DATA SHEET

XTM SERIES

DOUBLE 10 Gb/s LITE TRANSPONDER

A Versatile 10 Gigabit Transponder

The Double 10 Gb/s Lite Transponder (TPD10G-L-BU) is a powerful part of the Infinera XTM Series which enables optimized and cost-efficient transport networks based on CWDM and DWDM technology.

Optimized for Metro/Access Applications

The Double 10 Gb/s Lite Transponder is a complementary product to the high-end 10 Gb/s transponders in the XTM Series portfolio. The "lite" designation indicates that the functionality targets applications where features such as forward error correction (FEC) and embedded management channels are not required. The unit focuses on providing a cost-effective solution for transport of 10 Gb/s as well as 8 Gb/s services within metro/access applications.

Multi-purpose and Multi-technology

The use of pluggable XFP transceivers enables the TPD10G-L-BU to be used in CWDM as well as DWDM configurations for Ethernet, SDH/SONET optical transport networks (OTN), storage area networks (SAN) and mobile fronthaul applications. The unit also supports tunable XFPs, which further enhances flexibility and reduces total cost of ownership (TCO). The tunable XFP supports all 80 channels within the DWDM C-band.

Also via special DWDM and CWDM XFPs operating at 8 Gb/s, the new 8 Gb/s Fibre Channel format can be supported in both CWDM and DWDM networks.

The TPD10G-L-BU can be used as a translator between CWDM and DWDM networks, as shown in Figure 1.

Key benefits:

- Compact and cost-effective; two transponder functions in one plug-in unit
- Multi-service, transparent transport of 10 GBE-LAN, 10 GbE-WAN, STM-64, OC-192, OTU-2, 8 Gb/s and 10 Gb/s Fibre Channel traffic formats
- Support for Common Public Radio Interface (CPRI) protocol, making it ideal in mobile fronthaul applications
- Multi-functional plug-in unit. Each transponder can also be used as a regenerator function
- Technology-agnostic. Pluggable transceivers enable use in CWDM as well as DWDM networks
- Ultra low latency
- Low power design ensures low total cost of ownership

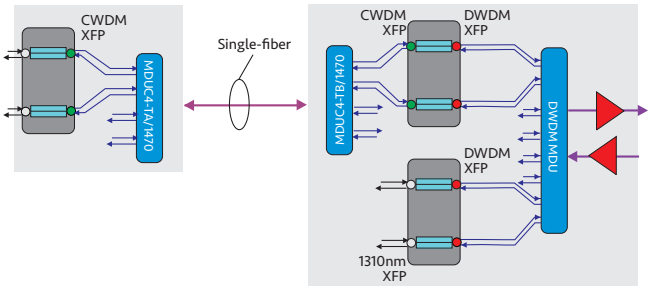

Fig 1. Transponder and Regenerator Configurations.

In this configuration example, the TPD10G-L-BU is used in a CWDM collector node as a transponder. In the hub node the unit is translating the CWDM channels onto a DWDM network simply by using corresponding XFPs.

Resilience Options

The unit can be configured into a line protection or equipment protection configuration via a passive coupler, as shown in Figure 2.

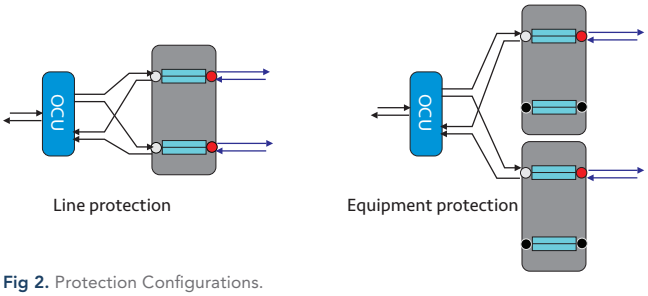

Fig 2. Protection Configurations.

Protection switching is performed in less than 50 ms.

The TPD10G-L-BU also supports optional revertive switching for client/equipment protection configurations.

Tailored Network Element Options

The TPD10G-L-BU transponder can be mounted in any of the XTM Series chassis options:

- As a self-managed network element in a 1U TM-102 chassis
- As one of many traffic units in a TM-3000/II (11U) or TM-301 (3U) chassis

This enables a tailored setup depending on the current and future capacity needs of the site.

In the TM-102 option, the TPD10G-L-BU initiates the complete Embedded Node Manager, including a web server on the onboard microprocessor. This enables local management simply by connecting any PC or workstation and launching a standard Internet browser.

Ultra Low Latency

The TPD10G-L-BU has less than 5 ns latency. This makes it ideally suited to SAN or Ethernet applications in which latency can be a crucial factor, such as services for financial institutions, video distribution and Long Term Evolution (LTE) backhaul.

Low Power Design

A fully equipped TPD10G-L-BU Transponder unit consumes less than 18 Watts (W). Low power consumption in combination with a small footprint reduces site costs and enables more capacity to be handled at sites with restrictions on power consumption, cooling and space.

Specifications

Supported Traffic Formats	10 GbE LAN, 10 GbE-WAN Sync-10 GbE (G.8262/Y.1362) STM-64/OC-192 OTU-2 8 Gb/s FC, 10 Gb/s FC CPRI/OBSAI 9.8304 Gb/s
Layer 1 Performance Monitoring	Loss of optical signal, loss of sync Collected every 15 min/24 h and presented according to G.784/G.826 using ES, SES, etc.
Protection	Client/equipment protection via OCU units. Non-revertive/revertive switching <50 ms
Latency	Max 5 ns
Power Consumption	Max 18 W in transponder mode (fully equipped with client and DWDM XFPs)
Interfaces	Client interfaces: XFP MM, SM at 1310 nm/1550 nm versions. Including "single-strand" transceivers enabling direct operation on a single-fiber configuration without need for a DWDM filter Line interfaces: 10 Gb/s XFP 40 km/70 km CWDM (up to 8 channels) or 80 km DWDM (up to 40 channels with fixed XFPs, up to 80 channels via tunable XFP), also including single-strand transceivers

Specifications and Features Are Subject to Change

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