

Philippine Optical Line Terminal QSFP-DD



Article Overview

QSFP-DD (Quad Small Form Factor Pluggable Double Density) modules enable high-density, 400G+ optical interconnects suitable for modern data centers and optical line terminals.

Overview of QSFP-DD

QSFP-DD is an enhanced version of the QSFP form factor, designed to double lane density from 4 to 8 high-speed electrical lanes, supporting aggregate data rates of 400G and beyond using PAM4 signaling . It maintains backward mechanical compatibility with QSFP28 and QSFP56, allowing seamless upgrades without increasing port space or power requirements . The standard is maintained by the QSFP-DD Multi-Source Agreement (MSA), with contributions from Cisco, Intel, Broadcom, and NVIDIA, ensuring interoperability across vendors .

Technical Features

- **Electrical Interface:** Eight lanes capable of 28 Gbps NRZ or 50-56 Gbps PAM4 per lane, achieving 200-400 Gbps per port .
- **Form Factor:** Compact QSFP-DD module with a cage and latch system defined by SFF-8677, optimized for high-density switch chassis .
- **Thermal Management:** Proprietary heat sink designs allow operation in 15-18W applications, maintaining signal integrity and airflow in dense deployments .
- **Pluggable Optical Line System (OLS):** Cisco QSFP-DD OLS modules integrate optical amplification and channel breakout options, enabling routed optical networking and simplified DWDM deployment

Article Content

Nov 14, 2025

The Ultimate Reference Table for SFP & QSFP Optical Transceiver ...

The definitive guide to SFP, QSFP, and QSFP-DD standards for 2025. Compare 400G/800G optics, understand

May 10, 2026

800G Optical Transceiver Overview: QSFP-DD and OSFP Packages

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

Oct 05, 2025

QSFP-DD Optical Transceivers Unlocking Faster Connections

QSFP-DD Optical Transceivers deliver up to 800Gbps speeds, offering high bandwidth, energy efficiency, and

Aug 16, 2025

Cisco QSFP-DD Pluggable Open Line System (QSFP-DD OLS)

This latest offering from Cisco, the QSFP-DD OLS, is a “pluggable open line system” solution that perfectly integrates into the Cisco

Nov 12, 2025

QSFP-DD Transceiver Guide 2026: Complete 400G/800G Deployment

What is a QSFP-DD Transceiver? The QSFP-DD optical transceiver form factor enables 400G and 800G connections

Sep 11, 2025

QSFP-DDVSQSFP+/QSFP28/QSFP56/OSFP:What Are the Differences?

The QSFP-DD, heralded as the most compact form factor for 400G transceivers, is gaining traction among fiber optic

Sep 15, 2025

Optical Connector – QSFP-DD

About Us The QSFP-DD MSA will define a new pluggable form factor that supports 8 high speed electrical interfaces connecting to

Aug 05, 2025

Cisco QSFP-DD Pluggable Open Line System (QSFP-DD OLS)

Product overview The Cisco® QSFP-DD Open Line System (QSFP-DD OLS) is a pluggable optical amplifier module that, together

Sep 26, 2025

QSFP-DD Linear Pluggable Optics (LPO)

Amphenol's QSFP-DD Linear Pluggable Optical (LPO) Transceiver delivers low-latency, high-bandwidth PCIe® Gen 5.0 over optical

Nov 09, 2025

QSFP-DD CONNECTORS & CABLE ASSEMBLIES PRODUCT

The QSFP-DD portfolio's backwards compatibility allows existing QSFP modules to be plugged into QSFP-DD ports. Our QSFP-DD

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Philippines QSFP-DD optical module QSFP-DD

QSFP-DD is a new module and cage/connector system similar to current QSFP, but with an additional row of contacts providing for

Apr 15, 2026

QSFP-DD vs QSFP28: Unraveling the Key Differences in Optical

Discover the key differences between QSFP-DD and QSFP28 optical modules in our comprehensive guide. Learn

Jun 21, 2026

Understanding the QSFP-DD Standard: The Foundation of 400G

QSFP-DD (Quad Small Form Factor Pluggable Double Density) is an evolution of the QSFP family, extending its lane

Aug 25, 2025

QSFP-DD Connector System

QSFP-DD Interconnect System's 8-lane electrical interface transmits 28G NRZ, 56G PAM-4 and 112G PAM-4, up to 200, 400 or 800

Mar 20, 2026

SFP+, SFP28, QSFP+, QSFP28, QSFP56, QSFP-DD, QSFP112 vs

Initial Published: February 19, 2022 The optical transceiver plays a crucial role in modern fiber networking. Various

Dec 03, 2025

SFP, QSFP, QSFP-DD, OSFP Active Optical Cable Assemblies

SFP, QSFP, QSFP-DD, OSFP ACTIVE OPTICAL CABLE ASSEMBLIES Our active optical cable assembly portfolio provides

Feb 22, 2026

QSFP-DD Connectors, Cages and Cable Assemblies

QSFP-DD provides high-performance computing capability. The QSFP interconnects density is doubled with electrical interface,

Jun 26, 2026

QSFP-DD Optical Module Overview: What is the differ?

The QSFP-DD is the smallest 400G form factor optical module on the market today. It is also the optical module that

Oct 04, 2025

Optical Transceiver: SFP vs SFP+ vs QSFP28 vs QSFP-DD

Compare SFP, SFP+, QSFP+, QSFP28, and QSFP-DD optical transceivers. Learn differences, speeds, and best use

Mar 29, 2026

The Ultimate Guide to QSFP Cable: Everything You Need to Know

QSFP-DD: Designed for 400Gbps applications. Knowing these categories and their specific usage scenarios can help

Dec 28, 2025

The Ultimate Guide to Cisco QSFP Optical Transceiver Modules

Efficient and consistent data transmission is significant in the rapidly changing technological environment. Without a

Oct 03, 2025

Cisco QSFP-DD Pluggable Open Line System (QSFP-DD OLS)

The QSFP-DD OLS can extend the reach of a 400G QSFP-DD ZR/ZR+ link (from 40 to 130 km or longer, depending on fiber

Aug 19, 2025

QSFP Versus QSFP-DD Here Are the Key Differences

With optical modules, it is often helpful to think of them in three parts: Form factor (QSFP, QSFP-DD, OSFP) Electrical

Contact Us

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