

XTM SERIES

100G OTN MUXPONDER

Cost-efficient Transport of 10x10 Gb/s Over 100 Gb/s in Metro Networks

The 100G OTN Muxponder (MXP100GOTN) is part of the Infinera XTM Series. The 100G OTN Muxponder enables mapping and multiplexing of 10G client services to an OTU4 line signal. With its small footprint and pluggable coherent optics, it is suitable for deployment in all parts of the network.

Pluggable Coherent Optics

The 100G OTN Muxponder utilizes state-of-the-art technology in the form of coherent CFP optical modules. These pluggable modules are used on the line side to provide a polarization-multiplexed quadrature phase shift keying (PM-QPSK) modulated 100G signal on a single channel in the 50 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 operations.

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 1200 km.

Integrated Platform Solution

The 100G OTN Muxponder is a two-slot plug-in unit in the XTM Series TM-3000, TM-3000/II and TM-301 chassis. It is fully integrated in the Embedded Node Manager (ENM) and in the Digital Network Administrator for XTM Series (DNA-M). As a natural part of the complete transport platform where ROADMs, filters, amplifiers and



Key benefits:

- Pluggable coherent optics provide superior optical performance while minimizing initial and spare parts cost
- Coherent detection removes need for dispersion compensation
- PM-QPSK modulation allows coexistence with legacy 10G and 40G wavelengths
- Dynamic client port allocation supports flexible multi-service aggregation
- True optical transport network (OTN) mapping and multiplexing of services enables multi-vendor environment deployment
- Built-in end-to-end service monitoring improves service level agreement (SLA) fulfillments
- Low power design with low power consumption pluggable optics

other traffic units can be deployed in the same chassis, it enables a flexible and vertically integrated system and simplifies network planning and operation.

True OTN Transport

The 100G OTN Muxponder supports the latest technology for mapping, multiplexing and transporting services over an OTU4 line signal according to ITU-T G.709 standards. The SFP+-based client ports can support various 10 Gb/s services in dynamic configurations.

This enables the 100G OTN Muxponder to be deployed both in greenfield networks as well as in existing OTN environments. Since it fulfills the multiplexing hierarchy of OTN standards, the applications reach beyond standard point-to-point networks.

The multi-stage multiplexing enables increased bandwidth efficiency by handing off aggregated services at OTU4 level at a single interface.

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 Muxponder supports service monitoring capabilities, such as performance evaluating bytes following 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 Muxponder typically consumes 80 W. The use of low power consuming and small footprint CFP modules as well as SFP+ interfaces 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 cost and enables more capacity to be handled at sites with restrictions on power consumption, cooling and space.

Specifications

Supported Traffic Formats	10GbE-LAN STM-64/OC-192 OTU2/OTU2e 8 Gb/s FC
Mapping	G.709 mapping and multiplexing to OTU4
Performance Monitoring	OTN: Full G.709 monitoring 10 GbE/8G FC: based on CRC and RMON STM-64/OC-192: based on B1/B3 Collected every 15 min/24 h and presented according to G.826 End-to-end PM presentation
Protection	1 + 1 client/equipment protection (Non-revertive & revertive)
Power Consumption	Typically 95 W including optics
Misc. Line Interface Features	Management channels: GCC0, GCC1 and GCC2 Forward error correction: GFEC/EFEC/SD-FEC
Interfaces	Client interfaces: SFP+ based DWDM/CWDM Line interfaces: CFP based. Coherent DP-QPSK

Specifications and Features Are Subject to Change

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