



400GbE to 8x50GbE (QSFP-DD to 8xSFP56) Direct Attach Copper Splitter Cable

MCP7F80-W0xxRyy

Mellanox® MCP7F80-W0xxRyy DAC splitter cables are a high speed, cost-effective 400GbE to 8 x 50GbE Ethernet connectivity solution, designed to meet the growing needs for higher bandwidth in data centers.

MCP7F80-W0xxRyy cables provide connectivity between system units with a QSFP-DD port on one side and up to eight different SFP56 ports on the other side. The cable connects data signals from each of the 8 copper pairs on the QSFP-DD end to the single pair of each of the SFP56 ends. Each QSFP-DD/SFP56 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. They enable 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



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HIGHLIGHTS

- 400GbE to 8x50GbE data rate
- Compliant I²C management interfaces:
 - QSFP-DD CMIS on QSFP-DD end
 - SFF-8472 on SFP end
- Operating case temperature of 0-70°C
- Single 3.3V supply voltage
- BER better than 1E-15 with Mellanox end-to-end systems
- Hot pluggable
- RoHS compliant
- Low Smoke Zero Halogen (LSZH) jacket
- LF (Lead Free) HF (Halogen Free) PCB

Table 4 - Cable Mechanical Specifications

Ordering Part No.	Length Tolerance	AWG	Single Cable Diameter	Minimum Bend Radius	Minimum Assembly Space	Cable Color
MCP7F80-W001R30	1m ± 0.025mm	30	4.8 ± 0.2mm	Single bend: 24mm Assembly/repeated bend: 48mm	195mm	Black
MCP7F80-W01AR30	1.5m ± 0.025mm					
MCP7F80-W002R26	2m ± 0.050mm	26	5.1 ± 0.3mm	Single bend: 25.5mm Assembly/repeated bend: 51mm	Assembly space calculation is based on repeated bend radius.	
MCP7F80-W02AR26	2.5m ± 0.050mm					
MCP7F80-W003R26	3m ± 0.050mm					

Figure 1. Assembly Bending Radius

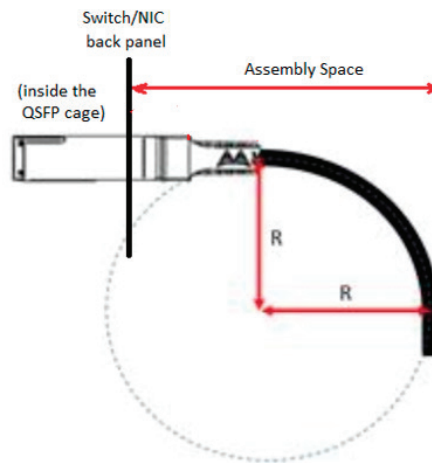
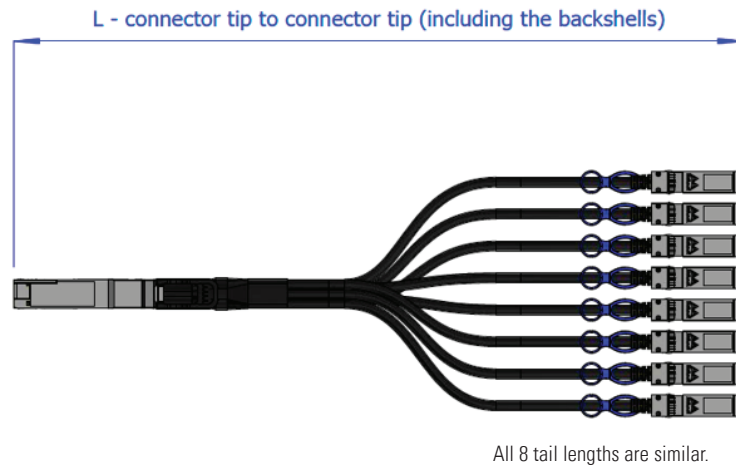
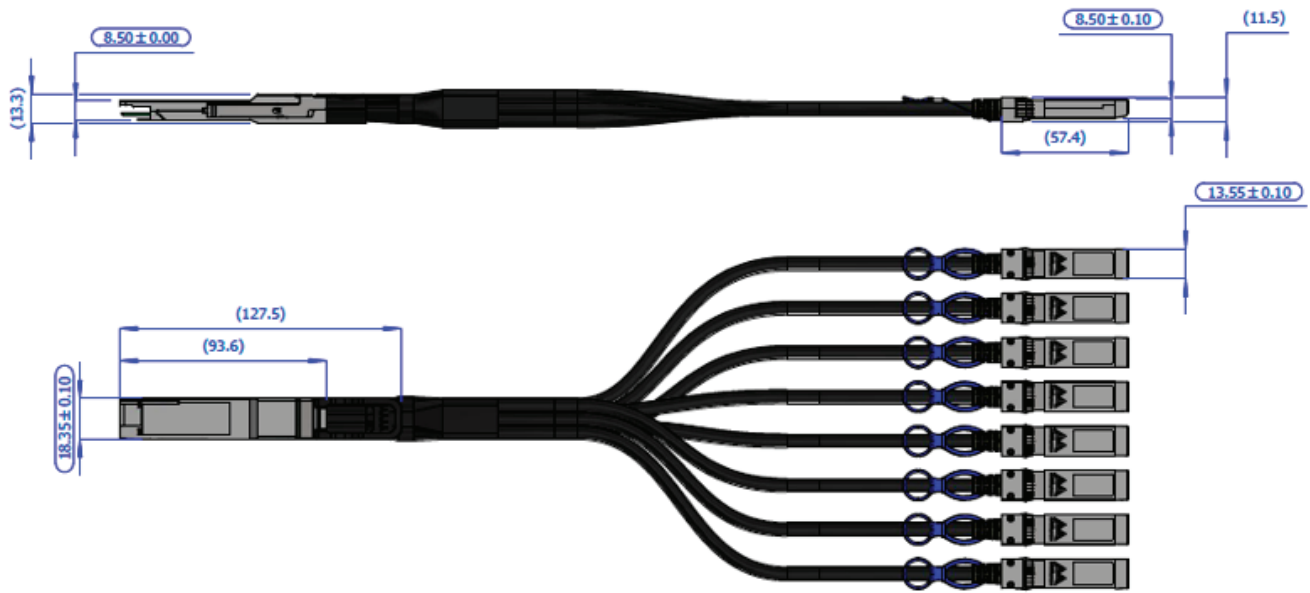


Figure 2. Cable Length



Mechanical Schematics



Actual colors of the tails are not shown in the illustration above.

Table 5 - Part Numbers and Descriptions

Part Number	Description
MCP7F80-W001R30	Mellanox® DAC splitter cable, 400GbE, 400Gb/s to 8x50Gb/s, QSFP-DD to 8xSFP56, 1m, 30AWG
MCP7F80-W01AR30	Mellanox® DAC splitter cable, 400GbE, 400Gb/s to 8x50Gb/s, QSFP-DD to 8xSFP56, 1.5m, 30AWG
MCP7F80-W002R26	Mellanox® DAC splitter cable, 400GbE, 400Gb/s to 8x50Gb/s, QSFP-DD to 8xSFP56, 2m, 26AWG
MCP7F80-W02AR26	Mellanox® DAC splitter cable, 400GbE, 400Gb/s to 8x50Gb/s, QSFP-DD to 8xSFP56, 2.5m, 26AWG
MCP7F80-W003R26	Mellanox® DAC splitter cable, 400GbE, 400Gb/s to 8x50Gb/s, QSFP-DD to 8xSFP56, 3m, 26AWG

Notes: xx = reach; yy = wire gauge

Raw cables are provided from different sources to ensure supply chain robustness.

Warranty Information

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