DATA SHEET

XTM SERIES

100G OTN TRANSPONDER/II

Cost-efficient Transport of 100G in Metro Networks

The 100G OTN Transponder/II (TP100GOTN/II) is part of the Infinera XTM Series. The 100G OTN Transponder/II enables mapping of 100 gigabit per second (100G) client services to an OTU4 line signal. With its small footprint, occupying only two slots in the chassis, and pluggable coherent optics, it is suitable for deployment in all parts of the network.

Pluggable Coherent Optics

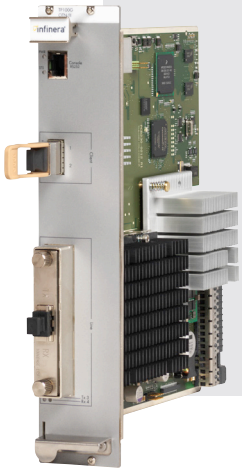
The 100G OTN Transponder/II utilizes state-of-the-art technology in the form of QSFP28 quad small form-factor pluggable optical modules on the client side and coherent C form-factor pluggable (CFP) optical modules on the line side. The pluggable CFP modules are used on the line side to provide a polarization-multiplexed quadrature phase-shift keying (QPSK)-modulated 100G signal on a single channel in the 50 gigahertz (GHz) spectrum. The coherent CFP modules are tunable over all 80 DWDM channels. This unique design reduces footprint and power as well as cost for spare parts and operation.

Metro-optimized Performance

The optical performance of the line side, together with coherent detection technology, enables simple installation of new 100G wavelengths in any type of network, coexisting with existing services on 10G and 40G wavelengths. The coherent detection technology removes the need for dispersion compensation units and enables regional and metro reach up to 1750 kilometers.

Integrated Platform Solution

The 100G OTN Transponder/II is a two-slot-wide plug-in unit in the XTM Series chassis TM-3000, TM-3000/II, TM-301 and TM-301/II. It is fully integrated in the Embedded Node Manager (ENM), and in the Infinera Digital Network Administrator for XTM Series (DNA-M). As part of a complete transport platform in which reconfigurable optical add-drop multiplexers (ROADMs), filters, amplifiers and other traffic units can be deployed in the same chassis, it enables a flexible and vertically integrated system and simplifies network planning and operations.



Key benefits:

- Pluggable coherent optics provide superior optical performance while minimizing initial and spare part cost
- Coherent detection removes need for dispersion compensation
- QPSK modulation allows coexistence with legacy 10G and 40G wavelengths
- Optical Transport Network (OTN) mapping of services enables deployment in multi- vendor environments
- Built-in end-to-end service monitoring improves service level agreement (SLA) fulfillments
- Low power design with low-power-consuming pluggable optics

OTN Transport

The 100G OTN Transponder/II supports the latest technology for mapping and transporting services over an OTU4 line signal according to the ITU-T G.709 standard. The pluggable client side can support various QSFP28 modules for 100 gigabit Ethernet (GbE) and OTU4 services.

This enables the 100G OTN Transponder/II to be deployed both in greenfield networks as well as in existing OTN environments. The standardized mapping of any service makes the network easier to plan and operate, which lowers the total cost of ownership.

Advanced Monitoring and Management Capabilities

The 100G OTN Transponder/II supports service monitoring capabilities, such as performance monitoring that follows the service from ingress to egress. This capability makes it an ideal unit for business wholesale applications, since any type of Layer 1 service can be monitored end-to-end through any complex multi-vendor OTN network at any time. Furthermore, it ensures a high SLA offering and also provides simple and reliable service troubleshooting.

Low Power Design

A fully equipped 100G OTN Transponder/II features industry-leading low power consumption of only 55 watts (W) under typical working conditions. The use of low-power-consuming and small-footprint CFPs in combination with the low power design of the XTM Series chassis enables a cost-efficient 100G system. The combination of a small footprint and low-power design reduces site costs and enables more capacity to be handled at sites with restrictions on power consumption, cooling and space.

Specifications

Supported Traffic Formats	100 GbE OTU4
Mapping	G.709 mapping to OTU4 or transparent 100 GbE
Performance Monitoring	OTN: full G.709 monitoring 100 GbE: based on CRC and RMON Collected every 15 min/24 h and presented according to G.826 End-to-end PM presentation
Power Consumption	Typical: 55 W including optics Max: 60 W
Misc. Line Interface Features	Management channels: GCC0, GCC1 and GCC2 Forward error correction: SD-FEC
Interfaces	Client interfaces: QSFP28-based. LR-4, SR-4, CLR-4, CWDM-4 Line interfaces: CFP-based. Coherent DP-QPSK, LR-4, SR-10

Specifications and Features Are Subject to Change

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