

40G optical module for long-distance



Overview

A QSFP 40G 80km module allows operators to extend link distance significantly while maintaining the QSFP+ form factor, simplifying deployment and preserving compatibility with many 40G switches and routers. They are typically deployed in metro networks, inter-campus backbones, and data center interconnect (DCI) scenarios that require up to 80km. 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 data center, high-performance computing networks, enterprise core and distribution layers, and service provider. The 40G ZR4 optical module, with its ultra-long-distance transmission capability of 80km, has become a cost-effective choice for bridging 10G and 100G, with ETU-LINK products gaining market favor for their stable performance. This article analyzes its value from three aspects: core technology. GIGALIGHT 40G QSFP+ ZR4 optical transceiver module is designed for long-distance interconnectivity in data centers. It complies with the 40G Ethernet transmission protocol and supports dual rates of 40GE and OTU3. This module features a built-in pair of 4-channel MUX and DEMUX. But what exactly is it, and how does it enable such impressive performance?

This guide will demystify the 40G LR4 QSFP+, exploring its technology, advantages, and how to select the best one for your.

Article Content

OPTICAL MODULES FOR HUAWEI S SERIES SWITCHES

The transmit power of a long-distance optical module is often larger than its overload power. Therefore, when using such optical modules, select optical fibers of an appropriate length to ensure that the

Cisco 40GBASE QSFP Modules Data Sheet

QSFP-40G-SR4-S does not support FCoE. Cisco QSFP-40G-SR4 The Cisco 40GBASE-SR4 QSFP Modules support link lengths of 100 meters and 150 meters, respectively, on laser

X-linkit 40G Optical Modules: The Complete Guide for High-Speed ...

X-linkit's 40G portfolio solves a critical market pain point: the gap between short-reach limitations and the high cost of long-haul 100G solutions. Our full-distance matrix allows network

The Ultimate Guide to SFP Modules (2026): Types, Speeds

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 transceiver for Cisco, Juniper, and more.

Select The Right Fiber Patch Cables For 1G/10G/25G Modules

Deploying optical modules requires the right fiber patch cable. It directly affects network connection stability, performance, and maintenance. This article will explain how to pick the right fiber

40G ZR4 Optical Module: The Preferred Solution for Long-Distance ...

The 40G ZR4 optical module, with its ultra-long-distance transmission capability of 80km, has become a cost-effective choice for bridging 10G and 100G, with ETU-LINK products gaining market favor for

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

QSFP+ 40G LR4 Explained: Your Ultimate Guide to 40G Long-Reach

At the heart of this evolution lies a critical component: the QSFP+ 40G LR4 optical transceiver. This powerful little module is the workhorse for high-bandwidth, long-distance

What is QSFP & QSFP+ Transceiver: An Ultimate

By Media Type QSFP DAC: Direct attach copper cable with QSFP+ module on both ends, mainly for very short interconnectivity, like between

BlueOptics Transceivers and DAC Cables for Extreme Networks 7000

For longer 40G links, LR4 optics use singlemode fiber and LC Duplex connectors. DAC options can also be used for short same-rack switch links. For 40G connectivity, available BlueOptics

#datacenter #fiberoptics #mpo #mtp #opticaltransceiver #100g #400g ...

□□ MPO Cables Explained Simply If you're deploying 40G, 100G, 400G, or even 800G optics, choosing the transceiver is only half of the equation. The other half ? The MPO cable. Many link ...

40G QSFP+ ZR4 EML LWDM4 80km Optical Transceiver

GIGALIGHT 40G QSFP+ ZR4 optical transceiver module is designed for long-distance interconnectivity in data centers. It complies with the 40G Ethernet transmission protocol and supports dual rates of

Cisco 40GBASE QSFP Modules Data Sheet

This module can be used for native 40G optical links over 12-fiber ribbon cables with MPO/MTP connectors or in 4x10G mode with parallel-to-duplex fiber breakout cables for connectivity

POTN Network Architecture: Optical Modules, WDM & Cabling

Where Optical Modules and WDM Fit in POTN Optical modules convert the electrical interface of the POTN equipment into an optical signal for the fiber route. In practical projects, the

Optical Transceiver Pricing: Cost Ranges by Speed and Type

40G QSFP + modules for MMF SR4 links are among the most cost-efficient high-speed options; compatible 40G SR4 MPO modules can be found at modest prices. LR4 or specialized packaged

100 Gigabit Ethernet

A networking device may support different PHY types by means of pluggable modules. Optical modules are not standardized by any official standards body but are in multi-source agreements (MSAs). One

HTF DWDM equipment, OTN Solution, QSFP28 OSFP

HTFuture offers industry-leading fiber optic products and WDM system solutions with global recognition for excellence and innovation.

10G SFP+ Module Selection Guide for Short-Range Networks

Learn how to choose the right 10G SFP+ module for short-range networks. Compare optical, copper, DAC/AOC, and breakout options to ensure reliable performance and scalability.

The Ultimate Guide to ZTE SFP Module Distance and Wavelength

A deep understanding of ZTE SFP module distance and wavelength specs is a prerequisite for designing reliable, scalable, and high-performance networks. From the cost-effective 850 nm SR

40G QSFP+ Optical Transceivers Complete Guide | Fibrecross

40G optical transceivers use fiber optic cables and offer longer reach (up to 40km) and higher flexibility in routing and distance. In contrast, 40G DAC cables (Direct Attach Copper) are used for short

40G QSFP+ ZR4 EML LWDM4 80km SMF LC Optical

FIBERSTAMP 40G QSFP+ ZR4 optical transceiver module is designed for long-distance interconnectivity in data centers. It complies with the 40G Ethernet

Contact Us

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

Website: <https://adikor.eu>

Email: info@adikor.eu

Phone: +33 6 48 37 92 15

Address: 12 Rue de la Paix, 75002 Paris, France

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