



## O400G2Q56-CU-P-xM-HDR-BK-5

400GBase-DAC OSFP Open Finned Top to 2x 200G QSFP56 Breakout, Direct Attach Cable

### Features

- Supports aggregate data rates of 400Gbps (PAM4)
- 400G OSFP Finned Top Design
- Compatible with IEEE 802.3bj and IEEE 802.3cd
- Straight and break out assembly configurations available
- Customized EEPROM mapping for cable signature
- 26AWG and 30AWG cable
- 3.3V Power supply
- Temperature Range: 0-70 °C
- RoHs Compliant
- InfiniBand and Ethernet Supported
- OSFP end supports CMIS, QSFP56 supports SFF 8636

### Applications

- Switches, servers and routers
- Data Center networks
- Storage area networks
- High performance computing
- Telecommunication and wireless infrastructure
- Medical diagnostics and networking
- Test and measurement equipment

### Industry Standards

- 2X200G Ethernet (IEEE 802.3cd)
- InfiniBand HDR

#### OSFP to 2XQSFP56 DAC Specifications

Number of Lanes	Tx8 & Rx8(400G OSFP) Tx4 & Rx4(2X200G QSFP56)
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## OSFP to 2XQSFP56 DAC Specifications

Channel Data Rate	53.125Gbps
Operating Temperature	0 to + 70°C
Storage Temperature	-40 to + 85°C
Supply Voltage	3.3 V nominal
Electrical Interface	60 pins edge connector (OSFP) 38 pins edge connector (QSFP56)
Management Interface	Serial, I2C

## High Speed Characteristics

Parameter	Symbol	Minimum	Typical	Maximum	Unit	Notes
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	SCC11			-2	dB	At 0.2 to 19 GHz
Output Return Loss	SCC22					
Differential to Common-mode Return Loss	SCD11			See 3	dB	At 0.01 to 12.89 GHz
	SCD22			See 4		At 12.89 to 19 GHz
Differential to Common Mode Conversion Loss	SCD21-IL			-10	dB	At 0.01 to 12.89 GHz
				See 5		At 12.89 to 15.7 GHz
				-6.3		At 15.7 to 19 GHz

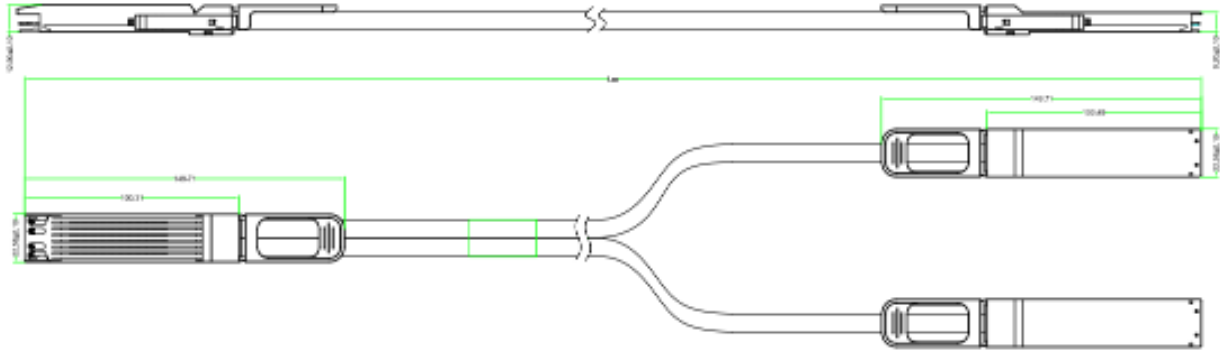
### Notes:

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  $SCD11(dB) < -22 + (20/25.78)*f$ , with f in GHz
4. Reflection Coefficient given by equation  $SCD11(dB) < -15 + (6/25.78)*f$ , with f in GHz
5. Reflection Coefficient given by equation  $SCD21(dB) < -27 + (29/22)*f$ , with f in GHz

## Regulatory Compliance

Feature	Test Method	Performance
Electrostatic Discharge (ESD) to the Electrical Pins	MIL-STD-883C Method 3015.7	Class 1 (>2000 Volts)
Electromagnetic In-terference(EMI)	FCC Class B	Compliant with Standards
	CENELEC EN55022 Class B	
	CISPR22 ITE Class B	
RF Immunity(RFI)	IEC61000-4-3	Typically Shows no Measurable Effect from a 10V/m Field Swept from 80 to 1000MHz
RoHS Compliance	RoHS Directive 2011/65/EU and it's Amendment Directives (EU) 2015/863	RoHS (EU) 2015/863 compliant
REACH Compliance	REACH Regulation (EC) No 1907/2006	REACH (EC) No 1907/2006 compliant

## Mechanical Diagram



Length (m)	Cable AWG
1	30
1.5	30
2	26
2.5	26
3	26

### Note:

External physical characteristics are subject to variation. This may include, but is not limited to, external case designs, pull tab colors and/or shapes, removal latch styles or colors, and label sizes and placement. These variations do not affect the function or characteristics of the transceivers.

## Ordering Information

OEM	Part Number	OEM	Part Number
Nvidia	MCP7Y60-H001-A	MSA	AN-O400G2Q56-DAC-1M
Nvidia	MCP7Y60-H01A-A	MSA	AN-O400G2Q56-DAC-1.5M
Nvidia	MCP7Y60-H002-A	MSA	AN-O400G2Q56-DAC-2M
Nvidia	MCP7Y60-H02A-A	MSA	AN-O400G2Q56-DAC-2.5M
Nvidia	MCP7Y60-H003-A	MSA	AN-O400G2Q56-DAC-3M

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