FS.COM

Data Center & Cloud Computing

DATASHEET

8 Channels C21-C28 Dual Fiber DWDM Mux Demux with Monitor Port, Expansion Port, and 1310nm Port, FMU Plug-in Module, LC/UPC

Data Center & Cloud Computing
Infrastruture Solutions

REV.1.0 2018

Overview

The DWDM passive Mux Demux modules deliver the benefits of a Dense Wave Division Multiplexer in a fully passive solution. They are designed for long-haul transmission where wavelengths are packed tightly together over the C-band range of wavelengths, up to 48 wavelengths in 100GHz grid(0.8nm) and 96 wavelengths in 50GHz grid(0.4nm). ITU G.694.1 standard and Telcordia GR1221, GR1209, CE, RoHS, FCC are compliant.

Our DWDM Mux Demux are modular, scalable and are perfectly suited to transport PDH, SDH / SONET, ETHERNET services over WWDM, CWDM and DWDM in optical metro edge and access networks.

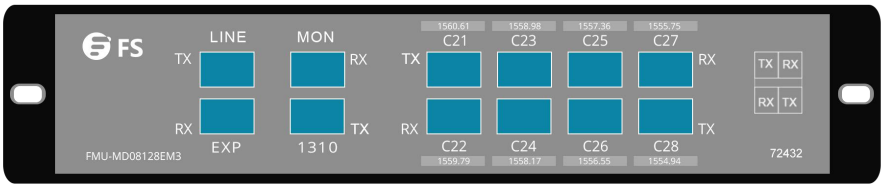
Highlights

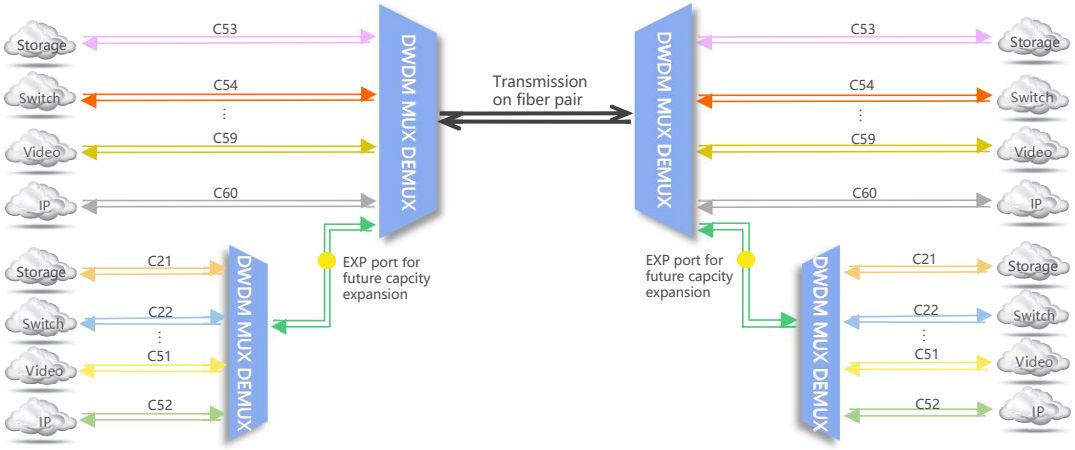
- Multiplexing of 8 channels on fiber pair
- Low insertion loss
- Low-profile modular design, fits in FMU 2-slot 1U chassis
- LC/UPC connectors
- Expansion port for future capacity expansion
- Compliant to ITU G.694.1, 100GHz ITU gird, 0.8 nm spacing
- High quality thin film filter technology
- Passive, no electricity needed (MTBF ca. 500 years)

General Specification

Front View	Function

72432





Technical Data

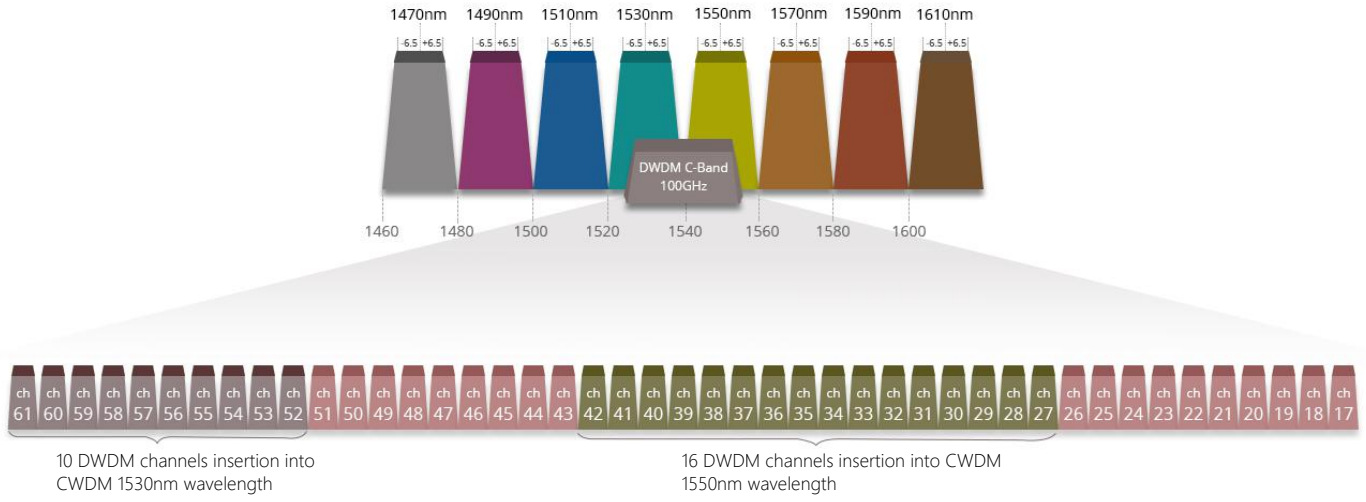
Parameter	Value
Operating Channel	8 channels C21-C28 (DWDM ports)
Channel Spacing	100 GHz (0.8 nm)
Channel Passband	±0.11 nm
Insertion Loss	≤ 3.7 dB
Insertion Loss (Exp)	≤ 3.4 dB
Adjacent Channel Isolation	≥ 30 dB
Non-adjacent Channel Isolation	≥ 40 dB
Exp Isolation	≥ 15 dB
Filter Technology	TFF (Thin Film Filter)
Return Loss	≥ 45 dB
Directivity	≥ 50 dB
Pass-band Ripple	≤ 0.5 dB
Polarzation Dependent Loss	≤ 0.2 dB
Polarization Mode Dispersion	≤ 0.1 ps
Power Handling	≤ 500 mW
Operating Temperature	-40°C~ +85°C
Storage Temperature	-40°C~ +85°C

Note: Specified with connectors and adapters.

Hybrid CWDM/DWDM System

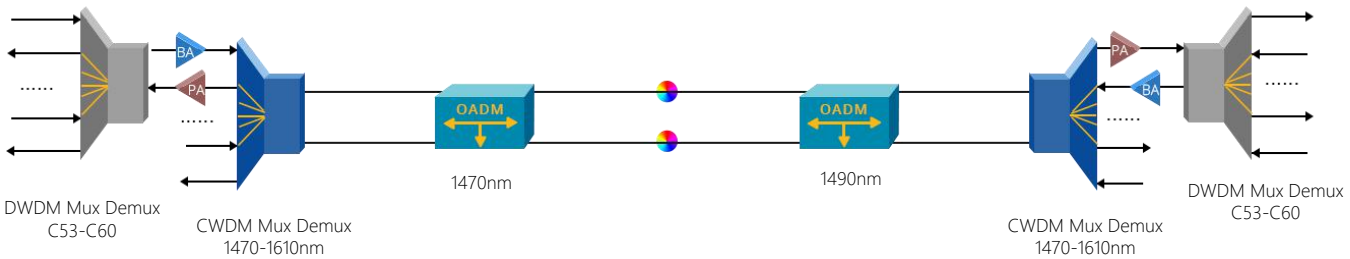
DWDM wavelengths are within the wavelength range of CWDM, which have much smaller channel spacing, so CWDM wavelengths near DWDM can be used to transmit the DWDM wavelengths. A hybrid C/DWDM system is built to expand the existing CWDM system, keeping initial startup costs low.

CWDM Channels (Bandwidth)	DWDM Channels (Center Wavelength)
1530nm (±6.5 nm)	C52-C61 (1528.77 - 1535.82 nm)
1550nm (±6.5 nm)	C27-C42 (1543.73 - 1555.75 nm)



Solution Design

To meet customers' applications, connect 8ch C53-C60 DWDM Mux Demux to 1530nm channel of 8ch CWDM Mux Demux to achieve the hybrid. Boost amplifier is deployed to amplify the output of single channel, which optimize the residual and signal quality of the link.



High Quality DWDM Transceivers to Build a Passive DWDM System

FS.COM offers DWDM transceiver modules in SFP, SFP+, XFP, Xenpak and X2 formats. Every optics is tested in real switches and full compatible with Cisco, Juniper, Arista, Brocade, Dell, Extreme, etc.

Transmission distances range from 20-120 km for Gigabit speeds, and 40-120km for 10 Gigabit speeds, without the use of optical amplifiers.

DWDM-SFP10G-80

DWDM-XFP10G-80

DWDM-X210G-40

DWDM-XPK10G-40

DWDM-SFP1G-ZX

DWDM Mux Demux Series

Application	ID#	Description
40/16/8 CHANNELS DUAL FIBER		
40 channels	33485	40 ch. DWDM Mux Demux, 100GHz, C21-C60, with monitor port, 3.0dB typical IL, 4.5dB max IL, duplex LC/UPC
40 channels	35887	40 ch. DWDM Mux Demux, 100GHz, C21-C60, with monitor port and 1310nm port, 3.5dB typical IL, 5.0dB max IL, duplex LC/UPC
16 channels	72430	16 ch. DWDM Mux Demux, 100GHz, C21-C36, with monitor port, expansion port and 1310nm port, IL ≤ 5.2dB, duplex LC/UPC
16 channels	72431	16 ch. DWDM Mux Demux, 100GHz, C27-C42, with monitor port, expansion port and 1310nm port, IL ≤ 4.9dB, duplex LC/UPC
16 channels	50123	16 ch. DWDM Mux Demux, 100GHz, C21-C36, with expansion port, IL ≤ 4.6dB, duplex LC/UPC
16 channels	26569	16 ch. DWDM Mux Demux, 100GHz, C27-C42, IL ≤ 4.6dB, duplex LC/UPC
16 channels	57884	16 ch. DWDM Mux Demux, 100GHz, C43-C58, with expansion port, IL ≤ 4.6dB, duplex LC/UPC
8 channels	30568	8 ch. DWDM Mux Demux, 100GHz, C53-C60, with expansion port, IL ≤ 3.2dB, duplex LC/UPC

8 channels	72432	8 ch. DWDM Mux Demux, 100GHz, C21-C28, with Monitor Port, Expansion Port and 1310nm Port, IL ≤ 3.7dB, duplex LC/UPC
8 channels	72433	8 ch. DWDM Mux Demux, 100GHz, C53-C60, with Monitor Port, Expansion Port and 1310nm Port, IL ≤ 3.7dB, duplex LC/UPC
8 CHANNELS SINGLE FIBER		
8 channels	50116	8 ch. DWDM Mux Demux, 100GHz, C22-C36 for transceiver wavelengths, with expansion port, IL ≤ 4.6dB, LC/UPC
8 channels	50117	8 ch. DWDM Mux Demux, 100GHz, C21-C35 for transceiver wavelengths, with expansion port, IL ≤ 4.6dB, LC/UPC

*Standard products are listed above. Customized specifications are available upon request.

ITU Channel Guiding

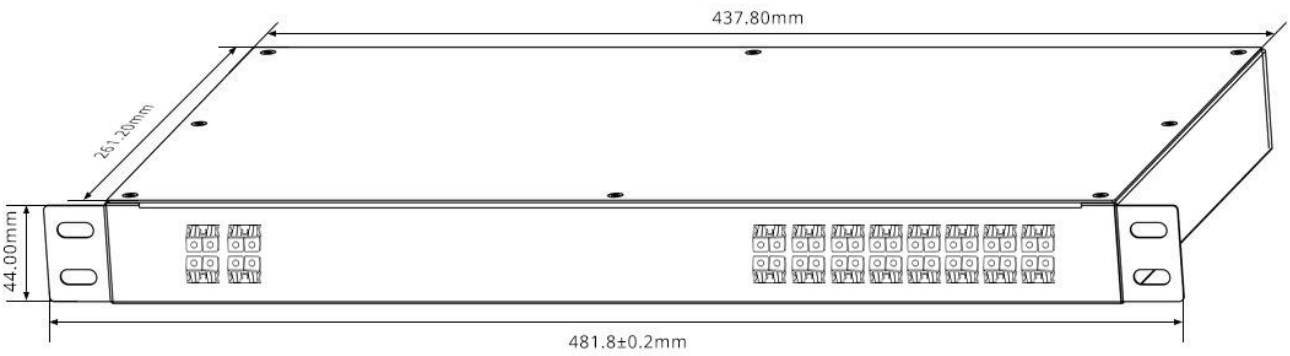
ITU Channel (xx or yy)	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Wavelength (nm)	1560.61	1559.79	1558.98	1558.17	1557.36	1556.55	1555.75	1554.94	1554.13	1553.33	1552.52	1551.72	1550.92	1550.12	1549.32	1548.51	1547.72	1546.92	1546.12	1545.32

ITU Channel (xx or yy)	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Wavelength (nm)	1544.53	1543.73	1542.94	1542.14	1541.35	1540.56	1539.77	1538.98	1538.19	1537.40	1536.61	1535.82	1535.04	1534.25	1533.47	1532.68	1531.90	1531.12	1530.33	1529.55

Layout and Dimensions

- Width: 481.8±0.2mm (19'')
- Height: 44mm (1.73'')
- Depth: 261.2mm (10.28'')

- The color of the module is black
- All fonts and lables are printed in black



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