PL-1000EM

Maximizes Wavelength Capacity
with 10xGbE Muxponder

PL-1000EM High capacity muxponder of 10xGbE Client Interfaces over Single 10G Wavelength

FEATURE OVERVIEW

Low latency 10xGbE Muxponder over single 10G wavelength

Additional multi-purpose, 2Mbps to 4Gbps, transponder

Uplinks: 10.5G or OTU-2 (OTN), 1310nm, CWDM/DWDM

1+1 Facility uplink protection

Bidirectional performance monitoring for 10G uplinks and GbE client interfaces

Optional integrated EDFA and/or MUX/DE-MUX modules

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

Remote management with Inband or Out-band Optical Supervisory Channel (OSC)

Dual AC or DC pluggable Power Supply and pluggable FAN Unit

Pluggable SFP for client interfaces and XFP for uplink, allowing maximum flexibility as well as ease of maintenance and operation

Supports 10G Tunable XFP's

PRODUCT DESCRIPTION

Increasing fiber utilization and spectral efficiency of data transport with PL-1000EM while improving the solution cost.

A solution for transparent multiplexing of 10xGbE interfaces over single protected 10G uplink, in elegant, low latency, and easy to deploy 1U box.

As the need of data capacity and advanced profitable services increases, data centers, ISPs and carriers are faced with a challenge to increase their fiber utilization and service capacity with minimal investments and maximum ROI. PacketLight's PL-1000EM 10xGbE Muxponder is the perfect solution for this growing need.

PacketLight's PL-1000EM 10G Muxponder introduces high density 10x GbE channels with transparent layer-1, ultra low latency mapping to 10G uplink pipe without packet loss. This solution fits perfectly not only for service providers but also for enterprises and the financial market.

PL-1000EM is fully integrated with the rest of PacketLight's WDM product line PL-400, PL-1000, PL-1000E, PL-1000RO, PL-2000, PL-1000IL and PL-300.

The PL-1000EM can be managed by HTTP web browsers, CLI, PacketLight's EMS or with 3rd party SNMP system.

10xGbE Services →→ Muxponder →) λ **Single 10G Wavelength**
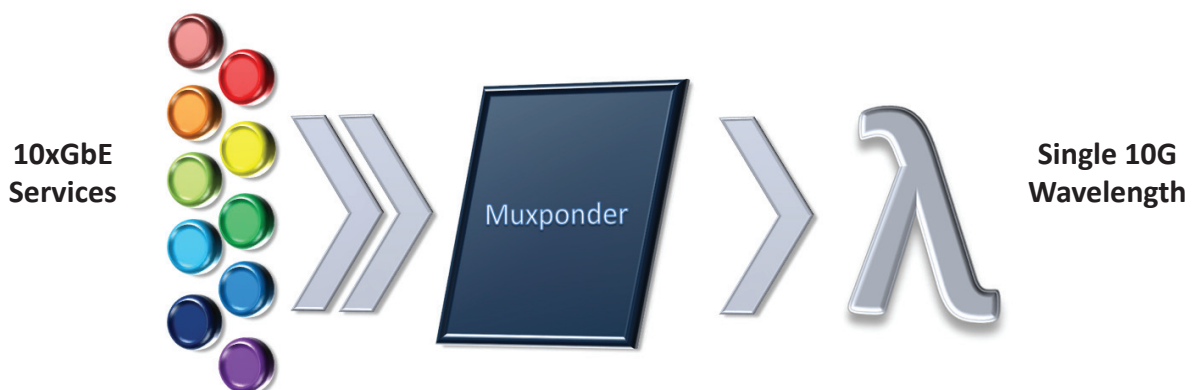
TECHNICAL SPECIFICATIONS

System

Topology	Point-to-point
Transport Network Medium	Metro CWDM/DWDM / Dark Fiber
Protection	1+1 Facility

Product Configurations

Muxponder 10:1 + additional transponder	10x GbE to single 10G Uplink Wavelength + additional multirate 2Mbps - 4.25Gbps transponder
EDFA	Optional 1/2 Amplifier modules
Mux/Demux	Optional 1/2 Mux/Demux modules

Muxponder Service

Interface Rates	1.25Gbps (GbE)
Optical Interfaces	850nm, 1310nm, CWDM, DWDM
Copper Interface	1000MBase-T

Muxponder Uplink

Bit Rate	10.5G, 11.3G (OTN)
Optical Interface	CWDM, DWDM, 1550nm, 1310nm
Optional OTN support	G.709 OTU-2 11.3G G.Sup43 Clause 7.1 G.975 compliant FEC
DWDM Wavelength	ITU-T G.694.1 Ch15 - 60, 50GHz/100GHz spacing
Optical Supervisory Channel	1490nm, 1510nm
Optical Reach	10, 40, 80, 120, 200Km
Optical Power Output	-1dBm (min) to +2dBm (max)
Sensitivity	-24dBm APD, -14dBm PIN
Optical Monitoring	Tx & Rx power

Low Rate Transponder

Interface Rates	2Mbps up to 4.25Gbps
Optical Interface	850nm, 1310nm, CWDM, DWDM
Optical Services	1G/2G/4G FC, FICON, ESCON, GbE (LX, SX), STM-1/OC-3, STM-4/OC-12, STM-16/OC-48, 2.66G OTN, 100FX and Video
Copper Services	10/100/1000MBase-T, E3/DS3, E1/T1
Uplink	CWDM/DWDM 40Km, 80Km, 120Km

Amplifier

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

Network Management

Management Ports	10/100MBase-T, RJ-45, RS-232, DB9
Protocols	SNMP, HTTP, CLI, TELNET
Management	Web server application, IBM Tivoli, HP Openview, SNMPc and integration with RADView EMS
OAM	Loopbacks PRBS Event Logger Alarms PM for GbE, FC (based on 8b/10b CV) SONET/SDH (based on B1 CV) OTN (based on section/path BIP-8 CV)
Management Ch.	2x Optical Supervisory Channel (OSC) In-Band Channel
Visual Indicators	LED status indicators for client ports, line interfaces, power and system

Power Supply

AC/DC	90 to 246 VAC, -40 VDC to -75VDC 68W max
PSU Redundancy	Single/Dual feeding, Hot Swappable
Cooling Unit	Hot Swappable Fan Unit

Environmental

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

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	5.5 Kg (max)
Mounting	19", ETSI and 23"

Approvals & Standards

	CE, FCC, RoHS 5/6 NEBS Compliant