

# 8ch Dual Fiber C29-C36 DWDM Mux Demux with Expansion and Monitor Port

FHD Plug-in Module, LC/UPC  
Data Center & Cloud Computing Infrastructure Solutions



## Overview

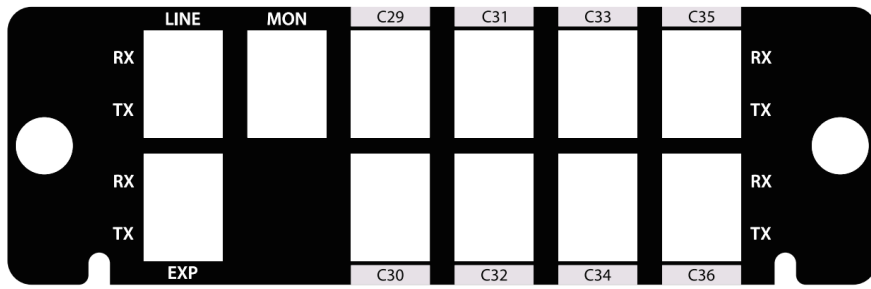
The 8ch DWDM Mux Demux is a high density, scalable, low loss passive device based on TFF(Thin Film Filter) technology. With modular design, it can be combined with CWDM/DWDM modules, OADMs and MTP cassettes in 1U FHD enclosures to save data center cabinet space.

In conjunction with the transponders and amplifiers, the 8ch DWDM Mux Demux supports a wide range of architectures from simple point-to-point to amplified ring configurations.

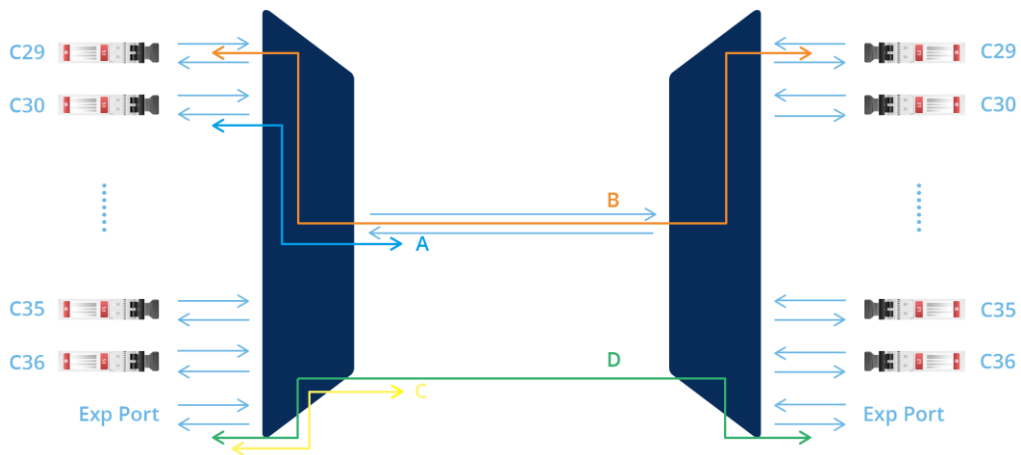
## Benefits

- Modularization, high density, saving data center cabinet space
- Mix CWDM/DWDM Mux Demux, OADMs and MPO Cassettes in 1U FHD enclosures
- 1% monitor port for easy troubleshooting without downtime
- Expansion port for future capacity expansion
- High quality thin film filter technology
- Passive, no electricity needed (MTBF ca. 500 years)

## Front Panel and Port Description



LINE	MON	EXP
Line interface for common signal	1% Monitoring for easy troubleshooting	Expansion for add additional channels



## Technical Specification

Parameter	Value
ITU Channel	8CH C29-C36
Operating Wavelength	1520-1570nm
Channel Passband	ITU ±0.11
Channel Passband (Exp port)	1500~1547.91 & 1554.73~1620nm
Insertion Loss, Per Channel (A)	≤ 2.8dB
Link Loss, Per Channel (B)	≤ 4.2dB
Insertion Loss, Expansion Port (C)	≤ 1.0dB
Link Loss, Expansion Ports (D)	≤ 2.0dB

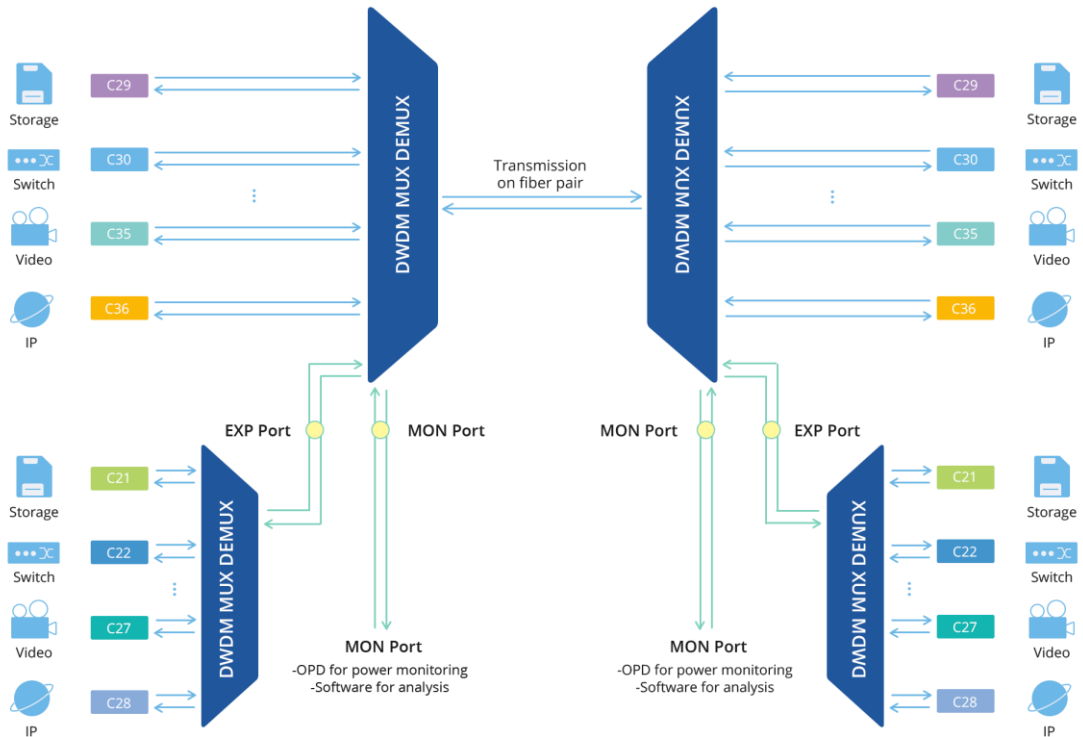
Parameter	Value
Channel Spacing	100GHz (0.8nm)
Insertion Loss @ 1% Mon	≤ 24dB
Exp Isolation	≥ 13dB
Adjacent Channel Isolation	≥ 30dB
Non-adjacent Channel Isolation	≥ 40dB
Filter Technology	TFF (Thin Film Filter)
Passband Ripple	≤ 0.5dB
Directivity	≥ 45dB
Return Loss	≥ 45dB
PDL	≤ 0.3dB
PMD	≤ 0.1ps
Power Handling	≤ 500mW
Operating Temperature	-40 ~ +85 ° C
Storage Temperature	-40 ~ +85 ° C
Fiber Type	G657 A1
Connector Type	LC/UPC Connector
Warranty	3 Years
Dimensions (H x W x D)	1.38"x4.29"x4.64" (35x109x118mm)

## Notes:

1.Specified with connectors and adapters.

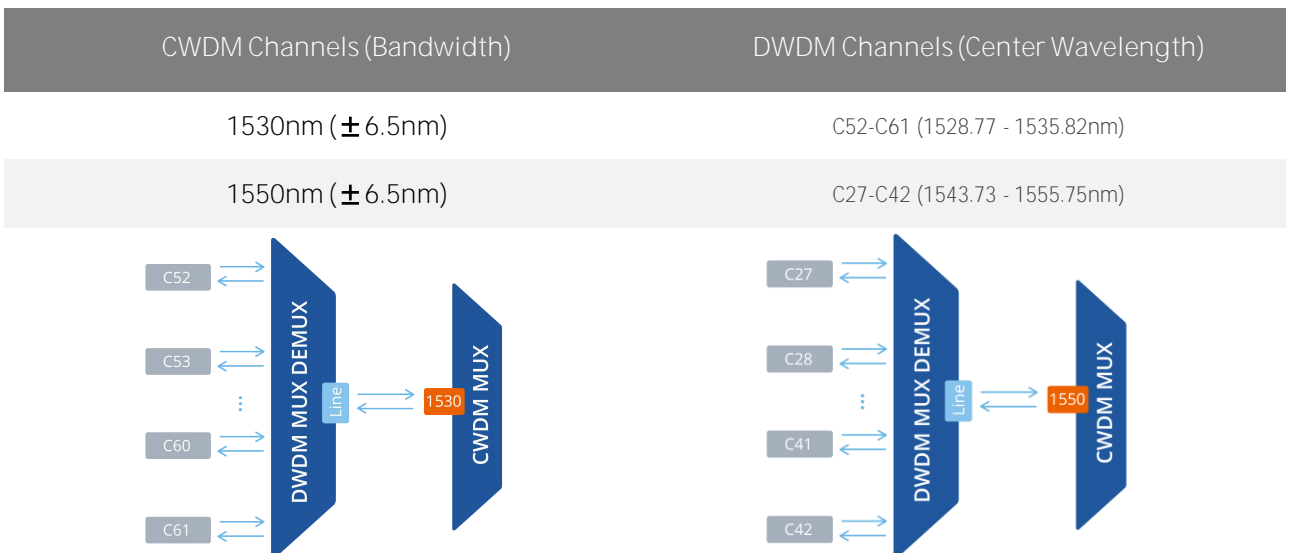
## Network Diagram

Expansion port can be used to connect another DWDM Mux Demux for wavelength expansion, and monitor port can be connected with monitoring devices to test the power of the signal without service interruption, which enables users the ability to monitor and troubleshoot networks.



## 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.



## High Quality DWDM Transceivers to Build a Passive DWDM System

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

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



DWDM-SFP10G-80



DWDM-XFP10G-80



DWDM-Tunable-XFP



DWDM-Tunable-SFP+



DWDM-SFP1G-ZX

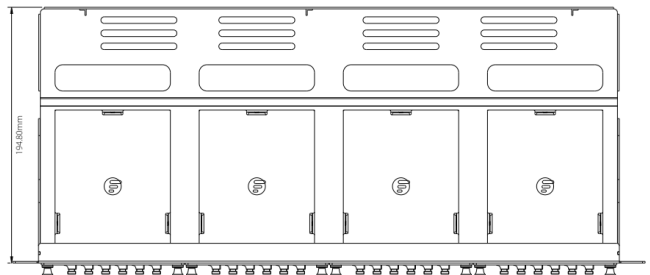
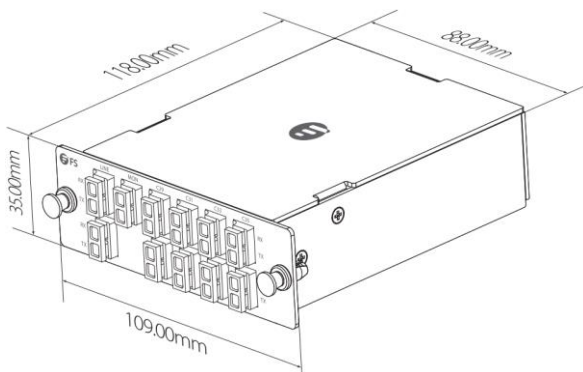
## ITU Channel Guiding

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: 109.00mm (4.29")
- Height: 35.00mm (1.35")
- Depth: 118.00mm (4.64")



## Ordering Information

### Mux Demux & OADM

	<a href="#">FMU-D402160M3</a>	40 Channels 100GHz C21-C60, with 1310nm and Monitor Port, 3.5dB Typical IL, LC/UPC, Dual Fiber DWDM Mux Demux, 1U Rack Mount #35887
DWDM MUX DEMUX	<a href="#">M6200-D2160M</a>	40 Channels 100GHz C21-C60 Dual Fiber DWDM Mux and Demux with Monitor Port, Pluggable Module, LC/UPC, Integrated with M6200 Series Managed Chassis #120424
	<a href="#">FMU-D162136EM3</a>	16 Channels 100GHz C21-C36, with Monitor, Expansion and 1310nm Port, LC/UPC, Dual Fiber DWDM Mux Demux, 1U Rack Mount #72430
CWDM MUX DEMUX	<a href="#">FMU-MD085360EM3</a>	CWDM/DWDM Hybrid Solution, 8 Channels 100GHz C53-C60, with Monitor, Expansion and 1310nm Port, LC/UPC, Dual Fiber DWDM Mux Demux, FMU Plug-in Module #72433
	<a href="#">FMU-C182761M</a>	18 Channels 1270-1610nm, with Monitor Port, LC/UPC, Dual Fiber CWDM Mux Demux, 1U Rack Mount #33489
	<a href="#">FMU-MC084761EM</a>	8 Channels 1470-1610nm, with Monitor and Expansion Port, LC/UPC, Dual Fiber, Low Insertion Loss CWDM Mux Demux, FMU Plug-in Module #78163
LWDM MUX DEMUX	<a href="#">ABS-L042930A</a>	4 Channels 1295.56-1309.14nm, Single Fiber LAN-WDM Mux Demux, Side-A, ABS Pigtailed Module, LC/UPC #97782
	<a href="#">ABS-C062737A</a>	6 Channels 1271-1371nm, Single Fiber CWDM Mux Demux, Side-A, ABS Pigtailed Module, LC/UPC #97784
OADM	<a href="#">DOADM-DF</a>	Customized Dual Fiber & Single Fiber DWDM OADM #70427
	<a href="#">COADM-DF</a>	Customized Dual Fiber & Single Fiber CWDM OADM #70425
Chassis	<a href="#">FMU-1UFMX-N</a>	FMU 2-Slot 1U 19" Rack Chassis Unloaded, holds up to 2 Units FMU Plug-in Module #30408
	<a href="#">FUD-1UFMX-N</a>	FUD 4-Slot 1U 19" Rack Chassis Unloaded, holds up to 4 Units FUD Plug-in Module #106578

### TRANSPONDERS & MUXPONDERS

8x 200G	<a href="#">M6800-TSP16</a>	16x 100G QSFP28 to 8x 200G CFP2 OTN Managed Transport Platform#111053
100G/200G	<a href="#">M6500-TMXP5</a>	2x 100G QSFP28/4x 40G QSFP+ to 1x 200G CFP2 Transponder/Muxponder#111049
10G	<a href="#">M6200-OEO10G</a>	5 Channels WDM Transponder (Converter), 10 SFP/SFP+ Slots#107365
	<a href="#">M6500-CH2U</a>	2U Managed Chassis Unloaded Platform, Supports 2x 200G Transponder/Muxponder #96454
	<a href="#">M6500-CH5U</a>	5U Managed Chassis Unloaded Platform, Supports 6x 200G Transponder/Muxponder #111050
	<a href="#">M6200-CH2U</a>	2U Managed Chassis Unloaded Platform, Supports 7x Mux/DEMUX/EDFA/OEO/OLP/DCM Cards #107371
	<a href="#">M6200-CH5U</a>	5U Managed Chassis Unloaded Platform, Supports 15x MUX/DEMUX/EDFA/OEO/OLP/DCM Cards #111052
Chassis		

## OPEN LINE SYSTEM

Amplifiers	<a href="#">M6200-25PA</a>	25dB Gain DWDM EDFA Pre-Amplifier, 16dBm Output#107367
	<a href="#">M6200-20BA</a>	20dBm Output DWDM EDFA Booster Amplifier, 16dB Gain#107366
Dispersion Compensation	<a href="#">M6200-DCM40</a>	40KM DCF-based Passive Dispersion Compensation Module#107370
	<a href="#">M6200-DCM80</a>	80KM DCF-based Passive Dispersion Compensation Module#119071
Line Protection	<a href="#">M6200-OLP2</a>	1+1 Optical Line Protection Switch (OLP)#107368
Red/Blue Filter	<a href="#">M6200-RB</a>	1x2 Single Fiber DWDM Red/Blue Filter#107369
VOA Units	<a href="#">M6200-SFPVOA</a>	SFP Variable Optical Attenuator Module#107373
	<a href="#">AT-M-LCU</a>	Fixed Fiber Optic Attenuators #70009
Chassis	<a href="#">M6200-CH2U</a>	2U Managed Chassis Unloaded Platform, Supports 7x Mux/DEMUX/EDFA/OEO/OLP/DCM Cards #107371
	<a href="#">M6200-CH5U</a>	5U Managed Chassis Unloaded Platform, Supports 15x MUX/DEMUX/EDFA/OEO/OLP/DCM Cards #111052

## WDM TRANSCEIVERS

100G/200G CFP2	<a href="#">M-CFP2-DCO</a>	C14 1566.31nm 100G/200G Tunable CFP2-DCO Coherent Transceiver, up to 1000km #120128
	<a href="#">DWDM-SFP25G-10</a>	25G DWDM SFP28 100GHz 1563.86nm 10km DOM LC SMF Optical Transceiver Module #87000
25G SFP28	<a href="#">CWDM-SFP25G-40S</a>	25G 1270nm CWDM SFP28 40km DOM LC SMF Optical Transceiver Module #100112
	<a href="#">CWDM-SFP25G-10SP</a>	25G 1270nm CWDM SFP28 10km DOM LC SMF Optical Transceiver Module #76003
	<a href="#">LWDM-SFP25G-40</a>	25G LWDM SFP28 1286.66nm 40km DOM LC SMF Optical Transceiver Module #93786
16G/8G FC	<a href="#">DWDM-SFP16G-40</a>	Customized 16G DWDM SFP+ C20-C61 100GHz 40km DDM LC SMF Transceiver Module#73084
	<a href="#">DWDM-SFP16GH-40</a>	Customized 16G DWDM SFP+ 50GHz 40km DDM LC SMF Transceiver Module #73085
	<a href="#">CWDM-SFP16G-40</a>	Customized 16G Fiber Channel CWDM SFP+ 1470-1610nm 40km DDM LC SMF Transceiver Module #80765

	<a href="#">DWDM-SFP10G-80</a>	10G DWDM SFP+ 1559.79nm 80km DOM LC SMF Transceiver Module, Commercial Temperature#31237, Industrial Temperature#113562
	<a href="#">DWDM-SFP10G-40</a>	10G DWDM SFP+ 1560.61nm 40km DOM LC SMF Transceiver Module, Commercial Temperature#38731, Industrial Temperature#113511
10G SFP+	<a href="#">DWDM-SFP10G-C</a>	10G DWDM C-band Tunable SFP+ 50GHz 80km DOM LC SMF Transceiver Module #69267
	<a href="#">CWDM-SFP10G-80L</a>	10G CWDM SFP+ 1470nm 80km DOM LC SMF Transceiver Module #19367
	<a href="#">CWDM-SFP10G-40S</a>	10G CWDM SFP+ 1270nm 40km DOM LC SMF Transceiver Module, Commercial Temperature#22168, Industrial Temperature#112392
	<a href="#">DWDM-SFP1G-EZX</a>	1000BASE-DWDM SFP 100GHz 1563.86nm 100km DOM LC SMF Transceiver Module #54150
1G SFP	<a href="#">DWDM-SFP1G-ZX</a>	1000BASE-DWDM SFP 1563.86nm 80km DOM LC SMF Transceiver Module #47697
	<a href="#">CWDM-SFP1G-EZX</a>	1000BASE-CWDM SFP 1270nm 120km DOM LC SMF Transceiver Module #102776
	<a href="#">CWDM-SFP1G-ZX</a>	1000BASE-CWDM SFP 1270nm 80km DOM LC SMF Transceiver Module #33234

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





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