

Gigabit optical port for 10 Gigabit module



Article Overview

A standard Gigabit SFP port cannot natively support a 10 Gigabit SFP+ module; 10G connectivity requires a dedicated SFP+ or 10G-capable port.

Compatibility Overview

Gigabit SFP ports are designed for 1 Gbps speeds and support SFP modules such as 1000BASE-SX, 1000BASE-LX, or 1000BASE-T. In contrast, 10 Gigabit SFP+ modules (e.g., 10GBASE-SR, 10GBASE-LR) operate at 10 Gbps and require SFP+ ports that are specifically rated for 10G speeds. Attempting to insert a 10G SFP+ module into a 1G SFP port will generally fail because the port cannot negotiate the higher data rate.

Module Types and Fiber Considerations

- 10GBASE-SR (Short Range): Multimode fiber, OM3/OM4, distances up to 300–400 meters.
 - 10GBASE-LR (Long Range): Single-mode fiber, distances up to 10 km.
 - 10GBASE-ER/ZR: Single-mode fiber, extended distances up to 40–80 km.
- Gigabit SFP ports typically support 1000BASE-SX/LX modules with shorter reach (up to 550 m for multimode or 10 km for single-mode) and cannot handle the higher bandwidth of 10G modules.

Practical Deployment Options

- Upgrade the port: Use a switch or network interface card (NIC) with SFP+ or 10G-capable ports to support 10G SFP+ modules.
- Use media converters: If the existing Gigabit port must remain, a 10G-to-1G media converter can be used.

Article Content

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10G SFP+ Optical Transceiver Modules | AscentOptics

10G SFP+ Product Descriptions AscentOptics" 10G SFP+ modules offer customers a wide variety of 10 Gigabit Ethernet connectivity

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Link-PP 10GbE SFP+ module solutions provide a wide variety of 10 Gigabit Ethernet connectivity options for data centers, enterprise

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K6097: Specifications of the Fiber Gigabit Ethernet SFP, XFP, SFP+ ...

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Product overview The Cisco ® 10GBASE X2 modules (Figure 1) offer customers a wide variety of 10 Gigabit Ethernet

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Optic Modules Datasheet

4 Optic Modules Data Sheet ... SFP (form factor) = small form-factor pluggable transceiver SMF (media) = single-mode fiber-optic

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Cisco's Transceiver Module Group delivers industry-leading, standards-compliant 40 Gigabit pluggable transceiver modules.

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Cisco 1-Port 10 Gigabit Ethernet Shared Port Adapter

– High-density Small Form-Factor Pluggable (SFP) interfaces are featured for high-port-count applications with reach

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10-GB X2 Transceiver Modules Installation note

Table 3 lists the port cabling specifications for the 10-Gigabit Ethernet X2 transceiver modules. Table 4 lists the X2

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Cisco SFP and SFP+ Transceiver Module Installation Notes

This installation note provides the installation instructions for the Cisco small form-factor pluggable (SFP) and SFP+

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Cisco CRS 8-Port 10 Gigabit Ethernet Interface Module

This data sheet describes the benefits, specifications, and ordering information for the Cisco CRS 8-Port 10 Gigabit

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