



DATA SHEET 10 | 2023

EKINOPS PM O5005MP

10G multi-protocol OTN transponder

KEY FEATURES & BENEFITS

- High density five 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)
- 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 backbone

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 O5005MP provides multi-protocol client support and can carry any mix of Ethernet and SONET/SDH since each of the five transponders is independent of the others. With OTU2 and OTU2e line support, both OC-192/STM-64 and 10GbE traffic can be handled natively at full line rate.

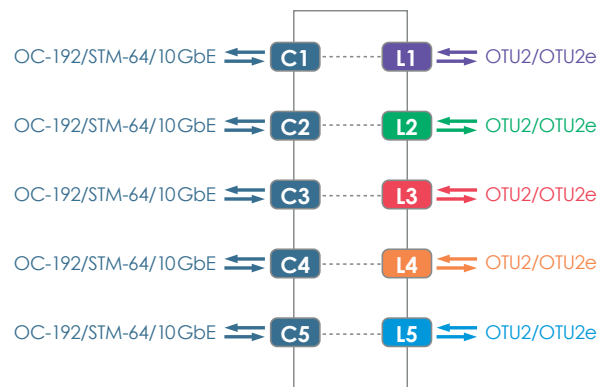


Figure 1: PM O5005MP port association

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. The EKINOPS PM O5005MP 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 eliminating the need for a bookend device to be co-located with the core equipment. The EKINOPS PM O5005MP can be utilized for both greenfield and existing deployments with no need to replace a line system already in place.

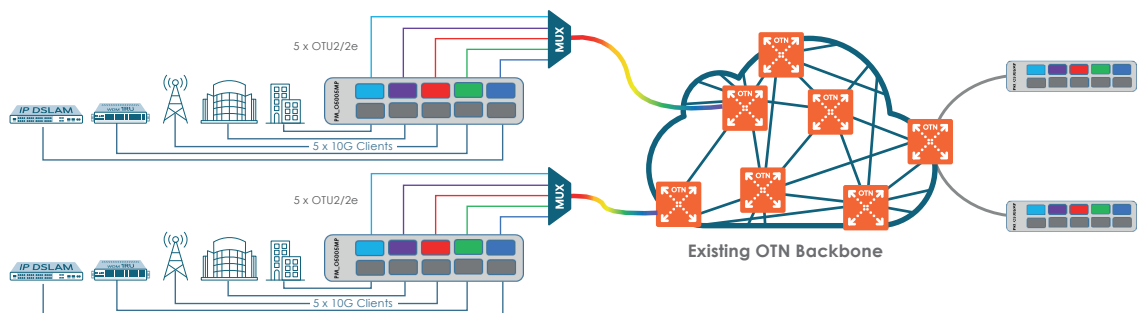


Figure 2: Using PM O5005MP as clients of OTN backbones



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MANAGEMENT

The EKINOPS PM O5005MP 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 O5005MP module is also supported by Celestis NMS, the Ekinops advanced Network Management System.

SPECIFICATIONS

• CLIENT INTERFACES

| | |
|-------------------|-----------------------|
| Protocols | 10GbE; OC-192; STM-64 |
| Optical interface | 5 x SFP+, B&W |

• LINE INTERFACES

| | |
|--------------------|-------------------------------|
| Protocols | OTU2e; OTU2 |
| Optical interfaces | 5 x SFP+; B&W or tunable DWDM |

• MANAGEMENT

| | |
|-------------------|----------------------|
| MIB | SNMP V2c Private MIB |
| Remote Management | 10 Mb DCC |

• PHYSICAL SPECIFICATIONS

| | |
|-----------------------|-------------------------------------|
| Module size | 2 slots |
| Operating temperature | 0 °C to +50 °C / +32 °F to +122 °F |
| Storage temperature | -20 °C to +85 °C / -4 °F to +185 °F |
| Power (typ.) | 41W |
| Power (max.) | 45W |

• INDICATORS

| | |
|--------|-------------------------------|
| Status | HW Ready, SW Ready |
| Alarm | Port Down (Clients and Lines) |

• REFERENCE STANDARD

| |
|--------------------------|
| ITU-T G.709 OTN standard |
|--------------------------|



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ORDERING INFORMATION

PLUGGABLE MODULE (PM)

| PRODUCT CODE | DESCRIPTION |
|--------------|---|
| PM_O5005MP | Multi-10G transponder with G.709 FEC and DCC; supporting 5 x 10GbE/STM-64/OC-192 on the client to OTU2e/OTU2 on the line; SFP+ for client and tunable line interfaces (<i>SFP+ not included</i>). |

EKINOPS CHASSIS

| PRODUCT CODE | DESCRIPTION |
|--------------|-----------------------------------|
| C600HC | High capacity modular chassis 7RU |
| C200HC | High capacity modular chassis 2RU |
| PM_MNGT4-2 | Management card |
| 400EEM | Ekinops Craft interface software |

CONTACT



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