WaveReady®Compact Eight-Channel CWDM Mux/Demux with 1310 nm SONET

MDX-08MDCC31B

Benefits

- Multiplexes and demultiplexes eight CWDM channels to a single fiber

- Reduces space requirements with double density form factor

- Low 2.5 dB multiplexing/demultiplexing insertion loss

- Overlays legacy networks, including SONET, with a 1310 nm bypass channel

- Eliminates the need for channel power balancing with ultra-high isolation design

- Environmentally hardened for ambient operating temperatures of −40 to 85°C; suitable for outside plant applications

- Requires no powering because of thermally stable passive optics

Applications

- Maximizes fiber in local loop applications

- Overlays CWDM with existing 1310 nm transmission systems

- Provides bidirectional transmission on a single fiber

- Supports linear (bus) add/drop architectures

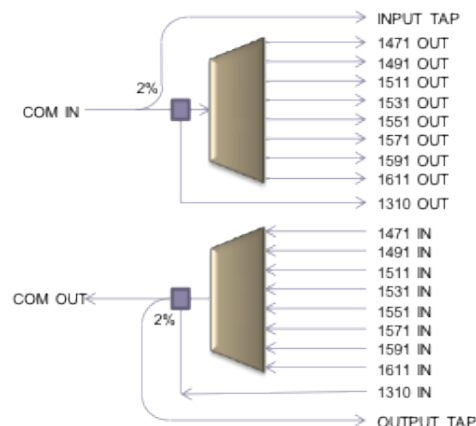- Supports hub-and-spoke ring architectures

Compliance

- ITU-T G.694.2 and G.695

- GR-1221 Issue 3 and 1209

- RoHS compliant 6/6

The JDSU WaveReady Coarse Wavelength Division Multiplexer/Demultiplexer Module (CWDM Mux/Demux) with SONET overlay is a flexible, low-cost solution that enables the expansion of existing fiber capacity. Highly reliable passive optics, certified for environmentally hardened applications, enable operators to make full use of available fiber bandwidth in local loop and enterprise architectures.

The CWDM Mux/Demux is a universal device that can combine nine optical signals into a fiber pair. It isupports a broad range of architectures, ranging from scalable point-to-point links to two-fiber protected rings. Its market-standard LGX™ packaging enables easy deployment in existing LGX-compatible frames or WaveReady 3500F shelves.

The CWDM Mux/Demux interoperates with WaveReady transponder and optical regenerator solutions as well as CWDM transponders and small form-factor pluggables (SFPs). With billions of field-operating hours, the industry-leading JDSU optical multiplexing technology offers unparalleled reliability and leading-edge performance.

Specifications[1]

Optical Characteristics

Parameter	Conditions	Minimum	Typical	Maximum
Passband center channel wavelength			1471, 1491, 1511, 1531, 1551,1571, 1591, 1611 nm	
CWDM passband at −0.5 dB		±6.5 nm		—
1310 nm passband	COM IN $\to$ UPG OUT	1260 nm		1360 nm
Insertion loss over passband[2]	COM IN $\to$ CWDM channel OUT	—	1.3 dB	2.5 dB
1310 nm add/drop loss		—	1.3 dB	2.1 dB
Channel flatness	Over-channel passband	—		0.5 dB
Isolation	Adjacent channel at λ_c ±13.5 nm over temperature and lifetime	30 dB		—
	Non-adjacent channel at λ_c ±33.5 nm over temperature and lifetime	45 dB		—
	CWDM channels to 1310 nm	45 dB		—
Optical return loss	All ports including connectors	40 dB		—
Tap-path insertion loss		15 dB		19 dB
PDL	All ports	—		0.4 dB
PMD	All ports	—		0.2 ps

Physical Characteristics

Size (L x W x H)	146.1 x 28.5 x 129.5 mm (5.75 x 1.12 x 5.1 in)
Optical connector type (all ports)	LC/PC bulkhead
Fiber type	SMF-28 or equivalent
Weight	0.22 kg (0.5 lb)

Environmental Characteristics

	Minimum		Maximum
Normal operating ambient temperature	−5℃	—	70℃
Extended operating ambient temperature	−40℃	—	85℃
Storage temperature	−40℃	—	85℃
Relative humidity (noncondensing)	5%	—	95%

1. Unless otherwise noted, all specifications are guaranteed over the life, operating temperatures, channel passband, and wavelength ranges specified.
2. Insertion loss includes one LC/PC connector loss.

Ordering Information

For more information about these or other products and their availability, contact your local JDSU account manager or JDSU directly at 1-800-498-JDSU (5378) in North America and +800-5378-JDSU worldwide or via e-mail at customer.service@jdsu.com.

CWDM Mux/Demux with 1310 nm SONET

Description	Part Number
Compact 8-channel CWDM mux/demux with 1310 nm bypass	MDX-08MDCC31B

Associated Parts

Description	Part Number
6-slot, 2RU passive mounting shelf	MDX-MN0204
12-slot, 4RU passive mounting shelf	MDX-MN0412
2-slot, magnetic wall-mount bracket	MDX-MNMM02
1-slot, 1RU passive mounting shelf	MDX-MN0103C
Passive optics cabinet - 4 LGX-compatible modules	MDX-MNWM02