Channel DWDM Fiber Mux Demux LGX

Variants

MUX/DEMUX: C57-C60/ TX:C21-C24 Side B MUX/DEMUX RX: C21-C24/ TX:C25-C28 side (A) MUX/DEMUX RX: C53-C56 TX:C25-C28 Side B MUX/DEMUX RX: C25-C28/ TX:C53-C56 Side A MUX/DEMUX RX: C21-C24/ TX:C57-C60 Side A MUX/DEMUX RX: C25-C28/ TX:C21-C24 Side (B)

Details

SINGLE FIBER • BI-DIRECTIONAL DWDM

4 Services • 8 DWDM Wavelengths • Single Fiber • 100GHz ITU Grid • 1U Rack Mount

Product Overview

The **4 Channel DWDM Fiber Mux Demux** is a single-fiber, bi-directional DWDM solution designed to transmit **4 independent services using 8 DWDM wavelengths over one optical fiber**.

It operates with **C25–C28** and **C53–C56** DWDM wavelengths and follows the **ITU-T G.694.1 100GHz grid**, allowing efficient use of C-band optical spectrum.

This solution is suitable for ISP backbone, data centers, cloud infrastructure, broadcasting, financial networks, government networks and other applications where fiber resources are limited but higher network capacity is required.

SERVICES

4 Channel

WAVELENGTHS

8 DWDM

LINE

1 Fiber

CHANNEL GRID

100 GHz

Key Features

? 4 Channels over Single Fiber

? Bi-Directional DWDM Transmission

? 8 DWDM Wavelengths

? C25–C28 / C53–C56 Channels

? ITU-T G.694.1 100GHz Grid

? Thin Film Filter (TFF) Technology

? Low Insertion Loss ? 2.4 dB

? Channel Isolation up to 45 dB

? EXP Port for Future Expansion

? Custom DWDM Wavelength Design Supported

How Single Fiber BIDI Works

SIDE A

MUX

Combines C25–C28 and C53–C56 wavelengths and sends multiple services through a single optical fiber.

SINGLE FIBER

BIDI LINK

Both directions of communication use different DWDM wavelengths over the same single-mode optical fiber.

SIDE B

DEMUX

Separates the corresponding wavelengths at the receiving side for stable point-to-point service transmission.

SINGLE FIBER DWDM TRANSMISSION

MUX Side-A ? C25–C28 + C53–C56 ? Single Fiber ? DEMUX Side-B

Supported DWDM Wavelengths

DWDM Channel	Wavelength	Channel Group
C25	1557.36 nm	C25–C28
C26	1556.55 nm	C25–C28
C27	1555.75 nm	C25–C28
C28	1554.94 nm	C25–C28
C53	1535.04 nm	C53–C56
C54	1534.25 nm	C53–C56
C55	1533.47 nm	C53–C56
C56	1532.68 nm	C53–C56

Optical Specifications

Parameter	Specification
Channel Spacing	100 GHz (Approx. 0.8 nm)
Channel Passband	±0.11 nm
Insertion Loss	? 2.4 dB
Return Loss	? 45 dB
Directivity	? 45 dB
Adjacent Channel Isolation	? 30 dB

Parameter	Specification
Non-Adjacent Channel Isolation	? 45 dB
Polarization Dependent Loss	? 0.3 dB
Polarization Mode Dispersion	? 0.1 ps
Center Wavelength Accuracy	±0.05 nm
Technology	Thin Film Filter (TFF)

Fiber & Interface

Parameter	Specification
Fiber Type	Single Mode OS2
Connector	LC-UPC
Optional Connector	LC-APC
Line Port	Single Fiber BIDI
Expansion Port	EXP Port Available

EXP Port – Ready for Future Expansion

The built-in **EXP port** allows another DWDM Mux/Demux to be cascaded with the system, making it possible to increase network capacity without installing an additional backbone fiber.

Mechanical & Environmental Specifications

Parameter	Specification
Mounting Type	19-inch 1U Rack Mount
Module Support	4 × LGX Plug-in Modules
Dimensions (H × W × D)	44 × 440 × 230 mm
Net Weight	Approx. 3.5 kg
Operating Temperature	-20°C to +70°C
Storage Temperature	-40°C to +85°C

Application Areas

- ISP & Telecom Backbone
- Data Centers & IDC
- Cloud Networks
- Broadcasting & TV
- Banking & Finance
- Government Networks
- Enterprise Networks
- High-Capacity Data Transmission

Important: BIDI Wavelength Pairing

For single-fiber bi-directional DWDM operation, the transceiver wavelengths on **Side-A and Side-B must match the corresponding DWDM channel design**. Confirm the required C25–C28 and C53–C56 channel mapping before selecting DWDM transceivers.

© 2026 | Phone: +977 9851248419 | Email: info@dtechtrading.com | Website: https://demoshop.com. All rights reserved.