

### Applications

- Switches, servers, and routers
- Data Center Networks: Utilized for efficient data routing and management within large-scale data centers
- Storage Area Networks: Integral for facilitating high-speed data transfers and storage management in networked storage environments
- High-Performance Computing
- Supporting the transmission of data and voice services in telecommunication and Wireless Infrastructure
- Connecting medical devices, facilitating data exchange, and enabling remote diagnostics and monitoring in healthcare settings
- Signal routing and measurement in various testing and analysis applications

### Features

- IEEE 802.3cd and InfiniBand NDR compliant
- Data Rate Support: up to 2x200 Gbps (PAM4) aggregate
- Engineered to minimize insertion loss and crosstalk
- Pull-to-release slide latch mechanism for easy handling
- Available in straight and break-out configurations
- Customized cable braid termination to limit electromagnetic interference (EMI)
- EEPROM Mapping: Customizable for cable signature identification
- Available in both 26AWG and 30AWG cable sizes
- 3.3 V Power supply
- Compliance: RoHS compliant
- RoHS 6 compatible (lead free)
- Operating temperature range: 0 °C to 70 °C

### Description

The 400G OSFP-2x200G QSFP56 passive copper cable assembly is equipped with sixteen differential copper pairs, offering eight data transmission channels capable of speeds up to 56 Gbps (PAM4) per channel. This configuration meets the stringent demands of 2x200 G Ethernet and InfiniBand Next Data Rate (NDR) requirements.

Available in both 26AWG and 30AWG wire gauges, this 400 OSFP-2x200G QSFP56 copper cable assembly is engineered to deliver low insertion loss and minimal crosstalk.

The utilization of PAM4 signals for transmission in the OSFP-QSFP56 passive copper cable assembly effectively doubles the data transmission rate. However, it also imposes more rigorous requirements for cable insertion loss. For detailed specifications, please refer to the High-Speed Characteristics.

### General Product Characteristics

Parameter	OSFP-2xQSFP56 DAC Specifications
Number of Lanes	Tx8 & Rx8 (400G OSFP) Tx4 & Rx4 (2x200G QSFP56)
Channel Data Rate	53.125 Gbps
Operating Temperature	0 °C to + 70° C
Storage Temperature	-40 °C to + 85 °C
Supply Voltage	3.3 V nominal
Electrical Interface	60 pins edge connector (OSFP) 38 pins edge connector (QSFP56)
Management Interface	Serial, I <sup>2</sup> C

### High Speed Characteristics

Parameter	Symbol	Min	Typical	Max	Unit	Note
Differential Impedance	TDR	90	100	110	Ω	
Insertion loss	SDD21	-17.16			dB	At 13.28 GHz
Differential Return Loss	SDD11			See 1	dB	At 0.05 to 4.1 GHz
	SDD22			See 2	dB	At 4.1 to 19 GHz
Common-mode to common-mode output return loss	SCC11 SCC22			-2	dB	At 0.2 to 19 GHz
Differential to common-mode return Loss	SCD11			See 3	dB	At 0.1 to 12.89 GHz
	SCD22			See 4		At 12.89 to 19 GHz
Differential to common Mode Conversion Loss	SCD21-IL			-10	dB	At 0.1 to 12.89 GHz
				See 5		At 12.89 to 15.7 GHz
				-6.3		At 15.7 to 19 GHz

#### Notes

1. Reflection Coefficient given by equation SDD11 (dB)  $< -16.5 + 2 \times \text{SQRT}(f)$ , with f in GHz
2. Reflection Coefficient given by equation SDD11 (dB)  $< -10.66 + 14 \times \log_{10}(f/5.5)$ , with f in GHz
3. Reflection Coefficient given by equation SCD11 (dB)  $< -22 + (20/25.78) \times f$ , with f in GHz
4. Reflection Coefficient given by equation SCD11 (dB)  $< -15 + (6/25.78) \times f$ , with f in GHz
5. Reflection Coefficient given by equation SCD21 (dB)  $< -27 + (29/22) \times f$ , with f in GHz

## Ordering information<sup>1</sup>

Part number	Product Description		
XCD-40Q52xx	400G OSFP – 2x200G QSFP56 DAC, 0-70°C, xx: 01 – 1 m, H1 – 1,5 m, 02 – 2 m		
Length	1	1,5	2
AWG	30	30	26

### Notes

<sup>1</sup> For accurate order specification please contact XenOpt reseller before placing an order. The content of this document is subject to change without notice. XenOpt does not guarantee errorless or outdated information.

Please specify any compatibility requirements at time of ordering. Standard MSA compatible pluggable components may not work or some function of these components may not be available in devices that require customized compatible devices. Pluggable components compatible with one type of communications equipment may not work in other type of communications equipment.

### Important Notice

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