

Article Overview

QSFP-DD active optical modules are available for bulk purchase from multiple MSA-compliant suppliers, supporting high-speed data transmission for data centers, AI clusters, and enterprise networks.

Overview of QSFP-DD Modules

QSFP-DD (Quad Small Form-factor Pluggable Double Density) modules are high-density, hot-pluggable optical transceivers designed for 200G and 400G Ethernet networks, with backward compatibility to QSFP28 and QSFP56 standards . They convert electrical signals into optical signals for high-speed fiber communication, enabling multi-lane data transmission in a compact form factor, which is ideal for data centers, cloud infrastructure, and AI computing clusters .

Key Features

- o High Bandwidth: Supports 200G and 400G speeds, with some modules capable of 800G in coherent optics applications .
- o MSA Compliance: Ensures compatibility with major OEM hardware such as Cisco, Juniper, Huawei, and Arista .
- o Connector Options: Typically LC, MPO, or MPO-16, supporting both short and long-reach deployments .
- o Power Efficiency: Compact and power-efficient design suitable for dense switch and router environments .
- o Advanced Diagnostics: Many modules include monitoring features for temperature, voltage, and optical power .

Bulk Purchasing Options

Several suppliers offer QSFP-DD modules in bulk quantities:

- o Unitekfiber: Offers a wide range of MSA-compliant transceivers including 200G QSFP-DD and 400G QSFP-DD modules, engineered for low latency and high reliability .
- o FS: Provides 400G QSFP-DD and OSFP modules with high performance and backward compatibility, available from multiple warehouses with 30-day free returns .
- o Pivotal Optics: Supplies precision-built, performance-driven QSFP-DD modules with limited lifetime warranty, supporting Ethernet and InfiniBand networks .

Considerations for Bulk Purchase

- o Compatibility: Verify that the modules are compatible with your existing switches, routers, and network protocols.

Bulk purchase of QSFP-DD optical modules QSFP

- o Transmission Distance: Choose modules based on required reach, from short-range (up to 100m) to long-range (up to 120 km for 800ZR coherent optics) deployments .
- o Connector Type: Ensure the connector type matches your fiber infrastructure (LC, MPO, MPO-16).
- o Vendor Support: Consider suppliers offering warranties, technical support, and testing for interoperability.
- o Cost Efficiency: Compare OEM vs third-party modules for bulk pricing without compromising performance .

Recommendations

- o For AI clusters or high-performance data centers, prioritize low-latency, high-bandwidth QSFP-DD modules with PAM4 signaling and advanced diagnostics .
- o For long-distance interconnects, consider coherent optics QSFP-DD modules like Cisco 800G ZR/ZR+ for distances up to 120 km or beyond .
- o Contact suppliers directly to negotiate bulk pricing, lead times, and warranty terms, especially for quantities exceeding dozens or hundreds of modules. By carefully evaluating compatibility, reach, connector type, and vendor reliability, you can ensure a cost-effective and high-performance deployment of QSFP-DD active optical modules for large-scale network infrastructure.

Smartoptics QSFP-DD transceivers provide cost-efficient 400G and 800G optical networking. QSFP-DD

Product overview The Cisco QSFP-DD800 modules introduce 8x100G and 2x400GGBASE Quad Small Form-Factor Pluggable

Bandwidth & Application The QSFP-DD module provides maximum bandwidth 400Gbps, whereas the

This article provides an overview of 800G optical transceivers, focusing on the QSFP-DD and OSFP packages.

FS 800G/400G Coherent OSFP/QSFP-DD optical transceiver module solutions offer a range of OSFP/QSFP-DD modules

Shop high-speed optical transceivers from Unitekfiber. We offer 100% compatible 40G, 100G, and 400G QSFP-DD modules for data

QSFP-DD is the mainstream module of 400G transceivers which is different than other form

Learn how Cisco 400G QSFP-DD High-Power (Bright) Optical module's small size and low



Bulk purchase of QSFP-DD optical modules QSFP

Learn how to choose QSFP modules for 40G, 100G, QSFP28, QSFP56, and 400G QSFP-DD networks. Compare speed, distance,

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

NVIDIA/Mellanox Compatible 800GBASE-2XDR4 Twin-port OSFP IHS/Closed Finned Top PAM4 1310nm 2km DDM Dual MPO/MTP

Nowadays, 400G optical modules are widely used, but 800G optical module technology has also been slowly used in

Delve deep into the world of optical modules. From SFP to the latest QSFP-DD, explore their differences,

Unsure which 400G module fits your data center? Compare QSFP-DD, OSFP, and

In today's fast-paced world of data centers and telecoms, 800G optical modules are leading the charge in high-speed

The explosive growth of global data volume has placed higher demands on the bandwidth and performance of data

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