

PL-1000GT

Coherent 100G Long Haul Muxponder/Transponder



100G OTU4 OTN coherent muxponder/transponder supporting 8G/10G/40G/100G services

Features Overview

- 100G coherent muxponder and transponder in one box
- Muxponder configurations for aggregating services into a single coherent OIF standards-based 100G OTU4 uplink:
 - 10x10G
 - 1x40G + 6x10G
 - 2x40G + 2x10G
- Supported clients: 10G/40G/100G LAN, 8G Fibre Channel, STM-64/OC-192, OTU2/OTU2e/OTU4, 100GBase-SR10, SR4, LR4, ER4
- Coherent OIF standards-based tunable uplink
- Forward error correction (FEC), GFEC, or HG-FEC
- Supports standard MSA pluggable client optics: SFP+ (8G/10G), QSFP+ (40G) and CFP (100G)
- Performance monitoring on all interfaces
- Out-of-band OSC or in-band GCC remote management
- Highly integrated 1U architecture
- Dual DC power feeding and pluggable fan unit
- Operates on dual or single fiber

Long Haul Transport Solution

The PL-1000GT is a 100G modular transport solution for building long distance networks. The device is a 1U platform with low power consumption, ideal for long haul 100G applications up to 2,000km.

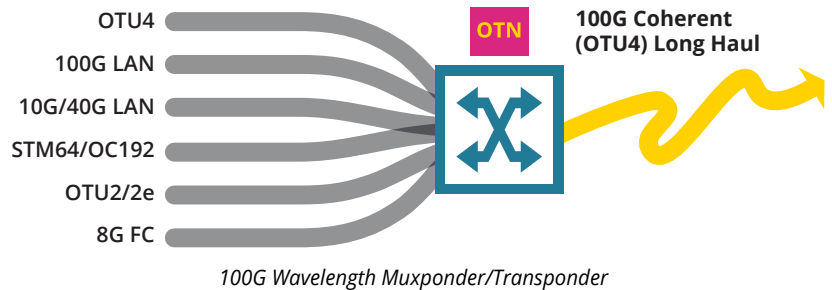
Main Benefits

- Easy and flexible transmission of mix of services over a single wavelength in long haul applications
- Ability to transport 10G/40G and 100G services in one box
- High spectral efficiency for long haul solutions
- Tunable DWDM 100G uplink which can be used as an alien wavelength over any existing DWDM network
- 1U with integrated EDFA for high attenuation links

Modular and Cost-effective 100G Transport Solution

The PL-1000GT resolves the challenge of having to choose between 40G and 100G solutions by mapping two 40G clients into a 100G uplink. The device integrates with PacketLight's product line, for serving multiple applications of data, storage and TDM networks.

The platform allows migration from current to future service requirements (protocols and rates) seamlessly, without infrastructure replacement.



Recommended for the following applications:

- Alien wavelength over existing third party WDM infrastructure
- Building efficient DWDM long haul networks up to 2,500km
- Increasing the capacity and spectral efficiency of existing 10G/40G long haul networks
- Building high capacity long haul backbone for utility, oil, gas and mining industries
- High bandwidth connectivity for data center and cloud computing



Low power consumption



1U rack mount



Multi operation modes

Technical Specifications

Product Configurations

10x10G Muxponder: Up to 10 multi-service & rate 10G clients mapped each to ODU2 and aggregated to OTU4 100G uplink

1x40G and 6x10G Muxponder: Up to 6 multi-service & rate 10G clients mapped each to ODU2 and 40G LAN mapped to ODU3 aggregated to OTU4 100G uplink

2x40G and 2x10G Muxponder: Up to 2 multi-service & rate 10G clients mapped each to ODU2 and 2x40G LAN mapped to ODU3 aggregated to OTU4 100G uplink

100G Transponder: 100GbE LAN or OTU4 services 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

Tunable Range: ITU-T G.694.1 channels 15-60, with 50GHz spacing

FEC Type Support: Standard ITU-T G.709 GFEC or enhanced 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 FC, STM-64/OC-192, OTU2, OTU2e

Optical Interface:

- SFP+: LR (1310nm), SR (850nm), ER (1550nm), ZR (1550nm) CWDM/DWDM
- QSFP+: LR-4 (1310nm), SR-4 (850nm)
- CFP: LR-4 (1310nm), SR-10 (850nm), ER-4 (1310nm)

Amplifier

Applications: Booster, pre-amp

Output Power:

- Booster: +14dBm, +17dBm, +20dBm
- Pre-amp: +5dBm

Input Power:

- Booster: -24 to +16dBm
- Pre-amp: -36 to -15dBm

Gain:

- Booster: +10 to +22dB
- Pre-amp: +20dB

Operating Modes:

- Automatic gain control (AGC)
- Automatic power control (APC)

Eye Safety: Automatic laser power reduction upon fiber cut or disconnection

Network Management

Management Ports:

- RJ-45 LAN port 10/100MBase-T
- 2xSFP MNG ports 100/1000MBase-X
- RS-232 serial port
- DB9 external alarm port
- OTN in-band GCC channel

Protocols: SNMP, HTTP, HTTPS, Telnet, SSH, Syslog, RADIUS, SNTP, TFTP and FTP

Management: Web browser over HTTP/HTTPS, PacketLight LightWatch™ 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: client and line ports, Management and LAN ports, amplifier, system Critical/Major/Minor and Power Supply

Software Upgrade: Hitless traffic – dual image

Power Supply

DC: -36 to 60 VDC, 260W max

PSU Redundancy: 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% RH

Physical Dimensions

1U:

- 1.77" (H) x 17.32" (W) x 9.05" (D)
- 45mm (H) x 440mm (W) x 230mm (D)

Weight: 8kg / 17.64lb (max)

Mounting: 19", ETSI and 23"

Approvals & Standards

- CE, FCC, RoHS, REACH
- NEBS ready