25GbE SFP28 Direct Attach Copper Cables

MCP2M00-Axxx

Mellanox® MCP2M00-Axxx passive copper cable is a high speed, cost-effective, 25Gb/s Ethernet connectivity solution designed to meet the growing needs for higher bandwidth in data centers.

The MCP2M00 passive copper cable contains a single high-speed copper pair, operating at data rates of up to 25Gb/s. The cables are compliant with the IEEE P802.3by Ethernet standard and SFF-8402 SFP28 standard. Each SFP28 connector comprises an EEPROM providing product information which can be read by the host system.

Mellanox's unique, quality, passive, copper, cable solutions provide 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 production testing ensures the best out-of-the-box installation experience, performance, and durability.

HIGHLIGHTS

– Up to 25Gb/s data rate
– SFF-8402 compliant
– Operating case temperature of 0-70°C
– Single 3.3V supply voltage
– BER better than 1E-15
– Hot pluggable
– RoHS6 compliant
– Supports IEEE 802.3by
– Tested in an end-to-end system

Table 1 - Cable Specifications and Ordering Information

Max Reach (m)	Gauge (AWG)	Max Cable Diameter (mm)	Min Bend Radius (mm)	Length Tolerance	Part Number
0.5	30	4.5 ±0.2mm (PVC)	Single bend: 22.5mm Repeated bend: 45mm	±25	MCP2M00-A00A
1					MCP2M00-A001
1.5					MCP2M00-A01A
2				±50	MCP2M00-A002
2.5					MCP2M00-A02A
3	28	4.7±0.3mm (PVC)	Single bend: 23.5mm Repeated bend: 47mm		MCP2M00-A003
4	26	5.2±0.3mm	Single bend: 26mm Repeated bend: 52mm		MCP2M00-A004E26L
5					MCP2M00-A0054E26L

Notes: Both the bending radius and the assembly bending radius are for a single time bending. The minimum assembly bending radius for a single bending is 10x the cable's diameter. See Figure 1 for the cable length definition. See Table 4 for the part number descriptions.

Table 2 - 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 3 - 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	%

Mechanical Schematics
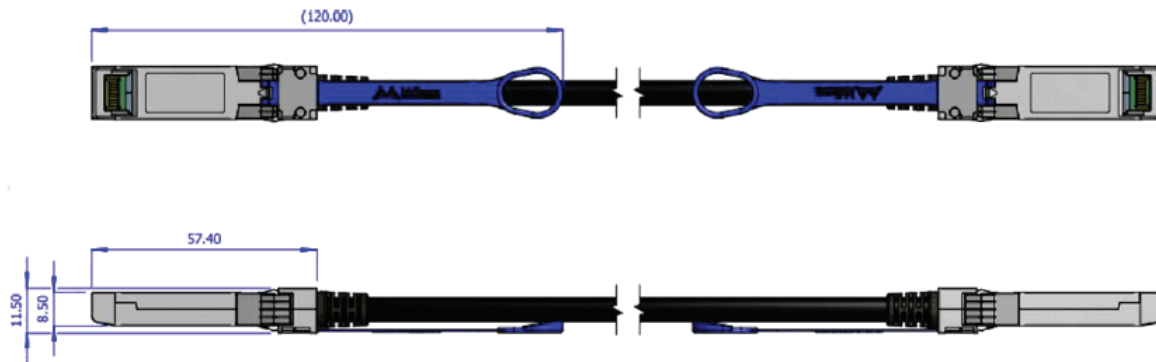
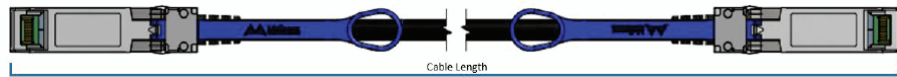**Figure 1.** *Cable Length Definition*

Table 4 - Part Numbers and Descriptions

OPN	Description
MCP2M00-A00A	Mellanox® Passive Copper cable, ETH, up to 25Gb/s, SFP28, 0.5m
MCP2M00-A001	Mellanox® Passive Copper cable, ETH, up to 25Gb/s, SFP28, 1m
MCP2M00-A01A	Mellanox® Passive Copper cable, ETH, up to 25Gb/s, SFP28, 1.5m
MCP2M00-A002	Mellanox® Passive Copper cable, ETH, up to 25Gb/s, SFP28, 2m
MCP2M00-A02A	Mellanox® Passive Copper cable, ETH, up to 25Gb/s, SFP28, 2.5m
MCP2M00-A003	Mellanox® Passive Copper cable, ETH, up to 25Gb/s, SFP28, 3m
MCP2M00-A004E26L	Mellanox® Passive Copper cable, ETH, up to 25Gb/s, SFP28, 4m, Black, 26AWG, CA-L
MCP2M00-A005E26L	Mellanox® Passive Copper cable, ETH, up to 25Gb/s, SFP28, 5m, Black, 26AWG, CA-L

Warranty Information

Mellanox LinkX direct attach copper cables include a 1 year limited hardware warranty, which covers parts repair or replacement.

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