PL-1000

Simplicity and Innovation in 10G Connectivity Solutions

The PL-1000 is a carrier class leading 1U Metro DWDM platform, for transport of 10G Data, Voice and Storage Applications, over dark fiber and WDM networks

FEATURE OVERVIEW

Highly flexible metro DWDM platform for transport of data, storage, and voice applications over dark fiber and C/DWDM networks

Performs bidirectional 3R ensuring error free operation over distance Supports 10G Eth LAN/WAN, OC-192/STM-64, 10G FC in any mix

Cost-effective, compact 1U platform with low power consumption ideal CLE (Customer Located Equipment)

Remote management with dedicated optical supervisory channels Pluggable XFP interface for both service and WDM channels, allowing maximum flexibility as well as ease of maintenance and operation

Support for 10G Tunable XFP's

Pay-as-you-grow architecture

Supports facility protection

Bidirectional performance monitoring for 10G Eth LAN/WAN, 10G FC and OC-192/STM-64 services

Support for Single fiber and Dual fiber operation

PRODUCT DESCRIPTION

PL-1000 is designed primarily to address the growing needs for high data capacity applications such as IPTV, Triple play and NGN which needs to be transported over existing or new fiber infrastructures.
The PL-1000's capabilities, dimensions and competitive cost make it the ideal solution for evolving metro Ethernet networks, enterprise networks, campus environments and central office connectivity.
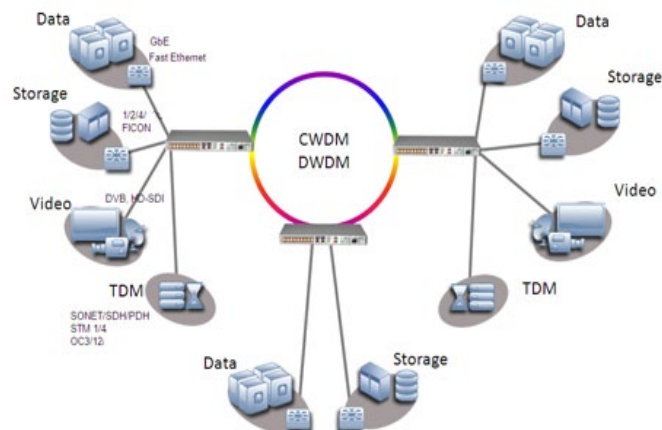
The PL-1000 supports up to 4 high-speed 10G services. Each Service is configured independently, using PacketLight's user-friendly Web-based management tool. The PL-1000 can be managed by any 3rd party SNMP system or with PacketLight's EMS.

The PL-1000 is designed to support point-to-point, Linear ADM and ring topologies with Facility protection. The PL-1000 is a highly integrated device, incorporating Mux/DeMux, EDFA and optical switch for both its transponder and regenerator modes, also enabling simple and cost effective upgrade of existing infrastructure to carry 10G services.

The PL-1000 seamlessly integrates with PacketLight's WDM product family thus enabling a mixture of 10G and sub 10G services over the same fiber and supporting stackable solution operation of up to 40 DWDM wavelengths. All optical transceivers, both on the service side and on the WDM-uplink side, are pluggable and replaceable allowing pay-as-you-grow budget planning and simplified maintenance.

The PL-1000 is highly suitable for applications such as:

- Interconnection of LAN, TDM and SAN over remote metro sites
- High bandwidth managed service over dark fiber
- Simple upgrade of existing CWDM or DWDM networks to support 10G services
- High throughput Metro Ethernet connectivity
- Effective infrastructure for triple play, NGN and DSLAM backhaul
- Efficient central office and local exchange connectivity

TECHNICAL SPECIFICATIONS

System

Topology	Point-to-Point, Ring, Linear ADM
Transport Network Medium	Metro CWDM/DWDM / Dark Fiber
Software Upgrade	Traffic Hitless – dual image
Protection	1+1 Facility

Product Options

Transponder	850/1310nm to DWDM, 3R, 2/4 wavelengths Mux & Demux
Transponder + Booster Amp	850/1310nm to DWDM, 3R, 2/4 wavelengths Mux Demux, 1/2 EDFA (Booster, Pre-Amp)
Regenerator	DWDM to DWDM 3R, 4 wavelengths 2 X Mux & 2 X Demux & 2 X EDFA

DWDM Link

Wavelength	ITU-T G.694.1 Ch15 - 60, 50GHz/100GHz spacing
Optical Supervisory Channel	1490nm, 1510nm
Optical Reach	40, 80, 120, 200Km
Optical Power Output	-1dBm (min) to +2dBm (max)
Sensitivity	-24dBm APD, -14dBm PIN
Optical Monitoring	Tx & Rx power
Link Attenuation	<4dB (Mux + DeMux)

Service Side

Interface Rates	9.95328Gbps up to 10.709255Gbps
Optical Interface	850nm / 1310nm / DWDM
Services	10G Eth LAN/WAN, OC-192/STM-64, 10G FC, OTU2 in any mix

Optical Switch

Topology	Protected point to point
Switching time	Less than 50ms
Signal WL	C and L band
Max input power	27dBm
Insertion loss	Transmit side 3.8dB Receiver side 1.2dB

Approvals & Standards

CE, FCC, RoHS, REACH
ISO 9000, NEBS Compliant

Amplifier

Applications	Booster, Pre-Amp
Output Power	14dBm, 17dBm, 20dBm, 23dBm
Input Power	-36dBm up to 16dBm
Gain	10dB to 22dB
Operating Modes	AGC (Automatic Gain Control), APC (Automatic Power Control
Eye Safety	Automatic laser power reduction upon fiber cut or disconnection

Network Management

Management Ports	• 1RJ-45 LAN port 10/100Mbase-T • 2x SFP MNG ports 100/1000MBase-X • RS-232 Serial port • DB9 External Alarm port
Protocols	SNMP, HTTP, HTTPS, Telnet, SSH, Syslog, RADIUS, SNTP, TFTP and FTP
Management	Web browser over HTTP/HTTPS, LightWatch PacketLight NMS/EMS, or 3rd party EMS NMS over SNMP, CLI over RS-232 or CLI over Telnet/SSH
OAM	Facility Loopback (Client and Line Interfaces), PRBS, Event Logger, Alarms, ALS
Performance Monitoring	Layer 1 PM for all Services, Optical Power Tx, Rx levels for all optical ports
Visual Indicators	LED status indicators for: client and line ports, Management and LAN ports, amplifier/s, System Critical/Major/Minor and Power Supply
Software Upgrade	Traffic Hitless – dual image

Power Supply

AC/DC	90 to 246VAC, -36 to -72VDC, 78W max
PSU Redundancy	Single/Dual feeding, Hot Swappable
Cooling Unit	Hot Swappable Fan Unit

Physical Dimensions

Size	1.77" (1 RU) (H) x 17.32"(W) x 9.05"(D) 44 mm (H) x 440mm (W) x 230 mm (D)
Weight	5.5Kg (Max)
Mounting	19", ETSI and 23"

Environmental

Operating Temperature	-5° C to 50° C (+23° F to+122° F) Operational
Humidity	5% to 85% RHI