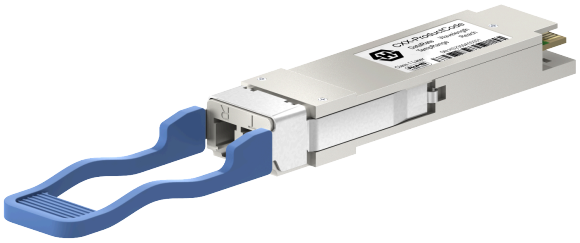
DATA SHEET

Transceivers
100G QSFP28 eLR4
CQS-913A11

Properties

- Protocol 100G Ethernet
- Data rate 103.125 Gbps
- Reach up to 20km
- Wavelengths 1296/1300/1304/1309nm
- LC/PC duplex connector
- Singlemode fiber
- Temp. range 0 ... 70°C
- Link budget at least 7 dB
- Power consumption < 4 W



General data	
Form factor	QSFP28
Product image	Actual product may differ from the images shown. Colours, design, and details can vary.
Protocol	100G Ethernet, Infiniband
Data rate standards	100GBASE-LR4
Media type	Singlemode
Connector	LC/PC duplex
Modulation Format	NRZ
Built-in FEC	No
CDR	Double
Operation temperature	0 °C ... 70 °C
Supply voltage typical	3.13 V ... 3.47 V
Supply Current	< 1200 mA
Power consumption	< 4 W
Digital Diagnostic Management (DDM)	Yes
Laser hazard level	1

Absolute Maximum Ratings	
Max. supply voltage range	-0.3 V ... 4 V
Max. Storage Temperature Range	-40 °C ... 85 °C
Max. relative humidity range	5 % ... 95 %

Transmitter Specifications	
Laser Type	DML
Operating channels	1295.56nm (1294.53 to 1296.59nm)
	1300.05nm (1299.02 to 1301.09nm)
	1304.58nm (1303.54 to 1305.63nm)

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Transmitter Specifications	
	1309.14nm (1308.09 to 1310.19nm)
Grid	None
Average launch power per lane	0.4 dBm ... 4.5 dBm
Total optical output power	< 10.5 dBm
Extinction Ratio	> 4 dB
Side Mode Suppression	> 30 dB
Supported Data rate	103.125 Gbps

Receiver Specifications	
Receiver Type	PIN
Operating channels	1295.56nm (1294.53 to 1296.59nm)
	1300.05nm (1299.02 to 1301.09nm)
	1304.58nm (1303.54 to 1305.63nm)
	1309.14nm (1308.09 to 1310.19nm)
Receiver Overload	> 4.5 dBm
Receiver Sensitivity	< -10.6 dBm
Receiver Sensitivity (OMA)	< -8.6 dBm
Bit Error Rate at Receiver	1E-12
Maximum Optical Input Power per Lane (Overload)	4.5 dBm
Receiver LOS De-Assert	< -12 dBm
Receiver LOS Assert	> -24 dBm
Receiver LOS Hysteresis	> 0.5 dB
Supported Data rate	103.125 Gbps

Ordering Information Table		
Order Code	Compatibility code explanation	Wavelength code explanation
CQS-913A11xxxx-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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