

# 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, OTU-2, 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**

**Native mapping of 10G LAN/WAN 10G FC & OC-192/STM-64 to OTN OTU-2**

## 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.

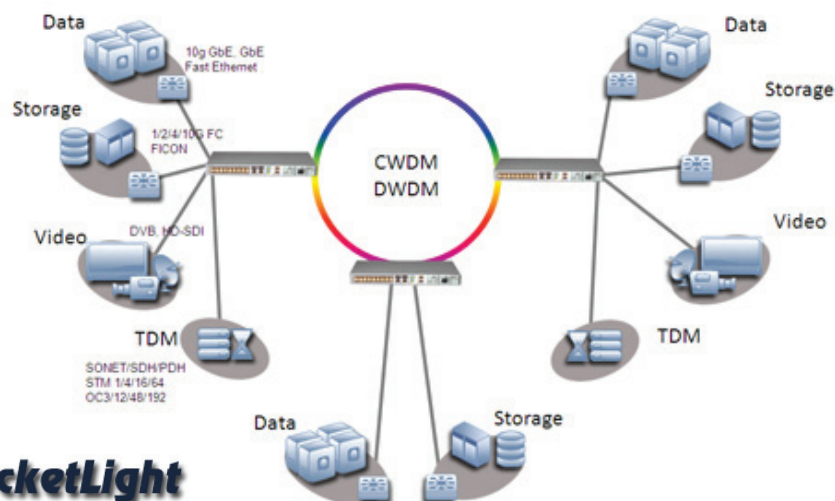
The PL-1000 supports up to 4 high-speed 10G services. Each Service is configured independently, using PacketLight's user-friendly Web-based management tool. The PL-1000 can be managed by any 3rd party SNMP system or with PacketLight's EMS.

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

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

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

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

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

Approvals & Standards	
	CE, FCC, RoHS 5/6 NEBS Compliant

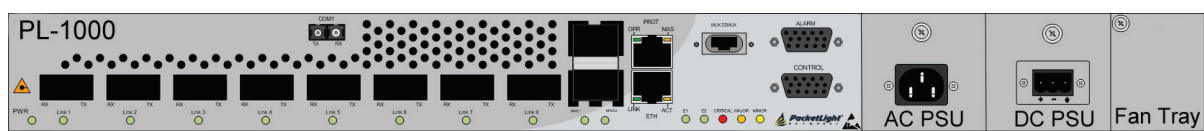
Amplifier	
<b>Applications</b>	Booster, Pre-Amp
<b>Output Power</b>	14dBm, 17dBm, 20dBm, 23dBm
<b>Input Power</b>	-36dBm up to 16dBm
<b>Gain</b>	10dB to 22dB
<b>Operating Modes</b>	AGC (Automatic Gain Control), APC (Automatic Power Control)
<b>Eye Safety</b>	Automatic laser power reduction upon fiber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

Network Management	
<b>Management Ports</b>	10/100MBase-T, RJ-45, RS-232, DB9
<b>Protocols</b>	SNMP, FTP, HTTP
<b>Management</b>	Web server application, IBM Tivoli, integration with RADView EMS
<b>OAM</b>	Loopbacks PRBS Event Logger Alarms PM for 10G Eth LAN and 10G FC and 10G Eth WAN and OC-192/STM-64
<b>Management Ch.</b>	2x Optical Supervisory Channel (OSC)
<b>Visual Indicators</b>	LED status indicators for client ports, line interfaces, power and system

Power Supply	
<b>AC/DC</b>	90 to 246VAC, -40 to -75VDC, 78W max
<b>PSU Redundancy</b>	Single/Dual feeding, Hot Swappable
<b>Cooling Unit</b>	Hot Swappable Fan Unit

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

Environmental	
<b>Operating Temperature</b>	-5° C to 50° C (+23° F to +122° F) Operational
<b>Humidity</b>	5% to 85% RHI



\*PL-1000-4-D-T