



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 center.

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 fibers in each direction and is intended for multimode optical cable attachments. Each fiber operates at signaling rates up to 25.78125GBd.

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 Information

Parameter	Minimum	Typical	Maximum	Units
Supply voltage (Vcc)	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
- Very low power consumption 2.2W
- Designed with Mellanox ICs
- 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

Table 3 - Electrical Specifications

Parameter (per lane)	Minimum	Typical	Maximum	Units
J2	---	---	0.44	UI
J9	---	---	0.69	UI
Output transition time	10	---	---	ps

Mechanical Schematics

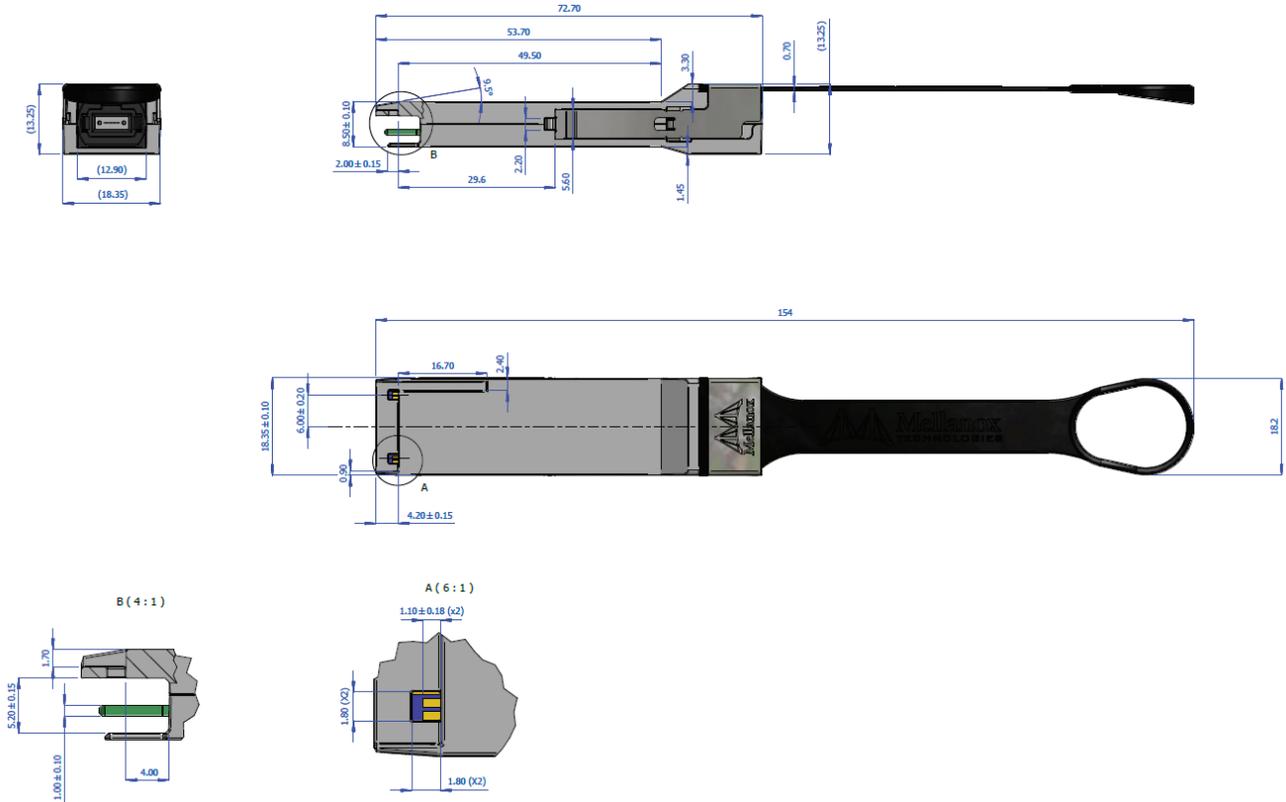


Table 4 - Part Number and Description

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.



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