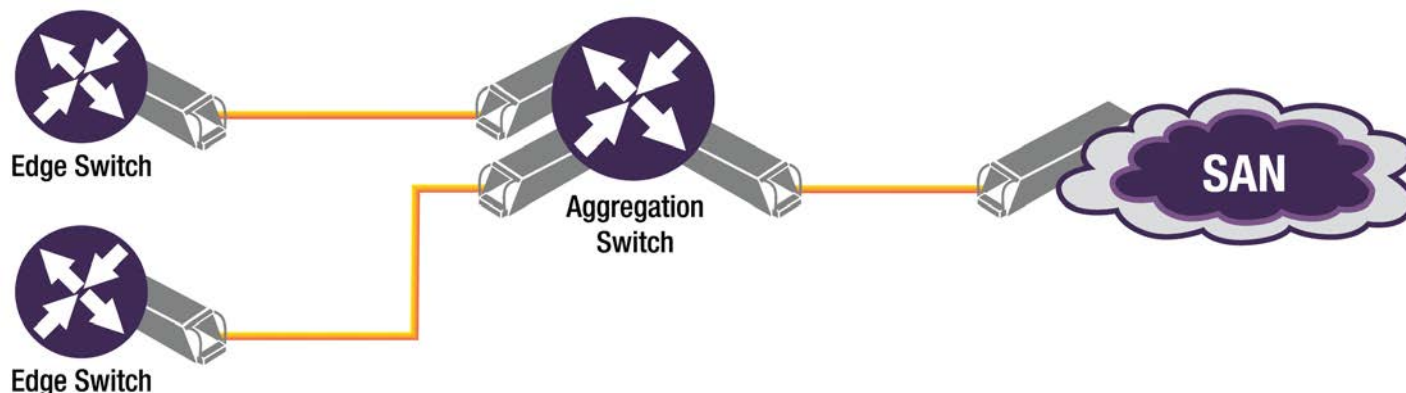


# 40 Gigabit QSFP+ Modules



## Applications

- 40GBase-X Ethernet
- Breakout to 10GBase-X Ethernet
- Data Center Aggregation and Backplane Applications
- Datacom/Telecom switch & router connections

## Features

## Benefits

Hot pluggable transceiver	Ease of installation and replacement
Compliant with IEEE 802.3ba	Guaranteed interoperability with any other IEEE 40GBase-SR4 compliant module
Compliant with IEEE 802.3ae	Interoperable with 10GBase-SR compliant modules of various form factors such as SFP+, XFP and X2
Small foot print	Ideal for high density applications
Standard MPO connector (SR4)	Utilizes a standard 12/8 Lane optical fiber with MTP (MPO) connector for high density cabling
Duplex LC receptacles (LR4)	Enables reuse of existing 1G/10G duplex single mode fiber infrastructure for migration to 40GE connectivity
SFF-8436 Digital Diagnostic Monitoring Interface (DMI)	Provides component level monitoring, fault isolation and failure prediction functions on their transceiver based applications
Low power dissipation: < 1.5 Watts (SR4)	Less heat dissipation needed on host device, cost savings and environment friendly

## Cisco Compliant 40G QSFP+

### QSFP+ 40GBase-X With DMI



The Transition Networks TN-QSFP-40G series 40G QSFP+ optical transceivers are designed to install in any QSFP+ port allowing for 40GBase-X interfaces to the network through the QSFP+ connector. The TN-QSFP-40G transceivers are Cisco Compliant\* and are designed for bi-directional serial-optical data communication such as 40G Ethernet.

Applications include: 40G Ethernet, 10G Ethernet, and Data Center Aggregation Connection.

### Features

- High capacity: up to 44.4 Gbps per module
- Compliant with SFF 8436 QSFP+ MSA
- Single +3.3 V Power Supply
- RoHS Compliant
- Digital Diagnostic Monitoring
- Low Power Dissipation : SR4 < 1.5 Watts, all other modules < 3.5 Watts
- 40GBase-SR4: 4 lanes, up to 11.1Gbps per lane, Standard MPO connector
- 40GBase-LR4 & 40GBase-LR4-3: 4 wavelength CWDM Mux/Demux design, up to 11.1Gbps per wavelength, Duplex LC connector
- 40GBase-SR-BD: two transmit/receive channels, 20Gbps each channel, 850 - 900nm wavelength range, Duplex LC connector
- 40GBase-IR4: 4 wavelength CWDM Mux/Demux design, up to 11.1Gbps per wavelength, Duplex LC connector

### Specifications

Standards	IEEE 802.3ba SFF 8436
Dimensions	Width: 0.71" [18 mm] Depth: 2.83" [72 mm] Height: 0.33" [8.5 mm]
Power Input	3.3V
Environment	Operating: 0°C to +70°C Storage: -40°C to +85°C
Certifications	IEC 60825-1, FDA CDRH 21-CFR 1040.10 Class 1
Warranty	Lifetime

\*Transition Networks' QSFP+ modules fully comply with the Multi-Sourcing Agreement (MSA). This compliance allows our QSFP+ modules to be used in all other MSA compliant QSFP+ platforms. In addition, Transition Networks QSFP+ modules are also Compliant with all Cisco QSFP+ based routers and switches, as well as Cisco's IOS software. Transition Networks QSFP+ modules ARE NOT Cisco OEM brand modules.

### Ordering Information

#### Duplex

##### TN-QSFP-40G-SR4

QSFP+ 40GBase-SR4, 850nm multimode (MPO)  
[400m/1313ft. on OM4, 300m/985ft. on OM3] with DMI Link Budget: 2.3 dB

##### TN-QSFP-40G-SR-BD

QSFP+ 40GBase-SR-BD, 850nm/900nm multimode (LC)  
[150m/492ft. on OM4, 100m/328ft. on OM3] Link Budget: 3.0 dB

##### TN-QSFP-40G-IR4

QSFP+ 40GBase-IR4, 1271nm, 1291nm, 1311nm, 1331nm, single mode (LC)  
[2km/1.24mi.] with DMI Link Budget: 6.7 dB

##### TN-QSFP-40G-LR4

QSFP+ 40GBase-LR4, 1271nm, 1291nm, 1311nm, 1331nm, single mode (LC)  
[10km/6.2mi.] with DMI Link Budget: 7.0 dB

##### TN-QSFP-40G-LR4-3

QSFP+ 40GBase-LR4, 1271nm, 1291nm, 1311nm, 1331nm single mode (LC)  
[30km/18.7mi.] with DMI Link Budget: 9.0 dB