

# 400G-QDD-DCO-MZRP

Optical Transceivers



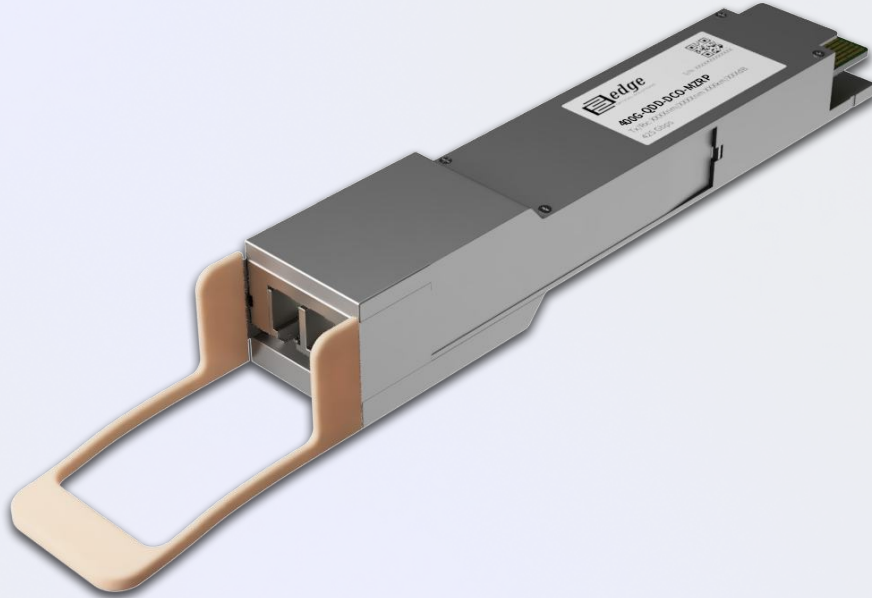
$\lambda = 1528-1567 \text{ nm}$



OS2 Fiber



Double LC



OB 26dB



Max 2000 km



oFEC



PC ≤ 23W

## Product description

400G-QDD-DCO-MZRP is a 400G OpenZR+ Multi-Rate 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-MZRP 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-MZRP supports DDM/DOM optical diagnostics and operates in Standard 0°-75°C temperature range and has Double LC interface. 400G-QDD-DCO-MZRP 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: 12dB; 300G: 16dB; 200G: 21dB; 100G: 26dB
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, 200GEthernet, 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:	400G: -10 dBm; 300G: -10dBm; 200G: -9dBm; 100G: -8dBm
Average Launch Power (Max) Each Lane:	400G: -6 dBm ; 300G: -6dBm; 200G: -5dBm; 100G: -4dBm
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: -22 dBm; 300G: -26dBm; 200G: -30dBm; 100G: -34dBm
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°-75°C
Storage Temperature:	-40° to 85°C
Relative Humidity:	0 to 85%
Power Consumption:	400G: ≤ 23W; 300G: ≤ 23W; 200G: ≤ 22W; 100G: ≤ 16W
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:

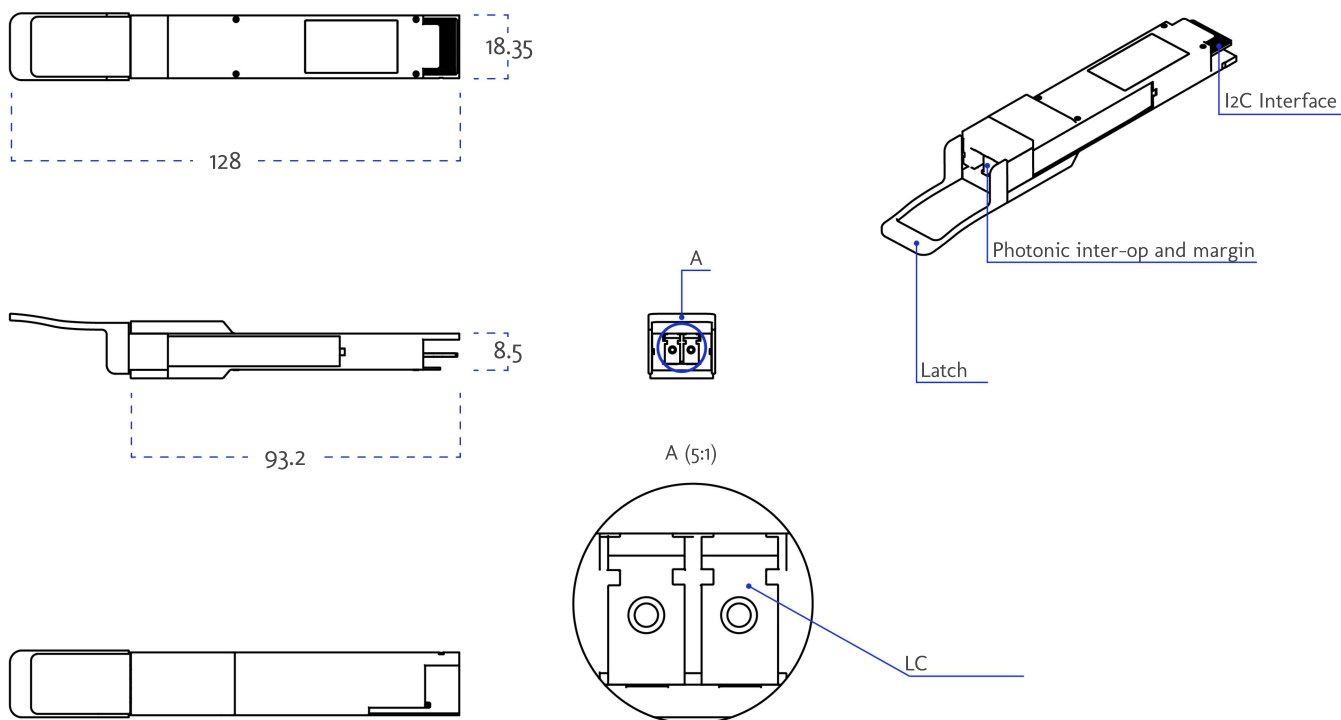
Host Interface	Application Data Rate	Lane Count	Lane Signaling Rate	Modulation
400GAUI-8	425.00 Gb/s	8	26.5625 GBaud (+/- 100 ppm)	PAM4
2*200GAUI-4	2*212.5 Gb/s	2*4	26.5625 GBaud (+/- 100 ppm)	PAM4
4*100GAUI-2	4*106.25 Gb/s	4*2	26.5625 GBaud (+/- 100 ppm)	PAM4
3*100GAUI-2	3*106.25 Gb/s	3*2	26.5625 GBaud (+/- 100 ppm)	PAM4
200GAUI-4	212.5 Gb/s	4	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	106.25 Gb/s	2	26.5625 GBaud (+/- 100ppm)	PAM4
CAUI-4	103.13 Gb/s	4	25.78125 GBaud (+/- 100 ppm)	NRZ

## Media Interface:

Application	Application Bit Rate	Baud Rate	Modulation	FEC
400G	481.108374 Gb/s	60.1385468 GBd	DP-16QAM	oFEC
300G	360.831281 Gb/s	60.1385468 GBd	DP-8QAM	oFEC
200G	240.554187 Gb/s	60.1385468 GBd	DP-QPSK	oFEC
100G	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.

