

SR4 optical module and SFP



AI Overview

SR4 optical modules are high-speed 40G or 100G transceivers using parallel multimode fiber, while SFP modules are smaller, lower-speed transceivers typically used for 1G, 10G, or 25G links.

SR4 Optical Modules SR4 modules (Short Reach 4-lane) are designed for high-bandwidth Ethernet connections over multimode fiber. They use parallel optics, transmitting data across four separate fiber lanes simultaneously. For example, the Cisco 40GBASE-SR4 QSFP module supports link lengths of 100 meters on OM3 and 150 meters on OM4/OM5 multimode fibers, using 12-fiber MPO/MTP connectors (8 fibers for data, 4 unused) for 40G links. SR4 modules can also operate in 4x10G breakout mode, connecting to four 10G SFP interfaces using a 12-fiber parallel-to-duplex breakout cable. For 100G applications, QSFP28 SR4 modules support 100G over multimode fiber up to 100 meters on OM4 and 70 meters on OM3, using MPO-12 Type B UPC connectors. These modules are hot-swappable and optimized for data center short-reach interconnections.

SFP and SFP+ Modules SFP (Small Form-Factor Pluggable) modules are compact transceivers used for 1G, 10G, or 25G Ethernet. They typically use duplex fiber (2 fibers) with LC connectors and are suitable for point-to-point links. SFP+ and SFP28 are enhanced versions supporting 10G and 25G speeds, respectively. Unlike SR4 modules, SFP modules do not use parallel optics and are generally limited to single-lane connections.

Key Differences

Feature	SR4 Module	SFP/SFP+ Module
Speed	40G, 100G	1G, 10G, 25G
Fiber Type	Multimode (OM3/OM4/OM5)	Single-mode or multimode
Connector	MPO/MTP (parallel)	LC duplex
Lanes	4 parallel lanes	1 lane
Breakout	4x10G or 4x25G possible	Not applicable
Typical Use	Data center high-bandwidth links	Server uplinks, access switches

Interoperability SR4 modules can interoperate with SFP modules in breakout configurations, allowing a 40G SR4 QSFP to connect to four 10G SFP+ ports or a 100G SR4 QSFP28 to four 25G SFP28 ports, using appropriate breakout cables. This flexi...

Article Content

Understanding High-Speed Transceiver Tests | 100G & 400G Optical ...

In this article, we'll explain why high-speed optical transceiver testing matters, which tests are most important, and how to choose modules that deliver long-term stable performance.

100G SR4 Optical Module: A Complete Guide to

This overview introduced the 100G SR4 optical module—its technology, design, and real-world applications. As data centers and networks

The Ultimate Guide to SFP Modules (2026): Types,

Confused by SFP vs SFP+? Read the definitive 2026 guide on SFP modules. We explain Single Mode vs Multimode, DDM diagnostics, and how to choose the

Leading Optical Transceiver Manufacturer since 2009-FIBERTOP

100GBASE-ER4 QSFP28 100G 1310nm 40km Optical Transceiver Module FIBERTOP
40G QSFP+ EZR4 DWDM 100km LC Optical Transceiver 10G SFP+ DWDM ZR+ 100km
100GHz Grid C-Band

Arista 400G Transceivers and Cables: Q& A

Each of the 8 optical channels from an SR8 module are carried on separate fibers, resulting in a total of 16 fibers (8 Tx and 8 Rx). Each optical channel operates at 50Gb/s. The SR8 module uses an MPO

QSFP SR4 40G Optics: 40GBASE Short Range Transceiver Guide

Learn what QSFP 40G SR4 transceivers are, including key specifications, fiber requirements, typical use cases, and how to choose the right module.

The Ultimate Guide to ZTE SFP Module Distance and Wavelength

A deep understanding of ZTE SFP module distance and wavelength specs is a prerequisite for designing reliable, scalable, and high-performance networks. From the cost-effective 850 nm SR

100G Optical Module: How to Choose Between SR4,

Today, we've delivered a clear and comprehensive breakdown of the transmission standards for 100G optical modules. Our goal is to empower you

40G QSFP+ Optical Transceivers Complete Guide

A 40G QSFP+ optical transceiver is a compact, hot-pluggable module that combines four 10G lanes into one 40Gbps Ethernet interface. It works by transmitting and

DAC vs AOC vs Fiber + Optics Buying Guide | How to Choose the

Not sure whether to choose DAC, AOC, or Fiber + Optics? Learn the differences, transmission distances, applications, and recommended optical modules for data centers, enterprise

HTF DWDM equipment, OTN Solution, QSFP28 OSFP

HTFuture offers industry-leading fiber optic products and WDM system solutions with global recognition for excellence and innovation.

NVIDIA LinkX Ethernet Optical Transceivers

40GbE QSFP+ SR4-Lite Optical Transceiver Product Brief 25GbE SR SFP28 MMF Optical Transceiver Product Brief 25GbE SFP28 LR Optical Transceiver Product

100G QSFP28 Optical Transceivers: A Guide to SR4, LR4, ER4

Description: Compare the 4 main 100G QSFP28 optical modules: SR4, LR4, ER4, and ZR4. Learn their working principles, distances, applications, and how to choose the right one for your

Cisco 40GBASE QSFP Modules Data Sheet

With this adapter, customers have the flexibility to use a SFP or SFP+ module, or cable to connect to a lower-speed port on the other end of the

StarTech JG325B-ST HP JG325B Compatible QSFP+ Module

The JG325B-ST is an HP JG325B compatible fiber transceiver module that has been designed, programmed and tested to work with HP brand switches and routers. It delivers dependable 40 GbE

Tanlink Optics

400G SR4 OSFP112 400GBASE-SR4 OSFP Flat Top PAM4 850nm 50m DOM MPO-12/APC MMF Optical Transceiver Module

SFP+ vs SFP28 vs QSFP28 vs QSFP-DD: Switch Port

Same slot ≠ same capability: SFP28 is physically the same size as SFP/SFP+, but it uses a higher-speed electrical interface to support 25G-class signaling. "100G

100G QSFP28 SR4 vs LR4 vs CWDM4: The Architect's Selection Guide

Deep Dive: The Optical Physics of 100G QSFP28 Architectures The 100G QSFP28 SR4, LR4, and CWDM4 formats dictate physical-layer architectures utilizing parallel MMF, multiplexed

QSFP28 SR4 Optical Transceiver Module Overview

The module features four independent transmit and receive channels, each capable of running at 25Gbps, which supports up to 70m on

The Evolution of 400G, 800G, and 1.6T Optical Modules

With the rapid advancement of AI, HPC, and cloud computing, the demand for high-speed optical modules such as 400G, 800G, and even 1.6T is

Cisco Compatible Optical Modules Catalog

EXECUTIVE SUMMARY This document serves as the definitive technical reference for the Cisco comprehensive of Small Form-Factor Pluggable (SFP), SFP+, SFP28, QSFP+, and QSFP28

Huawei QSFPDD-400G-SR4 Optical Module Datasheet

Huawei offers a comprehensive series of pluggable optical modules in the Huawei portfolio. The wide variety of modules gives you flexible and plug-and-play options for all types of interfaces. These

400G Optical Modules Explained: SR4 Vs. DR4 Vs.

Key differences between SR4, DR4, FR4, and LR4 400G optical modules. Expert advice from Asterfusion engineers to optimize your data center

100GBASE QSFP-100G Modules Data Sheet

The Cisco 100GBASE-SR4-S QSFP Module supports link lengths of up to 70m over OM3 and 100m over OM4 Multimode Fiber with MPO

Juniper SFP

Juniper SFP- price from Juniper price list 2022. Checks Juniper MSRP Price on IT Price

Arista Optics Modules and Cables

To accommodate an increasing spectrum of applications, Arista offers a wide choice of OSFP, QSFP-DD, QSFP, SFP, SFP-DD and DSFP transceivers and cables that comply with industry standards,

Contact Us

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