



Cisco IOS Software Release 12.1(10)EV on the Cisco ONS 15530

Overview

This product bulletin outlines the hardware and software features supported in Cisco IOS® Software Release 12.1(10)EV on the Cisco ONS 15530 Optical Multiservice Aggregation Platform. Cisco IOS Software Release 12.1(10)EV is an ED release (XED) that is optimized for the Cisco ONS 15530 and is based on the 12.1(10)E maintenance release.

The Cisco ONS 15530 is a highly scalable, dense wave division multiplexing (DWDM), multiservice aggregation platform that integrates data networking, storage, and legacy applications over an ultra-high, bandwidth intelligent optical infrastructure. The Cisco ONS 15530 provides flexible, scalable, and highly available optical networking for current and future high-performance, bandwidth-intensive networking applications.

New Hardware Supported

The following new hardware is supported.

Product Number	Description
Chassis	
15530-CHAS-N	ONS 15530 Chassis, NEBS Version, 11 slots
15530-CHAS-E	ONS 15530 Chassis, ETSI Version, 11 slots
Power	
15530-PWR-AC	ONS 15530 120–240 VAC Power Supply
15530-PWR-DC	ONS 15530 –48 VDC Power Supply
CPU and Switch Module	
15530-CPU	ONS 15530 CPU/Switch Module
Carrier Module	
15530-LCMB-0100	ONS 15530 Carrier Motherboard (supports OSC/VOA/PEQ Modules)
Optical Supervisory Channel (OSC) Modules	
15530-OSCM	ONS 15530 Optical Supervisory Channel Module



Product Number	Description
Optical Add/Drop Multiplexer/Demultiplexer (OADM)	
15530-MDXA-04x0	ONS 15530 4-Channel Band x multiplexer/demultiplexer Module—without OSC
15530-MDXB-04x0	ONS 15530 4-Channel Band x multiplexer/demultiplexer Module—with OSC
Transponders	
15530-TSP1-xx11	ONS 15530 Transponder Channel x/x+1 – 1310 nm MM SC with splitter
15530-TSP1-xx12	ONS 15530 Transponder Channel Ch x/x+1 – 1310 nm SM SC with splitter
15530-TSP1-xx21	ONS 15530 Transponder Channel Ch x/x+1 – 1310 nm MM SC non-splitter
15530-TSP1-xx22	ONS 15530 Transponder Channel Ch x/x+1 – 1310 nm SM SC non-splitter
Multiplexing Line Card	
15530-LCMB-0200	ONS 15530 10-port ESCON Multiplexing Line Card
15500-XVRA-01A2	ONS 15530 (Type 1) ESCON – 1310 nm MM - MTRJ
10 Gigabit Ethernet Uplink	
15530-10GE-UPLINK	ONS 15530 10 Gigabit Ethernet Uplink, 1310 nm with SC
10 Gbps ITU Trunk Cards	
15530-ITU2-xx10	ONS 15530 Channel Ch xx 10 Gbps ITU Trunk Card MU with splitter
15530-ITU2-xx20	ONS 15530 Channel Ch xx 10 Gbps ITU Trunk Card MU non-splitter
VOA and PEQ Modules	
15500-VOA-0100	ONS 15500 Single Wide-Band Variable Optical Attenuator
15500-VOA-0200	ONS 15500 Dual Wide-Band Variable Optical Attenuator
15500-PEQ-01x0	ONS 15500 Single-Band Optical Equalizer Band x
15500-PEQ-02xy	ONS 15500 Dual-Band Optical Equalizer Band xy



New Software Supported

The following new software is supported.

Feature	Description
Optical Supervisory Channel (OSC)	The OSC (Optical Supervisory Channel) allows control and management traffic to be carried without the necessity of a separate Ethernet connection to each Cisco ONS 15530 in the network. The OSC is established over a point-to-point connection and is always terminated on a neighboring node. The OSC channel provides OAM&P management capabilities such as optical performance monitoring with alarm indication, failure isolation, and protection mechanisms.
Per-wavelength management channel	A per-wavelength management channel provides SONET-like OAM&P capabilities in a 10-Gigabit-based optical network. The per-wavelength management channel provides the robustness and quality of service (QoS) required for a carrier-class optical network. The management channel provides optical performance monitoring with alarm indication, along with failure isolation and protection mechanisms. In addition to OAM&P capabilities, it provides mechanisms for advanced IP, packet, and TDM-oriented capabilities.
1+1 Protection	The Cisco ONS 15530 supports 1+1 client and trunk protection to protect against a fiber failure on a trunk or client interface. Hardware and software is used to offer a 1+1 protection mechanism that is similar to the SONET Automatic Protection Switching (APS) standard. When a loss of light or a configurable level of signal degradation is detected, the software will switch from the working fiber path to the protection fiber path in less than 50 ms.
Y-cable Protection	The Cisco ONS 15530 supports line card protection for transponder line cards using a <i>y-cable</i> mechanism. Y-cable protection protects against both facility failures and failure of the transponder line card. Using an external 2:1 combiner cable (the y-cable) between the client equipment and the transponder interfaces, the client signal is duplicated and sent to two transponder interfaces. The Cisco ONS 15530 software can be configured to address two transponder cards as the working and protection transponders from a single client source.
Switch Fabric Protection	The Cisco ONS 15530 provides facility and trunk and uplink card protection based on the switch fabric connecting one 10-port ESCON multiplexing line card and two 10 Gbps ITU trunk cards or two 10 Gigabit Ethernet uplink cards. With switch fabric protection, when a signal failure occurs on the trunk fiber or on a trunk card or uplink card, the system switches over to the standby signal. In the case of redundant switch fabrics, a failure in the switch fabric itself causes a switchover to the standby switch fabric. When switch fabric protection used along with Y-cable client protection and 1+1 trunk card protection, the entire path of a signal can be protected through the Cisco ONS 15530.
Modular Variable Optical Attenuators	Cisco ONS 15530 provides Variable Optical Attenuators (VOAs) as part of the amplification solution. The VOA modules include Per-Band Optical Equalizer (PB-OE) and Wide-Band Variable Optical Attenuator (WB-VOA). Together with either the Cisco ONS 15501 EDFA or Cisco ONS 15216 EDFA2, the Cisco ONS 15530 VOA modules can be configured to attenuate the add/drop bands as well as the pass-bands, ensuring a proper balance of the optical signal strengths across all the channels.



Release Notes can be found at:

http://www.cisco.com/univercd/cc/td/doc/product/mels/15530/phase_0/index.htm

Ordering Information

The Cisco IOS 12.1(10)EV software release for the Cisco ONS 15530 is scheduled for Q3CY02 and includes the following software.

Product Number	Description	Image
SO530C-12110EV Cisco	Cisco ONS 15530 IOS IP	ons15530-i-mz

SMARTnet Customers

Update

SMARTnet™ customers are entitled to a software update, which is described as a new release version of the customer last-purchased feature set. For customers wanting increased functionality, an upgrade to the new feature set will be required.

Upgrade

Cisco helps SMARTnet customers get upgrades quickly through CCO. If customers are upgrading from one feature set to another, they must place an order for the purchase of the appropriate Technology Use or Feature Licenses before downloading the software.

Non-SMARTnet Customers

Upgrades

Customers who wish to increase the level of functionality beyond their current feature set must order a software product code along with any appropriate feature licenses.

Downloading Cisco IOS 12.1(10)EV Software Release from Cisco

Registered CCO users may download the Cisco IOS 12.1(10)EV software release for the Cisco ONS 15530 at: <http://cco.cisco.com> when available. This release is scheduled for Q3CY02.

Those customers eligible for software upgrades under warranty that do not have service contracts will need to contact the Technical Assistance Center at 800 553-2447 or tac-dispatch@cisco.com.



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