PL-1000E

MULTI-SERVICE CWDM OR DWDM
TRANSPORT ACCESS DEVICE

PL-1000E is a unique 1U, all-in-one optical product supporting a combination of Sub 10G Services and 8G/10G services

FEATURE OVERVIEW

Combines any service and common protocols from 2Mbps up to 10Gbps in the same 1U chassis

Supports up to 4 sub 10G services in any mix- 1G/2G/4G FC & FICON, ESCON, Fast Ethernet, GbE, STM-1/OC-3, STM-4, OC-12, STM-16/OC-48, OTU1 (OTN),Video

In addition supports up to 4 services of 8/10G in any mix- 8G/10G FC, 10G Eth and optional OTU-2 OTN

Performs bidirectional 3R on each transponder ensuring error free operation over distance

Increase fiber utilization using 4xGbE Muxponder

Low latency connectivity, ideal for trading applications and synchronous Data Center Replication

Remote management with both optical supervisory channels and in-band management

Optical interfaces based on MSA pluggable SFP, SFP+ and XFP allowing maximum flexibility as well as ease of maintenance and operation

Redundant pluggable AC/DC PSUs & Fan Unit

Supports single and dual fiber connections

Support for 1+1 facility protection

Performance Monitoring

PRODUCT DESCRIPTION

The PL-1000E is primarily designed for CWDM/DWDM, Dark Fiber transport solution for high throughput, low latency, data, storage, TDM and ATM connectivity.

PL-1000E is a unique, all-in-one optical product supporting 8G FC, 10G, and sub-10G services. PacketLight solutions intergrate a rich feature set with cost effectivness in a compact 1U chassis and low power consumption.

PL-1000E is a leading CWDM/DWDM platform that combines a variety of multi-rate services allowing maximum flexibility and scalability for fiber optic connectivity. The combination of sub 10G and 10G transponders provide transparent migration from sub 10G to 10G services with zero downtime.

PL-1000E allows to expand to 10G services by simply adding the needed pluggable optic modules (XFPs). This architecture provides true scalability at the minimum possible cost.

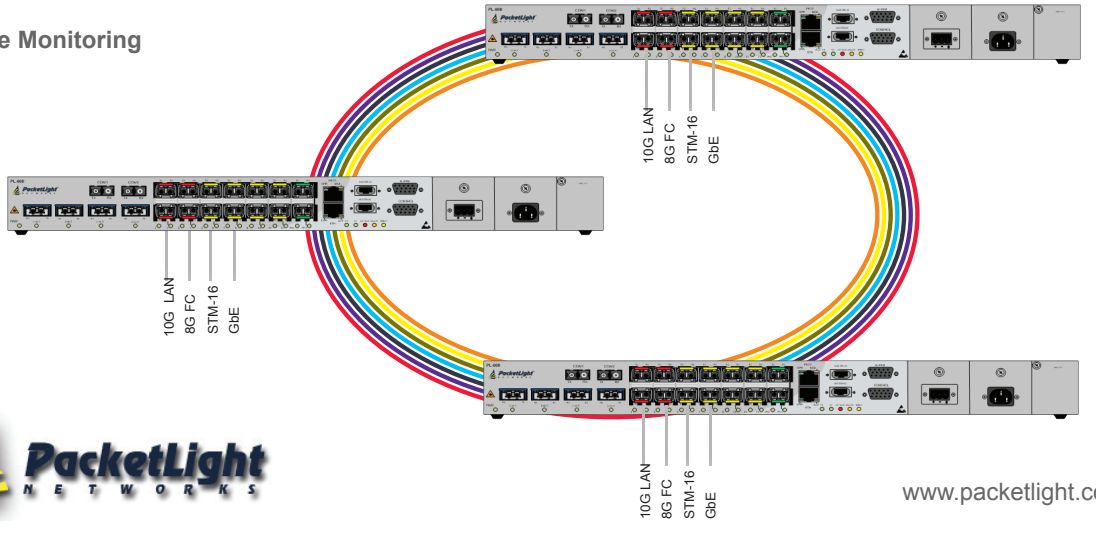
The PL-1000E supports the full spectrum of FC protocol rates: 1Gbps, 2Gbps, 4Gbps, 8Gbps and 10Gbps. Together with its extremely low latency, low power consumption, small foot print (1U, ETSI) and affordable cost PL-1000E is best in class CWDM/DWDM solution for connecting two data centers or back up sites.

The PL-1000E is designed to support point-to-point, Linear ADM and Ring topologies with facility protection. The PL-1000E is a highly integrated device, incorporating Mux/DeMux, EDFA and an optical switch, enabling a simple and cost effective upgrade of existing infrastructure which can carry any type of service.

The PL-1000E seamlessly integrates with the rest of PacketLight's product family (PL-400, PL-1000, PL-300 and PL-1000IL)

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

- High capacity low latency, data center connectivity
- Efficient connectivity for campus, ISP and enterprise networks
- Enables delivery of high bandwidth managed services over dark fiber
- Upgrade of existing WDM networks to support 10G services
- High throughput Metro Ethernet connectivity
- Effective infrastructure for triple play, NGN and DSLAM backhaul



PacketLight NETWORKS

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TECHNICAL SPECIFICATIONS

System	
Topology	Point-to-point, Ring, Linear ADM Dual or Single Fiber
Transport Network Medium	Metro CWDM, DWDM & Dark Fiber
Protection	1+1 Facility

Product Options	
Transponder	850/1310nm to C/DWDM, 3R, 4/8 wavelengths Mux & Demux
Transpoder + Amp	850/1310nm to DWDM, 3R, 4/8 wavelengths Mux Demux, 1 EDFA (Booster, Pre-Amp)
Muxponder	4x GbE 850/1310nm
Optical Switch	1+1 OTS Facility Protection

CWDM Link	
Wavelength	ITU-T G.694.2 1270-1610nm 20nm spacing
Optical Supervisory Channel	For 8 Channels- 1310nm, 1330nm For 16 Channels- 1270nm, 1290nm
Optical Reach	120Km for 1.25Gbps, 80Km up to 4.25Gbps,
Optical Output Power	0dBm (min) to +5dBm (max)
Sensitivity	-28dBm APD, -18dBm PIN
Optical Monitoring	Tx & Rx power
Link Attenuation	<4dB (Mux + DeMux)

DWDM Link	
Wavelength	ITU-T G.694.1 Channels 15-60, 100GHz spacing
Optical Supervisory Channel	1490nm, 1510nm
Optical Reach	400Km for 1.25Gbps, 200Km for 2.66Gbps, 80Km for 4.25Gbps/8.5Gbps, 120km for 10Gbps
Optical Output Power	Sub 10G: 0dBm (min) to +4dBm (max) 8/10G: -1dBm (min) to +2dBm (max)
Sensitivity	Up to 2.66Gbps: -28 dBm APD 4/8/10G: -24dBm APD, -14dBm PIN
Optical Monitoring	Tx & Rx power
Link Attenuation	<4dB (Mux + DeMux)

Service Side	
Interface Rates	2Mbps up to 10.7Gbps
Optical Interface	850nm/1310nm/1550nm
Optical Services	1G/2G/4G/8G FC, FICON, ESCON, GbE (LX, SX), STM-1/OC-3, STM-4/ OC-12, STM-16/OC-48, 2.66G OTN, 100FX, 10G Eth LAN/WAN, 10G FC and Video, in any mix
Copper Services	10/100/1000MBase-T

Standards	
	CE, FCC, RoHS 5/6 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	10/100MBase-T, RJ-45, RS-232, DB9
Protocols	SNMP, FTP, HTTP, CLI
Management	Web server application, Tivoli ready, HP Openview, SNMPc and integration with RADView EMS
OAM	Facility Loopback (Client and Line Interfaces) Event Logger Alarms PM for GbE, 10G Eth LAN and WAN, 1G/2G/4G & 10G FC, STM-1,STM-4, STM-16, and OC-3, OC-12, and OC-48
Management Channel	2x Optical Supervisory Channel (OSC) 2x In-Band Channels
Visual Indicators	LED status indicators for client ports, line interfaces, power, Management LAN and system
Software Upgrade	Traffic Hitless – dual image

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

Power Supply and Fans	
AC/DC	90 to 246VAC, -40 to -75VDC, 85W 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) 45 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

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