

2x200G QSFP56 HDR to 2x200G QSFP56 HDR MMF Active Optical Cross Connect Splitter H-Cable

Features

- Supports IBTA InfiniBand HDR and HDR100
- 2x 200Gb/s (2x 100Gb/s HDR100) to 2x 200Gb/s (2x 100Gb/s HDR100)
- 4x 50Gb/s PAM4 modulation
- Programmable Rx output amplitude and pre-emphasis
- SFF-8665 compliant QSFP56 port
- Single 3.3V power supply
- 4.35W power dissipation (typ., each lane)
- Bit Error Rate (BER) better than 1E-15 with InfiniBand systems
- Up to 30m length
- 0 to 70°C case temperature operating range
- Hot pluggable
- RoHS compliant
- SFF-8636 compliant I²C management interface

Description

2Q2Q56-200G-AOCH is a QSFP56 VCSEL-based (Vertical Cavity Surface-Emitting Laser), cost effective, 2x200Gb/s to 2x200Gb/s active optical splitter cable (AOC) designed for use in 200Gb/s InfiniBand HDR (High Data Rate) systems.

It provides cross-connectivity between a 200G Top of Rack (ToR) switch port configured as 2x100G ports and two 200G spine switch ports also configured as 2x100G ports. This offers a substantial CAPEX saving by reducing the required number of spine ports and cables. For data centers with more than 1600 servers, it will also save the third layer switches.

Each QSFP56 end of the cable comprises an EEPROM providing product and status monitoring information, which can be read by the host system.

Rigorous production testing ensures the best out-of-the-box installation experience, performance and durability.

NADDOD's unique quality active fiber cable solutions provide power-efficient connectivity for data center interconnects. It enables higher port bandwidth, density and configurability at a low cost, and reduced power requirement in the data centers.

Absolute Maximum Ratings

Table1-Absolute Maximum Ratings						
Parameter	Symbol	Min.	Typical	Max.	Unit	Note
Supply Voltage	Vcc ₃	-0.3	-	+3.6	V	
Storage Temperature	T _s	-40	-	+85	°C	
Operating Humidity	RH	+5	-	+85	%	
Data input voltage	Vcc	-0.3	-	3.465	V	
Control input voltage	Vcc	-0.3	-	4.0	V	
Damage threshold	DT	3.4	-	-	dBm	

Recommended Operating Conditions

Table2-Recommended Operating Conditions					
Parameter	Min.	Typical	Max.	Unit	Note
Operating Case Temperature	0	-	+70	°C	1
Power Supply Voltage	3.135	3.3	3.465	V	
Power dissipation (200G end)	-	4.35	4.55	W	
Supply noise tolerance (10Hz-10MHz)	66			mVpp	
Operating relative humidity	5		85	%	

Note:

[1] Internal temperature readout through DDMI of up to 75° C is allowed.

Mechanical

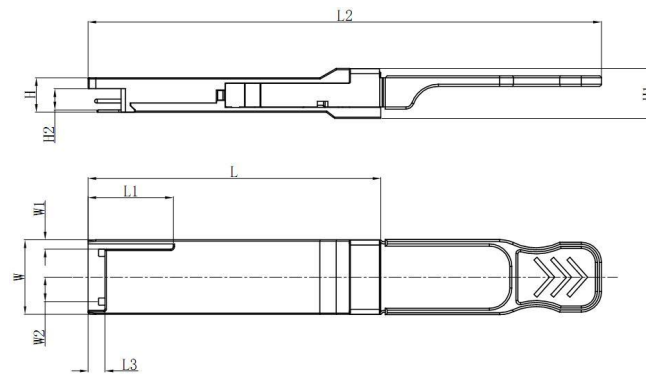


Figure 1 Mechanical Diagram

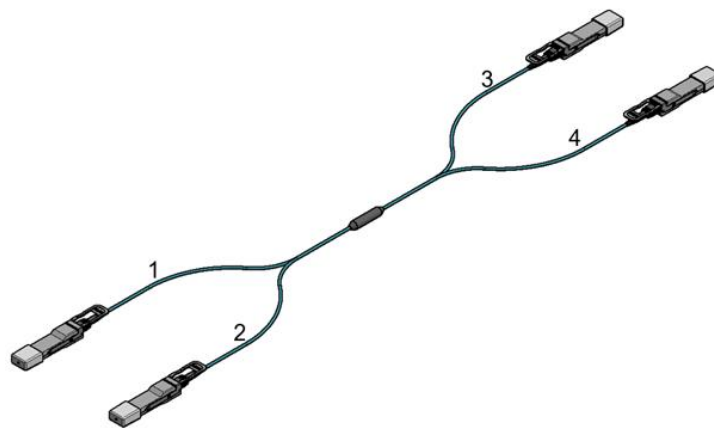


Figure 2 Mechanical Diagram of Cable

Regulatory Compliance

Table3-Regulatory Compliance		
Parameter	Value	Units
Diameter	3±0.2	mm
Minimum bend radius	30	mm
Length tolerance	1 m ≤ length < 5 m:	+300mm / -0
	5 m ≤ length < 50 m:	+500mm / -0
Cable color	Aqua	

Connectivity Schematic for QSFP56 Configured as 2x100G

Table4-Connectivity Schematic for QSFP56 Configured as 2x100G					
QSFP56	Fiber	Lane	QSFP56	Fiber	Lane
1	12	TX1	3	1	RX1
	11	TX2	3	2	RX2
	10	TX1	4	1	RX1
	9	TX2	4	2	RX2
	4	RX2	4	11	TX2
	3	RX1	4	12	TX1
	2	RX2	3	11	TX2
	1	RX1	3	12	TX1
2	12	TX1	3	3	RX1
	11	TX2	3	4	RX2
	10	TX1	4	3	RX1
	9	TX2	4	4	RX2
	4	RX2	4	9	TX2
	3	RX1	4	10	TX1
	2	RX2	3	9	TX2
	1	RX1	3	10	TX1

Part Numbers and Descriptions

Table5-Part Numbers and Descriptions	
Part Number	Description
2Q2Q56-200G-A3H	Active fiber splitter cable, IB HDR, 2x200Gb/s to 2x200Gb/s, 2xQSFP56 to 2xQSFP56, LSZH, 3m
2Q2Q56-200G-A5H	Active fiber splitter cable, IB HDR, 2x200Gb/s to 2x200Gb/s, 2xQSFP56 to 2xQSFP56, LSZH, 5m
2Q2Q56-200G-A10H	Active fiber splitter cable, IB HDR, 2x200Gb/s to 2x200Gb/s, 2xQSFP56 to 2xQSFP56, LSZH, 10m
2Q2Q56-200G-A15H	Active fiber splitter cable, IB HDR, 2x200Gb/s to 2x200Gb/s, 2xQSFP56 to 2xQSFP56, LSZH, 15m
2Q2Q56-200G-A20H	Active fiber splitter cable, IB HDR, 2x200Gb/s to 2x200Gb/s, 2xQSFP56 to 2xQSFP56, LSZH, 20m
2Q2Q56-200G-A30H	Active fiber splitter cable, IB HDR, 2x200Gb/s to 2x200Gb/s, 2xQSFP56 to 2xQSFP56, LSZH, 30m

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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