

QSFP28 Optical Module Low-Loss Technology Support

Article Overview

QSFP28 optical modules are high-speed 100G transceivers designed for low-loss, high-performance Ethernet links, supporting both short- and long-reach applications over multimode and single-mode fiber.

Overview of QSFP28

QSFP28 (Quad Small Form-Factor Pluggable 28) modules provide four lanes of 25 Gbps, aggregating to 100 Gbps Ethernet throughput. They are widely used in data centers, enterprise networks, and telecom infrastructure due to their high port density, low power consumption, and standardized CAUI-4 electrical interface . The modules can support multiple optical technologies, including VCSELs for multimode fiber, DFB lasers for single-mode fiber, PAM4, and coherent optics, depending on the deployment requirements .

Low-Loss and Long-Reach Options

Low-loss QSFP28 modules are designed to minimize optical attenuation, enabling longer link distances without signal degradation. Key types include:

- QSFP-SR4-100G: Supports up to 70m on OM3 and 100m on OM4 multimode fiber using 12-fiber MTP/MPO connectors, ideal for short-reach, low-loss intra-rack connections .
- QSFP-PSM4-100G: Single-mode parallel fiber module supporting up to 500m, suitable for long-reach applications .

Article Content

Aug 27, 2025

Enabling/Configuring QSFP28 module

I am now trying to use a QSFP28-SR optics module. I can talk to the module over I2C and have read over the QSFP management

Dec 29, 2025

Cisco QSFP28 100G ZR Digital Coherent Optics Module Data Sheet

The Cisco QSFP28 100G ZR leverages the latest Common Management Interface Specification (CMIS) 5.2

Jun 03, 2026

100G QSFP28 Transceivers: Types, Specs and How to Choose

In this guide, we provide a comprehensive, practical overview of 100G QSFP28 modules, covering their working principles, module

Oct 25, 2025

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

FS supports a full range of 100G copper cables and optical transceivers that comply with IEEE standards and industry MSA. FS's

Jan 10, 2026

QSFP28 Transceiver: Complete 100G Connectivity

QSFP28 transceiver guide covering module types, pricing, compatibility, and deployment.

Oct 07, 2025

100G QSFP28 Transceivers: Types, Specs and How to Choose

A complete guide to 100G QSFP28 transceivers covering types, specs, reach, compatibility, and how to choose the right module for

Aug 24, 2025

The Ultimate Guide to SFP, SFP+, SFP28, QSFP+, and QSFP28:

What are the Differences Between SFP, SFP+, SFP28, QSFP+ and QSFP28? Unlock higher bandwidth and

Mar 25, 2026

Everything You Need to Know About QSFP28 Port: The Future of

The QSFP28 port uses advanced optical and electrical technologies to enable high-speed communication. When data

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Understanding QSFP28 Optical Modules: A Comprehensive Guide

The 100GBASE-ER4 QSFP28 optical module uses advanced modulation technology to achieve high-speed data transmission over

Dec 19, 2025

QSFP28 100G Direct Attach Copper Cables

Regional Availability - Global Siemon QSFP28 100G passive Direct Attach Copper Cable assemblies are designed to exceed

Apr 21, 2026

Design and Implementation Scheme of QSFP28 Optical Transceiver

A quad, small form-factor pluggable 28 Gbps optical transceiver design scheme is proposed. It is capable of

Jun 11, 2026

What Are the Types of 100G QSFP28 Cables?

QSFP28 cables are essential for 100G data transmission in modern networks. Discover the different QSFP28 cable

Oct 12, 2025

SFP+, SFP28, QSFP+, QSFP28, QSFP56, QSFP-DD, QSFP112 vs

Initial Published: February 19, 2022 The optical transceiver plays a crucial role in modern fiber networking. Various

Feb 19, 2026

Intel® Ethernet QSFP28 Optic

When used with Intel® Ethernet Network Adapters with QSFP28 connectivity, these optics provide interoperability and secure

Sep 02, 2025

100G Optical Module Selection Guide: Advantages and Types of QSFP28

Explore the QSFP28 100G optical module, a vital component for high-speed network connections. Discover its unique

Apr 10, 2026

Spec Sheet

QSFP28 100G Siemon 100G QSFP28 Active Optical Cable (AOC) assemblies offer a highly reliable and cost-effective alternative to

Jan 31, 2026

100G QSFP28 Optical Module Selection Guide: Medium to Long

Choose 100G LR4 or 100G ER4. 100G LR4 supports 10KM transmission distance, while 100G ER4 supports up to

Aug 18, 2025

100G QSFP28 Explained: Key Features, Applications, and How to

As data centers, cloud computing, and enterprise networks demand higher bandwidth and faster data transmission,

Mar 12, 2026

100G QSFP28

100G QSFP28 and Related Products. 100G QSFP28 The rapid development of optical communications

Aug 05, 2025

QSFP, QSFP+, and QSFP28: What You Need to Know About the

If you're looking for the most advanced optical module package on the market, look no further than QSFP. QSFP+ and

Aug 21, 2025

QSFP28 MSA Explained: Compatibility, Standards, and Risks

Understand QSFP28 MSA standards, compatibility limits, and real-world risks. Learn how to choose reliable 100G

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QSFP28/QSFP+ 100G/400G LOOPBACK MODULE

Software defined multiple power consumption may emulate the optical module power, and the embedded insertion loss

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100G ZR QSFP28 Digital Coherent Optics Transceiver

To facilitate deployment in a wide variety of edge network locations, including street cabinets or pole mount

Sep 13, 2025

Cisco QSFP28 100G ZR Digital Coherent Optics Module

The module also supports Precision Timing Protocol (PTP) Class C Timing, making it an ideal choice for low latency and precise

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QSFP28 Optical Transceiver 100 Gigabit Ethernet for up to 10 km Reach

LQ2 Series The Lumentum 100G QSFP28 LR4 Optical Transceiver is a full duplex, photonic-integrated optical transceiver that

May 29, 2026

Two-Port 40

The DS280BR810 is available in a small 8- × 13-mm leadless BGA package, which fits easily behind a standard 2x1 stacked

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100G QSFP28 Cable and Transceiver Modules Data Sheet | FS

The 100GBASE-LR Single Lambda QSFP28 Optical Transceiver Module is designed for use in 100GBASE Ethernet throughput upto

Aug 05, 2025

QSFP28 PAM4 DWDM: How to Extend 100G/400G Links Without

Learn how QSFP28 PAM4 DWDM technology can extend 100G/400G network links without performance loss.

Contact Us

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

Website: <https://www.iiss.co.za>

Email: sales@iiss.co.za

Phone: +27 63 174 2895

Address: Unit 8, Innovation Park, 15 Rivonia Road, Sandton, Johannesburg,
2196, South Africa

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