

# Can a 15km optical module be used with a 40km optical range module



## Overview

Q1: Can I use a long-range SFP module with multimode fiber?

A: Generally, no. Q2: What is the difference between ZX and EX SFP modules?

SFP (Small Form-factor Pluggable) modules are standardized network transceivers that support a range of data rates (1G, 10G, 25G) and fiber types. We also carry transceivers in various form factors to meet your networking needs. The optical module serves as a crucial component in optical fiber communication systems, operating at the physical layer, which is the lowest layer in the OSI model. Its primary function is to achieve optoelectronic conversion by converting electrical signals into optical signals and vice versa. The fiber optic length, connector quality, cleanliness, and proper handling often determine whether a connection is stable or problematic.



## Article Content

May 29, 2026

QSFP-40G-ER4 Demystified: Your Guide to 40Gbps

The QSFP-40G-ER4 (Quad Small Form-factor Pluggable 40G Extended Reach) is a hot-swappable, optical fiber transceiver module. It's

Mar 03, 2026

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.

Jul 13, 2025

10G Base ER SFP+ Transceiver | 40km SMF | 1550nm

Compatible 10G Base ER SFP+ for 40km single-mode fiber. 1550nm, 15dB budget, IEEE 802.3ae. Works with 80+ brands.

Mar 26, 2026

SFP Optical Transceiver Modules for Long Distance: A

Overview: Why Long-Range SFP Modules Matter in Modern Networks In an era where enterprises are rapidly expanding their network infrastructure,

May 12, 2026

Comprehensive Knowledge Of Long-distance Optical

Due to the strict requirements for the receiving power range of long-distance optical modules, exceeding the receiving sensitivity can easily lead to

Nov 30, 2025

SFP Distance Explained: Real-World Range, Limits, and Optics

Understand SFP distance, fiber optic range, and real-world limits of SR/LR modules. Learn how wavelength, fiber type, and optics affect performance.

Jun 05, 2026

Best Long Range Drones 2026 (15-200km): Expert

Our in-depth review compares 9 long range drones, considering factors like range, battery life, camera quality, and more.

May 06, 2026

The relationship between wavelength and transmission

At 1310nm wavelength, 100Mbps, 10G, 40G, and 100G optical modules can transmit up to 40km, and 400G can transmit up to 500m. 3. 1550nm: The attenuation of

Jun 01, 2026

BlueOptics 10G SFP+ Transceiver | How to Achieve Maximum Distance!

In this article, we'll show you 10 simple, effective rules to help you get the maximum range from your SFP+ connections: choosing the right module, and fiber, as well as clever network planning.

Oct 30, 2025

10G-SFP+ SF-40KM

Overview 10G-SFP+ SF-40KM The 10G SFP+ transceivers is cost effective Bi-Directional transceiver a high performance, module supporting data rate of

Jun 07, 2026

SFP-10G-SM15-40KM

This Cablexa SFP+, 10Gb/s, 10GBase-ER, SMF, 1550nm, Duplex LC, 40KM Transceiver Module is 100% MSA compliant. It is guaranteed compatible with your router or switch.

Sep 08, 2025

Wavelength and Transmission Distance of Optical

Therefore, multi-mode fiber mostly uses 850nm wavelength optical transceiver modules for connection and transmission. Under 850nm wavelength, 100Mbps

Jul 21, 2025

The Best Optical Transceiver Modules for 5G Fronthaul

BiDi optical module has the advantages of saving 50% of fiber resources, equal spacing between upstream and downstream can effectively ensure high-precision

Apr 19, 2026

40G QSFP+ Optical Transceivers Complete Guide

How 40G QSFP+ optical transceivers boost performance in data centers and telecom networks. Learn about types, use cases, and cost-saving benefits.

Sep 09, 2025

The relationship between wavelength and transmission

The commonly used wavelengths in optical fibers are 850nm, 1310nm, and 1550nm, which have longer waveforms and therefore have relatively less attenuation.

Oct 09, 2025

### Optical Transceiver Interoperability and Compatibility Guide

If a module is connected with OM1/OM2 fibers, while the other one is connected with OM3/OM4 fibers, then the connection won't be succeeded.

Sep 24, 2025

### Comprehensive Guide to Optical Transceiver

Introduction Optical modules are critical components in fiber optic communications, enabling the conversion between electrical and optical signals.

Jan 12, 2026

### 400G Optical Module: Growth Opportunities and Competitive

400G Optical Module Company Market Share Technological Inflection Points  
Advancements in coherent optical technology are enabling 400G transmission over longer distances

Aug 12, 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.

Mar 26, 2026

### SFP Optical Transceiver Modules for Long Distance: A

This guide provides a comprehensive breakdown to help network professionals, IT architects, and procurement teams make informed decisions

Jul 24, 2025

### SFP 40km vs. DWDM SFP: Which to Choose

SFP 40km modules offer dedicated point-to-point connectivity over a single wavelength, limiting bandwidth scalability compared to DWDM. In contrast, DWDM SFPs allow for multiplexing

Dec 11, 2025

### 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 right

Jun 06, 2026

What Is a 1550nm Optical Transceiver and How Does It

1. What Is a 1550nm Optical Transceiver? A 1550nm optical module is a compact module—often in SFP or SFP+ form—that bridges network electronics

Dec 20, 2025

SFP-10G-ER Explained: Powering 40km 10Gbps Optical

SFP-10G-ER is a 10G SFP+ transceiver for up to 40km over single-mode fiber, featuring 1550nm wavelength, LC connector, and real-time monitoring.

Feb 13, 2026

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

Some SFP+ 40km modules support a multi-rate range (e.g., 1.25G–11.32G), but this depends on the module design and switch compatibility. Always verify whether your device supports

Aug 13, 2025

What is the maximum distance for SFP?

The datasheet for the SFP module will provide detailed information on its supported data rates, distance capabilities, and the types of optical fibers it is compatible with.

Jun 07, 2026

Mastering Cisco Optics: Understanding TX/RX Light Levels

Stop guessing your fiber health. Discover how to use Cisco DOM commands to measure real-time TX/RX light levels and ensure your optical

Sep 09, 2025

What is the range of SFP in KM?

The range of an SFP (Small Form-Factor Pluggable) module can vary depending on the specific type and intended use of the module. SFP modules are commonly used for both multimode

## Contact Us

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