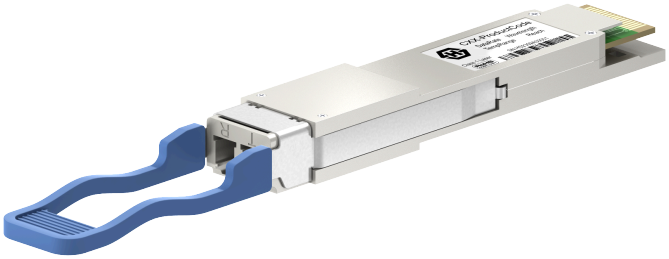
DATA SHEET

Transceivers
400G QSFP56-DD PAM4 LR4
CQS-103A05

Properties

- Protocol 400G Ethernet
- PAM4 Modulation
- Data rate 425 Gbps
- Reach up to 10km
- Wavelengths 1271/1291/1311/1331nm
- LC/PC duplex connector
- Singlemode fiber
- Temp. range 0 ... 70°C
- Link budget at least 5 dB
- Power consumption < 12 W



General data	
Form factor	QSFP56-DD
Product image	Actual product may differ from the images shown. Colours, design, and details can vary.
Protocol	400G Ethernet
Data rate standards	400GBASE-LR4
Media type	Singlemode
Connector	LC/PC duplex
Modulation Format	PAM4
Built-in FEC	No
CDR	Double
Operation temperature	0 °C ... 70 °C
Supply voltage typical	3.13 V ... 3.47 V
Supply Current	< 3600 mA
Power consumption	< 12 W
Digital Diagnostic Management (DDM)	Yes
Laser hazard level	1

Absolute Maximum Ratings	
Max. supply voltage range	-0.5 V ... 3.6 V
Max. Storage Temperature Range	-40 °C ... 85 °C
Max. relative humidity range	5 % ... 95 %

Transceivers

400G QSFP56-DD PAM4 LR4

CQS-103A05

Transmitter Specifications	
Laser Type	EML
Operating channels	1271.00nm (1264.5 to 1277.5nm)
	1291.00nm (1284.5 to 1297.5nm)
	1311.00nm (1304.5 to 1317.5nm)
	1331.00nm (1324.5 to 1337.5nm)
Grid	None
Average launch power per lane	-2.7 dBm ... 5.1 dBm
Outer Optical Modulation Amplitude (OMA)	0.3 dBm ... 4.4 dBm
Total optical output power	< 9.3 dBm
Extinction Ratio	> 3.5 dB
Side Mode Suppression	> 30 dB
Supported Data rate	425 Gbps
Transmitter and dispersion eye closure for PAM4 (TDECQ)	< 3.4 dB

Receiver Specifications	
Receiver Type	PIN
Operating channels	1271.00nm (1264.5 to 1277.5nm)
	1291.00nm (1284.5 to 1297.5nm)
	1311.00nm (1304.5 to 1317.5nm)
	1331.00nm (1324.5 to 1337.5nm)
Receiver Overload	> 4.4 dBm
Receiver Sensitivity (OMA)	< -6.8 dBm
Receiver LOS Hysteresis	> 0.5 dB
Supported Data rate	425 Gbps

Ordering Information Table		
Order Code	Compatibility code explanation	Wavelength code explanation
CQS-103A05xxxx-13	“xxxx” is an alphanumerical string, describing the compatibility. “0000” means no special coding to ensure compatibility with a special switch type.	-13: 1310nm

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