QSFP-DD 16F CABLE ASSEMBLIES

ADDING: 16-fiber QSFP-DD cable jumpers and breakouts for 400G, 800G and 1TB+ networks

NPI ENHANCEMENT I OCTOBER 2023

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QSFP-DD 16F CABLE ASSEMBLIES

QSFP-DD 16F Cable Assemblies are designed to unleash 16-fiber high-speed capabilities tailored for the future of data centers, networking and a wide array of transceiver applications. These cable assemblies come equipped with jumpers and breakouts, empowering 16F systems to achieve groundbreaking performance with data rates of 400G, 800G and 1TB+.

Key Product Information

Category: Fiber Optic Cable Assemblies

Connector: MTP

Fiber Count: 16

Mode: Single-Mode and Multi-Mode

View Product Landing Page

Download Datasheet

Series

106283   **QSFP-DD 16F Cable Assemblies**

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VITAL PRODUCT INFORMATION

16-Fiber Connectivity

As higher data rates become necessary for data center and networking applications, 16-fiber connectivity is critical to achieving increased performance demands while meeting requirements for compact size and compatibility with existing hardware.

Multiple Options for Increased Flexibility

QSFP-DD 16F Cable Assemblies offer multiple options to facilitate optical system design flexibility, including single-mode and multi-mode options, MTP-to-MTP jumper lengths between 3.0 and 15.0m, OM3 or OM4 cable and breakouts to LC connectors.
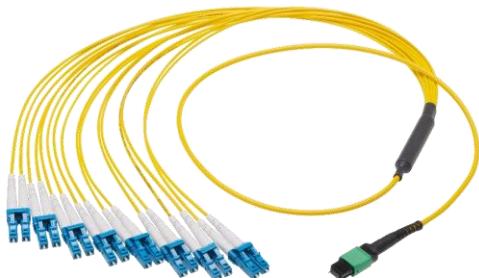
QSFP-DD High-Speed Capability

QSFP-DD 16F cable assemblies are designed for use with QSFP-DD systems and transceivers, transmitting up to 28 Gbps NRZ or 56 Gbps PAM-4 and up to 800 Gbps or higher aggregate within the same footprint as QSFP interconnects.

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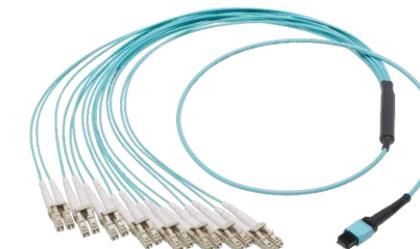
MARKETS AND APPLICATIONS

Server and Storage

- 400G/800G/1TB+ systems

- Servers

- Switches

- Routers

Telecommunications

- Optical transceivers

- Cable distribution and management

- Cloud computing

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PRODUCT ADVANTAGES AND FEATURES

Delivers 16-fiber connectivity for high data-rate applications

Design permits use with transceivers in 400G, 800G and 1TB+ applications

Helps ensure reliability and simplified installation with industry-standard MTP and LC connectors

MTP-to-MTP jumpers and MTP-to-LC breakouts are available

Supports high-speed QSFP-DD data transmission rates

16F design transmits up to 28 Gbps NRZ or 56 Gbps PAM-4, with 800 Gbps or higher aggregate

Affords multiple options for increased design flexibility

Cable options include single-mode and multi-mode OM3 or OM4 cable, MTP-to-MTP jumpers and breakouts, and various cable lengths

Provides quick and reliable connection

Cable assemblies are fitted with push-pull MTP connector housings

Offers improved return loss performance with angle-polished connectors (APCs)

SM and MM cable assemblies are available with APCs, while multi-mode cables are also available with ultra-polished connectors (UPCs)

Key Specifications	
Fiber Types	Single-mode, multi-mode
Fiber Count	16
Connectors	MTP-to-MTP, MTP-to-MDC, MPO-to-MPO, MTP-to-LC
Cable Outside Diameter	3.00mm
Fiber (Core/Cladding)	9/125µm (SM), 50/125µm (MM)
Operating Temperatures	-40 to +70°C

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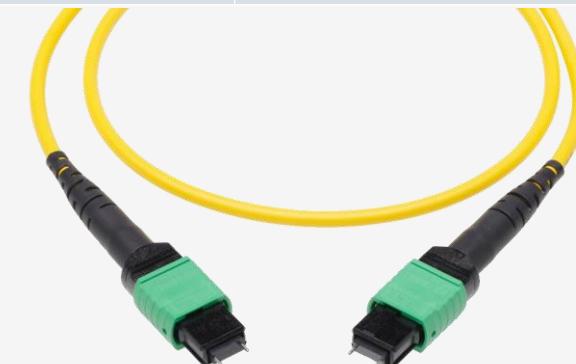
SPECIFICATIONS AND SUPPORTING INFORMATION

Reference Information

Packaging: Individually bagged

Fiber Count: 16

Wire/Cable Types:
    Single-Mode (SM): SM
    Multi-Mode (MM): OM3, OM4

Connector Types: MTP, MDC, MPO, LC

Designed in: Millimeters

RoHS: Yes

Halogen Free: Yes
    LSZH (Low Smoke Zero Halogen) or
    OFNP (Plenum)

Optical

Connector Insertion Loss (IL):
    Single-Mode: 0.75 dB
    Multi-Mode: 0.35 dB

Connector Return Loss (RL):
    Single-Mode: 55 dB (max.)
    Multi-Mode: 25 dB (max.)

Low Loss Insertion Loss: 0.35 to 0.5 dB

Low Loss Return Loss:
    Multi-Mode Flat Polish: 20 dB (max.)
    Multi-Mode APC: 20 dB (max.)
    Single-Mode APC: 50 dB (max.)

Physical

Connector Housings:
    Single-Mode: Green APC
    Multi-Mode: Aqua UPC or Green APC

Boot Type: Straight

Cable Lengths:
    Jumpers: 1.0 to 15.0m
    Breakouts: 1.0m

Fiber Core Diameter: 9µm (SM) or 50µm (MM)

Fiber Cladding Diameter: 125µm

Cable Outside Diameter: 3.00mm

Operating Temperatures: -40 to +70°C

Additional Resources	
Web Overview Page	**www.molex.com/en-us/products/optical-solutions/fiberoptic-cable-assemblies**
Datasheet	987652-6581.pdf (molex.com)
Global Product Manager	Brendan Walker, OSBU, DSS

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