PL-1000GT

PL-1000GT Coherent 100G Long Haul Solution

The PL-1000GT is an advanced 1U Multiservice 8G/10G/40G/100G coherent Muxponder/Transponder for Long Haul applications

FEATURE OVERVIEW

Highest 100G density feature set in the market. Compact 1U platform with low power consumption ideal for long haul 100G applications up to 2,000Km

Various Muxponder configurations for aggregation services into a single Coherent OIF standard base 100G OTU4 Uplink:
- **10 x 10G**
- **1x40G + 6x10G**
- **2 x 40G + 2x 10G**

100G coherent Transponder mode supporting 100GBase-SR10/LR10/LR4/ER4

**Supported clients:
10G LAN/WAN, 8G/10G Fibre Channel, STM64/OC192, OTU2,OTU2e, 40GBase-SR4/LR4, OTU3, OTU3e, 100GBase-SR10, LR10, LR4, ER4**

Standards based ITU-T G.709 100G Forward Error Correction (FEC) GFEC

Supports Full C-Band Tunable DWDM Line sides

Comprehensive Line and Service performance Monitoring

Integrated EDFA

Remote management with In-band or Out-band Optical Supervisory Channel

Dual DC feeding and pluggable FAN Unit

Supports standard MSA client pluggable SFP+ (8G/10G), QSFP+ (40G), and CFP (100G)

Operates on both dual or single fiber

100G OTU4 OTN COHERENT MUXPONDER & TRANSPONDER SUPPORTING 8G/10G/40G/100G SERVICES

The PL-1000GT is PacketLight's 100G Multiprotocol Multirate Muxponder/Transponder for high capacity long haul optical transport solutions.

It is ITU-T OIF standard based platform for providing a unified 100G optical transport layer supporting various client services including: 40G/100G LAN, 10G LAN/WAN, STM64/OC-192, OTU2/3/4 and 8G/10G FC over a single coherent 100G OTU4 wavelength.

The PL-1000GT is designed to provide 100G transport solution in modular and cost effective way for building long distance networks. It uses pluggable optical modules on all the client optical interfaces, as well as standard based protocols on both client and line side. It is targeted for meeting the market demands for low power consumption, rack space savings and reduction in the overall solution CAPEX and OPEX by increasing the spectral efficiency of the optical transport solution by a factor of 10.

The PL-1000GT resolves the market dilemma of having to choose between 40G and 100G solutions by mapping up to two 40G clients into a 100G uplink. The platform thus allows migration from current to future service requirement (protocols and rates) seamlessly without infrastructure replacement.

The PL-1000GT integrates with PacketLight's PL-2000 and PL-1000TN to deliver carrier-grade, high-end OTN network solutions capable of serving multiple applications and protocols of Data, Storage, TDM, ATM and Video networks.

Highly suitable for applications such as:
- Building efficient Long-haul networks up to 2000Km spans
- Increasing the capacity and spectral efficiency of existing 10G/40G long-haul networks
- Implementing backbone for Utility, Oil and Gas and mining industry
- High bandwidth connectivity for data center and cloud computing

LONG HAUL UP TO 2000Km

10G 10G 100G
10G
40G

PacketLight
NETWORKS
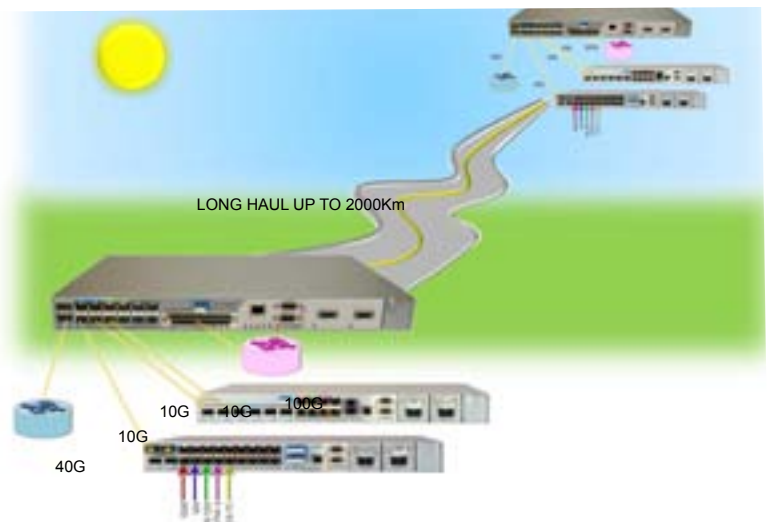
TECHNICAL SPECIFICATIONS

Product Configurations

10x10G Muxponder	Up to 10 Multiservice & rate 10G clients mapped each to ODU2 and ag-gregated to OTU4 100G uplink
1x40G and 6x10G Muxponder	Up to 6 Multiservice & rate 10G clients mapped each to ODU2 and 40G LAN mapped to ODU3 aggregated to OTU4 100G uplink
2x40G and 2x10G Mxponder	Up to 2 Multiservice & rate 10G clients mapped each to ODU2 and 2x 40G LAN mapped to ODU3 aggregated to OTU4 100G uplink
100G Transponder	100GbE LAN to OTU4 100G uplink
EDFA	Optional EDFA module

Uplink Interface

Bite Rate	127.157GHz (OTU4v with 20% SD FEC)
Optical Interface	DWDM OIF standard based coherent
Tune-ability range	ITU-T G.694.1 Channels 15-60,with 50GHz spacing
FEC Type Support	Standard ITU-T G.709 GFEC or en-hanced HG-FEC
Optical Reach	2000Km, 40,000ps/nm
Optical Output Power	0dBm
Sensitivity	-18dBm, OSNR with SD FEC 14dB
OTN Overhead	OTU4/ODU4 OH monitoring

Client Interfaces

Service type	10GbE LAN/WAN, 40GbE LAN, 100GbE LAN, 8G/10G FC, STM-64/OC-192, OTU2, OTU2e, OTU2f,
Optical Interface	SFP+ : LR(1310nm), SR (850nm), ER (1550nm) , ZR (1550nm) CWDM/DWDM QSFP+ : LR-4 (1310nm), SR-4 (850nm) CFP: LR-4(1310nm), LR-10 (WDM), SR-10 (850nm), ER-4 (1310nm)

Amplifier

Applications	Booster, Pre-Amp
Output Power	Booster: +14dBm, +17dBm Preamp: +5 dBm
Input Power	Booster: -24 to +16 dBm Preamp: -36 to -15 dBm
Gain	Booster: +10 to +22 dB Preamp: +18 dB
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 • OTN GCC Inband channel
Protocols	SNMP, HTTP, HTTPS, Telnet, SSH, Sys-log, 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, ALS Event Logger Alarms
Performance Monitoring	Layer 1 PM for all Services OTN PM for Uplink Optical Power RX levels for all optical ports
Visual Indicators	LED status indicators for: client and line ports, Management and LAN ports, amplifier, system Critical/Major/Minor and Power Supply
Software Upgrade	Traffic Hitless – dual image

Power Supply

DC	-48VDC, 6A max, Dual feeding
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	8Kg / 17.64 lb (Max)
Mounting	19", ETSI and 23"

Approvals & Standards

CE, FCC, RoHS, REACH
NEBS Compliant
ISO 9001