US QSFP optical module SFP

Overview

FS 40G QSFP+ optical transceiver module solutions offer a full range of QSFP+ modules from 150m to 80km reach, and used for high-density switching, routing and data center applications.

Key Takeaways

SFP modules are compact, versatile transceivers for lower-speed connections, while QSFP modules support higher-speed, multi-lane data transmission for data centers and high-performance networks.

Overview of Optical Modules

Optical modules, also called transceivers, convert electrical signals into optical signals and vice versa, enabling high-speed data transmission over fiber-optic networks. They come in various form factors that define their size, speed, and compatibility with networking equipment.

SF

P (Small Form-factor Pluggable)Form Factor: Compact, hot-pluggable, half the size of the older GBIC modules. Speed: Typically supports 1 Gbps, with SFP+ supporting 10 Gbps and SFP28 supporting 25 Gbps. Applications: Ideal for enterprise networks, Ethernet, Fibre Channel, and PON.

Suitable for environments with limited space and lower bandwidth requirements. Advantages: Hot-swappable, low power consumption (~1W), cost-effective, and versatile for both single-mode and multi-mode fiber.

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QSF

P (Quad Small Form-factor Pluggable)Form Factor: Larger than SFP but still hot-pluggable; “Quad” indicates four channels in a single module. Speed: QSFP+ supports 40 Gbps (4x10 Gbps), QSFP28 supports 100 Gbps (4x25 Gbps), and QSFP-DD can reach 400 Gbps. Applications: Designed for high-performance computing, hyperscale data centers, and high-speed backbone networks.

Advantages: High throughput, scalable for multi-lane connections, maintains compact size relative to speed, and supports Ethernet, InfiniBand, and Fibre Channel.

Key Differences Between SF

P and QSFPFeatureSFPQSFPSizeSmall, compactLarger, quad-channelSpeed1–25 Gbps (SFP, SFP+, SFP28)40–400 Gbps (QSFP+, QSFP28, QSFP-DD)ChannelsSingleFour (quad)ApplicationsEnterprise networks, low to medium bandwidthData centers, high-performance computing, high-speed backbonePower ConsumptionLow (~1W)Higher, depends on speed and lanesHot-swappableYesYesChoosing the Right ModuleWhen selecting between SFP and QSFP, consider: Bandwidth requirements: QSFP is preferred for high-speed aggregation and backbone links. Distance: Check single-mode vs multi-mode fiber compatibility. Hardware compatibility: Ensure the switch or router supports the module type.

Power and space constraints: SFP is more energy-efficient and space-saving for smaller deployments. In summary, SFP modules are ideal for flexible, lower-speed connections, while QSFP modules are optimized for high-speed, multi-lane data transmission, making them essential for modern data centers and high-performance networks.

Article Content

The Ultimate Reference Table for SFP & QSFP Optical Transceiver ...

The definitive guide to SFP, QSFP, and QSFP-DD standards for 2025. Compare 400G/800G optics, understand PAM4 complexity, and master QSFP-DD vs OSFP deployment

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 high-density switching, routing and data center applications. Click to get

100GBASE QSFP-100G Modules Data Sheet

The Cisco QSA Module converts a QSFP28 port to an SFP28, SFP+ or SFP port. This flexibility allows customers a cost-effective transition to high

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Cisco 40GBASE QSFP Modules Data Sheet

The Cisco QSA Module (Figure 6 and Figure 7) converts a QSFP+ port to an SFP or SFP+ port. With this adapter, customers have the flexibility to use a SFP or SFP+ module, or cable

Optical Transceivers SFP SFP28 QSFP28 QSFP-DD 1G to 400G Range

OEM-compatible optical transceivers from 1G to 800G—SFP, SFP28, QSFP28, QSFP-DD & OSFP. MSA-compliant, TAA-certified, lifetime warranty. Find your module today.

SFP SFP+ SFP28 QSFP+ QSFP28: Fiber Module Form Factor Guide

Learn the differences between SFP, SFP+, SFP28, QSFP+, and QSFP28 optical module form factors, including speeds, interfaces, and deployment scenarios.

SFP vs SFP+ vs QSFP28 vs QSFP-DD: 2026 Optical Buyer''s Guide

SFP vs SFP+ vs QSFP28 vs QSFP-DD: Master optical transceiver selection for 1G to 800G AI networks with our lab-verified guide.

100G SR4 Multi-Mode Optical Module

QSFP28 transceiver that supports 100G connections up to 100 m using multi-mode fiber with an MPO-12 Type B UPC connector.

Optical Transceiver: SFP vs SFP+ vs QSFP28 vs QSFP-DD

This article provides a comprehensive comparison of mainstream optical transceivers, including SFP, SFP+, QSFP+, QSFP28, and QSFP-DD. It explains their technical differences,

SFP+ Cables

Online shopping. w/24h-delivery, 7Days & Refund Guarantee. CE, RoHS and ISO9001 Certified. SFP+ Cables, QSFP+ Cables, MiniSAS Cables, XFP Cables, CX4 Cables and Fiber Optic Transceivers.

HTF DWDM equipment,OTN Solution,QSFP28 OSFP

200G QSFP-DD/QSFP56 400G QSFP-DD/OSFP/QSFP112 800G QSFP-DD/OSFP 1.6T OSFP-XD 100G/50G/40G Transceiver 50G QSFP28 100G

Ethernet Switch Port Types Explained 2026: RJ45,

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A complete engineering guide to Ethernet switch port types: RJ45, SFP, SFP+, SFP28, QSFP+, QSFP28, Combo, Stack, PoE, access/trunk/hybrid

Optical Transceivers

Optical transceivers have revolutionized data transmission, providing high-speed, long-distance, and secure data transmission capabilities. Optical transceivers have enabled the development of high

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The Big Differences Between SFP, SFP+, SFP28, QSFP+, QSFP28, QSFP

Delve deep into the world of optical modules. From SFP to the latest QSFP-DD, explore their differences, applications, and what to consider for your networking needs

SFP vs. SFP+ vs. QSFP: Key Differences

Discover the world of SFP, SFP+, and QSFP transceiver modules and find out which one fits your networking requirements.

40Gbps QSFP+ Optical Modules

1Gbps eSFP Optical Modules 10Gbps SFP+ Optical Modules 40Gbps QSFP+ Optical Modules 100Gbps QSFP28 Optical Modules Cables Hardware Installation Maintaining the Hardware

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