

Commercial Services

Prisma® Optical Media Converters CWDM Gigabit FiberLinX™ Modules

Description

Prisma® Gigabit FiberLinX modules are field-proven in Optical Ethernet, FTTx and campus area network applications worldwide.

Service providers who provide customers with Transparent LAN services must be able to remotely manage customer premise equipment while keeping management and customer data traffic completely separated. Designed to meet the needs of service providers and administrators of enterprise campus networks, Prisma FiberLinX modules provision point-to-point fiber optic connections and provide a management tool to monitor the entire link between two locations.

The Prisma FiberLinX modules connect two remote networks over fiber and allow administrators to observe both end-points and the fiber link between them as a single management entity and not as separate elements. Host management traffic is not visible to the remote or customer network. Access to the customer network is not required, allowing end-to-end data integrity. Prisma FiberLinX modules allow for remote configuration and alert administrators to any potential problems on the long-haul fiber run, provide vital information on link condition, and reports data traffic statistics. In addition, the modules reduce the total cost of network equipment by functioning as a copper-to-fiber media converter, allowing lower-cost copper switches to be deployed at both ends of the fiber connection. *(continued on page 2)*



Features

- All management traffic remains isolated from the remote (customer premise) LAN
- Installs in a wide variety of VLAN and non-VLAN environments – 802.1Q compliant
- Provides differential priority for higher QOS assignable to mission critical traffic
- Remotely configure initial settings
- Manage and monitor fiber traffic between switches or routers and receive vital system health information and notification should problems occur
- Minimizes costs of building and operating networks - Avoid unnecessary service calls; Deploy less expensive copper switches at both ends
- Includes GUI-based PrismaView SNMP management application software
- Includes three Loopback Testing modes
- Includes broadcast storm protection
- SNMP V2c compatible
- Auto MDI-II/MDI-X on data and external management transmit ports
- VLAN-tagging and Q-in-Q (double-tagging) segregates customer traffic

Description, continued

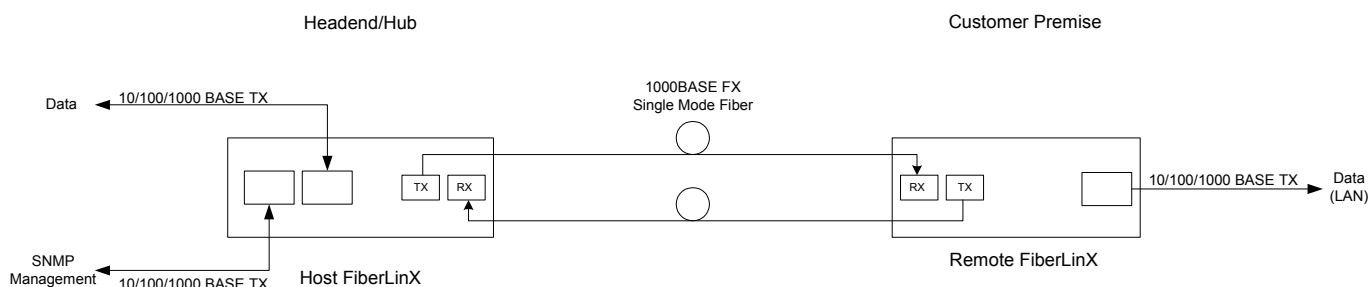
Offering outstanding flexibility, Prisma FiberLinX modules include one 1000 Mbps fiber port with CWDM technology (10 wavelengths available), one 10/100/1000 twisted pair data port, and an additional 10/100/1000 twisted pair port for management. Twisted pair ports auto-negotiate or can be manually set for 10, 100, or 1000 Mbps. The Prisma FiberLinX module VLAN functionality is extremely versatile, allowing installation in virtually any environment. Prisma FiberLinX modules support a full-range of VLAN IDs, and offer a 2-tier queue for differential prioritization. Available as a dual wide module for installation in any Prisma MediaCenter™ Chassis or dual slot Prisma MediaCPE™ Chassis, Prisma FiberLinX also includes the FiberAlert feature for troubleshooting, as well as bi-directional bandwidth control.

Prisma FiberLinX modules are easy to configure with graphical user interface (GUI)-based PrismaView™ SNMP management application software. The PrismaView application provides operational and system health information, and the ability to control various functions of Prisma FiberLinX modules. SNMP traps alert administrators to potential network failures, reduce administrative overhead, and increase network integrity and uptime. Information reported from Prisma FiberLinX modules via SNMP services includes LAN packets received and transmitted, errors, and port status (see Prisma MIB Specifications). This allows network administrators to keep networks running in peak condition. The PrismaView application is available in several versions and can also function as a snap-in module for Hewlett-Packard OpenView Network Node Manager. Please contact us for assistance in selecting the right version of the PrismaView application for your operating system.

Two models are also available with SFP ports, allowing users to easily accommodate changing fiber requirements; simply install a new SFP module rather than replacing an entire Gigabit FiberLinX module.

Application

When used in pairs, a Prisma FiberLinX module configured as a Host resides at the headend while another Prisma FiberLinX module configured as a Remote, is installed at the remote customer location, typically on the network edge where the customer network meets the service provider infrastructure. Via SNMP, the Prisma FiberLinX solution monitors the entire link and ensures data integrity while remaining isolated and completely transparent to the customer LAN. A Prisma FiberLinX module can be configured as a Standalone for a single-solution customer premises equipment application.



Specifications

Optical	
Wavelength Spacing	20 nm
Tx Wavelength	nominal $\pm$ 6 nm
Tx optical output range	0 to +5 dBm
Rx optical input range	0 to -24 dBm

Electrical	
Twisted Pair Data Port	IEEE 802.3 10Base-T/100Base-TX/1000 for data; RJ-45 connector; Half/Full-Duplex operation
Fiber Data Port	IEEE 802.3 1000Base-FX for data; SC connectors; Half/Full-Duplex operation
Twisted Pair Management Port	IEEE 802.3 10Base-T/100Base-TX/1000 for management; RJ-45 connector; Half/Full-Duplex operation
Local Console Port	DB-9, RS-232 connector
Standards Compliance	IEEE 802.1Q VLAN, 802.1p and 802.3x Flow Control
Bandwidth Control	Dynamic bandwidth control (244 Kbps at 1 GHz line rate) via GUI-based management software
Cut Through Latency	< 15 us for 2 Media Converters back-to-back, 64 byte frame size, 100% line utilization, bidirectional traffic

Prisma MIB	MIB-II (RFC 1213)	Transmission Dot 3 (RFC1643)
Link Status of Ports	Packets Transmitted	Alignment Errors
Port Type	Packets Received	Single Collision Frames
Fiber Type	Octets (bytes) Transmitted	Multiple Collision Frames
SNMP Port (Host/Remote)	Octets (bytes) Received	SQE Test Errors
SNMP Agent IP Address (Host/Remote/Single)	Plus All Standard MIB II Objects	Deferred Transmissions
Link Partner		Late Collisions
Traps (Cold Start, Warm Start, Link Up, Link Down, Authentication Failure, Remote Unit Lost, Remote Unit Back Online, Far End TX Link On and Far End TX Link Off)		Excessive Collisions
User-Definable Name of Product		Carrier Sense Errors
User-Definable ID/Name of Each Port		Frame Too Long
Enable/Disable Ports		Internal MAC Transmit Errors
Enable/Disable FiberAlert*		Internal MAC Receive Errors
Set Duplex Mode for Fiber Ports		
Set Auto-Negotiation/Speed for Twisted Pair Ports		
Specify the management port		

NOTE: Functions/features in blue are configurable via the software, all others listed can be monitored.

* FiberAlert is not available on single-strand fiber versions.

CWDM Gigabit FiberLinX Modules



Ordering Information

The Prisma FiberLinX modules listed below install in any Prisma MediaCenter™ or Prisma MediaCPE™ chassis.

Prisma CWDM Gigabit FiberLinX Modules – SC/APC	Part Number
Prisma FiberLinX/CWDM, TX/FX-SM1430-SC/APC [80 km]	4009465
Prisma FiberLinX/CWDM, TX/FX-SM1450-SC/APC [80 km]	4009466
Prisma FiberLinX/CWDM, TX/FX-SM1470-SC/APC [80 km]	4009467
Prisma FiberLinX/CWDM, TX/FX-SM1490-SC/APC [80 km]	4009468
Prisma FiberLinX/CWDM, TX/FX-SM1510-SC/APC [80 km]	4009469
Prisma FiberLinX/CWDM, TX/FX-SM1530-SC/APC [80 km]	4009470
Prisma FiberLinX/CWDM, TX/FX-SM1550-SC/APC [80 km]	4009471
Prisma FiberLinX/CWDM, TX/FX-SM1570-SC/APC [80 km]	4009472
Prisma FiberLinX/CWDM, TX/FX-SM1590-SC/APC [80 km]	4009473
Prisma FiberLinX/CWDM, TX/FX-SM1610-SC/APC [80 km]	4009474
Prisma CWDM Gigabit FiberLinX Modules – SC/UPC	
Prisma FiberLinX/CWDM, TX/FX-SM1430-SC/UPC [80 km]	1002925
Prisma FiberLinX/CWDM, TX/FX-SM1450-SC/UPC [80 km]	1002926
Prisma FiberLinX/CWDM, TX/FX-SM1470-SC/UPC [80 km]	1002927
Prisma FiberLinX/CWDM, TX/FX-SM1490-SC/UPC [80 km]	1002928
Prisma FiberLinX/CWDM, TX/FX-SM1510-SC/UPC [80 km]	1002929
Prisma FiberLinX/CWDM, TX/FX-SM1530-SC/UPC [80 km]	1002930
Prisma FiberLinX/CWDM, TX/FX-SM1550-SC/UPC [80 km]	1002931
Prisma FiberLinX/CWDM, TX/FX-SM1570-SC/UPC [80 km]	1002932
Prisma FiberLinX/CWDM, TX/FX-SM1590-SC/UPC [80 km]	1002933
Prisma FiberLinX/CWDM, TX/FX-SM1610-SC/UPC [80 km]	1002934
Prisma Gigabit FiberLinX SFP Modules	
Prisma FiberLinX, TX/SFP (one SFP/1250 module)	4016384
Prisma FiberLinX, TX/SFP (two SFP/1250 module)	4016385

For Prisma MediaCenter and Prisma MediaCPE Chassis specifications and ordering information, see data sheet #7001716 “Prisma Optical Media Converters – Prisma MediaCenter Chassis.”

For information on other Prisma FiberLinX products see the following data sheets:

Prisma Gigabit 1310/1550 FiberLinX Modules	7007828
Prisma FiberLinX Modules (1310 / 1550 nm)	7001714
Prisma FiberLinX Modules (CWDM)	7001715



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