

ROADM

RDM and OCM Cards

Demand for new and changing customer applications requires service providers to deploy networking services with scalable capacity to more destinations cost-effectively. Traditional fixed OADM products cannot provide the scalability or flexibility required, but reconfigurable OADMs (ROADMs) can; Optelian ROADMs provide an essential capability that reduces total cost of ownership, simplifies operations and delivers rapid time to revenue.

LightFLEX



Unrestricted flexibility

- Add, drop and pass-through DWDM wavelengths at network sites, and remotely reconfigure circuits at any time without visiting the site

Network monitoring

- Automatically monitor optical power levels on all wavelengths without requiring an optical spectrum analyzer

Power balancing

- Perform automatic, per-channel optical power balancing in real time

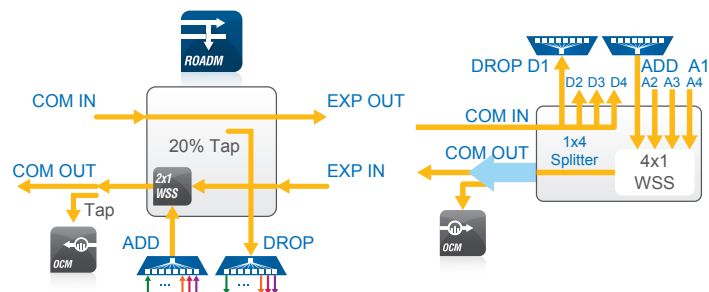
Scalable ROADM sites

- Two-degree and four-degree ROADMs are available to allow multi-degree site deployment
- 40-channel and 80-channel cards enable cost-effective deployment

Reliable infrastructure

- Leverages mature WSS technology for high reliability and low power utilization

ROADM network elements reduce the complexity of planning, provisioning, maintenance and growth. The stranded bandwidth associated with fixed and banded network architectures can be eliminated and replaced with all wavelengths available and configurable on demand at any ROADM site.



In addition to local add and drop capabilities, ROADMs provide channel pass-through capabilities that enable optical mesh networks and extend their reach. This minimizes the need to terminate wavelengths at each site and reduces the quantity of transponders in the network, thereby lowering equipment and operational costs.

Any network capacity and/or bandwidth design can be accommodated with Optelian ROADM support of network fiber overlays and full-spectrum access to all DWDM wavelengths.

ROADM

RDM Specifications

Specifications		Minimum	Maximum
Number of channels	RDM-2105, RDM-4105 RDM-2155, RDM-4155		40 C-band, 100 GHz 80 C-band, 50 GHz
Attenuator range		0 to 15 dB	
Through insertion loss	RDM-2105, RDM-2155, COM IN to EXP OUT		2.0 dB
Through insertion loss at 0 dB attenuation setting	RDM-2105, RDM-2155, EXP IN to COM OUT		6.25 dB
Drop port insertion loss	RDM-2105, RDM-2155, COM IN to DROP RDM-4105, RDM-4155, COM IN to DROP (D1 to D4)		8.0 dB 8.0 dB
Add port insertion loss at 0 dB attenuation setting	RDM-2105, RDM-2155, ADD to COM OUT RDM-4105, RDM-4155, ADD (A1 to A4) to COM OUT		6.25 dB 6.75 dB
Total optical input power			27 dBm
Per-channel optical input power			12 dBm
Channel clear passband	RDM-2105, RDM-4105 RDM-2155, RDM-4155	+/- 20 GHz +/- 12.5 GHz	
Return loss		30 dB	
Directivity		25 dB	
Power consumption	RDM-2105 RDM-2155 RDM-4105 RDM-4155		4.5 W 4.0 W 5.5 W 5.0 W

OCM Specifications

Specification	Value
Number of channels	40 C-band, 100 GHz 80 C-band, 50 GHz
Channel power measurement range	-40 to -10 dBm
Total power measurement range	-25 to 7 dBm
Absolute maximum total input power	7 dBm
Power consumption	8.5 W (maximum)

RDM and OCM Common Specifications

Specification	Value
Operating temperature (GR-63-CORE)	-5°C to 55°C (23°F to 131°F)
Operating humidity (relative, non-condensing)	5% to 95%
Connector	LC/UPC

Ordering Information

RDM-2105	1027-0100	RDM-2105, 2X1 ROADM, 40 channel, 100 GHz
RDM-2155	1027-0150	RDM-2155, 2X1 ROADM, 80 channel, 50 GHz
RDM-4105	1027-0200	RDM-4105, 4X1 ROADM, 40 channel, 100 GHz
RDM-4155	1027-0250	RDM-4155, 4X1 ROADM, 80 channel, 50 GHz
OCM-8400	1015-6500	Optical channel monitor, 4-port, 40/80 channel, 100/50 GHz

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