



# 200Gb/s HDR to 2x100Gb/s HDR100 (QSFP56 to 2xQSFP56) Direct Attach Copper Splitter Cable

MCP7H50-H0xxRyy



Mellanox® MCP7H50-H0xxRyy DAC splitter cables<sup>(1)</sup> are high-speed, cost-effective alternatives to fiber optics in 200Gb/s InfiniBand HDR applications.

MCP7H50-HxxxRyy cables provide connectivity between system units with a 200Gb/s HDR QSFP56 port on one side and two 100Gb/s HDR100 QSFP56 ports on the other side. The cable connects the data signals from each of the 2 dual copper pairs on the single QSFP56 (pair 1&2, 3&4) end to the dual copper pair of each of the QSFP56 (pair 1&2) ends on the multiport side. Each QSFP56 port comprises an EEPROM providing product information, which can be read by the host system.

Mellanox'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.

Table 1 - Absolute Maximum Ratings

Parameter	Minimum	Maximum	Units
Supply voltage	-0.3	3.6	V
Data input voltage	-0.3	3.6	V
Control input voltage	-0.3	3.6	V
Storage temperature	-40	85	°C

Table 2 - Operational Specifications

Parameter	Minimum	Typical	Maximum	Units
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	%

Table 3 - Electrical Specifications

Parameter	Minimum	Typical	Maximum	Units
Characteristic impedance	90	100	110	Ω
Time propagation delay (informative)	---	---	4.5	ns/m

## HIGHLIGHTS

- Supports IBTA InfiniBand HDR
- 200Gb/s HDR to 2x100Gb/s HDR100 data rate
- 4x 50Gb/s PAM4 modulation
- SFF-8665 compliant
- Operating case temperature 0-70°C
- Single 3.3V supply voltage
- Enables BER (Bit Error Rate) better than 10-15 with Mellanox IB HDR 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

<sup>(1)</sup> Raw cables are provided from different sources to ensure supply chain robustness.

Table 4 - Cable Mechanical Specifications

Ordering Part No.	Length (m)	AWG	Single Cable Diameter	Minimum Bend Radius
MCP7H50-H001R30	1 ± 0.025mm	30	7.1 ± 0.35mm	Single bend: 35.5mm Assembly/repeated bend: 71mm
MCP7H50-H01AR30	1.5 ± 0.025mm			
MCP7H50-H002R26	2 ± 0.050mm	26	9.4 ± 0.4mm	Single bend: 47mm Assembly/repeated bend: 94mm
MCP7H50-H02AR26	2.5 ± 0.050mm			
MCP7H50-H003R26	3 ± 0.050mm			

Note 1. The minimum assembly bending radius (close to the connector) is 10x the cable's outer diameter. The repeated bend (far from the connector) is also 10x the cable's outer diameter. The single bend (far from the connector) is 5x the cable's outer diameter.

Figure 1. Assembly Bending Radius

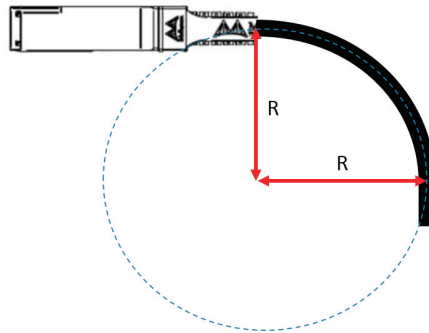
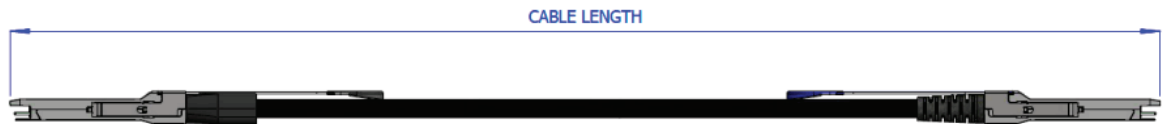


Figure 2. Cable Length



# Mechanical Schematics

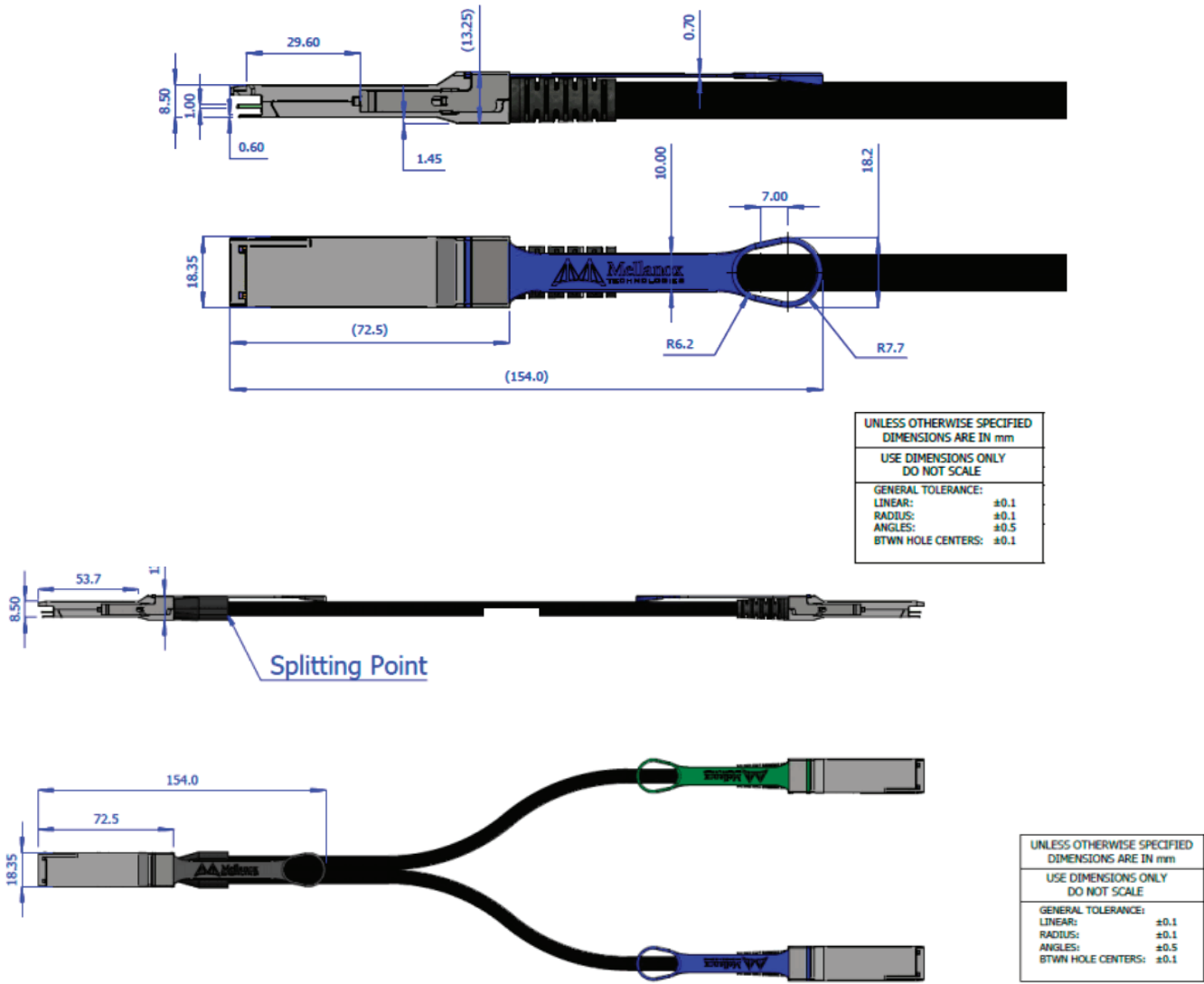


Table 5 - Part Numbers and Descriptions

Part Number	Description
MCP7H50-H001R30	Mellanox® passive copper hybrid cable, IB HDR 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56, colored pulltabs, 1m, 30AWG
MCP7H50-H01AR30	Mellanox® passive copper hybrid cable, IB HDR 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56, colored pulltabs, 1.5m, 30AWG
MCP7H50-H002R26	Mellanox® passive copper hybrid cable, IB HDR 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56, colored pulltabs, 2m, 26AWG
MCP7H50-H02AR26	Mellanox® passive copper hybrid cable, IB HDR 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56, colored pulltabs, 2.5m, 26AWG
MCP7H50-H003R26	Mellanox® passive copper hybrid cable, IB HDR 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56, colored pulltabs, 3m, 26AWG

Note: xx = reach; R = rainbow pulltab color; yy = wire gauge

## Warranty Information

Mellanox LinkX DAC cables include a 1-year limited hardware warranty, which covers parts repair or replacement.



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