

CISCO

### **400G Fiber Optic Transceiver**

Cable Ordering Guide: Cisco Nexus











Step 1:

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Choose the correct Cisco transceiver for your application

Cisco 400G Optics: QSFP-DD

Cisco Part Number	Reach	Media	Connector
QDD-400G-SR4.2-BD	100m	Parallel MMF	MPO-12
QDD-400G-DR4-S	500m	Parallel SMF	MPO-12
QDD-400G-FR4-S	2km	Duplex SMF	LC
QDD-2X400G-FR4	2km	Duplex SMF	LC
QDD-400G-LR4-S	10km	Duplex SMF	LC
QDD-400G-LR8-S	10km	Duplex SMF	LC

- reach decreases
- Only 10% of data centers exceed 100m
- Every connection introduces dB loss which further reduces the distance

#### **Description**

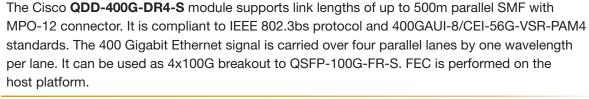


QDD-400G-SR4.2-BD

The Cisco QDD-400G-SR4.2-BD module supports length lengths of up to 100m parallel MMF with MPO-12 connector. It is compliant to IEEE 802.3cm protocol. The 400 Gigabit Ethernet signal is carried over four parallel lanes by two 50G wavelengths per lane. It can be used as 4x100G breakout to QSFP-40/100-SRBD. FEC is performed on the host platform.



QDD-400G-DR4-S





QDD-400G-FR4-S

The Cisco QDD-400G-FR4-S module supports link lengths of up to 2km SMF with duplex LC connector. It is compliant to IEEE 802.3bs, 400GBASE-FR4 Spec of 100G Lambda MSA group, and 400GAUI-8/CEI-56G-VSR-PAM4 standards. The 400 Gigabit Ethernet signal is carried over four CWDM grid optical wavelengths. Multiplexing and demultiplexing of the four wavelengths are managed within the device. FEC is performed on the host platform.



QDD-2X400G-FR4

The Cisco QDD-2X400G-FR4 module supports link lengths of up to 2 km SMF with two duplex LC connectors. It is compliant to IEEE 802.3cu for 400GBASE-FR4 requirements and 100G Lambda MSA group. The 400 Gigabit Ethernet signal is carried over four CWDM grid optical wavelengths. Multiplexing and demultiplexing of the four wavelengths are managed within the device. FEC is performed on the host platform.



QDD-400G-LR4-S

The Cisco QDD-400G-LR4-S module supports link lengths of up to 10km SMF with duplex LC connectors. It is compatible to IEEE 802.3cu for 400GBASE-LR4-6km requirements, but extends the reach to 10km, is compliant to 100G Lambda MSA group 400G-LR4 requirements, and 400GAUI-8/CEI-56G-VSR-PAM4 standards. The 400GbE signal is carried over four CWDM grid optical wavelengths. Multiplexing and demultiplexing of the four wavelengths are managed within the device. FEC is performed on the host platform.



QDD-400G-LR8-S

The Cisco QDD-400G-LR8-S module supports link lengths of up to 10km SMF with duplex LC connectors. It is compatible to IEEE 400GBASE-LR8 standard. The 400 GbE signal is carried over eight wavelengths. Multiplexing and demultiplexing of the eight wavelengths are managed within the device. FEC is performed on the host platform.



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Identify the enclosure system(s) that meet your application needs. Universal wired fiber cassettes provide optimal interoperability across fiber cabling systems.

For more information about universal wired fiber cassettes, see our video.

#### **HD** Flex<sup>™</sup> Fiber Enclosures

The HD Flex<sup>™</sup> Fiber Cabling System is the highest density solution designed to set you free by removing the barriers of architecture, deployment, scalability and maintenance challenges.



- Provides up to 144 fibers (72 duplex ports) per RU of density
- Enclosures and panels are adaptable between 4, 6, and 12-port configurations
- Split tray feature allows each half of the tray to be pulled out independently

For more information about the HD Flex™ Fiber Cabling System, reference the system brochure or visit panduit.com/hdflex

#### QuickNet<sup>™</sup> Patch Panels

Panduit QuickNet™ Patch Panels provide the flexibility to deployment both copper and fiber connectivity in the same RU.



- High-density patch panels conserve valuable rack space with 96 fibers (48 duplex ports) per RU
- Available in flat or angled patch panels to facilitate proper bend radius control and minimize the need for horizontal cable managers

For more information about the QuickNet™ Fiber Cabling System, reference the QuickNet™ Data Center Application Guide

### **Opticom® Fiber Enclosures**

Opticom® Fiber Enclosures accept pre-terminated, splice-on, and field terminated fiber connectivity.



- Slide-out, tilt-down drawer provides up to 96 LC fibers (48 duplex ports) per RU
- Integral bend radius control and cable management for fiber optic patch cords



## **Fiber Connecto**

for fast and efficient Ethernet and Fiber investment and minimize downtime. your position as a next-generation data center prepared to face future demands.

- (SR/SR-BD) to parallel (SR4.x) while maintaining compliance with cabling
- the MPO surface
- Link certification the gender increase test variability)

#### Signature Core<sup>™</sup> Fiber **Optic Cabling System**

Signature Core™ OM4+ and OM5+ Fiber Optic Cabling Systems extend the reach of standards-based Ethernet, BiDi, and Shortwave Wavelength Division Multiplexing (SWDM). Both are fully compliant and interoperable and OM5 solutions.

- Signature Core<sup>™</sup> OM4+ Cabling extends standard OM4
- Signature Core<sup>™</sup> OM5+ Cabling outperforms the standard OM5 fiber for any SWDM applications, providing on average 15% extended reach while maintaining Bit Error Rate performance
- Signature Core™ Fiber Medi solutions allow for design flexibility (more connectors in the channel)

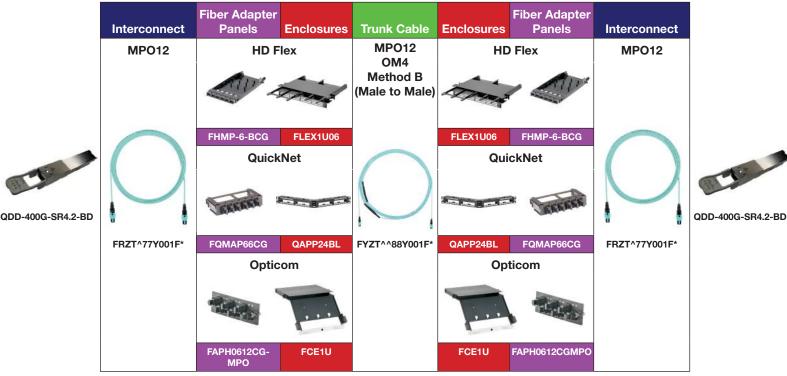
For more information on the Signature Core™ Fiber Optic Cabling System, visit here.

### Step 3:

Guide

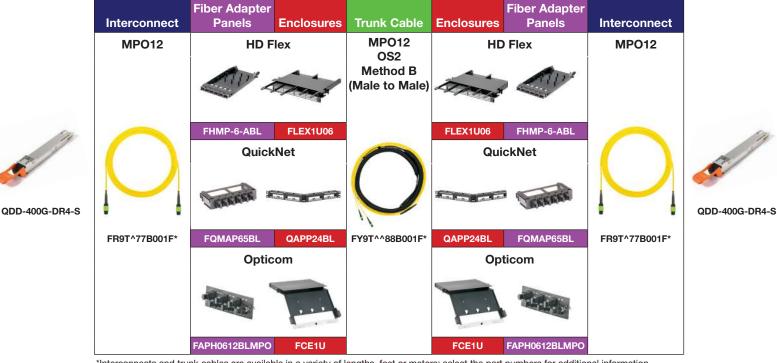
Select the components to build out your end-to-end fiber connectivity channel.

#### 400G Multimode Fiber Options for Multimode: QDD-400G-SR4-BD



<sup>\*</sup>Interconnects and trunk cables are available in a variety of lengths, feet or meters; select the part numbers for additional information.

#### 400G Single Mode Options for: QDD-400G-DR4-S



<sup>\*</sup>Interconnects and trunk cables are available in a variety of lengths, feet or meters; select the part numbers for additional information. ^Interconnects are available in PIAOFNP (Plenum), CALSZH or CALSZH or CALSZH OR

<sup>^</sup>Interconnects are available in P = OFNP (Plenum), L = LSZH or C = Euroclass Cca.

<sup>^^</sup>Trunk cables are available in P = OFNP (Plenum), L = LSZH or B = Euroclass B2ca.

<sup>^^</sup>Trunk cables are available in P = OFNP (Plenum), L = LSZH or B = Euroclass B2ca.

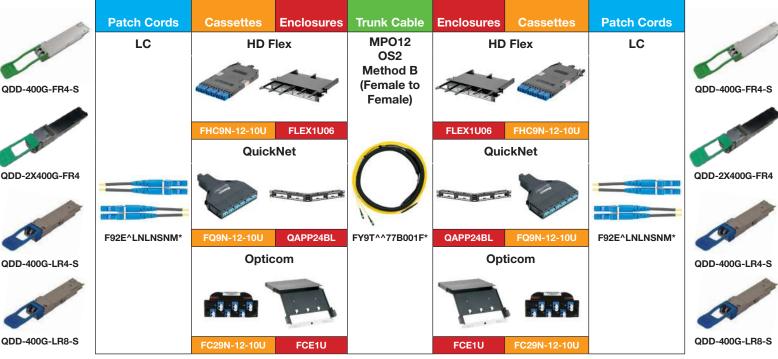
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#### **Step 3: Continued**

**Guide** Public

Select the components to build out your end-to-end fiber connectivity channel.

## 400G Single Mode Options for: QDD-400G-FR4-S, QDD-2X400G-FR4, QDD-400G-LR4-S, QDD-400G-LR8-S



<sup>\*</sup>Patch cords and trunk cables are available in a variety of lengths, feet or meters; select the part numbers for additional information.

Please note: For QDD-2X400G-FR4 you will need 2 connections per transceiver



business Strategy

<sup>^</sup>Patch cords are available in R = OFNR (Riser) or L = LSZH.

<sup>^^</sup>Trunk cables are available in P = OFNP (Plenum), L = LSZH or B = Euroclass B2ca.

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For other Panduit, Cisco related resources, visit www.panduit.com/panduitciscoalliance.

## **PANDUIT**

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