

# 200G QSFP56 HDR Direct Attach Passive Copper Cable

## Features

- IBTA InfiniBand HDR compliant
- Up to 200Gb/s data rate
- 4x 50Gb/s PAM4 modulation
- SFF-8665 compliant
- Operating case temperature 0-70°C
- Single 3.3V supply voltage
- Bit Error Rate (BER) 1E-15 with InfiniBand systems
- Hot pluggable
- RoHS compliant
- LSZH (Low Smoke Zero Halogen) jacket
- LF (Lead Free) HF (Halogen Free) PCB
- SFF-8636 compliant I<sup>2</sup>C management interface

## Description

Q56-200G-DACH cables are high speed, cost-effective alternatives to fiber optics in 200Gb/s InfiniBand HDR applications.

Q56-200G-DACH passive copper cable contains eight high-speed copper pairs, each operating at data rates of up to 50Gb/s. Each QSFP56 port comprises an EEPROM providing product information, which can be read by the host system.

NADDOD's unique quality passive copper cable solutions provide power-efficient connectivity for short distance interconnects. It enables higher port bandwidth, density and configurability at a low cost and reduced power requirement in the data centers. Rigorous cable production testing ensures best out-of-the-box installation experience, performance and durability.

## Absolute Maximum Ratings

Parameter	Min.	Typical	Max.	Unit	Note
Storage Temperature	-40	-	+85	°C	
Supply voltage	-0.3	-	3.6	V	
Data input voltage	-0.3	-	3.6	V	
Control input voltage	-0.3	-	3.6	V	

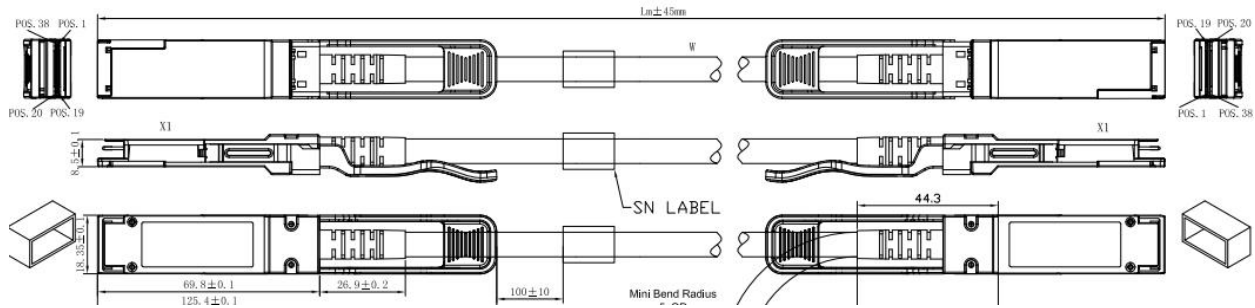
## Operational Specifications

Parameter	Min.	Typical	Max.	Unit	Note
Supply voltage (Vcc)	3.135	3.3	3.465	V	
Power consumption	-	-	0.1	W	
Operating case temperature	0	-	70	°C	
Operating relative humidity	5	-	85	%	

## Electrical Specifications

Parameter	Min.	Typical	Max.	Unit	Note
Characteristic impedance	90	100	110	Ω	
Time propagation delay (informative)	-	-	4.5	ns/m	

## Mechanical Specifications



Length (m)	Cable AWG	Single Cable Diameter	Minimum Bend Radius
1	30	$7.1 \pm 0.35\text{mm}$	Single bend: 35.5mm Assembly/repeated bend: 71mm
2	26/30	$7.1 \pm 0.35\text{mm}/$ $9.4 \pm 0.4\text{mm}$	Single bend: 35.5/47mm Assembly/repeated bend: 71/ 94mm
3	26	$9.4 \pm 0.4\text{mm}$	Single bend: 47mm Assembly/repeated bend: 94mm

## Regulatory Compliance

Feature	Test Method	Performance
Electrostatic Discharge (ESD) to the Electrical Pins	MIL-STD-883C Method 3015.7	Class 1(>2000 Volts)
Electromagnetic Interference(EMI)	FCC Class B	Compliant with Standards
	CENELEC EN55022 Class B	
	CISPR22 ITE Class B	
RF Immunity(RFI)	IEC61000-4-3	Typically Show 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 6/6	RoHS 6/6 compliant

## Part Numbers and Descriptions

Part Number	Description
Q56-200G-CU0-5H	Passive Copper cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, 0.5m, black pulltab, 30AWG
Q56-200G-CU1H	Passive Copper cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, 1m, black pulltab, 30AWG
Q56-200G-CU1-5H	Passive Copper cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, 1.5m, black pulltab, 30AWG
Q56-200G-CU2H	Passive Copper cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, 2m, black pulltab, 26AWG

## Warnings

Handling Precautions: This device is susceptible to damage as a result of electrostatic discharge (ESD). A static free environment is highly recommended. Follow guidelines according to proper ESD procedures.

Laser Safety: Radiation emitted by laser devices can be dangerous to human eyes. Avoid eye exposure to direct or indirect radiation.

## Further Information:

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## Disclaimer

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1. We are committed to continuous product improvement and feature upgrades, and the contents contained in this manual are subject to change without notice.

2. Nothing herein should be construed as constituting an additional warranty.

3. NADDOD assumes no responsibility for the use or reliability of equipment or software not provided by NADDOD.

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