EKINOPS PM O6006MP

Hex 10G multi-protocol OTN transponder

KEY FEATURES & BENEFITS

- High density with six independent transponders on a single module
- Multi-protocol client support; 10GbE or OC-192/STM-64
- OTU2/OTU2e line rate
- G.709 ITU standard Forward Error Correction *(FEC)*
- Pluggable module compatible with any EKINOPS chassis already installed in the field
- Economical agnostic SFP(+) interfaces for client and line sides
- B&W or colored line interfaces

APPLICATIONS

- Economical 10G transport
- Entry and termination points for legacy customer traffic into/from OTN transport network
- Gateway to switched OTN backbones

— THE EKINOPS TRANSPORT PRODUCT LINE EVOLVES WITH THE HEX OTN OTU2E MULTI-PROTOCOL TRANSPONDER
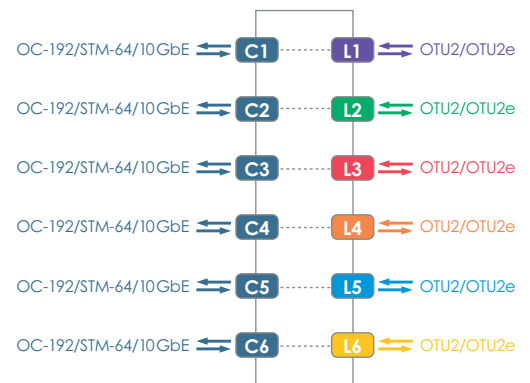
OVERVIEW

As operators require additional, and more varied, services to be handled by their existing and growing OTN backbone, efficient ingress and egress become mandatory.

An OTN transponder is the most straightforward, cost-effective answer for delivering client traffic inside OTN lines for backbone interconnection.

The EKINOPS PM O6006MP provides multi-protocol client support and can carry any mix of Ethernet and SONET/ SDH since each of the six transponders is independent of the others.

With both OTU2 and OTU2e line support, both OC-192/STM-64 and 10GbE traffic can be handled natively at full line rate.

APPLICATIONS

OTN is primarily a backbone/core network technology used to create a homogeneous network environment that can process multiple different types of service with greater efficiency.
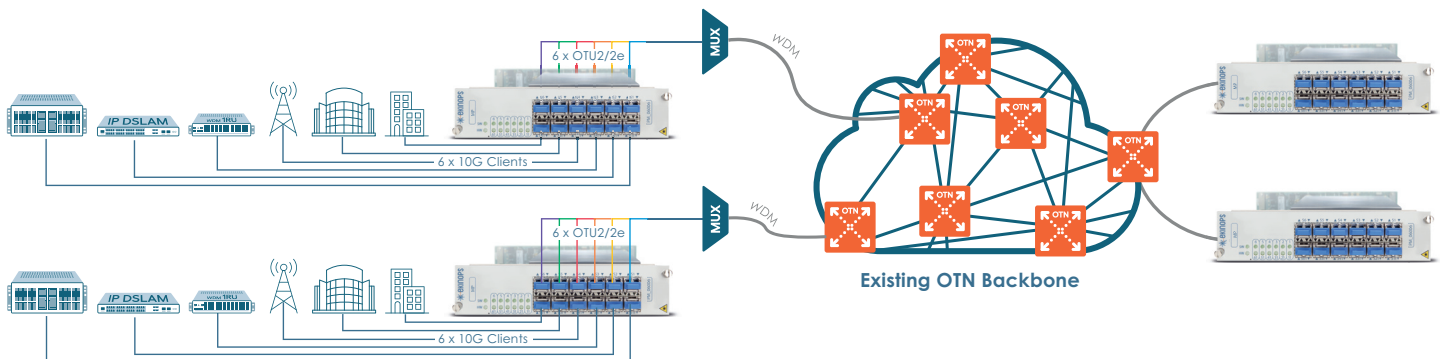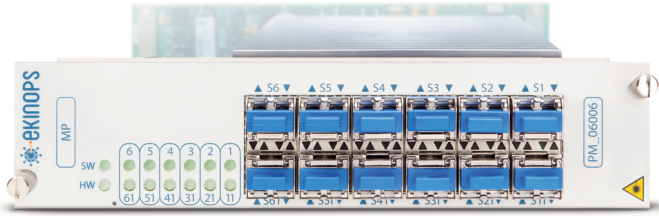

Figure: Using the EKINOPS PM O6006MP as clients of OTN backbones

The EKINOPS PM O6006MP provides a native on-ramp into this switched core backbone at the lowest possible cost. The line port output is a standard ITU G.709 OTU2 *(for SONET/SDH services)* or OTU2e *(for 10GbE services)* and can interface as a client directly on to any third-party, standards-based OTN switch, muxponder or transponder thereby eliminating the need for a bookend device to be co-located with the core equipment.

The EKINOPS PM O6006MP can be utilized for both greenfield and existing deployments with no need to replace a line system already in place.

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MANAGEMENT

The EKINOPS PM O6006MP module can be managed through SNMP or via the Ekinops standard element level management interfaces, which include a Command Line Interface *(CLI)* and an Ekinops Graphical User Interface *(GUI)*. The CLI is accessible via Secure Socket Shell *(SSH)* and Telnet remotely or via a local serial port on the management board.

Complete performance monitoring and management are provided, including laser shutoff and local and remote loopback, useful for maintenance and fault isolation.

Digital Diagnostics Management *(DDM)* is supported for SFP+ interfaces. This includes link status, transmit *(TX)* and receive *(RX)* signal power monitoring, and operational temperature, as well as manufacturer and transceiver model information essential for inventory management. A 10 Mbps in-band Data Communications Channel *(DCC)* is embedded in the line side for remote management.

The EKINOPS PM O6006MP module is also supported by Celestis **NMS**, the Ekinops advanced Network Management System.

SPECIFICATIONS

• CLIENT INTERFACE

Protocols	10GbE; OC-192; STM-64
Optical interface	SFP+
Number of ports	6

• LINE INTERFACE

Protocol	OTU2, OTU2e
Optical interface	SFP+; B&W or tunable DWDM
Number of ports	6

• MANAGEMENT

MIB	SNMP V2c Private MIB
Remote management	10 Mb Ethernet DCC

• PHYSICAL SPECIFICATIONS

Size	2 slots in all Ekinops chassis *(C200HC and C600HC)*
Operating temperature	0°C to +50°C / +32°F to +122°F
Storage temperature	-20°C to +85°C / -4°F to +185°F

• INDICATORS

Status	HW ready, SW ready
Alarm	Port down *(client and line)*

• PERFORMANCE

Optical spacing	SFP+ dependent
Power	30W

• REFERENCE STANDARD

ITU G.709 OTN standard

ORDERING INFORMATION

	PRODUCT CODE	DESCRIPTION
PLUGGABLE MODULE (PM)	PM_O6006MP	Hex 10G OTN transponder with G709 FEC & DCC, supporting 6x10GbE/OC-192/STM-64 on client to 6xOTU2e/OTU2 on the line, SFP+ for client and tunable line interfaces *(SFP+s for client and line interface not included)*
EKINOPS CHASSIS	C600HC	High capacity modular chassis 7RU
	C200HC	High capacity modular chassis 2RU
	PM_MNGT4	Management card
	400EEM	Ekinops Craft interface Software

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