

Swedish Fiber Ethernet Switch QSFP-DD



Overview

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

Key Takeaways

Swedish Fiber Ethernet switches supporting QSFP-DD enable 400G connectivity with high port density and backward compatibility for legacy QSFP modules.

QSFP-DD Overview

QSFP-DD (Quad Small Form-factor Pluggable Double Density) is a high-speed transceiver standard designed to deliver 400 Gbps per port using eight lanes of 50 Gbps PAM4 signaling. QSFP-DD switches feature deeper cages to accommodate both QSFP-DD and legacy QSFP modules, providing backward compatibility with QSFP28 and QSFP+ transceivers. These switches must support 50 Gbps PAM4 per lane and ideally downshift to 25 Gbps NRZ for older modules. Power requirements vary by module class, typically 10–25W per port for modern QSFP-DD modules.

Swedish Telecom QSFP-DD Transceivers

Swedish Telecom Opto offers the STC-QSFPDD-LR4-10KM, a 400G QSFP-DD transceiver capable of up to 10 km over single-mode fiber (SMF). It uses four LAN-WDM optical lanes at 106.25 Gbps PAM4, fully compliant with IEEE 802.3bs 400GBASE-LR4 and QSFP-DD MSA specifications. This module is suitable for data center interconnects, cloud providers, and telecom core networks, providing high-capacity long-distance links.

Switch Compatibility and Use Cases

A QSFP-DD compatible switch must meet the following criteria:

- Physical ports and electrical signaling compliant with QSFP-DD standards.
 - Firmware and power delivery capable of supporting Class 6–8 modules.
 - Mechanical design to accommodate deeper QSFP-DD cages.
 - Backward compatibility with QSFP28 and QSFP+ modules for flexible deployment.
- These switches are ideal for data centers, high-performance computing networks, enterprise core/distribution layers, and service provider applications, enabling high-density 400G connectivity while maintaining flexibility for legacy transceivers .

Key Benefits

- High port density: QSFP-DD doubles the lane count per port compared to QSFP28.
- Scalable bandwidth: Supports 400G per port with potential for future 800G or 1600G upgrades.
- Long-distance connectivity: With Swedish Telecom LR4 modules, links up to 10 km are achievable.
- Backward compatibility: Supports existing QSFP modules, reducing upgrade costs.
- Flexible deployment: Suitable for cloud, enterprise, and telecom networks requiring high-speed, high-capacity links . For procurement or custom configurations, Swedish Telecom Opto provides volume orders and custom tuning, ensuring compatibility with specific network requirements. Users can request quotes or technical support directly from their optical team.

Article Content

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

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

400G-QSFP-DD-SR8-100M

400G QSFP-DD SR8 transceiver, delivering up to 100 meters over multimode fiber. high-density, high-speed data center connections

Swedish Aggregation Switch QSFP-DD

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

Swedish OEM optical modulator 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

400G QSFP-DD Cable and Transceiver Modules Data Sheet

It provides a QSFP-DD-to-QSFP-DD copper direct-attach solution. They are suitable for very short links and offer a cost-effective

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