# OSIRIS Multi-Service Ethernet Mapper

## Overview

The Multi-Service Ethernet (MSE) family of Ethernet service mappers within Positron's OSIRIS™ portfolio incorporates the latest generation of standards based Ethernet over SONET (EoS) technology, including Generic Framing Protocol (GFP) and Virtual Concatenation (VCAT). It enables cost-effective, dynamic, flexible and efficient bandwidth provisioning of Ethernet services across today's multi-vendor SONET networking environment.

**The Multi-Service Ethernet Mapper family consists of the following offerings**:

- Electrical 10/100 Mb/s MSE Card without L2 Switch (MSE4) – Point-to-point application
- Optical 100FX MSE Card without L2 Switch (MSE4FX) – Point-to-point application
- Electrical 10/100 MSE Card with L2 Switch (MSE4S) – Point-to-multi-point application

The MSE4 mapper offers four 10/100 Mbps Ethernet ports with an electrical RJ-45 connector that dynamically map Ethernet (10/100 Mbps) signals onto virtual concatenation groups of VT1.5 (Low-Order).

The MSE4FX mapper offers four 100 Mbps Ethernet ports with an optical SFP duplex LC (100 Mbps only) interface that dynamically map Ethernet signals onto virtual concatenation groups of VT1.5 (Low-Order). The optical interface can be selected according to specific optical reach requirements (i.e., multi mode or single mode).

The MSE4S includes an integrated L2 switch and offers four 10/100 Mbps Ethernet ports with an electrical RJ-45 connector that dynamically map Ethernet (10/100 Mbps) signals onto virtual concatenation groups of VT1.5 (Low-Order).

## Key Benefits

- Enables Efficient Transport of Ethernet over SONET (EoS) – Point-to-point, Point-to-multi-point
- Supports rapid and flexible bandwidth provisioning and traffic protection
- Ensures Ethernet service connectivity is robustly managed
- Wide variety of electrical, optical and data interfaces
- Fully interoperable with AEX-200 data modules (10/100 Mb/s Ethernet & Gigabit) for Ethernet connection provisioning

## Key Features

- Standards based GFP/VCAT enabling effective multi-vendor interoperability
- Integrated L2 switching functionality
- Flexible bandwidth, virtual concatenation with groups of VT1.5
- Support for extended frame lengths such as Cisco ISL (in point to point application)
- TL1 support with end-to-end provisioning
- Software configurable application support (point-to-point, point-to-multi-point)

# Product Specifications

## Interface

### *Connector*

| | |
|---|---|
| 10Base-T/100Base-TX mappers (electrical) | RJ-45 |
| 100Base-FX (optical) | SFP module Single mode or Multi mode fiber with duplex LC connector |

### *Line Build-Out*

| | |
|---|---|
| 10Base-T/100Base-TX mappers | 0 – 99 m (0 – 325 ft) with 24 AWG unshielded twisted pair cable (category level 5 minimum) |

### *Line Rate*

| | |
|---|---|
| 10Base-T mapper | 10 Mbps |
| 100Base-TX and FX mappers | 100 Mbps |

### *Line Impendance*

| | |
|---|---|
| 10Base-T/100Base-TX mappers | 100 ohms ± 5% resistive |

### *Wavelength*

| | |
|---|---|
| 100Base-FX mapper | Multi mode 1310 nm (2 km) - Single mode 1310 nm (15 km) |

## Physical

| *Mapper* | Slots |
|---|---|
| OSIRIS STD shelf | 1-9 |
| OSIRIS XTD Shelf | 1-23 |
| OSIRIS XTS Shelf | 1-13 |
| OSIRIS Micro Shelf | 1,2 |

## Alarms

One large LED for card status (initializing, normal, alarm or failure)
One small LED for status of local EPROM

## Power Consumption (maximum)

| | |
|---|---|
| Per 10Base-T/100Base-TX mapper | 14 watts |
| Per 100Base-FX and Gigabit mapper | 15.5 watts |

## Product Structure

| *Product Code* | **Product Description** |
|---|---|
| 800850 | Multi-Service Ethernet 4 port 10/100 point-to-point |
| 800851 | Multi-Service Ethernet 4 port 100-FX point-to-point (laser not incl) |
| 800852 | Multi-Service Ethernet 4 port 10/100 (L2 switching functionality) |
| 800856 MM | 100-FX laser SFP LC multi mode 1310 nm (2 km) |
| 800856 SM-15 km | 100-FX laser SFP LC single mode 1310 nm (15 km) |

# Ordering Information

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