

# PL-1000T

## 100G OTN Transponder Solution



**100G transponder platform for metro and data center interconnect applications**

### Features Overview

- 1U demarcation platform
- Low power consumption customer premises equipment (CPE)
- 100G OTU4 transponder mode supporting 100GBase-SR10/LR4/ER4 client Interface
- Standards based ITU-T G.709 100G OTU4 uplink
- Forward error correction (FEC), GFEC, or HG-FEC
- Supports pluggable line side, CFP: Coherent, 4x28Gbps DWDM, SR4, LR4, ER4
- Supports 100G media converter mode
- Supports 1+1 facility protection
- Comprehensive line and service performance monitoring
- Integrated EDFAs, mux/demux, DCM
- Remote management with in-band or out-of-band OSC
- Supports full C-band tunable coherent DWDM on line side
- Supports standard MSA CFP (uplink), and CFP/CFP2 (client) 100G pluggable optics
- Dual AC or DC pluggable power supply and pluggable fan unit
- Operates on both dual or single fiber

### Affordable 100G Connectivity over Dark Fibre or OTN

The PL-1000T is an advanced demarcation transponder solution which provides high capacity optical transport solutions.

It is a highly integrated platform for providing a unified 100G optical transport layer, supporting various 100G client interfaces including LR4/ER4 and SR10.

### Main Benefits

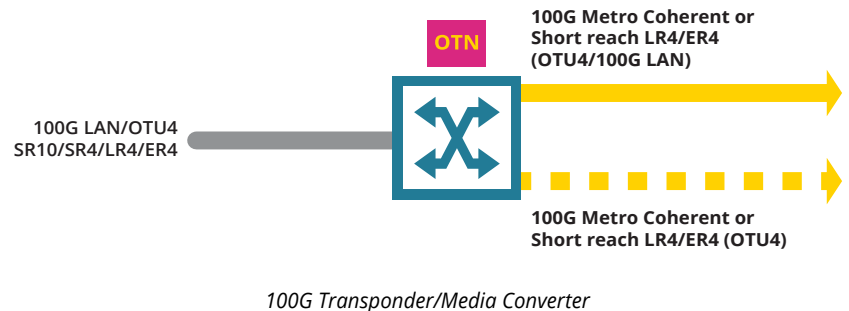
- OTN-based 1+1 facility protection
- Single device 100G media converter
- Supports up to two integrated optical amplifiers, mux/demux & DCM
- Integrates with any standards-based LR4 interface third party network equipment

### Modular and Cost-effective 100G Transport Solution

The PL-1000T is a modular and cost-effective transport solution for rolling out 100G services, and seamlessly interfaces with any third party equipment.

It is low power consumption and saves rack space, reducing the overall solution CAPEX and OPEX, while increasing the capacity of enterprise and metro networks.

The PL-1000T is the smallest, most integrated transport solution of its kind, reaching up to 200km/42dB without intermediate sites and 1200km with inline sites.



### Recommended for the following applications:

- 100G transport solution for DCI and metro
- CPE for 100G managed services
- Providing 100G links over existing infrastructure (alien wavelength)
- Supporting SR4, SR10, LR4, ER4 in compact device
- Operating as media converter between the different 100G optical interfaces



Low power consumption



1U rack mount

## Technical Specifications

### Product Configurations

**100G Transponder:** 100GbE LAN or OTU4 to 100G OTU4 uplink

**100G Media Converter:** Converting 100GE LAN optical modules

**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

**Tunability 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 overhead Monitoring

### Client Interfaces Characteristics

**CFP:** LR-4 (1310nm), SR-10 (850nm), ER-4 (1310nm), SR-4 (850nm)

**CFP2:** LR-4 (1310nm)

### 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 and FTP

#### Management:

- Web browser over HTTP/HTTPS
- PacketLight LightWatch™ NMS/EMS, or 3<sup>rd</sup> party NMS over SNMP
- CLI over RS-232 or CLI over Telnet/SSH

**OAM:** Facility loopback (client and 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 and 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, 160W 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 and 23"

### Approvals & Standards

- CE, FCC, RoHS, REACH
- NEBS ready