

Optical module range 10km or 20km



Overview

A standard LR module typically supports distances of up to 10km or 20km, though some extended LR variants (such as QSFP28-ER4 or QSFP-100G-ZR4-S modules) can reach 40km, 80km, or more depending on the specification. These modules enable network links across campuses, data center interconnects, or metro networks. The ability to sustain long distances comes at a higher cost but. An SFP (Small Form-factor Pluggable) module transmits data over fiber using specific wavelengths and power levels, which directly influence how far the signal can travel before degradation occurs. This is why two modules with the same form factor can have dramatically different ranges—some limited. The 10G SFP+ LR optical module operates at a wavelength of 1310nm. Its maximum transmission distance over single-mode fiber is 10km, and can actually reach up to 20km. Meanwhile, it has the advantages of miniaturization, low power consumption and long transmission distance. 10G SFP+ ER Optical. Do you really need a 10km module for a 300m connection?

Many customers unknowingly overspend by not matching transceiver distance with real needs.



Article Content

10G X2 ZR Module Guide: Specs, Compatibility & Sourcing

The phrase "10G X2 ZR" refers to a specialized 10 Gigabit Ethernet optical transceiver module designed for ultra-long-haul connectivity, reaching up to 80 km over single-mode fiber. Key

Cisco 40GBASE QSFP Modules Data Sheet

The Cisco® 40GBASE QSFP (Quad Small Form-Factor Pluggable) portfolio offers customers a wide variety of high-density and low-power 40 Gigabit Ethernet connectivity options for

Arista Optics Modules and Cables

Arista's Optical Modules and Cable portfolio offer a wide variety of high-density and low-power 800G (dual 400G), 400G, 200G, 100G, 50G, 40G, 25G, 10G, 1G, and 100M Ethernet connectivity options

Inventory Of 10G Optical Modules

The 10G SFP+ CWDM optical module is a coarse wavelength division multiplexing optical module, with a maximum transmission distance of up to 80km. It adopts CWDM technology to

Small Form-factor Pluggable

Small Form-factor Pluggable Small Form-factor Pluggable connected to a pair of fiber-optic cables Small Form-factor Pluggable (SFP) is a compact, hot-pluggable network interface module format used for

SFP Optical Module Transmission Distance Range | Yingda

SFP+ Optical Module: Offers the widest range of transmission distances, from 300 meters to 120 kilometers. The specific distance depends on the module type (e.g., SR, DR, FR, LR,

AAOI Optical Transceiver 800G: High-Speed Data Solutions

Price Analysis of 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

Fiber Optic Module 10G SFP+ 10km or 20km Reach Details

The high performance 1310nm DFB transmitter and high sensitivity PIN receiver provide superior performance for Ethernet applications at up to 10km or 20km links The SFP+ Module

Ubiquiti 25G Single-Mode Optical Module • SFP28 • 25/10/1GbE •

Product information "Ubiquiti 25G Single-Mode Optical Module • SFP28 • 25/10/1GbE • Single Pack • UACC-OM-SFP28-LR" SFP28-Transceiver, der 25G-Verbindungen bis zu 10 km über Singlemode

10GBASE-LR SFP+ 1310nm 10km DOM Datasheet | FS

10G SFP+ transceiver module is individually tested on corresponding equipment such as Cisco, Arista, Juniper, Dell, Brocade and other brands, and passes the monitoring of FS intelligent quality

Cisco 10GBASE SFP+ Modules Data Sheet

Product overview 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

1000BASE-SX vs 1000BASE-LX, EX, ZX & BX SFP Guide

1000BASE-SX, 1000BASE-LX, 1000BASE-EX, 1000BASE-ZX and 1000BASE-BX are all Gigabit Ethernet fiber optic module terms, but they are not the same type of link. They differ in fiber

10G SFP+ 20km LR | From €12 | EDGE Optical Solutions

The 10G-SFP-10 has a 6.2 dB budget per IEEE 802.3ae Clause 52, suitable for 10GBASE-LR links up to 10km. The 10G-SFP-20 provides 9 dB, covering campus and inter-site links up to 20km.

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

It utilizes bidirectional transmission over a single-mode optical fiber with an integrated XGSPON MAC and OMCI stack to support full FCAPS management functionality. This module provides a symmetric

Ubiquiti 10G CWDM Single-Mode Optical Module • SFP+ • 10/1GbE •

Product information "Ubiquiti 10G CWDM Single-Mode Optical Module • SFP+ • 10/1GbE • 1270nm • Single Pack • UACC-OM-SFP10-1270" SFP+-Transceiver für CWDM, der 10G-Verbindungen bis zu

Huawei 40G QSFP Switch Guide: CE6800 & CE12800 Specs

QSFP+ 40G CWDM4 Duplex 100m 10km 20km 40km 60km 80km 100km SR4 LR4 ER4 ZR4 MPO LC Optical QSFP CWDM Transceiver SFP Module \$22-1,600 5.0(800) MOQ: 1 piece Huawei 40G

1G SFP ELX Transceiver Options for 10–20km

Learn how 1G SFP transceivers such as ELX modules ensure stable 10–20km transmission in campus, metro access, and security networks. Compare LX, ELX, and EX to choose

Understanding SR/LR Optical Designations and Distances

A standard LR module typically supports distances of up to 10km or 20km, though some extended LR variants (such as QSFP28-ER4 or QSFP-100G-ZR4-S modules) can reach 40km, 80km, or more

Optical Fibre SFP Module for 5G Networks An SFP (Small Form-factor ...

Optical Fibre SFP Module for 5G Networks An SFP (Small Form-factor Pluggable) is a hot-swappable optical transceiver module that converts electrical signals into optical signals (and vice versa ...

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://umele-pestovani.eu>

Email: info@umele-pestovani.eu

Phone: +49 152 287 6349

Address: Neue Mainzer Straße 66-68, 60311 Frankfurt am Main, Germany

This document is for informational purposes only. Specifications subject to change without notice.

