



Slot Properties Pane Information—Common, DWDM, Electrical, and Ethernet Cards

This appendix provides information on the cards supported in Cisco Prime Optical. This appendix contains the following sections:

- [Common Cards, page C-1](#)
- [DWDM Cards, page C-92](#)
- [Electrical Cards, page C-610](#)
- [Ethernet Cards, page C-748](#)



Note

- In the Prime Optical GUI, display-only fields have a gray background.
- Slot properties are alphabetically displayed under the Overview and Provisioning drawers in the NE Explorer. For more information, see the [“NE Explorer” section on page 1-29](#).

Common Cards

This section describes the following common cards supported within Prime Optical:

- [Slot Properties—AIC, page C-2](#)
- [Slot Properties—AIC-I, page C-5](#)
- [Slot Properties—CTX-2500, page C-9](#)
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- [Slot Properties—XC-VXL-10G, page C-77](#)
- [Slot Properties—XC10G, page C-79](#)
- [Slot Properties—XCVT, page C-81](#)
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- [Slot Properties—XTC \(ONS 15305\), page C-84](#)
- [Slot Properties—XTC \(ONS 15327\), page C-84](#)

Slot Properties—AIC

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The optional Alarm Interface Controller (AIC) card provides customer-defined alarm input/output (I/O) and supports local and express orderwire.

For the AIC module, the slot properties pane displays the following properties: Module View, Identification, Alarm Extenders, Local Orderwire, Express Orderwire, and Info.

Module View

The Module View displays a graphic of the AIC that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update AIC identification information.

Table C-1 *Field Descriptions for the Identification Properties Pane*

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.

Table C-1 *Field Descriptions for the Identification Properties Pane (continued)*

Field	Description
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the Common Language Equipment Identifier (CLEI) code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Alarm Extenders

The Alarm Extenders Properties pane allows you view AIC alarm information and create custom alarm types. The Alarm Extenders Properties pane contains the following tabs:

- [External Alarms Tab, page C-3](#)
- [External Controls Tab, page C-4](#)
- [User-Defined Alarms Tab, page C-4](#)

External Alarms Tab

The External Alarms tab allows you to view and update external alarm information.

Table C-2 *Field Descriptions for the External Alarms Tab*

Field	Description
Input Number	Displays the alarm input number.
Enabled	Check to activate the fields for the alarm input number.
Alarm Type	Choose an alarm type from the provided list.
Severity	Choose a severity from the list.
Raised When	Choose the contact condition that will trigger the alarm in CTC.

Table C-2 *Field Descriptions for the External Alarms Tab (continued)*

Field	Description
Virtual Wire	To assign the external device to a virtual wire, choose a virtual wire from the list, or choose None if no assignment is required.
Description	Displays a default description that is provided for every enabled external alarm.
Raised	Indicates if an alarm has been raised.
Contact Status	Indicates the current status of the contact.

External Controls Tab

The External Controls tab allows you to view and update external controls.

Table C-3 *Field Descriptions for the External Controls Tab*

Field	Description
Control Number	Displays the control number.
Enabled	Check to activate the fields for the control number.
Control Type	Choose a control type from the provided list.
Trigger Type	Choose a trigger type: a local minor, major, or critical alarm; a remote minor, major, or critical alarm; or a virtual wire activation.
Description	Enter a description.
Current State	Displays the current state of the control.
Auto State	Displays the auto state of the control.
Contact Setting	Displays the current contact setting.

User-Defined Alarms Tab

The User-Defined Alarms tab allows you to view, add, and delete custom alarm types on AIC cards.

Table C-4 *Field Descriptions for the User-Defined Alarms Tab*

Field	Description
Alarm Types	Lists the user-defined alarm types that have been created on the AIC card. You can create up to 50 custom environmental alarms, which are reported in the Condition column in the Alarm Log and Alarm Browser windows.
Add	Click the Add button to add a new custom alarm type. Enter a unique alarm type name that contains 20 characters or fewer. Only the following characters are valid: 0-9, A-Z, a-z, and hyphen (-).
Delete	Click the Delete button to delete an existing alarm type.

Local Orderwire

Local Orderwire allows a craftsperson to plug a phoneset into a node and communicate with craftspeople working at other nodes or other facility equipment. The orderwire is a pulse code modulation (PCM) encoded voice channel that uses E1 or E2 bytes in section/line overhead. The AIC allows simultaneous

use of both local (section overhead signal) and express (line overhead channel) orderwire channels on a SONET ring or particular optics facility. Local orderwire also allows communication at regeneration sites when the regenerator is not a Cisco device.

Table C-5 *Field Descriptions for the Local Orderwire Properties Pane*

Field	Description
4-Wire Level	If needed, adjust the Tx and Rx dBm (decibels referenced per milliwatt) by moving the slider to the right or left for the four-wire headset that you will use. In general, you should not need to adjust the dBm.
2-Wire Level	If needed, adjust the Tx and Rx dBm by moving the slider to the right or left for the two-wire headset that you will use. In general, you should not need to adjust the dBm.

Express Orderwire

The Express Orderwire Properties pane allows you to configure express orderwire settings.

Table C-6 *Field Descriptions for the Express Orderwire Properties Pane*

Field	Description
4-Wire Level	If needed, adjust the Tx and Rx dBm by moving the slider to the right or left for the four-wire headset that you will use. In general, you should not need to adjust the dBm.
2-Wire Level	If needed, adjust the Tx and Rx dBm by moving the slider to the right or left for the two-wire headset that you will use. In general, you should not need to adjust the dBm.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the AIC card.

Table C-7 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—AIC-I

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The optional Alarm Interface Controller-International (AIC-I) card provides customer-defined (environmental) alarms and controls and supports local and express orderwire. It provides twelve customer-defined input and four customer-defined input/output contacts. The physical connections are through the backplane wire-wrap pin terminals.

For the AIC-I module, the slot properties pane displays the following properties: Module View, Identification, Card, Alarm Extenders, Local Orderwire, Express Orderwire, and Info.

Module View

The Module View displays a graphic of the AIC-I that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update AIC-I identification information.

Table C-8 *Field Descriptions for the Identification Properties Pane*

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Card

The Card Properties pane allows you to view and update AIC-I card information.

Table C-9 *Field Descriptions for the Card Properties Pane*

Field	Description
Add Extension	Check this check box if you are using the Alarm Expansion Panel (AEP).
Extended Type	The AEP radio button is automatically selected if you checked the Add Extension check box.
Input/Output	Select External Alarm if you use external alarms only; select External Control if you use both external alarms and external controls. Selecting only External Alarm gives you 16 external alarm ports and no external control ports. If you select External control, four of the ports are converted to external control ports, leaving you with 12 external alarm ports.
Station Number	Enter a four-digit station number. The valid range is from 0 to 9999.

Alarm Extenders

The Alarm Extenders Properties pane allows you view AIC-I alarm information. The Alarm Extenders Properties pane contains the following tabs:

- [External Alarms Tab, page C-7](#)
- [External Controls Tab, page C-7](#)
- [User-Defined Alarms Tab, page C-8](#)

External Alarms Tab

The External Alarms tab allows you to view and update external alarm information.

Table C-10 *Field Descriptions for the External Alarms Tab*

Field	Description
Input Number	The alarm input number.
Enabled	Check to activate the fields for the alarm input number.
Alarm Type	Choose an alarm type from the provided list.
Severity	Choose a severity from the list.
Raised When	Choose the contact condition that will trigger the alarm in CTC.
Virtual Wire	To assign the external device to a virtual wire, choose a virtual wire from the list, or choose None if no assignment is required.
Description	A default description is provided in this line for every external alarm that is enabled.
Raised	Indicates if an alarm has been raised.
Contact Status	Indicates the current status of the contact.

External Controls Tab

The External Controls tab allows you to view and update external controls.

Table C-11 *Field Descriptions for the External Controls Tab*

Field	Description
Control Number	The control number.
Enabled	Check to activate the fields for the control number.
Control Type	Choose a control type from the provided list.
Trigger Type	Choose a trigger type: a local minor, major, or critical alarm; a remote minor, major, or critical alarm; or a virtual wire activation.
Description	Enter a description.
Current State	The current state of the control.
Auto State	The auto state of the control.
Contact Setting	The current contact setting.

User-Defined Alarms Tab

The User-Defined Alarms tab allows you to view, add, and delete custom alarm types on AIC-I cards.

Table C-12 *Field Descriptions for the User-Defined Alarms Tab*

Field	Description
Alarm Types	Lists the user-defined alarm types that have been created on the AIC-I card. You can create up to 50 custom environmental alarms, which are reported in the Condition column in the Alarm Log and Alarm Browser windows.
Add	Click the Add button to add a new custom alarm type. Enter a unique alarm type name that contains 20 characters or fewer. Only the following characters are valid: 0-9, A-Z, a-z, and hyphen (-).
Delete	Click the Delete button to delete an existing alarm type.

Local Orderwire

Orderwire allows a craftsperson to plug a phoneset into a node and communicate with craftspeople working at other nodes or other facility equipment. The orderwire is a pulse code modulation (PCM) encoded voice channel that uses E1 or E2 bytes in section/line overhead. The AIC-I allows simultaneous use of both local (section overhead signal) and express (line overhead channel) orderwire channels on a SONET ring or particular optics facility. Local orderwire also allows communication at regeneration sites when the regenerator is not a Cisco device.

Table C-13 *Field Descriptions for the Local Orderwire Properties Pane*

Field	Description
Buzzer	The AIC-I supports selective dual tone multifrequency (DTMF) dialing for telephony connectivity, which causes one AIC-I card or all AIC-I cards on the orderwire subnetwork to ring. The ringer/buzzer resides on the AIC-I. If you want to turn on the audible alert (buzzer) for the orderwire, check the Buzzer check box.

Table C-13 *Field Descriptions for the Local Orderwire Properties Pane (continued)*

Field	Description
4-Wire Level	If needed, adjust the Tx and Rx dBm by moving the slider to the right or left for the four-wire headset that you will use. In general, you should not need to adjust the dBm.
2-Wire Level	If needed, adjust the Tx and Rx dBm by moving the slider to the right or left for the two-wire headset that you will use. In general, you should not need to adjust the dBm.

Express Orderwire

The Express Orderwire Properties pane allows you to configure express orderwire settings.

Table C-14 *Field Descriptions for the Express Orderwire Properties Pane*

Field	Description
Buzzer	If you want to turn on the audible alert (buzzer) for the orderwire, check the Buzzer check box.
4-Wire Level	If needed, adjust the Tx and Rx dBm by moving the slider to the right or left for the four-wire headset that you will use. In general, you should not need to adjust the dBm.
2-Wire Level	If needed, adjust the Tx and Rx dBm by moving the slider to the right or left for the two-wire headset that you will use. In general, you should not need to adjust the dBm.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the AIC-I card.

Table C-15 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—CTX-2500

The slot properties pane displays information about the Cisco ONS 15310 MA SONET or ONS 15310 MA SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The CTX-2500 card, for use with the ONS 15310 MA SONET or ONS 15310 MA SDH, is a fully nonblocking cross-connect card that operates in a redundant configuration. It performs system initialization, provisioning, alarm reporting, maintenance, diagnostics, IP address detection/resolution, SONET data communications channel (DCC) termination, system fault detection, and cross-connect

maintenance and management for the ONS 15310 MA SONET and ONS 15310 MA SDH. The card also provides the circuitry for the OC-3/OC-12/OC-48 interfaces, and ensures that the system maintains timing with SMC stability.

The CTX-2500 card provides 576 x 576 STS-1 level cross-connections, 96 x 96 TU-3 level cross-connections, 2688 x 2688 VT1.5s, or 2016 x 2016 VT2s.

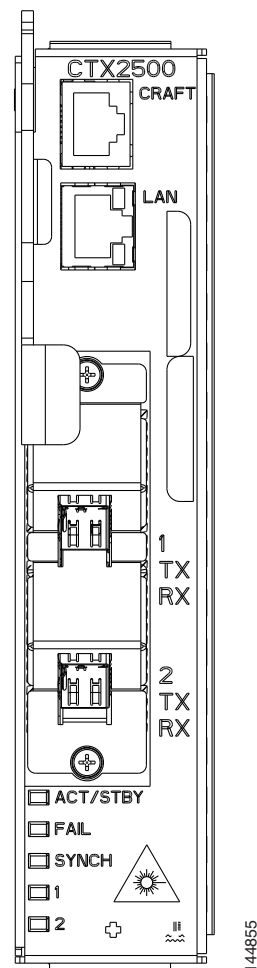
The CTX-2500 card can be installed in slots 3 or 4. Protection switches between the active and standby CTX-2500 are hitless (less than a 50-ms impact to any traffic).

The CTX-2500 supports errorless side switches (switching from one CTX-2500 on one side of the shelf to the other CTX-2500 on the other side of the shelf) when the switch is initiated through software and is caused by a software upgrade.

There are two PPM (small form factor pluggable [SFP]) slots on the CTX-2500 faceplate. Each slot can contain a one-port PPM. Cisco-qualified SFPs can be single-rate (OC-3, OC-12, or OC-48) or multirate (OC-3, OC-12, and OC-48). Single-rate PPMs are autoprovisioned when they are installed, but multirate PPMs must be provisioned. This behavior can be controlled by NE defaults.

The following figure shows the CTX-2500 card faceplate.

Figure C-1 CTX-2500 Faceplate



For the CTX-2500 module, the slot properties pane displays the following properties: Module View, Identification, Pluggable Provisioning, Line, STS, VT, Loopback, Alarm Behavior, Transceiver, Auto Laser Shutdown, Protection, J1 Path Trace, and Section Trace.

Module View

The Module View displays a graphic of the CTX-2500 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update CTX-2500 identification information.

Table C-16 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Card State	
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Pluggable Provisioning

The Pluggable Provisioning Properties pane allows you to view and provision pluggable entities; for example, the pluggable port module (PPM) and pluggable I/O module (PIM) and the ports inside these entities.

Table C-17 *Field Descriptions for the Pluggable Provisioning Properties Pane*

Field	Description
Pluggable Number	Displays the identifier of the plugin module.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Equipment State	Displays the equipment state of the card.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Pluggable Number	Displays the identifier of the plugin module and the port number.
Rate	Displays the rate of the port inside the pluggable entity.

Provision Pluggable Dialog Box

Click the **Create** button to launch the Provision Pluggable dialog box. This dialog box allows you to provision pluggable entities such as the PPM and PIM, and to create the ports inside these entities.

- [Table C-18](#) describes the fields displayed in the Provision Pluggable dialog box when provisioning a PPM.
- [Table C-19](#) applies only to the ONS 15600 SONET/SDH ASAP_4 card and describes the fields displayed in the Provision Pluggable dialog box when provisioning a PIM.
- [Table C-20](#) describes the fields displayed in the Provision Pluggable dialog box when provisioning a PPM.
- [Table C-21](#) describes the fields displayed in the Provision Pluggable dialog box when creating the ports inside the PPM and PIM.

Table C-18 *Field Descriptions for the Provision Pluggable Dialog Box—PPM*

Field	Description
PPM #	Sets the PPM number.
No. of Ports	Sets the number of ports inside the PPM.
PPM Type	Sets the type of PPM.

Table C-19 *Field Descriptions for the Provision Pluggable Dialog Box—PIM (ONS 15600 SONET/SDH ASAP_4 Card)*

Field	Description
PIM #	Sets the PIM number.
No. of Ports	Sets the number of ports inside the PIM.
PIM Type	Sets the type of PIM.

Table C-20 *Field Descriptions for the Provision Pluggable Dialog Box—PPM (ONS 15454 SONET/SDH MRC-12 Card)*

Field	Description
PPM	Select the PPM for which you want to create the port.
PPM Type	Sets the PPM type.

Table C-21 *Field Descriptions for the Provision Pluggable Dialog Box*

Field	Description
PPM	Select the PPM for which you want to create the port.
Port Number	Sets the port number.
Port Rate	Sets the rate of the new port.

Line

The Line Properties pane allows you to view and update line card information. The Line Properties pane displays the following tabs:

- [Line Config Tab, page C-13](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-15](#)
- [Section Thresh 15 Min/1 Day Tabs, page C-16](#)
- [Physical Thresh 15 Min/Physical Thresh 1 Day/Alarm Thresholds Tabs, page C-17](#)

Line Config Tab

The Line Config tab allows you to view and change the line settings of an optical card.

Table C-22 *Field Descriptions for the Line Config Tab*

Field	Description
Port Number	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Port Rate	Sets the rate of the new port.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
SF BER	Sets the signal fail bit error rate.
SD BER	Sets the signal degrade bit error rate.
ProvidesSync	When checked, the card is provisioned as an NE timing reference.
EnableSyncMsg	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
SendDoNotUse	When checked, sends a do not use (DUS) message on the S1 byte.

Table C-22 **Field Descriptions for the Line Config Tab (continued)**

Field	Description
Send <FF> DoNotUse	When checked, sends a do not use (DUS) (0xff) message on the S1 byte.
Type	Defines the port as SONET or SDH.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Admin SSM	If the node does not receive an SSM signal, it defaults to synchronization traceability unknown (STU). Admin SSM allows you to override the STU value with one of the following: • PRS—Primary reference source (Stratum 1) • STS2—Stratum 2 • TNC—Transit node clock • STS3E—Stratum 3E • STS3—Stratum 3 • SMC—SONET minimum clock • ST4—Stratum 4
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
PJSTSMon#	Sets the STS that will be used for pointer justification. If set to 0, no STS is monitored. Only one STS can be monitored on each OC-N port. • 0 (default)—3 (OC-3, per port) • 0 (default)—12 (OC-12) • 0 (default)—48 (OC-48)

Table C-22 *Field Descriptions for the Line Config Tab (continued)*

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency. The Wavelength column lists the correct wavelengths, depending on the type of card and the band selected.

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the near- and far-end 15-minute/1-day threshold settings of an optical card.

Table C-23 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
Port Number	Displays the optical port number.

Table C-23 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs*

Field	Description
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.
CV-L	Displays the coding violations line.
UAS-L	Displays the unavailable seconds line information.
FC-L	Failure count line (FC-L) lists a count of the number of near-end line failure events. A failure event begins when an AIS-L failure is declared, or when a lower-layer, traffic-related, near-end failure is declared. This failure event ends when the failure is cleared. A failure event that begins in one period and ends in another period is counted only in the period where it begins.
PSC	In a 1 + 1 protection scheme for a working card, protection switching count (PSC) is a count of the number of times service switches from a working card to a protection card plus the number of times service switches back to the working card. For a protection card, PSC is a count of the number of times service switches to a working card from a protection card plus the number of times service switches back to the protection card. The PSC PM is applicable only if revertive line-level protection switching is used. PSC is supported in revertive and nonrevertive modes. Note This parameter is not supported for transponder or muxponder cards.
PSD	Protection switching duration (PSD) applies to the length of time, in seconds, that service is carried on another line. For a working line, PSD is a count of the number of seconds that service was carried on the protection line. For the protection line, it is a count of the seconds that the line was used to carry service. The PSD PM is applicable only if revertive line-level protection switching is used. PSD is supported in revertive and nonrevertive modes. Note This parameter is not supported for transponder or muxponder cards.
Far End	
Port Number	Displays the optical port number.
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.
CV-L	Displays the coding violations line.
UAS-L	Displays the unavailable seconds line information.
FC-L	Failure count line (FC-L) lists a count of the number of near-end line failure events. A failure event begins when an AIS-L failure is declared, or when a lower-layer, traffic-related, near-end failure is declared. This failure event ends when the failure is cleared. A failure event that begins in one period and ends in another period is counted only in the period where it begins.

Section Thresh 15 Min/1 Day Tabs

The Section Thresh 15 Min /1 Day tabs allow you to view and change the near-end 15-minute/1-day section threshold settings of an optical card.

Table C-24 *Field Descriptions for the Section Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
Port Number	Displays the port number.
CV-S	Displays the coding violations section.

Table C-24 *Field Descriptions for the Section Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
ES-S	Displays the errored seconds section.
SES-S	Displays the severely errored seconds section.
SEFS-S	Displays the severely errored framing seconds section.

Physical Thresh 15 Min/Physical Thresh 1 Day/Alarm Thresholds Tabs

The Physical Thresh 15 Min/1 Day tabs allow you to view and change 15-minute/1-day physical threshold information on an optical card.

The Alarm Thresholds tab allows you to select thresholds for alarm generation.

Table C-25 *Field Descriptions for the Physical Thresh 15 Min/Physical Thresh 1 Day/Alarm Thresholds Tabs*

Field	Description
Port No.	Pluggable entity number and port number.
LBC-HIGH	Maximum laser bias current. The default is (15 min): 200 percent.
LBC-LOW	Minimum laser bias current. The default is (15 min): 20 percent.
OPT-HIGH	Maximum optical power transmitted. The default is (15 min): 120 percent.
OPT-LOW	Minimum optical power transmitted. The default is (15 min): 80 percent.
OPR-HIGH	Maximum optical power received. The default is (15 min): 200 percent.
OPR-LOW	Minimum optical power received. The default is (15 min): 50 percent.
Set OPR	Setting the optical power received (OPR) establishes the received power level as 100 percent. If the received power decreases, then the OPR percentage decreases to reflect the loss in received power. For example, if the received power decreases 3-dBm, the OPR decreases 50 percent.

STS

The STS Properties pane allows you to view and update synchronous transport signal (STS) information. The STS Properties pane displays the following tabs:

- [STS Config Tab, page C-17](#)
- [Path Thresh 15 Min/1 Day Tabs, page C-18](#)
- [Customer Info Tab, page C-18](#)

STS Config Tab

The STS Config tab allows you to view and change the STS settings of the EC1 port.

Table C-26 *Field Descriptions for the STS Config Tab*

Field	Description
STS Number	Displays the synchronous transport signal number information.
IPPM Enabled	Check to enable intermediate path performance monitoring (IPPM) and uncheck to disable IPPM.
XC Loopback	Displays the cross-connect loopback status.

Path Thresh 15 Min/1 Day Tabs

The Path Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day path threshold information for the CTX-2500 card.

Table C-27 *Field Descriptions for the Path Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
STS No.	Displays the synchronous transport signal number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
SAS-P	Displays the severely errored frame/alarm indication signal path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.
PPJC-Pdet	Displays positive pointer justification count-VC4 path detected.
NPJC-Pdet	Displays negative pointer justification count-VC4 path detected.
PPJC-Pgen	Displays positive pointer justification count-VC4 path generated.
NPJC-Pgen	Displays negative pointer justification count-VC4 path generated.
PJCS-Pdet	Indicates the number of pointer justification count seconds (PJCS) detected on a particular path.
PJCS-Pgen	Indicates the number of pointer justification count seconds generated for a particular path.
PJC-Diff	Displays the sum of the absolute values of differences between positive transmitted and received, and negative transmitted and received. The important metric on pointer justification is not the exact counts, but how many were absorbed.
Far End	
STS No.	Displays the synchronous transport signal number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.

Customer Info Tab

The Customer Info tab displays customer information.

Table C-28 *Field Descriptions for the Customer Info Tab*

Field	Description
STS No.	Displays the STS number.
Customer ID	The customer ID.
Service ID	The service ID.

VT

The VT Properties pane allows you to view and update VT line information. The VT Properties pane displays the following tabs:

- [VT Config Tab, page C-19](#)
- [VT Thresh 15 Min/1 Day Tabs, page C-19](#)
- [Customer Info Tab, page C-19](#)

VT Config Tab

The VT Config tab allows you to view and change the VT settings of the card.

Table C-29 *Field Descriptions for the VT Config Tab*

Field	Description
VT No.	Displays VT number information.
IPPM Enabled	Check to enable intermediate path performance monitoring (IPPM) and uncheck to disable IPPM.

VT Thresh 15 Min/1 Day Tabs

The VT Thresh 15 Min/1 Day tabs display near- and far-end 15-minute/1-day VT threshold information.

Table C-30 *Field Descriptions for the VT Thresh 15 Min/1 Day Tabs*

Field	Description
VT No.	Displays VT number information.
CV	Displays the coding violations information.
ES	Displays the errored seconds information.
SES	Displays the severely errored seconds information.
UAS	Displays the unavailable seconds information.
FC	Displays the failure count information.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Customer Info Tab

The Customer Info tab displays customer information.

Table C-31 *Field Descriptions for the Customer Info Tab*

Field	Description
STS No.	Displays the STS number.
Customer ID	The customer ID.
Service ID	The service ID.

Loopback

The Loopback Properties pane allows you to view and update CTX-2500 loopback information.

Table C-32 *Field Descriptions for the Loopback Properties Pane*

Field	Description
Port Number	Displays the port number.
Administration State	Allows you to select the administration state of the port: In Service (IS) or Out of Service (OOS).
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or clear the current loopback (none).
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Send AIS on Facility Loopback	When selected, sends AIS on the facility loopback.
Send AIS on Terminal Loopback	When selected, sends AIS on the terminal loopback.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update alarm profiles assigned to cards on the ONS 15310 MA SONET or ONS 15310 MA SDH node.

Table C-33 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Transceiver

The Transceiver Properties pane shows OC-N port optical power received (OPR), optical power transmitted (OPT), and laser bias current (LBC) from the line card and stores these values with the PM counts for the 15-minute and 1-day periods. The physical layer performance parameters consist of normalized and non-normalized values of LBC, OPT, and OPR.

Table C-34 *Field Descriptions for the Transceiver Properties Pane*

Field	Description
Port No.	Displays the port number.
Non-Normalized LBC (mA)	Displays the actual operating value of laser bias current (mA) for the specified card port. This value should be somewhat consistent from port to port and cannot be configured.
Non-Normalized OPT (dBm)	Displays the actual operating value of optical power transmitted (dBm) for the specified card port. This value should be somewhat consistent from port to port and cannot be configured.
Non-Normalized OPR (dBm)	Displays the actual operating value of optical power received (dBm) for the specified card port. This value varies from port to port because of received optical signal power differences.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-35 *Field Descriptions for the Auto Laser Shutdown Properties Pane*

Field	Description
Port Number	Displays the port number.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the received laser pulse duration, in seconds. The range is from 2.0 to 100.0 seconds.
Rec. Pulse Int. (sec)	Allows you to set the received laser pulse interval, in seconds. The range is from 60 to 300 seconds.
Status	Displays the current laser status. Values are Shut Down or Not Shut Down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

Protection

The Protection Properties pane allows you to view and update protection group information.

Table C-36 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection group.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and retrieve J1 path trace information.

Table C-37 Field Descriptions for the J1 Path Trace Properties Pane

Field	Description
Port Number	Displays the port number.
STS/VC Number	Displays the STS or VC number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Display	Click the Display button to view the circuit trace information. See Using the Circuit Trace Window to Apply Protection to the Ports in a Splitter-Protection Group, page 7-166 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

Section Trace

The Section Trace Properties pane is used to provision section trace.

Table C-38 Field Descriptions for the Section Trace Properties Pane

Field	Description
Port No.	Displays the port number.
Trace Mode	Displays the trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—CTX-CL600

The slot properties pane displays information about the Cisco ONS 15310 CL slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The CTX-CL600 card is an unpluggable card on the ONS 15310 CL NE. It has a total of 26 ports that are either mounted or pluggable.

For the CTX-CL600 module, the slot properties pane displays the following properties: Module View, Identification, Wideband Ports, Broadband Ports, Pluggable Provisioning, DS-1, DS-3, EC1, Optical, Alarm Extenders, and Info.

Module View

The Module View displays a graphic of the CTX-CL600 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update CTX-CL600 identification information.

Table C-39 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Wideband Ports

The Wideband Ports Properties pane allows you to view the wideband port information.

Table C-40 *Field Descriptions for the Wideband Ports Properties Pane*

Field	Description
Port Number	Displays the port number.
Rate	Displays the rate that the slot is provisioned for.

Broadband Ports

The Broadband Ports Properties pane allows you to view, create, and delete DS-3 and EC1 broadband ports.

Table C-41 *Field Descriptions for the Broadband Ports Properties Pane*

Field	Description
Create	Click the Create button to launch the Create Port dialog box and create a new broadband port. Use the Port Number drop-down list to choose an available port. Use the Port Rate drop-down list to specify the port rate (DS-3 or EC1). After making your selections, click OK .
Delete	Click the Delete button to delete an existing DS-3 or EC1 broadband port.
DS-3	
Port Number	Displays the DS-3 port number.
Rate	Displays the rate that the slot is provisioned for.
EC1	
Port Number	Displays the EC1 port number.
Rate	Displays the rate that the slot is provisioned for.

Pluggable Provisioning

The Pluggable Provisioning Properties pane allows you to view and provision pluggable entities; for example, the pluggable port module (PPM) and pluggable I/O module (PIM) and the ports inside these entities.

Table C-42 *Field Descriptions for the Pluggable Provisioning Properties Pane*

Field	Description
Pluggable Number	Displays the identifier of the plugin module.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Pluggable Number	Displays the identifier of the plugin module and the port number.
Rate	Displays the rate of the port inside the pluggable entity.

Provision Pluggable Dialog Box

Click the **Create** button to launch the Provision Pluggable dialog box. This dialog box allows you to provision pluggable entities such as the PPM and PIM, and to create the ports inside these entities.

- [Table C-43](#) applies only to the ONS 15600 SONET/SDH ASAP_4 card and describes the fields displayed in the Provision Pluggable dialog box when provisioning a PIM.
- [Table C-44](#) applies only to the ONS 15600 SONET/SDH ASAP_4 card and describes the fields displayed in the Provision Pluggable dialog box when creating the ports inside the PPM and PIM.
- [Table C-45](#) describes the fields displayed in the Provision Pluggable dialog box when provisioning a PPM.
- [Table C-46](#) describes the fields displayed in the Provision Pluggable dialog box when creating the ports inside the PPM.
- [Table C-47](#) describes the fields displayed in the Provision Pluggable dialog box when creating the lanes inside the PPM for CFP_LC card.

Table C-43 *Field Descriptions for the Provision Pluggable Dialog Box—PIM (ONS 15600 SONET/SDH ASAP_4 Card)*

Field	Description
PIM #	Sets the PIM number.
PIM Type	Sets the type of PIM.

Table C-44 *Field Descriptions for the Provision Pluggable Dialog Box—PPM (ONS 15600 SONET/SDH ASAP_4 Card)*

Field	Description
PIM	Select the PIM for which you want to create the port.
PPM	Select the PPM for which you want to create the port.
Port Rate	Sets the rate of the new port.

Table C-45 *Field Descriptions for the Provision Pluggable Dialog Box—PPM (ONS 15454 SONET/SDH MRC-12 Card)*

Field	Description
PPM	Select the PPM for which you want to create the port.
PPM Type	Sets the PPM type.

Table C-46 *Field Descriptions for the Provision Pluggable Dialog Box*

Field	Description
PPM	Select the PPM for which you want to create the port.
Port Rate	Sets the rate of the new port.

Table C-47 *Field Descriptions for the Provision Pluggable Dialog Box (ONS 15454 SONET/SDH CFP_LC Card)*

Field	Description
Port	Select the PPM for which you want to create the port.
Port Type	Sets the type of the port.
No of Lanes	Number of sublanes that can be created based on the pluggable type. Values are: 4 (card mode is TXP) 1 and 4 (card mode is MXP)

DS-1

The DS-1 Properties pane allows you to view node near-end and far-end performance on a DS-1 card to detect possible performance problems. The DS-1 Properties pane contains the following tabs:

- [Line Config Tab, page C-26](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-27](#)
- [Electric Path Thresh 15 Min/1 Day Tabs, page C-27](#)
- [STS Thresh 15 Min/1 Day Tabs, page C-28](#)
- [VT Thresh 15 Min/1 Day Tabs, page C-28](#)
- [Alarm Behavior Tab, page C-29](#)
- [Loopback Tab, page C-29](#)
- [J1 Path Trace Tab, page C-30](#)
- [Customer Info Tab, page C-30](#)

Line Config Tab

The Line Config tab allows you to view and change the line settings of the DS-1 card.

Table C-48 *Field Descriptions for the Line Config Tab*

Field	Description
Port Name	Allows you to add a name for the optical port.
Line Type	Allows you to select the line framing type.
Line Coding	Allows you to define the DS-1 transmission coding type.
Line Length	Defines the distance (in feet) from backplane connection to the next termination point. 0–131 (default) 132–262 263–393 394–524 525–655
Administration State	Displays the status of the line: In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).

Table C-48 Field Descriptions for the Line Config Tab (continued)

Field	Description
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
SF BER	Sets the signal fail bit error rate.
SD BER	Sets the signal degrade bit error rate.
Send Do Not Use	When checked, sends a do not use (DUS) message on the S1 byte.
Provide Sync	When checked, the card is provisioned as an NE timing reference.
Enable Sync Message	When checked, enables synchronization status messages, which allow the node to choose the best timing source.
Enable Retiming	When checked, enables retiming. Retiming removes accumulated jitter and wander from synchronous transport network payload signals. Retiming should not be enabled when accumulated jitter and wander is not present.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Send AIS-V for DS-1 AIS	When checked, sends an Alarm Indication Signal VT (AIS-V) instead of a DS-1 AIS (from the line side toward the backplane/system side) when a line-side trigger occurs.
Raise AIS for LOF	Sends an AIS when a loss of frame (LOF) occurs.

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the near- and far-end 15-minute/1-day threshold settings of the DS-1 card.

Table C-49 Field Descriptions for the Line Thresh 15 Min/1 Day Tabs

Field	Description
Near End	
Port Number	Displays the optical port number.
CV-L	Displays the coding violations line.
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.
LOSS-L	Displays the loss of signal seconds line.
Far End	
Port Number	Displays the optical port number.
ES-L	Displays the errored seconds line.

Electric Path Thresh 15 Min/1 Day Tabs

The Electric Path Thresh 15 Min/1 Day tabs allow you to view and change the near- and far-end 15-minute/1-day electrical path threshold settings for the DS-1 card.

Table C-50 *Field Descriptions for the Electric Path Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
Port No.	Displays the port number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
SAS-P	Displays the severely errored frame/alarm indication signal–path information.
AISS-P	Displays the alarm indication signal seconds path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.
Far End	
Port No.	Displays the port number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
ESA-P	Displays the errored seconds type A path information.
ESB-P	Displays the errored seconds type B path information.
CSS-P	Displays the controlled slip seconds path information.
SEFS-P	Displays the severely errored framing seconds path information.

STS Thresh 15 Min/1 Day Tabs

The STS Thresh 15 Min/1 Day tabs allow you to view and change near- and far-end 15-minute/1-day STS information for the DS-1 card.

Table C-51 *Field Descriptions for the STS Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
STS Number	Displays the synchronous transport signal number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.

VT Thresh 15 Min/1 Day Tabs

The VT Thresh 15 Min/1 Day tabs display near- and far-end 15-minute/1-day VT threshold information.

Table C-52 *Field Descriptions for the VT Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
VT Number	Displays VT number information.
CV-V	Displays the coding violations–VT path information.
ES-V	Displays the errored seconds–VT path information.
SES-V	Displays the severely errored seconds–VT path information.
UAS-V	Displays the unavailable seconds–VT path information.

Alarm Behavior Tab

The Alarm Behavior tab allows you to view and update DS-1 alarm profile information.

Table C-53 *Field Descriptions for the Alarm Behavior Tab*

Field	Description
Alarm Profile	Select the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Port Number	Displays the port number.
Alarm Profile	Displays the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Loopback Tab

The Loopback tab allows you to view and update DS-1 loopback information.

Table C-54 *Field Descriptions for the Loopback Tab*

Field	Description
Line Number	Displays the line number.
Administration State	Allows you to configure the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT)
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Send Code	Allows you to send loopback commands to the far end.
Send AIS on Facility Loopback	When selected, sends AIS on the facility loopback.
Send AIS on Terminal Loopback	When selected, sends AIS on the terminal loopback.

J1 Path Trace Tab

The J1 Path Trace tab allows you to view and retrieve J1 path trace information.

Table C-55 Field Descriptions for the J1 Path Trace Tab

Field	Description
Port Number	Displays the port number.
STS Number	Displays the synchronous transport signal number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

Customer Info Tab

The Customer Info tab displays customer information.

Table C-56 Field Descriptions for the Customer Info Tab

Field	Description
STS Number, VT Number	Displays the STS or VT number.
Customer ID	The customer ID.
Service ID	The service ID.

DS-3

The DS-3 Properties pane allows you to view node near-end and far-end performance on a DS-3 card to detect possible performance problems. The DS-3 Properties pane contains the following tabs:

- [Line Config Tab, page C-30](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-31](#)
- [PBit Thresh/CPBit Thresh 15 Min/1 Day Tabs, page C-31](#)
- [STS Thresh 15 Min/1 Day Tabs, page C-32](#)
- [Alarm Behavior Tab, page C-32](#)
- [Loopback Tab, page C-33](#)
- [J1 Path Trace Tab, page C-33](#)
- [Customer Info Tab, page C-33](#)

Line Config Tab

The Line Config tab allows you to view and change the line settings of the DS-3 card.

Table C-57 **Field Descriptions for the Line Config Tab**

Field	Description
Port Number	Displays the port number for the optical port.
Port Name	Allows you to add a name for the optical port.
SF BER	Sets the signal fail bit error rate.
SD BER	Sets the signal degrade bit error rate.
Line Length	Defines the distance (in feet) from backplane connection to the next termination point. 0 - 225 (default) 226 - 450
Line Type	Allows you to select the line framing type.
Line Coding	Allows you to define the transmission coding type.
Administration State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the near- and far-end 15-minute/1-day threshold settings of the DS-3 card.

Table C-58 **Field Descriptions for the Line Thresh 15 Min/1 Day Tabs**

Field	Description
Port Number	Displays the optical port number.
CV-L	Displays the coding violations line (near-end only).
ES-L	Displays the errored seconds lines line.
SES-L	Displays the severely errored seconds line (near-end only).
LOSS-L	Displays the loss of signal seconds line (near-end only).

PBit Thresh/CPBit Thresh 15 Min/1 Day Tabs

The PBit Thresh/CPBit Thresh 15 Min/1 Day tabs displays near-end 15-minute/1-day PBit path threshold information on the DS-3 card.

Table C-59 *Field Descriptions for the PBit Thresh/CPBit Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
Port No.	Displays the optical port number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
SAS-P (PBit Thresh only)	Severely errored frame/alarm indication signal–path
AISS-P (PBit Thresh only)	Alarm indication signal seconds path
UAS-P	Displays the unavailable seconds path information.

STS Thresh 15 Min/1 Day Tabs

The STS Thresh 15 Min/1 Day tabs allow you to view and change near- and far-end 15-minute/1-day STS information on the card.

Table C-60 *Field Descriptions for the STS Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
STS Number	Displays the synchronous transport signal number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.

Alarm Behavior Tab

The Alarm Behavior tab allows you to view and update DS-3 alarm profile information.

Table C-61 *Field Descriptions for the Alarm Behavior Tab*

Field	Description
Alarm Profile	Select the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Port Number	Displays the port number.
Alarm Profile	Displays the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Loopback Tab

The Loopback tab allows you to view and update DS-3 loopback information.

Table C-62 Field Descriptions for the Loopback Tab

Field	Description
Port Number	Displays the port number.
Administration State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.
Inhibit FE Loopback	When selected, inhibits far-end loopback.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Send AIS on Facility Loopback	When selected, sends AIS on the facility loopback.
Send AIS on Terminal Loopback	When selected, sends AIS on the terminal loopback.

J1 Path Trace Tab

The J1 Path Trace tab allows you to view and retrieve J1 path trace information.

Table C-63 Field Descriptions for the J1 Path Trace Tab

Field	Description
Port Number	Displays the port number.
STS Number	Displays the synchronous transport signal number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

Customer Info Tab

The Customer Info tab displays customer information.

Table C-64 *Field Descriptions for the Customer Info Tab*

Field	Description
STS Number	Displays the STS number.
Customer ID	The customer ID.
Service ID	The service ID.

EC1

The EC1 Properties pane allows you to view node near-end and far-end performance on an EC1 card to detect possible performance problems. The EC1 Properties pane contains the following tabs:

- [Line Config Tab, page C-34](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-35](#)
- [Section Thresh 15 Min/1 Day Tabs, page C-35](#)
- [Path Thresh 15 Min/1 Day Tabs, page C-35](#)
- [STS Config Tab, page C-36](#)
- [Alarm Behavior Tab, page C-36](#)
- [Loopback Tab, page C-37](#)
- [J1 Path Trace Tab, page C-37](#)
- [Customer Info Tab, page C-37](#)

Line Config Tab

The Line Config tab allows you to view and change the line settings of the EC1 card.

Table C-65 *Field Descriptions for the Line Config Tab*

Field	Description
Port Number	Displays the port number for the optical port.
Port Name	Allows you to add a name for the optical port.
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
PJSTSMon#	Sets the STS that will be used for pointer justification. If set to 0, no STS is monitored. Only one STS can be monitored on each OC-N port. • 0 (default)—3 (OC-3, per port) • 0 (default)—12 (OC-12) • 0 (default)—48 (OC-48)
Line Length (feet)	Defines the distance (in feet) from backplane connection to the next termination point. Values are 0 through 225 (default) or 226 through 450.
Rx Equalization	For early EC1 card versions, equalization can be turned off if the line length is short or the environment is extremely cold; Rx Equalization should normally be set to On (checked, default).
Administration State	Displays the status of the line. The line can be In Service (IS), In Service—Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service—Maintenance (OOS_MT).

Table C-65 *Field Descriptions for the Line Config Tab (continued)*

Field	Description
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the near- and far-end 15-minute/1-day threshold settings of the EC1 card.

Table C-66 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
Port Number	Displays the optical port number.
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.
CV-L	Displays the coding violations line.
UAS-L	Displays the unavailable seconds line.
FC-L	Displays the failure count line.

Section Thresh 15 Min/1 Day Tabs

The Section Thresh 15 Min/1 Day tabs allow you to view and change the near-end 15-minute/1-day section threshold information on the EC1 card.

Table C-67 *Field Descriptions for the Section Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
Port Number	Displays the port number.
CV-S	Displays the coding violations section.
ES-S	Displays the errored seconds section.
SES-S	Displays the severely errored seconds section.
SEFS-S	Displays the severely errored framing seconds section.

Path Thresh 15 Min/1 Day Tabs

The Path Thresh 15 Min/1 Day tabs allow you to view and change near- and far-end 15-minute/1-day path threshold information on the EC1 card.

Table C-68 *Field Descriptions for the Path Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
STS Number	Displays the synchronous transport signal number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.
PPJC-Pdet	Displays positive pointer justification count-VC4 path detected.
NPJC-Pdet	Displays negative pointer justification count-VC4 path detected.
PPJC-Pgen	Displays positive pointer justification count-VC4 path generated.
NPJC-Pgen	Displays negative pointer justification count-VC4 path generated.
PJCS-Pdet	Indicates the number of pointer justification count seconds (PJCS) detected on a particular path.
PJCS-Pgen	Indicates the number of pointer justification count seconds generated for a particular path.
PJC-Diff	Displays the sum of the absolute values of differences between positive transmitted and received, and negative transmitted and received. The important metric on pointer justification is not the exact counts, but how many were absorbed.

STS Config Tab

The STS Config tab allows you to view and change the STS settings of the EC1 card.

Table C-69 *Field Descriptions for the STS Config Tab*

Field	Description
STS Number	Displays the synchronous transport signal number information.
IPPM Enabled	Check to enable intermediate path performance monitoring (IPPM) and uncheck to disable IPPM.

Alarm Behavior Tab

The Alarm Behavior tab allows you to view and change EC1 alarm profile information.

Table C-70 *Field Descriptions for the Alarm Behavior Tab*

Field	Description
Alarm Profile	Select the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Port Number	Displays the port number.
Alarm Profile	Displays the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Loopback Tab

The Loopback tab allows you to view and change EC1 loopback information.

Table C-71 Field Descriptions for the Loopback Tab

Field	Description
Port Number	Displays the port number.
Administration State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Send AIS on Facility Loopback	When selected, sends AIS on the facility loopback.
Send AIS on Terminal Loopback	When selected, sends AIS on the terminal loopback.

J1 Path Trace Tab

The J1 Path Trace tab allows you to view and retrieve J1 path trace information.

Table C-72 Field Descriptions for the J1 Path Trace Tab

Field	Description
Port Number	Displays the port number.
STS Number	Displays the synchronous transport signal number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

Customer Info Tab

The Customer Info tab displays customer information.

Table C-73 Field Descriptions for the Customer Info Tab

Field	Description
STS Number	Displays the STS number.

Table C-73 *Field Descriptions for the Customer Info Tab (continued)*

Field	Description
Customer ID	The customer ID.
Service ID	The service ID.

Optical

The Optical Properties pane allows you to view node near-end and far-end performance on an optical card to detect possible performance problems. The Optical Properties pane contains the following tabs:

- [Line Config Tab, page C-38](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-40](#)
- [Section Thresh 15 Min/1 Day Tabs, page C-41](#)
- [Physical Thresh 15 Min/1 Day Tabs, page C-42](#)
- [STS Config Tab, page C-42](#)
- [Alarm Behavior Tab, page C-42](#)
- [Loopback Tab, page C-43](#)
- [Auto Laser Shutdown Tab, page C-43](#)
- [Protection Tab, page C-44](#)
- [J1 Path Trace Tab, page C-44](#)
- [Customer Info Tab, page C-44](#)

Line Config Tab

The Line Config tab allows you to view and change the line settings of an optical card.

Table C-74 *Field Descriptions for the Line Config Tab*

Field	Description
Port Number	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Port Rate	Sets the rate of the new port.
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Type	Defines the port as SONET or SDH.
PJSTSMon#	Sets the STS that will be used for pointer justification. If set to 0, no STS is monitored. Only one STS can be monitored on each OC-N port. • 0 (default)—3 (OC-3, per port) • 0 (default)—12 (OC-12) • 0 (default)—48 (OC-48)
Provides Sync	When checked, the card is provisioned as an NE timing reference.

Table C-74 **Field Descriptions for the Line Config Tab (continued)**

Field	Description
EnableSyncMsg	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
SendDoNotUse	When checked, sends a do not use (DUS) message on the S1 byte.
Administration State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Admin SSM	If the node does not receive an SSM signal, it defaults to synchronization traceability unknown (STU). Admin SSM allows you to override the STU value with one of the following: • PRS—Primary reference source (Stratum 1) • STS2—Stratum 2 • TNC—Transit node clock • STS3E—Stratum 3E • STS3—Stratum 3 • SMC—SONET minimum clock • ST4—Stratum 4
Send <FF> DoNotUse	When checked, sends a do not use (DUS) (0xff) message on the S1 byte.

Table C-74 *Field Descriptions for the Line Config Tab (continued)*

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency. The Wavelength column lists the correct wavelengths, depending on the type of card and the band selected.

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the near- and far-end 15-minute/1-day threshold settings of an optical card.

Table C-75 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
Port Number	Displays the optical port number.

Table C-75 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.
CV-L	Displays the coding violations line.
UAS-L	Displays the unavailable seconds line information.
FC-L	Failure count line (FC-L) lists a count of the number of near-end line failure events. A failure event begins when an AIS-L failure is declared, or when a lower-layer, traffic-related, near-end failure is declared. This failure event ends when the failure is cleared. A failure event that begins in one period and ends in another period is counted only in the period where it begins.
PSC	In a 1 + 1 protection scheme for a working card, protection switching count (PSC) is a count of the number of times service switches from a working card to a protection card plus the number of times service switches back to the working card. For a protection card, PSC is a count of the number of times service switches to a working card from a protection card plus the number of times service switches back to the protection card. The PSC PM is applicable only if revertive line-level protection switching is used. PSC is supported in revertive and nonrevertive modes. Note This parameter is not supported for transponder or muxponder cards.
PSD	Protection switching duration (PSD) applies to the length of time, in seconds, that service is carried on another line. For a working line, PSD is a count of the number of seconds that service was carried on the protection line. For the protection line, it is a count of the seconds that the line was used to carry service. The PSD PM is applicable only if revertive line-level protection switching is used. PSD is supported in revertive and nonrevertive modes. Note This parameter is not supported for transponder or muxponder cards.
Far End	
Port Number	Displays the optical port number.
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.
CV-L	Displays the coding violations line.
UAS-L	Displays the unavailable seconds line information.
FC-L	Failure count line (FC-L) lists a count of the number of near-end line failure events. A failure event begins when an AIS-L failure is declared, or when a lower-layer, traffic-related, near-end failure is declared. This failure event ends when the failure is cleared. A failure event that begins in one period and ends in another period is counted only in the period where it begins.

Section Thresh 15 Min/1 Day Tabs

The Section Thresh 15 Min/1 Day tab allows you to view and change the near-end 15-minute/1-day section threshold settings of an optical card.

Table C-76 *Field Descriptions for the Section Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
Port Number	Displays the port number.
CV-S	Displays the coding violations section.

Table C-76 *Field Descriptions for the Section Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
ES-S	Displays the errored seconds section.
SES-S	Displays the severely errored seconds section.
SEFS-S	Displays the severely errored framing seconds section.

Physical Thresh 15 Min/1 Day Tabs

The Physical Thresh 15 Min/1 Day tabs allow you to view and change 15-minute/1-day physical threshold information on an optical card.

Table C-77 *Field Descriptions for the Physical Thresh 15 Min/1 Day Tabs*

Field	Description
Port No.	Pluggable entity number and port number.
LBC-HIGH	Maximum laser bias current. The default is (15 min): 200 percent.
LBC-LOW	Minimum laser bias current. The default is (15 min): 20 percent.
OPT-HIGH	Maximum optical power transmitted. The default is (15 min): 120 percent.
OPT-LOW	Minimum optical power transmitted. The default is (15 min): 80 percent.
OPR-HIGH	Maximum optical power received. The default is (15 min): 200 percent.
OPR-LOW	Minimum optical power received. The default is (15 min): 50 percent.
Set OPR	Setting the optical power received (OPR) establishes the received power level as 100 percent. If the received power decreases, then the OPR percentage decreases to reflect the loss in received power. For example, if the received power decreases 3-dBm, the OPR decreases 50 percent.

STS Config Tab

The STS Config tab allows you to view and change the STS settings of an optical card.

Table C-78 *Field Descriptions for the STS Config Tab*

Field	Description
STS Number	Displays the synchronous transport signal number information.
IPPM Enabled	Check to enable IPPM and uncheck to disable IPPM.
XC Loopback	Displays the cross-connect loopback status.

Alarm Behavior Tab

The Alarm Behavior tab allows you to view and change optical card alarm profile information.

Table C-79 *Field Descriptions for the Alarm Behavior Tab*

Field	Description
Alarm Profile	Select the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Table C-79 Field Descriptions for the Alarm Behavior Tab (continued)

Field	Description
Port Number	Displays the port number.
Alarm Profile	Displays the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Loopback Tab

The Loopback tab allows you to view and change optical card loopback information.

Table C-80 Field Descriptions for the Loopback Tab

Field	Description
Port Number	Displays the port number.
Administration State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Send AIS on Facility Loopback	When selected, sends AIS on the facility loopback.
Send AIS on Terminal Loopback	When selected, sends AIS on the terminal loopback.

Auto Laser Shutdown Tab

The Auto Laser Shutdown tab allows you to view and update optical card auto laser shutdown (ALS) parameters.

Table C-81 Field Descriptions for the Auto Laser Shutdown Tab

Field	Description
Port Number	Displays the port number.
ASL Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the received laser pulse duration, in seconds. The range is from 2.0 to 100.0 seconds.
Rec. Pulse Int. (sec)	Allows you to set the received laser pulse interval, in seconds. The range is from 60 to 300 seconds.
Status	Displays the current laser status. Values are Shut Down or Not Shut Down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

Protection Tab

The Protection tab allows you to view and update protection group information.

Table C-82 *Field Descriptions for the Protection Tab*

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection groups, such as which port is the protected port and which port is the working port. Also allows you to execute switch commands.
Switch Commands	Allows you to perform a manual switch, perform a forced switch, or clear the existing command switching.
Inhibit Switching	Allows you to inhibit unlock switching, lock-out switching, or lock-on switching.

J1 Path Trace Tab

The J1 Path Trace tab allows you to view and retrieve J1 path trace information.

Table C-83 *Field Descriptions for the J1 Path Trace Tab*

Field	Description
Port Number	Displays the port number.
STS Number	Displays the synchronous transport signal number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

Customer Info Tab

The Customer Info tab displays customer information.

Table C-84 *Field Descriptions for the Customer Info Tab*

Field	Description
STS Number	Displays the STS number.
Customer ID	The customer ID.
Service ID	The service ID.

Alarm Extenders

The Alarm Extenders Properties pane allows you to view CTX-CL600 alarm information. The Alarm Extenders Properties pane contains the following tabs:

- [External Alarms Tab, page C-45](#)
- [External Controls Tab, page C-45](#)
- [User-Defined Alarms Tab, page C-45](#)

External Alarms Tab

The External Alarms tab allows you to view and update external alarm information.

Table C-85 *Field Descriptions for the External Alarms Tab*

Field	Description
Input Number	The alarm input number.
Enabled	Check to activate the fields for the alarm input number.
Alarm Type	Choose an alarm type from the provided list.
Severity	Choose a severity from the list.
Raised When	Choose the contact condition that will trigger the alarm in CTC.
Virtual Wire	To assign the external device to a virtual wire, choose a virtual wire from the list, or choose None if no assignment is required.
Description	A default description is provided in this line for every external alarm that is enabled.
Raised	Indicates if an alarm has been raised.
Contact Status	Indicates the current status of the contact.

External Controls Tab

The External Controls tab allows you to view and update external controls.

Table C-86 *Field Descriptions for the External Controls Tab*

Field	Description
Control Number	The control number.
Enabled	Check to activate the fields for the control number.
Control Type	Choose a control type from the provided list.
Trigger Type	Choose a trigger type: a local minor, major, or critical alarm; a remote minor, major, or critical alarm; or a virtual wire activation.
Description	Enter a description.
Current State	The current state of the control.
Auto State	The auto state of the control.
Contact Setting	The current contact setting.

User-Defined Alarms Tab

The User-Defined Alarms tab allows you to view, add, and delete custom alarm types on CTX-CL600 cards.

Table C-87 *Field Descriptions for the User-Defined Alarms Tab*

Field	Description
Alarm Types	Lists the user-defined alarm types that have been created on the CTX-CL600 card. You can create up to 50 custom environmental alarms, which are reported in the Condition column in the Alarm Log and Alarm Browser windows.
Add	Click the Add button to add a new custom alarm type. Enter a unique alarm type name that contains 20 characters or fewer. Only the following characters are valid: 0-9, A-Z, a-z, and hyphen (-).
Delete	Click the Delete button to delete an existing alarm type.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the CTX-CL600 module.

Table C-88 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—FILLER

The slot properties pane displays information about the ONS 15310 CL, ONS 15310 MA SONET, ONS 15310 MA SDH, ONS 15454 SONET, ONS 15454 SDH, ONS 15600 SONET, or ONS 15600 SDH slot that is selected in the NE Explorer tree. For the FILLER module, the slot properties pane displays the Module View.

Module View

The Module View displays a graphic of the FILLER card that is installed in the slot. Right-clicking the graphic opens a shortcut menu that you can use to add a card.

Slot Properties—MIC-28-3-A and MIC-28-3-B

The slot properties pane displays information about the Cisco ONS 15327 slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The MIC-28-3-A and MIC-28-3-B cards are the Mechanical Interface Cards (MICs). The MICs provide the physical connection points for the DS-1 and DS-3 interfaces on the XTC cards, the redundant power inputs, the alarm inputs and outputs, and the BITS timing inputs and outputs.

For the MIC module, the slot properties pane displays Module View and Identification properties.

Module View

The Module View displays a graphic of the MIC that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update MIC identification information.

Table C-89 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—MMU (ONS 15454 SONET and ONS 15454 SDH)

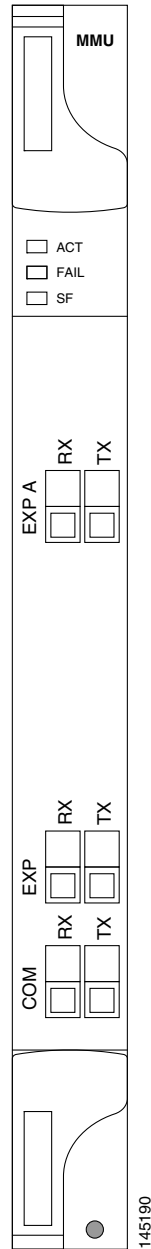
The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The Multi-Ring/Mesh Upgrade Unit (MMU) supports multiring and mesh upgrades for reconfigurable optical add/drop (ROADM) nodes in both the C-band and the L-band. Mesh/multiring upgrade is the capability to optically bypass a given wavelength from one section of the network or ring to another one without requiring 3R regeneration. In each node, you need to install two MMUs, one on the east side and one on the west side. You can install the MMU card in slots 1 through 6 and 12 through 17.

The MMU has six ports:

- EXP RX port—Receives the optical signal from the ROADM section available on the NE.
- EXP TX port—Sends the optical signal to the ROADM section available on the NE.
- EXP-A RX port—Receives the optical signal from the ROADM section available on other NEs or rings.
- EXP-A TX port—Sends the optical signal to the ROADM section available on other NEs or rings.
- COM TX port—Sends the optical signal to the fiber stage section.
- COM RX port—Receives the optical signal from the fiber stage section.

The following figure shows the card faceplate.

Figure C-2 *MMU Faceplate and Ports*

For the MMU module, the slot properties pane displays the following properties: Module View, Identification, Optical Line, and Inventory.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-90 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Displays the administration state. The state can either be Unlocked or Locked, Maintenance.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Line

The Optical Line Properties pane allows you to view and update optical channel threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-50](#)
- [Warning Thresh 15 Min/1 Day Tab, page C-51](#)
- [Alarm Thresh Tab, page C-51](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors.

Table C-91 Field Descriptions for the Parameters Tab

Field	Description
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Type	Displays the port type.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.

Table C-91 *Field Descriptions for the Parameters Tab (continued)*

Field	Description
Administration State	Displays the status of the channel. Values are: - IS—In Service; able to carry traffic. - OOS_DSBLD—Out of Service–Disabled. Unable to carry traffic. - IS_AINS—In Service–Auto In Service. Alarm reporting is suppressed, but traffic is carried. - OOS_MT—Out of Service–Maintenance. Alarm reporting is suppressed, but traffic is carried and loopbacks are allowed.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.

Warning Thresh 15 Min/1 Day Tab

The Warning Thresh 15 Min/ 1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert (TCA) generation.

Table C-92 *Field Descriptions for the Warning Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Type	Displays the port type.
Power Low (dBm)	Allows you to set the low power settings.
Power High (dBm)	Allows you to set the high power settings.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-93 *Field Descriptions for the Alarm Thresh Tab*

Field	Description
Port Number	The port number.
Power Failure Low (dBm)	Allows you to set the low power failure settings.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-94 Field Descriptions for the Inventory Properties Pane

Field	Description
Attribute	Displays the object that can be inventoried.
Value	Displays the value of the object that is inventoried.
Units	Displays the unit of measure (when applicable) of the object that is inventoried.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

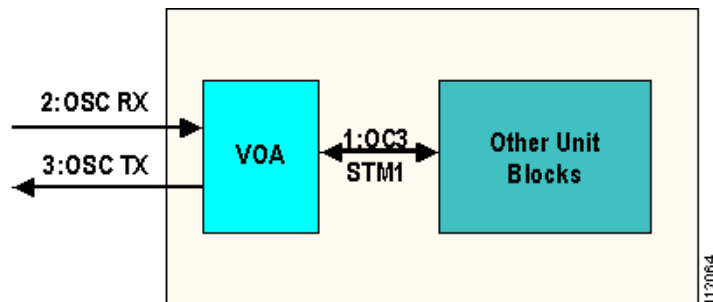
Slot Properties—OSCM (ONS 15454 SONET and ONS 15454 SDH)

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The Optical Service Channel Modem (OSCM) module is a single-slot card with a 1510 nm OC-3 optical transceiver interface. The OSCM features a variable optical attenuator (VOA) in the transmit path and a 100BASE-T FE user data channel. The OSCM also distributes the synchronous clock to all NEs on the ring.

The following figure shows the block diagram.

Figure C-3 OSCM Module



For the OSCM module, the slot properties pane displays the following properties: Module View, Identification, Line, Optical Line, Inventory, and Alarm Behavior.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-95 *Field Descriptions for the Identification Properties Pane*

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update line card information.

Table C-96 *Field Descriptions for the Line Properties Pane*

Field	Description
Line Config	
Port No.	The port number.
Port Name	The port name.
SD BER	The signal degrade bit error rate.
SF BER	The signal fail bit error rate.
Type	The port type (SONET or SDH).
PJSTSMon#	The STS that will be used for pointer justification. If set to zero, no STS is used.
ProvidesSync	When checked, the card is provisioned as an NE timing reference.

Table C-96 *Field Descriptions for the Line Properties Pane (continued)*

Field	Description
EnableSyncMsg	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Send DoNotUse	When checked, sends a do not use (DUS) message on the S1 byte.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Auto in service soak. The determination of duration left before the traffic/termination transitions to IS state.
Line Thresh 15 Min/1 Day - Near End, Far End	
Port No.	The port number.
ES-L	Errored seconds line.
SES-L	Severely errored seconds line.
CV-L	Coding violations line.
UAS-L	Unavailable seconds line.
FC-L	Failure count line.
Section Thresh 15 Min/1 Day - Near End	
Port No.	The port number.
CV-S	Coding violations section.
ES-S	Errored seconds section.
SES-S	Severely errored seconds section.
SEFS-S	Severely errored framing seconds section.

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information.

Table C-97 *Field Descriptions for the Optical Line Properties Pane*

Tab	Description
Parameters	
Port Number	The port number.
Port Name	The port name.
Status	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Active Channels	Indicates how many channels the amplifier is carrying. The value generally reflects the number of provisioned channels.

Table C-97 **Field Descriptions for the Optical Line Properties Pane (continued)**

Tab	Description
Line Direction (<i>available in CTM R7.2 and earlier</i>)	The direction of the line (west-to-east or east-to-west).
Type	The port type.
Power	The laser power.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Power Ref	The VOA reference power.
VOA Power Calib	The VOA calibration power.
VOA Attenuation Ref	The VOA reference attenuation.
OSC Power	Shows the current optical service channel (OSC) power level per port.
VOA Attenuation Calib	The VOA calibration attenuation.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Low	The lower power threshold.
Power High	The upper power threshold.
OSC Power Low	Allows you to set the low OSC power threshold.
OSC Power High	Allows you to set the high OSC power threshold.
Alarm Threshold	
Port Number	The port number.
Power Failure Low	The lower power failure threshold.
Power Degrade High	The upper power degrade threshold.
Power Degrade Low	The lower power degrade threshold.
VOA Degrade High	The upper VOA degrade threshold.
VOA Degrade Low	The lower VOA degrade threshold.
OSC Power Failure Low	Allows you to set the low OSC power failure threshold.
OSC Power Failure High	Allows you to set the high OSC power failure threshold.
OSC Power Degrade Low	Allows you to set the low OSC power degrade threshold.
OSC Power Degrade High	Allows you to set the high OSC power degrade threshold.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-98 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Serial Number	The serial number that is unique to each card.
IL-REF	The reference insertion loss.
Part Number	The part number that is printed on the top of the card.
Firmware Version	The revision number of the software used by the ASIC chip installed on the card.
Vendor ID	The ID of the vendor.
Hardware Version	The hardware version number.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-99 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—SSXC

The slot properties pane displays information about the Cisco ONS 15600 SONET and ONS 15600 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The SSXC card provides a fully nonblocking 6144 bidirectional STS-1 matrix.



Note

In NE releases earlier than release 5.0, the SSXC card is called the CXC card.

For the SSXC, the slot properties pane displays Module View and Identification properties.

Module View

The Module View displays a graphic of the SSXC card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update SSXC identification information.

Table C-100 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
User Code	Allows you to enter an ASCII string to identify the card. The user code is stored in nonvolatile memory so that it is not lost when the unit is moved or stored as a spare.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—TCC+

The slot properties pane displays information about the Cisco ONS 15327 or ONS 15454 slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The Timing Communication and Control+ (TCC+) card performs system initialization, provisioning, alarm reporting, maintenance, diagnostics, IP address detection/resolution, SONET data communications channel (DCC) termination, and system fault detection for the ONS 15327 and ONS 15454. The TCC+ also ensures that the system maintains Telcordia timing requirements.

For the TCC+ module, the slot properties pane displays Module View and Identification properties.

Module View

The Module View displays a graphic of the TCC+ that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s).

Identification

The Identification Properties pane allows you to view and update TCC+ identification information.

Table C-101 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—TCC-I

The slot properties pane displays information about the Cisco ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The Timing Communication and Control-International (TCC-I) Card performs system initialization, provisioning, alarm reporting, maintenance, diagnostics, IP address detection/resolution, SONET data communications channel (DCC) termination, and system fault detection for the ONS 15454 SDH. The TCC-I also ensures that the system maintains Telcordia timing requirements.

For the TCC-I module, the slot properties pane displays Module View and Identification properties.

Module View

The Module View displays a graphic of the TCC-I that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to add, delete, change, or reset the module.

Identification

The Identification Properties pane allows you to view and update TCC-I identification information.

Table C-102 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for; for example, TCC+ or TCC-I.
Actual Equipment Type	Displays the actual card that is installed in the slot; for example, TCC+ or TCC-I.
HW Part No	Displays the part number that is printed on the top of the card.
HW Hardware Revision	Displays the card revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the hardware revision number of the software used by the ASIC chip installed on the card.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—TCC2

The slot properties pane displays information about the Cisco ONS 15454 SONET and ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The Advanced Timing, Communications, and Control (TCC2) performs system initialization, provisioning, alarm reporting, maintenance, diagnostics, IP address detection/resolution, SDH section overhead (SOH) data communication channel/generic communication channel (DCC/GCC) termination,

and system fault detection for the ONS 15454 SDH. The TCC2 also ensures that the system maintains Stratum 3E (ITU-T G.813) timing requirements. It monitors the supply voltage of the system. The TCC2 card can work with the XC10G, XC-VXL-10G, or XC-VXL-2.5G cross-connect cards. It requires software release 5.0 or later.

For the TCC2 module, the slot properties pane displays the following properties: Module View, Identification, and Info.

Module View

The Module View displays a graphic of the TCC2 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update TCC2 identification information.

Table C-103 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the TCC2 card.

Table C-104 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—TCC2P

The slot properties pane displays information about the Cisco ONS 15454 SONET and ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The Advanced Timing, Communications, and Control Plus (TCC2P) card is an enhanced version of the TCC2 card. The primary enhancements are Ethernet security features and 64K composite clock BITS timing.

The TCC2P card performs system initialization, provisioning, alarm reporting, maintenance, diagnostics, IP address detection/resolution, SONET SOH DCC/GCC termination, and system fault detection for the ONS 15454. The TCC2P also ensures that the system maintains Stratum 3 (Telcordia GR-253-CORE) timing requirements. It monitors the supply voltage of the system.

**Note**

The TCC2P card requires software release 5.0 or later.

For the TCC2P module, the slot properties pane displays the following properties: Module View, Identification, and Info.

Module View

The Module View displays a graphic of the TCC2P that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update TCC2P identification information.

Table C-105 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Displays the administration state. The state can either be Unlocked or Locked, Maintenance.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the TCC2P card.

Table C-106 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

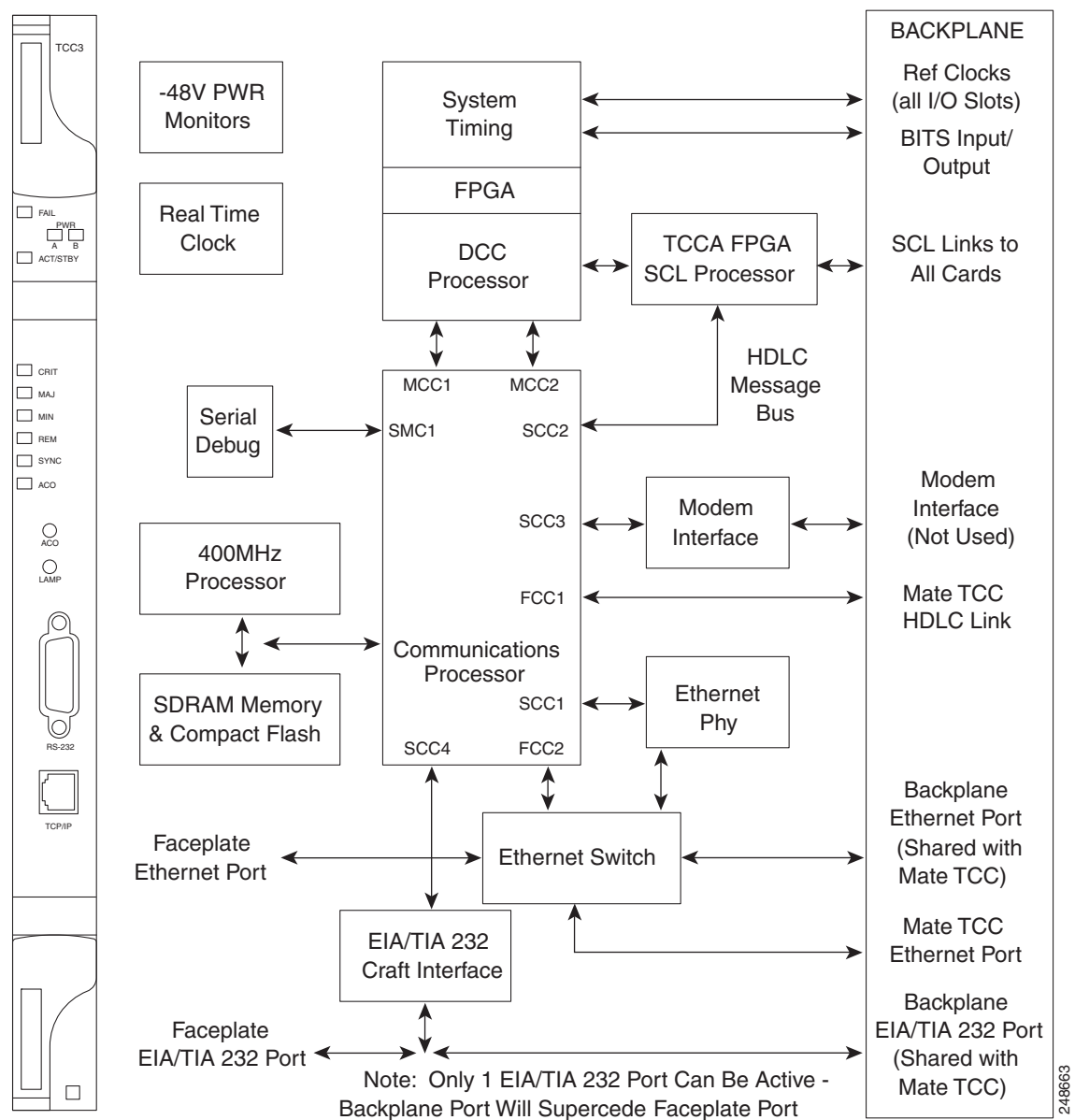
Slot Properties—TCC3

The slot properties pane displays information about the Cisco ONS 15454 SONET and ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The Timing Communications Control Three (TCC3) card is an enhanced version of the TCC2P card. The primary enhancements include the increase in memory size and compact flash space. The TCC3 card boots up as a TCC2P card in older releases and as a TCC3 card from Release 9.2 onwards. The TCC3 card supports multi-shelf management. The TCC3 card acts as a shelf controller and node controller for the ONS 15454.

The following figure shows the TCC3 faceplate and block diagram.

Figure C-4 TCC3 Faceplate and Block Diagram



For the TCC3 module, the slot properties pane displays the following properties: Module View, Identification, and Info.

Module View

The Module View displays a graphic of the TCC3 card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update TCC3 card identification information.

Table C-107 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format Administrative_State-Operational_State, Status_Attribute.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Suppress Alarms	When checked, all alarms are suppressed for the port.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the TCC3 card.

Table C-108 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—TNC and TNCE

(Cisco ONS 15454 M2 and ONS 15454 M6 only)

The Transport Node Controller (TNC) and the Transport Node Controller - Enhanced (TNCE) combines the functions of multiple cards such as TCC2P, OSCM, ISC, and AIC-I. The cards support the ONS 15454 M2 and ONS 15454 M6 shelf assemblies. The TNCE card is optimized for Ethernet transport and has support for Synchronous-Ethernet (SyncE) and IEEE1588-2008 Precision Time Protocol to add support for Two-Way Time Transfer (TWTT).

The TNC and TNCE cards are provisioned as master and slave in the ONS 15454 M6 shelf, and as a stand-alone card in the ONS 15454 M2 shelf. The TNC and TNCE card serves as the processor card for the node. The TNC and TNCE cards cannot be inserted in the same shelf.

On the ONS 15454 M6 shelf, install redundant TNC and TNCE cards in slots 1 and 8. If the active TNC or TNCE card fails, system traffic switches to the redundant TNC or TNCE card respectively. The card supports line cards from slots 2 to 7.

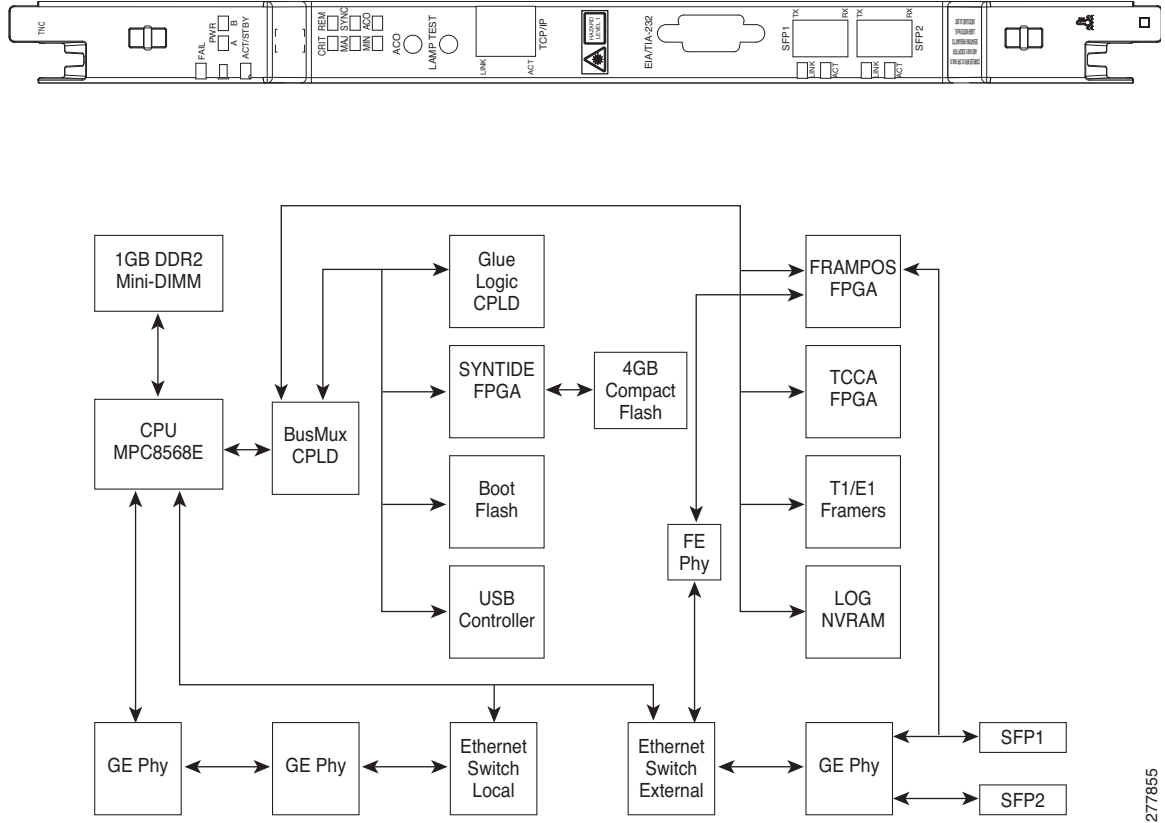
On the ONS 15454 M2 shelf, install the stand-alone TNC or TNCE card in slot 1. The TNC and TNCE cards support line cards in slots 2 and 3.

The following figure shows the TNC faceplate and block diagram.



Note

Both the TNC and TNCE cards are displayed as TNC in the NE Explorer.

Figure C-5 TNC Faceplate and Block Diagram

The slot properties pane displays the following properties: Module View, Identification, PPM, Alarm Behavior, UDC/VOIP, Optical Thresh, Auto Laser Shutdown, Line, and RMON Thresholds.

Module View

The Module View displays a graphic of the TNC or TNCE card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update TNC or TNCE card identification information.

Table C-109 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.

Table C-109 *Field Descriptions for the Identification Properties Pane (continued)*

Field	Description
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format Administrative_State-Operational_State, Status_Attribute.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Suppress Alarms	When checked, all alarms are suppressed for the port.

PPM

The PPM Properties pane allows you to view and provision the PPM and the ports inside the PPM.

Table C-110 *Field Descriptions for the PPM Properties Pane*

Field	Description
Pluggable Port Modules (PPM)	
Pluggable Number	Displays the identifier of the plugin module.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Equipment State	Displays the equipment state of the plugin module.
Administration State	Displays the port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format Administrative_State-Operational_State, Status_Attribute.
PPM	

Table C-110 *Field Descriptions for the PPM Properties Pane (continued)*

Field	Description
Port	Displays the port number for the PPM in the Pluggable Port Modules area.
Rate	Displays the port rate for the PPM in the Pluggable Port Modules area.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update TNC or TNCE card alarm profile information.

Table C-111 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Port Number	Displays the card port number.
Alarm Profile	Displays the alarm profile that has been configured for the card. You can choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

UDC/VOIP

You can configure UDC/VoIP on a specific port. The TNC or TNCE card supports the UDC/VoIP configuration only when Optical Supervisory Channel (OSC) is configured on the ports. From the **Service Type** drop-down list, choose UDC or VOIP.

Optical Thresh

The Optical Thresh Properties pane allows you to view and provision optical threshold settings. The Properties pane contains [TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs](#), [page C-68](#).

TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs

The TCA 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-112 *Field Descriptions for the TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs*

Field	Description
Port Number	Displays the port number.
LBC-High	Displays the maximum threshold for the laser bias current.
OPR-High	Displays the maximum threshold for the optical power received.
OPR-Low	Displays the minimum threshold for the optical power received.

Table C-112 *Field Descriptions for the TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs (continued)*

Field	Description
OPT-High	Displays the maximum threshold for the optical power transmitted.
OPT-Low	Displays the minimum threshold for the optical power transmitted.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-113 *Field Descriptions for the Auto Laser Shutdown Properties Pane*

Field	Description
OC3 Line/FE Line/ONE GE Line	
Port Number	Displays the port number.
OSRI	Displays the OSRI. Values are: - On—Laser switch is locked on - Off—(Cisco default) There is no lock on the lasers
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the received laser pulse duration, in seconds. The range is from 2.0 to 100.0 seconds.
Rec. Pulse Int. (sec)	Allows you to set the received laser pulse interval, in seconds. The range is from 60 to 300 seconds.
Status	Displays the current laser status. Values are Shut Down or Not Shut Down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

Line

The Line Properties pane allows you to configure line information. The Properties pane contains the following tabs:

- [Ports Tab, page C-69](#)
- [OC3 Tab, page C-70](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-71](#)
- [Section Thresh 15 Min/1 Day Tabs, page C-71](#)

Ports Tab

The ports tab allows you to provision PPM parameters of a TNC or TNCE card.

Table C-114 **Field Descriptions for the Ports Tab**

Field	Description
Port Number	Displays the port number.
Port Name	Allows you to add a port name.
Administration State	The port administration state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format Administrative_State-Operational_State, Status_Attribute.
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)

OC3 Tab

The OC3 tab allows you to view and change the OC3 line settings on the TNC or TNCE card.

Table C-115 *Field Descriptions for the OC3 Tab*

Field	Description
Port Number	Displays the card port number.
Port Name	Displays the port name.
SF BER	Sets the signal fail bit error rate.
SD BER	Sets the signal degrade bit error rate.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
ProvidesSync	When checked, the card is provisioned as an NE timing reference.
EnableSyncMsg	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
PJSTSMon#	Sets the STS that will be used for pointer justification. If set to 0, no STS is monitored. Only one STS can be monitored on each OC-N port. 0 (default)–3 (OC-3, per port) 0 (default)–12 (OC-12) 0 (default)–48 (OC-48)
SendDoNotUse	When checked, sends a do not use (DUS) message on the S1 byte.

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change 15-minute/1-day near- and far-end line thresholds for the TNC or TNCE card.

Table C-116 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
Port Number	Displays the port number.
CV-L	Displays the coding violations line.
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.
FC-L	Displays the failure count line.
UAS-L	Displays the unavailable seconds line.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Section Thresh 15 Min/1 Day Tabs

The Section Thresh 15 Min/1 Day tabs allow you to view and change 15-minute/1-day near-end regenerator section thresholds for the TNC or TNCE card.

Table C-117 *Field Descriptions for the Section Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
Port Number	Displays the port number.
CV-S	Displays the coding violations section.
ES-S	Displays the errored seconds section.
SES-S	Displays the severely errored seconds section.
SEFS-S	Displays the severely errored framing seconds section.
Reset to Defaults button	Resets the value of the port parameters to the default value.

RMON Thresholds

The RMON Thresholds Properties pane allows you to view RMON thresholds for the TNC or TNCE card. These thresholds are applicable to Fast Ethernet and Gigabit Ethernet Pluggable rates.

Table C-118 *Field Descriptions for the RMON Thresholds Properties Pane*

Field	Description
Index Number	Displays the optical port number.
Slot	Displays the slot.
Port	Displays the port.
Variable	Displays the Ethernet threshold variable. The variable depends on the card type.
Alarm Type	Displays the Ethernet threshold alarm type. Values are Rising, Falling, or Rising and Falling.
Sample Type	Displays the Ethernet threshold sample type. Values are Relative and Absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of any time period.
Sample Period (sec)	Displays the Ethernet threshold sample period, in seconds.
Rising Thresholds (count)	Displays a count of the number of times an alarm entry crosses the rising threshold and the entry generates an event.
Falling Thresholds (count)	Displays a count of the number of times an alarm entry crosses the falling threshold and the entry generates an event.

Slot Properties—TSC and TSCE

(Cisco ONS 15454 M2 and ONS 15454 M6 only)

The Transport Shelf Controller (TSC) and Transport Shelf Controller - Enhanced (TSCE) cards combine the functions of multiple cards such as TCC2P, ISC, and AIC-I. The cards support the ONS 15454 M2 and ONS 15454 M6 shelf assemblies. The TSCE is optimized for Ethernet transport and has support for Synchronous-Ethernet (SyncE) and IEEE1588-2008 Precision Time Protocol to add support for Two-Way Time Transfer (TWTT).

The TSC and TSCE cards are provisioned as master and slave in the ONS 15454 M6 shelf, and as a stand-alone card in the ONS 15454 M2 shelf. The TSC and TSCE cards serve as the processor card for the node.

On the ONS 15454 M6 shelf, install redundant TSC or TSCE cards in slots 1 and 8. If the active TSC or TSCE card fails, system traffic switches to the redundant TSC or TSCE card. The TSC or TSCE card supports line cards from slots 2 to 7.

On the ONS 15454 M2 shelf, install the stand-alone TSC or TSCE card in slot 1. The TSC or TSCE card supports line cards in slots 2 and 3.

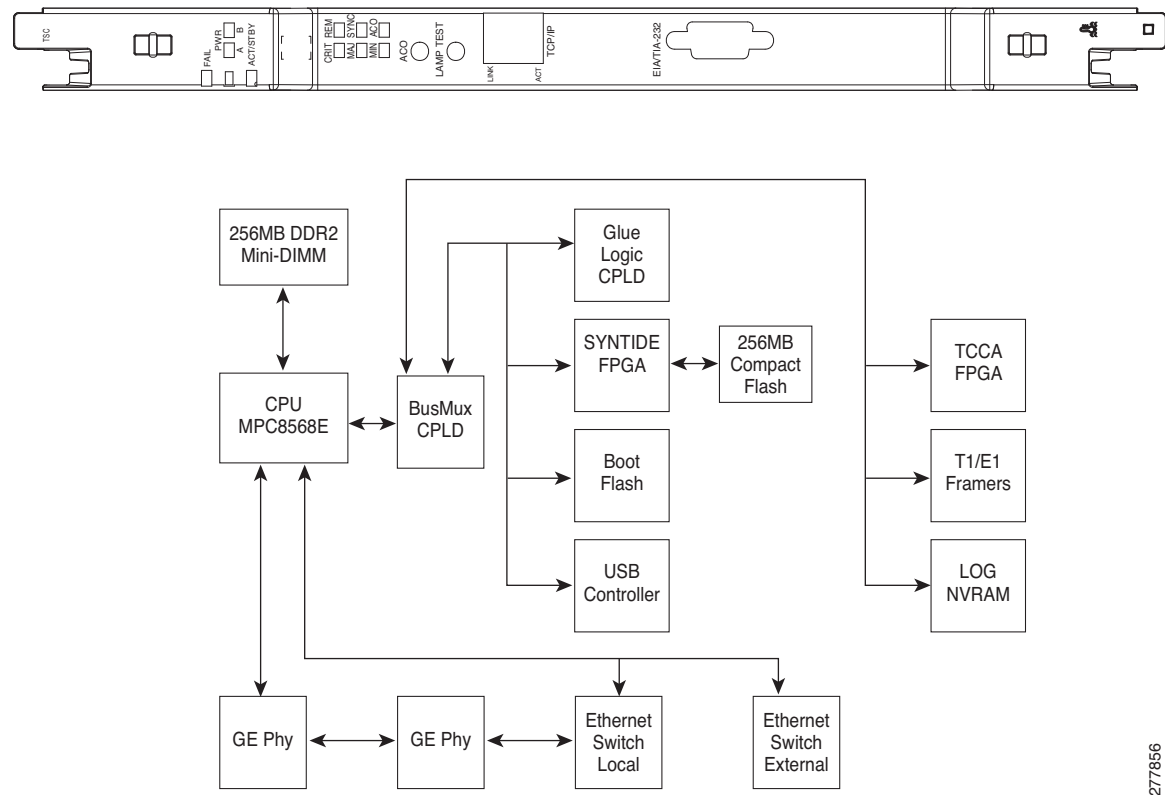
The following figure shows the TSC faceplate and block diagram.



Note

Both the TSC and TSCE cards are displayed as TSC in the NE Explorer.

Figure C-6 TSC Faceplate and Block Diagram



The slot properties pane displays the following properties: Module View and Identification.

Module View

The Module View displays a graphic of the TSC or TSCE card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s).

Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update TSC or TSCE card identification information.

Table C-119 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format Administrative_State-Operational_State, Status_Attribute.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Suppress Alarms	When checked, all alarms are suppressed for the port.

Slot Properties—TSC (ONS 15600 SONET and ONS 15600 SDH)

The slot properties pane displays information about the Cisco ONS 15600 SONET or ONS 15600 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The timing and shelf controller (TSC) card performs all system-timing functions for each ONS 15600. The TSC card monitors the recovered clocks from each traffic card and two building integrated timing supply (BITS) interfaces for frequency accuracy.

For the TSC module, the slot properties pane displays Module View and Identification properties.

Module View

The Module View displays a graphic of the TSC card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update TSC identification information.

Table C-120 **Field Descriptions for the Identification Properties Pane**

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
User Code	Allows you to enter an ASCII string to identify the card. The user code is stored in nonvolatile memory so that it is not lost when the unit is moved or stored as a spare.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—Unprovisioned Slot (ONS 15327 and ONS 15454 SONET)

The slot properties pane displays information about the Cisco ONS 15327 or ONS 15454 SONET subrack slot that is selected in the NE Explorer tree. Unprovisioned slots are slots that are not polled by the TCC. Unprovisioned slots display a Module View.

Module View

The Module View displays a graphic of the ONS 15327 or ONS 15454 SONET slot that is selected in the NE Explorer tree. For unprovisioned slots, a blank slot graphic is displayed.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—Unprovisioned Slot (ONS 15454 SDH)

The slot properties pane displays information about the Cisco ONS 15454 SDH subrack slot that is selected in the NE Explorer tree. Unprovisioned slots are slots that are not polled by the TCC. Unprovisioned slots display a Module View.

Module View

The Module View displays a graphic of the ONS 15454 SDH slot that is selected in the NE Explorer tree. For unprovisioned slots, a blank slot graphic is displayed.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—XC

The slot properties pane displays information about the Cisco ONS 15327 or ONS 15454 SONET slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The ONS 15327 or ONS 15454 Cross-Connect (XC) card performs port-to-port time-division multiplexing (TDM), STS switching, and can terminate 288 STSs, or 144 STS cross-connections. Each STS cross-connection uses two STS ports on the XC card STS matrix.

For the XC module, the slot properties pane displays the following properties: Module View, Identification, and Protection.

Module View

The Module View displays a graphic of the XC that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to add, delete, change, or reset the module.

Identification

The Identification Properties pane allows you to view and update XC identification information.

Table C-121 *Field Descriptions for the Identification Properties Pane*

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Protection

The Protection Properties pane allows you to view and update XC protection group information.

Table C-122 *Field Descriptions for the Protection Properties Pane*

Field	Description
State of Slot x	Displays the state of the selected slot and of the companion XC slot.
Switch	Click to switch the selected slot from its current state to the other states.
Lock	Click to lock the selected slot into its current state.
Unlock	Click to unlock the current slot from its current state.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—XC-VXL-10G

The slot properties pane displays information about the Cisco ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The XC-VXL-10G card cross-connects E-1, E-3, DS-3, STM-1, STM-4, STM-16, and STM-64 signal rates. The XC-VXL-10G provides a maximum of 384 x 384 VC-4 nonblocking cross-connections, 384 x 384 VC-3 nonblocking cross-connections, or 2016 x 2016 VC-12 nonblocking cross-connections. It is designed for 10-Gb/s solutions.

For the XC-VXL-10G module, the slot properties pane displays the following properties: Module View, Identification, and Protection.

Module View

The Module View displays a graphic of the XC-VXL-10G that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to add, delete, change, or reset the module.

Identification

The Identification Properties pane allows you to view and update XC-VXL-10G identification information.

Table C-123 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Protection

The Protection Properties pane allows you to view and update XC-VXL-10G protection group information.

Table C-124 Field Descriptions for the Protection Properties Pane

Field	Description
State of Slot <i>x</i>	Displays the state of the selected slot and of the companion XC-VXL-10G slot.
Switch	Click to switch the selected slot from its current state to the other states.
Lock	Click to lock the selected slot into its current state.
Unlock	Click to unlock the current slot from its current state.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—XC10G

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

ONS 15454 SONET and ONS 15454 SDH cross-connect cards establish connections and perform time division switching (TDS) at the STS-1 level between ONS 15454 traffic cards. The ONS 15454 SONET and ONS 15454 SDH 10 Gigabit Cross-Connect (XC10G) card cross-connects STS-12, STS-48, and STS-192 signal rates. The XC10G provides a maximum of 1152 STS-1 cross-connections. Any STS-1 on any port can be connected to any other port, which means that the STS cross-connections are nonblocking.

For the XC10G module, the slot properties pane displays the following properties: Module View, Identification, Protection, and Info.

Module View

The Module View displays a graphic of the XC10G that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update XC10G identification information.

Table C-125 **Field Descriptions for the Identification Properties Pane**

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.

Table C-125 *Field Descriptions for the Identification Properties Pane (continued)*

Field	Description
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Protection

The Protection Properties pane allows you to view and update XC10G protection group information.

Table C-126 *Field Descriptions for the Protection Properties Pane*

Field	Description
State of Slot <i>x</i>	Displays the state of the selected slot and of the companion XC10G slot.
Switch	Click to switch the selected slot from its current state to the other states.
Lock	Click to lock the selected slot into its current state.
Unlock	Click to unlock the current slot from its current state.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the XC10G card.

Table C-127 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—XCVT

The slot properties pane displays information about the Cisco ONS 15327 or ONS 15454 SONET slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The ONS 15327 or ONS 15454 Cross-Connect Virtual Tributary (XCVT) performs port-to-port time-division multiplexing (TDM), STS and VT1.5 switching, and can terminate 288 STSs, or 144 STS cross-connections. (Each STS cross-connection uses two STS ports on the cross-connect card STS matrix.)

For the XCVT module, the slot properties pane displays the following properties: Module View, Identification, and Protection.

Module View

The Module View displays a graphic of the XCVT that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to add, delete, change, or reset the module.

Identification

The Identification Properties pane allows you to view and update XCVT identification information.

Table C-128 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for
Actual Equipment Type	Displays the actual card that is installed in the slot.
Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Protection

The Protection Properties pane allows you to view and update XCVT protection group information.

Table C-129 Field Descriptions for the Protection Properties Pane

Field	Description
State of Slot <i>x</i>	Displays the state of the selected slot and of the companion XCVT slot.
Switch	Click to switch the selected slot from its current state to the other states.

Table C-129 *Field Descriptions for the Protection Properties Pane (continued)*

Field	Description
Lock	Click to lock the selected slot into its current state.
Unlock	Click to unlock the current slot from its current state.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—XCVXC

The slot properties pane displays information about the Cisco ONS 15454 SONET and ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

In the SONET system, the XCVXC card cross-connects STS-1 and VT1.5/VT2 layers. It provides full, nonblocking 1152 x 1152 port STS-1 cross-connections or 2688 x 2688 port VT1.5 cross-connections.

In the SDH system, the XCVXC card cross-connects VC-3, VC-4, and VC-12/VC-11 layers. It provides 384 x 384 VC-3/TUG-3 cross-connections, full, nonblocking 384 x 384 VC-4 (and 4-Nc) cross-connections, or 2016 x 2016 VC-12 cross-connections.

Cross-connect and provisioning information is established through the user interface on the TCC2 card.

For the XCVXC card, the slot properties pane displays the following properties: Module View, Identification, Protection, and Info.

Module View

The Module View displays a graphic of the XCVXC card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update XCVXC card identification information.

Table C-130 *Field Descriptions for the Identification Properties Pane*

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.

Table C-130 Field Descriptions for the Identification Properties Pane (continued)

Field	Description
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Protection

The Protection Properties pane allows you to view and update XCVXC protection group information.

Table C-131 Field Descriptions for the Protection Properties Pane

Field	Description
State of Slot <i>x</i>	Displays the state of the selected slot and of the companion XCVXC slot.
Switch	Click to switch the selected slot from its current state to the other states.
Lock	Click to lock the selected slot into its current state.
Unlock	Click to unlock the current slot from its current state.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the XCVXC card.

Table C-132 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—XTC (ONS 15305)

The slot properties pane displays information about the CTC-based ONS 15305 that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The Integrated Cross-Connect, Timing, and Control (XTC) cards perform system initialization, provisioning, alarm reporting, maintenance, diagnostics, IP address detection/resolution, SONET data communications channel (DCC) termination, system fault detection, and cross-connect maintenance and management for the ONS 15305 CTC. The XTC cards also provide the circuitry for the DS-1 and DS-3 interfaces and ensure that the system maintains Telcordia timing requirements. An XTC card is required to operate the ONS 15305 CTC and can be used in a redundant or nonredundant configuration.

For the ONS 15305 CTC XTC controller, the slot properties pane displays a single Module View.

Module View

The Module View displays a graphic of the XTC controller that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Slot Properties—XTC (ONS 15327)

The slot properties pane displays information about the Cisco ONS 15327 slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The Integrated Cross-Connect, Timing, and Control (XTC) cards perform system initialization, provisioning, alarm reporting, maintenance, diagnostics, IP address detection/resolution, SONET data communications channel (DCC) termination, system fault detection, and cross-connect maintenance and management for the ONS 15327. The XTC cards also provide the circuitry for the DS-1 and DS-3 interfaces and ensure that the system maintains Telcordia timing requirements. An XTC card is required to operate the ONS 15327 and can be used in a redundant or nonredundant configuration.

For the XTC module, the slot properties pane displays the following properties: Module View, Identification, DS-1, DS-3, STS-1 Path, VT1.5 Path, Alarm Extenders, Protection, and J1 Path Trace.

Module View

The Module View displays a graphic of the XTC that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update XTC identification information.

Table C-133 *Field Descriptions for the Identification Properties Pane*

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

DS-1

The DS-1 Properties pane allows you to view and update XTC DS-1 information.

Table C-134 *Field Descriptions for the DS-1 Properties Pane*

Subfield	Description
Line Config	
Port Number	Displays the port number: 1 to 14 (XTC-14) 1 to 28 (XTC-28-3)
Port Name	Allows you to enter the name of the port. You can enter up to 32 alphanumeric or special characters. The port name is blank by default.
Line Type	Defines the line framing type as ESF (Extended Super Frame), D4, or unframed.

Table C-134 Field Descriptions for the DS-1 Properties Pane (continued)

Subfield	Description
Line Coding	Allows you to define the DS-1 transmission coding type. Values are: • AMI—Alternate Mark Inversion (default) • B8ZS—Bipolar 8 Zero Substitution
Line Length	Defines the distance (in feet) from backplane connection to the next termination point. Values are: • 0–131 (default) • 132–262 • 263–393 • 394–524 • 525–655
State	Displays the status of the line. Values are: • IS—In Service • IS_AINS—In Service–Auto In Service Soak • OOS—Out of Service • OOS_MT—Out of Service–Maintenance
AINS Soak	Automatic in-service soak. The amount of valid input signal in <i>hh.mm</i> , after which the port is set in service by the software. The range is from 0 to 48 hours, in 15-minute increments.
AINS Soak Count Down	Displays the remaining time of valid input signal in <i>hh.mm</i> , after which the card becomes in service (IS) automatically. The range is from 0 to 48 hours, in 15-minute increments.
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Send AIS-V for DS-1 AIS	When checked, sends an Alarm Indication Signal VT (AIS-V) instead of a DS-1 AIS (from the line side toward the backplane/system side) when a line-side trigger occurs.
Raise AIS for LOF	Sends an AIS when a loss of frame (LOF) occurs.
Line Threshold 15 Minutes/1 Day	
Port Number	The port number (1 to 14 for XTC-14; 1 to 28 for XTC-28-3).
CV-L	Coding violations line (near-end only).
ES-L	Errored seconds line.
SES-L	Severely errored seconds line (near-end only).
LOSS-L	Loss of signal seconds line (near-end only).
Electric Path Threshold 15 Minutes/1 Day	
Near End	
Port Number	The port number (1 to 14 for XTC-14; 1 to 28 for XTC-28-3).
CV-P	Coding violations path information.
ES-P	Errored seconds path information.
SES-P	Severely errored seconds path information.
SAS-P	Severely errored frame/alarm indication signal–path information.
AISS-P	Alarm indication signal seconds path information.

Table C-134 Field Descriptions for the DS-1 Properties Pane (continued)

Subfield	Description
UAS-P	Unavailable seconds path information.
Far End	
Port Number	The port number (1 to 14 for XTC-14; 1 to 28 for XTC-28-3).
CV-P	Coding violations path information.
ES-P	Errored seconds path information.
SES-P	Severely errored seconds path information.
UAS-P	Unavailable seconds path information.
ESA-P	Errored seconds type A path information.
ESB-P	Errored seconds type B path information.
CSS-P	Controlled slip seconds path information.
SEFS-P	Severely errored framing seconds path information.
Alarm Behavior	
Displays alarm profile information.	
Loopback	
Line Number	The line number.
State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT). Note The line state must be OOS_MT before you can configure the loopback type.
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none).
Customer Info	
STS Number	Displays the STS number.
Customer ID	The customer ID.
Service ID	The service ID.

DS-3

The DS-3 Properties pane allows you to view and update XTC DS-3 information.

Table C-135 Field Descriptions for the DS-3 Properties Pane

Field	Description
Line Config	
Port Number	Displays the port number (1 to 3).
Port Name	Allows you to enter the name of the port. You can enter up to 32 alphanumeric or special characters. The port name is blank by default.
Line Length	Defines the distance (in feet) from backplane connection to the next termination point. Values are: 0 - 225 (default) 226 - 450

Table C-135 Field Descriptions for the DS-3 Properties Pane (continued)

Field	Description
State	Displays the status of the line. Values are: - IS—In Service - IS_AINS—In Service—Auto In Service Soak - OOS—Out of Service - OOS_MT—Out of Service—Maintenance
AINS Soak	Automatic in-service soak. The amount of valid input signal in <i>hh.mm</i> , after which the port is set in service by the software. The range is from 0 to 48 hours, in 15-minute increments.
AINS Soak Count Down	Displays the remaining time of valid input signal in <i>hh.mm</i> , after which the card becomes IS automatically. The range is from 0 to 48 hours, in 15-minute increments.
SF BER	Sets the signal fail bit error rate.
SD BER	Sets the signal degrade bit error rate.
Line Threshold 15 Minutes/1 Day	
Port Number	The port number (1 to 3).
CV-L	Coding violations line.
ES-L	Errored seconds line.
SES-L	Severely errored seconds line.
LOSS-L	Loss of signal seconds line.
Alarm Behavior	
Displays alarm profile information.	
Loopback	
Line Number	The line number.
State	Displays the status of the line. The line can be In Service (IS), In Service—Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service—Maintenance (OOS_MT). Note The line state must be OOS_MT before you can configure the loopback type.
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none).
Customer Info	
STS Number	Displays the STS number.
Customer ID	The customer ID.
Service ID	The service ID.

STS-1 Path

The STS-1 Properties pane allows you to view and update XTC STS-1 path information.

Table C-136 *Field Descriptions for the STS-1 Path Properties Pane*

Field	Description
Threshold 15 Min/1 Day	
STS Number	The synchronous transport signal number.
CV-P	Coding violations path.
ES-P	Errored seconds path.
SES-P	Severely errored seconds path.
UAS-P	Unavailable seconds path.
FC-P	Failure count path.
PPJC-Pdet	Positive pointer justification count, STS path detected.
NPJC-Pdet	Negative pointer justification count, STS path detected.
PPJC-Pgen	Positive pointer justification count, STS path generated.
NPJC-Pgen	Negative pointer justification count, STS path generated.
PJCS-Pdet	Positive pointer justification count, STS path detected.
PJCS-Pgen	Positive pointer justification count, STS path generated.
PJC-Diff	The sum of the absolute values of differences between positive transmitted and received, and negative transmitted and received. The important metric on pointer justification is not the exact counts, but how many were absorbed.
Customer Info	
STS Number	The STS number.
Customer ID	The user-defined customer ID number.
Service ID	The user-defined service ID number.

VT1.5 Path

The VT1.5 Path Properties pane allows you to view and update XTC VT1.5 path information.

Table C-137 *Field Descriptions for the VT1.5 Path Properties Pane*

Field	Description
Threshold 15 Minutes/1 Day STS Term	
STS Number	The synchronous transport signal number.
CV-P	Coding violations path.
ES-P	Errored seconds path.
SES-P	Severely errored seconds path.
UAS-P	Unavailable seconds path.
FC-P	Failure count path.
Threshold 15 Minutes/1 Day VT Term	

Table C-137 *Field Descriptions for the VT1.5 Path Properties Pane (continued)*

Field	Description
VT Number	The virtual terminal number.
CV-V	Coding violations–VT path.
ES-V	Errored seconds–VT path.
SES-V	Severely errored seconds–VT path.
UAS-V	Unavailable seconds–VT path.
Customer Info	
VT Number	The virtual terminal number.
Customer ID	The user-defined customer ID number.
Service ID	The user-defined service ID number.

Alarm Extenders

The Alarm Extenders Properties pane allows you view XTC alarm information. The Alarm Extenders Properties pane contains the following tabs:

- [External Alarms Tab, page C-90](#)
- [External Controls Tab, page C-91](#)

External Alarms Tab

The External Alarms tab allows you to view and update external alarm information.

Table C-138 *Field Descriptions for the External Alarms Tab*

Field	Description
Input Number	The alarm input number.
Enabled	Check to activate the fields for the alarm input number.
Alarm Type	Choose an alarm type from the provided list.
Severity	Choose a severity from the list.
Raised When	Choose the contact condition that will trigger the alarm in CTC.
Virtual Wire	To assign the external device to a virtual wire, choose a virtual wire from the list, or choose None if no assignment is required.
Description	A default description is provided in this line for every external alarm that is enabled.
Raised	Indicates if an alarm has been raised.
Contact Status	Indicates the current status of the contact.

External Controls Tab

The External Controls tab allows you to view and update external controls.

Table C-139 *Field Descriptions for the External Controls Tab*

Field	Description
Control Number	The control number.
Enabled	Check to activate the fields for the control number.
Control Type	Choose a control type from the provided list.
Trigger Type	Choose a trigger type: a local minor, major, or critical alarm; a remote minor, major, or critical alarm; or a virtual wire activation.
Description	Enter a description.
Current State	The current state of the control.
Auto State	The auto state of the control.
Contact Setting	The current contact setting.

Protection

The Protection Properties pane allows you to view and update XTC protection group information.

Table C-140 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection group.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and update J1 path trace information.

Table C-141 *Field Descriptions for the J1 Path Trace Properties Pane*

Field	Description
Port Number	Displays the port number.
STS Number	Displays the STS number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Mismatch	Indicates whether there is a mismatch in the C2 byte received.
Vcat Member Number	Displays the virtual concatenation (VCAT) member number.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

DWDM Cards

This section describes the following DWDM cards supported within Prime Optical:

- [Slot Properties—2.5G_DM, page C-93](#)
- [Slot Properties—2.5G_DMP, page C-104](#)
- [Slot Properties—2.5G Multirate Transponder, page C-115](#)
- [Slot Properties—32DMX, page C-132](#)
- [Slot Properties—32DMX-L, page C-138](#)
- [Slot Properties—32DMX_O, page C-144](#)
- [Slot Properties—40-DMX-C, page C-149](#)
- [Slot Properties—32MUX_O, page C-155](#)
- [Slot Properties—40-MUX-C, page C-159](#)
- [Slot Properties—32WSS, page C-165](#)
- [Slot Properties—32WSS-L, page C-172](#)
- [Slot Properties—40-WSS-C, page C-179](#)
- [Slot Properties—40-WXC-C, page C-186](#)
- [Slot Properties—80-WXC-C, page C-193](#)
- [Slot Properties—40G-MXP-C, page C-204](#)
- [Slot Properties—40E-MXP-C, page C-217](#)
- [Slot Properties—40G-TXP-C, page C-229](#)
- [Slot Properties—40E-TXP-C, page C-241](#)
- [Slot Properties—4MD_xx.x, page C-253](#)
- [Slot Properties—AD_1B_xx.x, page C-257](#)
- [Slot Properties—AD_1C_xx.x, page C-262](#)
- [Slot Properties—AD_2C_xx.x, page C-266](#)
- [Slot Properties—AD_4B_xx.x, page C-271](#)
- [Slot Properties—AD_4C_xx.x, page C-276](#)
- [Slot Properties—ADM-10G, page C-280](#)
- [Slot Properties—GE_XP and 10GE_XP, page C-297](#)
- [Slot Properties—MXP_2.5G_10E, page C-335](#)
- [Slot Properties—MXP_2.5G_10G, page C-350](#)
- [Slot Properties—MXP_MR_10DME, page C-360](#)

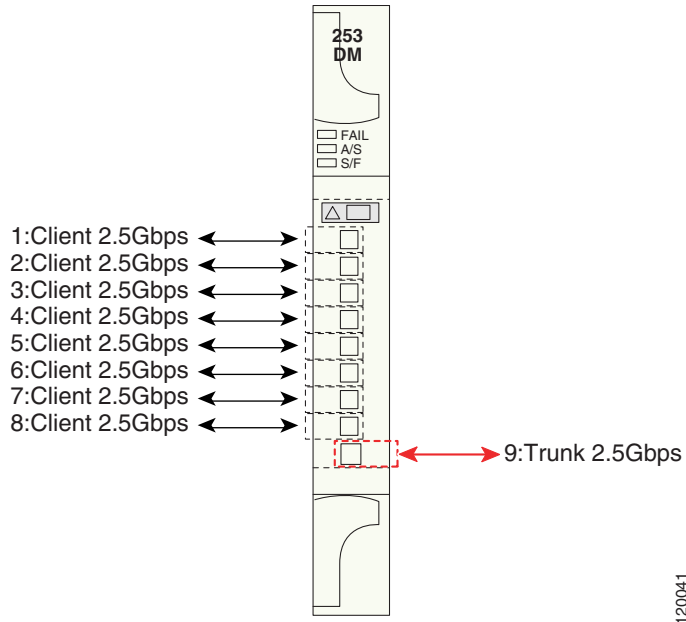
- Slot Properties—OPT-AMP-17-C and OPT-AMP-C, page C-377
- Slot Properties—OPT-AMP-L, page C-387
- Slot Properties—OPT-RAMP-C and OPT-RAMP-CE, page C-393
- Slot Properties—OPT-BST, page C-401
- Slot Properties—OPT-BST-E, page C-407
- Slot Properties—OPT-BST-L, page C-412
- Slot Properties—OPT-EDFA-17 and OPT-EDFA-24, page C-418
- Slot Properties—OPT-PRE, page C-424
- Slot Properties—OSC-CSM, page C-429
- Slot Properties—OTU2_XP, page C-435
- Slot Properties—PSM, page C-455
- Slot Properties—RAMAN-CTP and RAMAN-COP, page C-461
- Slot Properties—SMR-C, page C-467
- Slot Properties—T-DCU (TDC-CC and TDC-FC), page C-479
- Slot Properties—TXP_MR_10E, page C-483
- Slot Properties—TXP_MR_10E_C, page C-506
- Slot Properties—TXP_MR_10G, page C-523
- Slot Properties—PTF_10GE_4, page C-533
- Slot Properties—AR_MXP, AR_XP and AR_XPE, page C-543
- Slot Properties—10x10G_LC, 100G_LC_C, and CFP_LC, page C-571
- Slot Properties—WSE, page C-596

Slot Properties—2.5G_DM

The slot properties pane displays information about the Cisco ONS 15454 SONET and ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The 2.5G-DM card is capable of translating client input GE, ESCON, FICON, 1G and 2G Fiber Channel, and IBM GDPS optical signal into an optical signal with an optical frequency on the 100-GHz spacing frequency grid according to ITU-T G.692. The datamux cards are GR-253 and G.957 compliant. This card supports 8 client interfaces utilizing SFP technology, and 32 ITU wavelengths are supported. Each card supports tunability over 4 wavelengths. The card is supported on ONS 15454 SONET and ONS 15454 SDH platforms.

The following figure shows the card faceplate.

Figure C-7 2.5G-DM Module

For the 2.5G_DM module, the slot properties pane displays the following properties: Module View, Identification, Card, PPM, Line, Loopback, Auto Laser Shutdown, Optical Thresh, Alarm Behavior, Protection, and Info.

**Note**

The properties shown depend on the NE configuration.

Module View

The Module View displays a graphic of the 2.5G_DM that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update 2.5G_DM identification information.

Table C-142 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.

Table C-142 *Field Descriptions for the Identification Properties Pane (continued)*

Field	Description
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Suppress Alarms	When checked, all alarms are suppressed for the port.

Card

The Card Properties pane allows you to view and update card information.

Table C-143 *Field Descriptions for the Card Properties Pane*

Field	Description
Card Mode	Allows you to select a card mode. Select from: • FC_GE—Allows you to select a multiscard Ether Switch group, a single-card Ether Switch group, or the Port Mapped mode for E-series cards. • Mixed—Supports 1G FC or GE traffic on port 1, and ESCON traffic on ports 5 through 8. • ESCON—Supports 8 ports of ESCON traffic.

PPM

The PPM Properties pane allows you to view and provision the PPM and the ports inside the PPM.

Table C-144 *Field Descriptions for the PPM Properties Pane*

Field	Description
Pluggable Port Modules (PPM)	
Pluggable Number	Displays the identifier of the plugin module.
Equipment Type	Displays the equipment type that the slot is provisioned for.

Table C-144 Field Descriptions for the PPM Properties Pane (continued)

Field	Description
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Actual Equipment Type	Displays the actual card that is installed in the slot. Values are single mode or multimode.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
User Code	Allows you to enter an ASCII string to identify the card. The user code is stored in nonvolatile memory so that it is not lost when the unit is moved or stored as a spare.
Product ID	Displays a plugin module ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Displays the port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the plugin module.
Alarm Profile	Sets the alarm profile for the card.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this plugin module and its port(s).
PPM	
Pluggable Number	Displays the identifier of the plugin module.
Equipment Type	Displays the plugin type that the port is provisioned for.

Provision Pluggable Dialog Box

Click the **Create** button to launch the Provision Pluggable dialog box. This dialog box allows you to provision the PPM and to create the ports inside this entity. See [Provision Pluggable Dialog Box, page C-25](#) for more information.

Line

The Line Properties pane allows you to configure line information. If the card is installed on an ONS 15454 SONET NE, the Properties pane contains the following tabs:

- [Section Trace Tab, page C-97](#)
- [SONET Tab, page C-97](#)
- [Section Thresh 15 Min/1 Day Tabs, page C-98](#)

- [Line Thresh 15 Min/1 Day Tabs, page C-98](#)
- [Wavelength Trunk Settings Tab, page C-99](#)
- [Client Tab, page C-99](#)
- [RMON Thresholds Tab, page C-100](#)
- [Distance Extension Tab, page C-101](#)
- [Enhanced FC/FICON ISL Tab, page C-101](#)

**Note**

If the card is installed on an ONS 15454 SDH NE, see the SDH Line section. The following information is the same if the payload is SDH on an ONS 15454 SONET NE.

Section Trace Tab

The Section Trace tab allows you to change the section trace settings for the 2.5G-DM card.

Table C-145 *Field Descriptions for the Section Trace Tab*

Field	Description
Port Number	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.

SONET Tab

The SONET tab allows you to view and change the SONET line settings for the 2.5G-DM module.

Table C-146 *Field Descriptions for the SONET Tab*

Field	Description
Port Number	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Administration State	The port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
SF BER	Sets the signal fail bit error rate.

Table C-146 *Field Descriptions for the SONET Tab (continued)*

Field	Description
SD BER	Sets the signal degrade bit error rate.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Type	Defines the port.
ProvidesSync	When checked, the card is provisioned as an NE timing reference.
EnableSyncMsg	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
SendDoNotUse	When checked, sends a do not use (DUS) message on the S1 byte.
Admin SSM	Overrides the synchronization status message (SSM) synchronization traceability unknown (STU) value. If the node does not receive an SSM signal, it defaults to STU.

Section Thresh 15 Min/1 Day Tabs

The Section Thresh 15 Min/1 Day tabs allow you to view and change 15-minute/1-day near-end section thresholds for the 2.5G_DM module.

Table C-147 *Field Descriptions for the Section Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
Port Number	Displays the port number.
CV-S	Displays the coding violations section.
ES-S	Displays the errored seconds section.
SES-S	Displays the severely errored seconds section.
SEFS-S	Displays the severely errored framing seconds section.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change 15-minute/1-day near- and far-end line thresholds for the 2.5G_DM module.

Table C-148 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
Port No.	The port number.
CV-L	Coding violations line.
ES-L	Errored seconds line.
SES-L	Severely errored seconds line.

Table C-148 Field Descriptions for the Line Thresh 15 Min/1 Day Tabs

Field	Description
UAS-L	Unavailable seconds line.
FC-L	Failure count line.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Wavelength Trunk Settings Tab

The Wavelength Trunk Settings tab allows you to change the wavelength and band settings for the 2.5G_DM card.

Table C-149 Field Descriptions for the Wavelength Trunk Settings Tab

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Wavelength	Allows you to provision the wavelength frequency. The Wavelength column lists the correct wavelengths, depending on the type of card and the band selected. Refer to the <i>Other Information</i> field in the Equipment Inventory table (Equipment Inventory Table for CTC-Based NEs, page 11-12) for details of wavelengths supported.
Band	The Band column reduces the number of selectable wavelengths (82/80 lambdas only). For this single-band card, the band value is fixed to C, and this value cannot be altered.

Client Tab

The Client tab allows you to provision PPM parameters for the 2.5G_DM card.

Table C-150 Field Descriptions for the Client Tab

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you enter a port name.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.

Table C-150 *Field Descriptions for the Client Tab (continued)*

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

RMON Thresholds Tab

The RMON Thresholds Properties pane allows you to view RMON thresholds for the 2.5G_DM module.

Table C-151 *Field Descriptions for the RMON Thresholds Tab*

Field	Description
Show all RMON Thresholds	When checked, shows all RMON thresholds.
Index Number	Displays the optical port number.
Slot	Displays the slot.

Table C-151 *Field Descriptions for the RMON Thresholds Tab (continued)*

Field	Description
Port	Displays the port.
Variable	Displays the Ethernet threshold variable. The variable depends on the card type.
Alarm Type	Displays the Ethernet threshold alarm type. Values are Rising, Falling, or Rising and Falling.
Sample Type	Displays the Ethernet threshold sample type. Values are Relative and Absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of any time period.
Sample Period (sec)	Displays the Ethernet threshold sample period, in seconds.
Rising Thresh	Displays a count of the number of times an alarm entry crosses the rising threshold and the entry generates an event.
Falling Thresh	Displays a count of the number of times an alarm entry crosses the falling threshold and the entry generates an event.

Distance Extension Tab

The Distance Extension tab allows you to enable the buffer-to-buffer extension between the client and the 2.5G_DM card in order to increase the DWDM distance without affecting the throughput.

Table C-152 *Field Descriptions for the Distance Extension Tab*

Field	Description
Port Number	Displays the port number. - Client interface: 1 to 8 - Trunk: 9
Enable Distance Extension	Allows end-to-end distances of up to 1600 km for 1 GFC and up to 800 km for 2 GFC.
Auto Detect Credits	Allows automatic detection of buffer credits for flow control.
Credits Available	Displays the number of credits available.
Autoadjust GFP Buffer Threshold	Allows the threshold of the generic framing procedure (GFP) buffer between two 2.5G_DM cards. This is automatically adjusted.
GFP Buffers Available	Displays the number of GFP buffers available between two 2.5G_DM cards.

Enhanced FC/FICON ISL Tab

The Enhanced FC/FICON ISL tab allows you to enable the field programmable gate array (FPGA) to drop duplicate frames.

Table C-153 *Field Descriptions for the Enhanced FC/FICON ISL Tab*

Field	Description
Port Number	Displays the port number.
Maximum Frame Size	Allows you to select the maximum frame size supported by the FICON/FC. Valid range is from 2148 to 2172.

Loopback

The Loopback Properties pane allows you to view and update 2.5G_DM loopback information.

Table C-154 Field Descriptions for the Loopback Properties Pane

Field	Description
Port Number	Displays the port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-155 Field Descriptions for the Auto Laser Shutdown Properties Pane

Field	Description
Port Number	Displays the port number.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the received laser pulse duration, in seconds. The range is from 2.0 to 100.0 seconds.
Rec. Pulse Int. (sec)	Allows you to set the received laser pulse interval, in seconds. The range is from 60 to 300 seconds.
Status	Displays the current laser status. Values are Shut Down or Not Shut Down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

Optical Thresh

The Optical Thresh Properties pane allows you to view and provision optical threshold settings.

TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs

The TCA 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert and generation.

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-156 *Field Descriptions for the TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs*

Field	Description
Port Number	Displays the port number.
Laser Bias High (%)	Displays the upper laser bias threshold.
Rx Power High (dBm)	Displays the upper receive power threshold.
Rx Power Low (dBm)	Displays the lower receive power threshold.
Tx Power High (dBm)	Displays the upper transmit power threshold.
Tx Power Low (dBm)	Displays the lower transmit power threshold.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update 2.5G_DM alarm profile information.

Table C-157 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Protection

The Protection Properties pane allows you to view and update 2.5G_DM protection group information.

Table C-158 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection groups and allows you to execute switch commands.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the 2.5G_DM card.

Table C-159 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of measure (when applicable) of the object that is inventoried.

**Note**

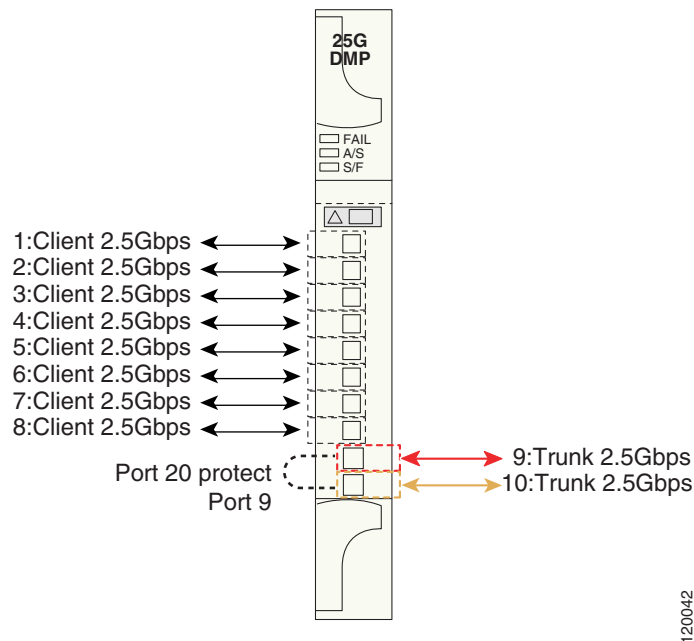
See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—2.5G_DMP

The slot properties pane displays information about the Cisco ONS 15454 SONET and ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The 2.5G-DMP card is capable of translating client input GE, ESCON, FICON, 1G and 2G Fiber Channel, and IBM GDPS optical signal into an optical signal with an optical frequency on the 100 GHz spacing frequency grid according to ITU-T G.692. The datamux cards are GR-253 and G.957 compliant. This card supports eight client interfaces utilizing SFP technology and protection on the trunk side. 32 ITU wavelengths are supported. Each card supports tunability over four wavelengths. This card is supported on ONS 15454 SONET and ONS 15454 SDH platforms.

The following figure shows the card faceplate.

Figure C-8 2.5G-DMP Module

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For the 2.5G_DMP module, the slot properties pane displays the following properties: Module View, Identification, Card, PPM, Line, Loopback, Auto Laser Shutdown, Optical Thresh, Alarm Behavior, Protection, and Info.

**Note**

Properties shown depend on whether the NE is a SONET or an SDH node.

Module View

The Module View displays a graphic of the 2.5G_DMP that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update 2.5G_DMP identification information.

Table C-160 **Field Descriptions for the Identification Properties Pane**

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Suppress Alarms	When checked, all alarms are suppressed for the port.

Card

The Card Properties pane allows you to view and update card information.

Table C-161 Field Descriptions for the Card Properties Pane

Field	Description
Card Mode	Allows you to select a card mode. Select from: - FC_GE—Allows you to select a multiscard Ether Switch group, a single-card Ether Switch group, or the Port Mapped mode for E-series cards. - Mixed—Supports 1G FC or GE traffic on port 1, and ESCON traffic on ports 5 through 8. - ESCON—Supports 8 ports of ESCON traffic.

PPM

The PPM Properties pane allows you to view and provision the PPM and the ports inside the PPM.

Table C-162 Field Descriptions for the PPM Properties Pane

Field	Description
Pluggable Port Modules (PPM)	
Pluggable Number	Displays the identifier of the plugin module.
Equipment Type	Displays the equipment type that the slot is provisioned for.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Actual Equipment Type	Displays the actual card that is installed in the slot. Values are single mode or multimode.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
User Code	Allows you to enter an ASCII string to identify the card. The user code is stored in nonvolatile memory so that it is not lost when the unit is moved or stored as a spare.
Product ID	Displays a plugin module ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Displays the port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the plugin module.

Table C-162 *Field Descriptions for the PPM Properties Pane (continued)*

Field	Description
Alarm Profile	Sets the alarm profile for the card.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this plugin module and its port(s).
PPM	
Pluggable Number	Displays the identifier of the plugin module.
Equipment Type	Displays the plugin type that the port is provisioned for.

Provision Pluggable Dialog Box

Click the **Create** button to launch the Provision Pluggable dialog box. This dialog box allows you to provision the PPM and to create the ports inside this entity. See [Provision Pluggable Dialog Box, page C-25](#) for more information.

Line

The Line Properties pane allows you to configure line information. If the card is installed on an ONS 15454 SONET NE, the Properties pane contains the following tabs:

- [Section Trace Tab, page C-107](#)
- [SONET Tab, page C-108](#)
- [Section Thresh 15 Min/1 Day Tabs, page C-108](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-109](#)
- [Wavelength Trunk Settings Tab, page C-109](#)
- [Client Tab, page C-109](#)
- [RMON Thresholds Tab, page C-111](#)
- [Distance Extension Tab, page C-112](#)
- [Enhanced FC/FICON ISL Tab, page C-112](#)



Note

If the card is installed on an ONS 15454 SDH NE, see the SDH Line section. The following information is the same if the payload is SDH on an ONS 15454 SONET NE.

Section Trace Tab

The Section Trace tab allows you to change the section trace settings for the 2.5G_DMP card.

Table C-163 *Field Descriptions for the Section Trace Tab*

Field	Description
Port Number	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.

Table C-163 *Field Descriptions for the Section Trace Tab (continued)*

Field	Description
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.

SONET Tab

The SONET tab allows you to view and change the SONET line settings for the 2.5G-DMP module.

Table C-164 *Field Descriptions for the SONET Tab*

Field	Description
Port Number	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
SF BER	Sets the signal fail bit error rate.
SD BER	Sets the signal degrade bit error rate.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).

Section Thresh 15 Min/1 Day Tabs

The Section Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day near-end section thresholds of the 2.5G_DMP card.

Table C-165 *Field Descriptions for the Section Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
Port Number	Displays the port number.
CV-S	Displays the coding violations section.
ES-S	Displays Errored seconds section.
SES-S	Displays Severely errored seconds section.

Table C-165 *Field Descriptions for the Section Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
SEFS-S	Displays Severely errored framing seconds section.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day near- and far-end line thresholds of the 2.5G_DMP card.

Table C-166 *Field Descriptions for the Line Thresh 15 Min/1 Day Tab*

Field	Description
Near End, Far End	
Port No.	The port number.
ES-L	Errored seconds line
SES-L	Severely errored seconds line.
CV-L	Coding violations line.
UAS-L	Unavailable seconds line.
FC-L	Failure count line.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Wavelength Trunk Settings Tab

The Wavelength Trunk Settings tab allows you to change the wavelength and band settings for the 2.5G_DMP card.

Table C-167 *Field Descriptions for the Wavelength Trunk Settings Tab*

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Wavelength	Allows you to provision the wavelength frequency. The Wavelength column lists the correct wavelengths, depending on the type of card and the band selected. Refer to the <i>Other Information</i> field in the Equipment Inventory table for details of wavelengths supported. See Equipment Inventory Table for CTC-Based NEs , page 11-12.
Band	The Band column reduces the number of selectable wavelengths (82/80 lambdas only). For this single-band card, the band value is fixed to C, and this value cannot be altered.

Client Tab

The Client tab allows you to provision PPM parameters for the 2.5G_DMP card.

Table C-168 **Field Descriptions for the Client Tab**

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to enter a port name.
Administration State	The port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.

Table C-168 *Field Descriptions for the Client Tab (continued)*

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

RMON Thresholds Tab

The RMON Thresholds tab allows you to view, create, and delete RMON threshold settings for the 2.5G_DMP card.

Table C-169 *Field Descriptions for the RMON Thresholds Tab*

Field	Description
Index Number	Displays the optical port number.
Slot	Displays the slot.
Port	Displays the port.

Table C-169 Field Descriptions for the RMON Thresholds Tab (continued)

Field	Description
Variable	Displays the Ethernet threshold variable. The variable depends on the card type.
Alarm Type	Displays the Ethernet threshold alarm type. Values are Rising, Falling, or Rising and Falling.
Sample Type	Displays the Ethernet threshold sample type. Values are Relative and Absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of any time period.
Sample Period (sec)	Displays the Ethernet threshold sample period, in seconds.
Rising Thresholds	Displays a count of the number of times an alarm entry crosses the rising threshold and the entry generates an event.
Falling Thresholds	Displays a count of the number of times an alarm entry crosses the falling threshold and the entry generates an event.
Create	Click the Create button to create an RMON threshold.
Delete	Select an RMON threshold from the list displayed and click the Delete button.

Distance Extension Tab

The Distance Extension tab allows you to enable the buffer-to-buffer extension between the client and the 2.5G_DMP card in order to increase the DWDM distance without affecting the throughput.

Table C-170 Field Descriptions for the Distance Extension Tab

Field	Description
Port Number	Displays the port number. - Client Interface: 1 to 8 - Trunk: 9 to 10
Enable Distance Extension	Allows end-to-end distances of up to 1600 km for 1 GFC and up to 800 km for 2 GFC.
Auto Detect Credits	Allows automatic detection of buffer credits for flow control.
Credits Available	Displays the number of credits available.
Autoadjust GFP Buffer Threshold	Allows the threshold of the GFP buffer between two 2.5G_DMP cards. This is automatically adjusted.
GFP Buffers Available	Displays the number of GFP buffers available between two 2.5G_DMP cards.

Enhanced FC/FICON ISL Tab

The Enhanced FC/RCON ISL tab allows you to enable the FCGA to drop duplicate frames.

Table C-171 Field Descriptions for the Enhanced FC/FICON ISL Tab

Field	Description
Port Number	Displays the port number.
Maximum Frame Size	Allows you to select the maximum frame size supported by the FICON/FC. Valid range is from 2148 to 2172.

Loopback

The Loopback Properties pane allows you to view and update 2.5G_DMP loopback information.

Table C-172 Field Descriptions for the Loopback Properties Pane

Field	Description
Port Number	Displays the port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-173 Field Descriptions for the Auto Laser Shutdown Properties Pane

Field	Description
Port Number	Displays the port number.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the received laser pulse duration, in seconds. The range is from 2.0 to 100.0 seconds.
Rec. Pulse Int. (sec)	Allows you to set the received laser pulse interval, in seconds. The range is from 60 to 300 seconds.
Status	Displays the current laser status. Values are Shut Down or Not Shut Down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

Optical Thresh

The Optical Thresh Properties pane allows you to view and provision optical threshold settings. The properties pane displays the [TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs](#), [page C-113](#).

TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs

The TCA 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert and generation.

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-174 *Field Descriptions for the TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs*

Field	Description
Port Number	Displays the port number.
Laser Bias High (%)	Displays the upper laser bias threshold.
Rx Power High (dBm)	Displays the upper receive power threshold.
Rx Power Low (dBm)	Displays the lower receive power threshold.
Tx Power High (dBm)	Displays the upper transmit power threshold.
Tx Power Low (dBm)	Displays the lower transmit power threshold.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update 2.5G_DMP alarm profile information.

Table C-175 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Protection

The Protection Properties pane allows you to view and update 2.5G_DMP protection group information.

Table C-176 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection groups and allows you to execute switch commands.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the 2.5G_DMP card.

Table C-177 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of measure (when applicable) of the object that is inventoried.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—2.5G Multirate Transponder

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The 2.5-Gb/s multirate transponder cards operate on the ITU grid and provide the ONS 15454 SONET and ONS 15454 SDH with enhanced economics in metro DWDM solutions. The multirate transponder cards provide a 2R/3R transponder functionality over a bit rate of 100 Mb/s to 2.5 Gb/s. The cards also provide a single-mode fiber DWDM interface. Multirate transponder cards use pluggable small form factor client interfaces. The cards translate the client input optical signal into an optical signal with an optical frequency on the spacing frequency grid according to ITU-T G.692. The cards are GR-253 and G.957 compliant.

There are two versions of the multirate 2.5G transponder card:

- Multirate 2.5G transponder, nonfiber-protected (TXP_MR_2.5G_xx.x)
- Multirate 2.5G transponder, fiber-protected (TXPP_MR_2.5G_xx.x)

Prime Optical supports DVB-ASI and ISC1 payloads on TXP_MR_2.5G and TXPP_MR_2.5G cards. Using these payloads, you can:

- Manage L1 circuits and links with endpoints.
- Manage historical PM data and alarms related to the client payloads for TXP-MR-2.5G and TXPP-MR-2.5G cards.
- Retrieve and set RMON thresholds.

Perform the following steps to provision the payloads:

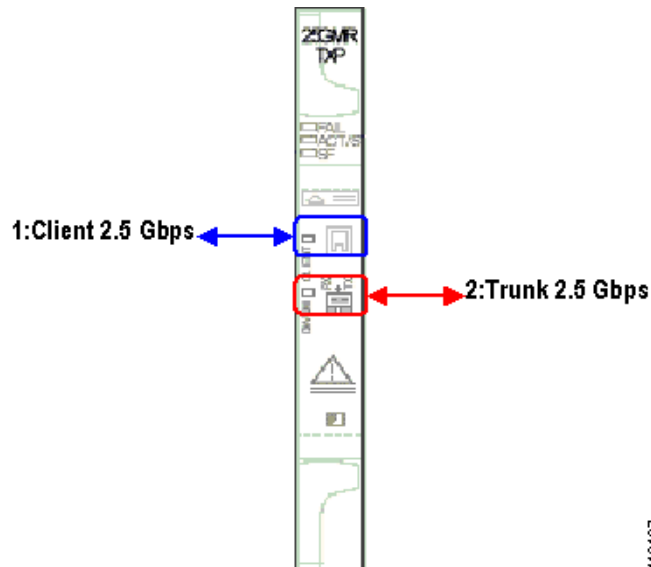
-
- Step 1** Click the **OTN Properties** pane.
- Step 2** Disable FEC and G709 OTN. If G709 is not disabled, PPM cannot be enabled.
- Step 3** Click the **PPM Properties** pane and create a PPM for port 1.
- Step 4** Provision the rate DVB-ASI or ISC1 by selecting the appropriate rate in the **Port Rate** drop-down list.
-

**Note**

When using protection groups, you can provision only the working port.

The following figure shows the multirate 2.5G transponder, nonfiber-protected (TXP_MR_2.5G_xx.x) card faceplate.

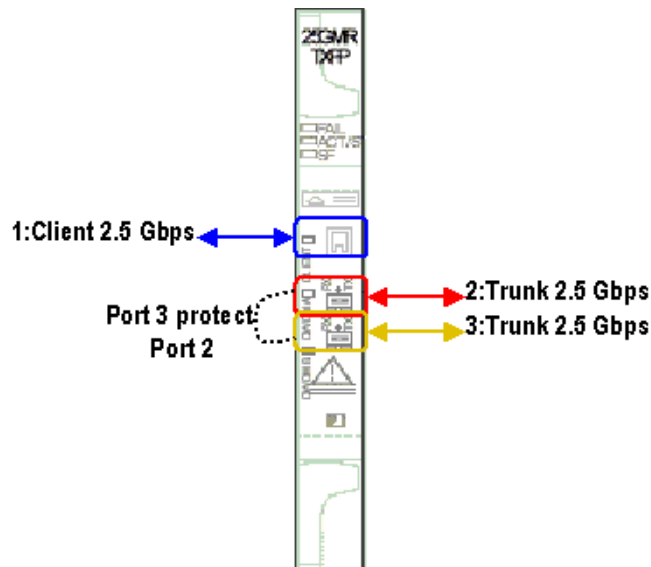
Figure C-9 TXP_MR_2.5G_xx.x Module



112187

The following figure shows the multirate 2.5G transponder, fiber-protected (TXPP_MR_2.5G_xx.x) card faceplate.

Figure C-10 TXPP_MR_2.5G_xx.x Module



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For the 2.5G Multirate Transponder, the slot properties pane displays the following properties: Module View, Identification, Card, PPM, Line, OTN, Loopback, Auto Laser Shutdown, Optical Thresh, Alarm Behavior, Protection, and Info. The properties shown depend on the NE configuration.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-178 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Admin State	Displays the admin state of the card.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Card

The Card Properties pane allows you to view and update card information.

Table C-179 Field Descriptions for the Card Properties Pane

Field	Description
Framing Type	<i>Display only.</i> The framing type is unframed.
Termination Mode	Allows you to set the mode of termination. The termination mode can be transparent, multiplexer section (MS), or regeneration section (RS). The Termination Mode is displayed as transparent and is read-only if you configured DVB-ASI or ISC1.
Regeneration Peer Slot	Allows you to select like cards so that you can configure a regeneration peer group.
Regeneration Group Name	(Optional) Allows you to set the name of the regeneration group.

PPM

The PPM Properties pane allows you to view and provision the PPM and the ports inside the PPM.

Table C-180 Field Descriptions for the PPM Properties Pane

Field	Description
Pluggable Number	Displays the identifier of the plugin module.
Actual Equipment Type	Displays the actual plugin module that is installed in the slot.
Equipment State	Displays the equipment state of the plugin module.
Admin State	Displays the status of the plugin module: In Service (IS); Out of Service–Maintenance (OOS_MT); Unlocked; or Locked, Maintenance. Note You can edit the Admin State value only for actual equipment, not preprovisioned equipment.
Service State	Displays the service state of the plugin module. Values are: - Unknown—The state cannot be determined. - Not Installed—The plugin module is not installed. - Out of Service—The plugin module is installed but is not commissioned and is not carrying traffic. - In Service—The plugin module is commissioned and carrying traffic.

Table C-181 Description of Ports Configured in the PPM

Field	Description
Port	Displays the port configured in the PPM.
Rate	Displays the rate provisioned for the port.

Provision Pluggable Dialog Box

Click the **Create** button to launch the Provision Pluggable dialog box. This dialog box allows you to provision the PPM and to create the ports inside this entity. See [Provision Pluggable Dialog Box, page C-25](#) for more information.

Line

The Line Properties pane allows you to configure line information.

If the card is installed on an ONS 15454 SONET NE, the Properties pane contains the following tabs:

- [Line Config Tab, page C-119](#)
- [Section Trace Tab, page C-120](#)
- [SONET Line Tab, page C-121](#)
- [Section Thresh 15 Min/1 Day Tabs, page C-122](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-123](#)
- [Wavelength Trunk Settings Tab, page C-123](#)

If the card is installed on an ONS 15454 SDH NE, the Properties pane contains the following tabs:

- [Line Config Tab, page C-123](#)
- [Section Trace Tab, page C-125](#)
- [SDH Line Tab, page C-125](#)
- [RS Thresh 15 Min/1 Day Tabs, page C-126](#)
- [MS Thresh 15 Min/1 Day Tabs, page C-127](#)
- [Wavelength Trunk Settings Tab, page C-127](#)

Line Config Tab

The Line Config tab allows you to provision PPM parameters of a multirate 2.5G transponder card.

Table C-182 **Field Descriptions for the Line Config Tab**

Field	Description
Port Number	Displays the port number.
Port Name	Allows you to add a port name.
Administration State	The port administration state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.

Table C-182 *Field Descriptions for the Line Config Tab (continued)*

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

Section Trace Tab

The Section Trace tab allows you to change the section trace settings for the card.

Table C-183 *Field Descriptions for the Section Trace Tab*

Field	Description
Port No.	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.

Table C-183 *Field Descriptions for the Section Trace Tab (continued)*

Field	Description
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.

SONET Line Tab

The SONET Line tab allows you to view and change the SONET line settings of the card.

Table C-184 *Field Descriptions for the SONET Line Tab*

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Administration State	The port administration state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Type	Defines the port as SONET or SDH.

Table C-184 *Field Descriptions for the SONET Line Tab (continued)*

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

Section Thresh 15 Min/1 Day Tabs

The Section Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day section threshold information for the card.

Table C-185 *Field Descriptions for the Section Thresh 15 Min/1 Day Tabs*

Field	Description
Port No.	Displays the port number.
CV-S	Displays the coding violations section.
ES-S	Displays the errored seconds section.

Table C-185 *Field Descriptions for the Section Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
SES-S	Displays the severely errored seconds section.
SEFS-S	Displays the severely errored framing seconds section.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day line threshold information for the card.

Table C-186 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
Port No.	Displays the optical port number.
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.
CV-L	Displays the coding violations line.
UAS-L	Displays the unavailable seconds line information.
FC-L	Displays the failure count line.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Wavelength Trunk Settings Tab

The Wavelength Trunk Settings tab allows you to change the wavelength and band settings for the card.

Table C-187 *Field Descriptions for the Wavelength Trunk Settings Tab*

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Wavelength	Allows you to provision the wavelength frequency. The Wavelength column lists the correct wavelengths, depending on the type of card and the band selected. Refer to the <i>Other Information</i> field in the Equipment Inventory table for details of wavelengths supported. See Equipment Inventory Table for CTC-Based NEs, page 11-12 .
Band	The Band column reduces the number of selectable wavelengths (82/80 lambdas only). When the card is plugged in, the selection is disabled and the correct value of the band is displayed. When the card is preprovisioned, you can select either L- or C-band.

Line Config Tab

The Line Config tab allows you to provision PPM parameters of a multirate 2.5G transponder card.

Table C-188 Field Descriptions for the Line Config Tab

Field	Description
Port Number	Displays the port number.
Port Name	Allows you to add a port name.
Administration State	The port administration state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

Section Trace Tab

The Section Trace tab allows you to change the section trace settings for the card.

Table C-189 *Field Descriptions for the Section Trace Tab*

Field	Description
Port No.	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.

SDH Line Tab

The SDH Line tab allows you to view and change the SDH line settings of the card.

Table C-190 *Field Descriptions for the SDH Line Tab*

Field	Description
Port No.	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Administration State	The port administration state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
ALS Mode	Allows you to select the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Type	Defines the port as SONET or SDH.

Table C-190 Field Descriptions for the SDH Line Tab (continued)

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

RS Thresh 15 Min/1 Day Tabs

The RS Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day regeneration section threshold for the card.

Table C-191 Field Descriptions for the RS Thresh 15 Min/1 Day Tab

Field	Description
Port No.	The port number.
EB-RS	Errored blocks regenerator section.
ES-RS	Errored seconds regenerator section.

Table C-191 *Field Descriptions for the RS Thresh 15 Min/1 Day Tab (continued)*

Field	Description
SES-RS	Severely errored seconds regenerator section.
BBE-RS	Background block errors regenerator section.
UAS-RS	Unavailable seconds regenerator section.
Reset to Defaults button	Resets the value of the port parameters to the default value.

MS Thresh 15 Min/1 Day Tabs

The MS Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day near- and far-end multiplex section threshold for the card.

Table C-192 *Field Descriptions for the MS Thresh 15 Min/1 Day Tabs*

Field	Description
Port No.	The port number.
EB-MS	Errored blocks multiplexer section.
ES-MS	Errored seconds multiplexer section.
SES-MS	Severely errored seconds multiplexer section.
BBE-MS	Background block errors multiplexer section.
UAS-MS	Unavailable seconds multiplexer section.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Wavelength Trunk Settings Tab

The Wavelength Trunk Settings tab allows you to change the wavelength and band settings for the card.

Table C-193 *Field Descriptions for the Wavelength Trunk Settings Tab*

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Wavelength	Allows you to provision the wavelength frequency. The Wavelength column lists the correct wavelengths, depending on the type of card and the band selected. Refer to the <i>Other Information</i> field in the Equipment Inventory table for details of wavelengths supported. See Equipment Inventory Table for CTC-Based NEs, page 11-12 .
Band	The Band column reduces the number of selectable wavelengths (82/80 lambdas only). When the card is plugged in, the selection is disabled and the correct value of the band is displayed. When the card is preprovisioned, you can select either L- or C-band.

OTN

The OTN Properties pane allows you to change the line optical transport network (OTN) settings for multirate transponder cards. If you provisioned the payloads DVB-ASI or ISC1, all other subtabs except OTN Line are blank.


Note

OTN is supported only for trunk ports.

Table C-194 Field Descriptions for the OTN Properties Pane

Field	Description
G.709 Thresh 15 Min/1 Day	
SM (OTUK) - Near End, Far End	
Port No.	The port number.
BBE-SM	Background block errors.
ES-SM	Errored seconds.
SES-SM	Severely errored seconds.
UAS-SM	Unavailable seconds.
FC-SM	Failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.
PM (ODUK) Near End, Far End	
Port Number	Displays the optical port number.
BBE-PM	Displays the background block errors.
ES-PM	Displays the errored seconds.
SES-PM	Displays the severely errored seconds.
UAS-PM	Displays the unavailable seconds.
FC-PM	Displays the failure count.
FEC Thresh 15 Min/1 Day	
Port Number	Displays the port number.
Bit Errors Corrected	Displays the bit errors corrected in 15-minute intervals.
Uncorrectable Words	Displays the uncorrectable words in 15-minute intervals.
Trail Trace Identifier	
Port No.	The port number.
Level	Displays the trail trace identifier level (Section or Path).
Trace Mode	Allows you to set the trace mode (Off or Manual).
Disable FDI on TTIM	Allows you to disable forward defect indication (FDI) for trail trace identifier mismatch alarms.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string.
Current Received String	Displays the current received string.
OTN Line	

Table C-194 Field Descriptions for the OTN Properties Pane (continued)

Field	Description
Port No.	The port number.
G.709 OTN	Disables or enables the G.709 OTN feature. If you provisioned the payloads DVB-ASI or ISC1, this field displays the current status of the G.709 OTN feature: enabled or disabled.
FEC	Disables or enables forward error correction. If you provisioned the payloads DVB-ASI or ISC1, this field displays the status of forward error correction: enabled or disabled. Note OTN must be enabled before you can enable FEC.
SF BER	The signal fail bit error rate.
SD BER	The signal degrade bit error rate.

Loopback

The Loopback Properties pane allows you to view and update card loopback information.

Table C-195 Field Descriptions for the Loopback Properties Pane

Field	Description
Port No.	Displays the port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown (ALS) parameters.

Table C-196 Field Descriptions for the Auto Laser Shutdown Properties Pane

Field	Description
Port No.	Displays the port number.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the received laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int. (sec)	Allows you to set the received laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Status	Displays the current laser status. Values are Shut Down or Not Shut Down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

Optical Threshold

The Optical Threshold Properties pane allows you to view and update optical threshold information.

Table C-197 Field Descriptions for the Optical Threshold Properties Pane

Field	Description
Warning 15 Min/1 Day and Alarm Threshold	
Port Number	Displays the port number.
Tx Power High	Displays the upper transmit power threshold. Note Tx Power High is not supported on trunk ports.
Tx Power Low	Displays the lower transmit power threshold. Note Tx Power Low is not supported on trunk ports.
Rx Power High	Displays the upper receive power threshold.
Rx Power Low	Displays the lower receive power threshold.
Laser Bias High	Displays the upper laser bias threshold.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-198 *Field Descriptions for the Alarm Behavior*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Protection

The Protection Properties pane allows you to view and update card protection group information.



Note

When using protection groups, you can provision only the working port.

Table C-199 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays a list of available protection groups. Y-cable (TXP_MR_2.5G) and splitter (TXPP_MR_2.5G) protection groups are supported.
Protection Group Details	Displays details about the selected protection groups, such as which port is the protected port and which port is the working port. Also allows you to execute switch commands.
Switch Commands	Allows you to perform a manual switch, perform a forced switch, or clear the existing command switching.
Inhibit Switching	Allows you to inhibit unlock switching, lock-out switching, or lock-on switching.

Info

The Info Properties pane allows you to view nominal operating values set for the card during manufacturing.

Table C-200 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of measure (when applicable) of the object that is inventoried.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—32DMX

The slot properties pane displays information about the 32-channel demultiplexer that is selected in the NE Explorer. Use this properties pane to change the card properties.

The 32-Channel Demultiplexer card (32DMX) is a single-slot optical demultiplexer. The card receives an aggregate optical signal on its COM RX port and demultiplexes it into 32 100-GHz-spaced channels.

The 32DMX includes these high-level features:

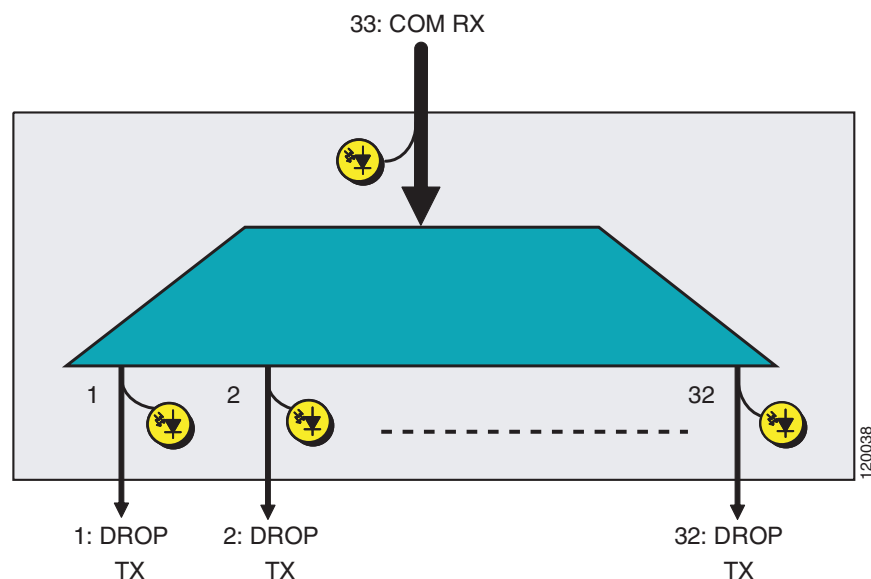
- **COM RX port**—The input port for the aggregate optical signal being demultiplexed. This port is supported by both a VOA for optical power regulation and a photodiode for optical power monitoring.
- **DROP ports (1-32)**—On its output, the 32DMX provides 32 drop ports that are typically used for dropping channels within the ROADM node. Each drop port has a photodiode for optical power monitoring. Unlike the two-slot 32DMX-O demultiplexer, the drop ports on the 32DMX do not have a VOA per channel for optical power regulation.

**Note**

The 32DMX card works in conjunction with the 32WSS card to create a software-controlled NE with ROADM functionality.

The following figure shows the block diagram.

Figure C-11 32DMX Module



For the 32DMX module, the slot properties pane displays the following properties: Module View, Identification, Optical Channel, Optical Line, Inventory, and Alarm Behavior.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-201 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Channel

The Optical Channel Properties pane allows you to view and update optical channel threshold information. The Properties pane contains the following tabs:

- Parameters Tab, page C-134

- [Warning Thresh 15 Min/1 Day Tabs, page C-135](#)
- [Alarm Thresh Tab, page C-135](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors.

Table C-202 **Field Descriptions for the Parameters Tab**

Field	Description
Optical Connector 1 through Optical Connector 5	
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Administration State	The port administration state. It can be: • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Power Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) is the only function that can modify this value.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.
VOA Power Calib.	Allows you to modify the optical output power to the VOA, if necessary.
VOA Attenuation Ref.	Shows the attenuation value of the VOA when the VOA is set in attenuation mode. ANS and APC are the only functions that can modify this value.
Actual Wavelength	Shows the wavelength specified by the manufacturing data. This field cannot be set manually.
Expected Wavelength	Shows the value of the expected wavelength for the given port. The wavelengths for these ports are not provisionable.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
Power ADD	Displays the input power of the channel that is in ADD.
Path Value	Select if the path is in use (Active) or not (Standby) for each channel in ADD.

Warning Thresh 15 Min/1 Day Tabs

The Warning Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-203 *Field Descriptions for the Warning Thresh 15 Min/1 Day Tabs*

Field	Description
Optical Connector 1 through Optical Connector 5	
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Power Low (dBm)	Allows you to set the low power settings.
Power High (dBm)	Allows you to set the high power settings.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-204 *Field Descriptions for the Alarm Thresh Tab*

Field	Description
Optical Connector 1 through Optical Connector 5	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure settings.
Power Degrade High	Allows you to set the high power settings.
Power Degrade Low	Allows you to set the low power settings.
Power Add Fail Low	Displays the threshold of low power failure on the add channel port. The crossing of this threshold generates an LOS-P alarm.

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-135](#)
- [Warning Thresh 15 Min/1 Day Tabs, page C-136](#)
- [Alarm Thresh Tab, page C-137](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors.

Table C-205 *Field Descriptions for the Parameters Tab*

Field	Description
Optical Connector 1 through Optical Connector 5	
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).

Table C-205 *Field Descriptions for the Parameters Tab (continued)*

Field	Description
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Administration State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Power Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) is the only function that can modify this value.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.
VOA Power Calib.	Allows you to modify the optical output power to the VOA, if necessary.
VOA Attenuation Ref.	Shows the attenuation value of the VOA when the VOA is set in attenuation mode. ANS and APC are the only functions that can modify this value.
Actual Wavelength	Shows the wavelength specified by the manufacturing data. This field cannot be set manually.
Expected Wavelength	Shows the value of the expected wavelength for the given port. The wavelengths for these ports are not provisionable.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
Power ADD	Displays the input power of the channel that is in ADD.
Path Value	Select if the path is in use (Active) or not (Standby) for each channel in ADD.

Warning Thresh 15 Min/1 Day Tabs

The Warning Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-206 *Field Descriptions for the Warning Thresh 15 Min/1 Day Tabs*

Field	Description
Optical Connector 1 through Optical Connector 5	
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).

Table C-206 *Field Descriptions for the Warning Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
Power Low (dBm)	Allows you to set the low power settings.
Power High (dBm)	Allows you to set the high power settings.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-207 *Field Descriptions for the Alarm Thresh Tab*

Field	Description
Optical Connector 1 through Optical Connector 5	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure settings.
Power Degrade High	Allows you to set the high power settings.
Power Degrade Low	Allows you to set the low power settings.
Power Add Fail Low	Displays the threshold of low power failure on the add channel port. The crossing of this threshold generates an LOS-P alarm.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-208 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Attribute	Displays the object that can be inventoried.
Value	Displays the value of the object that is inventoried.
Units	Displays the unit of measure (when applicable) of the object that is inventoried.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-209 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Select the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Port Number	Displays the port number.
Alarm Profile	Displays the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—32DMX-L

The slot properties pane displays information about the 32-channel demultiplexer L-band that is selected in the NE Explorer. Use this properties pane to change the card properties.

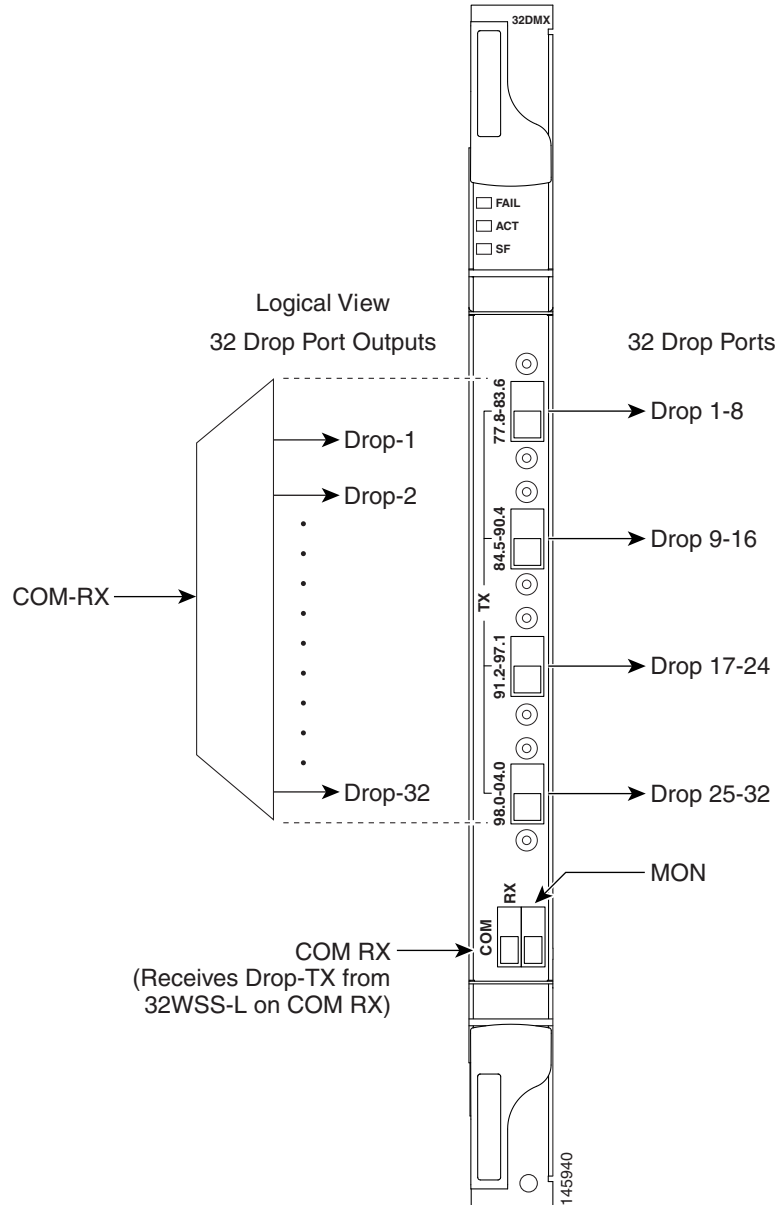
The 32-Channel Demultiplexer L-Band card (32DMX-L) is a single-slot optical demultiplexer. The card receives an aggregate optical signal on its COM RX port and demultiplexes it into 32 100-GHz-spaced channels. The 32DMX-L card is particularly well suited for use in networks that employ DS fiber or SMF-28 single-mode fiber. The 32DMX-L card can be installed in slots 1 to 6 and in slots 12 to 17.

The 32DMX-L card includes these high-level features:

- **COM RX port**—The input port for the aggregate optical signal being demultiplexed. This port is supported by both a VOA for optical power regulation and a photodiode for optical power monitoring.
- **DROP ports (1 to 32)**—On its output, the 32DMX-L card provides 32 drop ports that are typically used for dropping channels within the ROADM node. Each drop port has a photodiode for optical power monitoring. Unlike the two-slot 32DMX-O demultiplexer, the drop ports on the 32DMX-L do not have a VOA per channel for optical power regulation.

A terminal site can be configured using only a 32WSS-L card and a 32DMX-L card plugged into the east or west side of the shelf.

The following figure shows the 32DMX-L card front panel and the basic traffic flow through the ports.

Figure C-12 32DMX-L Faceplate and Ports

For the 32DMX-L module, the slot properties pane displays the following properties: Module View, Identification, Optical Channel, Optical Line, Inventory, and Alarm Behavior.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-210 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Channel

The Optical Channel Properties pane allows you to view and update optical channel threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-140](#)
- [Warning Thresh 15 Min/1 Day Tabs, page C-141](#)
- [Alarm Thresh Tab, page C-141](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors.

Table C-211 *Field Descriptions for the Parameters Tab*

Field	Description
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Administration State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
Actual Wavelength	Shows the wavelength specified by the manufacturing data. This field cannot be set manually.
Expected Wavelength	Shows the value of the expected wavelength for the given port. The wavelengths for these ports are not provisionable.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.

Warning Thresh 15 Min/1 Day Tabs

The Warning Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-212 *Field Descriptions for the Warning Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Power Low (dBm)	Allows you to set the low power settings.
Power High (dBm)	Allows you to set the high power settings.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-213 *Field Descriptions for the Alarm Thresh Tab*

Field	Description
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure settings.

Table C-213 Field Descriptions for the Alarm Thresh Tab (continued)

Field	Description
Power Degrade High	Allows you to set the high power settings.
Power Degrade Low	Allows you to set the low power settings.

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-142](#)
- [Warning Thresh 15 Min/1 Day Tabs, page C-143](#)
- [Alarm Thresh Tab, page C-143](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors.

Table C-214 Field Descriptions for the Parameters Tab

Field	Description
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Administration State	The port administration state. It can be: • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Power	Shows the current power level per port.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Power Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) is the only function that can modify this value.
VOA Power Calib.	Allows you to modify the optical output power to the VOA, if necessary.

Table C-214 *Field Descriptions for the Parameters Tab (continued)*

Field	Description
VOA Attenuation Ref.	Shows the attenuation value of the VOA when the VOA is set in attenuation mode. ANS and APC are the only functions that can modify this value.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.

Warning Thresh 15 Min/1 Day Tabs

The Warning Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-215 *Field Descriptions for the Warning Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Low (dBm)	Allows you to set the low power settings.
Power High (dBm)	Allows you to set the high power settings.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-216 *Field Descriptions for the Alarm Thresh Tab*

Field	Description
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Failure Low	Allows you to set the low power failure settings.
Power Degrade High	Allows you to set the high power settings.
Power Degrade Low	Allows you to set the low power settings.
Power Add Fail Low	Displays the threshold of low power failure on the add channel port. The crossing of this threshold generates an LOS-P alarm.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-217 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Attribute	Displays the object that can be inventoried.

Table C-217 Field Descriptions for the Inventory Properties Pane (continued)

Field	Description
Value	Displays the value of the object that is inventoried.
Units	Displays the unit of measure (when applicable) of the object that is inventoried.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-218 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Alarm Profile	Select the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Port Number	Displays the port number.
Alarm Profile	Displays the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—32DMX_0

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The 32-Channel Demultiplexer (32DMX_O) card demultiplexes 32 100-GHz-spaced channels identified in the channel plan.

The 32DMX_O features include:

- AWG that enables channel demultiplexing functions.
- Single-channel ports equipped with VOAs for automatic optical power regulation after demultiplexing. In the case of electrical power failure, the VOA is set to its maximum attenuation for safety purposes. A manual VOA setting is also available.

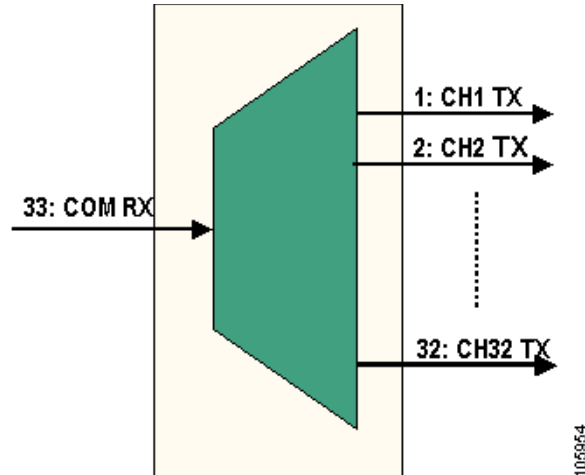


Note

In contrast, the single-slot 32DMX card does not have VOAs on each drop port for optical power regulation. The 32DMX optical demultiplexer module is used in conjunction with the 32-Channel Wavelength Selective Switch (32WSS) card in ONS 15454 Multiservice Transport Platform (MSTP) nodes.

- Each single-channel port is monitored using a photodiode to enable automatic power regulation.
- The following figure shows the block diagram.

Figure C-13 32DMX_O Module



For the 32DMX_O module, the slot properties pane displays the following properties: Module View, Identification, Optical Channel, Optical Line, Inventory, and Alarm Behavior.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-219 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.

Table C-219 Field Descriptions for the Identification Properties Pane (continued)

Field	Description
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Channel

The Optical Channel Properties pane allows you to view and update optical channel threshold information.

Table C-220 Field Descriptions for the Optical Channel Properties Pane

Field	Description
Parameters	
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT). Note You can only change the state from OOS to OOS_MT or vice versa. All other state transitions are controlled by the NE’s software.
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Power Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) is the only function that can modify this value.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.
VOA Power Calib.	Allows you to modify the optical output power to the VOA, if necessary.

Table C-220 Field Descriptions for the Optical Channel Properties Pane (continued)

Field	Description
VOA Attenuation Ref.	Shows the attenuation value of the VOA when the VOA is set in attenuation mode. ANS and APC are the only functions that can modify this value.
Actual Wavelength	Shows the wavelength specified by the manufacturing data. This field cannot be set manually.
Expected Wavelength	Shows the value of the expected wavelength for the given port. The wavelengths for these ports are not provisionable.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	Allows you to set the low power settings.
Power High	Allows you to set the high power settings.
Alarm Threshold	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure threshold.
Power Degrade High	Allows you to set the high power degrade threshold.
Power Degrade Low	Allows you to set the low power degrade threshold.

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information.

Table C-221 Field Descriptions for the Optical Line Properties Pane

Field	Description
Parameters	
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Status	Places the port in In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT) state. Note You can only change the state from OOS to OOS_MT or vice versa. All other state transitions are controlled by the NE's software.
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	Allows you to set the low power settings.
Power High	Allows you to set the high power settings.

Table C-221 *Field Descriptions for the Optical Line Properties Pane (continued)*

Field	Description
Alarm Threshold	
Port Number	The port number.
Type	The type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Failure Low	Allows you to set the low power failure settings.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-222 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Vendor ID	The ID of the vendor.
HW Version	The hardware version number.
IL-REF	The reference insertion loss.
Serial Number	The serial number that is unique to each card.
Firmware Version	The revision number of the software used by the ASIC chip installed on the card.
Part Number	The part number that is printed on the top of the card.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-223 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—40-DMX-C

The single-slot 40-Channel Demultiplexer C-Band (40-DMX-C) card demultiplexes forty 100 GHz-spaced channels identified in the channel plan, and sends them to dedicated output ports. The overall optical power can be adjusted using a single VOA that is common to all channels. The 40-DMX-C card is unidirectional, is optically passive, and can be installed in slots 1 to 6 and 12 to 17.

The 40-DMX card supports the Even and Odd bands. 40-DMX cards provisioned in the Even band support only card provisioning; circuits, links, and patchcords are not supported. The card name depends on the wavelength that is provisioned on the card. The card name is 40-DMX-CE if the supported wavelength belongs to the Even band and 40-DMX-CO if the supported wavelength belongs to the Odd band. When an actual card is plugged into a slot where the same card is preprovisioned, an alarm mismatch is raised if there is a conflict between the wavelength set on the preprovisioned card and the wavelength set on the actual card.

40-DMX-C Faceplate Ports

The 40-DMX-C card has two types of ports:

- **COM RX port**—Refers to the line input port for the aggregate optical signal being demultiplexed. This port is supported by a VOA for optical power regulation and a photodiode for per-channel optical power monitoring.

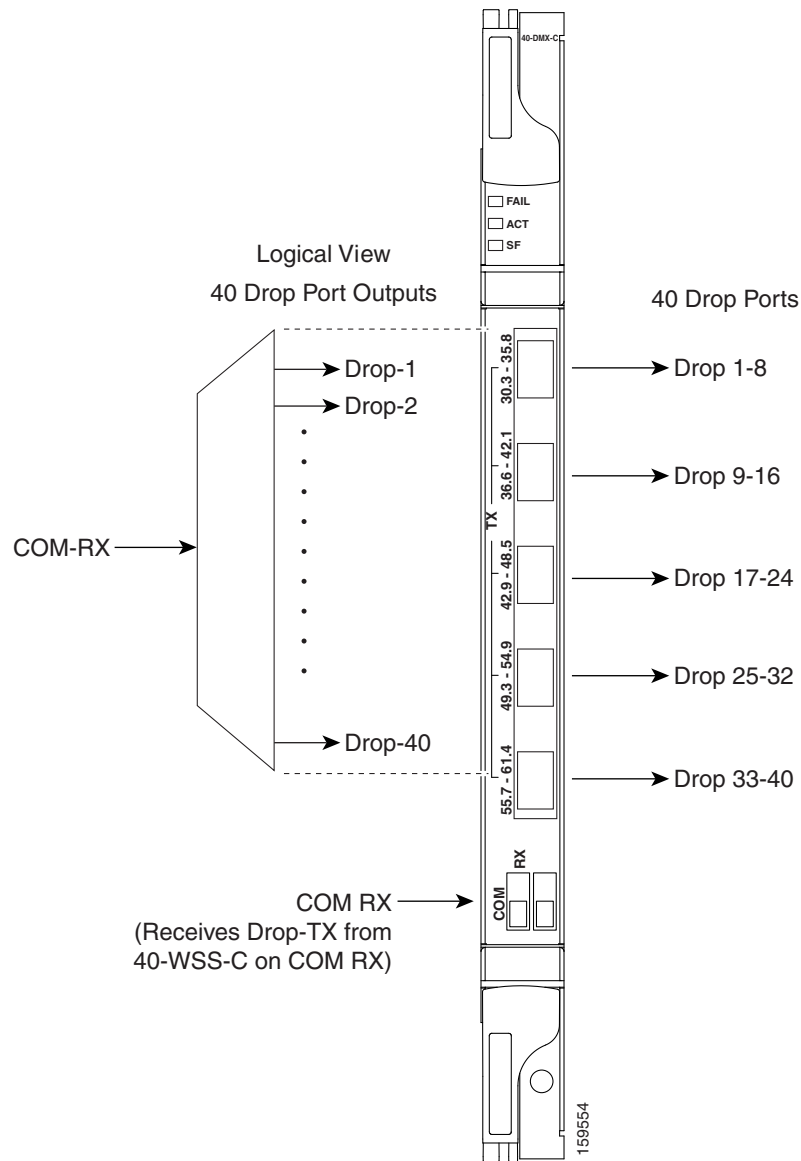


Note By default, the VOA is set to its maximum attenuation for safety purposes (for example, to regulate power during electrical power failure). A manual VOA setting is also available.

- **DROP TX ports (1 to 40)**—On its output, the 40-DMX-C card provides 40 drop ports that are typically used for dropping channels within the ROADM node. These ports are connected using five physical connectors on the front panel that accept MPO client input cables. (MPO cables break out into eight separate cables.) The 40-DMX-C card also has one LC-PC-II optical connector for the main input.

The following figure shows the 40-DMX-C card faceplate.

Figure C-14 40-DMX-C Faceplate



For the 40-DMX-C module, the slot properties pane displays the following properties: Module View, Identification, Optical Channel, Optical Line, Inventory, and Alarm Behavior.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-224 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Channel

The Optical Channel Properties pane allows you to view and update optical channel threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-151](#)
- [Warning Thresh 15 Min/1 Day Tabs, page C-152](#)
- [Alarm Thresh Tab, page C-152](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors.

Table C-225 *Field Descriptions for the Parameters Tab*

Field	Description
Port Number	Displays the port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Power	Shows the current power level per port.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
Actual Wavelength	Shows the wavelength specified by the manufacturing data. This field cannot be set manually.
Expected Wavelength	Shows the value of the expected wavelength for the given port. The wavelengths for these ports are not provisionable.

Warning Thresh 15 Min/1 Day Tabs

The Warning Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-226 *Field Descriptions for the Warning Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	Displays the port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Low (dBm)	Allows you to set the low power settings.
Power High (dBm)	Allows you to set the high power settings.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-227 *Field Descriptions for the Alarm Thresh Tab*

Field	Description
Port Number	Displays the port number.

Table C-227 *Field Descriptions for the Alarm Thresh Tab (continued)*

Field	Description
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Failure Low	Allows you to set the low power failure settings.

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-153](#)
- [Warning Thresh 15 Min/1 Day Tabs, page C-154](#)
- [Alarm Thresh Tab, page C-154](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors.

Table C-228 *Field Descriptions for the Parameters Tab*

Field	Description
Port Number	Displays the port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	The port administration state. It can be: • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Power	Shows the current power level per port.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Power Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) is the only function that can modify this value.
VOA Power Calib.	Allows you to modify the optical output power to the VOA, if necessary.
VOA Attenuation Ref.	Shows the attenuation value of the VOA when the VOA is set in attenuation mode. ANS and APC are the only functions that can modify this value.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.

Warning Thresh 15 Min/1 Day Tabs

The Warning Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-229 *Field Descriptions for the Warning Thresh 15 Min Tabs*

Field	Description
Port Number	Displays the port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Low (dBm)	Allows you to set the low power settings.
Power High (dBm)	Allows you to set the high power settings.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-230 *Field Descriptions for the Alarm Thresh Tab*

Field	Description
Port Number	Displays the port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Failure Low	Allows you to set the low power failure settings.

Inventory

The Inventory Properties pane allows you to view card inventory information.

Table C-231 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Attribute	Displays the object that can be inventoried.
Value	Displays the value of the object that is inventoried.
Units	Displays the unit of measure (when applicable) of the object that is inventoried.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-232 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Choose an alarm profile for all ports.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Port Number	Displays the port number.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—32MUX_0

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

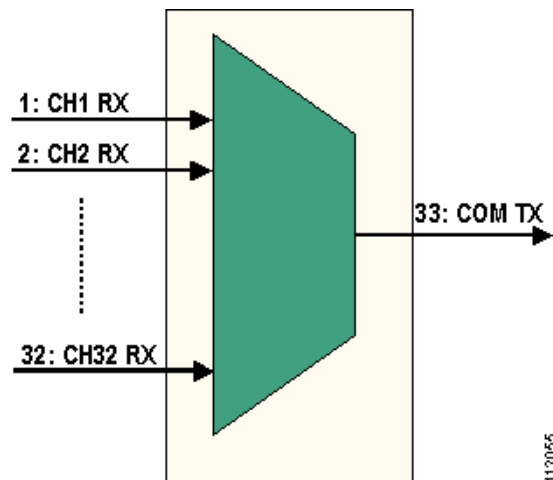
The 32-Channel Multiplexer (32MUX_O) card is typically used in hub nodes and provides the multiplexing of 32 channels, spaced at 100 GHz, into one fiber before their amplification and transmission along the line.

The 32MUX_O features include:

- Arrayed waveguide grating (AWG) device that enables full multiplexing functions for the channels.
- Each single-channel port is equipped with VOAs for automatic optical power regulation prior to multiplexing. In the case of electrical power failure, the VOA is set to its maximum attenuation for safety purposes. A manual VOA setting is also available.
- Each single-channel port is monitored using a photodiode to enable automatic power regulation.
- Additional optical monitoring port with 1/99 splitting ratio available.

The following figure shows the block diagram.

Figure C-15 **32MUX_O Module**



For the 32MUX_O module, the slot properties pane displays the following properties: Module View, Identification, Optical Channel, Optical Line, Inventory, and Alarm Behavior.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-233 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Channel

The Optical Channel Properties pane allows you to view and update optical channel threshold information.

Table C-234 Field Descriptions for the Optical Channel Properties Pane

Field	Description
Parameters	
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	Places the port in In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT) state. Note You can only change the state from OOS to OOS_MT or vice versa. All other state transitions are controlled by the NE's software.
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Power Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) is the only function that can modify this value.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.
VOA Power Calib.	Allows you to modify the optical output power to the VOA, if necessary.
VOA Attenuation Ref.	Shows the attenuation value of the VOA when the VOA is set in attenuation mode. ANS and APC are the only functions that can modify this value.
Actual Wavelength	Shows the wavelength specified by the manufacturing data. This field cannot be set manually.
Expected Wavelength	Shows the value of the expected wavelength for the given port. The wavelengths for these ports are not provisionable.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	Allows you to set the low power settings.
Power High	Allows you to set the high power settings.
Alarm Threshold	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure settings.
Power Degrade High	Allows you to set the high power settings.

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information.

Table C-235 *Field Descriptions for the Optical Line Properties Pane*

Field	Description
Parameters	
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Status	Places the port in In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT) state. Note You can only change the state from OOS to OOS_MT or vice versa. All other state transitions are controlled by the NE's software.
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	Allows you to set the low power settings.
Power High	Allows you to set the high power settings.
Alarm Threshold	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure settings.
Power Degrad High	Allows you to set the high power settings.
Power Degrad Low	Allows you to set the low power settings.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-236 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Vendor ID	The ID of the vendor.
HW Version	The hardware version number.
IL-REF	The reference insertion loss.
Serial Number	The serial number that is unique to each card.
Firmware Version	The revision number of the software used by the ASIC chip installed on the card.
Part Number	The part number that is printed on the top of the card.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-237 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—40-MUX-C

The single-slot 40-Channel Multiplexer C-Band (40-MUX-C) card multiplexes forty ITU-T 100 GHz-spaced channels identified in the channel plan. The 40-MUX-C card can be installed in slots 1 to 6 and 12 to 17. The 40-MUX-C card is typically used in hub nodes.

Y-cable protection between the same card type is supported only on ports with the same port number and signal rate. Y-cable protection is provided at the client port level.

40-MUX-C Faceplate Ports

The 40-MUX-C has two types of ports:

- **COM TX port**—Refers to the line output port for the aggregate optical signal being multiplexed. This port is supported by both a VOA for optical power regulation and a photodiode for per-channel optical power monitoring.



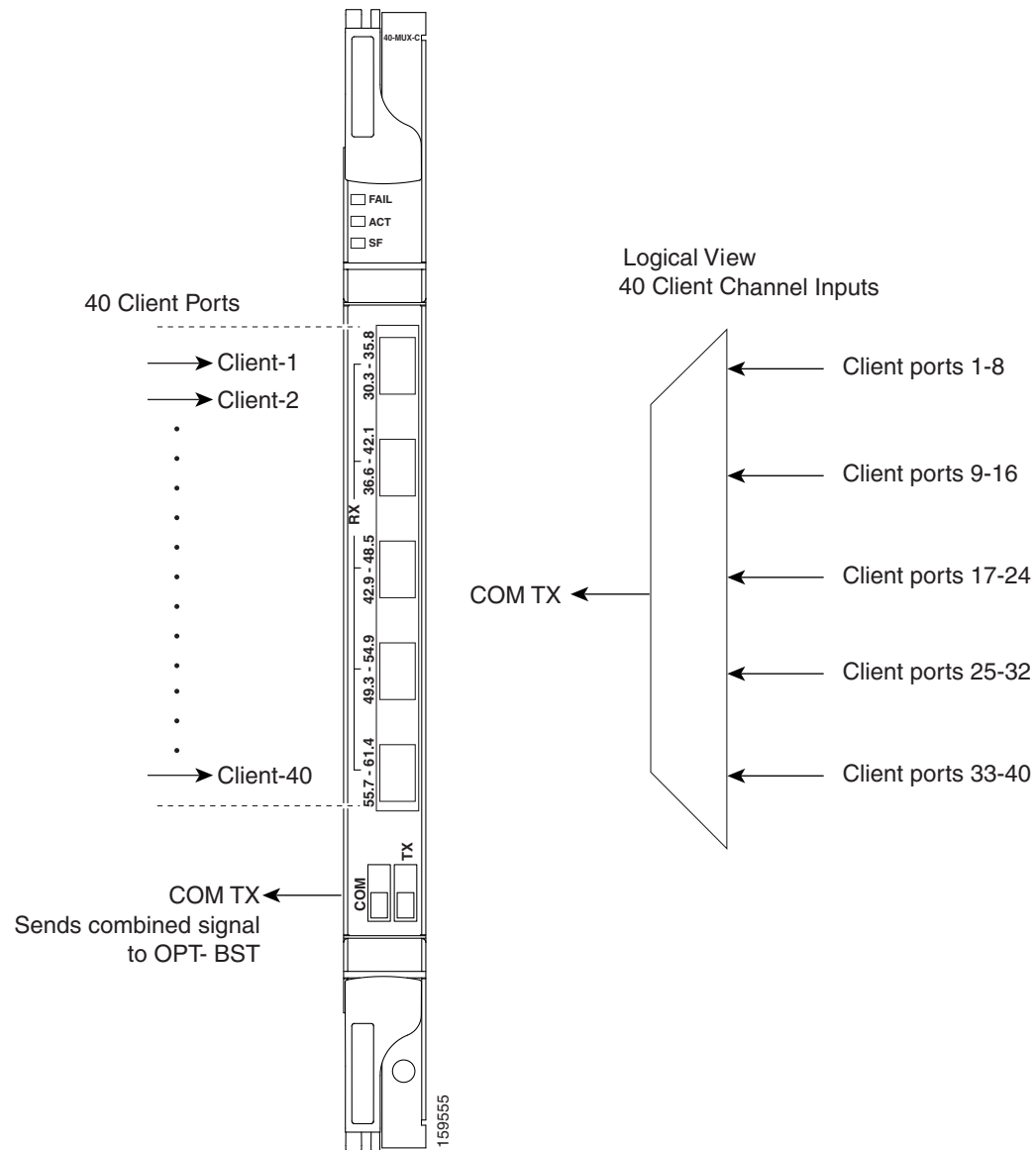
Note

By default, the VOA is set to its maximum attenuation for safety purposes (for example, to regulate power during electrical power failure). A manual VOA setting is also available.

- **DROP RX ports (1 to 40)**—Provides 40 input optical channels. These ports are connected using five physical receive connectors on the card's front panel that accept MPO cables for the client input interfaces. MPO cables break out into eight separate cables. The 40-DMX-C card also has one LC-PC-II optical connector for the main output.

The following figure shows the 40-MUX-C card faceplate.

Figure C-16 40-MUX-C Card Faceplate



For the 40-MUX-C module, the slot properties pane displays the following properties: Module View, Identification, Optical Channel, Optical Line, Inventory, and Alarm Behavior.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-238 *Field Descriptions for the Identification Properties Pane*

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Channel

The Optical Channel Properties pane allows you to view and update optical channel threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-161](#)
- [Warning Thresh 15 Min/1 Day Tabs, page C-162](#)
- [Alarm Thresh Tab, page C-162](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors.

Table C-239 Field Descriptions for the Parameters Tab

Field	Description
Port Number	Displays the port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, Add, and Drop.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	The port administration state. It can be: • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance • Locked, disabled • Locked, maintenance • Unlocked, automatic in service
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Power	Shows the current power level per port.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
Actual Wavelength	Shows the wavelength specified by the manufacturing data. This field cannot be set manually.
Expected Wavelength	Shows the value of the expected wavelength for the given port.

Warning Thresh 15 Min/1 Day Tabs

The Warning Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-240 Field Descriptions for the Warning Thresh 15 Min/1 Day Tabs

Field	Description
Port Number	Displays the port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, Add, and Drop.
Power Low (dBm)	Allows you to set the low power settings.
Power High (dBm)	Allows you to set the high power settings.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-241 *Field Descriptions for the Alarm Thresh Tab*

Field	Description
Port Number	Displays the port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, Add, and Drop.
Power Failure Low	Allows you to set the low power failure settings.

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-163](#)
- [Warning Thresh 15 Min/1 Day Tabs, page C-164](#)
- [Alarm Thresh Tab, page C-164](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors.

Table C-242 *Field Descriptions for the Parameters Tab*

Field	Description
Port Number	Displays the port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, Add, and Drop.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	The port administration state. It can be: • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance • Locked, disabled • Locked, maintenance • Unlocked, automatic in service
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Power	Shows the current power level per port.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Power Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) is the only function that can modify this value.

Table C-242 *Field Descriptions for the Parameters Tab (continued)*

Field	Description
VOA Power Calib.	Allows you to modify the optical output power to the VOA, if necessary.
VOA Attenuation Ref.	Shows the attenuation value of the VOA when the VOA is set in attenuation mode. ANS and APC are the only functions that can modify this value.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.

Warning Thresh 15 Min/1 Day Tabs

The Warning Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-243 *Field Descriptions for the Warning Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	Displays the port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, Add, and Drop.
Power Low (dBm)	Allows you to set the low power settings.
Power High (dBm)	Allows you to set the high power settings.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-244 *Field Descriptions for the Alarm Thresh Tab*

Field	Description
Port Number	Displays the port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, Add, and Drop.
Power Failure Low	Allows you to set the low power failure settings.

Inventory

The Inventory Properties pane allows you to view card inventory information.

Table C-245 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Attribute	Displays the object that can be inventoried.
Value	Displays the value of the object that is inventoried.
Units	Displays the unit of measure (when applicable) of the object that is inventoried.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-246 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list.
Suppress Alarms	When checked, all alarms are suppressed for the card or its port(s).
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—32WSS

The slot properties pane displays information about the 32-channel Wavelength Selective Switch (32WSS) module that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The 32-channel Wavelength Selective Switch (32WSS) card performs channel add/drop processing within the ONS 15454 DWDM node. The 32WSS works in conjunction with the 32DMX to implement ROADM functionality. Equipped with ROADM functionality, the ONS 15454 DWDM can be configured to add or drop individual optical channels using CTC, Cisco MetroPlanner, and Prime Optical.

An ROADM NE utilizes two 32WSS cards (two slots each) and two 32DMX cards (one slot each), for a total of six slots in the chassis, as follows:

- **ADD RX ports (1 to 32)**—Used for adding channels. Each add channel is associated with an individual switch element that selects whether an individual channel is added. Each add port has optical power regulation provided by a VOA. The 32WSS has four physical receive connectors that accept MPO cables on the card's front panel for the client input interfaces. MPO cables break out into eight separate cables.
- **EXP RX port**—Receives an optical signal from another 32WSS module in the same NE.
- **EXP TX port**—Sends an optical signal to the other 32WSS module within the NE.
- **COM TX port**—Sends an aggregate optical signal to a booster amplifier card (for example, OPT-BST) for transmission outside of the NE.
- **COM RX port**—Receives the optical signal from a preamplifier and sends it to the optical splitter.
- **DROP TX port**—Sends the split-off optical signal that contains drop channels to the 32DMX card, where the channels are further processed and dropped.



Note

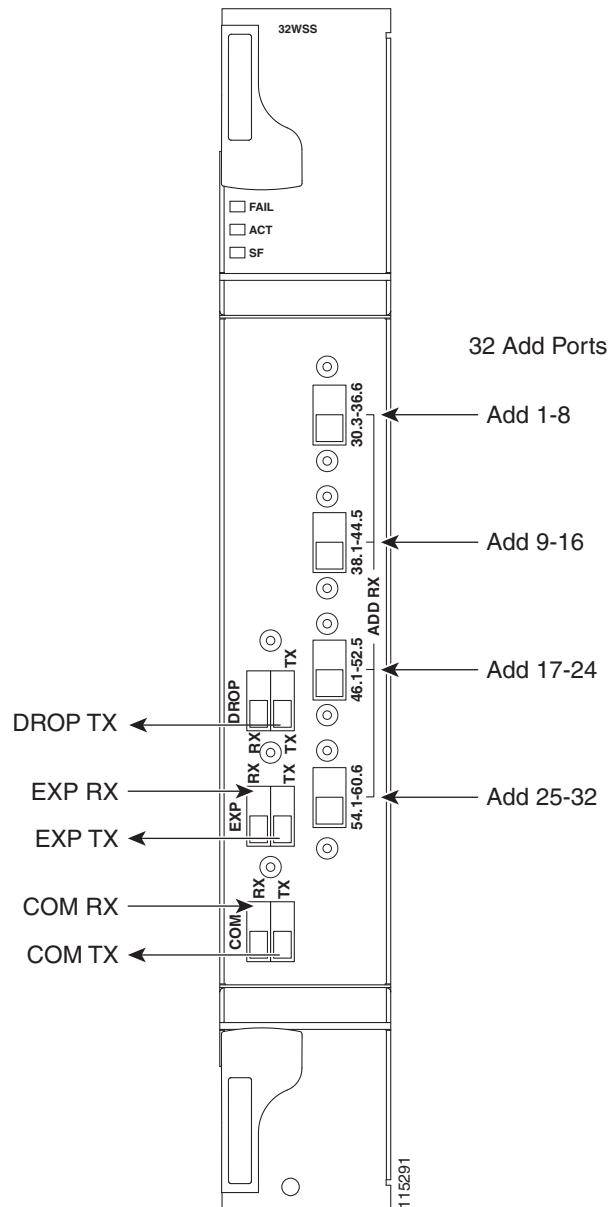
A terminal site can be configured using only a 32WSS card and a 32DMX card plugged into the east or west side of the shelf.

**Note**

The 32WSS works in conjunction with the 32DMX to implement ROADM functionality.

The following figure shows the 32WSS module front panel and identifies the traffic flow through the ports.

Figure C-17 32WSS Faceplate and Ports



For the 32WSS module, the slot properties pane displays the following properties: Module View, Identification, Optical Channel, Optical Line, Maintenance, Inventory, and Alarm Behavior.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-247 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Channel

The Optical Channel Properties pane allows you to view and update optical channel threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-168](#)
- [Warning Thresh 15 Min/1 Day Tabs, page C-168](#)
- [Alarm Thresh Tab, page C-169](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors.

Table C-248 Field Descriptions for the Parameters Tab

Field	Description
Optical Connector 1 through Optical Connector 5	
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Administration State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Power Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) is the only function that can modify this value.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.
VOA Power Calib.	Allows you to modify the optical output power to the VOA, if necessary.
VOA Attenuation Ref.	Shows the attenuation value of the VOA when the VOA is set in attenuation mode. ANS and APC are the only functions that can modify this value.
Actual Wavelength	Shows the wavelength specified by the manufacturing data. This field cannot be set manually.
Expected Wavelength	Shows the value of the expected wavelength for the given port. The wavelengths for these ports are not provisionable.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
Power ADD	Displays the input power of the channel that is in ADD.
Path Value	Select if the path is in use (Active) or not (Standby) for each channel in ADD.

Warning Thresh 15 Min/1 Day Tabs

The Warning Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-249 *Field Descriptions for the Warning Thresh 15 Min/1 Day Tabs*

Field	Description
Optical Connector 1 through Optical Connector 5	
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Power Low (dBm)	Allows you to set the low power settings.
Power High (dBm)	Allows you to set the high power settings.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-250 *Field Descriptions for the Alarm Thresh Tab*

Field	Description
Optical Connector 1 through Optical Connector 5	
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Power Failure Low	Allows you to set the low power failure settings.
Power Degrade High	Allows you to set the high power settings.
Power Degrade Low	Allows you to set the low power settings.
Power Add Fail Low	Displays the thresholds of low power failure on the add channel port. The crossing of this threshold generates an LOS-P alarm.

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-169](#)
- [Warning Thresh 15 Min/1 Day Tabs, page C-170](#)
- [Alarm Thresh Tab, page C-170](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors.

Table C-251 *Field Descriptions for the Parameters Tab*

Field	Description
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.

Table C-251 *Field Descriptions for the Parameters Tab (continued)*

Field	Description
Administration State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Power	Shows the current power level per port.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.

Warning Thresh 15 Min/1 Day Tabs

The Warning Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-252 *Field Descriptions for the Warning Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Low (dBm)	Allows you to set the low power settings.
Power High (dBm)	Allows you to set the high power settings.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-253 *Field Descriptions for the Alarm Thresh Tab*

Field	Description
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Failure Low	Allows you to set the low power failure settings.
Power Degrade High	Allows you to set the high power settings.
Power Degrade Low	Allows you to set the low power settings.
Power Add Fail Low	Displays the thresholds of low power failure on the add channel port. The crossing of this threshold generates an LOS-P alarm.

Maintenance

The Maintenance Properties pane allows you to assign the optical channel operating mode for each wavelength.

Table C-254 *Field Descriptions for the Maintenance Properties Pane*

Field	Description
Optical Connector 1 through 5	
Channel Number	Displays the channel number.
OCHNC Wavelength	Displays the wavelength assigned to the channel.
Operating Mode	Select the operating mode to assign to the wavelength: - Not assigned - Add/drop - Pass-through

Inventory

The Inventory Properties pane allows you to view card inventory information.

Table C-255 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Attribute	Displays the object that can be inventoried.
Value	Displays the value of the object that is inventoried.
Units	Displays the unit of measure (when applicable) of the object that is inventoried.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-256 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Select the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Alarm Profile	Displays the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—32WSS-L

The 32-Channel Wavelength Selective Switch L-Band (32WSS-L) card performs channel add/drop processing within the ONS 15454 DWDM node. The 32WSS-L works in conjunction with the 32DMX-L to implement ROADM functionality within the L-band (1570 to 1620 nm). The 32WSS-L card is particularly well suited for use in networks that employ DS fiber or SMF-28 single-mode fiber. Equipped with ROADM functionality, the ONS 15454 DWDM can be configured to add or drop individual optical channels using CTC, Cisco MetroPlanner, and Prime Optical.

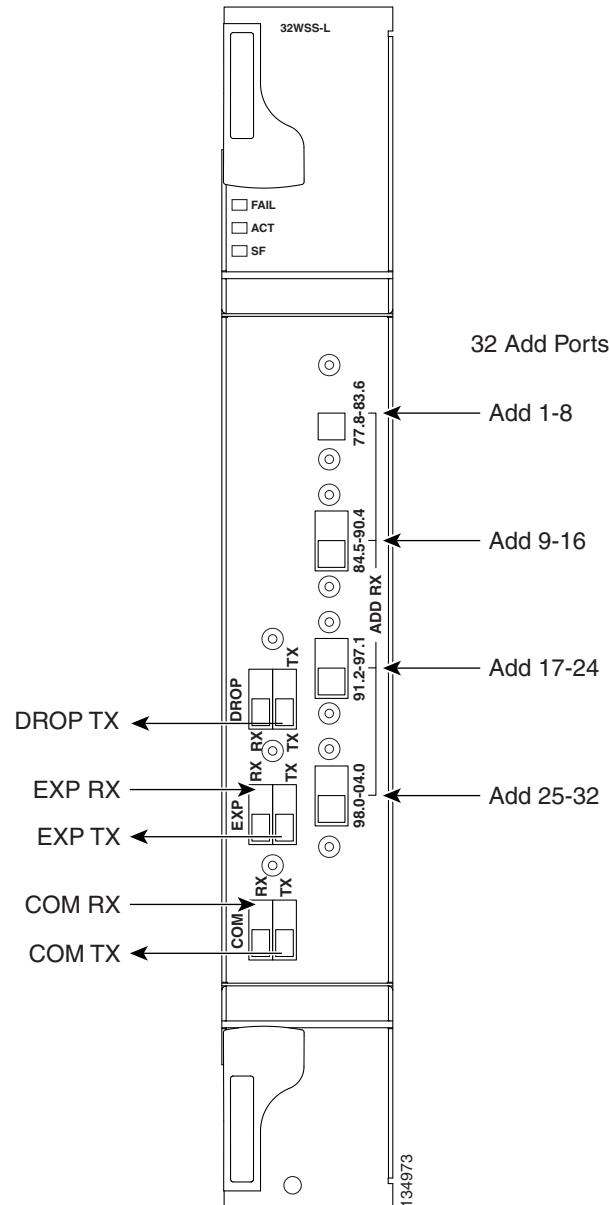
An ROADM NE utilizes two 32WSS-L cards (two slots each) and two 32DMX-L cards (one slot each), for a total of six slots in the chassis. The 32WSS-L card can be installed in slots 1 and 2, 3 and 4, 5 and 6, 12 and 13, 14 and 15, or 16 and 17.

The 32WSS-L has six types of ports:

- **ADD RX ports (1 to 32)**—Used for adding channels. Each add channel is associated with an individual switch element that selects whether an individual channel is added. Each add port has optical power regulation provided by a VOA.
- **EXP RX port**—Receives an optical signal from another 32WSS-L module in the same NE.
- **EXP TX port**—Sends an optical signal to the other 32WSS-L module within the NE.
- **COM TX port**—Sends an aggregate optical signal to a booster amplifier card (for example, OPT-BST) for transmission outside of the NE.
- **COM RX port**—Receives the optical signal from a preamplifier and sends it to the optical splitter.
- **DROP TX port**—Sends the split-off optical signal that contains drop channels to the 32DMX-L card, where the channels are further processed and dropped.

A terminal site can be configured using only a 32WSS-L card and a 32DMX-L card plugged into the east or west side of the shelf.

The following figure shows the 32WSS-L module front panel and identifies the traffic flow through the ports.

Figure C-18 *WSS-L Faceplate and Ports*

For the 32WSS-L module, the slot properties pane displays the following properties: Module View, Identification, Optical Channel, Optical Line, Maintenance, Inventory, and Alarm Behavior.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-257 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Channel

The Optical Channel Properties pane allows you to view and update optical channel threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-174](#)
- [Warning Thresh 15 Min/1 Day Tabs, page C-175](#)
- [Alarm Thresh Tab, page C-176](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors.

Table C-258 **Field Descriptions for the Parameters Tab**

Field	Description
Optical Connector 1 through Optical Connector 5	
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Administration State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Power Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) is the only function that can modify this value.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.
VOA Power Calib.	Allows you to modify the optical output power to the VOA, if necessary.
VOA Attenuation Ref.	Shows the attenuation value of the VOA when the VOA is set in attenuation mode. ANS and APC are the only functions that can modify this value.
Actual Wavelength	Shows the wavelength specified by the manufacturing data. This field cannot be set manually.
Expected Wavelength	Shows the value of the expected wavelength for the given port. The wavelengths for these ports are not provisionable.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
Power ADD	Displays the input power of the channel that is in ADD.
Path Value Display	Select if the path is in use (Active) or not (Standby) for each channel in ADD.

Warning Thresh 15 Min/1 Day Tabs

The Warning Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-259 *Field Descriptions for the Warning Thresh 15 Min/1 Day Tabs*

Field	Description
Optical Connector 1 through Optical Connector 5	
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Power Low (dBm)	Allows you to set the low power settings.
Power High (dBm)	Allows you to set the high power settings.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-260 *Field Descriptions for the Alarm Thresh Tab*

Field	Description
Optical Connector 1 through Optical Connector 5	
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Power Failure Low	Allows you to set the low power failure settings.
Power Degrade High	Allows you to set the high power settings.
Power Degrade Low	Allows you to set the low power settings.
Power Add Fail Low	Displays the thresholds of low power failure on the add channel port. The crossing of this threshold generates an LOS-P alarm.

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-176](#)
- [Warning Thresh 15 Min/1 Day Tabs, page C-177](#)
- [Alarm Thresh Tab, page C-177](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors.

Table C-261 *Field Descriptions for the Parameters Tab*

Field	Description
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.

Table C-261 *Field Descriptions for the Parameters Tab (continued)*

Field	Description
Administration State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Power	Shows the current power level per port.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.

Warning Thresh 15 Min/1 Day Tabs

The Warning Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-262 *Field Descriptions for the Warning Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Low (dBm)	Allows you to set the low power settings.
Power High (dBm)	Allows you to set the high power settings.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-263 *Field Descriptions for the Alarm Thresh Tab*

Field	Description
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Failure Low	Allows you to set the low power failure settings.
Power Degrade High	Allows you to set the high power settings.
Power Degrade Low	Allows you to set the low power settings.

Maintenance

The Maintenance Properties pane allows you to assign the optical channel operating mode for each wavelength.

Table C-264 *Field Descriptions for the Maintenance Properties Pane*

Field	Description
Optical Connector 1 through 5	
Channel Number	Displays the channel number.
OCHNC Wavelength	Displays the wavelength assigned to the channel.
Operating Mode	Select the operating mode to assign to the wavelength: - Not assigned - Ad/drop - Pass-through

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-265 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Attribute	Displays the object that can be inventoried.
Value	Displays the value of the object that is inventoried.
Units	Displays the unit of measure (when applicable) of the object that is inventoried.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-266 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Select the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Alarm Profile	Displays the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—40-WSS-C

The double-slot 40-Channel Wavelength Selective Switch C-Band (40-WSS-C) card switches forty ITU-T 100 GHz-spaced channels and sends them to dedicated output ports. The 40-WSS-C card is bidirectional and optically passive. The card can be installed in slots 1 to 6 and 12 to 17.

The 40-WSS-C features include:

- Receipt of an aggregate DWDM signal into 40 output optical channels from the line receive port (EXP RX) in one direction and from the COM-RX port in the other direction.
- Per-channel optical power monitoring using photodiodes.
- Signal splitting in a 70%-to-30% ratio, sent to the 40-DMX-C card for dropping signals, then to the other 40-WSS-C card.
- Aggregate DWDM signal monitoring and control through a VOA. In the case of electrical power failure, the VOA is set to its maximum attenuation for safety purposes. A manual VOA setting is also available.
- Support for the Even and Odd band. 40-WSS cards provisioned in the Even band support only card provisioning; circuits, links, and patchcords are not supported. The card name depends on the wavelength that is provisioned on the card. The card name is 40-WSS-CE if the supported wavelength belongs to the Even band and 40-WSS-CO if the supported wavelength belongs to the Odd band. When an actual card is plugged into a slot where the same card is preprovisioned, an alarm mismatch is raised if there is a conflict between the wavelength set on the preprovisioned card and the wavelength set on the actual card.

Within the 40-WSS-C card, the first arrayed waveguide grating (AWG) opens the spectrum and each wavelength is directed to one of the ports of a 1x2 optical switch. There, via MetroPlanner, the same wavelength can be passed through or stopped. If the pass-through wavelength is stopped, a new channel can be added at the ADD port. The card's second AWG multiplexes all of the wavelengths, and the aggregate signal is output through the COM-TX port.

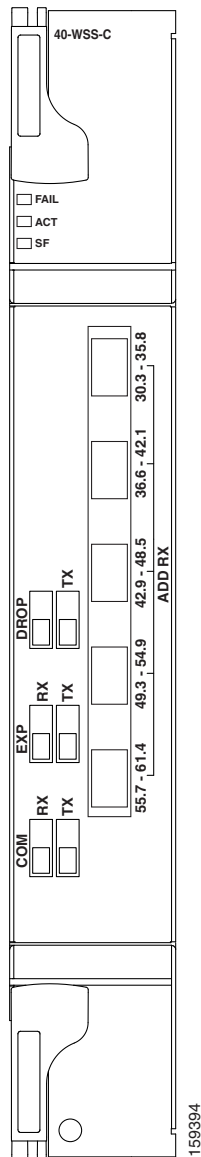
40-WSS-C Faceplate Ports

The 40-WSS-C has eight types of ports:

- ADD RX ports (1 to 40)—Used for adding channels. Each add channel is associated with an individual switch element that selects whether an individual channel is added. Each add port has optical power regulation provided by a VOA. The five connectors on the card faceplate accept MPO cables for the client input interfaces. MPO cables break out into eight separate cables. The 40-WSS-C card also has one LC-PC-II optical connector for the main input.
- COM RX—Receives the optical signal from a preamplifier (such as the OPT-PRE) and sends it to the optical splitter.
- COM TX—Sends an aggregate optical signal to a booster amplifier card (for example, the OPT-BST card) for transmission outside of the NE.
- EXP RX port—Receives an optical signal from another 40-WSS-C card in the same NE.
- EXP TX—Sends an optical signal to the other 40-WSS-C card within the NE.
- DROP TX port—Sends the split-off optical signal that contains drop channels to the 40-DMX-C card, where the channels are further processed and dropped.

The following figure shows the 40-WSS-C card faceplate.

Figure C-19 40-WSS-C Faceplate



For the 40-WSS-C module, the slot properties pane displays the following properties: Module View, Identification, Optical Channel, Optical Line, Maintenance, Inventory, and Alarm Behavior.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-267 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Channel

The Optical Channel Properties pane allows you to view and update optical channel threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-181](#)
- [Warning Thresh 15 Min/1 Day Tabs, page C-182](#)
- [Alarm Thresh Tab, page C-183](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors.

Table C-268 *Field Descriptions for the Parameters Tab*

Field	Description
Optical Connector 1 through Optical Connector 5	
Port Number	Displays the port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	Displays the status of the line. Values are: - OOS_DSBLD—Out of Service—Disabled. Unable to carry traffic. - IS_AINS—In Service—Auto In Service. Alarm reporting is suppressed, but traffic is carried. - OOS_MT—Out of Service—Maintenance. Alarm reporting is suppressed, but traffic is carried and loopbacks are allowed.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Power	Shows the current power level per port.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Power Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) is the only function that can modify this value.
VOA Power Calib.	Allows you to modify the optical output power to the VOA, if necessary.
VOA Attenuation Ref.	Shows the attenuation value of the VOA when the VOA is set in attenuation mode. ANS and APC are the only functions that can modify this value.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.
Actual Wavelength	Shows the wavelength specified by the manufacturing data. This field cannot be set manually.
Expected Wavelength	Shows the value of the expected wavelength for the given port. The wavelengths for these ports are not provisionable.
Path Value	Select if the path is in use (Active) or not (Standby) for each channel in ADD.

Warning Thresh 15 Min/1 Day Tabs

The Warning Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-269 *Field Descriptions for the Warning Thresh 15 Min/1 Day Tabs*

Field	Description
Optical Connector 1 through Optical Connector 5	
Port Number	Displays the port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.

Table C-269 *Field Descriptions for the Warning Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
Power Low (dBm)	Allows you to set the low power settings.
Power High (dBm)	Allows you to set the high power settings.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-270 *Field Descriptions for the Alarm Thresh Tab*

Field	Description
Optical Connector 1 through Optical Connector 5	
Port Number	Displays the port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Failure Low	Allows you to set the low power failure settings.
Power Degrade High	Allows you to set the high power settings.
Power Degrade Low	Allows you to set the low power settings.

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-183](#)
- [Warning Thresh 15 Min/1 Day Tabs, page C-184](#)
- [Alarm Thresh Tab, page C-184](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors.

Table C-271 *Field Descriptions for the Parameters Tab*

Field	Description
Port Number	Displays the port number.
Type	Identifies the type of port, such as Input Express, Output Com, Input Line, Output Line, Input OSC, Output OSC, or Drop.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.

Table C-271 *Field Descriptions for the Parameters Tab (continued)*

Field	Description
State	Displays the status of the line. Values are: - OOS_DSBLD—Out of Service—Disabled. Unable to carry traffic. - IS_AINS—In Service—Auto In Service. Alarm reporting is suppressed, but traffic is carried. - OOS_MT—Out of Service—Maintenance. Alarm reporting is suppressed, but traffic is carried and loopbacks are allowed.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Power	Shows the current power level per port.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.

Warning Thresh 15 Min/1 Day Tabs

The Warning Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-272 *Field Descriptions for the Warning Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	Displays the port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Low (dBm)	Allows you to set the low power settings.
Power High (dBm)	Allows you to set the high power settings.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-273 *Field Descriptions for the Alarm Thresh Tab*

Field	Description
Port Number	Displays the port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Failure Low	Allows you to set the low power failure settings.

Maintenance

The Maintenance Properties pane allows you to assign the optical channel operating mode for each wavelength.

Table C-274 *Field Descriptions for the Maintenance*

Field	Description
Optical Connector 1 through 5	
Channel Number	Displays the channel number.
OCHNC Wavelength	Displays the wavelength assigned to the channel.
Operating Mode	Select the operating mode to assign to the wavelength: - Not assigned - Add/drop - Pass-through

Inventory

The Inventory Properties pane allows you to view card inventory information.

Table C-275 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Attribute	Displays the object that can be inventoried.
Value	Displays the value of the object that is inventoried.
Units	Displays the unit of measure (when applicable) of the object that is inventoried.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-276 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Port Number	Displays the port number.
Alarm Profile	Choose an alarm profile for all ports.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—40-WXC-C

The double-slot 40-Channel Wavelength Cross-Connect C-Band (40-WXC-C) card selectively sends any wavelength combination coming from nine input ports to a common output port. The device can manage up to 41 channels spaced at 100 GHz on each port according to the channel grid. Each channel can be selected from any input. The card is optically passive and provides bidirectional capability. It can be installed in slots 1 to 5 and 12 to 16.

The 40-WXC-C card provides the following features:

- Demultiplexing, selection, and multiplexing of DWDM aggregate signals from input ports to a common output port.
- Aggregate DWDM signal monitoring and control through a VOA.
- VOAs are deployed in every channel path in order to regulate the channel's optical power. In case of an electrical power failure, VOAs are set to their maximum attenuation value, or to a fixed and configurable one. The VOA can also be set manually.
- Per-channel optical power monitoring using photodiodes.

The 40-WXC-C card acts as a selector element with the following characteristics:

- Selects a wavelength from one input port and passes the wavelength through to the common output port. Simultaneously, the card can block the same wavelength coming from the other eight input ports.
- Stops wavelengths from all nine input ports.
- Monitors optical power and controls path attenuation using per-channel VOA independently of the wavelength input-to-output port connection.

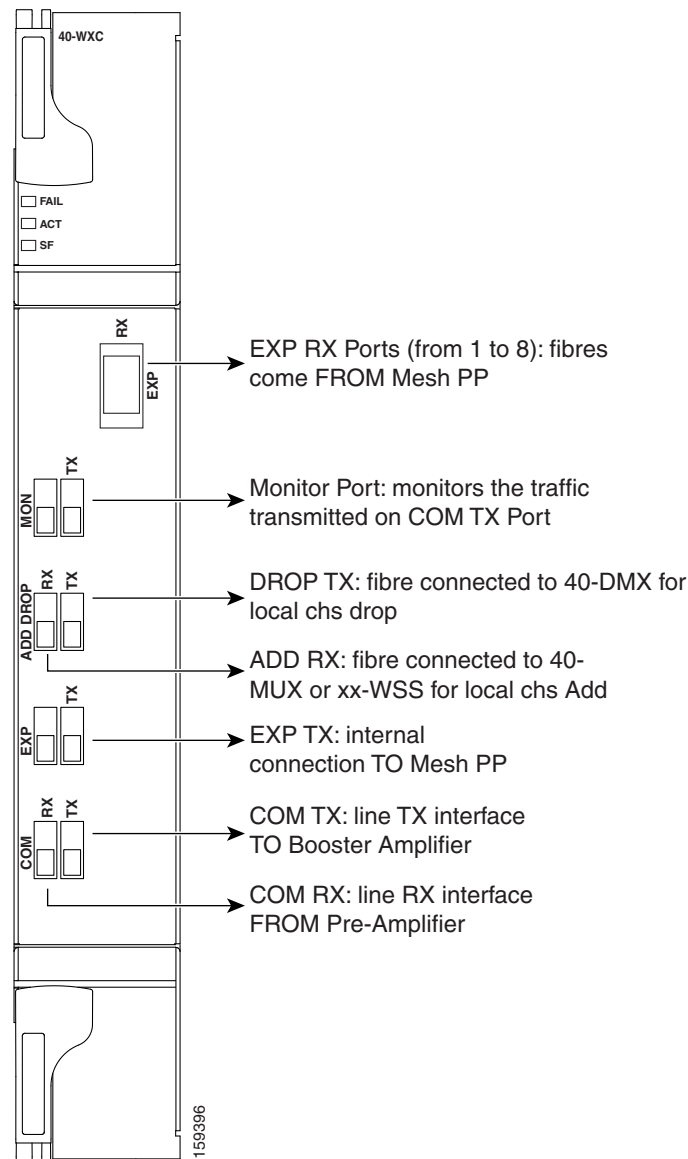
40-WXC-C Faceplate Ports

The 40-WXC-C card has six types of ports:

- COM RX—Receives the optical signal from a preamplifier (such as the OPT-PRE card) and sends it to the optical splitter.
- COM TX—Sends an aggregate optical signal to a booster amplifier card (for example, the OPT-BST card) for transmission outside of the NE.
- EXP TX—Sends an optical signal to the other 40-WXC-C card within the NE.
- MON TX—Refers to the optical service channel (OSC) monitor port.
- ADD/DROP RX—Provides 40 input optical channels. These ports are connected using five physical receive connectors on the card's front panel that accept MPO cables for the client input interfaces. MPO cables break out into eight separate cables.
- ADD/DROP TX—Sends the split-off optical signal that contains drop channels to the 40-WXC-C card, where the channels are further processed and dropped.

The following figure shows the 40-WXC-C card faceplate.

Figure C-20 40-WXC-C Faceplate



For the 40-WXC-C module, the slot properties pane displays the following properties: Module View, Identification, Optical Channel, WXC Line, Optical Line, Maintenance, Inventory, and Alarm Behavior.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-277 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Side	Displays side settings. Automatic node setup (ANS) assumes that every DWDM port has a line direction parameter that is either side A to side B or side B to side A. ANS automatically configures the mandatory optical connections according to following main rules: • Cards equipped in slots 1 to 5 have a drop section facing side A. • Cards equipped in slots 12 to 16 have a drop section facing side B for DWDM nodes in nonmesh networks. • Nodes in DWDM mesh networks have sides A, B, C, D, E, F, G, or H.

Optical Channel

The Optical Channel Properties pane allows you to view and update optical channel threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-189](#)
- [OCH Thresh 15 Min/1 Day Tabs, page C-189](#)
- [Alarm Thresh Tab, page C-189](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors.

Table C-278 Field Descriptions for the Parameters Tab

Field	Description
Circuit Name	Displays the name of the circuit.
Actual Wavelength	Shows the wavelength specified by the manufacturing data. This field cannot be set manually.
State	Displays the status of the line. Values are: - OOS_DSBLD—Out of Service–Disabled. Unable to carry traffic. - IS_AINS—In Service–Auto In Service. Alarm reporting is suppressed, but traffic is carried. - OOS_MT—Out of Service–Maintenance. Alarm reporting is suppressed, but traffic is carried and loopbacks are allowed.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
From	Shows the incoming Input Express (EXP_RX) port.
Power	Shows the current power level per port.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Power Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) is the only function that can modify this value.
VOA Power Calib.	Allows you to modify the optical output power to the VOA, if necessary.
VOA Attenuation Ref.	Shows the attenuation value of the VOA when the VOA is set in attenuation mode. ANS and APC are the only functions that can modify this value.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.

OCH Thresh 15 Min/1 Day Tabs

The OCH Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-279 Field Descriptions for the OCH Thresh 15 Min/1 Day Tabs

Field	Description
Circuit Name	Displays the name of the circuit.
Actual Wavelength	Shows the wavelength specified by the manufacturing data. This field cannot be set manually.
Power Low (dBm)	Allows you to set the low power settings.
Power High (dBm)	Allows you to set the high power settings.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-280 *Field Descriptions for the Alarm Thresh Tab*

Field	Description
Circuit Name	Displays the name of the circuit.
Actual Wavelength	Shows the wavelength specified by the manufacturing data. This field cannot be set manually.
Power Failure Low (dBm)	Allows you to set the low power failure settings.
Power Degrade High (dBm)	Allows you to set the high power settings.
Power Degrade Low (dBm)	Allows you to set the low power settings.

WXC Line

The WXC Line Properties pane allows you to view and update 40-WXC-C line threshold information.

Table C-281 *Field Descriptions for the WXC Line*

Field	Description
Parameters	
Port Number	Displays the card port number.
Type	Identifies the type of port, such as Input Line, Output Line, Input COM, Output COM, Input Express, Output Express, Input OSC, Output OSC, Add, Drop, or Pass-through.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	Displays the port administration state. Choosing an administration state from the drop-down list and clicking Apply changes the port's service state unless network conditions prevent the change. Administration states include: - unlocked—Puts the port in service. The port service state changes to unlocked-enabled. - unlocked,automaticInService—Puts the port in automatic in-service. The port service state changes to unlocked-disabled,automaticInService. - locked-disabled—Removes the port from service and disables it. The port service state changes to locked-enabled,disabled. - locked,maintenance—Removes the port from service for maintenance. The port service state changes to locked-enabled,maintenance.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-191](#)
- [Warning Thresh 15 Min/1 Day Tabs, page C-191](#)
- [Alarm Thresh Tab, page C-191](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors.

Table C-282 *Field Descriptions for the Parameters Tab*

Field	Description
Port Number	Displays the card port number.
Type	Identifies the type of port, such as Input Express, Output Express, Input COM, Output COM, Input Line, Output Line, Input OSC, Output OSC, or Drop.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	Displays the port administration state. Choosing an administration state from the drop-down list and clicking Apply changes the port's service state unless network conditions prevent the change. Administration states include: - unlocked—Puts the port in service. The port service state changes to unlocked-enabled. - unlocked,automaticInService—Puts the port in automatic in-service. The port service state changes to unlocked-disabled,automaticInService. - locked-disabled—Removes the port from service and disables it. The port service state changes to locked-enabled,disabled. - locked,maintenance—Removes the port from service for maintenance. The port service state changes to locked-enabled,maintenance.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Power	Shows the current power level per port.
AINS Soak	Displays the automatic in-service soak time. The duration of time that must pass with an uninterrupted signal before the traffic/termination transitions to the unlocked-enabled service state.

Warning Thresh 15 Min/1 Day Tabs

The Warning Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-283 *Field Descriptions for the Warning Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	Displays the port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Low (dBm)	Allows you to set the low power settings.
Power High (dBm)	Allows you to set the high power settings.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-284 *Field Descriptions for the Alarm Thresh Tab*

Field	Description
Port Number	Displays the port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Failure Low	Allows you to set the low power failure settings.

Maintenance

The Maintenance Properties pane allows you to display the insert and return values for each wavelength.

Table C-285 *Field Descriptions for the Maintenance*

Field	Description
Insert Value	
Target Power	Displays the default target power. The value is retrieved from the ANS parameter for the side where the 40-WXC-C card is inserted. You can edit this field with a new value as needed.
Input Port	Displays the input port number.
VOA Attenuation	Displays the default VOA attenuation value. The value is retrieved from the ANS parameter for the side where the 40-WXC-C card is inserted. You can edit this field with a new value as needed.
Wavelength	Displays the wavelength assigned to the channel. Maintenance mode is known as lambda zero. You can use this mode when you do not want to use one of the 40 system channels. For example, maintenance can be used in a degree upgrade when the system is up and running. Also, during installation, you can use maintenance or one of the 40 system channels, depending on your site requirements.
Return Value COM-TX on Selected Wavelength	
Actual Power	Displays the value returned by the card. This field indicates that the power on the cross-connection (also called OCHTerm) was created with the selected lambda and the incoming port that is calculated on the COM-TX port.
Refresh	Updates the actual power that is displayed in the Actual Power field.
Delete	Stops the unit from working in maintenance mode for the given port and lambda. You must click Delete when maintenance is complete. Exiting this screen without clicking Delete does not stop the maintenance mode.

Inventory

The Inventory Properties pane allows you to view card inventory information.

Table C-286 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Attribute	Displays the object that can be inventoried.
Value	Displays the value of the object that is inventoried.
Units	Displays the unit of measure (when applicable) of the object that is inventoried.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-287 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Port Number	Displays the port number.
Alarm Profile	Choose an alarm profile for all ports.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—80-WXC-C

The double-slot 80-Channel Wavelength Cross-Connect C-Band (80-WXC-C) card selectively sends any wavelength combination coming from nine input ports to a common output port. The device can manage up to 80 channels spaced at 50 GHz on each port according to the channel grid. Each channel can be selected from any input. The card is optically passive and provides bidirectional capability.

These cards can only be installed in the following slots:

- 1 to 5 and 12 to 16 on the Cisco ONS 15454 M2 chassis
- 2 to 6 on the Cisco ONS 15454 M6 chassis



Note

The 80-WXC-C is meant to be used in conjunction with the following:

- Passive (athermal) ONS 15216 odd/even multiplexer/demultiplexer 40-channel patch panels
- ONS 15216 multiplexer/demultiplexer patch panel 50-GHz interleaver/deinterleaver modules

Prime Optical does not manage these devices.

The 80-WXC-C card provides the following features:

- Card mode can be set to multiplexer, de-multiplexer, or bidirectional.
- When used in the multiplexer or bidirectional mode, the 80-WXC-C card allows selection of a single wavelength or any combination of wavelengths from any of the nine input ports to the common output port.
- VOAs are deployed in every channel path in order to regulate the channel's optical power. In case of an electrical power failure, VOAs are set to their maximum attenuation value, or to a fixed and configurable one. The VOA can also be set manually.

The 80-WXC-C card acts as a selector element with the following characteristics:

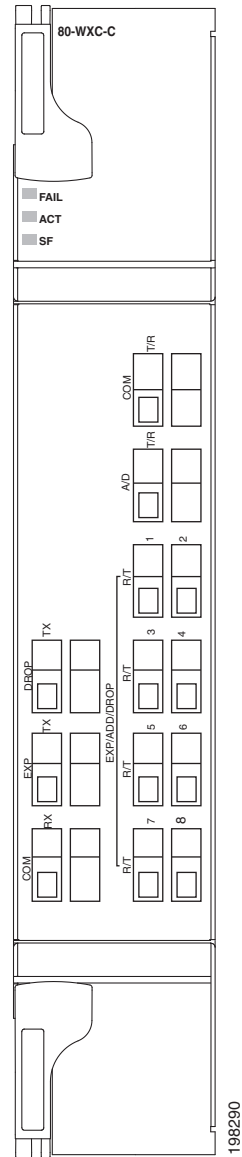
- Selects a wavelength from nine input ports and passes the wavelength through to the common output port. Simultaneously, the card can block the same wavelength coming from the other input ports.
- Stops wavelengths from all nine input ports.
- Monitors optical power and controls path attenuation using per-channel VOA independently of the wavelength input-to-output port connection.

80-WXC-C Faceplate Ports

The 80-WXC-C card has 14 types of ports:

- EXPRESS/ADD/DROP T/R (1 to 8)—Functions as a EXP port in the bidirectional mode, as a ADD port in the multiplexer mode, and as a DROP port in the demultiplexer mode.
- MON—Monitors power on the COM T/R port.
- COM RX—Receives the optical signal from a preamplifier (such as the OPT-PRE card) and sends it to the optical splitter.
- DROP TX—Sends the split-off optical signal that contains drop channels to the 80-WXC-C card, where the channels are further processed and dropped.
- EXP TX—Sends the split-off optical signal that contains pass-through channels to the other side of the NE.
- COM T/R—Functions as a COM TX port in the multiplexer mode and as a COM RX port in the demultiplexer mode. The COM port is a bidirectional port.
- ADD/DROP T/R—Functions as an ADD RX port in the bidirectional and multiplexer mode and as a DROP port in the demultiplexer mode.

The following figure shows the 80-WXC-C card faceplate.

Figure C-21 80-WXC-C Faceplate

For the 80-WXC-C module, the slot properties pane displays the following properties: Module View, Identification, Inventory, Alarm Behavior, Card, Maintenance, Optical Channel, Optical Line, Wavelength Power, and WXC Line.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-288 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Side	Displays side settings. Automatic node setup (ANS) assumes that every DWDM port has a line direction parameter that is either side A to side B or side B to side A. ANS automatically configures the mandatory optical connections according to following main rules: - Cards equipped in slots 1 to 5 have a drop section facing side A. - Cards equipped in slots 12 to 16 have a drop section facing side B for DWDM nodes in nonmesh networks. - Nodes in DWDM mesh networks have sides A, B, C, D, E, F, G, or H.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-289 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.

Table C-289 *Field Descriptions for the Alarm Behavior Properties Pane (continued)*

Field	Description
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Card

The Card Properties pane allows you to view and update card information.

Table C-290 *Field Descriptions for the Card Properties Pane*

Field	Descriptions
Card Mode	Allows you to select a card mode. Select from: - Bidirectional - Multiplexer - De-multiplexer

Inventory

The Inventory Properties pane allows you to view card inventory information.

Table C-291 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Attribute	Displays the card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of the attribute value.

Maintenance

The Maintenance Properties pane allows you to display the insert and return values for each wavelength.

Table C-292 *Field Descriptions for the Maintenance Properties Pane*

Field	Description
Insert Value	
Target Power (dBm)	Displays the default target power. The value is retrieved from the ANS parameter for the side where the 80-WXC-C card is inserted. You can edit this field with a new value as needed.
Input Port	Displays the input port number.
Wavelength	Displays the wavelength assigned to the channel. Maintenance mode is known as lambda zero. You can use this mode when you do not want to use one of the 80 system channels. For example, maintenance can be used in a degree upgrade when the system is up and running. Also, during installation, you can use maintenance or one of the 80 system channels, depending on your site requirements.
Return Value COM on Selected Wavelength	
Actual Power (dBm)	Displays the value returned by the card. This field indicates that the power on the cross-connection (also called OCHTerm) was created with the selected lambda and the incoming port that is calculated on the COM port.
Refresh	Updates the actual power that is displayed in the Actual Power field.
Delete	Stops the unit from working in maintenance mode for the given port and lambda. You must click Delete when maintenance is complete. Exiting this screen without clicking Delete does not stop the unit from working in maintenance mode.

Optical Channel

The Optical Channel Properties pane allows you to view and update optical channel threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-198](#)
- [OCH Thresh 15 Min/1 Day Tabs, page C-199](#)
- [Alarm Thresh Tab, page C-200](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors. To view optical channels, select the wavelength from the wavelength drop-down list and click **Retrieve**.



Note

Wavelengths with two asterisks (**) denote available optical channels.

Table C-293 **Field Descriptions for the Parameters Tab**

Field	Description
Circuit Name	Displays the name of the circuit.
State	Displays the status of the line. Values are: - OOS_DSBLD—Out of Service–Disabled. Unable to carry traffic. - IS_AINS—In Service–Auto In Service. Alarm reporting is suppressed, but traffic is carried. - OOS_MT—Out of Service–Maintenance. Alarm reporting is suppressed, but traffic is carried and loopbacks are allowed.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
From	Shows the incoming Input Express (EXP_RX) port.
Power From	Displays the power of the port from which the circuit starts.
To	Displays the port to which the circuit is connected.
Power To	Displays the power of the port to which the circuit is connected.
Force Channel	Allows you to start the channel by moving the VOA from Open to Closed loop. You can force VOA only when the Force Channel Status is in the Unlocked state.
Force Channel Status	Displays the channel status. The different statuses are: - Unlocked—Can force channel startup. - Locked—Cannot force channel startup; the device is under the control of some other function, such as Optical safety. - Forced—Channel startup has already been forced.
VOA Power Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) is the only function that can modify this value.
VOA Power Calib.	Allows you to modify the optical output power to the VOA, if necessary.
VOA Attenuation Ref.	Shows the attenuation value of the VOA when the VOA is set in attenuation mode. ANS and APC are the only functions that can modify this value.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).

OCH Thresh 15 Min/1 Day Tabs

The OCH Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation. To view optical channels, select both wavelength and port type from the drop-down lists and click **Retrieve**.

**Note**

Wavelengths with two asterisks (**) denote available optical channels.

Table C-294 *Field Descriptions for the OCH Thresh 15 Min/1 Day Tabs*

Field	Description
Circuit Name	Displays the name of the circuit.
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Type	Identifies the type of port.
Actual Wavelength	Shows the wavelength specified by the manufacturing data. This field cannot be set manually.
Power Low (dBm)	Allows you to set the low power settings.
Power High (dBm)	Allows you to set the high power settings.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation. To view optical channels, select both wavelength and port type from the drop-down lists and click **Retrieve**.

**Note**

Wavelengths with two asterisks (**) denote available optical channels.

Table C-295 *Field Descriptions for the Alarm Thresh Tab*

Field	Description
Circuit Name	Displays the name of the circuit.
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Type	Identifies the type of port.
Actual Wavelength	Shows the wavelength specified by the manufacturing data. This field cannot be set manually.
Power Failure Low (dBm)	Allows you to set the low power failure settings.
Power Degrade High (dBm)	Allows you to set the high power settings.
Power Degrade Low (dBm)	Allows you to set the low power settings.

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-200](#)
- [Warning 15 Min/1 Day Tabs, page C-201](#)
- [Alarm Thresh Tab, page C-202](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors.

Table C-296 *Field Descriptions for the Parameters Tab*

Field	Description
Port Number	The port number.
Type	Identifies the type of port.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	Displays the port administration state. It can be: • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance • Locked, disabled • Locked, maintenance • Unlocked, automatic in service
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Power	Shows the current power level per port.
Active Channels	Indicates how many channels the card/port is carrying. The value generally reflects the number of provisioned channels passing through the port.
VOA Mode	Shows the current functional mode of the VOA. The value is not provisionable and is read from the card.
VOA Power Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) is the only function that can modify this value.
VOA Power Calib.	Allows you to modify the optical output power to the VOA, if necessary.
VOA Attenuation Ref.	Shows the attenuation reference value of the VOA. The value is established by the manufacturer.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, per channel, if necessary. The sum of the Power Reference and Power Calibration, for each single channel, defines the Power Set Point.

Warning 15 Min/1 Day Tabs

The Warning Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1- day threshold crossing alert generation.

Table C-297 *Field Descriptions for the Warning 15 Min/1 Day Tabs*

Field	Description
Port Number	The port number.
Type	Identifies the type of port.
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-298 *Field Descriptions for the Alarm Thresh Tab*

Field	Description
Port Number	The port number.
Type	Identifies the type of port.
Power Failure Low	Allows you to set the low power failure threshold.

Wavelength Power

The Wavelength Power Properties pane displays wavelength power data. To view optical channels, select the port type from the port drop-down list and click **Retrieve**.

Table C-299 *Field Descriptions for the Wavelength Power Properties Pane*

Field	Description
Wavelength	Displays the wavelength number.
Measured Power	Displays the power.
Status	Displays the status.
Used	Whether or not the wavelength is being used. Values are Yes and No.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

WXC Line

The WXC Line Properties pane allows you to view and update 80-WXC-C line threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-202](#)
- [Warning Thresh 15 Min/1 Day Tabs, page C-203](#)
- [Alarm Thresh Tab, page C-203](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors.

Table C-300 *Field Descriptions for the WXC Line Tab*

Field	Description
Port Number	Displays the card port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, Add, and Drop.

Table C-300 *Field Descriptions for the WXC Line Tab (continued)*

Field	Description
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	Displays the port administration state. It can be: • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance • Locked, disabled • Locked, maintenance • Unlocked, automatic in service
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Power	Shows the current power level per port.
Active Channels	Indicates how many channels the amplifier is carrying. The value generally reflects the number of provisioned channels.

Warning Thresh 15 Min/1 Day Tabs

The Warning Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-301 *Field Descriptions for the Warning Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	The port number.
Type	Identifies the type of port.
Power Low (dBm)	Allows you to set the low power threshold.
Power High (dBm)	Allows you to set the high power threshold.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-302 *Field Descriptions for the Alarm Thresh Tab*

Field	Description
Port Number	The port number.
Type	Identifies the type of port.
Power Failure Low (dBm)	Allows you to set the low power failure threshold.

**Note**

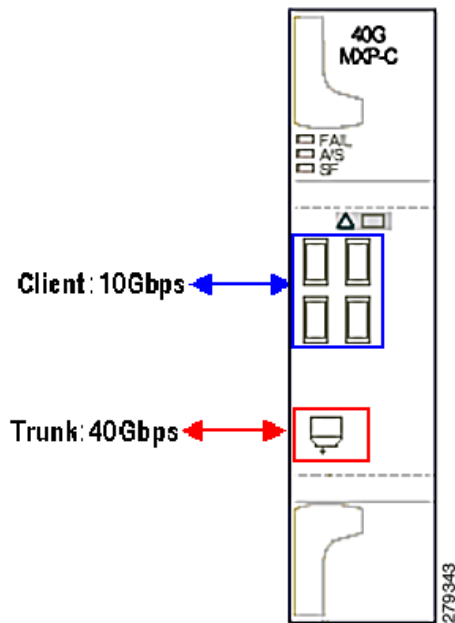
See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—40G-MXP-C

The slot properties pane displays information about the Cisco ONS 15454 MSTP slot that is selected in the NE Explorer tree. Use this properties pane to change the card details.

The following figure shows the 40-MXP-C card faceplate.

Figure C-22 40G-MXP-C Faceplate



The following are the main features of the card:

- The card is two slots wide.
- Overclock mode is available on the trunk port.
- The card has four client ports and one trunk port. The client operates with OC-192/STM 64, 10GE, 10G FC, OTU2, or Fiber Channel 8 Gb (FC8G) payloads. All client ports are pluggable, and there is no default value associated with the client port. The four client ports can have different payloads. G.709 is always enabled on all clients ports and cannot be disabled.
- The trunk port is DWDM-capable. G.709 is enabled on the trunk port by default. Besides the Standard mode, the trunk port can also be set for Overclock mode. If you enable the Overclock option, the trunk can operate with FC10G or OTU2 payloads.
- Links have Y-cable protection.
- PPM supports the following rates:

- On client ports: TEN_GE, FC_10G, OC_192, FC8G, and OTU2
- On the trunk port: FORTY_GE and OC_768.
- Regeneration peer group is supported.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-303 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: • IS, AINS—Automatic In Service • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Card

The card Properties pane allows you to view and update card information.

Table C-304 Field Descriptions for the Card Properties Pane

Field	Description
Card Mode	Allows you to set the card mode.
Regeneration Peer Slot	Allows you to select similar cards so that you can configure a peer group.
Regeneration Group Name	Allows you to set the name of the peer group.

PPM

The PPM Properties pane allows you to view and provision the PPM and the ports inside the PPM.

Table C-305 Field Descriptions for the PPM Properties Pane

Field	Description
Pluggable Port Modules	
Pluggable Number	Displays the identifier of the plugin module.
Actual Equipment Type	Displays the actual plugin module that is installed in the slot.
Equipment State	Displays the equipment state.
Administration State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
PPM	
Port	Displays the PPM number and port number.
Rate	Displays the port rate. To enable FC 10G payload, enable Overclock mode in the Line Properties pane > Ports tab.

Provision Pluggable Dialog Box

Click the **Create** button to launch the Provision Pluggable dialog box. You can create no more than four PPMs at a time. This dialog box allows you to provision the PPM and to create the ports inside this entity. See [Provision Pluggable Dialog Box, page C-25](#) for more information.

Line

The Line Properties pane allows you to configure line information.

If the card is installed on an ONS 15454 SONET NE, the Properties pane contains the following tabs:

- [Section Trace Tab, page C-207](#)
- [SONET Line Tab, page C-207](#)
- [Section Thresh 15 Min/1 Day Tabs, page C-208](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-208](#)

- [RMON Tab, page C-209](#)
- [Ethernet Tab, page C-209](#)
- [Ports Tab, page C-210](#)

Section Trace Tab

The Section Trace tab allows you to change the section trace settings for the card.

Table C-306 *Field Descriptions for the Section Trace Tab*

Field	Description
Port No.	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.
Default button	Resets the value of the port parameters to the default value.

SONET Line Tab

The SONET Line tab allows you to view and change the SONET line settings of the card.

Table C-307 *Field Descriptions for the SONET Line Tab*

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Termination Mode	Allows you to set the mode of termination.
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Type	Defines the port as SONET or SDH.
ProvidesSync	When checked, the card is provisioned as an NE timing reference.
EnableSyncMsg	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.

Table C-307 *Field Descriptions for the SONET Line Tab (continued)*

Field	Description
AdminSSM	Allows you to override the STU value with one of the following: • PRS—Primary Reference Source (Stratum 1) • STU • ST2—Stratum 2 • ST3—Stratum 3 • SMC—SONET minimum clock • ST4—Stratum 4 • DUS—Do not use for timing synchronization • RES—Reserved; quality level set by user
ProvidesSync	When checked, the card is provisioned as an NE timing reference.

Section Thresh 15 Min/1 Day Tabs

The Section Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day section threshold information for the card.

Table C-308 *Field Descriptions for the Section Thresh 15 Min/1 Day Tabs*

Field	Description
Port No.	Displays the port number.
CV-S	Displays the coding violations section.
ES-S	Displays the errored seconds section.
SES-S	Displays the severely errored seconds section.
SEFS-S	Displays the severely errored framing seconds section.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day line threshold information for the card.

Table C-309 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
Port No.	Displays the optical port number.
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.
CV-L	Displays the coding violations line.
UAS-L	Displays the unavailable seconds line information.

Table C-309 Field Descriptions for the Line Thresh 15 Min/1 Day Tabs (continued)

Field	Description
FC-L	Displays the failure count line.
Reset to Defaults button	Resets the value of the port parameters to the default value.

RMON Tab

The RMON Thresholds Properties pane allows you to view RMON thresholds for the card.

Table C-310 Field Descriptions for the RMON Tab

Field	Description
Create button	Allows you to create an RMON threshold. For more information, see Creating RMON Thresholds, page 6-11 .
Index Number	Displays the optical port number.
Slot	Displays the slot.
Port	Displays the port.
Variable	Displays the Ethernet threshold variable. The variable depends on the card type.
Alarm Type	Displays the Ethernet threshold alarm type. Values are Rising, Falling, or Rising and Falling.
Sample Type	Displays the Ethernet threshold sample type. Values are Relative and Absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of any time period.
Sample Period (sec)	Displays the Ethernet threshold sample period, in seconds.
Rising Thresholds (Count)	Displays a count of the number of times an alarm entry crosses the rising threshold and the entry generates an event.
Falling Thresholds (Count)	Displays a count of the number of times an alarm entry crosses the falling threshold and the entry generates an event.

Ethernet Tab

The Ethernet tab allows you to view Ethernet line information.

Table C-311 Field Descriptions for the Ethernet Tab

Field	Description
Port Number	Displays the port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Table C-311 *Field Descriptions for the Ethernet Tab (continued)*

Field	Description
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS state.
Max. Size	To permit the acceptance of jumbo-size Ethernet frames, select Jumbo (default).

Ports Tab**Table C-312** *Field Descriptions for the Ports Tab*

Field	Description
Port Number	Displays the port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak (H:M)	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS state.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Squelch Configuration	Allows you to configure the remote client to squelch or send an AIS signal.
Overclock	Allows you to enable or disable Overclock mode. Enable the mode to set the data rate to FC 10G for PPM.
Rx Wavelength	Displays the configuration parameter for modulation/demodulation.

Table C-312 *Field Descriptions for the Ports Tab (continued)*

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

Path

The Path Properties pane contains the following tabs:

- [SONET Tab, page C-212](#)
- [J1 Path Trace Tab, page C-212](#)

SONET Tab

The SONET tab allows you to view and change the SONET path settings for the OTU2_XP module.

Table C-313 Field Descriptions for the SONET Tab

Field	Descriptions
Port No.	Displays the port number.
SF BER Level	Sets the signal fail bit error rate.
SD BER Level	Sets the signal degrade bit rate.



Note

The SDH tab is displayed if the card is installed on an ONS 15454 SDH NE.

J1 Path Trace Tab

The J1 Path Trace tab allows you to view and update J1 path trace information.

Table C-314 Field Descriptions for the J1 Path Trace Tab

Field	Descriptions
Modify button	Allows you to open the Modify Trace dialog box, where you can change the section trace information for applicable cards. See Modifying Traces, page 7-171 for more information.
Port No.	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.
Default button	Resets the value of the port parameters to the default value.



Note

These properties are affected only when 10GE LAN to WAN card mode is configured.

OTN

The OTN Properties pane contains the following tabs:

- [OTN Line Tab, page C-213](#)
- [G.709 Thresh 15 Min/1 Day Tabs, page C-213](#)
- [FEC Thresh 15 Min/1 Day Tabs, page C-213](#)
- [Trail Trace Identifier Tab, page C-214](#)

OTN Line Tab

The OTN Line tab allows you to view and change the OTN line settings of the card.

Table C-315 Field Descriptions for the OTN Line Tab

Field	Description
Port No.	Displays the port number. If you set the payload as OTU2 in the PPM Properties pane, a new port is added to the OTN Line tab.
G.709 OTN	Disables or enables the G.709 OTN feature.
FEC	Disables or enables forward error correction. Note OTN must be enabled before you can enable FEC.
SF BER	The signal fail bit error rate.
SD BER	The signal degrade bit error rate.

G.709 Thresh 15 Min/1 Day Tabs

The G.709 Thresh 15 Min/1 Day tabs displays near- and far-end SM optical channel transport unit (OTUK), and near- and far-end PM optical channel data unit (ODUK) threshold information and allows you to change these card threshold values.

Table C-316 Field Descriptions for the G.709 Thresh 15 Min/1 Day Tabs

Field	Description
SM (OTUK)/PM (ODUK) - Near End, Far End	
Port Number	Displays the optical port number.
BBE-SM	Displays the background block errors.
ES-SM	Displays the errored seconds.
SES-SM	Displays the severely errored seconds.
UAS-SM	Displays the unavailable seconds.
FC-SM	Displays the failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.

FEC Thresh 15 Min/1 Day Tabs

The FEC Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day FEC threshold values of the card.

Table C-317 Field Descriptions for the FEC Thresh 15 Min/1 Day Tabs

Field	Description
Port Number	Displays port number information.
Bit Errors Corrected	Displays the bit errors corrected in 15-minute intervals.
Uncorrectable Words	Displays the uncorrectable words in 15-minute intervals.

Trail Trace Identifier Tab

The Trail Trace Identifier tab allows you to provision the trail trace identifier for the card.

Table C-318 Field Descriptions for the Trail Trace Identifier Tab

Field	Description
Modify button	Allows you to open the Modify Trace dialog box, where you can change the section trace information for applicable cards. For more information, see Modifying Traces, page 7-171 .
Port Number	Displays port number information.
Level	Displays the trail trace identifier level (Section or Path).
Trace Mode	Allows you to set the trace mode (Off or Manual).
Disable FDI on TTIM	Allows you to disable forward defect indication (FDI) for trail trace identifier mismatch (TTIM) alarms.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string.
Current Received String	Displays the current received string.

Loopback

The Loopback Properties pane allows you to view and update loopback information.

Table C-319 Field Descriptions for the Loopback Properties Pane

Field	Description
Port Number	Displays the port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The port state must be OOS_MT before you can configure the loopback type.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-320 *Field Descriptions for the Auto Laser Shutdown Properties Pane*

Field	Description
Port Number	Displays the port number.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur.	Allows you to set the recovery laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int.	Allows you to set the recovery laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Status	Indicates whether the laser is currently shut down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

Optical Thresh

The Optical Thresh Properties pane allows you to view and provision optical threshold settings. The Properties pane contains [TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs](#), page C-215.

TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs

The TCA 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert and generation.

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-321 *Field Descriptions for the TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs*

Field	Description
Port Number	Displays the port number.
Laser Bias High (%)	Displays the upper laser bias threshold.
Rx Power High (dBm)	Displays the upper receive power threshold.
Rx Power Low (dBm)	Displays the lower receive power threshold.
Tx Power High (dBm)	Displays the upper transmit power threshold.
Tx Power Low (dBm)	Displays the lower transmit power threshold.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-322 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Card Profile	
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
DWDM/Payload	
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.
GFP	
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.

Protection

The Protection Properties pane allows you to view and update protection group information.

Table C-323 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection groups and allows you to execute switch commands.

Info

The Info Properties pane allows you to view nominal operating values set for the card during manufacturing.

Table C-324 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.

Table C-324 Field Descriptions for the Info Properties Pane (continued)

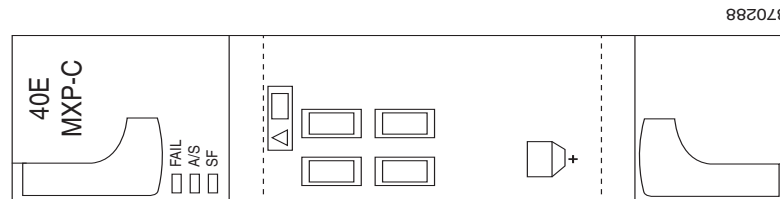
Field	Description
Value	Displays the value of the attribute.
Units	Displays the unit of the attribute value.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—40E-MXP-C

The 40E-MXP-C card aggregates a variety of client service inputs (Gigabit Ethernet, Fibre Channel, OTU2, OTU2e, and OC-192) into a single 40-Gbps OTU3/OTU3e signal on the trunk side. The slot properties pane displays information about the Cisco ONS 15454 MSTP slot that is selected in the NE Explorer tree. Use this properties pane to change the card details.

Figure C-23 40E-MXP-C Faceplate

The following are the main features of the card:

- The 40E-MXP-C muxponders pass all SONET/SDH overhead bytes transparently, section, or line termination. The card is two slots wide.
- You can install and provision the 40E-MXP-C card in a linear configuration in:
 - Slots 1 to 5 and 12 to 16 in ONS 15454 DWDM chassis
 - Slot 2 in ONS 15454 M2 chassis
 - Slots 2 to 6 in ONS 15454 M6 chassis
 - The client ports of the 40E-MXP-C card interoperate with all the existing TXP/MXP (OTU2 trunk) cards.
- The client port of 40E-MXP-C card does not interoperate with the OTU2_XP card when the signal rate is OTU1e (11.049 Gbps) and the "No Fixed Stuff" option is enabled on the trunk port of OTU2_XP card.
- Overclock mode is available on the trunk port. The card supports aggregation of the following signals:
 - With overclock enabled on the trunk port:
 - 10-Gigabit Fibre Channel

- OTU2e
- 10-GigabitEthernet LAN-Ph (CBR mapping)
 - With overclock disabled on the trunk port:
- 8-Gigabit Fibre Channel
- 10-GigabitEthernet LAN-Phy (GFP framing)
- 10-GigabitEthernet LAN-Phy (WIS framing)
- OC-192/STM-64
- OTU2
- The card has four client ports and one trunk port. The client operates with OC-192/STM 64, 10GE, 10G FC, OTU2, or Fiber Channel 8 Gb (FC8G) payloads. All client ports are pluggable, and there is no default value associated with the client port. The four client ports can have different payloads. G.709 is always enabled on all clients ports and cannot be disabled.
- The trunk port is DWDM-capable. G.709 is enabled on the trunk port by default. Besides the Standard mode, the trunk port can also be set for Overclock mode. If you enable the Overclock option, the trunk can operate with FC10G or OTU2 payloads.
- Onboard E-FEC processor—The E-FEC functionality improves the correction capability of the transponder to improve performance, allowing operation at a lower OSNR compared to the standard RS (239,255) correction algorithm. A new BCH algorithm implemented (according to G.975.1 I.7) in E-FEC allows recovery of an input BER up to 1E-3. The 40E-MXP-C card supports both the standard RS (specified in ITU-T G.709) and E-FEC standard, which allows an improved gain on trunk interfaces with a resultant extension of the transmission range on these interfaces.
- Y-cable protection—Supports Y-cable protection only between the same card type on ports with the same port number and signal rate.

**Note**

Y-cable cannot be created on a 10 GE port when WIS framing is enabled on the 40E-MXP-C card.

- PPM supports the following rates:
 - On client ports: TEN_GE, FC_10G, OC_192, FC8G, and OTU2
 - On the trunk port: FORTY_GE and OC_768.
- Unidirectional regeneration—The 40E-MXP-C card supports unidirectional regeneration configuration. Each 40E-MXP-C card in the configuration regenerates the signal received from another 40E-MXP-C card in one direction.

**Note**

When you configure the 40E-MXP-C card in the Unidirectional Regen mode, ensure that the payload is not configured on the pluggable port modules of the 40E-MXP-C card.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-325 *Field Descriptions for the Identification Properties Pane*

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Card

The card Properties pane allows you to view and update card information.

Table C-326 *Field Descriptions for the Card Properties Pane*

Field	Description
Card Mode	Allows you to set the card mode.
Regeneration Peer Slot	Allows you to select similar cards so that you can configure a peer group.
Regeneration Group Name	Allows you to set the name of the peer group.

PPM

The PPM Properties pane allows you to view and provision the PPM and the ports inside the PPM.

Table C-327 Field Descriptions for the PPM Properties Pane

Field	Description
Pluggable Port Modules	
Pluggable Number	Displays the identifier of the plugin module.
Actual Equipment Type	Displays the actual plugin module that is installed in the slot.
Equipment State	Displays the equipment state.
Administration State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
PPM	
Port	Displays the PPM number and port number.
Rate	Displays the port rate. To enable FC 10G payload, enable Overclock mode in the Line Properties pane > Ports tab.

Provision Pluggable Dialog Box

Click the **Create** button to launch the Provision Pluggable dialog box. You can create no more than four PPMs at a time. This dialog box allows you to provision the PPM and to create the ports inside this entity. See [Provision Pluggable Dialog Box, page C-25](#) for more information.

Line

The Line Properties pane allows you to configure line information.

If the card is installed on an ONS 15454 SONET NE, the Properties pane contains the following tabs:

- [RMON Tab, page C-209](#)
- [Ethernet Tab, page C-209](#)
- [Ports Tab, page C-210](#)

RMON Tab

The RMON Thresholds Properties pane allows you to view RMON thresholds for the card.

Table C-328 Field Descriptions for the RMON Tab

Field	Description
Create button	Allows you to create an RMON threshold. For more information, see Creating RMON Thresholds, page 6-11 .
Index Number	Displays the optical port number.
Slot	Displays the slot.
Port	Displays the port.
Variable	Displays the Ethernet threshold variable. The variable depends on the card type.

Table C-328 *Field Descriptions for the RMON Tab (continued)*

Field	Description
Alarm Type	Displays the Ethernet threshold alarm type. Values are Rising, Falling, or Rising and Falling.
Sample Type	Displays the Ethernet threshold sample type. Values are Relative and Absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of any time period.
Sample Period (sec)	Displays the Ethernet threshold sample period, in seconds.
Rising Thresholds (Count)	Displays a count of the number of times an alarm entry crosses the rising threshold and the entry generates an event.
Falling Thresholds (Count)	Displays a count of the number of times an alarm entry crosses the falling threshold and the entry generates an event.

Ethernet Tab

The Ethernet tab allows you to view Ethernet line information.

Table C-329 *Field Descriptions for the Ethernet Tab*

Field	Description
Port Number	Displays the port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS state.
MTU	Maximum transmission unit (MTU). The largest acceptable packet size configured for that port. The default value is 1548.

Table C-329 **Field Descriptions for the Ethernet Tab (continued)**

Field	Description
Flow Control	Enables or disables flow control messaging with its peer port. When enabled, the port can send and receive PAUSE frames when buffer congestion occurs. Values are: • ON—Flow control is enabled • OFF—(Default) Flow control is disabled To set this option, the card mode must be one of the following: • L2 over DWDM • 10GE MXP • 20GE MXP
Mapping	Sets the mapping mode.

Ports Tab**Table C-330** **Field Descriptions for the Ports Tab**

Field	Description
Port Number	Displays the port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak (H:M)	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS state.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Squelch Configuration	Allows you to configure the remote client to squelch or send an AIS signal.
Overclock	Allows you to enable or disable Overclock mode. Enable the mode to set the data rate to FC 10G for PPM.
Rx Wavelength	Displays the configuration parameter for modulation/demodulation.

Table C-330 *Field Descriptions for the Ports Tab (continued)*

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

Path

The Path Properties pane contains the following tabs:

- [SONET Tab, page C-212](#)
- [J1 Path Trace Tab, page C-212](#)

SONET Tab

The SONET tab allows you to view and change the SONET path settings for the OTU2_XP module.

Table C-331 Field Descriptions for the SONET Tab

Field	Descriptions
Port No.	Displays the port number.
SF BER Level	Sets the signal fail bit error rate.
SD BER Level	Sets the signal degrade bit rate.



Note

The SDH tab is displayed if the card is installed on an ONS 15454 SDH NE.

J1 Path Trace Tab

The J1 Path Trace tab allows you to view and update J1 path trace information.

Table C-332 Field Descriptions for the J1 Path Trace Tab

Field	Descriptions
Modify button	Allows you to open the Modify Trace dialog box, where you can change the section trace information for applicable cards. See Modifying Traces, page 7-171 for more information.
Port No.	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.
Default button	Resets the value of the port parameters to the default value.



Note

These properties are affected only when 10GE LAN to WAN card mode is configured.

OTN

The OTN Properties pane contains the following tabs:

- [OTN Line Tab, page C-213](#)
- [G.709 Thresh 15 Min/1 Day Tabs, page C-213](#)
- [FEC Thresh 15 Min/1 Day Tabs, page C-213](#)
- [Trail Trace Identifier Tab, page C-214](#)

OTN Line Tab

The OTN Line tab allows you to view and change the OTN line settings of the card.

Table C-333 Field Descriptions for the OTN Line Tab

Field	Description
Port No.	Displays the port number. If you set the payload as OTU2 in the PPM Properties pane, a new port is added to the OTN Line tab.
G.709 OTN	Disables or enables the G.709 OTN feature.
FEC	Disables or enables forward error correction. Note OTN must be enabled before you can enable FEC.
SF BER	The signal fail bit error rate.
SD BER	The signal degrade bit error rate.

G.709 Thresh 15 Min/1 Day Tabs

The G.709 Thresh 15 Min/1 Day tabs display near- and far-end SM optical channel transport unit (OTUK), and near- and far-end PM optical channel data unit (ODUK) threshold information and allows you to change these card threshold values.

Table C-334 Field Descriptions for the G.709 Thresh 15 Min/1 Day Tabs

Field	Description
SM (OTUK)/PM (ODUK) Near End, Far End	
Port Number	Displays the optical port number.
BBE-SM	Displays the background block errors.
ES-SM	Displays the errored seconds.
SES-SM	Displays the severely errored seconds.
UAS-SM	Displays the unavailable seconds.
FC-SM	Displays the failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.

FEC Thresh 15 Min/1 Day Tabs

The FEC Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute FEC threshold values of the card.

Table C-335 Field Descriptions for the FEC Thresh 15 Min/1 Day Tabs

Field	Description
Port Number	Displays port number information.
Bit Errors Corrected	Displays the bit errors corrected in 15-minute intervals.
Uncorrectable Words	Displays the uncorrectable words in 15-minute intervals.

Trail Trace Identifier Tab

The Trail Trace Identifier tab allows you to provision the trail trace identifier for the card.

Table C-336 Field Descriptions for the Trail Trace Identifier Tab

Field	Description
Modify button	Allows you to open the Modify Trace dialog box, where you can change the section trace information for applicable cards. For more information, see Modifying Traces, page 7-171 .
Port Number	Displays port number information.
Level	Displays the trail trace identifier level (Section or Path).
Trace Mode	Allows you to set the trace mode (Off or Manual).
Disable FDI on TTIM	Allows you to disable forward defect indication (FDI) for trail trace identifier mismatch (TTIM) alarms.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string.
Current Received String	Displays the current received string.

Loopback

The Loopback Properties pane allows you to view and update loopback information.

Table C-337 Field Descriptions for the Loopback Properties Pane

Field	Description
Port Number	Displays the port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The port state must be OOS_MT before you can configure the loopback type.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-338 *Field Descriptions for the Auto Laser Shutdown Properties Pane*

Field	Description
Port Number	Displays the port number.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur.	Allows you to set the recovery laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int.	Allows you to set the recovery laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Status	Indicates whether the laser is currently shut down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

Optical Thresh

The Optical Thresh Properties pane allows you to view and provision optical threshold settings. The Properties pane contains the [TCA 15 Min](#), [TCA 1 Day](#), and [Alarm Thresh Tabs](#), [page C-227](#).

TCA 15 Min, TCA 1 Day, and Alarm Thresh Tabs

The TCA 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert and generation.

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-339 *Field Descriptions for the TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs*

Field	Description
Port Number	Displays the port number.
Laser Bias High (%)	Displays the upper laser bias threshold.
Rx Power High (dBm)	Displays the upper receive power threshold.
Rx Power Low (dBm)	Displays the lower receive power threshold.
Tx Power High (dBm)	Displays the upper transmit power threshold.
Tx Power Low (dBm)	Displays the lower transmit power threshold.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-340 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Card Profile	
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
DWDM/Payload/GFP	
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Protection

The Protection Properties pane allows you to view and update protection group information.

Table C-341 Field Descriptions for the Protection Properties Pane

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection groups and allows you to execute switch commands.

Info

The Info Properties pane allows you to view nominal operating values set for the card during manufacturing.

Table C-342 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of the attribute value.



Note

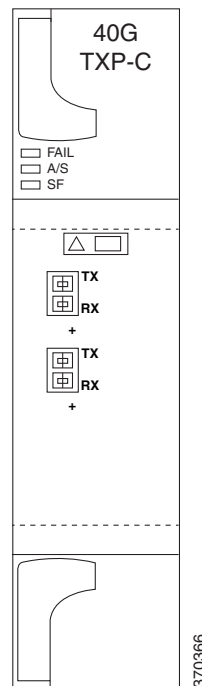
See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—40G-TXP-C

The slot properties pane displays information about the Cisco ONS 15454 MSTP slot that is selected in the NE Explorer tree. Use this properties pane to change the card details.

The following figure shows the 40G-TXP-C card faceplate.

Figure C-24 40G-TXP-C Faceplate



The two-channel 40G transponder card operates with OC 768 and non-pluggable 40GE payloads. The following are the features of the card:

- The card is two slots wide.
- The card does not contain Pluggable Port Modules (PPMs). Instead, you can configure data rates.
- Overclock mode is available on the trunk port.
- The card has one client port and one trunk port. The client operates with OC768/STM256, 40 GE, and OTU 3 payloads. The client port has no default signal. To set the payload 40 GE on the client port, you must enable Overclock mode on the trunk port. The client port cannot be canceled, and can operate without any payload configured.
- The trunk port is DWDM-capable. G.709 is enabled on the trunk port by default; it can be enabled on the client port. Besides the Standard mode, the trunk port can also be set for Overclock mode. If you enable the Overclock option, the trunk can operate with any client payload combination. If no payload is configured on the client port, the payload on the trunk port is set for OC 768. You cannot cancel this port or the payload. CTM automatically maintains the client and the trunk payload in congruence.
- The following is the client payload and the trunk payload combination:
 - If the client port operates at OC 768, the trunk port operates at OC 768/OTU 3. The Overclock option should be disabled.

- If the client port operates at 40 GE, the trunk port operates at 40 GE/OTU 3. The Overclock option should be enabled.
- Links have Y-cable protection.
- Regeneration peer group is supported.

Module View Tab

The Module View tab displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification Tab

The Identification tab allows you to view and update card identification information.

Table C-343 Field Descriptions for the Identification Tab

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: • IS, AINS—Automatic In Service • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Card Tab

The card tab allows you to view and update card information.

Table C-344 *Field Descriptions for the Card Tab*

Field	Description
Regeneration Peer Slot	Allows you to select similar cards so that you can configure a peer group.
Regeneration Group Name	Allows you to set the name of the peer group.

Data Rate Selection Tab

The PPM tab allows you to view and provision the PPM and the ports inside the PPM.

Table C-345 *Field Descriptions for the PPM Tab*

Field	Description
Create button	Click Create to launch the Create Port dialog box. You can configure only one data rate at a time. For more information on Creating Ports, see Provisioning Pluggable Entities on DWDM Cards, page 6-2 . Note To enable the 40G rate, the Overclock option must be enabled. Go to the Line > Ports tab, and enable Overclock.
Port	Displays the port number.
Rate	Displays the port rate.

Line Tab

The Line tab allows you to configure line information.

If the card is installed on an ONS 15454 SONET NE, the following subtabs are displayed when the port rate is OC768:

- [Section Trace Tab, page C-231](#)
- [SONET Line Tab, page C-232](#)
- [Section Thresh 15 Min/1 Day Tabs, page C-233](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-233](#)
- [STS Thresh 15 Min/1 Day Tabs, page C-234](#)
- [Ethernet Tab, page C-234](#)
- [Ports Tab, page C-235](#)



Note

If you provision a 40GE payload, only the port and ethernet tabs are displayed.

Section Trace Tab

The Section Trace tab allows you to change the section trace settings for the card.

Table C-346 *Field Descriptions for the Section Trace Tab*

Field	Description
Port No.	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.
Default button	Resets the value of the port parameters to the default value.

SONET Line Tab

The SONET Line tab allows you to view and change the SONET line settings of the card.

Table C-347 *Field Descriptions for the SONET Line Tab*

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Termination Mode	Allows you to set the mode of termination.
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Type	Defines the port as SONET or SDH.
ProvidesSync	When checked, the card is provisioned as an NE timing reference.
EnableSyncMsg	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.

Table C-347 *Field Descriptions for the SONET Line Tab (continued)*

Field	Description
AdminSSM	Overrides the synchronization status message (SSM) synchronization traceability unknown (STU) value. If the node does not receive an SSM signal, it defaults to STU. Admin SSM allows you to override the STU value with one of the following: • PRS—Primary Reference Source (Stratum 1) • ST2—Stratum 2 • TNC—Transit node clock • ST3E—Stratum 3E • ST3—Stratum 3 • SMC—SONET minimum clock • ST4—Stratum 4 • DUS—Do not use for timing synchronization • RES—Reserved; quality level set by user
ProvidesSync	When checked, the card is provisioned as an NE timing reference.

Section Thresh 15 Min/1 Day Tabs

The Section Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day section threshold information for the card.

Table C-348 *Field Descriptions for the Section Thresh 15 Min/1 Day Tabs*

Field	Description
Port No.	Displays the port number.
CV-S	Displays the coding violations section.
ES-S	Displays the errored seconds section.
SES-S	Displays the severely errored seconds section.
SEFS-S	Displays the severely errored framing seconds section.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day line threshold information for the card.

Table C-349 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
Port No.	Displays the optical port number.
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.

Table C-349 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
CV-L	Displays the coding violations line.
UAS-L	Displays the unavailable seconds line information.
FC-L	Displays the failure count line.
Reset to Defaults button	Resets the value of the port parameters to the default value.

STS Thresh 15 Min/1 Day Tabs

The STS Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day synchronous transport signal threshold information for the card.

Table C-350 *Field Descriptions for the STS Thresh 15 Min/1 Day Tabs*

Field	Description
STS No.	Displays the synchronous transport signal number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
FC-P	Displays the failure count path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Ethernet Tab

The Ethernet tab allows you to view Ethernet line information.

Table C-351 *Field Descriptions for the Ethernet Tab*

Field	Description
Port Number	Displays the port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Table C-351 *Field Descriptions for the Ethernet Tab (continued)*

Field	Description
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS state.

Ports Tab

The ports tab allows you to view and change the port settings.

Table C-352 *Field Descriptions for the Ports Tab*

Field	Description
Port Number	Displays the port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak (H:M)	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS state.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Squelch Configuration	Allows you to configure the remote client to squelch or send an AIS signal.
Overclock	Allows you to enable or disable Overclock mode. Enable the mode to set the data rate to FC 10G for PPM.
Rx Wavelength	Displays the configuration parameter for modulation/demodulation.

Table C-352 *Field Descriptions for the Ports Tab (continued)*

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

OTN Tab

The OTN tab contains the following subtabs:

- [OTN Line Tab, page C-237](#)
- [G.709 Thresh 15 Min/1 Day Tabs, page C-237](#)
- [FEC Thresh 15 Min/1 Day Tabs, page C-237](#)
- [Trail Trace Identifier Tab, page C-238](#)

OTN Line Tab

The OTN Line tab allows you to view and change the OTN line settings of the card.

Table C-353 Field Descriptions for the OTN Line Tab

Field	Description
Port No.	Displays the port number.
G.709 OTN	Disables or enables the G.709 OTN feature.
FEC	Disables or enables forward error correction. Note OTN must be enabled before you can enable FEC.
SF BER	The signal fail bit error rate.
SD BER	The signal degrade bit error rate.

G.709 Thresh 15 Min/1 Day Tabs

The G.709 Thresh 15 Min/1 Day tabs display near- and far-end SM optical channel transport unit (OTUK), and near- and far-end PM optical channel data unit (ODUK) threshold information and allow you to change these card threshold values.

Table C-354 Field Descriptions for the G.709 Thresh 15 Min/1 Day Tabs

Field	Description
SM (OTUK)/PM (ODUK) - Near End, Far End	
Port Number	Displays the optical port number.
BBE-SM	Displays the background block errors.
ES-SM	Displays the errored seconds.
SES-SM	Displays the severely errored seconds.
UAS-SM	Displays the unavailable seconds.
FC-SM	Displays the failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.

FEC Thresh 15 Min/1 Day Tabs

The FEC Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day FEC threshold values of the card.

Table C-355 Field Descriptions for the FEC Thresh 15 Min/1 Day Tabs

Field	Description
Port Number	Displays port number information.
Bit Errors Corrected	Displays the bit errors corrected in 15-minute intervals.
Uncorrectable Words	Displays the uncorrectable words in 15-minute intervals.

Trail Trace Identifier Tab

The Trail Trace Identifier tab allows you to provision the trail trace identifier for the card.

Table C-356 Field Descriptions for the Trail Trace Identifier Tab

Field	Description
Modify button	Allows you to open the Modify Trace dialog box, where you can change the section trace information for applicable cards. For more information, see Modifying Traces, page 7-171 .
Port Number	Displays port number information.
Level	Displays the trail trace identifier level (Section or Path).
Trace Mode	Allows you to set the trace mode (Off or Manual).
Disable FDI on TTIM	Allows you to disable forward defect indication (FDI) for trail trace identifier mismatch (TTIM) alarms.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string.
Current Received String	Displays the current received string.

Loopback Tab

The Loopback tab allows you to view and update loopback information.

Table C-357 Field Descriptions for the Loopback Tab

Field	Description
Port Number	Displays the port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The port state must be OOS_MT before you can configure the loopback type.

Auto Laser Shutdown Tab

The Auto Laser Shutdown tab allows you to view and update the automatic laser shutdown parameters.

Table C-358 *Field Descriptions for the Auto Laser Shutdown Tab*

Field	Description
Port Number	Displays the port number.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur.	Allows you to set the recovery laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int.	Allows you to set the recovery laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Status	Indicates whether the laser is currently shut down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shutdown.

Optical Thresh Tab

The Optical Thresh Properties pane allows you to view and provision optical threshold settings. The Properties pane contains [TCA 15 Min](#), [TCA 1 Day](#), and [Alarm Thresh Tabs](#), page C-239.

TCA 15 Min, TCA 1 Day, and Alarm Thresh Tabs

The TCA 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert and generation.

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-359 *Field Descriptions for the TCA 15 Min, TCA 1 Day, and Alarm Thresh Tabs*

Field	Description
Port Number	Displays the port number.
Laser Bias High (%)	Displays the upper laser bias threshold.
Rx Power High (dBm)	Displays the upper receive power threshold.
Rx Power Low (dBm)	Displays the lower receive power threshold.
Tx Power High (dBm)	Displays the upper transmit power threshold.
Tx Power Low (dBm)	Displays the lower transmit power threshold.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Alarm Behavior Tab

The Alarm Behavior tab allows you to view and update card alarm profile information.

Table C-360 Field Descriptions for the Alarm Behavior Tab

Field	Description
Card Profile	
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
DWDM/Payload	
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Protection Tab

The Protection tab allows you to view and update protection group information.

Table C-361 Field Descriptions for the Protection Tab

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection groups and allows you to execute switch commands. Note If you choose 10GE LAN to WAN as the card configuration, Y-cable protection is not supported.

Info Tab

The Info tab allows you to view nominal operating values set for the card during manufacturing.

Table C-362 Field Descriptions for the Info Tab

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of the attribute value.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—40E-TXP-C

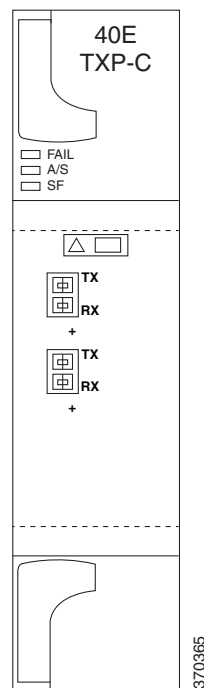
The 40E-TXP-C card process a single 40-Gbps signal (client side) into a single 40-Gbps, 50-GHz DWDM signal (trunk side). It provides one 40-Gbps port per card that can be provisioned for an OC-768/STM-256 very short reach (1550-nm) signal compliant with ITU-T G.707, ITU-T G.691, and Telcordia GR-253-CORE, 40G Ethernet LAN signal compliant with IEEE 802.3ba, or OTU3 signal compliant with ITU-T G.709.

The trunk port of the 40E-TXP-C card is tunable between 1529.55 nm through 1561.83 nm, ITU 50-GHz range.

ITU-T G.709 specifies a form of forward error correction (FEC) that uses a "wrapper" approach. The digital wrapper lets you transparently take in a signal on the client side, wrap a frame around it and restore it to its original form. FEC enables longer fiber links because errors caused by the optical signal degrading with distance are corrected.

The following figure shows the 40E-TXP-C card faceplate.

Figure C-25 40E-TXP-C Faceplate



Caution

You must use a 15-dB fiber attenuator (10 to 20 dB) when working with the 40E-TXP-C card in a loopback on the trunk port. Do not use direct fiber loopbacks with the 40E-TXP-C card. Using direct fiber loopbacks causes irreparable damage to the these cards.

You can install and provision the 40E-TXP-C card in a linear configuration in:

- Slots 1 to 5 and 12 to 16 in ONS 15454 DWDM chassis

- Slot 2 in ONS 15454 M2 chassis
- Slots 2 to 6 in ONS 15454 M6 chassis

When a protection switch occurs on the 40E-TXP-C and 40ME-TXP-C cards, the recovery from PSM protection switch takes about 3 to 4 minutes.

When TXP-40E and TXP-40ME trunk overclock is ON, EFEC will be 10%. When TXP-40E and TXP-40ME trunk overclock is OFF, EFEC will be 13%.

Module View Tab

The Module View tab displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification Tab

The Identification tab allows you to view and update card identification information.

Table C-363 Field Descriptions for the Identification Tab

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: • IS, AINS—Automatic In Service • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Card Tab

The card tab allows you to view and update card information.

Table C-364 *Field Descriptions for the Card Tab*

Field	Description
Regeneration Peer Slot	Allows you to select similar cards so that you can configure a peer group.
Regeneration Group Name	Allows you to set the name of the peer group.

Data Rate Selection Tab

The PPM tab allows you to view and provision the PPM and the ports inside the PPM.

Table C-365 *Field Descriptions for the PPM Tab*

Field	Description
Create button	Click Create to launch the Create Port dialog box. You can configure only one data rate at a time. For more information on Creating Ports, see Provisioning Pluggable Entities on DWDM Cards, page 6-2 .
Port	Displays the port number.
Rate	Displays the port rate.

Line Tab

The Line tab allows you to configure line information.

If the card is installed on an ONS 15454 SONET NE, the following subtabs are displayed when the port rate is OC768:

- [Section Trace Tab, page C-243](#)
- [SONET Line Tab, page C-244](#)
- [Section Thresh 15 Min/1 Day Tabs, page C-245](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-245](#)
- [STS Thresh 15 Min/1 Day Tabs, page C-246](#)
- [Ports Tab, page C-246](#)



Note

If you provision a 40GE payload, only the port and ethernet tabs are displayed.

Section Trace Tab

The Section Trace tab allows you to change the section trace settings for the card.

Table C-366 *Field Descriptions for the Section Trace Tab*

Field	Description
Port No.	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.
Default button	Resets the value of the port parameters to the default value.

SONET Line Tab

The SONET Line tab allows you to view and change the SONET line settings of the card.

Table C-367 *Field Descriptions for the SONET Line Tab*

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Termination Mode	Allows you to set the mode of termination.
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Type	Defines the port as SONET or SDH.
ProvidesSync	When checked, the card is provisioned as an NE timing reference.
EnableSyncMsg	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.

Table C-367 *Field Descriptions for the SONET Line Tab (continued)*

Field	Description
AdminSSM	Overrides the synchronization status message (SSM) synchronization traceability unknown (STU) value. If the node does not receive an SSM signal, it defaults to STU. Admin SSM allows you to override the STU value with one of the following: • PRS—Primary Reference Source (Stratum 1) • ST2—Stratum 2 • TNC—Transit node clock • ST3E—Stratum 3E • ST3—Stratum 3 • SMC—SONET minimum clock • ST4—Stratum 4 • DUS—Do not use for timing synchronization • RES—Reserved; quality level set by user
ProvidesSync	When checked, the card is provisioned as an NE timing reference.

Section Thresh 15 Min/1 Day Tabs

The Section Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day section threshold information for the card.

Table C-368 *Field Descriptions for the Section Thresh 15 Min/1 Day Tabs*

Field	Description
Port No.	Displays the port number.
CV-S	Displays the coding violations section.
ES-S	Displays the errored seconds section.
SES-S	Displays the severely errored seconds section.
SEFS-S	Displays the severely errored framing seconds section.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day line threshold information for the card.

Table C-369 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
Port No.	Displays the optical port number.
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.

Table C-369 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
CV-L	Displays the coding violations line.
UAS-L	Displays the unavailable seconds line information.
FC-L	Displays the failure count line.
Reset to Defaults button	Resets the value of the port parameters to the default value.

STS Thresh 15 Min/1 Day Tabs

The STS Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute synchronous transport signal threshold information for the card.

Table C-370 *Field Descriptions for the STS Thresh 15 Min/1 Day Tabs*

Field	Description
STS No.	Displays the synchronous transport signal number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
FC-P	Displays the failure count path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Ports Tab

The ports tab allows you to view and change the port settings.

Table C-371 *Field Descriptions for the Ports Tab*

Field	Description
Port Number	Displays the port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak (H:M)	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS state.

Table C-371 *Field Descriptions for the Ports Tab (continued)*

Field	Description
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Squelch Configuration	Allows you to configure the remote client to squelch or send an AIS signal.
Overclock	Allows you to enable or disable Overclock mode. Enable the mode to set the data rate to FC 10G for PPM.
Rx Wavelength	Displays the configuration parameter for modulation/demodulation.
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

Path Tab

The Path tab contains the following subtabs:

- [SONET Tab, page C-248](#)
- [J1 Path Trace Tab, page C-248](#)

SONET Tab

The SONET tab allows you to view and change the SONET path settings for the card.

Table C-372 **Field Descriptions for the SONET Tab**

Field	Descriptions
Port No.	Displays the port number.
SF BER Level	Sets the signal fail bit error rate.
SD BER Level	Sets the signal degrade bit rate.



Note

The SDH subtab is displayed if the card is installed on an ONS 15454 SDH NE.

J1 Path Trace Tab

The J1 Path Trace tab allows you to view and update J1 path trace information.

Table C-373 **Field Descriptions for the J1 Path Trace Tab**

Field	Descriptions
Modify button	Allows you to open the Modify Trace dialog box, where you can change the section trace information for applicable cards. See Modifying Traces, page 7-171 for more information.
Port No.	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.
Default button	Resets the value of the port parameters to the default value.



Note

These tabs are affected only when 10GE LAN to WAN card mode is configured.

OTN Tab

The OTN tab contains the following subtabs:

- [OTN Line Tab, page C-249](#)
- [G.709 Thresh 15 Min/1 Day Tabs, page C-249](#)
- [FEC Thresh 15 Min/1 Day Tabs, page C-249](#)

- [Trail Trace Identifier Tab, page C-250](#)

OTN Line Tab

The OTN Line tab allows you to view and change the OTN line settings of the card.

Table C-374 Field Descriptions for the OTN Line Tab

Field	Description
Port No.	Displays the port number.
G.709 OTN	Disables or enables the G.709 OTN feature.
FEC	Disables or enables forward error correction. Note OTN must be enabled before you can enable FEC.
SF BER	The signal fail bit error rate.
SD BER	The signal degrade bit error rate.

G.709 Thresh 15 Min/1 Day Tabs

The G.709 Thresh 15 Min/1 Day tabs display near- and far-end SM optical channel transport unit (OTUK), and near- and far-end PM optical channel data unit (ODUK) threshold information and allow you to change these card threshold values.

Table C-375 Field Descriptions for the G.709 Thresh 15 Min/1 Day Tabs

Field	Description
SM (OTUK)/PM (ODUK) - Near End, Far End	
Port Number	Displays the optical port number.
BBE-SM	Displays the background block errors.
ES-SM	Displays the errored seconds.
SES-SM	Displays the severely errored seconds.
UAS-SM	Displays the unavailable seconds.
FC-SM	Displays the failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.

FEC Thresh 15 Min/1 Day Tabs

The FEC Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day FEC threshold values of the card.

Table C-376 Field Descriptions for the FEC Thresh 15 Min/1 Day Tabs

Field	Description
Port Number	Displays port number information.
Bit Errors Corrected	Displays the bit errors corrected in 15-minute intervals.
Uncorrectable Words	Displays the uncorrectable words in 15-minute intervals.

Trail Trace Identifier Tab

The Trail Trace Identifier tab allows you to provision the trail trace identifier for the card.

Table C-377 Field Descriptions for the Trail Trace Identifier Tab

Field	Description
Modify button	Allows you to open the Modify Trace dialog box, where you can change the section trace information for applicable cards. For more information, see Modifying Traces, page 7-171 .
Port Number	Displays port number information.
Level	Displays the trail trace identifier level (Section or Path).
Trace Mode	Allows you to set the trace mode (Off or Manual).
Disable FDI on TTIM	Allows you to disable forward defect indication (FDI) for trail trace identifier mismatch (TTIM) alarms.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string.
Current Received String	Displays the current received string.

Loopback Tab

The Loopback tab allows you to view and update loopback information.

Table C-378 Field Descriptions for the Loopback Tab

Field	Description
Port Number	Displays the port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The port state must be OOS_MT before you can configure the loopback type.

Auto Laser Shutdown Tab

The Auto Laser Shutdown tab allows you to view and update the automatic laser shutdown parameters.

Table C-379 *Field Descriptions for the Auto Laser Shutdown Tab*

Field	Description
Port Number	Displays the port number.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur.	Allows you to set the recovery laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int.	Allows you to set the recovery laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Status	Indicates whether the laser is currently shut down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shutdown.

Optical Thresh Tab

The TCA 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert and generation.

The Alarm Thresh tab allows you to select thresholds for alarm generation.

TCA 15 Min, TCA 1 Day, and Alarm Thresh Tabs

The TCA 15 Min/1-day tabs allow you to view and change the 15-minute/1-day TCA settings of the card.

Table C-380 *Field Descriptions for the TCA 15 Min, TCA 1 Day, and Alarm Thresh Tabs*

Field	Description
Port Number	Displays the port number.
Laser Bias High (%)	Displays the upper laser bias threshold.
Rx Power High (dBm)	Displays the upper receive power threshold.
Rx Power Low (dBm)	Displays the lower receive power threshold.
Tx Power High (dBm)	Displays the upper transmit power threshold.
Tx Power Low (dBm)	Displays the lower transmit power threshold.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Alarm Behavior Tab

The Alarm Behavior tab allows you to view and update card alarm profile information.

Table C-381 Field Descriptions for the Alarm Behavior Tab

Field	Description
Card Profile	
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
DWDM/Payload	
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Protection Tab

The Protection tab allows you to view and update protection group information.

Table C-382 Field Descriptions for the Protection Tab

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection groups and allows you to execute switch commands. Note If you choose 10GE LAN to WAN as the card configuration, Y-cable protection is not supported.

Info Tab

The Info tab allows you to view nominal operating values set for the card during manufacturing.

Table C-383 Field Descriptions for the Info Tab

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of the attribute value.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

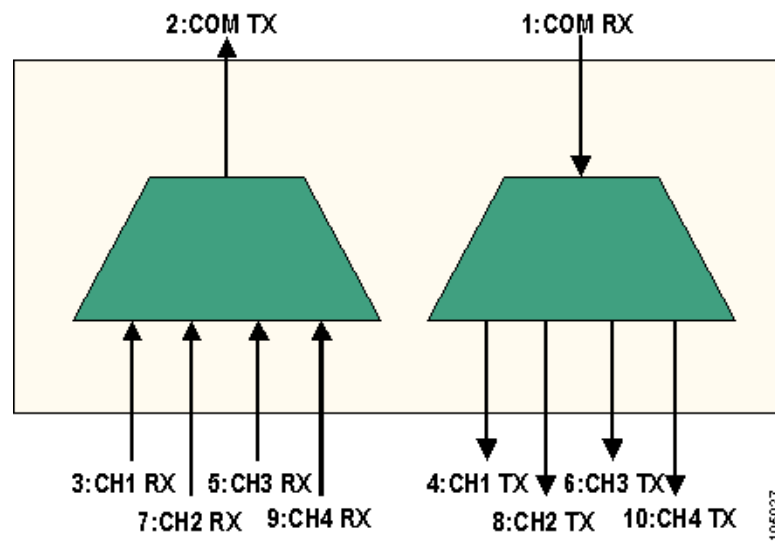
Slot Properties—4MD_xx.x

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The four-channel multiplexer/demultiplexer (4MD_xx.x) module is a single-slot card that features interferential filters with VOAs and photodiode for each input port. Each VOA is software controlled. The 4MD_xx.x card has ten LC-PC-II optical connectors.

The following figure shows the block diagram.

Figure C-26 4MD_xx.x Module



For the 4MD_xx.x module, the slot properties pane displays the following properties: Module View, Identification, Optical Channel, Optical Band, Inventory, and Alarm Behavior.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-384 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Channel

The Optical Channel Properties pane allows you to view and update optical channel threshold information.

Table C-385 Field Descriptions for the Optical Channel Properties Pane

Field	Description
Parameters	
Port Number	The port number.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	Places the port in In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT) state. Note You can only change the state from OOS to OOS_MT or vice versa. All other state transitions are controlled by the NE’s software.

Table C-385 Field Descriptions for the Optical Channel Properties Pane (continued)

Field	Description
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Power Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) is the only function that can modify this value.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.
VOA Power Calib.	Allows you to modify the optical output power to the VOA, if necessary.
VOA Attenuation Ref.	Shows the attenuation value of the VOA when the VOA is set in attenuation mode. ANS and APC are the only functions that can modify this value.
Actual Wavelength	Shows the wavelength specified by the manufacturing data. This field cannot be set manually.
Expected Wavelength	Shows the value of the expected wavelength for the given port. The wavelengths for these ports are not provisionable.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.
Alarm Threshold	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure threshold.
Power Degrade High	Allows you to set the high power degrade threshold.
Power Degrade Low	Allows you to set the low power degrade threshold.

Optical Band

The Optical Band Properties pane allows you to view and update optical band threshold information.

Table C-386 Field Descriptions for the Optical Band Properties Pane

Field	Description
Parameters	
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.

Table C-386 Field Descriptions for the Optical Band Properties Pane (continued)

Field	Description
State	Places the port in In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT) state. Note You can only change the state from OOS to OOS_MT or vice versa. All other state transitions are controlled by the NE's software.
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).

Warning Thresh 15 Min/1 Day

Port Number	The port number.
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.

Alarm Threshold

Port Number	The port number.
Power Failure Low	Allows you to set the low power failure threshold.
Power Degrade High	Allows you to set the high power degrade threshold.
Power Degrade Low	Allows you to set the low power degrade threshold.
VOA Degrade High	The high VOA degrade threshold.
VOA Degrade Low	The low VOA degrade threshold.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-387 Field Descriptions for the Inventory Properties Pane

Field	Description
Vendor ID	The ID of the vendor.
HW Version	The hardware version number.
IL-REF	The reference insertion loss.
Serial Number	The serial number that is unique to each card.
Firmware Version	The revision number of the software used by the ASIC chip installed on the card.
Part Number	The part number that is printed on the top of the card.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-388 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.



Note

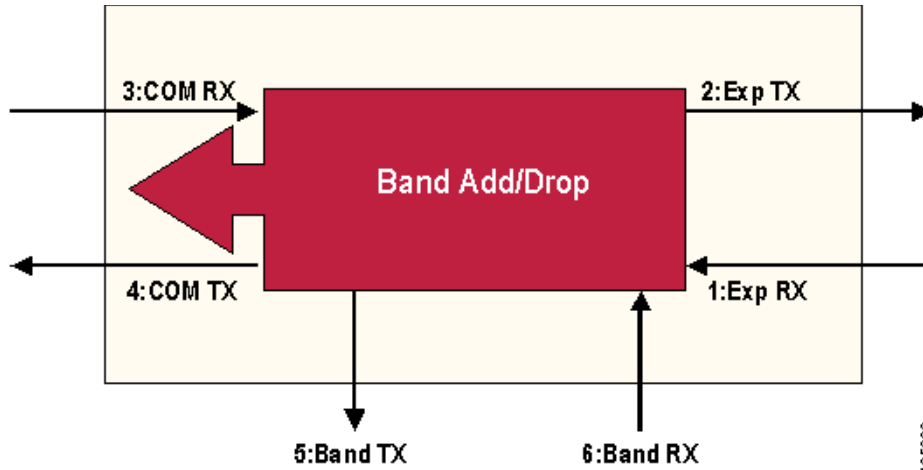
See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—AD_1B_xx.x

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The AD_1B_xx.x module is a single-slot, one-band OADM filter card that has interferential filters with VOAs and photodiode for each output port. Each VOA is software controlled. The AD_1B_xx.x card features six LC-PC-II optical connectors.

The following figure shows the block diagram.

Figure C-27 AD_1B_xx.x Module

For the AD_1B_xx.x module, the slot properties pane displays the following properties: Module View, Identification, Optical Line, Optical Band, Inventory, and Alarm Behavior.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-389 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.

Table C-389 Field Descriptions for the Identification Properties Pane (continued)

Field	Description
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information.

Table C-390 Field Descriptions for the Optical Line Properties Pane

Field	Description
Parameters	
Port Number	Displays the port number.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Status	Places the port in In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT) state. Note You can only change the state from OOS to OOS_MT or vice versa. All other state transitions are controlled by the NE's software.
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Attenuation Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) and APC are the only functions that can modify this value.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	Allows you to set the low power settings.

Table C-390 *Field Descriptions for the Optical Line Properties Pane (continued)*

Field	Description
Power High	Allows you to set the high power settings.
Alarm Threshold	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure settings.
Power Degrade High	Allows you to set the high power settings.
Power Degrade Low	Allows you to set the low power settings.
VOA Degrade High	Sets the high VOA settings.
VOA Degrade Low	Sets the low VOA settings.

Optical Band

The Optical Band Properties pane allows you to view and update optical band threshold information.

Table C-391 *Field Descriptions for the Optical Band Properties Pane*

Field	Description
Parameters	
Port Number	Displays the port number.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	Places the port in In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT) state. Note You can only change the state from OOS to OOS_MT or vice versa. All other state transitions are controlled by the NE's software.
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.
VOA Attenuation Ref.	Shows the attenuation value of the VOA when the VOA is set in attenuation mode. ANS and APC are the only functions that can modify this value.
Actual Band	Shows the current optical band setting.
Expected Band	Allows you to set the expected band.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	Allows you to set the low power settings.

Table C-391 *Field Descriptions for the Optical Band Properties Pane (continued)*

Field	Description
Power High	Allows you to set the high power settings.
Alarm Threshold	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure settings.
Power Degrade High	Allows you to set the high power settings.
Power Degrade Low	Allows you to set the low power settings.
VOA Degrade High	Allows you to set the high VOA settings.
VOA Degrade Low	Allows you to set the low VOA settings.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-392 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Vendor ID	The ID of the vendor.
IL-REF	The reference insertion loss.
Serial Number	The serial number that is unique to each card.
Part Number	The part number that is printed on the top of the card.
HW Version	The hardware version number.
Firmware Version	The revision number of the software used by the ASIC chip installed on the card.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-393 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

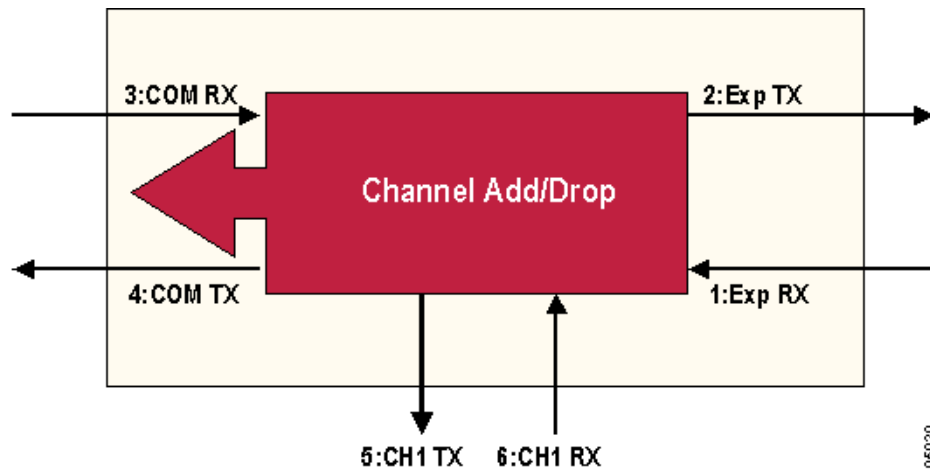
Slot Properties—AD_1C_xx.x

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The AD_1C_xx.x module is a single-slot one-channel OADM filter card that has interferential filters with VOAs and photodiode for each input port. Each VOA is software controlled per channel input power. The AD_1C_xx.x card features six LC-PC-II optical connectors.

The following figure shows the block diagram.

Figure C-28 AD_1C_xx.x Module



For the AD_1C_xx.x module, the slot properties pane displays the following properties: Module View, Identification, Optical Line, Optical Channel, Inventory, and Alarm Behavior.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-394 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information.

Table C-395 Field Descriptions for the Optical Line Properties Pane

Field	Description
Parameters	
Port Number	Displays the port number.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Status	Places the port in In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT) state. Note You can only change the state from OOS to OOS_MT or vice versa. All other state transitions are controlled by the NE’s software.
Line Direction (<i>available in CTM R7.2 and earlier</i>)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.

Table C-395 *Field Descriptions for the Optical Line Properties Pane (continued)*

Field	Description
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Attenuation Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) is the only function that can modify this value.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	Allows you to set the low power settings.
Power High	Allows you to set the high power settings.
Alarm Threshold	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure settings.
Power Degrade High	Allows you to set the high power settings.
Power Degrade Low	Allows you to set the low power settings.
VOA Degrade High	Sets the high VOA settings.
VOA Degrade Low	Sets the low VOA settings.

Optical Channel

The Optical Channel Properties pane allows you to view and update optical channel threshold information.

Table C-396 *Field Descriptions for the Optical Channel Properties Pane*

Field	Description
Parameters	
Port Number	Displays the port number.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	Places the port in In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT) state. Note You can only change the state from OOS to OOS_MT or vice versa. All other state transitions are controlled by the NE's software.
Line Direction (<i>available in CTM R7.2 and earlier</i>)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.

Table C-396 *Field Descriptions for the Optical Channel Properties Pane (continued)*

Field	Description
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Power Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) is the only function that can modify this value.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.
VOA Power Calib.	Allows you to modify the optical output power to the VOA, if necessary.
VOA Attenuation Ref.	Shows the attenuation value of the VOA when the VOA is set in attenuation mode. ANS and APC are the only functions that can modify this value.
Actual Wavelength	Shows the wavelength specified by the manufacturing data. This field cannot be set manually.
Expected Wavelength	Shows the value of the expected wavelength for the given port. The wavelengths for these ports are not provisionable.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	Allows you to set the low power settings.
Power High	Allows you to set the high power settings.
Alarm Threshold	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure settings.
Power Degrade High	Allows you to set the high power settings.
Power Degrade Low	Allows you to set the low power settings.
VOA Degrade High	Allows you to set the high VOA settings.
VOA Degrade Low	Allows you to set the low VOA settings.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-397 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Vendor ID	The ID of the vendor.
IL-REF	The reference insertion loss.
Serial Number	The serial number that is unique to each card.
Part Number	The part number that is printed on the top of the card.
HW Version	The hardware version number.
Firmware Version	The revision number of the software used by the ASIC chip installed on the card.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-398 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.



Note

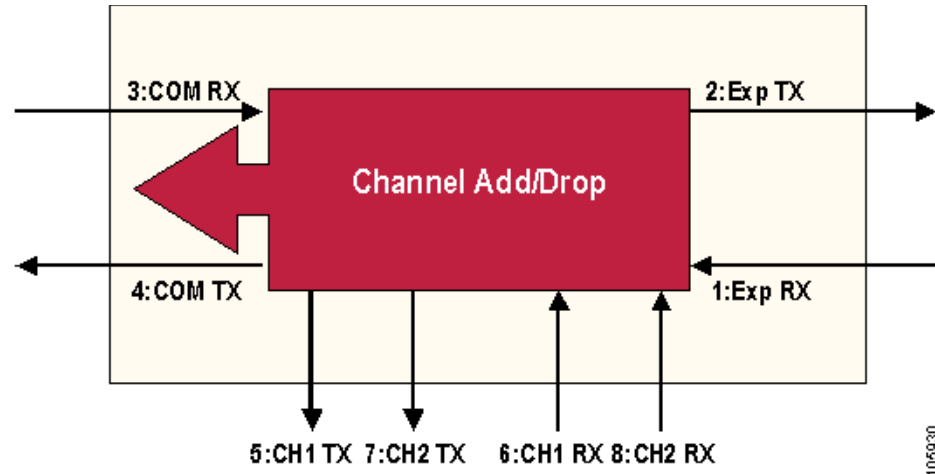
See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—AD_2C_xx.x

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The AD_2C_xx.x module is a single-slot two-channel OADM filter card that has interferential filters with VOAs and photodiode for each input port. Each VOA is software controlled per channel input power. The AD_2C_xx.x card features eight LC-PC-II optical connectors.

The following figure shows the block diagram.

Figure C-29 AD_2C_xx.x Module

For the AD_2C_xx.x module, the slot properties pane displays the following properties: Module View, Identification, Optical Line, Optical Channel, Inventory, and Alarm Behavior.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-399 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.

Table C-399 Field Descriptions for the Identification Properties Pane (continued)

Field	Description
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information.

Table C-400 Field Descriptions for the Optical Line Properties Pane

Field	Description
Parameters	
Port Number	Displays the port number.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Status	Places the port in In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT) state. Note You can only change the state from OOS to OOS_MT or vice versa. All other state transitions are controlled by the NE's software.
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Attenuation Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) is the only function that can modify this value.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	Allows you to set the low power settings.
Power High	Allows you to set the high power settings.

Table C-400 *Field Descriptions for the Optical Line Properties Pane (continued)*

Field	Description
Alarm Threshold	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure settings.
Power Degrade High	Allows you to set the high power settings.
Power Degrade Low	Allows you to set the low power settings.
VOA Degrade High	Sets the high VOA settings.
VOA Degrade Low	Sets the low VOA settings.

Optical Channel

The Optical Channel Properties pane allows you to view and update optical channel threshold information.

Table C-401 *Field Descriptions for the Optical Channel Properties Pane*

Field	Description
Parameters	
Port Number	Displays the port number.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	Places the port in In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT) state. Note You can only change the state from OOS to OOS_MT or vice versa. All other state transitions are controlled by the NE's software.
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Power Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) is the only function that can modify this value.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.
VOA Power Calib.	Allows you to modify the optical output power to the VOA, if necessary.
VOA Attenuation Ref.	Shows the attenuation value of the VOA when the VOA is set in attenuation mode. ANS and APC are the only functions that can modify this value.
Actual Wavelength	Shows the wavelength specified by the manufacturing data. This field cannot be set manually.

Table C-401 *Field Descriptions for the Optical Channel Properties Pane (continued)*

Field	Description
Expected Wavelength	Shows the value of the expected wavelength for the given port. The wavelengths for these ports are not provisionable.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	Allows you to set the low power settings.
Power High	Allows you to set the high power settings.
Alarm Threshold	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure settings.
Power Degrade High	Allows you to set the high power settings.
Power Degrade Low	Allows you to set the low power settings.
VOA Degrade High	Allows you to set the high VOA settings.
VOA Degrade Low	Allows you to set the low VOA settings.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-402 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Vendor ID	The ID of the vendor.
IL-REF	The reference insertion loss.
IL04	The insertion loss between the specified ports.
IL06	The insertion loss between the specified ports.
IL05	The insertion loss between the specified ports.
IL02	The insertion loss between the specified ports.
Serial Number	The serial number that is unique to each card.
Part Number	The part number that is printed on the top of the card.
HW Version	The hardware version number.
Firmware Version	The revision number of the software used by the ASIC chip installed on the card.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-403 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

**Note**

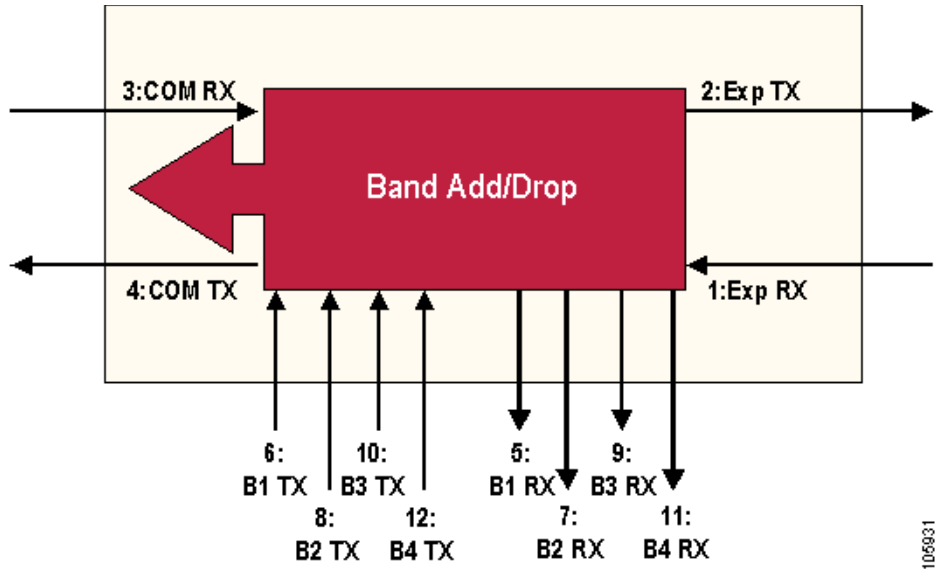
See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—AD_4B_xx.x

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The AD_4B_xx.x module is a single-slot, four-band OADM filter card that has interferential filters with VOAs and photodiode for each output port. Each VOA is software controlled. The AD_4B_xx.x card features twelve LC-PC-II optical connectors.

The following figure shows the block diagram.

Figure C-30 AD_4B_xx.x Module

For the AD_4B_xx.x module, the slot properties pane displays the following properties: Module View, Identification, Optical Line, Optical Band, Inventory, and Alarm Behavior.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-404 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.

Table C-404 Field Descriptions for the Identification Properties Pane (continued)

Field	Description
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information.

Table C-405 Field Descriptions for the Optical Line Properties Pane

Field	Description
Parameters	
Port Number	Displays the port number.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Status	Places the port in In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT) state. Note You can only change the state from OOS to OOS_MT or vice versa. All other state transitions are controlled by the NE’s software.
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Attenuation Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) and APC are the only functions that can modify this value.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.
Warning Thresh 15 Min/1 Day	

Table C-405 *Field Descriptions for the Optical Line Properties Pane (continued)*

Field	Description
Port Number	The port number.
Power Low	Allows you to set the low power settings.
Power High	Allows you to set the high power settings.
Alarm Threshold	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure settings.
Power Degrade High	Allows you to set the high power settings.
Power Degrade Low	Allows you to set the low power settings.
VOA Degrade High	Sets the high VOA settings.
VOA Degrade Low	Sets the low VOA settings.

Optical Band

The Optical Band Properties pane allows you to view and update optical band threshold information.

Table C-406 *Field Descriptions for the Optical Band Properties Pane*

Field	Description
Parameters	
Port Number	Displays the port number.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	Places the port in In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT) state. Note You can only change the state from OOS to OOS_MT or vice versa. All other state transitions are controlled by the NE's software.
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.
VOA Attenuation Ref.	Shows the attenuation value of the VOA when the VOA is set in attenuation mode. ANS and APC are the only functions that can modify this value.
Actual Band	Shows the current optical band setting.
Expected Band	Allows you to set the expected band.
Warning Thresh 15 Min/1 Day	

Table C-406 *Field Descriptions for the Optical Band Properties Pane (continued)*

Field	Description
Port Number	The port number.
Power Low	Allows you to set the low power settings.
Power High	Allows you to set the high power settings.
Alarm Threshold	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure settings.
Power Degrade High	Allows you to set the high power settings.
Power Degrade Low	Allows you to set the low power settings.
VOA Degrade High	Allows you to set the high VOA settings.
VOA Degrade Low	Allows you to set the low VOA settings.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-407 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Vendor ID	The ID of the vendor.
IL-REF	The reference insertion loss.
Serial Number	The serial number that is unique to each card.
Part Number	The part number that is printed on the top of the card.
HW Version	The hardware version number.
Firmware Version	The revision number of the software used by the ASIC chip installed on the card.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-408 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

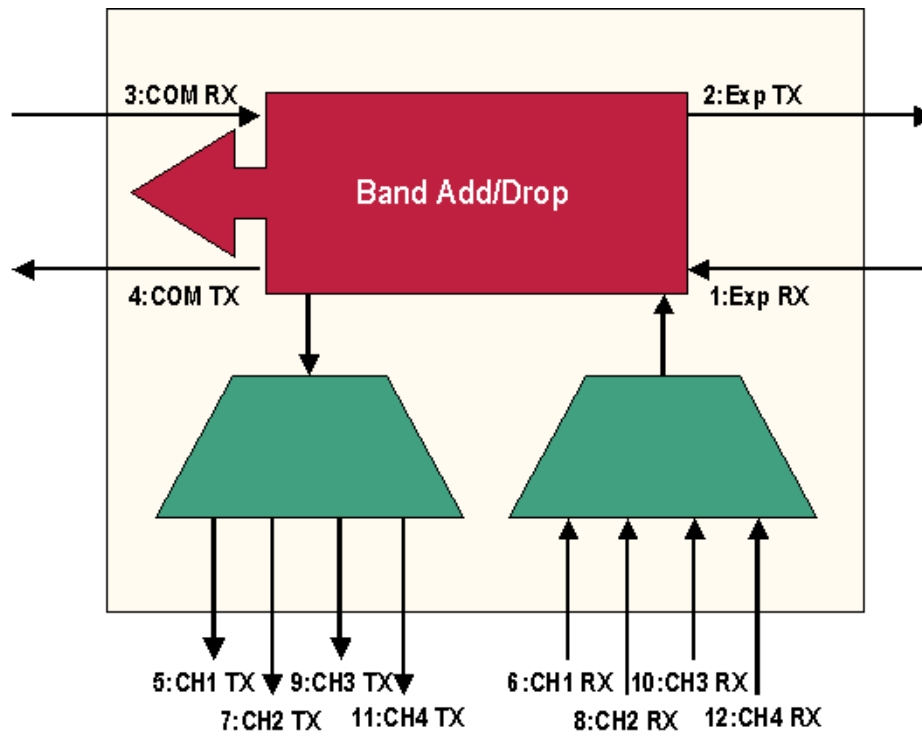
Slot Properties—AD_4C_xx.x

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The AD-4C-xx.x module is a single-slot four-channel OADM filter card that has interferential filters with VOAs and photodiode for each input port. Each VOA is software controlled per channel input power. The AD_4C_xx.x card features twelve LC-PC-II optical connectors.

The following figure shows the block diagram.

Figure C-31 AD_4C_xx.x Module



For the AD_4C_xx.x module, the slot properties pane displays the following properties: Module View, Identification, Optical Line, Optical Channel, Inventory, and Alarm Behavior.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-409 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information.

Table C-410 **Field Descriptions for the Optical Line Properties Pane**

Field	Description
Parameters	
Port Number	Displays the port number.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Status	Places the port in In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT) state. Note You can only change the state from OOS to OOS_MT or vice versa. All other state transitions are controlled by the NE's software.
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Attenuation Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) is the only function that can modify this value.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	Allows you to set the low power settings.
Power High	Allows you to set the high power settings.
Alarm Threshold	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure settings.
Power Degrade High	Allows you to set the high power settings.
Power Degrade Low	Allows you to set the low power settings.
VOA Degrade High	Sets the high VOA settings.
VOA Degrade Low	Sets the low VOA settings.

Optical Channel

The Optical Channel Properties pane allows you to view and update optical channel threshold information.

Table C-411 **Field Descriptions for the Optical Channel Properties Pane**

Field	Description
Parameters	
Port Number	Displays the port number.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	Places the port in In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT) state. Note You can only change the state from OOS to OOS_MT or vice versa. All other state transitions are controlled by the NE's software.
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Power Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) is the only function that can modify this value.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.
VOA Power Calib.	Allows you to modify the optical output power to the VOA, if necessary.
VOA Attenuation Ref.	Shows the attenuation value of the VOA when the VOA is set in attenuation mode. ANS and APC are the only functions that can modify this value.
Actual Wavelength	Shows the wavelength specified by the manufacturing data. This field cannot be set manually.
Expected Wavelength	Shows the value of the expected wavelength for the given port. The wavelengths for these ports are not provisionable.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	Allows you to set the low power settings.
Power High	Allows you to set the high power settings.
Alarm Threshold	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure settings.
Power Degrade High	Allows you to set the high power settings.
Power Degrade Low	Allows you to set the low power settings.
VOA Degrade High	Allows you to set the high VOA settings.
VOA Degrade Low	Allows you to set the low VOA settings.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-412 Field Descriptions for the Inventory Properties Pane

Field	Description
Vendor ID	The ID of the vendor.
IL-REF	The reference insertion loss.
Serial Number	The serial number that is unique to each card.
Part Number	The part number that is printed on the top of the card.
HW Version	The hardware version number.
Firmware Version	The revision number of the software used by the ASIC chip installed on the card.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-413 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—ADM-10G

The slot properties pane displays information about the ADM-10G card that is selected in the NE Explorer. Use this properties pane to change the card properties.

The ADM-10G card operates on ONS 15454 SONET, ONS 15454 SDH, and DWDM networks to carry optical signals and Gigabit Ethernet signals over DWDM wavelengths for transport. The card aggregates lower bit-rate client SONET or SDH signals (OC-3/STM-1, OC-12/STM-4, OC-48/STM-16, or Gigabit

Ethernet) onto a C-band tunable DWDM trunk operating at a higher OC-192/STM-64 rate. In a DWDM network, the ADM-10G card transports traffic over DWDM by mapping Gigabit Ethernet and SONET or SDH circuits onto the same wavelength with multiple protection options.

The ADM-10G card is a double-slot card that can be installed in slots 1 through 5 or 12 through 16 in standard and high-density SONET shelves (15454-SA-ANSI or 15454-SA-HD), the ONS 15454 SDH standard shelf assembly, or the ONS 15454 SDH high-density shelf assembly. Installation is supported in any of these slots.

**Note**

- The recommended slots are 1, 3, 5 and 12, 14, 16.
- In a single-card configuration, you can configure ports 17, 18, and 19 as trunk ports supporting the OC-192 payload. After it is configured as trunk ports, you can use ports 17, 18 and 19 in circuit, link, and server trail configurations.

**Caution**

Fan-tray assembly 15454E-CC-FTA (ETSI shelf)/15454-CC-FTA (ANSI shelf) must be installed on a shelf where the ADM-10G card is installed.

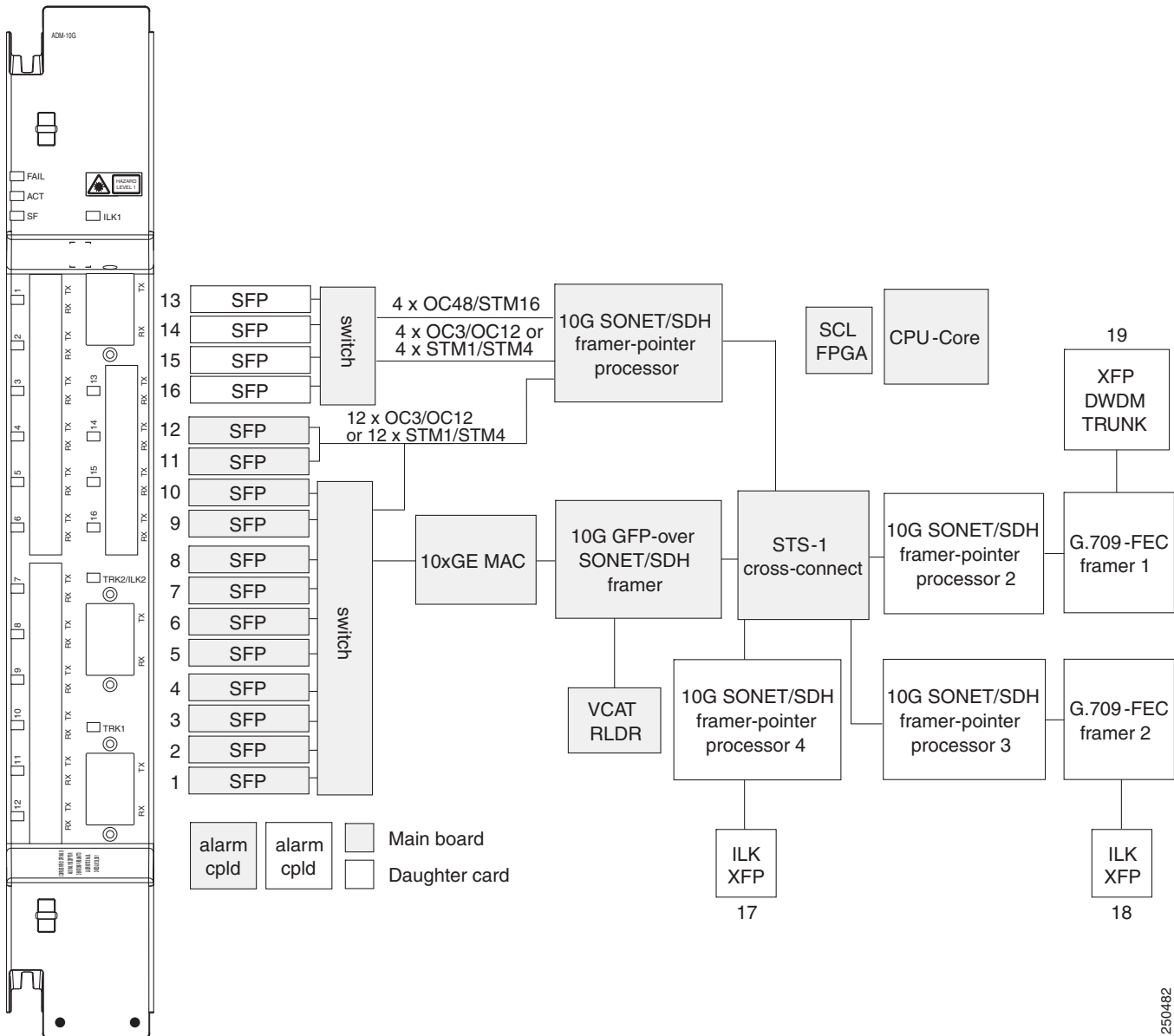
The card is compliant with ITU-T G.825 and ITU-T G.783 for SDH signals. It supports concatenated and nonconcatenated AU-4 mapped STM-1, STM-4, and STM-16 signals as specified in ITU-T G.707. The card also complies with Section 5.6 of Telcordia GR-253-CORE and supports synchronous transport signal (STS) mapped OC-3, OC-12, and OC-48 signals as specified in the standard.

The client SFP and trunk XFP are compliant with interface requirements in Telcordia GR-253-CORE, ITU-T G.957 and/or ITU-T G.959.1, and IEEE 802.3.

The ADM-10G card defaults to GFP-F encapsulation that is compliant with ITU-T G.7041. This mode allows the card to operate with ONS 15310 CL, ONS 15310 MA, or ONS 15454 data cards (for example, ONS 15454 CE-100T-8 or ML1000-2 cards). GFP encapsulation also allows the ADM-10G card to interoperate with other vendors' Gigabit Ethernet interfaces that adhere to the ITU-T G.7041 standard.

The following figure shows the card faceplate.

Figure C-32 *ADM-10G Faceplate*



Module View

The Module View displays a graphic of the ADM-10G card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Moving the mouse pointer over the graphic also displays the alarm counts.) Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

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Identification

The Identification Properties pane allows you to view and update identification information.

Table C-414 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Suppress Alarms	When checked, all alarms are suppressed for the port.

Card

The Card Properties pane allows you to view and update card information.

Table C-415 Field Descriptions for the Card Properties Pane

Field	Description
Regeneration Peer Slot	Allows you to select like cards so that you can configure a peer group.
Regeneration Group Name	Allows you to set the name of the peer group.

PPM

The PPM Properties pane allows you to view and provision the PPM and the ports inside the PPM.

Table C-416 Field Descriptions for the PPM Properties Pane

Field	Description
Pluggable Port Modules	
Pluggable Number	Displays the identifier of the plugin module.
Actual Equipment Type	Displays the actual plugin module that is installed in the slot.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
PPM	
Port	Displays the PPM number and port number.
Rate	Displays the port rate.

Provision Pluggable Dialog Box

Click the **Create** button to launch the Provision Pluggable dialog box. This dialog box allows you to provision the PPM and to create the ports inside this entity. See [Provision Pluggable Dialog Box, page C-25](#) for more information.

Line

The Line Properties pane allows you to configure line settings. If the card is installed on an ONS 15454 SONET NE, the Properties pane contains the subtabs and fields in [Table C-417](#). If the card is installed on an ONS 15454 SDH NE, the Properties pane contains the subtabs and fields in [Table C-418](#).

Table C-417 Field Descriptions for the Line Properties Pane — ONS 15454 SONET

Field	Description
Section Trace	
Port No.	The port number.
Trace Mode	The trace mode (Off or Manual).
Disable AIS/RDI on TIM-S	Disables the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Allows you to select a transmit length for the trace. Values are 1 byte or 16 bytes; the default is 16 bytes.
Current Transmit String	Displays the current transmit string; sets a new transmit string.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.
Ports	
Port No.	The port number.
Port Name	The port name.

Table C-417 Field Descriptions for the Line Properties Pane — ONS 15454 SONET (continued)

Field	Description
Administration State	The port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Auto in service soak. The determination of duration left before the traffic/termination transitions to IS state. The range is from 15 minutes to 48 hours.
ALS Mode	Allows you to select the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test). ALS is a laser safety feature defined by ITU G.664. ALS can be provisioned on client and trunk ports for SONET and SDH payload types only.

Table C-417 Field Descriptions for the Line Properties Pane — ONS 15454 SONET (continued)

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance) • CWDM • DWDM
Wavelength	Allows you to provision the wavelength frequency.
SONET Line	
Port No.	The port number.
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Type	The port type (SONET).
ProvidesSync	When checked, the card is provisioned as an NE timing reference.

Table C-417 Field Descriptions for the Line Properties Pane — ONS 15454 SONET (continued)

Field	Description
EnableSyncMsg	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Send DoNotUse	When checked, sends a do not use (DUS) message on the S1 byte.
Admin SSM	Allows you to override the STU value with one of the following: • PRS—Primary Reference Source (Stratum 1) • STU • ST2—Stratum 2 • ST3—Stratum 3 • SMC—SONET minimum clock • ST4—Stratum 4 • DUS—Do not use for timing synchronization • RES—Reserved; quality level set by user
Ethernet	
Port No.	The port number of the client port.
MTU	Maximum transmission unit (MTU). The largest acceptable packet size configured for that port. The default value is 1548.
Mode	Values are 1000 Mb/s or Auto.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
Framing	Shows the encapsulation type. Values are: • GFP-F—Frame-mapped generic framing procedure; a protocol data unit (PDU)-oriented adaptation mode that maps a client frame into one GFP frame. • HDLC—High-level data link control; does not support VLAN trunking. Standard on most Cisco data devices.
CRC Encap	Shows the cyclic redundancy check (CRC) encapsulation size. Values are 32-bit and None.
Section Thresh 15 Min/1 Day - Near End, Far End	
Port No.	The port number.
CV-S	Coding violations section.
ES-S	Errored seconds section.
SES-S	Severely errored seconds section.
SEFS-S	Severely errored framing seconds section.
Reset to Defaults button	Resets the value of the port parameters to the default value.
Line Thresh 15 Min/1 Day - Near End, Far End	
Port No.	The port number.
ES-L	Errored seconds line.
SES-L	Severely errored seconds line.
CV-L	Coding violations line.

Table C-417 Field Descriptions for the Line Properties Pane — ONS 15454 SONET (continued)

Field	Description
UAS-L	Displays the unavailable seconds line information.
FC-L	Failure count line.
PSC	Protection Switching Count (PSC) is a count of the number of times service switches from a working port to a protection port, plus the number of times service switches back to the working port. For a protection port, PSC is a count of the number of times service switches to a working port from a protection port, plus the number of times service switches back to the protection port.
PSD	Protection Switching Duration (PSD) applies to the length of time, in seconds, that service is carried on another line. For a working line, PSD is a count of the number of seconds that service was carried on the protection line. For the protection line, PSD is a count of the seconds that the line was used to carry service.
Reset to Defaults button	Resets the value of the port parameters to the default value.
RMON Thresholds	
Index No.	Displays the selected interface number.
Slot	Displays the selected card.
Port	Displays the port on the selected card.
Variable	Displays the MIB variable that is being monitored.
Alarm Type	Indicates whether the event is triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	Indicates whether the sample type is relative or absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period (sec)	Displays the sample period, in seconds.
Rising Thresholds (count)	Displays the number of occurrences for the rising threshold.
Falling Thresholds (count)	Displays the number of occurrences for the falling threshold. In most cases, the falling threshold is set lower than the rising threshold.
STS	
STS Number	Displays the synchronous transport signal number information.
IPPM Enabled	Check to enable intermediate path performance monitoring (IPPM) and uncheck to disable IPPM.

Table C-418 Field Descriptions for the Line Properties Pane — ONS 15454 SDH

Field	Description
Section Trace	
Port No.	The port number.
Trace Mode	The trace mode (Off or Manual).
Disable AIS/RDI on TIM-S	Disables the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.

Table C-418 Field Descriptions for the Line Properties Pane — ONS 15454 SDH (continued)

Field	Description
Transmit Length	Allows you to select a transmit length for the trace. Values are 1 byte or 16 bytes; the default is 16 bytes.
Current Transmit String	Displays the current transmit string; sets a new transmit string.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.
Ports	
Port No.	The port number.
Port Name	The port name.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Auto in service soak. The determination of duration left before the traffic/termination transitions to IS state. The range from is 15 minutes to 48 hours.
ALS Mode	Allows you to select the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test). ALS is a laser safety feature defined by ITU G.664. ALS can be provisioned on client and trunk ports for SONET and SDH payload types only.

Table C-418 Field Descriptions for the Line Properties Pane — ONS 15454 SDH (continued)

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance) • CWDM • DWDM
Wavelength	Allows you to provision the wavelength frequency.
SDH Line	
Port No.	The port number.
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Type	The port type (SDH).
ProvidesSync	When checked, the card is provisioned as an NE timing reference.

Table C-418 Field Descriptions for the Line Properties Pane — ONS 15454 SDH (continued)

Field	Description
EnableSyncMsg	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Admin SSM	Allows you to override the STU value with one of the following: - G811 - STU - G812T - G812L - SETS - DUS
Send DoNotUse	When checked, sends a do not use (DUS) message on the S1 byte.
Ethernet	
Port No.	The port number of the client port.
MTU	Maximum transmission unit (MTU). The largest acceptable packet size configured for that port. Possible values are 1548 (default) and Jumbo.
Mode	Values are 1000 Mb/s or Auto.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
Framing	Shows the encapsulation type. Values are: - GFP-F—Frame-mapped generic framing procedure; a protocol data unit (PDU)-oriented adaptation mode that maps a client frame into one GFP frame. - HDLC—High-level data link control; does not support VLAN trunking. Standard on most Cisco data devices.
CRC Encap	Sets the cyclic redundancy check (CRC) encapsulation size. Values are 32-bit and None.
RS Thresh 15 Min/1 Day - Near End	
Port No.	The port number.
EB-RS	Errored blocks regenerator section.
ES-RS	Errored seconds regenerator section.
SES-RS	Severely errored seconds regenerator section.
BBE-RS	Background block errors regenerator section.
UAS-RS	Unavailable seconds regenerator section.
Reset to Defaults button	Resets the value of the port parameters to the default value.
MS Thresh 15 Min/1 Day - Near End, Far End	
Port No.	The port number.
EB-MS	Errored blocks–multiplex section.
ES-MS	Errored seconds–multiplex section.
SES-MS	Severely errored seconds–multiplex section.
BBE-MS	Background block errors–multiplex section.

Table C-418 Field Descriptions for the Line Properties Pane — ONS 15454 SDH (continued)

Field	Description
UAS-MS	Unavailable seconds—multiplex section.
PSC	Protection Switching Count (PSC) is a count of the number of times service switches from a working port to a protection port, plus the number of times service switches back to the working port. For a protection port, PSC is a count of the number of times service switches to a working port from a protection port, plus the number of times service switches back to the protection port.
PSD	Protection Switching Duration (PSD) applies to the length of time, in seconds, that service is carried on another line. For a working line, PSD is a count of the number of seconds that service was carried on the protection line. For the protection line, PSD is a count of the seconds that the line was used to carry service.
Reset to Defaults button	Resets the value of the port parameters to the default value.
RMON Thresholds	
Index No.	Displays the selected interface number.
Slot	Displays the selected card.
Port	Displays the port on the selected card.
Variable	Displays the MIB variable that is being monitored.
Alarm Type	Indicates whether the event is triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	Indicates whether the sample type is relative or absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period (sec)	Displays the sample period, in seconds.
Rising Thresholds (count)	Displays the number of occurrences for the rising threshold.
Falling Thresholds (count)	Displays the number of occurrences for the falling threshold. In most cases, the falling threshold is set lower than the rising threshold.
VC4	
VC No.	Displays the VC number.
IPPM Enabled	Check to enable intermediate path performance monitoring (IPPM) and uncheck to disable IPPM.

OTN

The OTN Properties pane allows you to change the line optical transport network (OTN) settings for cards. The Properties pane contains the following tabs:

- [OTN Line Tab, page C-292](#)
- [G.709 Thresh 15 Min/1 Day Tabs, page C-293](#)
- [FEC Thresh 15 Min/1 Day Tabs, page C-293](#)
- [Trail Trace Identifier Tab, page C-293](#)

OTN Line Tab

The OTN Line tab allows you to view and change the OTN line settings of the ADM-10G card.

Table C-419 *Field Descriptions for the OTN Line Tab*

Field	Description
Port No.	Displays the port number.
G.709 OTN	Disables or enables the G.709 OTN feature.
FEC	Disables or enables forward error correction. Note OTN must be enabled before you can enable FEC.
Asynch/Synch Mapping	The card can perform multiplexing per ITU-T G.709. The ODUK (client SONET/SDH payload) can be mapped to the optical channel (OTUK) synchronously (synch mapping) with this setting.
SF BER	Displays the signal fail bit error rate.
SD BER	Displays the signal degrade bit error rate.

G.709 Thresh 15 Min/1 Day Tabs

The G.709 Thresh 15 Min/1 Day tabs display near- and far-end SM optical channel transport unit (OTUK), and near- and far-end PM optical channel data unit (ODUK) threshold information received during the past 15 minutes/24 hours.

Table C-420 *Field Descriptions for the G.709 Thresh 15 Min/1 Day Tabs*

Field	Description
SM (OTUK)/PM (ODUK) - Near End, Far End	
Port Number	Displays the optical port number.
BBE-SM	Displays the background block errors.
ES-SM	Displays the errored seconds.
SES-SM	Displays the severely errored seconds.
UAS-SM	Displays the unavailable seconds.
FC-SM	Displays the failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.

FEC Thresh 15 Min/1 Day Tabs

The FEC Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1 Day FEC threshold information of the ADM-10G card.

Table C-421 *Field Descriptions for the FEC Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	Displays port number information.
Bit Errors Corrected	Displays the bit errors corrected in 15-minute intervals.
Uncorrectable Words	Displays the uncorrectable words in 15-minute intervals.

Trail Trace Identifier Tab

The Trail Trace Identifier tab allows you to provision the trail trace identifier for the ADM-10G card.

Table C-422 *Field Descriptions for the Trail Trace Identifier Tab*

Field	Description
Port Number	Displays port number information.
Level	Displays the trail trace identifier level (Section or Path).
Trace Mode	Allows you to set the trace mode (Off or Manual).
Disable FDI on TTIM	Allows you to disable forward defect indication (FDI) for trail trace identifier mismatch (TTIM) alarms.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string.
Current Received String	Displays the current received string.

Loopback

The Loopback Properties pane allows you to view and update ADM-10G loopback information.

Table C-423 *Field Descriptions for the Loopback Properties Pane*

Field	Description
Port No.	Displays the port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-424 *Field Descriptions for the Auto Laser Shutdown Properties Pane*

Field	Description
Port Number	Displays the port number.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).

Table C-424 *Field Descriptions for the Auto Laser Shutdown Properties Pane (continued)*

Field	Description
Rec. Pulse Dur. (sec)	Allows you to set the recovery laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int. (sec)	Allows you to set the recovery laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Status	Displays the current laser status. Values are Shut Down or Not Shut Down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

Optical Thresh

The Optical Thresh Properties pane allows you to view and provision optical threshold settings. The Properties pane contains

TCA 15 Min/TCA 1 Day/ Alarm Thresh Tabs

The TCA 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert and generation.

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-425 *Field Descriptions for the TCA 15 Min/TCA 1 Day/ Alarm Thresh Tabs*

Field	Description
Port No.	Displays the port number.
Laser Bias High (%)	Displays the upper laser bias threshold.
Rx Power High (dBm)	Displays the upper receive power threshold.
Rx Power Low (dBm)	Displays the lower receive power threshold.
Tx Power High (dBm)	Displays the upper transmit power threshold.
Tx Power Low (dBm)	Displays the lower transmit power threshold.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update alarm profile information.

Table C-426 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Card Profile	
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
DWDM/Payload/GFP	
Port No.	Displays the card port number.

Table C-426 *Field Descriptions for the Alarm Behavior Properties Pane (continued)*

Field	Description
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Protection

The Protection Properties pane allows you to view and update protection group information.

Table C-427 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection groups and allows you to execute switch commands.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and update J1 path trace information.

Table C-428 *Field Descriptions for the J1 Path Trace Properties Pane*

Field	Description
Port Number	Displays the port number.
STS Number	(Available in ONS 15454 SONET only) Displays the STS number.
VC4 Number	(Available in ONS 15454 SDH only) Displays the VC number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.

Info

The Info Properties pane allows you to view nominal operating values set for the card during manufacturing.

Table C-429 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.

Table C-429 *Field Descriptions for the Info Properties Pane (continued)*

Field	Description
Value	Displays the value of the attribute.
Units	Displays the unit of measure (when applicable) of the object that is inventoried.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—GE_XP and 10GE_XP

The GE_XP and 10GE_XP cards are Gigabit Ethernet (GE) transponders for the ONS 15454 SONET and ONS 15454 SDH platforms. The cards aggregate Ethernet packets received on the client ports for transport on C-band trunk ports that operate on a 100-GHz grid. The trunk ports operate with ITU-T G.709 framing and either FEC or E-FEC. The GE_XP and 10GE_XP cards are designed for bulk point-to-point transport over 10GE LAN PHY wavelengths for video-on-demand (VoD), or broadcast video across protected 10GE LAN PHY wavelengths.

The GE_XP and 10GE_XP cards can be installed in slots 1 through 6 or 12 through 17. The GE_XP is a double-slot card with twenty GE client ports and two 10 GE trunk ports. The 10GE_XP is a single-slot card with two 10 GE client ports and two 10 GE trunk ports. The client ports support SX, LX, and ZX SFPs, and SR and 10GBASE-LR XFPs. (LR2 XFPs are not supported.) The trunk ports support a DWDM XFP.

**Caution**

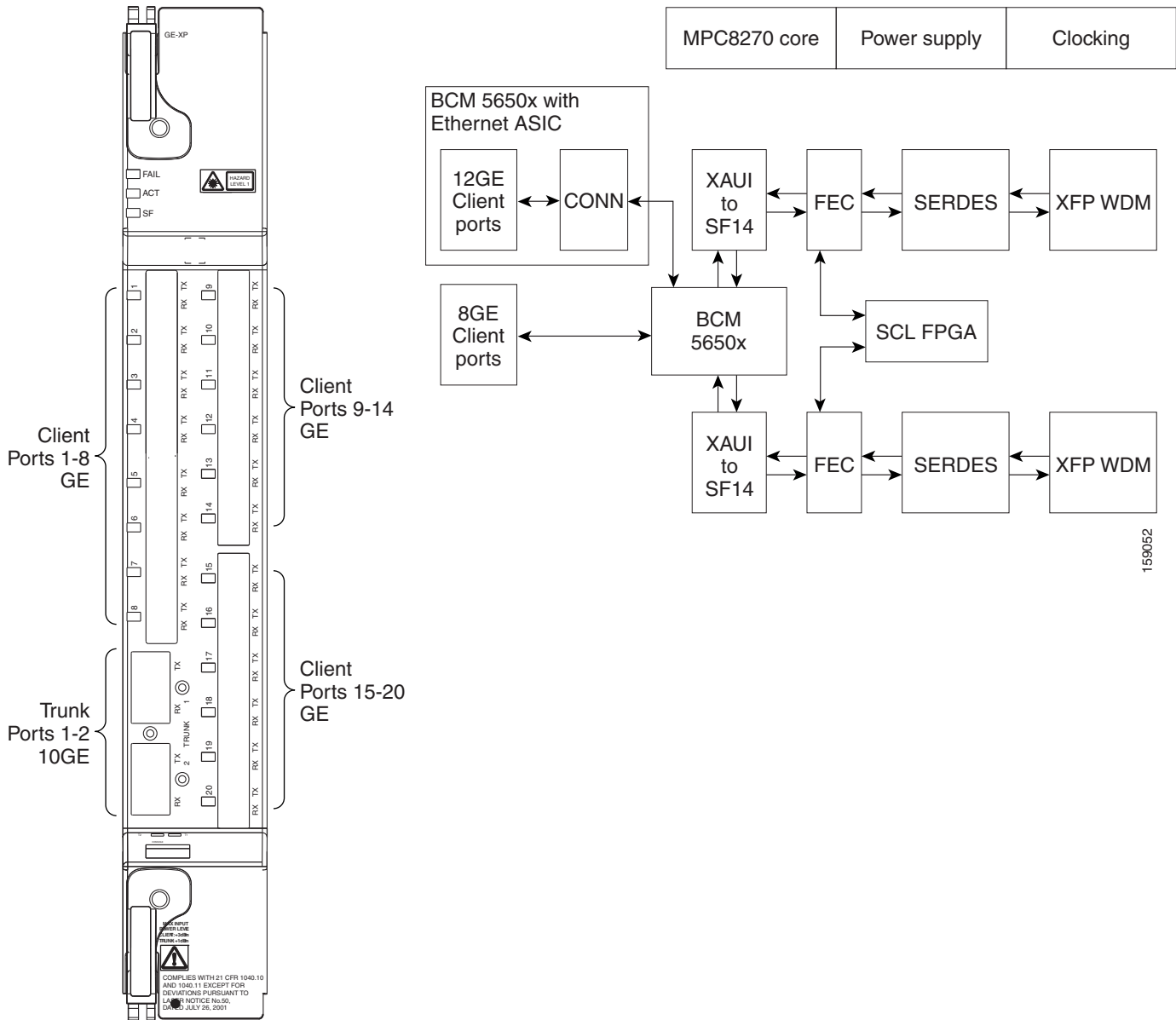
A fan-tray assembly (15454E-CC-FTA for the SDH shelf, or 15454-CC-FTA for the SONET shelf) must be installed on a shelf where a GE_XP or 10GE_XP card is installed.

GE_XP and 10GE_XP cards can be provisioned to perform different GE transport roles. Both cards can perform as Layer 2 switches. However, the 10GE_XP can also perform as a 10GE transponder, and the GE_XP can perform as a 10GE or 20GE muxponder.

Prime Optical supports the FE payload on RAD SFPs. For the 10GE_XP card, Prime Optical supports the 10GE payload, and for the GE_XP card, Prime Optical supports the 10GE payload on trunk ports 21 and 22.

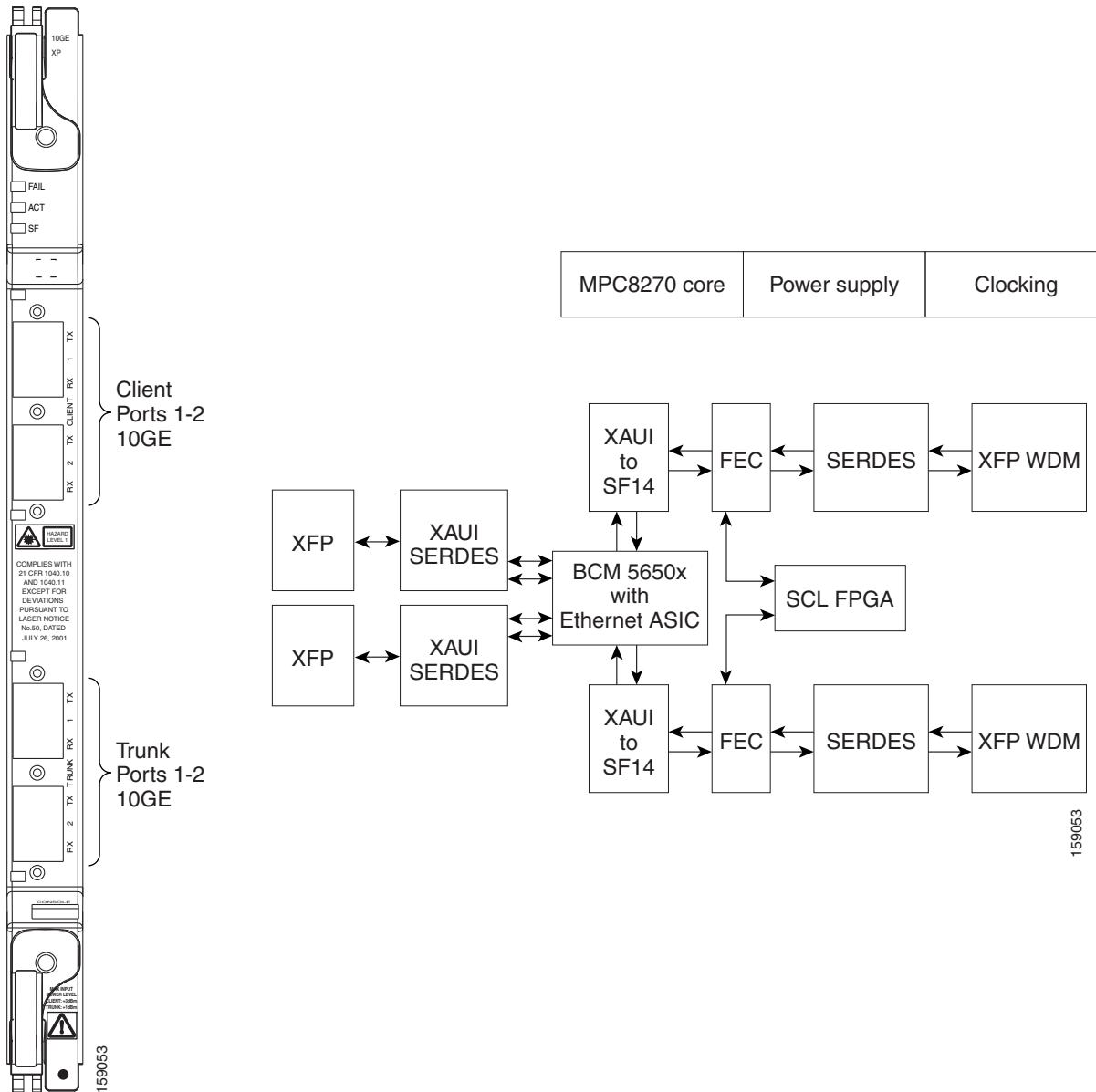
The following figure shows the GE_XP faceplate and block diagram.

Figure C-33 GE_XP Faceplate and Block Diagram

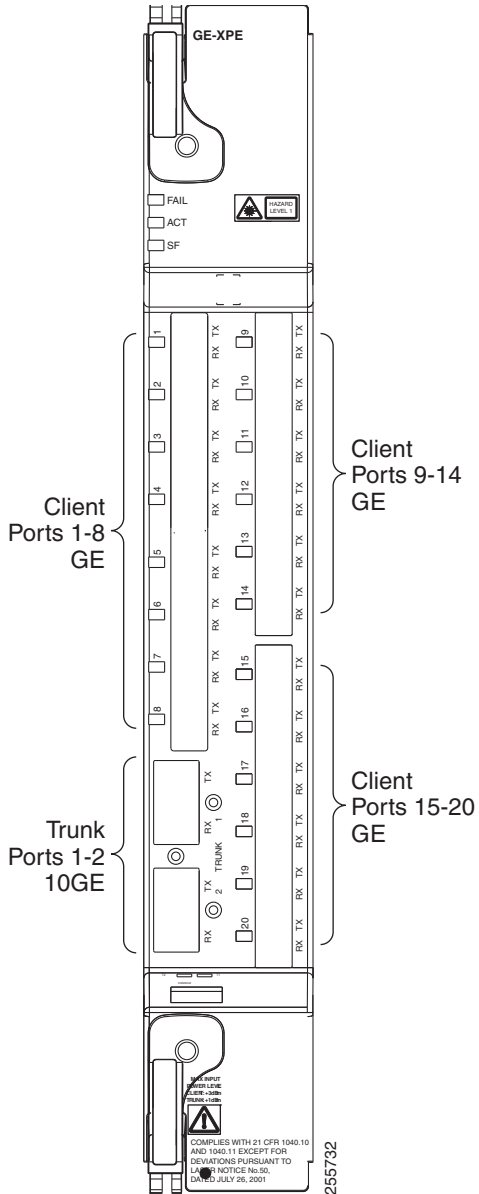


The following figure shows the 10GE_XP faceplate and block diagram.

Figure C-34 10GE_XP Faceplate and Block Diagram

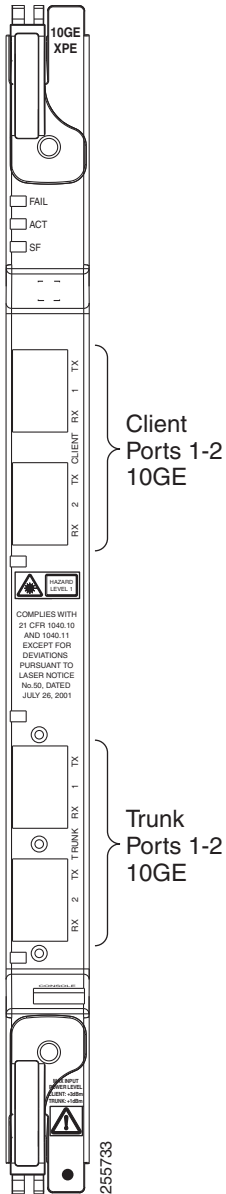


The following figure shows the GE_XPE faceplate.

Figure C-35 GE_XPE Faceplate**Note**

GE_XPE card is an enhanced version of the GE_XP card. GE_XPE trunk ports 1-2 are mapped to physical ports 21 and 22.

The following figure shows the 10GE_XPE faceplate.

Figure C-36 10GE_XPE Faceplate**Note**

10GE_XPE card is an enhanced version of the 10GE_XP card. 10GE_XPE trunk ports 1-2 are mapped to physical ports 3 and 4.

For GE_XP and 10GE_XP cards, the slot properties pane displays the following properties: Module View, Identification, Alarm Behavior, Auto Laser Shutdown, Card, CFM, Channel Groups, EFM, Ether Ports, Info, Loopback, MAC Addresses, MVR, Optical Thresh, OTN, PPM, Profiles Mapping, Protection, Protection Groups, QinQ, QoS, REP, RMON Thresholds, Security, Show Command, SVLAN, and SVLAN AIS.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Moving the mouse pointer over the graphic also displays the alarm counts.) Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-430 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance • Unlocked • Locked, disabled • Unlocked, automatic In Service • Locked, maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Suppress Alarms	When checked, all alarms are suppressed for the port.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update alarm profile information.

Table C-431 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Card Profile	
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, all alarms are suppressed for the card or its port(s).
DWDM/Payload/Channel Groups	
Port No.	Displays the card port number. Note DWDM/Payload ports are trunk ports.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-432 Field Descriptions for the Auto Laser Shutdown Properties Pane

Field	Description
Port Number	Displays the port number.
ALS Mode	Allows you to select the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the recovery laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int. (sec)	Allows you to set the recovery laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and 200 to 2000 seconds for trunk ports.
Status	Displays the current laser status. Values are Shut Down or Not Shut Down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is set to Shutdown.

Card

The Card Properties pane allows you to provision GE_XP and 10GE_XP card parameters.

Table C-433 Field Descriptions for the Card Properties Pane

Field	Description
Card Mode	Sets the card mode: Note Any provisioned client or trunk ports must be in the OOS-MA,DSBLD (SONET) or Locked-enabled,disabled (SDH) service state. You can change the state on the Ether Ports Properties pane > Ethernet tab. - L2 over DWDM—(GE_XP and 10GE_XP) Provisions the GE_XP or 10GE_XP as a Layer 2 switch. 10GE TXP—(10GE_XP only) Provisions the 10GE_XP as a 10GE transponder. Traffic received on the 10GE client port 1-1 is sent to 10GE trunk port 3-1, and traffic received on 10GE client port 2-1 is sent to 10GE trunk port 4-1. 10GE MXP—(GE_XP) Provisions the GE_XP as a 10GE muxponder. Traffic received on GE client ports 1-1 through 10-1 is multiplexed and sent to 10GE trunk port 21-1, and traffic received on GE client ports 11-1 through 20-1 is multiplexed and sent to 10GE trunk port 22-1. 20GE MXP—(GE_XP) Provisions the GE_XP as a 20GE muxponder. Traffic received on GE client ports 1-1 through 20-1 is multiplexed and sent to 10GE trunk port 21-1. Trunk port 22-1 is not used.

CFM

The CFM Properties pane allows you to enable or disable CFM on the cards.



Note

For the CFM Properties pane to be enabled, the card mode must be L2 over DWDM.

Configuration Tab

The Configuration tab allows you to enable or disable CFM for each port on the cards.

Table C-434 Field Descriptions for the Configuration Tab

Field	Description
Interface Configuration	
Port	<i>Display only.</i> Port number (n-n) and rate (ONE_GE or TEN_GE).
Enable CFM check box	Check the CFM check box to enable CFM on a port.
Card Configuration	
Enable CFM check box	Check the CFM check box to enable CFM on the card.
CC Timer	Choose the value for the CC Timer. Values are: 1 second 10 seconds 1 minute

Channel Groups

The Channel Groups Properties pane allows you to manage channel group settings for GE_XP and 10GE_XP cards.


Note

For the Channel Groups Properties pane to be enabled, the card mode must be L2 over DWDM.

Table C-435 **Field Descriptions for the Channel Groups Properties Pane**

Field	Description
Channel Group	<i>Display only.</i> ID and name of the channel group.
Port Name	Displays the name of the channel group.
Ports	<i>Display only.</i> Port number (n-n) and rate (ONE_GE or TEN_GE of the channel group).
LACP Mode	Sets the LACP mode. The channel group must be in OOS-DSBLD admin state. The options are: - On—Default mode. Ports will not exchange LACP packets with the partner ports. - Active—Places a port into an active negotiating state, in which the port initiates negotiations with remote ports by sending LACP packets. - Passive—Places a port into a passive negotiating state, in which the port responds to LACP packets it receives, but does not initiate LACP negotiation. In this mode, the port channel group attaches the interface to the bundle.
Hashing	Sets the LACP hashing algorithm. The channel group must be in OOS-DSBLD admin state. The following hashing algorithms are supported: - Unicast SA VLAN Incoming Port - Unicast DA VLAN Incoming Port - Unicast SA DA VLAN Incoming port - Unicast Src IP TCP UDP - Unicast Dst IP TCP UDP - Unicast Src Dst IP TCP UDP
Admin State	Sets the administrative state on the channel group. The Admin State can be: - IS—In Service - OOS, DSBLD—Out of Service, Disabled
Service State	<i>Display only.</i> Sets the service state that indicates the operational state of the channel group. The Service State can be: - IS-NR—In Service–Normal. - OOS-MA, DSBLD—Out of Service and Management, Disabled.
MTU	Sets the maximum transfer unit (MTU), which sets the maximum number of bytes per frame accepted on the port. The member ports must be in OOS-DSBLD admin state. The default MTU value in the channel group is taken from the default settings in the node. The default value is 9700. The valid range is from 64 to 9700.

Table C-435 Field Descriptions for the Channel Groups Properties Pane (continued)

Field	Description
Mode	Sets the provisional port mode. If the port mode is Auto, the Expected Speed field determines which ports can belong to the bundle. The member ports must be in OOS-DSBLD admin state. The values are: • Auto • 1000 Mb/s
Expected Speed	Sets the expected speed of ports of the channel group. The channel group must be in OOS-DSBLD admin state. The values are: • 10 Mb/s • 100 Mb/s • 1000 Mb/s
Duplex	<i>Display only.</i> Expected duplex capability of ports of the channel group. The value is Full.
Committed Info Rate	Sets the guaranteed information rate as per the service provider service-level agreement. The channel group must be in OOS-DSBLD admin state. The default value is 100. The valid range is from 0 to 100 percent.
Committed Burst Size	Sets the maximum number of bits transferred per second. The channel group must be in OOS-DSBLD admin state. The options are: • 4 k (default) • 8 k • 16 k • 32 k • 64 k • 128 k • 256 k • 512 k • 1 M • 2 M • 4 M • 8 M • 16 M

Table C-435 *Field Descriptions for the Channel Groups Properties Pane (continued)*

Field	Description
Excess Burst Size	Sets the maximum number of bits credited for later transfer if the committed burst rate cannot be transmitted. The channel group must be in OOS-DSBLD admin state. The options are: • 4 k (default) • 8 k • 16 k • 32 k • 64 k • 128 k • 256 k • 512 k • 1 M • 2 M • 4 M • 8 M • 16 M
NIM	Sets the port network interface mode (NIM) for the channel group. The member ports must be in OOS-DSBLD admin state. The channel group NIM is set to UNI or NNI based on the mode of the first port that is added to the channel group. The options are: • UNI Mode (Default)—Provisions the port as a UNI. This is the interface that faces the subscriber. • NNI Mode—Provisions the port as an NNI. This is the interface that faces the service provider network.

Table C-435 *Field Descriptions for the Channel Groups Properties Pane (continued)*

Field	Description
Ingress CoS	Provisions the IEEE 802.1p ingress class of service (CoS). Ingress CoS is used to set the priority of the Ethernet frame in the service provider network. The member ports must be in OOS-DSBLD admin state. The options are: • 0 • 1 • 2 • 3 • 4 • 5 • 6 • 7 • Trust • CVLAN • Differentiated Services Code Point (DSCP)
Inner Ethertype (Hex)	Defines the Inner Ethertype field. The Inner Ethertype field indicates which protocol is being transported in an Ethernet frame. The member ports must be in OOS-DSBLD admin state to modify the Inner Ethertype value to a non-default value. The default is 8100 (IEEE Standard 802.1Q customer VLAN tag type) and the range is from 0x600 to 0xffff.
Outer Ethertype (Hex)	Defines the Outer Ethertype field. The Outer Ethertype field identifies which protocol is being transported in an Ethernet frame. The member ports must be in OOS-DSBLD admin state. The default is 8100 (IEEE standard 802.1Q service provider VLAN tag type) and the range is from 0x600 to 0xffff.
MAC Learning	Enables or disables MAC learning for the port on GE_XP, 10GE_XP, GE_XPE, and 10GE_XPE cards. MAC learning is used by Layer 2 switches to learn the MAC addresses of network nodes so that the Layer 2 switches send traffic to the right location. On GE_XPE or 10GE_XPE cards, enable MAC address learning per SVLAN. The options are: • Checked—MAC learning is enabled for this port. • Unchecked—(Default) MAC learning is disabled for this port.
Delete	Allows you to delete an existing row from the LACP table. The Delete button is enabled when a particular row is selected in the table.

Table C-435 *Field Descriptions for the Channel Groups Properties Pane (continued)*

Field	Description
Add/Remove Ports	Allows you to add or remove ports to an existing channel group. Click the Add/Remove Ports button to open the Add/Remove Ports dialog box. To add ports to an existing channel group, complete the following: • Choose the required ports from the Standalone list. • Click the arrow (>>) to move the selected ports to the Bundled list. To remove ports from an existing channel group, complete the following: • Choose the required ports from the Bundled list. • Click the arrow (<<) to move the selected ports to the Standalone list. Click Apply to save the changes or click Cancel to exit without saving.
Create	Allows you to add a new row to the LACP table. Click Create. The Create Channel Group dialog box appears. Do the following: • Enter the name of the channel group in the Name field. • From the ID drop-down list, select a valid group ID. • From the Standalone list, choose the ports that will belong to this channel group and click the right arrow button to move the selected ports to the Bundled list. • From the LACP Mode drop-down list, choose the LACP mode as needed: – On – Active – Passive • From the LACP Hashing drop-down list, select the LACP hashing algorithm that the protocol uses to perform the load balancing task between the bundled ports. The following hashing algorithms are supported: – Unicast SA VLAN Incoming Port – Unicast DA VLAN Incoming Port – Unicast SA DA VLAN Incoming port – Unicast Src IP TCP UDP – Unicast Dst IP TCP UDP – Unicast Src Dst IP TCP UDP Click Create to create a new channel group or click Cancel to exit without saving. A new row is added to the Channel Groups Properties pane.

EFM

The EFM Properties pane allows you to configure EFM parameters, link monitoring parameters, and enable remote loopback on each port on the GE_XP and 10GE_XP cards. The Properties pane contains the following tabs:

- [Configuration Tab, page C-310](#)
- [Link Monitoring Tab, page C-310](#)

- [Loopback Tab, page C-311](#)

**Note**

This Properties pane is applicable only when the Card Mode is set to L2 over DWDM in the Card Properties pane.

Configuration Tab

The Configuration tab allows you to configure EFM parameters on the GE_XP and 10GE_XP cards.

Table C-436 **Field Descriptions for the Configuration Tab**

Field	Description
Port	<i>Display only.</i> Port number (n-n) and rate (ONE_GE or TEN_GE).
EFM State	Sets the state of the EFM protocol for each port. Values are: • Enabled—Enables EFM for that port. • Disabled—Disables EFM for that port.
Mode	Sets the operating mode of the port. Values are: • Active—The port sends OAM Protocol Data Units (OAMPDUs) at regular intervals to the partner ports. • Passive—The port will not send OAMPDUs until the partner ports send OAMPDUs.
Link Fault	Sets the Remote Failure Indication (RFI) action. If the link is down on a port, the link fault RFI is sent to the partner port through OAMPDU. An alarm indicating the remote failure indication link fault (RFI-LF) is raised. The alarm is cleared after you clear the link fault condition. You can specify the following actions for link fault RFI: • Error Block—The interface is placed in the error-block state and the RFI-LF alarm is raised. • NONE—Only the RFI-LF alarm is raised.
Session Timer	Sets the duration up to when the EFM session is retained with the partner port without receiving OAMPDUs. The valid range is from 2 to 30 seconds.

Link Monitoring Tab

The Link Monitoring tab allows you to configure EFM link monitoring parameters for each port on the GE_XP and 10GE_XP cards.

Table C-437 **Field Descriptions for the Link Monitoring Tab**

Field	Description
Port	<i>Display only.</i> Port number (n-n) and rate (ONE_GE or TEN_GE).
EF Max	Sets the threshold value for the maximum number of errored frames to detect during a specific period. The valid range is from 0 to 65535. Note If the EF max value is set to zero, 0 (Not Provisioned) is displayed.
EF Min	Sets the threshold value for the minimum number of errored frames to detect during a specific period. The valid range is from 0 to 65535.

Table C-437 Field Descriptions for the Link Monitoring Tab (continued)

Field	Description
EF Action	The following EF actions are available: - NONE—If the parameter value exceeds the maximum threshold value, the applicable action is None. - Squelch—If the parameter value falls below the minimum threshold value, a threshold crossing alert (transient condition) is generated.
EF Window	Sets the threshold value for the maximum number of errored frames within the last n frames. The valid range is from 10 to 600.
EF Max	Sets the threshold value for the maximum number of errored frames within the last n frames. The valid range is from 0 to 65535. Note If the EFP max value is set to zero, 0 (Not Provisioned) is displayed.
EF Min	Sets the threshold value for the minimum number of errored frames within the last n frames. The valid range is from 0 to 65535.
EFP Action	The following EFP actions are available: - NONE—If the parameter value exceeds the maximum threshold value, the applicable action is NONE. - Squelch—If the parameter value falls below the minimum threshold value, a threshold crossing alert (transient condition) is generated.
EFP Window	Period in which the EFP parameters are monitored. The valid range is from 1 to 65535.
EFSS Max	Sets the threshold value for the maximum number of errored seconds within the last m seconds. The valid range is from 0 to 900. Note If the EFSS max value is set to zero, 0 (Not Provisioned) is displayed.
EFSS Min	Sets the threshold value for the minimum number of errored seconds within the last m seconds. The valid range is from 0 to 900.
EFSS Action	The following EFSS actions are available: - NONE—If the parameter value exceeds the maximum threshold value, the applicable action is None. - Squelch—If the parameter value falls below the minimum threshold value, a threshold crossing alert (transient condition) is generated.
EFSS Window	Specifies the period when the EFSS parameters are monitored. The valid range is from 100 to 9000.

Loopback Tab

The Loopback tab allows you to enable remote loopback for each port on the GE_XP and 10GE_XP cards.

Table C-438 Field Descriptions for the Loopback Tab

Field	Description
Port	<i>Display only.</i> Port number (n-n) and rate (ONE_GE or TEN_GE).
Remote Loopback Type	Ensures link quality with a remote peer during installation or troubleshooting. Values are: - Remote Loopback—Allows you to configure a port to terminal loopback. - NONE—Allows you to clear the current loopback.

Ether Ports

The Ether Ports Properties pane allows you to provision Ethernet ports for GE_XP and 10GE_XP cards. The options that can be set depend on the card mode. You can set the card mode in the Card Properties pane. The Ether Ports contains the following tabs:

- [Ports Tab, page C-312](#)
- [Ethernet Tab, page C-313](#)
- [PDH Ethernet Parameters Tab, page C-317](#)
- [DS1/DS3 Line Tabs, page C-317](#)

Ports Tab

The Ports tab allows you to view and change the port settings.

Table C-439 Field Descriptions for the Ports Tab

Field	Description
Port Number	Displays the port number on the selected card.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Admin State	Displays the status of the line. The line can be In Service (IS); In Service–Auto In Service Soak (IS_AINS); Out of Service (OOS); Out of Service–Maintenance (OOS_MT); unlocked; locked, disabled; or locked, maintenance.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
ALS Mode	Allows you to select the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test). ALS is a laser safety feature defined by ITU G.664. ALS can be provisioned on client and trunk ports for SONET and SDH payload types only.
AINS Soak	Automatic in-service soak. The duration remaining before the traffic/termination transitions to IS state.

Table C-439 *Field Descriptions for the Ports Tab (continued)*

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card and line (client or trunk) that are selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance) • CWDM • DWDM
Wavelength	Allows you to provision the wavelength frequency.

Ethernet Tab

The Ethernet tab allows you to view Ethernet line information.

Table C-440 **Field Descriptions for the Ethernet Tab**

Field	Description
Port	Displays the card port number. The GE_XP is a double-slot card with twenty GE client ports (displayed as ONE_GE) and two 10 GE trunk ports (displayed as TEN_GE). The 10GE_XP is a single-slot card with two 10 GE client ports and two 10 GE trunk ports (all displayed as TEN_GE).
Egress QoS	Enables Quality of Service (QoS) on the port's egress, or output queues. The options are: - Checked—QoS is enabled on the port's egress queues. - Unchecked—(Default) QoS is disabled on the port's egress queues. To set this option, the card mode must be L2 over DWDM.
IGMP Static Router Port	Adds multicast-capable ports to the forwarding table for every IP multicast. The options are: - Checked—IGMP static router port is enabled. - Unchecked—(Default) IGMP static router port is disabled. To set this option, the card mode must be L2 over DWDM.
AIS Action	Defines the AIS action type provisioned on the port. The options are: - None—No action. - Squelch—When an AIS packet is received on a SVLAN terminating on the UNI-port, the UNI port is squelched. To set this option, the card mode must be L2 over DWDM.
Protection Action	Configures the standby port behavior. The options are: - None—No action. - Squelch—The laser on the standby port in a 1+1 protection group is squelched. This setting has no effect if the port is not part of the 1+1 protection group. To set this option, the card mode must be L2 over DWDM.
MTU	Sets the maximum transmission unit (MTU), which is the largest acceptable packet size configured for that port. The range is from 64 to 9700 bytes; the default size is 1548. To set this option, the card mode must be one of the following values: - L2 over DWDM 10GE TXP 10GE MXP 20GE MXP
Mode	Displays the Ethernet mode. The values are: - Auto (default, GE ports only) 1000 Mb/s (GE ports only) 10000 Mb/s (default, 10 GE ports only) To set this option, the card mode must be one of the following: - L2 over DWDM 10GE TXP 10GE MXP 20GE MXP

Table C-440 *Field Descriptions for the Ethernet Tab (continued)*

Field	Description
Flow Control	Enables or disables flow control messaging with its peer port. When enabled, the port can send and receive PAUSE frames when buffer congestion occurs. Values are: • ON—Flow control is enabled • OFF—(Default) Flow control is disabled To set this option, the card mode must be one of the following: • L2 over DWDM • 10GE MXP • 20GE MXP
Media Type	(GE_XPE card only) Sets the Media Type. To set this option, the card mode must be one of the following: • L2 over DWDM • 10GE MXP • 20GE MXP
Committed Info Rate	Sets the guaranteed information rate as provided by the service provider service-level agreement. To set this option, the card mode must be one of the following: • L2 over DWDM • 10GE MXP • 20GE MXP
Committed Burst Size	In Frame Relay links, sets the maximum number of bits that are transferred per second. To set this option, the card mode must be one of the following: • L2 over DWDM • 10GE MXP • 20GE MXP
Excess Burst Size	Sets the maximum number of bits that are credited for later transfer in the event the committed burst rate cannot be transmitted. To set this option, the card mode must be one of the following: • L2 over DWDM • 10GE MXP • 20GE MXP
NIM	Sets the port network interface mode (NIM). This parameter classifies port types designed for the Metro Ethernet market to simplify deployment, management, and troubleshooting. The options are: • UNI Mode—Provisions the port as a user-to-network interface (UNI). This is the interface that faces the subscriber. • NNI Mode—Provisions the port as a network-to-network interface (NNI). This is the interface that faces the service provider network. When a port is in UNI mode, tagging can be configured as transparent or selective. In transparent mode, only service provider virtual LANs (SVLANs) in the node VLAN database can be configured. In selective mode, the customer virtual LAN (CVLAN)-to-SVLAN relationship can be defined. To set this option, the card mode must be L2 over DWDM.

Table C-440 *Field Descriptions for the Ethernet Tab (continued)*

Field	Description
MAC Learning	Enables or disables MAC learning for the port. MAC learning is used by Layer 2 switches to learn the MAC addresses of network nodes so they know where to send traffic. Layer 2 switches—including GE_XP and 10GE_XP cards in L2 over DWDM mode—maintain a MAC learning table that associates the MAC addresses and VLANs with a given port. Note MAC address table aging is 300 seconds. It cannot be changed. To set this option, the card mode must be L2 over DWDM.
Ingress CoS	Provisions the IEEE 802.1p ingress Class of Service (CoS). The CoS .1p bits set the Ethernet frame priority. The options are: • 0—(Default) Sets the .1p bit to 0. • 1—Sets the .1p bit to 1. • 2—Sets the .1p bit to 2. • 3—Sets the .1p bit to 3. • 4—Sets the .1p bit to 4. • 5—Sets the .1p bit to 5. • 6—Sets the .1p bit to 6. • 7—Sets the .1p bit to 7. • Trust—Copies the .1p bit from the incoming packet. • Differentiated Services Code Point (DSCP) Note Ingress CoS applies only to ports provisioned as UNI mode. It does not apply to ports provisioned as NNI mode. To set this option, the card mode must be L2 over DWDM.
Inner Ethertype (Hex)	Defines the Inner Ethertype field. The Ethertype field indicates which protocol is being transported in an Ethernet frame. The inner Ethertype applies to ports provisioned for UNI mode only. It does not apply to ports provisioned for NNI mode. The ports must be out of service (OOS) before the inner Ethertype can be provisioned. The default is 8100 (IEEE standard 802.1Q customer VLAN tag type) and the range is from 0x600 to 0xffff. To set this option, the card mode must be L2 over DWDM.
Outer Ethertype (Hex)	Defines the Outer Ethertype field. The Ethertype field indicates which protocol is being transported in an Ethernet frame. The default is 8100 (IEEE standard 802.1Q customer VLAN tag type) and the range is from 0x600 to 0xffff. To set this option, the card mode must be L2 over DWDM.
Speed	Displays the operating speed for the ports.
Duplex	Actual setting of the port. Values are Auto, Full, and Half.

PDH Ethernet Parameters Tab



Note

- The PDH Ethernet Parameters tab is available in GE_XP card view only, provided the PPM for the card ports are created in Fast Ethernet (FE) mode.
- The PDH Ethernet Parameters tab is enabled only when the Card Mode is set to L2 over DWDM in the Card Properties pane.

Table C-441 **Field Descriptions for the PDH Ethernet Parameters Tab**

Field	Description
Port No	Displays the port number.
Port Name	Displays the name of the port.
MPLS Inner Label	Sets the MPLS Inner Label value. The default value is 16. The valid range is from 1 to 127.
MPLS Outer Label	Sets the MPLS Outer Label value. The default value is 16. The valid range is from 1 to 8063.
Jitter Buffer	Sets the jitter buffer value. The default value is 1500. The valid range is from 400 to 200000.
RX Sensitivity	Sets the RX sensitivity value.
Source IP Address	Allows you to enter the source IP address. Only Unicast IP addresses are accepted.
Peer IP Address	Allows you to enter the peer IP address. Only Unicast IP addresses are accepted.

DS1/DS3 Line Tabs

The DS1/DS3 Line tab allows you to view and change the DS1/DS3 line settings.



Note

- The DS1/DS3 Line tab is available in GE_XP card view only, provided the PPM for the card ports are created in FE mode.
- The DS1/DS3 Line tab is enabled only when the Card Mode is set to L2 over DWDM in the Card Properties pane.

Table C-442 **Field Descriptions for the DS1/DS3 Line Tabs**

Field	Description
Port No	Displays the port number.
Port Name	Displays the name of the port.
Clock Source	Sets the Clock Source.
Line Type	Allows you to select the line framing type.

Table C-442 *Field Descriptions for the DS1/DS3 Line Tabs (continued)*

Field	Description
Line Coding	Allows you to define the DS-1 transmission coding type.
Line Length	Defines the distance (in feet) from backplane connection to the next termination point. 0–131 (default) 132–262 263–393 394–524 525–655

Info

The Info Properties pane allows you to view nominal operating values set for the card during manufacturing.

Table C-443 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of measure (when applicable) of the object that is inventoried.

Loopback

The Loopback Properties pane allows you to view and update GE_XP and 10GE_XP loopback information.

Table C-444 *Field Descriptions for the Loopback Properties Pane*

Field	Description
Port Number	Displays the port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance - Unlocked - Locked, disabled - Locked, maintenance

Table C-444 *Field Descriptions for the Loopback Properties Pane (continued)*

Field	Description
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or clear the current loopback (None).

MAC Addresses

The MAC Addresses Properties pane allows you to configure MAC address learning, which facilitates switch processing. The Properties pane contains the following tabs:

- [Multicast Tab, page C-319](#)
- [Card Tab, page C-319](#)
- [Learned Tab, page C-319](#)

Multicast Tab

The Multicast tab allows you to view multicast port information for GE_XP and 10GE_XP cards.

Table C-445 *Field Descriptions for the Multicast Tab*

Field	Description
Multicast IP Address	Displays the multicast IP address.
SVLAN	Displays the SVLAN number.
Multicast dialog box	This dialog box appears when you double-click a row in the table. It provides a list of ports that are related to the selected SVLAN.

Card Tab

The Card tab allows you to retrieve a list of internal MAC addresses on GE_XP and 10GE_XP cards. Internal card MAC addresses are retrieved as cached values from the Prime Optical database.

Table C-446 *Field Descriptions for the Card Properties Pane Tab*

Field	Description
Port	Displays the port number. There is one MAC address per port, plus one MAC address that identifies the CPU.
MAC Address	Displays the MAC address that corresponds to the selected port.

Learned Tab

The Learned tab allows you to retrieve learned MAC addresses per SVLAN on GE_XP and 10GE_XP cards, which support 32K MAC addresses. Learned MAC addresses are not cached and are retrieved directly from the NE. The cards learn the MAC address of packets they receive on each port and add the MAC address and its associated port number to the MAC address learning table. As stations are added or removed from the network, the GE_XP and 10 GE_XP cards update the MAC address learning table, adding new dynamic addresses and aging out those that are no longer in use.

Table C-447 Field Descriptions for the Learned Tab

Field	Description
MAC Address	Displays the learned MAC address on the GE_XP or 10GE_XP card.
SVLAN	Displays the SVLAN ID associated with the learned MAC address.
SVLAN Name	Displays the SVLAN name associated with the SVLAN ID. The following values are displayed in the SVLAN Name field if the SVLAN ID is invalid: - N/A—Unable to associate a valid SVLAN ID to a valid SVLAN name. - Invalid—Invalid SVLAN ID.
Port	Displays the port associated with the learned MAC address.
SVLANs text box	Enter a single SVLAN or a range of SVLANs for which to retrieve learned MAC addresses. The range is from 1 to 4093 SVLANs.
Refresh	After specifying the SVLAN range, click the Refresh button to monitor the progress of the learned MAC address retrieval. If the TCC card is busy processing another request on the same GE_XP or 10GE_XP card, the following error message is displayed: The resource is already in use. Try again later.
Clear	Click the Clear button to clear the learned MAC addresses from the GE_XP or 10GE_XP card. The following warning message is displayed: You are about to clear all of the learned MAC addresses on the card. Do you want to continue?

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

MVR

The MVR Properties pane allows you to enable multicast VLAN registration (MVR) and set a multicast address for a single multicast SVLAN.

Table C-448 Field Descriptions for the MVR Properties Pane

Field	Description
Enabled check box	When checked, enables MVR on the card. If unchecked, disables MVR on the card.
IGMP CVLAN check box	When checked, enables IGMP snooping on CVLAN. The IGMP CVLAN check box is not enabled if MVR on the card is not enabled.
Multicast SVLAN	Sets the MVR VLAN ID. From the list of available IDs, select an SVLAN ID that is not part of the QinQ configuration on any of the card's UNI ports.
Multicast Address	Sets the specified multicast group address as the MVR multicast group. The range is from 224.0.0.0 to 239.255.255.255, excluding the following IP addresses: (224-239).0/128.0.(0-255)
Count	Sets the range of multicast group addresses. The count range is from 1 to 256.

Optical Thresh

The Optical Thresh Properties pane allows you to view and provision optical threshold settings. The Properties pane contains the [TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs](#), [page C-321](#).

TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs

The TCA 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day TCA settings of GE_XP and 10GE_XP cards.

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-449 Field Descriptions for the TCA 15 Min/1 Day Tabs

Field	Description
Port Number	Displays the port number.
Laser Bias High (%)	Displays the upper laser bias threshold.
Rx Power High (dBm)	Displays the upper receive power threshold.
Rx Power Low (dBm)	Displays the lower receive power threshold.
Tx Power High (dBm)	Displays the upper transmit power threshold.
Tx Power Low (dBm)	Displays the lower transmit power threshold.
Reset to Defaults button	Resets the value of the port parameters to the default value.

OTN

The OTN Properties pane allows you to change the line optical transport network (OTN) settings for cards. The Properties pane contains the following tabs:

- [OTN Line Tab](#), [page C-321](#)
- [G.709 Thresh 15 Min/1 Day Tabs](#), [page C-322](#)
- [FEC Thresh 15 Min/1 Day Tabs](#), [page C-322](#)
- [Trail Trace Identifier Tab](#), [page C-323](#)

OTN Line Tab

The OTN Line tab allows you to view and change the OTN line settings of GE_XP and 10GE_XP cards.

Table C-450 Field Descriptions for the OTN Line Tab

Field	Description
Port No.	Displays the port number.
G.709 OTN	Disables or enables the G.709 OTN feature.
FEC	Disables or enables forward error correction.
	Note OTN must be enabled before you can enable FEC.

Table C-450 *Field Descriptions for the OTN Line Tab (continued)*

Field	Description
Asynch/Synch Mapping	Indicates whether the card can perform multiplexing per ITU-T G.709. The ODUK (client SONET/SDH payload) can be mapped to the optical channel (OTUK) either asynchronously (asynch mapping) or synchronously (synch mapping) with this setting. Note For 10GE_XP and GE_XP cards, this field is set to “Not Used” and is not editable.
SF BER	Displays the signal fail bit error rate.
SD BER	Displays the signal degrade bit error rate.

G.709 Thresh 15 Min/1 Day Tabs

The G.709 Thresh 15 Min/1 Day tabs display near- and far-end SM optical channel transport unit (OTUK), and near- and far-end PM optical channel data unit (ODUK) threshold information received during the past 15 minutes/24 hours.

Table C-451 *Field Descriptions for the G.709 Thresh 15 Min/1 Day Tabs*

Field	Description
SM (OTUK) - Near End, Far End	
Port Number	Displays the optical port number.
BBE-SM	Displays the background block errors.
ES-SM	Displays the errored seconds.
SES-SM	Displays the severely errored seconds.
UAS-SM	Displays the unavailable seconds.
FC-SM	Displays the failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.
PM (ODUK) Near End, Far End	
Port No.	Displays the optical port number.
BBE-PM	Displays the background block errors.
ES-PM	Displays the errored seconds.
SES-PM	Displays the severely errored seconds.
UAS-PM	Displays the unavailable seconds.
FC-PM	Displays the failure count.

FEC Thresh 15 Min/1 Day Tabs

The FEC Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day FEC threshold information of GE_XP and 10GE_XP cards.

Table C-452 *Field Descriptions for the FEC Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	Displays port number information.
Bit Errors Corrected	Displays the bit errors corrected in 15-minute intervals.

Table C-452 Field Descriptions for the FEC Thresh 15 Min/1 Day Tabs (continued)

Field	Description
Uncorrectable Words	Displays the uncorrectable words in 15-minute intervals.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Trail Trace Identifier Tab

The Trail Trace Identifier tab allows you to provision the trail trace identifier for GE_XP and 10GE_XP cards.

Table C-453 Field Descriptions for the Trail Trace Identifier Tab

Field	Description
Modify button	Allows you to open the Modify Trace dialog box, where you can change the section trace information for applicable cards. For more information, see Modifying Traces, page 7-171 .
Port Number	Displays port number information.
Level	Displays the trail trace identifier level (Section or Path).
Trace Mode	Allows you to set the trace mode (Off or Manual).
Disable FDI on TTIM	Allows you to disable forward defect indication (FDI) for trail trace identifier mismatch (TTIM) alarms.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string.
Current Received String	Displays the current received string.

PPM

The PPM Properties pane allows you to view and provision the PPM and the ports inside the PPM.

Table C-454 Field Descriptions for the PPM Properties Pane

Field	Description
Pluggable Port Modules	
Pluggable Number	Displays the identifier of the plugin module.
Actual Equipment Type	Displays the actual plugin module that is installed in the slot.
Equipment State	Displays the equipment state of the plugin module.
Admin State	Displays the status of the plugin module: In Service (IS); Out of Service–Maintenance (OOS_MT); Unlocked; or Locked, Maintenance. Note You can edit the Admin State value only for actual equipment, not preprovisioned equipment.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
PPM	
Port	Displays the PPM number and port number.
Rate	Displays the port rate.

Provision Pluggable Dialog Box

Click the **Create** button to launch the Provision Pluggable dialog box. This dialog box allows you to provision the PPM and to create the ports inside this entity. See [Provision Pluggable Dialog Box, page C-25](#) for more information.

Profiles Mapping

The Profiles Mapping Properties pane allows you to map a port to an SVLAN and a CVLAN with a specific profile. The Properties pane contains a row for each VLAN that is present in the card's VLAN database, plus a column for each port. The Properties pane contains the following tabs:

- [SVLAN Tab, page C-324](#)
- [CVLAN Tab, page C-324](#)

SVLAN Tab

The SVLAN tab allows you to associate the SVLAN profile to an SVLAN on a port.

Table C-455 **Field Descriptions for the SVLAN Tab**

Field	Description
SVLAN	<i>Display only.</i> Lists each VLAN that is present in the card's VLAN database.
Port (<i>number</i>)	Lists each port number. When you click a cell, the drop-down list displays all of the SVLAN profiles created for the NE. To map a port to a VLAN with a specific profile, click the port's cell, choose the profile, and click Apply . To detach a previously mapped profile, click the port's cell, choose Detach Current , and click Apply .

CVLAN Tab

The CVLAN tab allows you to associate the CVLAN profile to a CVLAN on a UNI port.

Table C-456 **Field Descriptions for the CVLAN Tab**

Field	Description
CVLAN	<i>Display only.</i> Lists each VLAN that is present in the card's VLAN database.
Port (number)	Lists each port number. When you click a cell, the drop-down list displays all of the CVLAN profiles created for the NE. To map a port to a VLAN with a specific profile, click the port's cell, choose the profile, and click Apply .

Protection

The Protection Properties pane allows you to provision protection for GE_XP and 10GE_XP cards. To provision protection, the card mode must be L2 over DWDM. You can set the card mode on the Card Properties pane.

Table C-457 **Field Descriptions for the Protection Properties Pane**

Field	Description
Port	Displays the card port number.
Status	Sets the spanning-tree protocol port states. If you have designated the card as a master, you must set one of the trunk ports to the blocked state to avoid loops in the network. - Blocking—Sets the port to the blocked (standby) state. A port in the blocked state does not participate in frame forwarding. - Forwarding—Sets the port to the forwarded state. A port in the forwarded state forwards frames.
Actual Status	Sets the port states. It can be: - Blocking—Sets the port to the blocked state. A port in the blocked state blocks the Ethernet packets that are received by the port. - Forwarding—Sets the port to the forwarded state. A port in the forwarding state forwards the Ethernet packets that are received by the port.
Protection	Sets the protection: - Enabled—Enables protection. - Disabled—Disables protection. - Forced—Forces the protection.
Master	Sets the card as the master card for the network. Only one card in the network should be set as a master card.
Hold Off Time	Sets the hold off time. Choose one of the following values from the Hold Off Time drop-down list: - Disabled—Disables Fast Automatic Protection Switch (FAPS) protection (default) 50 milliseconds 100 milliseconds 200 milliseconds 500 milliseconds 1 sec 2 sec 5 sec

Protection Groups

The Protection Groups Properties pane allows you to view and update protection group information.

Table C-458 Field Descriptions for the Protection Groups Properties Pane

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection groups and allows you to execute switch commands.

QinQ

The QinQ Properties pane allows you to provision the IEEE 802.1 QinQ VLAN tags on GE_XP or 10GE_XP cards. QinQ tags expand the VLAN capability by tagging the tagged packets to produce a “double-tagged” Ethernet frame. For service providers, the expanded VLAN allows specific services to be provided on specific VLANs for specific customers, while other types of services can be provided to other customers on other VLANs.

To provision QinQ settings, the card mode must be L2 over DWDM. You can set the card mode on the Card Properties pane.

The QinQ tab displays only ports in UNI mode. You can set UNI mode on the Ether Ports Properties pane > Ethernet tab.

Table C-459 Field Descriptions for the QinQ Properties Pane

Field	Description
Port Configuration	
Port	Sets the port where you want to provision QinQ. Note Channel groups configured in UNI mode appear in the Port field along with the physical ports.
QinQ Mode	Sets the QinQ mode. The options are: • Selective—Allows you to specify the mapping between CVLANs and SVLANs. • Transparent—Allows you to specify a single SVLAN.
BPDU	Sets the bridge protocol data unit (BPDU) modes. The options are: • Drop—Discards incoming packets with the MAC address on the BPDU list. • Tunnel—Transports packets with MAC addresses on the BPDU list. BPDU list: • 01-80-c2-00-00-00 (802.1D) • 01-80-c2-00-00-02 (LACP) • 01-00-0c-cc-cc-cd (PVST+) • 01-00-0c-cc-cc-cc (CDP (type 0x2000), VTP (type 0x2003), PAgP (type 0x0104), UDLD (type 0x0111), DTP (type 0x2004))
Transparent SVLAN ID	Displays the SVLAN ID used when the QinQ mode is set to transparent. When the QinQ mode is set to selective, you can specify the mapping between the customer VLAN and the service VLAN.

Table C-459 Field Descriptions for the QinQ Properties Pane (continued)

Field	Description
DSCP-CoS	Click the DSCP-CoS button. The DSCP-CoS mapping table to provision the CoS based on DSCP for each port is displayed with the following information: - DSCP—Displays the DSCP value. - CoS Value—Displays the CoS value. Choose a CoS value from 0 to 7 and click OK. The DSCP-CoS button is enabled only when the following conditions are met: - QinQ mode is set to Selective. - Ingress CoS is set to DSCP on Ether and Channel Group ports. Note The DSCP-CoS button is enabled only if XPE cards are provisioned in the slot.
Selective Mode	
Filter	Click the filter icon to view the SVLAN details. A text box is available under each head; type the parameter based on which you want the data to be filtered. To sort the data, click the column title.
Add Row	Click the Add Row button to add a new QinQ setting to the table. The QinQ mode must be set to Selective. If the client source port mode is set to Transparent, the Add Row button is dimmed.
Add Range	Click the Add Range button to open the Add CVLAN Range dialog box and specify a CVLAN range. In the SVLAN drop-down list, choose the SVLAN ID. In the Range text field, specify the CVLAN range; then, click OK. A source QinQ table entry will be added for each CVLAN in the range. The QinQ mode must be set to Selective. If the client source port mode is set to Transparent, the Add Range button is dimmed.
Remove Row	Click the Remove Row button to remove an existing source QinQ table entry. The QinQ mode must be set to Selective. If the client source port mode is set to Transparent, the Remove Row button is dimmed.
Show VLAN	Click the Show VLAN button to show the VLAN name. The VLAN name gets added to the SVLAN column. Click the Show VLAN button again to remove the VLAN name.
CVLAN	Enter the CVLAN range.
SVLAN	Choose the SVLAN from the drop-down list. You can also perform the following activities: - To show the VLAN name—Click the Show VLAN button. - To update the list of VLAN names—Click the Update button in the NE Explorer. - To hide the VLAN name—Click the Show VLAN button again.
Operation	Sets the operation mode. The options are: - Add—Appends a new .1Q tag with a specific SVLAN ID to all the incoming Ethernet frames tagged with a CVLAN ID. - Double Add—Adds a double tag for the incoming untagged packets. - Translate—Translates the incoming VLAN ID of the incoming Ethernet frames tagged with a CVLAN ID. The CVLAN ID is translated into an SVLAN ID. After this translation, the .1Q tag of the frame is SVLAN. - Translate Add—Adds the outer SVLAN and translates the inner VLAN for incoming single-tagged packets.

Table C-459 Field Descriptions for the QinQ Properties Pane (continued)

Field	Description
Inner SVLAN	This parameter is configurable only when the Operation field is set to Double Add or Translate Add. - If Double Add is chosen, the incoming frame must be untagged and the card will first add the inner SVLAN and then the SVLAN. - If Translate Add is chosen, the incoming frame must be tagged and the card will translate the CVLAN tag with the Inner SVLAN and then will add the SVLAN.
CoS	Class of service for the CVLAN. The CoS .1p bits set the Ethernet frame priority. The options are: 0 (default)—Sets the .1p bit to 0. 1—Sets the .1p bit to 1. 2—Sets the .1p bit to 2. 3—Sets the .1p bit to 3. 4—Sets the .1p bit to 4. 5—Sets the .1p bit to 5. 6—Sets the .1p bit to 6. 7—Sets the .1p bit to 7.
IGMP CVLAN	Displays the IGMP CVLAN values. An IGMP CVLAN check box is provided for each row to set the IGMP CVLAN. Note the following IGMP CVLAN setting restrictions: - You can only set one IGMP CVLAN. - You cannot set IGMP CVLAN on the CVLAN range. - You cannot set IGMP CVLAN when the operation mode is set to either Double Add or Translate Add. To set this option, the card mode must be L2 over DWDM. Note If the IGMP CVLAN check box is not enabled in the MVR Properties pane, the field shows N/A.

QoS

The QoS Properties pane allows you to provision the Weighted Round Robin (WRR) value and bandwidth for QoS Class of Service (CoS) egress queues on GE_XP and 10GE_XP card ports.

To provision QoS settings, the card mode must be L2 over DWDM. You can set the card mode on the Card Properties pane.

You can perform this task only on ports with QoS enabled. You can enable QoS on the Ether Ports Properties pane > Ethernet tab.

Table C-460 Field Descriptions for the QoS Properties Pane

Field	Description
CoS	Displays the CoS egress queue (0 through 7).
Bandwidth	Sets the bandwidth allocated for the CoS egress queue. 100 is the default.

Table C-460 *Field Descriptions for the QoS Properties Pane (continued)*

Field	Description
WRR Weight	Sets the Weighted Round Robin (WRR) level for the CoS egress queue. The default is 0 (Strict Priority). The range is from 0 to 15.
Port	Sets the port where you want to provision the QoS settings.

REP

The REP Properties pane allows you to control network loops, handle link failures, and improve the convergence time. The Properties pane contains the following tabs:

- [Admin VLAN Configuration Tab, page C-329](#)
- [Segment Tab, page C-329](#)


Note

For the REP Properties pane to be enabled, the card mode must be L2 over DWDM.

Admin VLAN Configuration Tab

The Admin VLAN Configuration tab allows you to manage the VLAN configuration.

Table C-461 *Field Descriptions for the Admin VLAN Configuration Tab*

Field	Description
Admin VLANs	
SVLAN	Choose the SVLAN from the drop-down list. The valid range is from 1 to 4093.
CVLAN	Sets the CVLAN value. The valid range is from 1 to 4094.

Segment Tab

The Segment tab allows you to view, create, edit, and delete the segment parameters.

Table C-462 *Field Descriptions for the Segment Tab*

Field	Description
Segment	Choose the segment from the Segment drop-down list.
Selected Segment	
Port	Displays the port number.
Port Role	Displays the port role. The port is configured as an edge port or as a regular port. The options are: • Edge—The port is configured as an edge port. • None—The port is configured as a regular port.
Port Preferred	Check the Port Preferred check box to configure the regular port as a preferred alternate port.
VLB Enabled	Check the VLAN Load Balancing (VLB) check box to enable VLB. VLAN Load Balancing is configured on GE_XP and 10GE_XP by specifying the VLB preempt delay.

Table C-462 *Field Descriptions for the Segment Tab (continued)*

Field	Description
SVLAN	Lists the available SVLANs on the selected card.
VLB Preempt Delay	Displays the trigger delay for automatic VLB activation.
VLB Port ID	Specifies the port identifier that is set for the VLB.
VLB Preferred Port	Specifies if the preferred port identifier should be used for VLB.
STCN Enabled	If checked, enables the show topology change notification (STCN).
STCN Port	Specifies the port used for STCN.
STCN Segment	Specifies the segment used for STCN.
Create button	Click the Create button to create a new REP segment.
Edit button	Click the Edit button to edit an existing REP segment.
Activate VLB button	Click the Activate VLB button to activate VLAN load balancing.
Deactivate VLB button	Click the Deactivate VLB button to deactivate VLAN load balancing.
Delete button	Click the Delete button to delete an existing REP segment.

RMON Thresholds

The RMON Thresholds Properties pane allows you to view RMON thresholds for GE_XP and 10GE_XP cards.

Table C-463 *Field Descriptions for the RMON Thresholds Properties Pane*

Field	Description
Port No.	Displays the port number.
Index No.	Displays the selected interface number.
Variable	Displays the MIB variable that is being monitored.
Alarm Type	Indicates whether the event is triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	Indicates whether the sample type is relative or absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period	Displays the sample period, in seconds.
Rising Thresholds	Displays the number of occurrences for the rising threshold.
Falling Thresholds	Displays the number of occurrences for the falling threshold. In most cases, the falling threshold is set lower than the rising threshold.
Create	Click the Create button to create a threshold for the POS ports. Note You can select a Channel Group when you create a threshold.
Delete	Select a threshold from the list displayed and click the Delete button.

Security

The Security Properties pane allows you to change the MAC filtering properties on the Ethernet ports and provision storm control settings on GE_XP and 10GE_XP cards. The Properties pane contains the following tabs:

- [MAC Filter Tab, page C-331](#)
- [Storm Control Tab, page C-331](#)



Note

For the Security Properties pane to be enabled, the card mode must be L2 over DWDM.

MAC Filter Tab

The MAC Filter Properties pane allows you to provision MAC addresses filter for GE_XP and 10GE_XP cards.

Table C-464 *Field Descriptions for the MAC Filter Tab*

Field	Description
Port	Displays the port on the selected card.
MAC List	Displays the list of MAC addresses that are filtered or allowed on the Ethernet port. Click the MAC address fields to edit them.
Allowed	Check the Allowed check box to specify that only the MAC address listed will be allowed to pass through. If left unchecked, the MAC address will be denied by the port.
Create	Click the Create button to add new MAC addresses to the MAC list. A maximum of eight MAC addresses are allowed.
Delete	Click the Delete button to delete MAC addresses from the MAC list.

Storm Control Tab

The Storm Control Properties pane allows you to provision storm control settings for the GE_XP and 10GE_XPE cards.

Table C-465 *Field Descriptions for the Storm Control Tab*

Field	Description
Port	Displays the port on the selected card.
DLF Storm Control	Enables or disables DLF storm control on the card. The options are: • Checked—DLF storm control is enabled. • Unchecked—DLF storm control is disabled.
DLF Storm Control Threshold (pps)	Enables you to set the threshold value for the number of unknown unicast packets per second. The valid range is from 0 to 16777215 packets per second.
Mcast Storm Control	Enables or disables Multicast storm control on the card. The options are: • Checked—Multicast storm control is enabled. • Unchecked—Multicast storm control is disabled.

Table C-465 *Field Descriptions for the Storm Control Tab (continued)*

Field	Description
Mcast Storm Control Threshold (pps)	Enables you to set the threshold value for the number of multicast packets per second. The valid range is from 0 to 16777215 packets per second.
Bcast Storm Control	Enables or disables Broadcast storm control on the card. The options are: - Checked—Broadcast storm control is enabled. - Unchecked—Broadcast storm control is disabled.
Bcast Storm Control Threshold (pps)	Enables you to set the threshold value for the number of broadcast packets per second. The valid range is from 0 to 16777215 packets per second.

Show Command

The Show Command Properties pane allows you to run commands on the node.

Table C-466 *Field Descriptions for the Show Command*

Field	Description
Command	Choose a command from the Command drop-down list. Values are: - ETH LACP—Displays detailed LACP information from the GE_XP and 10GE_XP cards. - REP TOPO—Displays the topology information for a specific Resilient Ethernet Protocol (REP) segment. - REP TOPO ARCHIVE—Displays the previous topology information for a specific REP segment. - REP INTERFACE—Displays information on the REP interface status and configuration. You can retrieve detailed information for each segment by selecting Detailed from the Level drop-down list and providing the segment ID. - OAM DISCOVERY—Displays discovery information for all the EFM interfaces or for a specific EFM interface. - OAM STATUS—Displays information about the EFM configurations for all the EFM interfaces or for a specific interface. - OAM SUMMARY—Displays the active EFM sessions on a device. - OAM STATISTICS—Displays detailed information about the EFM packets.
Level	Choose the level from the Level drop-down list. Values are: - Normal—Displays the normal information about the segments. - Detailed—Displays the detailed information about the segments.
Key	Enter the key for the selected command. The key value should be an integer. Note The Key field is editable only when the command is set to REP.

Table C-466 Field Descriptions for the Show Command (continued)

Field	Description
Show	Click the Show button. Depending on the command, the appropriate output appears in the text area.
Save to File	Click the Save to File button to save the details of the result to a file on your PC. The Save In window is displayed. Specify the filename and the destination directory. The default location is <i>client-installation-directory/reports/</i>. Note The Save to File button is enabled only when the command output is executed. The following message appears in the dialog box. Click Yes to overwrite or No to cancel the operation. File already exist, Overwrite? The following input/output (I/O) exception appears while saving the file. File not saved, IO Exception occurred Reasons for exception: - Failed I/O operations - Interrupted I/O operations - File directory is write-access protected - Access denied to the user

SVLAN

The SVLAN Properties pane allows you to change the SVLAN settings for GE_XP or 10GE_XP cards.

To provision SVLAN settings, the card mode must be L2 over DWDM. You can set the card mode on the Card Properties pane. You can perform this task only on ports provisioned as NNI. You can set NNI on the Ether Ports Properties pane > Ethernet tab.

The SVLAN Properties pane contains the following tabs:

- [SVLAN Tab, page C-333](#)
- [SVLAN Database Tab, page C-334](#)

SVLAN Tab

The SVLAN tab allows you to add an SVLAN to a GE_XP or 10GE_XP port.

Table C-467 Field Descriptions for the SVLAN Tab

Field	Description
SVLAN	Lists the available SVLANs on the selected card.
Port <i>port number</i>	Check the port check box to enable the SVLAN on that port. Uncheck the check box to disable the SVLAN on that port. A warning message is displayed when you disable an SVLAN. The SVLAN tab uses the following visual indicators to highlight user changes: • If the background color of the port check box is white, the value has not been modified by a user. • If the background color of the port check box is gray, the value has been modified by a user. • If an SVLAN has been modified by a user, the SVLAN name appears in bold font in the SVLAN list. Note Ports assigned to channel groups in the NNI mode will be displayed.

SVLAN Database Tab

The SVLAN Database tab allows you to view SVLAN database information on a GE_XP or 10GE_XP card.

Table C-468 Field Descriptions for the SVLAN Database Tab

Fields	Description
SVLAN ID	<i>Display only.</i> Displays the SVLAN identifier.
SVLAN Name	<i>Display only.</i> Displays the SVLAN name.
Protection	<i>Display only.</i> Displays whether VLAN protection is enabled.
MAC Learning	<i>Display only.</i> Displays whether MAC learning is enabled for the port. MAC learning is used by Layer 2 switches to learn the MAC addresses of network nodes so they know where to send traffic. Layer 2 switches—including GE_XP and 10GE_XP cards in L2 over DWDM mode—maintain a MAC learning table that associates the MAC addresses and VLANs with a given port. Note MAC address table aging is 300 seconds. It cannot be changed. For MAC learning to be enabled, the card mode must be L2 over DWDM.
IGMP	<i>Display only.</i> Displays whether Internet Group Management Protocol (IGMP) is enabled. IGMP is a protocol used by IPv4 systems to report IP multicast memberships to neighboring multicast routers. IGMP is used to dynamically register individual hosts in a multicast group on a particular LAN. IGMP provides a means to automatically control and limit the flow of multicast traffic throughout your network with the use of special multicast queriers and hosts.
IGMP Fast Leave	<i>Display only.</i> Displays whether IGMP fast leave is enabled. IGMP-snooping, fast-leave processing allows the switch to remove an interface from the forwarding table entry without first sending out MAC-based general queries to the interface. The VLAN interface is pruned from the multicast tree for the multicast group specified in the original leave message. Fast-leave processing ensures optimal bandwidth management for all hosts on a switched network, even when multiple multicast groups are being used simultaneously.

Table C-468 Field Descriptions for the SVLAN Database Tab (continued)

Fields	Description
IGMP Suppression	<i>Display only.</i> Displays whether IGMP report suppression is enabled. Switches use IGMP report suppression to forward only one IGMP report per multicast router query to multicast devices. When IGMP router suppression is enabled (the default), the switch sends the first IGMP report from all hosts for a group to all the multicast routers. The switch does not send the remaining IGMP reports for the group to the multicast routers. This feature prevents duplicate reports from being sent to the multicast devices.
Load	Click the Load button to display or reload the SVLAN database information for the GE_XP or 10GE_XP card.

SVLAN AIS

The SVLAN AIS Properties pane allows you to view the SVLAN AIS port information for GE_XP and 10GE_XP cards.

Table C-469 Field Descriptions for the SVLAN AIS Properties Pane

Field	Description
Port	Displays the SVLAN AIS port.
SVLAN AIS dialog box	This dialog box appears when you double-click a row in the table. It provides a list of VLAN IDs that are related to the selected port.

Slot Properties—MXP_2.5G_10E

The slot properties pane displays information about the Cisco ONS 15454 SONET and ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The MXP_2.5G_10E card is a DWDM muxponder for the ONS 15454 platform that supports full optical transparency on the client side. The card multiplexes four 2.5-Gb/s client signals (4 x OC48/STM-16 SFP) into a single 10-Gb/s DWDM optical signal on the trunk side. The MXP_2.5G_10E provides wavelength transmission service for the four incoming 2.5-Gb/s client interfaces. The MXP_2.5G_10E muxponder passes all SONET/SDH overhead bytes transparently.

The MXP_2.5G_10E_C and MXP_2.5G_10E_L cards are DWDM muxponders for the ONS 15454 platform that support full optical transparency on the client side. The cards multiplex four 2.5-Gb/s client signals (4 x OC48/STM-16 SFP) into a single 10-Gb/s DWDM optical signal on the trunk side. The MXP_2.5G_10E_C and MXP_2.5G_10E_L cards provide wavelength transmission service for the four incoming 2.5-Gb/s client interfaces. The MXP_2.5G_10E_C and MXP_2.5G_10E_L muxponders pass all SONET/SDH overhead bytes transparently.



Note

When an MLSE transponder module is installed on the MXP_2.5G_10E_C card, Prime Optical displays the card as MXP_2.5G_10EX.

The digital wrapper function (ITU-T G.709 compliant) formats the DWDM wavelength so that it can be used to set up GCCs for data communications, enable FEC, or facilitate PM.

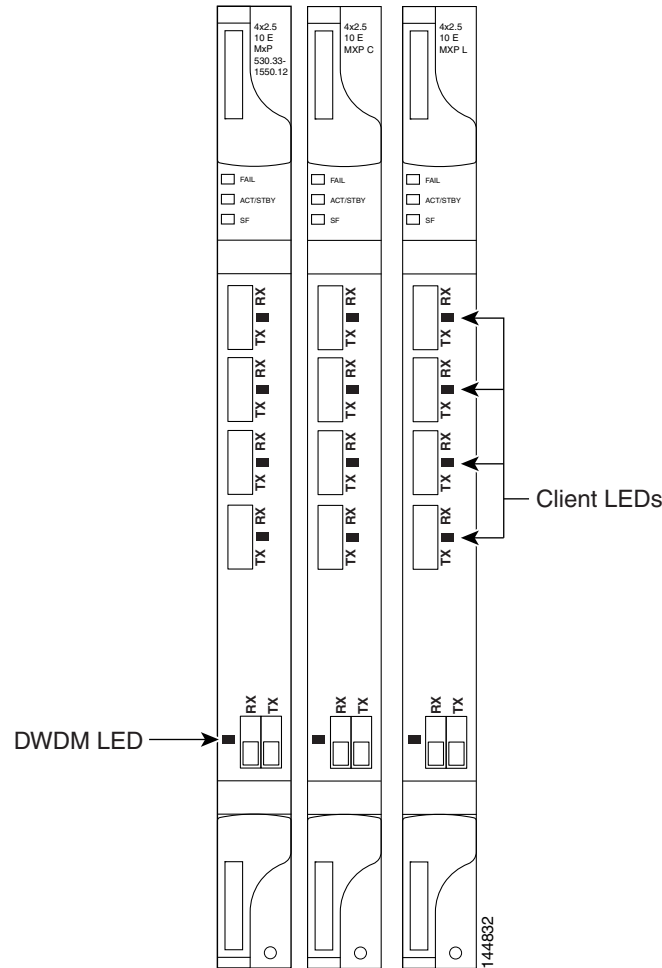
The MXP_2.5G_10E_C and MXP_2.5G_10E_L cards work with OTN devices defined in ITU-T G.709. The cards support ODU1-to-OTU2 multiplexing, an industry-standard method for asynchronously mapping a SONET/SDH payload into a digitally wrapped envelope.

The MXP_2.5G_10E_C and MXP_2.5G_10E_L cards are not compatible with the MXP_2.5G_10G card, which does not support full optical transparency. The faceplate designation of the cards is 4x2.5G 10E MXP C for the MXP_2.5G_10E_C card and 4x2.5G 10E MXP L for the MXP_2.5G_10E_L card.

You can install MXP_2.5G_10E_C and MXP_2.5G_10E_L cards in slots 1 to 6 and 12 to 17. You can provision a card in a linear configuration, as a BLSR/MS-SPRing, a UPSR/SNCP, or a regenerator. The cards can be used in the middle of BLSR/MS-SPRing or 1+1 spans when the cards are configured for transparent termination mode.

The MXP_2.5G_10E_C card features a tunable 1550-nm C-band laser on the trunk port. The laser is tunable across 82 wavelengths on the ITU grid with 50-GHz spacing between wavelengths. The MXP_2.5G_10E_L features a tunable 1580-nm L-band laser on the trunk port. The laser is tunable across 80 wavelengths on the ITU grid, also with 50-GHz spacing. Each card features four 1310-nm lasers on the client ports and contains five transmit and receive connector pairs (labeled) on the card faceplate. The cards use dual LC connectors on the trunk side and SFP modules on the client side for optical cable termination. The SFP pluggable modules are SR or IR and support an LC fiber connector.

The following figure shows the card faceplates.

Figure C-37 ***MXP-2.5G-10E, MXP-2.5G-10E-C, and MXP-2.5G-10E-L Faceplates***

For the MXP_2.5G_10E module, the slot properties pane displays the following properties: Module View, Identification, Card, PPM, Line, OTN, Loopback, Auto Laser Shutdown, Optical Thresh, Alarm Behavior, Protection, and Info.

**Note**

The properties shown depend on the NE configuration.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update identification information.

Table C-470 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Suppress Alarms	When checked, all alarms are suppressed for the port.

Card

The Card Properties pane allows you to view and update card information.

Table C-471 Field Descriptions for the Card Properties Pane

Field	Description
Termination Mode	Allows you to set the mode of termination.
AIS/Squelch Configuration	Allows you to configure the remote client to squelch or send an AIS signal.

PPM

The PPM Properties pane allows you to view and provision the PPM and the ports inside the PPM.

Table C-472 Field Descriptions for the PPM Properties Pane

Field	Description
Pluggable Port Modules	
Pluggable Number	Displays the identifier of the plugin module.
Actual Equipment Type	Displays the actual plugin module that is installed in the slot.
Equipment State	Displays the equipment state of the plugin module.
Admin State	Displays the status of the plugin module: In Service (IS); Out of Service–Maintenance (OOS_MT); Unlocked; or Locked, Maintenance. Note You can edit the Admin State value only for actual equipment, not preprovisioned equipment.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
PPM	
Port	Displays the PPM number and port number.
Rate	Displays the port rate.

Provision Pluggable Dialog Box

Click the **Create** button to launch the Provision Pluggable dialog box. This dialog box allows you to provision the PPM and to create the ports inside this entity. See [Provision Pluggable Dialog Box, page C-25](#) for more information.

Line

The Line Properties pane allows you to configure line settings. If the card is installed on an ONS 15454 SONET NE, the Properties pane contains the subtabs and fields in [Table C-473](#). If the card is installed on an ONS 15454 SDH NE, the Properties pane contains the subtabs and fields in [Table C-474](#).



Note

The following information is the same if the payload is SDH on an ONS 15454 SONET NE.

Table C-473 Field Descriptions for the Line Properties Pane (SONET)

Field	Description
Section Trace	
Port No.	The port number.
Trace Mode	The trace mode (Off or Manual).
Disable AIS/RDI on TIM-S	Disables the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Allows you to select a transmit length for the trace. Values are 1 byte or 16 bytes; the default is 16 bytes.

Table C-473 Field Descriptions for the Line Properties Pane (SONET) (continued)

Field	Description
Current Transmit String	Displays the current transmit string; sets a new transmit string.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.
SONET Line	
Port No.	The port number.
Port Name	The port name.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Auto in service soak. The determination of duration left before the traffic/termination transitions to IS state. The range is from 15 minutes to 48 hours.
ALS Mode	Allows you to select the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test). ALS is a laser safety feature defined by ITU G.664. ALS can be provisioned on client and trunk ports for SONET and SDH payload types only.
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Type	The port type (SONET or SDH).
ProvidesSync	When checked, the card is provisioned as an NE timing reference.
EnableSyncMsg	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Send DoNotUse	When checked, sends a do not use (DUS) message on the S1 byte.

Table C-473 *Field Descriptions for the Line Properties Pane (SONET) (continued)*

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.
Section Thresh 15 Min/1 Day - Near End	
Port No.	The port number.
CV-S	Coding violations section.
ES-S	Errored seconds section.
SES-S	Severely errored seconds section.
SEFS-S	Severely errored framing seconds section.
Reset to Defaults button	Resets the value of the port parameters to the default value.
Line Thresh 15 Min/1 Day - Near End, Far End	
Port No.	The port number.

Table C-473 Field Descriptions for the Line Properties Pane (SONET) (continued)

Field	Description
ES-L	Errored seconds line.
SES-L	Severely errored seconds line.
CV-L	Coding violations line.
UAS-L	Unavailable seconds line.
FC-L	Failure count line.
Reset to Defaults button	Resets the value of the port parameters to the default value.
Wavelength Trunk Settings	
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Wavelength	Allows you to provision the wavelength frequency. The Wavelength column lists the correct wavelengths, depending on the type of card and the band selected. Refer to the <i>Other Information</i> field in the Equipment Inventory table for details of wavelengths supported. See Equipment Inventory Table for CTC-Based NEs, page 11-12 .
Band	The Band column reduces the number of selectable wavelengths (82/80 lambdas only). This single-band card's value is set to C.
Trunk	
Port No.	The port number.
Port Name	The port name.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
ALS Mode	Allows you to select the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Error Decorrelator Settings	
Port No.	Displays the port number.
Port Name	Allows you to add a port name.
Error Decorrelator	Allows you to enable or disable Prime Optical from retrieving the error decorrelator value.

Table C-474 **Field Descriptions for the Line Properties Pane (SDH)**

Field	Description
Section Trace	
Port No.	The port number.
Trace Mode	The trace mode (Off or Manual).
Disable AIS/RDI on TIM-S	Disables the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Allows you to select a transmit length for the trace. Values are 1 byte or 16 bytes; the default is 16 bytes.
Current Transmit String	Displays the current transmit string; sets a new transmit string.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.
SDH Line	
Port No.	The port number.
Port Name	The port name.
Administration State	The port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Auto in service soak. The determination of duration left before the traffic/termination transitions to IS state. The range is from 15 minutes to 48 hours.
ALS Mode	Allows you to select the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test). ALS is a laser safety feature defined by ITU G.664. ALS can be provisioned on client and trunk ports for SONET and SDH payload types only.
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Type	The port type (SONET or SDH).
ProvidesSync	When checked, the card is provisioned as an NE timing reference.
EnableSyncMsg	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Send DoNotUse	When checked, sends a do not use (DUS) message on the S1 byte.

Table C-474 Field Descriptions for the Line Properties Pane (SDH) (continued)

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.
RS Thresh 15 Min/1 Day	
Port No.	The port number.
EB-RS	Errored blocks regenerator section.
ES-RS	Errored seconds regenerator section.
SES-RS	Severely errored seconds regenerator section.
BBE-RS	Background block errors regenerator section.
UAS-RS	Unavailable seconds regenerator section.
Reset to Defaults button	Resets the value of the port parameters to the default value.
MS Thresh 15 Min/1 Day - Near End, Far End	

Table C-474 Field Descriptions for the Line Properties Pane (SDH) (continued)

Field	Description
Port No.	The port number.
EB-MS	Errored blocks–multiplex section.
ES-MS	Errored seconds–multiplex section.
SES-MS	Severely errored seconds–multiplex section.
BBE-MS	Background block errors–multiplex section.
UAS-MS	Unavailable seconds–multiplex section.
Reset to Defaults button	Resets the value of the port parameters to the default value.
Wavelength Trunk Settings	
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Wavelength	Allows you to provision the wavelength frequency. The Wavelength column lists the correct wavelengths, depending on the type of card and the band selected. Refer to the <i>Other Information</i> field in the Equipment Inventory table for details of wavelengths supported. See Equipment Inventory Table for CTC-Based NEs, page 11-12 .
Band	The Band column reduces the number of selectable wavelengths (82/80 lambdas only). This single-band card's value is set to C.
Trunk	
Port No.	The port number
Port Name	The port name.
State	Displays the port administration state. Choosing an administration state from the drop-down list and clicking Apply changes the port's service state unless network conditions prevent the change. Administration states include: - unlocked—Puts the port in service. The port service state changes to unlocked-enabled. - unlocked,automaticInService—Puts the port in automatic in-service. The port service state changes to unlocked-disabled,automaticInService. - locked-disabled—Removes the port from service and disables it. The port service state changes to locked-enabled,disabled. - locked,maintenance—Removes the port from service for maintenance. The port service state changes to locked-enabled,maintenance.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
ALS Mode	Allows you to select the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Error Decorrelator Settings	
Port No.	Displays the port number.
Port Name	Allows you to add a port name.
Error Decorrelator	Allows you to enable or disable Prime Optical from retrieving the error decorrelator value.

OTN

The OTN Properties pane allows you to change the line optical transport network (OTN) settings for cards. The Properties pane contains the following tabs:

- [OTN Line Tab, page C-346](#)
- [G.709 Thresh 15 Min/1 Day Tabs, page C-346](#)
- [FEC Thresh 15 Min/1 Day Tabs, page C-347](#)
- [Trail Trace Identifier Tab, page C-347](#)

OTN Line Tab

The OTN Line tab allows you to view and change the OTN line settings of the MXP-2.5G-10E card.

Table C-475 Field Descriptions for the OTN Line Tab

Field	Description
Port No.	Displays the port number.
G.709 OTN	Disables or enables the G.709 OTN feature.
FEC	Disables or enables forward error correction. Note OTN must be enabled before you can enable FEC.
Asynch/Synch Mapping	The card can perform multiplexing per ITU-T G.709. The ODUK (client SONET/SDH payload) can be mapped to the optical channel (OTUK) either asynchronously (asynch mapping) or synchronously (synch mapping) with this setting.
SF BER	Displays the signal fail bit error rate.
SD BER	Displays the signal degrade bit error rate.

G.709 Thresh 15 Min/1 Day Tabs

The G.709 Thresh 15 Min/1 Day tabs display near- and far-end SM optical channel transport unit (OTUK), and near- and far-end PM optical channel data unit (ODUK) threshold information received during the past 15 minutes/24 hours.

Table C-476 Field Descriptions for the G.709 Thresh 15 Min/1 Day Tabs

Field	Description
SM (OTUK) - Near End, Far End	
Port Number	Displays the optical port number.
BBE-SM	Displays the background block errors.
ES-SM	Displays the errored seconds.
SES-SM	Displays the severely errored seconds.
UAS-SM	Displays the unavailable seconds.
FC-SM	Displays the failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.
PM (ODUK) Near End, Far End	
Port No.	Displays the optical port number.

Table C-476 *Field Descriptions for the G.709 Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
BBE-PM	Displays the background block errors.
ES-PM	Displays the errored seconds.
SES-PM	Displays the severely errored seconds.
UAS-PM	Displays the unavailable seconds.
FC-PM	Displays the failure count.

FEC Thresh 15 Min/1 Day Tabs

The FEC Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day FEC threshold information of the MXP-2.5G-10E card.

Table C-477 *Field Descriptions for the FEC Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	Displays port number information.
Bit Errors Corrected	Displays the bit errors corrected in 15-minute intervals.
Uncorrectable Words	Displays the uncorrectable words in 15-minute intervals.

Trail Trace Identifier Tab

The Trail Trace Identifier tab allows you to provision the trail trace identifier for the MXP-2.5G-10E card.

Table C-478 *Field Descriptions for the Trail Trace Identifier Tab*

Field	Description
Port Number	Displays port number information.
Level	Displays the trail trace identifier level (Section or Path).
Trace Mode	Allows you to set the trace mode (Off or Manual).
Disable FDI on TTIM	Allows you to disable forward defect indication (FDI) for trail trace identifier mismatch (TTIM) alarms.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string.
Current Received String	Displays the current received string.

Loopback

The Loopback Properties pane allows you to view and update MXP-2.5G-10E loopback information.

Table C-479 Field Descriptions for the Loopback Properties Pane

Field	Description
Port Number	Displays the port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or clear the current loopback (none).

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-480 Field Descriptions for the Auto Laser Shutdown Properties Pane

Field	Description
Port Number	Displays the port number.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the recovery laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int. (sec)	Allows you to set the recovery laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Status	Displays the current laser status. Values are Shut Down or Not Shut Down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

Optical Thresh

The Optical Thresh Properties pane allows you to view and provision optical threshold settings. The Properties pane contains the [TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs](#), [page C-349](#).

TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs

The TCA 15 Min/1 Day tabs allow you to view and change the 15-minute TCA settings of the MXP-2.5G-10E card.

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-481 **Field Descriptions for the TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs**

Field	Description
Port Number	Displays the port number.
Laser Bias High (%)	Displays the upper laser bias threshold.
Rx Power High (dBm)	Displays the upper receive power threshold.
Rx Power Low (dBm)	Displays the lower receive power threshold.
Tx Power High (dBm)	Displays the upper transmit power threshold.
Tx Power Low (dBm)	Displays the lower transmit power threshold.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update alarm profile information.

Table C-482 **Field Descriptions for the Alarm Behavior Properties Pane**

Field	Description
Card Profile	
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
DWDM/Payload	
Port No.	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Protection

The Protection Properties pane allows you to view and update protection group information.

Table C-483 Field Descriptions for the Protection Properties Pane

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection groups and allows you to execute switch commands.

Info

The Info Properties pane allows you to view nominal operating values set for the card during manufacturing.

Table C-484 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of measure (when applicable) of the object that is inventoried.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—MXP_2.5G_10G

The slot properties pane displays information about the Cisco ONS 15454 SONET and ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

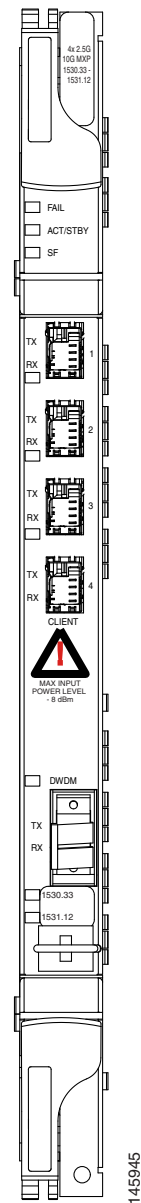
The MXP_2.5G_10G card multiplexes/demultiplexes four 2.5-Gb/s signals (client side) into one 10-Gb/s, 100-GHz DWDM signal (trunk side). It provides one extended long-range STM-64/OC-192 port per card on the trunk side (compliant with ITU-T G.707, ITU-T G.709, ITU-T G.957, and Telcordia GR-253-CORE) and four intermediate- or short-range OC-48/STM-16 ports per card on the client side. The port operates at 9.95328 Gb/s over unamplified distances up to 80 km (50 miles) with different types of fiber such as C-SMF or dispersion-compensated fiber limited by loss and/or dispersion. Prime Optical supports the STM-16 L1 payload over 4x2.5G MXP.

Client ports on the MXP_2.5G_10G card are also interoperable with SONET OC-1 (STS-1) fiber optic signals defined in Telcordia GR-253-CORE. An OC-1 signal is the equivalent of one DS-3 channel transmitted across optical fiber. OC-1 is primarily used for trunk interfaces to phone switches in the United States. There is no SDH equivalent for SONET OC-1.

The MXP_2.5G_10G card is tunable over two neighboring wavelengths in the 1550-nm, ITU 100-GHz range. It is available in 16 different versions, each of which covers two wavelengths, for a total coverage of 32 different wavelengths in the 1550-nm range.

The following figure shows the card faceplate.

Figure C-38 *MXP_2.5G_10G Faceplate*



For the MXP_2.5G_10G module, the slot properties pane displays the following properties: Module View, Identification, Card, PPM, Line, OTN, Loopback, Auto Laser Shutdown, Optical Thresh, Alarm Behavior, Protection, Inventory, and Info. The properties shown depend on the NE configuration.

Module View

The Module View displays a graphic of the MXP_2.5G_10G that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update MXP_2.5G_10G identification information.

Table C-485 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Card

The Card Properties pane allows you to view and update card information.

Table C-486 Field Descriptions for the Card Properties Pane

Field	Description
Termination Mode	Allows you to set the mode of termination.

PPM

The PPM Properties pane allows you to view and provision the PPM and the ports inside the PPM.

Table C-487 Field Descriptions for the PPM Properties Pane

Field	Description
Pluggable Port Modules	
Pluggable Number	Displays the identifier of the plugin module.
Actual Equipment Type	Displays the actual plugin module that is installed in the slot.
Equipment State	Displays the equipment state of the plugin module.
Admin State	Displays the status of the plugin module: In Service (IS); Out of Service–Maintenance (OOS_MT); Unlocked; or Locked, Maintenance. Note You can edit the Admin State value only for actual equipment, not preprovisioned equipment.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
PPM	
Port	Displays the PPM number and port number.
Rate	Displays the port rate.

Provision Pluggable Dialog Box

Click the **Create** button to launch the Provision Pluggable dialog box. This dialog box allows you to provision the PPM and to create the ports inside this entity. See [Provision Pluggable Dialog Box, page C-25](#) for more information.

Line

The Line Properties pane allows you to configure line settings. If the card is installed on an ONS 15454 SONET NE, the Properties pane contains the subtabs and fields in [Table C-488](#). If the card is installed on an ONS 15454 SDH NE, the Properties pane contains the subtabs and fields in [Table C-489](#).



Note

The following information is the same if the payload is SDH on an ONS 15454 SONET NE.

Table C-488 Field Descriptions for the Line Properties Pane (SONET)

Field	Description
Section Trace	
Port No.	The port number.
Trace Mode	The trace mode (Off or Manual).
Disable AIS/RDI on TIM-S	Disables the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Allows you to select a transmit length for the trace. Values are 1 byte or 16 bytes; the default is 16 bytes.
Current Transmit String	Displays the current transmit string; sets a new transmit string.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.
SONET Line	
Port No.	The port number.
Port Name	The port name.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Auto in service soak. The determination of duration left before the traffic/termination transitions to IS state. The range is from 15 minutes to 48 hours.
ALS Mode	Allows you to select the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test). ALS is a laser safety feature defined by ITU G.664. ALS can be provisioned on client and trunk ports for SONET and SDH payload types only.
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Type	The port type (SONET or SDH).
Section Thresh 15 Min/1 Day - Near End	
Port No.	The port number.
CV-S	Coding violations section.
ES-S	Errored seconds section.
SES-S	Severely errored seconds section.
SEFS-S	Severely errored framing seconds section.
Reset to Defaults button	Resets the value of the port parameters to the default value.
Line Thresh 15 Min/1 Day - Near End, Far End	
Port No.	The port number.

Table C-488 Field Descriptions for the Line Properties Pane (SONET) (continued)

Field	Description
ES-L	Errored seconds line.
SES-L	Severely errored seconds line.
CV-L	Coding violations line.
UAS-L	Unavailable seconds line.
FC-L	Failure count line.
Reset to Defaults button	Resets the value of the port parameters to the default value.
Wavelength Trunk Settings	
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Wavelength	Allows you to provision the wavelength frequency. The Wavelength column lists the correct wavelengths, depending on the type of card and the band selected. Refer to the <i>Other Information</i> field in the Equipment Inventory table for details of wavelengths supported. See Equipment Inventory Table for CTC-Based NEs, page 11-12 .
Band	The Band column reduces the number of selectable wavelengths (82/80 lambdas only). For this single-band card, the band value is fixed to C, and this value cannot be altered.

Table C-489 Field Descriptions for the Line Properties Pane (SDH)

Field	Description
Section Trace	
Port Number	The port number.
Trace Mode	Set the trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string; sets a new transmit string.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.
SDH Line	
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Administration State	Displays the administration state. The state can either be Unlocked or Locked, Maintenance.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
ALS Mode	Allows you to select the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).

Table C-489 Field Descriptions for the Line Properties Pane (SDH) (continued)

Field	Description
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Type	The port type (SONET or SDH).
RS Thresh 15 Min/1 Day - Near End	
Port Number	The port number.
EB-RS	Errored blocks regenerator section.
ES-RS	Errored seconds regenerator section.
BBE-RS	Background block errors regenerator section.
SES-RS	Severely errored seconds regenerator section.
UAS-RS	Unavailable seconds regenerator section.
Reset to Defaults button	Resets the value of the port parameters to the default value.
MS Thresh 15 Min/1 Day - Near End, Far End	
Port Number	The port number.
ES-MS	Errored seconds multiplexer section.
SES-MS	Severely errored seconds multiplexer section.
EB-MS	Errored blocks multiplexer section.
BBE-MS	Background block errors multiplexer section.
UAS-MS	Unavailable seconds multiplexer section.
Reset to Defaults button	Resets the value of the port parameters to the default value.
Wavelength Trunk Settings	
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Wavelength	Allows you to provision the wavelength frequency. The Wavelength column lists the correct wavelengths, depending on the type of card and the band selected. Refer to the <i>Other Information</i> field in the Equipment Inventory table for details of wavelengths supported. See Equipment Inventory Table for CTC-Based NEs, page 11-12 .
Band	The Band column reduces the number of selectable wavelengths (82/80 lambdas only). For this single-band card, the band value is fixed to C, and this value cannot be altered.

OTN

The OTN Properties pane allows you to change the line optical transport network (OTN) settings for MXP_2.5G_10G cards.

Table C-490 Field Descriptions for the OTN Properties Pane

Field	Description
OTN Line	
Port No.	The port number.
G.709 OTN	Disables or enables the G.709 OTN feature.

Table C-490 *Field Descriptions for the OTN Properties Pane (continued)*

Field	Description
FEC	Disables or enables forward error correction. Note OTN must be enabled before you can enable FEC.
SF BER	The signal fail bit error rate.
SD BER	The signal degrade bit error rate.
G.709 Thresh 15 Min/1 Day	
SM (OTUK) - Near End, Far End	
Port No.	The port number.
BBE-SM	Background block errors.
ES-SM	Errored seconds.
SES-SM	Severely errored seconds.
UAS-SM	Unavailable seconds.
FC-SM	Failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.
PM (ODUK) Near End, Far End	
Port No.	Displays the optical port number.
BBE-PM	Displays the background block errors.
ES-PM	Displays the errored seconds.
SES-PM	Displays the severely errored seconds.
UAS-PM	Displays the unavailable seconds.
FC-PM	Displays the failure count.
FEC Thresh 15 Min/1 Day	
Port Number	Displays the port number.
Bit Errors Corrected	Displays the bit errors corrected in 15-minute intervals.
Uncorrectable Words	Displays the uncorrectable words in 15-minute intervals.
Trail Trace Identifier	
Port No.	The port number.
Level	Displays the trail trace identifier level (Section or Path).
Trace Mode	Allows you to set the trace mode (Off or Manual).
Disable FDI on TTIM	Allows you to disable forward defect indication (FDI) for trail trace identifier mismatch alarms.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string.
Current Received String	Displays the current received string.

Loopback

The Loopback Properties pane allows you to view and update MXP_2.5G_10G loopback information.

Table C-491 Field Descriptions for the Loopback Properties Pane

Field	Description
Port Number	Displays the port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none).

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-492 Field Descriptions for the Auto Laser Shutdown Properties Pane

Field	Description
Port Number	Displays the port number.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the recovery laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int. (sec)	Allows you to set the recovery laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Status	Displays the current laser status. Values are Shut Down or Not Shut Down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

Optical Thresh

The Optical Thresh Properties pane allows you to view and provision optical threshold settings.

Table C-493 *Field Descriptions for the Optical Thresh Properties Pane*

Field	Description
TCA 15 Min/TCA 1 Day/Alarm Thresh	
Port Number	Displays the port number.
Tx Power High	Displays the upper transmit power threshold. Note Tx Power High is not supported on trunk ports.
Tx Power Low	Displays the lower transmit power threshold. Note Tx Power Low is not supported on trunk ports.
Rx Power High	Displays the upper receive power threshold.
Rx Power Low	Displays the lower receive power threshold.
Laser Bias High	Displays the upper laser bias threshold.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update MXP_2.5G_10G alarm profile information.

Table C-494 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Card Profile	
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
DWDM/Payload/GFP	
Port No.	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Protection

The Protection Properties pane allows you to view and update MXP_2.5G_10G protection group information.

Table C-495 Field Descriptions for the Protection Properties Pane

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection groups and allows you to execute switch commands.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the MXP_2.5G_10G module.

Table C-496 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of measure (when applicable) of the object that is inventoried.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—MXP_MR_10DME

The MXP_MR_10DME-C and MXP_MR_10DME-L cards aggregate a mix of client SAN service client inputs (GE, FICON, and Fibre Channel) into one 10.0-Gb/s STM-64/OC-192 DWDM signal on the trunk side. It provides one long-reach STM-64/OC-192 port per card and is compliant with Telcordia GR-253-CORE and ITU-T G.957.

The cards support aggregation of the following signal types:

- 1-Gigabit Fibre Channel
- 2-Gigabit Fibre Channel
- 4-Gigabit Fibre Channel
- 1-Gigabit Ethernet
- 1-Gigabit ISC-Compatible (ISC-1)
- 2-Gigabit ISC-Peer (ISC-3)

The MXP_MR_10DME-C and MXP_MR_10DME-L muxponders pass all SONET/SDH overhead bytes transparently.

The digital wrapper function (ITU-T G.709 compliant) formats the DWDM wavelength so that it can be used to set up GCCs for data communications, enable FEC, or facilitate PM. The MXP_MR_10DME-C and MXP_MR_10DME-L cards work with the OTN devices defined in ITU-T G.709. The cards support ODU1-to-OTU2 multiplexing, an industry-standard method for asynchronously mapping a SONET/SDH payload into a digitally wrapped envelope.

**Note**

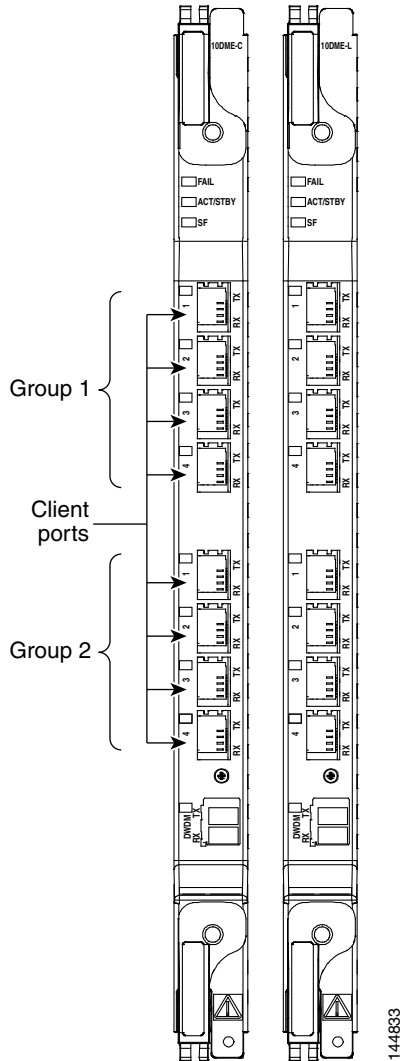
Because the client payload cannot oversubscribe the trunk, a mix of client signals can be accepted, up to a maximum limit of 10 Gb/s.

You can install MXP_MR_10DME-C and MXP_MR_10DME-L cards in slots 1 to 6 and 12 to 17.

**Note**

- When an MLSE transponder module is installed on the MXP_MR_10DME-C card, Prime Optical displays the card as MXP_MR_10DMEX.
- On the card faceplates, the MXP_MR_10DME-C and MXP_MR_10DME-L cards are displayed as 10DME-C and 10DME-L, respectively.
- The MXP_MR_10DME-C and MXP_MR_10DME-L cards are not compatible with the MXP_2.5G_10G card, which does not support full optical transparency.

The MXP_MR_10DME-C card features a tunable 1550-nm C-band laser on the trunk port. The laser is tunable across 82 wavelengths on the ITU grid with 50-GHz spacing between wavelengths. The MXP_MR_10DME-L features a tunable 1580-nm L-band laser on the trunk port. The laser is tunable across 80 wavelengths on the ITU grid, also with 50-GHz spacing. Each card features four 1310-nm lasers on the client ports and contains five transmit and receive connector pairs (labeled) on the card faceplate. The cards use dual LC connectors on the trunk side and SFP modules on the client side for optical cable termination. The SFP pluggable modules are SR or IR and support an LC fiber connector. The following figure shows the MXP_MR_10DME-C and MXP_MR_10DME-L faceplates.

Figure C-39 *MXP_MR_10DME-C and MXP_MR_10DME-L Faceplates*

For the card, the slot properties pane displays the following properties: Module View, Identification, Card, PPM, Line, OTN, Loopback, Auto Laser Shutdown, Optical Thresh, Alarm Behavior, Protection, and Info.

**Note**

The properties shown depend on the NE configuration.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-497 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part No.	Displays the part number that is printed on the top of the card.
HW Revision	Displays the hardware version number of the card.
Serial No.	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Suppress Alarms	When checked, all alarms are suppressed for the port.

Card

The Card Properties pane allows you to change the working mode of the selected card.

Table C-498 Field Descriptions for the Card Properties Pane

Field	Description
Card Mode	Select the card mode. It can be: - Port 1-4: FC-GE-ISC, Port 5-8: FC-GE-ISC - Port 1-4: FC-GE-ISC, Port 5-8: FC4G - Port 1-4: FC4G Port, 5-8: FC-GE-ISC - Port 1-4: FC4G Port, 5-8: FC4G

PPM

The PPM Properties pane allows you to view and provision the PPM and the ports inside the PPM.

Table C-499 Field Descriptions for the PPM Properties Pane

Field	Description
Pluggable Port Modules	
Pluggable Number	Displays the identifier of the plugin module.
Actual Equipment Type	Displays the actual plugin module that is installed in the slot.
Equipment State	Displays the equipment state of the plugin module.
Admin State	Displays the status of the plugin module: In Service (IS); Out of Service–Maintenance (OOS_MT); Unlocked; or Locked, Maintenance. Note You can edit the Admin State value only for actual equipment, not preprovisioned equipment.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
PPM	
Port	Displays the PPM number and port number.
Rate	Displays the port rate.

Provision Pluggable Dialog Box

Click the **Create** button to launch the Provision Pluggable dialog box. This dialog box allows you to provision the PPM and to create the ports inside this entity. See [Provision Pluggable Dialog Box, page C-25](#) for more information.

Line

The Line Properties pane allows you to configure line information.

If the card is installed on an ONS 15454 SONET NE, the Line Properties pane contains the following tabs:

- [Section Trace Tab, page C-365](#)
- [SONET Line Tab, page C-365](#)
- [Section Thresh 15 Min/1 Day Tabs, page C-366](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-366](#)
- [Client Tab, page C-366](#)
- [RMON Thresholds Tab, page C-368](#)
- [Distance Extension Tab, page C-369](#)
- [Wavelength Trunk Settings Tab, page C-369](#)
- [Error Decorrelator Settings Tab, page C-370](#)

If the card is installed on an ONS 15454 SDH NE, the Properties pane contains the following tabs:

- [SDH Line Tab, page C-370](#)

- [RS Thresh 15 Min/1 Day Tabs, page C-371](#)
- [MS Thresh 15 Min/1 Day Tabs, page C-372](#)
- [Wavelength Trunk Settings Tab, page C-372](#)
- [Error Decorrelator Settings Tab, page C-373](#)

Section Trace Tab

The Section Trace tab allows you to change the section trace settings for the card.

Table C-500 *Field Descriptions for the Section Trace Tab*

Field	Description
Port No.	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string. The trail trace identifier is either 1 or 16 bytes.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.

SONET Line Tab

The SONET Line tab allows you to view and change the SONET line settings of the card.

Table C-501 *Field Descriptions for the SONET Line Tab*

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Administration State	The port administration state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Type	Defines the port as SONET or SDH.
Provides Sync	When checked, the card is provisioned as an NE timing reference.
Enable Sync Msg	When checked, enables synchronization status messages, which allow the node to choose the best timing source.

Table C-501 *Field Descriptions for the SONET Line Tab (continued)*

Field	Description
Send Do Not Use	When checked, sends a do not use (DUS) message on the S1 byte.
Wavelength Trunk Settings	Allows you to provision the wavelength frequency and reach value.

Section Thresh 15 Min/1 Day Tabs

The Section Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day section threshold information for the card.

Table C-502 *Field Descriptions for the Section Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
Port No.	Displays the port number.
CV-S	Displays the coding violations section.
ES-S	Displays the errored seconds section.
SES-S	Displays the severely errored seconds section.
SEFS-S	Displays the severely errored framing seconds section.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day line threshold information for the card.

Table C-503 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
Port No.	Displays the optical port number.
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.
CV-L	Displays the coding violations line.
UAS-L	Displays the unavailable seconds line information.
FC-L	Displays the failure count line.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Client Tab

The Client tab allows you to provision PPM parameters for the MXP_MR_10DME-C and MXP_MR_10DME-L cards.

Table C-504 **Field Descriptions for the Client Tab**

Field	Description
Port No.	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Administration State	The port administration state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
ALS Mode	Allows you to select the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
AIS/Squelch Configuration	Allows you to configure the remote client to squelch or send an AIS signal.

Table C-504 *Field Descriptions for the Client Tab (continued)*

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

RMON Thresholds Tab

The RMON Thresholds tab allows you to view RMON thresholds for the MXP_MR_10DME-C and MXP_MR_10DME-L cards.

Table C-505 *Field Descriptions for the RMON Thresholds Tab*

Field	Description
Index No.	Displays the selected interface number.
Slot	Displays the selected card.
Port	Displays the port on the selected card.

Table C-505 *Field Descriptions for the RMON Thresholds Tab (continued)*

Field	Description
Variable	Displays the MIB variable that is being monitored.
Alarm Type	Indicates whether the event is triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	Indicates whether the sample type is relative or absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period (sec)	Displays the sample period, in seconds.
Rising Thresholds (count)	Displays the number of occurrences for the rising threshold.
Falling Thresholds (count)	Displays the number of occurrences for the falling threshold. In most cases, the falling threshold is set lower than the rising threshold.
Create	Click the Create button to create a threshold for the ports.
Delete	Select a threshold from the list displayed and click the Delete button.

Distance Extension Tab

The Distance Extension tab allows you to enable the buffer-to-buffer extension between the client and the MXP_MR_10DME card.

Table C-506 *Field Descriptions for the Distance Extension Tab*

Field	Description
Port No.	Displays the port number.
Enable Distance Extension	Check to enable end-to-end distances of up to 1600 km for 1 GFC and up to 800 km for 2 GFC. When enabled, all the fields for the port are enabled.
Fast Switch	Check to allow the interoperability of MXP_MR_10DME card with other devices. Note To allow interoperability, the MXP_MR_10DME card should be Y-cable configured.

Wavelength Trunk Settings Tab

The Wavelength Trunk Settings tab allows you to change the wavelength and band settings for the card.

Table C-507 *Field Descriptions for the Wavelength Trunk Settings Tab*

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.

Table C-507 Field Descriptions for the Wavelength Trunk Settings Tab (continued)

Field	Description
Wavelength	Allows you to provision the wavelength frequency. The Wavelength column lists the correct wavelengths, depending on the type of card and the band selected. Refer to the <i>Other Information</i> field in the Equipment Inventory table for details of wavelengths supported. See Equipment Inventory Table for CTC-Based NEs , page 11-12.
Band	The Band column reduces the number of selectable wavelengths (82/80 lambdas only). When the card is plugged in, the selection is disabled and the correct value of the band is displayed. When the card is preprovisioned, you can select either L- or C-band.

Error Decorrelator Settings Tab



Note

This Properties pane appears only when the MLSE transponder module is installed.

The Error Decorrelator Settings tab allows you to enable or disable Prime Optical from retrieving the error decorrelator value.

Table C-508 Field Descriptions for the Error Decorrelator Settings Tab

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a port name.
Error Decorrelator	Allows you to enable or disable Prime Optical from retrieving the error decorrelator value.

SDH Line Tab

The SDH Line tab allows you to view and change the SDH line settings of the card.

Table C-509 Field Descriptions for the SDH Line Tab

Field	Description
Port No.	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Administration State	The port administration state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
ALS Mode	Allows you to select the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Type	Defines the port as SONET or SDH.
ProvidesSync	When checked, the card is provisioned as an NE timing reference.

Table C-509 *Field Descriptions for the SDH Line Tab (continued)*

Field	Description
EnableSyncMsg	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Send DoNotUse	When checked, sends a do not use (DUS) message on the S1 byte.
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

RS Thresh 15 Min/1 Day Tabs

The RS Thresh 15 Min/1 Day tab allows you to view and change the 15-minute/1-day regeneration section threshold for the card.

Table C-510 *Field Descriptions for the RS Thresh 15 Min/1 Day Tabs*

Field	Description
Port No.	The port number.
EB-RS	Errored blocks regenerator section.
ES-RS	Errored seconds regenerator section.
SES-RS	Severely errored seconds regenerator section.
BBE-RS	Background block errors regenerator section.
UAS-RS	Unavailable seconds regenerator section.
Reset to Defaults button	Resets the value of the port parameters to the default value.

MS Thresh 15 Min/1 Day Tabs

The MS Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day near- and far-end multiplex section threshold for the card.

Table C-511 *Field Descriptions for the MS Thresh 15 Min/1 Day Tabs*

Field	Description
Port No.	The port number.
EB-MS	Errored blocks multiplexer section.
ES-MS	Errored seconds multiplexer section.
SES-MS	Severely errored seconds multiplexer section.
BBE-MS	Background block errors multiplexer section.
UAS-MS	Unavailable seconds multiplexer section.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Wavelength Trunk Settings Tab

The Wavelength Trunk Settings tab allows you to change the wavelength and band settings for the card.

Table C-512 *Field Descriptions for the Wavelength Trunk Settings Tab*

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Wavelength	Allows you to provision the wavelength frequency. The Wavelength column lists the correct wavelengths, depending on the type of card and the band selected. Refer to the <i>Other Information</i> field in the Equipment Inventory table for details of wavelengths supported. See Equipment Inventory Table for CTC-Based NEs , page 11-12.
Band	The Band column reduces the number of selectable wavelengths (82/80 lambdas only). When the card is plugged in, the selection is disabled and the correct value of the band is displayed. When the card is preprovisioned, you can select either L - or C-band.

Error Decorrelator Settings Tab


Note

This Properties pane appears only when the MLSE transponder module is installed.

The Error Decorrelator Settings tab allows you to enable or disable Prime Optical from retrieving the error decorrelator value.

Table C-513 **Field Descriptions for the Error Decorrelator Settings Tab**

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a port name.
Error Decorrelator	Allows you to enable or disable Prime Optical from retrieving the error decorrelator value.

OTN

The OTN Properties pane allows you to change the line optical transport network (OTN) settings for MXP_MR_10DME cards. The Properties pane contains the following tabs:

- [OTN Line Tab, page C-373](#)
- [G.709 Thresh 15 Min/1 Day Tabs, page C-373](#)
- [FEC Thresh 15 Min/1 Day Tab, page C-374](#)
- [Trail Trace Identifier Tab, page C-374](#)

OTN Line Tab

The OTN Line tab allows you to view and change the OTN line settings of the card.

Table C-514 **Field Descriptions for the OTN Line Tab**

Field	Description
Port No.	The port number.
G.709 OTN	Disables or enables the G.709 OTN feature.
FEC	Disables or enables forward error correction. Note OTN must be enabled before you can enable FEC.
Asynch/Synch Mapping	The card can perform multiplexing per ITU-T G.709. The ODUK (client SONET/SDH payload) can be mapped to the optical channel (OTUK) either asynchronously (asynch mapping) or synchronously (synch mapping) with this setting.
SF BER	The signal fail bit error rate.
SD BER	The signal degrade bit error rate.

G.709 Thresh 15 Min/1 Day Tabs

The G.709 Thresh 15 Min/1 Day tabs display near- and far-end SM optical channel transport unit (OTUK), and near- and far-end PM optical channel data unit (ODUK) threshold information received during the past 15 minutes/24 hours.

Table C-515 Field Descriptions for the G.709 Thresh 15 Min/1 Day Tabs

Field	Description
SM (OTUK) - Near End, Far End	
Port No.	Displays the optical port number.
BBE-SM	Displays the background block errors.
ES-SM	Displays the errored seconds.
SES-SM	Displays the severely errored seconds.
UAS-SM	Displays the unavailable seconds.
FC-SM	Displays the failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.
PM (ODUK) - Near End, Far End	
Port No.	Displays the optical port number.
BBE-PM	Displays the background block errors.
ES-PM	Displays the errored seconds.
SES-PM	Displays the severely errored seconds.
UAS-PM	Displays the unavailable seconds.
FC-PM	Displays the failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.

FEC Thresh 15 Min/1 Day Tab

The FEC Thresh 15 Min/1 Day tab allows you to view and change the 15-minute/1-day FEC threshold values of the card.

Table C-516 Field Descriptions for the FEC Thresh 15 Min/1 Day Tab

Field	Description
Port No.	Displays port number information.
Bit Errors Corrected	Displays the bit errors corrected in 15-minute intervals.
Uncorrectable Words	Displays the uncorrectable words in 15-minute intervals.

Trail Trace Identifier Tab

The Trail Trace Identifier tab allows you to provision the trail trace identifier for the card.

Table C-517 Field Descriptions for the Trail Trace Identifier Tab

Field	Description
Port No.	Displays port number information.
Level	Displays the trail trace identifier level (Section or Path).
Trace Mode	Allows you to set the trace mode (Off or Manual).

Table C-517 Field Descriptions for the Trail Trace Identifier Tab (continued)

Field	Description
Disable FDI on TTIM	Allows you to disable forward defect indication (FDI) for trail trace identifier mismatch (TTIM) alarms.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string.
Current Received String	Displays the current received string.

Loopback

The Loopback Properties pane allows you to view and update loopback information.

Table C-518 Field Descriptions for the Loopback Properties Pane

Field	Description
Port No.	Displays the port number.
Port Name	Displays the name of the port.
Administration State	The port administration state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or clear the current loopback (None).

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-519 Field Descriptions for the Auto Laser Shutdown Properties Pane

Field	Description
Port No.	Displays the port number.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the recovery laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int. (sec)	Allows you to set the recovery laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Status	Displays the current laser status. Values are Shut Down or Not Shut Down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

Optical Thresh

The Optical Thresh Properties pane allows you to view and provision optical threshold settings. The Properties pane contains the [TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs](#), [page C-376](#).

TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs

The TCA 15 Min tab allows you to view and change the 15-minute/1-day TCA settings of the card.

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-520 Field Descriptions for the TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs

Field	Description
Port No.	Displays the port number.
Laser Bias High (%)	Displays the upper laser bias threshold.
Rx Power High (dBm)	Displays the upper receive power threshold.
Rx Power Low (dBm)	Displays the lower receive power threshold.
Tx Power High (dBm)	Displays the upper transmit power threshold.
Tx Power Low (dBm)	Displays the lower transmit power threshold.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update alarm profile information.

Table C-521 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Card Profile	
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
DWDM/Payload/GFP	
Port No.	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Protection

The Protection Properties pane allows you to view and update card protection group information.

Table C-522 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection groups and allows you to execute switch commands.

Info

The Info Properties pane allows you to view nominal operating values set for the card during manufacturing.

Table C-523 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of measure (when applicable) of the object that is inventoried.

Slot Properties—OPT-AMP-17-C and OPT-AMP-C

This section contains information about the following cards:

- [OPT-APM-17-C, page C-377](#)
- [OPT-AMP-C, page C-379](#)

OPT-APM-17-C

The OPT-AMP-17-C is a 17-dB gain, C-band, DWDM EDFA amplifier/preamplifier with OSC add-and-drop capability. It supports 80 channels at 50-GHz channel spacing in the C-band (that is, the 1529 nm to 1562.5 nm wavelength range). When an ONS 15454 has an OPT-AMP-17-C installed, an OSCM card is needed to process the OSC. You can install the OPT-AMP-17-C in slots 1 to 6 and 12 to 17.

The card's features include:

- Fixed gain mode (no programmable tilt)
- Standard gain range of 14 to 20 dB at startup when configured as a preamplifier
- Standard gain range of 20 to 23 dB in the transient mode when configured as a preamplifier
- Gain range of 14 to 23 dB (with no transient gain range) when configured as a booster amplifier
- True variable gain
- Fast transient suppression

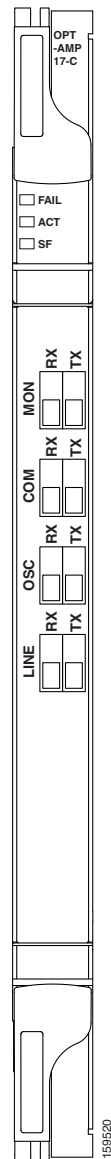
- Nondistorting low-frequency transfer function
- Settable maximum output power
- Fixed output power mode (mode used during provisioning)
- ASE compensation in fixed gain mode
- Full monitoring and alarm handling with settable thresholds
- Optical safety remote interlock (OSRI)
- ALS

The OPT-AMP-17-C amplifier card has eight optical ports located on the faceplate:

- MON RX—Output monitor port (receive section).
- MON TX—Output monitor port.
- COM RX—Input signal port.
- LINE TX—Output signal port.
- LINE RX—Input signal port (receive section).
- COM TX—Output signal port (receive section).
- OSC RX—OSC add input port.
- OSC TX—OSC drop output port.

The following figure shows the OPT-AMP-17-C amplifier card faceplate.

Figure C-40 *OPT-AMP-17-C Faceplate*



OPT-AMP-C

The OPT-AMP-C is a 20-dB output power, C-band, DWDM EDFA amplifier/preamplifier. It contains midstage access loss for a Dispersion Compensation Unit (DCU). To control gain tilt, a VOA is used. The VOA is also used to pad the DCU to a reference value. The amplifier module also includes the OSC add (TX direction) and drop (RX direction) optical filters.

The OPT-AMP-C supports 80 channels at 50-GHz channel spacing in the C-band (that is, the 1529 nm to 1562.5 nm wavelength range). When an ONS 15454 has an OPT-AMP-C installed, an OSCM card is needed to process the OSC. You can install the OPT-AMP-C in slots 1 to 6 and 12 to 17. Slots 2 to 6 and slots 12 to 16 are the default slots for provisioning the OPT-AMP-C card as a preamplifier, and slots 1 and 17 are the default slots for provisioning the OPT-AMP-C card as a booster amplifier.

The card's features include:

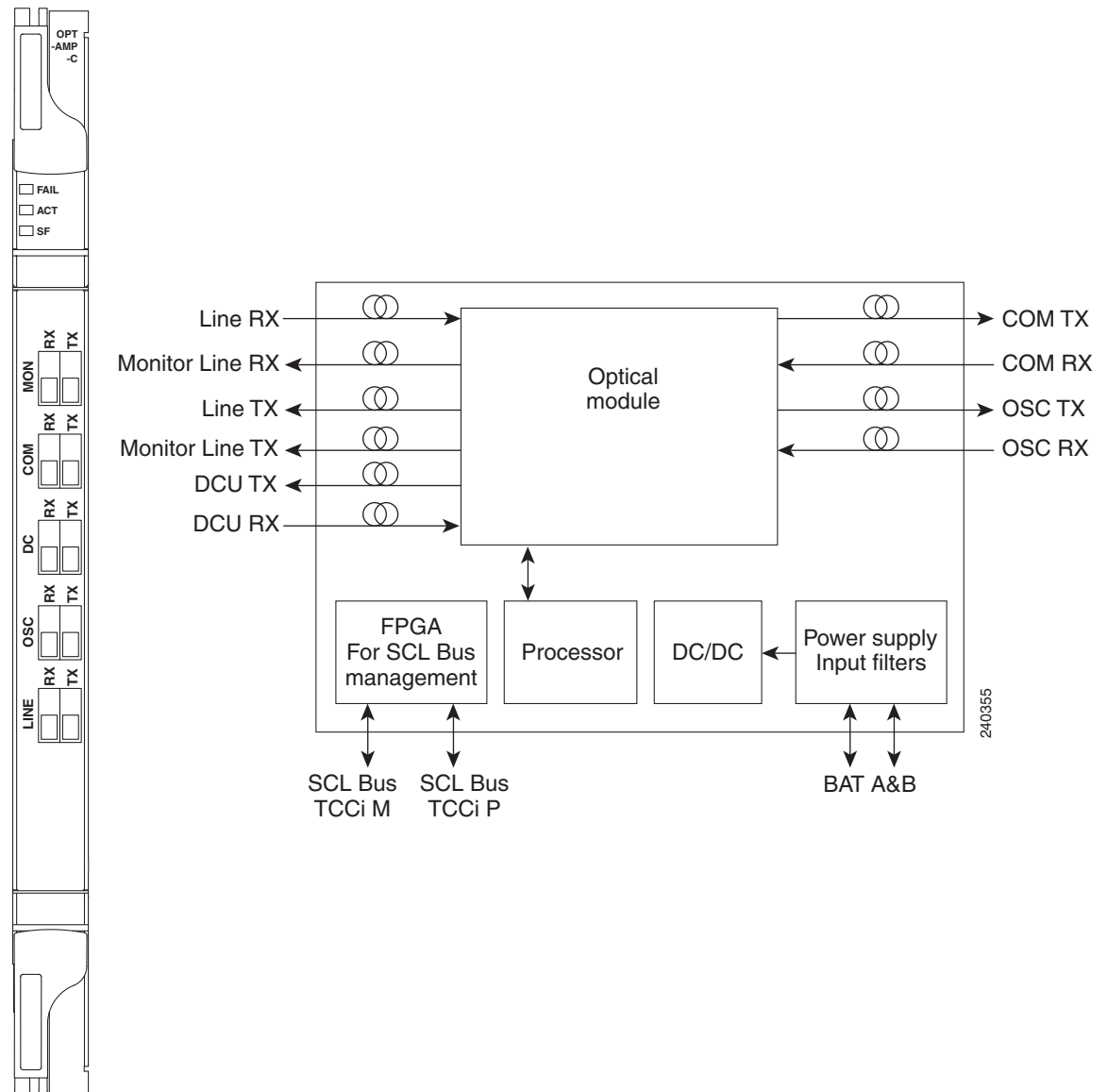
- Fast transient suppression
- Nondistorting low-frequency transfer function
- Midstage access for dispersion compensation unit
- Constant pump current mode (test mode)
- Fixed output power mode (mode used during provisioning)
- Constant gain mode
- ASE compensation in constant gain and constant output power modes
- Programmable tilt
- Full monitoring and alarm handling capability
- Gain range with gain tilt control of 12 to 24 dB
- Extended gain range (with uncontrolled tilt) of 24 to 35 dB
- Full monitoring and alarm handling with settable thresholds
- OSRI
- ALS

The OPT-AMP-C amplifier card has 10 optical ports located on the faceplate:

- MON RX is the output monitor port (receive section).
- MON TX is the output monitor port.
- COM RX is the input signal port.
- COM TX is the output signal port (receive section).
- DC RX is the input DCU port.
- DC TX is the output DCU port.
- OSC RX is the OSC add input port.
- OSC TX is the OSC drop output port.
- LINE RX is the input signal port (receive section).
- LINE TX is the output signal port.

The following figure shows the OPT-AMP-C amplifier card faceplate.

Figure C-41 OPT-AMP-C Faceplate



For the OPT-AMP-17-C and OPT-AMP-C modules, the slot properties pane displays the following properties: Module View, Identification, Card, Optical Line, Optical Amplified Line, Inventory, Alarm Behavior, and Auto Laser Shutdown.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-524 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Card

The Card Properties pane allows you to change the working mode of the selected card.

Table C-525 Field Descriptions for the Card Properties Pane

Field	Description
Card Working Mode	Select the card working mode: - OPT_LINE—The card is working as a booster amplifier. - OPT_PRE—The card is working as a preamplifier. In this state the OSC ports are disabled.

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information.

Table C-526 *Field Descriptions for the Optical Line Properties Pane*

Field	Description
Parameters	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	The port administration state. Choosing an administration state from the drop-down list and clicking Apply changes the port's service state unless network conditions prevent the change. Administration states include: - IS, AINS—In Service. The port service state changes to IS_NR. - OOS, MT—Out of Service, Maintenance. The port service state changes to OOS_MA, MT. For loopbacks, the OOS, MT Administration State must be initiated.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Power	Shows the current power level per port.
AINS Soak	Auto in service soak. The determination of duration left before the traffic/termination transitions to IS state.
Attenuator Value	Displays the value of an external attenuator required by DWDM network design.
OSC Power	Shows the current optical service channel (OSC) power level per port.
Active Channels	Indicates how many channels the amplifier is carrying. The value generally reflects the number of provisioned channels.
Warning Thresh 15 Min	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Low (dBm)	Allows you to set the low power threshold.
Power High (dBm)	Allows you to set the high power threshold.
OSC Power Low	Allows you to set the low OSC power threshold.
OSC Power High	Allows you to set the high OSC power threshold.
Warning Thresh 1 Day	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Low (dBm)	Allows you to set the low power threshold.
Power High (dBm)	Allows you to set the high power threshold.
Alarm Thresh	

Table C-526 Field Descriptions for the Optical Line Properties Pane (continued)

Field	Description
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Failure Low (dBm)	Allows you to set the low power failure threshold.
Power Degrade High (dBm)	Allows you to set the high power degrade threshold.
Power Degrade Low (dBm)	Allows you to set the low power degrade threshold.
Gain Degrade Low (dBm)	Allows you to set the low gain degrade threshold.
Gain Degrade High (dBm)	Allows you to set the high gain degrade threshold.
OSC Power Failure High	Allows you to set the high OSC power failure threshold.
OSC Power Failure Low	Allows you to set the low OSC power failure threshold.
OSC Power Degrade High	Allows you to set the high OSC power degrade threshold.
OSC Power Degrade Low	Allows you to set the low OSC power degrade threshold.

Optical Amplified Line

The Optical Amplified Line Properties pane allows you to view and update optical amplified line threshold information.

Table C-527 Field Descriptions for the Optical Amplified Line Properties Pane

Field	Description
Parameters	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Total Output Power	Shows the current power level per port.
Output Power Setpoint	Shows the total optical power going to the amplifier.
Channel Power Ref.	Shows the channel power setpoint.
Offset	Allows you to manually set the total optical power going to the amplifiers.
Signal Output Power	Shows the current output power leaving the amplifier, including the ASE contribution.
Attenuator Value	Displays the value of an external attenuator required by DWDM network design.

Table C-527 Field Descriptions for the Optical Amplified Line Properties Pane (continued)

Field	Description
OSC Power	Shows the current optical service channel (OSC) power level per port.
Mode	Shows the working mode of the amplifier: control gain or control power.
Gain	The current gain of the amplifiers.
Gain Set Point	The value of the gain that the amplifier must achieve. The value is display-only or numeric depending on the mode setting. When the system is configured as metro core, this field is display-only. When the system is configured as metro access, this field is configurable.
Tilt Reference	This field is set to zero. It represents the default value for the amplifier tilt. In a future software release this value will be managed by APC.
Active Channels	Indicates how many channels the amplifier is carrying. The value generally reflects the number of provisioned channels.
AINS Soak	The automatic in-service soak period.
Tilt Calibration	(Available in the OPT-AMP-C card only) Allows you to manually set the amplifier tilt.
DCU Insertion Loss	(Available in the OPT-AMP-C card only) The dispersion compensation unit (DCU) insertion loss.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, Output Line, Input Line, and Drop.
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.
OSC Power Low	Allows you to set the low OSC power threshold.
OSC Power High	Allows you to set the high OSC power threshold.
Alarm Thresh	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, Output Line, Input Line, and Drop.
Power Failure Low	Allows you to set the low power failure threshold.
Power Degrade High	Allows you to set the high power degrade threshold.
Power Degrade Low	Allows you to set the low power degrade threshold.
Gain Degrade Low	Allows you to set the low gain degrade threshold.
Gain Degrade High	Allows you to set the high gain degrade threshold.
OSC Power Failure High	Allows you to set the high OSC power failure threshold.
OSC Power Failure Low	Allows you to set the low OSC power failure threshold
OSC Power Degrade High	Allows you to set the high OSC power degrade threshold.
OSC Power Degrade Low	Allows you to set the low OSC power degrade threshold.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-528 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Attribute	Displays the card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of the attribute value.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-529 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-530 *Field Descriptions for the Auto Laser Shutdown Properties Pane*

Field	Description
OSRI	Allows you to turn the optical safety remote interlock (OSRI) on or off.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur.	Allows you to set the recovery laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int.	Allows you to set the recovery laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Currently Shutdown	Indicates whether the laser is currently shut down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—OPT-AMP-L

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

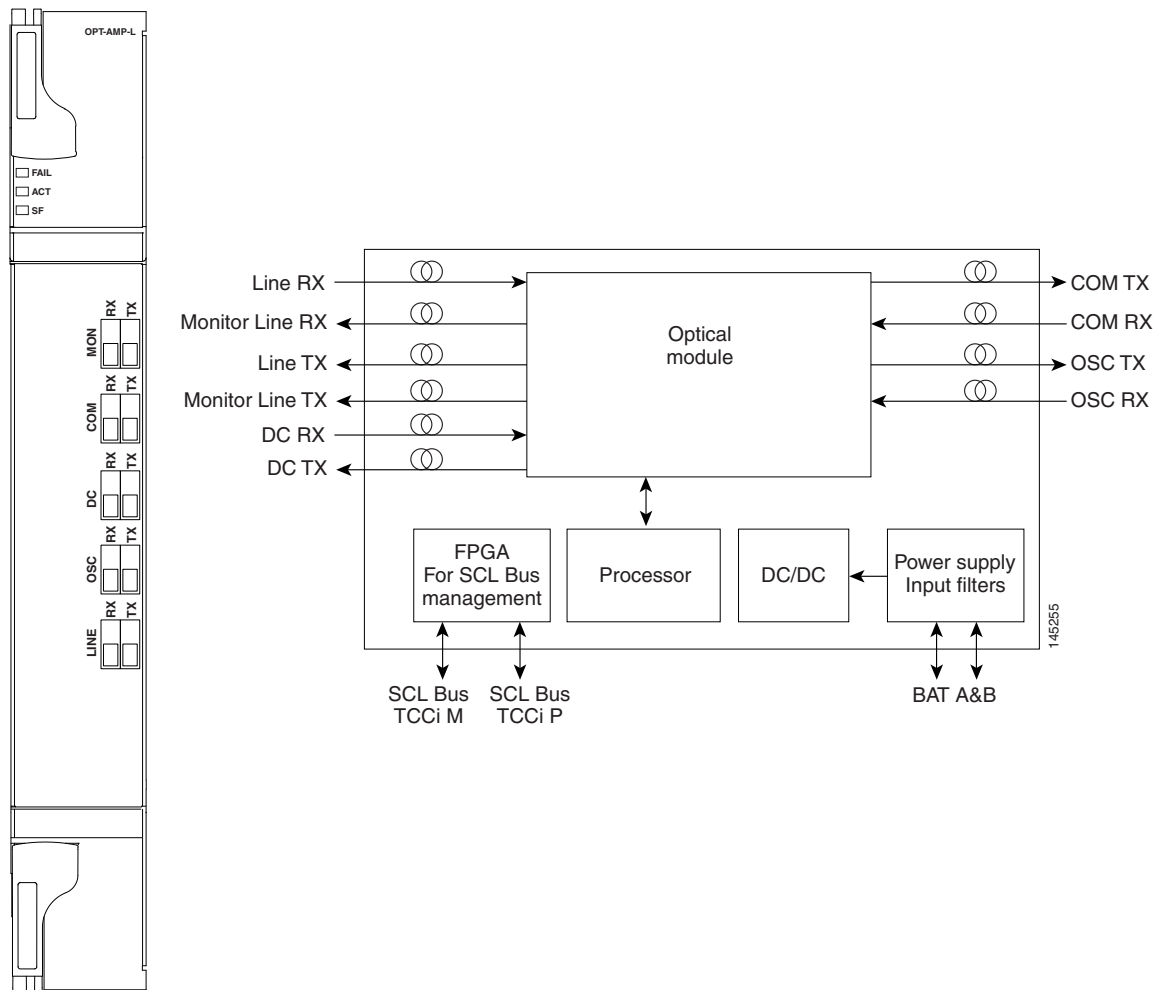
The OPT-AMP-L is an L-band DWDM optical amplifier module consisting of a two-stage EDFA with midstage access loss (MSL) for an external DCU and OSC add-and-drop capability. Using CTC, the card is provisionable as a preamplifier or booster amplifier and is well suited for use in networks that employ DS fiber or SMF-28 single-mode fiber. The amplifier can operate up to 64 optical transmission channels at a channel spacing of 50 GHz in the wavelength range from 1570 nm to 1605 nm.

The OPT-AMP-L can achieve a maximum signal power of 20 dBm throughout the gain and MSL ranges. The amplifier has a variable gain range that is settable from 12-dBm to 24-dBm in the standard gain range and from 24-dBm to 35-dBm with uncontrolled gain tilt. It also provides up to 12-dBm MSL for an external DCU.

When an ONS 15454 has an OPT-AMP-L installed, you only need the OSCM to process the OSC. You can install the two-slot OPT-AMP-L in slots 1 to 6 and 12 to 17. To control the gain tilt, the OPT-AMP-L is equipped with a built-in VOA.

The following figure shows the OPT-AMP-L amplifier faceplate and block diagram.

Figure C-42 OPT-AMP-L Faceplate



For the OPT-AMP-L module, the slot properties pane displays the following properties: Module View, Identification, Card, Optical Line, Optical Amplified Line, Inventory, and Alarm Behavior.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-531 *Field Descriptions for the Identification Properties Pane*

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Card

The Card Properties pane allows you to change the working mode of the selected card.

Table C-532 *Field Descriptions for the Card Properties Pane*

Field	Description
Card Working Mode	Select the card working mode: - OPT-LINE—The card is working as preamplifier. In this state the OSC ports are disabled. - OPT_PRE—The card is working as booster amplifier.

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information.

Table C-533 **Field Descriptions for the Optical Line Properties Pane**

Field	Description
Parameters	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Administration State	The port administration state. Choosing an administration state from the drop-down list and clicking Apply changes the port's service state unless network conditions prevent the change. Administration states include: - IS, AINS—In Service. The port service state changes to IS_NR. - OOS, DSBLD—Out of Service, Disabled. The port service state changes to OOS_MA, DSBLD. - OOS, MT—Out of Service, Maintenance. The port service state changes to OOS_MA, MT. For loopbacks, the OOS, MT Administration State must be initiated.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Power	Shows the current power level per port.
OSC Power	Shows the current optical service channel (OSC) power level per port.
Active Channels	Indicates how many channels the amplifier is carrying. The value generally reflects the number of provisioned channels.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.
OSC Power Low	Allows you to set the low OSC power threshold.
OSC Power High	Allows you to set the high OSC power threshold.
Alarm Thresh	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Failure Low	Allows you to set the low power failure threshold.
Power Degrade High	Allows you to set the high power degrade threshold.
Power Degrade Low	Allows you to set the low power degrade threshold.
Gain Degrade Low	Allows you to set the low gain degrade threshold.
Gain Degrade High	Allows you to set the high gain degrade threshold.
OSC Power Failure Low	Allows you to set the low OSC power failure threshold.

Table C-533 Field Descriptions for the Optical Line Properties Pane (continued)

Field	Description
OSC Power Degrade High	Allows you to set the high OSC power degrade threshold.
OSC Power Degrade Low	Allows you to set the low OSC power degrade threshold.

Optical Amplified Line

The Optical Amplified Line Properties pane allows you to view and update optical amplified line threshold information.

Table C-534 Field Descriptions for the Optical Amplified Line Properties Pane

Field	Description
Parameters	
Port Number	The port number.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Administration State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Total Output Power	Shows the current power level per port.
Output Power Setpoint	Shows the total optical power going to the amplifier.
Channel Power Ref.	Shows the channel power setpoint.
Offset	Allows you to manually set the total optical power going to the amplifiers.
Mode	Shows the working mode of the amplifier: control gain or control power.
Gain	The current gain of the amplifiers.
Gain Set Point	The value of the gain that the amplifier must achieve. The value is display-only or numeric depending on the mode setting. When the system is configured as metro core, this field is display-only. When the system is configured as metro access, this field is configurable.
Tilt Reference	This field is set to zero. It represents the default value for the amplifier tilt. In a future software release this value will be managed by APC.
Tilt Calibration	Allows you to manually set the amplifier tilt.
DCU Insertion Loss	The dispersion compensation unit (DCU) insertion loss.
OSC Power	Shows the current optical service channel (OSC) power level per port.
Active Channels	Indicates how many channels the amplifier is carrying. The value generally reflects the number of provisioned channels.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.

Table C-534 *Field Descriptions for the Optical Amplified Line Properties Pane (continued)*

Field	Description
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.
OSC Power Low	Allows you to set the low OSC power threshold.
OSC Power High	Allows you to set the high OSC power threshold.
Alarm Thresh	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure threshold.
Power Degrade High	Allows you to set the high power degrade threshold.
Power Degrade Low	Allows you to set the low power degrade threshold.
Gain Degrade Low	Allows you to set the low gain degrade threshold.
Gain Degrade High	Allows you to set the high gain degrade threshold.
OSC Power Failure Low	Allows you to set the low OSC power failure threshold.
OSC Power Degrade High	Allows you to set the high OSC power degrade threshold.
OSC Power Degrade Low	Allows you to set the low OSC power degrade threshold.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-535 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Attribute	Displays the card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of the attribute value.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-536 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.

Table C-536 *Field Descriptions for the Alarm Behavior Properties Pane (continued)*

Field	Description
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—OPT-RAMP-C and OPT-RAMP-CE

The OPT-RAMP-C is a double slot unit and improves unregenerated sections in long spans using the span fiber to amplify the optical signal. To achieve Raman amplification, two Raman signals (that do not carry any payload or overhead) are transmitted on the fiber and are used because the gain generated by one signal is not flat (different wavelengths in C-band receive different gain values). The energy of these Raman signals transfers to the higher region of the spectrum, thereby amplifying the signals transmitted at higher wavelengths. The Raman effect reduces span loss and does not compensate it completely.

The unit operates up to 80 optical transmission channels at 50-GHz channel spacing over the C-band of the optical spectrum (wavelengths from 1529 nm to 1562.5 nm). To provide a counter-propagating Raman pump into the transmission fiber, the Raman amplifier provides up to 500 mW at the LINE-RX connector. The OPT-RAMP-C card can be installed in slots 1 to 5 and 12 to 16. The OPT-RAMP-C card supports all network configurations. However, it can be equipped only on the endpoints of a span.

The OPT-RAMP-CE card is a 20-dBm output power, gain-enhanced version of the OPT-RAMP-C card and is optimized for short span. The OPT-RAMP-C or OPT-RAMP-CE card can operate up to 80 optical transmission channels at 50-GHz channel spacing over the C-band of the optical spectrum (wavelengths from 1529 nm to 1562.5 nm). To provide a counter-propagating Raman pump into the transmission fiber, the Raman amplifier provides up to 500 mW at the LINE-RX connector. The OPT-RAMP-C or OPT-RAMP-CE card can be installed in Slots 1 to 5 and 12 to 16, and supports all network configurations. However, the OPT-RAMP-C or OPT-RAMP-CE card can be equipped only on endpoints of a span.

When the Raman optical powers are set correctly, a gain profile with limited ripple is achieved. The wavelengths of the Raman signals are not in the C-band of the spectrum (used by MSTP for payload signals). The two Raman wavelengths are fixed and always the same. Due to a limited Raman gain, an EDFA amplifier is embedded on the card to generate a higher total gain. An embedded EDFA gain block provides a first amplification stage, while the midstage access (MSA) is used for DCU loss compensation.

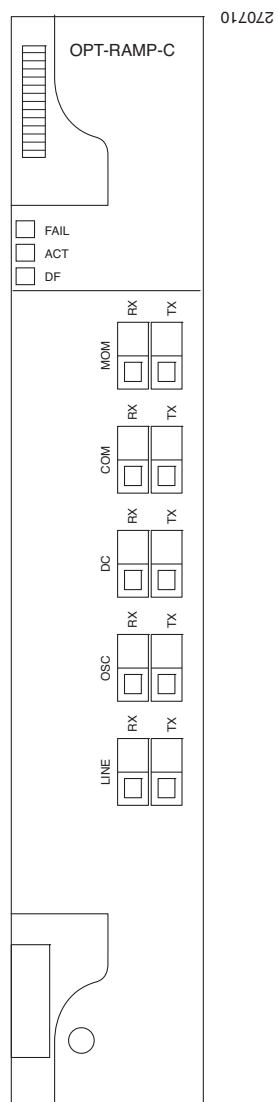
The features of the OPT-RAMP-C and OPT-RAMP-CE card include:

- Raman pump with embedded EDFA gain block
- Raman section: 500 mW total pump power for two pump wavelengths
- EDFA section:
 - OPT-RAMP-C: 16 dB gain and 17 dB output power
 - OPT-RAMP-CE: 11 dB gain and 20 dB output power
- Gain Flattening Filter (GFF) for Raman plus EDFA ripple compensation

- MSA for DC units
- VOA for DC input power control
- Full monitoring of pump, OSC, and signal power
- Fast gain control for transient suppression
- Low-FIT (hardware-managed) optical laser safety
- Hardware output signals for LOS monitoring at input photodiodes
- Optical service channel add and drop filters
- Raman pump back-reflection detector

The following figure shows the OPT-RAMP-C card faceplate.

Figure C-43 *OPT-RAMP-C Faceplate*



For the OPT-RAMP-C and OPT-RAMP-CE modules, the slot properties pane displays the following properties: Module View, Identification, Optical Line, Optical Amplified Line, Optical Raman Line, Alarm Behavior, Auto Laser Shutdown, Installation, and Inventory.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-537 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information.

Table C-538 Field Descriptions for the Optical Line Properties Pane

Field	Description
Parameters	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	The port administration state. Choosing an administration state from the drop-down list and clicking Apply changes the port's service state unless network conditions prevent the change. Administration states include: - IS—In Service. The port service state changes to IS_NR. - IS, AINS—Automatic In Service. The port service state changes to OOS_AU, AINS. - OOS, DSBLD—Out of Service, Disabled. The port service state changes to OOS_MA, DSBLD. - OOS, MT—Out of Service, Maintenance. The port service state changes to OOS_MA, MT. For loopbacks, the OOS, MT Administration State must be initiated.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Power	Shows the current power level per port.
AINS Soak	Auto in service soak. The determination of duration left before the traffic/termination transitions to IS state.
Active Channels	Indicates how many channels the amplifier is carrying. The value generally reflects the number of provisioned channels.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Low (dBm)	Allows you to set the low power threshold.
Power High (dBm)	Allows you to set the high power threshold.
Alarm Thresh	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Failure Low (dBm)	Allows you to set the low power failure threshold.
Power Degrade High (dBm)	Allows you to set the high power degrade threshold.
Power Degrade Low (dBm)	Allows you to set the low power degrade threshold.

Table C-538 Field Descriptions for the Optical Line Properties Pane (continued)

Field	Description
Gain Degrad Low (dBm)	Allows you to set the low gain degrade threshold.
Gain Degrad High (dBm)	Allows you to set the high gain degrade threshold.

Optical Amplified Line

The Optical Amplified Line Properties pane allows you to view and update optical amplified line threshold information.

Table C-539 Field Descriptions for the Optical Amplified Line Properties Pane

Field	Description
Parameters	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	The port administration state. It can be: - IS—In Service. - IS, AINS—Automatic In Service. - OOS, DSBLD—Out of Service, Disabled. - OOS, MT—Out of Service, Maintenance.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Total Output Power	Shows the current power level per port.
Offset	Allows you to manually set the total optical power going to the amplifiers.
Signal Output Power	Shows the current output power leaving the amplifier, including the ASE contribution.
Mode	Shows the working mode of the amplifier: control gain or control power.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Attenuation Ref	The VOA reference attenuation.
VOA Attenuation Calib	The VOA calibration attenuation.
DCU Insertion Loss	(Available in the OPT-RAMP-C card only) The dispersion compensation unit (DCU) insertion loss.
Gain	The current gain of the amplifiers.
Gain Set Point	The value of the gain that the amplifier must achieve. The value is display-only or numeric depending on the mode setting. When the system is configured as metro core, this field is display-only. When the system is configured as metro access, this field is configurable.
Tilt Reference	This field is set to zero. It represents the default value for the amplifier tilt. In a future software release this value will be managed by APC.

Table C-539 Field Descriptions for the Optical Amplified Line Properties Pane (continued)

Field	Description
AINS Soak	The automatic in-service soak period.
Active Channels	Indicates how many channels the amplifier is carrying. The value generally reflects the number of provisioned channels.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, Output Line, Input Line, and Drop.
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.
Alarm Thresh	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, Output Line, Input Line, and Drop.
Power Failure Low	Allows you to set the low power failure threshold.
Power Degrade High	Allows you to set the high power degrade threshold.
Power Degrade Low	Allows you to set the low power degrade threshold.
Gain Degrade Low	Allows you to set the low gain degrade threshold.
Gain Degrade High	Allows you to set the high gain degrade threshold.

Optical Raman Line

The Optical Raman Line Properties pane allows you to view and update optical Raman line information.

Table C-540 Field Descriptions for the Optical Raman Line

Field	Description
Parameters	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Power	Shows the current power level per port.
Active Channels	Indicates how many channels the amplifier is carrying. The value generally reflects the number of provisioned channels.

Table C-540 *Field Descriptions for the Optical Raman Line (continued)*

Field	Description
Ratio	Displays the Raman pump ratio in percentage value.
Expected Total Power	Displays the Raman pump expected total power.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, Output Line, Input Line, and Drop.
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.
Alarm Thresh	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, Output Line, Input Line, and Drop.
Power Failure Low	Allows you to set the low power failure threshold.
Power Degrade High	Allows you to set the high power degrade threshold.
Power Degrade Low	Allows you to set the low power degrade threshold.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-541 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-542 Field Descriptions for the Auto Laser Shutdown Properties Pane

Field	Description
Port Number	Displays the card port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
OSRI	Allows you to turn the optical safety remote interlock (OSRI) on or off.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur.	<i>Display only.</i> Allows you to set the recovery laser pulse duration, in seconds, for the initial recovery optical power pulse following a laser shutdown.
Rec. Pulse Int.	<i>Display only.</i> Allows you to set the recovery laser pulse interval, in seconds. This is the period of time that must pass before the recovery pulse is repeated.
Currently Shutdown	Indicates whether the laser is currently shut down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.
OSC Based Startup	When true, enables OSC-based startup for Raman optics line.

Installation

The Installation Properties pane displays installation information.

Table C-543 Field Descriptions for the Installation Properties Pane

Field	Description
Username	Provides the string for user login for the setup.
Status	Displays whether Raman is tuned or not tuned.
Gain	Displays the actual Raman gain.
Actual Tilt	Displays the actual Raman tilt.
Date	Displays the date and time for the setup.
Power	Displays the Raman pump total power.
Ratio	Displays the Raman pump ratio.
Fiber Cut Recovery	Displays the status of the Restore from Fiber Cut operation. Valid values are: - Not Need - Failed - Executed - Pending
Fiber Cut Date	Displays the date when the Restore from Fiber Cut operation was executed.

Table C-543 *Field Descriptions for the Installation Properties Pane (continued)*

Field	Description
S1 Low	Displays the power at node B when wavelength 1 is switched on at node A and the power is low.
S1 High	Displays the power at node B when wavelength 1 is switched on at node A and the power is high.
S2 Low	Displays the power at node B when wavelength 2 is switched on at node A and the power is low.
S2 High	Displays the power at node B when wavelength 2 is switched on at node A and the power is high.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-544 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Attribute	Displays the card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of the attribute value.



Note

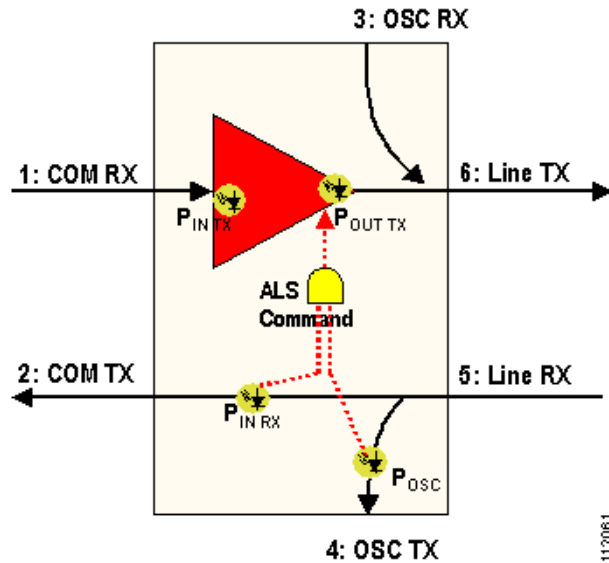
See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—OPT-BST

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The Optical Booster Amplifier (OPT-BST) module is a single-slot card that has eight LC-PC-II optical connectors. The card features true variable gain, fixed gain mode (with programmable tilt), fast transient suppression, and configurable maximum output power. The OPT-BST card supports optical safety functionality by signal loss detection and alarm, fast power down control, and reduced maximum output power in safe power mode.

The following figure shows the block diagram.

Figure C-44 OPT-BST Module

For the OPT-BST module, the slot properties pane displays the following properties: Module View, Identification, Optical Line, Optical Amplified Line, Inventory, Alarm Behavior, and Auto Laser Shutdown.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-545 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.

Table C-545 Field Descriptions for the Identification Properties Pane (continued)

Field	Description
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information.

Table C-546 Field Descriptions for the Optical Line Properties Pane

Field	Description
Parameters	
Port Number	Displays the port number.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Direction (<i>available in CTM R7.2 and earlier</i>)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
OSC Power	Shows the current optical service channel (OSC) power level per port.
Active Channels	Indicates how many channels the amplifier is carrying. The value generally reflects the number of provisioned channels.

Table C-546 *Field Descriptions for the Optical Line Properties Pane (continued)*

Field	Description
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.
OSC Power Low	Allows you to set the low OSC power threshold.
OSC Power High	Allows you to set the high OSC power threshold.
Alarm Thresh	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure threshold. The range for each port is: - Port 1: -40 to 11-dBm - Port 2: -42 to 11-dBm - Port 3: N/A - Port 4: -43 to -2-dBm - Port 5: N/A
Power Degrade High	Allows you to set the high power degrade threshold.
Power Degrade Low	Allows you to set the low power degrade threshold.
Gain Degrade Low	Allows you to set the low gain degrade threshold.
Gain Degrade High	Allows you to set the high gain degrade threshold.
OSC Power Failure Low	Allows you to set the low OSC power failure threshold.
OSC Power Degrade High	Allows you to set the high OSC power degrade threshold.
OSC Power Degrade Low	Allows you to set the low OSC power degrade threshold.

Optical Amplified Line

The Optical Amplified Line Properties pane allows you to view and update optical amplified line threshold information.

Table C-547 *Field Descriptions for the Optical Amplified Line Properties Pane*

Field	Description
Parameters	
Port Number	The port number.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.

Table C-547 Field Descriptions for the Optical Amplified Line Properties Pane (continued)

Field	Description
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Total Output Power	Shows the current power level per port.
Output Power Setpoint	Shows the total optical power going to the amplifier.
Channel Power Ref.	Shows the channel power setpoint.
Offset	Allows you to manually set the total optical power going to the amplifiers.
Mode	Shows the working mode of the amplifier: control gain or control power.
Gain	The current gain of the amplifiers.
Gain Set Point	The value of the gain that the amplifier must achieve. The value is display-only or numeric depending on the mode setting. When the system is configured as metro core, this field is display-only. When the system is configured as metro access, this field is configurable.
Tilt Reference	This field is set to zero. It represents the default value for the amplifier tilt. In a future software release this value will be managed by APC.
Tilt Calibration	Allows you to manually set the amplifier tilt.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.
Alarm Thresh	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure threshold. The range is from –10 to 20-dBm.
Power Degrade High	Allows you to set the high power degrade threshold. The range is from –10 to 20-dBm.
Power Degrade Low	Allows you to set the low power degrade threshold. The range is from –10 to 20-dBm.
Gain Degrade Low	Allows you to set the low gain degrade threshold. The range is from 3 to 22-dBm.
Gain Degrade High	Allows you to set the high gain degrade threshold. The range is from 3 to 22-dBm.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-548 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Attribute	Displays the card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of the attribute value.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-549 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-550 *Field Descriptions for the Auto Laser Shutdown Properties Pane*

Field	Description
Currently Shutdown	Indicates whether the laser is currently shut down.
OSRI	Allows you to turn the optical safety remote interlock (OSRI) on or off.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the recovery laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int. (sec)	Allows you to set the recovery laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—OPT-BST-E

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

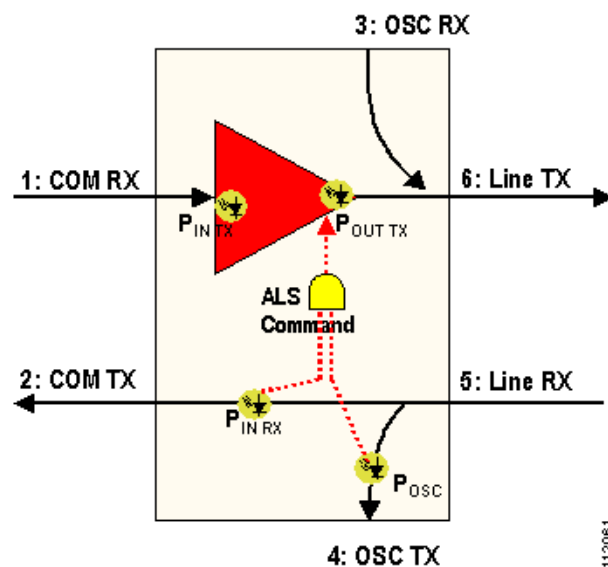
The Enhanced Optical Booster Amplifier (OPT-BST-E) card supports the transmission of 32 channels in the C-band on the ONS 15454 SONET and ONS 15454 SDH platforms. The OPT-BST-E card provides optical amplification in the line where a +1 dBm per channel power in fiber with the full 64-channel grid is required.

Compared to the standard amplifier card (OPT-BST), the enhanced card provides a higher optical output power, up to a maximum of 20-dBm, to address longer unregenerated distances using the ONS 15454 platform.

Through the Power Restyling feature, six new levels of Optical Service Channel (OSC) power can be monitored. Prime Optical supports all of the six new parameters on all optical interfaces of cards supported by ONS 15454 SONET and ONS 15454 SDH.

The following figure shows the block diagram.

Figure C-45 OPT-BST-E Module



For the OPT-BST-E module, the slot properties pane displays the following properties: Module View, Identification, Optical Line, Optical Amplified Line, Inventory, Alarm Behavior, and Auto Laser Shutdown.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-551 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information.

Table C-552 **Field Descriptions for the Optical Line Properties Pane**

Field	Description
Parameters	
Port Number	The port number.
Port Name	Allows you to assign the specified port a user-defined name. The port name can contain up to 32 alphanumeric or special characters. The port name is blank by default.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Direction (<i>available in CTM R7.2 and earlier</i>)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.
OSC Power	Shows the current optical service channel (OSC) power level per port.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.
OSC Power Low	Allows you to set the low OSC power threshold.
OSC Power High	Allows you to set the high OSC power threshold.
Alarm Thresh	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure threshold. The range for each port is: - Port 1: -31 to 13-dBm - Port 2: -42 to 11-dBm - Port 3: N/A - Port 4: -43 to -2-dBm - Port 5: N/A
Power Degrad High	Allows you to set the high power degrade threshold.
Power Degrad Low	Allows you to set the low power degrade threshold.
Gain Degrad Low	Allows you to set the low gain degrade threshold.
Gain Degrad High	Allows you to set the high gain degrade threshold.
OSC Power Failure Low	Allows you to set the low OSC power failure threshold

Table C-552 Field Descriptions for the Optical Line Properties Pane (continued)

Field	Description
OSC Power Failure High	Allows you to set the high OSC power failure threshold.
OSC Power Degrade Low	Allows you to set the low OSC power degrade threshold.
OSC Power Degrade High	Allows you to set the high OSC power degrade threshold.

Optical Amplified Line

The Optical Amplified Line Properties pane allows you to view and update optical amplified line threshold information.

Table C-553 Field Descriptions for the Optical Amplified Line Properties Pane

Field	Description
Parameters	
Port Number	The port number.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Total Output Power	Shows the current power level per port.
Output Power Setpoint	Shows the total optical power going to the amplifier.
Channel Power Ref.	Shows the channel power setpoint.
Offset	Allows you to manually set the total optical power going to the amplifiers.
Mode	Shows the working mode of the amplifier: control gain or control power.
Gain	The current gain of the amplifiers.
Gain Set Point	The value of the gain that the amplifier must achieve. The value is display-only or numeric depending on the mode setting. When the system is configured as metro core, this field is display-only. When the system is configured as metro access, this field is configurable.
Tilt Reference	This field is set to zero. It represents the default value for the amplifier tilt. In a future software release this value will be managed by APC.
Tilt Calibration	Allows you to manually set the amplifier tilt.

Table C-553 *Field Descriptions for the Optical Amplified Line Properties Pane (continued)*

Field	Description
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.
Alarm Thresh	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure threshold. The range is from –5 to 23-dBm.
Power Degrade High	Allows you to set the high power degrade threshold. The range is from –5 to 23-dBm.
Power Degrade Low	Allows you to set the low power degrade threshold. The range is from –5 to 23-dBm.
Gain Degrade Low	Allows you to set the low gain degrade threshold. The range is from 10 to 28-dBm.
Gain Degrade High	Allows you to set the high gain degrade threshold. The range is from 6 to 24-dBm.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-554 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Attribute	Displays the card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of the attribute value.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-555 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-556 *Field Descriptions for the Auto Laser Shutdown Properties Pane*

Field	Description
Currently Shutdown	Indicates whether the laser is currently shut down.
OSRI	Allows you to turn the optical safety remote interlock (OSRI) on or off.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the recovery laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int. (sec)	Allows you to set the recovery laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—OPT-BST-L

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

This section describes the OPT-BST-L amplifier card. The OPT-BST-L standard gain range is from 8 to 20 dB in the controllable gain tilt mode, and from 20 to 27 dB in the uncontrolled gain tilt mode. The OPT-BST-L is designed to support 64 channels at 50-GHz channel spacing, but currently is limited to 32 channels at 100 GHz spacing. The OPT-BST-L is an L-band DWDM EDFA with OSC add-and-drop capability. The card is particularly well suited for use in networks that employ dispersion shifted (DS) fiber or SMF-28 single-mode fiber. When an ONS 15454 has an OPT-BST-L installed, you only need the OSCM to process the OSC. You can install the OPT-BST-L in slots 1 to 6 and 12 to 17. To control the gain tilt, the OPT-BST-L is equipped with a built-in VOA.

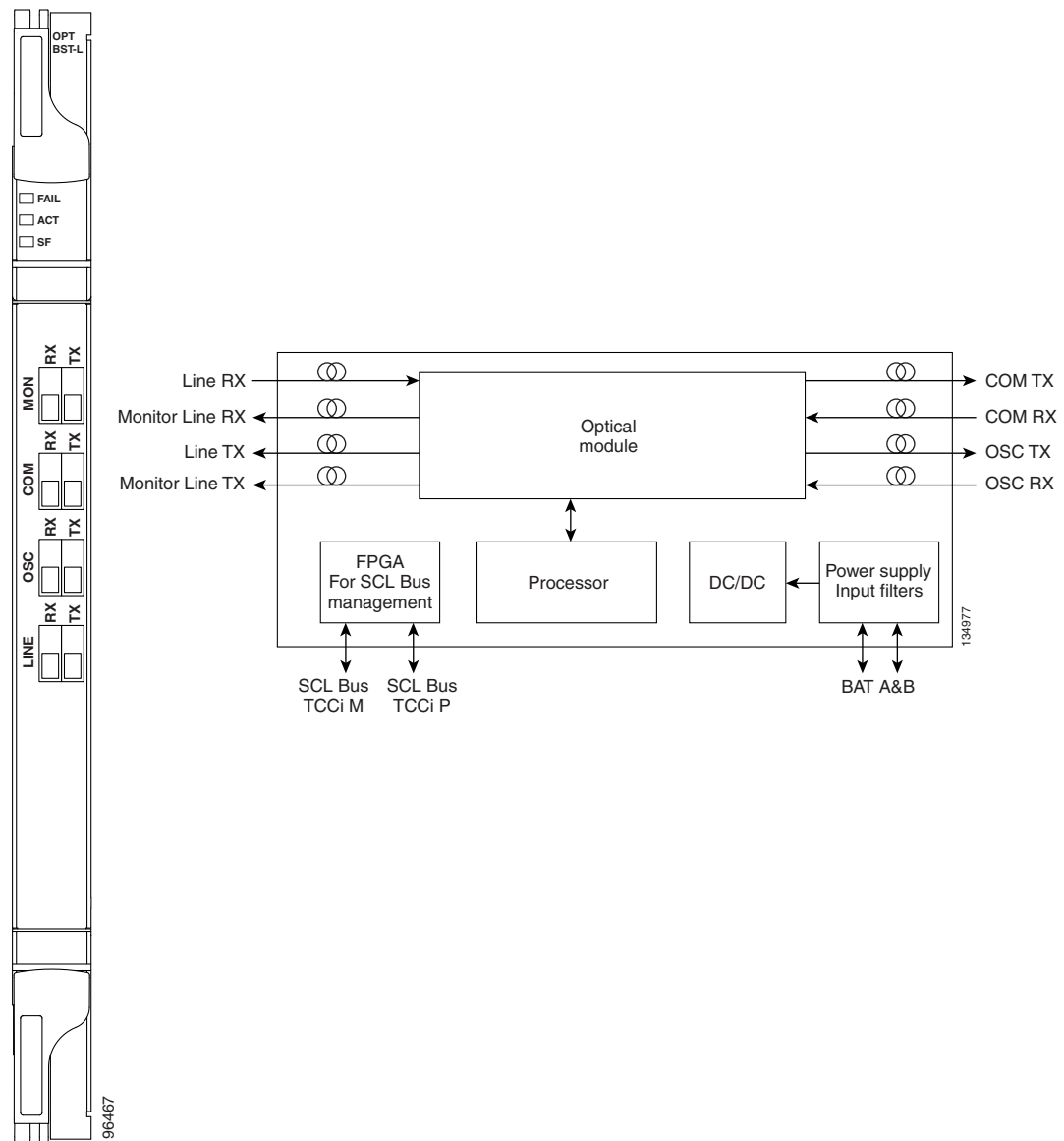


Note

The optical splitters each have a ratio of 1:99. The result is that the power at the MON TX and MON RX ports is about 20 dB lower than the power at the COM TX and COM RX ports.

The following figure shows the block diagram.

Figure C-46 *OPT-BST-L Faceplate*



For the OPT-BST-L module, the slot properties pane displays the following properties: Module View, Identification, Optical Line, Optical Amplified Line, Inventory, Alarm Behavior, and Auto Laser Shutdown.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-557 *Field Descriptions for the Identification Properties Pane*

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information.

Table C-558 *Field Descriptions for the Optical Line Properties Pane*

Field	Description
Parameters	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.

Table C-558 Field Descriptions for the Optical Line Properties Pane (continued)

Field	Description
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Direction (<i>available in CTM R7.2 and earlier</i>)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Power	Shows the current power level per port.
OSC Power	Shows the current optical service channel (OSC) power level per port.
Active Channels	Indicates how many channels the amplifier is carrying. The value generally reflects the number of provisioned channels.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.
OSC Power Low	Allows you to set the low OSC power threshold.
OSC Power High	Allows you to set the high OSC power threshold.
Alarm Thresh	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Failure Low	Allows you to set the low power failure threshold. The range for each port is: - Port 1: -31 to 13-dBm - Port 2: -42 to 11-dBm - Port 3: N/A - Port 4: -43 to -2-dBm - Port 5: N/A
Power Degrad High	Allows you to set the high power degrade threshold.
Power Degrad Low	Allows you to set the low power degrade threshold.
Gain Degrad Low	Allows you to set the low gain degrade threshold.
Gain Degrad High	Allows you to set the high gain degrade threshold.
OSC Power Failure Low	Allows you to set the low OSC power failure threshold.

Table C-558 Field Descriptions for the Optical Line Properties Pane (continued)

Field	Description
OSC Power Degradate High	Allows you to set the high OSC power degrade threshold.
OSC Power Degradate Low	Allows you to set the low OSC power degrade threshold.

Optical Amplified Line

The Optical Amplified Line Properties pane allows you to view and update optical amplified line threshold information.

Table C-559 Field Descriptions for the Optical Amplified Line Properties Pane

Field	Description
Parameters	
Port Number	The port number.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Direction (<i>available in CTM R7.2 and earlier</i>)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Total Output Power	Shows the current power level per port.
Output Power Setpoint	Shows the total optical power going to the amplifier.
Channel Power Ref.	Shows the channel power setpoint.
Offset	Allows you to manually set the total optical power going to the amplifiers.
Mode	Shows the working mode of the amplifier: control gain or control power.
Gain	The current gain of the amplifiers.
Gain Set Point	The value of the gain that the amplifier must achieve. The value is display-only or numeric depending on the mode setting. When the system is configured as metro core, this field is display-only. When the system is configured as metro access, this field is configurable.
Tilt Reference	This field is set to zero. It represents the default value for the amplifier tilt. In a future software release this value will be managed by APC.
Tilt Calibration	Allows you to manually set the amplifier tilt.
OSC Power	Shows the current optical service channel (OSC) power level per port.

Table C-559 *Field Descriptions for the Optical Amplified Line Properties Pane (continued)*

Field	Description
Active Channels	Indicates how many channels the amplifier is carrying. The value generally reflects the number of provisioned channels.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.
OSC Power Low	Allows you to set the low OSC power threshold.
OSC Power High	Allows you to set the high OSC power threshold.
Alarm Thresh	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure threshold. The range is from –5 to 23-dBm.
Power Degrade High	Allows you to set the high power degrade threshold. The range is from –5 to 23-dBm.
Power Degrade Low	Allows you to set the low power degrade threshold. The range is from –5 to 23-dBm.
Gain Degrade Low	Allows you to set the low gain degrade threshold. The range is from 10 to 28-dBm.
Gain Degrade High	Allows you to set the high gain degrade threshold. The range is from 6 to 24-dBm.
OSC Power Failure Low	Allows you to set the low OSC power failure threshold.
OSC Power Degrade High	Allows you to set the high OSC power degrade threshold.
OSC Power Degrade Low	Allows you to set the low OSC power degrade threshold.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-560 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Attribute	Displays the card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of the attribute value.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-561 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Port Number	Displays the card port number.
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.

Table C-561 *Field Descriptions for the Alarm Behavior Properties Pane (continued)*

Field	Description
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-562 *Field Descriptions for the Auto Laser Shutdown Properties Pane*

Field	Description
Currently Shutdown	Indicates whether the laser is currently shut down.
OSRI	Allows you to turn the optical safety remote interlock (OSRI) on or off.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the recovery laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int. (sec)	Allows you to set the recovery laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—OPT-EDFA-17 and OPT-EDFA-24

The OPT-EDFA-17 and OPT-EDFA-24 cards are 20-dBm (17/24 dBm gain) output power, C-band, DWDM EDFA amplifiers/preamplifiers. They do not contain mid-stage access loss for a Dispersion Compensation Unit (DCU). The OPT-EDFA-17 and OPT-EDFA-24 cards provide a noise-figure optimized version of the EDFA amplifiers to cope with new modulation formats such as PM-DQPSK, which does not need dispersion compensation. To control gain tilt, a VOA is used. The VOA can also be used to attenuate the signal to the DCU to a reference value. The amplifier module also includes the OSC add (TX direction) and drop (RX direction) optical filters.

The OPT-EDFA-17 and OPT-EDFA-24 cards share the same hardware platform and firmware architecture, and differ only in operative optical gain, which is 17dB and 24dB, respectively.

The OPT-EDFA-17 and OPT-EDFA-24 cards support 80 channels at 50-GHz channel spacing in the C-band (that is, the 1528.77 nm to 1566.72 nm wavelength range). When an ONS 15454 has an OPT-EDFA-17 or OPT-EDFA-24 card installed, an OSCM card is needed to process the OSC. You can install the OPT-AMP-C card in Slots 1 to 6 and 12 to 17. Slots 2 to 6 and Slots 12 to 16 are the default slots for provisioning an OPT-EDFA-17 or OPT-EDFA-24 card as a preamplifier, and slots 1 and 17 are the default slots for provisioning an OPT-EDFA-17 or OPT-EDFA-24 card as a booster amplifier.

The card's features include:

- Embedded Gain Flattening Filter
- Constant pump current mode (test mode)
- Constant output power mode
- Constant gain mode
- Nondistorting, low-frequency transfer function
- ASE compensation in Constant Gain and Constant Output Power modes
- Fast transient suppression
- Programmable tilt
- Full monitoring and alarm handling capability
- Gain range with gain tilt control of 5 to 17 dB (for OPT-EDFA-17) and 12 to 24 dB (for OPT-EDFA-24)
- Extended gain range (with uncontrolled tilt) of 17 to 20 dB (for OPT-EDFA-17) and 24 to 27 dB (for OPT-EDFA-24)
- Optical Safety Remote Interlock (OSRI)
- Automatic Alarm Shutdown (ALS)

You can also create a DWDM side for these cards. See [Creating Side Objects, page 7-342](#).

You can view the following properties for these cards:

- [Identification](#)
- [Module View](#)
- [Alarm Behavior](#)
- [Auto Laser Shutdown](#)
- [Optical Line](#)
- [Inventory](#)
- [Optical Amplified Line](#)

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-563 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.

Table C-563 Field Descriptions for the Identification Properties Pane (continued)

Field	Description
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-564 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Port Number	Displays the card port number.
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.

Table C-564 *Field Descriptions for the Alarm Behavior Properties Pane (continued)*

Field	Description
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-565 *Field Descriptions for the Auto Laser Shutdown Properties Pane*

Field	Description
Currently Shutdown	Indicates whether the laser is currently shut down.
OSRI	Allows you to turn the optical safety remote interlock (OSRI) on or off.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the recovery laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int. (sec)	Allows you to set the recovery laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information.

Table C-566 *Field Descriptions for the Optical Line Properties Pane*

Field	Description
Parameters	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.

Table C-566 Field Descriptions for the Optical Line Properties Pane (continued)

Field	Description
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Direction (<i>available in CTM R7.2 and earlier</i>)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Power	Shows the current power level per port.
OSC Power	Shows the current optical service channel (OSC) power level per port.
Active Channels	Indicates how many channels the amplifier is carrying. The value generally reflects the number of provisioned channels.
Warning Threshold 15 Min/1 Day	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.
OSC Power Low	Allows you to set the low OSC power threshold.
OSC Power High	Allows you to set the high OSC power threshold.
Alarm Threshold	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Failure Low	Allows you to set the low power failure threshold. The range for each port is: - Port 1: -31 to 13-dBm - Port 2: -42 to 11-dBm - Port 3: N/A - Port 4: -43 to -2-dBm - Port 5: N/A
Power Degradate High	Allows you to set the high power degrade threshold.
Power Degradate Low	Allows you to set the low power degrade threshold.
Gain Degradate Low	Allows you to set the low gain degrade threshold.
Gain Degradate High	Allows you to set the high gain degrade threshold.
OSC Power Failure Low	Allows you to set the low OSC power failure threshold.

Table C-566 *Field Descriptions for the Optical Line Properties Pane (continued)*

Field	Description
OSC Power Degrade High	Allows you to set the high OSC power degrade threshold.
OSC Power Degrade Low	Allows you to set the low OSC power degrade threshold.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-567 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Attribute	Displays the card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of the attribute value.

Optical Amplified Line

The Optical Amplified Line Properties pane allows you to view and update optical amplified line threshold information.

Table C-568 *Field Descriptions for the Optical Amplified Line Properties Pane*

Field	Description
Parameters	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Direction (<i>available in CTM R7.2 and earlier</i>)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Total Output Power	Shows the current power level per port.
Output Power Setpoint	Shows the total optical power going to the amplifier.
Channel Power Ref.	Shows the channel power setpoint.

Table C-568 Field Descriptions for the Optical Amplified Line Properties Pane (continued)

Field	Description
Offset	Allows you to manually set the total optical power going to the amplifiers.
Mode	Shows the working mode of the amplifier: control gain or control power.
Gain	The current gain of the amplifiers.
Gain Set Point	The value of the gain that the amplifier must achieve. The value is display-only or numeric depending on the mode setting. When the system is configured as metro core, this field is display-only. When the system is configured as metro access, this field is configurable.
Tilt Reference	This field is set to zero. It represents the default value for the amplifier tilt. In a future software release this value will be managed by APC.
Tilt Calibration	Allows you to manually set the amplifier tilt.
OSC Power	Shows the current optical service channel (OSC) power level per port.
Active Channels	Indicates how many channels the amplifier is carrying. The value generally reflects the number of provisioned channels.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.
OSC Power Low	Allows you to set the low OSC power threshold.
OSC Power High	Allows you to set the high OSC power threshold.
Alarm Thresh	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure threshold. The range is from –5 to 23-dBm.
Power Degrade High	Allows you to set the high power degrade threshold. The range is from –5 to 23-dBm.
Power Degrade Low	Allows you to set the low power degrade threshold. The range is from –5 to 23-dBm.
Gain Degrade Low	Allows you to set the low gain degrade threshold. The range is from 10 to 28-dBm.
Gain Degrade High	Allows you to set the high gain degrade threshold. The range is from 6 to 24-dBm.
OSC Power Failure Low	Allows you to set the low OSC power failure threshold.
OSC Power Degrade High	Allows you to set the high OSC power degrade threshold.
OSC Power Degrade Low	Allows you to set the low OSC power degrade threshold.

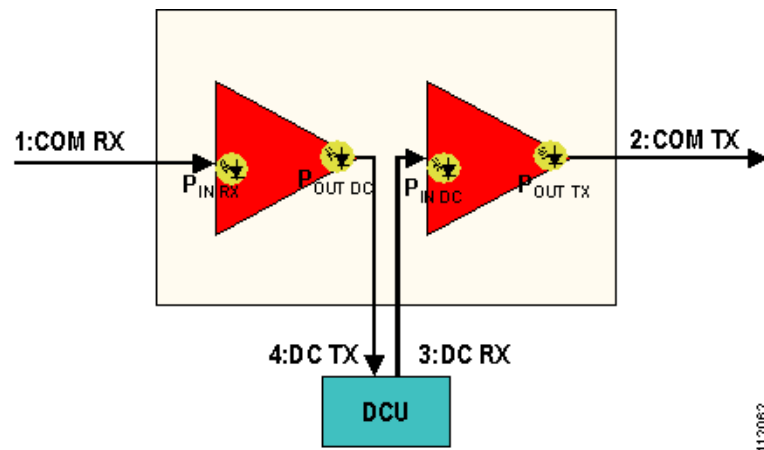
Slot Properties—OPT-PRE

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The Optical Preamplifier (OPT-PRE) module is a single-slot card that has six LC-PC-II optical connectors. The card features true variable gain, fast transient suppression, and configurable maximum output power. The OPT_PRE card offers full monitoring and alarm handling capability with configurable thresholds. The card supports optical safety functionality by signal loss detection and alarm, fast power down control, and reduced maximum output power in safe power mode.

The following figure shows the block diagram.

Figure C-47 OPT_PRE Module



For the OPT_PRE module, the slot properties pane displays the following properties: Module View, Identification, Optical Line, Optical Amplified Line, Inventory, and Alarm Behavior.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-569 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.

Table C-569 Field Descriptions for the Identification Properties Pane (continued)

Field	Description
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information.

Table C-570 Field Descriptions for the Optical Line Properties Pane

Field	Description
Parameters	
Port Number	The port number.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power	Shows the current power level per port.

Table C-570 *Field Descriptions for the Optical Line Properties Pane (continued)*

Field	Description
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.
Alarm Thresh	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure threshold.
Power Degrade High	Allows you to set the high power degrade threshold.
Power Degrade Low	Allows you to set the low power degrade threshold.
Gain Degrade Low	Allows you to set the low gain degrade threshold.
Gain Degrade High	Allows you to set the high gain degrade threshold.

Optical Amplified Line

The Optical Amplified Line Properties pane allows you to view and update optical amplified line threshold information.

Table C-571 *Field Descriptions for the Optical Amplified Line Properties Pane*

Field	Description
Parameters	
Port Number	The port number.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Total Output Power	Shows the current power level per port.
Output Power Setpoint	Shows the total optical power going to the amplifier.
Channel Power Ref.	Shows the channel power setpoint.

Table C-571 *Field Descriptions for the Optical Amplified Line Properties Pane (continued)*

Field	Description
Offset	Allows you to manually set the total optical power going to the amplifiers.
Mode	Shows the working mode of the amplifier: control gain or control power.
Gain	The current gain of the amplifiers.
Gain Set Point	The value of the gain that the amplifier must achieve. The value is display-only or numeric depending on the mode setting. When the system is configured as metro core, this field is display-only. When the system is configured as metro access, this field is configurable.
Tilt Reference	This field is set to zero. It represents the default value for the amplifier tilt. In a future software release this value will be managed by APC.
Tilt Calibration	Allows you to manually set the amplifier tilt.
DCU Insertion Loss	The dispersion compensation unit (DCU) insertion loss.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.
Alarm Thresh	
Port Number	The port number.
Power Failure Low	Allows you to set the low power failure threshold.
Power Degrade High	Allows you to set the high power degrade threshold.
Power Degrade Low	Allows you to set the low power degrade threshold.
Gain Degrade Low	Allows you to set the low gain degrade threshold.
Gain Degrade High	Allows you to set the high gain degrade threshold.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-572 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Attribute	Displays the card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of the attribute value.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-573 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—OSC-CSM

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The Optical Service Channel and Combiner/Separator Module (OSC-CSM) is a single-slot card with a 1510 nm OC-3 optical transceiver interface. The OSC-CSM is used to multiplex and demultiplex the service channel to and from the wavelength division multiplexing (WDM) signal. The OSC_CSM features a VOA in the transmit path and a 100BASE-T FE user data channel. The OSC-CSM also distributes the synchronous clock to all NEs on the ring.

The following figure shows the block diagram.

Module View

Identification

Table C-574 **Field Descriptions for the Identification Properties Pane**

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.

Table C-574 Field Descriptions for the Identification Properties Pane (continued)

Field	Description
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update line card information.

Table C-575 Field Descriptions for the Line Properties Pane

Field	Description
Line Config	
Port No.	The port number.
Port Name	The port name.
SD BER	The signal degrade bit error rate.
SF BER	The signal fail bit error rate.
Type	The port type (SONET or SDH).
PJSTSMon#	The STS that will be used for pointer justification. If set to zero, no STS is used.
ProvidesSync	When checked, the card is provisioned as an NE timing reference.
EnableSyncMsg	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Send DoNotUse	When checked, sends a do not use (DUS) message on the S1 byte.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Table C-575 Field Descriptions for the Line Properties Pane (continued)

Field	Description
AINS Soak	Auto in service soak. The determination of duration left before the traffic/termination transitions to IS state.
Line Thresh 15 Min/1 Day - Near End, Far End	
Port No.	The port number.
ES-L	Errored seconds line.
SES-L	Severely errored seconds line.
CV-L	Coding violations line.
UAS-L	Unavailable seconds line.
FC-L	Failure count - line.
Section Thresh 15 Min/1 Day, Near End	
Port No.	The port number.
CV-S	Coding violations section.
ES-S	Errored seconds section.
SES-S	Severely errored seconds section.
SEFS-S	Severely errored framing seconds section.

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information.

Table C-576 Field Descriptions for the Optical Line Properties Pane

Field	Description
Parameters	
Port Number	The port number.
Port Name	The port name.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Active Channels	Indicates how many channels the amplifier is carrying. The value generally reflects the number of provisioned channels.
Line Direction (<i>available in CTM R7.2 and earlier</i>)	The direction of the line (west-to-east or east-to-west).
Type	The port type.
Power	The laser power.

Table C-576 *Field Descriptions for the Optical Line Properties Pane (continued)*

Field	Description
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Power Ref	The VOA reference power.
VOA Power Calib	The VOA calibration power.
VOA Attenuation Ref	The VOA reference attenuation.
OSC Power	Shows the current optical service channel (OSC) power level per port.
VOA Attenuation Calib	The VOA calibration attenuation.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Power Low	The lower power threshold.
Power High	The upper power threshold.
OSC Power Low	Allows you to set the low OSC power threshold.
OSC Power High	Allows you to set the high OSC power threshold.
Alarm Thresh	
Port Number	The port number.
Power Failure Low	The lower power failure threshold.
Power Degrade High	The upper power degrade threshold.
Power Degrade Low	The lower power degrade threshold.
VOA Degrade High	The upper VOA degrade threshold.
VOA Degrade Low	The lower VOA degrade threshold.
OSC Power Failure Low	Allows you to set the low OSC power failure threshold.
OSC Power Failure High	Allows you to set the high OSC power failure threshold.
OSC Power Degrade Low	Allows you to set the low OSC power degrade threshold.
OSC Power Degrade High	Allows you to set the high OSC power degrade threshold.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-577 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Attribute	Displays the card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of the attribute value.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-578 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-579 Field Descriptions for the Auto Laser Shutdown Properties Pane

Field	Description
Currently Shutdown	Indicates whether the laser is currently shut down.
OSRI	Allows you to turn the optical safety remote interlock (OSRI) on or off.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the recovery laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int. (sec)	Allows you to set the recovery laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—OTU2_XP

The OTU2_XP card is a four-port, XFP-based multirate (OC-192/STM-64, 10GE, 10G FC) transponder for the ONS 15454 SONET and SDH platforms. The OTU2_XP card supports multiple configurations. The following table describes the different configurations supported by the OTU2_XP card and the ports that must be used for these configurations.

Table C-580 OTU2_XP Card Configurations and Ports

Configuration	Port 1	Port 2	Port 3	Port 4
2 x 10G transponder	Client port 1	Client port 2	Trunk port 1	Trunk port 2
2 x 10G standard regenerator (with enhanced FEC [E-FEC] on only one port)	Trunk port 1	Trunk port 2	Trunk port 1	Trunk port 2
1 x 10G E-FEC regenerator (with E-FEC on two ports)	Not used	Not used	Trunk port	Trunk port
1 x 10G splitter-protected transponder	Client port	Not used	Trunk port (working)	Trunk port (protect)

All four ports are ITU-T G.709 compliant and support 40 channels (wavelengths) at 100-GHz channel spacing in the C-band (that is, the 1530.33 nm-to-1561.42 nm wavelength range).

The OTU2_XP card can be installed in slots 1 to 6 or slots 12 to 17. The OTU2_XP card is a single-slot card with four ports. The ports support SR, IR2, LR2, and ZR XFPs.



Caution

Fan-tray assembly 15454E-CC-FTA (SDH shelf)/15454-CC-FTA (SONET shelf) must be installed on a shelf where the OTU2_XP card is installed.

A new mode for 10GE LAN-to-WAN has been added for cards and ports in the Card Configuration panel. When the OTU2_XP card is provisioned in the 10GE LAN-to-WAN mode, the card takes 10GE LAN traffic as input (from client port 1) and provides 10GE WAN traffic as output (from trunk port 3).

The following table describes the configuration supported by the OTU2_XP card for the LAN-to-WAN conversion feature and the ports that must be configured.

Table C-581 OTU2_XP Card Configuration and Ports for LAN-to-WAN Feature

Configuration	Port 1-3	Port 2-4
10GE LAN-to-WAN	10GE LAN-to-WAN	Transponder
	10GE LAN-to-WAN	Regenerator



Note

Port 2 supports OC192, 10GE, and 10FC rates and does not support 10G FC PM monitoring.

Prime Optical supports IB_5G, OC-192, 10G FC, and 10GE payloads on the OTU2_XP card. PM and TCA are not supported for the IB_5G payload type.

Perform the following steps to provision the payloads:

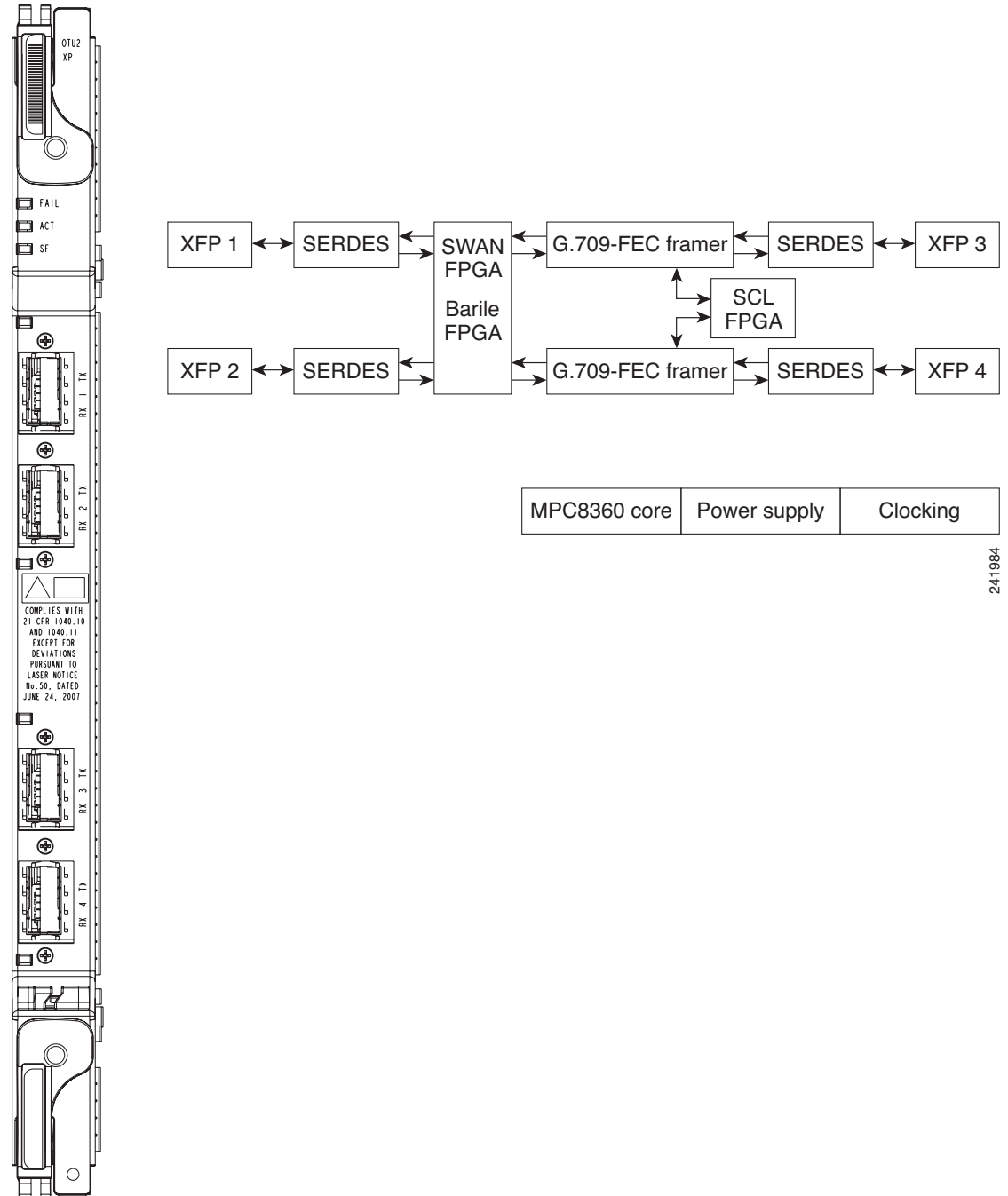
-
- Step 1** Click the **PPM** Properties pane and create a PPM for port 1.
- Step 2** Provision the rate IB_5G by selecting the rate from the **Port Rate** drop-down list.



Note By default, FEC and G.709 OTN are enabled. If they are disabled, you cannot provision the rate IB_5G.

The following figure shows the OTU2_XP faceplate and block diagram.

Figure C-49 OTU2_XP Card Faceplate and Block Diagram



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For the OTU2_XP card, the slot properties pane displays the following properties: Module View, Identification, Card, PPM, Line, Path, OTN, Loopback, Auto Laser Shutdown, Optical Thresh, Alarm Behavior, Protection, and Info.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Moving the mouse pointer over the graphic also displays the alarm counts.) Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-582 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The equipment administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Card

The Card Properties pane allows you to view and update card information.

Table C-583 *Field Descriptions for the Card Properties Pane*

Field	Description
Card Mode	Choose one of the following card configuration options: • Transponder—Provisions the card as a 10G transponder. • Standard Regen—Provisions the card as a 10G standard regenerator. • Enhanced FEC—Provisions the card as a 10GE-FEC regenerator. • Mixed—Provisions the card for mixed port modes. • 10GE LAN to WAN—Provisions the card for 10GE LAN to WAN. Note 10GE LAN to WAN can be configured only on ports 1 to 3, and only if the payloads for PPM 1 and PPM 3 are provisioned. If you change the card mode from Transponder to 10GE LAN to WAN, you are prompted with the following message: Changing the OTU2_XP card mode to "10GE LAN to WAN" will reboot the card. Do you want to continue? If you change the card mode from 10GE LAN to WAN to Transponder, you are prompted with the following message: Changing the OTU2_XP card from "10GE LAN to WAN" will reboot the card and delete the pluggable ports 1 and 3. Do you want to continue? If you change the card mode from Transponder to Enhanced FEC, you are prompted with the following message: Changing the card to EFEC mode will cause the ports 1 and 2 to be disabled. Do you want to continue? Click Yes to continue or No to cancel the operation.
Port Mode 1-3	Choose Transponder or Standard Regen. Note Port mode is editable only when the card configuration is Mixed.
Termination Mode 1-3	Allows you to set the mode of termination. • If 10GE LAN to WAN is selected as the card configuration, the termination mode is Line and it is not editable. • If Standard or Enhanced FEC Regen is selected as the card configuration, the termination mode is Transparent and it is not editable. • If Transponder is selected as the card configuration, the termination mode defaults to Transparent. Note Termination mode can be configured only for SONET/SDH payload types.
Framing Type 1-3	<i>Display only.</i> Displays the framing type, which depends on the payload type that is configured in the PPM Properties pane.

Table C-583 Field Descriptions for the Card Properties Pane (continued)

Field	Description
AIS/Squelch Configuration 1-3	Allows you to configure the remote client to squelch or send an AIS signal. - If Transponder, Standard Regen, or 10GE LAN to WAN is selected as the card configuration, this parameter defaults to Squelch. - For Mixed card configuration, the AIS/Squelch Configuration depends on the port mode you selected. Note AIS/Squelch can be configured only for SONET/SDH payload types.
Regen Line Name 1-3	<i>Display only</i> when transponder or 10GE LAN to WAN is selected as the card configuration. - If Standard Regen is selected as the card configuration, you can set the regeneration line name. Note For Mixed card configuration, the Regen Line Name depends on the port mode you selected.
ODU Transparency 1-3	Choose Transparent Standard Use or Cisco Extended Use. - If Transponder or 10GE LAN to WAN is selected as the card configuration, this parameter defaults to Cisco Extended Use. - Choose Transparent Standard Use or Cisco Extended Use if Standard Regen or Enhanced FEC is selected as the card configuration type. Note For Mixed card configuration, the ODU Transparency depends on the port mode you selected.
Proactive Protection Regen 1-3	Allows you to enable or disable the proactive protection regen mode.
Port Mode 2-4	Choose Transponder or Standard Regen if the card configuration is 10GE LAN to WAN. Note You cannot choose the same port mode for ports 1 to 3 and ports 2 to 4.
Termination Mode 2-4	- Choose Transparent, Line, or Section if the card configuration type is Transponder. - If Standard or Enhanced FEC Regen is selected as the card configuration, the termination mode is Transparent and it is not editable. - If Transponder is selected as the card configuration, the termination mode defaults to Transparent. Note Termination mode can be configured only for SONET/SDH payload types.
Framing Type 2-4	<i>Display only.</i> Displays the framing type, which depends on the payload type that is configured in the PPM Properties pane.
AIS/Squelch Configuration 2-4	Allows you to configure the remote client to squelch or send an AIS signal. - If Transponder is selected as the card configuration, choose squelch or AIS. - If Standard Regen is selected as the card configuration, this parameter defaults to AIS. Note AIS/Squelch can be configured only for SONET/SDH payload types.
Regen Line Name 2-4	<i>Display only</i> when Transponder is selected as the card configuration. - If Standard Regen is selected as the card configuration, you can set the regeneration line name. Note For Mixed card configuration, the Regen Line Name depends on the port mode you selected.

Table C-583 *Field Descriptions for the Card Properties Pane (continued)*

Field	Description
ODU Transparency 2-4	- If Transponder is selected as the card configuration, this parameter defaults to Cisco Extended Use. - Choose Transparent Standard Use or Cisco Extended Use if Standard Regen or Enhanced FEC is selected as the card configuration. Note For Mixed card configuration, the ODU Transparency depends on the port mode you selected.
Proactive Protection Regen 2-4	Allows you to enable or disable the proactive protection regen mode.

PPM

The PPM Properties pane allows you to view and provision the PPM and the ports inside the PPM.

Table C-584 *Field Descriptions for the PPM Properties Pane*

Field	Description
Pluggable Port Modules	
Pluggable Number	Displays the identifier of the plugin module.
Actual Equipment Type	Displays the actual plugin module that is installed in the slot.
Equipment State	Displays the equipment state of the plugin module.
Admin State	Displays the status of the plugin module: In Service (IS); Out of Service–Maintenance (OOS_MT); Unlocked; or Locked, Maintenance. Note You can edit the Admin State value only for actual equipment, not preprovisioned equipment.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
PPM	
Port	Displays the PPM number and port number.
Rate	Displays the port rate.

Provision Pluggable Dialog Box

Click the **Create** button to launch the Provision Pluggable dialog box. This dialog box allows you to provision the PPM and to create the ports inside this entity. See [Provision Pluggable Dialog Box, page C-25](#) for more information.

Line

The Line Properties pane allows you to configure line information.

If the card is installed on an ONS 15454 SONET NE, the Properties pane contains the following tabs:

- [SONET Line Tab, page C-442](#)
- [Ports Tab, page C-442](#)
- [Section Trace Tab, page C-443](#)

- [Line Thresh 15 Min/1 Day Tabs, page C-444](#)
- [Section Thresh 15 Min/1 Day Tabs, page C-444](#)
- [Ethernet Tab, page C-445](#)
- [STS Thresh 15 Min/1 Day Tabs, page C-445](#)
- [RMON Thresholds Tab, page C-446](#)

If the card is installed on an ONS 15454 SDH NE, the Properties pane contains the following tabs:

- [SDH Line Tab, page C-446](#)
- [Ports Tab, page C-446](#)
- [Section Trace Tab, page C-447](#)
- [RS Thresh 15 Min/1 Day Tabs, page C-447](#)
- [MS Thresh 15 Min/1 Day Tabs, page C-448](#)
- [VC4 Thresh 15 Min/1 Day Tabs, page C-448](#)
- [Ethernet Tab, page C-448](#)
- [RMON Thresholds Tab, page C-449](#)

SONET Line Tab

The SONET Line tab allows you to view and change the SONET line settings of the card.

Table C-585 *Field Descriptions for the SONET Line Tab*

Field	Description
Port No.	Displays the port number.
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Type	Displays the framing type.

Ports Tab

The Ports tab allows you to view and change the port settings.

Table C-586 *Field Descriptions for the Ports Tab*

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Admin State	Shows the administration state of the port: In Service (IS), Automatic In Service (IS, AINS), Out of Service–Disabled (OOS, DSBLD), or Out of Service–Maintenance (OOS_MT).
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak (H:M)	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS_NR state.

Table C-586 *Field Descriptions for the Ports Tab (continued)*

Field	Description
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

Section Trace Tab

The Section Trace tab allows you to change the section trace settings for the card.

Table C-587 *Field Descriptions for the Section Trace Tab*

Field	Description
Port No.	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).

Table C-587 *Field Descriptions for the Section Trace Tab (continued)*

Field	Description
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string; sets a new transmit string of 1 or 16 bytes.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1Day tabs allow you to view and change the 15-minute/1-day line threshold information for the card.

Table C-588 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
Port Number	Displays the optical port number.
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.
CV-L	Displays the coding violations line.
UAS-L	Displays the unavailable seconds line information.
FC-L	Displays the failure count line.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Section Thresh 15 Min/1 Day Tabs

The Section Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day section threshold information for the card.

Table C-589 *Field Descriptions for the Section Thresh 15 Min/1 Day Tabs*

Field	Description
Port No.	Displays the port number.
CV-S	Displays the coding violations section.
ES-S	Displays the errored seconds section.
SES-S	Displays the severely errored seconds section.
SEFS-S	Displays the severely errored framing seconds section.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Ethernet Tab

The Ethernet tab allows you to view Ethernet line information. This tab is available only when the OTU2_XP card is configured with the TEN_GE payload type.

Table C-590 **Field Descriptions for the Ethernet Tab**

Field	Description
Port No.	Displays the port number.
AINS Soak (H:M)	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
Max. Size	To permit the acceptance of jumbo-size Ethernet frames, select Jumbo (default). If you do not want to permit jumbo-size Ethernet frames, select 1548.
Incoming MAC Address	Allows you to edit the incoming MAC address.
Flow Control	Enables or disables flow control messaging with its peer port. When enabled, the port can send and receive PAUSE frames when buffer congestion occurs. When disabled, no PAUSE frames are transmitted and the PAUSE frames received are discarded. Values are: - ON—(Default) Flow control is enabled - OFF—Flow control is disabled Note The flow control property is available only when 10GE LAN to WAN card mode is configured.
Client Distance	Sets the fiber distance between the client of OTU2_XP card and the LAN port that is connected to the OTU2_XP client port. Values are: 10 km (default) 30 km Note The client distance property is available only when 10GE LAN to WAN card mode is configured.

STS Thresh 15 Min/1 Day Tabs

The STS Thresh 15 Minute/1 Day tabs allow you to view and change the near-end 15-minutes/1-day synchronous transport signal threshold information for the card.

Table C-591 **Field Descriptions for the STS Thresh 15 Min/1 Day Tabs**

Field	Description
Near End	
STS No.	Displays the synchronous transport signal number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
FC-P	Displays the failure count path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
Reset to Defaults button	Resets the value of the port parameters to the default value.

RMON Thresholds Tab

The RMON Thresholds tab allows you to view, create, and delete RMON threshold settings for the OTU2_XP card. This tab is available only when the OTU2_XP card is configured with the TEN_GE or 10 GFC payload type.

Table C-592 Field Descriptions for the RMON Thresholds Tab

Field	Description
Index No.	Displays the optical port number.
Slot	Displays the slot.
Port	Displays the port.
Variable	Displays the Ethernet threshold variable. The variable depends on the card type.
Alarm Type	Displays the Ethernet threshold alarm type. Values are Rising, Falling, or Rising or Falling.
Sample Type	Displays the Ethernet threshold sample type. Values are Relative and Absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of any time period.
Sample Period	Displays the Ethernet threshold sample period, in seconds.
Rising Thresholds	Displays a count of the number of times an alarm entry crosses the rising threshold and the entry generates an event.
Falling Thresholds	Displays a count of the number of times an alarm entry crosses the falling threshold and the entry generates an event.
Create	Click the Create button to create an RMON threshold.
Delete	Select an RMON threshold from the list displayed and click the Delete button.

SDH Line Tab

The SDH Line tab allows you to view and change the SDH line settings of the card.

Table C-593 Field Descriptions for the SDH Line Tab

Field	Description
Port No.	Displays the optical port number.
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Type	Defines the port as SONET or SDH.

Ports Tab

The Ports tab allows you to view and change the port settings.

Table C-594 Field Descriptions for the Ports Tab

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a name for the optical port.

Table C-594 *Field Descriptions for the Ports Tab*

Field	Description
Admin State	Shows the administration state of the port: In Service (IS), Automatic In Service (IS, AINS), Out of Service–Disabled (OOS, DSBLD), or Out of Service–Maintenance (OOS_MT).
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format Administrative_State-Operational_State, Status_Attribute.
AINS Soak	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS_NR state.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).

Section Trace Tab

The Section Trace tab allows you to change the section trace settings for the card.

Table C-595 *Field Descriptions for the Section Trace Tab*

Field	Description
Port No.	The port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string; sets a new transmit string.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.

RS Thresh 15 Min/1 Day Tabs

The RS Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day near-end regeneration section threshold information for the card.

Table C-596 *Field Descriptions for the RS Thresh 15 Min/1 Day Tabs*

Field	Description
Port No.	The port number.
EB-RS	Errored blocks regenerator section.
ES-RS	Errored seconds regenerator section.
SES-RS	Severely errored second regenerator section.
BBE-RS	Background block error regenerator section.
UAS-RS	Unavailable seconds regenerator section.

MS Thresh 15 Min/1 Day Tabs

The MS Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day multiplex section threshold information for the card.

Table C-597 *Field Descriptions for the MS Thresh 15 Min/1 Day Tabs*

Field	Description
Port No.	The port number.
EB-MS	Errored blocks multiplexer section.
ES-MS	Errored seconds multiplexer section.
SES-MS	Severely errored second multiplexer section.
BBE-MS	Background block errors multiplexer section.
UAS-MS	Unavailable seconds multiplexer section.

VC4 Thresh 15 Min/1 Day Tabs

The VC4 Thresh 15 Min/1 Day tabs allow you to view and update the near-end 15-minutes/1-day VC4 threshold settings of the port.

Table C-598 *Field Descriptions for the VC4 Thresh 15 Min/1 Day Tabs*

Field	Description
VC No.	The VC number. Displays as VC4- <i>x</i> , where <i>x</i> equals 1, 2, 3, or 4.
CV-P	Errored block/byte errors corrected–high-order path.
BBE-HP	Background block errors–high-order path.
ES-HP	Errored seconds–high-order path.
SES-HP	Severely errored seconds–high-order path.
UAS-HP	Unavailable seconds–high-order path.

Ethernet Tab

The Ethernet tab allows you to view Ethernet line information. This tab is available only when the OTU2_XP card is configured with the TEN_GE payload type.

Table C-599 *Field Descriptions for the Ethernet Tab*

Field	Description
Port No.	Displays the port number.
AINS Soak (H:M)	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
Max. Size	To permit the acceptance of jumbo-size Ethernet frames, select Jumbo (default). If you do not want to permit jumbo-size Ethernet frames, select 1548.
Incoming MAC Address	Allows you to edit the incoming MAC address.

Table C-599 *Field Descriptions for the Ethernet Tab (continued)*

Field	Description
Flow Control	Enables or disables flow control messaging with its peer port. When enabled, the port can send and receive PAUSE frames when buffer congestion occurs. When disabled, no PAUSE frames are transmitted and the PAUSE frames received are discarded. Values are: - ON—(Default) Flow control is enabled - OFF—Flow control is disabled Note The flow control property is available only when 10GE LAN to WAN card mode is configured.
Client Distance	Sets the fiber distance between the client of OTU2_XP card and the LAN port that is connected to the OTU2_XP client port. Values are: 10 km (default) 30 km Note The client distance property is available only when 10GE LAN to WAN card mode is configured.

RMON Thresholds Tab

The RMON Thresholds tab allows you to view, create, and delete RMON threshold settings for the OTU2_XP card. This tab is available only when the OTU2_XP card is configured with the TEN_GE or 10 GFC payload type.

Table C-600 *Field Descriptions for the RMON Thresholds Tab*

Field	Description
Index No.	Displays the optical port number.
Slot	Displays the slot.
Port	Displays the port.
Variable	Displays the Ethernet threshold variable. The variable depends on the card type.
Alarm Type	Displays the Ethernet threshold alarm type. Values are Rising, Falling, or Rising or Falling.
Sample Type	Displays the Ethernet threshold sample type. Values are Relative and Absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of any time period.
Sample Period (sec)	Displays the Ethernet threshold sample period, in seconds.
Rising Thresholds (count)	Displays a count of the number of times an alarm entry crosses the rising threshold and the entry generates an event.
Falling Thresholds (count)	Displays a count of the number of times an alarm entry crosses the falling threshold and the entry generates an event.
Create	Click the Create button to create an RMON threshold.
Delete	Select an RMON threshold from the list displayed and click the Delete button.

Path

The Path Properties pane contains the following tabs:

- [SONET Tab, page C-450](#)
- [J1 Path Trace Tab, page C-450](#)

SONET Tab

The SONET tab allows you to view and change the SONET path settings for the OTU2_XP module.

Table C-601 **Field Descriptions for the SONET Tab**

Field	Descriptions
Port No.	Displays the port number.
SF BER Level	Sets the signal fail bit error rate.
SD BER Level	Sets the signal degrade bit rate.



Note

The SDH tab is displayed if the card is installed on an ONS 15454 SDH NE.

J1 Path Trace Tab

The J1 Path Trace tab allows you to view and update J1 path trace information.

Table C-602 **Field Descriptions for the J1 Path Trace Tab**

Field	Descriptions
Port No.	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.



Note

These properties are affected only when 10GE LAN to WAN card mode is configured.

OTN

The OTN Properties pane contains the following tabs:

- [OTN Line Tab, page C-451](#)
- [G.709 Thresh 15 Min/ 1 Day Tabs, page C-451](#)
- [FEC Thresh 15 Min/1 Day Tabs, page C-452](#)

- [Trail Trace Identifier Tab, page C-452](#)

OTN Line Tab

The OTN Line tab allows you to view and change the OTN line settings of the card.

Table C-603 Field Descriptions for the OTN Line Tab

Field	Description
Port No.	Displays the port number.
G.709 OTN	Disables or enables the G.709 OTN feature.
FEC	Disables or enables forward error correction. Note OTN must be enabled before you can enable FEC.
No Fixed Stuff	Disables or enables fixed stuffing used in 10 GE-over-OTN G.709 mapping. When 10 GE is mapped over G.709, the overall bit rate is approximately 11.09 Gb/s. If a fixed pattern of stuffing bits is used in this mapping, the rate can be lowered to 11.04 Gb/s. 10 GE over OTN G.709 works with or without fixed stuffing. Note This parameter applies only to 10 GE signals in transponder card configurations. For all other card configurations, this parameter is display-only.
SF BER	The signal fail bit error rate.
SD BER	The signal degrade bit error rate.

G.709 Thresh 15 Min/1 Day Tabs

The G.709 Thresh 15 Min/1 Day tab displays near- and far-end SM optical channel transport unit (OTUK), and near- and far-end PM optical channel data unit (ODUK) threshold information and allow you to change these card threshold values.

Table C-604 Field Descriptions for the G.709 Thresh 15 Min/1 Day Tabs

Field	Description
SM (OTUK) Near End, Far End	
Port Number	Displays the optical port number.
BBE-SM	Displays the background block errors.
ES-SM	Displays the errored seconds.
SES-SM	Displays the severely errored seconds.
UAS-SM	Displays the unavailable seconds.
FC-SM	Displays the failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.
PM (ODUK) Near End, far End	
Port Number	Displays the optical port number.
BBE-PM	Displays the background block errors.
ES-PM	Displays the errored seconds.
SES-PM	Displays the severely errored seconds.

Table C-604 *Field Descriptions for the G.709 Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
UAS-PM	Displays the unavailable seconds.
FC-PM	Displays the failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.

FEC Thresh 15 Min/1 Day Tabs

The FEC Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day FEC threshold values of the card.

Table C-605 *Field Descriptions for the FEC Thresh 15 Min Tab*

Field	Description
Port Number	Displays port number information.
Bit Errors Corrected	Displays the bit errors corrected in 15-minute intervals.
Uncorrectable Words	Displays the uncorrectable words in 15-minute intervals.

Trail Trace Identifier Tab

The Trail Trace Identifier tab allows you to provision the trail trace identifier for the card.

Table C-606 *Field Descriptions for the Trail Trace Identifier Tab*

Field	Description
Port Number	Displays port number information.
Level	Displays the trail trace identifier level (Section or Path).
Trace Mode	Allows you to set the trace mode (Off or Manual).
Disable FDI on TTIM	Allows you to disable forward defect indication (FDI) for trail trace identifier mismatch (TTIM) alarms.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string.
Current Received String	Displays the current received string.

Loopback

The Loopback Properties pane allows you to view and update loopback information.

Table C-607 *Field Descriptions for the Loopback Properties Pane*

Field	Description
Port Number	Displays the port number.
Port Name	Displays the name of the port.

Table C-607 Field Descriptions for the Loopback Properties Pane (continued)

Field	Description
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The port state must be OOS_MT before you can configure the loopback type.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-608 Field Descriptions for the Auto Laser Shutdown Properties Pane

Field	Description
Port Number	Displays the port number.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur.	Allows you to set the recovery laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int.	Allows you to set the recovery laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Currently Shut Down	Indicates whether the laser is currently shut down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

Optical Thresh

The Optical Thresh Properties pane allows you to view and provision optical threshold settings. The Optical Thresh Properties pane contains the [TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs](#), [page C-453](#).

TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs

The TCA 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day TCA settings of the card. The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-609 Field Descriptions for the TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs

Field	Description
Port Number	Displays the port number.
Laser Bias High (%)	Displays the upper laser bias threshold.
Rx Power High (dBm)	Displays the upper receive power threshold.
Rx Power Low (dBm)	Displays the lower receive power threshold.
Tx Power High (dBm)	Displays the upper transmit power threshold.
Tx Power Low (dBm)	Displays the lower transmit power threshold.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-610 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Protection

The Protection Properties pane allows you to view and update protection group information.

Table C-611 Field Descriptions for the Protection Properties Pane

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection groups and allows you to execute switch commands. For OTU2_XP cards, the card name might be shown as XP_4_10G_LINE_CARD. Note If you choose 10GE LAN to WAN as the card configuration, Y-cable protection is not supported.

Info

The Info Properties pane allows you to view nominal operating values set for the card during manufacturing.

Table C-612 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of the attribute value.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—PSM

The slot properties pane displays information about the Protection Switching Module (PSM) that is selected in the NE Explorer. Use this properties pane to change the card properties.

The PSM performs splitter protection functions. During transmission, the card has a hardware splitter that duplicates the incoming signal from the two protected ports. On the receiving side, the card provides a switch to receive one of the two input signals that can be received on the COM-TX client ports.

In case of a single fiber cut, the VOA implements bidirectional switching after the splitter function. After a near-end signal loss detection, bidirectional switching is implemented with a far-end switch. The protection switching card does not require creation of a protection group to work.

The PSM provides the following features:

- TX section:
 - Splits input optical channels to both working and protection lines
 - Forces remote site switch by opening one of the two lines (puts the related VOA in the AVS)
- RX section:
 - Selects signals from the working or protection line, where each line is monitored through a photodiode
 - Balances the two line losses by changing the VOA attenuation value simultaneously with the changed switch state
- Bidirectional unit that operates over the C-band of the optical spectrum (wavelengths from 1529 nm to 1562.5 nm)
- Single-slot card with three LEDs on the front panel
- Six LC-PC-II optical connectors on the front panel
- Threshold crossing alerts (TCAs)
- Performance monitoring: thirty-two 15-minute intervals and two 24-hour intervals
- Equipped in any node from slots 1 to 6 and 12 to 17. It can also be equipped in a different shelf from its peer. Protection group creation is not required for management purposes.

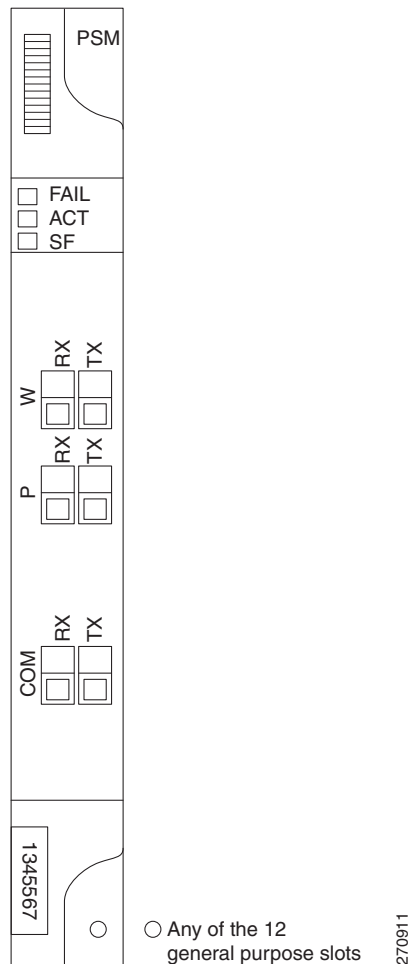
- COM-RX, W-RX, and P-RX ports provide power measurement capability (for example, the 32WSS COM-RX port). These ports support optical PM, power failure, low power indication alarms, and related thresholds crossing alarms.
- COM-TX, W-TX, and P-TX are MSTP aggregated ports with VOAs (for example, AD_4C EXP-TX port). These ports support optical PM, power failure, low power indication alarms, and all the provisioning parameters that are associated to a VOA in attenuation control mode. All VOAs equipped by the PSM work only in controlled attenuation, including OCH protection schemes. The VOA attenuation calibration parameter can be changed in all traffic conditions.

**Note**

VOA degrade alarms are not supported because a photodiode is available only after the VOA phase.

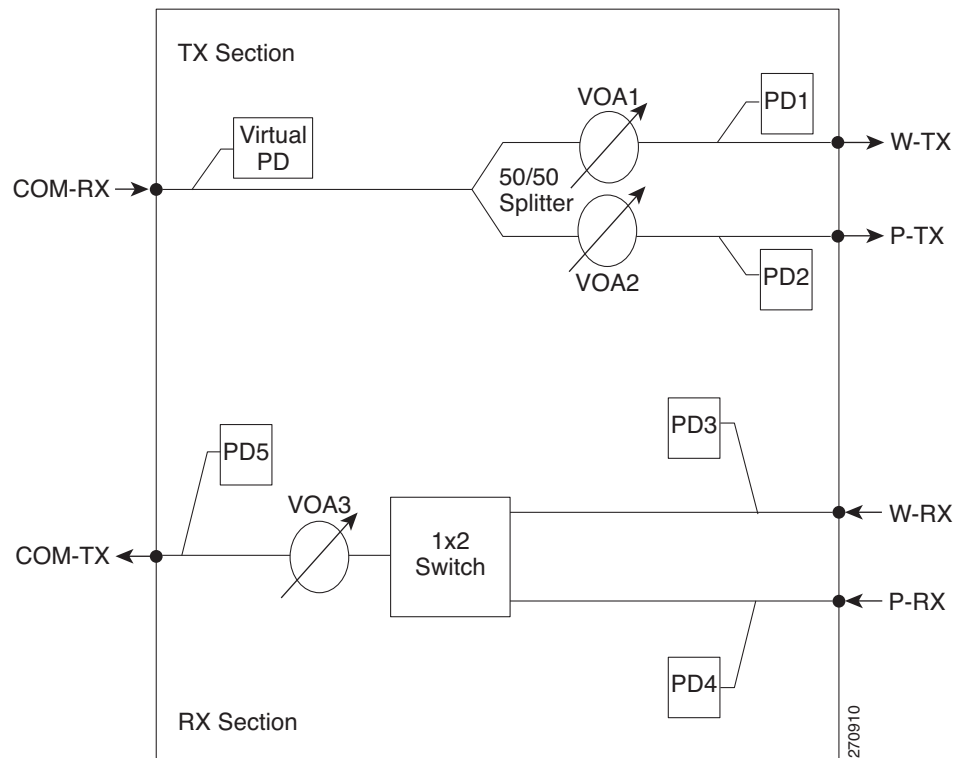
The following figure shows the PSM faceplate.

Figure C-50 PSM Faceplate



The following figure shows a simplified block diagram of the PSM.

Figure C-51 PSM Block Diagram



The optical VOA controls in a closed loop are performed by the PSM software. Under normal conditions, VOA1 and VOA2 function in an open loop at 0 dB attenuation. In a path section protection topology, during a restart of the standby path in Automatic Power Reduction (APR) mode, the corresponding VOA in the TX path works in power control mode. The optical power is limited to +8-dBm. Under normal conditions, VOA3 functions in attenuation control mode (closed loop).

For the PSM, the slot properties pane displays the following properties: Module View, Identification, Card, Optical Line, Auto Laser Shutdown, Protection, and Alarm Behavior.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-613 *Field Descriptions for the Identification Properties Pane*

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The equipment administration state. It can be: - IS—In Service - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Card

The Card Properties pane allows you to select the mode of the PSM card. The modes can be Normal or Standalone.

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information.

Table C-614 *Field Descriptions for the Optical Line Properties Pane*

Field	Description
Parameters	
Port Number	The port number.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Active Channels	Indicates how many channels the amplifier is carrying. The value generally reflects the number of provisioned channels.

Table C-614 Field Descriptions for the Optical Line Properties Pane (continued)

Field	Description
State	The port administration state. Choosing an administration state from the drop-down list and clicking Apply changes the port's service state unless network conditions prevent the change. Administration states include: • IS • IS, AINS • OOS, DSBLD • OOS, MT If the card mode is set to Standalone, the administrative state is In Service (IS) or Unlocked (for the ONS 15454 SDH). If the card mode is set to Normal, the administrative state is In Service, Automatic In Service (IS, AINS).
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i>. If the card mode is set to Standalone, the service state is IS-NR. If the card mode is set to Normal, the service state is OOS-AU, AINS.
Power	Shows the current power level per port.
AINS Soak	Auto in service soak. The determination of duration left before the traffic/termination transitions to IS state.
VOA Mode	Shows the current functional mode of the VOA: constant gain mode, constant power mode, or not in use (N/A).
VOA Attenuation Ref	Shows the attenuation value of the VOA when the VOA is set in attenuation mode. AINS and APC are the only functions that can modify this value.
VOA Attenuation Calib	Allows you to modify the attenuation value of the VOA, if necessary, when the VOA mode is set for constant attenuation.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Low (dBm)	Allows you to set the low power threshold.
Power High (dBm)	Allows you to set the high power threshold.
Alarm Thresh	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Failure Low (dBm)	Allows you to set the low power failure threshold.
VOA Degrade High	The upper VOA degrade threshold.
VOA Degrade Low	The lower VOA degrade threshold.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.



Note

The Auto Laser Shutdown Properties pane is configurable only if the PSM card is configured in path protection mode. In other configurations, this Properties pane is empty.

Table C-615 Field Descriptions for the Auto Laser Shutdown Properties Pane

Field	Description
OSRI	Allows you to turn the optical safety remote interlock (OSRI) on or off.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur.	Allows you to set the recovery laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int.	Allows you to set the recovery laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Currently Shut Down	Indicates whether the laser is currently shut down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

Protection

The Protection Properties pane allows you to view and update protection group information.

Table C-616 Field Descriptions for the Protection Properties Pane

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection groups and allows you to execute switch commands.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-617 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.

Table C-617 Field Descriptions for the Alarm Behavior Properties Pane (continued)

Field	Description
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—RAMAN-CTP and RAMAN-COP

(Cisco ONS 15454 M2 and ONS 15454 M6 only)

The single-slot RAMAN-CTP and RAMAN-COP cards support counter and copropagating RAMAN amplification on very long unregenerated spans.

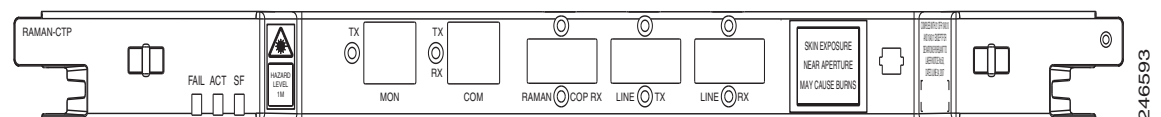
The cards manage up to 96 ITU-T, 50-GHz spaced channels over the C-band of the optical spectrum (wavelengths from 1528.77 nm to 1566.72 nm). The counter-propagating RAMAN-CTP card is the master unit. The copropagating RAMAN-COP card is the slave unit and can be used only when the counter-propagating unit is present.

The RAMAN-CTP and RAMAN-COP units must be installed in adjacent slots (Slots 2 and 3, 4 and 5, or 6 and 7) in the Cisco ONS 15454 M6 chassis and Slots 2 and 3 in the Cisco ONS 15454 M2 chassis.

The RAMAN-CTP unit is provided with three E-2000 PS PC connectors for the LINE-TX, LINE-RX, and RAMAN-COP-RX ports and three LC-UPC-II connectors for the COM-TX, COM-RX, and MON-TX ports. The RAMAN-COP unit is provided with one E-2000 PS PC connector. The E2000 PS PC patchcord is used to connect the RAMAN-COP unit to the RAMAN-COP-RX port on the RAMAN-CTP unit.

The features of the RAMAN-CTP and RAMAN-COP units include:

- RAMAN section—1000 mW total pump power for four pumps and two wavelengths
- Embedded distributed feedback (DFB) laser at 1568.77 nm to be used for optical safety and link continuity (in RAMAN-CTP card only)
- Photodiodes to enable monitoring of RAMAN pump power
- Photodiodes to enable monitoring of the DFB laser and signal power (in RAMAN-CTP card only)
- Hardware managed automatic laser shutdown (ALS) for optical laser safety
- Hardware output signals for loss of signal (LOS) monitoring at input photodiodes
- RAMAN pump back reflection detector to check for excessive back reflection

Figure C-52 RAMAN-CTP Faceplate

The RAMAN-COP card has only one optical port located on the faceplate. RAMAN-TX is the RAMAN copropagating output port.

Figure C-53 shows the RAMAN-COP card faceplate.

Figure C-53 RAMAN-COP Faceplate

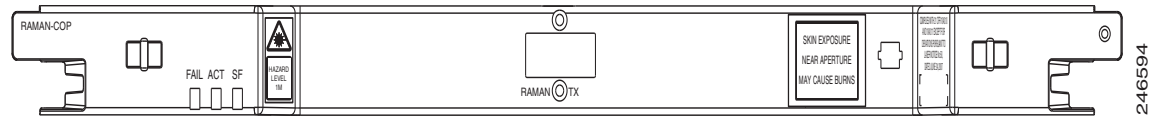
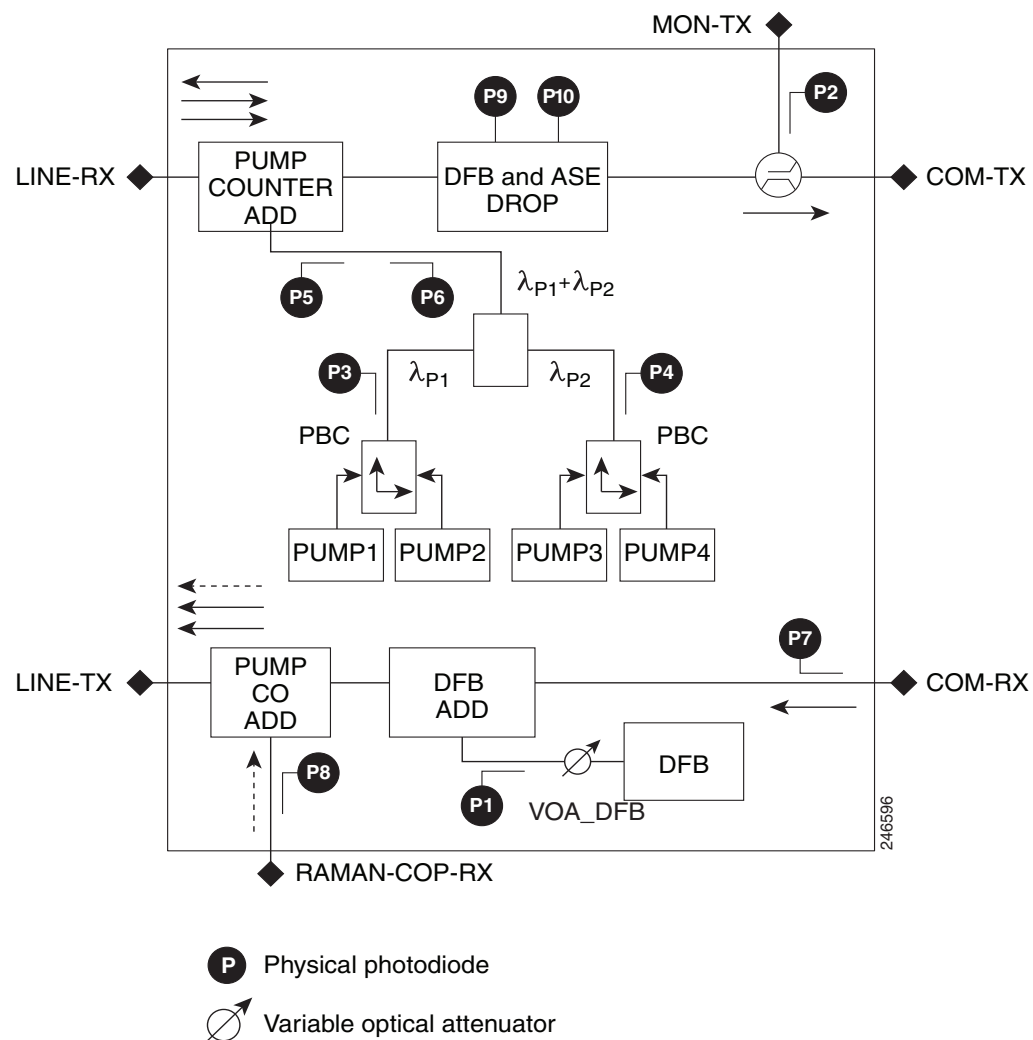


Figure C-54 shows a block diagram of how the RAMAN-CTP card functions.

Figure C-54 RAMAN-CTP Functional Block Diagram



Four Raman pump lasers (two for each wavelength) are combined internally and launched in-fiber at the LINE-RX port, thereby counter-propagating with the DWDM signal.

The two pump lasers at the same nominal central wavelength, power, and polarization are made orthogonally polarized by the polarization beam combiner (that rotates one of the laser beams) and then coupled, resulting in a depolarized beam. A DFB laser at 1568.77 nm is used for optical safety. Optical filters for DFB add and drop are present.

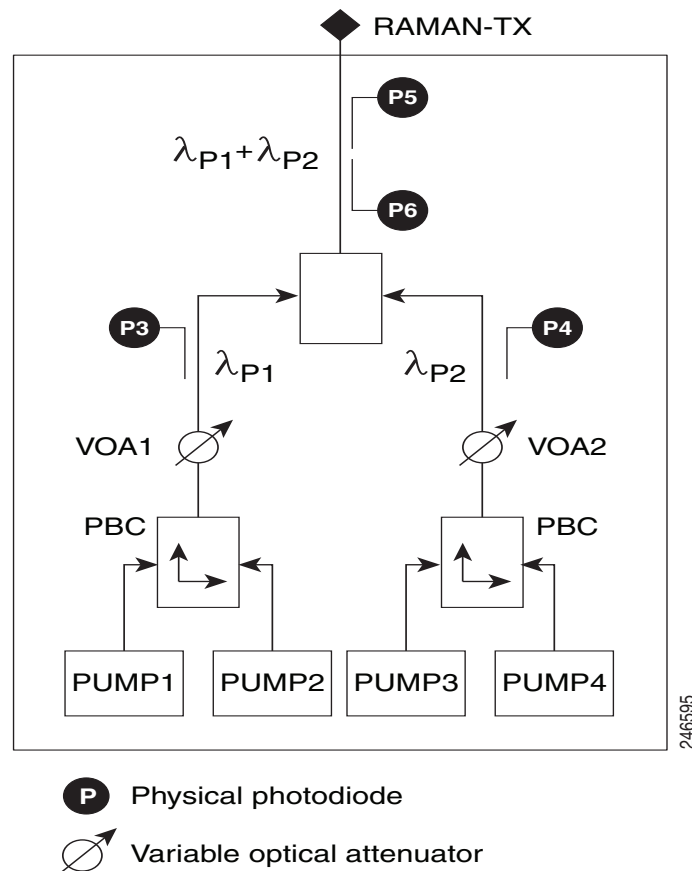
The DFB signal generated by the DFB laser is transmitted in-fiber, co-propagating with the DWDM signal. A MON-TX port monitors the DWDM signal at the COM-TX port. A total of ten photodiodes are provided, allowing monitoring of RAMAN pump (RP) power, DWDM signal power, and DFB signal power in each section of the card.

P8 measures the co-propagating RP power in-fiber (when the RAMAN-COP unit is present), while P6 detects the amount of RP power backscattered by the LINE-RX connector and transmission fiber. P1 measures the DFB signal power transmitted in-fiber while P9 and P10 measures the DFB signal and ASE power respectively, which is received from the other line site.

The insertion loss of the main optical path and the relative optical attenuation of the monitor port is stored in non-volatile memory of the card.

Figure C-55 shows a block diagram of how the RAMAN-COP card functions.

Figure C-55 15454-M-RAMAN-COP Functional Block Diagram



Four RAMAN pump lasers (two for each wavelength) are combined internally and launched in-fiber at the LINE-TX port of the counter-propagating unit, thereby co-propagating with the DWDM signal.

The two pump lasers at the same nominal central wavelength, power, and polarization are made orthogonally polarized by the polarization beam combiner (that rotates one of the laser beams) and then coupled, resulting in a depolarized beam.

A total of four photodiodes are provided, allowing the monitoring of RP power. In particular, P6 detects the amount of RP power backscattered by the LINE-RX connector and transmission fiber.

The slot properties pane displays the following properties: Identification, Module View, Card, Alarm Behavior, Auto Laser Shutdown, Installation, Inventory Protection, and Optical RAMAN Line.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-618 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-619 Field Descriptions for the Auto Laser Shutdown Properties Pane

Field	Description
Port Number	Displays the port number.
Type	Displays the port type.
OSRI	Allows you to turn the optical safety remote interlock (OSRI) on or off.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Displays the recovery laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int. (sec)	Displays the recovery laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Currently Shutdown	Indicates whether the laser is currently shut down.

Installation

The Installation Properties pane displays installation information.

Table C-620 **Field Descriptions for the Installation Properties Pane**

Field	Description
Username	Provides the string for user login for the setup.
Status	Displays whether Raman is tuned or not tuned.
Gain	Displays the actual Raman gain.
Actual Tilt	Displays the actual Raman tilt.
Date	Displays the date and time for the setup.
Power	Displays the Raman pump total power.
Ratio	Displays the Raman pump ratio.
Fiber Cut Recovery	Displays the status of the Restore from Fiber Cut operation. Valid values are: • Not Need • Failed • Executed • Pending
Fiber Cut Date	Displays the date when the Restore from Fiber Cut operation was executed.
S1 Low	Displays the power at node B when wavelength 1 is switched on at node A and the power is low.
S1 High	Displays the power at node B when wavelength 1 is switched on at node A and the power is high.
S2 Low	Displays the power at node B when wavelength 2 is switched on at node A and the power is low.
S2 High	Displays the power at node B when wavelength 2 is switched on at node A and the power is high.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-621 **Field Descriptions for the Inventory Properties Pane**

Field	Description
Attribute	Displays the card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of the attribute value.

Optical Line



Note

The Optical Line Properties pane applies to RAMAN-CTP only.

The Optical Line Properties pane allows you to view and update optical line threshold information.

Table C-622 *Field Descriptions for the Optical Line Properties Pane*

Tab	Description
Parameters	
Port Number	The port number.
Type	The port type.
Port Name	The port name.
State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).
Service State	An autonomously generated state that gives the overall condition of the entity.
Power	Shows the current power level per port.
Active Channels	Indicates how many channels the amplifier is carrying. The value generally reflects the number of provisioned channels.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.
Alarm Threshold	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Failure Low	Allows you to set the low power failure threshold.
Power Degrade High	Allows you to set the high power degrade threshold.
Power Degrade Low	Allows you to set the low power degrade threshold.
Gain Degrade Low	Allows you to set the low gain degrade threshold.
Gain Degrade High	Allows you to set the high gain degrade threshold.

Optical Raman Line

The Optical Raman Line Properties pane allows you to view and update optical Raman line information.

Table C-623 *Field Descriptions for the Optical Raman Line*

Field	Description
Parameters	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.

Table C-623 Field Descriptions for the Optical Raman Line (continued)

Field	Description
State	The port administration state. It can be: - IS, AINS—Automatic In Service - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Power	Shows the current power level per port.
Active Channels	Indicates how many channels the amplifier is carrying. The value generally reflects the number of provisioned channels.
Ratio	Displays the RAMAN pump ratio in percentage value.
Power Set-point	Displays the RAMAN pump expected total power.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, Output Line, Input Line, and Drop.
Power Min	Allows you to set the low power threshold.
Power Max	Allows you to set the high power threshold.
Alarm Thresh	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, Output Line, Input Line, and Drop.
Power Failure Low	Allows you to set the low power failure threshold.
Power Degrad High	Allows you to set the high power degrade threshold.
Power Degrad Low	Allows you to set the low power degrade threshold.

Slot Properties—SMR-C

The single-slot, 40-channel, single module ROADM (SMR-C) cards integrate the following functional blocks on a single line card:

- Optical preamplifier
- Optical booster amplifier
- Optical service channel (OSC) filter
- 2x1 wavelength cross-connect (WXC) or 4x1 WXC
- Optical channel monitor (OCM)

The SMR-C cards are available in two versions:

- 40-SMR1-C—Includes a 100-GHz, 1x2 WXC unit with integrated preamplifier unit (single erbium-doped fiber amplifier [EDFA]).

- 40-SMR2-C—Includes a 100-GHz, 1x4 WXC unit with integrated preamplifier and booster amplifier units (double EDFA).

The optical amplifier units in the SMR-C cards provide the following features:

- Embedded gain flattening filter.
- Midstage access for dispersion compensation unit (applicable only for preamplifier EDFA).
- Fixed output power mode.
- Fixed gain mode.
- Nondistorting, low-frequency transfer function.
- Amplified spontaneous emissions (ASE) compensation in fixed gain and fixed output power mode.
- Fast transient suppression.
- Programmable tilt (applicable only for preamplifier EDFA).
- Full monitoring and alarm handling capability.
- Optical safety support through signal-loss detection and alarm at any input port, fast power-down control, and reduced maximum output power in safe power mode.
- EDFA section calculates the signal power by taking into account the expected ASE power contribution to the total output power. The signal output power or the signal gain can be used as feedback signals for the EDFA pump power control loop.

The 1x2 WXC unit (40-SMR1-C card) provides the following features:

- Selection of individual wavelength of the aggregated 100-GHz signal from either the EXP-RX or ADD-RX ports
- Automatic VOA shutdown (AVS) blocking state on each wavelength and port
- Per-channel power regulation based on external OCM unit
- Open-loop, path attenuation control for each wavelength and port

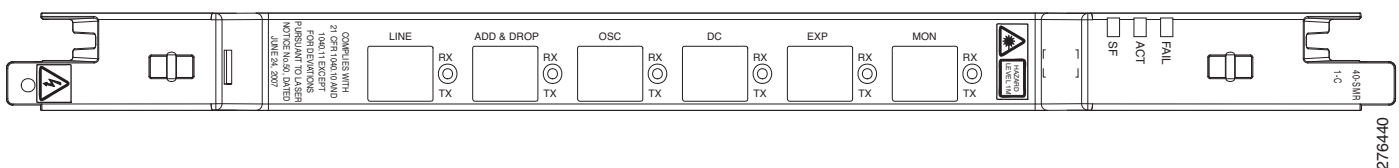
The 1x4 WXC unit (40-SMR2-C card) provides the following features:

- Selection of individual wavelength of the aggregated 100-GHz signal from either the EXP_{*i*}-RX (where *i* = 1, 2, 3) or ADD-RX ports
- AVS blocking state on each wavelength and port
- Per-channel power regulation based on external OCM unit
- Open-loop, path attenuation control for each wavelength and port

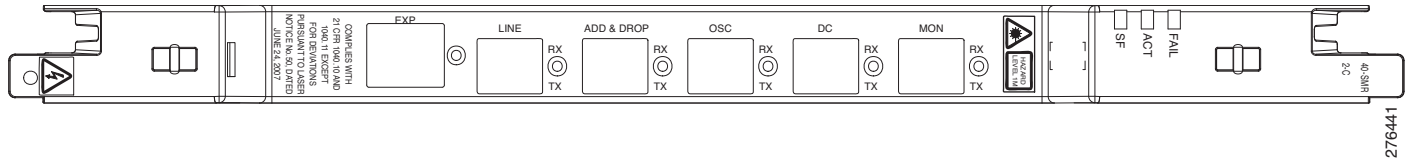
The OCM unit provides per-channel optical power monitoring at EXP-RX, ADD-RX, DROP-TX, and LINE-TX ports.

The following figure shows the faceplate of the 40-SMR1-C card.

Figure C-56 40-SMR1-C Faceplate



The following figure shows the faceplate of the 40-SMR2-C card.

Figure C-57 40-SMR2-C Faceplate

The slot properties pane displays the following properties: Module View, Identification, Optical Channel, Optical Line, Optical Amplified Line, Alarm Behavior, Auto Laser Shutdown, Inventory, Maintenance, and Wavelength Power.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-624 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format "V99_." The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Table C-624 Field Descriptions for the Identification Properties Pane (continued)

Field	Description
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Channel

The Optical Channel Properties pane allows you to view and update optical channel threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-470](#)
- [OCH Thresh 15 Min/1 Day Tabs, page C-471](#)
- [Alarm Thresh Tab, page C-471](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical channels. To view optical channels, select the wavelength from the wavelength drop-down list and click **Retrieve**.



Note

Wavelengths with two asterisks (**) denote available optical channels.

Table C-625 Field Descriptions for the Parameters Tab

Field	Description
Circuit Name	Optical channel name.
State	The port administration state. It can be: • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Direction (available in CTM R7.2 and earlier)	Allows you to associate a card with the line direction. Use this field if you have two cards on the same shelf and must designate which one will carry the traffic flow from east-to-west. The second card will carry traffic from west-to-east.
From	Displays the port from which the circuit starts.
Power From	Displays the power of the port to which the circuit starts.
VOA Power Ref.	Shows the value of the optical output power going to a VOA when constant power mode is active. Automatic Node Setup (ANS) is the only function that can modify this value.
VOA Power Calib.	Allows you to modify the optical output power to the VOA, if necessary.
To	Displays the port to which the circuit is connected.
Power To	Displays the power of the port to which the circuit is connected.
Attenuator Value	Displays the value of an external attenuator required by DWDM network design.

Table C-625 *Field Descriptions for the Parameters Tab (continued)*

Field	Description
Force Channel	Allows you to start the channel by moving the VOA from Open to Closed loop. You can force VOA only when the Force Channel Status is in the Unlocked state.
Force Channel Status	Displays the channel status. The different statuses are: - Unlocked—Can force channel startup. - Locked—Cannot force channel startup as the device is under control of other functions like Optical safety. - Forced—Channel startup has already been forced.

OCH Thresh 15 Min/1 Day Tabs

The OCH Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation. To view optical channels, select both wavelength and port type from the drop-down lists and click **Retrieve**.

**Note**

Wavelengths with two asterisks (**) denote available optical channels.

Table C-626 *Field Descriptions for the OCH Thresh 15 Min/1 Day Tabs*

Field	Description
Circuit Name	Displays the name of the circuit.
Actual Wavelength	Shows the wavelength specified by the manufacturing data. This field cannot be set manually.
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Type	Identifies the type of port, which can be: 40-SMR1-C—DC-TX, DC-RX, OSC-TX, OSC-RX, ADD-RX, DROP-TX, LINE-RX, EXP-TX, and EXP-RX. 40-SMR2-C—EXP-TX 1-1, EXP-RX 1-2, EXP-TX 1-3, and EXP-TX 1-4.
Power Low (dBm)	Allows you to set the low power settings.
Power High (dBm)	Allows you to set the high power settings.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation. To view optical channels, select both wavelength and port type from the drop-down lists and click **Retrieve**.

**Note**

Wavelengths with two asterisks (**) denote available optical channels.

Table C-627 *Field Descriptions for the Alarm Thresh Tab*

Field	Description
Circuit Name	Displays the name of the circuit.
Actual Wavelength	Shows the wavelength specified by the manufacturing data. This field cannot be set manually.
Port Number	Displays the identifier of the port (and specific channel information: Add, Drop, Tx, or Rx).
Type	Identifies the type of port, which can be: 40-SMR1-C—DC-TX, DC-RX, OSC-TX, OSC-RX, ADD-RX, DROP-TX, LINE-RX, EXP-TX, and EXP-RX. 40-SMR2-C—EXP-TX 1-1, EXP-RX 1-2, EXP-TX 1-3, and EXP-TX 1-4.
Power Failure Low (dBm)	Displays the threshold of low power failure on the channel port. The crossing of this threshold generates an LOS-P alarm.
Power Degrade High (dBm)	Allows you to set the high power settings.
Power Degrade Low (dBm)	Allows you to set the low power settings.

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-472](#)
- [Warning Thresh 15 Min/1 Day Tabs, page C-473](#)
- [Alarm Thresh Tab, page C-474](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors.

Table C-628 *Field Descriptions for the Parameters Tab*

Field	Description
Port Number	The port number.
Type	Identifies the type of port, which can be: 40-SMR1-C—DC-TX, DC-RX, OSC-TX, OSC-RX, ADD-RX, DROP-TX, LINE-RX, EXP-TX, and EXP-RX. 40-SMR2-C—EXP-TX 1-1, EXP-RX 1-2, EXP-TX 1-3, and EXP-TX 1-4.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.

Table C-628 Field Descriptions for the Parameters Tab (continued)

Field	Description
State	The port administration state. Choosing an administration state from the drop-down list and clicking Apply changes the port's service state unless network conditions prevent the change. Administration states include: - IS, AINS—In Service. The port service state changes to IS_NR. - OOS, DSBLD—Out of Service, Disabled. The port service state changes to OOS_MA, DSBLD. - OOS, MT—Out of Service, Maintenance. The port service state changes to OOS_MA, MT. For loopbacks, the OOS, MT Administration State must be initiated.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Active Channels	Indicates how many channels the card/port is carrying. The value generally reflects the number of provisioned channels passing through the port.
Power	Shows the current power level per port.
VOA Mode	Shows the current functional mode of the VOA. The value is not provisionable and is read from the card.
VOA Attenuation Ref.	Shows the attenuation reference value of the VOA. The value is established by the manufacturer.
VOA Attenuation Calib.	Allows you to modify the attenuation value of the VOA, per channel, if necessary. The sum of the Power Reference and Power Calibration, for each single channel, defines the Power Set Point.
OSC Power	Displays the OSC power of the port. The values can be: 40SMR1-C card—OSC POWER is read on ports 5, 6, 9, and 10. For the other ports, the value is N.A. - SMR2—OSC POWER is read on the ports 3, 4, and 7. For the other ports, the value is N.A.
Attenuator Value	Displays the value of an external attenuator required by DWDM network design

Warning Thresh 15 Min/1 Day Tabs

The Warning Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-629 Field Descriptions for the Warning Thresh 15 Min/1 Day Tabs

Field	Description
Port Number	The port number.
Type	Identifies the type of port, which can be: 40-SMR1-C—DC-TX, DC-RX, OSC-TX, OSC-RX, ADD-RX, DROP-TX, LINE-RX, EXP-TX, and EXP-RX. 40-SMR2-C—EXP-TX 1-1, EXP-RX 1-2, EXP-TX 1-3, and EXP-TX 1-4.
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.
OSC Power Low	Allows you to set the low OSC power threshold.
OSC Power High	Allows you to set the high OSC power threshold.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-630 Field Descriptions for the Alarm Thresh Tab

Field	Description
Port Number	The port number.
Type	Identifies the type of port, which can be: 40-SMR1-C—DC-TX, DC-RX, OSC-TX, OSC-RX, ADD-RX, DROP-TX, LINE-RX, EXP-TX, and EXP-RX. 40-SMR2-C—EXP-TX 1-1, EXP-RX 1-2, EXP-TX 1-3, and EXP-TX 1-4.
Power Failure Low	Allows you to set the low power failure threshold.
Power Degrade High	Allows you to set the high power degrade threshold.
Power Degrade Low	Allows you to set the low power degrade threshold.
OSC Power Degrade Low	Allows you to set the low OSC power degrade threshold.
OSC Power Degrade High	Allows you to set the high OSC power degrade threshold.
OSC Power Failure Low	Allows you to set the low OSC power failure threshold.

Optical Amplified Line

The Optical Amplified Line Properties pane allows you to view and update optical amplified line threshold information. The Properties pane contains the following tabs:

- [Parameters Tab, page C-474](#)
- [Warning Thresh 15 Min/1 Day Tabs, page C-475](#)
- [Alarm Thresh Tab, page C-476](#)

Parameters Tab

The Parameters tab provides information on the status and directions specified for the optical connectors.

Table C-631 Field Descriptions for the Parameters Tab

Field	Description
Port Number	The port number.
Type	Identifies the type of port, which can be: 40-SMR1-C—DC-TX, DC-RX, OSC-TX, OSC-RX, ADD-RX, DROP-TX, LINE-RX, EXP-TX, and EXP-RX. 40-SMR2-C—EXP-TX 1-1, EXP-RX 1-2, EXP-TX 1-3, and EXP-TX 1-4.
Port Name	Allows you to assign the specified port a user-defined name. The port name can be up to 32 alphanumeric or special characters. The port name is blank by default.

Table C-631 Field Descriptions for the Parameters Tab (continued)

Field	Description
State	The port administration state. It can be: - IS—In Service. - IS, AINS—Automatic In Service. - OOS, DSBLD—Out of Service, Disabled. - OOS, MT—Out of Service, Maintenance.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Total Output Power	Shows the current power level per port.
Channel Power Ref.	Shows the channel power setpoint.
Output Power Setpoint	Shows the total optical power going to the amplifier.
Offset	Allows you to manually set the total optical power going to the amplifiers.
Mode	Shows the working mode of the amplifier: control gain or control power.
Signal Output Power	Shows the current output power leaving the amplifier, including the ASE contribution.
Gain	The current gain of the amplifiers.
Gain Set Point	The value of the gain that the amplifier must achieve. The value is display-only or numeric depending on the mode setting. When the system is configured as metro core, this field is display-only. When the system is configured as metro access, this field is configurable.
Tilt Reference	This field is set to zero. It represents the default value for the amplifier tilt. In a future software release this value will be managed by APC.
Tilt Calibration	Allows you to manually set the amplifier tilt.
OSC Power	Displays the OSC power of the port. The values can be: - SMR1—For port 5, 6, 9, and 10. - SMR2—For port 3, 4, and 7.
DCU Insertion Loss	The dispersion compensation unit (DCU) insertion loss.
Active Channels	Indicates how many channels the amplifier is carrying. The value generally reflects the number of provisioned channels.

Warning Thresh 15 Min/1 Day Tabs

The Warning Thresh 15 Min/1 Day tabs allow you to set thresholds for 15-minute threshold crossing alert generation.

Table C-632 Field Descriptions for the Warning Thresh 15 Min/1 Day Tabs

Field	Description
Port Number	The port number.
Type	Identifies the type of port, which can be: 40-SMR1-C—DC-TX, DC-RX, OSC-TX, OSC-RX, ADD-RX, DROP-TX, LINE-RX, EXP-TX, and EXP-RX. 40-SMR2-C—EXP-TX 1-1, EXP-RX 1-2, EXP-TX 1-3, and EXP-TX 1-4.

Table C-632 Field Descriptions for the Warning Thresh 15 Min/1 Day Tabs (continued)

Field	Description
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.
OSC Power Low	Allows you to set the low OSC power threshold. Note This field is applicable only for port 8 of 40-SMR2-C cards.
OSC Power High	Allows you to set the high OSC power threshold. Note This field is applicable only for port 8 of 40-SMR2-C cards.

Alarm Thresh Tab

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-633 Field Descriptions for the Alarm Thresh Tab

Field	Description
Port Number	The port number.
Type	Identifies the type of port, which can be: 40-SMR1-C—DC-TX, DC-RX, OSC-TX, OSC-RX, ADD-RX, DROP-TX, LINE-RX, EXP-TX, and EXP-RX. 40-SMR2-C—EXP-TX 1-1, EXP-RX 1-2, EXP-TX 1-3, and EXP-TX 1-4.
Power Failure Low	Allows you to set the low power failure threshold.
Power Degrade High	Allows you to set the high power degrade threshold.
Power Degrade Low	Allows you to set the low power degrade threshold.
Gain Degrade Low	Allows you to set the low gain degrade threshold.
Gain Degrade High	Allows you to set the high gain degrade threshold.
OSC Power Failure High	Allows you to set the high OSC power failure threshold.
OSC Power Failure Low	Allows you to set the low OSC power failure threshold.
OSC Power Degrade High	Allows you to set the high OSC power degrade threshold.
OSC Power Degrade Low	Allows you to set the low OSC power degrade threshold.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-634 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-635 *Field Descriptions for the Auto Laser Shutdown Properties Pane*

Field	Description
Port Number	Displays the port number.
Type	Displays the port type. Values are: • ADD RX—Used to add channels. • DROP-TX—Used to drop channels. • EXP RX—Receives an optical signal from another SMR module in the same NE. • EXP TX—Sends an optical signal to the another SMR module in the same NE. • OSC-TX—Transmits the optical service channel to the OSCM or OSC-CSM. • OSC-RX—Receives the optical service channel from the OSCM or OSC-CSM. • LINE TX—Sends an aggregate optical signal for transmission outside of the NE. • LINE RX—Receives the optical signal from another node in the network.
OSRI	Allows you to turn the optical safety remote interlock (OSRI) on or off.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the recovery laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int. (sec)	Allows you to set the recovery laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Currently Shutdown	Indicates whether the laser is currently shut down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-636 *Field Descriptions for the Inventory Properties Pane*

Field	Description
Attribute	Displays the card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of the attribute value.

Maintenance

The Maintenance Properties pane allows you to display the insert and return values for each wavelength.

Table C-637 *Field Descriptions for the Maintenance Properties Pane*

Field	Description
Insert Value	
Target Power	Displays the default target power, in dBm. The value is retrieved from the ANS parameter for the side where the card is inserted. You can edit this field with a new value as needed.
Input Port	Displays the input port number.
Wavelength	Displays the wavelength assigned to the channel. Maintenance mode is known as lambda zero. You can use this mode when you do not want to use one of the system channels. For example, maintenance can be used in a degree upgrade when the system is up and running. Also, during installation, you can use maintenance or one of the system channels, depending on your site requirements.
Return Value LINE-TX on Selected Wavelength	
Actual Power	Displays the value returned by the card. This field indicates that the power on the cross-connection was created with the selected lambda and the incoming port that is calculated on the LINE-TX port.
Refresh	Updates the actual power that is displayed in the Actual Power field.
Delete	Stops the unit from working in maintenance mode for the given port and lambda. You must click Delete when maintenance is complete. Exiting this screen without clicking Delete does not stop the maintenance mode.

Wavelength Power

The Wavelength Power Properties pane displays wavelength power data. To view optical channels, select the port type from the port drop-down list and click **Retrieve**.

Table C-638 *Field Descriptions for the Wavelength Power Properties Pane*

Field	Description
Wavelength	Displays the wavelength number.
Measured Power	Displays the power.
Status	Displays the status.
Used	Whether or not the wavelength is being used. Values are Yes and No.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—T-DCU (TDC-CC and TDC-FC)

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The T-DCU is a card that compensates for chromatic dispersion (CD) of the transmission fiber. The T-DCU enables faster troubleshooting of the network. The T-DCU card provides a selectable set of discrete negative chromatic dispersion values to compensate for chromatic dispersion of the transmission line. The card operates over the entire C-band (in the range of 1529.0 nm to 1562.5 nm) and monitors the optical power at the input and the output ports. The T-DCU provides two line cards with a varied set of tunable wavelengths to compensate for CD:

- TDC-CC (Coarse T-DCU)—Provides 16 values of CD ranging from 0 to –1650 ps/nm with a granularity of 110 ps/nm in the C-band spectrum.
- TDC-FC (Fine T-DCU)—Provides 16 values of CD ranging from 0 to –675 ps/nm with a granularity of 45 ps/nm in the C-band spectrum.

The TDC-CC and TDC-FC cards have the following high-level features:

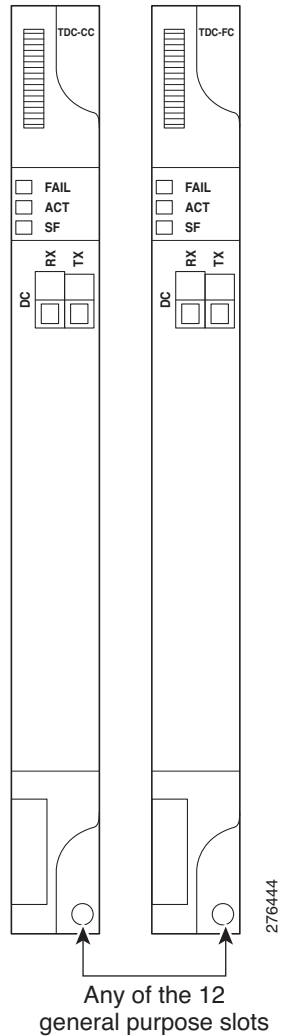
- Single slot card with three LEDs on the front panel.
- Two LC-PC-II optical connectors on the front panel.
- Operates in slots 1 to 6 and 12 to 17.
- Operates over the C-band (wavelengths from 1529 nm to 1562.5 nm) of the optical spectrum.
- Allows up to 16 provisionable CD values for chromatic dispersion compensation.
- Connects to OPT-PRE, OPT-AMP-C, OPT-RAMP-C, and OPT-RAMP-CE amplifiers and 40-SMR-1 and 40-SMR-2 cards.
- Supports performance monitoring and alarm handling for selectable thresholds.
- Allows monitoring and provisioning using CTC, SNMP, or TL1.

The TDC-CC and TDC-FC cards monitor the Optical Input Power and Optical Output Power of the fiber. The cards monitor the insertion loss from the input (DC-RX) to the output (DC-TX) port, with the help of the two photodiodes PD1 and PD2. The cards report the minimum, average, and maximum power statistics of each of the monitored ports or channels. The performance data is recorded in 15-minute and 24-hour intervals.

**Note**

The PM data is stored on a wrap-around basis at 32 x 15-minute and 2 x 24-hour intervals.

The following figure shows the faceplate of a TDC-CC and TDC-FC card.

Figure C-58 TDC-CC and TDC-FC Faceplate**Note**

In the T-DCU card faceplate, the coarse T-DCU is identified with the label “TDC-CC.” The fine T-DCU is identified with the label “TDC-FC.”

Each card has one set of optical ports located on the faceplate.

The slot properties pane displays the following properties: Module View, Identification, Optical Line, Alarm Behavior, Card, and Inventory.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update card identification information.

Table C-639 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Admin State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Optical Line

The Optical Line Properties pane allows you to view and update optical line threshold information.

Table C-640 Field Descriptions for the Optical Line Properties Pane

Tab	Description
Parameters	
Port Number	The port number.
Type	The port type.
Port Name	The port name.

Table C-640 *Field Descriptions for the Optical Line Properties Pane (continued)*

Tab	Description
State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).
Service State	An autonomously generated state that gives the overall condition of the entity.
Power	Shows the current power level per port.
Active Channels	Indicates how many channels the amplifier is carrying. The value generally reflects the number of provisioned channels.
Warning Thresh 15 Min/1 Day	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Low	Allows you to set the low power threshold.
Power High	Allows you to set the high power threshold.
Alarm Threshold	
Port Number	The port number.
Type	Identifies the type of port, such as Output Express, Input Express, Output COM, Input COM, and Drop.
Power Failure Low	Allows you to set the low power failure threshold.
Power Degrade High	Allows you to set the high power degrade threshold.
Power Degrade Low	Allows you to set the low power degrade threshold.
Gain Degrade Low	Allows you to set the low gain degrade threshold.
Gain Degrade High	Allows you to set the high gain degrade threshold.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-641 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Port Number	Displays the card port number.
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Card

The Card Properties pane allows you to view and update the compensation value.

Inventory

The Inventory Properties pane allows you to view the card inventory information.

Table C-642 Field Descriptions for the Inventory Properties Pane

Field	Description
PID	Displays the product ID (PID) code.
VID	Displays the version ID (VID) code.
Vendor ID	The ID of the vendor.
Part Number	The part number that is printed on the top of the card.
FW Version	The revision number of the software used by the ASIC chip installed on the card.
HW Version	The hardware version number.
Serial Number	The serial number that is unique to each card.
IL01 (LINE RX->TX)	The insertion loss between the specified ports.
IL-REF	The reference insertion loss.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—TXP_MR_10E

The TXP_MR_10E card is a multirate transponder for the ONS 15454 platform. The card is fully backward compatible with the TXP_MR_10G card. It processes one 10-Gb/s signal (client side) into one 10-Gb/s, 100-GHz DWDM signal (trunk side) that is tunable over four wavelength channels (spaced at 100 GHz on the ITU grid) in the C-band and tunable over eight wavelength channels (spaced at 50 GHz on the ITU grid) in the L-band. There are eight versions of the C-band card, with each version covering four wavelengths, for a total coverage of 32 wavelengths. There are five versions of the L-band card, with each version covering eight wavelengths, for a total coverage of 40 wavelengths.

The TXP_MR_10E_C cards are multirate transponders for the ONS 15454 platform. The cards are fully backward compatible with the TXP_MR_10G and TXP_MR_10E cards. They process one 10-Gb/s signal (client side) into one 10-Gb/s, 100-GHz DWDM signal (trunk side). The TXP_MR_10E_C is tunable over the entire set of C-band wavelength channels (82 channels spaced at 50 GHz on the ITU grid). The advantage of these cards over previous versions (TXP_MR_10G and TXP_MR_10E) is that there is only one version of each card (one C-band version) instead of several versions needed to cover each band.

**Note**

When an MLSE transponder module is installed on the TXP_MR_10E_C card, Prime Optical displays the card as TXP_MR_10EX.

You can install these cards in slots 1 to 6 and 12 to 17 and provision the cards in a linear configuration, BLSR/MS-SPRing, path protection/SNCP, or regenerator. The card can be used in the middle of BLSR/MS-SPRing or 1+1 spans when the card is configured for transparent termination mode.

The TXP_MR_10E card features a 1550-nm tunable laser (C-band) or a 1580-nm tunable laser (L-band) for the trunk port and a separately orderable ONS-XC-10G-S1 1310-nm or ONS-XC-10G-L2 1550-nm laser XFP module for the client port.

**Note**

When the ONS-XC-10G-L2 XFP is installed, the TXP_MR_10E card must be installed in slots 6, 7, 12, or 13.

Prime Optical supports IB_5G payload on the TXP_MR_10E card. PM and TCA are not supported for the IB_5G payload type.

Perform the following steps to provision the payloads:

Step 1 Click the **PPM Properties** pane and create a PPM for port 1.

Step 2 Provision the rate IB_5G by selecting the rate from the **Port Rate** drop-down list.

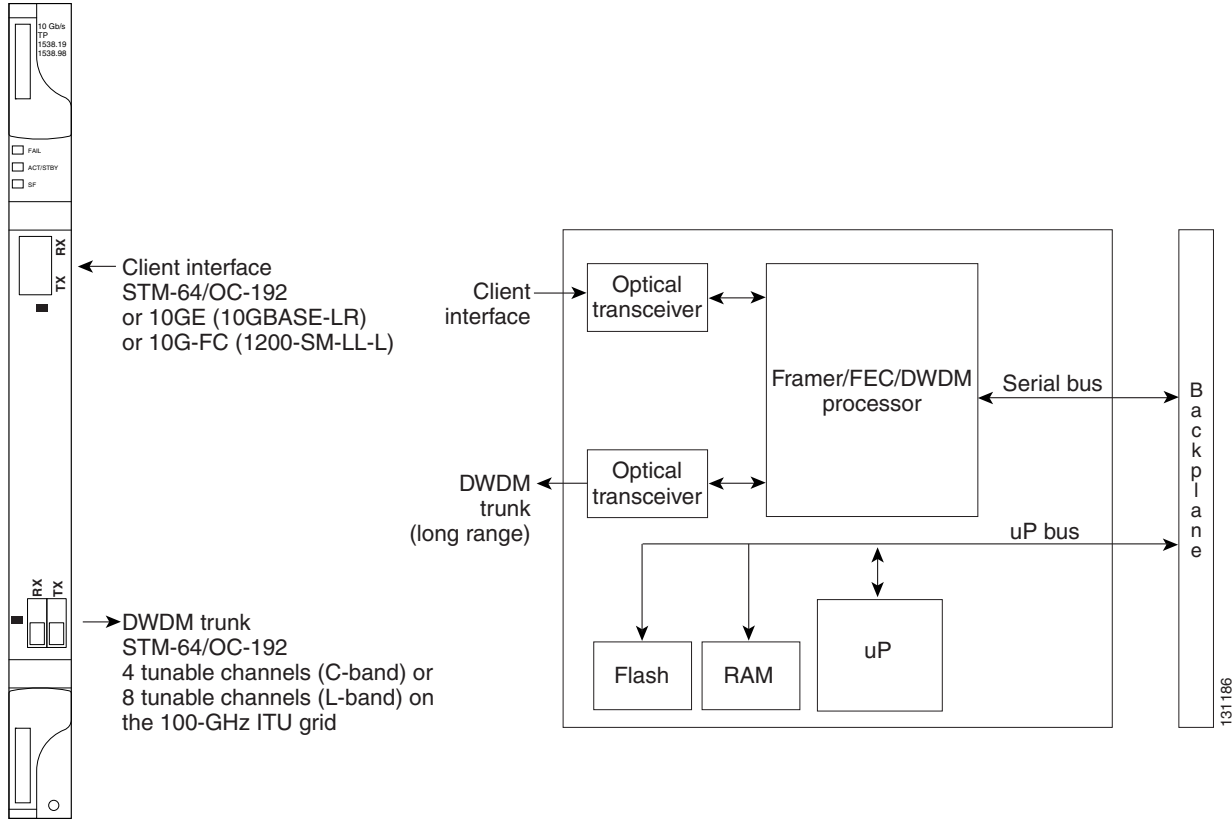
**Note**

By default, FEC and G.709 OTN are enabled. If they are disabled, you cannot provision the rate IB_5G.

The key features of the TXP_MR_10E card are:

- A tri-rate client interface (available through the ONS-XC-10G-S1 XFP, ordered separately)
 - OC-192 (SR1)
 - 10GE (10GBASE-LR)
 - 10G-FC (1200-SM-LL-L)
- OC-192 to ITU-T G.709 OTU2 provisionable synchronous and asynchronous mapping

On its faceplate, the TXP_MR_10E card contains two transmit and receive connector pairs, one for the trunk port and one for the client port. Each connector pair is labeled.

Figure C-59 TXP_MR_10E Faceplate and Block Diagram

For the card selected, the slot properties pane displays the following properties: Module View, Identification, Card, PPM, Line, OTN, Loopback, Auto Laser Shutdown, Optical Thresh, Alarm Behavior, Protection, and Info.

**Note**

The properties shown depend on the NE configuration.

Module View

The Module View displays a graphic that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update identification information.

Table C-643 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The equipment administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Suppress Alarms	When checked, all alarms are suppressed for the port.

Card

The Card Properties pane allows you to view and update card information.

Table C-644 Field Descriptions for the Card Properties Pane

Field	Description
Termination Mode	Allows you to set the mode of termination.
AIS/Squelch Configuration	Allows you to configure the remote client to squelch or send an AIS signal.
Regeneration Peer Slot	Allows you to select like cards so that you can configure a regeneration peer group.
Regeneration Group Name	(Optional) Allows you to set the name of the regeneration group.

PPM

The PPM Properties pane allows you to view and provision the PPM and the ports inside the PPM.

Table C-645 Field Descriptions for the PPM Properties Pane

Field	Description
Pluggable Port Modules	
Pluggable Number	Displays the identifier of the plugin module.
Actual Equipment Type	Displays the actual plugin module that is installed in the slot.
Equipment State	Displays the equipment state of the plugin module.
Admin State	Displays the status of the plugin module: In Service (IS); Out of Service–Maintenance (OOS_MT); Unlocked; or Locked, Maintenance. Note You can edit the Admin State value only for actual equipment, not preprovisioned equipment.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
PPM	
Port	Displays the PPM number and port number.
Rate	Displays the port rate.

Provision Pluggable Dialog Box

Click the **Create** button to launch the Provision Pluggable dialog box. This dialog box allows you to provision the PPM and to create the ports inside this entity. See [Provision Pluggable Dialog Box, page C-25](#) for more information.

Line

The Line Properties pane allows you to configure line information.

If the card is installed on an ONS 15454 SONET NE, the Properties pane contains the following tabs:

- [10G FibCh. Line Config Tab, page C-488](#)
- [10GE Line Config Tab, page C-489](#)
- [Section Trace Tab, page C-491](#)
- [SONET Line Tab, page C-491](#)
- [Section Thresh 15 Min/1 Day Tabs, page C-492](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-493](#)
- [Wavelength Trunk Settings Tab, page C-493](#)
- [Error Decorrelator Settings Tab, page C-494](#)
- [RMON Thresholds Tab, page C-494](#)

If the card is installed on an ONS 15454 SDH NE, the Properties pane contains the following tabs:

- [10G FibCh. Line Config Tab, page C-494](#)
- [10GE Line Config Tab, page C-496](#)

- [Section Trace Tab, page C-497](#)
- [SDH Line Tab, page C-498](#)
- [RS Thresh 15 Min/1 Day Tabs, page C-499](#)
- [MS Thresh 15 Min/1 Day Tabs, page C-500](#)
- [Wavelength Trunk Settings Tab, page C-500](#)
- [Error Decorrelator Settings Tab, page C-500](#)
- [RMON Thresholds Tab, page C-501](#)

**Note**

The following information is the same if the payload is SDH on an ONS 15454 SONET NE.

10G FibCh. Line Config Tab

The 10G FibCh. Line Config tab allows you to provision the 10G FiberChannel PPM parameters of a TXP_MR_10E card.

Table C-646 **Field Descriptions for the 10G FibCh. Line Config Tab**

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a port name.
Administration State	The port administration state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.

Table C-646 Field Descriptions for the 10G FibCh. Line Config Tab (continued)

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

10GE Line Config Tab

The 10GE Line Config tab allows you to provision the 10GE PPM parameters of a TXP_MR_10E card.

Table C-647 Field Descriptions for the 10GE Line Config Tab

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a port name.
Administration State	The port administration state.

Table C-647 Field Descriptions for the 10GE Line Config Tab (continued)

Field	Description
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.
Incoming MAC Address	Allows you to edit the incoming MAC address.
Max. Size	To permit the acceptance of jumbo-size Ethernet frames, select Jumbo (default). If you do not want to permit jumbo-size Ethernet frames, select 1548.

Section Trace Tab

The Section Trace tab allows you to change the section trace settings for the card.

Table C-648 *Field Descriptions for the Section Trace Tab*

Field	Description
Port Number	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string. The trail trace identifier is either 1 or 16 bytes.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.

SONET Line Tab

The SONET Line tab allows you to view and change the SONET line settings of the card.

Table C-649 *Field Descriptions for the SONET Line Tab*

Field	Description
Port Number	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
SF BER	Sets the signal fail bit error rate.
SD BER	Sets the signal degrade bit error rate.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Send Do Not Use	When checked, sends a do not use (DUS) message on the S1 byte.
Provides Sync	When checked, the card is provisioned as an NE timing reference.
Enable Sync Msg	When checked, enables synchronization status messages, which allow the node to choose the best timing source.
Type	Displays the type of port.

Table C-649 Field Descriptions for the SONET Line Tab (continued)

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

Section Thresh 15 Min/1 Day Tabs

The Section Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute section threshold information for the card.

Table C-650 Field Descriptions for the Section Thresh 15 Min/1 Day Tabs

Field	Description
Near End	
Port Number	Displays the port number.
CV-S	Displays the coding violations section.

Table C-650 *Field Descriptions for the Section Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
ES-S	Displays the errored seconds section.
SES-S	Displays the severely errored seconds section.
SEFS-S	Displays the severely errored framing seconds section.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day line threshold information for the card.

Table C-651 *Field Descriptions for the Line Thresh 15 Min/1-Day Tabs*

Field	Description
Near End, Far End	
Port Number	Displays the optical port number.
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.
CV-L	Displays the coding violations line.
UAS-L	Displays the unavailable seconds line information.
FC-L	Displays the failure count line.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Wavelength Trunk Settings Tab

The Wavelength Trunk Settings tab allows you to change the wavelength and band settings for the card.

Table C-652 *Field Descriptions for the Wavelength Trunk Settings Tab*

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Wavelength	Allows you to provision the wavelength frequency. The Wavelength column lists the correct wavelengths, depending on the type of card and the band selected. Refer to the <i>Other Information</i> field in the Equipment Inventory table for details of wavelengths supported. See Equipment Inventory Table for CTC-Based NEs, page 11-12 .
Band	The Band column reduces the number of selectable wavelengths (82/80 lambdas only). When the card is plugged in, the selection is disabled and the correct value of the band is displayed. When the card is preprovisioned, you can select either L- or C-band.

Error Decorrelator Settings Tab



Note

This tab appears only when the MLSE transponder module is installed.

The Error Decorrelator Settings tab allows you to enable or disable Prime Optical from retrieving the error decorrelator value.

Table C-653 Field Descriptions for the Error Decorrelator Settings Tab

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a port name.
Error Decorrelator	Allows you to enable or disable Prime Optical from retrieving the error decorrelator value.

RMON Thresholds Tab

The RMON Thresholds tab allows you to view RMON thresholds for the MXP_MR_10DME-C and MXP_MR_10DME-L cards.

Table C-654 Field Descriptions for the RMON Thresholds Tab

Field	Description
Index No.	Displays the selected interface number.
Slot	Displays the selected card.
Port	Displays the port on the selected card.
Variable	Displays the MIB variable that is being monitored.
Alarm Type	Indicates whether the event is triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	Indicates whether the sample type is relative or absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period (sec)	Displays the sample period, in seconds.
Rising Thresholds (count)	Displays the number of occurrences for the rising threshold.
Falling Thresholds (count)	Displays the number of occurrences for the falling threshold. In most cases, the falling threshold is set lower than the rising threshold.
Create	Click the Create button to create a threshold for the POS ports.
Delete	Select a threshold from the list displayed and click the Delete button.

10G FibCh. Line Config Tab

The 10G FibCh. Line Config tab allows you to provision the 10G FiberChannel PPM parameters of a TXP_MR_10E card.

Table C-655 **Field Descriptions for the 10G FibCh. Line Config Tab**

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a port name.
Administration State	The port administration state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

10GE Line Config Tab

The 10GE Line Config tab allows you to provision the 10GE PPM parameters of a TXP_MR_10E card.

Table C-656 **Field Descriptions for the 10GE Line Config Tab**

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a port name.
Administration State	The port administration state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.

Table C-656 *Field Descriptions for the 10GE Line Config Tab (continued)*

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

Section Trace Tab

The Section Trace tab allows you to change the section trace settings for the card.

Table C-657 *Field Descriptions for the Section Trace Tab*

Field	Description
Port Number	The port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.

Table C-657 Field Descriptions for the Section Trace Tab (continued)

Field	Description
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string; sets a new transmit string.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.

SDH Line Tab

The SDH Line tab allows you to view and change the SDH line settings of the card.

Table C-658 Field Descriptions for the SDH Line Tab

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
State	Displays the port administration state. Choosing an administration state from the drop-down list and clicking Apply changes the port's service state unless network conditions prevent the change. Administration states include: - unlocked—Puts the port in service. The port service state changes to unlocked-enabled. - unlocked,automaticInService—Puts the port in automatic in-service. The port service state changes to unlocked-disabled,automaticInService. - locked-disabled—Removes the port from service and disables it. The port service state changes to locked-enabled,disabled. - locked,maintenance—Removes the port from service for maintenance. The port service state changes to locked-enabled,maintenance.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
ALS Mode	Allows you to select the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Type	Defines the port as SONET or SDH.
ProvidesSync	When checked, the card is provisioned as an NE timing reference.
EnableSyncMsg	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Send DoNotUse	When checked, sends a do not use (DUS) message on the S1 byte.

Table C-658 *Field Descriptions for the SDH Line Tab (continued)*

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

RS Thresh 15 Min/1 Day Tabs

The RS Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day regeneration section threshold for the card.

Table C-659 *Field Descriptions for the RS Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	The port number.
EB-RS	Errored blocks regenerator section.
ES-RS	Errored seconds regenerator section.

Table C-659 *Field Descriptions for the RS Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
BBE-RS	Background block errors regenerator section.
SES-RS	Severely errored seconds regenerator section.
UAS-RS	Unavailable seconds regenerator section.

MS Thresh 15 Min/1 Day Tabs

The MS Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day multiplex section threshold for the card.

Table C-660 *Field Descriptions for the MS Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	The port number.
ES-MS	Errored seconds multiplexer section.
SES-MS	Severely errored seconds multiplexer section.
EB-MS	Errored blocks multiplexer section.
BBE-MS	Background block errors multiplexer section.
UAS-MS	Unavailable second multiplexer section.

Wavelength Trunk Settings Tab

The Wavelength Trunk Settings tab allows you to change the wavelength and band settings for the card.

Table C-661 *Field Descriptions for the Wavelength Trunk Settings Tab*

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Wavelength	Allows you to provision the wavelength frequency. The Wavelength column lists the correct wavelengths, depending on the type of card and the band selected. Refer to the <i>Other Information</i> field in the Equipment Inventory table for details of wavelengths supported. See Equipment Inventory Table for CTC-Based NEs, page 11-12 .
Band	The Band column reduces the number of selectable wavelengths (82/80 lambdas only). When the card is plugged in, the selection is disabled and the correct value of the band is displayed. When the card is preprovisioned, you can select either L- or C-band.

Error Decorrelator Settings Tab**Note**

This Properties pane appears only when the MLSE transponder module is installed.

The Error Decorrelator Settings tab allows you to enable or disable Prime Optical from retrieving the error decorrelator value.

Table C-662 *Field Descriptions for the Error Decorrelator Settings Tab*

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a port name.
Error Decorrelator	Allows you to enable or disable Prime Optical from retrieving the error decorrelator value.

RMON Thresholds Tab

The RMON Thresholds tab allows you to view RMON thresholds for the MXP_MR_10DME-C and MXP_MR_10DME-L cards.

Table C-663 *Field Descriptions for the RMON Thresholds Tab*

Field	Description
Index No.	Displays the selected interface number.
Slot	Displays the selected card.
Port	Displays the port on the selected card.
Variable	Displays the MIB variable that is being monitored.
Alarm Type	Indicates whether the event is triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	Indicates whether the sample type is relative or absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period (sec)	Displays the sample period, in seconds.
Rising Thresholds (count)	Displays the number of occurrences for the rising threshold.
Falling Thresholds (count)	Displays the number of occurrences for the falling threshold. In most cases, the falling threshold is set lower than the rising threshold.
Create	Click the Create button to create a threshold for the POS ports.
Delete	Select a threshold from the list displayed and click the Delete button.

OTN

The OTN Properties pane allows you to change the line optical transport network (OTN) settings for the card. The Properties pane contains the following tabs:

- [OTN Line Tab, page C-501](#)
- [G.709 Thresh 15 Min/1 Day Tabs, page C-502](#)
- [FEC Thresh 15 Min/1 Day Tabs, page C-502](#)
- [Trail Trace Identifier Tab, page C-503](#)

OTN Line Tab

The OTN Line tab allows you to view and change the OTN line settings of the card.

Table C-664 *Field Descriptions for the OTN Line Tab*

Field	Description
G.709 OTN	Disables or enables the G.709 OTN feature.
FEC	Disables or enables forward error correction. Note OTN must be enabled before you can enable FEC.
Asynch/Synch Mapping	The card can perform multiplexing per ITU-T G.709. The ODUK (client SONET/SDH payload) can be mapped to the optical channel (OTUK) either asynchronously (asynch mapping) or synchronously (synch mapping) with this setting.
SF BER	The signal fail bit error rate.
SD BER	The signal degrade bit error rate.

G.709 Thresh 15 Min/1 Day Tabs

The G.709 Thresh 15 Min/1 Day tabs display near- and far-end SM optical channel transport unit (OTUK), and near- and far-end PM optical channel data unit (ODUK) threshold information received during the past 15 minutes/24 hours.

Table C-665 *Field Descriptions for the G.709 Thresh 15 Min/1 Day Tabs*

Field	Description
SM (OTUK) Near End, Far End	
Port Number	Displays the optical port number.
BBE-SM	Displays the background block errors.
ES-SM	Displays the errored seconds.
SES-SM	Displays the severely errored seconds.
UAS-SM	Displays the unavailable seconds.
FC-SM	Displays the failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.
PM (ODUK) Near End, Far End	
Port Number	Displays the optical port number.
BBE-PM	Displays the background block errors.
ES-PM	Displays the errored seconds.
SES-PM	Displays the severely errored seconds.
UAS-PM	Displays the unavailable seconds.
FC-PM	Displays the failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.

FEC Thresh 15 Min/1 Day Tabs

The FEC Thresh 15 Minute/1 Day tabs allow you to view and change the 15-minute/1-day FEC threshold values of the card.

Table C-666 *Field Descriptions for the FEC Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	Displays port number information.
Bit Errors Corrected	Displays the bit errors corrected in 15-minute intervals.
Uncorrectable Words	Displays the uncorrectable words in 15-minute intervals.

Trail Trace Identifier Tab

The Trail Trace Identifier tab allows you to provision the trail trace identifier for the card.

Table C-667 *Field Descriptions for the Trail Trace Identifier Tab*

Field	Description
Port Number	Displays port number information.
Level	Displays the trail trace identifier level (Section or Path).
Trace Mode	Allows you to set the trace mode (Off or Manual).
Disable FDI on TTIM	Allows you to disable forward defect indication (FDI) for trail trace identifier mismatch (TTIM) alarms.
Current Transmit String	Displays the current transmit string.
Current Expected String	Displays the current expected string.
Current Received String	Displays the current received string.

Loopback

The Loopback Properties pane allows you to view and update loopback information.

Table C-668 *Field Descriptions for the Loopback Properties Pane*

Field	Description
Port Number	Displays the port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or clear the current loopback (none).

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-669 Field Descriptions for the Auto Laser Shutdown Properties Pane

Field	Description
Port Number	Displays the port number.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the recovery laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int. (sec)	Allows you to set the recovery laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Status	Displays the current laser status. Values are Shut Down or Not Shut Down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

Optical Thresh

The Optical Thresh Properties pane allows you to view and provision optical threshold settings. The Properties pane contains the [TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs](#), page C-504.

TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs

The TCA 15 Min/1 Day tab allows you to view and change the 15-minute/1-day TCA settings of the card.

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-670 Field Descriptions for the TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs

Field	Description
Port Number	Displays the port number.
Laser Bias High (%)	Displays the upper laser bias threshold.
Rx Power High (dBm)	Displays the upper receive power threshold.
Rx Power Low (dBm)	Displays the lower receive power threshold.
Tx Power High (dBm)	Displays the upper transmit power threshold.
Tx Power Low (dBm)	Displays the lower transmit power threshold.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update alarm profile information.

Table C-671 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Card Profile	
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
DWDM/Payload	
Port No.	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Protection

The Protection Properties pane allows you to view and update protection group information.

Table C-672 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection groups and allows you to execute switch commands.

Info

The Info Properties pane allows you to view nominal operating values set for the card during manufacturing.

Table C-673 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of the attribute value.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—TXP_MR_10E_C

The TXP_MR_10E_C cards are multirate transponders for the ONS 15454 platform. The cards are fully backward compatible with the TXP_MR_10G and TXP_MR_10E cards. They process one 10-Gb/s signal (client side) into one 10-Gb/s, 100-GHz DWDM signal (trunk side). The TXP_MR_10E_C is tunable over the entire set of C-band wavelength channels (82 channels spaced at 50 GHz on the ITU grid).

The advantage of these cards over previous versions (TXP_MR_10G and TXP_MR_10E) is that there is only one version of each card (one C-band version) instead of several versions needed to cover each band.

You can install TXP_MR_10E_C cards in slots 1 to 6 and 12 to 17 and provision the cards in a linear configuration, BLSR/MS-SPRing, path protection/SNCP, or regenerator. The cards can be used in the middle of BLSR/MS-SPRing or 1+1 spans when the cards are configured for transparent termination mode.

The TXP_MR_10E_C card features a universal transponder 2 (UT2) 1550-nm tunable laser (C-band) for the trunk port and a separately orderable ONS-XC-10G-S1 1310-nm or ONS-XC-10G-L2 1550-nm laser XFP module for the client port.



Note

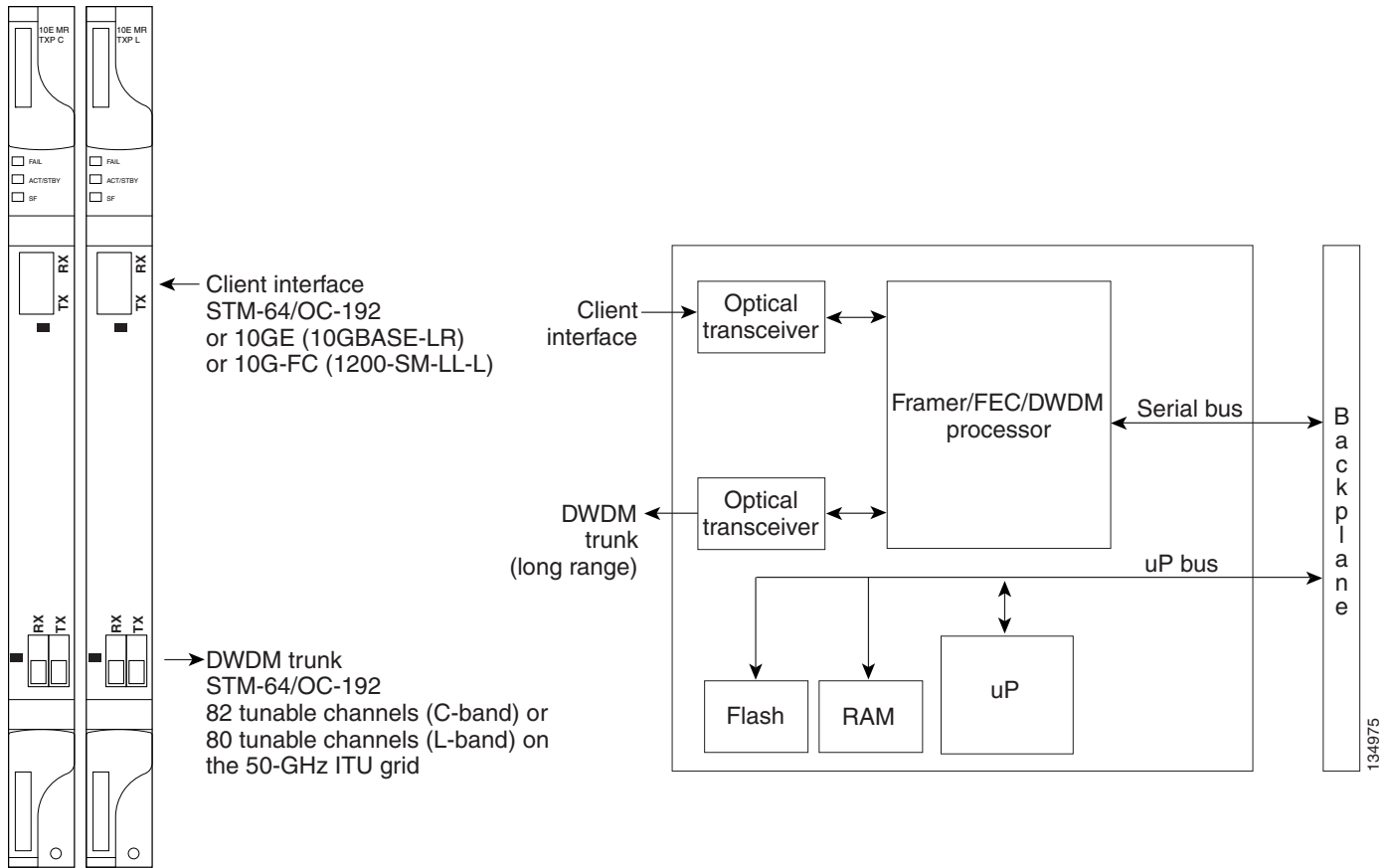
When the ONS-XC-10G-L2 XFP is installed, the TXP_MR_10E_C card must be installed in a high-speed slot (slot 6, 7, 12, or 13).

The key features of the TXP_MR_10E_C card are:

- A tri-rate client interface (available through the ONS-XC-10G-S1 XFP, ordered separately):
 - OC-192 (SR1)
 - 10GE (10GBASE-LR)
 - 10G-FC (1200-SM-LL-L)
- A UT2 module tunable through the entire C-band. The channels are spaced at 50 GHz on the ITU grid.
- OC-192 to ITU-T G.709 OTU2 provisionable synchronous and asynchronous mapping.

On its faceplate, the TXP_MR_10E_C card contains two transmit and receive connector pairs, one for the trunk port and one for the client port. Each connector pair is labeled.

The following figure shows the card faceplates.

Figure C-60 *TXP_MR_10E_C and TXP_MR_10E_L Faceplates*

For the card selected, the slot properties pane displays the following properties: Module View, Identification, Card, PPM, Line, OTN, Loopback, Auto Laser Shutdown, Optical Thresh, Alarm Behavior, Protection, and Info.

**Note**

The properties shown depend on the NE configuration.

Module View

The Module View displays a graphic that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update identification information.

Table C-674 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The equipment administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Suppress Alarms	When checked, all alarms are suppressed for the port.

Card

The Card Properties pane allows you to view and update card information.

Table C-675 Field Descriptions for the Card Properties Pane

Field	Description
Termination Mode	Allows you to set the mode of termination.
AIS/Squelch Configuration	Allows you to configure the remote client to squelch or send an AIS signal.
Regeneration Peer Slot	Allows you to select like cards so that you can configure a regeneration peer group.
Regeneration Group Name	(Optional) Allows you to set the name of the regeneration group.

PPM

The PPM Properties pane allows you to view and provision the PPM and the ports inside the PPM.

Table C-676 Field Descriptions for the PPM Properties Pane

Field	Description
Pluggable Port Modules	
Pluggable Number	Displays the identifier of the plugin module.
Actual Equipment Type	Displays the actual plugin module that is installed in the slot.
Equipment State	Displays the equipment state of the plugin module.
Admin State	Displays the status of the plugin module: In Service (IS); Out of Service–Maintenance (OOS_MT); Unlocked; or Locked, Maintenance. Note You can edit the Admin State value only for actual equipment, not preprovisioned equipment.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
PPM	
Port	Displays the PPM number and port number.
Rate	Displays the port rate.

Provision Pluggable Dialog Box

Click the **Create** button to launch the Provision Pluggable dialog box. This dialog box allows you to provision the PPM and to create the ports inside this entity. See [Provision Pluggable Dialog Box, page C-25](#) for more information.

Line

The Line Properties pane allows you to configure line information.

If the card is installed on an ONS 15454 SONET NE, the Properties pane contains the following tabs:

- [Section Trace Tab, page C-510](#)
- [SONET Line Tab, page C-510](#)
- [Section Thresh 15 Min/1 Day Tabs, page C-511](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-511](#)
- [Wavelength Trunk Settings Tab, page C-512](#)
- [Error Decorrelator Settings Tab, page C-512](#)

If the card is installed on an ONS 15454 SDH NE, the Properties pane contains the following tabs:

- [10G FibCh. Line Config Tab, page C-512](#)
- [10GE Line Config Tab, page C-514](#)
- [Section Trace Tab, page C-515](#)
- [SDH Line Tab, page C-516](#)
- [RS Thresh 15 Min/1 Day Tabs, page C-517](#)

- [MS Thresh 15 Min/1 Day Tabs, page C-518](#)
- [Wavelength Trunk Settings Tab, page C-518](#)
- [Error Decorrelator Settings Tab, page C-518](#)
- [RMON Thresholds Tab, page C-519](#)

**Note**

The following information is the same if the payload is SDH on an ONS 15454 SONET NE.

Section Trace Tab

The Section Trace tab allows you to change the section trace settings for the card. Select a port and click the **Modify** button to edit the trace.

Table C-677 **Field Descriptions for the Section Trace Tab**

Field	Description
Port Number	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string. The trail trace identifier is either 1 or 16 bytes.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.

SONET Line Tab

The SONET Line tab allows you to view and change the SONET line settings of the card.

Table C-678 **Field Descriptions for the SONET Line Tab**

Field	Description
Port Number	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Administration State	The port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).

Table C-678 *Field Descriptions for the SONET Line Tab (continued)*

Field	Description
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Type	Displays the port type.
Provides Sync	When checked, the card is provisioned as an NE timing reference.
Enable Sync Msg	When checked, enables synchronization status messages, which allow the node to choose the best timing source.
Send Do Not Use	When checked, sends a do not use (DUS) message on the S1 byte.
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance)
Wavelength	Allows you to provision the wavelength frequency.

Section Thresh 15 Min/1 Day Tabs

The Section Thresh 15 Minutes/1 Day tabs allow you to view and change the near-end 15-minute/1-day section threshold information for the card.

Table C-679 *Field Descriptions for the Section Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	Displays the port number.
CV-S	Displays the coding violations section.
ES-S	Displays the errored seconds section.
SES-S	Displays the severely errored seconds section.
SEFS-S	Displays the severely errored framing seconds section.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the near-end 15-minute/1-day line threshold information for the card.

Table C-680 **Field Descriptions for the Line Thresh 15 Min/1 Day Tabs**

Field	Description
Line Thresh 15 Min/1 Day Tabs	
Near End, Far End	
Port Number	Displays the optical port number.
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.
CV-L	Displays the coding violations line.
UAS-L	Displays the unavailable seconds line information.
FC-L	Displays the failure count line.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Wavelength Trunk Settings Tab

The Wavelength Trunk Settings tab allows you to change the wavelength and band settings for the card.

Table C-681 **Field Descriptions for the Wavelength Trunk Settings Tab**

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Wavelength	Allows you to provision the wavelength frequency. The Wavelength column lists the correct wavelengths, depending on the type of card and the band selected. Refer to the <i>Other Information</i> field in the Equipment Inventory table for details of wavelengths supported. See Equipment Inventory Table for CTC-Based NEs, page 11-12 .
Band	The Band column reduces the number of selectable wavelengths (82/80 lambdas only). When the card is plugged in, the selection is disabled and the correct value of the band is displayed. When the card is preprovisioned, you can select either L- or C-band.

Error Decorrelator Settings Tab

The Error Decorrelator Settings tab allows you to enable or disable Prime Optical from retrieving the error decorrelator value.

Table C-682 **Field Descriptions for the Error Decorrelator Settings Tab**

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a port name.
Error Decorrelator	Allows you to enable or disable Prime Optical from retrieving the error decorrelator value.

10G FibCh. Line Config Tab

The 10G FibCh. Line Config tab allows you to provision the 10G FiberChannel PPM parameters of a card.

Table C-683 **Field Descriptions for the 10G FibCh. Line Config Tab**

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a port name.
Administration State	The port administration state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

10GE Line Config Tab

The 10GE Line Config tab allows you to provision the 10GE PPM parameters.

Table C-684 **Field Descriptions for the 10GE Line Config Tab**

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a port name.
Administration State	The port administration state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.

Table C-684 Field Descriptions for the 10GE Line Config Tab (continued)

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

Section Trace Tab

The Section Trace tab allows you to change the section trace settings for the card.

Table C-685 Field Descriptions for the Section Trace Tab

Field	Description
Port Number	The port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.

Table C-685 Field Descriptions for the Section Trace Tab (continued)

Field	Description
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string; sets a new transmit string.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.

SDH Line Tab

The SDH Line tab allows you to view and change the SDH line settings of the card.

Table C-686 Field Descriptions for the SDH Line Tab

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
ALS Mode	Allows you to select the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Type	Defines the port as SONET or SDH.
ProvidesSync	When checked, the card is provisioned as an NE timing reference.
EnableSyncMsg	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Send DoNotUse	When checked, sends a do not use (DUS) message on the S1 byte.

Table C-686 *Field Descriptions for the SDH Line Tab (continued)*

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

RS Thresh 15 Min/1 Day Tabs

The RS Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day regeneration section threshold for the card.

Table C-687 *Field Descriptions for the RS Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	The port number.
EB-RS	Errored blocks regenerator section.
ES-RS	Errored seconds regenerator section.

Table C-687 Field Descriptions for the RS Thresh 15 Min/1 Day Tabs (continued)

Field	Description
SES-RS	Severely errored seconds regenerator section.
UAS-RS	Unavailable seconds regenerator section.

MS Thresh 15 Min/1 Day Tabs

The MS Thresh 15 Minutes/1 Day tabs allow you to view and change the 15 minutes/1-day multiplex section threshold for the card.

Table C-688 Field Descriptions for the MS Thresh 15 Min/1 Day Tabs

Field	Description
Port Number	The port number.
ES-MS	Errored seconds multiplexer section.
SES-MS	Severely errored second multiplexer section.
EB-MS	Errored blocks multiplexer section.
BBE-MS	Background block errors multiplexer section.
UAS-MS	Unavailable seconds multiplexer section.

Wavelength Trunk Settings Tab

The Wavelength Trunk Settings tab allows you to change the wavelength and band settings for the card.

Table C-689 Field Descriptions for the Wavelength Trunk Settings Tab

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Wavelength	Allows you to provision the wavelength frequency. The Wavelength column lists the correct wavelengths, depending on the type of card and the band selected. Refer to the <i>Other Information</i> field in the Equipment Inventory table for details of wavelengths supported. See Equipment Inventory Table for CTC-Based NEs , page 11-12.
Band	The Band column reduces the number of selectable wavelengths (82/80 lambdas only). When the card is plugged in, the selection is disabled and the correct value of the band is displayed. When the card is preprovisioned, you can select either L- or C-band.

Error Decorrelator Settings Tab**Note**

This Properties pane appears only when the MLSE transponder module is installed.

The Error Decorrelator Settings tab allows you to enable or disable Prime Optical from retrieving the error decorrelator value.

Table C-690 *Field Descriptions for the Error Decorrelator Settings Tab*

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a port name.
Error Decorrelator	Allows you to enable or disable Prime Optical from retrieving the error decorrelator value.

RMON Thresholds Tab

The RMON Thresholds tab allows you to view RMON thresholds for the MXP_MR_10DME-C and MXP_MR_10DME-L cards.

Table C-691 *Field Descriptions for the RMON Thresholds Tab*

Field	Description
Index No.	Displays the selected interface number.
Slot	Displays the selected card.
Port	Displays the port on the selected card.
Variable	Displays the MIB variable that is being monitored.
Alarm Type	Indicates whether the event is triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	Indicates whether the sample type is relative or absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period (sec)	Displays the sample period, in seconds.
Rising Thresholds (count)	Displays the number of occurrences for the rising threshold.
Falling Thresholds (count)	Displays the number of occurrences for the falling threshold. In most cases, the falling threshold is set lower than the rising threshold.
Create	Click the Create button to create a threshold for the POS ports.
Delete	Select a threshold from the list displayed and click the Delete button.

OTN

The OTN Properties pane allows you to change the line optical transport network (OTN) settings for multirate transponder cards. If you provisioned the payloads DVB-ASI or ISC1, all other subtabs except OTN Line are blank.

**Note**

OTN is supported only for trunk ports.

Table C-692 Field Descriptions for the OTN Properties Pane

Field	Description
OTN Line	
Port No.	The port number.
G.709 OTN	Disables or enables the G.709 OTN feature. If you provisioned the new payloads, the field displays the current status of the G.709 OTN feature: enabled or disabled.
FEC	Disables or enables forward error correction. If you provisioned the new payloads, this field displays the status of forward error correction: enabled or disabled. Note OTN must be enabled before you can enable FEC.
Asynch/Synch Mapping	
SF BER	The signal fail bit error rate.
SD BER	The signal degrade bit error rate.
G.709 Thresh 15 Min/1 Day	
SM (OTUK) Near End, Far End	
Port No.	The port number.
BBE-SM	Background block errors.
ES-SM	Errored seconds.
SES-SM	Severely errored seconds.
UAS-SM	Unavailable seconds.
FC-SM	Failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.
PM (ODUK) Near End, Far End	
Port No.	The port number.
BBE-PM	Background block errors.
ES-PM	Errored seconds.
SES-PM	Severely errored seconds.
UAS-PM	Unavailable seconds.
FC-PM	Failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.
FEC Thresh 15 Min/1 Day	
Port Number	Displays the port number.
Bit Errors Corrected	Displays the bit errors corrected in 15-minute intervals.
Uncorrectable Words	Displays the uncorrectable words in 15-minute intervals.
Trail Trace Identifier	
Port No.	The port number.
Level	Displays the trail trace identifier level (Section or Path).

Table C-692 *Field Descriptions for the OTN Properties Pane (continued)*

Field	Description
Trace Mode	Allows you to set the trace mode (Off or Manual).
Disable FDI on TTIM	Allows you to disable forward defect indication (FDI) for trail trace identifier mismatch alarms.
Current Transmit String	Displays the current transmit string.
Current Expected String	Displays the current expected string.
Current Received String	Displays the current received string.

Loopback

The Loopback Properties pane allows you to view and update card loopback information.

Table C-693 *Field Descriptions for the Loopback Properties Pane*

Field	Description
Port No.	Displays the port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown (ALS) parameters.

Table C-694 *Field Descriptions for the Auto Laser Shutdown Properties Pane*

Field	Description
Port No.	Displays the port number.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the received laser pulse duration, in seconds. The range is from 60 to 200 seconds.

Table C-694 Field Descriptions for the Auto Laser Shutdown Properties Pane (continued)

Field	Description
Rec. Pulse Int. (sec)	Allows you to set the received laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Status	Displays the current laser status. Values are Shut Down or Not Shut Down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

Optical Threshold

The Optical Threshold Properties pane allows you to view and update optical threshold information.

Table C-695 Field Descriptions for the Optical Threshold Properties Pane

Field	Description
TCA 15 Min/TCA 1 Day/Alarm Threshold	
Port Number	Displays the port number.
Laser Bias High	Displays the upper laser bias threshold.
Rx Power High	Displays the upper receive power threshold.
Rx Power Low	Displays the lower receive power threshold.
Tx Power High	Displays the upper transmit power threshold. Note Tx Power High is not supported on trunk ports.
Tx Power Low	Displays the lower transmit power threshold. Note Tx Power Low is not supported on trunk ports.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-696 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Card Profile	
Alarm Profile	Select the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
DWDM/Payload	
Port Number	Displays the port number.
Alarm Profile	Displays the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Protection

The Protection Properties pane allows you to view and update card protection group information.


Note

When using protection groups, you can provision only the working port.

Table C-697 **Field Descriptions for the Protection Properties Pane**

Field	Description
Protection Groups	Displays a list of available protection groups. Y-cable (TXP_MR_2.5G) and splitter (TXPP_MR_2.5G) protection groups are supported.
Protection Group Details	Displays details about the selected protection groups, such as which port is the protected port and which port is the working port. Also allows you to execute switch commands.


Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—TXP_MR_10G

The slot properties pane displays information about the Cisco ONS 15454 SONET and ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The 10-Gb/s Transponder–100-GHz–Tunable xx.xx-xx.xx card (TXP_MR_10G) processes one 10-Gb/s signal (client side) into one 10-Gb/s, 100-GHz DWDM signal (trunk side). It provides one 10-Gb/s port per card that can be provisioned for an STM64/OC-192 short reach (1310 nm) signal, compliant with ITU-T G.707, G.709, ITU-T G.691, Telcordia GR-253-CORE, or a 10 GE BASE-LR, compliant to IEEE 802.3.

The following figure shows the card faceplate.

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The Module View displays a graphic of the TXP_MR_10G that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

The Identification Properties pane allows you to view and update TXP_MR_10G identification information.

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.

Table C-698 *Field Descriptions for the Identification Properties Pane (continued)*

Field	Description
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Vendor ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Card

The Card Properties pane allows you to view and update card information.

Table C-699 *Field Descriptions for the Card Properties Pane*

Field	Description
Termination Mode	Allows you to set the mode of termination.
Regeneration Peer Slot	Allows you to select like cards so that you can configure a regeneration peer group.
Regeneration Group Name	(Optional) Allows you to set the name of the regeneration group.

PPM

The PPM Properties pane allows you to view and provision the PPM and the ports inside the PPM for TXP_MR_10G cards.

Table C-700 *Field Descriptions for the PPM Properties Pane*

Field	Description
Pluggable Port Modules	
Pluggable Number	Displays the identifier of the plugin module.
Actual Equipment Type	Displays the actual plugin module that is installed in the slot.
Equipment State	Displays the equipment state of the plugin module.
Admin State	Displays the status of the plugin module: In Service (IS); Out of Service–Maintenance (OOS_MT); Unlocked; or Locked, Maintenance. Note You can edit the Admin State value only for actual equipment, not preprovisioned equipment.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
PPM	
Port	Displays the PPM number and port number.
Rate	Displays the port rate.

OTN

The OTN Properties pane allows you to change the line optical transport network (OTN) settings for TXP_MR_10G cards.

Table C-701 Field Descriptions for the OTN Properties Pane

Field	Description
G.709 Thresh 15 Min/1 Day	
SM (OTUK) Near End, Far End	
Port No.	The port number.
BBE-SM	Background block errors.
ES-SM	Errored seconds.
SES-SM	Severely errored seconds.
UAS-SM	Unavailable seconds.
FC-SM	Failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.
PM (ODUK) Near End, Far End	
Port No.	The port number.
BBE-PM	Background block errors.
ES-PM	Errored seconds.
SES-PM	Severely errored seconds.
UAS-PM	Unavailable seconds.
FC-PM	Failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.
FEC Thresh 15 Min/1 Day	
Port Number	Displays the port number.
Bit Errors Corrected	Displays the bit errors corrected in 15-minute intervals.
Uncorrectable Words	Displays the uncorrectable words in 15-minute intervals.
Trail Trace Identifier	
Port No.	The port number.
Level	Displays the trail trace identifier level (Section or Path).
Trace Mode	Allows you to set the trace mode (Off or Manual).
Disable FDI on TTIM	Allows you to disable forward defect indication (FDI) for trail trace identifier mismatch (TTIM) alarms.
Current Transmit String	Displays the current transmit string.
Current Expected String	Displays the current expected string.
Current Received String	Displays the current received string.
OTN Line	
Port No.	The port number.
G.709 OTN	Disables or enables the G.709 OTN feature.

Table C-701 *Field Descriptions for the OTN Properties Pane (continued)*

Field	Description
FEC	Disables or enables forward error correction. Note OTN must be enabled before you can enable FEC.
SF BER	The signal fail bit error rate.
SD BER	The signal degrade bit error rate.

Loopback

The Loopback Properties pane allows you to view and update TXP_MR_10G loopback information.

Table C-702 *Field Descriptions for the Loopback Properties Pane*

Field	Description
Port Number	Displays the port number.
Port Name	Displays the name of the port.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.

Auto Laser Shutdown

The Auto Laser Shutdown Properties pane allows you to view and update the automatic laser shutdown parameters.

Table C-703 *Field Descriptions for the Auto Laser Shutdown Properties Pane*

Field	Description
Port Number	Displays the port number.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the recovery laser pulse duration, in seconds. The range is from 60 to 200 seconds.
Rec. Pulse Int. (sec)	Allows you to set the recovery laser pulse interval, in seconds. The range is from 100 to 2000 seconds for client ports and from 200 to 2000 seconds for trunk ports.
Status	Displays the current laser status. Values are Shut Down or Not Shut Down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

Optical Thresh

The Optical Thresh Properties pane allows you to view and provision optical threshold settings.

Table C-704 *Field Descriptions for the Optical Thresh Properties Pane*

Field	Description
Warning 15 Min/Warning 1 Day/Alarm Threshold	
Port Number	Displays the port number.
Tx Power High	Displays the upper transmit power threshold.
Tx Power Low	Displays the lower transmit power threshold.
Rx Power High	Displays the upper receive power threshold.
Rx Power Low	Displays the lower receive power threshold.
Laser Bias High	Displays the upper laser bias threshold.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update TXP_MR_10G alarm profile information.

Table C-705 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Card Profile	
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
DWDM/Payload/GFPS	
Port No.	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

SONET Line

The SONET Line Properties pane allows you to configure SONET line information. If the card is installed on an ONS 15454 SONET NE, the Properties pane contains the following tabs and fields. If the card is installed on an ONS 15454 SDH NE, see [SDH Line, page C-530](#).



Note

The following information is the same if the payload is SDH on an ONS 15454 SONET NE.

Table C-706 **Field Descriptions for the SONET Line Properties Pane**

Field	Description
Section Threshold 15 Minutes/1 Day	
Port Number	The port number.
CV-S	Coding violations section.
ES-S	Errored seconds section.
SES-S	Severely errored seconds section.
SEFS-S	Severely errored framing seconds section.
Reset to Defaults button	Resets the value of the port parameters to the default value.
Line Threshold 15 Minutes/1 Day	
Port Number	The port number.
ES-L	Errored seconds line.
SES-L	Severely errored seconds line.
CV-L	Coding violations line.
UAS-L	Unavailable seconds line.
FC-L	Failure count line.
Reset to Defaults button	Resets the value of the port parameters to the default value.
Wavelength Trunk Settings	
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Wavelength	Allows you to provision the wavelength frequency. The Wavelength column lists the correct wavelengths, depending on the type of card and the band selected. Refer to the <i>Other Information</i> field in the Equipment Inventory table for details of wavelengths supported. See Equipment Inventory Table for CTC-Based NEs, page 11-12 .
Band	The Band column reduces the number of selectable wavelengths (82/80 lambdas only). For this single-band card, the band value is fixed to C, and this value cannot be altered.
Section Trace	
Port Number	The port number.
Trace Mode	Allows you to set the trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string; sets a new transmit string.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.
Modify	Allows you to change the section trace settings for TXP_MR_10G cards. Select a trace and click the Modify button to open the Modify Trace window.
Line Config	
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.

Table C-706 Field Descriptions for the SONET Line Properties Pane (continued)

Field	Description
State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
ProvidesSync	When checked, the card is provisioned as an NE timing reference.
EnableSyncMsg	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Send DoNotUse	When checked, sends a DNS (do not use) message on the S1 byte.

SDH Line

The SDH Line Properties pane allows you to configure SDH line information. If the card is installed on an ONS 15454 SDH NE, the Properties pane contains the following tabs and fields. If the card is installed on an ONS 15454 SONET NE, see the SONET Line section.



Note

The following information is the same if the payload is SONET on an ONS 15454 SDH NE.

Table C-707 Field Descriptions for the SDH Line Properties Pane

Field	Description
Section Trace	
Port Number	The port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string; sets a new transmit string.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.
Line Config	
Port Number	Displays the optical port number.

Table C-707 **Field Descriptions for the SDH Line Properties Pane (continued)**

Field	Description
Port Name	Allows you to enter an optical port name.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
ALS Mode	Allows you to select the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
ProvidesSync	When checked, the card is provisioned as an NE timing reference.
EnableSyncMsg	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Send DoNotUse	When checked, sends a DNS (do not use) message on the S1 byte.
RS Threshold 15 Minutes/1 Day - Near End	
Port Number	The port number.
EB-RS	Errored blocks regenerator section.
ES-RS	Errored seconds regenerator section.
BBE-RS	Background block error regenerator section.
SES-RS	Severely errored second regenerator section.
UAS-RS	Unavailable seconds regenerator section.
Reset to Defaults button	Resets the value of the port parameters to the default value.
MS Threshold 15 Minutes/1 Day - Near End, Far End	
Port Number	The port number.
ES-MS	Errored seconds multiplexer section.
SES-MS	Severely errored seconds multiplexer section.
EB-MS	Errored blocks multiplexer section.
BBE-MS	Background block errors multiplexer section.
UAS-MS	Unavailable seconds multiplexer section.
Reset to Defaults button	Resets the value of the port parameters to the default value.
Wavelength Trunk Settings	
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.

Table C-707 Field Descriptions for the SDH Line Properties Pane (continued)

Field	Description
Wavelength	Allows you to provision the wavelength frequency. The Wavelength column lists the correct wavelengths, depending on the type of card and the band selected. Refer to the <i>Other Information</i> field in the Equipment Inventory table for details of wavelengths supported. See Equipment Inventory Table for CTC-Based NEs, page 11-12 .
Band	The Band column reduces the number of selectable wavelengths (82/80 lambdas only). For this single-band card, the band value is fixed to C, and this value cannot be altered.

Ether Line

The Ether Line Properties pane allows you to configure Ethernet line information.

Table C-708 Field Descriptions for the Ether Line Properties Pane

Field	Description
Line Config	
Port Number	The port number.
Port Name	Allows you to enter a port name.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
ALS Mode	Allows you to select the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Incoming MAC Address	Allows you to edit the incoming MAC address.
Max Frame	To permit the acceptance of jumbo-size Ethernet frames, select Jumbo (default). If you do not want to permit jumbo-size Ethernet frames, select 1548.
Thresholds	
Index Number	Displays the index number.
Slot	Displays the slot.
Port	Displays the port.
Variable	Displays the Ethernet threshold variable. The variable depends on the card type.
Alarm Type	Displays the Ethernet threshold alarm type. Values are Rising, Falling, or Rising and Falling.
Sample Type	Displays the Ethernet threshold sample type. Values are Relative and Absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of any time period.
Sample Period	Displays the Ethernet threshold sample period, in seconds.
Rising Thresh	Displays a count of the number of times an alarm entry crosses the rising threshold and the entry generates an event.
Falling Thresh	Displays a count of the number of times an alarm entry crosses the falling threshold and the entry generates an event.

Protection

The Protection Properties pane allows you to view and update TXP_MR_10G protection group information.

Table C-709 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection groups and allows you to execute switch commands.
Switch Commands	Allows you to perform a manual switch, perform a forced switch, or clear the existing command switching.
Inhibit Switching	Allows you to inhibit unlock switching, lock-out switching, or lock-on switching.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the TXP_MR_10G card.

Table C-710 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of measure (when applicable) of the object that is inventoried.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

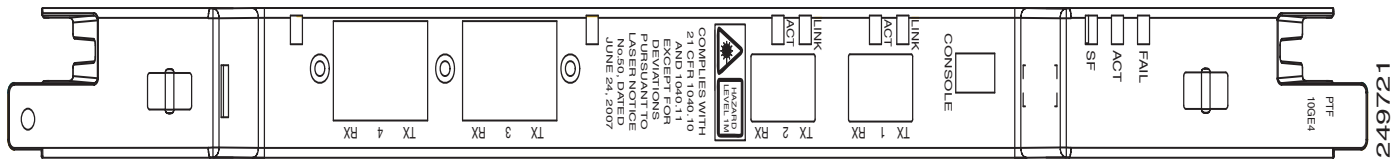
Slot Properties—PTF_10GE_4

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The PTF_10GE_4 card is a single-slot card with two 10 GE SFP+ ports and two 10 GE XFP ports. The XFP ports on the PTF_10GE_4 card support the OTN protocol. The SFP+ ports on the PTF_10GE_4 card can serve as normal ports or InterConnect (IC) ports.

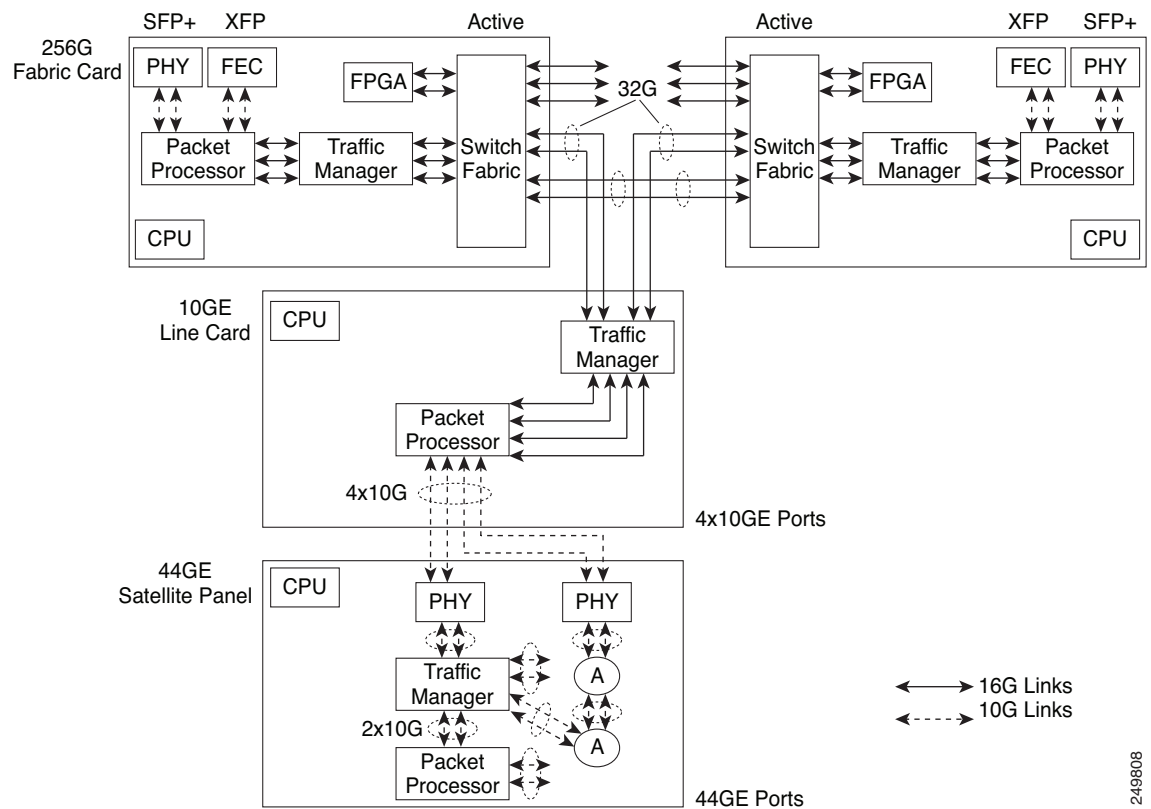
On the CPT 600 shelf, install the redundant PTF_10GE_4 cards in slots 4 and 5. There can be up to two PTF_10GE_4 cards on the CPT 600 shelf. The two PTF_10GE_4 cards on the CPT 600 shelf can both be in active mode with both cards carrying the traffic. On the CPT 200 shelf, install the fabric card in slot 2 or 3.

The following figure shows the PTF_10GE_4 faceplate.

Figure C-62 PTF_10GE_4 Card Faceplate

For the PTF_10GE_4 card, the slot properties pane displays the following properties: Identification, Module View, Alarm Behavior, Ether Ports, Info, Loopback, Optical Thresh, OTN, PPM, and RMON Thresholds.

The following figure shows the CPT System block diagram.

Figure C-63 CPT System Block Diagram

Identification

The Identification Properties pane allows you to view and update PTF_10GE_4 identification information.

Table C-711 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.

Table C-711 Field Descriptions for the Identification Properties Pane (continued)

Field	Description
HW Part Number	Displays the part number that is printed on the top of the card.
HW Revision	Displays the hardware version number of the card.
Serial No.	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Admin State	The port administration state. It can be: - IS—In Service - OOS, MT—Out of Service, Maintenance
Service State	<i>Display only.</i> Sets the service state that indicates the operational state of the channel group. The Service State can be: - IS-NR—In Service–Normal. - OOS-MA, DSBLD—Out of Service and Management, Disabled.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. You can choose an alarm profile for the card from the drop-down list. Values are Default and Inherited. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Module View

The Module View displays a graphic of the PTF_10GE_4 card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-712 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Card Profile	
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
DWDM/Payload	
Port No.	Displays the card port number.

Table C-712 Field Descriptions for the Alarm Behavior Properties Pane (continued)

Field	Description
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Ether Ports

The Ether Ports Properties pane contains the following tabs:

- [Ports Tab, page C-536](#)
- [Ethernet Tab, page C-537](#)
- [Layer 2 Protocols, page C-538](#)

Ports Tab

Table C-713 Field Descriptions for the Ports Tab

Field	Description
Port No.	Displays the port number.
Port Name	Displays the name of the port.
Admin State	The port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak (H:M)	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS state.

Table C-713 *Field Descriptions for the Ports Tab (continued)*

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • EW • LW • SW • LRM • ER • LR • SR (short reach, up to 2 km distance) • ZR • IR 2 • LR 2 • DWDM • CWDM40km
Wavelength	Allows you to provision the wavelength frequency.

Ethernet Tab

The Ethernet tab allows you to view Ethernet line information.

Table C-714 *Field Descriptions for the Ethernet Tab*

Field	Description
Port	Displays the port number.
MTU	Displays the maximum transfer unit, which is the largest acceptable packet size configured for that port. The maximum setting is 9000 and the default size is 1500. The MTU value is 0 until the packet-over-SONET (POS) port is used in creating a circuit.
Link State	Displays the physical port state. Possible values are Up and Down.
Expected Speed	Displays the expected speed. Possible values are 10 Mbps, 100 Mbps, and Auto. If expected speed is set to Auto, you cannot enable selective autonegotiation.
Expected Duplex	Displays the port's expected duplex setting. Possible values are Full, Half, and Auto. If expected duplex is set to Auto, you cannot enable selective autonegotiation.
Flow Control	Displays the negotiated flow control mode. Possible values are None, Symmetrical, and Asymmetrical.
Interconnect Mode	—
Operating Speed	Displays the actual operating speed.
Operating Duplex	Displays the expected duplex setting of the port.

Table C-714 *Field Descriptions for the Ethernet Tab (continued)*

Field	Description
Operating Flow Control	Displays the value of the flow control.
Carrier Delays (ms)	—

Layer 2 Protocols

The Layer 2 Protocols tab allows you to view and modify actions for Layer 2 protocols.

Table C-715 *Field Descriptions for the Layer 2 Protocols Tab*

Field	Description
Port	Displays the port number.
CDP	Displays the Layer 2 action configured for CDP. To modify the action, click the cell and select the action from the drop-down list.
DOT1X	Displays the Layer 2 action configured for DOT1X. To modify the action, click the cell and select the action from the drop-down list.
DTP	Displays the Layer 2 action configured for DTP. To modify the action, click the cell and select the action from the drop-down list.
LACP	Displays the Layer 2 action configured for LACP. To modify the action, click the cell and select the action from the drop-down list.
PAGP	Displays the Layer 2 action configured for PAGP. To modify the action, click the cell and select the action from the drop-down list.
VTP	Displays the Layer 2 action configured for VTP. To modify the action, click the cell and select the action from the drop-down list.
STP	Displays the Layer 2 action configured for STP. To modify the action, click the cell and select the action from the drop-down list.

Info

The Info Properties pane allows you to view nominal operating values set for the card during manufacturing.

Table C-716 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of measure (when applicable) of the object that is inventoried.

Loopback

The Loopback Properties pane allows you to view and update PTF_10GE_4 loopback information.

Table C-717 Field Descriptions for the Loopback Properties Pane

Field	Description
Port No.	Displays the port number.
Port Name	Displays the name of the port.
Admin State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.

Optical Thresh

The Optical Thresh Properties pane allows you to view and provision optical threshold settings. The Properties pane contains [TCA 15 Min/TCA 1 Day/Alarm Thresh Tab, page C-539](#) tabs:

TCA 15 Min/TCA 1 Day/Alarm Thresh Tab

The TCA 15 Min tab allows you to set thresholds for 15-minute threshold crossing alert generation.

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-718 Field Descriptions for the TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs

Field	Description
Port No.	Displays the port number.
Laser Bias High (%)	Displays the upper laser bias threshold.
Rx Power High (dBm)	Displays the upper receive power threshold.
Rx Power Low (dBm)	Displays the lower receive power threshold.
Tx Power High (dBm)	Displays the upper transmit power threshold.
Tx Power Low (dBm)	Displays the lower transmit power threshold.
Reset to Defaults button	Resets the value of the port parameters to the default value.

OTN

The OTN Properties pane contains the following tabs:

- [OTN Line Tab, page C-540](#)

- [G.709 Thresh 15Min/1 Day Tabs, page C-540](#)
- [FEC Thresh 15 Min/1 Day Tabs, page C-541](#)
- [Trail Trace Identifier Tab, page C-541](#)

OTN Line Tab

The OTN Line tab allows you to view and change the OTN line settings of the card.

Table C-719 Field Descriptions for the OTN Line Tab

Field	Description
Port No.	Displays the port number. If you set the payload as OTU2 in the PPM Properties pane, a new port is added to the OTN Line tab.
G.709 OTN	Disables or enables the G.709 OTN feature.
FEC	Disables or enables forward error correction. Note OTN must be enabled before you can enable FEC.
SF BER	The signal fail bit error rate.
SD BER	The signal degrade bit error rate.

G.709 Thresh 15Min/1 Day Tabs

The G.709 Thresh 15 Min/1 Day tabs display near- and far-end SM optical channel transport unit (OTUK), and near- and far-end PM optical channel data unit (ODUK) threshold information and allow you to change these card threshold values.

Table C-720 Field Descriptions for the G.709 Thresh 15 Min/1 Day Tabs

Field	Description
SM (OTUK) Near End, Far End	
Port Number	Displays the optical port number.
BBE-SM	Displays the background block errors.
ES-SM	Displays the errored seconds.
SES-SM	Displays the severely errored seconds.
UAS-SM	Displays the unavailable seconds.
FC-SM	Displays the failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.
PM (ODUK) Near End, Far End	
Port Number	Displays the optical port number.
BBE-PM	Displays the background block errors.
ES-PM	Displays the errored seconds.
SES-PM	Displays the severely errored seconds.
UAS-PM	Displays the unavailable seconds.
FC-PM	Displays the failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.

FEC Thresh 15 Min/1 Day Tabs

The FEC Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day FEC threshold values of the card.

Table C-721 *Field Descriptions for the FEC Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	Displays port number information.
Bit Errors Corrected	Displays the bit errors corrected in 15-minute intervals.
Uncorrectable Words	Displays the uncorrectable words in 15-minute intervals.

Trail Trace Identifier Tab

The Trail Trace Identifier tab allows you to provision the trail trace identifier for the card.

Table C-722 *Field Descriptions for the Trail Trace Identifier Tab*

Field	Description
Modify button	Allows you to open the Modify Trace dialog box, where you can change the section trace information for applicable cards. For more information, see Modifying Traces, page 7-171 .
Port Number	Displays port number information.
Level	Displays the trail trace identifier level (Section or Path).
Trace Mode	Allows you to set the trace mode (Off or Manual).
Disable FDI on TTIM	Allows you to disable forward defect indication (FDI) for trail trace identifier mismatch (TTIM) alarms.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string.
Current Received String	Displays the current received string.

PPM

The PPM Properties pane allows you to view and provision the PPM and the ports inside the PPM.

Table C-723 *Field Descriptions for the PPM Properties Pane*

Field	Description
Pluggable Port Modules (PPM)	
PPM No.	Displays the identifier of the plugin module.
Actual Equipment Type	Displays the equipment type that the slot is provisioned for.
Equipment State	Displays the equipment state of the plugin module.

Table C-723 Field Descriptions for the PPM Properties Pane (continued)

Field	Description
Admin State	Displays the port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
PPM	
Port	Displays the identifier of the plugin module and the port number.
Rate	Displays the rate of the port inside the pluggable entity.

Provision Pluggable Dialog Box

Click the **Create** button to launch the Provision Pluggable dialog box. This dialog box allows you to provision the PPM and to create the ports inside this entity. See [Provision Pluggable Dialog Box, page C-25](#) for more information.

RMON Thresholds

The RMON Thresholds Properties pane allows you to view RMON thresholds for the PTF_10GE_4 card.

Table C-724 Field Descriptions for the RMON Thresholds

Field	Description
Index No.	Displays the selected interface number.
Slot	Displays the selected card.
Port	Displays the port on the selected card.
Variable	Displays the MIB variable that is being monitored.
Alarm Type	Indicates whether the event is triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	Indicates whether the sample type is relative or absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period	Displays the sample period, in seconds.
Rising Thresholds	Displays the number of occurrences for the rising threshold.
Falling Thresholds	Displays the number of occurrences for the falling threshold. In most cases, the falling threshold is set lower than the rising threshold.

Table C-724 *Field Descriptions for the RMON Thresholds (continued)*

Field	Description
Create	Allows you to create an RMON threshold. Click the Create button to create a threshold for the POS ports. Note You can select a Channel Group when you create a threshold. For more information, see Creating RMON Thresholds, page 6-11.
Delete	Select a threshold from the list displayed and click the Delete button.

Slot Properties—AR_MXP, AR_XP and AR_XPE

The Any-Rate Muxponder (AR_MXP) and Any-Rate Xponder (AR_XP) cards are supported on ONS 15454, ONS 15454 M2, and ONS 15454 M6 platforms. The AR_MXP card supports a bandwidth of up to 10 Gbps, and the AR_XP card supports a bandwidth of up to 20 Gbps. The AR_MXP and AR_XP cards aggregate a mix of client SAN services (FICON, ESCON, ISC3-STP, and Fiber Channel), Ethernet (GE, FE), OCn (OC3/STM-1, OC12/STM-4, and OC48/STM-16), OTU1, and video (SD-SDI, HD-SDI, and 3G-SDI) into one 10.0 Gbps signal on the trunk side.

The cards support aggregation of the following signal types:

- SONET/SDH:
 - STM-1/OC-3
 - STM-4/OC-12
 - STM-16/OC-48

- OTN:
 - OTU-1
 - OTU-2 (OTU1E/OTU2E)
- Ethernet:
 - Fast Ethernet (FE)
 - Gigabit Ethernet (GE)
- SAN:
 - Enterprise Systems Connection (ESCON)
 - 1-Gigabit Fiber Channel or fiber connectivity (FICON)
 - 2-Gigabit Fiber Channel or FICON
 - 4-Gigabit Fiber Channel or FICON
 - 8-Gigabit Fiber Channel or FICON
 - 1-Gigabit ISC3-STP
 - 2-Gigabit ISC3-STP
- Video:
 - SD-SDI (270 Mb/s)
 - HD-SDI (1.485 Gb/s)
 - Third-generation SDI (3G-SDI) (2.970 Gb/s)

The AR_MXP and AR_XP cards pass all SONET/SDH overhead bytes transparently.



Caution

The AR_MXP and AR_XP cards can be damaged if dropped. Handle them with care.

Table C-725 shows the input data rate for each client interface, and the encapsulation method. The digital wrapper function (ITU-T G.709 compliant) formats the DWDM wavelength so that it can be used to set up GCCs for data communications, enable FEC, or facilitate PM. The AR_MXP and AR_XP cards work with the OTN devices defined in ITU-T G.709. The client can be OTU1 with standard G.975 FEC or disabled FEC. The cards provide standard 4 x OTU1-to-OTU2 multiplexing. The OTU2 card is equipped with standard G.709 FEC, E-FEC I.4, E-FEC I.7, and disabled FEC. The cards support ODU1-to-OTU1 or OTU2 multiplexing, an industry standard method for asynchronously mapping a SONET/SDH payload into a digitally wrapped envelope.

Table C-725 AR_MXP and AR_XP Client Interface Data Rates and Encapsulation

Client Interface	Input Data Rate	GFP Encapsulation
OC3/STM1	155 Mb/s	—
OC12/STM4	622 Mb/s	—
OC48/STM16	2.488 Gb/s	—
FE	100 Mb/s	GFP-F
GE	1.125 Gb/s	GFP-F
1GFC	1.06 Gb/s	GFP-T
2GFC	2.125 Gb/s	GFP-T

Table C-725 *AR_MXP and AR_XP Client Interface Data Rates and Encapsulation (continued)*

Client Interface	Input Data Rate	GFP Encapsulation
4GFC	4.25 Gb/s	GFP-T
8GFC	8.5 Gb/s	GFP-T
OTU1	2.66 Gb/s	—
OTU2	11.09 Gb/s	—
ESCON	200 Mb/s	GFP-T
1G ISC3-STP	1.06 Gb/s	GFP-T
2G ISC3-STP	2.125 Gb/s	GFP-T
HD-SDI	1.485 Gb/s	GFP-F
SD-SDI	270 Mb/s	GFP-F
3G-SDI	2.970 Gb/s	GFP-F

The AR_MXP and AR_XP cards support the following operating modes:

- **Multiple Operating Modes**—The AR_MXP or AR_XP cards can be configured into multiple operating modes. The cards are equipped with pluggables for client and trunk options, and offer a large variety of configurations.
- **Operating Mode-to-Client Payload Mapping**—Each operating mode supports a specific set of client payloads.

A single AR_MXP or AR_XP card can be configured into multiple operating modes. Criteria for selecting a particular operating mode are defined by the network-level design. CTP helps you to choose the appropriate operating mode, each of which is divided into two categories based on trunk rate:

- Low rate (< 5G)
- High rate (> 5G)

When you configure the operating modes, make sure that:

- The OCHCC circuit is created.
- The same operating mode is configured at both ends.
- For MXP_DME, MXPP_DME, MXP_MR, MXPP_MR, MXP-4x2.5-10G, and MXPP-4x2.5-10G operating modes, the port numbers are the same on both ends.
- ODU and TS match on both ends.
- For Y-cable protection, the ports are 1:1 protected at both ends.
- If Auto port is selected, autosensing is enabled at both ends.
- If Auto port is selected, the supported payload is configured.

[Table C-726](#) and [Table C-727](#) lists the supported payloads for each operating mode.

Table C-726 *AR_MXP and AR_XP Card Supported Client-Payload Mapping—SONET/SDH, Ethernet, OTU1, and FC*

Card Mode	Rate	SONET/SDH			Ethernet			OTU1	FC				
		OC3/S TM1	OC12/ STM4	OC48/ STM16	FE	GE	10GE/ OTU2	OTU1	FICON 1G/FC1 G	FICON 2G/FC2 G	FICON 4G/FC4 G	FICON 8G/FC8 G	ESCON
TXP_MR	LOW	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes
	HIGH	No	No	No	No	No	Yes	No	No	No	No	Yes	No
TXPP_MR	LOW	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No	Yes
	HIGH	No	No	No	No	No	No	No	No	No	No	No	No
MXP_DME	HIGH	No	No	No	No	Yes	No	No	Yes	Yes	Yes	No	No
MXPP_DME	HIGH	No	No	No	No	Yes	No	No	Yes	Yes	Yes	No	No
MXP_MR	LOW	Yes	Yes	No	Yes	Yes	No	No	Yes	No	No	No	Yes
	HIGH	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes
MXPP_MR	LOW	Yes	Yes	No	Yes	Yes	No	No	Yes	No	No	No	Yes
	HIGH	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes
MXP-4x2.5-10G	HIGH	No	No	Yes	No	No	No	Yes	No	No	No	No	No
MXPP-4x2.5-10G	HIGH	No	No	Yes	No	No	No	Yes	No	No	No	No	No
MXP-VD-10G	HIGH	No	No	No	No	No	No	No	No	No	No	No	No
REGEN	HIGH	No	No	No	No	No	Yes	No	No	No	No	No	No
	LOW	No	No	No	No	No	No	Yes	No	No	No	No	No

Table C-727 *AR_MXP and AR_XP Card Supported Client-Payload Mapping—ISC and Video*

Card Mode	Rate	ISC			Video		
		ISC-1	ISC3_STP_1 G	ISC3_STP_2 G	SD-SDI	HD-SDI	3G-SDI
TXP_MR	LOW	No	Yes	Yes	No	No	No
	HIGH	No	No	No	No	No	No
TXPP_MR	LOW	No	Yes	Yes	No	No	No
	HIGH	No	No	No	No	No	No
MXP_DME	HIGH	No	No	No	No	No	No
MXPP_DME	HIGH	No	No	No	No	No	No
MXP_MR	LOW	No	No	No	No	No	No
	HIGH	No	No	No	Yes	Yes	No

Table C-727 *AR_MXP and AR_XP Card Supported Client-Payload Mapping—ISC and Video (continued)*

Card Mode	Rate	ISC			Video		
		ISC-1	ISC3_STP_1 G	ISC3_STP_2 G	SD-SDI	HD-SDI	3G-SDI
MXPP_MR	LOW	No	No	No	No	No	No
	HIGH	No	No	No	Yes	Yes	No
MXP-4x2.5-10G	HIGH	No	No	No	No	No	No
MXPP-4x2.5-10G	HIGH	No	No	No	No	No	No
MXP-VD-10G	HIGH	No	No	No	No	No	Yes
REGEN	HIGH	No	No	No	No	No	No
	LOW	No	No	No	No	No	No

The AR_MXP and AR_XP cards support the following key features:

- Autosensing—The AR_MXP and AR_XP cards support autosensing of client payloads. The line card analyzes the received client signal and configures the payload on the client port automatically without user intervention.

The autosensing feature is supported on the Gigabit Ethernet, OC-3/STM-1, OC-12/STM-4, and OC-48/STM-16 payloads. The following operating card modes support the autosensing feature:

- TXP (low rate)
- TXPP (low rate)
- MXP_MR (low and high rate)
- MXPP_MR (high rate)

Prime Optical supports the configuration of all provisioning parameters supported by the autosensing payload. However, creation and deletion of circuits are the only configurations supported on the autosensing payload.

- Video multiplexing—The AR_XP card supports the capability to multiplex SD-SDI, HD-SDI, and 3G-SDI signals over the OTU2 trunk interface, allowing for maximum wavelength bandwidth, full transparency for uncompressed signals, and reduced latency. This feature is not supported on the AR_MXP card.
- Regenerator mode—You can regenerate 10-Gigabit Ethernet over OTU2e signals with standard G.975 FEC, disabled FEC, I.4, or I.7 EFEC mode. You can configure ODU transparency between the Cisco Extended Use or Transparent Standard Use and REGEN card mode.
- High-speed GCCs—The AR_MXP and AR_XP cards support the provisioning of GCC channel on OTN (OTU1/OTU2)-enabled client and trunk ports. You can create a maximum of 5 GCC channels on the Cisco ONS 15454 shelf and 10 GCC channels on the Cisco ONS 15454 M2 or Cisco ONS 15454 M6 shelf. The high-speed GCC enables you to create the GCC when both the NE and FE line cards are on the Cisco ONS 15454 M2, or Cisco ONS 15454 M6 shelf. You can select the legacy GCC on the Cisco ONS 15454 shelf on one side and the Cisco ONS 15454, Cisco ONS 15454 M2, or Cisco ONS 15454 M6 shelf on the other side.
- Y-cable and splitter protection—Y-cable protection between the same card type is supported only on ports with the same port number and signal rate. Y-cable protection is provided at the client port level. When using the AR_MXP or AR_XP card on a storage ISL link, use it with a Cisco MDS

storage switch to avoid a 15-to-20-second traffic hit. With Brocade Condor-based platforms, you can avoid this 15-to-20-second traffic hit by increasing the bouncing timer to 100 ms for the front-end port. Splitter protection is provided at the trunk-port level.



Note AR_MXP and AR_XP cards support Y-cable protection only when the card is provisioned in an unprotected card mode.

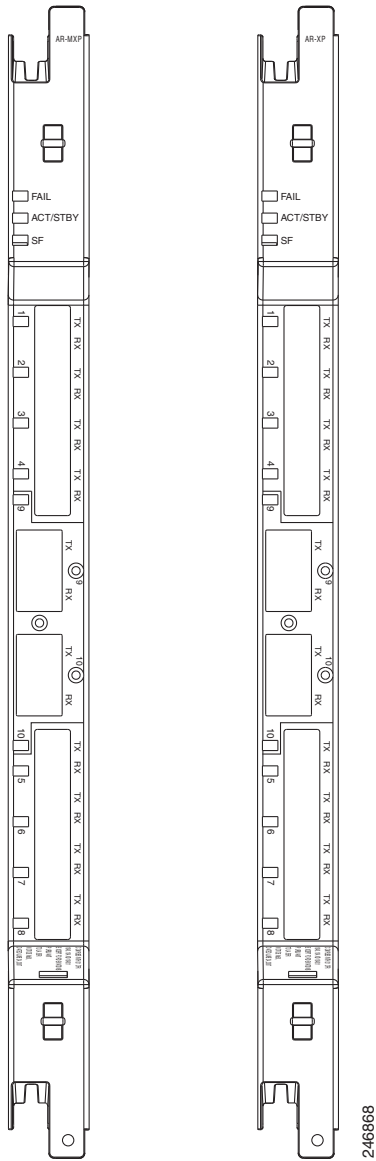
- **Licensing**—The AR_MXP and AR_XP cards offer you unprecedented flexibility. The cards support a wide range of applications and configurations. To help you take advantage of such flexibility and lower capital expenditures (CapEx) on your network, Cisco provides a licensing model for AR_MXP and AR_XP cards. For more information on licensing, see the *Cisco ONS 15454 DWDM Licensing Configuration Guide*.

Figure C-64 shows the AR_MXP and AR_XP faceplates.

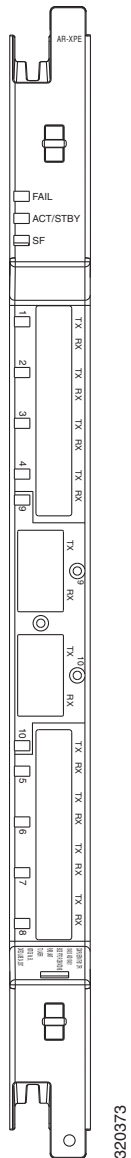
The AR_MXP and AR_XP cards have eight SFP ports and two XFP ports. The client ports are SFP (2.5 G)- or XFP (10 G)-based ports. The trunk ports are SFP (2.5 G)- or XFP (10 G)-based ports.

You can tune the AR_MXP or AR_XP card to any wavelength over the C-band by inserting the required DWDM SFP or XFP on client or trunk ports. The AR_MXP or AR_XP card supports pluggable SFPs or XFPs on the client and trunk ports. For optical termination, each XFP/SFP uses two LC connectors, which are labeled TX and RX on the faceplate.

Figure C-64 *AR_MXP and AR_XP Faceplates*



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Figure C-65 AR_XPE Faceplate

Caution

Using direct fiber loopbacks causes irreparable damage to AR_MXP and AR_XP cards. You must use a fiber attenuator ranging 15-25 dB when working with the cards in a loopback on the trunk port.

You can install AR_MXP and AR_XP cards in Slot 1 to Slot 6 and Slot 12 to Slot 17 of the Cisco ONS 15454 chassis, Slot 2 to Slot 7 of the Cisco ONS 15454 M6 chassis, and Slot 2 and Slot 3 of the Cisco ONS 15454 M2 chassis. The AR_MXP and AR_XP cards' client port interoperates with all existing TXP or MXP (OTU2 trunk) cards. The AR_MXP card enables you to configure eight SFP clients and one XFP trunk or only two XFP ports. The AR_XP card enables you to configure all SFP and XFP ports without limitations.

The slot properties pane displays the following properties: Module View, Identification, Card, Alarm Behavior, Auto Laser Shutdown, Info, Line, Loopback, Optical Thresholds, OTN, PPM, and Protection.

Module View

The Module View displays a graphic of the AR_MXP and AR_XP that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its ports. Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update AR_MXP and AR_XP identification information.

Table C-728 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Alarm Behavior Tab

The Alarm Behavior tab allows you to view and update alarm profiles assigned to ports and PPM on AR_XP and AR_MXP cards.

Table C-729 Field Descriptions for the Alarm Behavior Tab

Field	Description
Filter button	Click the Filter button to filter the data displayed in the table.
Force Profile	When clicked, forces all ports and PPM to the alarm profile in the selected row of the table.
Port/PPM Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Card Profile	
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.

Auto Laser Shutdown Tab

The Auto Laser Shutdown tab allows you to view and update optical card auto laser shutdown (ALS) parameters.

Table C-730 Field Descriptions for the Auto Laser Shutdown Tab

Field	Description
Port Number	Displays the port number.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the received laser pulse duration, in seconds. The range is from 2.0 to 100.0 seconds.
Rec. Pulse Int. (sec)	Allows you to set the received laser pulse interval, in seconds. The range is from 60 to 300 seconds.
Status	Displays the current laser status. Values are Shut Down or Not Shut Down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

Card

The Card mode tab allows you to view the operating modes and the ODU interfaces that are provisioned. The Properties pane displays the following subtabs:

- [Operating Modes, page C-553](#)
- [ODU Interfaces, page C-553](#)

Operating Modes

A single AR_MXP, AR_XP or AR_XPE card can be configured into multiple operating modes.

Table C-731 **Field Descriptions for the Operating Mode Tab**

Field	Description
Card Mode	Displays the card mode.
Rate	Displays the port rate.
Client Trunk Mapping	Displays the client trunk ports mapping.
Trunk Ports	Displays the trunk ports involved in the card mode.
Client Ports	Displays the client ports involved in the card mode.
Bandwidth Used	Bandwidth used by provisioned payload for the operating mode.
Bandwidth Utilization of Provisioned Configurations	
Bandwidth Utilization	Total bandwidth used by operating modes.
ODU Utilization	Click the ODU Utilization button. The ODU Utilization dialog box shows the graphical representation of how payloads are encapsulated into the ODU layer of the OTN frame. The payloads positioned into the frame are displayed in green. When the card mode selected has zero bandwidth, the following error message is displayed: <pre>Bandwidth is not allocated for the current configuration mode.</pre> Bandwidth is allocated after PPM payloads are provisioned. If the configuration mode is set to MXP_MR, bandwidth is only allocated after a circuit is created. When the card mode selected is RGN or MXP_VD_10G, the following error message is displayed: <pre>ODU utilization is not supported for the selected mode.</pre> Click Cancel to cancel the operation. For AR_XPE card, clicking the ODU Utilization button displays the graphical representation of how payloads are encapsulated into the ODU layer of the OTN frame. These details are displayed only when ONE_GE or FC1G payloads have been provisioned for that card mode. You cannot edit the ODU utilization dialog box. The ODU-1 Time Slot allocation for each payload is displayed in green. For 1GE and FC1G payload types, the ODU-0 Time Slot allocation is displayed in green.

ODU Interfaces

When 1GE and 1GFC payloads are provisioned, the ODU Interface tab shows the mapping of ODU0 objects with the corresponding Client and Trunk ports.



Note

The ODU Interfaces tab is enabled for AR_XPE cards only.

Table C-732 *Field Descriptions for the ODU Interfaces Tab*

Field	Description
ODU Objects	Physical representation of the ODU involved on the provisioned operating mode.
Trunk Ports	Displays the trunk ports number which maps to the virtual ODU0 object.
ODU1	Displays the ODU1 frame number which contains the corresponding ODU0 frame.
ODU0	Displays the ODU0 frame number within a ODU1 frame.
Client Ports	Displays the client ports that have been provisioned for each operating mode.

Info

The Info Properties pane allows you to view nominal operating values set for the card during manufacturing.

Table C-733 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of the attribute value.

Line

The Line Properties pane allows you to configure line information. If the card is installed on an ONS 15454 SONET NE, the Line Properties pane contains the following tabs:

- [Ports Tab, page C-555](#)
- [SONET Line Tab, page C-556](#)
- [Auto Ports Tab, page C-558](#)
- [Section Thresh 15 Min/1 Day Tabs, page C-558](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-558](#)
- [Section Trace Tab, page C-559](#)
- [RMON Thresholds, page C-559](#)
- [Ethernet Line Tab, page C-560](#)

If the card is installed on an ONS 15454 SDH NE, the Properties pane contains the following tabs:

- [Ports Tab, page C-560](#)
- [SDH Line Tab, page C-561](#)
- [Auto Ports Tab, page C-563](#)
- [RS Thresh 15 Min/1 Day Tabs, page C-564](#)
- [MS Thresh 15 Min/1 Day Tabs, page C-564](#)
- [Section Trace Tab, page C-564](#)
- [RMON Thresholds, page C-565](#)

- [Ethernet Line Tab, page C-565](#)

Ports Tab

The ports tab allows you to view and change the port settings.

Table C-734 **Field Descriptions for the Ports Tab**

Field	Description
Port Number	Displays the PPM and port number.
Port Name	Displays the name of the port.
Administration State	Note The port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format Administrative_State-Operational_State, Status_Attribute.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS state.
AIS/Squelch Configuration	Allows you to configure the remote client to squelch or send an AIS signal.
Termination Mode	Sets the mode of operation. (This option is available only for SONET/SDH payloads).
Video Type	Video.

Table C-734 *Field Descriptions for the Ports Tab (continued)*

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • Autoprovision—The system automatically provisions the reach from the pluggable port module (PPM) reach value on the hardware. • I1—Intermediate reach • S1—Short reach, up to a 15-km distance • S2—Short reach, up to a 40-km distance • L1—Long reach, up to a 40-km distance • L2—Long reach, up to a 80-km distance • L3—Long reach, up to a 80-km distance • CWDM—CWDM reach • MM—Multimode reach • ULH—Ultra-long haul (ULH) • DWDM—DWDM reach
Wavelength	Allows you to provision the wavelength frequency: • First tunable wavelength • Further wavelengths: – 850 nm through 1561.83 nm – 100-GHz ITU spacing – CWDM spacing

SONET Line Tab

The SONET Line tab allows you to view and change the SONET line settings of the card.

Table C-735 *Field Descriptions for the SONET Line Tab*

Field	Description
Port Number	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Administration State	The port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance

Table C-735 **Field Descriptions for the SONET Line Tab (continued)**

Field	Description
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
SF BER	Sets the signal fail bit error rate.
SD BER	Sets the signal degrade bit error rate.
Type	Defines the port.
ProvidesSync	When checked, the card is provisioned as an NE timing reference.
SyncMsgIn	Sets the EnableSync card parameter. Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Admin SSM In	Overrides the synchronization status message (SSM) synchronization traceability unknown (STU) value. If the node does not receive an SSM signal, it defaults to STU.
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • Autoprovision—The system automatically provisions the reach from the pluggable port module (PPM) reach value on the hardware. • I1—Intermediate reach • S1—Short reach, up to 15-km distance • S2—Short reach, up to 40-km distance • L1—Long reach, up to 40-km distance • L2—Long reach, up to 80-km distance • L3—Long reach, up to 80-km distance • CWDM—CWDM reach • MM—Multimode reach • ULH—Ultra-long haul (ULH) • DWDM—DWDM reach
Wavelength	Allows you to provision the wavelength frequency. • First tunable wavelength • Further wavelengths: – 850 nm through 1561.83 nm – 100-GHz ITU spacing – CWDM spacing

Auto Ports Tab

The Auto Ports tab allows you to enable autosensing for AR_MXP or AR_XP cards.

Table C-736 Field Descriptions for the Auto Ports Tab

Field	Description
Port No.	The port number.
Auto Sensing	If checked, enables autosensing.
Actual Port Type	Displays the autosensing signal type.

Section Thresh 15 Min/1 Day Tabs

The Section Thresh 15 Min/1 Day tabs allow you to view and change 15-minutes/1-day near-end section thresholds for the AR_MXP or AR_XP cards.

Table C-737 Field Descriptions for the Section Thresh 15 Min/1 Day Tabs

Field	Description
Near End	
Port Number	Displays the port number.
CV-S	Displays the coding violations section.
ES-S	Displays the errored seconds section.
SES-S	Displays the severely errored seconds section.
SEFS-S	Displays the severely errored framing seconds section.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change 15-minutes/1-day near- and far-end line thresholds for the AR_MXP or AR_XP cards.

Table C-738 Field Descriptions for the Line Thresh 15 Min/1 Day Tabs

Field	Description
Near End, Far End	
Port No.	The port number.
ES-L	Errored seconds line.
SES-L	Severely errored seconds line.
CV-L	Coding violations line.
UAS-L	Unavailable seconds line.
FC-L	Failure count line.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Section Trace Tab

The Section Trace tab allows you to change the section trace settings for AR_MXP or AR_XP cards.

Table C-739 Field Descriptions for the Section Trace Tab

Field	Description
Modify button	Allows you to open the Modify Trace dialog box, where you can change the section trace information for applicable cards. See Modifying Traces, page 7-171 for more information.
Port Number	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.
Default button	Resets the value of the port parameters to the default value.

RMON Thresholds

The RMON Thresholds Properties pane allows you to view RMON thresholds for the AR_MXP or AR_XP cards.

Table C-740 Field Descriptions for the RMON Thresholds Properties Pane

Field	Description
Filter button	Click the Filter button to filter the data displayed in the table.
Add button	Click Add to add the RMON thresholds.
Remove button	Click Remove button to delete the threshold. It is possible to delete more than one RMON threshold.
Index No.	Displays the selected interface number. Click the Index No. field to sort the data.
Slot	Displays the selected card.
Port	Displays the port on the selected card.
Variable	Displays the MIB variable that is being monitored.
Alarm Type	Indicates whether the event is triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	Indicates whether the sample type is relative or absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period	Displays the sample period, in seconds.
Rising Thresholds	Displays the number of occurrences for the rising threshold.
Falling Thresholds	Displays the number of occurrences for the falling threshold. In most cases, the falling threshold is set lower than the rising threshold.

Table C-740 *Field Descriptions for the RMON Thresholds Properties Pane (continued)*

Field	Description
Create	Allows you to create an RMON threshold. Click the Create button to create a threshold for the POS ports. Note You can select a Channel Group when you create a threshold. For more information, see Creating RMON Thresholds, page 6-11 .
Delete	Select a threshold from the list displayed and click the Delete button.

Ethernet Line Tab

The Ethernet Line tab allows you to view Ethernet line information.

Table C-741 *Field Descriptions for the Ethernet Line Tab*

Field	Description
Port Number	Displays the PPM and port number.
Port Name	Displays the name of the port.
ProvidesSync	Sets the ProvidesSync card parameter. If checked, the card is provisioned as a network element (NE) timing reference.
SyncMsgIn	Sets the EnableSync card parameter. Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Admin SSM In	Overrides the synchronization status message (SSM) and the synchronization traceability unknown (STU) value. If the node does not receive an SSM signal, it defaults to STU.
Termination Mode	Sets the mode of operation. (This option is available only for SONET/SDH payloads).
Video Type	Video.
Send DoNotUse	When checked, sends a DUS message on the S1 byte.
MTU	Sets the maximum size of the Ethernet frames accepted by the port. The port must be in OOS/locked state.
Speed	Sets the expected speed of the ports.
Duplex	(Display only) Displays expected duplex capability of ports.
Auto negotiation	If checked, enables autonegotiation on the same port.
ESMC Enable	Enables the timing to be taken from the Ethernet port.

Ports Tab

The Ports tab allows you to view and change the port settings for SDH platform.

Table C-742 *Field Descriptions for the Ports Tab*

Field	Description
Port Number	Displays the PPM and port number.
Port Name	Displays the name of the port.

Table C-742 Field Descriptions for the Ports Tab (continued)

Field	Description
Administration State	Note The port administrative state. It can be: - unlocked—Puts the port in service. The port service state changes to unlocked-enabled. - unlocked, automaticInService—Puts the port in automatic in-service. The port service state changes to unlocked-disabled, automaticInService. - locked-disabled—Removes the port from service and disables it. The port service state changes to locked-enabled, disabled. - locked, maintenance—Removes the port from service for maintenance. The port service state changes to locked-enabled, maintenance.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS state.
AIS/Squelch Configuration	Allows you to configure the remote client to squelch or send an AIS signal.
Termination Mode	Sets the mode of operation. (This option is not applicable on 10x10G_LC, 100G_LC_C, or CFP_LC cards).
Video Type	Video. (This option is not applicable on 10x10G_LC, 100G_LC_C, or CFP_LC cards).
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Note The reach distance options depend on the card selected.
Wavelength	Allows you to provision the wavelength: - First tunable wavelength: the system automatically provision the first wavelength supported by the PPM 850nm, 1310nm and 1550nm wavelengths - DWDM wavelengths: ranging from 1528.77nm to 1566.72nm at 50GHz ITU spacing - CWDM wavelengths: 1470nm, 1490nm, 1510nm, 1530nm, 1570nm, and 1590nm

SDH Line Tab

The SDH Line tab allows you to view and change the SDH line settings of the card.

Table C-743 Field Descriptions for the SDH Line Tab

Field	Description
Port No.	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Administration State	The port administration state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Table C-743 *Field Descriptions for the SDH Line Tab (continued)*

Field	Description
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
ALS Mode	Allows you to select the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Type	Defines the port as SONET or SDH.
ProvidesSync	When checked, the card is provisioned as an NE timing reference.
EnableSyncMsg	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Admin SSM In	Overrides the synchronization status message (SSM) and the synchronization traceability unknown (STU) value. If the node does not receive an SSM signal, it defaults to STU.

Table C-743 *Field Descriptions for the SDH Line Tab (continued)*

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR (short reach, up to 2 km distance) • SR 1 (up to 2 km distance) • IR 1 (intermediate reach, up to 15 km distance) • IR 2 (up to 40 km distance) • LR 1 (long reach, up to 40 km distance) • LR 2 (up to 80 km distance) • LR 3 (up to 80 km distance) • I1 • S1 • S2 • L1 • L2 • L3 • SX (up to 550 m or 270 m distance based on 50 um/62.5 um diameter fiber) • LX (up to 10 km or 550 m distance based on 50 um/62.5 um diameter fiber) • CX • T • DX (up to 40 km distance) • HX (up to 40 km distance) • ZX (up to 80 km distance) • VX (up to 100 km distance)
Wavelength	Allows you to provision the wavelength frequency.

Auto Ports Tab

The Auto Ports tab allows you to enable autosensing for AR_MXP or AR_XP cards.

Table C-744 *Field Descriptions for the Auto Ports Tab*

Field	Description
Port No.	The port number.
Auto Sensing	If checked, enables autosensing.
Actual Port Type	Displays the autosensing signal type.

RS Thresh 15 Min/1 Day Tabs

The RS Thresh 15 Min/1 Day tabs allow you to view and change the 15minutes/1-day regeneration section threshold for the card.

Table C-745 Field Descriptions for the RS Thresh 15 Min/1 Day Tabs

Field	Description
Port No.	The port number.
EB-RS	Errored blocks regenerator section.
ES-RS	Errored seconds regenerator section.
SES-RS	Severely errored seconds regenerator section.
BBE-RS	Background block errors regenerator section.
UAS-RS	Unavailable seconds regenerator section.
Reset to Defaults button	Resets the value of the port parameters to the default value.

MS Thresh 15 Min/1 Day Tabs

The MS Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day near- and far-end multiplex section threshold for the card.

Table C-746 Field Descriptions for the MS Thresh 15 Min/1 Day Tabs

Field	Description
Port No.	The port number.
EB-MS	Errored blocks multiplexer section.
ES-MS	Errored seconds multiplexer section.
SES-MS	Severely errored seconds multiplexer section.
BBE-MS	Background block errors multiplexer section.
UAS-MS	Unavailable seconds multiplexer section.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Section Trace Tab

The Section Trace tab allows you to change the section trace settings for the AR_MXP or AR_XP cards.

Table C-747 Field Descriptions for the Section Trace Tab

Field	Description
Modify button	Allows you to open the Modify Trace dialog box, where you can change the section trace information for applicable cards. See Modifying Traces, page 7-171 for more information.
Port Number	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.

Table C-747 *Field Descriptions for the Section Trace Tab (continued)*

Field	Description
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.
Default button	Resets the value of the port parameters to the default value.

RMON Thresholds

The RMON Thresholds Properties pane allows you to view RMON thresholds for the AR_MXP or AR_XP cards.

Table C-748 *Field Descriptions for the RMON Thresholds Properties Pane*

Field	Description
Filter button	Click the Filter button to filter the data displayed in the table.
Add button	Click Add to add the RMON thresholds.
Remove button	Click Remove button to delete the threshold. It is possible to delete more than one RMON threshold.
Index No.	Displays the selected interface number.
Slot	Displays the selected card.
Port	Displays the port on the selected card.
Variable	Displays the MIB variable that is being monitored.
Alarm Type	Indicates whether the event is triggered by the rising threshold, the falling threshold, or both the rising and falling thresholds.
Sample Type	Indicates whether the sample type is relative or absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period	Displays the sample period, in seconds.
Rising Thresholds	Displays the number of occurrences for the rising threshold.
Falling Thresholds	Displays the number of occurrences for the falling threshold. In most cases, the falling threshold is set lower than the rising threshold.
Create	Allows you to create an RMON threshold. Click the Create button to create a threshold for the POS ports. Note You can select a Channel Group when you create a threshold. For more information, see Creating RMON Thresholds, page 6-11 .
Delete	Select a threshold from the list displayed and click the Delete button.

Ethernet Line Tab

The Ethernet Line tab allows you to view Ethernet line information.

Table C-749 **Field Descriptions for the Ethernet Line Tab**

Field	Description
Port Number	Displays the port number.
Port Name	Displays the name of the port.
ProvidesSync	Sets the ProvidesSync card parameter. If checked, the card is provisioned as a network element (NE) timing reference.
SyncMsgIn	Sets the EnableSync card parameter. Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Admin SSM In	Overrides the synchronization status message (SSM) and the synchronization traceability unknown (STU) value. If the node does not receive an SSM signal, it defaults to STU.
Termination Mode	Sets the mode of operation. (This option is available only for SONET/SDH payloads).
Video Type	Video.
Send DoNotUse	When checked, sends a DUS message on the S1 byte.
MTU	Sets the maximum size of the Ethernet frames accepted by the port. The port must be in OOS/locked state.
Speed	Sets the expected speed of the ports.
Duplex	(Display only) Displays expected duplex capability of ports.
Auto negotiation	If checked, enables autonegotiation on the same port.
ESMC Enable	Enables the timing to be taken from the Ethernet port.

Loopback

The Loopback Properties pane allows you to view and update AR_MXP and AR_XP loopback information.

Table C-750 **Field Descriptions for the Loopback Properties Pane**

Field	Description
Port Number	Displays the port number (1 to 10).
Port Name	Allows you to add a name for the optical port.
Admin State	Allows you to select the administration state of the port: In Service (IS), Out of Service (OOS), or Out of Service-Maintenance (OOS_MT).
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.

Optical Thresholds

The Optical Thresh Properties pane allows you to view and provision optical threshold settings. The Properties pane displays the [Alarm Thresholds/TCA 15 Min/TCA 1 Day Tabs, page C-567](#) tabs:

Alarm Thresholds/TCA 15 Min/TCA 1 Day Tabs

The Alarm Thresholds tab allows you to select thresholds for alarm generation.

The TCA 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-751 Field Descriptions for the Alarm Thresholds/TCA 15 Min/TCA 1 Day Tabs

Field	Description
Port No.	The port number.
Laser Bias High	Displays the upper laser bias threshold.
Rx Power High	Displays the upper receive power threshold.
Rx Power Low	Displays the lower receive power threshold.
Tx Power High	Displays the upper transmit power threshold. Note Tx Power High is not supported on trunk ports.
Tx Power Low	Displays the lower transmit power threshold. Note Tx Power Low is not supported on trunk ports.
Reset to Defaults button	Resets the value of the port parameters to the default value.

OTN

The OTN Properties pane allows you to change the line optical transport network (OTN) settings for AR_MXP and AR_XP cards. The Properties pane displays the following tabs:

- [OTN Line Tab, page C-567](#)
- [G.709 Thresh 15Min/1 Day Tabs, page C-568](#)
- [FEC Thresh 15 Min/1 Day Tabs, page C-569](#)
- [Trail Trace Identifier Tab, page C-569](#)
- [Proactive Protection Regen Tab, page C-569](#)

OTN Line Tab

The OTN Line tab allows you to view and change the OTN line settings of the card.

Table C-752 Field Descriptions for the OTN Line Tab

Field	Description
Port No.	The port number.
G.709 OTN	Displays the G.709 OTN feature.
FEC	Displays the forward error correction.
SF BER	The signal fail bit error rate.
SD BER	The signal degrade bit error rate.
Asynch/Synch Mapping	The card can perform multiplexing per ITU-T G.709. The ODUK (client SONET/SDH payload) can be mapped to the optical channel (OTUK) either asynchronously (asynch mapping) or synchronously (synch mapping) with this setting.

Table C-752 Field Descriptions for the OTN Line Tab (continued)

Field	Description
OTU Mapping	The client payload mapping to the trunk. Note ODU1E and ODU2E mapping is supported only if the card mode is TXP_MR and client payload is 10GE.
ProvidesSync	If checked, the card is provisioned as an NE timing reference.
EnableSyncMsg	Allows you to set the EnableSync card parameter. Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Admin SSM In	Overrides the synchronization status message (SSM) and the synchronization traceability unknown (STU) value. If the node does not receive an SSM signal, it defaults to STU.
SendDoNotUse	If checked, sends a DUS message on the S1 byte.
ODU Transparency	The ODU overhead byte configuration. - If Transponder is selected as the card configuration, this parameter defaults to Cisco Extended Use. - Choose Transparent Standard Use or Cisco Extended Use if Standard Regen or Enhanced FEC is selected as the card configuration. Note For Mixed card configuration, the ODU Transparency depends on the port mode you selected.

G.709 Thresh 15Min/1 Day Tabs

The G.709 Thresh 15Min/1 Day tabs displays near- and far-end SM optical channel transport unit (OTUK), and near- and far-end PM optical channel data unit (ODUK) threshold information received during the past 15minutes/24 hours.

Table C-753 Field Descriptions for the G.709 Thresh 15Min/1 Day Tabs

Field	Description
SM (OTUK) Near End, Far End	
Port No.	Displays the optical port number.
BBE-SM	Displays the background block errors.
ES-SM	Displays the errored seconds.
SES-SM	Displays the severely errored seconds.
UAS-SM	Displays the unavailable seconds.
FC-SM	Displays the failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.
Reset to Defaults button	Resets the value of the port parameters to the default value.
PM (ODUK) Near End, Far End	
Port No.	Displays the optical port number.
BBE-PM	Displays the background block errors.
ES-PM	Displays the errored seconds.
SES-PM	Displays the severely errored seconds.

Table C-753 *Field Descriptions for the G.709 Thresh 15Min/1 Day Tabs (continued)*

Field	Description
UAS-PM	Displays the unavailable seconds.
FC-PM	Displays the failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.

FEC Thresh 15 Min/1 Day Tabs

The FEC Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day FEC threshold values of the card.

Table C-754 *Field Descriptions for the FEC Thresh 15 Min/1 Day Tabs*

Field	Description
Port No.	Displays port number information.
Bit Errors Corrected	Displays the bit errors corrected in 15-minute intervals.
Uncorrectable Words	Displays the uncorrectable words in 15-minute intervals.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Trail Trace Identifier Tab

The Trail Trace Identifier tab allows you to provision the trail trace identifier for the card.

Table C-755 *Field Descriptions for the Trail Trace Identifier Tab*

Field	Description
Modify button	Allows you to open the Modify Trace dialog box, where you can change the section trace information for applicable cards. For more information, see Modifying Traces, page 7-171 .
Port No.	Displays port number information.
Level	Displays the trail trace identifier level (Section or Path).
Trace Mode	Allows you to set the trace mode (Off or Manual).
Disable FDI on TTIM	Allows you to disable forward defect indication (FDI) for trail trace identifier mismatch (TTIM) alarms.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string.
Current Received String	Displays the current received string.

Proactive Protection Regen Tab

The Proactive Protection Regen tab allows you to provision proactive protection regen for the card.

**Note**

Proactive protection regen is supported only when the AR_MXP or AR_XP card is in high-rate REGEN card mode.

Table C-756 Field Descriptions for the Proactive Protection Regen Tab

Field	Description
Port No.	Displays port number information.
Trigger Threshold	Sets the maximum BER threshold to trigger proactive protection.
Trigger Window (ms)	Sets the duration for which BER is monitored before triggering the proactive protection. The trigger window value must be a multiple of: 10 ms for trigger thresholds between 1E-3 and 6E-6 100 ms for trigger threshold between 5E-6 to 1E-7 Trigger window must be less than or equal to 10000 ms.
Revert Threshold	Sets the revert threshold value of BER. Note Revert Threshold settings must be less than the Trigger Threshold values.
Revert Window (ms)	Sets the duration for which BER is monitored for settings that are less than the revert threshold value before which proactive protection provided to the router is removed. Revert Window value must be at least 2000ms and a multiple of: 10ms for a revert threshold of 1E-4 to 6E-7 100ms for a revert threshold of 5E-7 to 5E-8. The revert window must be less than or equal to 10000ms.
Enable Proactive Protection	Allows you to enable or disable proactive protection. Possible values are: - Enable - Disable The enable proactive protection is disabled by default.

PPM

The PPM Properties pane allows you to view and provision the ports inside the PPM.

Table C-757 Field Descriptions for the PPM Properties Pane

Field	Description
Pluggable Port Modules (PPM)	
PPM No.	Displays the identifier of the plugin module.
Actual Equipment Type	Displays the actual card that is installed in the slot. Values are single mode or multimode.
Equipment State	Displays the equipment state of the plugin module.
Admin State	Displays the port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service (only when PPM is pre-provisioned) - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

PPM

Table C-757 *Field Descriptions for the PPM Properties Pane (continued)*

Field	Description
Port	Displays the port number for the PPM in the Pluggable Port Modules area.
Rate	Displays the port rate for the PPM in the Pluggable Port Modules area.

Provision Pluggable Dialog Box

Click the **Create** button to launch the Provision Pluggable dialog box. This dialog box allows you to provision the PPM and to create the ports inside this entity. See [Provision Pluggable Dialog Box, page C-25](#) for more information.

Protection

The Protection Properties pane allows you to view and update protection group information.

Table C-758 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection groups, such as which port is the protected port and which port is the working port. Also allows you to execute switch commands.

Slot Properties—10x10G_LC, 100G_LC_C, and CFP_LC

The 10x10G_LC, 100G_LC_C, and CFP_LC cards are supported on ONS 15454 M2, and ONS 15454 M6 platforms. The slot properties pane displays information about the Cisco ONS 15454 M2 or ONS 15454 M6 slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties. The single-slot 10x10G_LC and 100G_LC_C cards and the double-slot CFP_LC cards are connected to the backplane.

The 100G-LC-C, 10x10G-LC, and CFP-LC cards support the following key features:

- **Operating Modes**—The 100G-LC-C, 10x10G-LC, and CFP-LC cards can be configured into multiple operating modes. The cards can be equipped with pluggables for client and trunk options, and offer a large variety of configurations. When you configure the 100G-LC-C, 10x10G-LC, or CFP-LC card into multiple operational modes, make sure that the following tasks are completed:
 - The card must be preprovisioned and the modes must be configured. None of the modes are provisioned on the card by default. All operating modes are created on the card level. These are card-specific provisioning, which decides the behavior of a particular card.
 - Depending on the card mode selected, the supported payload for that particular card mode must be provisioned on the PPMs.
 - The payloads can be provisioned after configuring the operational mode on the card.

Each operating mode can be configured using the specific set of cards and client payloads. [Table C-759](#) describes how each mode can be configured, the supported payloads, and the valid port pair for a specific operating mode.

Table C-759 Operating Modes and Supported Payloads for 100G-LC-C, 10x10G-LC, and CFP-LC Cards

Card (provisioning executed on this card)	Operational Mode	Peer Card (connected through backplane)	Supported Client Payloads	Valid Card Slot	Valid Peer Card Slot
100G-LC-C	TXP-100G (Standalone 100GE Transponder)	—	100GE, OTU4	M2—Slots 2 and 3 M6—Slots 2 to 7	—
	RGN-100G (100G Regenerator)	100G-LC-C card	— Regeneration of any 100 G configuration	M2—Slot-2 M2—Slot-3 M6—Slot-2 M6—Slot-3 M6—Slot-4 M6—Slot-5 M6—Slot-6 M6—Slot-7	M2—Slot-3 M2—Slot-2 M6—Slot-3 M6—Slot-2 M6—Slot-5 M6—Slot-4 M6—Slot-7 M6—Slot-6
10x10G-LC	MXP-10x10G (10x10G Muxponder)	100G-LC-C card	OC192/STM-64, 10GE-LAN Phy, 10GE-WAN Phy (using OC192), OTU2, OTU2e, 8G FC, 10G FC, FICON	M2—Slot-2 M2—Slot-3 M6—Slot-2 M6—Slot-3 M6—Slot-4 M6—Slot-5 M6—Slot-6 M6—Slot-7	M2—Slot-3 M2—Slot-2 M6—Slot-3 M6—Slot-2 M6—Slot-5 M6—Slot-4 M6—Slot-7 M6—Slot-6
	RGN-10G (5x10G Regenerator)	—	10GE-LAN Phy, OTU2, OC192/STM64, 10GE-WAN Phy, OTU2, OTU2e, 8G FC/FICON, 10G FC/FICON	M2—Slots 2 and 3 M6—Slots 2 to 7	—
	TXP-10G (5x10G Transponder)	—	10GE-LAN Phy, OTU2e, OC192/STM64, 10GE-WAN Phy, OTU2, OTU2e, 8G FC/FICON, 10G FC/FICON	M2—Slots 2 and 3 M6—Slots 2 to 7	—
	LOW-LATENCY	—	TEN_GE, FC10G	—	—
	FANOUT	—	TEN_GE, OTU2	—	—

Table C-759 Operating Modes and Supported Payloads for 100G-LC-C, 10x10G-LC, and CFP-LC Cards

Card (provisioning executed on this card)	Operational Mode	Peer Card (connected through backplane)	Supported Client Payloads	Valid Card Slot	Valid Peer Card Slot
CFP-LC	2x40G Muxponder	100G-LC-C card	OTU3/40GE-LAN Phy	M6—Slot-3 M6—Slot-5	M6—Slot 2 or 5 M6—Slot 4 or 7
	CFP-TXP (100G Transponder)—One port	100G-LC-C card	OTU4, 100GE	M6—Slot-3 M6—Slot-5	M6—Slot 2 or 5 M6—Slot 4 or 7
	CFP-TXP (100G Transponder)—Two ports	Two 100G-LC-C cards	OTU4, 100GE	M6—Slot-3 M6—Slot-5	M6—Slot 2 or 5 M6—Slot 4 or 7

**Note**

100G_LC_C card refers to the 15454-M 100G-LC-C card, 10x10G-LC refers to the 15454-M-10x10G LC card, and CFP-LC refers to the 15454-M-CFP-LC card.

- GCCs—The 100G_LC_C, 10x10G_LC, and CFP_LC cards support the provisioning of GCC channel on both client and trunk: OTU2, OTU3 and OTU4 ports. You can create a maximum of 1 GCC channel for 100G and 10 GCC channels for 10X10G card on the Cisco ONS 15454 M2 or Cisco ONS 15454 M6 shelf. The high-speed GCC enables you to create the GCC when both the NE and FE line cards are on the Cisco ONS 15454 M2 or Cisco ONS 15454 M6 shelf. You can select the legacy GCC on the Cisco ONS 15454 shelf on one side and the Cisco ONS 15454, Cisco ONS 15454 M2, or Cisco ONS 15454 M6 shelf on the other side. The 100G-LC-C, 10x10G-LC, and CFP-LC cards work with the OTN devices defined in ITU-T G.709. The Digital Wrapper function (ITU-T G.709-compliant) formats the DWDM wavelength so that it can be used to set up GCCs for data communications, enable FEC, or facilitate performance monitoring. The GCC rate for the card is as follows:

- 10x10G_LC—192 k and 1200 k
- 100G_LC_C—192 k (virtual port only), 400 k, and 1200 k
- CFP_LC—192 k

For more information on GCC, see [Create, Edit, and Delete GCC, page 6-17](#).

- Y-cable protection—Y-cable protection between the same card type is supported only on ports with the same port number and signal rate. The Y-cable protection scheme is aimed to protect the client signal. Two TXP (or MXP) cards on a single DWDM shelf are required to implement this type of protection mechanism. The two client ports of the two TXP (or MXP) cards are configured in Y-cable Protection Group.

The protection mechanism is based on the following:

- TXP_10G—10x10G_LC only for 10GE and 8GFC payloads in standalone configuration.
- MXP_10x10G—10x10G_LC and 100G_LC_C cards only for 10GE and 8GFC payloads in a peer configuration.
- CFP_MXP—CFP_LC and 100G_LC_C cards only for 40GE payload in a peer configuration.
- CFP_TXP—CFP_LC and 100G_LC_C only for 100GE payload in a peer configuration.
- MXP_10x10G—10x10G_LC cards only for OC192, OTU2, and 10G-FC payloads.

- TXP_10G—10x10G_LC card only (5x configuration) supports the following client mapping trunk combinations:
 - OC192
 - 10GFC
 - OTU2

For more information on Protection, see [Protection](#).

- Signal Types—The 100G_LC_C, 10x10G_LC, and CFP_LC cards supports the following client signal types:

For 100G_LC_C card:

- 100 Gigabit Ethernet and OTU4
- OTU4 from BP OTL4.10 (interconnect with 100G-LC-C and CFP client)
- 100 Gigabit Ethernet from BP CAUI (interconnect with CFP client)
- 3 x OTU3e(255/227) from BP OTL3.4 (interconnect with 10 x10G client)
- 2 x OTU3 from BP OTL3.4 (interconnect with CFP client)
- 2 x 40 Gigabit Ethernet from BP XLAUI (interconnect with CFP client)

For 10x10G_LC card:

- OC-192/STM-64 (9.95328 Gbps)
- 10 Gigabit Ethernet WAN PHY (9.95328 Gbps)
- 10 Gigabit Ethernet LAN PHY (10.3125 Gbps)
- 10 G FC (10.518 Gbps)
- 8 G FC
- OTU-2
- G.709 overlocked to transport 10 Gigabit Ethernet as defined by ITU-T G. Sup43 Clause 7.2 (11.0491 Gbps)

For CFP_LC card:

- 100 Gigabit Ethernet
- 40 Gigabit Ethernet
- OTU-3
- OTU-4

The following figure shows the 10x10G_LC card faceplate.

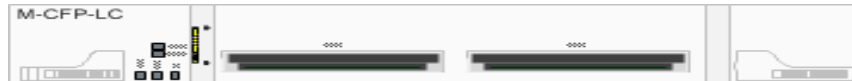
Figure C-66 10x10G_LC Card Faceplate



The following figure shows the 100G_LC_C card faceplate.

Figure C-67 100G_LC_C Card Faceplate

The following figure shows the CFP_LC card faceplate.

Figure C-68 CFP_LC Card Faceplate

For the 10x10G_LC, 100G_LC_C, and CFP_LC module, the slot properties pane displays the following properties: Module View, Identification, Card, Alarm Behavior, Auto Laser Shutdown, Backplane Loopback, Info, Line, Loopback, Optical Thresholds, OTN, and PPM.

Module View

The Module View displays a graphic of the 10x10G_LC, 100G_LC_C, and CFP_LC that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its ports. Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update 10x10G_LC, 100G_LC_C, and CFP_LC identification information.

Table C-760 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.

Table C-760 *Field Descriptions for the Identification Properties Pane (continued) (continued)*

Field	Description
Administrative State	The card administrative state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Alarm Behavior Tab

The Alarm Behavior tab allows you to view and update alarm profiles assigned to ports and PPM on 10x10G_LC, 100G_LC_C, and CFP_LC.

Table C-761 *Field Descriptions for the Alarm Behavior Tab*

Field	Description
Filter button	Click the Filter button to filter the data displayed in the table.
Force Profile	When clicked, forces all ports and PPM to the alarm profile in the selected row of the table.
Port/PPM Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Card Profile	
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.

Auto Laser Shutdown Tab

The Auto Laser Shutdown tab allows you to view and update optical card auto laser shutdown (ALS) parameters for 10x10G_LC, 100G_LC_C, and CFP_LC.

Table C-762 *Field Descriptions for the Auto Laser Shutdown Tab*

Field	Description
Port Number	Displays the port number.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the received laser pulse duration, in seconds. The range is from 2.0 to 100.0 seconds.

Table C-762 Field Descriptions for the Auto Laser Shutdown Tab (continued)

Field	Description
Rec. Pulse Int. (sec)	Allows you to set the received laser pulse interval, in seconds. The range is from 60 to 300 seconds.
Status	Displays the current laser status. Values are Shut Down or Not Shut Down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

Backplane Loopback Tab

The Backplane Loopback tab allows you to view and configure the loopback on the backplane connections on 10x10G_LC, 100G_LC_C, and CFP_LC.

Table C-763 Field Descriptions for the Backplane Loopback Tab

Field	Description
Admin State	The card administrative state. It can be: - IS, AINS—Automatic In Service - OOS, MT—Out of Service, Maintenance - IS—In Service
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.

Card

The Card mode tab allows you to view the operating modes that are provisioned.

Table C-764 Field Descriptions for the Card Mode Tab

Field	Description
Card Mode	Displays the operating mode that has been provisioned on the card.
Client Ports	Displays the client ports that have been provisioned for the selected card configuration.
Trunk Ports	Displays the trunk ports that have been provisioned for the selected card configuration.
Peer Card	Displays the shelf and slot number of the peer card that is set up for a specific card configuration. If the peer card is not set up, “None” or “N/A” is displayed for the operating modes that requires no peer card for configuration.
Create	Displays the Operating Mode Configuration creation dialog box to configure a new card mode. Click the Create button to create a new operating configuration mode. For more details on creating configurations, see Creating Configurations, page 6-14 .

Table C-764 *Field Descriptions for the Card Mode Tab (continued)*

Field	Description
Delete	Click the Delete button to delete the selected card configuration. Note The Delete button is enabled only when at least one operating mode is configured.
Add Peer Card	Allows addition of another 100_LC_C card to the CFP_TXP card configuration with only one peer card configured. The Add Peer button will be enabled only if the CFP card is configured with CFP-TXP card mode with one peer card. For more information on adding peer cards, see Adding a Peer Card, page 6-17 . Note This field is unavailable when CFP_LC is configured in Muxponder mode.
Remove Peer Card	Allows deletion of an existing 100_LC_C peer card from a CFP_TXP when it is configured with two 100G_LC_C peer cards. The Remove Peer button will be enabled only if the CFP card is configured with CFP-TXP card mode with two peer cards. Click the Remove Peer button to open the dialog showing the available peer cards and the mapped port with corresponding radio buttons. Choose a peer card to remove. Note This field is unavailable when CFP_LC is configured in Muxponder mode.

Info

The Info Properties pane allows you to view nominal operating values set for the card during manufacturing.

Table C-765 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of the attribute value.

Line

The Line Properties pane allows you to configure line information. If the card is installed on an ONS 15454 SONET NE, the Line Properties pane contains the following tabs:

- [Ports Tab, page C-579](#)
- [SONET Line Tab, page C-580](#)
- [Section Thresh 15 Min/1 Day Tabs, page C-581](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-581](#)
- [Section Trace Tab, page C-582](#)
- [Ethernet Tab, page C-582](#)
- [RMON Thresholds, page C-584](#)

If the card is installed on an ONS 15454 SDH NE, the Properties pane contains the following tabs:

- [Ports Tab, page C-585](#)
- [SDH Line Tab, page C-586](#)

- [RS Thresh 15 Min/ 1 Day Tabs, page C-587](#)
- [MS Thresh 15 Min/1 Day Tabs, page C-588](#)
- [Section Trace Tab, page C-588](#)
- [Ethernet Tab, page C-589](#)
- [RMON Thresholds, page C-590](#)

**Note**

The Section Trace, SONET Line, Section Thresholds, Line Thresholds, SDH Line, RS Thresholds, and MS Thresholds tabs are displayed for 10x10G_LC cards only when you create an OC192 payload.

Ports Tab

The ports tab allows you to view and change the port settings.

Table C-766 **Field Descriptions for the Ports Tab**

Field	Description
Port Number	Displays the PPM and port number.
Port Name	Displays the name of the port.
Administration State	Note The port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format Administrative_State-Operational_State, Status_Attribute.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS state.
AIS/Squelch Configuration	Allows you to configure the remote client to squelch or send an AIS signal.
Video Type	Video. (This option is not applicable on 10x10G_LC, 100G_LC_C, or CFP_LC cards).
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Note The reach distance options depend on the card and pluggables selected.
Wavelength	Allows you to provision the wavelength: • First tunable wavelength: the system automatically provision the first wavelength supported by the PPM • 850nm, 1310nm and 1550nm wavelengths • DWDM wavelengths: ranging from 1528.77nm to 1566.72nm at 50GHz ITU spacing • CWDM wavelengths: 1470nm, 1490nm, 1510nm, 1530nm, 1570nm, and 1590nm
Overclock	Allows you to enable or disable overclock mode. Enable overclock mode to set the data rate to FC 10G for PPM.

Table C-766 *Field Descriptions for the Ports Tab (continued)*

Field	Description
CD High	Sets the Chromatic Dispersion upper threshold. Note This is supported only on 100G_LC_C card trunk port.
CD Low	Sets the Chromatic Dispersion lower threshold. Note This is supported only on 100G_LC_C card trunk port.
Tx Shutdown	If checked, the transmit optical power is turned off. Note This can be done when the port is out of service or in maintenance.
Tx Power	Allows you to set the transmit power to a specific value. The range is from -10.0 to 0.25 dBm.
Mapping Mode	Sets the mapping mode.

SONET Line Tab

The SONET Line tab allows you to view and change the SONET line settings of the 10x10G_LC card.

Table C-767 *Field Descriptions for the SONET Line Tab*

Field	Description
Port Number	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
SF BER	Sets the signal fail bit error rate.
SD BER	Sets the signal degrade bit error rate.
Type	Defines the port.
ProvidesSync	When checked, the card is provisioned as an NE timing reference.
SyncMsgIn	Sets the EnableSync card parameter. Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Admin SSM In	Overrides the synchronization status message (SSM) synchronization traceability unknown (STU) value. If the node does not receive an SSM signal, it defaults to STU.

Table C-767 *Field Descriptions for the SONET Line Tab (continued)*

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR-MM • SR1 • IR2 • LR2 • DWDM—DWDM reach
Wavelength	Allows you to provision the wavelengths: • First tunable wavelength: the system automatically provision the first wavelength supported by the PPM • 850nm, 1310nm, and 1530nm wavelengths • DWDM wavelengths: ranging from 1528.77nm to 1566.72nm at 50GHz ITU spacing • CWDM wavelengths: 1470nm, 1490nm, 1510nm, 1530nm, 1570nm, and 1590nm.
Send DoNotUse	When checked, sends a DUS message on the S1 byte.

Section Thresh 15 Min/1 Day Tabs

The Section Thresh 15 Min/1 Day tabs allow you to view and change 15-minute/1-day near-end section thresholds of the 10x10G_LC card.

Table C-768 *Field Descriptions for the Section Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	Displays the port number.
CV-S	Displays the coding violations section.
ES-S	Displays the errored seconds section.
SES-S	Displays the severely errored seconds section.
SEFS-S	Displays the severely errored framing seconds section.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tab allows you to view and change 15-minute/1-day near- and far-end line thresholds of the 10x10G_LC card.

Table C-769 Field Descriptions for the Line Thresh 15 Min/1 Day Tabs

Field	Description
Near End, Far End	
Port No.	The port number.
ES-L	Errored seconds line.
SES-L	Severely errored seconds line.
CV-L	Coding violations line.
UAS-L	Unavailable seconds line.
FC-L	Failure count line.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Section Trace Tab

The Section Trace tab allows you to change the section trace settings for 10x10G_LC card.

Table C-770 Field Descriptions for the Section Trace Tab

Field	Description
Modify button	Allows you to open the Modify Trace dialog box, where you can change the section trace information for applicable cards. See Modifying Traces, page 7-171 for more information.
Port Number	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.
Default button	Resets the value of the port parameters to the default value.

Ethernet Tab

The Ethernet tab allows you to view the Ethernet line information.



Note

The Ethernet tab is displayed depending on the following criteria:

- For 10x10G_LC card—When the payload is TEN_GE.
- For 100G_LC_C card—When the payload is ONEHUNDRED_GE provisioned on 100G_LC_C in standalone operating mode or FORTY_GE/ONEHUNDRED_GE provisioned on the CFP_LC peer card.

Table C-771 *Field Descriptions for the Ethernet Tab*

Field	Description
Port Number	Displays the PPM and port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format Administrative_State-Operational_State, Status_Attribute.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS state.
Video Type	Video. (This option is not applicable on 10x10G_LC, 100G_LC_C, or CFP_LC cards).
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • TEN_GE payload – TEN_GE SR – TEN_GE LR – TEN_GE ER – TEN_GE ZR – DWDM • FORTY_GE payload – 40GBASE-FR – 40GBASE-LR4 • ONEHUNDRED_GE payload – 100GBASE_SR10
Wavelength	Allows you to provision the wavelength: • First tunable wavelength: the system automatically provision the first wavelength supported by the PPM • 850nm, 1310nm, and 1530nm wavelengths • DWDM wavelengths: ranging from 1528.77nm to 1566.72nm at 50GHz ITU spacing • CWDM wavelengths: 1470nm, 1490nm, 1510nm, 1530nm, 1570nm, and 1590nm.

Table C-771 Field Descriptions for the Ethernet Tab (continued)

Field	Description
Termination Mode	Sets the mode of operation. (This option is not applicable on 10x10G_LC, 100G_LC_C, or CFP_LC cards).
MTU	Maximum transmission unit (MTU). The largest acceptable packet size configured for that port. The default value is 1548.
Incoming MAC Address	Allows you to edit the incoming MAC address.
Mapping	Displays the client trunk ports mapping. Available options are: • GFB • CBR • Transparent

RMON Thresholds

The RMON Thresholds Properties pane allows you to view RMON thresholds for the 10x10G_LC and 100G_LC_C cards.

**Note**

The RMON thresholds tab is displayed depending on the following criteria:

- For 10x10G_LC card when a data payload is provisioned (TEN_GE, 8GFC, 10GFC).
- For 100G_LC_C card when the payload is ONEHUNDRED_GE provisioned on 100G_LC_C in standalone operating mode or FORTY_GE/ONEHUNDRED_GE provisioned on the CFP_LC peer card.

Table C-772 Field Descriptions for the RMON Thresholds Properties Pane

Field	Description
Filter button	Click the Filter button to filter the data displayed in the table.
Add button	Click Add to add the RMON thresholds.
Remove button	Click Remove button to delete the threshold. It is possible to delete more than one RMON threshold.
Index No.	The number which is automatically assigned by the system to the RMON Threshold. Click the Index No. field to sort the data.
Slot	Displays the selected card.
Port	Displays the port on the selected card.
Variable	Displays the MIB variable that is being monitored.
Alarm Type	Indicates whether the event is triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	Indicates whether the sample type is relative or absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period	Displays the sample period, in seconds.
Rising Thresholds	Displays the number of occurrences for the rising threshold.

Table C-772 *Field Descriptions for the RMON Thresholds Properties Pane (continued)*

Field	Description
Falling Thresholds	Displays the number of occurrences for the falling threshold. The falling threshold must be lower than the rising threshold.
Create	Allows you to create an RMON threshold. Click the Create button to create a threshold for the ports. Note You can select a Channel Group when you create a threshold. For more information, see Creating RMON Thresholds, page 6-11 .
Delete	Select a threshold from the list displayed and click the Delete button.

Ports Tab

The ports tab allows you to view and change the port settings.

Table C-773 *Field Descriptions for the Ports Tab*

Field	Description
Port Number	Displays the PPM and port number.
Port Name	Displays the name of the port.
Administration State	Note The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format Administrative_State-Operational_State, Status_Attribute.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS state.
AIS/Squelch Configuration	Allows you to configure the remote client to squelch or send an AIS signal.
Video Type	Video.

Table C-773 **Field Descriptions for the Ports Tab (continued)**

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • Autoprovision—The system automatically provisions the reach from the pluggable port module (PPM) reach value on the hardware. • I1—Intermediate reach • S1—Short reach, up to a 15-km distance • S2—Short reach, up to a 40-km distance • L1—Long reach, up to a 40-km distance • L2—Long reach, up to a 80-km distance • L3—Long reach, up to a 80-km distance • CWDM— CWDM reach • MM—Multimode reach • ULH—Ultra-long haul (ULH) • DWDM—DWDM reach
Wavelength	Allows you to provision the wavelength frequency: • First tunable wavelength • Further wavelengths: – 850 nm through 1561.83 nm – 100-GHz ITU spacing – CWDM spacing
Overclock	Allows you to enable or disable overclock mode. Enable overclock mode to set the data rate to FC 10G for PPM.
CD High	Displays the Chromatic Dispersion upper threshold. Note This is supported only on 100G_LC card trunk port.
CD Low	Displays the Chromatic Dispersion lower threshold. Note This is supported only on 100G_LC card trunk port.
Tx Shutdown	If checked, the transmit optical power is turned off. Note This can be done when the port is out of service or in maintenance.
Tx Power	Allows you to set the transmit power to a specific value. The range is from -10.0 to 0.25 dBm.
Mapping Mode	Sets the mapping mode.

SDH Line Tab

The SDH Line tab allows you to view and change the SDH line settings of the 10x10G_LC card.

Table C-774 **Field Descriptions for the SDH Line Tab**

Field	Description
Port No.	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Administration State	The port administration state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
ALS Mode	Allows you to select the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Type	Defines the port as SONET or SDH.
ProvidesSync	When checked, the card is provisioned as an NE timing reference.
EnableSyncMsg	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Admin SSM In	Overrides the synchronization status message (SSM) and the synchronization traceability unknown (STU) value. If the node does not receive an SSM signal, it defaults to STU.
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • SR-MM (short reach, up to 2 km distance) • I1 • S2 • L2 • DWDM
Wavelength	Allows you to provision the wavelength frequency.
Send DoNotUse	When checked, sends a do not use (DUS) message on the S1 byte.

RS Thresh 15 Min/ 1 Day Tabs

The RS Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day regeneration section threshold for the 10x10G_LC card.

Table C-775 **Field Descriptions for the RS Thresh 15 Min/1 Day Tabs**

Field	Description
Port No.	The port number.
EB-RS	Errored blocks regenerator section.

Table C-775 *Field Descriptions for the RS Thresh 15 Min/1 Day Tabs*

Field	Description
ES-RS	Errored seconds regenerator section.
SES-RS	Severely errored seconds regenerator section.
BBE-RS	Background block errors regenerator section.
UAS-RS	Unavailable seconds regenerator section.
Reset to Defaults button	Resets the value of the port parameters to the default value.

MS Thresh 15 Min/1 Day Tabs

The MS Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day near- and far-end multiplex section threshold for the 10x10G_LC card.

Table C-776 *Field Descriptions for the MS Thresh 15 Min/1 Day Tabs*

Field	Description
Port No.	The port number.
EB-MS	Errored blocks multiplexer section.
ES-MS	Errored seconds multiplexer section.
SES-MS	Severely errored seconds multiplexer section.
BBE-MS	Background block errors multiplexer section.
UAS-MS	Unavailable seconds multiplexer section.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Section Trace Tab

The Section Trace tab allows you to change the section trace settings for the 10x10G_LC card.

Table C-777 *Field Descriptions for the Section Trace Tab*

Field	Description
Modify button	Allows you to open the Modify Trace dialog box, where you can change the section trace information for applicable cards. See Modifying Traces, page 7-171 for more information.
Port Number	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.
Default button	Resets the value of the port parameters to the default value.

Ethernet Tab

The Ethernet tab allows you to view Ethernet line information.



Note

The Ethernet tab is displayed on the following criteria:

- For 10x10G_LC card when the payload is TEN_GE.
- For 100G_LC_C card when the payload is ONEHUNDRED_GE provisioned on 100G_LC_C in standalone operating mode or FORTY_GE/ONEHUNDRED_GE provisioned on the CFP_LC peer card.

Table C-778 *Field Descriptions for the Ethernet Tab*

Field	Description
Port Number	Displays the PPM and port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: • unlocked—Puts the port in service. The port service state changes to unlocked-enabled. • unlocked, automaticInService—Puts the port in automatic in-service. The port service state changes to unlocked-disabled, automaticInService. • locked-disabled—Removes the port from service and disables it. The port service state changes to locked-enabled, disabled. • locked, maintenance—Removes the port from service for maintenance. The port service state changes to locked-enabled, maintenance.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format Administrative_State-Operational_State, Status_Attribute.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS state.
Video Type	Video.

Table C-778 **Field Descriptions for the Ethernet Tab (continued)**

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note Note The reach distance options that appear in the drop-down list depend on the card selected. • EW • LW • SW • LRM • ER • LR • SR (short reach, up to 2 km distance) • ZR • IR 2 • LR 2 • DWDM • CWDM40km
Wavelength	Allows you to provision the wavelength frequency.
Termination Mode	Sets the mode of operation. (This option is available only for SONET/SDH payloads).
MTU	Maximum transmission unit (MTU). The largest acceptable packet size configured for that port. The default value is 1548.
Incoming MAC Address	Allows you to edit the incoming MAC address.
Mapping	Displays the client trunk ports mapping.

RMON Thresholds

The RMON Thresholds Properties pane allows you to view RMON thresholds for the 10x10G_LC and 100G_LC_C cards.



Note

The RMON Thresholds tab is displayed depending on the following criteria:

- For 10x10G_LC card when a data payload is provisioned (TEN_GE, 8GFC, 10GFC).
- For 100G_LC_C card when the payload is ONEHUNDRED_GE provisioned on 100G_LC_C in standalone operating mode or FORTY_GE/ONEHUNDRED_GE provisioned on the CFP_LC peer card.

Table C-779 *Field Descriptions for the RMON Thresholds Properties Pane*

Field	Description
Filter button	Click the Filter button to filter the data displayed in the table.
Add button	Click Add to add the RMON thresholds.
Remove button	Click Remove button to delete the threshold. It is possible to delete more than one RMON threshold.
Index No.	The number which is automatically assigned by the system to the RMON Threshold.
Slot	Displays the selected card.
Port	Displays the port on the selected card.
Variable	Displays the MIB variable that is being monitored.
Alarm Type	Indicates whether the event is triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	Indicates whether the sample type is relative or absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period	Displays the sample period, in seconds.
Rising Thresholds	Displays the number of occurrences for the rising threshold.
Falling Thresholds	Displays the number of occurrences for the falling threshold. The falling threshold must be lower than the rising threshold.
Create	Allows you to create an RMON threshold. Click the Create button to create a threshold for the ports. Note You can select a Channel Group when you create a threshold. For more information, see Creating RMON Thresholds, page 6-11 .
Delete	Select a threshold from the list displayed and click the Delete button.

Loopback

The Loopback Properties pane allows you to view and update 10x10G_LC and 100G_LC_C loopback information.

Table C-780 *Field Descriptions for the Loopback Properties Pane*

Field	Description
Port Number	Displays the port number (1 to 10).
Port Name	Displays the name of the port.
Admin State	Allows you to select the administration state of the port: In Service (IS), Out of Service (OOS), or Out of Service-Maintenance (OOS_MT), In Service (IS), and Automatic In Service (AINS).
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.

Optical Thresholds

The Optical Thresh Properties pane allows you to view and provision optical threshold settings. The Properties pane displays the following tabs:

- [Alarm Thresholds Tab, page C-592](#)
- [TCA 15 Min/1 Day Tabs, page C-592](#)

Alarm Thresholds Tab

The Alarm Thresholds tab allows you to select thresholds for alarm generation.

Table C-781 Field Descriptions for the Alarm Thresholds Tab

Field	Description
Filter button	Click the Filter button to filter the data displayed in the table.
Port No.	The port number.
Laser Bias High	Displays the upper laser bias threshold.
Rx Power High	Displays the upper receive power threshold.
Rx Power Low	Displays the lower receive power threshold.
Tx Power High	Displays the upper transmit power threshold.
Tx Power Low	Displays the lower transmit power threshold.
CD High	Displays the Chromatic Dispersion upper threshold. Note This is supported only on 100G_LC card trunk port.
CD Low	Displays the Chromatic Dispersion lower threshold. Note This is supported only on 100G_LC card trunk port.
Reset to Defaults button	Resets the value of the port parameters to the default value.

TCA 15 Min/1 Day Tabs

The TCA 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-782 Field Descriptions for the TCA 15 Min/1 Day Tabs

Field	Description
Filter button	Click the Filter button to filter the data displayed in the table.
Port No.	The port number.
Laser Bias High	Displays the upper laser bias threshold.
Rx Power High	Displays the upper receive power threshold.
Rx Power Low	Displays the lower receive power threshold.
Tx Power High	Displays the upper transmit power threshold. Note Tx Power High is not supported on trunk ports.
Tx Power Low	Displays the lower transmit power threshold. Note Tx Power Low is not supported on trunk ports.

Table C-782 *Field Descriptions for the TCA 15 Min/1 Day Tabs (continued)*

Field	Description
OSNR Power High	Displays the upper Optical Signal To Noise Ratio threshold. Note This is supported only on 100G_LC card trunk port.
OSNR Power Low	Displays the lower Optical Signal To Noise Ratio threshold. Note This is supported only on 100G_LC card trunk port.
PMD High	Displays the upper Polarization Mode Dispersion threshold. Note This is supported only on 100G_LC card trunk port.
PMD Low	Displays the lower Polarization Mode Dispersion threshold. Note This is supported only on 100G_LC card trunk port.
Reset to Defaults button	Resets the value of the port parameters to the default value.

OTN

The OTN Properties pane allows you to change the line optical transport network (OTN) settings for 10x10G_LC and 100G_LC_C. The Properties pane displays the following tabs:

- [OTN Line Tab, page C-593](#)
- [G.709 Thresh 15 Min/1 Day Tabs, page C-594](#)
- [FEC Thresh 15 Min/1 Day Tabs, page C-594](#)
- [Trail Trace Identifier Tab, page C-594](#)

OTN Line Tab

The OTN Line tab allows you to view and change the OTN line settings of the card.

Table C-783 *Field Descriptions for the OTN Line Tab*

Field	Description
Port No.	The port number.
G.709 OTN	Displays the G.709 OTN feature.
FEC	Displays the forward error correction.
SF BER	The signal fail bit error rate.
SD BER	The signal degrade bit error rate.
ProvidesSync	If checked, the card is provisioned as an NE timing reference.
EnableSyncMsg	Allows you to set EnableSync card parameter. Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Admin SSM In	Overrides the synchronization status message (SSM) and the synchronization traceability unknown (STU) value. If the node does not receive an SSM signal, it defaults to STU.

G.709 Thresh 15 Min/1 Day Tabs

The G.709 Thresh 15Min/1 Day tabs displays near- and far-end SM optical channel transport unit (OTUK), and near- and far-end PM optical channel data unit (ODUK) threshold information received during the past 15 minutes/24 hours.

Table C-784 Field Descriptions for the G.709 Thresh 15Min/1 Day Tabs

Field	Description
Filter button	Click the Filter button to filter the data displayed in the table.
SM (OTUK) Near End, Far End	
Port No.	Displays the optical port number.
BBE-SM	Displays the background block errors.
ES-SM	Displays the errored seconds.
SES-SM	Displays the severely errored seconds.
UAS-SM	Displays the unavailable seconds.
FC-SM	Displays the failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.
PM (ODUK) Near End, Far End	
Port No.	Displays the optical port number.
BBE-PM	Displays the background block errors.
ES-PM	Displays the errored seconds.
SES-PM	Displays the severely errored seconds.
UAS-PM	Displays the unavailable seconds.
FC-PM	Displays the failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.

FEC Thresh 15 Min/1 Day Tabs

The FEC Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day FEC threshold values of the card.

Table C-785 Field Descriptions for the FEC Thresh 15 Min/1 Day Tabs

Field	Description
Filter button	Click the Filter button to filter the data displayed in the table.
Port No.	Displays port number information.
Bit Errors Corrected	Displays the bit errors corrected in 15-minute intervals.
Uncorrectable Words	Displays the uncorrectable words in 15-minute intervals.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Trail Trace Identifier Tab

The Trail Trace Identifier tab allows you to provision the trail trace identifier for the card.

Table C-786 *Field Descriptions for the Trail Trace Identifier Tab*

Field	Description
Filter button	Click the Filter button to filter the data displayed in the table.
Modify button	Allows you to open the Modify Trace dialog box, where you can change the section trace information for applicable cards. For more information, see Modifying Traces, page 7-171 .
Port No.	Displays port number information.
Level	Displays the trail trace identifier level (Section or Path).
Trace Mode	Allows you to set the trace mode (Off or Manual).
Disable FDI on TTIM	Allows you to disable forward defect indication (FDI) for trail trace identifier mismatch (TTIM) alarms.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string.
Current Received String	Displays the current received string.

Proactive Protection Regen Tab

The Proactive Protection Regen tab allows you to provision proactive protection regen for the card.

**Note**

Proactive protection regen is supported only when the 100GC_LC card is in high-rate REGEN or TXP card mode.

Table C-787 *Field Descriptions for the Proactive Protection Regen Tab*

Field	Description
Port No.	Displays port number information.
Trigger Threshold	Sets the maximum BER threshold to trigger proactive protection.
Trigger Window (ms)	Sets the duration for which BER is monitored before triggering the proactive protection. The trigger window value must be a multiple of: 10 ms for trigger thresholds between 1E-3 and 6E-6 100 ms for trigger threshold between 5E-6 to 1E-7 Trigger window must be less than or equal to 10000 ms.
Revert Threshold	Sets the revert threshold value of BER. Note Revert Threshold settings must be less than the Trigger Threshold values.
Revert Window (ms)	Sets the duration for which BER is monitored for settings that are less than the revert threshold value before which proactive protection provided to the router is removed. Revert Window value must be at least 2000ms and a multiple of: 10ms for a revert threshold of 1E-4 to 6E-7 100ms for a revert threshold of 5E-7 to 5E-8. The revert window must be less than or equal to 10000ms.
Enable Proactive Protection	Allows you to enable or disable proactive protection.

PPM

The PPM Properties pane allows you to view and provision the ports inside the PPM for the 100G_LC_C card.

Table C-788 Field Descriptions for the PPM Properties Pane

Field	Description
Pluggable Port Modules (PPM)	
PPM No.	Displays the identifier of the plugin module.
Actual Equipment Type	Displays the actual pluggable unit that is installed on the card.
Equipment State	Displays the equipment state of the plugin module.
Admin State	Displays the port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service (only when PPM is pre-provisioned) - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
PPM	
Port	Displays the port number for the PPM in the Pluggable Port Modules area.
Rate	Displays the port rate for the PPM in the Pluggable Port Modules area.

Provision Pluggable Dialog Box

Click the **Create** button to launch the Provision Pluggable dialog box. This dialog box allows you to provision the PPM and to create the ports inside this entity. See [Provision Pluggable Dialog Box](#) for more information.



Note

To create sublanes for the CFP_LC card, see [Table C-47](#).

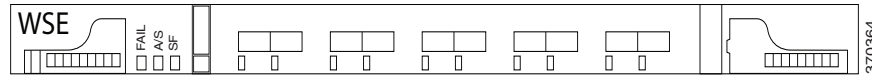
Slot Properties—WSE

The Wire Speed Encryption (WSE) card is an optical line card that provides the encryption capability at the optical layer to the Cisco ONS 15454 M2 and Cisco ONS 15454 M6 platforms. The slot properties pane displays information about the Cisco ONS 15454 M2 or ONS 15454 M6 slot that is selected in the NE Explorer tree. Use the properties pane to change the card properties. The single-slot WSE card is connected to the backplane and can be installed on ANSI, ETSI, 15454 M2, and 15454 M6 shelves.

The WSE card has ten SFP+ ports that include 5 x client and 5 x trunk ports. WSE cards are placed in slots 2 and 3 of the M2 chassis or in slots 2, 3, 4, 5, 6, and 7 of the M6 chassis.

The WSE card provides confidentiality and integrity of the data sent over a fiber optic communication channel through Next Generation Cryptography. The card provides integrated transponder functionality in addition to providing encryption.

The following figure shows the WSE card faceplate.

Figure C-69 WSE Faceplate

The cards support the following pluggables and payloads on the client or trunk interfaces:

- 10GE (client ports only)
- OTU-2 G.709 according to ITU-T G.709
- OTU-2e

The WSE card provides the following key features:

- Operating Modes—[Table C-789](#) provides a list of operational modes supported by the WSE card.

Table C-789 Operating Modes and Supported Payloads for WSE Cards

Operational Mode	Supported Client Payloads
RGN-10G (5x10G Regenerator)	No payload for the client port.
TXP-10G (5x10G Transponder)	TEN-GE, OTU2, and OTU2e

- Regeneration Configurations—One WSE card placed in any slot with five ports used as regeneration ports. The port pairs used for regeneration are 1-2, 3-4, 5-6, 7-8, and 9-10.
- GCCs—The WSE cards support the provisioning of GCC channel on both client and trunk: OTU2 and OTU2e ports. The high-speed GCC enables you to create the GCC when both the NE and FE line cards are on the Cisco ONS 15454 M2 or Cisco ONS 15454 M6 shelf. You can select the legacy GCC on the Cisco ONS 15454 shelf on one side and the Cisco ONS 15454, Cisco ONS 15454 M2, or Cisco ONS 15454 M6 shelf on the other side. The WSE card works with the OTN devices defined in ITU-T G.709. The Digital Wrapper function (ITU-T G.709-compliant) formats the DWDM wavelength so that it can be used to set up GCCs for data communications, enable FEC, or facilitate performance monitoring. The GCC rate for the WSE card is 192k.

For more information on GCC, see [Create, Edit, and Delete GCC](#).

- The WSE card is supported only in Point-to-Point, P-ring and ROADM demands.

Module View

The Module View displays a graphic of the WSE that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update WSE identification information.

Table C-790 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the Common Language Equipment Identifier (CLEI) code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Alarm Behavior Tab

The Alarm Behavior tab allows you to view and update alarm profiles assigned to ports and PPM on WSE.

Table C-791 Field Descriptions for the Alarm Behavior Tab

Field	Description
Filter button	Click the Filter button to filter the data displayed in the table.
Force Profile	When clicked, forces all ports and PPM to the alarm profile in the selected row of the table.
Port/PPM Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.

Auto Laser Shutdown Tab

The Auto Laser Shutdown tab allows you to view and update optical card auto laser shutdown (ALS) parameters for WSE.

Table C-792 *Field Descriptions for the Auto Laser Shutdown Tab*

Field	Description
Port Number	Displays the port number.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
Rec. Pulse Dur. (sec)	Allows you to set the received laser pulse duration, in seconds. The range is from 2.0 to 100.0 seconds.
Rec. Pulse Int. (sec)	Allows you to set the received laser pulse interval, in seconds. The range is from 60 to 300 seconds.
Status	Displays the current laser status. Values are Shut Down or Not Shut Down.
Request Restart	When selected, allows you to request a laser restart. This parameter is configurable only when the ALS mode is set to Manual Restart or Manual Restart for Test and when the laser status is Shut Down.

Card

The Card mode tab allows you to view the operating modes that are provisioned. For more information on operating modes, see [Operating Modes and Supported Payloads for WSE Cards](#).

Table C-793 *Field Descriptions for the Card Mode Tab*

Field	Description
Card Mode	Displays the operating mode that has been provisioned on the card.
Client Ports	Displays the client ports that have been provisioned for the selected card configuration.
Trunk Ports	Displays the trunk ports that have been provisioned for the selected card configuration.
Peer Card	Displays the shelf and slot number of the peer card that is set up for a specific card configuration. If the peer card is not set up, “None” or “N/A” is displayed for the operating modes that requires no peer card for configuration.
Create	Displays the Operating Mode Configuration creation dialog box to configure a new card mode. Click the Create button to create a new operating configuration mode. For more details on creating configurations, see Creating Configurations, page 6-14 .
Delete	Click the Delete button to delete the selected card configuration. Note The Delete button is enabled only when at least one operating mode is configured.

Encryption

The Encryption tab allows you to configure mechanisms and view the security and packet traffic details. For more details on the encryption information, see [Viewing Encryption Details, page 7-162](#)

**Note**

For the WSE card, the encryption option can be modified even when the demand is in locked state. When modifications are made without the unlock, the encryption parameter on the specific port of the WSE card is updated on analysis.

The property pane displays the following tabs:

- [GCC2 Settings Tab, page C-600](#)
- [Security Tab, page C-600](#)
- [Key Management Tab, page C-601](#)
- [OTN Overhead for Packet traffic Tab, page C-601](#)
- [Advanced Settings Tab, page C-602](#)

GCC2 Settings Tab

The GCC2 settings tab allows you to configure the setting that is required to establish a connection between two WSE cards. To establish the connection, configure the IP address of the source and destination WSE cards.

Table C-794 **GCC2 Settings Tab**

Field	Description
Port	Port number of the selected card. Provide the trunk port number of the source card. For example, the trunk port numbers are 2, 4, 6, 8, and 10.
Destination Card IP	Provide the IP address of the destination card.
Destination Port	Provide the port number of the destination card.
Card IP Address	Provide the IP address of the source WSE card.

Security Tab

The card security tab allows you to configure mechanisms that control the communication of a WSE card port with the cards it discovers at the other end. You can configure the encryption, and authentication of the payload on a port using this tab.

Table C-795 **Card Security Tab**

Field	Description
Port	From this list, choose the provisioned trunk port on which you want to configure authentication and encryption.
Card Authentication	Check the Card Authentication check box to have the source WSE card port authenticate any remote card that it detects. The check box must be checked before you enable payload encryption and authentication.
Payload Encryption	Check the Payload Authentication check box in the Payload Encryption column to enable encryption of the payload on a port listed in the Port column

Key Management Tab

The Key Management tab enables you to configure parameters related to the Master Key used for encryption and authentication of the payload.

Table C-796 **Key Management Tab**

Field	Description
Reset Master Key	
Port	All the provisioned trunk ports on the card.
Master Key Change Interval	Click an entry corresponding to a port. Two drop-down lists appear: one to set the time in hours, and the other to set the time in minutes. Configure the desired interval between successive resets of the master key using the drop-down lists.
Reset Master Key	Click the Reset Master Key button corresponding to a port to reset the Master Key on the port.

OTN Overhead for Packet traffic Tab

The OTN Overhead for Packet traffic tab allows you to configure the composition of the AES (Advanced Encryption Standard) packet, and control PRBS (Pseudorandom Binary Sequence) generation at the ingress and egress of a port.

Table C-797 **OTN Overhead for Packet traffic Tab**

Field	Description
Port	All the provisioned trunk ports on the card.
AES Secure Packet	You can configure the number of frames that will make up an AES Secure Packet of that port corresponding to a port. The options available are: • 4 OTN Frame Based • 8 OTN Frame Based
ESP Header Location	You can set the location of the ESP (Encapsulating Security Payload) header within an AES Secure Packet of that port. The location is one among the following: • A • B • C • D • E • F

Table C-797 OTN Overhead for Packet traffic Tab (continued)

Field	Description
ESP Trailer Location	Indicates the location of the ESP (Encapsulating Security Payload) trailer within an AES Secure Packet of that port. The location is one among the following: • A • B • C • D • E • F
Ingress PRBS Generator	Check the Ingress PRBS Generator check box corresponding to a port, to enable PRBS generation at the ingress of that port. The ingress of a port is the encryption data path on that port.
Egress PRBS Monitor	Check the Egress PRBS Monitor check box corresponding to a port, to enable PRBS monitor at the egress of that port. The egress of a port is the decryption data path on that port.
PRBS State	Shows whether the PRBS pattern on the egress of a port is locked or not.

Advanced Settings Tab

Table C-798 Advanced Settings Tab

Field	Description
Port	All the provisioned trunk ports on the card.
Egress BIP-8 Bypass	Check the Egress BIP-8 Bypass check box to query the FPGA to recalculate the BIP-8 in its output frame.
Ingress BIP-8 Bypass	Check the Ingress BIP-8 Bypass check box to query the FPGA to recalculate the BIP-8 on incoming traffic. If the check box is not selected, the crypto FPGA will not be able to identify any BIP-8 errors, if present. There will be no errors shown in the crypto FPGA even if there are BIP-8 errors.
Ingress Insert AIS	Check the Ingress Insert AIS check box for FPGA to insert the alarm indication signal (AIS) before it encrypts the payload.
Egress Insert AIS	Check the Egress Insert AIS check box for FPGA to insert the AIS after it encrypts the payload.

Info

The Info Properties pane allows you to view nominal operating values set for the card during manufacturing.

Table C-799 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of the attribute value.

Line

The Line Properties pane allows you to configure line information.

If the card is installed on an ONS 15454 SONET NE/ 15454 SDH NE, the Line Properties pane contains the following tabs:

- [Ports Tab, page C-579](#)
- [Ethernet Tab, page C-582](#)
- [RMON Thresholds, page C-584](#)

Ports Tab

The ports tab allows you to view and change the port settings.

Table C-800 **Field Descriptions for the Ports Tab**

Field	Description
Port Number	Displays the PPM and port number.
Port Name	Displays the name of the port.
Administration State	Note The port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format Administrative_State-Operational_State, Status_Attribute.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS state.
AIS/Squelch Configuration	Allows you to configure the remote client to squelch or send an AIS signal.
Video Type	Video.
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Note The reach distance options depend on the card and pluggables selected.
Wavelength	Allows you to provision the wavelength: • First tunable wavelength: the system automatically provision the first wavelength supported by the PPM • 850nm, 1310nm and 1550nm wavelengths • DWDM wavelengths: ranging from 1528.77nm to 1566.72nm at 50GHz ITU spacing • CWDM wavelengths: 1470nm, 1490nm, 1510nm, 1530nm, 1570nm, and 1590nm
Overclock	Allows you to enable or disable overclock mode. Enable overclock mode to set the data rate to OTU2e for PPM.

Ethernet Tab

The Ethernet tab allows you to view the Ethernet line information.


Note

This tab is displayed only when you provision a TEN_GE payload.

Table C-801 **Field Descriptions for the Ethernet Tab**

Field	Description
Port Number	Displays the PPM and port number.
Port Name	Displays the name of the port.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format Administrative_State-Operational_State, Status_Attribute.
ALS Mode	Displays the auto laser shutdown mode (Disabled, Auto Restart, Manual Restart, or Manual Restart for Test).
AINS Soak (H:M)	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS state.
Video Type	Video.
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. - TEN_GE payload - TEN_GE SR - TEN_GE LR - TEN_GE ER - TEN_GE ZR - DWDM - FORTY_GE payload 40GBASE-FR 40GBASE-LR4 - ONEHUNDRED_GE payload 100GBASE_SR10

Table C-801 *Field Descriptions for the Ethernet Tab (continued)*

Field	Description
Wavelength	Allows you to provision the wavelength: - First tunable wavelength: the system automatically provision the first wavelength supported by the PPM 850nm, 1310nm, and 1530nm wavelengths - DWDM wavelengths: ranging from 1528.77nm to 1566.72nm at 50GHz ITU spacing - CWDM wavelengths: 1470nm, 1490nm, 1510nm, 1530nm, 1570nm, and 1590nm.
Termination Mode	Sets the mode of operation.
MTU	Maximum transmission unit (MTU). The largest acceptable packet size configured for that port. The default value is 1548.

RMON Thresholds

The RMON Thresholds Properties pane allows you to view RMON thresholds for the WSE cards.

**Note**

This tab is displayed only when you provision a TEN_GE payload.

Table C-802 *Field Descriptions for the RMON Thresholds Properties Pane*

Field	Description
Filter button	Click the Filter button to filter the data displayed in the table.
Add button	Click Add to add the RMON thresholds.
Remove button	Click Remove button to delete the threshold. It is possible to delete more than one RMON threshold.
Index No.	The number which is automatically assigned by the system to the RMON Threshold. Click the Index No. field to sort the data.
Slot	Displays the selected card.
Port	Displays the port on the selected card.
Variable	Displays the MIB variable that is being monitored.
Alarm Type	Indicates whether the event is triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	Indicates whether the sample type is relative or absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period	Displays the sample period, in seconds.
Rising Thresholds	Displays the number of occurrences for the rising threshold.
Falling Thresholds	Displays the number of occurrences for the falling threshold. The falling threshold must be lower than the rising threshold.

Table C-802 *Field Descriptions for the RMON Thresholds Properties Pane (continued)*

Field	Description
Create	Allows you to create an RMON threshold. Click the Create button to create a threshold for the ports. Note You can select a Channel Group when you create a threshold. For more information, see Creating RMON Thresholds, page 6-11 .
Delete	Select a threshold from the list displayed and click the Delete button.

Loopback Tab

The Loopback Properties pane allows you to view and update WSE loopback information.

Table C-803 *Field Descriptions for the Loopback Properties Pane*

Field	Description
Port Number	Displays the port number (1 to 10).
Port Name	Displays the name of the port.
Admin State	Allows you to select the administration state of the port: In Service (IS), Out of Service (OOS), or Out of Service-Maintenance (OOS_MT), In Service (IS), and Automatic In Service (AINS).
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.

Optical Thresholds

The Optical Thresh Properties pane allows you to view and provision optical threshold settings. The Properties pane displays the [Alarm Thresholds/TCA 15 Min/TCA 1 Day Tabs, page C-606](#) tabs:

Alarm Thresholds/TCA 15 Min/TCA 1 Day Tabs

The Alarm Thresholds tab allows you to select thresholds for alarm generation.

The TCA 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-804 *Field Descriptions for the Alarm Thresholds/TCA 15 Min/TCA 1 Day Tabs*

Field	Description
Filter button	Click the Filter button to filter the data displayed in the table.
Port No.	The port number.
Laser Bias High	Displays the upper laser bias threshold.
Rx Power High	Displays the upper receive power threshold.
Rx Power Low	Displays the lower receive power threshold.
Tx Power High	Displays the upper transmit power threshold.

Table C-804 *Field Descriptions for the Alarm Thresholds/TCA 15 Min/TCA 1 Day Tabs (continued)*

Field	Description
Tx Power Low	Displays the lower transmit power threshold.
Reset to Defaults button	Resets the value of the port parameters to the default value.

**Note**

Tx Power High and Tx Power Low is not supported on trunk ports for TCA 15 Min/1 Day thresholds.

OTN

The OTN Properties pane allows you to change the line optical transport network (OTN) settings for WSE. The Properties pane displays the following tabs:

- [OTN Line Tab, page C-593](#)
- [G.709 Thresh 15 Min/1 Day Tabs, page C-607](#)
- [FEC Thresh 15 Min/1 Day Tabs, page C-594](#)
- [Trail Trace Identifier Tab, page C-594](#)

OTN Line Tab

The OTN Line tab allows you to view and change the OTN line settings of the card.

Table C-805 *Field Descriptions for the OTN Line Tab*

Field	Description
Port No.	The port number.
G.709 OTN	Displays the G.709 OTN feature.
FEC	Displays the forward error correction.
SF BER	The signal fail bit error rate.
SD BER	The signal degrade bit error rate.
ProvidesSync	If checked, the card is provisioned as an NE timing reference.
EnableSyncMsg	Allows you to set EnableSync card parameter. Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Admin SSM In	Overrides the synchronization status message (SSM) and the synchronization traceability unknown (STU) value. If the node does not receive an SSM signal, it defaults to STU.

G.709 Thresh 15 Min/1 Day Tabs

The G.709 Thresh 15 Min/1 Day tabs displays near- and far-end SM optical channel transport unit (OTUK), and near- and far-end PM optical channel data unit (ODUK) threshold information received during the past 15 minutes/24 hours.

Table C-806 *Field Descriptions for the G.709 Thresh 15 Min/1 Day Tabs*

Field	Description
Filter button	Click the Filter button to filter the data displayed in the table.
SM (OTUK) Near End, Far End	
Port No.	Displays the optical port number.
BBE-SM	Displays the background block errors.
ES-SM	Displays the errored seconds.
SES-SM	Displays the severely errored seconds.
UAS-SM	Displays the unavailable seconds.
FC-SM	Displays the failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.
PM (ODUK) Near End, Far End	
Port No.	Displays the optical port number.
BBE-PM	Displays the background block errors.
ES-PM	Displays the errored seconds.
SES-PM	Displays the severely errored seconds.
UAS-PM	Displays the unavailable seconds.
FC-PM	Displays the failure count.
Reset to Defaults button	Resets the value of the port parameters to the default value.

FEC Thresh 15 Min/1 Day Tabs

The FEC Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day FEC threshold values of the card.

Table C-807 *Field Descriptions for the FEC Thresh 15 Min/1 Day Tabs*

Field	Description
Filter button	Click the Filter button to filter the data displayed in the table.
Port No.	Displays port number information.
Bit Errors Corrected	Displays the bit errors corrected in 15-minute intervals.
Uncorrectable Words	Displays the uncorrectable words in 15-minute intervals.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Trail Trace Identifier Tab

The Trail Trace Identifier tab allows you to provision the trail trace identifier for the card.

Table C-808 *Field Descriptions for the Trail Trace Identifier Tab*

Field	Description
Filter button	Click the Filter button to filter the data displayed in the table.
Modify button	Allows you to open the Modify Trace dialog box, where you can change the section trace information for applicable cards. For more information, see Modifying Traces, page 7-171 .
Port No.	Displays port number information.
Level	Displays the trail trace identifier level (Section or Path).
Trace Mode	Allows you to set the trace mode (Off or Manual).
Disable FDI on TTIM	Allows you to disable forward defect indication (FDI) for trail trace identifier mismatch (TTIM) alarms.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string.
Current Received String	Displays the current received string.

PPM

The PPM Properties pane allows you to view and provision the ports inside the PPM.

Table C-809 *Field Descriptions for the PPM Properties Pane*

Field	Description
Pluggable Port Modules (PPM)	
PPM No.	Displays the identifier of the plugin module.
Actual Equipment Type	Displays the actual card that is installed in the slot. Values are single mode or multimode.
Equipment State	Displays the equipment state of the plugin module.
Admin State	Displays the port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service (only when PPM is pre-provisioned) - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
PPM	
Port	Displays the port number for the PPM in the Pluggable Port Modules area.
Rate	Displays the port rate for the PPM in the Pluggable Port Modules area.

Provision Pluggable Dialog Box

Click the **Create** button to launch the Provision Pluggable dialog box. This dialog box allows you to provision the PPM and to create the ports inside this entity. See [Provision Pluggable Dialog Box, page C-25](#) for more information.

Security Thresholds

The Security Thresholds Properties pane allows you to view and provision threshold settings. The Properties pane displays the [TCA 15 Min/1 Day Tabs](#), [page C-610](#) tabs.

TCA 15 Min/1 Day Tabs

The TCA 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-810 **Field Descriptions for the TCA 15 Min/1 Day Tab**

Field	Description
Filter button	Click the Filter button to filter the data displayed in the table.
Port No.	The port number.
Sequence Mismatch	Displays the sequence mismatch number of a VCAT alarm. The Sequence Mismatch alarm is a VCAT member alarm. (VCAT member circuits are independent circuits that are concatenated from different time slots into a higher-rate signal.) The alarm occurs when the expected sequence numbers of VCAT members do not match the received sequence numbers.
Reset to Defaults button	Resets the value of the port parameters to the default value.

Electrical Cards

This section describes the following electrical cards supported within Prime Optical:

- [Slot Properties—DS-1-14](#), [page C-611](#)
- [Slot Properties—DS1-28/DS3-EC1-3](#), [page C-616](#)
- [Slot Properties—DS1-84/DS3-EC1-3](#), [page C-633](#)
- [Slot Properties—DS-1N](#), [page C-650](#)
- [Slot Properties—DS-3-12](#), [page C-654](#)
- [Slot Properties—DS-3E](#), [page C-657](#)
- [Slot Properties—DS-3i](#), [page C-661](#)
- [Slot Properties—DS-3i-N-12](#), [page C-665](#)
- [Slot Properties—DS-3XM-6](#), [page C-669](#)
- [Slot Properties—DS-N](#), [page C-675](#)
- [Slot Properties—DS1_E1_56](#), [page C-676](#)
- [Slot Properties—DS3_EC1_48](#), [page C-684](#)
- [Slot Properties—DS3XM-12](#), [page C-695](#)
- [Slot Properties—E-1](#), [page C-703](#)
- [Slot Properties—E1_21_E3_DS3_3 and E1_63_E3_DS3_3](#), [page C-706](#)

- [Slot Properties—E1-42, page C-722](#)
- [Slot Properties—E1-63 \(ONS 15305 CTC\), page C-727](#)
- [Slot Properties—E1-8 \(ONS 15305 CTC\), page C-729](#)
- [Slot Properties—E1-N-14, page C-731](#)
- [Slot Properties—E3-12, page C-736](#)
- [Slot Properties—E3T3_6 \(ONS 15305 CTC\), page C-741](#)
- [Slot Properties—EC1-12, page C-743](#)
- [Slot Properties—FMEC-E3/DS-3, page C-747](#)

Slot Properties—DS-1-14

The slot properties pane displays information about the Cisco ONS 15310 CL, Cisco ONS 15310 MA SONET, Cisco ONS 15327, or Cisco ONS 15454 SONET slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The DS-1-14 card provides 14 Telcordia-compliant GR-499 DS-1 ports. Each port operates at 1.544 Mb/s over a 100-ohm twisted-pair copper cable.

For the DS-1-14 module, the slot properties pane displays the following properties: Module View, Identification, Line, STS, VT, Loopback, Protection, Alarm Behavior, and J1 Path Trace.

Module View

The Module View displays a graphic of the DS-1 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update DS-1 identification information.

Table C-811 **Field Descriptions for the Identification Properties Pane**

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.

Table C-811 *Field Descriptions for the Identification Properties Pane (continued)*

Field	Description
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update DS-1 optical line performance monitoring information.

Table C-812 *Field Descriptions for the Line Properties Pane*

Field	Description
Line Config	
Port Number	Displays the optical port number (1 to 14).
Port Name	Allows you to add a name for the optical port.
SF BER	Sets the signal failure bit error rate. Values are: 1E-3 1E-4 (default) 1E-5
SD BER	Sets the signal deterioration bit error rate. Values are: 1E-5 1E-6 1E-7 (default) 1E-8 1E-9
Line Type	Allows you to select the line framing type. Values are: - D4 (default) - ESF—Extended Super Frame - Unframed
Line Coding	Allows you to define the DS-1-14 transmission coding type. Values are: - AMI—Alternate Mark Inversion (default) - B8ZS—Bipolar 8-zero Substitution

Table C-812 Field Descriptions for the Line Properties Pane (continued)

Field	Description
Line Length	Defines the distance (in feet) from backplane connection to the next termination point. Values are: 0–131 (default) 132–262 263–393 394–524 525–655
Administration State	The port administration state. Choosing an administration state from the drop-down list and clicking Apply changes the port's service state unless network conditions prevent the change. Administration states include: - IS—In Service. The port service state changes to IS_NR. - OOS, DSBLD—Out of Service, Disabled. The port service state changes to OOS_MA, DSBLD. - OOS, MT—Out of Service, Maintenance. The port service state changes to OOS_MA, MT. For loopbacks, the OOS, MT Administration State must be initiated. - IS, AINS—Automatic In Service. The port service state changes to OOS_AU, AINS.
AINS Soak	Automatic in-service soak. The amount of valid input signal in <i>hh.mm</i> , after which the port is set in service by the software. The range is from 0 to 48 hours, in 15-minute increments.
AINS Soak Count Down	Displays the remaining time of valid input signal in <i>hh.mm</i> , after which the card becomes in service (IS) automatically. The range is from 0 to 48 hours, in 15-minute increments.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Send AIS-V for DS-1 AIS	When checked, sends an Alarm Indication Signal VT (AIS-V) instead of a DS-1 AIS (from the line side toward the backplane/system side) when a line-side trigger occurs.
Raise AIS for LOF	Sends an AIS when a loss of frame (LOF) occurs.
Line Threshold 15 Minutes/1 Day	
Port Number	The optical port number (1 to 14).
CV-L	Coding violations line (near-end only). The default is 13340.
ES-L	Errored seconds line. The default is 65.
SES-L	Severely errored seconds line (near-end only). The default is 10.
LOSS-L	Loss of signal seconds line (near-end only). The default is 10.
Path Threshold 15 Minutes/1 Day	
Near End	
Displays the following near-end 1-day path threshold information.	
Port Number	The optical port number (1 to 14).
CV-P	Coding violations path.
ES-P	Errored seconds path.
SES-P	Severely errored seconds path.
SAS-P	Severely errored frame/alarm indication signal–path information.
AISS-P	Alarm indication signal seconds path.

Table C-812 *Field Descriptions for the Line Properties Pane (continued)*

Field	Description
UAS-P	Unavailable seconds path.
Far End	
Displays the following far-end 1-day path threshold information.	
Port Number	The optical port number (1 to 14).
CV-P	Coding violations path.
ES-P	Errored seconds path.
SES-P	Severely errored seconds path.
UAS-P	Unavailable seconds path.
ESA-P	Errored seconds type A path.
ESB-P	Errored seconds type B path.
CSS-P	Controlled slip seconds path.
SEFS-P	Severely errored framing seconds path.

STS

The STS Properties pane allows you to view and update DS-1 synchronous transport signal (STS) information.

Table C-813 *Field Descriptions for the STS Properties Pane*

Field	Description
STS Threshold 15 Minutes/1 Min	
STS Number	The synchronous transport signal number.
CV-P	Coding violations path. The default is 15.
ES-P	Errored seconds path. The default is 12.
SES-P	Severely errored seconds path. The default is 3.
UAS-P	Unavailable seconds path. The default is 10.
FC-P	Failure count path. The default is 10.
Customer Info	
STS Number	The STS number.
Customer ID	The user-defined customer ID number.
Service ID	The user-defined service ID number.

VT

The VT Properties pane allows you to view and update DS-1 virtual tributary information.

Table C-814 *Field Descriptions for the VT Properties Pane*

Field	Description
VT Threshold 15 Minutes/1 Day	
VT Number	The VT number.
CV-V	Coding violations—VT path. The default is 15.
ES-V	Errored seconds—VT path. The default is 12.
SES-V	Severely errored seconds—VT path. The default is 3.
UAS-V	Unavailable seconds—VT path. The default is 10.
Customer Info	
VT Number	The VT number.
Customer ID	The user-defined customer ID number.
Service ID	The user-defined service ID number.

Loopback

The Loopback Properties pane allows you to view and update DS-1 loopback information.

Table C-815 *Field Descriptions for the Loopback Properties Pane*

Field	Description
Port Number	Displays the port number (1 to 14).
State	Displays the status of the line. The line can be In Service (IS), In Service—Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service—Maintenance (OOS_MT).
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.

Protection

The Protection Properties pane allows you to view and update DS-1 protection group information.

Table C-816 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection group.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update DS-1 alarm profile information.

Table C-817 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and update J1 path trace information.

Table C-818 Field Descriptions for the J1 Path Trace Properties Pane

Field	Description
Port Number	Displays the port number.
STS Number	Displays the STS number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Mismatch	Indicates whether there is a mismatch in the C2 byte received.
Vcat Member Number	Displays the virtual concatenation (VCAT) member number.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

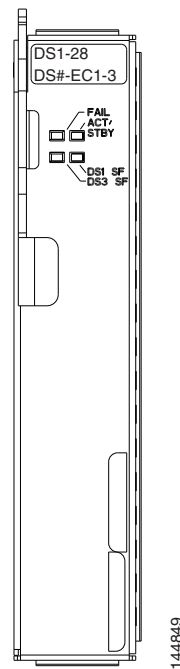
Slot Properties—DS1-28/DS3-EC1-3

The ONS 15310 MA SONET DS1-28/DS3-EC1-3 card provides 28 Telcordia-compliant, GR-499 DS-1 ports per card, and three DS-3/EC-1 ports. Each DS-1 port operates at 1.544 Mb/s. Each DS-3/EC-1 port operates at 44.736 Mb/s over a single 75-ohm 728A or equivalent coaxial span. This card can operate as a working or protect card in 1:N protection schemes, where N is less than or equal to 2.

The DS1-28/DS3-EC1-3 card can be installed in slots 1, 2, 5, and 6. Cards installed in slots 1 and 2 correspond with BIC A, and cards in slots 5 and 6 correspond with BIC B.

The following figure shows the DS1-28/DS3-EC1-3 card faceplate.

Figure C-70 **DS1-28/DS3-EC1-3 Card Faceplate**



For the DS1-28/DS3-EC1-3 module, the slot properties pane displays the following properties: Module View, Identification, DS-1, Broadband Ports, DS-3, EC1, Protection, and Info.

Module View

The Module View displays a graphic of the DS1-28/DS3-EC1-3 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update DS1-28/DS3-EC1-3 identification information.

Table C-819 **Field Descriptions for the Identification Properties Pane**

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.

Table C-819 Field Descriptions for the Identification Properties Pane (continued)

Field	Description
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

DS-1

The DS-1 Properties pane allows you to view and update DS-1 information for the card. The DS-1 Properties pane contains the following tabs:

- [Line Config Tab, page C-618](#)
- [Line Thresh 15 Min/1 Day Tab, page C-620](#)
- [Electric Path Thresh 15 Min/1 Day Tabs, page C-620](#)
- [STS Thresh 15 Min/1 Day Tabs, page C-621](#)
- [VT Thresh 15 Min/1 Day Tabs, page C-621](#)
- [Alarm Behavior Tab, page C-622](#)
- [Loopback Tab, page C-622](#)
- [J1 Path Trace Tab, page C-623](#)
- [Customer Info Tab, page C-623](#)

Line Config Tab

The Line Config tab allows you to view and update line configuration information.

Table C-820 Field Descriptions for the Line Config Tab

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to add a name for the optical port.
Line Type	Allows you to select the line framing type.
Line Coding	Allows you to define the DS-1N transmission coding type.

Table C-820 Field Descriptions for the Line Config Tab (continued)

Field	Description
Line Length	Defines the distance (in feet) from backplane connection to the next termination point. 0–131 (default) 132–262
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
SF BER	Sets the signal failure bit error rate.
SD BER	Sets the signal deterioration bit error rate.
Send Do Not Use	When checked, sends a do not use (DUS) message on the S1 byte.
Provides Sync	When checked, the card is provisioned as an NE timing reference.
Enable Sync Message	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Enable Retiming	When checked, retimes the transmit clock to the clock reference of the NE, removing the asynchronous relationship between electrical line and SONET transport time domains for the electrical path. When unchecked, leaves the port as <i>through-timed</i> , which means that the transmit clock is extracted from the DS-1/E1 data in the SONET payload coming from the backplane.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Send AIS-V for DS1-AIS/Defects	When checked, sends an Alarm Indication Signal VT (AIS-V) instead of a DS-1 AIS (from the line side toward the backplane/system side) when a line-side trigger occurs.
Raise AIS for LOF	Sends an AIS when a loss of frame (LOF) occurs.
Admin SSM	Overrides the synchronization status message (SSM) synchronization traceability unknown (STU) value. If the node does not receive an SSM signal, it defaults to STU. Admin SSM allows you to override the STU value with one of the following: - PRS—Primary Reference Source (Stratum 1) - ST2—Stratum 2 - TNC—Transit node clock - ST3E—Stratum 3E - ST3—Stratum 3 - SMC—SONET minimum clock - ST4—Stratum 4 - DUS—Do not use for timing synchronization - RES—Reserved; quality level set by user

Line Thresh 15 Min/1 Day Tab

The Line Thresh 15 Min/1 Day tabs allow you to view and change the near- and far-end 15-minute/1-day threshold settings of the port.

Table C-821 Field Descriptions for the Line Thresh 15 Min/1 Day Tabs

Field	Description
Near End	
Port Number	Displays the optical port number.
CV-L	Displays the coding violations line.
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.
LOSS-L	Loss of signal line; number of 1-second intervals containing one or more LOS defects.
Far End	
Port Number	Displays the optical port number.
ES-L	Displays the errored seconds line.

Electric Path Thresh 15 Min/1 Day Tabs

The Electric Path Thresh 15 Min/1 Day tabs allow you to view and change the near- and far-end 15-minute/1-day electrical path threshold settings for the card.

Table C-822 Field Descriptions for the Electric Path Thresh 15 Min/1 Day Tabs

Field	Description
Near End	
Port No.	Displays the port number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
SAS-P	Displays the severely errored frame/alarm indication signal path information.
AISS-P	Displays the alarm indication signal seconds path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.
Far End	
Port No.	Displays the port number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
CSS-P	Displays the controlled slip seconds path information.
ESA-P	Displays the errored seconds type A path information.

Table C-822 *Field Descriptions for the Electric Path Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
ESB-P	Displays the errored seconds type B path information.
SEFS-P	Displays the severely errored framing seconds path information.
FC-P	Failure count path.
ESNE	Displays the network performance errored seconds (near end) during a fixed measurement interval.
ESFE	Displays the network performance errored seconds (far end) during a fixed measurement interval.
SESNE	Displays the network performance severely errored seconds (near end) during a fixed measurement interval.
SESFE	Displays the network performance severely errored seconds (far end) during a fixed measurement interval.
UASNE	Displays the network performance unavailable seconds (near end) during a fixed measurement interval.
UASFE	Displays the network performance unavailable seconds (far end) during a fixed measurement interval.

STS Thresh 15 Min/1 Day Tabs

The STS Thresh 15 Min/1 Day tabs allow you to view and change near- and far-end 15-minute/1-day synchronous transport signal (STS) information for the port.

Table C-823 *Field Descriptions for the STS Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
STS Number	Displays the synchronous transport signal number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.

VT Thresh 15 Min/1 Day Tabs

The VT Thresh 15 Min/1 Day tabs displays near- and far-end 15-minute/1-day VT threshold information.

Table C-824 *Field Descriptions for the VT Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
VT Number	Displays VT number information.
CV	Displays the coding violations–VT path information.
ES	Displays the errored seconds–VT path information.
SES	Displays the severely errored seconds–VT path information.

Table C-824 *Field Descriptions for the VT Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
UAS	Displays the unavailable seconds–VT path information.
FC	Failure count.

Alarm Behavior Tab

The Alarm Behavior tab allows you to view and update port alarm profile information.

Table C-825 *Field Descriptions for the Alarm Behavior Tab*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Loopback Tab

The Loopback tab allows you to view and update port loopback information.

Table C-826 *Field Descriptions for the Loopback Tab*

Field	Description
Port Number	Displays the port number.
Administration State	Displays the administration state. The state can either be Unlocked or Locked, Maintenance.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.
Send Code	Allows you to select No Code (default) or Line Loop Code. Selecting Line Loop Code inserts a line loop activate Far End Action Code (FEAC) in the CBIT overhead transmitting to the connected facility. This code initiates a loopback from the facility to the ONS 15310 MA SONET. Selecting No Code sends a line loop deactivate FEAC code to the connected equipment, which removes the loopback. You can also insert an FEAC for the 28 individual DS-1 circuits transmuted into a DS-3 circuit.
Send AIS on Facility Loopback	When selected, sends AIS on the facility loopback.

Table C-826 *Field Descriptions for the Loopback Tab (continued)*

Field	Description
Send AIS on Terminal Loopback	When selected, sends AIS on the terminal loopback.
Inhibit FE Loopback	If the Inhibit FE Loopback check box is checked for a port, that port will ignore any FEAC line loop codes and will not loop back. The port can still be put into loopback manually using the Loopback Type column even if the Inhibit FE Loopback check box is selected. Only DS-3 ports can be configured to inhibit responding to FEAC loopback commands.

J1 Path Trace Tab

The J1 Path Trace tab allows you to view and retrieve J1 path trace information.

Table C-827 *Field Descriptions for the J1 Path Trace Tab*

Field	Description
Port Number	Displays the port number.
STS Number	Displays the synchronous transport signal number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

Customer Info Tab

The Customer Info tab displays the port customer information.

Table C-828 *Field Descriptions for the Customer Info Tab*

Field	Description
STS Number	Displays the synchronous transport signal number.
Customer ID	The customer ID.
Service ID	The service ID.

Broadband Ports

The Broadband Ports Properties pane allows you to view the DS-3 or EC1 port information.

Table C-829 *Field Descriptions for the Broadband Ports Properties Pane*

Field	Description
DS-3	
Port Number	Displays the DS-3 port number.
Rate	Displays the rate that the port is provisioned for.
EC1	
Port Number	Displays the EC1 port number.
Rate	Displays the rate that the port is provisioned for.

DS3

The DS-3 Properties pane allows you to view and update DS-3 information for the card. The DS-3 Properties pane contains the following tabs:

- [Line Config Tab, page C-624](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-625](#)
- [PBit Thresh 15 Min/1 Day Tabs, page C-625](#)
- [CPBit Thresh 15 Min/1 Day Tabs, page C-625](#)
- [STS Thresh 15 Min/1 Day Tabs, page C-626](#)
- [Alarm Behavior Tab, page C-626](#)
- [Loopback Tab, page C-627](#)
- [J1 Path Trace Tab, page C-627](#)
- [Customer Info Tab, page C-627](#)

Line Config Tab

The Line Config tab allows you to view and change the line settings of the port.

Table C-830 *Field Descriptions for the Line Config Tab*

Field	Description
Port Number	Displays the port number for the optical port.
Port Name	Allows you to add a name for the optical port.
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Line Length (feet)	Defines the distance (in feet) from backplane connection to the next termination point. Values are 0 through 225 (default) or 226 through 450.
Line Type	Allows you to select the line framing type.
Line Coding	Allows you to define the DS-3i transmission coding type.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.

Table C-830 *Field Descriptions for the Line Config Tab (continued)*

Field	Description
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the near- and far-end 15-minute/1-day threshold settings of the port.

Table C-831 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	Displays the optical port number.
CV-L	Displays the coding violations line.
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.
LOSS-L	Displays the unavailable seconds line.

PBit Thresh 15 Min/1 Day Tabs

The PBit Thresh 15 Min/1 Day tabs displays near-end 15-minute/1-day PBit path threshold information on the card.

Table C-832 *Field Descriptions for the PBit Thresh 15 Min/1 Day Tabs*

Field	Description
Port No.	Displays the optical port number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
SAS-P	Severely errored frame/alarm indication signal path
AISS-P	Alarm indication signal seconds path
UAS-P	Displays the unavailable seconds path information.

CPBit Thresh 15 Min/1 Day Tabs

The CPBit Thresh 15 Min/1 Day tabs displays near- and far-end 15-minute/1-day CPBit path threshold information on the card.

Table C-833 *Field Descriptions for the CPBit Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
Port No.	Displays the optical port number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.

STS Thresh 15 Min/1 Day Tabs

The STS Thresh 15 Min/1 Day tabs allow you to view and change near- and far-end 15-minute synchronous transport signal (STS) information for the port.

Table C-834 *Field Descriptions for the STS Thresh 15/1 Day Min Tabs*

Field	Description
Near End, Far End	
STS Number	Displays the synchronous transport signal number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.

Alarm Behavior Tab

The Alarm Behavior tab allows you to view and update port alarm profile information.

Table C-835 *Field Descriptions for the Alarm Behavior Tab*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Loopback Tab

The Loopback tab allows you to view and update port loopback information.

Table C-836 *Field Descriptions for the Loopback Tab*

Field	Description
Port Number	Displays the port number.
Administration State	Displays the administration state. The state can either be Unlocked or Locked, Maintenance.
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Send AIS on Facility Loopback	When selected, sends AIS on the facility loopback.
Send AIS on Terminal Loopback	When selected, sends AIS on the terminal loopback.
Inhibit FE Loopback	If the Inhibit FE Loopback check box is checked for a port, that port will ignore any FEAC line loop codes and will not loop back. The port can still be put into loopback manually using the Loopback Type column even if the Inhibit FE Loopback check box is selected. Only DS-3 ports can be configured to inhibit responding to FEAC loopback commands.

J1 Path Trace Tab

The J1 Path Trace tab allows you to view and retrieve J1 path trace information.

Table C-837 *Field Descriptions for the J1 Path Trace Tab*

Field	Description
Port Number	Displays the port number.
STS Number	Displays the synchronous transport signal number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

Customer Info Tab

The Customer Info tab displays the port customer information.

Table C-838 *Field Descriptions for the Customer Info Tab*

Field	Description
STS Number	Displays the synchronous transport signal number.
Customer ID	The customer ID.
Service ID	The service ID.

EC1

The EC1 Properties pane allows you to view node near-end and far-end performance on an EC1 card to detect possible performance problems.

The EC1 Properties pane contains the following tabs:

- [Line Config Tab, page C-628](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-629](#)
- [Section Thresh 15 Min/1 Day Tabs, page C-629](#)
- [STS Thresh 15 Min/1 Day Tabs, page C-629](#)
- [Alarm Behavior Tab, page C-630](#)
- [STS Config Tab, page C-631](#)
- [Loopback Tab, page C-631](#)
- [Section Trace Tab, page C-631](#)
- [J1 Path Trace Tab, page C-632](#)
- [Customer Info Tab, page C-632](#)

Line Config Tab

The Line Config tab allows you to view and change the line settings of the EC1 port.

Table C-839 *Field Descriptions for the Line Config Tab*

Field	Description
Port Number	Displays the port number for the optical port.
Port Name	Allows you to add a name for the optical port.
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
PJSTSMon#	Sets the EC-1 port that will be used for pointer justification. Values are Off or 1.
Line Length (feet)	Defines the distance (in feet) from backplane connection to the next termination point. Values are 0 through 225 (default) or 226 through 450.
Rx Equalization	For early EC1 card versions, equalization can be turned off if the line length is short or the environment is extremely cold; Rx Equalization should normally be set to On (checked, default).
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.

Table C-839 *Field Descriptions for the Line Config Tab (continued)*

Field	Description
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1-Day tabs allow you to view and change the near- and far-end 15-minute/1-day threshold settings of the EC1 port.

Table C-840 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
Port Number	Displays the optical port number.
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.
CV-L	Displays the coding violations line.
UAS-L	Displays the unavailable seconds line information.
FC-L	Displays the failure count line.

Section Thresh 15 Min/1 Day Tabs

The Section Thresh 15 Min/1 Day tabs allow you to view and change the near-end 15-minute/1-day section threshold information on the EC1 port.

Table C-841 *Field Descriptions for the Section Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
Port Number	Displays the port number.
CV-S	Displays the coding violations section.
ES-S	Displays the errored seconds section.
SES-S	Displays the severely errored seconds section.
SEFS-S	Displays the severely errored framing seconds section.

STS Thresh 15 Min/1 Day Tabs

The STS Thresh 15 Min/1 Day tabs allow you to view and change near- and far-end 15-minute/1-day synchronous transport signal (STS) information for the port.

Table C-842 *Field Descriptions for the STS Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
STS Number	Displays the synchronous transport signal number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.
PPJC-Pdet	Positive pointer justification count, STS path detected.
NPJC-Pdet	Negative pointer justification count, STS path detected.
PPJC-Pgen	Positive pointer justification count, STS path generated.
NPJC-Pgen	Negative pointer justification count, STS path generated.
PJCS-Pdet	Positive pointer justification count, STS path detected.
PJCS-Pgen	Positive pointer justification count, STS path generated.
PJC-Diff	The sum of the absolute values of differences between positive transmitted and received, and negative transmitted and received. The important metric on pointer justification is not the exact counts, but how many were absorbed.
Far End	
STS Number	Displays the synchronous transport signal number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.

Alarm Behavior Tab

The Alarm Behavior tab allows you to view and update port alarm profile information.

Table C-843 *Field Descriptions for the Alarm Behavior Tab*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

STS Config Tab

The STS Config tab allows you to view and change the STS settings of the EC1 port.

Table C-844 Field Descriptions for the STS Config Tab

Field	Description
STS Number	Displays the synchronous transport signal number information.
IPPM Enabled	Check to enable intermediate path performance monitoring (IPPM) and uncheck to disable IPPM.

Loopback Tab

The Loopback tab allows you to view and update port loopback information.

Table C-845 Field Descriptions for the Loopback Tab

Field	Description
Port Number	Displays the port number.
Administration State	Displays the administration state. The state can either be Unlocked or Locked, Maintenance.
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Send AIS on Facility Loopback	When selected, sends AIS on the facility loopback.
Send AIS on Terminal Loopback	When selected, sends AIS on the terminal loopback.
Inhibit FE Loopback	If the Inhibit FE Loopback check box is checked for a port, that port will ignore any FEAC line loop codes and will not loop back. The port can still be put into loopback manually using the Loopback Type column even if the Inhibit FE Loopback check box is selected. Only DS-3 ports can be configured to inhibit responding to FEAC loopback commands.
Send AIS on Terminal Loopback	When selected, sends AIS on the terminal loopback.

Section Trace Tab

The Section Trace tab allows you to change the EC1 port section trace settings.

Table C-846 Field Descriptions for the Section Trace Tab

Field	Description
Port Number	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Select a transmit length for the trace.

Table C-846 *Field Descriptions for the Section Trace Tab (continued)*

Field	Description
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.

J1 Path Trace Tab

The J1 Path Trace tab allows you to view and retrieve J1 path trace information.

Table C-847 *Field Descriptions for the J1 Path Trace Tab*

Field	Description
Port Number	Displays the port number.
STS Number	Displays the synchronous transport signal number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

Customer Info Tab

The Customer Info tab displays the port customer information.

Table C-848 *Field Descriptions for the Customer Info Tab*

Field	Description
STS Number	Displays the synchronous transport signal number.
Customer ID	The customer ID.
Service ID	The service ID.

Protection

The Protection Properties pane allows you to view and update protection group information.

Table C-849 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection groups, such as which port is the protected port and which port is the working port. Also allows you to execute switch commands.

Table C-849 *Field Descriptions for the Protection Properties Pane (continued)*

Field	Description
Switch Commands	Allows you to perform a manual switch, perform a forced switch, or clear the existing command switching.
Inhibit Switching	Allows you to inhibit unlock switching, lock-out switching, or lock-on switching.

Info

The Info Properties pane allows you to view nominal operating values set for the card during manufacturing.

Table C-850 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

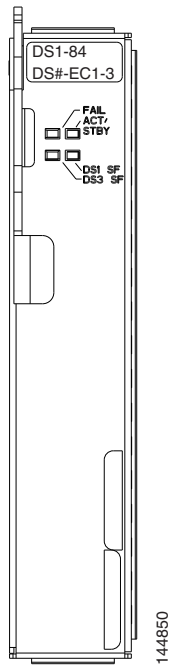
Slot Properties—DS1-84/DS3-EC1-3

The ONS 15310 MA SONET DS1-84/DS3-EC1-3 card provides 84 Telcordia-compliant, GR-499 DS-1 ports per card, and three DS-3/EC-1 ports. Each DS-1 port operates at 1.544 Mb/s. Each DS-3/EC-1 port operates at 44.736 Mb/s over a single 75-ohm 728A or equivalent coaxial span. This card can operate as a working or protect card in 1:N protection schemes, where N is less than or equal to 2.

The DS1-84/DS3-EC1-3 card can be installed in slots 1, 2, 5, and 6. Cards installed in slots 1 and 2 correspond with BIC A, and cards in slots 5 and 6 correspond with BIC B.

The following figure shows the DS1-84/DS3-EC1-3 card faceplate.

Figure C-71 DS1-84/DS3-EC1-3 Card Faceplate



For the DS1-84/DS3-EC1-3 module, the slot properties pane displays the following properties: Module View, Identification, DS-1, Broadband Ports, DS-3, EC1, Protection, and Info.

Module View

The Module View displays a graphic of the DS1-84/DS3-EC1-3 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update DS1-84-DS3-EC1-3 identification information.

Table C-851 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.

Table C-851 *Field Descriptions for the Identification Properties Pane (continued)*

Field	Description
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

DS1

The DS-1 Properties pane allows you to view and update DS-1 information for the card. The DS-1 Properties pane contains the following tabs:

- [Line Config Tab, page C-635](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-637](#)
- [Electric Path Thresh 15 Min/1 Day Tabs, page C-637](#)
- [STS Thresh 15 Min/1 Day Tabs, page C-638](#)
- [VT Thresh 15 Min/1 Day Tabs, page C-638](#)
- [Alarm Behavior Tab, page C-639](#)
- [Loopback Tab, page C-639](#)
- [J1 Path Trace Tab, page C-640](#)
- [Customer Info Tab, page C-640](#)

Line Config Tab

The Line Config tab allows you to view and update line configuration information.

Table C-852 *Field Descriptions for the Line Config Tab*

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to add a name for the optical port.
Line Type	Allows you to select the line framing type.
Line Coding	Allows you to define the DS-1N transmission coding type.

Table C-852 Field Descriptions for the Line Config Tab (continued)

Field	Description
Line Length	Defines the distance (in feet) from backplane connection to the next termination point. 0–131 (default) 132–262
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
SF BER	Sets the signal failure bit error rate.
SD BER	Sets the signal deterioration bit error rate.
Send Do Not Use	When checked, sends a do not use (DUS) message on the S1 byte.
Provides Sync	When checked, the card is provisioned as an NE timing reference.
Enable Sync Message	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Enable Retiming	When checked, retimes the transmit clock to the clock reference of the NE, removing the asynchronous relationship between electrical line and SONET transport time domains for the electrical path. When unchecked, leaves the port as <i>through-timed</i> , which means that the transmit clock is extracted from the DS-1/E1 data in the SONET payload coming from the backplane.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Send AIS-V for DS1-AIS/Defects	When checked, sends an Alarm Indication Signal VT (AIS-V) instead of a DS-1 AIS (from the line side toward the backplane/system side) when a line-side trigger occurs.
Raise AIS for LOF	Sends an AIS when a loss of frame (LOF) occurs.
Admin SSM	Overrides the synchronization status message (SSM) synchronization traceability unknown (STU) value. If the node does not receive an SSM signal, it defaults to STU. Admin SSM allows you to override the STU value with one of the following: - PRS—Primary Reference Source (Stratum 1) - ST2—Stratum 2 - TNC—Transit node clock - ST3E—Stratum 3E - ST3—Stratum 3 - SMC—SONET minimum clock - ST4—Stratum 4 - DUS—Do not use for timing synchronization - RES—Reserved; quality level set by user

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the near- and far-end 15-minute/1-day threshold settings of the port.

Table C-853 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
Port Number	Displays the optical port number.
CV-L	Displays the coding violations line.
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.
LOSS-L	Loss of signal line; number of 1-second intervals containing one or more LOS defects.
Far End	
Port Number	Displays the optical port number.
ES-L	Displays the errored seconds line.

Electric Path Thresh 15 Min/1 Day Tabs

The Electric Path Thresh 15 Min/1 Day tabs allow you to view and change the near- and far-end 15-minute/1-day electrical path threshold settings for the card.

Table C-854 *Field Descriptions for the Electric Path Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
Port No.	Displays the port number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
SAS-P	Displays the severely errored frame/alarm indication signal path information.
AISS-P	Displays the alarm indication signal seconds path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.
Far End	
Port No.	Displays the port number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
CSS-P	Displays the controlled slip seconds path information.
ESA-P	Displays the errored seconds type A path information.

Table C-854 *Field Descriptions for the Electric Path Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
ESB-P	Displays the errored seconds type B path information.
SEFS-P	Displays the severely errored framing seconds path information.
FC-P	Failure count path.
ESNE	Displays the network performance errored seconds (near end) during a fixed measurement interval.
ESFE	Displays the network performance errored seconds (far end) during a fixed measurement interval.
SESNE	Displays the network performance severely errored seconds (near end) during a fixed measurement interval.
SESFE	Displays the network performance severely errored seconds (far end) during a fixed measurement interval.
UASNE	Displays the network performance unavailable seconds (near end) during a fixed measurement interval.
UASFE	Displays the network performance unavailable seconds (far end) during a fixed measurement interval.

STS Thresh 15 Min/1 Day Tabs

The STS Thresh 15 Min/1 Day tabs allow you to view and change near- and far-end 15-minute/1-day synchronous transport signal (STS) information for the port.

Table C-855 *Field Descriptions for the STS Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
STS Number	Displays the synchronous transport signal number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.

VT Thresh 15 Min/1 Day Tabs

The VT Thresh 15 Min/1- Day tabs displays near- and far-end 15-minute/1-day VT threshold information.

Table C-856 *Field Descriptions for the VT Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
VT Number	Displays VT number information.
CV	Displays the coding violations–VT path information.
ES	Displays the errored seconds–VT path information.
SES	Displays the severely errored seconds–VT path information.

Table C-856 *Field Descriptions for the VT Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
UAS	Displays the unavailable seconds–VT path information.
FC	Failure count.

Alarm Behavior Tab

The Alarm Behavior tab allows you to view and update port alarm profile information.

Table C-857 *Field Descriptions for the Alarm Behavior Tab*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Loopback Tab

The Loopback tab allows you to view and update port loopback information.

Table C-858 *Field Descriptions for the Loopback Tab*

Field	Description
Port Number	Displays the port number.
Administration State	Displays the administration state. The state can either be Unlocked or Locked, Maintenance.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.
Send Code	Allows you to select No Code (default) or Line Loop Code. Selecting Line Loop Code inserts a line loop activate Far End Action Code (FEAC) in the CBIT overhead transmitting to the connected facility. This code initiates a loopback from the facility to the ONS 15310 MA SONET. Selecting No Code sends a line loop deactivate FEAC code to the connected equipment, which removes the loopback. You can also insert an FEAC for the 28 individual DS-1 circuits transmuted into a DS-3 circuit.
Send AIS on Facility Loopback	When selected, sends AIS on the facility loopback.
Send AIS on Terminal Loopback	When selected, sends AIS on the terminal loopback.

Table C-858 *Field Descriptions for the Loopback Tab (continued)*

Field	Description
Inhibit FE Loopback	If the Inhibit FE Loopback check box is checked for a port, that port will ignore any FEAC line loop codes and will not loop back. The port can still be put into loopback manually using the Loopback Type column even if the Inhibit FE Loopback check box is selected. Only DS-3 ports can be configured to inhibit responding to FEAC loopback commands.
Send AIS on Terminal Loopback	When selected, sends AIS on the terminal loopback.

J1 Path Trace Tab

The J1 Path Trace tab allows you to view and retrieve J1 path trace information.

Table C-859 *Field Descriptions for the J1 Path Trace Tab*

Field	Description
Port Number	Displays the port number.
STS Number	Displays the synchronous transport signal number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

Customer Info Tab

The Customer Info tab displays the port customer information.

Table C-860 *Field Descriptions for the Customer Info Tab*

Field	Description
STS Number	Displays the synchronous transport signal number.
Customer ID	The customer ID.
Service ID	The service ID.

Broadband Ports

The Broadband Ports Properties pane allows you to view the DS-3 or EC1 port information.

Table C-861 *Field Descriptions for the Broadband Ports Properties Pane*

Field	Description
DS-3	
Port Number	Displays the DS-3 port number.
Rate	Displays the rate that the port is provisioned for.
EC1	
Port Number	Displays the EC1 port number.
Rate	Displays the rate that the port is provisioned for.

DS3

The DS-3 Properties pane allows you to view and update DS-3 information for the card. The DS-3 Properties pane contains the following tabs:

- [Line Config Tab, page C-641](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-642](#)
- [PBit Thresh 15 Min/1 Day Tabs, page C-642](#)
- [CPBit Thresh 15 Min/1 Day Tabs, page C-642](#)
- [STS Thresh 15 Min/1 Day Tabs, page C-643](#)
- [Alarm Behavior Tab, page C-643](#)
- [Loopback Tab, page C-644](#)
- [J1 Path Trace Tab, page C-644](#)
- [Customer Info Tab, page C-645](#)

Line Config Tab

The Line Config tab allows you to view and change the line settings of the DS3 port.

Table C-862 *Field Descriptions for the Line Config Tab*

Field	Description
Port Number	Displays the port number for the optical port.
Port Name	Allows you to add a name for the optical port.
SF BER	Sets the signal fail bit error rate.
SD BER	Sets the signal degrade bit error rate.
Line Length (feet)	Defines the distance (in feet) from backplane connection to the next termination point. Values are 0 through 225 (default) or 226 through 450.
Line Type	Allows you to select the line framing type.
Line Coding	Allows you to define the DS-1N transmission coding type.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.

Table C-862 *Field Descriptions for the Line Config Tab (continued)*

Field	Description
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the near- and far-end 15-minute/1-day threshold settings of the port.

Table C-863 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
Port Number	Displays the optical port number.
CV-L	Displays the coding violations line.
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.
UAS-L	Displays the unavailable seconds line.
FC-L	Displays the failure count line.
LOSS-L	Loss of signal line; number of 1-second intervals containing one or more LOS defects.

PBit Thresh 15 Min/1 Day Tabs

The PBit Thresh 15 Min/1 Day tabs allow you to view and change the near-end 15-minute/1-day PBit path threshold information on the card.

Table C-864 *Field Descriptions for the PBit Path Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
Port Number	Displays the optical port number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
SAS-P	Displays the severely errored frame/alarm indication signal path information.
AISS-P	Displays the alarm indication signal seconds path information.
UAS-P	Displays the unavailable seconds path information.

CPBit Thresh 15 Min/1 Day Tabs

The CPBit Thresh 15 Min/1 Day tabs display near- and far-end 15-minute/1-day CPBit path threshold information on the card.

Table C-865 *Field Descriptions for the CPBit Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
Port No.	Displays the optical port number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.

STS Thresh 15 Min/1 Day Tabs

The STS Thresh 15 Min/1 Day tabs allow you to view and change near- and far-end 15-minute/1-day synchronous transport signal (STS) information for the port.

Table C-866 *Field Descriptions for the STS Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
STS Number	Displays the synchronous transport signal number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.

Alarm Behavior Tab

The Alarm Behavior tab allows you to view and update DS-3 port alarm profile information.

Table C-867 *Field Descriptions for the Alarm Behavior Tab*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Loopback Tab

The Loopback tab allows you to view and update DS-3 port loopback information.

Table C-868 Field Descriptions for the Loopback Tab

Field	Description
Port Number	Displays the port number.
Administration State	Displays the administration state. The state can either be Unlocked or Locked, Maintenance.
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.
Inhibit FE Loopback	If the Inhibit FE Loopback check box is checked for a DS-3 port, that port will ignore any FEAC line loop codes and will not loop back. The port can still be put into loopback manually using the Loopback Type column even if the Inhibit FE Loopback check box is selected. Only DS-3 ports can be configured to inhibit responding to FEAC loopback commands.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Send AIS on Facility Loopback	When selected, sends AIS on the facility loopback.
Send AIS on Terminal Loopback	When selected, sends AIS on the terminal loopback.
Inhibit FE Loopback	If the Inhibit FE Loopback check box is checked for a port, that port will ignore any FEAC line loop codes and will not loop back. The port can still be put into loopback manually using the Loopback Type column even if the Inhibit FE Loopback check box is selected. Only DS-3 ports can be configured to inhibit responding to FEAC loopback commands.

J1 Path Trace Tab

The J1 Path Trace tab allows you to view and retrieve J1 path trace information on the DS-3 port.

Table C-869 Field Descriptions for the J1 Path Trace Tab

Field	Description
Port Number	Displays the port number.
STS Number	Displays the synchronous transport signal number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

Customer Info Tab

The Customer Info tab displays the DS-3 port customer information.

Table C-870 **Field Descriptions for the Customer Info Tab**

Field	Description
STS Number	Displays the synchronous transport signal number.
Customer ID	The customer ID.
Service ID	The service ID.

EC1

The EC1 Properties pane allows you to view node near-end and far-end performance on an EC1 card to detect possible performance problems.

The EC1 Properties pane contains the following tabs:

- [Line Config Tab, page C-645](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-646](#)
- [Section Thresh 15 Min/1 Day Tabs, page C-646](#)
- [STS Thresh 15 Min/1 Day Tabs, page C-647](#)
- [Alarm Behavior Tab, page C-647](#)
- [STS Config Tab, page C-648](#)
- [Loopback Tab, page C-648](#)
- [Section Trace Tab, page C-648](#)
- [J1 Path Trace Tab, page C-649](#)
- [Customer Info Tab, page C-649](#)

Line Config Tab

The Line Config tab allows you to view and change the line settings of the EC1 port.

Table C-871 **Field Descriptions for the Line Config Tab**

Field	Description
Port Number	Displays the port number for the optical port.
Port Name	Allows you to add a name for the optical port.
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
PJSTSMon#	Sets the EC-1 port that will be used for pointer justification. Values are Off or 1.
Line Length (feet)	Defines the distance (in feet) from backplane connection to the next termination point. Values are 0 through 225 (default) or 226 through 450.
Rx Equalization	For early EC1 card versions, equalization can be turned off if the line length is short or the environment is extremely cold; Rx Equalization should normally be set to On (checked, default).

Table C-871 Field Descriptions for the Line Config Tab (continued)

Field	Description
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the near- and far-end 15-minute/1-day threshold settings of the EC1 port.

Table C-872 Field Descriptions for the Line Thresh 15 Min/1 Day Tabs

Field	Description
Near End, Far End	
Port Number	Displays the optical port number.
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.
CV-L	Displays the coding violations line.
UAS-L	Displays the unavailable seconds line.
FC-L	Displays the failure count line.

Section Thresh 15 Min/1 Day Tabs

The Section Thresh 15 Min/1 Day tabs allow you to view and change the near-end 15-minute/1-day section threshold information on the EC1 port.

Table C-873 Field Descriptions for the Section Thresh 15 Min/1 Day Tabs

Field	Description
Near End	
Port Number	Displays the port number.
CV-S	Displays the coding violations section.
ES-S	Displays the errored seconds section.
SES-S	Displays the severely errored seconds section.
SEFS-S	Displays the severely errored framing seconds section.

STS Thresh 15 Min/1 Day Tabs

The STS Thresh 15 Min/1 Day tabs allow you to view and change near- and far-end 15-minute/1-day synchronous transport signal (STS) information for the port.

Table C-874 *Field Descriptions for the STS Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
STS Number	Displays the synchronous transport signal number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.
PPJC-Pdet	Positive pointer justification count, STS path detected.
NPJC-Pdet	Negative pointer justification count, STS path detected.
PPJC-Pgen	Positive pointer justification count, STS path generated.
NPJC-Pgen	Negative pointer justification count, STS path generated.
PJCS-Pdet	Positive pointer justification count, STS path detected.
PJCS-Pgen	Positive pointer justification count, STS path generated.
PJC-Diff	The sum of the absolute values of differences between positive transmitted and received, and negative transmitted and received. The important metric on pointer justification is not the exact counts, but how many were absorbed.
Far End	
STS Number	Displays the synchronous transport signal number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.

Alarm Behavior Tab

The Alarm Behavior tab allows you to view and update port alarm profile information.

Table C-875 *Field Descriptions for the Alarm Behavior Tab*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.

Table C-875 *Field Descriptions for the Alarm Behavior Tab (continued)*

Field	Description
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

STS Config Tab

The STS Config tab allows you to view and change the STS settings of the EC1 port.

Table C-876 *Field Descriptions for the STS Config Tab*

Field	Description
STS Number	Displays the synchronous transport signal number information.
IPPM Enabled	Check to enable intermediate path performance monitoring (IPPM) and uncheck to disable IPPM.

Loopback Tab

The Loopback tab allows you to view and update port loopback information.

Table C-877 *Field Descriptions for the Loopback Tab*

Field	Description
Port Number	Displays the port number.
Administration State	Displays the administration state. The state can either be Unlocked or Locked, Maintenance.
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Send AIS on Facility Loopback	When selected, sends AIS on the facility loopback.
Send AIS on Terminal Loopback	When selected, sends AIS on the terminal loopback.

Section Trace Tab

The Section Trace tab allows you to change the EC1 port section trace settings.

Table C-878 *Field Descriptions for the Section Trace Tab*

Field	Description
Port Number	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).

Table C-878 *Field Descriptions for the Section Trace Tab (continued)*

Field	Description
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.

J1 Path Trace Tab

The J1 Path Trace tab allows you to view and retrieve J1 path trace information.

Table C-879 *Field Descriptions for the J1 Path Trace Tab*

Field	Description
Port Number	Displays the port number.
STS Number	Displays the synchronous transport signal number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

Customer Info Tab

The Customer Info tab displays the port customer information.

Table C-880 *Field Descriptions for the Customer Info Tab*

Field	Description
STS Number	Displays the synchronous transport signal number.
Customer ID	The customer ID.
Service ID	The service ID.

Protection

The Protection Properties pane allows you to view and update protection group information.

Table C-881 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection groups, such as which port is the protected port and which port is the working port. Also allows you to execute switch commands.
Switch Commands	Allows you to perform a manual switch, perform a forced switch, or clear the existing command switching.
Inhibit Switching	Allows you to inhibit unlock switching, lock-out switching, or lock-on switching.

Info

The Info Properties pane allows you to view nominal operating values set for the card during manufacturing.

Table C-882 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—DS-1N

The slot properties pane displays information about the Cisco ONS 15327 or ONS 15454 SONET slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The DS-1N transmux card can accept up to six DS-3 signals and convert each signal to 28 VT1.5s. Conversely, the card can take 28 T-1s and multiplex them into a channeled C-bit or M23 framed DS-3. Unlike the DS-3-12 and DS-3N-12 cards, the DS-1N allows circuit mapping at the VT level.

For the DS-1N module, the slot properties pane displays the following properties: Module View, Identification, Line, STS, VT, Loopback, Protection, and Alarm Behavior.

Module View

The Module View displays a graphic of the DS-1N that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to add, delete, change, or reset the module.

Identification

The Identification Properties pane allows you to view and update DS-1N identification information.

Table C-883 **Field Descriptions for the Identification Properties Pane**

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update DS-1N optical line performance monitoring information.

Table C-884 **Field Descriptions for the Line Properties Pane**

Field	Description
Line Config	
Port Number	Displays the optical port number.
Port Name	Allows you to add a name for the optical port.
Line Type	Allows you to select the line framing type.
Line Coding	Allows you to define the DS-1N transmission coding type.
Line Length	Defines the distance (in feet) from backplane connection to the next termination point. 0–131 (default) 132–262
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.

Table C-884 Field Descriptions for the Line Properties Pane (continued)

Field	Description
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Send AIS-V for DS-1 AIS	When checked, sends an Alarm Indication Signal VT (AIS-V) instead of a DS-1 AIS (from the line side toward the backplane/system side) when a line-side trigger occurs.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
BLSR Ext. Byte	Select an alternate BLSR byte. Choices are Z2, E2, or F1.
Line Threshold 15 Minutes/1 Day	
Port Number	The optical port number.
ES-L	Errored seconds line.
SES-L	Severely errored seconds line.
CV-L	Coding violations line.
Path Threshold 15 Minutes/1 Day	
Port Number	The optical port number.
ES-P	Errored seconds path.
SES-P	Severely errored seconds path.
SAS-P	Severely errored frame/alarm indication signal path.
AIS-P	Alarm indication signal path.
UAS-P	Unavailable seconds path.

STS

The STS Properties pane allows you to view and update DS-1N Synchronous Transport Signal (STS) information.

Table C-885 Field Descriptions for the STS Properties Pane

Field	Description
STS Threshold 15 Minutes/1 Day	
STS Number	The synchronous transport signal number.
CV-P	Coding violations path.
ES-P	Errored seconds path.
SES-P	Severely errored seconds path.
UAS-P	Unavailable seconds path.
FC-P	Failure count path.
Customer Info	
VC Number	The VC number.
Customer ID	The user-defined customer ID number.

Table C-885 *Field Descriptions for the STS Properties Pane (continued)*

Field	Description
Service ID	The user-defined service ID number.
J1 Path Trace	
Port Number	Displays the port number.
VC Number	Displays the VC number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Mismatch	Indicates whether there is a mismatch in the C2 byte received.

VT

The VT Properties pane allows you to view and update DS-1N virtual tributary information.

Table C-886 *Field Descriptions for the VT*

Field	Description
VT Threshold 15 Minutes/1 Day	
VT Number	The VT number.
CV-V	Coding violations—VT layer.
ES-V	Errored seconds—VT layer.
SES-V	Severely errored seconds—VT layer.
UAS-V	Unavailable seconds—VT layer.

Loopback

The Loopback Properties pane allows you to view and update DS-1N loopback information.

Table C-887 *Field Descriptions for the Loopback Properties Pane*

Field	Description
Port Number	Displays the port number.
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or clear the current loopback (none).

Protection

The Protection Properties pane allows you to view and update DS-1N protection group information.

Table C-888 **Field Descriptions for the Protection Properties Pane**

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection group.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update DS-1N alarm profile information.

Table C-889 **Field Descriptions for the Alarm Behavior Properties Pane**

Field	Description
Parent Profile	Displays a global alarm profile for the card from the drop-down list.
Port Number	Displays the DS-1N port number.
Alarm Profile	Displays an alarm profile for the slot from the drop-down list.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—DS-3-12

The slot properties pane displays information about the Cisco ONS 15327 or ONS 15454 SONET slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The DS-3-12 cards (DS-3-12, DS-3N-12) provide 12 Telcordia-compliant GR-499 DS-3 ports per card. Each port operates at 44.736 Mb/s over a single 75-ohm 728A or equivalent coaxial span. The DS-3N-12 supports the same features as the DS-3-12 but can also provide 1:N protection (where N is less than or equal to 5).

For the DS-3-12 module, the slot properties pane displays the following properties: Module View, Identification, Line, STS, Loopback, Protection, and Alarm Behavior.

Module View

The Module View displays a graphic of the DS-3 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update DS-3 identification information.

Table C-890 **Field Descriptions for the Identification Properties Pane**

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update DS-3 optical line performance monitoring information.

Table C-891 **Field Descriptions for the Line Properties Pane**

Field	Description
Line Config	
Port Number	Displays the optical port number (1 to 12).
Port Name	Allows you to add a name for the optical port.
SF BER	Sets the signal failure bit error rate.
SD BER	Sets the signal deterioration bit error rate.
Line Length	Defines the distance (in feet) from backplane connection to the next termination point. 0–131 (default) 132–262
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.

Table C-891 *Field Descriptions for the Line Properties Pane (continued)*

Field	Description
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Line Threshold 15 Minutes/1 Day	
Port Number	The optical port number.
CV-L	Coding violations line.
ES-L	Errored seconds line.
SES-L	Severely errored seconds line.
LOSS-L	Loss of signal line; number of 1-second intervals containing one or more LOS defects.

STS

The STS Properties pane allows you to view and update DS-3 STS information.

Table C-892 *Field Descriptions for the STS Properties Pane*

Field	Description
STS Threshold 15 Minutes/1 Day	
STS Number	The synchronous transport signal number.
CV-P	Coding violations path.
ES-P	Errored seconds path.
SES-P	Severely errored seconds path.
UAS-P	Unavailable seconds path.
FC-P	Failure count path.
Customer Info	
STS Number	The STS number.
Customer ID	The user-defined customer ID number.
Service ID	The user-defined service ID number.

Loopback

The Loopback Properties pane allows you to view and update DS-3 loopback information.

Table C-893 *Field Descriptions for the Loopback Properties Pane*

Field	Description
Port Number	Displays the port number.
State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none).
	Note The line state must be OOS_MT before you can configure the loopback type.

Protection

The Protection Properties pane allows you to view and update DS-3 protection group information.

Table C-894 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection group.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update DS-3 alarm profile information.

Table C-895 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—DS-3E

The slot properties pane displays information about the Cisco ONS 15327 or ONS 15454 SONET slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The ONS 15454 DS-3E cards (DS-3-12E, DS-3N-12E) provide 12 Telcordia-compliant ports per card. Each port operates at 44.736 Mb/s over a single 75-ohm 728A or equivalent coaxial span. The DS-3-12E card provides enhanced performance monitoring functions. Default thresholds are based on recommendations in GR-820-CORE, Section 5.0. The DS-3N-12E card supports the same features as the DS-3-12E but can also provide 1:N protection (where N is less than or equal to 5).

For the DS-3E module, the slot properties pane displays the following properties: Module View, Identification, Line, STS, Loopback, Protection, Alarm Behavior, and J1 Path Trace.

Module View

The Module View displays a graphic of the DS-3 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update DS-3 identification information.

Table C-896 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update DS-3 optical line performance monitoring information.

Table C-897 Field Descriptions for the Line Properties Pane

Field	Description
Line Config	
Port Number	Displays the optical port number.
Port Name	Allows you to add a name for the optical port.
SF BER	Sets the signal failure bit error rate.
SD BER	Sets the signal deterioration bit error rate.

Table C-897 **Field Descriptions for the Line Properties Pane (continued)**

Field	Description
Line Length	Defines the distance (in feet) from backplane connection to the next termination point. 0–131 (default) 132–262
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Line Threshold 15 Minutes/1 Day	
Port Number	The optical port number.
CV-L	Coding violations line.
ES-L	Errored seconds line.
SES-L	Severely errored seconds line.
LOSS-L	Loss of signal line; number of 1-second intervals containing one or more LOS defects.

STS

The STS Properties pane allows you to view and update DS-3 synchronous transport signal (STS) information.

Table C-898 **Field Descriptions for the STS Properties Pane**

Field	Description
STS Threshold 15 Minutes/1 Day	
STS Number	The synchronous transport signal number.
CV-P	Coding violations path.
ES-P	Errored seconds path.
SES-P	Severely errored seconds path.
UAS-P	Unavailable seconds path.
FC-P	Failure count path.
FC-P	Failure count path.
Customer Info	
STS Number	The STS number.
Customer ID	The user-defined customer ID number.
Service ID	The user-defined service ID number.

Loopback

The Loopback Properties pane allows you to view and update DS-3 loopback information.

Table C-899 **Field Descriptions for the Loopback Properties Pane**

Field	Description
Port Number	Displays the port number.
State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.

Protection

The Protection Properties pane allows you to view and update DS-3 protection group information.

Table C-900 **Field Descriptions for the Protection Properties Pane**

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection group.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update DS-3 alarm profile information.

Table C-901 **Field Descriptions for the Alarm Behavior Properties Pane**

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and retrieve J1 path trace information.

Table C-902 *Field Descriptions for the J1 Path Trace Properties Pane*

Field	Description
Port Number	Displays the port number.
VC4 Number	Displays the VC number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Mismatch	Indicates whether there is a mismatch in the C2 byte received.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—DS-3i

The slot properties pane displays information about the Cisco ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The DS-3i-N-12 cards provide twelve DS-3 ports. Each port operates at 44.736 Mb/s. The DS-3i-N-12 uses B3ZS error monitoring and enhanced performance monitoring, including P-Bit and CP-Bit monitoring.

For the DS-3i module, the slot properties pane displays the following properties: Module View, Identification, Line, VC-3, VC-4, Loopback, Protection, Alarm Behavior, and J1 Path Trace.

Module View

The Module View displays a graphic of the DS-3i that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update DS-3i identification information.

Table C-903 *Field Descriptions for the Identification Properties Pane*

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.

Table C-903 *Field Descriptions for the Identification Properties Pane (continued)*

Field	Description
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update DS-3i line performance monitoring information.

Table C-904 *Field Descriptions for the Line Properties Pane*

Field	Description
Line Config	
Port Number	Displays the port number.
Port Name	Allows you to add a name for the port.
SD BER	Sets the signal deterioration bit error rate.
SF BER	Sets the signal failure bit error rate.
Line Type	Allows you to select the line framing type.
Detected Line Type	Displays the detected line type.
Line Length	Defines the distance (in feet) from backplane connection to the next termination point. Values are 0–225 (default) or 226–450.
Line Coding	Allows you to define the DS-3i transmission coding type.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Line Threshold 15 Minutes/1 Day	
Port Number	Displays the port number.

Table C-904 *Field Descriptions for the Line Properties Pane (continued)*

Field	Description
CV-L	Coding violations line.
ES-L	Errored seconds line.
SES-L	Severely errored seconds line.
LOSS-L	Loss of signal seconds line.
DS-3 PBit Path Threshold 15 Minutes/1 Day	
Port Number	Displays the port number.
CV-P/EB-P	Coding violations/errored blocks path.
ES-P	Errored seconds path.
SES-P	Severely errored seconds path.
UAS-P	Unavailable seconds path.
AISS-P	AIS seconds path.
SAS-P	Severely errored frame/alarm indication signal path.
DS-3 CPBit Path Threshold 15 Minutes/1 Day	
Port Number	Displays the port number.
CV-P	Coding violations path.
ES-P	Errored seconds path.
SES-P	Severely errored seconds path.
UAS-P	Unavailable seconds path.
SAS-P	Severely errored frame/alarm indication signal path (<i>far-end only</i>).

VC-3

The VC-3 Properties pane allows you to view and update DS-3i VC-3 information.

Table C-905 *Field Descriptions for the VC-3 Properties Pane*

Field	Description
Threshold 15 Minutes/1 Day	
VC Number	The VC number.
EB-LP	Errored blocks—low-order path.
BBE-LP	Background block errors—low-order path.
ES-LP	Errored seconds—low-order path.
SES-LP	Severely errored seconds—low-order path.
UAS-LP	Unavailable seconds—low-order path.
Customer Info	
VC Number	The VC number.
Customer ID	The user-defined customer ID number.
Service ID	The user-defined service ID number.

VC-4

The VC-4 Properties pane allows you to view and update DS-3i VC-4 information.

Table C-906 *Field Descriptions for the VC-4 Properties Pane*

Field	Description
Threshold 15 Minutes/1 Day	
VC Number	The VC number. Displays as VC4- <i>x</i> , where <i>x</i> equals 1, 2, 3, or 4.
EB-HP/BEC-HP	Errored block/byte errors corrected–high-order path.
BBE-HP	Background block errors–high-order path.
ES-HP	Errored seconds–high-order path.
SES-HP	Severely errored seconds–high-order path.
UAS-HP	Unavailable seconds–high-order path.

Loopback

The Loopback Properties pane allows you to view and update DS-3i loopback information.

Table C-907 *Field Descriptions for the Loopback Properties Pane*

Field	Description
Port Number	Displays the port number.
State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.
Inhibit Loopback	Allows you to prevent loopback functionality.

Protection

The Protection Properties pane allows you to view and update DS-3i protection group information.

Table C-908 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection group.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update DS-3i alarm profile information.

Table C-909 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and retrieve J1 path trace information.

Table C-910 *Field Descriptions for the J1 Path Trace Properties Pane*

Field	Description
Port Number	Displays the port number.
VC4 Number	Displays the VC number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Mismatch	Indicates whether there is a mismatch in the C2 byte received.
Vcat Member Number	Displays the virtual concatenation (VCAT) member number.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—DS-3i-N-12

The slot properties pane displays information about the Cisco ONS 15454 SONET slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The DS-3i-N-12 cards provide twelve DS-3 ports. Each port operates at 44.736 Mb/s. The DS-3i-N-12 uses B3ZS error monitoring and enhanced performance monitoring, including P-Bit and CP-Bit monitoring.

For the DS-3i module, the slot properties pane displays the following properties: Module View, Identification, Line, STS, Loopback, Protection, Alarm Behavior, and J1 Path Trace.

Module View

The Module View displays a graphic of the DS-3i that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update DS-3i identification information.

Table C-911 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update DS-3i line performance monitoring information.

Table C-912 Field Descriptions for the Line Properties Pane

Field	Description
Line Config	
Port Number	Displays the port number (1 to 12).
Port Name	Allows you to add a name for the port.

Table C-912 Field Descriptions for the Line Properties Pane (continued)

Field	Description
SD BER	Sets the signal deterioration bit error rate.
SF BER	Sets the signal failure bit error rate.
Line Type	Allows you to select the line framing type.
Detected Line Type	Displays the detected line type.
Line Length	Displays the length of the line.
Line Coding	Allows you to define the DS-3i transmission coding type.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Line Threshold 15 Minutes/1 Day	
Port Number	Displays the port number (1 to 12).
ES-L	Errored seconds line.
SES-L	Severely errored seconds line.
CV-L	Coding violations line.
LOSS-L	Loss of signal seconds line.
DS-3 PBit/CPBit Path Threshold 15 Minutes/1 Day	
Port Number	Displays the port number (1 to 12).
CV-P	Coding violations path.
ES-P	Errored seconds path.
SES-P	Severely errored seconds path.
UAS-P	Unavailable seconds path.
AISS-P	AIS seconds path.
SAS-P	Severely errored frame/alarm indication signal path.

STS

The STS Properties pane allows you to view and update DS-3 synchronous transport signal (STS) information.

Table C-913 Field Descriptions for the STS Properties Pane

Field	Description
STS Threshold 15 Minutes/1 Day	
STS Number	The synchronous transport signal number.

Table C-913 *Field Descriptions for the STS Properties Pane (continued)*

Field	Description
CV-P	Coding violations path.
ES-P	Errored seconds path.
SES-P	Severely errored seconds path.
UAS-P	Unavailable seconds path.
FC-P	Failure count path.
Customer Info	
STS Number	The STS number.
Customer ID	The user-defined customer ID number.
Service ID	The user-defined service ID number.

Loopback

The Loopback Properties pane allows you to view and update DS-3i loopback information.

Table C-914 *Field Descriptions for the Loopback Properties Pane*

Field	Description
Port Number	Displays the port number (1 to 12).
State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.
Inhibit Loopback	Allows you to prevent loopback functionality.

Protection

The Protection Properties pane allows you to view and update DS-3i protection group information.

Table C-915 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection group.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update DS-3i alarm profile information.

Table C-916 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and retrieve J1 path trace information.

Table C-917 *Field Descriptions for the J1 Path Trace Properties Pane*

Field	Description
Port Number	Displays the port number.
STS Number	Displays the STS number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Mismatch	Indicates whether there is a mismatch in the C2 byte received.
Vcat Member Number	Displays the virtual concatenation (VCAT) member number.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—DS-3XM-6

The slot properties pane displays information about the Cisco ONS 15327 or ONS 15454 SONET slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The DS-3XM-6 card provides six Telcordia-compliant GR-499-CORE M13 multiplexing functions. The DS-3XM-6 converts six framed DS-3 network connections to 28x6 or 168 VT1.5s. Unlike the DS-3-12 and DS-3N-12 cards, the DS-3XM-6 allows circuit mapping at the VT level.

For the DS-3XM-6 module, the slot properties pane displays the following properties: Module View, Identification, Line, STS, VT, DS-1, Loopback, Protection, Alarm Behavior, and J1 Path Trace.

Module View

The Module View displays a graphic of the DS-3XM-6 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update DS-3XM-6 identification information.

Table C-918 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update DS-3XM-6 optical line performance monitoring information.

Table C-919 Field Descriptions for the Line Properties Pane

Field	Description
Line Config	
Port Number	Displays the optical port number (1 to 6).

Table C-919 Field Descriptions for the Line Properties Pane (continued)

Field	Description
Port Name	Allows you to add a name for the optical port.
SD BER	Sets the signal deterioration bit error rate.
SF BER	Sets the signal failure bit error rate.
Line Type	Allows you to select the line framing type. Values are: • M13 (default) • C BIT
Line Coding	Allows you to define the DS-3XM transmission coding type.
Line Length	Defines the distance (in feet) from backplane connection to the next termination point. • 0–131 (default) • 132–262
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The amount of valid input signal in <i>hh:mm</i> , after which the port is set in service by the software. The range is from 0 to 48 hours, in 15-minute increments.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically. The range is from 0 to 48 hours, in 15-minute increments.
Line Threshold 15 Minutes/1 Day	
Port Number	Displays the optical port number (1 to 6).
CV-L	Coding violations line.
ES-L	Errored seconds line.
SES-L	Severely errored seconds line.
LOSS-L	Loss of signal seconds line.
PBit/CPBit Path Threshold 15 Minutes/1 Day	
Port Number	Displays the optical port number (1 to 6).
CV-P	Coding violations path.
ES-P	Errored seconds path.
SES-P	Severely errored seconds path.
SAS-P	Severely errored frame/alarm indication signal path.
AIS-P	Alarm indication signal path.
UAS-P	Unavailable seconds path.

STS

The STS Properties pane allows you to view and update DS-3XM-6 STS information.

Table C-920 *Field Descriptions for the STS Properties Pane*

Field	Description
STS Threshold 15 Minutes/1 Day	
STS Number	The synchronous transport signal number.
CV-P	Coding violations path.
ES-P	Errored seconds path.
SES-P	Severely errored seconds path.
UAS-P	Unavailable seconds path.
FC-P	Failure count path.
Customer Info	
STS Number	The STS number.
Customer ID	The user-defined customer ID number.
Service ID	The user-defined service ID number.

VT

The VT Properties pane allows you to view and update DS-3XM-6 virtual tributary information.

Table C-921 *Field Descriptions for the VT Properties Pane*

Field	Description
VT Threshold 15 Minutes/1 Day	
VT Number	Displays the VT number.
CV-V	Coding violations–VT path.
ES-V	Errored seconds–VT path.
SES-V	Severely errored seconds–VT path.
UAS-V	Unavailable seconds–VT path.
Customer Info	
VT Number	The VT number.
Customer ID	The user-defined customer ID number.
Service ID	The user-defined service ID number.

DS-1

The DS-1 Properties pane allows you to view and update DS-3XM-6 virtual tributary information.

Table C-922 *Field Descriptions for the DS-1 Field Properties Pane*

Field	Description
Path Threshold 15 Minutes/1 Day	
Port Number	Displays the optical port number (1 to 6).
ES-P	Errored seconds path.

Table C-922 *Field Descriptions for the DS-1 Field Properties Pane (continued)*

Field	Description
SES-P	Severely errored seconds path.
SAS-P	Severely errored frame/alarm indication signal path.
AISS-P	Alarm indication signal seconds path.
UAS-P	Unavailable seconds path.
Customer Info	
VT Number	The VT number.
Customer ID	The user-defined customer ID number.
Service ID	The user-defined service ID number.

Loopback

The Loopback Properties pane allows you to view and update DS-3XM-6 loopback information.

Table C-923 *Field Descriptions for the Loopback Properties Pane*

Subfield	Description
DS-1	
Port Number	Displays the optical port number (1 to 6).
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or clear the current loopback (none).
Send Code	Allows you to select No Code (default) or Line Loop Code. Selecting Line Loop Code inserts a line loop activate Far End Action Code (FEAC) in the CBIT overhead transmitting to the connected facility. This code initiates a loopback from the facility to the ONS 15454. Selecting No Code sends a line loop deactivate FEAC code to the connected equipment, which removes the loopback. You can also insert an FEAC for the 28 individual DS-1 circuits transmuted into a DS-3 circuit.
Derived State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT). Note The Derived State field is available only for release 3.4.
DS-3	
Port Number	Displays the port number.
State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT). Note The State field is available only for release 3.4.
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or clear the current loopback (none).
Send Code	Allows you to select No Code (default) or Line Loop Code. Selecting Line Loop Code inserts a line loop activate Far End Action Code (FEAC) in the CBIT overhead transmitting to the connected facility. This code initiates a loopback from the facility to the ONS 15454. Selecting No Code sends a line loop deactivate FEAC code to the connected equipment, which removes the loopback. You can also insert an FEAC for the 28 individual DS-1 circuits transmuted into a DS-3 circuit.
Inhibit FE Loopback	If the Inhibit FE Loopback check box is checked for a DS-3 port, that port will ignore any FEAC line loop codes and will not loop back. The port can still be put into loopback manually using the Loopback Type column even if the Inhibit FE Loopback check box is selected. Only DS-3 ports can be configured to inhibit responding to FEAC loopback commands.

Protection

The Protection Properties pane allows you to view and update DS-3XM-6 protection group information.

Table C-924 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection group.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update DS-3XM-6 alarm profile information.

Table C-925 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and retrieve J1 path trace information.

Table C-926 *Field Descriptions for the J1 Path Trace Properties Pane*

Field	Description
Port Number	Displays the port number.
STS Number	Displays the STS number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Mismatch	Indicates whether there is a mismatch in the C2 byte received.
Vcat Member Number	Displays the virtual concatenation (VCAT) member number.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—DS-N

The slot properties pane displays information about the Cisco ONS 15327 or ONS 15454 SONET slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

For the DS-N module, the slot properties pane displays the following properties: Module View, Identification, and Protection.

Module View

The Module View displays a graphic of the DS-N that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to add, delete, change, or reset the module.

Identification

The Identification Properties pane allows you to view and update DS-N identification information.

Table C-927 **Field Descriptions for the Identification Properties Pane**

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the card revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the hardware revision number of the software used by the ASIC chip installed on the card.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Protection

The Protection Properties pane allows you to view and update protection group information.

Table C-928 Field Descriptions for the Protection Properties Pane

Field	Description
State of Slot <i>x</i>	Displays the state of the selected slot and of the companion DS-N slot.
Switch	Click to switch the selected slot from its current state to the other states.
Lock	Click to lock the selected slot into its current state.
Unlock	Click to unlock the current slot from its current state.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—DS1_E1_56

The slot properties pane displays information about the ONS 15454 SONET slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The DS1_E1_56 card provides 56 Telcordia-compliant, GR-499 DS-1 ports per card, or 56 E1 ports per card. Each port operates at 1.544 Mb/s (DS-1) or 2.048 Mb/s (E1). The DS1_E1_56 card operates as a working or protect card in 1:N protection schemes, where $N \leq 2$. The DS1_E1_56 card can be used with the XCVT, XC10G, or XC-VXC-10G cross-connect cards.



Caution

When a protection switch moves traffic from the DS1_E1_56 working/active card to the DS1_E1_56 protect/standby card, ports on the now active/standby card cannot be taken out of service. Lost traffic can result if you take a port out of service, even if the DS1_E1_56 standby card no longer carries traffic.



Note

This module works only in a high-density ONS chassis backplane.

For the DS1_E1_56 module, the slot properties pane displays the following properties: Module View, Identification, Card, Line, STS, VT, Loopback, Protection, Alarm Behavior, J1 Path Trace, and Info.

Module View

The Module View displays a graphic of the DS1_E1_56 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update DS1_E1_56 line card identification information.

Table C-929 *Field Descriptions for the Identification Properties Pane*

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Card

The Card Properties pane allows you to provision the encapsulation, port usage and retiming, and VT mapping for the DS1_E1_56 card.

Table C-930 Field Descriptions for the Card Properties Pane

Field	Description
Transport Mode	Sets encapsulation to SONET mode or AU4 mode. SONET mode transports DS-1s in VT1.5s; AU4 mode transports DS-1s and E1s in a structured VC4 payload (STS-3c). The transport mode changes depending on the operating mode. Note Switching from one transport mode to another is not allowed if any circuit exists on any port or if any port is in service.
Operating Mode	Sets the port usage: - All DS-1—All 56 ports are to be used as DS-1 ports. Ports 1 to 28 have retiming capability. In this mode, the Retiming Enabled value is always enabled. - All E1—All 56 ports are to be used as E1 ports. Ports 1 to 21 have retiming capability. In this mode, the Retiming Enabled value can be enabled or disabled. The restrictions on switching between these restrictions are based on existing circuits, ports being in service, and port usage as an NE reference source.
Retiming Enabled	When checked, sets the retime transmission of data out to the plesiochronous digital hierarchy (PDH) line.
Port to VT Mapping	Selects the ordering in which DS-1 ports are mapped into the VT1.5s within an STS-1. This setting applies to a group of DS-1 ports associated with the same STS-1. - GR-253 interleaves the DS-1 ports into the DS-1-14-compatible VT1.5. In this mapping, sequential DS-1 port numbers are mapped to interleave the 7 VT groups of VT1.5s. Interleaving by VT group essentially means that the DS-1 ports follow the order of transmission of the VT1.5s, as indicated in GR-253. - INDUSTRY maps sequential DS-1 port numbers to fill each VT group in order. The operating mode All E1 always corresponds to INDUSTRY. Note The Port to VT Mapping field is editable only when the operating mode is set to All DS-1.

Line

The Line Properties pane allows you to view and update DS1_E1_56 line performance monitoring information.

Table C-931 Field Descriptions for the Line Properties Pane

Field	Description
Line Config	
Port Number	Displays the port number (1 to 56).
Port Name	Allows you to add a name for the port.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
SF BER	Sets the signal failure bit error rate.
SD BER	Sets the signal deterioration bit error rate.

Table C-931 **Field Descriptions for the Line Properties Pane (continued)**

Field	Description
Line Type	Allows you to select the line framing type: ESF, D4, UNFRAMED, AUTO_PROVISION_FMT, or J_ESF.
Line Coding	Defines the transmission coding type: B8ZS or AMI.
AINS Soak	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS_NR state.
Provides Sync	When checked, the port is provisioned as an NE timing reference.
Enable Sync Message	Enables synchronization status messages (S1 byte), which allow the node to choose the best timing source.
Send DoNotUse	When checked, sends a do not use (DUS) message on the S1 byte.
Enable Retiming	When checked, retimes the transmit clock to the clock reference of the NE, removing the asynchronous relationship between electrical line and SONET transport time domains for the electrical path. When unchecked, leaves the port as <i>through-timed</i>, which means that the transmit clock is extracted from the DS-1/E1 data in the SONET payload coming from the backplane.
Admin SSM	Overrides the synchronization status message (SSM) synchronization traceability unknown (STU) value. If the node does not receive an SSM signal, it defaults to STU. Admin SSM allows you to override the STU value with one of the following: • PRS—Primary Reference Source (Stratum 1) • ST2—Stratum 2 • TNC—Transit node clock • ST3E—Stratum 3E • ST3—Stratum 3 • SMC—SONET minimum clock • ST4—Stratum 4 • DUS—Do not use for timing synchronization • RES—Reserved; quality level set by user
Line Length	Defines the distance (in feet) from the backplane connection to the next termination point.
FDL Mode	Sets the mode for far-end loopbacks and far-end performance monitoring.
DS-1 Mapping	Sets the mapping mode: • Asynchronous—DS-1 transport over SONET uses asynchronous mapping into VT1.5 (within a VT-structured STS-1 synchronous payload envelope [SPE]). • Byte Synchronous—DS-1 transport over SONET uses byte-synchronous mapping into VT1.5 (within a VT-structured STS-1 SPE). • Japan Byte Synchronous—E1 transport over SONET uses asynchronous mapping into VT2 (within a VT-structured STS-1 SPE).
Send AIS-V for DS-1 AIS	When checked, sends an Alarm Indication Signal VT (AIS-V) instead of a DS-1 AIS (from the line side toward the backplane/system side) when a line-side trigger occurs.
Raise AIS for LOF	Sends an AIS when a loss of frame (LOF) occurs.

Table C-931 *Field Descriptions for the Line Properties Pane (continued)*

Field	Description
Line Threshold 15 Minutes/1 Day	
Near End	
Port Number	The optical port number.
CV-L	Coding violations line.
ES-L	Errored seconds line.
SES-L	Severely errored seconds line.
LOSS-L	Loss of signal line; number of 1-second intervals containing one or more LOS defects.
Far End	
Port Number	The optical port number.
ES-L	Errored seconds line.
Path Thresh 15 Min/1 Day	
Near End	
Port No.	Displays the port number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
SAS-P	Displays the severely errored frame/alarm indication signal path information.
AISS-P	Displays the alarm indication signal seconds path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.
Far End	
Port No.	Displays the port number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
CSS-P	Displays the controlled slip seconds path information.
ESA-P	Displays the errored seconds type A path information.
ESB-P	Displays the errored seconds type B path information.
SEFS-P	Displays the severely errored framing seconds path information.
FC-P	Displays the failure count path information.
ESNE	Displays the network performance errored seconds (near end) during a fixed measurement interval.
ESFE	Displays the network performance errored seconds (far end) during a fixed measurement interval.
SESNE	Displays the network performance severely errored seconds (near end) during a fixed measurement interval.
SESFE	Displays the network performance severely errored seconds (far end) during a fixed measurement interval.

Table C-931 *Field Descriptions for the Line Properties Pane (continued)*

Field	Description
UASNE	Displays the network performance unavailable seconds (near end) during a fixed measurement interval.
UASFE	Displays the network performance unavailable seconds (far end) during a fixed measurement interval.

STS

The STS Properties pane allows you to view and update DS1_E1_56 STS information.

Table C-932 *Field Descriptions for the STS Properties Pane*

Field	Description
STS Threshold 15 Minutes/1 Day	
Near End, Far End	
STS Number	The synchronous transport signal number.
CV-P	Coding violations path.
ES-P	Errored seconds path.
FC-P	Failure count path.
SES-P	Severely errored seconds path.
UAS-P	Unavailable seconds path.
Customer Info	
STS Number	The STS number.
Customer ID	The user-defined customer ID number.
Service ID	The user-defined service ID number.

VT

The VT Properties pane allows you to view and update DS1_E1_56 virtual tributary information.

Table C-933 *Field Descriptions for the VT Properties Pane*

Field	Description
VT Thresh 15 Min/1 Day - Near End, Far End	
VT No.	Displays VT number information.
ES-V	Displays the errored seconds–VT path information.
SES-V	Displays the severely errored seconds–VT path information.
CV-V	Displays the coding violations–VT path information.
UAS-V	Displays the unavailable seconds–VT path information.
Customer Info	
VT No.	The VT number.

Table C-933 Field Descriptions for the VT Properties Pane (continued)

Field	Description
Customer ID	The user-defined customer ID number.
Service ID	The user-defined service ID number.

Loopback

The Loopback Properties pane allows you to view and update DS1_E1_56 loopback information.

Table C-934 Field Descriptions for the Loopback Properties Pane

Field	Description
Port Number	Displays the port number.
Administration State	Displays the administration state. The state can either be Unlocked or Locked, Maintenance.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.
Send Code	Allows you to select No Code (default) or Line Loop Code. Selecting Line Loop Code inserts a line loop activate Far End Action Code (FEAC) in the CBIT overhead transmitting to the connected facility. This code initiates a loopback from the facility to the ONS 15454. Selecting No Code sends a line loop deactivate FEAC code to the connected equipment, which removes the loopback. You can also insert an FEAC for the 28 individual DS-1 circuits transmuted into a DS-3 circuit.
Send AIS on Facility Loopback	When selected, sends AIS on the facility loopback.
Send AIS on Terminal Loopback	When selected, sends AIS on the terminal loopback.
Inhibit FE Loopback	If the Inhibit FE Loopback check box is checked for a DS-3 port, that port will ignore any FEAC line loop codes and will not loop back. The port can still be put into loopback manually using the Loopback Type column even if the Inhibit FE Loopback check box is selected. Only DS-3 ports can be configured to inhibit responding to FEAC loopback commands.

Protection

The Protection Properties pane allows you to view and update DS1_E1_56 protection group information.

Table C-935 Field Descriptions for the Protection Properties Pane

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection group.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update DS1_E1_56 alarm profile information.

Table C-936 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and retrieve J1 path trace information.

Table C-937 *Field Descriptions for the J1 Path Trace Properties Pane*

Field	Description
Port Number	Displays the port number.
STS Number	Displays the STS number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the DS1_E1_56 card.

Table C-938 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—DS3_EC1_48

The slot properties pane displays information about the Cisco ONS 15454 SONET slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The DS3_EC1_48 card is a high-density I/O card with 48 ports that may function as a DS-3 or EC1 interface. This allows users to provision the card at port level instead of card level. Each of the DS-3 interfaces operates at 44.736 Mb/s over a single 75-ohm coaxial span. Each of the EC1 interfaces operates at 51.840 Mb/s over a single 75-ohm coaxial span.

**Note**

This module works only in a high-density backplane.

For the DS3_EC1_48 module, the slot properties pane displays the following properties: Module View, Identification, Broadband Ports, DS-3, EC1, Protection, and Info.

Module View

The Module View displays a graphic of the DS3_EC1_48 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update DS3_EC1_48 identification information.

Table C-939 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.

Table C-939 *Field Descriptions for the Identification Properties Pane (continued)*

Field	Description
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Broadband Ports

The Broadband Ports Properties pane allows you to view the DS-3 or EC1 port information.

Table C-940 *Field Descriptions for the Broadband Ports*

Field	Description
DS-3	
Port Number	Displays the DS-3 port number.
Rate	Displays the rate that the port is provisioned for.
EC1	
Port Number	Displays the EC1 port number.
Rate	Displays the rate that the port is provisioned for.

Provision Pluggable Dialog Box

In the Broadband Ports Properties pane, click the **Create** button to launch the Provision Pluggable dialog box. This dialog box allows you to create DS-3 or EC1 ports inside the DS3_EC1_48 card.

Table C-941 *Field Descriptions for the Provision Pluggable Dialog Box—PPM*

Field	Description
Port Number	Select a port number (1 to 48) from the pull-down menu.
Port Rate	Select a port. You can choose either DS-3 or EC1 from the pull-down menu.

You can also delete a DS-3 or EC1 port listed under the Broadband Ports Properties pane. Select a DS-3 port listed in the DS-3 area or an EC1 port listed in the EC1 area; then click the **Delete** button.

DS-3

The DS-3 Properties pane allows you to view and update DS-3 information for the DS3_EC1_48 card. The DS-3 Properties pane contains the following tabs:

- [Line Config Tab, page C-686](#)

- [Line Thresh 15 Min/1 Day Tabs](#), page C-686
- [PBit Path Thresh 15 Min/1 Day Tabs](#), page C-687
- [CPBit Path Thresh 15 Min/1 Day Tabs](#), page C-687
- [STS Thresh 15 Min/1 Day Tabs](#), page C-687
- [Alarm Behavior Tab](#), page C-688
- [Loopback Tab](#), page C-688
- [J1 Path Trace Tab](#), page C-689
- [Customer Info Tab](#), page C-689

Line Config Tab

The Line Config tab allows you to view and change the line settings of the DS-3 port.

Table C-942 Field Descriptions for the Line Config Tab

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to add a name for the optical port.
SF BER	Sets the signal fail bit error rate.
SD BER	Sets the signal degrade bit error rate.
Line Length	Defines the distance (in feet) from backplane connection to the next termination point. Values are: • 0–225 • 226–450
Line Type	Allows you to select the line framing type.
Detected Line Type	Displays the detected line type.
Line Coding	Allows you to define the transmission coding type.
Administration State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day threshold settings of the DS-3 port.

Table C-943 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	Displays the optical port number.
CV-L	Displays the coding violations line (near-end only).
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line (near-end only).
LOSS-L	Displays the loss of signal seconds line (near-end only).

PBit Path Thresh 15 Min/1 Day Tabs

The PBit Path Thresh 15 Min/1 Day tabs allow you to view and change near-end 15-minute/1-day PBit path threshold settings of the DS-3 port.

Table C-944 *Field Descriptions for the PBit Path Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
Port Number	Displays the optical port number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
SAS-P	Displays the severely errored frame/alarm indication signal path information.
AISS-P	Displays the alarm indication signal seconds path information.
UAS-P	Displays the unavailable seconds path information.

CPBit Path Thresh 15 Min/1 Day Tabs

The CBit Path Thresh 15 Min/1 Day tabs allow you to view and change near- and far-end 15-minute/1-day CBit path threshold settings of the DS-3 port.

Table C-945 *Field Descriptions for the CPBit Path Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
Port Number	Displays the optical port number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.

STS Thresh 15 Min/1 Day Tabs

The STS Thresh 15 Min/1 Day tabs allow you to view and change near- and far-end 15-minute/1-day synchronous transport signal (STS) information for the DS-3 port.

Table C-946 *Field Descriptions for the STS Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
STS Number	Displays the synchronous transport signal number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.

Alarm Behavior Tab

The Alarm Behavior tab allows you to view and update DS-3 port alarm profile information.

Table C-947 *Field Descriptions for the Alarm Behavior Tab*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Loopback Tab

The Loopback tab allows you to view and update DS-3 port loopback information.

Table C-948 *Field Descriptions for the Loopback Tab*

Field	Description
Port Number	Displays the port number.
Administration State	Displays the administration state. The state can either be Unlocked or Locked, Maintenance.
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.
Inhibit FE Loopback	If the Inhibit FE Loopback check box is checked for a DS-3 port, that port will ignore any FEAC line loop codes and will not loop back. The port can still be put into loopback manually using the Loopback Type column even if the Inhibit FE Loopback check box is selected. Only DS-3 ports can be configured to inhibit responding to FEAC loopback commands.

Table C-948 Field Descriptions for the Loopback Tab (continued)

Field	Description
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Send AIS on Facility Loopback	When selected, sends AIS on the facility loopback.
Send AIS on Terminal Loopback	When selected, sends AIS on the terminal loopback.

J1 Path Trace Tab

The J1 Path Trace tab allows you to view and retrieve J1 path trace information on the DS-3 port.

Table C-949 Field Descriptions for the J1 Path Trace Tab

Field	Description
Port Number	Displays the port number.
STS Number	Displays the synchronous transport signal number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

Customer Info Tab

The Customer Info tab displays the DS-3 port customer information.

Table C-950 Field Descriptions for the Customer Info Tab

Field	Description
STS Number	Displays the synchronous transport signal number.
Customer ID	The customer ID.
Service ID	The service ID.

EC1

The EC1 Properties pane allows you to view node near-end and far-end performance on an EC1 card to detect possible performance problems. The EC1 Properties pane contains the following tabs:

- [Line Config Tab, page C-690](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-690](#)
- [Section Thresh 15 Min/1 Day Tabs, page C-691](#)

- [Path Thresh 15 Min/1 Day Tabs](#), page C-691
- [Alarm Behavior Tab](#), page C-692
- [STS Config Tab](#), page C-692
- [Loopback Tab](#), page C-692
- [J1 Path Trace Tab](#), page C-693
- [Customer Info Tab](#), page C-693
- [Section Trace Tab](#), page C-694

Line Config Tab

The Line Config tab allows you to view and change the line settings of the EC1 port.

Table C-951 **Field Descriptions for the Line Config Tab**

Field	Description
Port Number	Displays the port number for the optical port.
Port Name	Allows you to add a name for the optical port.
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
PJSTSMon#	Sets the EC-1 port that will be used for pointer justification. Values are Off or 1.
Line Length (feet)	Defines the distance (in feet) from backplane connection to the next termination point. Values are 0 through 225 (default) or 226 through 450.
Rx Equalization	For early EC1 card versions, equalization can be turned off if the line length is short or the environment is extremely cold; Rx Equalization should normally be set to On (checked, default).
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the near- and far-end 15-minute/1-day threshold settings of the EC1 port.

Table C-952 **Field Descriptions for the Line Thresh 15 Min/1 Day Tabs**

Field	Description
Near End, Far End	
Port Number	Displays the optical port number.
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.

Table C-952 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
CV-L	Displays the coding violations line.
UAS-L	Displays the unavailable seconds line.
FC-L	Displays the failure count line.

Section Thresh 15 Min/1 Day Tabs

The Section Thresh 15 Min/1 Day tabs allow you to view and change the near-end 15-minute/1-day section threshold information on the EC1 port.

Table C-953 *Field Descriptions for the Section Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
Port Number	Displays the port number.
CV-S	Displays the coding violations section.
ES-S	Displays the errored seconds section.
SES-S	Displays the severely errored seconds section.
SEFS-S	Displays the severely errored framing seconds section.

Path Thresh 15 Min/1 Day Tabs

The Path Thresh 15 Min/1 Day tabs allow you to view and change near- and far-end 15-minute/1-day path threshold information on the EC1 port.

Table C-954 *Field Descriptions for the Path Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
STS Number	Displays the synchronous transport signal number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.
PPJC-Pdet	Positive pointer justification count-VC4 path detected.
NPJC-Pdet	Negative pointer justification count-VC4 path detected.
PPJC-Pgen	Positive pointer justification count-VC4 path generated.
NPJC-Pgen	Negative pointer justification count-VC4 path generated.
PJCS-Pdet	Indicates the number of pointer justification count seconds (PJCS) detected on a particular path.
PJCS-Pgen	Indicates the number of pointer justification count seconds generated for a particular path.

Table C-954 *Field Descriptions for the Path Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
PJC-Diff	Displays the sum of the absolute values of differences between positive transmitted and received, and negative transmitted and received. The important metric on pointer justification is not the exact counts, but how many were absorbed.
Far End	
STS Number	Displays the synchronous transport signal number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.

Alarm Behavior Tab

The Alarm Behavior tab allows you to view and change EC1 port alarm profile information.

Table C-955 *Field Descriptions for the Alarm Behavior Tab*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

STS Config Tab

The STS Config tab allows you to view and change the STS settings of the EC1 port.

Table C-956 *Field Descriptions for the STS Config Tab*

Field	Description
STS Number	Displays the synchronous transport signal number information.
IPPM Enabled	Check to enable intermediate path performance monitoring (IPPM) and uncheck to disable IPPM.

Loopback Tab

The Loopback tab allows you to view and change EC1 port loopback information.

Table C-957 **Field Descriptions for the Loopback Tab**

Field	Description
Port Number	Displays the port number.
Administration State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Send AIS on Facility Loopback	When selected, sends AIS on the facility loopback.
Send AIS on Terminal Loopback	When selected, sends AIS on the terminal loopback.

J1 Path Trace Tab

The J1 Path Trace tab allows you to view and retrieve J1 path trace information on the EC1 port.

Table C-958 **Field Descriptions for the J1 Path Trace Tab**

Field	Description
Port Number	Displays the port number.
STS Number	Displays the synchronous transport signal number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

Customer Info Tab

The Customer Info tab displays EC1 port customer information.

Table C-959 **Field Descriptions for the Customer Info Tab**

Field	Description
STS Number	Displays the STS number.
Customer ID	The customer ID.
Service ID	The service ID.

Section Trace Tab

The Section Trace tab allows you to change the EC1 port section trace settings.

Table C-960 Field Descriptions for the Section Trace Tab

Field	Description
Port Number	Displays the port number.
Trace Mode	The trace mode (Off/None or Manual).
Disable AIS/RDI on TIM-S	Allows you to disable the Alarm Indication Signal (AIS) and the Remote Defect Indication (RDI) when the path Trace Identifier Mismatch Section (TIM-S) alarm is detected.
Transmit Length	Select a transmit length for the trace.
Current Transmit String	Displays the current transmit string. The trail trace identifier is 64 bytes in length.
Current Expected String	Displays the current expected string; sets a new expected string.
Current Received String	Displays the current received string.

Protection

The Protection Properties pane allows you to view and update protection group information.

Table C-961 Field Descriptions for the Protection Properties Pane

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection group.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the DS3_EC1_48 card.

Table C-962 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—DS3XM-12

The slot properties pane displays information about the Cisco ONS 15454 SONET slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The DS3XM-12 card provides 12 Telcordia-compliant GR-499-CORE M13 multiplexing functions. The DS3XM-12 converts twelve framed DS-3 network connections to 28x12 or 336 VT1.5s.

For the DS3XM-12 module, the slot properties pane displays the following properties: Module View, Identification, Line, STS, VT, DS-1, Loopback, Protection, Alarm Behavior, J1 Path Trace, and Info.

Module View

The Module View displays a graphic of the DS3XM-12 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update identification information.

Table C-963 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Backplane Rate	Allows you to select STS12, STS48, STS96, or STS192 as the backplane rate.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update optical line performance monitoring information. The Line Properties pane contains the following tabs:

- [Line Config Tab, page C-696](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-696](#)
- [PBit Path Thresh 15 Min/1 Day Tabs, page C-697](#)
- [CPBit Path Thresh 15 Min/1 Day Tabs, page C-697](#)
- [STS, page C-697](#)

Line Config Tab

The Line Config tab allows you to view and change the line settings of the DS3XM-12 card.

Table C-964 **Field Descriptions for the Line Config Tab**

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to add a name for the optical port.
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Line Type	Allows you to select the line framing type.
Line Coding	Allows you to define the transmission coding type.
Line Length	Defines the distance (in feet) from backplane connection to the next termination point. • 0–131 (default) • 132–262
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day threshold settings of the DS3XM-12 card.

Table C-965 **Field Descriptions for the Line Thresh 15 Min/1 Day Tabs**

Field	Description
Port Number	Displays the optical port number.
CV-L	Displays the coding violations line (near-end only).

Table C-965 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line (near-end only).
LOSS-L	Displays the loss of signal seconds line (near-end only).

PBit Path Thresh 15 Min/1 Day Tabs

The PBit Thresh 15 Min/1 Day tabs allow you to view and change the near-end 15-minute/1-day PBit path threshold information on the card.

Table C-966 *Field Descriptions for the PBit Path Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
Port Number	Displays the optical port number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
SAS-P	Displays the severely errored frame/alarm indication signal path information.
AISS-P	Displays the alarm indication signal seconds path information.
UAS-P	Displays the unavailable seconds path information.

CPBit Path Thresh 15 Min/1 Day Tabs

The CBit Thresh 15 Min/1 Day tabs allow you to view and change the near- and far-end 15-minute/1-day CBit path threshold information on the DS3XM-12 card.

Table C-967 *Field Descriptions for the CPBit Path Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
Port Number	Displays the optical port number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
SAS-P	Displays the severely errored frame/alarm indication signal path information.
UAS-P	Displays the unavailable seconds path information.

STS

The STS Properties pane allows you to view and update DS3XM-12 Synchronous Transport Signal (STS) information. The STS Properties pane contains the following tabs:

- [STS Thresh 15 Min/1 Day Tabs, page C-698](#)

- [Customer Info Tab, page C-698](#)

STS Thresh 15 Min/1 Day Tabs

The STS Thresh 15 Min/1 Day tabs allow you to view and change near- and far-end 15-minute/1-day STS information for the DS3XM-12 card.

Table C-968 **Field Descriptions for the STS Thresh 15 Min/1 Day Tabs**

Field	Description
Near End, Far End	
STS Number	Displays the synchronous transport signal number.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.

Customer Info Tab

The Customer Info tab displays the customer information.

Table C-969 **Field Descriptions for the Customer Info Tab**

Field	Description
STS Number	Displays the synchronous transport signal number.
Customer ID	Displays the customer ID.
Service ID	Displays the service ID.

VT

The VT Properties pane allows you to view and update DS3XM-12 virtual tributary information. The VT Properties pane contains the following tabs:

- [VT Thresh 15 Min/1 Day Tabs, page C-698](#)
- [Customer Info Tab, page C-699](#)

VT Thresh 15 Min/1 Day Tabs

The VT Thresh 15 Min/1 Day tabs display near- and far-end 15-minute/1-day VT threshold information.

Table C-970 **Field Descriptions for the VT Thresh 15 Min/1 Day Tabs**

Field	Description
Near End, Far End	
VT Number	Displays VT number information.
CV-V	Displays the coding violations–VT path information.

Table C-970 *Field Descriptions for the VT Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
ES-V	Displays the errored seconds–VT path information.
SES-V	Displays the severely errored seconds–VT path information.
UAS-V	Displays the unavailable seconds–VT path information.

Customer Info Tab

The Customer Info tab displays the customer information.

Table C-971 *Field Descriptions for the Customer Info Tab*

Field	Description
VT Number	Displays VT number information.
Customer ID	The customer ID.
Service ID	The service ID.

DS-1

The DS-1 Properties pane allows you to view and update DS3XM-12 DS-1 information. The DS-1 Properties pane contains the following tabs:

- [DS-1 Config Tab, page C-699](#)
- [Path Thresh 15 Min/1 Day Tabs, page C-699](#)
- [Loopback, page C-700](#)

DS-1 Config Tab

The DS-1 Config tab allows you to view and change the DS-1 configuration settings for the DS3XM-12 card.

Table C-972 *Field Descriptions for the DS-1 Config Tab*

Field	Description
Port Number	Displays the port number information.
Port Name	Allows you to add a name for the optical port. The name can contain up to 32 alphanumeric or special characters. By default, the port name is blank.
Line Type	Allows you to select the line framing type.
FDL Mode	Allows you to select the facility data link mode.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Path Thresh 15 Min/1 Day Tabs

The Path Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day path threshold information for the DS3XM-12 card.

Table C-973 **Field Descriptions for the Path Thresh 15 Min/1 Day Tabs**

Field	Description
Near End	
Port No.	Displays the port number information.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
SAS-P	Displays the severely errored frame/alarm indication signal path information.
AISS-P	Displays the alarm indication signal seconds path information.
UAS-P	Displays the unavailable seconds path information.
FC-P	Displays the failure count path information.
Far End	
Port No.	Displays the port number information.
CV-P	Displays the coding violations path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
AISS-P	Displays the alarm indication signal seconds path information.
UAS-P	Displays the unavailable seconds path information.
CSS-P	Displays the controlled slip seconds path information.
ESA-P	Displays the errored seconds type A path information.
ESB-P	Displays the errored seconds type B path information.
SEFS-P	Displays the severely errored framing seconds path information.
ESNE	Displays the network performance errored seconds (near end) during a fixed measurement interval.
SESNE	Displays the network performance severely errored seconds (near end) during a fixed measurement interval.
UASNE	Displays the network performance unavailable seconds (near end) during a fixed measurement interval.
ESFE	Displays the network performance errored seconds (far end) during a fixed measurement interval.
SESFE	Displays the network performance severely errored seconds (far end) during a fixed measurement interval.
UASFE	Displays the network performance unavailable seconds (far end) during a fixed measurement interval.

Loopback

The Loopback Properties pane allows you to view and update DS3XM-12 loopback information. The Properties pane contains the following tabs:

- [DS-3 Tab, page C-700](#)
- [DS-1 Tab, page C-701](#)

DS-3 Tab

The DS-3 tab allows you to view and change the DS-3 loopback information of the DS3XM-12 card.

Table C-974 **Field Descriptions for the DS-3 Tab**

Subfield	Description
Port Number	Displays the optical port number.
Administration State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or clear the current loopback (none).
Send Code	Allows you to select No Code (default) or Line Loop Code. Selecting Line Loop Code inserts a line loop activate Far End Action Code (FEAC) in the CBIT overhead transmitting to the connected facility. This code initiates a loopback from the facility to the ONS 15454. Selecting No Code sends a line loop deactivate FEAC code to the connected equipment, which removes the loopback. You can also insert an FEAC for the 28 individual DS-1 circuits transmuted into a DS-3 circuit.
Send AIS on Facility Loopback	When selected, sends AIS on the facility loopback.
Send AIS on Terminal Loopback	When selected, sends AIS on the terminal loopback.
Inhibit FE Loopback	If the Inhibit FE Loopback check box is checked for a DS-3 port, that port will ignore any FEAC line loop codes and will not loop back. The port can still be put into loopback manually using the Loopback Type column even if the Inhibit FE Loopback check box is selected. Only DS-3 ports can be configured to inhibit responding to FEAC loopback commands.

DS-1 Tab

The DS-1 tab allows you to view and change the DS-1 loopback information of the DS3XM-12 card.

Table C-975 **Field Descriptions for the DS-1 Tab**

Subfield	Description
Port Number	Displays the optical port number.
Derived State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT). Note The Derived State field is available only for release 3.4.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or clear the current loopback (none).
Send Code	Allows you to select No Code (default) or Line Loop Code. Selecting Line Loop Code inserts a line loop activate Far End Action Code (FEAC) in the CBIT overhead transmitting to the connected facility. This code initiates a loopback from the facility to the ONS 15454. Selecting No Code sends a line loop deactivate FEAC code to the connected equipment, which removes the loopback. You can also insert an FEAC for the 28 individual DS-1 circuits transmuted into a DS-3 circuit.
Send AIS on Facility Loopback	When selected, sends AIS on the facility loopback.
Send AIS on Terminal Loopback	When selected, sends AIS on the terminal loopback.

Protection

The Protection Properties pane allows you to view and update DS3XM-12 protection group information.

Table C-976 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection group.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update DS3XM-12 alarm profile information.

Table C-977 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and retrieve J1 path trace information.

Table C-978 *Field Descriptions for the J1 Path Trace Properties Pane*

Field	Description
Port Number	Displays the port number.
STS Number	Displays the STS number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the DS3XM-12 card.

Table C-979 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—E-1

The slot properties pane displays information about the Cisco ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The ONS 15454 SDH E-1 cards (E-1-N-14) provide 14 E-1 ports. Each port operates at 2.048 Mb/s.

For the E-1 card, the slot properties pane displays the following properties: Module View, Identification, Line, VC-12, Loopback, Protection, and Alarm Behavior.

Module View

The Module View displays a graphic of the E-1 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update E-1 identification information.

Table C-980 *Field Descriptions for the Identification Properties Pane*

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.

Table C-980 Field Descriptions for the Identification Properties Pane (continued)

Field	Description
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update E-1 line performance monitoring information.

Table C-981 Field Descriptions for the Line Properties Pane

Field	Description
Line Config	
Port Number	Displays the port number.
Port Name	Allows you to add a name for the port.
SD BER	Sets the signal deterioration bit error rate.
SF BER	Sets the signal failure bit error rate.
Line Type	Allows you to select the line framing type.
Line Coding	Allows you to define the E1 transmission coding type.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Threshold 15 Minutes/1 Day	
Port Number	Displays the port number
CV-L	Coding violations - line
ES-L	Errored seconds - line
SES-L	Severely errored seconds - line
Path Threshold 15 Minutes/1 Day - Near End, Far End	
Port Number	Displays the port number
CV-P/EB-P	Coding violations/errored bits - path

Table C-981 *Field Descriptions for the Line Properties Pane (continued)*

Field	Description
BBE-P	Background block errors - path
ES-P	Errored seconds - path
SES-P	Severely errored seconds - path
UAS-P	Unavailable seconds - path
AISS-P	Alarm indication signal seconds - path

VC-12

The VC-12 Properties pane allows you to view and update E-1 VC-12 information.

Table C-982 *Field Descriptions for the VC-12 Properties Pane*

Field	Description
Threshold 15 Minutes/1 Day - Near End, Far End	
VC Number	The VC number
EB	Errored bits
BBE	Background block errors
ES	Errored seconds
SES	Severely errored seconds
UAS	Unavailable seconds
Customer Info	
VC Number	The VC number
Customer ID	The user-defined customer ID number
Service ID	The user-defined service ID number

Loopback

The Loopback Properties pane allows you to view and update E-1 loopback information.

Table C-983 *Field Descriptions for the Loopback Properties Pane*

Field	Description
Port Number	Displays the port number.
State	Displays the current loopback state.
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (None).
	Note The line state must be OOS_MT before you can configure the loopback type.

Protection

The Protection Properties pane allows you to view and update E-1 protection group information.

Table C-984 Field descriptions for the Protection Properties Pane

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection group.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update E-1 alarm profile information.

Table C-985 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—E1_21_E3_DS3_3 and E1_63_E3_DS3_3

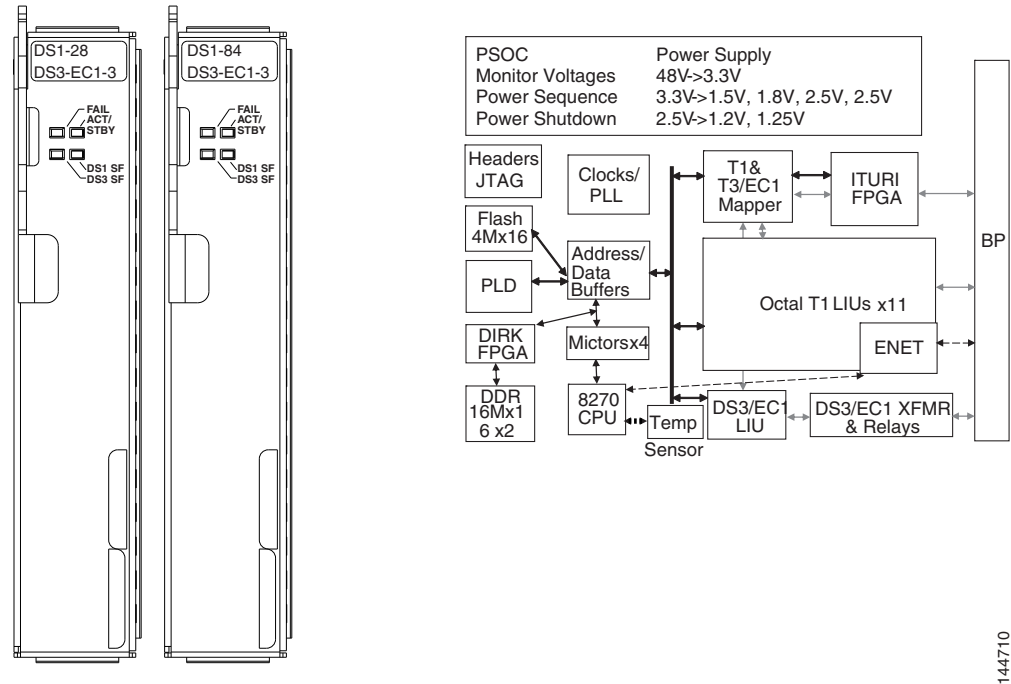
The ONS 15310 MA SDH E1_21_E3_DS3_3 and E1_63_E3_DS3_3 cards provide 21 and 63 Telcordia-compliant E1 ports, and three E3/DS-3 ports. Each E1 port operates at 2.048 Mb/s. Each E3/DS-3 port operates at 34.368 Mb/s/44.736 Mb/s over a single 75-ohm, 728-A or equivalent coaxial span. These cards can operate as working or protect cards in 1:1 protection schemes.

In addition, the E1_21_E3_DS3_3 card provides retiming, so that any outgoing E1 signal can be retimed to eliminate accumulated jitter and wander at the point of egress from a synchronous network. Any incoming E1 signal from the transport element can also be used as a timing source.

The E1_21_E3_DS3_3 and E1_63_E3_DS3_3 cards can be installed in slots 1, 2, 5, and 6. Cards installed in slots 1 and 2 correspond with the electrical interface assembly (EIA) installed on side A at the rear of the shelf assembly, and cards in slots 5 and 6 correspond with the EIA installed on side B.

The following figure shows the E1_21_E3_DS3_3 and E1_63_E3_DS3_3 card faceplates and block diagram.

Figure C-72 E1_21_E3_DS3_3 and E1_63_E3_DS3_3 Card Faceplates and Block Diagram



For the E1_21_E3_DS3_3 and E1_63_E3_DS3_3 cards, the slot properties pane displays the following properties: Module View, Identification, Broadband Ports, E1, DS3, E3, Protection, and Info.

Module View

The Module View displays a graphic of the E1_21_E3_DS3_3 or E1_63_E3_DS3_3 card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphics.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its ports. Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the module.

Identification

The Identification Properties pane allows you to view and update E1_21_E3_DS3_3 or E1_63_E3_DS3_3 card identification information.

Table C-986 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.

Table C-986 Field Descriptions for the Identification Properties Pane (continued)

Field	Description
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Displays the administration state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Broadband Ports

The Broadband Ports Properties pane allows you to view, create, and delete DS-3 and E3 broadband ports.

Table C-987 Field Descriptions for the Broadband Ports

Field	Description
Create	Click the Create button to launch the Create Port dialog box and create a new broadband port. Use the Port Number drop-down list to choose an available port. Use the Port Rate drop-down list to specify the port rate (DS-3 or E3). After making your selections, click OK .
Delete	Click the Delete button to delete an existing DS-3 or E3 broadband port.
E3/DS3	
Port Number	Displays the DS-3 or E3 port number.
Rate	Displays the rate that the slot is provisioned for.

E1

The E1 Properties pane allows you to view and update E1 information for the card. The E1 Properties pane contains the following tabs:

- [Line Config Tab, page C-709](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-710](#)
- [Electric Path Thresh 15 Min/1 Day Tabs, page C-710](#)
- [VC LO Thresh 15 Min/1 Day Tabs, page C-711](#)
- [Alarm Behavior Tab, page C-711](#)
- [Loopback Tab, page C-712](#)

- [J1 Path Trace Tab, page C-712](#)
- [Customer Info Tab, page C-712](#)

Line Config Tab

The Line Config tab allows you to view and change the line settings of the port.

Table C-988 **Field Descriptions for the Line Config Tab**

Field	Description
Port No.	Displays the port number.
Port Name	Displays the name of the port.
Line Type	Allows you to select the line framing type.
Line Coding	Allows you to define the transmission coding type.
Admin State	The port administration state. It can be: • Unlocked • Locked, disabled • Locked, maintenance • Unlocked, automatic in service
AINS Soak (H:M)	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
SF BER	Sets the signal fail bit error rate.
SD BER	Sets the signal degrade bit error rate.
Send DoNot Use	When checked, sends a do not use (DUS) message on the S1 byte.
Provides Sync	When checked, the card is provisioned as an NE timing reference.
Enable Sync Message	When checked, enables synchronization status messages, which allow the node to choose the best timing source.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Send AIS-V for DS1-AIS/Defects	When checked, sends an AIS-V instead of a DS-1 AIS (from the line side toward the backplane/system side) when a line-side trigger occurs.
Raise AIS for LOF	Sends an AIS when a loss of frame (LOF) occurs.

Table C-988 *Field Descriptions for the Line Config Tab (continued)*

Field	Description
Admin SSM	If the node does not receive an SSM signal, it defaults to STU. Admin SSM allows you to override the STU value with one of the following: • PRS—Primary reference source (Stratum 1) • STS2—Stratum 2 • TNC—Transit node clock • STS3E—Stratum 3E • STS3—Stratum 3 • SMC—SONET minimum clock • ST4—Stratum 4
SA Bit	Transmits the SSM message.

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day line threshold settings of the port.

Table C-989 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs*

Field	Description
Port No.	Port number.
EB-L	Errored blocks line.
ES-L	Errored seconds line.
SES-L	Severely errored seconds line.
LOSS-L	Loss of signal line.
Reset To Defaults	Resets the value of the parameters to the default value.

Electric Path Thresh 15 Min/1 Day Tabs

The Electric Path Thresh 15 Min/1 Day tabs allow you to view and change the near- and far-end 15-minute/1-day electric path threshold settings of the port.

Table C-990 *Field Descriptions for the Electric Path Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
Port No.	Port number.
BBE	Background block errors.
ES-P	Errored seconds path.
SES-P	Severely errored seconds path.
UAS-P	Unavailable seconds path.
AISS-P	Alarm indication signal seconds path.

Table C-990 *Field Descriptions for the Electric Path Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
Far End	
Port No.	Port number.
BBE	Background block errors.
ES-P	Errored seconds path.
SES-P	Severely errored seconds path.
UAS-P	Unavailable seconds path.
Reset To Defaults	Resets the value of the parameters to the default value.

VC LO Thresh 15 Min/1 Day Tabs

The VC LO Thresh 15 Min/1 Day tabs allow you to view and change the near- and far-end 15-minute/1-day VC low order threshold settings of the port.

Table C-991 *Field Descriptions for the VC LO Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
VT No.	VT number.
EB	Errored blocks.
ES	Errored seconds.
SES	Severely errored seconds.
UAS	Unavailable seconds.
FC	Failure count.
Reset To Defaults	Resets the value of the parameters to the default value.

Alarm Behavior Tab

The Alarm Behavior tab allows you to view and update port alarm profile information.

Table C-992 *Field Descriptions for the Alarm Behavior Tab*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Loopback Tab

The Loopback tab allows you to view and update port loopback information.

Table C-993 Field Descriptions for the Loopback Tab

Field	Description
Port Number	Displays the port number.
Administration State	Displays the administration state. The state can either be Unlocked or Locked, Maintenance.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be locked, Maintenance before you can configure the loopback type.
Send AIS on Facility Loopback	When selected, sends AIS on the facility loopback.
Send AIS on Terminal Loopback	When selected, sends AIS on the terminal loopback.

J1 Path Trace Tab

The J1 Path Trace tab allows you to view and retrieve J1 path trace information.

Table C-994 Field Descriptions for the J1 Path Trace Tab

Field	Description
Port Number	Displays the port number.
VC4 No.	Displays the VC4 number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

Customer Info Tab

The Customer Info tab displays the port customer information.

Table C-995 Field Descriptions for the Customer Info Tab

Field	Description
STS	
STS Number	Displays the synchronous transport signal number.
Customer ID	The customer ID.

Table C-995 *Field Descriptions for the Customer Info Tab (continued)*

Field	Description
Service ID	The service ID.
VT	
STS Number	Displays the synchronous transport signal number.
Customer ID	The customer ID.
Service ID	The service ID.

DS3

The DS3 Properties pane allows you to view and update DS-3 information for the card. The DS3 Properties pane contains the following tabs:

- [Line Config Tab, page C-713](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-714](#)
- [PBit Thresh 15 Min/ 1 Day Tabs, page C-714](#)
- [CPBit Thresh 15 Min/1 Day Tabs, page C-714](#)
- [VC4 Thresh 15 Min/1 Day Tabs, page C-715](#)
- [VC LO Thresh 15 Min/1 Day Tabs, page C-715](#)
- [Alarm Behavior Tab, page C-716](#)
- [Loopback Tab, page C-716](#)
- [J1 Path Trace Tab, page C-717](#)
- [Customer Info Tab, page C-717](#)

Line Config Tab

The Line Config tab allows you to view and change the line settings of the port.

Table C-996 *Field Descriptions for the Line Config Tab*

Field	Description
Port Number	Displays the port number for the port.
Port Name	Allows you to add a name for the port.
SF BER	Sets the signal fail bit error rate.
SD BER	Sets the signal degrade bit error rate.
Line Length	Defines the distance (in feet) from backplane connection to the next termination point. Values are 0 through 225 (default) or 226 through 450.
Line Type	Allows you to select the line framing type.
Line Coding	Allows you to define the transmission coding type.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.

Table C-996 *Field Descriptions for the Line Config Tab (continued)*

Field	Description
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day line threshold settings of the port.

Table C-997 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	Displays the port number.
EB-L	Displays the errored blocks line information.
ES-L	Displays the errored seconds line information.
SES-L	Displays the severely errored seconds line information.
LOSS-L	Displays the loss of signal line information.
Reset To Defaults	Resets the value of the parameters to the default value.

PBit Thresh 15 Min/1 Day Tabs

The PBit Thresh 15 Min/1 Day tabs display 15-minute/1-day PBit path threshold information of the port.

Table C-998 *Field Descriptions for the PBit Thresh 15 Min/1 Day Tabs*

Field	Description
Port No.	Displays the port number.
EB-P	Displays the errored blocks path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
SAS-P	Displays the severely errored frame/alarm indication signal path information.
AISS-P	Displays the alarm indication signal seconds path information.
UAS-P	Displays the unavailable seconds path information.
Reset To Defaults	Resets the value of the parameters to the default value.

CPBit Thresh 15 Min/1 Day Tabs

The CPBit Thresh 15 Min/1 Day tabs display near- and far-end 15-minute/1-day CPBit path threshold information of the port.

Table C-999 *Field Descriptions for the CPBit Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
Port No.	Displays the port number.
EB-P	Displays the errored blocks path information.
ES-P	Displays the errored seconds path information.
SES-P	Displays the severely errored seconds path information.
UAS-P	Displays the unavailable seconds path information.
SAS-P (For Near End only)	Displays the severely errored frame/alarm indication signal–path information.
Reset To Defaults	Resets the value of the parameters to the default value.

VC4 Thresh 15 Min/1 Day Tabs

The VC4 Thresh 15 Min/1 Day tabs allow you to view and change the near- and far-end 15-minute/1-day VC4 threshold settings of the port.

Table C-1000 *Field Descriptions for the VC4 Thresh 15 Min/1 Day Tabs*

Field	Description
Near End	
VC-4 Number	VC-4 number.
EB-HP	Errored blocks–higher-order path.
ES-HP	Errored seconds–higher-order path.
SES-HP	Severely errored seconds–higher-order path.
UAS-HP	Unavailable seconds–higher-order path.
FC-HP	Failure count–higher-order path.
Reset To Defaults	Resets the value of the parameters to the default value.

VC LO Thresh 15 Min/1 Day Tabs

The VC LO Thresh 15 Min/1 Day tabs allow you to view and change the near- and far-end 15-minute/1-day VC low order threshold settings of the port.

Table C-1001 *Field Descriptions for the VC LO Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
VT No.	VT number.
EB	Errored blocks.
ES	Errored seconds.
SES	Severely errored seconds.
UAS	Unavailable seconds.

Table C-1001 *Field Descriptions for the VC LO Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
FC	Failure count.
Reset To Defaults	Resets the value of the parameters to the default value.

Alarm Behavior Tab

The Alarm Behavior tab allows you to view and update port alarm profile information.

Table C-1002 *Field Descriptions for the Alarm Behavior Tab*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Loopback Tab

The Loopback tab allows you to view and update port loopback information.

Table C-1003 *Field Descriptions for the Loopback Tab*

Field	Description
Port Number	Displays the port number.
Administration State	Displays the administration state. The state can either be Unlocked or Locked, Maintenance.
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Send AIS on Facility Loopback	When selected, sends AIS on the facility loopback.
Send AIS on Terminal Loopback	When selected, sends AIS on the terminal loopback.
Inhibit FE Loopback	If the Inhibit FE Loopback check box is checked for a port, that port will ignore any FEAC line loop codes and will not loop back. The port can still be put into loopback manually using the Loopback Type column even if the Inhibit FE Loopback check box is selected. Only DS-3 ports can be configured to inhibit responding to FEAC loopback commands.

J1 Path Trace Tab

The J1 Path Trace tab allows you to view and retrieve J1 path trace information.

Table C-1004 *Field Descriptions for the J1 Path Trace Tab*

Field	Description
Port Number	Displays the port number.
VC4 Number	Displays the VC4 number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

Customer Info Tab

The Customer Info tab displays the port customer information.

Table C-1005 *Field Descriptions for the Customer Info Tab*

Field	Description
STS Number	Displays the synchronous transport signal number.
Customer ID	The customer ID.
Service ID	The service ID.

E3

The E3 Properties pane allows you to view and update E3 information for the card. The E3 Properties pane contains the following tabs:

- [Line Config Tab, page C-717](#)
- [Line Thresh 15 Min/1 Day Tabs, page C-718](#)
- [Electric Path Thresh 15 Min/1 Day Tabs, page C-718](#)
- [VC4 Thresh 15 Min/1 Day Tabs, page C-719](#)
- [VC LO Thresh 15 Min/1 Day Tabs, page C-719](#)
- [Alarm Behavior Tab, page C-719](#)
- [Loopback Tab, page C-720](#)
- [J1 Path Trace Tab, page C-720](#)
- [Customer Info Tab, page C-721](#)

Line Config Tab

The Line Config tab allows you to view and change the line settings of the port.

Table C-1006 *Field Descriptions for the Line Config Tab*

Field	Description
Port No.	Displays the port number.
Port Name	Displays the name of the port.
Admin State	The port administration state. It can be: • Unlocked • Locked, disabled • Locked, maintenance • Unlocked, automatic in service
SF BER	Sets the signal fail bit error rate.
SD BER	Sets the signal degrade bit error rate.
AINS Soak (H:M)	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Line Thresh 15 Min/1 Day Tabs

The Line Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day line threshold settings of the port.

Table C-1007 *Field Descriptions for the Line Thresh 15 Min/1 Day Tabs*

Field	Description
Port No.	Displays the port number.
EB-L	Displays the errored blocks line.
ES-L	Displays the errored seconds line.
SES-L	Displays the severely errored seconds line.
LOSS-L	Displays the loss of signal line.
Reset To Defaults	Resets the value of the parameters to the default value.

Electric Path Thresh 15 Min/1 Day Tabs

The Electric Path Thresh 15 Min/1 Day tabs allow you to view and change the 15-minute/1-day electrical path threshold settings of the port.

Table C-1008 *Field Descriptions for the Electric Path Thresh 15 Min/1 Day Tabs*

Field	Description
Port No.	Port number.
ES-P	Errored seconds path.
SES-P	Severely errored seconds path.

Table C-1008 *Field Descriptions for the Electric Path Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
UAS-P	Unavailable seconds path.
Reset To Defaults	Resets the value of the parameters to the default value.

VC4 Thresh 15 Min/1 Day Tabs

The VC4 Thresh 15 Min/1 Day tabs allow you to view and change the near- and far-end 15-minute/1-day VC4 threshold settings of the port.

Table C-1009 *Field Descriptions for the VC4 Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
VC-4 Number	VC-4 number.
EB-HP	Errored blocks—higher-order path.
ES-HP	Errored seconds—higher-order path.
SES-HP	Severely errored seconds—higher-order path.
UAS-HP	Unavailable seconds—higher-order path.
FC-HP	Failure count—higher-order path.
Reset To Defaults	Resets the value of the parameters to the default value.

VC LO Thresh 15 Min/1 Day Tabs

The VC LO Thresh 15 Min/1 Day tabs allow you to view and change the near- and far-end 15-minute/1-day VC low order threshold settings of the port.

Table C-1010 *Field Descriptions for the VC LO Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
VT No.	VT number.
EB	Errored blocks.
ES	Errored seconds.
SES	Severely errored seconds.
UAS	Unavailable seconds.
FC	Failure count.
Reset To Defaults	Resets the value of the parameters to the default value.

Alarm Behavior Tab

The Alarm Behavior tab allows you to view and update port alarm profile information.

Table C-1011 Field Descriptions for the Alarm Behavior Tab

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Loopback Tab

The Loopback tab allows you to view and update port loopback information.

Table C-1012 Field Descriptions for the Loopback Tab

Field	Description
Port Number	Displays the port number.
Administration State	Displays the administration state. The state can either be Unlocked or Locked, Maintenance.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.
Send Code	Allows you to send loopback commands to the far end.
Send AIS on Facility Loopback	When selected, sends AIS on the facility loopback.
Send AIS on Terminal Loopback	When selected, sends AIS on the terminal loopback.
Inhibit FE Loopback	If the Inhibit FE Loopback check box is checked for a port, that port will ignore any FEAC line loop codes and will not loop back. The port can still be put into loopback manually using the Loopback Type column even if the Inhibit FE Loopback check box is selected. Only DS-3 ports can be configured to inhibit responding to FEAC loopback commands.

J1 Path Trace Tab

The J1 Path Trace tab allows you to view and retrieve J1 path trace information.

Table C-1013 Field Descriptions for the J1 Path Trace Tab

Field	Description
Port Number	Displays the port number.
VC4 Number	Displays the synchronous transport signal number.

Table C-1013 Field Descriptions for the J1 Path Trace Tab (continued)

Field	Description
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

Customer Info Tab

The Customer Info tab displays the port customer information.

Table C-1014 Field Descriptions for the Customer Info Tab

Field	Description
STS Number	Displays the synchronous transport signal number.
Customer ID	The customer ID.
Service ID	The service ID.

Protection

The Protection Properties pane allows you to view and update E1_21_E3_DS3_3 or E1_63_E3_DS3_3 protection group information.

Table C-1015 Field Descriptions for the Protection Properties Pane

Field	Description
Protection Groups	Displays the list of available protection groups.
Protection Group Details	Displays details about the selected protection group.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the E1_21_E3_DS3_3 or E1_63_E3_DS3_3 card.

Table C-1016 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—E1-42

The slot properties pane displays information about the Cisco ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The 42-port ONS 15454 SDH E1-42 card provides 42 ITU-compliant, G.703 E-1 ports. Each port of the E1-42 card operates at 2.048 Mb/s over a 120-ohm, twisted-pair copper cable. Front mount electrical connection is done using the FMEC E1-120 NP card for unprotected operation, the FMEC E1-120PROA for 1:3 protection in the left side of the shelf, or the FMEC E1-120PROB for 1:3 protection on the right side of the shelf.

For the E1-42 module, the slot properties pane displays the following properties: Module View, Identification, Line, VC-12, VC-4, Loopback, Protection, Alarm Behavior, J1 Path Trace, and Info.

Module View

The Module View displays a graphic of the E1-42 card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphics.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its ports. Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the module.

Identification

The Identification Properties pane allows you to view and update E1-42 card identification information.

Table C-1017 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Displays the administration state. The state can either be Unlocked or Locked, Maintenance.

Table C-1017 Field Descriptions for the Identification Properties Pane (continued)

Field	Description
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update E1-42 optical line performance monitoring information. The Line Properties pane contains the following tabs:

- [Line Config Tab, page C-723](#)
- [MS Thresh 15 Min/1 Day Tabs, page C-723](#)
- [Elect Path Thresh 15 Min/1 Day Tabs, page C-724](#)
- [VC-12, page C-724](#)

Line Config Tab

The Line Config tab allows you to view and change the line settings of the E1-42 card.

Table C-1018 Field Descriptions for the Line Config Tab

Field	Description
Port Number	Displays the port number.
Port Name	Allows you to add a name for the optical port.
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Line Type	Sets the line framing type.
Line Coding	Allows you to define the transmission coding type.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Administration State	Displays the administration state. The state can either be Unlocked or Locked, Maintenance.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

MS Thresh 15 Min/1 Day Tabs

The MS Thresh 15 Min/1 Day tabs allow you to view the 15-minute/1-day multiplexer section threshold of the E1-42 card.

Table C-1019 *Field Descriptions for the MS Thresh 15 Min/1 Day Tabs*

Field	Description
Port Number	Displays the port number
EB-L	Errored blocks line
ES-L	Errored seconds line
SES-L	Severely errored seconds line
LOSS-L	Loss of signal line

Elect Path Thresh 15 Min/1 Day Tabs

The Elect Path Thresh 15 Min/1 Day tabs allow you to view the near- and far-end 15-minute/1-day electrical path threshold settings of the E1-42 card.

Table C-1020 *Field Descriptions for the Elect Path Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
Port Number	Displays the port number
EB-P	Errored blocks path
BBE-P	Background block errors path
ES-P	Errored seconds path
SES-P	Severely errored seconds path
UAS-P	Unavailable seconds path
AISS-P	Alarm indication signal seconds - path

VC-12

The VC-12 Properties pane allows you to view and update E1-42 VC-12 information. The Properties pane contains the following tabs:

- [Thresh 15 Min/1 Day Tabs, page C-724](#)
- [Customer Info Tab, page C-725](#)

Thresh 15 Min/1 Day Tabs

The Thresh 15 Min/1 Day tabs allow you to view the near- and far-end 15-minute/1-day path threshold settings of the E1-42 card.

Table C-1021 *Field Descriptions for the Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
VC Number	Displays the VC number.
EB-LP	Errored blocks—low-order path.

Table C-1021 *Field Descriptions for the Thresh 15 Min/1 Day Tabs (continued)*

Field	Description
BBE-LP	Background block errors—low-order path.
ES-LP	Errored seconds—low-order path.
SES-LP	Severely errored seconds—low-order path.
UAS-LP	Unavailable seconds—low-order path.

Customer Info Tab

The Customer Info tab allows you to view customer information.

Table C-1022 *Field Descriptions for the Customer Info Tab*

Field	Description
VC Number	Displays the VC number.
Customer ID	The user-defined customer ID number.
Service ID	The user-defined service ID number.

VC-4

The VC-4 Properties pane allows you to view and update E1-42 VC-4 information. The Properties pane contains the Customer Info tab.

Customer Info Tab

The Customer Info tab allows you to view customer information.

Table C-1023 *Field Descriptions for the Customer Info Tab*

Field	Description
VC Number	Displays the VC number.
Customer ID	The user-defined customer ID number.
Service ID	The user-defined service ID number.

Loopback

The Loopback Properties pane allows you to view and update E1-42 loopback information.

Table C-1024 *Field Descriptions for the Loopback Properties Pane*

Field	Description
Port Number	Displays the port number.
Administration State	Displays the administration state. The state can either be Unlocked or Locked, Maintenance.

Table C-1024 *Field Descriptions for the Loopback Properties Pane (continued)*

Field	Description
Loopback Type	Allows you to configure a port for terminal loopback (Inward) or Facility (Line), or clear the current loopback (None).
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Protection

The Protection Properties pane allows you to view and update E1-42 protection group information.

Table C-1025 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays the list of available protection groups.
Protection Group Details	Displays details about the selected protection group.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update E1-42 alarm profile information.

Table C-1026 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to all ports	When clicked, forces all the ports to the selected alarm profile.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and update J1 path trace information.

Table C-1027 *Field Descriptions for the J1 Path Trace Properties Pane*

Field	Description
Port Number	Displays the port number.
VC4 Number	Displays the VC number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.

Table C-1027 Field Descriptions for the J1 Path Trace Properties Pane (continued)

Field	Description
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents the machine-generated J1/J2 payload label byte.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the E1-42 card.

Table C-1028 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.

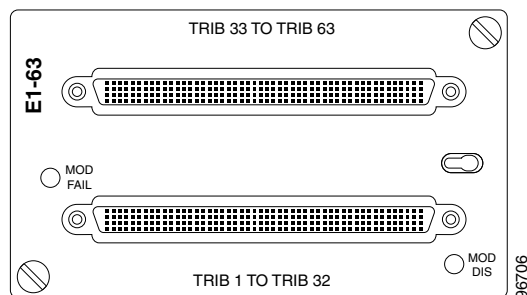


Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—E1-63 (ONS 15305 CTC)

The Cisco ONS 15305 CTC E1-63 module contains 63 E1 interfaces. The E1 traffic is mapped into VC-12 containers and multiplexed together. Two high-density, LFH-type connectors are used to interface the 63 E1s: 32 interfaces in the bottom connector, and 31 interfaces in the top connector (one pair remains unconnected). The module supports transparent data (G.703) and ISDN PRA. The following figure shows the module diagram.

Figure C-73 High-Density 63xE1 Module, E1-63

For the E1-63 module, the slot properties pane displays the following properties: Module View, Identification, Line, and Loopback.

Module View

The Module View displays a graphic of the E1-63 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to add, delete, change, or reset the module.

Identification

The Identification Properties pane allows you to view and update E1-63 identification information.

Table C-1029 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the hardware revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Displays the alarm profile for the port.

Line

The Line Properties pane allows you to view and update line card information.

Table C-1030 Field Descriptions for the Line Properties Pane

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Line Type	Allows you to select the line framing type: pra, tra, or pra-fixed.
Line Coding	Allows you to define the transmission coding type.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Loopback

The Loopback Properties pane allows you to view and update loopback information.

Table C-1031 Field Descriptions for the Loopback Properties Pane

Field	Description
Port Number	Displays the port number.
Administration State	Allows you to select the administration state of the port: In Service (IS) or Out of Service (OOS).
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (None). Note The line state must be OOS_MT before you can configure the loopback type.



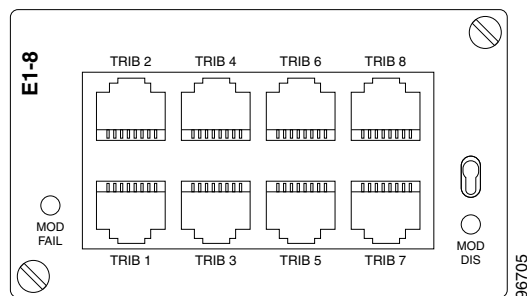
Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—E1-8 (ONS 15305 CTC)

The Cisco ONS 15305 CTC E1-8 module contains eight E1 interfaces. The E1 traffic is mapped into VC-12 containers and multiplexed together. The physical interface uses an RJ-45 connector and supports only a 120-ohm differential interface. The module does not contain any IP functionality. The interface supports both transparent data (G.703) and the NT functionality of ISDN PRA according to ETSI 300 233. The following figure shows the module diagram.

Figure C-74 E1 Tributary Module, E1-8



For the E1-8 module, the slot properties pane displays the following properties: Module View, Identification, Line, and Loopback.

Module View

The Module View displays a graphic of the E1-8 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to add, delete, change, or reset the module.

Identification

The Identification Properties pane allows you to view and update E1-8 identification information.

Table C-1032 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the hardware revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Card Mode	Allows you to select a multiscard Ether Switch group, a single-card Ether Switch group, or the Port Mapped mode for E-series cards.
Alarm Profile	Displays the alarm profile for the port.

Line

The Line Properties pane allows you to view and update line card information.

Table C-1033 Field Descriptions for the Line Properties Pane

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Line Type	Allows you to select the line framing type: pra, tra, or pra-fixed.
Line Coding	Allows you to define the transmission coding type as HDB3.

Table C-1033 Field Descriptions for the Line Properties Pane (continued)

Field	Description
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Loopback

The Loopback Properties pane allows you to view and update E1-8 loopback information.

Table C-1034 Field Descriptions for the Loopback Properties Pane

Field	Description
Port Number	Displays the port number.
Administration State	Allows you to select the administration state of the port: In Service (IS) or Out of Service (OOS).
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (None). Note The line state must be OOS_MT before you can configure the loopback type.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—E1-N-14

The slot properties pane displays information about the Cisco ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The 14-port ONS 15454 SDH E1-N-14 card provides 14 ITU-compliant, G.703 E-1 ports. Each port of the card operates at 2.048 Mb/s over a 120-ohm, twisted-pair copper cable (with FMEC-E1) or over a 75-ohm unbalanced coaxial cable (with FMEC-E1).

For the E1-N-14 module, the slot properties pane displays the following properties: Module View, Identification, Line, VC-12, VC-4, Loopback, Protection, Alarm Behavior, J1 Path Trace, and Info.

Module View

The Module View displays a graphic of the E1-N-14 card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphics.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its ports. Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the module.

Identification

The Identification Properties pane allows you to view and update E1-N-14 card identification information.

Table C-1035 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Displays the administration state. The state can either be Unlocked or Locked, Maintenance.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update E1-N-14 optical line performance monitoring information. The Line Properties pane contains the following tabs:

- [Line Config Tab, page C-732](#)
- [MS Thresh 15 Min/1 Day Tabs, page C-733](#)
- [Elect Path Thresh 15 Min/1 Day Tabs, page C-733](#)
- [VC-12, page C-734](#)

Line Config Tab

The Line Config tab allows you to view and change the line settings of the E1-N-14 card.

Table C-1036 Field Descriptions for the Line Config Tab

Field	Description
Port Number	Displays the port number.
Port Name	Allows you to add a name for the optical port.

Table C-1036 Field Descriptions for the Line Config Tab (continued)

Field	Description
SD BER	Sets the signal degrade bit error rate.
SF BER	Sets the signal fail bit error rate.
Line Type	Sets the line framing type.
Line Coding	Allows you to define the transmission coding type.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Administration State	Displays the administration state. The state can either be Unlocked or Locked, Maintenance.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

MS Thresh 15 Min/1 Day Tabs

The MS Thresh 15 Min/1 Day tabs allow you to view the 15-minute/1-day multiplexer section threshold of the E1-N-14 card.

Table C-1037 Field Descriptions for the MS Thresh 15 Min/1 Day Tabs

Field	Description
Port Number	Displays the port number.
EB-L	Errored blocks line.
ES-L	Errored seconds line.
SES-L	Severely errored seconds line.
LOSS-L	Loss of signal line.

Elect Path Thresh 15 Min/1 Day Tabs

The Elect Path Thresh 15 Min/1 Day tabs allow you to view the near- and far-end 15-minute/1-day electrical path threshold settings of the E1-N-14 card.

Table C-1038 Field Descriptions for the Elect Path Thresh 15 Min/1 Day Tabs

Field	Description
Near End, Far End	
Port Number	Displays the port number.
EB-P	Errored blocks path.
BBE-P	Background block errors path.
ES-P	Errored seconds path.
SES-P	Severely errored seconds path.
UAS-P	Unavailable seconds path.
AISS-P	Alarm indication signal seconds path.

VC-12

The VC-12 Properties pane allows you to view and update E1-N-14 VC-12 information. The Properties pane contains the following tabs:

- [Thresh 15 Min/1 Day Tabs, page C-734](#)
- [Customer Info Tab, page C-734](#)

Thresh 15 Min/1 Day Tabs

The Thresh 15 Min/1 Day tabs allow you to view the near- and far-end 15-minute/1-day path threshold settings of the E1-N-14 card.

Table C-1039 *Field Descriptions for the Thresh 15 Min/1 Day Tabs*

Field	Description
Near End, Far End	
VC Number	Displays the VC number.
EB-LP	Errored blocks—low-order path.
BBE-LP	Background block errors—low-order path.
ES-LP	Errored seconds—low-order path.
SES-LP	Severely errored seconds—low-order path.
UAS-LP	Unavailable seconds—low-order path.

Customer Info Tab

The Customer Info tab allows you to view customer information.

Table C-1040 *Field Descriptions for the Customer Info Tab*

Field	Description
VC Number	Displays the VC number.
Customer ID	The user-defined customer ID number.
Service ID	The user-defined service ID number.

VC-4

The VC-4 Properties pane allows you to view and update E1-N-14 VC-4 information. The Properties pane contains the Customer Info tab.

Customer Info Tab

The Customer Info tab allows you to view customer information.

Table C-1041 *Field Descriptions for the Customer Info Tab*

Field	Description
VC Number	Displays the VC number.
Customer ID	The user-defined customer ID number.
Service ID	The user-defined service ID number.

Loopback

The Loopback Properties pane allows you to view and update E1-N-14 loopback information.

Table C-1042 *Field Descriptions for the Loopback Properties Pane*

Field	Description
Port Number	Displays the port number.
Administration State	Displays the administration state. The state can either be Unlocked or Locked, Maintenance.
Loopback Type	Allows you to configure a port for terminal loopback (Inward) or Facility (Line), or clear the current loopback (None).
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Protection

The Protection Properties pane allows you to view and update E1-N-14 protection group information.

Table C-1043 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays the list of available protection groups.
Protection Group Details	Displays details about the selected protection group.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update E1-N-14 alarm profile information.

Table C-1044 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.

Table C-1044 Field Descriptions for the Alarm Behavior Properties Pane (continued)

Field	Description
Alarm Profile	Choose an alarm profile for all ports.
Force to all ports	When clicked, forces all the ports to the selected alarm profile.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and update J1 path trace information.

Table C-1045 Field Descriptions for the J1 Path Trace Properties Pane

Field	Description
Port Number	Displays the port number.
VC4 Number	Displays the VC number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents the machine-generated J1/J2 payload label byte.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the E1-N-14 card.

Table C-1046 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—E3-12

The slot properties pane displays information about the Cisco ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The ONS 15454 SDH E3-12 cards provides twelve E3 ports. Each port operates at 34.368 Mb/s.

For the E3-12 module, the slot properties pane displays the following properties: Module View, Identification, Line, VC-3, VC-4, Loopback, Protection, Alarm Behavior, and J1 Path Trace.

Module View

The Module View displays a graphic of the E3-12 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update E3-12 identification information.

Table C-1047 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update E3-12 line performance monitoring information.

Table C-1048 Field Descriptions for the Line Properties Pane

Field	Description
Line Config	
Port Number	Displays the port number.
Port Name	Allows you to add a name for the port.
SD BER	Sets the signal deterioration bit error rate.
SF BER	Sets the signal failure bit error rate.
AINS Soak	Automatic in-service soak. The determination of duration left before the traffic/termination transitions to IS state.

Table C-1048 Field Descriptions for the Line Properties Pane (continued)

Field	Description
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Line Threshold 15 Minutes/1 Day	
Port Number	Displays the port number.
CV-L	Coding violations line.
ES-L	Errored seconds line.
SES-L	Severely errored seconds line.
LOSS-L	Loss of signal line; number of 1-second intervals containing one or more LOS defects.
Path Threshold 15 Minutes/1 Day	
Port Number	Displays the port number.
ES-P	Errored seconds path.
SES-P	Severely errored seconds path.
UAS-P	Unavailable seconds path.

VC-3

The VC-3 Properties pane allows you to view and update E3-12 VC-3 information.

Table C-1049 Field Descriptions for the VC-3 Properties Pane

Field	Description
Threshold 15 Minutes/1 Day	
VC Number	The VC number.
EB-LP	Errored blocks–low-order path.
BBE-LP	Background block errors–low-order path.
ES-LP	Errored seconds–low-order path.
SES-LP	Severely errored seconds–low-order path.
UAS-LP	Unavailable seconds–low-order path.
Customer Info	
VC Number	The VC number
Customer ID	The user-defined customer ID number.
Service ID	The user-defined service ID number.

VC-4

The VC-4 Properties pane allows you to view and update E3-12 VC-4 information.

Table C-1050 *Field Descriptions for the VC-4 Properties Pane*

Field	Description
Threshold 15 Minutes/1 Day	
VC Number	The VC number. Displays as VC4- <i>x</i> , where <i>x</i> equals 1, 2, 3, or 4.
EB-HP	Errored blocks–higher-order path.
BBE-HP	Background block errors–higher-order path.
ES-HP	Errored seconds–higher-order path.
SES-HP	Severely errored seconds–higher-order path.
UAS-HP	Unavailable seconds–higher-order path.

Loopback

The Loopback Properties pane allows you to view and update E3-12 loopback information.

Table C-1051 *Field Descriptions for the Loopback Properties Pane*

Field	Description
Port Number	Displays the port number.
State	Displays the current loopback state.
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (None). Note The line state must be OOS_MT before you can configure the loopback type.

Protection

The Protection Properties pane allows you to view and update E3-12 protection group information.

Table C-1052 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection group.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update E3-12 alarm profile information.

Table C-1053 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and retrieve E3-12 J1 path trace information.

Table C-1054 *Field Descriptions for the J1 Path Trace Properties Pane*

Field	Description
Port Number	Displays the port number.
VC Number	Displays the VC number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Mismatch	Indicates whether there is a mismatch in the C2 byte received.
Vcat Mem Num	Displays the virtual concatenation (VCAT) member number.



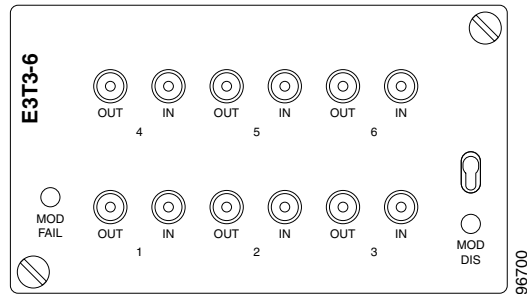
Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—E3T3_6 (ONS 15305 CTC)

The Cisco ONS 15305 CTC E3T3_6 module contains six E3 interfaces. The E3 traffic is mapped into VC-3 containers and multiplexed together. The interfaces can be configured to E3 or T3. The physical connector for the interface is the miniature 1.0/2.3 type. The module does not contain any IP functionality. The interface supports transparent data (G.703). The following figure shows the module diagram.

Figure C-75 Hex E3/T3 Tributary Module, E3T3_6



For the E3T3_6 module, the slot properties pane displays the following properties: Module View, Identification, Line, and Loopback.

Module View

The Module View displays a graphic of the E3T3_6 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to add, delete, change, or reset the module.

Identification

The Identification Properties pane allows you to view and update E3T3_6 identification information.

Table C-1055 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the hardware revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.

Table C-1055 *Field Descriptions for the Identification Properties Pane (continued)*

Field	Description
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Displays the alarm profile for the port.

Line

The Line Properties pane allows you to view and update line card information.

Table C-1056 *Field Descriptions for the Line Properties Pane*

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.
Line Type	Allows you to select the line framing type: pra, tra, or pra-fixed.
Line Coding	Allows you to define the transmission coding type.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Loopback

The Loopback Properties pane allows you to view and update loopback information.

Table C-1057 *Field Descriptions for the Loopback Properties Pane*

Field	Description
Port Number	Displays the port number.
Administration State	Allows you to select the administration state of the port: In Service (IS) or Out of Service (OOS).
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (None). Note The line state must be OOS_MT before you can configure the loopback type.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—EC1-12

The slot properties pane displays information about the Cisco ONS 15327 or ONS 15454 SONET slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties. The EC1-12 provides 12 STS-1 electrical ports. Each port operates at 51.840 Mb/s.

For the EC1_12 module, the slot properties pane displays the following properties: Module View, Identification, Line, STS, Loopback, Protection, Alarm Behavior, and J1 Path Trace.

Module View

The Module View displays a graphic of the EC1_12 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update EC1-12 identification information.

Table C-1058 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update EC1-12 optical line performance monitoring information.

Table C-1059 Field Descriptions for the Line Properties Pane

Subfield	Description
Line Config	
Port Number	Displays the EC1-12 part number (1 through 12).
Port Name	Allows you to add a name for the optical port. The name can contain up to 32 alphanumeric or special characters. By default, the port name is blank.
SF BER	Sets the signal failure bit error rate.
SD BER	Sets the signal deterioration bit error rate.
PJStsMon#	Allows you to set the STS that will be used for pointer justification. If set to zero, no STS is used.
Line Length	Defines the distance (in feet) from backplane connection to the next termination point. Values are 0 through 225 (default) or 226 through 450.
Rx Equalization	For early EC1-12 card versions, equalization can be turned off if the line length is short or the environment is extremely cold; Rx Equalization should normally be set to On (checked, default).
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The amount of valid input signal in <i>hh:mm</i> , after which the port is set in service by the software. The range is from 0 to 48 hours, in 15-minute increments.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically. The range is from 0 to 48 hours, in 15-minute increments.
Line Threshold 15 Minutes/1 Day	
Port Number	The optical port number (1 to 12).
ES-L	Errored seconds line.
SES-L	Severely errored seconds line.
CV-L	Coding violations line.
UAS-L	Unavailable seconds line.
FC-L	Failure count line.
PSC	Protection switching count (near-end only).
PSD	Protection switching duration (near-end only).
PPJC-PDET	Positive pointer justification count, STS path detected.
PPJC-PGEN	Positive pointer justification count, STS path generated.
NPJC-PDET	Negative pointer justification count, STS path detected.
NPJC-PGEN	Negative pointer justification count, STS path generated.
Section Threshold 15 Minutes/1 Day	
Port Number	Displays the optical port number (1 to 12).

Table C-1059 *Field Descriptions for the Line Properties Pane (continued)*

Subfield	Description
CV-S	Coding violations section.
ES-S	Errored seconds section.
SES-S	Severely errored seconds section.
SEFS-S	Severely errored framing seconds section.

STS

The STS Properties pane allows you to view and update EC1-12 synchronous transport signal (STS) information.

Table C-1060 *Field Descriptions for the STS Properties Pane*

Field	Description
STS Config	Displays the STS number, intermediate path protection monitoring (IPPM), and XC loopback status.
Path Threshold 15 Minutes/1 Day	
STS Number	The synchronous transport signal number.
CV-P	Coding violations path.
ES-P	Errored seconds path.
SES-P	Severely errored seconds path.
UAS-P	Unavailable seconds path.
FC-P	Failure count path.
Customer Info	
STS Number	The STS number.
Customer ID	The user-defined customer ID number.
Service ID	The user-defined service ID number.

Loopback

The Loopback Properties pane allows you to view and update EC1-12 loopback information.

Table C-1061 *Field Descriptions for the Loopback Properties Pane*

Field	Description
Port Number	Displays the port number (1 to 12).
State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none).
	Note The line state must be OOS_MT before you can configure the loopback type.

Protection

The Protection Properties pane allows you to view and update EC1-12 protection group information.

Table C-1062 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays a list of available protection groups.
Protection Group Details	Displays details about the selected protection group.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update EC1-12 alarm profile information.

Table C-1063 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and update J1 path trace information.

Table C-1064 *Field Descriptions for the J1 Path Trace Properties Pane*

Field	Description
Port Number	Displays the port number.
STS Number	Displays the STS number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Mismatch	Indicates whether there is a mismatch in the C2 byte received.
Vcat Member Number	Displays the virtual concatenation (VCAT) member number.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—FMEC-E3/DS-3

The slot properties pane displays information about the Cisco ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The ONS 15454 SDH FMEC-E3/DS-3 card provides front-mount electrical connection for 12 ITU-compliant, G.703 E-3 or DS-3 ports. With the FMEC-E3/DS-3 card, each interface of an E3-12 card operates at 34.368 Mb/s. Each interface of a DS-3i-N-12 card operates at 44.736 Mb/s over a 75-ohm unbalanced coaxial 1.0/2.3 miniature coaxial connector.

For the FMEC-E3/DS-3 module, the slot properties pane displays Module View and Identification properties.

Module View

The Module View displays a graphic of the FMEC-E3/DS-3 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s).

Identification

The Identification Properties pane allows you to view and update FMEC-E3/DS-3 identification information.

Table C-1065 *Field Descriptions for the Identification Properties Pane*

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number of the card.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Ethernet Cards

This section describes the following Ethernet cards supported within Prime Optical:

- [Slot Properties—CE-100T-8 \(ONS 15310 CL, ONS 15310 MA SONET, and ONS 15310 MA SDH\), page C-749](#)
- [Slot Properties—CE-100T-8 \(ONS 15454 SONET\), page C-754](#)
- [Slot Properties—CE-100T-8 \(ONS 15454 SDH\), page C-759](#)
- [Slot Properties—CE-1000-4 \(ONS 15454 SDH and ONS 15454 SONET\), page C-765](#)
- [Slot Properties—CE-MR-6, page C-771](#)
- [Slot Properties—CE-MR-10, page C-778](#)
- [Slot Properties—E10/100T-4, page C-786](#)
- [Slot Properties—E1000-2, page C-790](#)
- [Slot Properties—E1000-2-G, page C-793](#)
- [Slot Properties—E100T-12, page C-797](#)
- [Slot Properties—E100T-G, page C-800](#)
- [Slot Properties—E100-8 \(ONS 15305 CTC\), page C-803](#)
- [Slot Properties—E100-WAN-8 \(ONS 15305 CTC\), page C-805](#)
- [Slot Properties—ETH1000, page C-808](#)
- [Slot Properties—G1000-2, page C-810](#)
- [Slot Properties—G1000-4, page C-814](#)
- [Slot Properties—GE-2 \(ONS 15305 CTC\), page C-819](#)
- [Slot Properties—GigE-WAN-2 \(ONS 15305 CTC\), page C-821](#)
- [Slot Properties—ML-100T-8, page C-824](#)
- [Slot Properties—ML1000-2, page C-830](#)
- [Slot Properties—ML100T-12, page C-840](#)
- [Slot Properties—ML100X-8, page C-850](#)
- [Slot Properties—ML-MR-10, page C-859](#)
- [Slot Properties—MS-ISC-100T, page C-865](#)
- [Slot Properties—RAN-SVC, page C-868](#)
- [Slot Properties—PT_10GE_4, page C-872](#)
- [Slot Properties—PTSA_GE, page C-879](#)

Slot Properties—CE-100T-8 (ONS 15310 CL, ONS 15310 MA SONET, and ONS 15310 MA SDH)

The slot properties pane displays information about the Cisco ONS 15310 CL, Cisco ONS 15310 MA SONET, or Cisco ONS 15310 MA SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The CE-100T-8 card is a subset of the ML-100T-8 card and provides an L1 mapping mode of operation. The card provides G-series-like behavior, but adds low- and high-order VCAT and link capacity adjustment scheme (LCAS) features, as well as GFP. The CE-100T-8 card on the ONS 15310 CL, ONS 15310 MA SONET, and ONS 15310 MA SDH interfaces interoperate with the CE-100T-8 card on the ONS 15454 platform. The card supports concatenation functions to construct transport trails (for example, STS-3c) for carrying packet data. The card provides contiguous, low-order, and high-order virtual concatenation. The CE-100T-8 card has its own PID and CLEI, and a port count that ranges from 1 to 8.

For the CE-100T-8 module, the slot properties pane displays the following properties, some of which apply only to a specific NE type: Module View, Identification, Line, Ether Loopback, Thresholds, Alarm Behavior, J1 Path Trace, and Info.

Module View

The Module View displays a graphic of the CE-100T-8 module that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update CE-100T-8 identification information.

Table C-1066 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.

Table C-1066 Field Descriptions for the Identification Properties Pane (continued)

Field	Description
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update line performance monitoring information. The Line Properties pane contains the following tabs:

- [Ether Line Tab, page C-750](#)
- [POS Line Tab, page C-751](#)

Ether Line Tab

The Ether Line tab allows you to view and change the Ethernet line settings of the CE-100T-8 card.

Table C-1067 Field Descriptions for the Ether Line Tab

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Administration State	Shows the administration state of the port: In Service (IS), Out of Service–Disabled (OOS, DSBLD), or Out of Service–Maintenance (OOS_MT).
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS_NR state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Link State	Displays the physical port state. Values are Up, Down, or Not Present.
Expected Speed	Displays the expected speed for the Ethernet ports. Values are Auto, 10 Mb/s, and Configurable.
Operating Speed	Displays the operating speed for the Ethernet ports. Values are Auto, 10 Mb/s, and NonConfigurable.
Expected Duplex	Expected setting of the port.
Operating Duplex	Actual setting of the port. Values are Auto, Full, and Half.
Enable Flow Control	Check this check box to enable flow control for the selected port.
Flow Control	Displays the negotiated flow control mode. Values are None, Symmetrical, and Asymmetrical.
802.1Q VLAN CoS	Sets the IEEE 802.1Q standard VLAN class of service (CoS) threshold for priority queueing. Values are 0 through 7; 0 is the lowest priority and 7 is the highest priority.

Table C-1067 Field Descriptions for the Ether Line Tab (continued)

Field	Description
IP ToS	Sets the IP type of service (ToS) byte value for priority queueing. Values are 0 through 255.
Link Integrity Timer	Set the link integrity timer for the port. Enter a range from 200 to 5000 milliseconds, in increments of 100 milliseconds. Enabling link integrity ensures that links are never broken.

POS Line Tab

The POS Line tab allows you to view and change the POS line settings of the CE-100T-8 card.

Table C-1068 Field Descriptions for the POS Line Tab

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Administration State	Shows the administration state of the port: In Service (IS), Out of Service, Disabled (OOS, DSBLD), or Out of Service–Maintenance (OOS_MT).
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS_NR state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Link State	Displays the physical port state. Values are Up and Down.
Framing Type	Shows the encapsulation type. Values are: - HDLC—High-level data link control; does not support VLAN trunking. Standard on most Cisco data devices. - GFP-F—Frame-mapped generic framing procedure; a protocol data unit (PDU)-oriented adaptation mode that maps a client frame into one GFP frame. - None—No framing type.
Encap CRC	Sets the cyclic redundancy check (CRC) to verify the integrity of the transmitted data.
MTU	Maximum transmission unit. The largest acceptable packet size configured for that port. The default value is 1500.

Ether Loopback

The Loopback Properties pane allows you to view and update CE-100T-8 Ether loopback information.

Table C-1069 Field Descriptions for the Loopback Properties Pane

Field	Description
Port Number	Displays the port number.
Administration State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).

Table C-1069 Field Descriptions for the Loopback Properties Pane (continued)

Field	Description
Loopback	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Thresholds

The Thresholds Properties pane allows you to view and create thresholds. The Thresholds Properties pane contains the [POS Ports/Ether Ports Tabs, page C-752](#).

POS Ports/Ether Ports Tabs

The POS Ports tab allows you to view the thresholds for the POS and ether ports.

Table C-1070 Field Descriptions for the POS Ports/Ether Ports Tabs

Field	Description
Index Number	Displays the selected interface number.
Slot	Displays the selected card.
Port	Displays the port on the selected card.
Variable	Displays the MIB variable that is being monitored.
Alarm Type	Indicates whether the event is triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	Indicates whether the sample type is relative or absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period	Displays the sample period, in seconds.
Rising Threshold	Displays the number of occurrences for the rising threshold.
Falling Threshold	Displays the number of occurrences for the falling threshold field. In most cases, a falling threshold is set lower than the rising threshold.
Create	Click the Create button to create a threshold for the POS ports.
Delete	Select a threshold from the list displayed and click the Delete button.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information. The Alarm Behavior Properties pane contains the [POS Ports/Ether Ports Tabs, page C-752](#).

Ether Alarm Behavior/POS Alarm Behavior Tabs

The Ether Alarm Behavior tab allows you to view and update Ether and POS alarm profile information.

Table C-1071 Field Descriptions for the Ether Alarm Behavior/POS Alarm Behavior Tabs

Field	Description
Equipment State	Displays the equipment state of the card.
Alarm Profile	Select the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Port Number	Displays the port number.
Alarm Profile	Displays the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and retrieve J1 path trace information.

Table C-1072 Field Descriptions for the J1 Path Trace Properties Pane

Field	Description
Port Number	Displays the port number.
Circuit Type	Displays the circuit type.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
VCAT Mem Num	Displays the virtual concatenation (VCAT) member number.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the CE-100T-8.

Table C-1073 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—CE-100T-8 (ONS 15454 SONET)

The slot properties pane displays information about the Cisco ONS 15454 SONET module that is installed in the slot selected in the NE Explorer tree. Use this properties pane to change the card properties.

The CE-100T-8 is a Layer 1 mapper card with eight 10/100 Ethernet ports. It maps each port to a unique SONET circuit in a point-to-point configuration.

The CE-100T-8 cards allow you to provision and manage an Ethernet private line service as if it were a traditional SONET line. CE-100T-8 card applications include providing carrier-grade transparent LAN services (TLS), Ethernet private line services, and high-availability transport.

The CE-100T-8 card is a standard ONS line card and supports ITU-T G.707 and Telcordia GR-253-based standards for SONET. It offers the same carrier-class level of features and reliability as SONET optical cards or electrical line cards.

For the ONS 15454 SONET CE-100T-8 card, the slot properties pane displays the following properties: Module View, Identification, Line, Ether Loopback, Thresholds, Alarm Behavior, J1 Path Trace, and Info.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Moving the mouse pointer over the graphic also displays the alarm counts.) Right-clicking the graphic opens a shortcut menu that allows you to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update CE-100T-8 identification information.

Table C-1074 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Table C-1074 Field Descriptions for the Identification Properties Pane (continued)

Field	Description
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update performance monitoring information. The Line Properties pane contains the following tabs:

- [Ether Line Tab, page C-755](#)
- [POS Line Tab, page C-756](#)

Ether Line Tab

The Ether Line tab allows you to view and change the Ethernet line settings of the CE-100T-8 card.

Table C-1075 Field Descriptions for the Ether Line Tab

Field	Description
Port Number	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Administration State	Shows the administration state of the port: In Service (IS), Out of Service–Disabled (OOS, DSBLD), or Out of Service–Maintenance (OOS_MT).
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS_NR state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Link State	Displays the physical port state. Values are Up, Down, or Not Present.
Expected Speed	Displays the expected speed for the Ethernet ports. Values are Auto, 10 Mb/s, and Configurable.
Operating Speed	Displays the operating speed for the Ethernet ports. Values are Auto, 10 Mb/s, and NonConfigurable.
Expected Duplex	Expected setting of the port.
Operating Duplex	Actual setting of the port. Values are Auto, Full, and Half.
Enable Flow Control	Check this check box to enable flow control for the selected port.
Flow Control	Displays the negotiated flow control mode. Values are None, Symmetrical, and Asymmetrical.
802.1Q VLAN CoS	Sets the IEEE 802.1Q standard VLAN class of service (CoS) threshold for priority queueing. Values are 0 through 7; 0 is the lowest priority and 7 is the highest priority.
IP ToS	Sets the IP type of service (ToS) byte value for priority queueing. Values are 0 through 255.
Link Integrity Timer	Set the link integrity timer for the port. Enter a range from 200 to 5000 milliseconds, in increments of 100 milliseconds. Enabling link integrity ensures that links are never broken.

POS Line Tab

The POS Line tab allows you to view and change POS line settings of the CE-100T-8 card.

Table C-1076 Field Descriptions for the POS Line Tab

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Administration State	Shows the administration state of the port: In Service (IS), Out of Service–Disabled (OOS, DSBLD), or Out of Service–Maintenance (OOS_MT).
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS_NR state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Link State	Displays the physical port state. Values are Up and Down.
Framing Type	Shows the encapsulation type. Values are: - HDLC—High-level data link control; does not support VLAN trunking. Standard on most Cisco data devices. - GFP-F—Frame-mapped generic framing procedure; a protocol data unit (PDU)-oriented adaptation mode that maps a client frame into one GFP frame. - None—No framing type.
Encap CRC	Sets the cyclic redundancy check (CRC) to verify the integrity of the transmitted data.
MTU	Maximum transmission unit. The largest acceptable packet size configured for that port. The default value is 1500.

Ether Loopback

The Ether Loopback Properties pane allows you to view and update loopback information.

Table C-1077 Field Descriptions for the Ether Loopback Properties Pane

Field	Description
Port Number	Displays the port number.
Administration State	Displays the status of the line. The line can be in In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT) state.
Loopback	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Thresholds

The Thresholds Properties pane allows you to view thresholds and create new ones. The Properties pane contains the [POS Ports/Ether Ports Tabs](#), [page C-752](#).

POS Ports/Ether Ports Tabs

The POS Ports tab allows you to view the thresholds for the POS ports.

Table C-1078 Field Descriptions for the POS Ports/Ether Ports Tabs

Field	Description
Index Number	The index number.
Slot	Select a slot for the new threshold.
Port	Select a port for the selected slot. If you select All, the threshold will be created on all ports for that slot. This operation may take several minutes to complete.
Variable	The MIB variable to monitor. Supported variables are cportQosDropPkts and cportQosDropOctets in the cportQosStatsTable in CISCO-PORT-QOS-MIB.
Alarm Type	Select an alarm type for the new threshold. Indicate whether the event will be triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	The sample type (relative or absolute). Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period	Enter a sample period for the new threshold. The sample period is measured in seconds.
Rising Threshold	The number of occurrences for the rising threshold. Note For a rising type of alarm, the measured value must move from below the falling threshold to above the rising threshold. For example, if a network is running below a falling threshold of 400 collisions every 15 seconds and a problem causes 1001 collisions in 15 seconds, the excess occurrences trigger an alarm.
Falling Threshold	The number of occurrences for the falling threshold. In most cases, a falling threshold is set lower than the rising threshold. A falling threshold is the counterpart to a rising threshold. When the number of occurrences is above the rising threshold and then drops below a falling threshold, it resets the rising threshold. For example, when the network problem that caused 1001 collisions in 15 minutes subsides and creates only 799 collisions in 15 minutes, occurrences fall below a falling threshold of 800 collisions. This resets the rising threshold so that if network collisions again spike over 1000 per 15-minute period, an event again triggers when the rising threshold is crossed. An event is triggered only the first time a rising threshold is exceeded (otherwise a single network problem might cause a rising threshold to be exceeded multiple times and cause a flood of events).
Create	Click the Create button to create a threshold for the POS ports.
Delete	Select a threshold from the list displayed and click the Delete button.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information. The Alarm Behavior Properties pane contains [Ether Alarm Behavior/ POS Alarm Behavior Tabs](#), [page C-758](#).

Ether Alarm Behavior/ POS Alarm Behavior Tabs

The Ether Alarm Behavior tab allows you to view and update Ether alarm profile information.

Table C-1079 Field Descriptions for the Ether Alarm Behavior/POS Alarm Behavior Tabs

Field	Description
Equipment State	Displays the equipment state of the card.
Alarm Profile	Select the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Port Number	Displays the port number.
Alarm Profile	Displays the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and retrieve J1 path trace information.

Table C-1080 Field Descriptions for the J1 Path Trace Properties Pane

Field	Description
Port Number	Displays the port number.
Circuit Type	Displays the circuit type.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
VCAT Mem Num	Displays the virtual concatenation (VCAT) member number.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the CE-100T-8.

Table C-1081 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—CE-100T-8 (ONS 15454 SDH)

The slot properties pane displays information about the Cisco ONS 15454 SDH module that is installed in the slot selected in the NE Explorer tree. Use this properties pane to change the card properties.

The CE-100T-8 is a Layer 1 mapper card with eight 10/100 Ethernet ports. It maps each port to a unique SDH circuit in a point-to-point configuration.

The CE-100T-8 cards allow you to provision and manage an Ethernet private line service as if it were a traditional SDH line. CE-100T-8 card applications include providing carrier-grade transparent LAN services (TLS), Ethernet private line services, and high-availability transport.

The CE-100T-8 card is a standard ONS line card and supports ITU-T G.707 and Telcordia GR-253-based standards for SDH. It offers the same carrier-class level of features and reliability as SDH optical cards or electrical line cards.

For the ONS 15454 SDH CE-100T-8 card, the slot properties pane displays the following properties: Module View, Identification, Line, Ether Loopback, Thresholds, Alarm Behavior, J1 Path Trace, and Info.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Moving the mouse pointer over the graphic also displays the alarm counts.) Right-clicking the graphic opens a shortcut menu that allows you to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update CE-100T-8 identification information.

Table C-1082 *Field Descriptions for the Identification Properties Pane*

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.

Table C-1082 Field Descriptions for the Identification Properties Pane (continued)

Field	Description
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update performance monitoring information. The Line Properties pane contains the following tabs:

- [Ether Line Tab, page C-760](#)
- [POS Line Tab, page C-761](#)

Ether Line Tab

The Ether Line tab allows you to view and change the Ethernet line settings of the CE-100T-8 card.

Table C-1083 Field Descriptions for the Ether Line Tab

Field	Description
Port Number	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Administration State	The port administration state. Choosing an administration state from the drop-down list and clicking Apply changes the port's service state unless network conditions prevent the change. Administration states include: • IS—In Service. The port service state changes to IS_NR. • OOS, DSBLD—Out of Service, Disabled. The port service state changes to OOS_MA, DSBLD. • OOS, MT—Out of Service, Maintenance. The port service state changes to OOS_MA, MT. For loopbacks, the OOS, MT Administration State must be initiated. • IS, AINS—Automatic In Service. The port service state changes to OOS_AU, AINS.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS_NR state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Link State	Displays the physical port state. Values are Up, Down, or Not Present.
Expected Speed	Displays the expected speed for the Ethernet ports. Values are Auto, 10 Mb/s, and Configurable.

Table C-1083 *Field Descriptions for the Ether Line Tab (continued)*

Field	Description
Operating Speed	Displays the operating speed for the Ethernet ports. Values are Auto, 10 Mb/s, and NonConfigurable.
Expected Duplex	Expected setting of the port.
Operating Duplex	Actual setting of the port. Values are Auto, Full, and Half.
Enable Flow Control	Check this check box to enable flow control for the selected port.
Flow Control	Displays the negotiated flow control mode. Values are None, Symmetrical, and Asymmetrical.
802.1Q VLAN CoS	Sets the IEEE 802.1Q standard VLAN class of service (CoS) threshold for priority queueing. Values are 0 through 7; 0 is the lowest priority and 7 is the highest priority.
IP ToS	Sets the IP type of service (ToS) byte value for priority queueing. Values are 0 through 255.
Link Integrity Timer	Set the link integrity timer for the port. Enter a range from 200 to 5000 milliseconds, in increments of 100 milliseconds. Enabling link integrity ensures that links are never broken.

POS Line Tab

The POS Line tab allows you to view and change POS line settings of the CE-100T-8 card.

Table C-1084 *Field Descriptions for the POS Line Tab*

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Administration State	The port administration state. Choosing an administration state from the drop-down list and clicking Apply changes the port's service state unless network conditions prevent the change. Administration states include: - IS—In Service. The port service state changes to IS_NR. - OOS, DSBLD—Out of Service, Disabled. The port service state changes to OOS_MA, DSBLD. - OOS, MT—Out of Service, Maintenance. The port service state changes to OOS_MA, MT. For loopbacks, the OOS, MT Administration State must be initiated. - IS, AINS—Automatic In Service. The port service state changes to OOS_AU, AINS.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS_NR state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Link State	Displays the physical port state. Values are Up and Down.
Framing Type	Shows the encapsulation type. Values are: - HDLC—High-level data link control; does not support VLAN trunking. Standard on most Cisco data devices. - GFP-F—Frame-mapped generic framing procedure; a protocol data unit (PDU)-oriented adaptation mode that maps a client frame into one GFP frame. - None—No framing type.

Table C-1084 Field Descriptions for the POS Line Tab (continued)

Field	Description
Encap CRC	Sets the cyclic redundancy check (CRC) to verify the integrity of the transmitted data.
MTU	Maximum transmission unit. The largest acceptable packet size configured for that port. The default value is 1500.

Ether Loopback

The Ether Loopback Properties pane allows you to view and update loopback information.

Table C-1085 Field Descriptions for the Ether Loopback Properties Pane

Field	Description
Port Number	Displays the port number.
Administration State	The port administration state. Choosing an administration state from the drop-down list and clicking Apply changes the port's service state unless network conditions prevent the change. Administration states include: - IS—In Service. The port service state changes to IS_NR. - OOS, DSBLD—Out of Service, Disabled. The port service state changes to OOS_MA, DSBLD. - OOS, MT—Out of Service, Maintenance. The port service state changes to OOS_MA, MT. For loopbacks, the OOS, MT Administration State must be initiated. - IS, AINS—Automatic In Service. The port service state changes to OOS_AU, AINS.
Loopback	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Thresholds

The Thresholds Properties pane allows you to view thresholds and create new ones. The Properties pane contains the [POS Ports/Ether Ports Tab, page C-762](#).

POS Ports/Ether Ports Tab

The POS Ports tab allows you to view the RMON thresholds for the POS ports.

Table C-1086 Field Descriptions for the POS Ports Tab

Field	Description
Index Number	The index number.
Slot	Select a slot for the new threshold.
Port	Select a port for the selected slot. If you select All, the threshold will be created on all ports for that slot. This operation may take several minutes to complete.

Table C-1086 Field Descriptions for the POS Ports Tab (continued)

Field	Description
Variable	The MIB variable to monitor. Supported variables are cportQosDropPkts and cportQosDropOctets in the cportQosStatsTable in CISCO-PORT-QOS-MIB.
Alarm Type	Select an alarm type for the new threshold. Indicate whether the event will be triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	The sample type (relative or absolute). Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period	Enter a sample period for the new threshold. The sample period is measured in seconds.
Rising Threshold	The number of occurrences for the rising threshold. Note For a rising type of alarm, the measured value must move from below the falling threshold to above the rising threshold. For example, if a network is running below a falling threshold of 400 collisions every 15 seconds and a problem causes 1001 collisions in 15 seconds, the excess occurrences trigger an alarm.
Falling Threshold	The number of occurrences for the falling threshold. In most cases, a falling threshold is set lower than the rising threshold. A falling threshold is the counterpart to a rising threshold. When the number of occurrences is above the rising threshold and then drops below a falling threshold, it resets the rising threshold. For example, when the network problem that caused 1001 collisions in 15 minutes subsides and creates only 799 collisions in 15 minutes, occurrences fall below a falling threshold of 800 collisions. This resets the rising threshold so that if network collisions again spike over 1000 per 15-minute period, an event again triggers when the rising threshold is crossed. An event is triggered only the first time a rising threshold is exceeded (otherwise a single network problem might cause a rising threshold to be exceeded multiple times and cause a flood of events).
Create	Click the Create button to create a threshold for the POS ports.
Delete	Select a threshold from the list displayed and click the Delete button.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information. The Alarm Behavior Properties pane contains the [Ether Alarm Behavior/POS Alarm Behavior Tabs](#), page C-763.

Ether Alarm Behavior/POS Alarm Behavior Tabs

The Ether Alarm Behavior tab allows you to view and update Ether alarm profile information.

Table C-1087 Field Descriptions for the Ether Alarm Behavior/POS Alarm Behavior Tabs

Field	Description
Equipment State	Displays the equipment state of the card.
Alarm Profile	Select the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Port Number	Displays the port number.
Alarm Profile	Displays the alarm profile for the port.

Table C-1087 Field Descriptions for the Ether Alarm Behavior/POS Alarm Behavior Tabs (continued)

Field	Description
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and retrieve J1 path trace information.

Table C-1088 Field Descriptions for the J1 Path Trace Properties Pane

Field	Description
Port Number	Displays the port number.
Circuit Type	Displays the circuit type.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
VCAT Mem Num	Displays the virtual concatenation (VCAT) member number.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the CE-100T-8.

Table C-1089 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—CE-1000-4 (ONS 15454 SDH and ONS 15454 SONET)

The CE-1000-4 is a data line card for the ONS 15454 SONET and ONS 15454 SDH NEs that enables private line Ethernet and Gigabit Ethernet services. The CE-1000-4 card has four IEEE 802.3-compliant Gigabit Ethernet ports at the ingress, and an integrated Ethernet over SONET/SDH mapper with equal number of virtual ports at the egress, to send and receive Ethernet packets over a SONET/SDH network.

The interface media type is determined by the GBICs module installed, and on a per-port basis. The CE-1000-4 card supports standard compliant ITU-T G.7041 Generic Framing Procedure (GFP), and ITUT G.707 HO virtual concatenation (VCAT). There is no support for LCAS.

The CE-1000-4 card is managed by TL1, SNMP, CTC, and Prime Optical.

The slot properties pane displays information about the Cisco ONS 15454 SDH card that is installed in the slot selected in the NE Explorer tree. Use this properties pane to change the card properties.

For the CE-1000-4 card, the slot properties pane displays the following properties: Module View, Identification, Line, Gigabit Ether Line Loopback, Thresholds, Alarm Behavior, J1 Path Trace, GBIC Inventory, and Info.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Moving the mouse pointer over the graphic also displays the alarm counts.) Right-clicking the graphic opens a shortcut menu that allows you to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update CE-1000-4 identification information.

Table C-1090 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Table C-1090 Field Descriptions for the Identification Properties Pane (continued)

Field	Description
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update performance monitoring information. The Line Properties pane contains the following tabs:

- [Gigabit Ether Line Tab, page C-766](#)
- [POS Line Tab, page C-767](#)

Gigabit Ether Line Tab

The Gigabit Ether Line tab allows you to view and change the Ethernet line settings of the CE-1000-4 card.

Table C-1091 Field Descriptions for the Gigabit Ether Line Tab

Field	Description
Port Number	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Administration State	The port administration state. Choosing an administration state from the drop-down list and clicking Apply changes the port's service state unless network conditions prevent the change. Administration states include: • IS—In Service. The port service state changes to IS_NR. • OOS, DSBLD—Out of Service, Disabled. The port service state changes to OOS_MA, DSBLD. • OOS, MT—Out of Service, Maintenance. The port service state changes to OOS_MA, MT. For loopbacks, the OOS, MT Administration State must be initiated. • IS, AINS—Automatic In Service. The port service state changes to OOS_AU, AINS.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS_NR state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Link State	Displays the physical port state. Values are Up and Down.
Flow Control	Displays the negotiated flow control mode. Values are None, Symmetrical, and Asymmetrical.
Flow Control Status	Displays the negotiated flow control status.
Auto Negotiation	Allows you to enable the card to match the speed and duplex mode of a partner node.
MTU	Maximum transmission unit. The largest acceptable packet size configured for that port. The default value is 1500.

Table C-1091 Field Descriptions for the Gigabit Ether Line Tab (continued)

Field	Description
Water Marks	Water marks can be Custom, Low Latency, or Default.
Flow Control Low	Displays the minimum flow control.
Flow Control High	Displays the maximum flow control.
Link Integrity Disable	If this check box is checked, the Link Integrity Timer field for the corresponding port number will be disabled.
Link Integrity Timer	Set the link integrity timer for the port. Enter a range from 200 to 5000 milliseconds, in increments of 100 milliseconds. Enabling link integrity ensures that links are never broken.

POS Line Tab

The POS Line tab allows you to view and change POS line settings of the CE-1000-4 card.

Table C-1092 Field Descriptions for the POS Line Tab

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a name for the optical port.
Administration State	The port administration state. Choosing an administration state from the drop-down list and clicking Apply changes the port's service state unless network conditions prevent the change. Administration states include: - IS—In Service. The port service state changes to IS_NR. - OOS, DSBLD—Out of Service, Disabled. The port service state changes to OOS_MA, DSBLD. - OOS, MT—Out of Service, Maintenance. The port service state changes to OOS_MA, MT. For loopbacks, the OOS, MT Administration State must be initiated. - IS, AINS—Automatic In Service. The port service state changes to OOS_AU, AINS.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS_NR state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Link State	Displays the physical port state. Values are Up and Down.
Framing Type	Shows the encapsulation type. Values are: - HDLC—High-level data link control; does not support VLAN trunking. Standard on most Cisco data devices. - GFP-F—Frame-mapped generic framing procedure; a protocol data unit (PDU)-oriented adaptation mode that maps a client frame into one GFP frame. - None—No framing type.
Encap CRC	Sets the cyclic redundancy check (CRC) to verify the integrity of the transmitted data.
MTU	Maximum transmission unit. The largest acceptable packet size configured for that port. The default value is 1500.

Gigabit Ether Line Loopback

The Gigabit Ether Line Loopback Properties pane allows you to view and update loopback information.

Table C-1093 Field Descriptions for the Gigabit Ether Line Loopback

Field	Description
Port Number	Displays the port number.
Administration State	The port administration state. Choosing an administration state from the drop-down list and clicking Apply changes the port's service state unless network conditions prevent the change. Administration states include: - IS—In Service. The port service state changes to IS_NR. - OOS, DSBLD—Out of Service, Disabled. The port service state changes to OOS_MA, DSBLD. - OOS, MT—Out of Service, Maintenance. The port service state changes to OOS_MA, MT. For loopbacks, the OOS, MT Administration State must be initiated. - IS, AINS—Automatic In Service. The port service state changes to OOS_AU, AINS.
Loopback	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Thresholds

The Thresholds Properties pane allows you to view thresholds and create new ones. The Properties pane contains the [POS Ports/Ether Ports Tabs](#), [page C-768](#).

POS Ports/Ether Ports Tabs

The POS Ports tab allows you to view the RMON thresholds for the POS ports.

Table C-1094 Field Descriptions for the POS Ports/Ether Ports Tabs

Field	Description
Index Number	The index number.
Slot	Select a slot for the new threshold.
Port	Select a port for the selected slot. If you select All, the threshold will be created on all ports for that slot. This operation may take several minutes to complete.
Variable	The MIB variable to monitor. Supported variables are cportQosDropPkts and cportQosDropOctets in the cportQosStatsTable in CISCO-PORT-QOS-MIB.
Alarm Type	Select an alarm type for the new threshold. Indicate whether the event will be triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	The sample type (relative or absolute). Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.

Table C-1094 Field Descriptions for the POS Ports/Ether Ports Tabs (continued)

Field	Description
Sample Period	Enter a sample period for the new threshold. The sample period is measured in seconds.
Rising Threshold	The number of occurrences for the rising threshold. Note For a rising type of alarm, the measured value must move from below the falling threshold to above the rising threshold. For example, if a network is running below a falling threshold of 400 collisions every 15 seconds and a problem causes 1001 collisions in 15 seconds, the excess occurrences trigger an alarm.
Falling Threshold	The number of occurrences for the falling threshold. In most cases, a falling threshold is set lower than the rising threshold. A falling threshold is the counterpart to a rising threshold. When the number of occurrences is above the rising threshold and then drops below a falling threshold, it resets the rising threshold. For example, when the network problem that caused 1001 collisions in 15 minutes subsides and creates only 799 collisions in 15 minutes, occurrences fall below a falling threshold of 800 collisions. This resets the rising threshold so that if network collisions again spike over 1000 per 15-minute period, an event again triggers when the rising threshold is crossed. An event is triggered only the first time a rising threshold is exceeded (otherwise a single network problem might cause a rising threshold to be exceeded multiple times and cause a flood of events).
Create	Click the Create button to create a threshold for the POS ports.
Delete	Select a threshold from the list displayed and click the Delete button.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information. The Alarm Behavior Properties pane contains the [POS Ports/Ether Ports Tabs](#), page C-769.

POS Ports/Ether Ports Tabs

The POS Ports tab allows you to view and update alarm profile information.

Table C-1095 Field Descriptions for the POS Ports/Ether Ports Tabs

Field	Description
Equipment State	Displays the equipment state of the card.
Alarm Profile	Select the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Port Number	Displays the port number.
Alarm Profile	Displays the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and retrieve J1 path trace information.

Table C-1096 Field Descriptions for the J1 Path Trace Properties Pane

Field	Description
Port Number	Displays the port number.
STS Number	Displays the synchronous transport signal number information.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
VCAT Mem Num	Displays the virtual concatenation (VCAT) member number.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

GBIC Inventory

The GBIC Inventory Properties pane allows you to view GBIC inventory information.

Table C-1097 Field Descriptions for the GBIC Inventory Properties Pane

Field	Description
Port Number	Displays the GBIC card port number.
Equipment Type	Displays the equipment type the slot is provisioned for.
Serial Number	Displays the GBIC serial number that is unique to each GBIC.
CLEI Code	Displays the CLEI code.
Hardware Part Number	Displays the manufacturer's part number.
Hardware Revision	Displays the hardware revision number.
Actual Equipment Type	Displays the actual card that is installed in the slot. Values are single mode or multimode.
Vendor ID	Displays the ID of the vendor.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the CE-1000-4.

Table C-1098 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—CE-MR-6

The slot properties pane displays information about the Cisco ONS 15310 MA SONET or ONS 15310 MA SDH module that is installed in the slot selected in the NE Explorer tree. Use this properties pane to change the card properties.

The Carrier Ethernet Multirate 6 (CE-MR-6) card provides six IEEE 802.3-compliant 10/100/1000-Mb/s Gigabit Ethernet ports at the ingress. At the egress, the CE-MR-6 card provides an integrated Ethernet-over-SONET mapper with six virtual ports to transfer Ethernet packets over a SONET network.

The CE-MR-6 card uses pluggable SFPs to transport Ethernet traffic over a SONET network. The Ethernet frames are encapsulated using the ITU-T generic framing procedure (GFP) (with or without CRC) or LAN extension (LEX), the point-to-point protocol (PPP) with high-level data link control (HDLC).

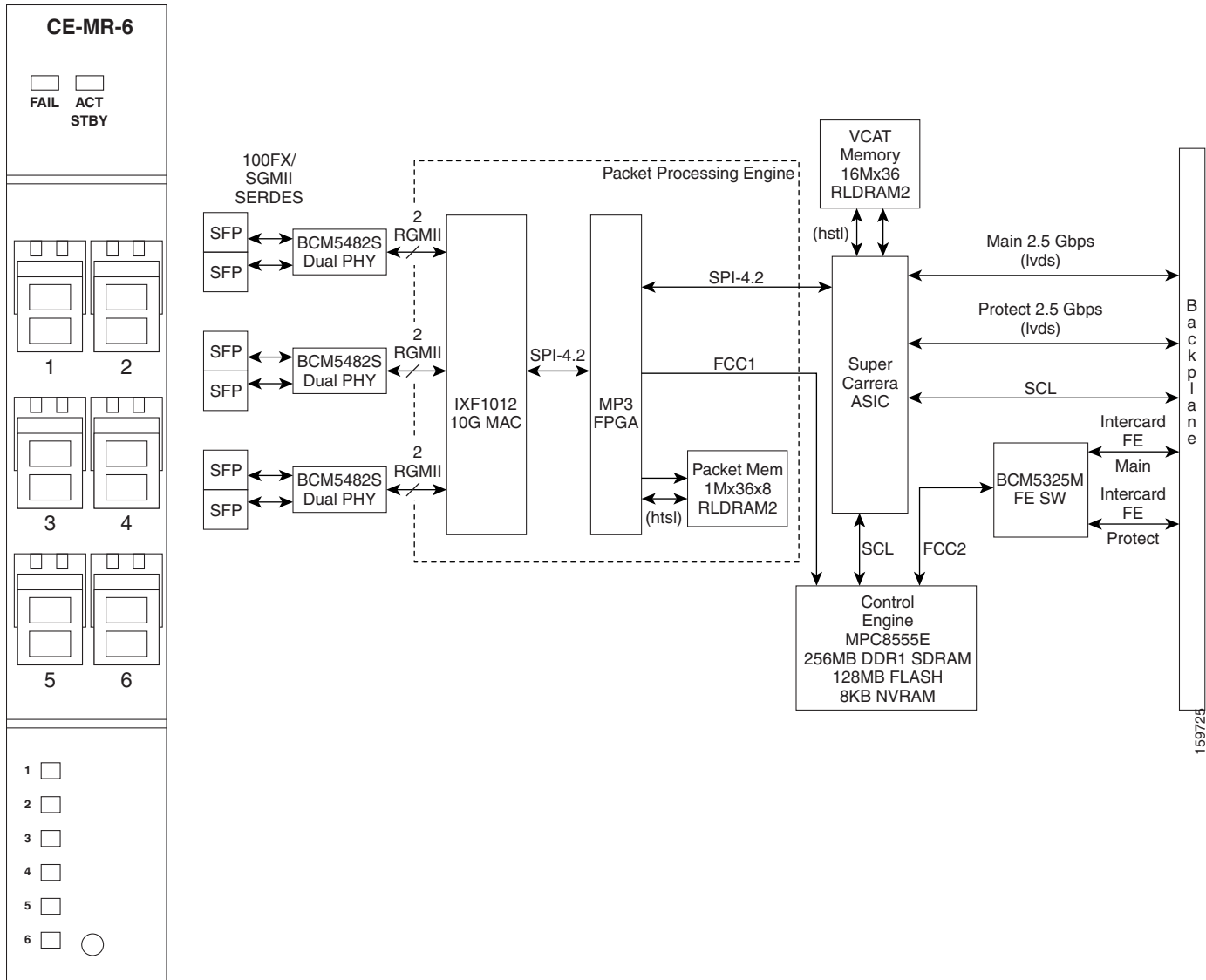
The Ethernet ports automatically configure to operate at either half or full duplex and can determine whether to enable or disable flow control. The Ethernet ports can also be oversubscribed using flow control.

The CE-MR-6 card supports the link capacity adjustment scheme (LCAS), which allows hitless dynamic adjustment of SONET link bandwidth. The CE-MR-6 card's LCAS is hardware-based, but the CE-MR-6 also supports software LCAS (SW-LCAS). This makes it compatible with ML-series cards, which support only SW-LCAS, along with the CE-100T-8 cards. The CE-MR-6 card also supports the nonlink capacity adjustment scheme (no-LCAS). The CE-MR-6 card supports both flexible and fixed VCAT groups (VCG). Prime Optical supports the FE payload on RAD SFPs.

The Ethernet frames can be mapped into:

- T1X1 G.707-based high-order virtual concatenated (HO VCAT) payloads
 - STS-3c-nv, where *n* is 1 to 7
 - STS-1-nv, where *n* is 1 to 21
- T1X1 G.707-based low-order virtual concatenated (LO VCAT) payloads
 - VT1.5-nv, where *n* is 1 to 64
- Contiguously concatenated (CCAT) SONET payloads
 - Standard CCAT sizes (STS-1, STS-3c, STS-12c, STS-24c, and STS-48c)
 - Nonstandard CCAT sizes (STS-6c and STS-9c)

The following figure shows the CE-MR-6 card faceplate and block diagram.

Figure C-76 CE-MR-6 Faceplate and Block Diagram

For the CE-MR-6 card, the slot properties pane displays the following properties: Module View, Identification, Line, Ether Loopback, Thresholds, Alarm Behavior, J1 Path Trace, GBIC Inventory, and Info.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the card is displayed under Alarm Status. (Moving the mouse pointer over the graphic also displays the alarm counts.) Right-clicking the graphic opens a shortcut menu that allows you to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update CE-MR-6 identification information.

Table C-1099 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Select the designation that determines whether an entity is in service or out of service, unlocked or locked—maintenance. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Card Mode	Specify the mode setting for the internal STS/VC allocation method on the card. Values are: - Automatic—Implies internal selection of time slot index numbers by the node. - Manual—Implies user-selected index numbers.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update CE-MR-6 performance monitoring information. The Line Properties pane contains the following tabs:

- [Ether Line Tab, page C-774](#)
- [POS Line Tab, page C-774](#)

Ether Line Tab

The Ether Line tab allows you to view and change the Ethernet line settings of the CE-MR-6 card.

Table C-1100 Field Descriptions for the Ether Line Tab

Field	Description
Port Number	Displays the port number (1 to 6).
Port Name	Allows you to add a name for the port.
Administration State	Allows you to change the administrative state of the port.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS_NR state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Link State	Displays the physical port state. Values are Up, Down, or Not Present.
Expected Speed	Displays the expected speed for the Ethernet ports. Values are Auto, 10 Mb/s, 100 Mb/s, and 1000 Mb/s.
Operating Speed	Displays the operating speed for the Ethernet ports.
Expected Duplex	Expected setting of the port. Values are Auto, Full, and Half.
Operating Duplex	Actual setting of the port. Values are Auto, Full, and Half.
Enable Flow Control	Check this check box to enable flow control for the selected port.
Flow Control	Displays the negotiated flow control mode. Values are None, Symmetrical, and Asymmetrical.
802.1Q VLAN CoS	Sets the IEEE 802.1Q standard VLAN class of service (CoS) threshold for priority queueing. Values are 0 through 7; 0 is the lowest priority and 7 is the highest priority.
IP ToS	Sets the IP type of service (ToS) byte value for priority queueing. Values are 0 through 255.
Enable Auto Negotiate	When checked, the port negotiates with the mating port to set its own rate. If unchecked, the port operating rate does not work with the mate unless the port rates match.
Link Integrity Timer	Set the link integrity timer for the port. Enter a range from 200 to 5000 milliseconds, in increments of 100 milliseconds. Enabling link integrity ensures that links are never broken.

POS Line Tab

The POS Line tab allows you to view and change POS line settings for the CE-MR-6 card.

Table C-1101 Field Descriptions for the POS Line Tab

Field	Description
Port Number	Displays the port number (1 to 6).
Port Name	Allows you to add a name for the port.
Administration State	Allows you to change the administrative state of the port.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Table C-1101 Field Descriptions for the POS Line Tab (continued)

Field	Description
AINS Soak	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS_NR state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Link State	Displays the physical port state. Values are Up and Down.
Framing Type	Shows the encapsulation type. Values are: - HDLC—High-level data link control; does not support VLAN trunking. Standard on most Cisco data devices. - GFP-F—Frame-mapped generic framing procedure; a protocol data unit (PDU)-oriented adaptation mode that maps a client frame into one GFP frame. - None—No framing type.
Encap CRC	Sets the cyclic redundancy check (CRC) to verify the integrity of the transmitted data.
MTU	Maximum transmission unit. The largest acceptable packet size configured for that port. The default value is 1500.

Ether Loopback

The Ether Loopback Properties pane allows you to view and update CE-MR-6 loopback information.

Table C-1102 Field Descriptions for the Ether Loopback Properties Pane

Field	Description
Port Number	Displays the port number (1 to 6).
Administration State	Allows you to configure the status of the line.
Loopback	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (None). Note The line state must be OOS MT or locked, maintenance before you can configure the loopback type.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Thresholds

The Thresholds Properties pane allows you to view CE-MR-6 thresholds and create new ones. The Properties pane contains [POS Ports/Ether Ports Tabs](#), [page C-776](#).

POS Ports/Ether Ports Tabs

The POS Ports tab allows you to view the thresholds for the POS ports.

Table C-1103 *Field Descriptions for the POS Ports/Ether Ports Tabs*

Field	Description
Index Number	The index number.
Slot	Select a slot for the new threshold.
Port	Select a port for the selected slot. If you select All, the threshold will be created on all ports for that slot. This operation may take several minutes to complete.
Variable	The MIB variable to monitor.
Alarm Type	Select an alarm type for the new threshold. Indicate whether the event will be triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	The sample type (relative or absolute). Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period	Enter a sample period for the new threshold. The sample period is measured in seconds.
Rising Thresholds	The number of occurrences for the rising threshold. Note For a rising type of alarm, the measured value must move from below the falling threshold to above the rising threshold. For example, if a network is running below a falling threshold of 400 collisions every 15 seconds and a problem causes 1001 collisions in 15 seconds, the excess occurrences trigger an alarm.
Falling Thresholds	The number of occurrences for the falling threshold. In most cases, a falling threshold is set lower than the rising threshold. A falling threshold is the counterpart to a rising threshold. When the number of occurrences is above the rising threshold and then drops below a falling threshold, it resets the rising threshold. For example, when the network problem that caused 1001 collisions in 15 minutes subsides and creates only 799 collisions in 15 minutes, occurrences fall below a falling threshold of 800 collisions. This resets the rising threshold so that if network collisions again spike over 1000 per 15-minute period, an event again triggers when the rising threshold is crossed. An event is triggered only the first time a rising threshold is exceeded (otherwise a single network problem might cause a rising threshold to be exceeded multiple times and cause a flood of events).
Create	Click the Create button to create a threshold for the POS ports.
Delete	Select a threshold from the list displayed and click the Delete button.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information. The Alarm Behavior Properties pane contains the [POS Ports/Ether Ports Tabs](#), [page C-777](#).

POS Ports/Ether Ports Tabs

The POS Ports/Ether Ports tabs allow you to view and update POS alarm profile information.

Table C-1104 Field Descriptions for the POS Ports/Ether Ports Tabs

Field	Description
Equipment State	Displays the equipment state of the card.
Alarm Profile	Select the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Port Number	Displays the port number.
Alarm Profile	Displays the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and retrieve J1 path trace information.

Table C-1105 Field Descriptions for the J1 Path Trace Properties Pane

Field	Description
Port Number	Displays the port number.
Circuit Type	Displays the circuit type.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
VCAT Member Number	Displays the virtual concatenation (VCAT) member number.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

GBIC Inventory

The GBIC Inventory Properties pane displays GBIC inventory information for new SFPs and old Ethernet SFPs that are plugged into the CE-MR-6 card. The card supports the following SFPs:

- ONS-SE-100-BX10U
- ONS-SE-100-BX10D
- ONS-SI-100-FX
- ONS-SI-100-LX10
- ONS-SI-GE-SX
- ONS-SI-GE-LX

- ONS-SI-GE-ZX
- ONS-SE-ZE-EL

Table C-1106 *Field Descriptions for the GBIC Inventory Properties Pane*

Field	Description
Port Number	Displays the GBIC card port number.
Equipment Type	Displays the equipment type the slot is provisioned for.
Serial Number	Displays the GBIC serial number that is unique to each GBIC.
CLEI Code	Displays the CLEI code.
Hardware Part Number	Displays the manufacturer's part number.
Hardware Revision Number	Displays the hardware revision number.
Actual Equipment Type	Displays the actual card that is installed in the slot. Values are single mode or multimode.
Vendor ID	Displays the ID of the vendor.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the CE-MR-6 card.

Table C-1107 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—CE-MR-10

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH module that is installed in the slot selected in the NE Explorer tree. Use this properties pane to change the card properties.

The Carrier Ethernet Multirate 10 (CE-MR-10) card provides ten IEEE 802.3-compliant 10/100/1000-Mb/s Gigabit Ethernet ports at the ingress. At the egress, the CE-MR-10 card provides an integrated Ethernet over SDH mapper with ten virtual ports to transfer Ethernet packets over an SDH network.

The CE-MR-10 card uses pluggable SFPs to transport Ethernet traffic over an SDH network. SFP modules are offered as separate orderable products for flexibility.

The Ethernet frames are encapsulated using the ITU-T generic framing procedure (GFP) (with or without CRC) or LEX, the point-to-point protocol (PPP) with high-level data link control (HDLC).

The Ethernet ports automatically configure to operate at either half or full duplex and can determine whether to enable or disable flow control. The Ethernet ports can also be oversubscribed using flow control.

The CE-MR-10 card supports the link capacity adjustment scheme (LCAS), which allows hitless dynamic adjustment of SDH link bandwidth. The CE-MR-10 card's LCAS is hardware-based, but the CE-MR-10 also supports software LCAS (SW-LCAS). This makes it compatible with ML-series cards, which support only SW-LCAS, along with G-series and CE-series cards. The CE-MR-10 card also supports the nonlink capacity adjustment scheme (no-LCAS). The CE-MR-10 card supports both flexible and fixed VCAT groups (VCG). Prime Optical supports the FE payload on RAD SFPs.

The Ethernet frames can be mapped into:

- High-order virtual concatenated (HO VCAT) payloads
 - STS-1-*mv*, where *m* is 1 to 21
 - STS-3c-*mv* where *m* is 1 to 7
 - VC-4-*mv*, where *m* is 1 to 7
- Low-order virtual concatenated (LO VCAT) payloads
 - VC3-*mv*, where *m* is 1 to 21
 - VC12-*mv*, where *m* is 1 to 63
 - VT1.5-*mv*, where *m* is 1 to 64



Note SW-LCAS is not supported on VC12-*mv* or VT1.5-*mv* payloads.

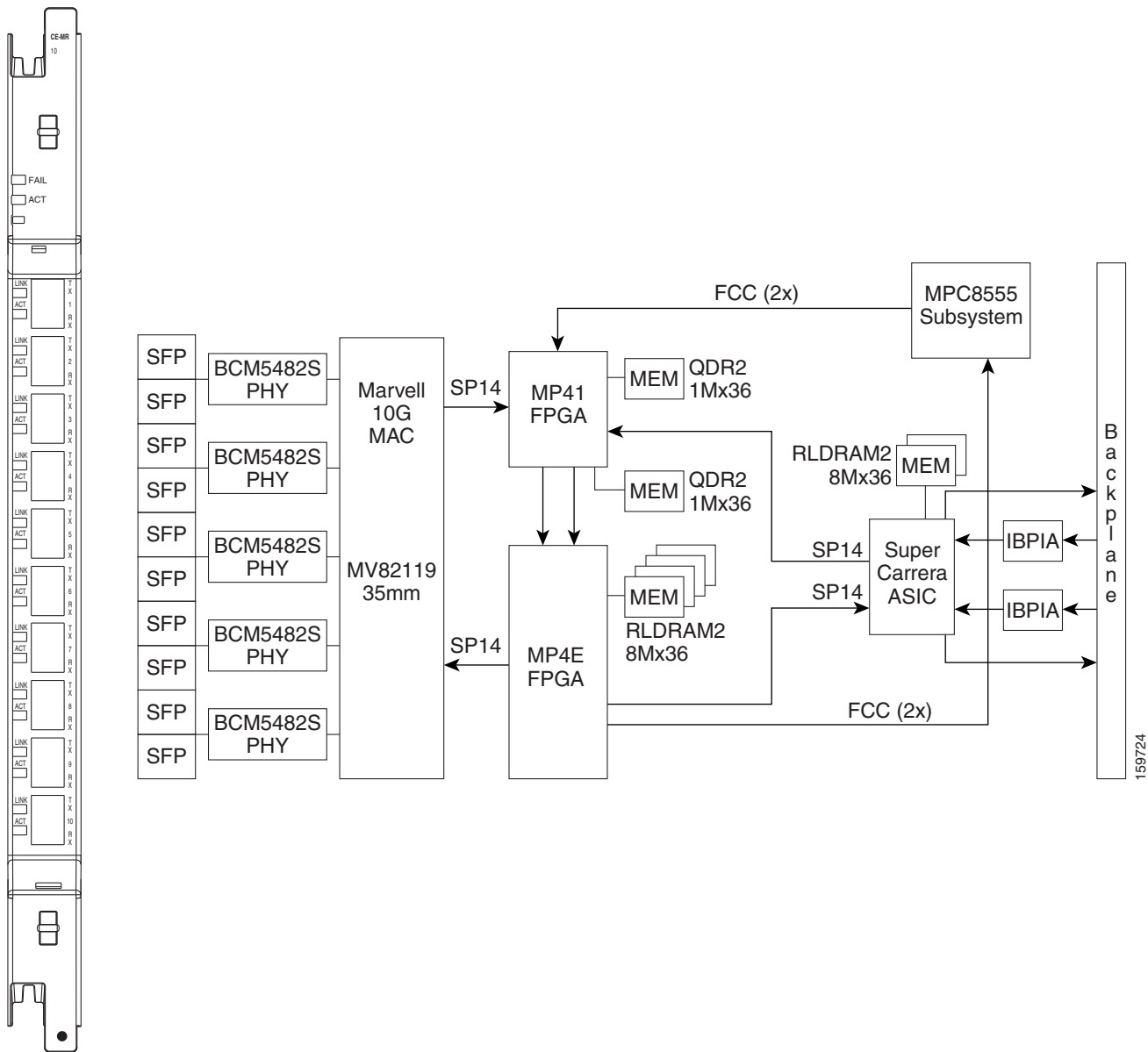
- High-order contiguously concatenated (CCAT) SONET payloads
 - STS-1, STS-3c, STS-6c, STS-9c, STS-12c, STS24c, and STS-48c
- CCAT SDH payloads
 - VC-3, VC-4, VC-4-2c, VC-4-3c, VC-4-4c, VC-4-8c, and VC-4-16c

To configure a CE-MR-10 card circuit, refer to the “Create Circuits and Low-Order Tunnels” chapter in the *Cisco ONS 15454 SDH Procedure Guide*.

The CE-MR-10 card provides multiple management options through CTC, Prime Optical, TL1, and SNMP.

The following figure shows the CE-MR-10 card faceplate and block diagram.

Figure C-77 CE-MR-10 Faceplate and Block Diagram



For the CE-MR-10 card, the slot properties pane displays the following properties: Module View, Identification, Line, Ether Loopback, Thresholds, Alarm Behavior, J1 Path Trace, GBIC Inventory, and Info.

Module View

The Module View displays a graphic of the card that is installed in the slot. The number of critical, major, minor, and warning alarms for the card is displayed under Alarm Status. (Moving the mouse pointer over the graphic also displays the alarm counts.) Right-clicking the graphic opens a shortcut menu that allows you to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update CE-MR-10 identification information.

Table C-1108 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Select the designation that determines whether an entity is in service or out of service, unlocked or locked–maintenance. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Card Mode (ONS 15454 SONET only)	Specify the mode setting for the internal STS/VC allocation method on the card. Values are: - Automatic—Implies internal selection of time slot index numbers by the node. - Exposed—Implies user-selected index numbers.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update CE-MR-10 performance monitoring information. The Line Properties pane contains the following tabs:

- [Ether Line Tab, page C-782](#)
- [POS Line Tab, page C-782](#)

Ether Line Tab

The Ether Line tab allows you to view and change the Ethernet line settings of the CE-MR-10 card.

Table C-1109 Field Descriptions for the Ether Line Tab

Field	Description
Port Number	Displays the port number (1 to 10).
Port Name	Allows you to add a name for the port.
Administration State	Allows you to change the administrative state of the port.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS_NR state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Link State	Displays the physical port state. Values are Up, Down, or Not Present.
Expected Speed	Displays the expected speed for the Ethernet ports. Values are Auto, 10 Mb/s, 100 Mb/s, and 1000 Mb/s.
Operating Speed	Displays the operating speed for the Ethernet ports.
Expected Duplex	Expected setting of the port. Values are Auto, Full, and Half.
Operating Duplex	Actual setting of the port. Values are Auto, Full, and Half.
Enable Flow Control	Check this check box to enable flow control for the selected port.
Flow Control	Displays the negotiated flow control mode. Values are None, Symmetrical, and Asymmetrical.
802.1Q VLAN CoS	Sets the IEEE 802.1Q standard VLAN class of service (CoS) threshold for priority queueing. Values are 0 through 7; 0 is the lowest priority and 7 is the highest priority.
IP ToS	Sets the IP type of service (ToS) byte value for priority queueing. Values are 0 through 255.
Enable Auto Negotiate	When checked, the port negotiates with the mating port to set its own rate. If unchecked, the port operating rate does not work with the mate unless the port rates match.
Link Integrity Timer	Set the link integrity timer for the port. Enter a range from 200 to 5000 milliseconds, in increments of 100 milliseconds. Enabling link integrity ensures that links are never broken.

POS Line Tab

The POS Line tab allows you to view and change POS line settings for the CE-MR-10 card.

Table C-1110 Field Descriptions for the POS Line Tab

Field	Description
Port Number	Displays the port number (1 to 8).
Port Name	Allows you to add a name for the port.
Administration State	Allows you to change the administrative state of the port.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Table C-1110 Field Descriptions for the POS Line Tab (continued)

Field	Description
AINS Soak	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS_NR state.
AINS Soak Count Down	Automatic in-service soak countdown. Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Link State	Displays the physical port state. Values are Up and Down.
Framing Type	Shows the encapsulation type. Values are: • HDLC—High-level data link control; does not support VLAN trunking. Standard on most Cisco data devices. • GFP-F—Frame-mapped generic framing procedure; a protocol data unit (PDU)-oriented adaptation mode that maps a client frame into one GFP frame. • None—No framing type.
Encap CRC	Sets the cyclic redundancy check (CRC) to verify the integrity of the transmitted data.
MTU	Maximum transmission unit. The largest acceptable packet size configured for that port. The default value is 1500.

Ether Loopback

The Ether Loopback Properties pane allows you to view and update CE-MR-10 loopback information.

Table C-1111 Field Descriptions for the Ether Loopback Properties Pane

Field	Description
Port Number	Displays the port number.
Administration State	Allows you to configure the status of the line.
Loopback	Allows you to configure a port to terminal loopback (Inward) or Facility (Line), or clear the current loopback (None). Note The line state must be OOS MT or locked, maintenance before you can configure the loopback type.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Thresholds

The Thresholds Properties pane allows you to view CE-MR-10 thresholds and create new ones. The Properties pane contains the [POS Ports/Ether Ports Tabs](#), [page C-752](#).

POS Ports/Ether Ports Tabs

The POS Ports tabs allow you to view the thresholds for the POS ports.

Table C-1112 Field Descriptions for the POS Ports/Ether Ports Tabs

Field	Description
Index Number	The index number.
Slot	Select a slot for the new threshold.
Port	Select a port for the selected slot. If you select All, the threshold will be created on all ports for that slot. This operation may take several minutes to complete.
Variable	The MIB variable to monitor.
Alarm Type	Select an alarm type for the new threshold. Indicate whether the event will be triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	The sample type (relative or absolute). Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period	Enter a sample period for the new threshold. The sample period is measured in seconds.
Rising Thresholds	The number of occurrences for the rising threshold. Note For a rising type of alarm, the measured value must move from below the falling threshold to above the rising threshold. For example, if a network is running below a falling threshold of 400 collisions every 15 seconds and a problem causes 1001 collisions in 15 seconds, the excess occurrences trigger an alarm.
Falling Thresholds	The number of occurrences for the falling threshold. In most cases, a falling threshold is set lower than the rising threshold. A falling threshold is the counterpart to a rising threshold. When the number of occurrences is above the rising threshold and then drops below a falling threshold, it resets the rising threshold. For example, when the network problem that caused 1001 collisions in 15 minutes subsides and creates only 799 collisions in 15 minutes, occurrences fall below a falling threshold of 800 collisions. This resets the rising threshold so that if network collisions again spike over 1000 per 15-minute period, an event again triggers when the rising threshold is crossed. An event is triggered only the first time a rising threshold is exceeded (otherwise a single network problem might cause a rising threshold to be exceeded multiple times and cause a flood of events).
Create	Click the Create button to create a threshold for the POS ports.
Delete	Select a threshold from the list displayed and click the Delete button.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information. The Alarm Behavior Properties pane contains the [POS Ports/Ether Ports Tabs](#), [page C-784](#).

POS Ports/Ether Ports Tabs

The POS Ports tabs allow you to view and update POS alarm profile information.

Table C-1113 Field Descriptions for the POS Ports/Ether Ports Tabs

Field	Description
Equipment State	Displays the equipment state of the card.
Alarm Profile	Select the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Port Number	Displays the port number.
Alarm Profile	Displays the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and retrieve J1 path trace information.

Table C-1114 Field Descriptions for the J1 Path Trace Properties Pane

Field	Description
Port Number	Displays the port number.
Circuit Type	Displays the circuit type.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
VCAT Member Number	Displays the virtual concatenation (VCAT) member number.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

GBIC Inventory

The GBIC Inventory Properties pane allows you to view GBIC inventory information for the CE-MR-10 card.

Table C-1115 Field Descriptions for the GBIC Inventory Properties Pane

Field	Description
Port Number	Displays the GBIC card port number.
Equipment Type	Displays the equipment type the slot is provisioned for.
Serial Number	Displays the GBIC serial number that is unique to each GBIC.

Table C-1115 *Field Descriptions for the GBIC Inventory Properties Pane (continued)*

Field	Description
CLEI Code	Displays the CLEI code.
Hardware Part Number	Displays the manufacturer's part number.
Hardware Revision Number	Displays the hardware revision number.
Actual Equipment Type	Displays the actual card that is installed in the slot. Values are single mode or multimode.
Vendor ID	Displays the ID of the vendor.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the CE-MR-10 card.

Table C-1116 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—E10/100T-4

The slot properties pane displays information about the Cisco ONS 15327 slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The E10/100T-4 card provides four Layer 2 switched, autosensing, 10/100BaseT Ethernet interfaces. Each interface supports full-duplex operation for a maximum bandwidth of 200 Mb/s per port.

For the E10/100T-4 module, the slot properties pane displays the following properties: Module View, Identification, Port, Line, VLAN, Alarm Behavior, Thresholds, and Info.

Module View

The Module View displays a graphic of the E10/100T-4 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to delete, change, or reset the module.

Identification

The Identification Properties pane allows you to view and update E10/100T-4 identification information.

Table C-1117 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the hardware revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. Choosing an administration state from the drop-down list and clicking Apply changes the port’s service state unless network conditions prevent the change. Administration states include: • IS—In Service. The port service state changes to IS_NR. • OOS, DSBLD—Out of Service, Disabled. The port service state changes to OOS_MA, DSBLD. • OOS, MT—Out of Service, Maintenance. The port service state changes to OOS_MA, MT. For loopbacks, the OOS, MT Administration State must be initiated. • IS, AINS—Automatic In Service. The port service state changes to OOS_AU, AINS.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Card Mode	Allows you to select a multiscard Ether Switch group, a single-card Ether Switch group, or the Port Mapped mode for E-series cards.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Port

The Port Properties pane allows you to view and update E10/100T-4 port information.

Table C-1118 Field Descriptions for the Port Properties Pane

Field	Description
Port Number	Displays the card port number.
Enabled	When checked, the corresponding port is enabled.
Queue Priority	Allows you to select the priority queue for the port.

Table C-1118 *Field Descriptions for the Port Properties Pane (continued)*

Field	Description
STP Enabled	When checked, indicates that Spanning Tree Protocol (STP) is enabled for the card.
STP State	Displays the current STP state.

Line

The Line Properties pane allows you to view and update E10/100T-4 line performance monitoring information.

Table C-1119 *Field Descriptions for the Line Properties Pane*

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to add a name for the port.
Mode	Allows you to select the appropriate mode for each Ethernet port. Valid choices for the E100T-12/E100T-G card are Auto, 10 Half, 10 Full, 100 Half, or 100 Full. Valid choices for the E1000-2/E1000-2-G card are 1000 Full or Auto.
Status	Displays the current optical line status.

VLAN

The VLAN Properties pane allows you to view and update E10/100T-4 VLAN information.

Table C-1120 *Field Descriptions for the VLAN Properties Pane*

Field	Description
VLAN	Displays the name of the VLAN.
Port <i>x</i>	If a port is a member of only one VLAN, select Untag from the Port column. The VLAN with Untag selected can connect to the port, but other VLANs cannot access that port. If a port is a trunk port, it connects multiple VLANs to an external device, such as a switch, which also supports trunking. A trunk port must have tagging (802.1Q) enabled for all VLANs that connect to that external device. Select Tagged at all VLAN rows that need to be trunked. Select Untag at one or more VLAN rows in the trunk port column that do not need to be trunked; for example, the default VLAN. Each Ethernet port must be attached to at least one untagged VLAN.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update E10/100T-4 alarm profile information.

Table C-1121 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Parent Profile	Choose a global alarm profile for the card from the drop-down list.
Port Number	Displays the E10/100T-4 port number.
Alarm Profile	Choose an alarm profile for the slot from the drop-down list.

Table C-1121 *Field Descriptions for the Alarm Behavior Properties Pane (continued)*

Field	Description
Suppress Alarms	When checked, all alarms are suppressed.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Thresholds

The Thresholds Properties pane allows you to create, view, and delete E10/100T-4 thresholds.

Table C-1122 *Field Descriptions for the Threshold Properties*

Field	Description
Index #	A unique value that identifies the different thresholds currently existing on the NE.
Slot	Select a slot for the new Ether threshold.
Port	Select a port for the selected slot. If you select All, the threshold will be created on all ports for that slot. This operation may take several minutes to complete.
Variable	Select a variable for the new Ether threshold. Available variables will differ based on the type of card selected in the Slot field.
Alarm Type	Select an alarm type for the new Ether threshold. Available alarm types are Rising, Falling, and Rising and Falling.
Sample Type	Select a sample type for the new Ether threshold. Available sample types are Relative and Absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of any time period.
Sample Period	Enter a sample period for the new Ether threshold. The sample period is measured in seconds.
Rising Threshold	Enter a rising threshold for the new Ether threshold. The value must be equal to or greater than the Falling Threshold value.
Falling Threshold	Enter a falling threshold for the new Ether threshold. The value must be equal to or less than the rising threshold value.
Create	Click the Create button to create a E10/100T-4 thresholds.
Delete	Select an E10/100T-4 threshold from the list displayed and click the Delete button.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the E10/100T-4 card.

Table C-1123 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—E1000-2

The slot properties pane displays information about the Cisco ONS 15454 or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The ONS 15454 and ONS 15454 SDH E1000-2 cards incorporate Layer 2 switching, while the G-series card is a straight mapper card. The ONS 15454 E-series cards include the E100T-12/E100T-G and E1000-2/E1000-2-G. E-series cards support VLAN, IEEE 802.1Q, spanning tree, and IEEE 802.1D. An ONS 15454 holds a maximum of ten Ethernet cards, which can be inserted in any multipurpose slot.

For the E1000-2 module, the slot properties pane displays the following properties: Module View, Identification, Port, Line, VLAN, Alarm Behavior, Thresholds, and Info.

Module View

The Module View displays a graphic of the E1000-2 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to add, delete, change, or reset the module.

Identification

The Identification Properties pane allows you to view and update E1000-2 identification information.

Table C-1124 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the hardware revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.

Table C-1124 *Field Descriptions for the Identification Properties Pane (continued)*

Field	Description
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Card Mode	Allows you to select a multiscard Ether Switch group, a single-card Ether Switch group, or the Port Mapped mode for E-series cards.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Port

The Port Properties pane allows you to view and update E1000-2 port information.

Table C-1125 *Field Descriptions for the Port Properties Pane*

Field	Description
Port Number	Displays the card port number.
Enabled	When checked, the corresponding port is enabled.
Queue Priority	Allows you to select the priority queue for the port.
STP Enabled	When checked, indicates that Spanning Tree Protocol (STP) is enabled for the card.
STP State	Displays the current STP state.

Line

The Line Properties pane allows you to view and update E1000-2 line performance monitoring information.

Table C-1126 *Field Descriptions for the Line Properties Pane*

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to add a name for the port.
Mode	Allows you to select the appropriate mode for each Ethernet port. Valid choices for the E100T-12/E100T-G card are Auto, 10 Half, 10 Full, 100 Half, or 100 Full. Valid choices for the E1000-2/E1000-2-G card are 1000 Full or Auto.
Status	Displays the current optical line status.

VLAN

The VLAN Properties pane allows you to view and update E1000-2 VLAN information.

Table C-1127 Field Descriptions for the VLAN Properties Pane

Field	Description
VLAN	Displays the name of the VLAN.
Port <i>x</i>	If a port is a member of only one VLAN, select Untag from the Port column. The VLAN with Untag selected can connect to the port, but other VLANs cannot access that port. If a port is a trunk port, it connects multiple VLANs to an external device, such as a switch, which also supports trunking. A trunk port must have tagging (802.1Q) enabled for all VLANs that connect to that external device. Select Tagged at all VLAN rows that need to be trunked. Select Untag at one or more VLAN rows in the trunk port column that do not need to be trunked; for example, the default VLAN. Each Ethernet port must be attached to at least one untagged VLAN.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update E1000-2 alarm profile information.

Table C-1128 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Parent Profile	Choose a global alarm profile for the card from the drop-down list.
Port Number	Displays the ETH1000-2 port number.
Alarm Profile	Choose an alarm profile for the slot from the drop-down list.
Suppress Alarms	When checked, all alarms are suppressed.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Thresholds

The Thresholds Properties pane allows you to create, view, and delete E1000-2 thresholds.

Table C-1129 Field Descriptions for the Threshold Properties

Field	Description
Index #	A unique value that identifies the different thresholds currently existing on the NE.
Slot	Select a slot for the new Ether threshold.
Port	Select a port for the selected slot. If you select All, the threshold will be created on all ports for that slot. This operation may take several minutes to complete.
Variable	Select a variable for the new Ether threshold. Available variables will differ based on the type of card selected in the Slot field.
Alarm Type	Select an alarm type for the new Ether threshold. Available alarm types are Rising, Falling, and Rising and Falling.
Sample Type	Select a sample type for the new Ether threshold. Available sample types are Relative and Absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of any time period.
Sample Period	Enter a sample period for the new Ether threshold. The sample period is measured in seconds.

Table C-1129 *Field Descriptions for the Threshold Properties (continued)*

Field	Description
Rising Threshold	Enter a rising threshold for the new Ether threshold. The value must be equal to or greater than the Falling Threshold value.
Falling Threshold	Enter a falling threshold for the new Ether threshold. The value must be equal to or less than the rising threshold value.
Create	Click the Create button to create a E1000-2 thresholds.
Delete	Select an E1000-2 threshold from the list displayed and click the Delete button.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the E1000-2 card.

Table C-1130 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—E1000-2-G

The slot properties pane displays information about the Cisco ONS 15454 or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The ONS 15454 and ONS 15454 SDH E1000-2-G cards incorporate Layer 2 switching, while the G-series card is a straight mapper card. The ONS 15454 E-series cards include the E100T-12/E100T-G and E1000-2/E1000-2-G. E-series cards support VLAN, IEEE 802.1Q, spanning tree, and IEEE 802.1D. An ONS 15454 holds a maximum of ten Ethernet cards, which can be inserted in any multipurpose slot.

For the E1000-2-G module, the slot properties pane displays the following properties: Module View, Identification, Port, Line, VLAN, Alarm Behavior, Thresholds, and Info.

Module View

The Module View displays a graphic of the E1000-2-G that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the module.

Identification

The Identification Properties pane allows you to view and update E1000-2-G identification information.

Table C-1131 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the hardware revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Card Mode	Allows you to select a multicard Ether Switch group, a single-card Ether Switch group, or the Port Mapped mode for E-series cards.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Port

The Port Properties pane allows you to view and update E1000-2-G port information.

Table C-1132 Field Descriptions for the Port Properties Pane

Field	Description
Port Number	Displays the card port number.
Enabled	When checked, the corresponding port is enabled.
Queue Priority	Allows you to select the priority queue for the port.
STP Enabled	When checked, indicates that Spanning Tree Protocol (STP) is enabled for the card.
STP State	Displays the current STP state.

Line

The Line Properties pane allows you to view and update E1000-2-G line performance monitoring information.

Table C-1133 *Field Descriptions for the Line Properties Pane*

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to add a name for the port.
Mode	Allows you to select the appropriate mode for each Ethernet port. Valid choices for the E100T-12/E100T-G card are Auto, 10 Half, 10 Full, 100 Half, or 100 Full. Valid choices for the E1000-2/E1000-2-G card are 1000 Full or Auto.
Status	Displays the current optical line status.

VLAN

The VLAN Properties pane allows you to view and update E1000-2-G VLAN information.

Table C-1134 *Field Descriptions for the VLAN Properties Pane*

Field	Description
VLAN	Displays the name of the VLAN.
Port <i>x</i>	If a port is a member of only one VLAN, select Untag from the Port column. The VLAN with Untag selected can connect to the port, but other VLANs cannot access that port. If a port is a trunk port, it connects multiple VLANs to an external device, such as a switch, which also supports trunking. A trunk port must have tagging (802.1Q) enabled for all VLANs that connect to that external device. Select Tagged at all VLAN rows that need to be trunked. Select Untag at one or more VLAN rows in the trunk port column that do not need to be trunked; for example, the default VLAN. Each Ethernet port must be attached to at least one untagged VLAN.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update E1000-2-G alarm profile information.

Table C-1135 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Parent Profile	Choose a global alarm profile for the card from the drop-down list.
Port Number	Displays the E1000-2-G port number.
Alarm Profile	Choose an alarm profile for the slot from the drop-down list.
Suppress Alarms	When checked, all alarms are suppressed.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Thresholds

The Thresholds Properties pane allows you to create, view, and delete E1000-2-G thresholds.

Table C-1136 Field Descriptions for the Threshold

Field	Description
Index #	A unique value that identifies the different thresholds currently existing on the NE.
Slot	Select a slot for the new Ether threshold.
Port	Select a port for the selected slot. If you select All, the threshold will be created on all ports for that slot. This operation may take several minutes to complete.
Variable	Select a variable for the new Ether threshold. Available variables will differ based on the type of card selected in the Slot field.
Alarm Type	Select an alarm type for the new Ether threshold. Available alarm types are Rising, Falling, and Rising and Falling.
Sample Type	Select a sample type for the new Ether threshold. Available sample types are Relative and Absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of any time period.
Sample Period	Enter a sample period for the new Ether threshold. The sample period is measured in seconds.
Rising Threshold	Enter a rising threshold for the new Ether threshold. The value must be equal to or greater than the Falling Threshold value.
Falling Threshold	Enter a falling threshold for the new Ether threshold. The value must be equal to or less than the rising threshold value.
Create	Click the Create button to create a E1000-2-G thresholds.
Delete	Select an E1000-2-G threshold from the list displayed and click the Delete button.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the E1000-2-G card.

Table C-1137 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—E100T-12

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The ONS 15454 and ONS 15454 SDH E100T-12 cards incorporate Layer 2 switching, while the G-series card is a straight mapper card. The ONS 15454 E-series cards include the E100T-12/E100T-G and E1000-2/E1000-2-G. E-series cards support VLAN, IEEE 802.1Q, spanning tree, and IEEE 802.1D. An ONS 15454 holds a maximum of ten Ethernet cards, which can be inserted in any multipurpose slot.

For the E100T-12 module, the slot properties pane displays the following properties: Module View, Identification, Port, Line, VLAN, Alarm Behavior, Thresholds, and Info.

Module View

The Module View displays a graphic of the E100T-12 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to add, delete, change, or reset the module.

Identification

The Identification Properties pane allows you to view and update E100T-12 identification information.

Table C-1138 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the hardware revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format "V99_." The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.

Table C-1138 *Field Descriptions for the Identification Properties Pane (continued)*

Field	Description
Card Mode	Allows you to select a multiscard Ether Switch group, a single-card Ether Switch group, or the Port Mapped mode for E-series cards.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Port

The Port Properties pane allows you to view and update E100T-12 port information.

Table C-1139 *Field Descriptions for the Port Properties Pane*

Field	Description
Port Number	Displays the card port number.
Enabled	When checked, the corresponding port is enabled.
Queue Priority	Allows you to select the priority queue for the port.
STP Enabled	When checked, indicates that Spanning Tree Protocol (STP) is enabled for the card.
STP State	Displays the current STP state.

Line

The Line Properties pane allows you to view and update E100T-12 line performance monitoring information.

Table C-1140 *Field Descriptions for the Line Properties Pane*

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to add a name for the port.
Mode	Allows you to select the appropriate mode for each Ethernet port. Valid choices for the E100T-12/E100T-G card are Auto, 10 Half, 10 Full, 100 Half, or 100 Full. Valid choices for the E1000-2/E1000-2-G card are 1000 Full or Auto.
Status	Displays the current optical line status.

VLAN

The VLAN Properties pane allows you to view and update E100T-12 VLAN information.

Table C-1141 *Field Descriptions for the VLAN Properties Pane*

Field	Description
VLAN	Displays the name of the VLAN.
Port <i>x</i>	If a port is a member of only one VLAN, select Untag from the Port column. The VLAN with Untag selected can connect to the port, but other VLANs cannot access that port. If a port is a trunk port, it connects multiple VLANs to an external device, such as a switch, which also supports trunking. A trunk port must have tagging (802.1Q) enabled for all VLANs that connect to that external device. Select Tagged at all VLAN rows that need to be trunked. Select Untag at one or more VLAN rows in the trunk port column that do not need to be trunked; for example, the default VLAN. Each Ethernet port must be attached to at least one untagged VLAN.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update E100T-12 alarm profile information.

Table C-1142 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Parent Profile	Choose a global alarm profile for the card from the drop-down list.
Port Number	Displays the ETH100 port number.
Alarm Profile	Choose an alarm profile for the slot from the drop-down list.
Suppress Alarms	When checked, all alarms are suppressed.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Thresholds

The Thresholds Properties pane allows you to create, view, and delete E100T-12 thresholds.

Table C-1143 *Field Descriptions for the Threshold Properties*

Field	Description
Index #	A unique value that identifies the different thresholds currently existing on the NE.
Slot	Select a slot for the new Ether threshold.
Port	Select a port for the selected slot. If you select All, the threshold will be created on all ports for that slot. This operation may take several minutes to complete.
Variable	Select a variable for the new Ether threshold. Available variables will differ based on the type of card selected in the Slot field.
Alarm Type	Select an alarm type for the new Ether threshold. Available alarm types are Rising, Falling, and Rising and Falling.
Sample Type	Select a sample type for the new Ether threshold. Available sample types are Relative and Absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of any time period.
Sample Period	Enter a sample period for the new Ether threshold. The sample period is measured in seconds.

Table C-1143 *Field Descriptions for the Threshold Properties (continued)*

Field	Description
Rising Threshold	Enter a rising threshold for the new Ether threshold. The value must be equal to or greater than the Falling Threshold value.
Falling Threshold	Enter a falling threshold for the new Ether threshold. The value must be equal to or less than the rising threshold value.
Create	Click the Create button to create a E100T-12 thresholds.
Delete	Select an E100T-12 threshold from the list displayed and click the Delete button.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the E100T-12 card.

Table C-1144 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—E100T-G

The slot properties pane displays information about the Cisco ONS 15454 or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

Use the E100T-G cards when the XC10G card is in use. The ONS 15454 and ONS 15454 SDH use E100T-G cards for Ethernet (10 Mb/s) and Fast Ethernet (100 Mb/s). Each card provides 12 switched, IEEE 802.3-compliant, 10/100BaseT Ethernet ports that can independently detect the speed of an attached device (autosense) and automatically connect at the appropriate speed. The ports autoconfigure to operate at either half or full duplex and determine whether to enable or disable flow control.

The ONS 15454 and ONS 15454 SDH incorporate Layer 2 switching, while the G-series card is a straight mapper card. The ONS 15454 E-series cards include the E100T-12/E100T-G and E1000-2/E1000-2-G. E-series cards support VLAN, IEEE 802.1Q, spanning tree, and IEEE 802.1D. An ONS 15454 holds a maximum of ten Ethernet cards, which can be inserted in any multipurpose slot.

For the E100T-G module, the slot properties pane displays the following properties: Module View, Identification, Port, Line, VLAN, and Alarm Behavior.

Module View

The Module View displays a graphic of the E100T-G that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to add, delete, change, or reset the module.

Identification

The Identification Properties pane allows you to view and update E100T-G identification information.

Table C-1145 *Field Descriptions for the Identification Properties Pane*

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the hardware revision number of the software used by the ASIC chip installed on the card.
Equipment State	Displays the equipment state of the card.
Card Mode	Allows you to select a multocard Ether Switch group, a single-card Ether Switch group, or the Port Mapped mode for E-series cards.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Port

The Port Properties pane allows you to view and update E100T-G port information.

Table C-1146 *Field Descriptions for the Port Properties Pane*

Field	Description
Port Number	Displays the card port number.
Enabled	When checked, the corresponding port is enabled.
Queue Priority	Allows you to select the priority queue for the port.
STP Enabled	When checked, indicates that Spanning Tree Protocol (STP) is enabled for the card.
STP State	Displays the current STP state.

Line

The Line Properties pane allows you to view and update E100T-G line performance monitoring information.

Table C-1147 *Field Descriptions for the Line Properties Pane*

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to add a name for the port.
Mode	Allows you to select the appropriate mode for each Ethernet port. Valid choices for the E100T-12/E100T-G card are Auto, 10 Half, 10 Full, 100 Half, or 100 Full. Valid choices for the E1000-2/E1000-2-G card are 1000 Full or Auto.
Status	Displays the current optical line status.

VLAN

The VLAN Properties pane allows you to view and update E100T-G VLAN information.

Table C-1148 *Field Descriptions for the VLAN Properties Pane*

Field	Description
VLAN	Displays the name of the VLAN.
Port <i>x</i>	If a port is a member of only one VLAN, select Untag from the Port column. The VLAN with Untag selected can connect to the port, but other VLANs cannot access that port. If a port is a trunk port, it connects multiple VLANs to an external device, such as a switch, which also supports trunking. A trunk port must have tagging (802.1Q) enabled for all VLANs that connect to that external device. Select Tagged at all VLAN rows that need to be trunked. Select Untag at one or more VLAN rows in the trunk port column that do not need to be trunked; for example, the default VLAN. Each Ethernet port must be attached to at least one untagged VLAN.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update E100T-G alarm profile information.

Table C-1149 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Parent Profile	Choose a global alarm profile for the card from the drop-down list.
Port Number	Displays the ETH100 port number.
Alarm Profile	Choose an alarm profile for the slot from the drop-down list.
Suppress Alarms	When checked, all alarms are suppressed.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.



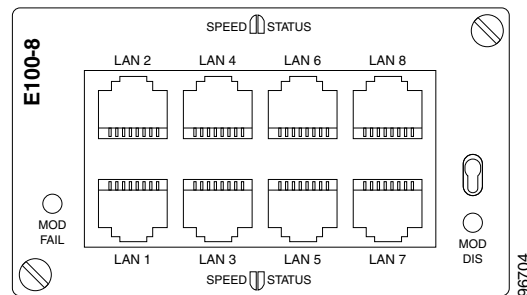
Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—E100-8 (ONS 15305 CTC)

The E100-8 module contains eight Ethernet interfaces that support both 10Base-T and 100Base-TX according to the IEEE 802.3 specification. The interfaces support half- and full-duplex modes. The interfaces are connected to an integrated Ethernet switch. The physical interface uses an RJ-45 connector. Every interface also has an LED that signals the status of the link. The module supports IP interface only. The following figure shows the module diagram.

Figure C-78 LAN 10/100Base TX Module, E100-8



For the E100-8 module, the slot properties pane displays the following properties: Module View, Identification, Port, Line, and VLAN.

Module View

The Module View displays a graphic of the E100-8 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to add, delete, change, or reset the module.

Identification

The Identification Properties pane allows you to view and update E100-8 identification information.

Table C-1150 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the hardware revision number of the software used by the ASIC chip installed on the card.

Table C-1150 *Field Descriptions for the Identification Properties Pane (continued)*

Field	Description
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Card Mode	Displays the card mode as multicard Ether Switch group, single-card Ether Switch group, or Port Mapped.
Alarm Profile	Displays the alarm profile for the port.

Port

The Port Properties pane allows you to view and update port information.



Note

The ONS 15305 supports only a partial Rapid Spanning Tree Protocol (RSTP) implementation that offers the same type of service as, for example, PortFast on Cisco equipment. The partial RSTP implementation does not support creation of a spanning tree among bridges; however, partial RSTP configures customer-facing ports for forwarding mode without having to wait for two times the forwarding delay as is the case with normal Spanning Tree Protocol (STP). To prevent loops in the network, normal STP must be running. RSTP should be used only on ports that face end-user equipment. If the ONS 15305 detects normal STP bridge protocol data units (BPDUs) on an interface configured for RSTP, the node switches back to normal STP for that interface.

Table C-1151 *Field Descriptions for the Port Properties Pane*

Field	Description
Port Number	Displays the card port number.
Enabled	When checked, the corresponding port is enabled.
Queue Priority	Allows you to select the priority queue for the port. You can select from, 0 (Low), 1 (Low), 2 (Low), 3 (Low), 4 (High), 5 (High), 6 (High), or 7 (High).
STP Enabled	When checked, indicates that STP is enabled for the card.
STP State	Displays the current STP state.

Line

The Line Properties pane allows you to view and update line card information.

Table C-1152 *Field Descriptions for the Line Properties Pane*

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to add a name for the port.

Table C-1152 *Field Descriptions for the Line Properties Pane (continued)*

Field	Description
Mode	Allows you to select the appropriate mode for each port. Valid choices are Auto, 10 Half, 10 Full, 100 Half, or 100 Full.
Status	Displays the current optical line status.

VLAN

The VLAN Properties pane allows you to view and update VLAN information.

Table C-1153 *Field Descriptions for the VLAN Properties Pane*

Field	Description
VLAN	Displays the name of the VLAN.
Port <i>x</i>	If a port is a member of only one VLAN, select Untag from the Port column. The VLAN with Untag selected can connect to the port, but other VLANs cannot access that port. If a port is a trunk port, it connects multiple VLANs to an external device, such as a switch, which also supports trunking. A trunk port must have tagging (802.1Q) enabled for all VLANs that connect to that external device. Select Tagged at all VLAN rows that need to be trunked. Select Untag at one or more VLAN rows in the trunk port column that do not need to be trunked; for example, the default VLAN. Each Ethernet port must be attached to at least one untagged VLAN.



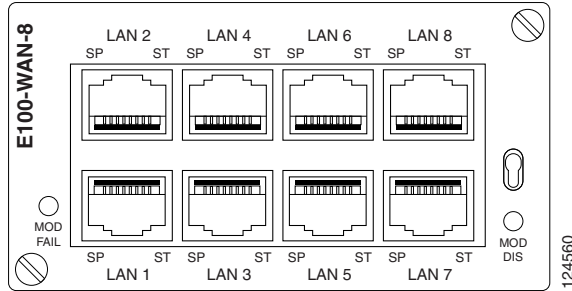
Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—E100-WAN-8 (ONS 15305 CTC)

The E100-WAN-8 module is a tributary module that supports both optical and electrical Ethernet interfaces. The module contains eight LAN Ethernet interfaces that support both 10Base-T and 100Base-TX according to the IEEE 802.3 specification. The interface supports half- and full-duplex modes.

The physical interface is RJ-45 connectors. Every interface has two LEDs; one LED indicates the link status and the other LED indicates the link speed. The module includes up to 16 Ethernet-to-SDH mappers. The module supports both L1 and L2 services. The following figure shows the module diagram.

Figure C-79 LAN 10/100Base-TX Module with Mapper, E100-WAN-8

For the E100-WAN-8 module, the slot properties pane displays the following properties: Module View, Identification, Ether Line, Ether Port, WAN Line, and VLAN.

Module View

The Module View displays a graphic of the E100-WAN-8 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to add, delete, change, or reset the module.

Identification

The Identification Properties pane allows you to view and update E100-WAN-8 identification information.

Table C-1154 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the hardware revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format "V99_." The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Card Mode	Displays the card mode as multcard Ether Switch group or Port Mapped.
Alarm Profile	Displays the alarm profile for the port.

Ether Line

The Ether Line Properties pane allows you to configure Ether line information.

Table C-1155 *Field Descriptions for the Ether Line Properties Pane*

Field	Description
Port Number	The port number.
Port Name	Allows you to add a name for the port.
Mode	Allows you to select the appropriate mode for each port. Valid choices are Auto, 10 Half, 10 Full, 100 Half, or 100 Full.
Status	Displays the current optical line status.

Ether Port

The Ether Port Properties pane allows you to view and update port information.

Table C-1156 *Field Descriptions for the Ether Port*

Field	Description
Port Number	Displays the card port number.
Enabled	When checked, the corresponding port is enabled.
Queue Priority	Allows you to select the priority queue for the port. You can select from, 0 (Low), 1 (Low), 2 (Low), 3 (Low), 4 (High), 5 (High), 6 (High), or 7 (High).
STP Enabled	When checked, indicates that Spanning Tree Protocol (STP) is enabled for the card.
STP State	Displays the current STP state.

WAN Line

The WAN Line Properties pane allows you to view and configure wide-area network (WAN) line information.

Table C-1157 *Field Descriptions for the WAN Line*

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.

VLAN

The VLAN Properties pane allows you to view and update VLAN information.

Table C-1158 Field Descriptions for the VLAN Properties Pane

Field	Description
VLAN	Displays the name of the VLAN.
Port <i>x</i>	If a port is a member of only one VLAN, select Untag from the Port column. Select — for all the other VLAN rows in that Port column. The VLAN with Untag selected can connect to the port, but other VLANs cannot access that port. If a port is a trunk port, it connects multiple VLANs to an external device, such as a switch, which also supports trunking. A trunk port must have tagging (802.1Q) enabled for all VLANs that connect to that external device. Select Tagged at all VLAN rows that need to be trunked. Select Untag at one or more VLAN rows in the trunk port column that do not need to be trunked; for example, the default VLAN. Each Ethernet port must be attached to exactly one untagged VLAN.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—ETH1000

The slot properties pane displays information about the Cisco ONS 15327, ONS 15454 SONET, or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The ONS 15454 and ONS 15454 SDH ETH1000 cards incorporate Layer 2 switching, while the G-series card is a straight mapper card. The ONS 15454 E-series cards include the E100T-12/E100T-G and E1000-2/E1000-2-G. E-series cards support VLAN, IEEE 802.1Q, spanning tree, and IEEE 802.1D. An ONS 15454 holds a maximum of ten Ethernet cards, which can be inserted in any multipurpose slot.

For the ETH1000 module, the slot properties pane displays the following properties: Module View, Identification, Port, Line, VLAN, and Alarm Behavior.

Module View

The Module View displays a graphic of the ETH1000 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to add, delete, change, or reset the module.

Identification

The Identification Properties pane allows you to view and update ETH1000 identification information.

Table C-1159 *Field Descriptions for the Identification Properties Pane*

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the hardware revision number of the software used by the ASIC chip installed on the card.
Equipment State	Displays the equipment state of the card.
Card Mode	Allows you to select a multiscard Ether Switch group, a single-card Ether Switch group, or the Port Mapped mode for E-series cards.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Port

The Port Properties pane allows you to view and update ETH1000 port information.

Table C-1160 *Field Descriptions for the Port Properties Pane*

Field	Description
Port Number	Displays the card port number.
Enabled	When checked, the corresponding port is enabled.
Queue Priority	Allows you to select the priority queue for the port.
STP Enabled	When checked, indicates that Spanning Tree Protocol (STP) is enabled for the port.
STP State	Displays the current STP state.

Line

The Line Properties pane allows you to view and update ETH1000 line performance monitoring information.

Table C-1161 *Field Descriptions for the Line Properties Pane*

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to add a name for the port.
Mode	Allows you to select the appropriate mode for each Ethernet port. Valid choices for the card are 1000 Full or Auto.
Status	Displays the current optical line status.

VLAN

The VLAN Properties pane allows you to view and update ETH1000 VLAN information.

Table C-1162 Field Descriptions for the VLAN Properties Pane

Field	Description
VLAN	Displays the name of the VLAN.
Port <i>x</i>	If a port is a member of only one VLAN, select Untag from the Port column. Select -- for all the other VLAN rows in that Port column. The VLAN with Untag selected can connect to the port, but other VLANs cannot access that port. If a port is a trunk port, it connects multiple VLANs to an external device, such as a switch, which also supports trunking. A trunk port must have tagging (802.1Q) enabled for all VLANs that connect to that external device. Select Tagged at all VLAN rows that need to be trunked. Select Untag at one or more VLAN rows in the trunk port column that do not need to be trunked; for example, the default VLAN. Each Ethernet port must be attached to exactly one untagged VLAN.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update ETH1000 alarm profile information.

Table C-1163 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Parent Profile	Choose a global alarm profile for the card from the drop-down list.
Port Number	Displays the ETH1000 port number.
Alarm Profile	Choose an alarm profile for the slot from the drop-down list.
Suppress Alarms	When checked, all alarms are suppressed.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—G1000-2

The slot properties pane displays information about the Cisco ONS 15327 slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The ONS 15327 G1000-2 card reliably transports Ethernet and IP data across a SONET backbone. The G1000-2 card maps up to two Gigabit Ethernet interfaces onto a SONET transport network. A single card provides scalable and provisionable transport bandwidth at the signal levels up to STS-48c per card. The card provides line rate forwarding for all Ethernet frames (unicast, multicast, and broadcast) and can be configured to support jumbo frames (defined as a maximum of 10,000 bytes).

For the G1000-2 module, the slot properties pane displays the following properties: Module View, Identification, Port, Loopback, Thresholds, Alarm Behavior, J1 Path Trace, and Info.

Module View

The Module View displays a graphic of the G1000-2 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update G1000-2 identification information.

Table C-1164 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Port

The Port Properties pane allows you to view and update G1000-2 port information.

Table C-1165 Field Descriptions for the Port Properties Pane

Field	Description
Port Number	Displays the card port number.
Port Name	Allows you to add a name for the optical port.
Max Frame	To permit the acceptance of jumbo-size Ethernet frames, select Jumbo (the default). If you do not want to permit jumbo-size Ethernet frames, select 1548.

Table C-1165 *Field Descriptions for the Port Properties Pane (continued)*

Field	Description
Flow Control	Displays the negotiated flow control mode. Values are None, Symmetrical, and Asymmetrical.
Auto Negotiation	Allows you to enable the card to match the speed and duplex mode of a partner node.
Negotiation Status	Displays the result of the most-recent autonegotiation. The type of flow control that was negotiated will be displayed.
Media Type	Indicates the type of SFP installed.
Administration State	Displays the status of the line. The line can be In Service (IS), In Service–Auto In Service Soak (IS_AINS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).
Water Marks	Watermarks can either be Custom, Low Latency, or Default.
Flow Control Low	Displays the minimum flow control.
Flow Control High	Displays the maximum flow control.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Loopback

The Loopback Properties pane allows you to view and update G1000-2 loopback information.

Table C-1166 *Field Descriptions for the Loopback Properties Pane*

Field	Description
Port Number	Displays the port number.
Administration State	Allows you to select the administration state of the port: In Service (IS) or Out of Service (OOS).
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or clear the current loopback (none).

Thresholds

The Thresholds Properties pane allows you to create, view, and delete G1000-2 thresholds.

Table C-1167 *Field Descriptions for the Threshold Properties*

Field	Description
Index #	A unique value that identifies the different thresholds currently existing on the NE.
Slot	Select a slot for the new Ether threshold.
Port	Select a port for the selected slot. If you select All, the threshold will be created on all ports for that slot. This operation may take several minutes to complete.
Variable	Select a variable for the new Ether threshold. Available variables will differ based on the type of card selected in the Slot field.
Alarm Type	Select an alarm type for the new Ether threshold. Available alarm types are Rising, Falling, and Rising and Falling.

Table C-1167 Field Descriptions for the Threshold Properties (continued)

Field	Description
Sample Type	Select a sample type for the new Ether threshold. Available sample types are Relative and Absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of any time period.
Sample Period	Enter a sample period for the new Ether threshold. The sample period is measured in seconds.
Rising Threshold	Enter a rising threshold for the new Ether threshold. The value must be equal to or greater than the Falling Threshold value.
Falling Threshold	Enter a falling threshold for the new Ether threshold. The value must be equal to or less than the rising threshold value.
Create	Click the Create button to create a G1000-2 thresholds.
Delete	Select a G1000-2 threshold from the list displayed and click the Delete button.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update G1000-2 alarm profile information.

Table C-1168 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Parent Profile	Choose a global alarm profile for the card from the drop-down list.
Port Number	Displays the G1000-2 port number.
Alarm Profile	Choose an alarm profile for the slot from the drop-down list.
Suppress Alarms	When checked, all alarms are suppressed.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and retrieve G1000-2 J1 path trace information.

Table C-1169 Field Descriptions for the J1 Path Trace Properties Pane

Column	Description
Port Number	Displays the port number.
Circuit Type	Displays the circuit type.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the G1000-2 card.

Table C-1170 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

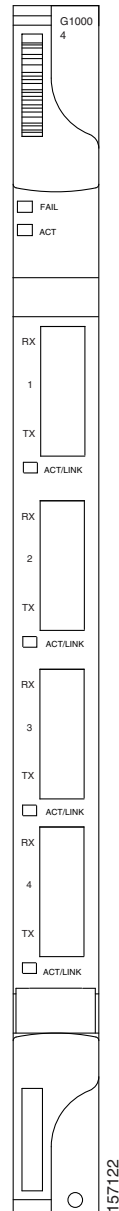
Slot Properties—G1000-4

The slot properties pane displays information about the Cisco ONS 15327, ONS 15454 SONET, or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The ONS 15454 SONET G1000-4 card reliably transports Ethernet and IP data across a SONET backbone. The G1000-4 card maps up to four Gigabit Ethernet interfaces onto a SONET transport network. A single card provides scalable and provisionable transport bandwidth at the signal levels up to STS-48c per card. The card provides line rate forwarding for all Ethernet frames (unicast, multicast, and broadcast) and can be configured to support jumbo frames (defined as a maximum of 10,000 bytes).

For ONS 15454 SDH NEs, the G1000-4 card provides four ports of IEEE-compliant, 1000-Mb/s interfaces. Each interface supports full-duplex operation for a maximum bandwidth of 1 Gb/s or 2 Gb/s bidirectional per port, and 2.5 Gb/s or 5 Gb/s bidirectional per card. Each port autonegotiates for full duplex and 802.3x flow control. The G1000-4 card uses GBIC modular receptacles for the optical interfaces.

The following figure shows the card faceplate.

Figure C-80 G1000-4 Module

For the G1000-4 module, the slot properties pane displays the following properties: Module View, Identification, Port, Loopback, Thresholds, Alarm Behavior, J1 Path Trace, and Info.

Module View

The Module View displays a graphic of the G1000-4 that is installed in the slot. In the module graphic the small arrows indicate the transponder mode. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to add, delete, change, or reset the module.

Identification

The Identification Properties pane allows you to view and update G1000-4 identification information.

Table C-1171 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Current Bandwidth Usage	Displays the current bandwidth utilization in terms of STS or VC-4 usage.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Port

The Port Properties pane allows you to view and update G1000-4 port information.

Table C-1172 Field Descriptions for the Port Properties Pane

Field	Description
Port Number	Displays the card port number.
Port Name	Allows you to add a name for the optical port.
Max Frame	To permit the acceptance of jumbo-size Ethernet frames, select Jumbo (the default). If you do not want to permit jumbo-size Ethernet frames, select 1548.
Flow Control	Displays the negotiated flow control mode. Values are None, Symmetrical, and Asymmetrical.
Auto Negotiation	Allows you to enable the card to match the speed and duplex mode of a partner node.
Negotiation Status	Displays the result of the most-recent autonegotiation. The type of flow control that was negotiated will be displayed.
Media Type	Indicates the type of SFP installed.

Table C-1172 Field Descriptions for the Port Properties Pane (continued)

Field	Description
Administration State	Displays the status of the line. The line can be In Service (IS), Out of Service (OOS), or Out of Service–Maintenance (OOS_MT).
Transponder Port	Ports in the transponding mode.
Transponder Mode	The GigE Ethernet Transponder can be set for 3 different operation modes: - Two ports bidirectional transponder mode (Tx and Rx of one port can be mapped into Rx and Tx of another port) - One port bidirectional transponding mode (Ethernet frames received at port Rx will be transmitted out at the same port Tx) - Two ports unidirectional transponding mode (Ethernet frames received at one port Rx will be transmitted out at another port Tx). In the module view the small arrows indicate the transponder mode (see the module graphic in the Module View description).
Water Marks	Adjustable buffers for flow control.
Flow Control Low	Flow control low value.
Flow Control High	Flow control high value.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Link Integrity Disable	If this check box is checked, the Link Integrity Timer field for the corresponding port number will be disabled.
Link Integrity Timer	Set the link integrity timer for the port. Enter a range from 200 to 5000 milliseconds, in increments of 100 milliseconds. Enabling link integrity ensures that links are never broken.

Loopback

The Loopback Properties pane allows you to view and update G1000-4 loopback information.

Table C-1173 Field Descriptions for the Loopback Properties Pane

Field	Description
Port Number	Displays the port number.
Administration State	Allows you to select the administration state of the port: In Service (IS) or Out of Service (OOS).
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or clear the current loopback (none).

Thresholds

The Thresholds Properties pane allows you to create, view, and delete G1000-4 thresholds.

Table C-1174 *Field Descriptions for the Thresholds Properties Pane*

Field	Description
Index #	A unique value that identifies the different thresholds currently existing on the NE.
Slot	Select a slot for the new Ether threshold.
Port	Select a port for the selected slot. If you select All, the threshold will be created on all ports for that slot. This operation may take several minutes to complete.
Variable	Select a variable for the new Ether threshold. Available variables will differ based on the type of card selected in the Slot field.
Alarm Type	Select an alarm type for the new Ether threshold. Available alarm types are Rising, Falling, and Rising and Falling.
Sample Type	Select a sample type for the new Ether threshold. Available sample types are Relative and Absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of any time period.
Sample Period	Enter a sample period for the new Ether threshold. The sample period is measured in seconds.
Rising Threshold	Enter a rising threshold for the new Ether threshold. The value must be equal or greater than the Falling Threshold value.
Falling Threshold	Enter a falling threshold for the new Ether threshold. The value must be equal or less than the rising threshold value.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update G1000-4 alarm profile information.

Table C-1175 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Parent Profile	Choose a global alarm profile for the card from the drop-down list.
Port Number	Displays the G1000-4 port number.
Alarm Profile	Choose an alarm profile for the slot from the drop-down list.
Suppress Alarms	When checked, all alarms are suppressed.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and retrieve G1000-4 J1 path trace information.

Table C-1176 *Field Descriptions for the J1 Path Trace Properties Pane*

Column	Description
Port Number	Displays the port number.
Circuit Type	Displays the circuit type.
Expected String	Displays the current expected string.
Received String	Displays the current received string.

Table C-1176 Field Descriptions for the J1 Path Trace Properties Pane (continued)

Column	Description
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the G1000-4 card.

Table C-1177 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



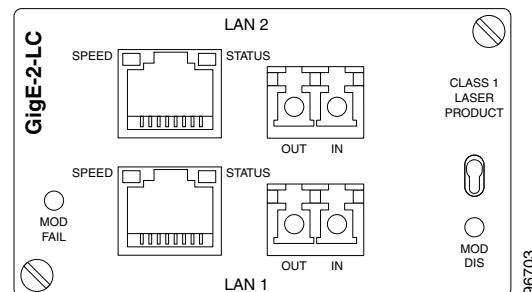
Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—GE-2 (ONS 15305 CTC)

The slot properties pane displays information about the Cisco ONS 15305 CTC slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The GE-2 module contains two Gigabit Ethernet (GE) interfaces that meet the 1000Base-LX specification in IEEE 802.3. This interface is a long-haul interface based on single-mode fiber. The physical connector is an LC connector. The following figure shows the card faceplate.

Figure C-81 Dual Optical LAN 1000BASE-LX, GE-2 Module

For the GE-2 module, the slot properties pane displays the following properties: Module View, Identification, Line, Port, and VLAN.

Module View

The Module View displays a graphic of the GE-2 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to add, delete, change, or reset the module.

Identification

The Identification Properties pane allows you to view and update GE-2 identification information.

Table C-1178 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the hardware revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Card Mode	Displays the card mode as, multiscard Ether Switch group, a single-card Ether Switch group, or the Port Mapped mode for E-series cards.
Alarm Profile	Displays the alarm profile for the port.

Line

The Line Properties pane allows you to view and update line card information.

Table C-1179 Field Descriptions for the Line Properties Pane

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to add a name for the port.
Mode	Allows you to select the appropriate mode for each port. Valid choices are Auto, 10 Half, 10 Full, 100 Half, 100 Full, 1000 Half, or 1000 Full.
Status	Displays the current optical line status.

Port

The Port Properties pane allows you to view and update port information.

Table C-1180 Field Descriptions for the Port Properties Pane

Field	Description
Port Number	Displays the card port number.
Enabled	When checked, the corresponding port is enabled.
Queue Priority	Allows you to select the priority queue for the port. You can select from, 0 (Low), 1 (Low), 2 (Low), 3 (Low), 4 (High), 5 (High), 6 (High), or 7 (High).
STP Enabled	When checked, indicates that Spanning Tree Protocol (STP) is enabled for the card.
STP State	Displays the current STP state.

VLAN

The VLAN Properties pane allows you to view and update VLAN information.

Table C-1181 Field Descriptions for the VLAN Properties Pane

Field	Description
VLAN	Displays the name of the VLAN.
Port <i>x</i>	If a port is a member of only one VLAN, select Untag from the Port column. The VLAN with Untag selected can connect to the port, but other VLANs cannot access that port. If a port is a trunk port, it connects multiple VLANs to an external device, such as a switch, which also supports trunking. A trunk port must have tagging (802.1Q) enabled for all VLANs that connect to that external device. Select Tagged at all VLAN rows that need to be trunked. Select Untag at one or more VLAN rows in the trunk port column that do not need to be trunked; for example, the default VLAN. Each Ethernet port must be attached to at least one untagged VLAN.



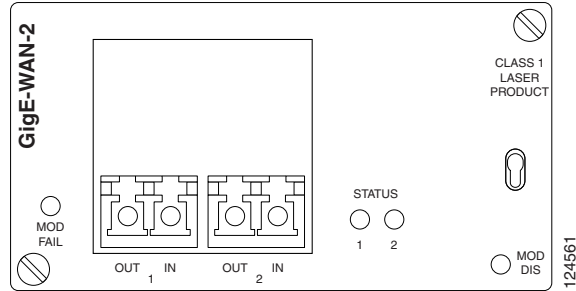
Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—GigE-WAN-2 (ONS 15305 CTC)

The slot properties pane displays information about the Cisco ONS 15305 CTC slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The GigE-WAN-2 module is a tributary module that supports both optical and electrical Gigabit Ethernet interfaces. It supports up to two interfaces and includes up to two Gigabit Ethernet-to-SDH mappers. The module supports both L1 and L2 services. The following figure shows the module diagram.

Figure C-82 Dual Optical LAN 1000Base-LX Module with Mapper, GigE-WAN-2

For the GigE-WAN-2 module, the slot properties pane displays the following properties: Module View, Identification, Ether Line, Ether Port, WAN Line, and VLAN.

Module View

The Module View displays a graphic of the GigE-WAN-2 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to add, delete, change, or reset the card.

Identification

The Identification Properties pane allows you to view and update identification information.

Table C-1182 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware version number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the hardware revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format "V99_." The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Equipment State	Displays the equipment state of the card.
Card Mode	Displays the card mode as multcard Ether Switch group or Port Mapped.
Alarm Profile	Displays the alarm profile for the port.

Ether Line

The Ether Line Properties pane allows you to configure Ether line information.

Table C-1183 *Field Descriptions for the Ether Line Properties Pane*

Field	Description
Port Number	The port number.
Port Name	Allows you to enter a port name.
Mode	Allows you to set the mode for the port to 1000 Full.
Status	Displays the current optical line status.

Ether Port

The Ether Port Properties pane allows you to view and update port information.

Table C-1184 *Field Descriptions for the Ether Port Properties Pane*

Field	Description
Port Number	Displays the card port number.
Enabled	When checked, the corresponding port is enabled.

WAN Line

The WAN Line Properties pane allows you to view and configure wide-area network (WAN) line information.

Table C-1185 *Field Descriptions for the WAN Line*

Field	Description
Port Number	Displays the optical port number.
Port Name	Allows you to enter an optical port name.

VLAN

The VLAN Properties pane allows you to view and update VLAN information.

Table C-1186 *Field Descriptions for the VLAN Properties Pane*

Field	Description
VLAN	Displays the name of the VLAN.
Port <i>x</i>	If a port is a member of only one VLAN, select Untag from the Port column. Select -- for all the other VLAN rows in that Port column. The VLAN with Untag selected can connect to the port, but other VLANs cannot access that port. If a port is a trunk port, it connects multiple VLANs to an external device, such as a switch, which also supports trunking. A trunk port must have tagging (802.1Q) enabled for all VLANs that connect to that external device. Select Tagged at all VLAN rows that need to be trunked. Select Untag at one or more VLAN rows in the trunk port column that do not need to be trunked; for example, the default VLAN. Each Ethernet port must attached to exactly one untagged VLAN.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—ML-100T-8

The slot properties pane displays information about the Cisco ONS 15310 CL, Cisco ONS 15310 MA SONET, or Cisco ONS 15310 MA SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The ML-100T-8 card provides feature parity with the ONS 15454 ML card features. The ML-100T-8 card interoperates with ML-series cards as a hub node, and also interoperates with other ML cards on an RPR ring. The card also supports concatenation functions to construct transport trails (for example, VC-4-4c) for carrying packet data. The card provides contiguous, low-order, and high-order virtual concatenation. The ML-100T-8 card has its own PID and CLEI, and a port count that ranges from 0 to 7.

For the ML-100T-8 module, the slot properties pane displays the following properties: Module View, Identification, Configuration, POS, Ether, Alarm Behavior, L2 Service Drops, Card Parameters, Thresholds, J1 Path Trace, and Info.

Module View

The Module View displays a graphic of the ML-100T-8 module that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s).

Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Identification

The Identification Properties pane allows you to view and update ML-100T-8 identification information.

Table C-1187 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.

Table C-1187 *Field Descriptions for the Identification Properties Pane (continued)*

Field	Description
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Configuration

The Configuration Properties pane allows you to upload or download a configuration file for the ML-100T-8 card.

Table C-1188 *Field Descriptions for the Configuration Properties Pane*

Field	Description
IOS Startup Config	
Source	Displays the source of the configuration file.
Host	Displays the host machine where the configuration file is stored, or the location where the file will be downloaded.
Filename	Displays the name of the configuration file.
Directory	Displays the directory on the host machine for the configuration file.
Time Stamp	Displays the date and time of the file upload or download. The time stamp shows the time on the NE, not the time on the Prime Optical server. Note You can update the time stamp on the NE in the node-level NE Explorer > Identification Properties pane.
IOS Config File	
CTX >> File	Click this button to download the file from the CTX card to the host machine. Select Local or Server in the CTX >> File dialog box to designate a location for the file.
File >> CTX	Click this button to upload the file from the host machine to the CTX card. Select Local or Server in the File >> CTX dialog box to designate a location for the file.
Launch CLI	Click this button to launch the command-line interface (CLI).
Microcode	
Microcode	Configure the ML-series card with one of the following microcode images: - Base—Enables base features, which include IP multicast routing and IP fragmentation. - Enhanced—Enables Ethernet Relay Multipoint Service (ERMS), enhanced packet statistics, and enhanced Dual RPR Interconnect (DRPRI). This disables IP fragmentation and IP multicast routing features supported by the base microcode image. - MPLS—Enables Multiprotocol Label Switching (MPLS). Note After changing the microcode, you should reset the card manually.
Hostname	

Table C-1188 *Field Descriptions for the Configuration Properties Pane (continued)*

Field	Description
Hostname	Enter the hostname of the device where you want to upload or download a configuration file for the card.
IOS Access	
Enable Console Port Access	Allows you to enable access to ML cards through the console port. If this field is disabled, you cannot connect to the ML card through the console port.
Enable RADIUS Relay	Allows you to enable access to ML cards through the RADIUS relay server.

POS

The POS Properties pane allows you to view and update ML-100T-8 POS port information.

Table C-1189 *Field Descriptions for the POS*

Field	Description
POS Ports	
Port Number	Displays the port number.
Port Name	Allows you to add a name for the optical port.
AINS Suppress Alarms	Choose ON to suppress alarms for the selected port; choose OFF to switch alarm suppression off for the selected port.
AINS Soak	Enter the soak time in hours from 0 to 48, and in minutes from 0 to 45 (in 15-minute increments).
State	Displays the state of the port. Values are Up and Down.
Link State	Displays the link state. Values are Up and Down.
MTU	Maximum transmission unit. The largest acceptable packet size configured for that port. The default value is 1500.
POS Provisioning	
Port Number	Displays the port number.
Interface State	Status of the interface (up or shut down). When the interface is shut down, no traffic can flow through it.
MTU Size	Maximum transmission unit. The largest acceptable packet size configured for that port. The default value is 1500.
Framing Type	Shows the encapsulation type. Values are: - HDLC—High-level data link control; does not support VLAN trunking. Standard on most Cisco data devices. - GFP-F—Frame-mapped generic framing procedure; a protocol data unit (PDU)-oriented adaptation mode that maps a client frame into one GFP frame. - None—No framing type.
CoS Accounting	Indicates whether or not PM is enabled on the POS.

Ether

The Ether Properties pane allows you to view and update ML-100T-8 Ethernet port information.

Table C-1190 *Field Descriptions for the Ether*

Field	Description
Ether Ports	
Port Number	Displays the configurable identifier for the port.
Port Name	Displays the name of the port.
AINS Suppress Alarms	Choose ON to suppress alarms for the selected port; choose OFF to switch alarm suppression off for the selected port.
AINS Soak	Enter the soak time in hours from 0 to 48, and in minutes from 0 to 45 (in 15-minute increments).
State	Displays the configured administration port state, which is active or inactive. Values are UP and DOWN.
Link State	Displays the physical port state. Values are UP and DOWN.
Operating Speed	Displays the operating speed for the ports.
Operating Duplex	Actual setting of the port. Values are Auto, Full, and Half.
Flow Control	Displays the negotiated flow control mode. Values are None, Symmetrical, and Asymmetrical.
Fast Ethernet Provisioning	
Port Number	Displays the port number.
Interface State	Status of the interface (up or shut down). When the interface is shut down, no traffic can flow through it.
Speed	Displays the operating speed for the ports.
Duplex	Actual setting of the port. Values are Auto, Full, and Half.
Flow Control (Send)	Negotiated flow control mode, which configures the send traffic flow operation. Flow control works only with policing. Values and their impact on traffic flow are: - Desired—Allow but do not require flow-control packets on port - Off—Disable flow-control packets on port - On—Enable flow-control packets on port (works only with policing)
CoS Accounting	Indicates whether or not PM is enabled on the port.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information for POS and Ethernet ports.

Table C-1191 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Equipment State	Displays the equipment state of the card.
Alarm Profile	Select the alarm profile for the port.
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Port Number	Displays the port number.
Alarm Profile	Displays the alarm profile for the port.

Table C-1191 *Field Descriptions for the Alarm Behavior Properties Pane (continued)*

Field	Description
Suppress Alarms	Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

L2 Service Drops

The L2 Service Drops Properties pane allows you to view L2 service drop configuration settings. Click the **Show QoS Parameters** button to open the QoS for L2 Service Drop Port table, which shows the QoS for the selected drop.

Table C-1192 *Field Descriptions for the L2 Service Drops Properties Pane*

Field	Description
Port No.	The port number.
Port Sub Interface	The port subinterface.
Topology Name	The topology name.
SP VLAN ID	The service provider VLAN ID.
Customer ID	The customer ID.
Service ID	The service ID.
Bridge Group	The bridge group.
Port Type	The port type (UNI or NNI).
Connection Type	The connection type (Dot1Q, Untagged, or QinQ).
Policing	The QoS policy configured on the selected front port interface or subinterface. Supported values are CIR/PIR and Best Effort.
RSTP	When checked, RSTP is enabled.

Card Parameters

The Card Parameters Properties pane allows you to view card parameter settings.

Table C-1193 *Field Descriptions for the Card Properties Pane Parameters*

Field	Description
Port Number	The port number.
Port Sub Interface	The port subinterface.
Bridge Group	The bridge group.
CIR	The committed information rate. The range is from 96000 to 8000000000 bits per second.
CIR Burst	The maximum CIR burst. The default is 8000 bytes; the range is from 8000 to 64000 bytes.
PIR	The peak information rate. The range is from 96000 to 8000000000 bits per second. PIR should be greater than or equal to CIR.

Table C-1193 *Field Descriptions for the Card Properties Pane Parameters (continued)*

Field	Description
PIR Burst	The maximum PIR burst. The default is 64000 bytes; the range is from 8000 to 64000 bytes. PIR burst should be greater than or equal to CIR burst.
CCOSTRANSMIT	This keyword comes from the grammar file for the police command. For confirm action, the set-cos-transmit keyword specifies the set cos value. This value is used to determine the QoS configured on the front port of the ML card. A CCOSTRANSMIT value of 0 means a best effort policy has been configured for this port (FE/GE_IN). Other values are: 1: Best Effort (for Policy_Qos_Out) 2: CIR 3: CONTROL 4: VOICE 5: VIDEO 6: VOICE_VIDEO 7: MISSION_CRITICAL 8: SP_MANAGEMENT The card parameters shown on the NE Explorer are only for Policy_FE/GE_IN, meaning CCOSTRANSMIT is 0 or 2 (what VLAN provisioning supports).

Thresholds

The Thresholds Properties pane allows you to view and create RMON thresholds for POS and Ethernet ports.

Table C-1194 *Field Descriptions for the Thresholds Properties Pane*

Field	Description
Index Number	Displays the selected interface number.
Slot	Displays the selected card.
Port	Displays the port on the selected card.
Variable	Displays the MIB variable that is being monitored.
Alarm Type	Indicates whether the event is triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	Indicates whether the sample type is relative or absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period	Displays the sample period, in seconds.
Rising Threshold	Displays the number of occurrences for the rising threshold.
Falling Threshold	Displays the number of occurrences for the falling threshold field. In most cases, a falling threshold is set lower than the rising threshold.

Table C-1194 Field Descriptions for the Thresholds Properties Pane (continued)

Field	Description
Create	Click the Create button to create RMON thresholds for the port.
Delete	Select an RMON threshold from the list displayed and click the Delete button.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and retrieve J1 path trace information.

Table C-1195 Field Descriptions for the J1 Path Trace Properties Pane

Field	Description
Port Number	Displays the port number.
Circuit Type	Displays the circuit type.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the ML-100T-8 card.

Table C-1196 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—ML1000-2

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The Gigabit Ethernet (ML1000-2) Layer 3 switch processes up to 5.7 Mb/s. The card is integrated into the ONS 15454 SONET or ONS 15454 SDH. An ONS 15454 SONET with a 10-gigabit cross-connect card (XC10G) can host the ML1000-2 card in any traffic card slot, but an ONS 15454 SONET with a

cross-connect card (XC) or cross-connect virtual tributary card (XCVT) can only host the ML1000-2 card in the four traffic slots. An ONS 15454 SDH can host the ML1000-2 card in any traffic card slot with any cross-connect card.

For the ML1000-2 module, the slot properties pane displays the following properties: Module View, Identification, Configuration, POS, Ether, Alarm Behavior, L2 Service Drops, Card Parameters, Thresholds, J1 Path Trace, Info, and Port Channel. The properties shown depend on the NE configuration.

Module View

The Module View displays a graphic of the ML1000-2 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update ML1000-2 card identification information.

Table C-1197 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Displays the administration state. The state can either be Unlocked or Locked, Maintenance.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .

Table C-1197 Field Descriptions for the Identification Properties Pane (continued)

Field	Description
Card Mode	Select the card mode. It can be one of the following: - HDLC—High-level data link control; does not support VLAN trunking. Standard on most Cisco data devices. - GFP-F—Frame-mapped generic framing procedure; a protocol data unit (PDU)-oriented adaptation mode; maps a client frame into one GFP frame. - RPR 802.17—IEEE 802.17 Resilient Packet Ring (RPR) standard, which specifies the data traffic protection and spatial reuse over ring architecture. The RPR ring architecture is highly scalable and provides efficient transfer of packet-based traffic across a network. It is suitable for data, voice, and video applications.  Caution If you change the card mode to RPR 802.17, you must reload the barebone configuration on the ML card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Configuration

The Configuration Properties pane allows you to upload or download a configuration file for the ML1000-2 card.

Table C-1198 Field Descriptions for the Configuration Properties Pane

Field	Description
IOS Startup Config	
Source	Displays the source of the configuration file.
Host	Displays the host machine where the configuration file is stored, or the location where the file will be downloaded.
Filename	Displays the name of the configuration file.
Directory	Displays the directory on the host machine for the configuration file.
Time Stamp	Displays the date and time of the file upload or download. The time stamp shows the time on the NE, not the time on the Prime Optical server. Note You can update the time stamp on the NE in the node-level NE Explorer > Identification Properties pane.
IOS Config File	
TCC >> File	Click this button to download the file from the TCC card to the host machine. Select Local or Server in the TCC >> File dialog box to designate a location for the file. Note If you select Server, the file is saved in the \$CTMROOT/IosConfig directory.
File >> TCC	Click this button to upload the file from the host machine to the TCC card. Select Local or Server in the File >> TCC dialog box to designate a location for the file.
Launch CLI	Click this button to launch the command-line interface (CLI).
Hostname	

Table C-1198 *Field Descriptions for the Configuration Properties Pane (continued)*

Field	Description
Hostname	Displays the hostname that was configured through the Cisco IOS CLI. You can enter a different value for the hostname if required.
Microcode	
Microcode	Configure the ML-series card with one of the following microcode images. Select either: - Base—Enables base features, which include IP multicast routing and IP fragmentation. - Enhanced—Enables Ethernet Relay Multipoint Service (ERMS), enhanced packet statistics, and enhanced Dual RPR Interconnect (DRPRI). This disables IP fragmentation and IP multicast routing features supported by the base microcode image. Note After changing the microcode, you should reset the card manually.
IOS Access	
Enable Console Port Access	Allows you to enable access to ML cards through the console port. If this field is disabled, you cannot connect to the ML card through the console port.
Enable RADIUS Relay	Allows you to enable access to ML cards through the RADIUS relay server.

POS

The POS Properties pane allows you to view and update ML1000-2 POS port information.

Table C-1199 *Field Descriptions for the POS Properties Pane*

Field	Description
POS Ports	
Port Number	Displays the configurable identifier for the port.
Port Name	Displays the name of the port.
AINS Suppress Alarms	Choose ON to suppress alarms for the selected port; choose OFF to switch alarm suppression off for the selected port.
AINS Soak	Enter the soak time in hours from 0 to 48, and in minutes from 0 to 45 (in 15-minute increments).
State	Displays the configured administration port state, which is active or inactive. Values are UP and DOWN. Note The Administration State field displays “DOWN” whenever a circuit is not provisioned. To see the actual administration state of the port, view the POS Properties pane > POS Provisioning tab. The Interface State attribute shows the actual Administration State value.
Link State	Displays the physical port state. Values are UP and DOWN.
MTU	Maximum transmission unit. The largest acceptable packet size configured for that port. Maximum setting is 9000 and the default size is 1500. The MTU value will display 0 until the POS port is used in creating a circuit.

Table C-1199 *Field Descriptions for the POS Properties Pane (continued)*

Field	Description
Framing Type	Shows the encapsulation type. Values are: • HDLC—High-level data link control; does not support VLAN trunking. Standard on most Cisco data devices. • GFP-F—Frame-mapped generic framing procedure; a protocol data unit (PDU)-oriented adaptation mode that maps a client frame into one GFP frame. • None—No framing type.
RPR Span	
Port Number	Displays the port number.
Port Name	Displays the name of the port. You can edit the port name.
AINS Suppress Alarms	Choose ON to suppress alarms for the selected port; choose OFF to switch alarm suppression off for the selected port.
AINS Soak	Enter the automatic in-service soak time, which is the amount of valid input signal, after which the port is set in service by the software. The range is from 0 to 48 hours, in 15-minute increments.
Span Interface	Displays the direction of the RPR span, either RPR_EAST or RPR_WEST.
State	Displays the state of the east and west spans.
Framing Type	Indicates the framing type, which is RPR 802.17.
Jumbo	Displays a value of true, which indicates that jumbo frame support is applied on all of the ML cards participating in the 802.17 RPR topology. Jumbo frame support is set at the ring level and carried in the attribute discovery messages.
Edge	Indicates the existence of a protection edge in an open ring. Values are: • EDGE—The selected RPR has a protection edge in an open ring. • NO_EDGE—The selected RPR does not have a protection edge in an open ring.
POS Provisioning	
Port Number	Displays the port number.
Interface State	Status of the interface (up or shut down). When the interface is shut down, no traffic can flow through it.
MTU Size	Maximum transmission unit. The largest acceptable packet size configured for that port. The default value is 1500.
CoS Accounting	Indicates whether or not PM is enabled on the POS.
RPR Span Provisioning	
Port Number	Displays the port number.
Interface State	Check the Interface State check box to bring up the interface. Leave the check box unchecked to shut down the interface. When the interface is shut down, no traffic can flow through it.

Ether

The Ether Properties pane allows you to view and update ML1000-2 Ethernet port information.

Table C-1200 *Field Descriptions for the Ether*

Field	Description
Ether Ports	
Port Number	Displays the configurable identifier for the port.
Port Name	Displays the name of the port.
AINS Suppress Alarms	Choose ON to suppress alarms for the selected port; choose OFF to switch alarm suppression off for the selected port.
AINS Soak	Enter the soak time in hours from 0 to 48, and in minutes from 0 to 45 (in 15-minute increments).
State	Displays the configured administration port state, which is active or inactive. Values are UP and DOWN.
Link State	Displays the physical port state. Values are UP and DOWN.
MTU	Maximum transmission unit. The largest acceptable packet size configured for that port. The default value is 1500.
Operating Speed	Displays the operating speed for the ports.
Operating Duplex	Actual setting of the port. Values are Auto, Full, and Half.
Flow Control	Displays the negotiated flow control mode. Values are None, Symmetrical, and Asymmetrical.
Optics	Displays the SFP physical media type. Values are Unplugged, 1000 SX, and 1000 LX.
Gigabit Ethernet Provisioning	
Port Number	Displays the port number.
Interface State	Status of the interface (up or shut down). When the interface is shut down, no traffic can flow through it.
MTU Size	Maximum transmission unit. The largest acceptable packet size configured for that port. The default value is 1500.
Speed	Displays the operating speed for the ports.
Flow Control (Send)	Negotiated flow control mode, which configures the send traffic flow operation. Flow control works only with policing. Values and their impact on traffic flow are: - Desired—Allow but do not require flow-control packets on port - Off—Disable flow-control packets on port - On—Enable flow-control packets on port (works only with policing)
Flow Control (Receive)	Negotiated flow control mode, which configures the receiving traffic flow operation. Values and their impact on traffic flow are: - Desired—Allow but do not require flow-control packets on port - Off—Disable flow-control packets on port - On—Enable flow-control packets on port (works only with policing)
CoS Accounting	Indicates whether or not PM is enabled on the port.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update ML1000-2 alarm profile information for the POS and Ethernet ports and RPR spans.

Table C-1201 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Equipment State	Displays the equipment state.
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

L2 Service Drops

The L2 Service Drops Properties pane allows you to view L2 service drop configuration settings. Click the **Show QoS Parameters** button to open the QoS for L2 Service Drop Port table, which shows the QoS for the selected drop.

Table C-1202 Field Descriptions for the L2 Service Drops Properties Pane

Field	Description
Port No.	The port number.
Port Sub Interface	The port subinterface.
Topology Name	The topology name.
SP VLAN ID	The service provider VLAN ID.
Customer ID	The customer ID.
Service ID	The service ID.
Bridge Group	The bridge group.
Port Type	The port type (UNI or NNI).
Connection Type	The connection type (Dot1Q, Untagged, or QinQ).
Policing	The QoS policy configured on the selected front port interface or subinterface. Supported values are CIR/PIR and Best Effort.
RSTP	When checked, RSTP is enabled.

Card Parameters

The Card Parameters Properties pane allows you to view card parameter settings.

Table C-1203 *Field Descriptions for the Card Properties Pane Parameters*

Field	Description
Port No.	The port number.
Port Sub Interface	The port subinterface.
Bridge Group	The bridge group.
CIR	The committed information rate. The range is from 96000 to 800000000 bits per second.
CIR Burst	The maximum CIR burst. The default is 8000 bytes; the range is from 8000 to 64000 bytes.
PIR	The peak information rate. The range is from 96000 to 800000000 bits per second. PIR should be greater than or equal to CIR.
PIR Burst	The maximum PIR burst. The default is 64000 bytes; the range is from 8000 to 64000 bytes. PIR burst should be greater than or equal to CIR burst.
CCOSTRANSMIT	This keyword comes from the grammar file for the police command. For confirm action, the set-cos-transmit keyword specifies the set cos value. This value is used to determine the QoS configured on the front port of the ML card. A CCOSTRANSMIT value of 0 means a best effort policy has been configured for this port (FE/GE_IN). Other values are: • 1: Best Effort (for Policy_Qos_Out) • 2: CIR • 3: CONTROL • 4: VOICE • 5: VIDEO • 6: VOICE_VIDEO • 7: MISSION_CRITICAL • 8: SP_MANAGEMENT The card parameters shown on the NE Explorer are only for Policy_FE/GE_IN, meaning CCOSTRANSMIT is 0 or 2 (what VLAN provisioning supports).

Thresholds

The Thresholds Properties pane allows you to view remote monitoring (RMON) thresholds and create new RMON thresholds to allow Prime Optical to monitor ML POS counts.

Table C-1204 *Field Descriptions for the Thresholds Properties Pane*

Field	Description
Index Number	The index number.
Interface Name	The interface name. Currently, only POS0 and POS1 are supported.
Direction	The direction of the reported statistics. Currently, only output is supported.
COS	The class of service level. Supported levels are 0 to 7.

Table C-1204 Field Descriptions for the Thresholds Properties Pane (continued)

Field	Description
Sample Period	The sample period, in seconds.
Variable	The MIB variable to monitor. Supported variables are cportQosDropPkts and cportQosDropOctets in the cportQosStatsTable in CISCO-PORT-QOS-MIB.
Sample Type	The sample type (relative or absolute). Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Rising Threshold	The number of occurrences for the rising threshold. Note For a rising type of alarm, the measured value must move from below the falling threshold to above the rising threshold. For example, if a network is running below a falling threshold of 400 collisions every 15 seconds and a problem causes 1001 collisions in 15 seconds, the excess occurrences trigger an alarm.
Falling Threshold	The number of occurrences for the falling threshold. In most cases, a falling threshold is set lower than the rising threshold. A falling threshold is the counterpart to a rising threshold. When the number of occurrences is above the rising threshold and then drops below a falling threshold, it resets the rising threshold. For example, when the network problem that caused 1001 collisions in 15 minutes subsides and creates only 799 collisions in 15 minutes, occurrences fall below a falling threshold of 800 collisions. This resets the rising threshold so that if network collisions again spike over 1000 per 15-minute period, an event again triggers when the rising threshold is crossed. An event is triggered only the first time a rising threshold is exceeded (otherwise a single network problem might cause a rising threshold to be exceeded multiple times and cause a flood of events).

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and retrieve J1 path trace information.

Table C-1205 Field Descriptions for the J1 Path Trace Properties Pane

Field	Description
Port Number	Displays the port number.
Circuit Type	Displays the circuit type.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
VCAT Member Number	Displays the virtual concatenation (VCAT) member number.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the ML1000-2.

Table C-1206 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.

Port Channel

The Port Channel Properties pane allows you to configure the port channel interface on ML1000-2 cards. Port channel (also known as *link aggregation*) is a trunking technology that groups together multiple full-duplex IEEE 802.3 Gigabit Ethernet/Fast Ethernet interfaces to provide fault-tolerant high-speed links between switches, routers, and servers. Port channel forms a single higher bandwidth routing or bridging endpoint and was designed primarily for host-to-switch connectivity.

Table C-1207 Field Descriptions for the Port Channel Properties Pane

Field	Description
Port Channel Table	
Create	Opens the Create Port Channel ID dialog box, which allows you create a new port channel. Each ML1000-2 card supports up to two port channels. A maximum of two Gigabit Ethernet ports can bundle into one Gigabit Ethernet Channel (GEC) and provide 2-Gb/s full-duplex aggregate capacity on the ML1000-2 card. See Creating a Port Channel, page 7-318 . Note The Create button is dimmed if two port channels have already been created.
Modify	Opens the Modify Port Channel ID dialog box, which allows you to modify an existing port channel. See Modifying a Port Channel, page 7-319 .
Delete	Deletes the selected port channel. Note You cannot delete an aggregate link that contains active members. You must first disaggregate all of the associated members from the port channel, then delete the empty port channel.
Channel ID	Displays the port channel ID, which identifies the port channel interface. Prime Optical generates the ID automatically; the range is from 1 to 64.
Admin State	Displays the status of the port channel interface (Up or Down).
MTU	Displays the maximum transmission unit (MTU) size, which is the largest acceptable packet size configured for the port channel interface. The range is from 64 to 9000 bytes; the default is 1500 bytes.
Hold Queue In	Displays the size of the memory packets input queue. The range is from 0 to 4096 bytes.
Hold Queue Out	Displays the size of the memory packets output queue. The range is from 0 to 4096 bytes.
Port Channel Members Table	
Add	Opens the Add Port Channel Member on Port Channel ID dialog box, which allows you to add members to a port channel. See Creating a Port Channel Member, page 7-320 .
Modify	Opens the Modify Port Channel Member on Port Channel ID dialog box, which allows you to modify an existing port channel member. See Modifying a Port Channel Member, page 7-321 .
Remove	Removes the selected member from the port channel.
Port No.	Displays the port number, which identifies the port channel member.

Table C-1207 Field Descriptions for the Port Channel Properties Pane (continued)

Field	Description
LACP Priority	Displays the number that Link Aggregation Control Protocol (LACP) uses with the port number to form the port identifier. The port priority determines which ports should be put in standby mode when there is a hardware limitation that prevents all compatible ports from aggregating. The range is from 1 to 65535.
LACP Mode	Defines the LACP packets exchange mode between different ports: - Transparent—LACP is not enabled. - Active—Places a port into an active negotiating state, in which the port initiates negotiations with remote ports by sending LACP packets. - Passive—Places a port into a passive negotiating state, in which the port responds to LACP packets it receives but does not initiate LACP negotiation. In this mode, the port channel group attaches the interface to the bundle.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—ML100T-12

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The Fast Ethernet (ML100T-12) Layer 3 switch processes up to 5.7 Mb/s. The card is integrated into the ONS 15454 SONET or ONS 15454 SDH. An ONS 15454 SONET with a 10-gigabit cross-connect card (XC10G) can host the ML100T-12 card in any traffic card slot, but an ONS 15454 SONET with a cross-connect card (XC) or cross-connect virtual tributary card (XCVT) can only host the ML100T-12 card in the four traffic slots. An ONS 15454 SDH can host the ML100T-12 card in any traffic card slot with any cross-connect card.

For the ML100T-12 module, the slot properties pane displays the following properties: Module View, Identification, Configuration, POS, Ether, Alarm Behavior, L2 Service Drops, Card Parameters, Thresholds, J1 Path Trace, Info, and Port Channel. The properties shown depend on the NE configuration.

Module View

The Module View displays a graphic of the ML100T-12 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update ML100T-12 card identification information.

Table C-1208 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Card Mode	Select the card mode. It can be one of the following: • HDLC—High-level data link control; does not support VLAN trunking. Standard on most Cisco data devices. • GFP-F—Frame-mapped generic framing procedure; a protocol data unit (PDU)-oriented adaptation mode; maps a client frame into one GFP frame. • RPR 802.17—IEEE 802.17 Resilient Packet Ring (RPR) standard, which specifies the data traffic protection and spatial reuse over ring architecture. The RPR ring architecture is highly scalable and provides efficient transfer of packet-based traffic across a network. It is suitable for data, voice, and video applications.  Caution If you change the card mode to RPR 802.17, you must reload the barebone configuration on the ML card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Configuration

The Configuration Properties pane allows you to upload or download a configuration file for the ML100T-12 card.

Table C-1209 Field Descriptions for the Configuration Properties Pane

Field	Description
IOS Startup Config	
Source	Displays the source of the configuration file.
Host	Displays the host machine where the configuration file is stored, or the location where the file will be downloaded.
Filename	Displays the name of the configuration file.
Directory	Displays the directory on the host machine for the configuration file.
Time Stamp	Displays the date and time of the file upload or download. The time stamp shows the time on the NE, not the time on the Prime Optical server. Note You can update the time stamp on the NE in the node-level NE Explorer > Identification Properties pane.
IOS Config File	
TCC >> File	Click this button to download the file from the TCC card to the host machine. Select Local or Server in the TCC >> File dialog box to designate a location for the file. Note If you select Server, the file is saved in the \$CTMROOT/IosConfig directory.
File >> TCC	Click this button to upload the file from the host machine to the TCC card. Select Local or Server in the File >> TCC dialog box to designate a location for the file.
Launch CLI	Click this button to launch the command-line interface (CLI).
Microcode	
Microcode	Configure the ML-series card with one of the following microcode images. Select either: - Base—Enables base features, which include IP multicast routing and IP fragmentation. - Enhanced—Enables Ethernet Relay Multipoint Service (ERMS), enhanced packet statistics, and enhanced Dual RPR Interconnect (DRPRI). This disables IP fragmentation and IP multicast routing features supported by the base microcode image. Note After changing the microcode, you should reset the card manually.
IOS Access	
Enable Console Port Access	Allows you to enable access to ML cards through the console port. If this field is disabled, you cannot connect to the ML card through the console port.
Enable RADIUS Relay	Allows you to enable access to ML cards through the RADIUS relay server.

POS

The POS Properties pane allows you to view and update ML100T-12 POS port information.

Table C-1210 *Field Descriptions for the POS Properties Pane*

Field	Description
POS Ports	
Port Number	Displays the configurable identifier for the port.
Port Name	Displays the port name.
AINS Suppress Alarms	Choose ON to suppress alarms for the selected port; choose OFF to switch alarm suppression off for the selected port.
AINS Soak	Enter the soak time in hours from 0 to 48, and in minutes from 0 to 45 (in 15-minute increments).
State	Displays the configured administration port state, which is active or inactive. Values are UP and DOWN. Note The Administration State field displays “DOWN” whenever a circuit is not provisioned. To see the actual administration state of the port, view the POS Properties pane > POS Provisioning tab. The Interface State attribute shows the actual Administration State value.
Link State	Displays the physical port state. Values are UP and DOWN.
MTU	Maximum transmission unit, which is the largest acceptable packet size configured for that port. The maximum setting is 9000; the default size is 1500. The MTU value will display 0 until the POS port is used to create a circuit.
Framing Type	Shows the encapsulation type. Values are: - HDLC—High-level data link control; does not support VLAN trunking. Standard on most Cisco data devices. - GFP-F—Frame-mapped generic framing procedure; a protocol data unit (PDU)-oriented adaptation mode that maps a client frame into one GFP frame. - None—No framing type.
RPR Span	
Port Number	Displays the port number.
Port Name	Displays the name of the port. You can edit the port name.
AINS Suppress Alarms	Choose ON to suppress alarms for the selected port; choose OFF to switch alarm suppression off for the selected port.
AINS Soak	Enter the automatic in-service soak time, which is the amount of valid input signal, after which the port is set in service by the software. The range is from 0 to 48 hours, in 15-minute increments.
Span Interface	Displays the direction of the RPR span, either RPR_EAST or RPR_WEST.
State	Displays the state of the east and west spans.
Framing Type	Indicates the framing type, which is RPR 802.17.
Jumbo	Displays a value of true, which indicates that jumbo frame support is applied on all of the ML cards participating in the 802.17 RPR topology. Jumbo frame support is set at the ring level and carried in the attribute discovery messages.
Edge	Indicates the existence of a protection edge in an open ring. Values are: - EDGE—The selected RPR has a protection edge in an open ring. - NO_EDGE—The selected RPR does not have a protection edge in an open ring.

Table C-1210 Field Descriptions for the POS Properties Pane (continued)

Field	Description
POS Provisioning	
Port Number	Displays the port number.
Interface State	Status of the interface (up or shut down). When the interface is shut down, no traffic can flow through it.
MTU Size	Maximum transmission unit. The largest acceptable packet size configured for that port. The default value is 1500.
CoS Accounting	Indicates whether or not PM is enabled on the POS.
RPR Span Provisioning	
Port Number	Displays the port number.
Interface State	Check the Interface State check box to bring up the interface. Leave the check box unchecked to shut down the interface. When the interface is shut down, no traffic can flow through it.

Ether

The Ether Properties pane allows you to view and update ML100T-12 Ethernet port information.

Table C-1211 Field Descriptions for the Ether

Field	Description
Ether Ports	
Port Number	Displays the configurable identifier for the port.
Port Name	Displays the port name.
AINS Suppress Alarms	Choose ON to suppress alarms for the selected port; choose OFF to switch alarm suppression off for the selected port.
AINS Soak	Enter the soak time in hours from 0 to 48, and in minutes from 0 to 45 (in 15-minute increments).
State	Displays the configured administration port state, which is active or inactive. Values are UP and DOWN.
Link State	Displays the physical port state. Values are UP and DOWN.
MTU	Maximum transmission unit. The largest acceptable packet size configured for that port. The default value is 1500.
Operating Speed	Displays the operating speed for the ports. Values are Auto, 10 Mb/s, and 100 Mb/s.
Operating Duplex	Actual setting of the port. Values are Auto, Full, and Half.
Flow Control	Displays the negotiated flow control mode. Values are None, Symmetrical, and Asymmetrical.
Fast Ethernet Provisioning—This area displays the ML card attributes retrieved and provisioned through the IOS CLI interface.	
Port Number	Displays the port number.
Interface State	Status of the interface (up or shut down). When the interface is shut down, no traffic can flow through it.
MTU Size	Maximum transmission unit. The largest acceptable packet size configured for that port. The default value is 1500.
Speed	Displays the administrative speed value set into the card.
Duplex	Actual setting of the port. Values are Auto, Full, and Half.

Table C-1211 *Field Descriptions for the Ether (continued)*

Field	Description
Flow Control (Send)	Negotiated flow control mode, which configures the send traffic flow operation. Flow control works only with policing. Values and their impact on traffic flow are: - Desired—Allow but do not require flow-control packets on port - Off—Disable flow-control packets on port - On—Enable flow-control packets on port (works only with policing)
CoS Accounting	Indicates whether or not PM is enabled on the POS.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update ML100T-12 alarm profile information for the POS and Ethernet ports and RPR spans.

Table C-1212 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Equipment State	Displays the equipment state.
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

L2 Service Drops

The L2 Service Drops Properties pane allows you to view L2 service drop configuration settings. Click the **Show QoS Parameters** button to open the QoS for L2 Service Drop Port table, which shows the QoS for the selected drop.

Table C-1213 *Field Descriptions for the L2 Service Drops Properties Pane*

Field	Description
Port Number	The port number.
Port Sub Interface	The port subinterface.
Topology Name	The topology name.
SP VLAN ID	The service provider VLAN ID.
Customer ID	The customer ID.
Service ID	The service ID.
Bridge Group	The bridge group.

Table C-1213 *Field Descriptions for the L2 Service Drops Properties Pane (continued)*

Field	Description
Port Type	The port type (UNI or NNI).
Connection Type	The connection type (Dot1Q, Untagged, or QinQ).
Policing	The QoS policy configured on the selected front port interface or subinterface. Supported values are CIR/PIR and Best Effort.
RSTP	When checked, RSTP is enabled.
CIR	The committed information rate (CIR) range is from 96000 to 800000000 bits per second.
CIR Burst	The CIR burst default value is 8000 bytes; the range is from 8000 to 64000 bytes.
PIR	The peak information rate (PIR) range is from 96000 to 800000000 bits per second. PIR should be greater than or equal to CIR.
PIR Burst	The PIR burst default value is 64000 bytes; the range is from 8000 to 64000 bytes. PIR burst should be greater than or equal to CIR burst.
Best Effort Max Value	The Cisco best effort maximum value default is 96000 bits per second.
Best Effort Burst	Max CIR burst value. The default is 8000 bytes.

Card Parameters

The Card Parameters Properties pane allows you to view card parameter settings.

Table C-1214 *Field Descriptions for the Card Properties Pane Parameters*

Field	Description
Port Number	The port number.
Port Sub Interface	The port subinterface.
Bridge Group	The bridge group.
CIR	The committed information rate. The range is from 96000 to 800000000 bits per second.
CIR Burst	The maximum CIR burst. The default is 8000 bytes; the range is from 8000 to 64000 bytes.
PIR	The peak information rate. The range is from 96000 to 800000000 bits per second. PIR should be greater than or equal to CIR.

Table C-1214 *Field Descriptions for the Card Properties Pane Parameters (continued)*

Field	Description
PIR Burst	The maximum PIR burst. The default is 64000 bytes; the range is from 8000 to 64000 bytes. PIR burst should be greater than or equal to CIR burst.
CCOSTRANSMIT	This keyword comes from the grammar file for the police command. For confirm action, the set-cos-transmit keyword specifies the set cos value. This value is used to determine the QoS configured on the front port of the ML card. A CCOSTRANSMIT value of 0 means a best effort policy has been configured for this port (FE/GE_IN). Other values are: • 1: Best Effort (for Policy_Qos_Out) • 2: CIR • 3: CONTROL • 4: VOICE • 5: VIDEO • 6: VOICE_VIDEO • 7: MISSION_CRITICAL • 8: SP_MANAGEMENT The card parameters shown on the NE Explorer are only for Policy_FE/GE_IN, meaning CCOSTRANSMIT is 0 or 2 (what VLAN provisioning supports).

Thresholds

The Thresholds Properties pane allows you to view remote monitoring (RMON) thresholds and create new RMON thresholds to allow Prime Optical to monitor ML POS counts.

Table C-1215 *Field Descriptions for the Thresholds Properties Pane*

Field	Description
Index Number	The index number.
Interface Name	The interface name. Currently, only POS0 and POS1 are supported.
Direction	The direction of the reported statistics. Currently, only output is supported.
COS	The class of service level. Supported levels are 0 to 7.
Sample Period	The sample period, in seconds.
Variable	The MIB variable to monitor. Supported variables are cportQosDropPkts and cportQosDropOctets in the cportQosStatsTable in CISCO-PORT-QOS-MIB.
Sample Type	The sample type (relative or absolute). Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.

Table C-1215 *Field Descriptions for the Thresholds Properties Pane (continued)*

Field	Description
Rising Threshold	The number of occurrences for the rising threshold. Note For a rising type of alarm, the measured value must move from below the falling threshold to above the rising threshold. For example, if a network is running below a falling threshold of 400 collisions every 15 seconds and a problem causes 1001 collisions in 15 seconds, the excess occurrences trigger an alarm.
Falling Threshold	The number of occurrences for the falling threshold. In most cases, a falling threshold is set lower than the rising threshold. A falling threshold is the counterpart to a rising threshold. When the number of occurrences is above the rising threshold and then drops below a falling threshold, it resets the rising threshold. For example, when the network problem that caused 1001 collisions in 15 minutes subsides and creates only 799 collisions in 15 minutes, occurrences fall below a falling threshold of 800 collisions. This resets the rising threshold so that if network collisions again spike over 1000 per 15-minute period, an event again triggers when the rising threshold is crossed. An event is triggered only the first time a rising threshold is exceeded (otherwise a single network problem might cause a rising threshold to be exceeded multiple times and cause a flood of events).

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and retrieve J1 path trace information.

Table C-1216 *Field Descriptions for the J1 Path Trace Properties Pane*

Field	Description
Port Number	Displays the port number.
Circuit Type	Displays the circuit type.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
VCAT Member Number	Displays the virtual concatenation (VCAT) member number.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the ML100T-12 card.

Table C-1217 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.

Port Channel

The Port Channel Properties pane allows you to configure the port channel interface on ML100T-12 cards. Port channel (also known as *link aggregation*) is a trunking technology that groups together multiple full-duplex IEEE 802.3 Gigabit Ethernet/Fast Ethernet interfaces to provide fault-tolerant high-speed links between switches, routers, and servers. Port channel forms a single higher bandwidth routing or bridging endpoint and was designed primarily for host-to-switch connectivity.

Table C-1218 Field Descriptions for the Port Channel Properties Pane

Field	Description
Port Channel Table	
Create	Opens the Create Port Channel ID dialog box, which allows you create a new port channel. Each ML100T-12 card supports up to six Fast Ethernet Channels (FECs). A maximum of four Fast Ethernet ports can bundle into one FEC and provide bandwidth scalability up to 400-Mb/s full-duplex Fast Ethernet for the ML100T-12 card. See Creating a Port Channel, page 7-318 . Note The Create button is dimmed if six port channels have already been created.
Modify	Opens the Modify Port Channel ID dialog box, which allows you to modify an existing port channel. See Modifying a Port Channel, page 7-319 .
Delete	Deletes the selected port channel. Note You cannot delete an aggregate link that contains active members. You must first disaggregate all of the associated members from the port channel, then delete the empty port channel.
Channel ID	Displays the port channel ID, which identifies the port channel interface. Prime Optical generates the ID automatically; the range is from 1 to 64.
Admin State	Displays the status of the port channel interface (Up or Down).
MTU	Displays the maximum transmission unit (MTU) size, which is the largest acceptable packet size configured for the port channel interface. The range is from 64 to 9000 bytes; the default is 1500 bytes.
Hold Queue In	Displays the size of the memory packets input queue. The range is from 0 to 4096 bytes.
Hold Queue Out	Displays the size of the memory packets output queue. The range is from 0 to 4096 bytes.
Port Channel Members Table	
Add	Opens the Add Port Channel Member on Port Channel ID dialog box, which allows you to add members to a port channel. See Creating a Port Channel Member, page 7-320 .
Modify	Opens the Modify Port Channel Member on Port Channel ID dialog box, which allows you to modify an existing port channel member. See Modifying a Port Channel Member, page 7-321 .
Remove	Removes the selected member from the port channel.
Port No.	Displays the port number, which identifies the port channel member.

Table C-1218 Field Descriptions for the Port Channel Properties Pane (continued)

Field	Description
LACP Priority	Displays the number that Link Aggregation Control Protocol (LACP) uses with the port number to form the port identifier. The port priority determines which ports should be put in standby mode when there is a hardware limitation that prevents all compatible ports from aggregating. The range is from 1 to 65535.
LACP Mode	Defines the LACP packets exchange mode between different ports: - Transparent—LACP is not enabled. - Active—Places a port into an active negotiating state, in which the port initiates negotiations with remote ports by sending LACP packets. - Passive—Places a port into a passive negotiating state, in which the port responds to LACP packets it receives but does not initiate LACP negotiation. In this mode, the port channel group attaches the interface to the bundle.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—ML100X-8

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH card slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The ML100X-8 card is functionally equivalent to the ML-100T-12 card but with eight SFP Ethernet ports. The FX feature is an 8-port 100 Mb/s ML module and two corresponding 802.3ah-compliant optical SFPs that operate in the ONS 15454.

For the ML100X-8 module, the slot properties pane displays the following properties: Module View, Identification, Configuration, POS, Ether, Alarm Behavior, L2 Service Drops, Card Parameters, Thresholds, J1 Path Trace, Info, and Port Channel. The properties shown depend on the NE configuration.

Module View

The Module View displays a graphic of the ML100X-8 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update ML100X-8 card identification information.

Table C-1219 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Card Mode	Select the card mode. It can be one of the following: • HDLC—High-level data link control; does not support VLAN trunking. Standard on most Cisco data devices. • GFP-F—Frame-mapped generic framing procedure; a protocol data unit (PDU)-oriented adaptation mode; maps a client frame into one GFP frame. • RPR 802.17—IEEE 802.17 Resilient Packet Ring (RPR) standard, which specifies the data traffic protection and spatial reuse over ring architecture. The RPR ring architecture is highly scalable and provides efficient transfer of packet-based traffic across a network. It is suitable for data, voice, and video applications.  Caution If you change the card mode to RPR 802.17, you must reload the barebone configuration on the ML card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Configuration

The Configuration Properties pane allows you to upload or download a configuration file for the ML100X-8 card.

Table C-1220 Field Descriptions for the Configuration Properties Pane

Field	Description
IOS Startup Config	
Source	Displays the source of the configuration file.
Host	Displays the host machine where the configuration file is stored, or the location where the file will be downloaded.
Filename	Displays the name of the configuration file.
Directory	Displays the directory on the host machine for the configuration file.
Time Stamp	Displays the date and time of the file upload or download. The time stamp shows the time on the NE, not the time on the Prime Optical server. Note You can update the time stamp on the NE in the node-level NE Explorer > Identification Properties pane.
IOS Config File	
TCC >> File	Click this button to download the file from the TCC card to the host machine. Select Local or Server in the TCC >> File dialog box to designate a location for the file. Note If you select Server, the file is saved in the \$CTMROOT/IosConfig directory.
File >> TCC	Click this button to upload the file from the host machine to the TCC card. Select Local or Server in the File >> TCC dialog box to designate a location for the file.
Launch CLI	Click this button to launch the command-line interface (CLI).
Microcode	
Microcode	Configure the ML-series card with one of the following microcode images. Select either: - Base—Enables base features, which include IP multicast routing and IP fragmentation. - Enhanced—Enables Ethernet Relay Multipoint Service (ERMS), enhanced packet statistics, and enhanced Dual RPR Interconnect (DRPRI). This disables IP fragmentation and IP multicast routing features supported by the base microcode image. Note After changing the microcode, you should reset the card manually.
IOS Access	
Enable Console Port Access	Allows you to enable access to ML cards through the console port. If this field is disabled, you cannot connect to the ML card through the console port.
Enable RADIUS Relay	Allows you to enable access to ML cards through the RADIUS relay server.

POS

The POS Properties pane allows you to view and update ML100X-8 POS port information.

Table C-1221 Field Descriptions for the POS Properties Pane

Field	Description
POS Ports	
Port Number	Displays the configurable identifier for the port.
Port Name	Displays the name of the port.
AINS Suppress Alarms	Choose ON to suppress alarms for the selected port; choose OFF to switch alarm suppression off for the selected port.
AINS Soak	Enter the soak time in hours from 0 to 48, and in minutes from 0 to 45 (in 15-minute increments).
State	Displays the configured administration port state, which is active or inactive. Values are UP and DOWN. Note The State field displays “Down” whenever a circuit is not provisioned. To see the actual administration state of the port, view the POS Properties pane > POS Provisioning tab. The Interface State attribute shows the actual Administration State value.
Link State	Displays the physical port state. Values are UP and DOWN.
MTU	Maximum transmission unit. The largest acceptable packet size configured for that port. Maximum setting is 9000 and the default size is 1500. The MTU value will display 0 until the POS port is used in creating a circuit.
Framing Type	Shows the encapsulation type. Values are: - HDLC—High-level data link control; does not support VLAN trunking. Standard on most Cisco data devices. - GFP-F—Frame-mapped generic framing procedure; a protocol data unit (PDU)-oriented adaptation mode that maps a client frame into one GFP frame. - None—No framing type.
RPR Span	
Port Number	Displays the port number.
Port Name	Displays the name of the port. You can change the port name.
AINS Suppress Alarms	Choose ON to suppress alarms for the selected port; choose OFF to switch alarm suppression off for the selected port.
AINS Soak	Enter the automatic in-service soak time, which is the amount of valid input signal, after which the port is set in service by the software. The range is from 0 to 48 hours, in 15-minute increments.
Span Interface	Displays the direction of the RPR span, either RPR_EAST or RPR_WEST.
State	Displays the state of the east and west spans.
Framing Type	Indicates the framing type, which is RPR 802.17.
Jumbo	Displays a value of true, which indicates that jumbo frame support is applied on all of the ML cards participating in the 802.17 RPR topology. Jumbo frame support is set at the ring level and carried in the attribute discovery messages.
Edge	Indicates the existence of a protection edge in an open ring. Values are: - EDGE—The selected RPR has a protection edge in an open ring. - NO_EDGE—The selected RPR does not have a protection edge in an open ring.

Table C-1221 *Field Descriptions for the POS Properties Pane (continued)*

Field	Description
POS Provisioning	
Port Number	Displays the port number.
Interface State	Status of the interface (up or shut down). When the interface is shut down, no traffic can flow through it.
MTU Size	Maximum transmission unit. The largest acceptable packet size configured for that port. The default value is 1500.
CoS Accounting	Indicates whether or not PM is enabled on the POS.
RPR Span Provisioning	
Port Number	Displays the port number.
Interface State	Check the Interface State check box to bring up the interface. Leave the check box unchecked to shut down the interface. When the interface is shut down, no traffic can flow through it.

Ether

The Ether Properties pane allows you to view and update ML100X-8 Ethernet port information.

Table C-1222 *Field Descriptions for the Ether*

Field	Description
Ether Ports	
Port Number	Displays the configurable identifier for the port.
Port Name	Displays the name of the port.
AINS Suppress Alarms	Choose ON to suppress alarms for the selected port; choose OFF to switch alarm suppression off for the selected port.
AINS Soak	Enter the soak time in hours from 0 to 48, and in minutes from 0 to 45 (in 15-minute increments).
State	Displays the configured administration port state, which is active or inactive. Values are UP and DOWN.
Link State	Displays the physical port state. Values are UP and DOWN.
MTU	Maximum transmission unit. The largest acceptable packet size configured for that port. The default value is 1500.
Operating Speed	Displays the operating speed for the ports. Values are Auto, 10 Mb/s, and 100 Mb/s.
Operating Duplex	Actual setting of the port. Values are Auto, Full, and Half.
Flow Control	Displays the negotiated flow control mode. Values are None, Symmetrical, and Asymmetrical.
Optics	Displays the SFP physical media type. Values are Unplugged, Plugged In, 1000 SX, and 1000 LX. Pluggables to the ML100X-8 card are not noted in the Equipment Inventory table. Instead, pluggables are indicated in the Optics field. The Optics field displays “Unknown” if there are no pluggables, and “Plugged In” if there is pluggable equipment. The Optics field does not specify the exact equipment.
Fast Ethernet Provisioning	
Port Number	Displays the port number.
Interface State	Status of the interface (up or shut down). When the interface is shut down, no traffic can flow through it.
MTU Size	Maximum transmission unit. The largest acceptable packet size configured for that port. The default value is 1500.

Table C-1222 *Field Descriptions for the Ether (continued)*

Field	Description
Flow Control (Send)	Negotiated flow control mode, which configures the send traffic flow operation. Flow control works only with policing. Values and their impact on traffic flow are: - Desired—Allow but do not require flow-control packets on port - Off—Disable flow-control packets on port - On—Enable flow-control packets on port (works only with policing)
CoS Accounting	Indicates whether or not PM is enabled on the POS.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update ML100X-8 alarm profile information for the POS and Ethernet ports and RPR spans.

Table C-1223 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Equipment State	Displays the equipment state.
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

L2 Service Drops

The L2 Service Drops Properties pane allows you to view L2 service drop configuration settings. Click the **Show QoS Parameters** button to open the QoS for L2 Service Drop Port table, which shows the QoS for the selected drop.

Table C-1224 *Field Descriptions for the L2 Service Drops Properties Pane*

Field	Description
Port No.	The port number.
Port Sub Interface	The port subinterface.
Topology Name	The topology name.
SP VLAN ID	The service provider VLAN ID.
Customer ID	The customer ID.
Service ID	The service ID.
Bridge Group	The bridge group.

Table C-1224 *Field Descriptions for the L2 Service Drops Properties Pane (continued)*

Field	Description
Port Type	The port type (UNI or NNI).
Connection Type	The connection type (Dot1Q, Untagged, or QinQ).
Policing	The QoS policy configured on the selected front port interface or subinterface. Supported values are CIR/PIR and Best Effort.
RSTP	When checked, RSTP is enabled.

Card Parameters

The Card Parameters Properties pane allows you to view card parameter settings.

Table C-1225 *Field Descriptions for the Card Properties Pane Parameters*

Field	Description
Port	The port number.
Port Sub Interface	The port subinterface.
Bridge Group	The bridge group.
CIR	The committed information rate. The range is from 96000 to 800000000 bits per second.
CIR Burst	The maximum CIR burst. The default is 8000 bytes; the range is from 8000 to 64000 bytes.
PIR	The peak information rate. The range is from 96000 to 800000000 bits per second. PIR should be greater than or equal to CIR.
PIR Burst	The maximum PIR burst. The default is 64000 bytes; the range is from 8000 to 64000 bytes. PIR burst should be greater than or equal to CIR burst.
CCOSTRANSMIT	This keyword comes from the grammar file for the police command. For confirm action, the set-cos-transmit keyword specifies the set cos value. This value is used to determine the QoS configured on the front port of the ML card. A CCOSTRANSMIT value of 0 means a best effort policy has been configured for this port (FE/GE_IN). Other values are: 1: Best Effort (for Policy_Qos_Out) 2: CIR 3: CONTROL 4: VOICE 5: VIDEO 6: VOICE_VIDEO 7: MISSION_CRITICAL 8: SP_MANAGEMENT The card parameters shown on the NE Explorer are only for Policy_FE/GE_IN, meaning CCOSTRANSMIT is 0 or 2 (what VLAN provisioning supports).

Thresholds

The Thresholds Properties pane allows you to view remote monitoring (RMON) thresholds and create new RMON thresholds to allow Prime Optical to monitor ML POS counts.

Table C-1226 Field Descriptions for the Thresholds Properties Pane

Field	Description
Index Number	The index number.
Interface Name	The interface name. Currently, only POS0 and POS1 are supported.
Direction	The direction of the reported statistics. Currently, only output is supported.
COS	The class of service level. Supported levels are 0 to 7.
Sample Period	The sample period, in seconds.
Variable	The MIB variable to monitor. Supported variables are cportQosDropPkts and cportQosDropOctets in the cportQosStatsTable in CISCO-PORT-QOS-MIB.
Sample Type	The sample type (relative or absolute). Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Rising Threshold	The number of occurrences for the rising threshold. Note For a rising type of alarm, the measured value must move from below the falling threshold to above the rising threshold. For example, if a network is running below a falling threshold of 400 collisions every 15 seconds and a problem causes 1001 collisions in 15 seconds, the excess occurrences trigger an alarm.
Falling Threshold	The number of occurrences for the falling threshold. In most cases, a falling threshold is set lower than the rising threshold. A falling threshold is the counterpart to a rising threshold. When the number of occurrences is above the rising threshold and then drops below a falling threshold, it resets the rising threshold. For example, when the network problem that caused 1001 collisions in 15 minutes subsides and creates only 799 collisions in 15 minutes, occurrences fall below a falling threshold of 800 collisions. This resets the rising threshold so that if network collisions again spike over 1000 per 15-minute period, an event again triggers when the rising threshold is crossed. An event is triggered only the first time a rising threshold is exceeded (otherwise a single network problem might cause a rising threshold to be exceeded multiple times and cause a flood of events).

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and retrieve J1 path trace information.

Table C-1227 Field Descriptions for the J1 Path Trace Properties Pane

Field	Description
Port Number	Displays the port number.
STS/VC Number	Displays the STS or VC number.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).

Table C-1227 Field Descriptions for the J1 Path Trace Properties Pane (continued)

Field	Description
C2	Represents a machine-generated J1/J2 payload label byte.
VCAT Member Number	Displays the virtual concatenation (VCAT) member number.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the ML100X-8.

Table C-1228 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.

Port Channel

The Port Channel Properties pane allows you to configure the port channel interface on ML100X-8 cards. Port channel (also known as *link aggregation*) is a trunking technology that groups together multiple full-duplex IEEE 802.3 Gigabit Ethernet/Fast Ethernet interfaces to provide fault-tolerant high-speed links between switches, routers, and servers. Port channel forms a single higher bandwidth routing or bridging endpoint and was designed primarily for host-to-switch connectivity.

Table C-1229 Field Descriptions for the Port Channel Properties Pane

Field	Description
Port Channel Table	
Create	Opens the Create Port Channel ID dialog box, which allows you create a new port channel. Each ML100X-8 card supports up to four Fast Ethernet Channels (FECs). A maximum of four Fast Ethernet ports can bundle into one FEC and provide bandwidth scalability up to 400-Mb/s full-duplex Fast Ethernet for the ML100X-8 card. See Creating a Port Channel, page 7-318. Note The Create button is dimmed if four port channels have already been created.
Modify	Opens the Modify Port Channel ID dialog box, which allows you to modify an existing port channel. See Modifying a Port Channel, page 7-319.
Delete	Deletes the selected port channel. Note You cannot delete an aggregate link that contains active members. You must first disaggregate all of the associated members from the port channel, then delete the empty port channel.
Channel ID	Displays the port channel ID, which identifies the port channel interface. Prime Optical generates the ID automatically; the range is from 1 to 64.
Admin State	Displays the status of the port channel interface (Up or Down).
MTU	Displays the maximum transmission unit (MTU) size, which is the largest acceptable packet size configured for the port channel interface. The range is from 64 to 9000 bytes; the default is 1500 bytes.
Hold Queue In	Displays the size of the memory packets input queue. The range is from 0 to 4096 bytes.

Table C-1229 Field Descriptions for the Port Channel Properties Pane (continued)

Field	Description
Hold Queue Out	Displays the size of the memory packets output queue. The range is from 0 to 4096 bytes.
Port Channel Members Table	
Add	Opens the Add Port Channel Member on Port Channel ID dialog box, which allows you to add members to a port channel. See Creating a Port Channel Member, page 7-320 .
Modify	Opens the Modify Port Channel Member on Port Channel ID dialog box, which allows you to modify an existing port channel member. See Modifying a Port Channel Member, page 7-321 .
Remove	Removes the selected member from the port channel.
Port No.	Displays the port number, which identifies the port channel member.
LACP Priority	Displays the number that Link Aggregation Control Protocol (LACP) uses with the port number to form the port identifier. The port priority determines which ports should be put in standby mode when there is a hardware limitation that prevents all compatible ports from aggregating. The range is from 1 to 65535.
LACP Mode	Defines the LACP packets exchange mode between different ports: - Transparent—LACP is not enabled. - Active—Places a port into an active negotiating state, in which the port initiates negotiations with remote ports by sending LACP packets. - Passive—Places a port into a passive negotiating state, in which the port responds to LACP packets it receives but does not initiate LACP negotiation. In this mode, the port channel group attaches the interface to the bundle.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—ML-MR-10

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH card slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The Multilayer 2 (ML2) card (also known as ML-MR-10) is a Layer 2 switch that processes up to 10 Gb/s. With its 10 Ethernet ports, the card is integrated into the ONS 15454 SONET and ONS 15454 SDH platforms.

An ONS 15454 SONET with a 10-gigabit cross-connect card (XC10G) can host the ML2 card in any traffic card slot, but an ONS 15454 SONET with a cross-connect card (XC) or cross-connect virtual tributary card (XCVT) can only host the ML2 card in the four traffic slots. An ONS 15454 SDH can host the ML2 card in any traffic card slot with any cross-connect card.

You can provision VCAT, CCAT, or LCAS circuits on 10 POS ports on the ML-MR-10 card. POS ports are used for aggregation and serve as the source or destination for Ethernet circuits. Prime Optical supports FE payload on RAD SFPs.

VCAT circuits on POS ports can have the following circuit sizes:

- VT1.5- nv , where n is 1 to 64
- STS-1- nv , where n is 1 to 192
- STS-3c- nv , where n is 1 to 64

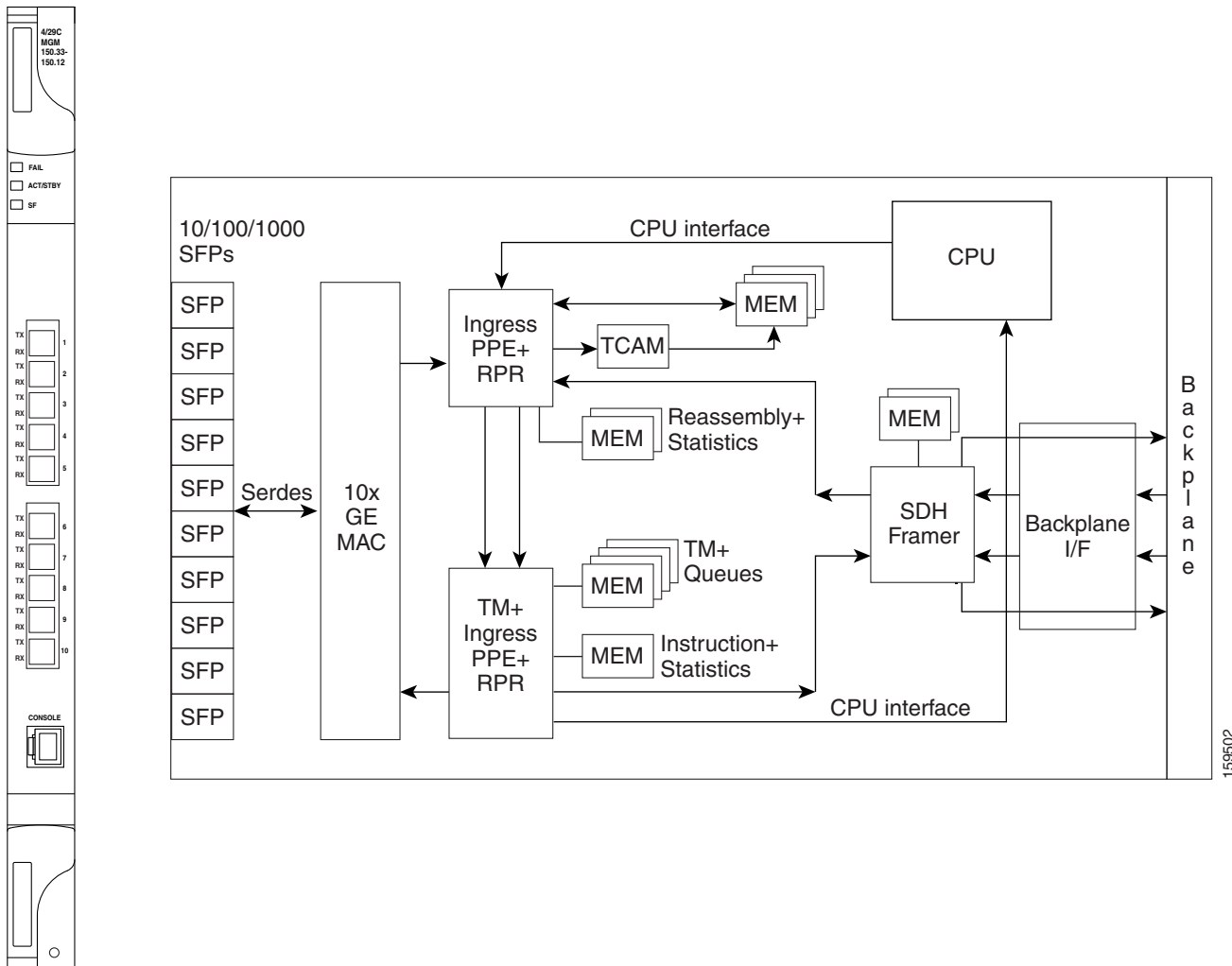
CCAT circuits on POS ports can have the following circuit sizes:

- STS-1, STS-3, STS-6, STS-9, STS-12, STS-24, STS-48, and STS-192

The SDH equivalents of these circuit sizes are also supported.

The following figure shows the card faceplate and block diagram.

Figure C-83 ML-MR-10 Faceplate and Block Diagram



For the ML-MR-10 (ML2) module, the slot properties pane displays the following properties: Module View, Identification, Line, Thresholds, Alarm Behavior, J1 Path Trace, GBIC Inventory, and Info. The properties shown depend on the NE configuration.

Module View

The Module View displays a graphic of the ML-MR-10 that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update ML-MR-10 card identification information.

Table C-1230 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Card Mode	Specify the mode setting for the internal STS/VC allocation method on the card. Values are: - Exposed—Implies automatic internal selection of time slot index numbers by the node. - Manual—Implies user-selected index numbers.
Equipment State	Displays the state of the card that is installed in the slot.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Line

The Line Properties pane allows you to view and update line performance monitoring information. The Line Properties pane contains the following tabs:

- [Ether Line Properties Tab](#), page C-862

- [POS Port Tab, page C-862](#)
- [RPR Span Tab, page C-863](#)

Ether Line Properties Tab

The Ether Line tab allows you to view and change the Ethernet line settings on the ML-MR-10 card.

Table C-1231 Field Descriptions for the Ether Line Tab

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a name for the port.
Administration State	Shows the administrative state of the port: In Service (IS), Out of Service–Maintenance (OOS MT), Out of Service–Disabled (OOS DSBLD), or In Service–Auto In Service Soak (IS AINS).
AINS Suppress Alarms	Choose ON to suppress alarms for the selected port; choose OFF to switch alarm suppression off for the selected port.
AINS Soak	Displays the automatic in-service soak, which is the amount of time left before the traffic/termination transitions to the IS_NR state.
AINS Soak Count Down	Displays the remaining time of valid input signal in <i>hh:mm</i> format, after which the card becomes in service (IS) automatically.
Link State	Displays the physical port state. Values are Up or Down.
Operating Speed	Displays the operating speed for the Ethernet ports. Values are Auto, 10 Mb/s, 100 Mb/s, or 1000 Mb/s.
Operating Duplex	Displays the actual setting of the port. Values are Auto, Full, or Half.
Flow Control	Displays the negotiated flow control mode. Values are On, Off, or None.

POS Port Tab

The POS Port tab allows you to view and change the POS port settings on the ML-MR-10 card.

Table C-1232 Field Descriptions for the POS Port Tab

Field	Description
Port No.	Displays the port number.
Port Name	Allows you to add a name for the port.
Administration State	Shows the administrative state of the port: In Service (IS), Out of Service–Maintenance (OOS MT), Out of Service–Disabled (OOS DSBLD), or In Service–Auto In Service Soak (IS AINS).
AINS Suppress Alarms	Choose ON to suppress alarms for the selected port; choose OFF to switch alarm suppression off for the selected port.
AINS Soak	Displays the automatic in-service soak, which is the amount of time left before the traffic/termination transitions to the IS_NR state.
Link State	Displays the physical port state. Values are Up or Down.
MTU	Displays the maximum transmission unit, which is the largest acceptable packet size configured for that port. The default value is 1500.

RPR Span Tab

The RPR Span tab allows you to view and change the RPR settings on the ML-MR-10 card.

Table C-1233 Field Descriptions for the RPR Span Tab

Field	Description
Port	Displays the port number.
Port Name	Allows you to add a name for the port.
AINS Soak	Displays the automatic in-service soak, which is the amount of time left before the traffic/termination transitions to the IS_NR state.
Administration State	Shows the administrative state of the port: In Service (IS), Out of Service–Maintenance (OOS MT), Out of Service–Disabled (OOS DSBLD), or In Service–Auto In Service Soak (IS AINS).
Framing Type	Shows the encapsulation type set on the card. Values are: - HDLC—High-level data link control; does not support VLAN trunking. Standard on most Cisco data devices. - GFP-F—Frame-mapped generic framing procedure; a protocol data unit (PDU)-oriented adaptation mode that maps a client frame into one GFP frame. - RPR 802.17—802.17 resilient packet ring, which is IEEE compliant.
Span Interface	Displays the direction of the RPR span, either RPR_EAST or RPR_WEST.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Edge	Displays whether or not a span has a neighboring active node or active connection. Possible values are Yes and No.

Thresholds

The Thresholds Properties pane allows you to view and create ML-MR-10 thresholds. The Thresholds Properties pane contains [POS Port/RPR Span/Ether Ports Tabs](#), page C-863.

POS Port/RPR Span/Ether Ports Tabs

The POS Port tab allows you to view the thresholds for the POS ports.

Table C-1234 Field Descriptions for the POS Port/RPR Span/Ether Ports Tabs

Field	Description
Index Number	Displays the selected interface number.
Slot	Displays the selected card.
Port	Displays the port on the selected card.
Variable	Displays the MIB variable that is being monitored.
Alarm Type	Indicates whether the event is triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	Indicates whether the sample type is relative or absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period	Displays the sample period, in seconds.

Table C-1234 Field Descriptions for the POS Port/RPR Span/Ether Ports Tabs (continued)

Field	Description
Rising Thresholds	Displays the number of occurrences for the rising threshold.
Falling Thresholds	Displays the number of occurrences for the falling threshold field. In most cases, a falling threshold is set lower than the rising threshold.
Create	Click the Create button to create a threshold for the POS ports.
Delete	Select a threshold from the list displayed and click the Delete button.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update ML-MR-10 alarm profile information for the RPR span and Ethernet ports.

Table C-1235 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Equipment State	Displays the equipment state.
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port	Displays the card port number or RPR span.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

J1 Path Trace

The J1 Path Trace Properties pane allows you to view and retrieve J1 path trace information.

Table C-1236 Field Descriptions for the J1 Path Trace Properties Pane

Field	Description
Port Number	Displays the port number.
Circuit Type	Displays the type of circuit.
Expected String	Displays the current expected string.
Received String	Displays the current received string.
Mode	Displays the path trace mode (Off/None, Auto, or Manual).
C2	Represents a machine-generated J1/J2 payload label byte.
Display	Click the Display button to view the circuit trace information. See Viewing a J1 Path Trace from the NE Explorer, page 7-168 for more information.
Retrieve	Click the Retrieve button to retrieve J1 path trace information.

GBIC Inventory

The GBIC Inventory Properties pane allows you to view GBIC inventory information.

Table C-1237 *Field Descriptions for the GBIC Inventory Properties Pane*

Field	Description
Port Number	Displays the GBIC card port number.
Equipment Type	Displays the equipment type the slot is provisioned for.
Serial Number	Displays the GBIC serial number that is unique to each GBIC.
CLEI Code	Displays the CLEI code.
Hardware Part Number	Displays the manufacturer's part number.
Hardware Revision Number	Displays the hardware revision number.
Actual Equipment Type	Displays the actual card that is installed in the slot. Values are single mode or multimode.
Vendor ID	Displays the ID of the vendor.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the ML-MR-10 card.

Table C-1238 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—MS-ISC-100T

The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The Fast Ethernet (MS-ISC-100T) Layer 3 switch processes up to 5.7 Mb/s. The card is integrated into the ONS 15454 SONET or ONS 15454 SDH.

For the MS-ISC-100T module, the slot properties pane displays the following properties: Module View, Identification, Ether Ports, Alarm Behavior, and Info. The properties shown depend on the NE configuration.

Module View

The Module View displays a graphic of the MS-ISC-100T that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update MS-ISC-100T card identification information.

Table C-1239 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	Select the designation that determines whether an entity is in service or out of service. The administration state is the driver for the service state.
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the state of the card that is installed in the slot.
Card Mode	Specifies the card mode. The card mode is HDLC (high-level data link control). HDLC does not support VLAN trunking and is standard on most Cisco data devices. This value cannot be changed.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Ether Ports

The Ether Ports Properties pane allows you to view and update MS-ISC-100T Ethernet port information.

Table C-1240 *Field Descriptions for the Ether Ports Properties Panes*

Field	Description
Ether Ports	
Port Number	Displays the configurable identifier for the port.
Port Name	Displays the port name.
State	Displays the configured administration port state, which is active or inactive. Values are UP and DOWN.
Link State	Displays the physical port state. Values are UP and DOWN.
MTU	Displays the maximum transmission unit, which is the largest acceptable packet size configured for that port. The default value is 1500.
Operating Speed	Displays the operating speed for the ports. Values are Auto, 10 Mb/s, and 100 Mb/s.
Operating Duplex	Displays the actual setting of the port. Values are Auto, Full, and Half.
Flow Control	Displays the negotiated flow control mode. Values are None, Symmetrical, and Asymmetrical.
Optics	Displays the SFP physical media type. Values are Unplugged, Plugged In, 1000 SX, and 1000 LX. Pluggables to the ML100X-8 card are not noted in the Equipment Inventory table. Instead, pluggables are indicated in the Optics field. The Optics field displays “Unknown” if there are no pluggables, and “Plugged In” if there is pluggable equipment. The Optics field does not specify the exact equipment.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update MS-ISC-100T alarm profile information for Ethernet ports.

Table C-1241 *Field Descriptions for the Alarm Behavior Properties Pane*

Field	Description
Equipment State	Displays the equipment state.
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the MS-ISC-100T card.

Table C-1242 Field Descriptions for the Info Properties Pane

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.

**Note**

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—RAN-SVC

The slot properties pane displays information about the ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The Radio Access Network Service (RAN-SVC) card performs circuit emulation and optimization on traffic from 3rd Generation Partnership Project (3GPP) RAN nodes and provides IP-based backhaul of the optimized traffic to other peer nodes. The RAN-SVC card, when combined with the DS1/E1-56 and OC-3/STM-1 cards, provides a high-rack-density aggregation function for the Cisco RAN optimization solution. When the RAN-SVC is used with a Cisco MWR-1941-DC-A, it provides transparent RAN aggregation and optimization services.

The optimized traffic is received by the RAN-SVC card from peer cell site routers on VT1.5 circuits via the cross-connect card or from native GE ports on the RAN-SVC card. Optimized traffic can be received on the ONS 15454 node over a variety of rate interfaces higher than VT1.5, such as OC-3 through OC-192. The data is then reconstructed by the RAN-SVC card onto VT1.5 circuits and sent back through the cross-connect card. The reconstructed traffic is externally delivered to the 3GPP RAN nodes over DS-1 and OC-3 interfaces.

The RAN-SVC card is a multiprocessor card. It consists of three traffic-forwarding CPUs and one service CPU, which performs the control plane function for the card. Each traffic forwarding processor is equipped with one front-side 10/100/1000 Gigabit Ethernet (GE) port, one OC-3 ATM port, one OC-3 POS port, two STM-1, and 42 E1 interfaces. The OC-3 ATM port, OC-3 POS port, STM-1, and E1 interfaces are connected to the backplane. The service CPU is equipped with one Gigabit Ethernet, ATM, and POS interface.

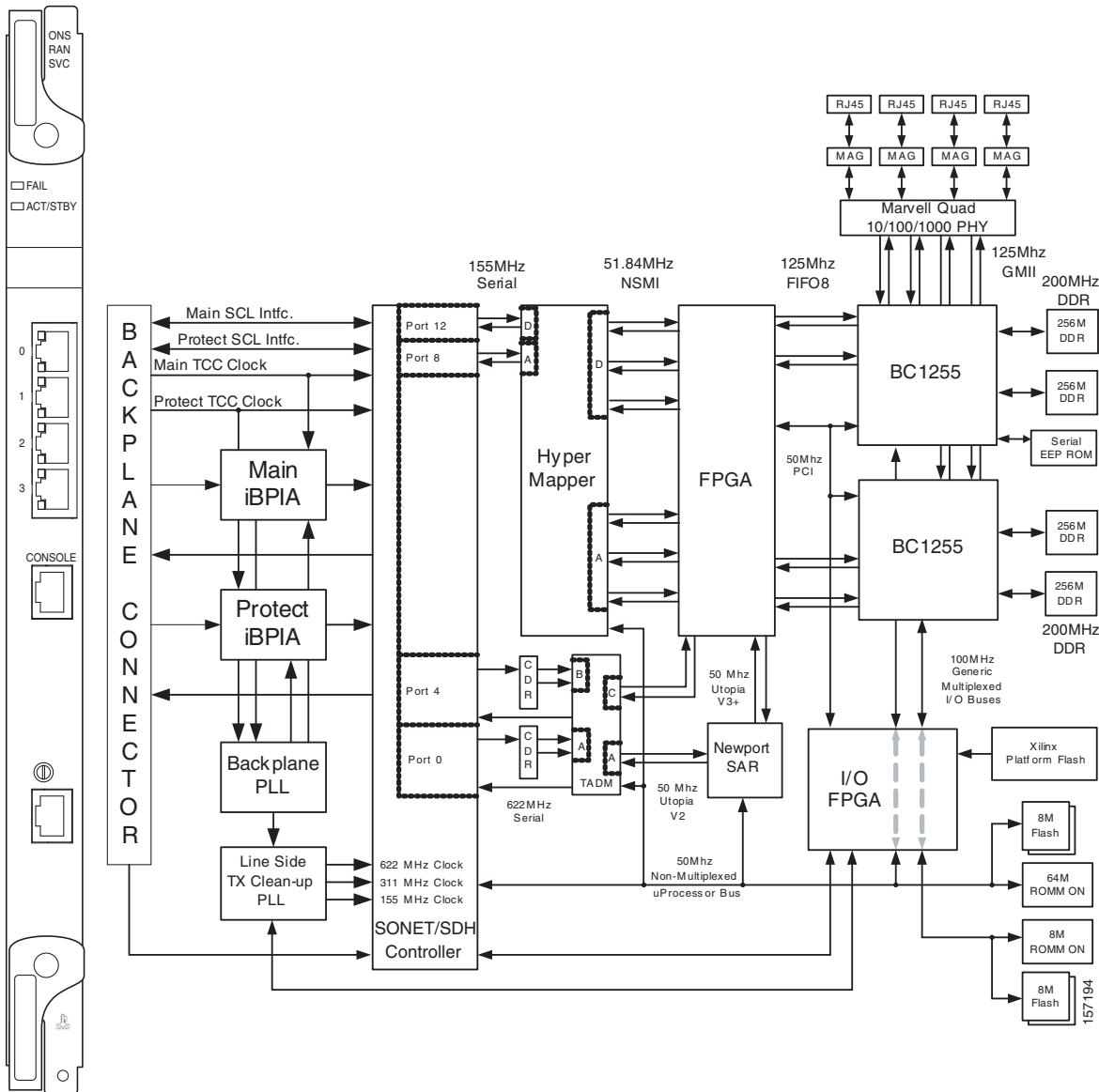
In the ONS 15454, the RAN-SVC card transmits and receives T1 data streams (for GSM applications) and OC-3 data streams (for UMTS applications) via the cross-connect cards. For T1 connections (GSM and/or backhaul), up to 126 T1 interfaces from multiple T1-56 cards can be aggregated by the cross-connect card to form two STS-1 data streams, which are terminated on the RAN-SVC card. For OC-3 interfaces (POS and/or ATM), up to eight OC-3 interfaces from multiple OC-3 cards can be aggregated by the cross-connect cards to form two STS-4 data streams, which are terminated on the RAN-SVC card.

The RAN-SVC card supports 1:N protection. This allows a single RAN-SVC card to protect up to nine working RAN-SVC cards. A RAN-SVC protect card can be installed in any slot and can protect working cards on either side of the shelf.

The RAN-SVC IOS card is present in the ONS 15454 chassis. It combines multiple E1, POS, and ATM streams routed over its GE interfaces for transmission over long-haul access networks. It can be plugged into any ONS 15454 service slot (1-6, 12-17), and is supported on ONS15454 ETSI/SDH and ONS 15454 ANSI/SONET platforms.

The following figure shows the card faceplate and block diagram.

Figure C-84 RAN-SVC Faceplate and Block Diagram



For the RAN-SVC card, the slot properties pane displays the following properties: Module View, Identification, Configuration, Protection, Line, and Info. The properties shown depend on the NE configuration.

Module View

The Module View displays a graphic of the RAN-SVC that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset, delete, or change the card.

Identification

The Identification Properties pane allows you to view and update RAN-SVC identification information.

Table C-1243 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type that the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
Hardware Part Number	Displays the part number that is printed on the top of the card.
Hardware Revision	Displays the hardware revision number.
Serial Number	Displays the serial number that is unique to each card.
CLEI Code	Displays the Common Language Equipment Identifier (CLEI) code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Administration State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Configuration

The Configuration Properties pane allows you to upload or download a configuration file for RAN-SVC card.

Table C-1244 *Field Descriptions for the Configuration Properties Pane*

Field	Description
IOS Config File	
TCC >> File	Click this button to download the file from the TCC card to the host machine. Select Local or Server in the TCC >> File dialog box to designate a location for the file.
File >> TCC	Click this button to upload the file from the host machine to the TCC card. Select Local or Server in the File >> TCC dialog box to designate a location for the file.
Launch CLI	Click this button to launch the command-line interface (CLI).
IOS Access	
Enable Console Port Access	Allows you to enable access to ML cards through console ports. If this field is disabled, you cannot connect to the ML card through the console port.
Enable RADIUS Relay	Allows you to enable access to ML cards through the RADIUS relay server.

Protection

The Protection Properties pane allows you to view and update RAN-SVC protection group information.

Table C-1245 *Field Descriptions for the Protection Properties Pane*

Field	Description
Protection Groups	Displays the list of available protection groups.
Protection Group Details	Displays details about the selected protection group, such as which port is the protected port and which port is the working port. Also allows you to execute switch commands.
Switch Commands	Allows you to perform a manual switch or clear the existing command switching.
Inhibit Switching	Allows you to inhibit unlock switching, lock out switching, or lock on switching.

Line

The Line Properties pane allows you to view and update line performance monitoring information. The Line Properties pane contains the [OC3/DS1 Tabs, page C-871](#).

OC3/DS1 Tabs

The OC3 tab allows you to view and change the OC3/DS1 line settings on the RAN-SVC card.

Table C-1246 *Field Descriptions for the OC3/DS1 Tabs*

Field	Description
Port Number	Displays the card port number.
Port Name	Displays the port name.
Admin State	Displays the administration port state, which is active or inactive. Values are Up and Down.
Link State	Displays the physical port state. Values are Up and Down.

Info

The Info Properties pane allows you to view nominal operating values set during manufacturing for the RAN-SVC card.

Table C-1247 Field Descriptions for the Info Properties Pane

Field	Descriptions
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.



Note

See [Table 1-22 on page 1-47](#) for descriptions of actions that you can perform using the buttons at the bottom of the window.

Slot Properties—PT_10GE_4

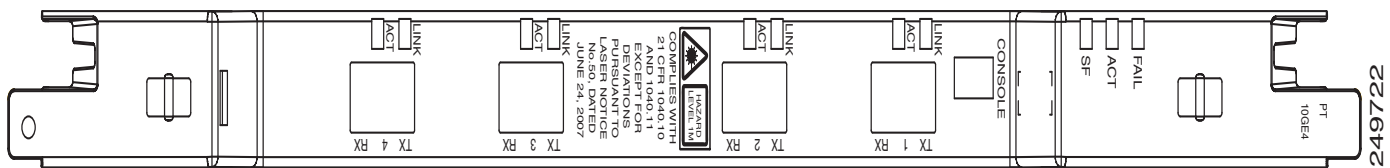
The slot properties pane displays information about the Cisco ONS 15454 SONET or ONS 15454 SDH slot that is selected in the NE Explorer tree. Use this properties pane to change the card properties.

The PT_10GE_4 card has four 10GE SFP+ ports. The SFP+ ports on the PT_10GE_4 card serve as normal ports or InterConnect (IC) ports. When PTF_10GE_4 and PT_10GE_4 cards are installed on the shelf, a bidirectional 2 * 16G connection is set up between each PTF_10GE_4 card and PT_10GE_4 card, and between two PTF_10GE_4 cards.

On the CPT 600 shelf, install the PT_10GE_4 cards in slot 2, 3, 6, or 7. There can be up to four PT_10GE_4 cards on the CPT 600 shelf. On the CPT 200 shelf, install the PT_10GE_4 card in slot 2 or 3. There can be a single PT_10GE_4 card on the CPT 200 shelf.

The following figure shows the PT_10GE_4 card faceplate.

Figure C-85 PT_10GE_4 Card Faceplate



For the PT_10GE_4 card, the slot properties pane displays the following properties: Identification, Module View, Alarm Behavior, Ether Ports, Info, Loopback, Optical Thresh, PPM, and RMON Thresholds.

Identification

The Identification Properties pane allows you to view and update the PT_10GE_4 identification information.

Table C-1248 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
HW Revision	Displays the hardware version number of the card.
Serial No.	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Admin State	The port administration state. It can be: - IS—In Service - OOS, MT—Out of Service, Maintenance
Service State	<i>Display only.</i> Sets the service state that indicates the operational state of the channel group. The Service State can be: - IS-NR—In Service–Normal. - OOS-MA, DSBLD—Out of Service and Management, Disabled.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. You can choose an alarm profile for the card from the drop-down list. Values are Default and Inherited. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Module View

The Module View displays a graphic of the PT_10GE_4 card that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-1249 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Card Profile	
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Payload	
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Ether Ports

The Ether Ports contains the following tabs:

- [Ports Tab, page C-536](#)
- [Ethernet Tab, page C-537](#)
- [Layer 2 Protocols, page C-538](#)

Ports Tab

Table C-1250 Field Descriptions for the Ports Tab

Field	Description
Port	Displays the port number.
Port Name	Displays the name of the port.
Admin State	The port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak (H:M)	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS state.

Table C-1250 *Field Descriptions for the Ports Tab (continued)*

Field	Description
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • EW • LW • SW • LRM • ER • LR • SR (short reach, up to 2 km distance) • ZR • IR 2 • LR 2 • DWDM • CWDM40km
Wavelength	Allows you to provision the wavelength frequency.

Ethernet Tab

The Ethernet tab allows you to view Ethernet line information.

Table C-1251 *Field Descriptions for the Ethernet Tab*

Field	Description
Port	Displays the port number.
MTU	Displays the maximum transfer unit, which is the largest acceptable packet size configured for that port. The maximum setting is 9000 and the default size is 1500. The MTU value is 0 until the packet-over-SONET (POS) port is used in creating a circuit.
Link State	Displays the physical port state. Possible values are Up and Down.
Expected Speed	Displays the expected speed. Possible values are 10 Mbps, 100 Mbps, and Auto. If expected speed is set to Auto, you cannot enable selective autonegotiation.
Expected Duplex	Displays the port's expected duplex setting. Possible values are Full, Half, and Auto. If expected duplex is set to Auto, you cannot enable selective autonegotiation.
Flow Control	Displays the negotiated flow control mode. Possible values are None, Symmetrical, and Asymmetrical.
Interconnect Mode	—
Operating Speed	Displays the actual operating speed.
Operating Duplex	Displays the expected duplex setting of the port.

Table C-1251 *Field Descriptions for the Ethernet Tab (continued)*

Field	Description
Operating Flow Control	Displays the value of the flow control.
Carrier Delays (ms)	—

Layer 2 Protocols

The Layer 2 Protocols tab allows you to view and modify actions for Layer 2 protocols.

Table C-1252 *Field Descriptions for the Layer 2 Protocols Tab*

Field	Description
Port	Displays the port number.
CDP	Displays the Layer 2 action configured for CDP. To modify the action, click the cell and select the action from the drop-down list.
DOT1X	Displays the Layer 2 action configured for DOT1X. To modify the action, click the cell and select the action from the drop-down list.
DTP	Displays the Layer 2 action configured for DTP. To modify the action, click the cell and select the action from the drop-down list.
LACP	Displays the Layer 2 action configured for LACP. To modify the action, click the cell and select the action from the drop-down list.
PAGP	Displays the Layer 2 action configured for PAGP. To modify the action, click the cell and select the action from the drop-down list.
VTP	Displays the Layer 2 action configured for VTP. To modify the action, click the cell and select the action from the drop-down list.
STP	Displays the Layer 2 action configured for STP. To modify the action, click the cell and select the action from the drop-down list.

Info

The Info Properties pane allows you to view nominal operating values set for the card during manufacturing.

Table C-1253 *Field Descriptions for the Info Properties Pane*

Field	Description
Attribute	Displays the nominal card specification.
Value	Displays the value of the attribute.
Units	Displays the unit of measure (when applicable) of the object that is inventoried.

Loopback

The Loopback Properties pane allows you to view and update PT_10GE_4 loopback information.

Table C-1254 Field Descriptions for the Loopback Properties Pane

Field	Description
Port	Displays the port number.
Admin State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or clear the current loopback (none).

Optical Thresh

The Optical Thresh Properties pane allows you to view and provision optical threshold settings. The Properties pane contains the [TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs](#), page C-877.

TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs

The TCA 15 Min/1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

The Alarm Thresh tab allows you to select thresholds for alarm generation.

Table C-1255 Field Descriptions for the TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs

Field	Description
Port	Displays the port number.
Laser Bias High (%)	Displays the upper laser bias threshold.
Rx Power High (dBm)	Displays the upper receive power threshold.
Rx Power Low (dBm)	Displays the lower receive power threshold.
Tx Power High (dBm)	Displays the upper transmit power threshold.
Tx Power Low (dBm)	Displays the lower transmit power threshold.
Reset to Defaults button	Resets the value of the port parameters to the default value.

PPM

The PPM Properties pane allows you to view and provision the PPM and the ports inside the PPM.

Table C-1256 Field Descriptions for the PPM Properties Pane

Field	Description
Pluggable Port Modules (PPM)	
PPM No.	Displays the identifier of the plugin module.
Actual Equipment Type	Displays the actual card that is installed in the slot. Values are single mode or multimode.
Equipment State	Displays the equipment state of the plugin module.
Admin State	Displays the port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
PPM	
Port	Displays the port number for the PPM in the Pluggable Port Modules area.
Rate	Displays the port rate for the PPM in the Pluggable Port Modules area.

Provision Pluggable Dialog Box

Click the **Create** button to launch the Provision Pluggable dialog box. This dialog box allows you to provision the PPM and to create the ports inside this entity. See [Provision Pluggable Dialog Box, page C-25](#) for more information.

RMON Thresholds

The RMON Thresholds Properties pane allows you to view RMON thresholds for the PT_10GE_4 card.

Table C-1257 Field Descriptions for the RMON Thresholds Properties Pane

Field	Description
Index No.	Displays the selected interface number.
Slot	Displays the selected card.
Port	Displays the port on the selected card.
Variable	Displays the MIB variable that is being monitored.
Alarm Type	Indicates whether the event is triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	Indicates whether the sample type is relative or absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period	Displays the sample period, in seconds.
Rising Thresholds	Displays the number of occurrences for the rising threshold.

Table C-1257 Field Descriptions for the RMON Thresholds Properties Pane (continued)

Field	Description
Falling Thresholds	Displays the number of occurrences for the falling threshold. In most cases, the falling threshold is set lower than the rising threshold.
Create	Allows you to create an RMON threshold. Click the Create button to create a threshold for the POS ports. Note You can select a Channel Group when you create a threshold. For more information, see Creating RMON Thresholds, page 6-11 .
Delete	Select a threshold from the list displayed and click the Delete button.

Slot Properties—PTSA_GE

The PTSA_GE panel is a standalone unit and can be connected to the PT System. The PTSA_GE panel enables the number of ports to be scaled on the PT System. The PTSA_GE panel has 4 10GE SFP+ ports and 44 GE SFP ports.

The PTSA_GE panel cannot operate independently. After connecting the PTSA_GE panel to the PTF_10GE_4 card or the PT_10GE_4 card, the PTSA_GE panel is automatically discovered and registered. The discovery operation is performed using the Satellite Discovery Protocol (SDP) and the registration operation is performed using the Satellite Registration Protocol (SRP).

The four SFP+ ports on the PTSA_GE panel can be connected to the SFP+ ports on the PTF_10GE_4 card or the PT_10GE_4 card. The four SFP+ ports on the PTSA_GE panel can be connected to only one card (PTF_10GE_4 or PT_10GE_4) at a time.

PTSA_GE shelf supports ONE-GE and FE for 1 to 44 ports and supports TEN-GE for 45 to 48 ports. By default, the 45 to 48 ports are in IC mode and cannot be changed.

The following figures show the four variations of the PTSA_GE panel faceplate.

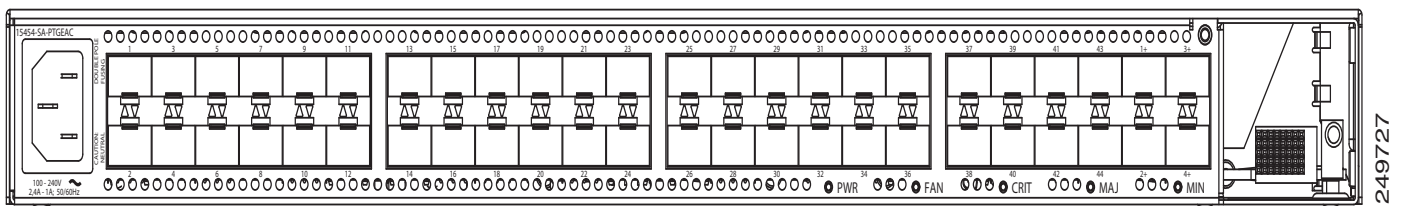
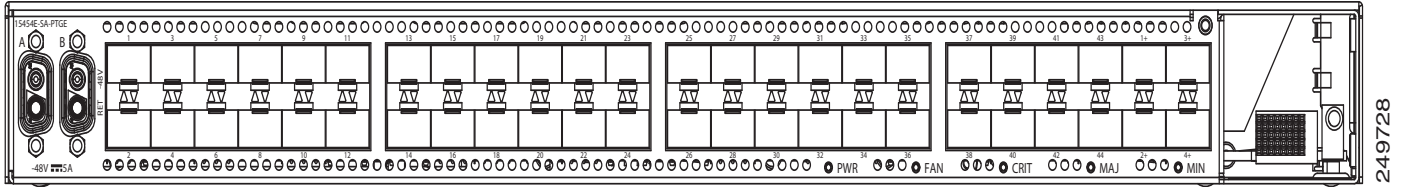
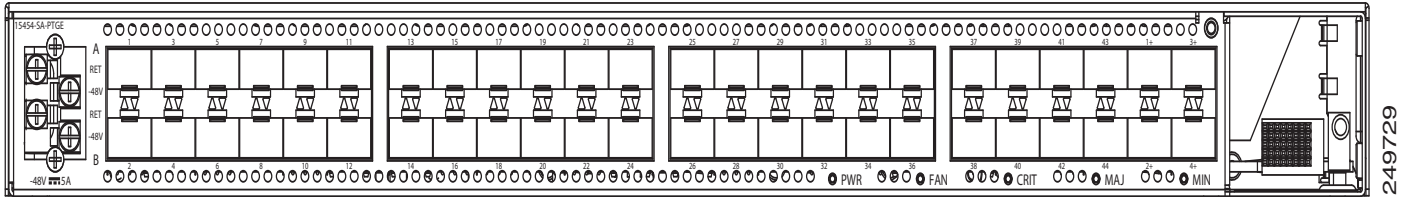
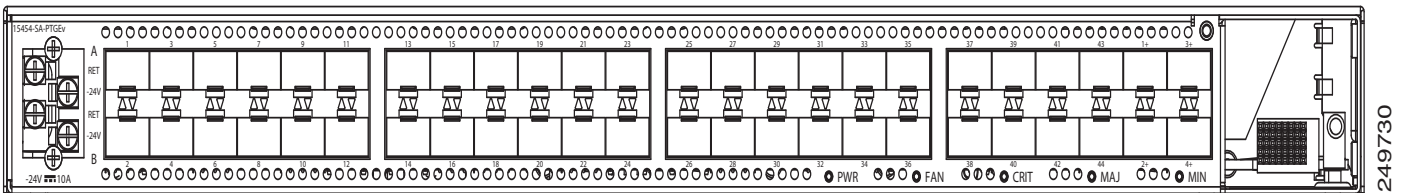
Figure C-86 PTSA_GE Panel With AC Power Faceplate

Figure C-87 PTSA_GE Panel With DC ETSI 48 V Faceplate**Figure C-88** PTSA_GE Panel With DC ANSI 48 V Faceplate**Figure C-89** PTSA_GE Panel With DC ANSI 24 V Faceplate

For the PTSA_GE panel, the slot properties pane displays the following properties: Identification, Module View, Alarm Behavior, Ether Ports, Info, Loopback, Optical Thresh, PPM, and RMON Thresholds.

Identification

The Identification Properties pane allows you to view and update the PTSA_GE identification information.

Table C-1258 Field Descriptions for the Identification Properties Pane

Field	Description
Equipment Type	Displays the equipment type the slot is provisioned for.
Actual Equipment Type	Displays the actual card that is installed in the slot.
HW Part Number	Displays the part number that is printed on the top of the card.
HW Revision	Displays the hardware version number of the card.
Serial No.	Displays the serial number that is unique to each card.
CLEI Code	Displays the CLEI code.
Firmware Version	Displays the revision number of the software used by the ASIC chip installed on the card.
Product ID	Displays a product ID string of 63 characters maximum. If the card does not support the product ID, the field shows N/A.

Table C-1258 Field Descriptions for the Identification Properties Pane (continued)

Field	Description
Version ID	Displays a version ID string in the format “V99_.” The version ID always begins with a V and ends with a space. If the card does not support the version ID, the field shows N/A.
Admin State	The port administration state. It can be: - IS—In Service - OOS, MT—Out of Service, Maintenance
Service State	<i>Display only.</i> Sets the service state that indicates the operational state of the channel group. The Service State can be: - IS-NR—In Service–Normal. - OOS-MA, DSBLD—Out of Service and Management, Disabled.
Equipment State	Displays the equipment state of the card.
Alarm Profile	Sets the alarm profile for the card. You can choose an alarm profile for the card from the drop-down list. Values are Default and Inherited. Check the Suppress Alarms check box to suppress all alarms for this card and its port(s).

Module View

The Module View displays a graphic of the PTSA_GE panel that is installed in the slot. The number of critical, major, minor, and warning alarms for the module is displayed under Alarm Status. (Alarms are also displayed when you move the mouse pointer over the graphic.) The Suppress Alarms check box is display-only and indicates whether all alarms are suppressed for the card and its port(s). Right-clicking the graphic opens a shortcut menu that you can use to reset or delete the card.

Alarm Behavior

The Alarm Behavior Properties pane allows you to view and update card alarm profile information.

Table C-1259 Field Descriptions for the Alarm Behavior Properties Pane

Field	Description
Card Profile	
Alarm Profile	Displays the alarm profile that has been configured for the card.
Suppress Alarms	When checked, indicates that all alarms are suppressed for the card.
Payload	
Port Number	Displays the card port number.
Alarm Profile	Choose an alarm profile for the port from the drop-down list. Values are Default, Inherited, or a customized alarm profile.
Suppress Alarms	When checked, all alarms are suppressed for the port.
Alarm Profile	Choose an alarm profile for all ports.
Force to All Ports	When clicked, forces all the ports to the selected alarm profile.

Ether Ports

The Ether Ports contains the following tabs:

- [Ports Tab, page C-536](#)
- [Ethernet Tab, page C-537](#)
- [Layer 2 Protocols, page C-538](#)

Ports Tab

Table C-1260 Field Descriptions for the Ports Tab

Field	Description
Port No.	Displays the port number.
Port Name	Displays the name of the port.
Admin State	The port administration state. It can be: • IS—In Service • IS, AINS—Automatic In Service • OOS, DSBLD—Out of Service, Disabled • OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
AINS Soak (H:M)	Automatic in-service soak. The amount of time left before the traffic/termination transitions to the IS state.
Reach	Allows you to provision the reach value. You can choose Auto Provision, which allows the system to automatically provision the reach from the PPM reach value on the hardware. Choose one of the following reach distances: Note The reach distance options that appear in the drop-down list depend on the card selected. • EW • LW • SW • LRM • ER • LR • SR (short reach, up to 2 km distance) • ZR • IR 2 • LR 2 • DWDM • CWDM40km
Wavelength	Allows you to provision the wavelength frequency.

Ethernet Tab

The Ethernet tab allows you to view Ethernet line information.

Table C-1261 *Field Descriptions for the Ethernet Tab*

Field	Description
Port	Displays the port number.
MTU	Displays the maximum transfer unit, which is the largest acceptable packet size configured for that port. The maximum setting is 9000 and the default size is 1500. The MTU value is 0 until the packet-over-SONET (POS) port is used in creating a circuit.
Link State	Displays the physical port state. Possible values are Up and Down.
Expected Speed	Displays the expected speed. Possible values are 10 Mbps, 100 Mbps, and Auto. If expected speed is set to Auto, you cannot enable selective autonegotiation.
Expected Duplex	Displays the port's expected duplex setting. Possible values are Full, Half, and Auto. If expected duplex is set to Auto, you cannot enable selective autonegotiation.
Flow Control	Displays the negotiated flow control mode. Possible values are None, Symmetrical, and Asymmetrical.
Interconnect Mode	—
Operating Speed	Displays the actual operating speed.
Operating Duplex	Displays the expected duplex setting of the port.
Operating Flow Control	Displays the value of the flow control.
Carrier Delays(ms)	—

Layer 2 Protocols Tab

The Layer 2 Protocols tab allows you to view and modify actions for Layer 2 protocols.

Table C-1262 *Field Descriptions for the Layer 2 Protocols Tab*

Field	Description
Port	Displays the port number.
CDP	Displays the Layer 2 action configured for CDP. To modify the action, click the cell and select the action from the drop-down list.
DOT1X	Displays the Layer 2 action configured for DOT1X. To modify the action, click the cell and select the action from the drop-down list.
DTP	Displays the Layer 2 action configured for DTP. To modify the action, click the cell and select the action from the drop-down list.
LACP	Displays the Layer 2 action configured for LACP. To modify the action, click the cell and select the action from the drop-down list.
PAGP	Displays the Layer 2 action configured for PAGP. To modify the action, click the cell and select the action from the drop-down list.
VTP	Displays the Layer 2 action configured for VTP. To modify the action, click the cell and select the action from the drop-down list.
STP	Displays the Layer 2 action configured for STP. To modify the action, click the cell and select the action from the drop-down list.

Loopback

The Loopback Properties pane allows you to view and update PTSA_GE loopback information.

Table C-1263 Field Descriptions for the Loopback Properties Pane

Field	Description
Port	Displays the port number and the name of the port.
Admin State	The port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
Loopback Type	Allows you to configure a port to terminal loopback (Inward) or clear the current loopback (none). Note The line state must be OOS_MT before you can configure the loopback type.

Optical Thresh

The Optical Thresh Properties pane allows you to view and provision optical threshold settings. The Properties pane contains the following tabs:

- [TCA 15 Min/TCA 1 Day/Alarm Thresh Tab, page C-539](#)
- [OTN, page C-539](#)

TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs

The TCA 15 Min/TCA 1 Day tabs allow you to set thresholds for 15-minute/1-day threshold crossing alert generation.

Table C-1264 Field Descriptions for the TCA 15 Min/TCA 1 Day/Alarm Thresh Tabs

Field	Description
Port	Displays the port number and the name of the port.
Laser Bias High (%)	Displays the upper laser bias threshold.
Rx Power High (dBm)	Displays the upper receive power threshold.
Rx Power Low (dBm)	Displays the lower receive power threshold.
Tx Power High (dBm)	Displays the upper transmit power threshold.
Tx Power Low (dBm)	Displays the lower transmit power threshold.

PPM

The PPM Properties pane allows you to view and provision the PPM and the ports inside the PPM.

Table C-1265 Field Descriptions for the PPM Properties Pane

Field	Description
Pluggable Port Modules (PPM)	
Pluggable Number	Displays the identifier of the plugin module.
Actual Equipment Type	Displays the equipment type that the slot is provisioned for.
Equipment State	Displays the equipment state of the plugin module.
Admin State	Displays the port administration state. It can be: - IS—In Service - IS, AINS—Automatic In Service - OOS, DSBLD—Out of Service, Disabled - OOS, MT—Out of Service, Maintenance
Service State	An autonomously generated state that gives the overall condition of the entity. Service states appear in the format <i>Administrative_State-Operational_State, Status_Attribute</i> .
PPM	
Port	Displays the identifier of the plugin module and the port number.
Rate	Displays the rate of the port inside the pluggable entity.

Provision Pluggable Dialog Box

Click the **Create** button to launch the Provision Pluggable dialog box. This dialog box allows you to provision the PPM and to create the ports inside this entity. See [Provision Pluggable Dialog Box, page C-25](#) for more information.

RMON Thresholds

The RMON Thresholds Properties pane allows you to view RMON thresholds for the PTSA_GE panel.

Table C-1266 Field Descriptions for the RMON Thresholds Properties Pane

Field	Description
Index No.	Displays the selected interface number.
Slot	Displays the selected card.
Port	Displays the port on the selected card.
Variable	Displays the MIB variable that is being monitored.
Alarm Type	Indicates whether the event is triggered by the rising threshold, falling threshold, or both the rising and falling thresholds.
Sample Type	Indicates whether the sample type is relative or absolute. Relative restricts the threshold to using the number of occurrences in the user-set sample period. Absolute sets the threshold to use the total number of occurrences, regardless of time period.
Sample Period	Displays the sample period, in seconds.
Rising Thresholds	Displays the number of occurrences for the rising threshold.

Table C-1266 *Field Descriptions for the RMON Thresholds Properties Pane (continued)*

Field	Description
Falling Thresholds	Displays the number of occurrences for the falling threshold. In most cases, the falling threshold is set lower than the rising threshold.
Create	Allows you to create an RMON threshold. Click the Create button to create a threshold for the POS ports. Note You can select a Channel Group when you create a threshold. For more information, see Creating RMON Thresholds, page 6-11.
Delete	Select a threshold from the list displayed and click the Delete button.