400G QSFP-DD ZR 120km Transceiver

400G QSFP-DD ZR
Coherent 80-120km Optical Transceiver Module

QSFP-DD Series

- Hot Pluggable QSFP-DD
- Supports 400G PM-16QAM Modulation
- Supports 100G/75 GHz channel spacing for 400G PM-16QAM
- Up to 120 km data links
- Supports C-FEC
- Compliant with 400GAUI-8 interface
- QSFP-DD class 8 (Maximum power consumption 16.5W)
- LC connector

Ascent’s QSFP-DD-ZR-120 module is intended to be used in conjunction with a host platform to support 400G transmission over optical links in DCI applications. The module can be portioned into four parts: oDSP, optical component IC-TROSA, Controller and Power supply.

These pluggable solutions were designed to enable network operators to address increasing bandwidth demand through a simplified network architecture, reducing both capital and operational expenditures.

The 400G pluggable module family features an expansive list of interoperability solutions in QSFP-DD, OSFP and CFP2-DCO pluggable form factors for cloud data center interconnects (DCIs) and service provider networks. Mechanical dimensions, connectors and footprint of the module conform to QSFP-DD MSA.

The module is QSFP-DD type2 size, 18.4 mm x 93.4mm x 8.5mm and hot pluggable by 76-pin connector. The maximum power consumption is 16.5W and power supply voltage is +3.3V.
### Key Features

- Hot Pluggable QSFP-DD
- Supports 400G PM-16QAM Modulation
- Full C-band wavelength tunable
- Supports 100G/75 GHz channel spacing for 400G PM-16QAM
- Reach beyond 80 km to 120 km for 400G over SMF without inline chromatic dispersion compensation
- Supports C-FEC
- Hardware Specification Compliant to QSFP-DD-Hardware-rev5p0
- Management Interface Compliant to QSFP-DD-CMIS-rev4p0 and oxf2019.015.05-CMIS
- Supports 400GE, compliant with 400GAUI-8 interface, the high-speed lane supports 8x50G configurations
- QSFP-DD class 8 (Maximum power consumption 16.5W)
- Operating case temperature: 0°C to 70°C
- LC connector

### Application Diagram

[Diagram showing Ethernet interfaces and QD400ZR Module connections]
Transceiver Block Diagram

List of Acronyms

- DWDM: Dense Wavelength Division Multiplexing
- QSFP-DD: QSFP Double Density 8x Pluggable Transceiver
- PM-16QAM: Polarization Multiplexing – 16 state Quadrature Amplitude Modulation
- PM-QPSK: Polarization Multiplexing– Quadrature Phase Shift Keying
- SD-FEC: Soft Decision Forward Error Correction
- C-FEC: Concatenated FEC (Staircase FEC + Hamming)
- ODSP: Optical Digital Signal Processing

Ordering Information

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<td>QSFP-DD-ZR-120</td>
<td>QSFP DD PM-16QAM Plug-in, Coherent QSFP-DD, 80-120km, C-band Tunable Wavelength Optical Transceiver, LC, DOM</td>
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