

## 10G and 6G product optical modules



### AI Overview

6G optical modules support up to 6.25 Gbps over medium-range single-mode fiber, while 10G optical modules deliver 10 Gbps over longer distances with single-mode or multi-mode fiber.

**6G Optical Modules Specifications and Features:**

- Data rate: up to 6.144–6.25 Gbps
- Transmission distance: typically up to 10 km over single-mode fiber (SMF)
- Wavelength: 1310 nm DFB laser
- Interface: LC duplex connector, hot-pluggable SFP+ footprint
- Compliance: SFP+ MSA, SFF-8472, IEEE 802.3, Fibre Channel standards
- Operating temperature: Standard 0–70°C, Industrial -40–85°C
- Applications: 6G Ethernet, LTE/OBSAI/CPRI links, Fibre Channel SAN/NAS, data center interconnects
- Features: Digital diagnostics monitoring (DDM/DOM), low power consumption, minimal signal dispersion, robust data integrity

6G modules are ideal for medium-range enterprise and telecom networks, providing a cost-effective upgrade path for legacy systems while supporting modern optical networks.

**10G Optical Modules Specifications and Features:**

- Data rate: 10 Gbps
- Transmission distance: 10 km to 80 km depending on module type and fiber
- Fiber type: Single-mode fiber (SMF) for long-range, multi-mode fiber (MMF) for short-range
- Wavelengths: 850 nm, 1310 nm, 1550 nm, with options for BIDI, CWDM, DWDM
- Interface: SFP+ transceiver, hot-pluggable
- Applications: 10G Ethernet, 10G Fibre Channel, SONET/SDH OC-192/STM-64, OTN OTU2e links
- Advantages: Extended reach, superior signal integrity, low-latency, EMI immunity
- Features: Digital diagnostics, compatibility with major OEMs (Cisco, Juniper, HP, Dell)

10G modules are designed for high-bandwidth, long-distance connections, suitable for Metropolitan Area Networks (MANs), data center interconnects, and geographically dispersed enterprise networks.

**Key Differences**

| Feature          | 6G Optical Module | 10G Optical Module                          |
|------------------|-------------------|---------------------------------------------|
| Data Rate        | Up to 6.25 Gbps   | 10 Gbps                                     |
| Typical Distance | Up to 10 km (SMF) | 10–80 km (SMF), shorter for MMF             |
| Wavelength       | 1310 nm           | 850 nm, 1310 nm, 1550 nm, CWDM/DWDM options |

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## Article Content

SFP transceiver BlueOptics SFP-10G-ER-CM-BO | AiO.lv

**Product information Description** The BlueOptics SFP-10G-ER-CM-BO is a fiber optic SFP+ transceiver module designed for 10 Gbit/s optical links. The module provides a metal housing that supports

6C-SFP+-LR 10GBASE-LR SFP+ 1310nm 10km DDM LC SMF

Contact us to access our comprehensive test bed, which includes compatibility checks with modules from all major switch brands. Click The Model Name to Check the Test Reports.

Ubiquiti SFP+ Module UACC-OM-MM-10G-D-20

**Ubiquiti SFP+ Module** The 10 Gbps Multi-mode Optical Module is a duplex transceiver that delivers up to 10 Gbps speed over distances up to 300 meters. Optimize the network's performance with 10 Gigabit

6G/8G/10G/16G/32G SFP+ Transceiver Modules | FiberMall

FiberMall SFP+ Transceivers are hot swapping, cost effective modules supporting data rate of 6Gbps/8Gbps/10Gbps/16Gbps/32Gbps and up to 120km transmission.

6G SFP+ LR 1310nm 10km Optical Transceiver | AscentOptics

6G SFP+ LR module enables high-speed data transmission in 6G Ethernet link lengths of up to 10km of single-mode fiber via Duplex LC connectors - AscentOptics.

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

AAOI Optical Transceiver 800G: High-Speed Data Solutions

**Price Analysis** aaoi optical transceiver 800g Band Distribution The price range for optical transceivers is extremely wide, from as low as \$2 to \$1,650, reflecting the vast differences in data

The Complete Guide to the Best Choice of 10G SFP+ Optical Modules

Choose a module that meets your requirements without exceeding your budget. **WHGEARLINK Brand Optical Modules** WHGEARLINK is a reputable brand known for producing high-quality 10G SFP+

Optical Transceivers Market Size Report, 2026-2033

The demand for high-speed optical modules is accelerating as data centers and telecom operators shift away from legacy 10G/40G technologies. AI training clusters, cloud workloads, and hyperscale

6G SFP+ LR 1310nm 10KM LC Optical Transceiver-SFP Module,

Combining 6G Fibre Channel compatibility with 10GbE flexibility, it delivers a balanced blend of speed, reach, and reliability for enterprise and service provider applications demanding efficient medium

10G InGaAs Photodiodes and Optical Receivers

Our 10G InGaAs Photodiodes and Optical Receivers are meant for 850nm - 1650nm wavelength, with singlemode or multimode fiber for applications such as telecom, datacom, Cable TV, and Microwave

10G Multi-Mode Optical Module

SFP+ transceiver that supports 10G connections up to 400 m using multi-mode fiber with a duplex LC UPC connector.

Transceiver CBO SFP-10G-BX-U 10G 1310 nm | AiO.lv

Product information Description The Transceiver CBO SFP-10G-BX-U 10G Fiber Optic Module 1310 nm is a single-mode SFP+ transceiver designed for 10 Gigabit Ethernet links over fiber. It fits SFP+ ports

Ubiquiti 10G Single-Mode Optical Module UACC-OM-SM-10G-D-2

Ubiquiti 10G Single-Mode Optical Module SFP+ transceiver that supports 10G connections up to 10 km using single-mode fiber with a duplex LC UPC connector. Max data rate: 10 Gbps Compatible with

6G/8G/10G/16G SFP Fiber Transceiver Module Manufacturer

10G DWDM SFP+ module is a series of optical fiber modules operating at DWDM C-band (100GHz channel spacing) wavelengths over single-Mode Fiber (SMF). They are designed for using in 10G

10G Optical Transceiver Modules | AscentOptics

We offer a wide range of high-quality 10G transceivers for various applications and network protocols eck out our catalog and order online today - AscentOptics.

The Most Comprehensive Guide Of Optical Modules

Explore the ultimate guide to optical modules. Learn types, functions, performance metrics & how to choose the right module for your fiber network.

10G SFP+ Optical Transceivers | Transceiver Module

Click to get your 10G SFP+ transceiver modules from nearby warehouses. 30-Day Free Return. Trusted by 260K+ Enterprise Users.

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

Product information Description The CBO SFP-10G-BX-D 10G single-fiber bidirectional SFP+ fiber optic transceiver from BlueOptics is a compact module designed for 10 Gigabit Ethernet links over

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

Short description CBO SFP-10G-BX-D is a fiber optic SFP+ transceiver module supporting 10G data rates for single-fiber bidirectional links. Designed for use in compatible switches and routers, it

1 related photodetectors and fiber optic sensing products

1 related products 1064nm-200MHz PM Fiber Acousto-Optic Modulator 2025-02-24 04:09:58 This PM fiber acousto-optic demodulator (1064 nm, 200 MHz) is primarily used for seed

SFP vs SFP+ vs SFP28 vs QSFP+ vs QSFP28 vs QSFP-DD vs

Conclusion The transceiver module is a vital part of high-performance networks. As networks evolve, optical transceivers become more compact, cost-effective, and energy-efficient,

AI Data Centers Drive Optical Transceiver Market Growth

Analysis of how AI and hyperscale data centers accelerate global optical transceiver adoption, including 400G/800G evolution, silicon photonics, CPO, and Link-PP integration for next

## Contact Us

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