

# **French Liquid-Cooled Switch QSFP-DD**





## Overview

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The QSFP-DD Series offers up to 400Gbps transmission speeds and features 1-by cages. QSFP-DD is a new module and cage/connector system similar to current QSFP, but with an additional row of contacts providing for an eight lane electrical interface. Electronics, optics, and copper wires are housed in metal shell plugs called form-factor plugs. Plugs have a cage counterpart that is in the network switch front panels and on top of network adapters. TE Connectivity's (TE) QSFP-DD (quad small form-factor pluggable double density) doubles the density of QSFP interconnects with an eight-lane electrical interface capable of 28 Gbps NRZ or 56 Gbps PAM-4 to achieve 200 or 400 Gbps aggregate per port. She discovered that her 800G QSFP-DD modules, which she had just purchased, experienced thermal throttling because she had not anticipated this problem.



## French Liquid-Cooled Switch QSFP-DD

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### QSFP-DD Power & Thermal Management Guide for Data Centers

Complete QSFP-DD power and thermal guide with module power data, rack calculations, AI cluster planning, and cooling strategies for 400G and 800G deployments.



### QSFP-DD pluggable modules boost data density

Each QSFP-DD port provides 76 electrical contacts, which can support next-generation switching chips for higher density applications. The QSFP-DD is

### TE Connectivity

Hier sollte eine Beschreibung angezeigt werden, diese Seite lässt dies jedoch nicht zu.



### QSFP-DD Optical Transceivers for High-Speed Connections

QSFP-DD ports incorporate a riding heatsink that can be sized independently of the optical module, added on top of the module, or placed between modules. This flexibility enables switch and routing



### 2023 QSFP-DD MSA Thermal Whitepaper Final (for approval)

As was the case for previous generations, the universally-adopted QSFP-DD family continues to extend its performance threshold, use cases, and backwards-compatibility. QSFP-DD1600 establishes a



### Thermal Design of QSFP-DD Cages and Heatsinks

This paper will talk to factors in the QSFP-DD design that affect the thermal performance, the thermal design of modular reference 32 port 1U switch loosely based on the Facebook Wedge



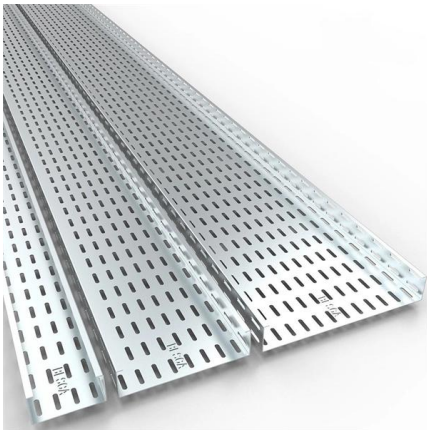
### QSFP-DD

The QSFP-DD interconnect system is comprised of a 76-position, 0.8mm pitch connector built for use in high speed serial applications. Each port supports up to 400 Gbps in aggregate over an 8 x 50 Gbps



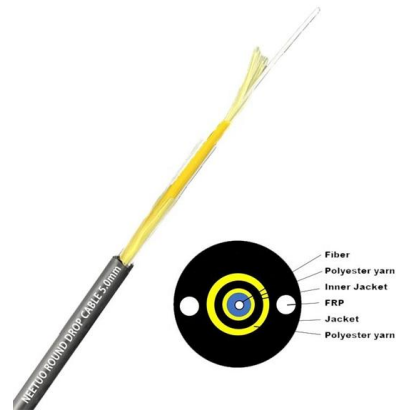
## Liquid Cooling Solutions

Advanced Liquid Cooling Solution - Purpose-built thermal solutions for any cooling budget  
Professionally designed, built, & tested to meet the most demanding server/storage/data center



### QSFP-DD series

QSFP-DD can enable up to 14.4 Tbps aggregate bandwidth in a single switch slot. QSFP-DD electrical interfaces will employ eight lanes that operate up to 25 Gbps NRZ modulation or 50 Gbps PAM4



### QSFP Double Density (DD) Interconnect System

Amphenol Commercial QSFP Double Density (DD) Interconnect System is backwards mating compatible with QSFP products. The connectors



### Immersion 400G QSFP-DD SR8 850nm 100m (328ft)

FIBERSTAMP 400G QSFP-DD SR8 liquid-cooled optical module is designed for immersive data center 400GBASE-SR8 Ethernet links. It utilizes 50G PAM4 and



## Understanding QSFP Switches: A Comprehensive

Explore the latest QSFP switches for modern network solutions with this comprehensive guide. Learn about port configurations, features, and more.



## QSFP-DD Strategies Help Data Centers Keep Cool

QSFP-DD Modules are Flexible and Economical Building and sustaining the pipeline of interoperable interconnect solutions is absolutely critical

## The Ultimate Guide to QSFP Cage Connectors and

In order to find out where the future lies in this competitive quest for speed of data transmission, it is observed that QSFP (Quad Small Form-factor



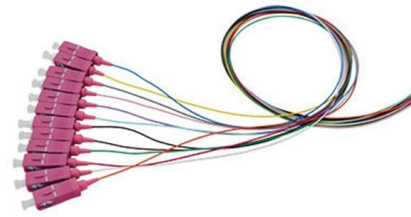
## Molex QSFP-DD BiPass Module Cooler Helps

The Molex QSFP-DD Interconnect System's 8-lane electrical interface transmits up to 28 Gbps NRZ or 56 Gbps PAM-4, up to 200 or 400 Gbps aggregate, with the



### Immersible Extender

A new standalone product, the Immersion Liquid Cooling Extender, is designed for immersion-cooled data centers. It extends the electrical interface of the server to



### Wall Mount Cabinet Server Racks

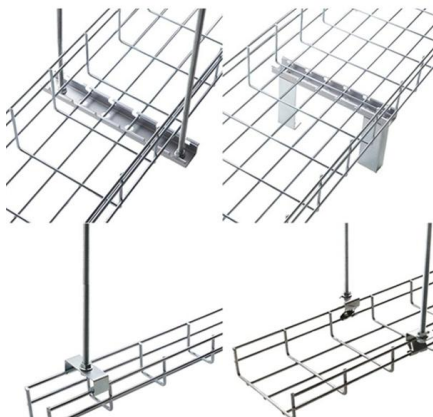
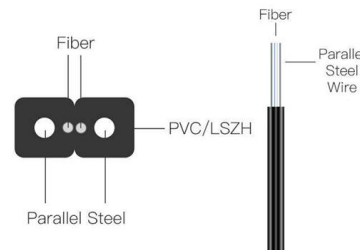


### Optimizing QSFP-DD Systems to Achieve at Least 25 Watt

Due to the commonality of the thermal considerations between QSFP-DD and QSFP-DD800, this paper will typically just refer to QSFP-DD but will call out specific differences for QSFP-DD800 where they

### QSFP DD Connectors

Amphenol Communications Solutions' QSFP DD interconnect system is comprised of a 76-position, 0.8 mm pitch connector built for use in high-speed



### Optimizing QSFP-DD Systems to Achieve at Least 25 Watt

Abstract High performance network environments need to cool pluggable optical modules efficiently. Higher power (25 Watt) modules for QSFP-DD800 systems must dissipate this heat effectively to



## QSFP-DD Connectors , High Speed I/O , Amphenol

The QSFP-DD family supports legacy QSFP channels on the front interface and four additional channels on the rear interface. This interconnect

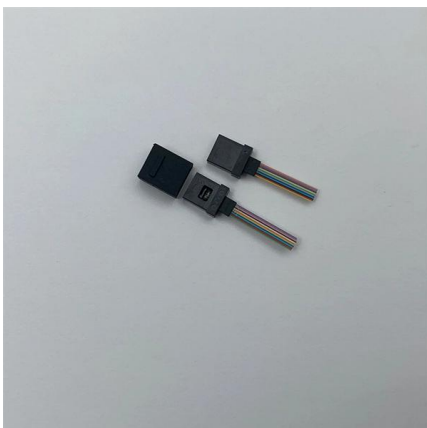


## QSFP-DD Connectors, Cages and Cable Assemblies

QSFP-DD provides high-performance computing capability. The QSFP interconnects density is doubled with electrical interface, providing superior thermal and signal

## 400G QSFP-DD Immersible Cooling Extender

This product include extender cage, cable, QSFP-DD housing three parts, the cable length can be customized no more than 0.5m for extension, that can avoid the



## QSFP-DD: Enabling 15 Watt Cooling Solutions

It has been demonstrated that the QSFP-DD module/cage design in both stacked and belly-to-belly configurations can support thermal loads beyond 15W as needed for next generation



### Connectors and Cages

This enables the QSFP-DD cages in switches to support backwards compatibility to 4-channel QSFP56, QSFP28, and QSFP+ devices, which engage only the first row of 4 pins in the 8



### The Ultimate Guide to QSFP28-DD: Features, Benefits, and Applications

Discover QSFP28-DD (200G/400G) modules: features, benefits, and applications in data centers, AI/HPC, and telecom. Compare and learn how to choose the right.

### Connectors and Cages

ConnectX-6/7 and BlueField-2/3 are not offered using QSFP-DD cages -- only for switches. NVIDIA does not offer a QSA port adapter to convert QSFP112 devices to be inserted into



### QSFP-DD CONNECTORS & CABLE ASSEMBLIES PRODUCT

Our QSFP-DD cages feature a proprietary heat sink design, making them the only solution to work in 15-18W applications at a low cost - providing superior thermal and signal integrity performance.



## Contact Us

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For datasheets, pricing, or custom high-speed optical interconnect solutions, please visit:

<https://www.syropy.com.pl>