Cisco Prisma II Platform

Front Access Chassis

In optical transmission systems, the network platform forms the foundation of the product family. The Cisco® Prisma® II platform provides network operators with the unique features that enable the deployment of a carrier class-type network. Advanced features such as high usable module density, broad operating temperature range for field deployment without environmental controls, and a unique design optimized for easy module insertion, setup, and administration make the Prisma II platform the key to increased network reliability, scalability, and more cost-effective deployments.

Rear Access Chassis

Features

- 1 GHz capable
- High usable module density (up to 13 modules per chassis)
- Operating temperature range suitable for outdoor field deployment
- Solid metal construction
- Low power consumption
- Superior heat dissipation and air circulation
- Front access and rear access chassis available
- Technician-friendly design with easy module insertion and removal, setup, and administration
- High-speed passive backplane to support migration to digital transmission technologies such as Cisco's BDR Digital Reverse System
- Excellent fiber, powering, and RF cable management
- Advanced SNMP-oriented network monitoring and control over multiple network interfaces
- Multiple connector and powering options
- User-friendly alarm setup
- Master / Slave Redundant switching between modules
- Supports Web Browser and Command Line Interface (CLI)

Power Supply System

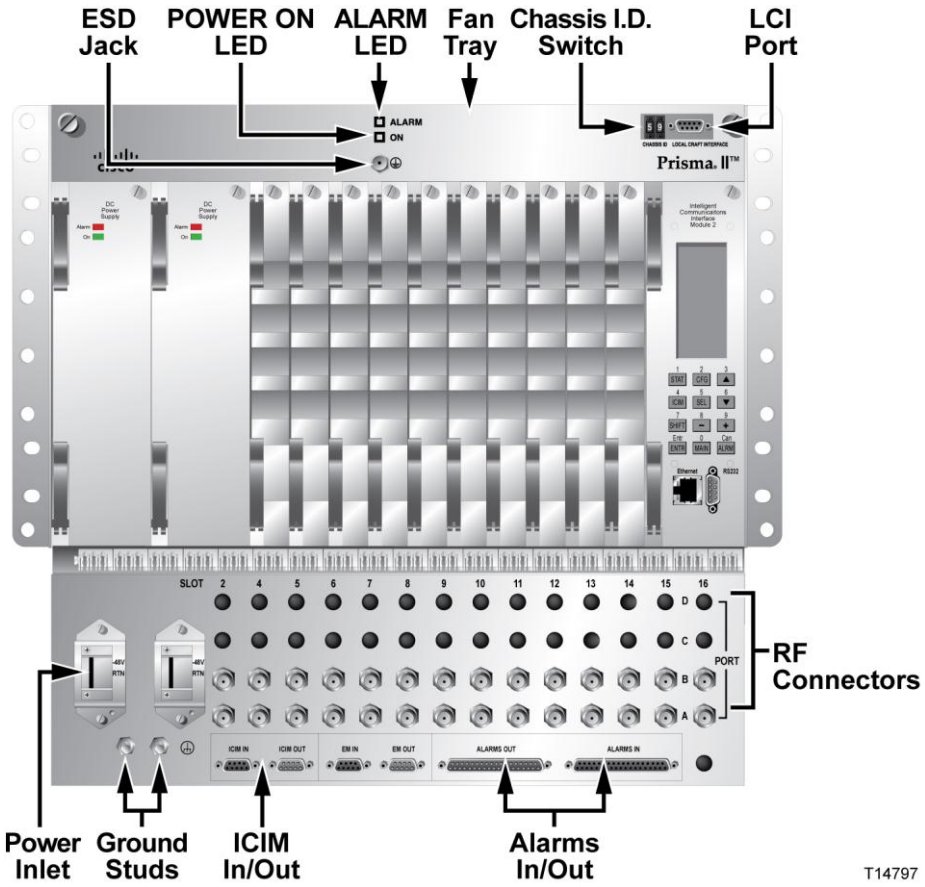
Platform Components

The Prisma II platform consists of the following modules/components:

- Chassis with fan tray (front and rear access)
- Power Supply System
- Intelligent Communications Interface Module 2 (ICIM2)
- Module Blanks

ICIM 2

Prisma II Chassis Configuration



Slots 1 through 16, left to right

- Slots 1 and 3 are dedicated to power supplies.
- Slots 2 and 4 can accommodate any single width Application Module *(i.e., Optical Amplifier, Transmitter, Receiver, etc.).*
- Slots 5 through 16 can accommodate any Application Module.
- Intelligent Communications Interface Module 2 (ICIM2), if used, must be installed in slots 15 and 16.
  (Note: An ICIM or ICIM 2 is not required in every chassis.)
- Blanks are required in all unused slots of the chassis to maintain proper cooling for all other modules.
- High-Density Modules require a separate Host Module.

Prisma II products include some of the industry's most complete range of high performance optical components.

For more information, please refer to:

Prisma II 1310 nm High-Density Transmitters	Data Sheet Part Number 7006768
Prisma II 1 GHz 1550 nm Transmitters	Data Sheet Part Number 7009178
Prisma II 1550 nm Optical Amplifiers	Data Sheet Part Number 739202
Prisma II Forward Optical Receivers	Data Sheet Part Number 7011887
Prisma II Reverse Optical Receivers	Data Sheet Part Number 7011888
Prisma II Redundancy Interface Panel	Data Sheet Part Number 751713
Ancillary Modules	Data Sheet Part Number 739205
BDR Digital Reverse 2:1 Multiplexing System	Data Sheet Part Number 744484
BDR Digital Reverse 4:1 Multiplexing System	Data Sheet Part Number 746623

Chassis

Features

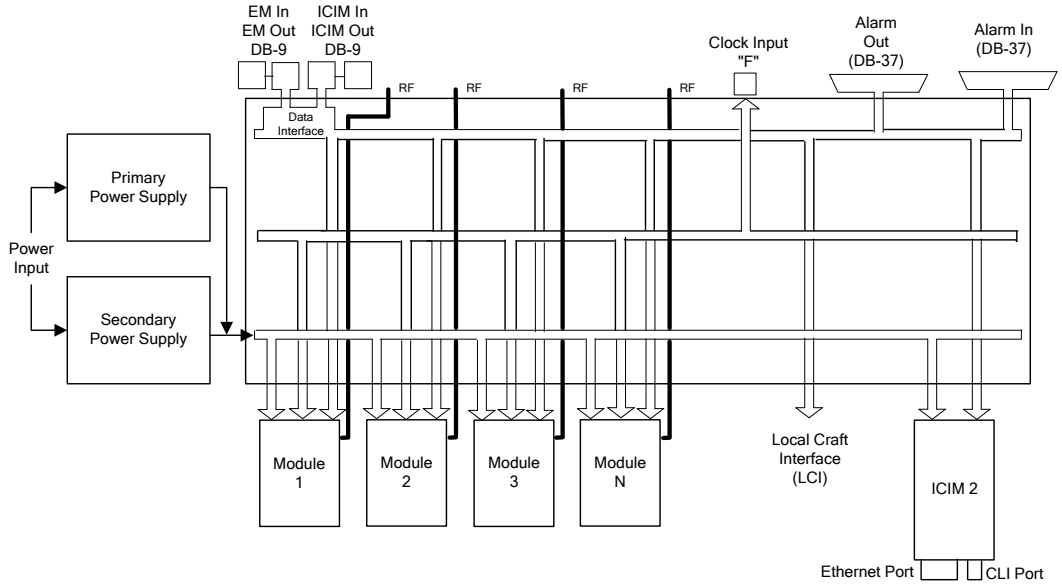
- 1 GHz capable
- Rear access; 10.5” (6 RU) high, 13.5” deep
- Front access; 14.0” (8 RU) high, 11.25” deep
- 19-inch width with mounts available to fit 23-inch rack
- Chassis accommodates 16 single-width modules
- Blind mate (push-on) connectors for RF, power, and data provide complete front access for simplified installation and maintenance
- Advanced fiber handling system accommodates front or rear fiber routing
- Optional Intelligent Communications Interface Module 2 (ICIM2) for element management
- Front panel Local Craft Interface (LCI) port for local module configuration
- Designed for dual, redundant powering via AC or DC power supplies
- Chassis cooling fans for enhanced air circulation and heat dissipation
- Extended operating temperature range (-40°C to +65°C)
- Option for “F” or “BNC” connectors

Front Access Chassis

Rear Access Chassis

Chassis

Block Diagram



Specifications

Electrical	Units		Notes
Connections			
ROSA/TNCS with ICIM2		Two DB-9 or one RJ-45	
Local Alarm		Two DB-37 male (rear)	
Ground Stud (Rear)		10-32 thread (rear)	
Power Consumption with fan tray	W DC	48	
Bandwidth	MHz	5 - 1002	

Environmental	Units		Notes
Temperature Range			1, 2
Full Specs and Operational	°C	-40 to +65	
	°F	-40 to +149	
Humidity Range	%	0 to 95	3

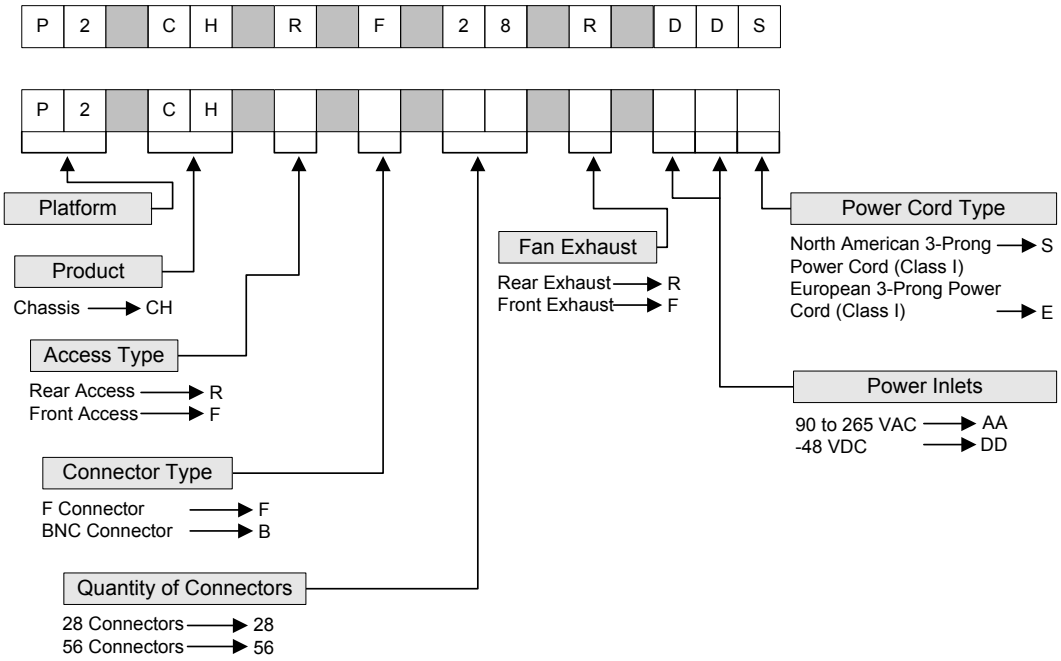
Mechanical	Units			Notes
		Rear Access	Front Access	
Physical Dimensions				
Depth	in.	13.5	11.25	
	cm	34.3	28.6	
Width	in.	17.5	17.5	
	cm	44.4	44.4	
Height	in.	10.50	14.0	
	cm	26.7	35.6	
Weight	lb	19.0	20.0	
	kg	8.6	9.1	
Rack Units	RU	6	8	

Notes:
1. Air temperature measured at the air inlet of the Prisma II chassis.
2. All unused slots in the Prisma II chassis need to be filled with a Module Blank.
3. Recommended for use only in non-condensing environments.

Chassis

Ordering Information

Sample



Note: Tinted plastic faceplate sold separately. Some configurations may not be available; contact the Applications Engineering group for more information.

Ordering Information Notes

Item	Options	Notes
Access Type	• Rear Access • Front Access	• Standard configuration. This selection provides the 6 RU chassis with all connectors on the rear. • Optional configuration. This selection provides the 8 RU chassis with all connectors on the front. Consider this option for back-to-back or Remote Terminal (RT) installations.
Connector Type	• F Connector • BNC Connector	• Standard configuration. • Optional configuration.
Quantity of Connectors	• 28 Connectors • 56 Connectors	• Standard. This selection provides 2 coaxial connectors per single slot. • Optional. This selection provides 4 coaxial connectors per single slot. Select this option if 4:1 BDR Digital Reverse System products will be installed in the chassis.
Fan Exhaust *(chassis order code includes fan tray)*	• Rear Exhaust • Front Exhaust	• Standard configuration. • Optional configuration. Available for back-to-back chassis installations.
Power Inlets	• 90 – 265 VAC • -48 VDC	• Universal 90 to 265 VAC powering. • -48 VDC powering.
Power Cord Type	• North American Power Cord • European Power Cord	• Select North American Power Cord for all -48 VDC installations. • Standard selection with AC powering provides a 3-prong, Class I AC power cord suitable for North American compatible power receptacles. • European selection with AC powering provides a 3-prong, Class I AC power cord suitable for standard European compatible power receptacles. • DO NOT select European Power Cord for -48 VDC powering.

Chassis

Ordering Information, continued

Chassis (See Ordering Matrix on page 5 for Code)	Part Number
P2-CH-F-F-28-R-AAE	736735
P2-CH-F-F-28-F-AAE	736741
P2-CH-F-F-56-R-AAE	736748
P2-CH-F-F-56-F-AAE	736747
P2-CH-R-F-28-R-AAE	736727
P2-CH-R-F-56-R-AAE	736761
P2-CH-R-F-28-R-DDS	736732
P2-CH-R-F-55-R-DDS	736766
P2-CH-F-F-28-R-DDS	736740
P2-CH-F-F-28-F-DDS	736743
P2-CH-F-F-56-F-DDS	736744
P2-CH-F-F-56-R-DDS	736750
P2-CH-F-F-28-R-AAS	736736
P2-CH-F-F-28-F-AAS	736737
P2-CH-F-F-56-R-AAS	736746
P2-CH-F-F-56-F-AAS	736748
P2-CH-R-F-28-R-AAS	736728
P2-CH-R-F-56-R-AAS	736762

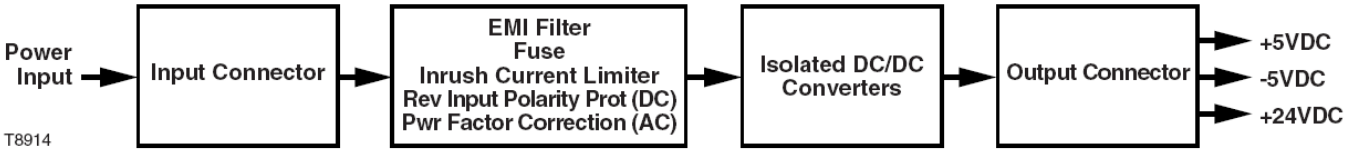
Optional Spare Equipment and Tools	Part Number
Module Blank (pk. 6)	716307
Power Supply Blank (pk. 6)	716308
Serial Extension Cable, DB-9 Male to DB-9 Female, 6 ft (1 ea)	180143
TNCS, Cable Kit, Prisma II (1 kit)	738686
Tool, RF Connector Removal, Backplane / Module (1 ea)	741425
Tool, F Connector (security shield) (1 ea)	744313
Test Point Adapter, Long Reach (1 ea)	562580
Fan Tray, Rear Exhaust (1 ea) *(Note: chassis order code includes fan tray)*	741419
Fan Tray, Front Exhaust (1 ea) *(Note: chassis order code includes fan tray)*	741420
Fans Only (5 ea)	741421
Power Inlet, Front Access, AC, Standard (1 ea)	744432
Power Inlet, Front Access, DC, Standard (1 ea)	744430
Power Inlet, Rear Access, AC, Standard (1 ea)	741422
Power Inlet, Rear Access, DC, Standard (1 ea)	741424
Power Connector, -48 VDC (12 ea)	741982
RF Connectors, F, Front or Rear Access, (28 ea)	741429
RF Connectors, BNC, Front or Rear Access, (28 ea)	741428
Mounting Ears, Black (3 pair)	741602
Mounting Ears, Green (3 pair)	741603
Fiber Storage, Rack Mount, 1 RU	739138
Tinted plastic faceplate, P2-CH	4008670
Host Module, P2-HM	4008281
AC Power Cord, 2 meter, North American 3-conductor (Class I)	3989838
AC Power Cord, 2.5 meter, European 3-conductor (Class I)	700788

Power Supply System

Features

- Universal AC (90-265 VAC) and -48 VDC power options
- Designed to be used in fully-redundant configuration
- Uninterruptible transfer to single supply in the event that one power supply module fails
- Modular, front access design and hot-swap capability allow for quick and easy replacement in the event of failure
- Universal AC voltage input (automatically adjusts to voltage input, for AC supply only)
- Power factor correction

Power Supply System



Power Supply System

Specifications

Electrical	Units	AC	-48 VDC	Notes
Voltage Requirements	V	90 to 265, 50/60 Hz	-40 to -75	1
Power Consumption	A	4.7 full load	9.8 full load	
Output Voltage/Current	VDC / A	+24 / 10.0	+24 / 10.0	
	VDC / A	+5 / 40.0	+5 / 40.0	
	VDC / A	-5 / 3.0	-5 / 3.0	
Efficiency (minimum)	%	≥ 68	≥ 68	
Line Regulation	%	≥ 0.5	≥ 0.5	
Load Regulation	%	± 1.5	± 1.5	
Power Stability	%	± 0.5 over temperature range	± 0.5 over temperature range	
Redundancy Switch Time	ms	0	0	4

Environmental	Units	AC	-48 VDC	Notes
Temperature Range				2
Full Specs and Operational	°C	-40 to +65	-40 to +65	
	°F	-40 to +149	-40 to +149	
Humidity Range	%	0 to 95	0 to 95	3

Mechanical	Units		Notes
Physical Dimensions			
Depth	in.	9.2	
	cm	23.4	
Width	in.	2.1	
	cm	5.3	
Height	in.	6.4	
	cm	16.3	
Weight	lb	6.0	
	kg	2.7	
Module Width	slots	2	

Notes:

1. AC power cords provided with AC chassis.
2. Air temperature measured at the air inlet of the Prisma II chassis.
3. Recommended for use only in non-condensing environments.
4. To maximize system reliability, power supplies showing the CE silkscreen on the lower front of the module (earlier generation) should only be paired with similarly labeled modules within a chassis, due to their particular load sharing methods. When replacing these earlier-generation CE power supplies in a chassis with later generation modules, we recommend replacing both modules at the same time.

Ordering Information

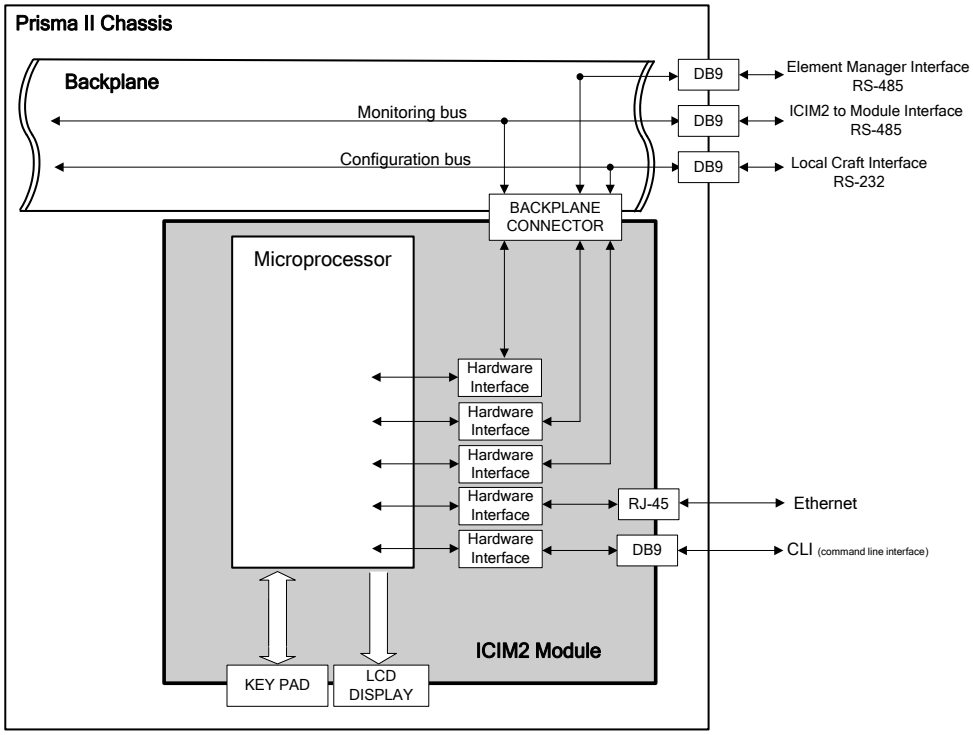
Description	Part Number
AC power supply, World Wide, 90-265 VAC, P2-PS-M-A-S-W	4012765.001.000.AB
DC power supply, World Wide, -48 VDC, P2-PS-M-D-W	716312.001.000.BB

Intelligent Communications Interface Module 2 (ICIM2)

Features

- Functions as the interface between the Prisma II modules and the ROSA/Transmission Networks Control Systems (TNCS) communications bus
- Supports Web Browser and Command Line Interface (CLI) for local and remote management
- Provides early warning of systems faults
- Blind-mate (push-on) connectors for power and data provide complete front access for simplified installation and maintenance
- Allows local module configuration and status monitoring for up to 150 modules[1] or 10 chassis, whichever comes first, including:
  - Prisma II Chassis
  - Prisma II High Density Chassis
  - Prisma II XD Chassis
  - Prisma HDRx Chassis
- SNMP Ethernet interface
- LCD display and keypad
- ROSA/TNCS compatible
  - Remote control and monitoring of individual modules
- SNMP compatible
- Firmware can be upgraded by remote download

ICIM2



Note:

1. The polling rate is approximately 1 second per module. Assign the number of modules per ICIM2 accordingly.

Intelligent Communications Interface Module 2 (ICIM2)

Specifications

Electrical	Units		Notes
Connections		RJ-45 (Ethernet) DB-9 (CLI)	
Power Consumption			
Nominal Operation	W DC	0.3	
Heater ON Operation	W DC	13.0	
Polling Speed	Kb	38.4	

Environmental	Units		Notes
Temperature Range			1
Full Specs and Operational	°C °F	-40 to +65 -40 to +149	
Humidity Range	%	0 to 95	2

Mechanical	Units		Notes
Physical Dimensions			
Depth	in. cm	9.8 24.9	
Width	in. cm	2.1 5.3	
Height	in. cm	7.6 19.3	
Weight	lb kg	2.0 0.9	
Module Width	slot	2	

Notes:
1. Air temperature measured at the air inlet of the Prisma II chassis.
2. Recommended for use only in non-condensing environments.

Ordering Information

Description	Part Number
ICIM2, Prisma II (P2-ICIM2-MSO)	4025187
ICIM OUT Terminator, DB9 Female (Spare)	4013014
ICIM IN Terminator, DB9 Male (required for redundancy with the HD Rx)	4031282

Module Blanks

Description

The Prisma II platform is a high-density platform designed for a broad operating temperature range. This feature allows for field deployment without facility environment controls. The thermal integrity of the platform and air circulation around the modules are critical. All unused module slots in a Prisma II chassis must be filled with a Module Blank.

Module Blank

Features

- One module slot wide
- Two types of blanks available
  -- Power supply blank (slots 1 and 3)
  -- Standard blank for all other slots
- Blanks are required in all unused slots of the chassis to maintain proper cooling for all other modules

Note: Slots 1 and 3 of the Prisma II chassis are dedicated to power supplies. These two slots require the “Power Supply Blank.” All other slots use the “Module Blank.”

Ordering Information

Description	Part Number
Module Blank (pk. 6)	716307
Power Supply Blank (pk. 6)	716308

Cisco Systems, Inc.
1-800-722-2009 or 770-277-1120
www.cisco.com

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