Flat-top 40 Channels C21-C60, Dual Fiber DWDM Mux Demux

1U Rack Mount, LC/UPC
Data Center & Cloud Computing Infrastructure Solutions

Overview

The Flat-top 40ch Mux Demux is a high density, cost-effective and standalone passive optical module that provides excellent solution for infrastructure savings by aggregating all 40 DWDM channels at a single site. All 40 channels are spreading over the C-band per ITU-T 100GHz spacing between channels using high quality AAWG technology.

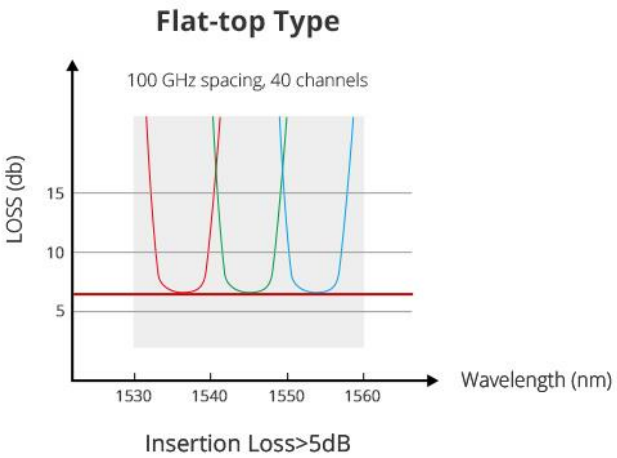
The 1310nm port can be used for 1000Base SFP LX/EX, 10G SFP+ LR/ER, 40G QSFP+ ER4/LR4 and 100G QSFP28 ER4/LR4. The 40 DWDM channels are able to transport 400Gbps so that one can run totally 500Gbps over this unit.

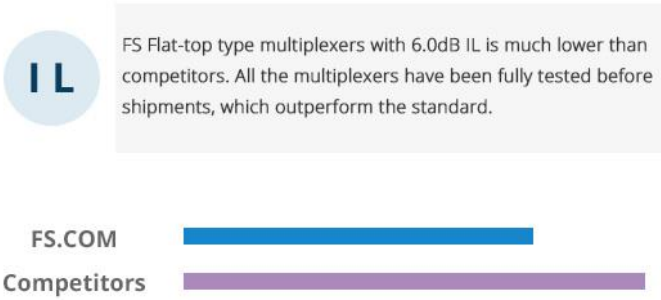
Features

- Multiplexing of 40 channels on fiber pair
- 1U 19" low profile modular design
- LC/UPC duplex connectors
- Qualified to Telcordia GR-1209-CORE and GR-1221-CORE
- Passive, no electricity needed (MTBF ca. 500 years)
- Compliant to ITU G.694.1, 100GHz ITU gird, 0.8 nm spacing
- Based on a- athermal AWG technology with Flat-top shaped pass bands

Highlights

The DWDM Mux Demux features with broader pass band in using AAWG Flat-top monolithic technology. With excellent channel isolation, accurate channel spacing, low insertion loss and high reliability, which is developed for long haul, metro and CATV applications.

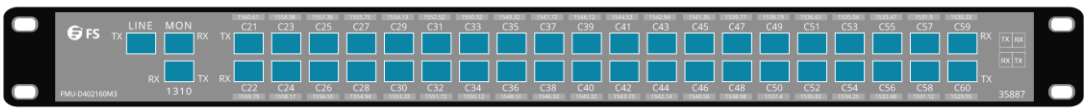


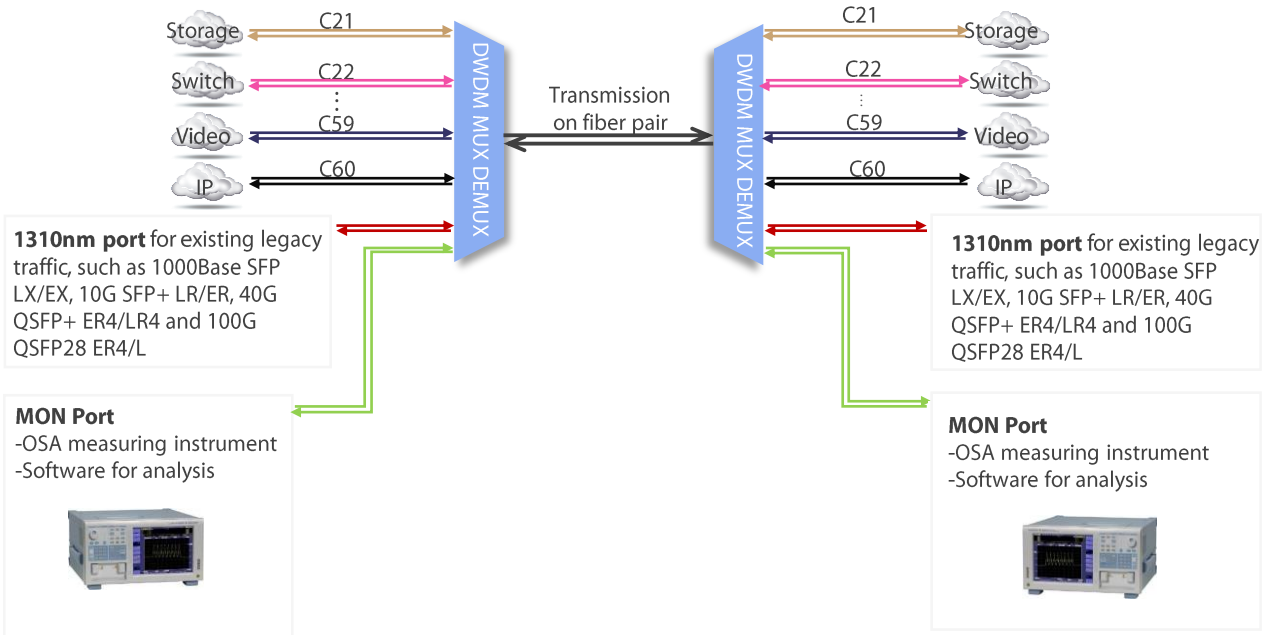


General Specification

Front View	Function

79580





Notes:

The special port is optional, panel diagram is only for reference.

Technical Data

Parameter	Value
ITU Channel	40 channels C21-C60 (DWDM ports)
Operating Wavelength	1520-1570nm
Channel Spacing	100GHz (0.8nm)
Channel Passband	±0.11nm
Center Wavelength Accuracy	±0.05nm
-1 dB Channel Bandwidth	≥ 0.40nm
-3 dB Channel Bandwidth	≥ 0.60nm
Insertion Loss	≤ 6.0dB
Insertion Loss (1% Mon)	≤ 28dB
Insertion Loss (1310 port)	≤ 1.5dB
Adjacent Channel Isolation	≥ 25dB
Non-adjacent Channel Isolation	≥ 29dB
Filter Technology	AAWG (Flat-Top)
Insertion Loss Uniformity	≤ 1.5dB
Return Loss	≥ 40dB
Directivity	≥ 40dB
Polarzation Dependent Loss	≤ 0.3dB
Polarization Mode Dispersion	≤ 0.1ps
Power Handling	≤ 300mW
Operating Temperature	-5° C~ +65° C
Storage Temperature	-40° C~ +85° C

Notes:

1. Specified with connectors and adapters.

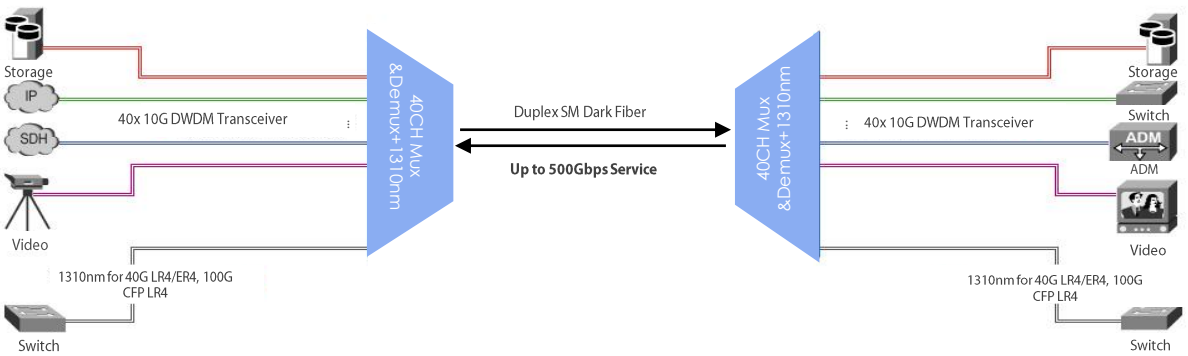
Application Example

Overlaying 10Gbps Networks with Additional 40Gbps or 100Gbps Services

How to add 40Gbps and 100Gbps services to your existing metro networks without effecting the legacy installation?

In fact, you just need to plug 40G or 100G fiber optic transceiver into the terminal equipment (Ethernet switch, router etc.) , then use the patch cable to connect it to your existing DWDM network via a 1310nm band pass port on the DWDM multiplexer.

Since the 1310nm band port is integrated into a 40 channels 100GHz DWDM multiplexer, then this set-up allows the transport of up to 40 x10Gbps plus 100Gbps over one fiber pair, in total 500Gbps, but without replacing any infrastructure.



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
40 channels	#79580	40 ch. DWDM Mux Demux, 100GHz, C21-C60, Flat-top, 6.0dB 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	#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	#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

16 channels	#78535	16 ch. DWDM Mux Demux, 100GHz, C21-C36 for transceiver wavelengths, IL ≤ 4.3dB, LC/UPC
16 channels	#78536	16 ch. DWDM Mux Demux, 100GHz, C45-C60 for transceiver wavelengths, IL ≤ 4.3dB, LC/UPC
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

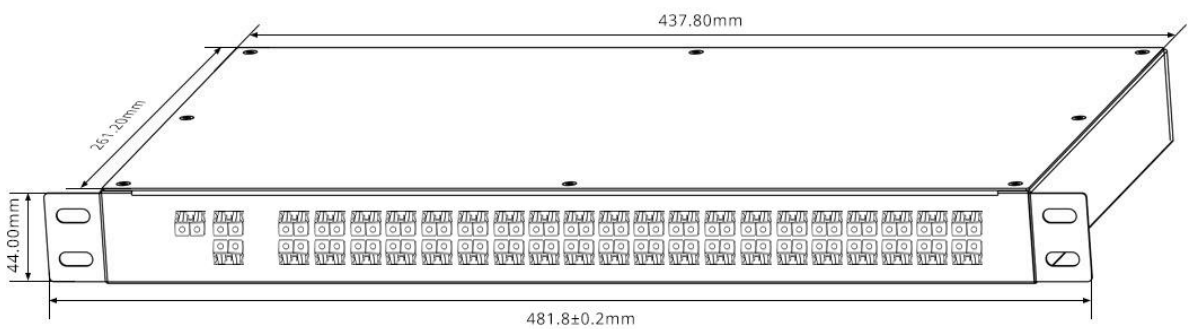
ITU Channel (xx or yy)	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Wavelength (nm)	1560.61	1559.79	1558.98	1558.17	1557.36	1556.55	1555.75	1554.94	1554.13	1553.33	1552.52	1551.72	1550.92	1550.12	1549.32	1548.51	1547.72	1546.92	1546.12	1545.32

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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