DATA SHEET 06 | 2024

EKINOPS CM_OC2-BR/RB

Cassette Mounted Red/Blue MUX/DEMUX Band Coupler Units for Single Fiber Operation

KEY FEATURES & BENEFITS

- Splits and combines two (2) optical channels
- Lowers overall cost of gridless ROADM deployment
- Accommodates multiple channel width
- Supports O-band through L-band frequency spectrum
- Super-extended temperature range operation
- Completely passive, no power or maintenance required

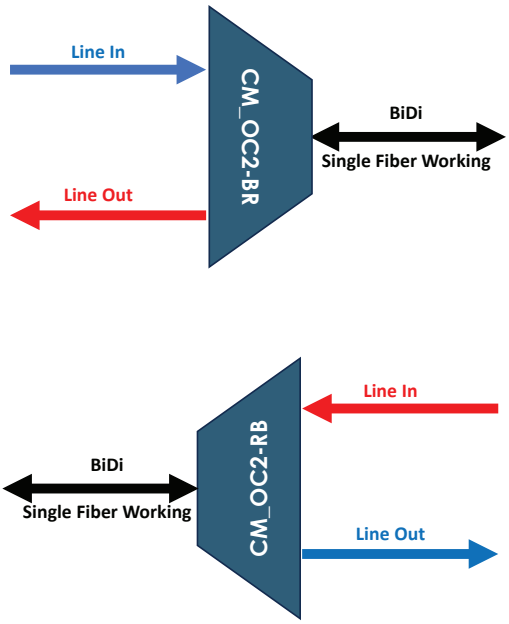
APPLICATIONS

- Single fiber networks
- Terminal and intermediate sites (including non-environmentally controlled sites)
- Colorless, Directionless and Gridless ROADM networks
- Filtering high baud rate channels

OVERVIEW

Single fiber networks present unique challenges that require purpose-built devices to provide specialized functionality. Unlike standard dual-fiber networks that use separate fiber strands to send and receive in both directions, wavelengths travel in both directions simultaneously on the same strand of fiber. Maintaining separation requires dividing the optical channels into separate bands—Red and Blue—to prevent interference. Ekinops provides a full suite of optical line system (OLS) solutions built specifically for single fiber networks including filters, optical add/drop multiplexers, amplifiers and couplers in addition to our transponders and muxponders that are single fiber compatible at all line interfaces from 10G to 600G.

Ekinops CM_OC2-BR/RB optical couplers are deployed in pairs, one each on either end of the line, to add and remove aggregated channels from a single strand of fiber in each direction. CM_OC2-BR is a bi-directional optical coupler device which combines a BLUE transmit optical signal and a RED receive optical signal on a single line while the companion CM_OC2-RB combines a RED transmit optical signal and a BLUE receive optical signal on a single line.



CM_OC2-BR/RB operations

The CM_OC2-BR/RB modules provide a cost-efficient solution to high-speed colorless, gridless, directionless and even contentionless networks. Since they are not tied to the ITU grid, they can couple and split any two arbitrary wavelengths of any width not just across the C-band, but the O-, E-, S- and L-bands as well for full support of the CWDM wavelength grid. This means they are capable of supporting 400G, 800G, 1.2T channels and beyond. Occupying one slot in Ekinops' passive RM_OPR shelf, up to eight channels can be added and dropped at any node from a single RU.

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EKINOPS360

EKINOPS CM_OC2-BR/RB

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SPECIFICATIONS

PHYSICAL SPECIFICATIONS

Module size	1 slot in RM_OPR
Operating temperature	-40°C to +70°C / -40°F to +158°F
Storage temperature	-40°C to +85°C / -40°F to +185°F
Optical connectors	LC/PC

OPTICAL CHARACTERISTICS

CM_OC2-BR

Parameter	Unit of Measure	Tx (Blue)	Rx (Red)	Common
Operating Wavelength	nm	1460-1542.5	1546.5-1630	
Max. Insertion Loss	dB	0.5	0.7	
Flatness	dB	0.2	0.4	
Isolation	dB	13	25	
Return Loss	dB			45
Polarization Mode Dispersion	ps			0.2
Polarization Dependent Loss	dB			0.1
Optical Power Handling	dBm			30

CM_OC2-RB

Parameter	Unit of Measure	Tx (Red)	Rx (Blue)	Common
Operating Wavelength	nm	1546.5-1630	1460-1542.5	
Max. Insertion Loss	dB	0.5	0.7	
Flatness	dB	0.2	0.4	
Isolation	dB	13	25	
Return Loss	dB			45
Polarization Mode Dispersion	ps			0.2
Polarization Dependent Loss	dB			0.1
Optical Power Handling	dBm			30

REFERENCE STANDARD

ITU-T G.694-1, ITU G959.1

ORDERING INFORMATION

CASSETTE MOUNT (CM)

PRODUCT CODE	DESCRIPTION
CM_OC2-BR	Cassette Mounted Blue MUX & Red DMUX Band Coupler Unit, compatible with PM_OABP-HCS2-17-BR & PM_OAIL-HCS2-17-SF
CM_OC2-RB	Cassette Mounted Red MUX & Blue DMUX Band Coupler Unit, compatible with PM_OABP-HCS2-17-RB & PM_OAIL-HCS2-17-SF

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PRODUCT CODE	DESCRIPTION
RM_OPR	Optical Passive Rack

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