



WaveReady® Compact 8-Channel CWDM Mux/Demux and 8-Channel Upgrade

MDX-08MDCCB1B and MDX-08MDCCU1B

The JDSU WaveReady Coarse Wavelength Division Multiplexer/Demultiplexer Module (CWDM Mux/Demux) and upgrade are flexible, low-cost solutions that enable 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 and upgrade are universal devices that can combine 9 optical signals into a fiber pair, 16 with the upgrade module. They support 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 and upgrade interoperate 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.

Benefits

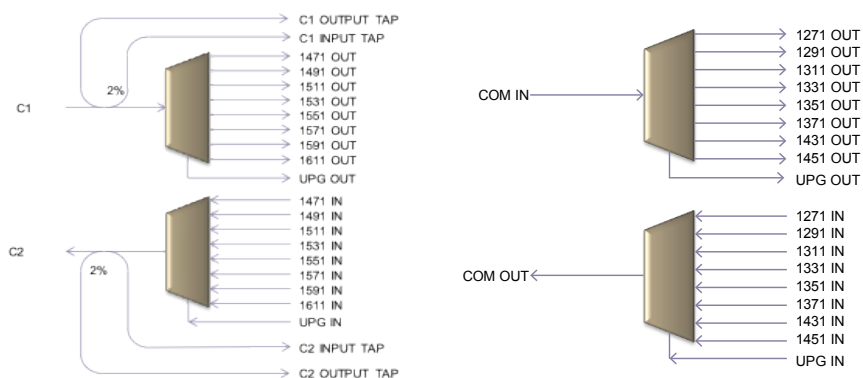
- MDX-08MDCCB1B multiplexes and demultiplexes 8 CWDM channels to a single fiber, 16 channels with the MDX-08MDCCU1B upgrade
- Can operate as a universal bidirectional multiplexer when upgraded
- Reduces space requirements with double density form factor
- Low 2.5 dB multiplexing/demultiplexing insertion 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

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



Specifications¹

Parameter	Conditions	Minimum	Maximum
Optical Characteristics			
MDX-08MDCCB1B Base			
Passband center channel wavelength		1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611 nm	
CWDM passband at -0.5 dB		±6.5 nm	—
Upgrade passband	COM IN → UPG OUT	1260 nm	1457.5 nm
Insertion loss over passband ²	COM IN → CWDM channel OUT	—	2.5 dB
Channel flatness	Over-channel passband	—	0.5 dB
Upgrade insertion loss	COM IN → UPG OUT	—	2.1 dB
Isolation	Adjacent channel at $\lambda_c \pm 13.5$ nm over temp and lifetime	30 dB	—
	Non-adjacent channel at $\lambda_c \pm 33.5$ nm over temp and lifetime	45 dB	—
Optical return loss	All ports including connectors	40 dB	—
Tap-path insertion loss		15 dB	19 dB
Directivity	Between CWDM channel ports	50 dB	—
PDL	All ports	—	0.4 dB
PMD	All ports	—	0.2 ps
MDX-08MDCCU1B Upgrade			
Passband center channel wavelength		1271, 1291, 1311, 1331, 1351, 1371, 1431, 1451 nm	
CWDM passband at -0.5 dB		±6.5 nm	—
Upgrade passband	COM IN → UPG OUT	1463.5 nm	1617.5 nm
Insertion loss over passband ²	COM IN → CWDM channel OUT	—	2.3 dB
Channel flatness	Over-channel passband	—	0.5 dB
Upgrade insertion loss	COM IN → UPG OUT	—	2.3 dB
Isolation	Adjacent channel at $\lambda_c \pm 13.5$ nm over temp and lifetime	30 dB	—
	Non-adjacent channel at $\lambda_c \pm 33.5$ nm over temp and lifetime	45 dB	—
Optical return loss	All ports including connectors	40 dB	—
Directivity	Between CWDM channel ports	50 dB	—
PDL	All ports	—	0.4 dB
PMD	All ports	—	0.2 ps

Parameter	Conditions	Minimum	Maximum
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			
Normal operating ambient temperature		-5°C	70°C
Extended operating ambient temperature		-40°C	85°C
Storage temperature		-40°C	85°C
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 on this or other products and their availability, please 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 UMUX

Description	Part Number
Compact 8-channel CWDM mux/demux base	MDX-08MDCCB1B
Compact 8-channel CWDM mux/demux upgrade	MDX-08MDCCU1B

Associated Parts

Description	Part Number
4-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



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