

QSFP28 Optical Module Applications



AI Overview

The QSFP28 optical module is used to enable high-speed 100G data transmission in data centers, enterprise networks, and high-performance computing environments.

Overview

QSFP28 (Quad Small Form-Factor Pluggable 28) is a compact, hot-swappable optical transceiver designed to support 100 Gigabit Ethernet (100GbE) by aggregating four parallel electrical lanes, each operating at 25 Gbps NRZ signaling, resulting in a total throughput of 100 Gbps . The “28” in QSFP28 refers to the maximum 28 Gbaud signaling rate per lane, providing sufficient overhead for error correction and clocking . Its form factor is backward-compatible with QSFP+ (40G) ports, allowing network devices to upgrade bandwidth density without redesigning front panels .

Key Uses

- **High-Speed Data Transmission** QSFP28 modules convert four electrical lanes into optical signals, enabling 100G connectivity over multimode or single-mode fiber. Variants like SR4, LR4, and CWDM4 support different distances and fiber types, from short-reach data center links to long-haul metro connections .
- **Data Center and Cloud Infrastructure** QSFP28 is widely deployed in spine-leaf architectures and hyperscale data centers, providing high port density and efficient bandwidth utilization. It allows operators to scale network capacity while maintaining low power consumption and compact module size .
- **Flexible Deployment Options** The module supports breakout configurations, where a single 100G port can be split into four 25G connections, offering flexibility for connecting servers, switches, or storage devices . It also supports Digital Diagnostic...

Article Content

Mar 22, 2026

100G ZR QSFP28 Digital Coherent Optics Transceiver

The Steelerton DSP is the first purpose-built DSP for 100G ZR applications, optimized for the lowest power

Jun 13, 2026

Cisco QSFP28 100G ZR Digital Coherent Optics Module Data Sheet

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

Jul 12, 2026

400G Optical Module Selection Guide: QSFP-DD vs. QSFP28 vs. OSFP

Compare QSFP-DD, QSFP28, and OSFP form factors. Learn about compatibility, power constraints, migration TCO,

Jan 18, 2026

Understanding the Differences of SFP, SFP+, SFP28, QSFP+, and QSFP28 ...

In the world of high-speed networking, optical transceivers play a critical role in enabling data transmission across

Nov 25, 2025

Selecting the Perfect 100G Optical Module Packaging: QSFP28, CFP,

100G Optical Modules" Packaging Type 100G optical modules come in various form factors designed to meet the

Sep 10, 2025

Overview of QSFP28 LR4 Optical Transceiver

Discover FS's QSFP28 100G LR4 optical transceiver, offering low power consumption, perfect compatibility, and

Feb 28, 2026

Everything You Need to Know About QSFP28 Ports:

□□ QSFP28 essentially quadruples the throughput per lane compared to QSFP+, enabling

Jan 24, 2026

Cisco QSFP28 100G ZR Digital Coherent Optics Module

The module is compatible with widely deployed ports of QSFP28 100G and 100GBASE ER CAUI-4 client interfaces. Its maximum

Jan 01, 2026

Difference Between QSFP, QSFP+, QSFP28

Except SFP, current market is full of various types of fiber optic transceivers, such as QSFP, QSFP+ and QSFP28. At

Dec 02, 2025

Optical Transceiver Manufacturer, Advantages and application solution of ...

The QSFP28 optical module has four signal channels, each of which has a maximum transmission rate of 28Gbps

Jun 24, 2026

QSFP28 Transceiver: Complete 100G Connectivity

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

Sep 18, 2025

Introduction And Applications Of QSFP28 Optical Modules

Among these different form factors, QSFP28 optical modules have emerged as the mainstream form factor for 100G

Jan 05, 2026

QSFP28 Transceiver: Complete 100G Connectivity Guide

Complete guide to QSFP28 transceivers: SR4, LR4, CWDM4 module types, switch compatibility, breakout cables,

Dec 28, 2025

100G QSFP28 Applications, Use Cases and Deployment Scenarios

Thanks to its flexibility, a single QSFP28 port can support optical fiber modules, DAC cables, AOC cables, and breakout

Mar 30, 2026

100G Fiber Optic Transceivers — QSFP28

100G QSFP28-PSM4 is a Four-Channel, Pluggable, Parallel, Fiber-Optic QSFP28 Transceiver for 100G Ethernet

Oct 22, 2025

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

QSFP28-100G-LR4 is a 100 Gigabit per second (Gbps) Ethernet optical transceiver module that operates over OS2

Oct 21, 2025

QSFP28 SR4 Optical Transceiver Module Overview

Common QSFP28 variants like SR4, LR4, PSM4, CWDM4, and ER4 are designed to meet diverse transmission

Apr 25, 2026

Introduction to 100G QSFP28 Optical Transceiver

100G QSFP28 optical transceivers are designed for 100 Gigabit Ethernet, EDR InfiniBand, or 32G Fibre Channel. What is 100G

Oct 24, 2025

100G QSFP28 Transceiver Modules | Optical

The 100G QSFP28 module solution provides high-performance 100GbE connectivity for data centres,

Sep 14, 2025

Application Of 100G QSFP28 Optical Module In Data Center-ETU

Next, ETU-LINK will introduce the application of 100G QSFP28 optical module in the data center. The network structure in the data

Apr 27, 2026

Exploring the Key Differences Between QSFP and QSFP28 in Modern ...

Discover the key differences between QSFP and QSFP28 transceivers, including their form factors, performance

Jun 14, 2026

Everything You Need to Know About QSFP28 Ports:

Electrical-to-optical conversion occurs in the QSFP28 module. Optical signals travel over

Apr 12, 2026

Comprehensive Guide to QSFP-DD, QSFP28, QSFP56,

Complete Guide to QSFP-DD, QSFP28, QSFP56, SFP56, and SFP28 Optical Modules As high-speed

Jun 27, 2026

Selecting the Right QSFP28 Module

With so many different QSFP28 optical transceiver modules available for 100G connections, it can sometimes be

Mar 06, 2026

The Ultimate Guide to QSFP28-DD: Understanding Its

Explore the differences between QSFP28 and QSFP-DD transceivers, their applications,

Dec 17, 2025

100G QSFP28 Transceiver Modules | Optical Transceivers

FS 100G QSFP28 module solutions provide various high-density, low-power 100 Gigabit Ethernet connectivity options for data

Sep 10, 2025

100G QSFP28

The 100G QSFP28 optical module first appeared in 2013, and after the development of recent years, the

Contact Us

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

Website: <https://ntmmgroup.co.za>

Email: sales@ntmmgroup.co.za

Phone: +27 82 471 2596

Address: Unit 7, Optic Park, 24 High-Tech Lane, Century City, Cape Town,
7441, South Africa

This document is for informational purposes only. Specifications subject to
change without notice.

