



100GbE to 4x25GbE (QSFP28 to 4xSFP28) MMF Active Optical Splitter Cable

MFA7A50-Cxxx

Mellanox® MFA7A50 is a VCSEL-based (Vertical Cavity Surface-Emitting Laser), cost-effective, 100GbE to 4x25GbE, active optical splitter cable designed for use in 100GbE Ethernet systems.

The MFA7A50 cable is compliant with SFF-8402 for the SFP28 ends and with SFF-8665 for the QSFP28 end. It provides connectivity between system units with a QSFP28 port on one side and up to four different SFP28 ports on the other side, such as a switch and four servers. The cable connects data signals from each of the 4 MMF (Multi Mode Fiber) pairs on the QSFP28 end to the single pair of each of the SFP28 ends. Each QSFP and SFP port comprises an EEPROM providing product and status monitoring information which can be read by the host system.

Mellanox's unique, quality, active, fiber, cable solutions provide power-efficient connectivity for data center 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	3.465	V
Data input voltage	-0.3	3.465	V
Control input voltage	-0.3	4.0	V

Table 2 - Operational Specifications

Parameter	Minimum	Typical	Maximum	Units
Supply voltage (Vcc)	3.145	3.3	3.465	V
Power dissipation (QSFP28 end, no retiming)	---	1.8	2.0	W
Power dissipation (QSFP28 end, retiming both directions)	---	2.3	2.5	W
Power dissipation (SFP28 end, no retiming)	---	0.45	0.5	W
Power dissipation (SFP28 end, both directions)	---	0.7	0.8	W
Supply noise tolerance (10Hz-10MHz)	66	---	---	mVpp
Operating case temperature	0	---	70	°C
Operating relative humidity	5	---	85	%

Table 3 - Cable Mechanical Specifications

Parameter	Value	Units
Diameter	3	mm
Minimum bend radius	30	mm
Length tolerance	Length < 5m: +300/-0 5 m < Length < 30m: +500/-0	mm



HIGHLIGHTS

- 100GbE to 4x25GbE data rate
- Programmable Rx output amplitude and pre-emphasis
- Programmable Tx input equalizer
- Selectable retiming
- SFF-8665 compliant (QSFP end)
- SFF-8402 compliant (SFP ends)
- Single 3.3V power supply
- 2.5W power dissipation (typ., QSFP end, with retiming)
- 0.8W power dissipation (typ., SFP end, with retiming)
- BER better than 1E-15
- Up to 30m length
- Hot pluggable
- RoHS compliant
- I²C management interface

Mechanical Schematics

Figure 1. QSFP28 End

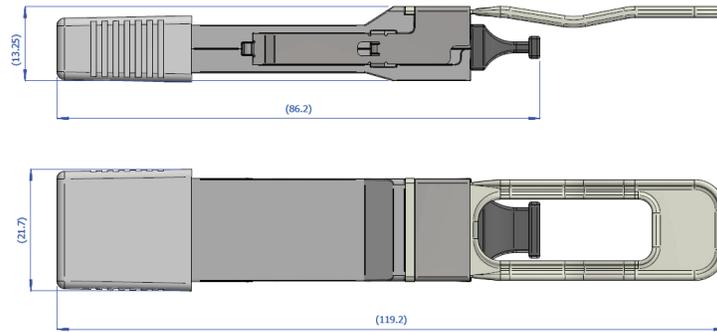


Figure 2. SFP28 Ends

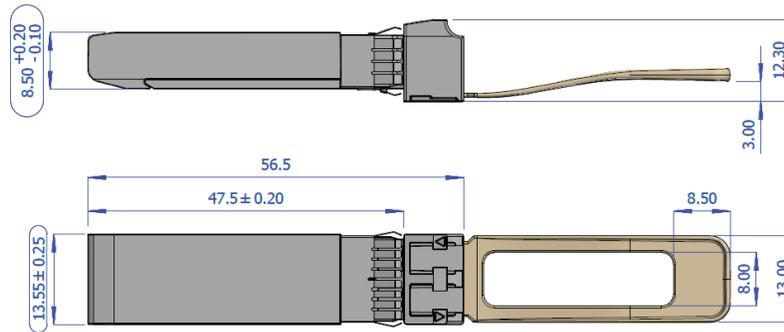


Figure 3. Mechanical Dimensions



Figure 4. Cable Length



Table 4 - Part Numbers and Descriptions

OPN	Description
MFA7A50-C003	Mellanox® active fiber hybrid solution, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 3m
MFA7A50-C005	Mellanox® active fiber hybrid solution, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 5m
MFA7A50-C010	Mellanox® active fiber hybrid solution, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 10m
MFA7A50-C015	Mellanox® active fiber hybrid solution, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 15m
MFA7A50-C020	Mellanox® active fiber hybrid solution, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 20m
MFA7A50-C030	Mellanox® active fiber hybrid solution, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 30m

Note 1. See Figure 4 for the cable length definition.

Warranty Information

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



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