



40GbE QSFP+ SR4 Optical Transceiver

MMA1B00-B150D

Mellanox® MMA1B00-B150D is a 4-channel, pluggable, QSFP+, VCSEL-based (Vertical Cavity Surface Emitting Laser) optical transceiver designed for up to 150m reach in 40Gb/s Ethernet networks operating at 4x10.3125Gb/s. This transceiver incorporates Mellanox integrated circuit technology, which combines high performance at low power. The transceiver operates over parallel multi-mode fiber (MMF), using a nominal wavelength of 850nm, and is SFF-8436 compliant.

The MMA1B00-B150D transceiver has a standard QSFP+ connector on the electrical side towards the host system for power, control/monitoring and high-speed data. The optical interface is composed of four optical channels/fibers in each direction, intended for a parallel MMF cable via a standard MPO connector. The transceiver can operate 10.3125Gb/s without retiming.

The transceiver provides digital diagnostic monitoring of supply voltage, temperature, transmit/receive power, and VCSEL bias.

Rigorous production testing ensures the 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	3.465	V
Control input voltage	-0.3	4	V
Damage threshold ^(a)	3.4	--	dBm
Storage temperature	-40	85	°C

Note a: The receiver may not operate correctly at this input power level.

Table 2 - Operational Information

Parameter	Min	Typical	Max	Units
Supply voltage	3.135	3.3	3.465	V
Power dissipation	--	1.3	1.5	W
Supply noise tolerance (10Hz-10MHz)	66	--	--	mVpp
Operating case temperature	0	--	70	°C
Operating relative humidity	5	--	85	%RH



HIGHLIGHTS

- 40GbE (4x10GbE) Ethernet
- Programmable Tx input equalizer
- Programmable Rx output amplitude
- Programmable Rx output emphasis
- SFF-8436 compliant QSFP+
- Single 3.3V supply
- QSFP+ power class 1
- BER better than 1E-15
- Class 1 laser safety
- Up to 150m on OM4 and 100m on OM3 multi-mode fiber
- Digital diagnostic monitoring (DDM)
- Hot pluggable
- RoHS compliant
- IEEE 802.3 40GBASE-SR4 compliant
- SFF-8636 compliant I²C management interface

Mechanical Schematics

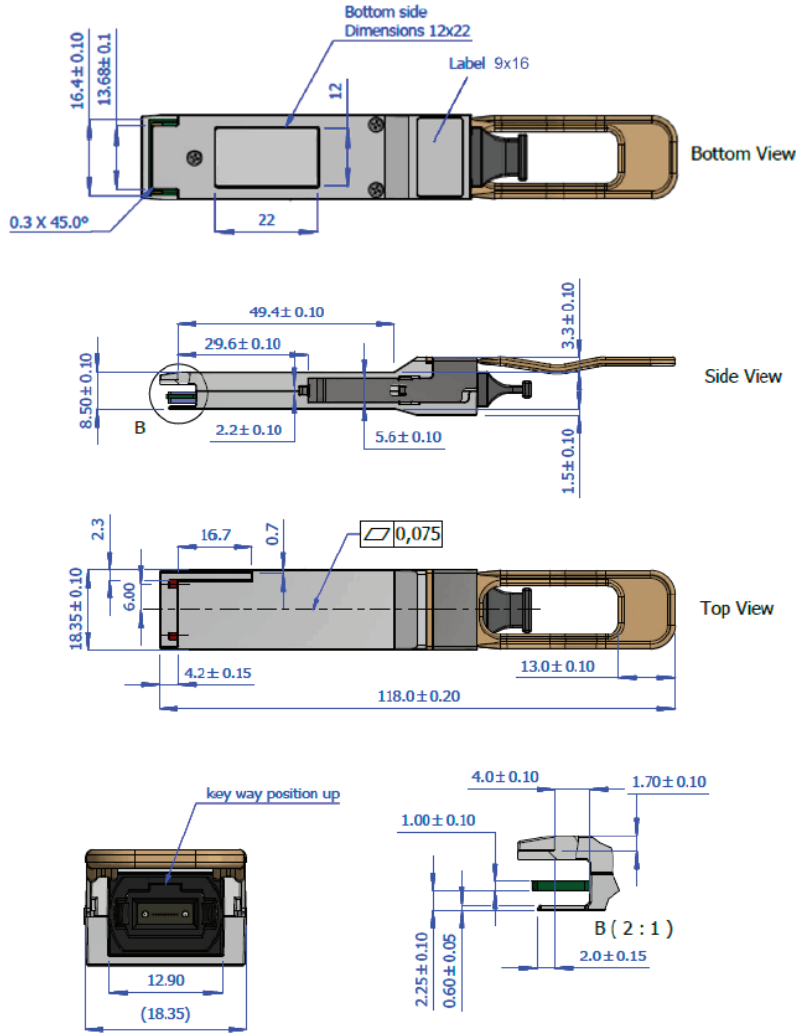


Table 3 - Part Number and Description

OPN	Description
MMA1B00-B150D	Mellanox® transceiver, 40GbE, QSFP+, MPO, 850nm, SR4, up to 150m, DDMI

Warranty Information

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