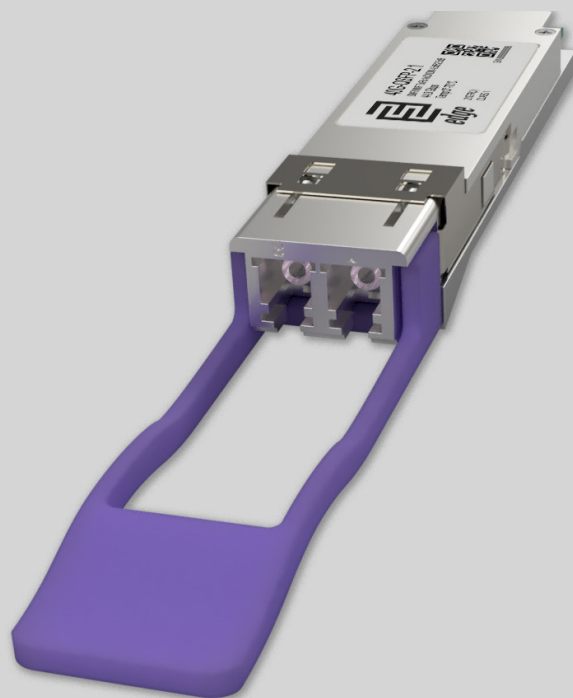


## Key Highlights:

- Type: QSFP+
- Compatibility: Multi-Vendor MSA Compatible
- Tx/Rx Wavelength: 4 CWDM lines (1271, 1291, 1311, 1331)
- Media Type: 4 x Double SMF/MMF
- Optical Budget: 4.5 dB / 2.5 dB
- Max. Distance: 2 km (SMF) / 150 m (OM4) or 100m (OM3)
- Data Rate: 39.81-44.8 Gbps
- Temperature: Standard 0°-70°C



## Optical Transceiver: 40G-QSFP-2.1

### Product Description:

40G-QSFP-2.1 is Multi-Vendor MSA Compatible QSFP (Quad Small Form-factor Pluggable) Transceiver, operating over pair of singlemode or multi-mode optical fiber with four independent optical communication lanes separated from each other using WDM technology. Module has minimum guaranteed optical budget of 4.5 dB if used on SMF and 2.5 dB if used on MMF, which in most cases is enough to reach 2 km distance using single-mode cable and 150m distance using OM4 multi-mode cable, or 100m distance using OM3 multi-mode cable. However, distance is just indicative parameter calculated for comfort of identification. Eventually we calculate distance taking in account minimal optical budget and average attenuation of optical cabling in industry. 40G-QSFP-2.1 uses 4 x DFB transmitting lasers and 4 x PIN receivers, operating each lane with speeds of 11.2 Gbps, giving an aggregated maximum bandwidth of 44.8 Gbps. Module supports DDM/DOM optical diagnostics, which provide diagnostic information about the present operating conditions. 40G-QSFP-2.1 operates in Standard 0°-70°C temperature range and has double LC connector. QSFP+ support 39.81 - 44.8 Gbps data rate and such applications as 40G Ethernet (41.25 Gbps), STM256 (39.81 Gbps), OTU3 (43.108 Gbps) and OTU3e2 (44.58 Gbps). 40G-QSFP-2.1 optical transceiver is multi-purpose module used in number of different places of today's networking. Consequently, most popular applications are Internet Service Provider (ISP) Fiber To The Home aggregation and backbone, Mobile operator core and back-haul 40G applications, Data Center networking site interconnections and other optical links.

Transceiver is CE/RoHS certified and it is Compliant with product safety standards. 40G-QSFP-2.1 Transceiver is fully compliant to QSFP+ Multi Source Agreement. Consequently, it means that module is compatible with 80% of networking equipment, where is not implemented a special algorithm for protection against third party modules. However – we can provide QSFP+ transceiver with custom-encoded firmware in order to make it work almost in any equipment. Therefore, we will be glad to know what your requirement is. Because our focus is providing top quality service, we are performing serious quality checks before delivery of our products. As a result, we do optical parameter measurements, connector cleanness tests and QSFP+ transceiver EEPROM memory data validation tests.



## Product Specification:

Parameter	Value
Media Type:	Single Mode Fiber / Multi Mode Fiber
TX Wavelength:	4 CWDM lines (1271, 1291, 1311, 1331)
RX Wavelength:	4 CWDM lines (1271, 1291, 1311, 1331)
Minimum Optical Budget:	4.5 dB (SMF) / 2.5 dB (MMF)
Maximum Distance:	2 km (SMF) / 150m (OM4) or 100m (OM3)
Supported Data Rate:	39.81 - 44.8 Gbps
Supported Applications:	40G Ethernet (41.25 Gbps), STM256 (39.81 Gbps), OTU3 (43.108 Gbps) and OTU3e2 (44.58 Gbps)
DDM/DOM:	Supported
Temperature Range:	Standard 0°-70°C
Connectors:	Double LC
Tx Wavelength Bandwidth:	13 nm (1271, 1291, 1311, 1331 nm)
Rx Wavelength Bandwidth:	13 nm (1271, 1291, 1311, 1331 nm)
Minimum Transmitting Power:	Each Lane SMF: -7 dBm Each Lane MMF: -7 dBm
Maximum Transmitting Power:	Each Lane SMF: 2.3 dBm Each Lane MMF: 2.3 dBm
Receiver Sensitivity:	Each Lane SMF: -11.5 dBm Each Lane MMF: -9.5 dBm
Receiver Overload:	Each Lane SMF: 2.3 dBm Each Lane MMF: 2.3 dBm
Transmitter Type:	4 x DFB Laser
Receiver Type:	4 x PIN photodiode
Power:	+3.3V single power supply
Compliance:	QSFP+ MSA, SFF-8436, 40GBASE-LR4, CE, Class 1 FDA and IEC60825-1 Laser Safety Compliant, RoHS



## Compatibility:

EDGE Optical transceivers can be provided with custom-encoded firmware, in order to provide compatibility with more than 50 vendor brands in data and telecom communications industry:

**MS** - General MSA  
**AD** - ADVA  
**AL** - Alcatel-Lucent  
**AR** - Arista  
**AV** - Avaya  
**BR** - Brocade  
**CN** - Ciena  
**CI** - Cisco  
**DL** - Dell & Force10  
**DK** - D-Link  
**EM** - EMC2  
**ET** - Enterasys

**ER** - Ericsson  
**EX** - Extreme Networks  
**F5** - F5 Networks  
**FO** - Fortinet  
**FU** - Fujitsu  
**H3** - H3C  
**HI** - Hirschmann  
**HP\*** - HP Networking  
**HS\*** - HP Storage  
**HU** - Huawei  
**IB** - IBM  
**IF** - Infinera

**IN** - Intel  
**JU** - Juniper Networks  
**LI** - Linksys  
**ML** - Mellanox  
**ME** - Meraki (Cisco)  
**MT** - MikroTik  
**MO** - Moxa  
**MR** - MRV  
**NG** - Netgear  
**NS** - NSN  
**PA** - Palo Alto Network  
**QL** - Qlogic

**RD** - RAD  
**RU** - Ruijie Networks  
**SM** - Supermicro  
**SY** - Synology  
**TC** - Telco Systems  
**TP** - TP-LINK  
**TN** - Trendnet  
**WG** - WatchGuard  
**ZT** - ZTE  
**XX** - Other

## Warranty:

EDGE Optic's provides a limited **warranty for sixty (60) months** from Purchaser's receipt of the Equipment represented in this data sheet against defective design or workmanship.

