

40g optical module package



AI Overview

A 40G optical module is a high-speed, hot-pluggable transceiver that combines four 10Gbps channels into a single 40Gbps link for short- or long-distance fiber-optic communication. Overview A 40G optical module—often in the QSFP+ (Quad Small Form-Factor Pluggable) form factor—is designed to transmit and receive data at 40 gigabits per second by bundling four independent 10Gbps lanes into one module. These modules are widely used in data centers, enterprise networks, and telecom infrastructure to provide high-bandwidth connections between switches, routers, and servers. Key Features Hot-pluggable: Can be inserted or removed without powering down the device. Quad-channel design: Four separate 10Gbps channels combined into a single 40Gbps interface. Standards compliance: Adheres to IEEE 802.3ba specifications for 40G Ethernet. Fiber compatibility: Works with multimode fiber (MMF) for short distances or single-mode fiber (SMF) for long distances, depending on the module type. Common Types 40GBASE-SR4 (Short Range) Uses multimode fiber and operates at 850nm. Supports distances up to 100m on OM3 fiber and 150m on OM4 fiber. Employs parallel optics with an MPO/MTP connector, using four transmit and four receive fibers, with four fibers unused in a 12-fiber cable. 40GBASE-LR4 (Long Range) Uses single-mode fiber with LC duplex connectors. Supports distances up to 10 km. Combines four 10Gbps channels using CWDM (coarse wavelength division multiplexing) to transmit over a single fiber pair. 40GBASE-ER4 (Extended Range) Also uses single-mode fiber. Supports distances up to 40 km. Similar multiplexing principle as LR4 for long-distance transmission. 40GBASE-CSR4 / PLR4 / PLRL4 Variants designed for intermediate or long distances over multimode or single-mode fiber. CSR4 can reach 300–400m on OM3/OM4 fibers, while PLR4/PLRL4 can reach 1.4–10 km depending on fiber type. Applications Data center interconnects: High-density switch-to-switch or switch-to-server links. High-performance computing: Low...

Article Content

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.

40G QSFP Modules-Optical Transceivers

QSFP 40G LR4 The QSFP+ optical module is specifically designed for 40GBASE Ethernet, supporting a throughput of up to 10km over single-mode fiber (SMF) with a wavelength of 1310nm through duplex

Optical Transceiver Module Wholesale,10g/25g/40g/100g SFP+ Optical ...

Fiber optic module manufacturer,ETU-Link supply full model optical transceivers,including standard 8g/10g/25g/40g/100g sfp+ optical modules and copper RJ45 transceiver,wholesale at factory price!

Cisco 40 Gigabit Modules

It allows smooth and cost-effective migration to 40 Gigabit Ethernet by providing an option to use QSFP+ modules with empty SFP+ ports when the other end of the network is running at 40 Gigabit

40G QSFP+ Transceiver Modules | Optical Transceivers

FS 40G QSFP+ optical transceiver module solutions offer a full range of QSFP+ modules from 150m to 80km reach, and used for high-density switching, routing and data center applications. Click to get

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.

direcXource Quanta QSFP-LX4-40G Compatible 40GBASE-LX4

Quanta QSFP-LX4-40G compatible optical transceiver is a parallel 41.2Gbps Quad Small Form-factor Pluggable QSFP+ module for use in 40GBASE Ethernet. QSFP+ LX4 provides 40Gb/s throughput

200G Modules

SFP/XFP/QSFP Cloud Programmer 10G Tunable BOX Optical Transceiver Checkers GIGALIGHT provides a series of BER testing tools (checker) for 10G SFP+, 25G/32GFC SFP28, 40G QSFP+,

40G Optical Transceivers and Cables Portfolio | FS

Product Overview The 40G transceiver module portfolio offers customers a wide variety of high-density and low-power 40 Gigabit Ethernet connectivity options for data center, high-performance computing

The Evolution of 400G, 800G, and 1.6T Optical Modules

With the rapid advancement of AI, HPC, and cloud computing, the demand for high-speed optical modules such as 400G, 800G, and even 1.6T is growing exponentially. This surge is driving

Huawei 40G QSFP Switch Guide: CE6800 & CE12800 Specs

Compare Huawei CloudEngine 40G switches (CE6800, CE12800), QSFP+ module compatibility (SR4/LR4), and deployment guidance for AI-ready Ethernet fabrics.

40Gbps QSFP+ Optical Modules

1Gbps SFP Copper Modules 1Gbps eSFP Optical Modules 10Gbps SFP+ Optical Modules 40Gbps QSFP+ Optical Modules 100Gbps QSFP28 Optical Modules Cables Hardware Installation

400G, 800G, and Terabit Pluggable Optics:

Alternative to pluggable: Co-packaged Optics Co-packaged optics (CPO) and Linear Pluggable Optics (LPO) are two implementation variants of the same idea - reduce ASIC to optics power/DSP

Single Mode Optical Modules: Growth & Key Trends to 2033

Analyze the Single Mode Optical Modules market driving demand from telecom and data centers. Projecting 16.2% CAGR to 2033. Access key market dynamics and strategic insights.

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

Co-Packaged Optics (CPO) Market Analysis: 1.6T Transition & AI

Strategic analysis of the Co-Packaged Optics (CPO) market, tracking the 2026 inflection point for 1.6T modules. Explores value migration, supply chain bottlenecks, and thermal

Wholesale Optical Transceivers Module | 100G QSFP28, 40G QSFP

Shop high-speed optical transceivers from Unitekfiber. We offer 100% compatible 40G, 100G, and 400G QSFP-DD modules for data centers. Expert technical support & wholesale pricing.

LPO optical module

LPO optical module, Linear drive Pluggable Optics, linear drive pluggable optical module The key difference between LPO and traditional optical modules is Linear drive; The so-called "linear

Learn About Optical Transceiver Modules in One Minute

After transmission through the optical fiber, the receiving end converts the optical signal into an electrical signal Signal. Type of Optical Transceiver Modules There are five types of optical

40Gb/s QSFP+ Active Optical Cables

Amphenol provides a series of 40G QSFP& #43;optical module products, including SR4, eSR4, IR4, LR4, ER4 lite, AOC and AOC breakout series.

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

Contact Us

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