



100Gb/s EDR SR4 QSFP28 MMF Optical Transceiver

MMA1B00-E100

Mellanox® MMA1B00-E100 pluggable optical transceiver is designed for use in 100Gb/s InfiniBand link protocol applications. This SFF-8665 compliant transceiver is a flexible alternative to an Active Optical Cable (AOC) as it combines high port density and configurability with longer reach than passive copper cables in the data centers. The MMA1B00-E100 transceiver has a standard QSFP28 port on the electrical side towards the host system.

The optical cable is attached via a standard MPO connector. The optical interface comprises four optical beams/fibers in each direction, intended for multimode optical cable attachments. Each fiber/beam operates at signaling rates up to 25.78125GBd.

Note that Mellanox EDR AOCs and transceivers including MMA1B00-E100 work in Mellanox end-to-end Ethernet applications.

However, the Ethernet version of the transceiver (MMA1B00-C100D) is generally not supported in InfiniBand applications.

Rigorous production testing ensures the 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
Damage threshold, per optical lane	3.4	---	dBm
Storage temperature	-40	85	°C

Table 2 - Operational Specifications

Parameter	Minimum	Typical	Maximum	Units
Supply voltage	3.135	3.3	3.465	V
Power dissipation (no retiming)	---	1.5	1.8	W
Power dissipation (retiming on all lanes)	---	2.2	2.5	W
Supply noise tolerance (10Hz - 10MHz)	66	---	---	mVpp
Operating case temperature	0	---	70	°C
Operating relative humidity	5	---	85	%

HIGHLIGHTS

- Up to 100Gb/s data rate
- Programmable Rx output amplitude
- Programmable Rx output emphasis
- Programmable Tx input equalizer
- Selectable retiming
- SFF-8665 compliant
- 3.3V power supply
- QSFP28 power class 3
- BER better than 1E-15
- Class 1 laser safety
- Maximum link length of 70m on OM3 and 100m on OM4 multimode fiber at 100Gb/s
- Hot pluggable
- RoHS compliant
- IEEE 802.3 100GBASE-SR4 compliant
- I²C management interface

Mechanical Schematics

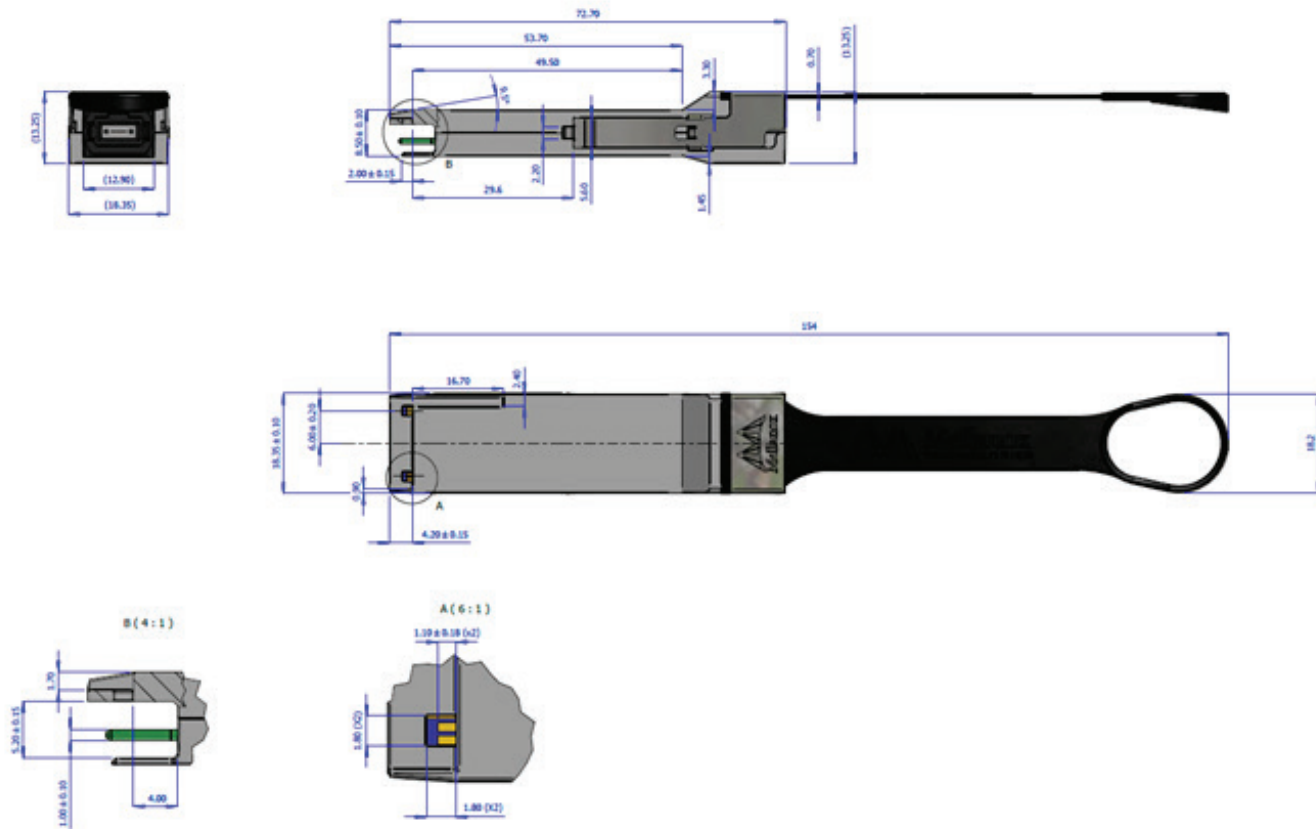


Table 3 - Part Number and Description

OPN	Description
MMA1B00-E100	Mellanox® transceiver, 1B EDR, up to 100Gb/s, QSFP28, MPO, 850nm, up to 100m

Warranty Information

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