

# Maximum distance of 10G optical module



## Overview

The 10G SFP+ DWDM optical module is a dense wavelength division multiplexing optical module, with a maximum transmission distance of up to 80km, suitable for long-distance data transmission. It follows the SFP+ Multi-Source Agreement (MSA) and is widely used to build stable medium-distance 10G links between switches, routers, and servers. Find the right 10G module for your network deployment. To exceed 120km, traditional solutions rely on EDFA optical amplifiers or dispersion compensation modules. These devices increase capital cost, power consumption. 10GBASE-LR is a 10-gigabit Ethernet optical standard that operates at 1310 nm over single-mode fiber (SMF), supporting link distances of up to 10 km. It is typically implemented using SFP+ transceivers and defined under IEEE 802. 10G SFP+ LR Optical Module The.



## Article Content

Jul 23, 2025

### Dell Emc Sfp-10g-bx40-u Compatible Sfp+ Module

They are designed, programmed and tested to work with 10GBase-BX40 compatible Dell EMC switches and routers. The SFP+ transceiver module supports a maximum distance of up to 40 km (24.8 mi)

Jul 12, 2025

### Optical Transceiver Manufacturer,Huawei S6720s

Huawei S6720S switch and 10G SFP+ optical module matching solution: 10G Optical module can support hot plug, and the maximum transmission distance can reach

Aug 07, 2025

### Mastering Cisco Optics: Understanding TX/RX Light Levels

Different modules are designed for different distances, which means they operate at different power levels. Below is a general reference guide for 10G

Feb 21, 2026

### 10GBASE-LRM SFP Module Guide: Specs, Distance & Use Cases

Learn what a 10GBASE-LRM SFP module is, how it works on multimode fiber, key specifications, distance limits, and common enterprise use cases.

Jan 13, 2026

### Inventory Of 10G Optical Modules

The 10G SFP+ DWDM optical module is a dense wavelength division multiplexing optical module, with a maximum transmission distance of up to 80km, suitable for long-distance data

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### 10G SR vs LR vs ER vs ZR - Optical Transceiver Distance

Compare 10GBASE-SR, LR, ER, and ZR optical transceivers by distance, fiber type, and application. Find the right 10G module for your network deployment.

Dec 07, 2025

### 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.

Feb 20, 2026

StarTech SFP10GSREMST Dell EMC SFP-10G-SR Compatible SFP+ Module ...

The SFP10GSREMST is a Dell EMC SFP-10G-SR compatible fiber transceiver module that has been designed, programmed and tested to work with Dell EMC brand switches and routers. It delivers

Aug 31, 2025

10 Gbit/s SFP+ Optical Modules

10 Gbit/s SFP+ optical modules apply to 10 GE optical ports. The wavelength can be 850 nm, 1310 nm, or 1550 nm, and the transmission distance ranges from 0.5 km (0.31 mi) to 80 km (49.71 mi).

Aug 13, 2025

Best SFP Modules 2026: Top Picks for 1G, 10G & 25G Networks

Best SFP modules 2026 reviewed. Compare top SFP SFP+ SFP28 transceivers for speed, reach, and compatibility with major brands.

Apr 13, 2026

OM1 vs OM2 vs OM3 vs OM4 vs OM5 Multimode Fiber

Compare OM1, OM2, OM3, OM4, and OM5 multimode fiber specs, distances, bandwidth, and applications. Essential guide for data center fiber

Apr 04, 2026

Huawei OSX010000 SFP+ 10G Single Mode Optical

Huawei OSX010000 SFP+ 10G transceiver for single-mode fiber, 1310nm wavelength, 10km range. Compliant with 10Gbase-LR standard.

Nov 26, 2025

STARTECH

The AR-SFP-10G-SRL-ST is an Arista Networks SFP-10G-SR compatible fiber transceiver module that has been designed, programmed and tested to work with Arista Networks brand switches and

Dec 29, 2025

StarTech XG-LR-ST Brocade XG-LR Compatible SFP+ Module

The XG-LR-ST is a Brocade XG-LR compatible fiber transceiver module that has been designed, programmed and tested to work with Brocade brand switches and routers. It delivers dependable 10

May 26, 2026

### How to Achieve Long Distance Transmission Beyond 120km: SFP

The SFP+ 10G ZR is a 10Gbps optical transceiver designed for ultra-long distance transmission. It is widely used in metro networks, backbone edge networks, and point-to-point fiber links that span tens

Jan 11, 2026

### What is the maximum distance for 10g sfp?

The maximum distance for 10G SFP modules largely depends on the type of fiber optic cable used, the specific module in question, and the network environment.

Dec 06, 2025

### Cisco Sfp-10g-bx-u-40 Compatible Sfp+ Module

They are designed, programmed and tested to work with 10GBase-BX compatible Cisco switches and routers. The SFP+ transceiver module supports a maximum distance of up to 40 km (24.8 mi) and

May 31, 2026

### Overview of 400G QSFP-DD Mid-Range Optical

These signals are multiplexed and coupled into a single-mode fiber (SMF) for transmission, with a maximum transmission distance of up to 10km via

Mar 08, 2026

### Ubiquiti 10 Gbps UACC-OM-SM-10G-S-2 | Cendirect Canada

Ubiquiti 10 Gbps Bidirectional Single-Mode Optical Module - For Data Networking, Optical Network - 1 x LC Simplex 10GBase-BiDi Network - Optical Fiber - Single-mode - Gigabit Ethernet - 10GBase-X - 10

Feb 23, 2026

### SFP+10GE-LH10-SM1310

SFP+10GE-LH10-SM1310 (02311MUU) Huawei compatible Transceiver is based on our 10G-SFP-10I product, which is fully compliant with SFP+ Multi Source Agreement (MSA) SFF-8432 standard,

Sep 12, 2025

### What Is 10GBASE-LR? SMF 1310nm 10km SFP+ Explained

Choosing the correct 10GBASE standard requires balancing distance, fiber type, optical budget, and cost. 10G-LR is ideal for single-mode links up to 10 km, providing reliable performance for enterprise

Sep 28, 2025

400G Optical Modules Explained: SR4 Vs. DR4 Vs. FR4

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

Feb 06, 2026

StarTech J9151E-ST HP J9151E Compatible SFP

The J9151E-ST is a HP J9151E compatible fiber transceiver module that has been designed, programmed and tested to work with HP brand switches and routers. It

Jan 25, 2026

SFP-10G-SR vs SFP-10G-LRM vs SFP-10G-LR, Which

SFP-10G-LRM is a 10GBASE-LRM 10 Gigabit optical module with a wavelength of 1310nm. In multimode fiber, the longest transmission distance for this optical

Sep 15, 2025

How 10G SFP+ ER Modules Enable Long-Distance Optical Link

10G SFP+ ER modules extend high-speed data transmission up to 40 km over single-mode fiber, offering improved reliability, diagnostics, and future-proof network performance.

## Contact Us

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