EKINOPS PM ROADM FLEX-H4M

Flexgrid Four-Degree Pluggable ROADM

DATA SHEET 05 | 2020

KEY FEATURES & BENEFITS

- WSS-based single-slot card
- Monitors channel power at ingress and egress with bi-directional OCM
- Supports 2 to 4 degree ROADM node configurations
- Supports Flexgrid architecture

APPLICATIONS

- Inter-network connectivity
- Optical mesh networks
- Automatic power balanced networks
- Flexgrid networks

OVERVIEW

Ekinops PM ROADM FLEX-H4M provides advanced Reconfigurable Optical Add Drop Multiplexer (ROADM) functionality in a single-slot pluggable module for the EKINOPS 360 platform. Using a Wavelength Selective Switch (WSS)-based optical switch and Optical Channel Monitor (OCM), it delivers multifunction capability in minimal shelf space. Functionally aligned with Ekinops PM OA-HCS amplifiers (see separate data sheet), the PM ROADM FLEX-H4M helps enable network automation capabilities such as automatic topology discovery and end-to-end service creation.

The PM ROADM FLEX-H4M adds advanced functionality to any optical transport network. It can be combined with either EKINOPS optical multiplexers or splitters/combiners to support full colorless, directionless, contentionless and gridless (CDCG) system configuration. Automatic per-channel power balancing optimizes performance to achieve the highest Optical Signal-to-Noise Ratio (OSNR) possible and Flexgrid compatibility enables gridless, multirate designs by accommodating channels with different spectral widths and spacing requirements.

Having a compact and flexible form factor means "plug-and-play" scalability that allows the operator to add degrees when and where necessary without disrupting traffic on the existing degrees. Scalable from two to four degrees, the PM ROADM FLEX-H4M extends the network beyond simple point-to-point and ring configurations to spurs and even optical mesh. It also eliminates the need for back-to-back transponders normally required for inter-network connectivity by providing an optical layer junction point for pure wavelength traffic.
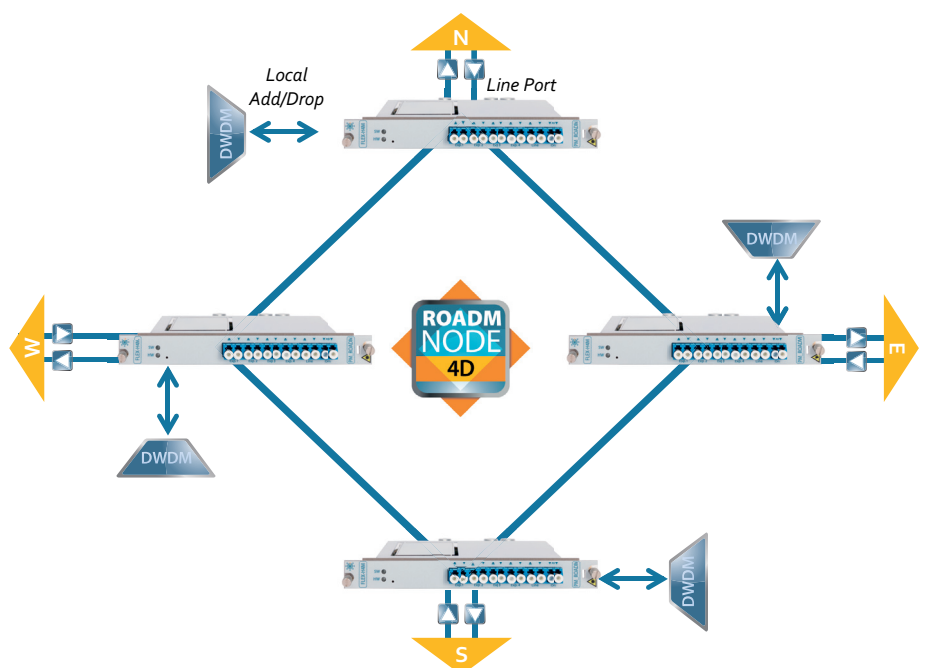

Figure 1: Four degree network architecture using PM ROADM FLEX-H4M

EKINOPS PM ROADM FLEX-H4M
Flexgrid Four-Degree Pluggable ROADM

MANAGEMENT

The EKINOPS PM ROADM FLEX-H4M 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 shutdown status, amplifier configuration parameters, input power, and output power. The EKINOPS PM ROADM FLEX-H4M is also supported by Celestis NMS, the Ekinops advanced Network Management System.

SPECIFICATIONS

• WSS CHARACTERISTICS

Degrees	1-4
Operating bandwidth range	191.325-196.125 THz
Channels spacing	Flexgrid
Insertion loss (max)	11.25 dB
Optical Channel Monitor	Integrated, bi-directional

• PHYSICAL SPECIFICATIONS

Optical connectors	Dual LC
Power consumption	25W
Size	1 slot
Operating temperature	0℃ to +50℃ / +32°F to +122°F
Storage temperature	-40℃ to +85℃ / -40°F to +185°F

• MANAGEMENT

MIB	SNMP V2c Private MIB

• REFERENCE STANDARD

ITU-T G.691, ITU-T G959.1, ITU-T G694.1

ORDERING INFORMATION

PLUGGABLE UNIT (PM)

PRODUCT CODE	DESCRIPTION
PM_ROADM_FLEX-H4M	Flexgrid single sided 4 degrees Reconfigurable Add & Drop Unit with integrated bidirectional Optical Channel Monitoring

CONTACT

www.ekinops.com

Ekinops EMEA
sales.eu@ekinops.com

Ekinops APAC
sales.asia@ekinops.com

Ekinops Americas
sales.us@ekinops.com