EKINOPS RM ROADM-H4-WB

Four-Degree Open Architecture ROADM Shelf

DATA SHEET 05 | 2020

KEY FEATURES & BENEFITS

- Complete ROADM degree in 1RU shelf
- Supports 1 to 4 degree ROADM node configurations
- Non-traffic affecting expansion
- Automatic power balancing per channel
- Supports Flexgrid architecture
- NETCONG/YANG management-ready

APPLICATIONS

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

OVERVIEW

EKINOPS RM ROADM-H4-WB provides all the functionality of a full Reconfigurable Optical Add Drop Multiplexer (ROADM) degree in a single 1RU shelf. Complete with a Wavelength Selective Switch (WSS)-based optical switch, booster amplifier, pre-amplifier and Optical Channel Monitor (OCM), the RM ROADM-H4-WB simplifies the installation and scalability of your ROADM network while improving its overall flexibility and performance. By integrating all of these functions, the RM ROADM-H4-WB eliminates the external cabling between modules, and also provides a cost-effective solution for adding functionality to the optical layer of small to medium sized networks.

The RM ROADM-H4-WB adds advanced functionality to any optical transport network. It can be combined with either EKINOPS optical multiplexers or optical couplers 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 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 one to four degrees, the RM ROADM-H4-WB 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.

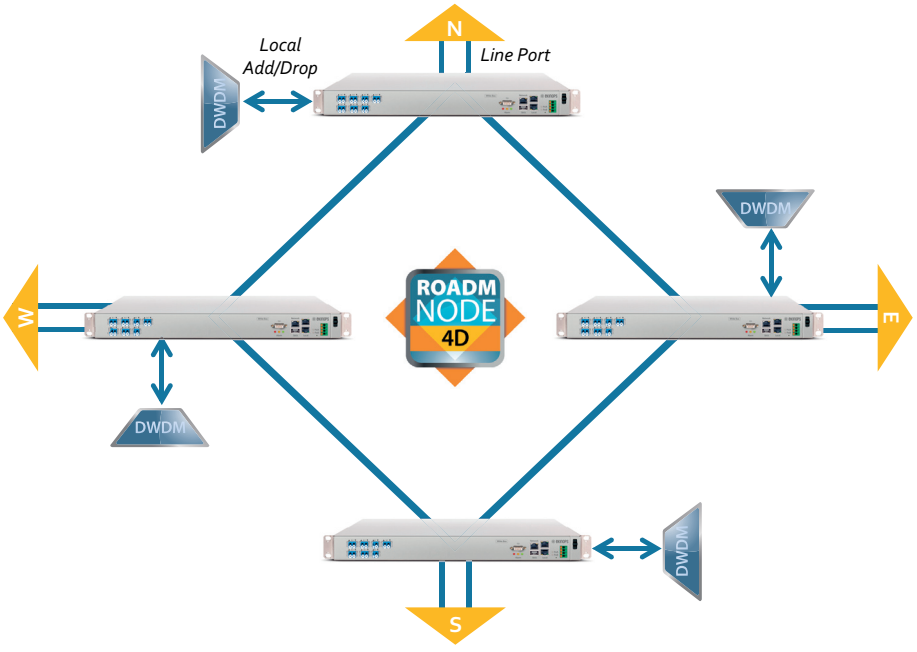

Figure 1: Four degree network architecture using RM ROADM-H4-WB

EKINOPS RM ROADM-H4-WB

Four-Degree Open Architecture ROADM Shelf

MANAGEMENT

The EKINOPS RM ROADM-H4-WB 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 by Celestis**NMS**, the Ekinops advanced Network Management System and, in a future evoluton, through any SDN controller via NETCONF interface.

SPECIFICATIONS

• WSS CHARACTERISTICS

Degrees	1-4
Operating bandwidth range	191.325-196.10 THz
Channels spacing	Flexgrid
Insertion loss (max)	11 dB
Optical Channel Monitor	Integrated

• AMPLIFIER CHARACTERISTICS

Output power	+17 dBm
Gain	+15 dB to +25 dB
Noise figure	5.5 dB

• PHYSICAL SPECIFICATIONS

Optical connectors	Dual LC
Power consumption	50W
Size	1RU
Operating temperature	0°C to +50°C / +32°F to +122°F
Storage temperature	-20°C to +85°C / -4°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

RACK MOUNTABLE UNIT(RM)

PRODUCT CODE	DESCRIPTION
RM_ROADM-H4-WB	4 degree ROADM White Box, includes ROADM, optical amplifier with 1510 nm Optical Supervisory Channel & 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