

100G/200G FlexRate Pluggable Muxponder

- Provides 400G of throughput capacity
- Built-in Variable Optical Attenuator (VOA) allows the operator to remotely select the output power level
- Increases fiber capacity by 200%
- Software selectable line side modulation—DP-QPSK or 16QAM
- Multi-protocol support includes 10GbE, 8G/10G/16G FC, OC-192/STM-64 and OTU2/OTU2e client interfaces
- Simplifies sparing requirements
- Compatible with multiple channel spacings—both on-grid and off-grid
- Low cost pluggable client optics 20xSFP+
- Support for up to 88 200G channels
- Applications:
 - Data Center interconnect
 - High-capacity Metro networks
 - Break through congested 10G networks



OVERVIEW

MICROSENS continues to advance the capabilities of its coherent high-speed modules with the FlexRate family that provides flexible line rate functionality to deliver up to 400G of capacity in a single shelf. Using advanced Digital Signal Processor (DSP) technology, the MICROSENS Muxponder supports both the 16QAM and DP-QPSK modulation formats with the software flexibility to select either for a 100G or 200G line rate, depending on your requirements for capacity and distance. In DP-QPSK format, the Muxponder can transport 100G up to 10 000 km but can be used for shorter metro-regional spans as well. In 16QAM format, it can transport 200G up to 1000 km. The MICROSENS card is also available in a single fiber variant supporting transmit and receive of different channels on the same module over a single strand of fiber.

With this flexibility, network operators can use the same line card for multiple applications no matter what the span requirements are, helping them simplify sparing, streamline logistics and speed ordering and replacement, all of which result in lower operational costs. It also allows the operator to easily double capacity on any link simply by upgrading the existing module.

This process can be easily accomplished from a remote Network Operations Center (NOC) using a simple firmware download. There is no need to roll a truck or dispatch a technician to replace hardware or move patch cords.

MS430948M also has a high degree of service flexibility with multi-protocol client support including

10GbE, 8G FC, 10G FC, 16G FC, OC-192/STM-64, OTU2 and OTU2e. The MICROSENS FlexRate card supports 20 SFP+ client ports.

The module is ultra-compact delivering either 2x100G or 2x200G in only 2RU and highly power efficient. Combining this with ease of operation, unmatched price points and superior performance, MICROSENS makes your choice easy when it comes to coherent transport solutions.

MANAGEMENT

At the element level, the 100G/200G modules can be managed through SNMP or via the MICROSENS standard element level management interfaces, which include a CLI (Command Line Interface) and MICROSENS java-based GUI (Graphical User Interface) or MICROSENS Network Management Platform.

The CLI is accessible via SSH and Telnet remotely or via a local serial port locally on the Management board. Complete performance monitoring and management is provided, including laser shut off and local and remote loopback, which is 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. A 10 Mbps in-band data communications channel (DCC) is embedded in the line side for remote management.

Order Information

Article no.	Description
MS430948M	FlexRate Muxponder (Metro Regional 200G or Ultra Long Haul 100G) , 20 multi protocol clients Ports , 1 Line Port with VOA & DCC, SFP+ Clients and Tunable 100G ULH/200G MR Line Interface (SFP+s Not Included, Tunable Line Interface Included). Compatible with MS430504M/MS430501M chassis.

Technical specifications

Type

100G/200G Muxponder

Protocols (Muxponder)

10GbE, 8G FC, 10G FC, 16G FC

OC-192, STM-64, OTU2, OTU2e

Line – 100G/200 G

Optical Interface

Client – 20x SFP+

Line – Included on the Module

Management

MIB - SNMP V2c private MIB

Remote Management –

10Mb Ethernet DCC

Module Size

3 slots

Operating Temperature

0°C to +50°C

Storage Temperature

-20°C to +85°C

Indicators

Status: HW ready, SW ready

Alarm: Port Down (Client and Line)

Performance

Optical Spacing: 25GHz,

33GHz, 50GHz, 100GHz;

Power consumption

150W

Line interface

OSNR: 11.5 dB (100G)

21dB (200G)

Tx power: +3 to -25 dBm

Rx power:

-19 to -9 dBm (100G) or

-15 to -5 dBm (200G)

Max distance:

10000km (100G)

1000km (200G)

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