100GbE to 4x25GbE (QSFP28 to 4xSFP28) Direct Attach Copper Splitter Cable

MCP7F00-Axxx

The Mellanox® MCP7F00-AXXX passive copper splitter cable is a high speed, cost-effective 100GbE to 4x25GbE Ethernet connectivity solution, designed to meet the growing needs for higher bandwidth in data centers.

MCP7F00 cables are compliant with SFF-8402 SFP28 and SFF-8665 QSFP28 standard specifications and provide connectivity between system units with QSFP28 port on one side and up to four different SFP28 ports on the other. The cable connects data signals from each of the 4 copper pairs on the QSFP28 end to the single pair of each of the SFP28 ends. Each (Q)SFP 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

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

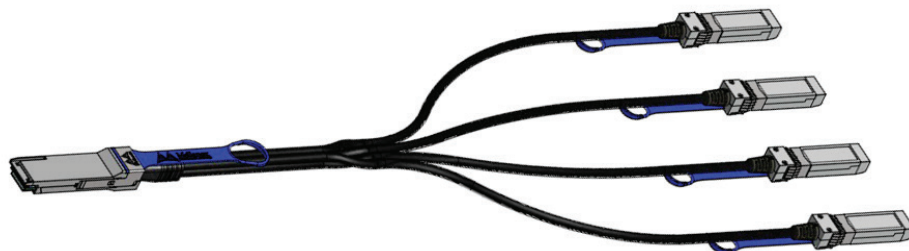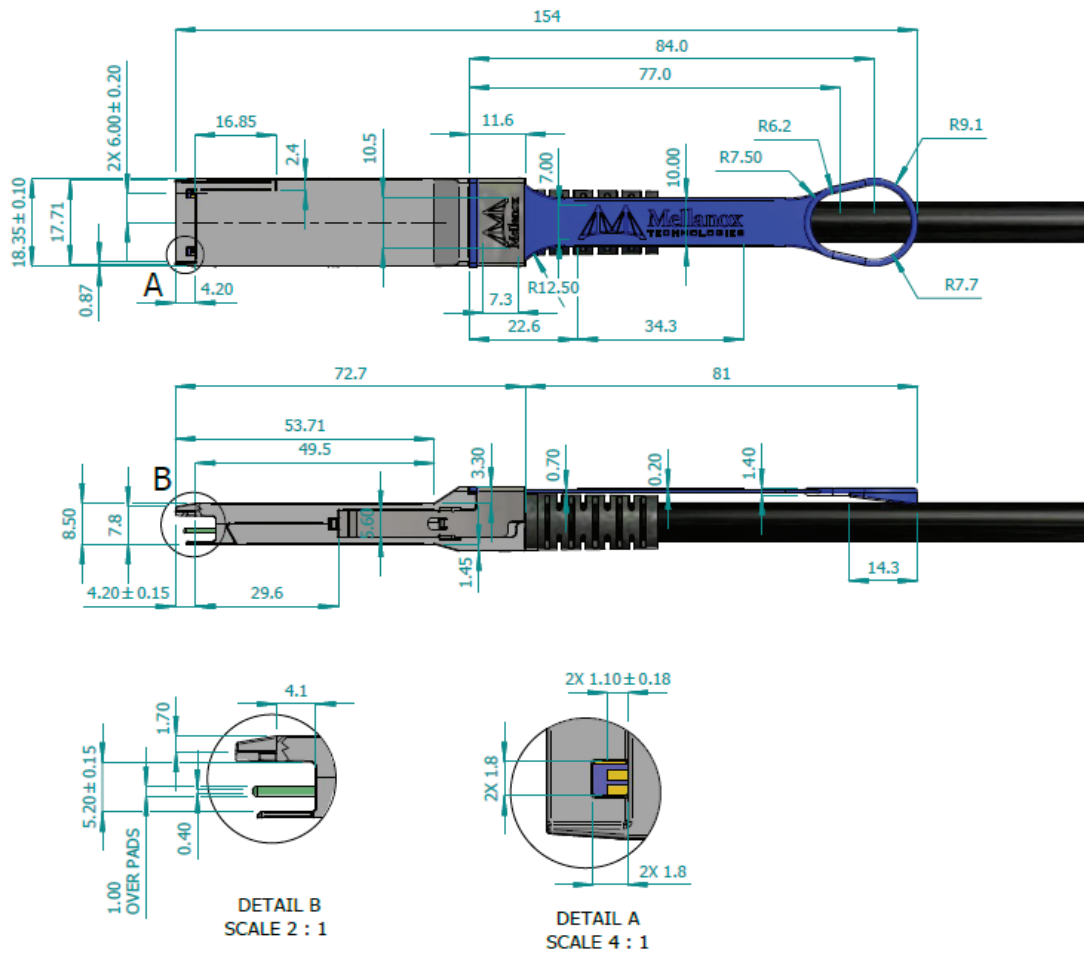| Parameter	Minimum	Typical	Maximum	Units
Characteristic impedance	90	100	110	Ω
Time delay (informative)	---	---	4.5	ns/m

HIGHLIGHTS

– 100GbE to 4x25GbE data rate

– 40GbE to 4x10GbE data rate

– SFF-8402 SFP28 compliant

– SFF-8665 QSFP28 compliant

– Operating case temperature of 0-70°C

– Single 3.3V supply voltage

– BER better than 1E-15

– Hot pluggable

– RoHS compliant

– SFF-8431/8432 compliant

– Supports IEEE 802.3bj and 802.3by

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†For illustration only. Actual products may vary.

Table 4 - Cable Mechanical Specifications

OPN (see Table 5)	AWG	Cable Length	Single Cable Diameter	Minimum Bend Radius	Length Tolerance
MCP7F00-A001	30	1	4.5 ± 0.2 mm (PVC)	Single bend: 23mm Repeated bend: 45mm	± 25mm
MCP7F00-A01A		1.5			
MCP7F00-A002		2			
MCP7F00-A02A		2.5			
MCP7F00-A003	28	3	4.7± 0.3 mm (PVC)	Single bend: 24mm Repeated bend: 47mm	± 50mm

Note 1. See Figure 1 for the cable length definition.
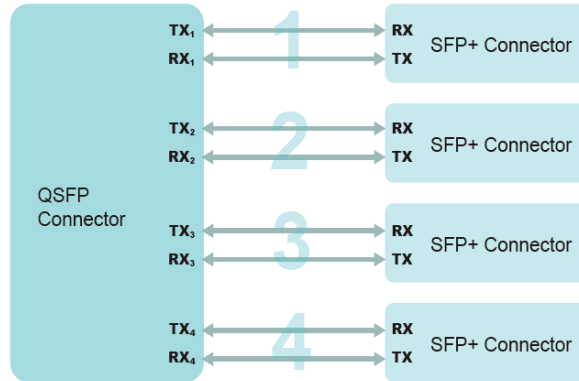
Mechanical Schematics

Mechanical Schematics (cont.)

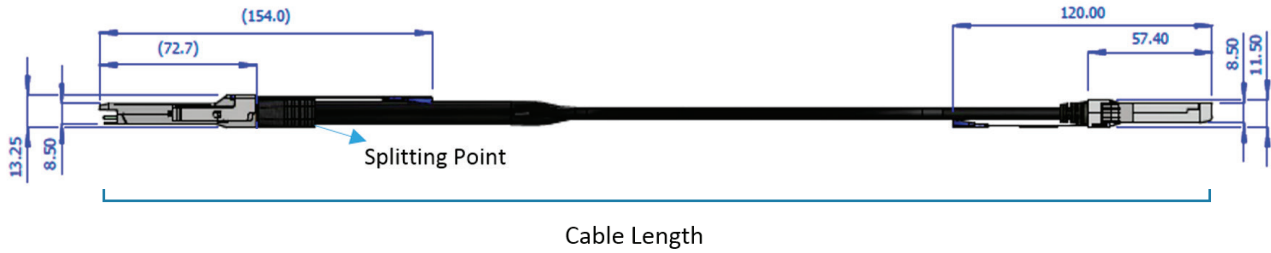**Figure 1.** *Cable Length Definition*

Cable Length

Table 5 - Part Number and Description

OPN	Description
MCP7F00-A001	Mellanox® passive copper hybrid cable, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 1m, 30AWG
MCP7F00-A01A	Mellanox® passive copper hybrid cable, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 1.5m, 30AWG
MCP7F00-A002	Mellanox® passive copper hybrid cable, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 2m, 30AWG
MCP7F00-A02A	Mellanox® passive copper hybrid cable, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 2.5m, 30AWG
MCP7F00-A003	Mellanox® passive copper hybrid cable, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 3m, 28AWG

Note 1. See Figure 1 for the cable length definition.

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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