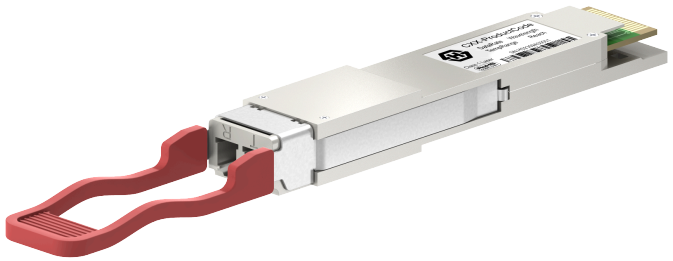
DATA SHEET

Transceivers
400G QSFP56-DD PAM4 ER4
CQS-105A18

Properties

- Protocol 400G Ethernet
- PAM4 Modulation
- Data rate 425 Gbps
- Reach up to 40km
- Wavelenghts 1304.6/1306.9/1309.1/1311.4nm
- LC/PC duplex connector
- Singlemode fiber
- Temp. range 0 ... 70°C
- Link budget at least 18 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-ER4
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
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 % ... 85 %

Transceivers

400G QSFP56-DD PAM4 ER4

CQS-105A18

Transmitter Specifications	
Laser Type	EML
Operating channels	1304.58nm (1303.06 to 1305.1nm)
	1306.85nm (1306.33 to 1307.38nm)
	1309.14nm (1308.61 to 1309.66nm)
	1311.43nm (1310.90 to 1311.96nm)
Grid	None
Average launch power per lane	1.5 dBm ... 7.1 dBm
Outer Optical Modulation Amplitude (OMA)	4.5 dBm ... 7.9 dBm
Total optical output power	< 13.1 dBm
Extinction Ratio	> 6 dB
Side Mode Suppression	> 30 dB
Supported Data rate	425 Gbps

Receiver Specifications	
Receiver Type	APD
Operating channels	1304.58nm (1303.06 to 1305.1nm)
	1306.85nm (1306.33 to 1307.38nm)
	1309.14nm (1308.61 to 1309.66nm)
	1311.43nm (1310.90 to 1311.96nm)
Receiver Overload	> -3.4 dBm
Receiver Sensitivity	< -16.2 dBm
Receiver Sensitivity (OMA)	< -14 dBm
Bit Error Rate at Receiver	2.4E-4
Maximum Optical Input Power per Lane (Overload)	-2.4 dBm
Receiver LOS De-Assert	< -17 dBm
Receiver LOS Assert	> -30 dBm
Receiver LOS Hysteresis	> 0.5 dB
Supported Data rate	425 Gbps

Ordering Information Table		
Order Code	Compatibility code explanation	Wavelength code explanation
CQS-105A18xxxx-13	“xxxx” is an alphanumerical string, describing the compatibility. “0000” means no special coding to ensure compatibility with a special switch type.	-13: 1310nm

HUBER+SUHNER is certified by ISO 9001, ISO 14001, ISO 45001, IATF 16949, AS/EN 9100 and ISO/TS 22163-IRIS. Waiver: Facts and figures herein are for information only and do not represent any warranty of any kind.
DOCUMENT PIM-P36014 / Date of publication: 24.03.2026 / uncontrolled copy