

# Norwegian Certified Single-Fiber Bidirectional QSFP



## Article Overview

Single-fiber bidirectional QSFP modules enable 100G full-duplex transmission over a single fiber using WDM technology, reducing fiber usage while maintaining high-speed connectivity.

### Overview

Single-fiber bidirectional (BiDi) QSFP modules, such as the 100G QSFP28 BiDi, are optical transceivers that transmit and receive data simultaneously over a single single-mode fiber (SMF). They achieve this by using Wavelength Division Multiplexing (WDM), assigning different wavelengths for upstream and downstream communication, allowing full-duplex 100Gbps connectivity without requiring two separate fibers .

### Key Features

- **High-Speed Transmission:** Supports 100Gbps data rates, suitable for high-bandwidth interconnects .
- **Single-Fiber Operation:** Reduces fiber usage by half compared to traditional dual-fiber solutions like 100G LR4/ER4, lowering fiber procurement and rental costs .
- **Transmission Distances:** Typically supports 10 km, 20 km, 40 km, and up to 80 km depending on the module and technology used .
- **Plug-and-Play:** Designed for easy deployment and compatibility with mainstream switches and routers ....

## Article Content

Jun 29, 2026

Cisco 40GBASE QSFP Modules Data Sheet

Cisco QSFP-40G-SR-BD (40G BiDi) The Cisco QSFP 40-Gbps BiDirectional (BiDi) transceiver (Figure 1) is a

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100G QSFP28 Cable and Transceiver Modules Data Sheet | FS

It uses single-fibre bi-directional technology to transmit different wavelengths over a single fiber. Multiplexing and demultiplexing of

Sep 18, 2025

Understanding 100G Single Fiber QSFP28 Module for Modern Networks

100G single fiber QSFP28 modules enable fast, cost-effective network upgrades using one fiber strand, ideal for

Nov 26, 2025

What is QSFP-40G-SR-BD Optical Transceiver, Everything You

Finally, the QSFP-40G-SR-BD transmits these models over a single fiber optic cable via a laser on the transmitter side.

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40G BiDi QSFP+: Single-fiber Bidirectional Transmission

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

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Datasheet 40GBASE-SR Bi-Directional QSFP LC Duplex Transceiver

Datasheet Description I,Pluggable, LC Duplex, Fiber-Optic QSFP+ Transceiver for 40 Gigabit Ethernet Applications. This transceiver

Feb 10, 2026

Arista 100G Transceivers and Cables: Q& A

Arista supports a full range of 100G copper cables and optical transceivers compliant to IEEE standards and industry MSAs. Arista's

Aug 22, 2025

## A Complete Guide to Selecting 100G QSFP28 Optical Transceivers:

Ideal for fiber migration strategies where duplex MMF is prevalent. Model Example: LINK-PP QSFP-100G-SWDM4

Feb 14, 2026

## QSFP-40GB Transceivers Guide and Compatibility

QSFP+ 40Gb transceivers guide. Learn specs, compatibility, and benefits for efficient networking solutions.

Mar 21, 2026

## SFP vs QSFP: Key Differences Explained

SFP vs QSFP module differences explained. Learn about compatibility, speeds, and use cases for network setups.

Jan 29, 2026

## 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

Dec 27, 2025

## Dual to Single Fiber Solutions | RAD BiDi QSFP28 DD Adaptor

Simple to deploy, this compact adaptor doubles fiber capacity while avoiding costly new fiber/transceiver deployments and frees up

Feb 24, 2026

## Complete Guide to 40G QSFP+ Transceivers and Cables

Today, we are proud to deliver a large selection of 25G SFP28, 40G QSFP+, 100G QSFP28 and 400G QSFP-DD

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## Cisco QSFP-100G-B20U4-I and QSFP-100G-B20D4-I 100G 20km Bidirectional ...

Whether it's building a network or upgrading an existing network, the Cisco QSFP-100G- B20U4-I and QSFP-100G

Nov 04, 2025

## SFP vs. SFP+ vs. QSFP: Key Differences

Standard SFP transceivers, for 1 Gbps, span up to 550 meters over multi-mode fiber, or 150 kilometers on single

Dec 26, 2025

### Explaining 100G Bidirectional (BiDi) Optics

This 100G bidirectional transceiver provides 100Gbs bandwidth over standard duplex multi-mode fiber. The 100G

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### Cisco 40 Gigabit Modules

Cisco offers a broad range of 40 Gigabit Ethernet interfaces to meet the high-performance connectivity requirements of campus, data

Jun 23, 2026

### 100G QSFP28 / SFP-DD Modules and Cables FAQ | FS

The 100G BiDi transceiver refers to the QSFP28 single-mode fiber bidirectional optical module applied to 100G Ethernet. Each

May 07, 2026

### Arista 100G Transceivers and Cables: Q&A

The QSFP-100G-LR4 supports links up to 10km over duplex single mode fiber. Enabling FEC with QSFP-100G-LR4 optics on Arista

Oct 28, 2025

### Fiber-Optic Cabling Connectivity Guide for 40-Gbps Bidirectional and ...

Cabling Options for 40-Gbps Two-Fiber Bidirectional Optics (QSFP-40G-SR-BD) Since the introduction of 40 Gigabit Ethernet with

Jun 16, 2026

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

What's unique about the QSFP-100G-B20U4-I and QSFP-100G-B20D4-I transceivers is that they operate in the O

Apr 27, 2026

### 40G QSFP BIDI vs 40G QSFP SR4 vs 40G QSFP UNIV: What Is the

What Is 40G QSFP BIDI SR Optical Transceiver Module The 40GBASE-BiDi SR (Bidirectional Short Reach) module

Mar 27, 2026

### 100G Over Single Fiber, Simplified

Upgrading from 10G to 100G no longer requires complex fiber builds. Our QSFP28 Bidirectional (Bidi) transceivers

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Bidirectional SFP Modules | Bidirectional SFP Transceivers

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

Mar 12, 2026

40G QSFP+ Transceiver Modules | Optical Transceivers

FS 40G QSFP+ optical transceiver module solutions offer a full range of QSFP+ modules from 150m to 80km reach, and used for

Apr 23, 2026

Industry's First 100G ZR QSFP28 for Bi-Directional Application

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

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SFF-8679 Specification for QSFP+ 4X Hardware and Electrical ...

The scope includes electrical contacts for the host connector; status, control and management interface signals; power supply

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Introduction About BiDi SFP and BiDi Fiber

How Does BiDi SFP Work? As the above-mentioned introduction about BiDi SFP, we have learned the modules

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What is QSFP & QSFP+ Transceiver: An Ultimate Guide

What is a QSFP & QSFP+ Transceiver? QSFP stands for Quad Small Form-factor Pluggable. By integrating four-lane

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100G Over Single Fiber, Simplified | ProLabs

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

Sep 06, 2025

## The Ultimate Guide to Buying 40G QSFP+ Transceivers

Unstanding different types of 40G QSFP+ Transceivers, including 40GBASE-SR4, 40GBASE-LR4, 40GBASE-FR4,

### Contact Us

For more information, pricing, or custom solutions, please contact us:

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