

HDR QSFP56 MMF Transceiver

MMA1T00-HS

Mellanox® MMA1T00-HS transceiver is a 4-channel, pluggable, QSFP56, optical transceiver designed for use in 200Gb/s InfiniBand applications. This module incorporates Mellanox integrated circuit technology in order to provide high performance. The transceiver operates over 4-lane parallel multi-mode fiber (MMF), using a nominal wavelength of 850nm, and is QSFP56 MSA compliant.

The transceiver has a standard SFF-8665 compliant QSFP56 connector on the electrical side towards the host system. The optical interface is composed of four optical channels/fibers in each direction, intended for a parallel multi-mode optical cable via a standard MPO-12 UPC connector. Each channel/fiber operates at signaling rates up to 26.5625 GBd. Rigorous production testing ensures the best out-of-the-box installation experience, performance and durability.

The MMA1T00-HS transceiver has Digital Diagnostic Monitoring functions for supply voltage, temperature, laser bias current, optical transmit and receive levels with associated warning and alarm thresholds.

The MMA1T00-HS transceiver will work with a fiber plant as specified in the QSFP MSA standard.



HIGHLIGHTS

- Up to 200Gb/s data rate
- Up to 100m on OM4 and 70m on OM3 multimode fiber at 200Gb/s
- 4x 50Gb/s PAM4 modulation
- Programmable Rx output amplitude and emphasis
- Adaptive Tx input equalizer
- SFF-8665 compliant QSFP56 port
- SFF-8636 DDM compliant
- Single 3.3V power supply
- 4.5W power dissipation
- BER better than 1E-15 with Mellanox systems
- QSFP56 power class 5
- Class 1 laser safety
- Hot pluggable
- RoHS compliant
- IEEE 802.3 200GAUI-4 / 200GBASE-SR4 compliant
- MPO-12 UPC male receptacle connector
- SFF-8636 compliant I²C management interface

Table 1 - Absolute Maximum Ratings

Parameter	Minimum	Maximum	Units
Supply voltage	-0.3	3.6	V
Data input voltage	-0.3	3.465	V
Control input voltage	-0.3	4.0	V
Damage threshold	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 (each end, retiming on all lanes)	---	4.5	5.0	W
Supply noise tolerance (10Hz-10MHz)	66	---	---	mVpp
Operating case temperature	0	---	70	°C
Operating relative humidity	5	---	85	%

Mechanical Schematics

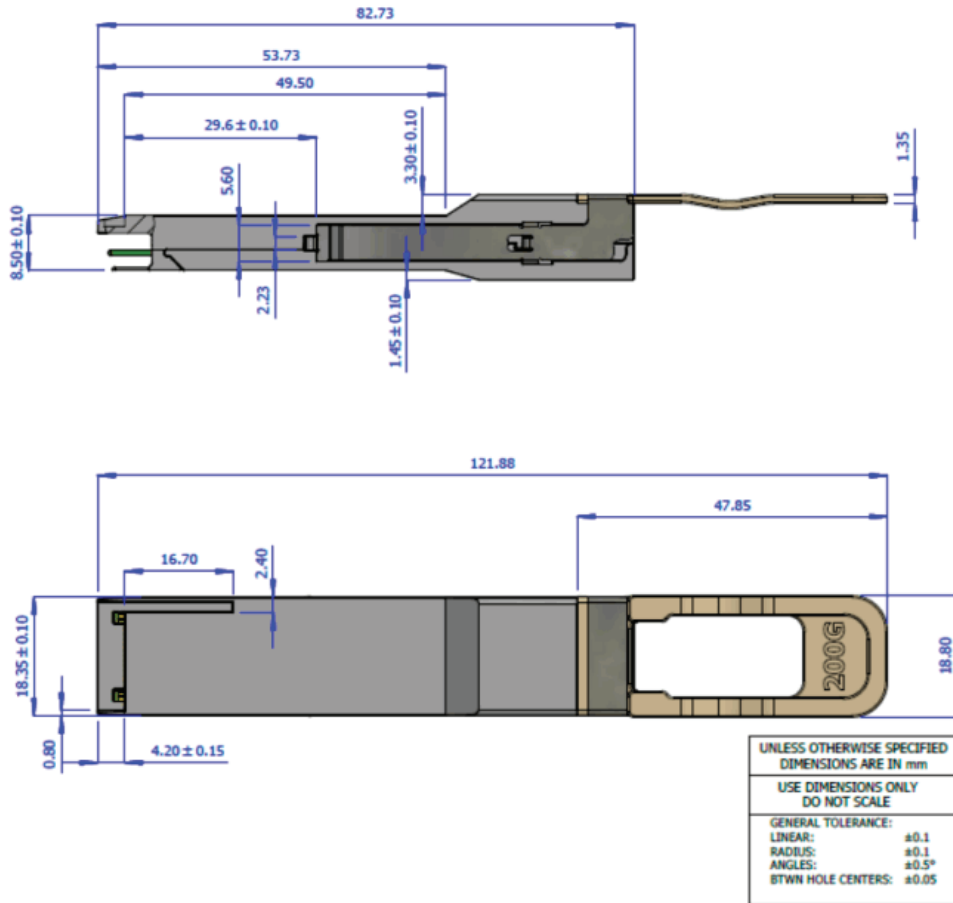


Table 3 - Part Number and Description

OPN	Description
MMA1T00-HS	Mellanox® transceiver, HDR, up to 200Gb/s, QSFP56, MPO, 850nm, SR4, up to 100m

Warranty Information

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