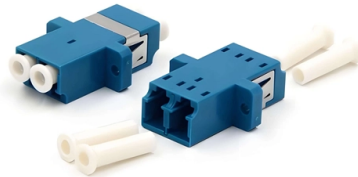


Single-fiber bidirectional QSFP solution



Article Overview

Single-fiber bidirectional QSFP modules enable 100G data transmission over a single optical fiber, maximizing fiber utilization and reducing infrastructure costs.

Overview

Single-fiber bidirectional (BiDi) QSFP modules allow full-duplex 100G transmission over a single optical fiber, effectively doubling the capacity of existing fiber infrastructure without laying additional fiber. These modules are ideal for access networks, data center interconnects, and edge deployments where fiber resources are limited.

Key Technologies and Products

- Coherent 100G ZR QSFP-DCO: Uses a dual-laser digital coherent optics (DCO) design with one laser for transmission and one for the local oscillator. It supports IP-over-DWDM transmission on a single fiber, enabling up to 10x capacity increase on existing 10G networks with low power consumption.
- Walsun 100G QSFP28 ZR4 BiDi: Employs a 4×25G NRZ scheme to achieve single-fiber bidirectional transmission over distances up to 80 km in KR4 FEC mode. It supports industrial-grade temperatures and consumes less than 6.5W.
- NEC 100G QSFP28 BiDi: Uses four wavelengths in the LWDM band for bidirectional transmission, achieving up to 80 km on a single fiber. This module enhances fiber utilization and reduces fiber costs.
- Cisco QSFP-100G-B20U4-I / B20D4-I: Operates in the O-band with low-power NRZ modulation and uses a diplexer filter to separate transmit and receive wavelengths,...

Article Content

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By leveraging Bidirectional (BiDi) technology and wavelength multiplexing, this innovative module allows data to transmit and receive

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Unlike traditional transceivers that require two fibers (one for transmitting and one for receiving), the 100G BIDI

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It uses a clever bidirectional communication setup over a single fiber strand, making it perfect for short distances.

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Versitron offers single-mode and multimode Bidirectional SFP Modules suitable for point-to-point networking, metro access ring,

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BiDi Transceivers For Beyond 100G Fiber Infrastructure | RAD SFP

RAD has developed the patented BiDi QSP adaptor to solve the issue of making the transition from dual-fiber optical

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Our QSFP28 Bidirectional (Bidi) transceivers delivers high-speed 100G connectivity over a single strand of fiber, with

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The Cisco QSFP 40/100 Gb dual-rate BiDi transceiver can function as a 40Gb BiDi, matching its reach of 100m and

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The demand for high-speed, cost-effective, and fiber-efficient optical transceivers has surged with the growth of data

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100G QSFP28 BiDi : Optical Transceiver Module | NEC

NEC's 100G QSFP28 BiDi optical transceiver enables the transmission and reception of 100Gb/s high-speed data over a single

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The Complete Guide to BiDi Transceiver

FS currently offers point-to-point fiber direct drive solutions (single-fiber bidirectional), which can meet the

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What Is A Single-Fiber BiDi Transceiver?--ETU-LINK

When planning a fiber optic network, one key decision is choosing between single-fiber (BiDi) and dual-fiber optical transceivers. This

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RAD offers dual to single fiber solutions for high-speed, reliable networks. Explore our BiDi QSFP28 adaptors for seamless connectivity.

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FS 40G QSFP BiDi Transceiver Solution

As to the migration from 10G to 40G, this article will introduce a cost-effective solution — 40G quad small form-factor

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How the Bi-directional SFP works over 1 core Fiber?

Single-fiber bidirectional (BiDi) refers to the simultaneous transmission and reception of optical signals in two directions over 1 optical

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A Closer Look at 100G QSFP28 Single Lambda Modules for Modern

100G QSFP28 optical module, as a mainstream solution for high-speed data center interconnects, has been widely

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40G QSFP + bidi dual fiber bidirectional optical module is a special bidi optical module, which is designed with LC

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The interfaces of optical modules are mainly divided into single-fiber bidirectional BiDi and dual-fiber bidirectional

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The Coherent 100G ZR QSFP-DCO is the industry's first dual laser QSFP28 digital coherent optics (DCO) module for

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QSFP28 100G BiDi Optics: Halve Your Fiber Capacity, Double Your

QSFP28 100G BIDI modules enable 100G Ethernet over duplex LC fiber, offering bidirectional transmission, compact

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Single Fiber Bidirectional SFP Transceivers

Single Fiber Bidirectional SFP transceivers use simplex single-mode fiber to double the bandwidth, data rates up to 4G and

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Cisco QSFP-100G-B20U4-I and QSFP-100G-B20D4-I 100G 20km

The QSFP-100G-B20U4-I and QSFP-100G-B20D4-I transceivers provide single-fiber, full-duplex, 100Gbps connectivity as network

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What is QSFP & QSFP+ Transceiver: An Ultimate Guide

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Cisco 40 Gigabit Modules

The Cisco QSFP BiDi transceiver offers the industry's most cost-effective solution for 40-Gbps connectivity. By transmitting full

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Turning Dual to Single Fiber for 50% Fiber Savings

RAD's BiDi QSFP adaptor is a passive, small-factor dual to single fiber adapter that can be plugged into existing SFPs, providing

Contact Us

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