



Certified for
Extended
Temperature
Range
(ETR)



DATA SHEET 09 | 2022

EKINOPS RM OADM4R-ETR

**Optical Add-Drop Multiplexer
4 Wavelengths (Bidirectional)**

EXTENDED TEMPERATURE RANGE

KEY FEATURES & BENEFITS

- Ability to deliver super high-capacity bandwidth to any rural location
 - 40G (10G wavelengths)
 - or 400G (100G wavelengths)
 - Supports 10G and 100G simultaneously
- Temperature hardened for environmentally challenged sites (-40°C to +65°C)
- Minimum footprint required (1RU)
 - flexible mounting options available
 - fits in standard 19" rack
- No power required (passive device)
- Ability to efficiently add-drop up to 4 channels (10G or 100G)
- Access to Composite signal at OADM mid stage for amplification and dispersion compensation
- NEBS Level 3 Compliant
- Low insertion loss:
 - add/drop = 2.0 dB
 - express = 3.7 dB
- Pre-configured enclosure options available
- Easy to maintain – no active components

OVERVIEW

Optical Add-Drop Multiplexers (OADM) are used as a very efficient means to add or drop wavelengths at intermediate sites along a fiber route. They provide connectivity to those sites without the need to DMUX all the wavelengths on the fiber.

However, many rural and remote network operators can not take advantage of the functionality that OADM offer because the majority of them were not engineered and manufactured to accommodate many of their rural or remote facilities.

The EKINOPS RM OADM4R-ETR is a purpose-built OADM solution for remote, environmentally challenged sites. At 1RU, it requires minimum space, requires no power, and because it is temperature-hardened, the site does not require heating, venting, or air conditioning. All of this eliminates the need for any costly upgrades to the remote facilities.

The EKINOPS RM OADM4R-ETR solution also provides extremely low insertion loss which allows you to maximize the number of remote sites between hub locations. Not to mention, the flexible amplifier options (*none, before, and middle port*) further lowers overall network costs.



Mid-Point East



Mid-Point West

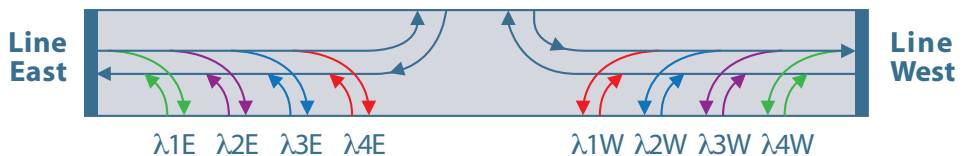


Figure 1 : EKINOPSRM OADM4R-ETR Signal Flow

APPLICATIONS

- Cell tower | Mobile Backhaul
- Residential Backhaul
- Metro / Regional / Long-haul Networks
- Point to point, linear, ring, star and mesh topologies

A SUPER, HIGH-CAPACITY RURAL NETWORK

The inherent capabilities of the EKINOPS RM OADM4R-ETR make it a perfect fit for the rural network operator and vast area they service. Because of its size and flexible mounting options, it can be placed in the smallest of enclosures (*pedestal, in-ground, cabinet, LGX, etc.*), or you can take advantage of one of Ekinops' pre-configured enclosure options. And, like all of Ekinops products, it was designed and engineered to provide maximum reach, so it is ideally suited for the significant distances that can exist between rural sites.





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EKINOPS RM OADM4R-ETR

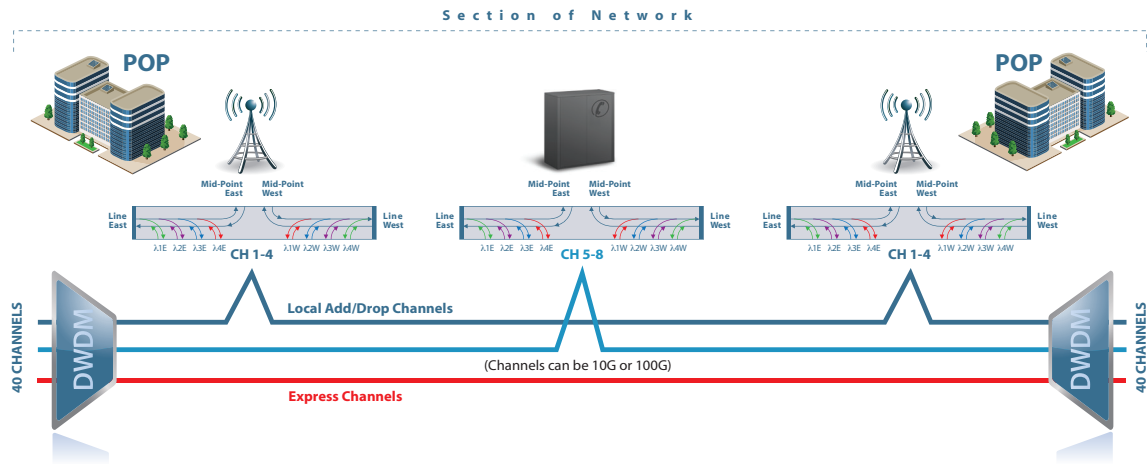
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Wavelength utilization and efficiency is one of the key attributes to the EKINOPS RM OADM4R solution. The OADMs are used to add / drop up to four (4) wavelengths (bidirectional) at each remote site. The added / dropped wavelengths can be common or unique to each remote location and they are only added / dropped where needed.

The multi-wavelength solution not only delivers unmatched capacity to each remote location (as much as 400G), but also allows for traffic separation (by carrier, type, customer, etc.). The remaining wavelengths are expressed through the site to maintain maximum optical performance.



SPECIFICATIONS

PHYSICAL SPECIFICATIONS

Optical Connectors	LC
Size	1RU
Operating Temperature	-40°C to +65°C / -40°F to +149°F
Storage Temperature	-40°C to +85°C / -40°F to +185°F

OPTICAL CHARACTERISTICS

Optical Connectors	LC
Operating Wavelength	1528 nm - 1563 nm
Insertion Loss <i>East/West to MP or MP to East/West</i>	1.8 dB
Insertion Loss <i>λ/Line to Line/λ</i>	2.0 dB
λ1/λ2/λ3/λ4 Port Adjacent Channel Isolation	25dB
λ1/λ2/λ3/λ4 Port Non-Adjacent Channel Isolation	45 dB
Line East/West to MP λ1/λ2/λ3/λ4 Rejection	12 dB
MP to Line East/West λ1/λ2/λ3/λ4 Rejection	12 dB
Return Loss (<i>all ports</i>)	45 dB

ORDERING INFORMATION

PLUGGABLE MODULE (PM)

PRODUCT CODE	DESCRIPTION
RM_OADM4R-ETR	Rack Mount 4 channel Dual sided Bidirectional Optical Add&Drop Unit with mid access point, compatible with Extended Temperature Range 19" brackets included

CONTACT



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