Optical modules with a range of over 40km



Overview

SFP+ 40km is a type of 10 Gigabit optical transceiver designed for long-distance data transmission up to 40 kilometers over single-mode fiber (SMF). In most cases, this term specifically refers to the 10GBASE-ER (Extended-Reach) standard defined by the IEEE for 10G Ethernet networks. These modules typically operate at a 1550 nm wavelength, use LC duplex connectors, and support Digital Optical Monitoring (DOM/DDM) for. The SFP transceivers are high performance, cost effective modules supporting data-rate of 1. 25Gbps and 80km transmission distance with SMF. 3bm 40GBASE-ER4, and OTU3 standards. Digital. Among the myriad of options, the QSFP-100G-ER4L-S module has emerged as a specialized solution. The series uses 1 pair of singlemode.

Article Content

SFP+ 40km (10GBASE-ER): Extended-Reach Optical Module Guide

Understand SFP+ 40km (10GBASE-ER) modules, including specs, SMF compatibility, and how to choose the right extended-reach optical transceiver for your network.

10G SFP+ module SM 20KM 40KM 80KM TX/RX 1270/1330nm,single

40G QSFP+ Optical transceiver module solutions offer a full range of QSFP+ modules from 150m to 80km reach, and used for high-density switching,This transceiver is compliant with

© 2026 EXF OPTICAL NETWORKS - All rights reserved

Up to 40Gbps Data over 40km with 40GBASE-ER4 QSFP+ Module

The 40GBASE-ER4 QSFP+ 1310nm Optical Transceiver Module is designed to transmit 40GBASE Ethernet throughput up to 40km over duplex LC connectors using single-mode fiber

Is the QSFP-100G-ER4L-S Your Best 40km 100G Solution?

The 40km reach of the ER4L module allows providers to consolidate hardware and streamline their network topology. They can bypass intermediate regeneration points that would be

High-Speed 40G QSFP+ Optical Transceivers for Long

The 40GBASE QSFP+ LR4 and ER4 optical transceiver modules are designed for use in 40GBASE Ethernet applications with throughput up to 10km,

10G SFP+ DWDM 40km/70km/80km Optical Module

The series uses 1 pair of singlemode fibers for transmission, C-band 100GHz/50GHz multiple operating wavelength options, distances up to 40km, 70km or 80km, and

100G QSFP28 ER4 40km Optical Module

HTFuture''s 100G QSFP28 ER4 Optical Module supports 40km SMF transmission at 100Gbps, ideal for high-speed data centers and telecom applications.

QSFP28 100G ER4 Optical Module:Technologies and Applications for

This "self-gain" characteristic enables ER4 modules to effectively detect optical signals that have been greatly attenuated over 40km, forming the foundation for ultra-long-distance reception.

100G QSFP ER4L 40km

• High speed I/O electrical interface (CAUI-4) compliant with IEEE 802.3bm • Maximum power consumption 5.0W • LAN WDM EML laser and APD Receiver • 40km (with host FEC),30km (without

200G/400G/800G Optical Transceiver Modules | FiberMall

200G/400G/800G optical module features up to 40km transmission distances using QSFP56/QSFP-DD footprints for data center interconnect applications - FiberMall

400G Optical Module: Growth Opportunities and Competitive

The 400G Optical Module market is projected to reach $14.8B by 2025, growing at 11.5% CAGR. Demand from data centers and telecom drives this expansion. Access market growth analysis.

© 2026 EXF OPTICAL NETWORKS - All rights reserved

100GBASE QSFP-100G Modules Data Sheet

QSFP-100G Optical modules Features and benefits of Cisco QSFP modules Hot-swappable input/output device that plugs into a 100G Gigabit

ZTE 033030100475 SFP+-SM-80KM-1490Tx LX4441CDR Optical Module

The ZTE 033030100475 (LX4441CDR) is a high-performance 10G SFP+ optical module compliant with the SFP+ MSA standard. Operating at the 1490nm wavelength window, it supports data transmission

QSFP-DD-400G-SR4 Optical Transceiver 1. Summary

The Huawei QSFP-DD-400G-SR4 optical transceiver module represents a critical leap forward in short-range network solutions, delivering unprecedented bandwidth over multi-mode fiber

Set Up a Fiber-Optic Network in Your Home or Office

Learn about the various fiber-optic components used for running fiber in your house, office, or between buildings. Find out how to use fiber optics for

Optics Transceiver Module Market 2025

MARKET INSIGHTS The global Optics Transceiver Module Market size was valued at US$ 12.67 billion in 2024 and is projected to reach US$ 28.94 billion by 2032, at a CAGR of 10.84% during the

800G Client Optics in the Data Center

The next key development is 800G, and the industry is already gearing up to deploy this next generation of client optics in hyperscale data centers. Developments in three distinct areas are needed for 800G

What are SFPs and why are they important?

Distance Support: Depending on the optic type : □ 1.25G SFP modules: SX (short-range, multi-mode) up to ~550m. LX (long-range, single-mode) up to 10km. EX variants can extend to 40km ...

© 2026 EXF OPTICAL NETWORKS - All rights reserved

Contact Us

Continue your research online:

Website: https://explosivefunctions.co.za
Technical inquiry: https://explosivefunctions.co.za/contact.html
EU project coordination: Parque das Nações, Lisbon, Portugal

This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

© 2026 EXF OPTICAL NETWORKS - All rights reserved