

100Gb/s QSFP28 Direct Attach Copper Cable

MCP1600-E0xxEyy

Mellanox® MCP1600-E0xxEyy DAC cables are high speed, cost-effective alternatives to fiber optics in InfiniBand 100Gb/s EDR applications.

Mellanox QSFP28 passive copper cables⁽¹⁾ contain four high-speed copper pairs, each operating at data rates of up to 25Gb/s. Each QSFP28 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	Min	Max	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	Min	Typical	Max	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	Min	Typical	Max	Units
Characteristic impedance	90	100	110	Ω
Propagation delay (informative)	--	--	4.5	ns/m

HIGHLIGHTS

- Up to 100Gb/s data rate
- SFF-8665 compliant QSFP28
- Operating case temperature 0-70°C
- Single 3.3V supply voltage
- Bit Error Rate (BER) better than 1E-15 with Mellanox systems
- Hot pluggable
- RoHS compliant
- LSZH (Low Smoke Zero Halogen) jacket
- LF (Lead Free) HF (Halogen Free) PCB
- SFF-8636 compliant I²C management interface

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

Table 4 - Cable Mechanical Specifications

OPN	AWG	Length (m)	Single Cable Diameter	Minimum Bend Radius	Length Tolerance
MCP1600-E00AE30	30	0.5	7.1 ± 0.35mm	Single bend: 35.5mm Repetitive and assembly bend: 71mm	±25mm
MCP1600-E001E30		1			
MCP1600-E01AE30		1.5			
MCP1600-E002E30		2			
MCP1600-E02AE26	26	2.5	9.4 ± 0.4mm	Single bend: 47mm Repetitive and assembly bend: 94mm	±50mm
MCP1600-E003E26		3			
MCP1600-E004E26		4			
MCP1600-E005E26		5			

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

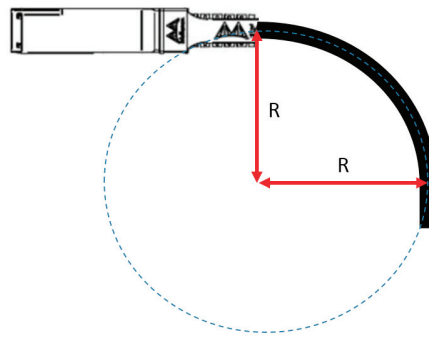
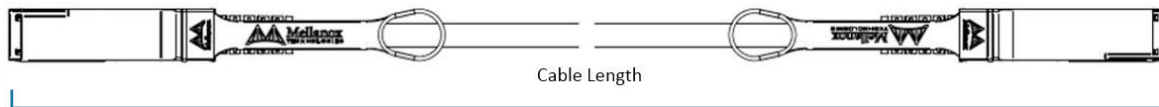


Table 5 - Part Numbers and Descriptions

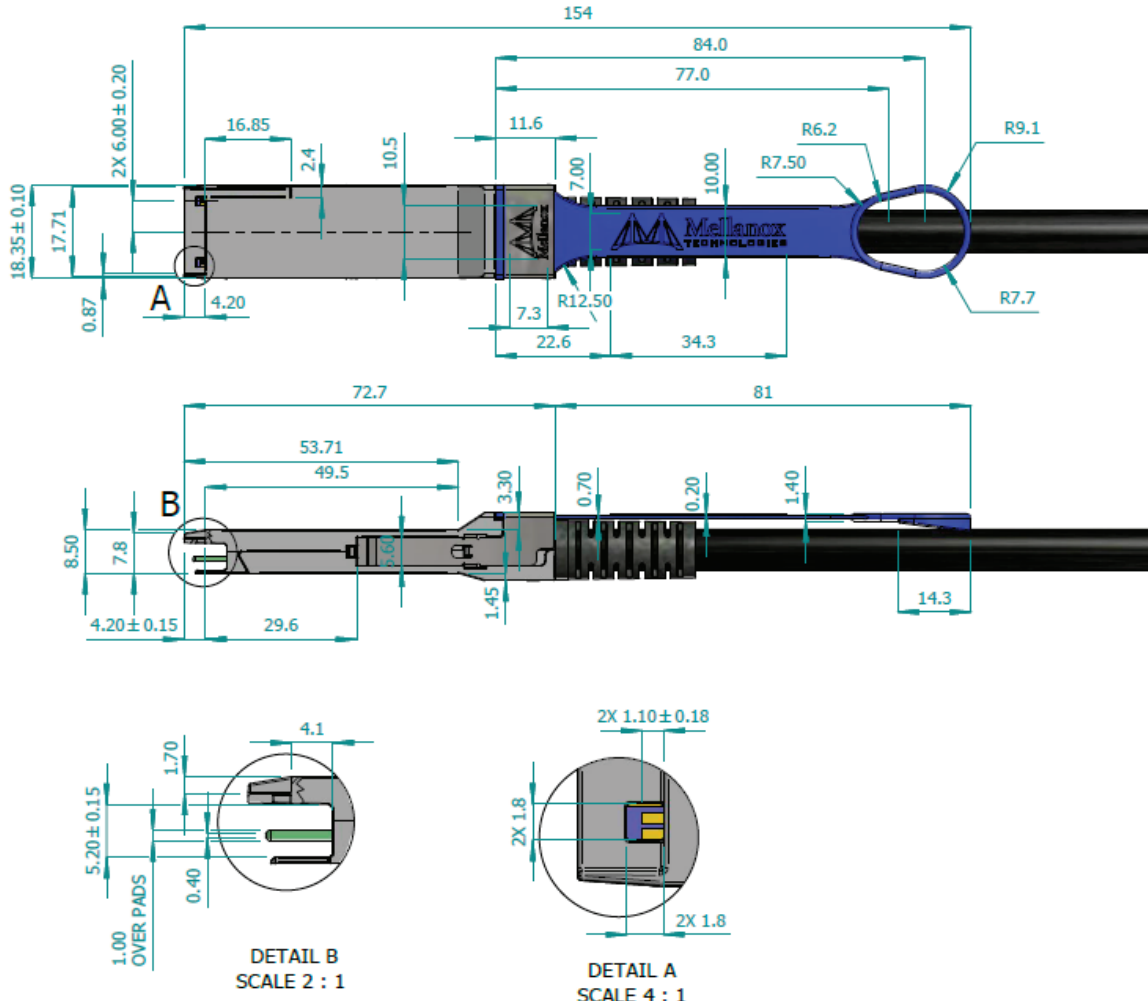
Part Number	Description
MCP1600-E00AE30	Mellanox® Passive Copper cable, IB EDR, up to 100Gb/s, QSFP28, 0.5m, Black, 30AWG
MCP1600-E001E30	Mellanox® Passive Copper cable, IB EDR, up to 100Gb/s, QSFP28, 1m, Black, 30AWG
MCP1600-E01AE30	Mellanox® Passive Copper cable, IB EDR, up to 100Gb/s, QSFP28, 1.5m, Black, 30AWG
MCP1600-E002E30	Mellanox® Passive Copper cable, IB EDR, up to 100Gb/s, QSFP28, 2m, Black, 30AWG
MCP1600-E02AE26	Mellanox® Passive Copper cable, IB EDR, up to 100Gb/s, QSFP28, 2.5m, Black, 26AWG
MCP1600-E003E26	Mellanox® Passive Copper cable, IB EDR, up to 100Gb/s, QSFP28, 3m, Black, 26AWG
MCP1600-E004E26	Mellanox® Passive Copper cable, IB EDR, up to 100Gb/s, QSFP28, 4m, Black, 26AWG
MCP1600-E005E26	Mellanox® Passive Copper cable, IB EDR, up to 100Gb/s, QSFP28, 5m, Black, 26AWG

Note. See Figure 2 for the cable length definition.
 Note 2. xx = reach; yy = wire gauge.

Figure 2. Cable Length Definition



Mechanical Schematics



Warranty Information

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