

PL-1000GM

Multi-rate 10G/40G/100G Optical Transport Solution



100G multi-protocol multi-rate muxponder/transponder for metro and data center high capacity solutions

Features Overview

- Highly integrated 1U architecture
- 100G muxponder and transponder in one box
- Aggregates various mix of services into 100G OTU4 DWDM uplink: 10x10G, 2x40G Eth + 2x8/10G, 1x40G Eth + 6x8/10G
- Low cost SR10 100G transponder mode
- 10 times better spectral efficiency than 10x10G links
- Supported clients: 10G/40G/100G LAN, 8G Fibre Channel, STM-64/OC-192 and OTU2/OTU2e
- Uplink based on coherent 50GHz tunable DWDM CFP for up to 1,200km
- Standard MSA pluggable optics for 100G line and 8G/10G/40G/100G client interfaces
- Performance monitoring on all interfaces
- Integrated optical amplifiers and DCM for extended reach
- Out-of-band OSC or in-band GCC remote management
- Dual AC/DC pluggable power supply and fan unit

100G High Capacity Optical Transport Solution

The PL-1000GM is a highly integrated platform which provides a unified 100G optical transport layer, capable of serving multiple applications and protocols in enterprise, data center and metro networks for data, storage and TDM connectivity applications.

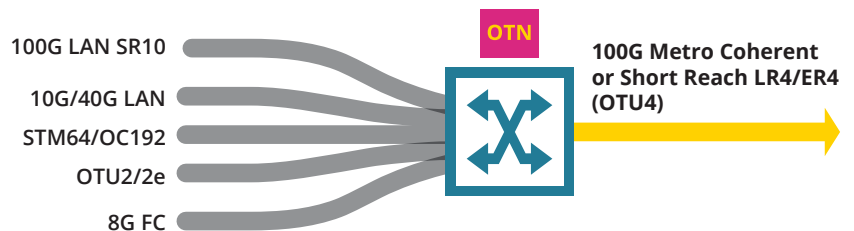
Main Benefits

- 100G solution expandable up to 96 channels
- Supports any mix of 10G, 40G muxponder or 100G transponder in the same platform
- Highly integrated solution including EDFAs, mux/demux and DCMs
- Optical interface flexibility using pluggable optics in both client and line sides
- Low power consumption

Modular and Cost-effective 100G Transport Solution

The PL-1000GM modularity meets market demands for low power consumption, rack space savings and reduction in the overall solution CAPEX and OPEX by cost-effectively increasing network capacity.

The platform allows migration from current to future service requirements (protocols and rates) without the need to replace the unit.



Muxponder Configurations for Aggregating Services into a 100G OTU4 Uplink

Recommended for the following applications:

- Expanding 10G infrastructure capacity to 100G
- Building 100G metro networks up to 1,200km
- Providing 100G links over existing DWDM infrastructure
- Data center connectivity and cloud applications
- Last mile access/aggregation CPE for managed services providers



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 & aggregated to OTU4 100G uplink

1x40G and 6x10G Muxponder: Up to 6 multi-service & rate 10G clients mapped each to ODU2 & 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 & 2x40G LAN mapped to ODU3 aggregated to OTU4 100G uplink

100G Transponder: 100GbE or OTU4 services to OTU4 100G uplink

Optical Amplifiers: Optional up to two EDFA modules

DCM: Optional tunable or fixed DCM

Mux/Demux: Optional 4ch mux/demux module

Uplink Characteristics

Bite Rate: 120Gb/s

Optical Interface: DWDM CFP

Tune-ability range: DWDM ITU-T G.694.1 channels 15-60, with 50GHz spacing

OTN Support: Standard ITU-T G.709 GFEC or enhanced HG-FEC

Optical Reach: 1,200km, 20,000ps/nm

Optical Output Power: 0dBm

RX sensitivity: -18dBm, OSNR with SD-FEC 15dB

OTN Overhead: OTU4/ODU4 OH monitoring

Client Interfaces Characteristics

Service type:

- 10GbE LAN/WAN, 40GbE LAN, 100GbE, 8G FC, STM-64/OC-192
- OTU2, OTU2e

Optical Interface:

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

Amplifier

Applications: Booster, pre-amp

Output Power:

- Booster: +4 to +14dBm
- Pre-amp: +5dBm

Input Power:

- Booster: 0 to +10dBm
- Pre-amp: -25 to -9dBm

Gain:

- Booster: +10 to +22dB
- Pre-amp: +18dB

Operating Modes:

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

Mux/Demux

Channels: 4 DWDM channels

Spacing: 100GHz

Insertion loss: <4dB end-to-end

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 & 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 & line interfaces), PRBS, event logger, alarms, ALS

Performance Monitoring:

- Layer-1 PM for all services
- Layer-2 PM for Ethernet
- OTN PM for uplink
- Optical power Rx levels for all optical ports

Visual Indicators: LED status indicators for: client & line ports, Management and LAN ports, amplifier/s, system Critical/Major/Minor and Power Supply

Software Upgrade: Hitless traffic – dual image

Power Supply

AC/DC: 100 to 240 VAC, 50/60 Hz, -36 to -60 VDC, 180W 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% RH

Physical Dimensions

1U:

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

Weight: 7.5kg / 17.64lb (max)

Mounting: 19", ETSI & 23"

Approvals & Standards

- CE, FCC, RoHS, REACH
- NEBS ready