

10 Gigabit Optical Module Equipment Types



Overview

Learn everything about 10GB SFP modules, including types, specifications, compatibility, and how to choose the right 10G SFP+ transceiver for your network.

Key Takeaways

Here is a list of commonly used 10 Gigabit Ethernet optical modules across different form factors and specifications. 10 Gigabit Optical Modules SFP-10G-SR – Short-range multimode fiber module, LC connector, up to 300m on OM3 fiber, widely used in data centers (Cisco). SFP-10G-LR – Long-range single-mode fiber module, LC connector, up to 10km, suitable for enterprise and campus networks (Cisco).

SFP-10G-ER – Extended-range single-mode fiber module, LC connector, up to 40km, ideal for long-distance links (Cisco). SFP-10G-LRM – Long-reach multimode fiber module, compatible with OM1/OM2/OM3 fibers, up to 220m, often used in legacy multimode deployments (Cisco). SFP-10G-BX – Bidirectional single-fiber module, requires a pair (e.g., SFP-10G-BXD1 with SFP-10G-BXU1), supports 10GbE over a single fiber strand (Huawei).

XFP-10G-SR – Small form-factor pluggable module for short-range multimode fiber, LC connector, primarily used in routers and high-performance switches. XFP-10G-LR – XFP module for long-range single-mode fiber, LC connector, up to 10km, suitable for service provider networks.

X2-10

G - Legacy 10GbE module, SC connector, limited market adoption, mainly Cisco platforms. XENPAK-10G - Original 10GbE pluggable module, SC connector, larger form factor, used in early 10GbE deployments. 10GBase-CX1 (SFP+ DAC) - Direct attach copper cable with integrated SFP+ ends, up to 10m, low latency and power consumption, ideal for server-to-switch connections.

Notes on Selection Form Factor: SFP+ is the most common today due to its small size and flexibility, supporting both 1G and 10G ports.

XF

P, X2, and XENPAK are older or specialized form factors. Fiber Type: Modules are available for multimode (MMF) and single-mode (SMF) fibers.

BID

I modules allow 10GbE over a single fiber strand. Distance: Choose modules based on required link length, e.g., SR for short distances, LR/ER for long distances.

Compatibility: Ensure the module matches the switch or router port type; some modules require vendor-specific validation.

This list covers a broad spectrum of 10GbE optical modules suitable for data centers, enterprise networks, and service provider environments.

Article Content

10GB SFP Module Guide: Types, Specs, and How to Choose

Learn everything about 10GB SFP modules, including types, specifications, compatibility, and how to choose the right 10G SFP+ transceiver for your network.

Explained: 10 Gigabit Ethernet Optical Modules Standards,

They vary by form factor (such as SFP+, XFP, and QSFP+), wavelength, fiber type, and transmission distance. Understanding the different types helps in selecting the right module for specific network

Cisco 10GBASE SFP+ Modules Data Sheet

The Cisco® 10GBASE SFP+ modules (Figure 1) give you a wide variety of 10 Gigabit Ethernet connectivity options for data center, enterprise wiring closet, and service provider transport applications.

10 Gigabit Ethernet

There are two basic types of optical fiber used for 10 Gigabit Ethernet: single-mode (SMF) and multi-mode (MMF). In SMF light follows a single path through the

10G Transceivers: Types, Distances & Buying Guide

Choosing the right 10G module affects reach, cost, power, and compatibility. This guide summarizes the common 10G transceiver types, clarifies practical distance and cabling expectations, and gives

A Simple Guide to SFP-10G-SR and Its Practical Uses

When it comes to cost-effective 10 Gigabit Ethernet over short to medium distances, the SFP-10G-SR optical transceiver remains a cornerstone technology. This comprehensive guide dives

10G SFP+ Transceiver Guide: Types, Compatibility, Uses & Buying Tips

Your complete guide to 10G SFP+ modules. Understand the differences between SR, LR, ER & ZR types, check compatibility with Cisco, Dell, HPE, and get expert buying advice.

Optical Module-Main types of 10 Gigabit Ethernet

10 Gigabit Ethernet is 10 times faster than gigabit Ethernet, with a data rate of 10 Gbit/s. The following are referenced in the description of our Transceiver

Ortronics Cisco SFP+ Module

C2g SFP-10G-BX60U-I-A for \$166.60 - Ortronics Cisco Sfp+ Module - For Optical Network, Data Networking - 1 X Lc Duplex 10gbase-bx Networ Sfp10gbx60uia at CompSource

XGSPON ONU SFP+ 1270nm-TX/1577nm-RX 9.953G-TX/9.953G-RX

OverviewThe XGS-SFP-ONT-MAC-I is a high-performance optical transceiver module designed for 10-Gigabit-capable passive optical network (XGS-PON) deployments. It functions as an integrated

10G BiDi SFP+ 20km Tx1270/Rx1330

The BIDI-10G-SFP-20A (Tx1270/Rx1330) will pair with any SFP+ MSA-compliant Tx1330/Rx1270 BiDi module that meets the 9 dB budget and 20km reach class, which is common when one end of the

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+ transceiver modules. These transceiver modules are hot-swappable

Ubiquiti Compatible XGSPON ONU SFP+ 1270nm-TX/1577nm-RX

Overview The XGS-SFP-ONT-MAC-I is an SFP+ transceiver module engineered for 10-Gigabit capable symmetric passive optical network (XGS-PON) systems. It utilizes bidirectional transmission over a

SFP+ Transceiver CBO SFP-10G-BX-D 10G | AiO.lv

CBO SFP-10G-BX-D 10G Fiber Optic Single-Mode Bidirectional is an SFP+ transceiver module engineered for 10 Gigabit Ethernet links over single-mode fiber. The module supports bidirectional

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European manufacturer of high-quality passive fiber optic equipment and FTTH network components, operating since 1992. We specialize in providing reliable, certified solutions for...

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

Complete Guide to Fiber Optic Home Networking | BroadbandSearch

For power users on 10 Gbps plans: some ONTs support a direct SFP+ (Small Form-factor Pluggable) connection instead of an Ethernet handoff. SFP+ is a fiber-optic module that plugs directly

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