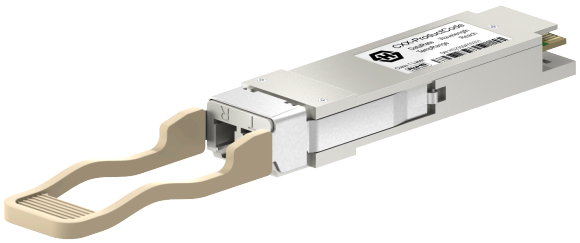
DATA SHEET

Transceivers
100G QSFP28 ZR4
CQS-921A29

Properties

- Protocol 100G Ethernet
- Data rate 103.125 Gbps
- Reach up to 80km
- Wavelengths 1296/1300/1304/1309nm
- LC/PC duplex connector
- Singlemode fiber
- Temp. range 0 ... 70°C
- Link budget at least 28 dB



General data	
Form factor	QSFP28
Product image	Actual product may differ from the images shown. Colours, design, and details can vary.
Protocol	100G Ethernet
Data rate standards	100GBASE-ZR4
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	< 1670 mA
Power consumption	< 5.5 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 % ... 85 %

Transmitter Specifications	
Laser Type	EML
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)
Grid	None

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Transmitter Specifications	
Average launch power per lane	1 dBm ... 6.5 dBm
Outer Optical Modulation Amplitude (OMA)	2 dBm ... 6.5 dBm
Total optical output power	< 12.5 dBm
Extinction Ratio	> 8.2 dB
Side Mode Suppression	> 30 dB
Supported Data rate	103.125 Gbps

Receiver Specifications	
Receiver Type	PIN+SOA
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	> -6 dBm
Receiver Sensitivity	< -27 dBm
Bit Error Rate at Receiver	5E-5
Receiver LOS De-Assert	< -28 dBm
Receiver LOS Assert	> -40 dBm
Supported Data rate	103.125 Gbps

Ordering Information Table		
Order Code	Compatibility code explanation	Wavelength code explanation
CQS-921A29xxxx-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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