

400G-QDD-DCO-MZRHP

Optical Transceivers



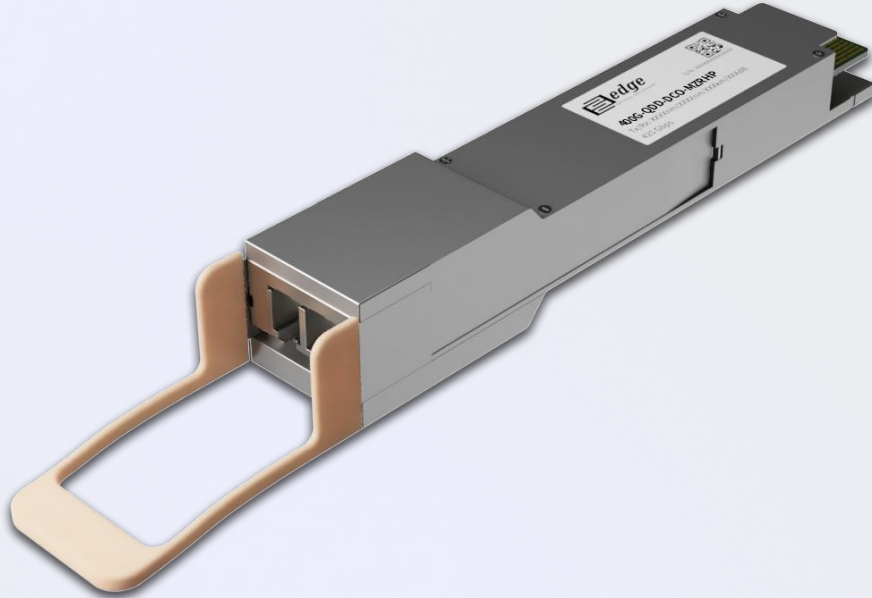
$\lambda = 1528-1567 \text{ nm}$



OS2 Fiber



Double LC



OB 27dB



Max 2000 km



oFEC



PC ≤ 22W

Product description

400G-QDD-DCO-MZRHP is a 400G OpenZR+ Multi-Rate High-power Coherent QSFP-DD DCO Tunable Multi-Vendor MSA Compatible QSFP-DD (Quad Small Form-Factor Pluggable Double Density) Transceiver designed for operation over Double Single-Mode Fiber (SMF) optical cable. Module supports various host interfaces: 400GAUI-8, 200GAUI-4, 100GAUI- 2, CAUI-4. Depending on the host interface, the OpenZR+ multi-rate Tunable support such applications as 400G Ethernet (425Gbps), 200G Ethernet (212.5Gbps), 100G Ethernet (106.25Gbps). 400G-QDD-DCO-MZRHP uses top quality ITLA (Integrable Tunable Laser Assembly) Tunable transmitter, operating at nominal C-band 75GHz ITU-T grid (1528 - 1567nm)/ Ch. 13-61 and 400Gb/s PIN photodiode receiver. 400G-QDD-DCO-MZRHP supports DDM/DOM optical diagnostics and operates in Standard 0°-70°C temperature range and has Double LC interface. 400G-QDD-DCO-MZRHP transceiver is CE/RoHS certified and is compliant to 76pin QSFP-DD Multi Source Agreement (MSA), CMIS 5.0, OIF Implementation Agreement for Coherent CMIS, Rev 01.1, RoHS. We will be glad to know your requirements!

Product Specification:

| | |
|-------------------------|--|
| Media Type: | Single-Mode Fiber (SMF) |
| Connectors: | Double LC |
| TX Wavelength: | C-band 75GHz ITU-T grid (1528 - 1567nm)/ Ch. 13-61 |
| RX Wavelength: | 1528.77nm-1567.13nm |
| Minimum Optical Budget: | 400G: 19dB; 300G: 21dB; 200G: 23dB; 100G: 27dB |
| Maximum Distance: | 400G: ≤450km; 300G: ≤600km; 200G: ≤1000km; 100G: ≤2000km |
| Supported Data Rate: | 425Gbps, 318.75Gbps, 212.5Gbps, 206.26Gbps (NRZ), 106.25Gbps, 103.13Gbps (NRZ) |

Product Specification:

| | |
|---|---|
| Supported Applications: | 400G Ethernet, 200G Ethernet, 100G Ethernet |
| DDM/DOM: | Supported |
| Forward Error Correction (FEC): | Supported oFEC |
| Host interface Modulation: | PAM4, NRZ |
| Media Interface Modulation: | Single-Mode Fiber (SMF) |
| Transmitter Type: | ITLA |
| Tx Wavelength Bandwidth: | 75 GHz (0.6 nm) |
| Average Launch Power (Min) Each Lane: | -5 dBm |
| Average Launch Power (Max) Each Lane: | 5 dBm |
| Extinction Ratio (Min): | 3 dB |
| Receiver Type: | ICR |
| Rx Wavelength Bandwidth: | 75 GHz (0.6 nm) |
| Rx Input Power Range (Min): | 400G: -12 dBm; 300G: -15dBm; 200G: -18dBm; 100G: -18dBm |
| Rx Input Power Range (Max): | 0 dbm |
| Receiver Sensitivity: | 400G: -24 dBm; 300G: -26dBm; 200G: -28dBm; 100G: -32dBm |
| Avg Receiver Sensitivity(Min)Each Lane: | -8.4 dBm |
| Avg Receiver Sensitivity(Max)Each Lane: | 4 dbm |
| Receiver Overload: | 10 dBm |
| Temperature Range: | Standard 0°-70°C |
| Storage Temperature: | -40° to 85°C |
| Relative Humidity: | 0 to 85% |
| Power Consumption: | 400G: ≤ 22W; 300G: ≤ 22W; 200G: ≤ 22W; 100G: ≤ 18W |
| Power: | 3.3V |
| Compliance: | OpenZR+ Specifications, OIF Implementation Agreement for Coherent CMIS, Rev 01.1, CMIS 5.0, 76pin QSFP-DD MSA, RoHS-6, CE |

Host Interfaces:

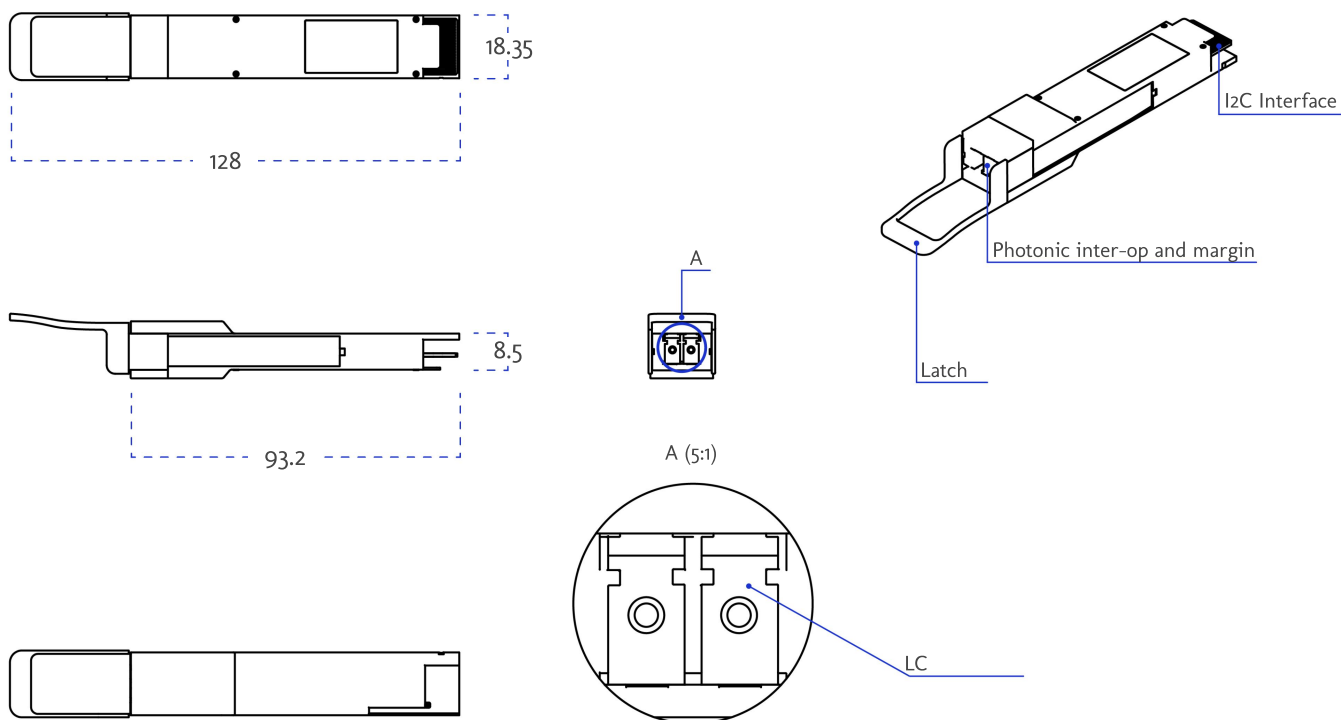
| Host Interface | Application Data Rate | Lane Count | Lane Signaling Rate | Modulation |
|----------------|-----------------------|------------|------------------------------|------------|
| 400GAUI-8 | 425.00 Gb/s | 8 | 26.5625 GBaud (+/- 100 ppm) | PAM4 |
| 4*100GAUI-2 | 4*106.25 Gb/s | 4*2 | 26.5625 GBaud (+/- 100 ppm) | PAM4 |
| 3*100GAUI-2 | 3*106.25 Gb/s | 3*2 | 26.5625 GBaud (+/- 100 ppm) | PAM4 |
| 2*100GAUI-2 | 2*106.25 Gb/s | 2*2 | 26.5625 GBaud (+/- 100 ppm) | PAM4 |
| 2*CAUI-4 | 2*103.13 Gb/s | 2*4 | 25.78125 GBaud (+/- 100 ppm) | NRZ |
| 100GAUI-2 | 1*106.25 Gb/s | 2 | 26.5625 GBaud (+/- 100 ppm) | PAM4 |
| CAUI-4 | 103.13 Gb/s | 4 | 25.78125 GBaud (+/- 100 ppm) | NRZ |

Media Interface:

| Application | Application Bit Rate | Baud Rate | Modulation | FEC |
|------------------|----------------------|----------------|------------|------|
| ZR400-OFEC-16QAM | 481.108374 Gb/s | 60.1385468 GBd | DP-16QAM | oFEC |
| ZR300-OFEC-8QAM | 360.831281 Gb/s | 60.1385468 GBd | DP-8QAM | oFEC |
| ZR200-OFEC-OPSK | 240.554187 Gb/s | 60.1385468 GBd | DP-QPSK | oFEC |
| ZR100-OFEC-QPSK | 120.277094 Gb/s | 30.069273 GBd | DP-QPSK | oFEC |

Mechanical Dimensions

*The dimensions are given in millimetres [mm]



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.

