

## Features:

- QSFP56 conforms to the Small Form Factor SFF8636
- 4-Channel QSFP56 2X breakout passive copper cable assembly
- Maximum aggregate data rate: 200Gb/s (4x 50G Per channel)
- I2C interface for EEPROM signature which can be customized and CMIS V4.0 compliant
- Backward compatible with existing QSFP+ connectors and cages
- Operating Temperature: 0~ 70 °C
- ROHS Compliant

## Applications:

- 40GE/100GE/200GE
- Infiniband QDR/FDR/EDR/HDR
- Storage area networks

- Switch / router / HBA
- Enterprise network
- Data Center Network

## Standards Compliance:

- IEEE 802.3bj & 200G Ethernet (IEEE 802.3cd)
- 100GEBASE-CR4&200GBASE-CR4
- SFF-8665 QSFP+ 28G 4X Pluggable Transceiver Solution (QSFP28)
- InfiniBand HDR

## 1. Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Parameter	Symbol	Min	Typical	Max	Unit
Storage Ambient Temperature		-40		85	°C
Operating Case Temperature	Tc	0		70	°C

Power Supply Voltage	VCC3	3.14	3.3	3.47	V
Data Rate Per Lane		1		28	GBaud/s

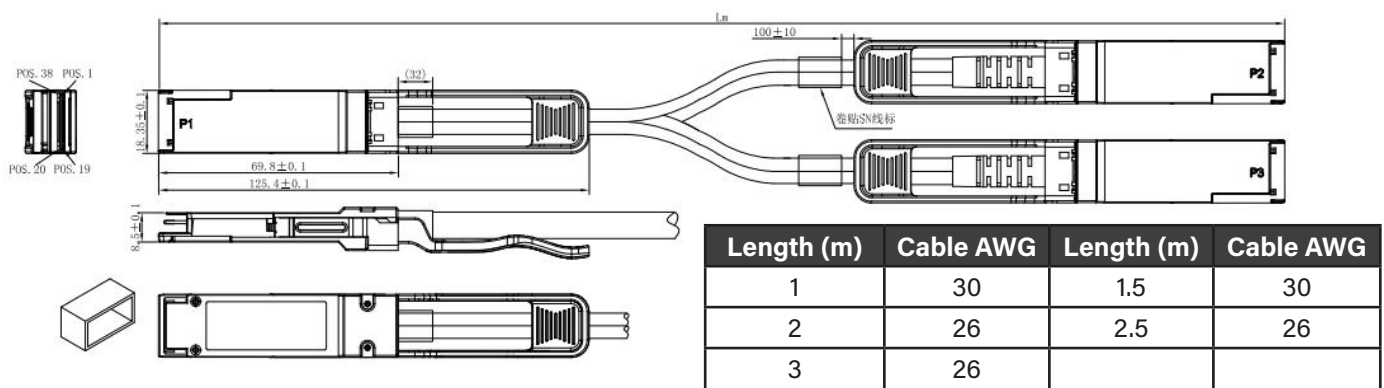
## 2. High Speed Characteristics

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 0.01 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

## 3. Mechanical Diagram



**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.

## 4. Ordering Information

OEM	Part Number	OEM	Part Number
Nvidia/Mellanox	MCP7H50-H00AR30	Nvidia/Mellanox	MCP7H50-H001R30
Nvidia/Mellanox	MCP7H50-H01AR30	Nvidia/Mellanox	MCP7H50-H002R26
Nvidia/Mellanox	MCP7H50-H02AR26		

## 5. Contact Information

Tel: 800.590.9535

Web: <http://www.approvednetworks.com>