

Single-fiber bidirectional 4-wavelength CWDM optical module



Overview

The Single Fiber 4 Channel Compact CWDM Mux Demux Module is a high-performance Coarse Wavelength Division Multiplexing (CWDM) device that utilizes single-fiber bidirectional transmission technology to multiplex and demultiplex four different wavelengths (typically in the 1270nm–1610nm). The Single Fiber 4 Channel Compact CWDM Mux Demux Module is a high-performance Coarse Wavelength Division Multiplexing (CWDM) device that utilizes single-fiber bidirectional transmission technology to multiplex and demultiplex four different wavelengths (typically in the 1270nm–1610nm). With the vigorous development of data centers, optical fiber interconnection technologies have been evolved from multimode optical fiber (MMF) parallel transmission to CWDM4 single-fiber bidirectional (Bidi) transmission. This technique enables bidirectional communications over a. Corning coarse wavelength division multiplexing (CWDM) solutions utilize advanced thin-film-filter technology. CWDM solutions are available in industry-standard 20 nm spacing with options for a 1310 nm RF overlay bypass as well as single or bidirectional test ports. Connectorized and spliced. BiDi transceiver, a compact optical transceiver with WDM (wavelength division multiplexing) technology and SFP multi-source protocol (MSA) compliance, allows fast data transmission using a single fiber optic for both sending and receiving signals, saving resources and cutting infrastructure costs. The combination of CWDM GBICs and CWDM SFPs and CWDM Optical Add-Drop Modules (OADMs) and Multiplexers enables the design of a flexible and highly available.

Article Content

The Ultimate Guide to SFP Modules (2026): Types,

Confused by SFP vs SFP+? Read the definitive 2026 guide on SFP modules. We explain Single Mode vs Multimode, DDM diagnostics, and how to choose the

Custom 100G QSFP28 CWDM4 Module | 2km SMF LC | WolonFiber

The 100G QSFP28 CWDM4 transceiver is an MSA-compliant module built for hyperscale Data Center Interconnects (DCI). It multiplexes four 25Gbps optical signals into a single 100Gbps stream over

CWDM Channel Plan: Complete Wavelength Guide 2024

Complete CWDM channel plan with 18 wavelengths, color coding & BiDi pairing for single/double fiber systems. ITU-T G.694.2 compliant guide.

Cisco CWDM Transceiver Modules

The Cisco CWDM Solution offers a convenient and cost-effective solution for the adoption of optical Gigabit Ethernet in campus, data center, and metropolitan-area access networks.

Optical Compute Interconnect v1.0 Brings NRZ + DWDM to AI Scale-Up

The OCI v1.0 PHY specification formalizes a simplified optical architecture optimized for short-reach, high-density environments. It uses 53.125 Gbaud NRZ modulation across four

SFP CWDM BIDI Transceivers

Bidirectional Communication: GAOTek's SFP CWDM BIDI transceivers have a duplex LC connector that allows for bidirectional communication over a single fiber. They use separate wavelengths for

What are the Main Types of 10G SFP+ Optical Transceiver?

Main Types of 10G SFP+ Optical Transceivers 10G SFP+ CWDM Optical Transceiver 10G SFP+ CWDM optical transceiver is a hot-pluggable, compact optical module used in 10Gbps fiber

Single Mode SFP Transceiver: Complete Guide Explained

A single mode SFP transceiver is an optical module that uses laser-based transmission over single mode fiber to deliver long-distance, high-speed data communication, typically at 1310nm or 1550nm

Transceiver Optical Module Cisco 10G SFP+ 1550.92nm DWDM

This fiber optical transceiver module operates within a wavelength range of 1563.86-1528.77nm and supports seamless data transmission over single-mode fiber spans of up to 80km. Equipped with

Wavelength-division multiplexing

This technique enables bidirectional communications over a single strand of fiber (also called wavelength-division duplexing) as well as multiplication of capacity.

10GE SFP+ Optical Modules

OMXD30000 OSX010000 OSX040N01 OSXD22N00 SFP-10G-BXD1 SFP-10G-BXU1
SFP-10G-ER-1310 SFP-10G-ER-SM1270-BIDI SFP-10G-ER-SM1330-BIDI SFP-10G-LR-I
SFP-10G-USR SFP-10G

The Essential Guide to BiDi Transceivers: Everything

BiDi transceiver, a compact optical transceiver with WDM (wavelength division multiplexing) technology and SFP multi-source protocol

QSFP28 Module Types: SR4, LR4, CWDM4 & Single-Lambda

4-Lambda Modules: These legacy modules operate through four separate 25G NRZ data channels. The SR4 module transmits four 850nm light beams over parallel multimode fiber. CWDM4

Pluggable Optical Module Market Research Report 2034

The pluggable optical module market was valued at \$9.8 billion in 2025 and is projected to reach \$26.4 billion by 2034, growing at a CAGR of 11.6%.

Single Fiber 4 Channel Compact CWDM Mux Demux

This compact module features low insertion loss, high channel

LR4 40G QSFP+ Transceiver 1310nm 10km SMF Fiber Transceiver Module

40G QSFP+ LR4 1310nm 10km SMF Fiber Transceiver Module Description This product is a transceiver module designed for 2m-10km optical communication applications. The design is compliant to

Top 5 Tips for Choosing 10G SFP Bidi Modules?

Understanding 10G SFP Bidi Modules and Their Importance in Networking 10G SFP Bidi modules play a crucial role in modern networking. These devices utilize bidirectional signaling,

Design of a CWDM4 single fiber bidirectional transceiving module

What's more, requirements for miniaturization of optical transceivers are put forward. This paper studies a CWDM4 Bidi transceiving module based on hybrid integration technology.

25G BiDi SFP28 80KM Optical Transceiver | FiberMania

The FiberMania 25G BiDi SFP28 80KM optical transceiver is a high-performance module designed for long-reach, single-fiber bidirectional transmission over

Transceiver Optical Module Cisco 10G SFP+ 1270nm CWDM

Specifications As a versatile network component, 10G SFP+ CWDM fiber optical transceiver supports data rates of up to 10G, operating within the 1270-1370nm wavelength range, enabling efficient and

CWDM Mux Demux Single Fiber

The CWDM Mux Demux single fiber bidirectional solution supports CWDM channels in both directions over a single simplex singlemode fiber.

Design of a CWDM4 single fiber bidirectional transceiving module

With the vigorous development of data centers, optical fiber interconnection technologies have been evolved from multimode optical fiber (MMF) parallel transmission to CWDM4 single-fiber

Transceiver Optical Module Cisco 10G SFP+ 1270nm CWDM

Fiber Optical Transceiver|Optical Module Cisco Compatible CWDM 10G SFP+ 1270nm 40km Duplex LC/UPC Single Mode Specifications 10G SFP+ CWDM fiber module is a workhorse for handling

16-lambda DWDM on single strand of SM fibre

Lightmatter, the photonic computing specialist, says it has developed a 16-wavelength DWDM optical link operating on one strand of

Custom 100G QSFP28 SRBD Module | Duplex LC MMF

Dual-Wavelength PAM4: Multiplexes 850nm and 900nm optical frequencies to execute concurrent 50G bidirectional transmission and reception within a single multimode core. Wideband Fiber

Design of a CWDM4 single fiber bidirectional transceiving module

This new device technology is an enabler for bidirectional optical networks and opens up a range of possibilities for bidirectional fiber devices: isolators, circulators, add-drops,...

CWDM Solution Guide

Corning coarse wavelength division multiplexing (CWDM) solutions utilize advanced thin-film-filter technology. CWDM solutions are available in industry-standard 20 nm spacing with options for a

Optical Component Startup Tracker

The number of venture-backed optical component startups has exploded - the Optical Component Start-Up Tracker identifies these companies

Single-mode optical fiber

In fiber optics, a quadruply clad fiber is a single-mode optical fiber that has four claddings. Each cladding has a refractive index lower than that of the core.

CWDM Bidirection 4 Channel 8 Wavelength (CWDM-BiDi-04-8wave)

Optico provides filter-based wavelength division multiplexing (WDM) filter devices that are customized to the particular wavelength bands for your special applications.

Contact Us

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