

# Dynamix QSA™ QSA28 QSFP28 to SFP28 Adapter



## MAM1Q00A-QSA28

Mellanox Dynamix QSA™ QSA28, QSFP28 to SFP28 adapter, enables a smooth cost-effective connection between a single lane transceiver/cable and a quad lane port. The QSA28 provides the option to connect an SFP28/SFP+/SFP transceiver or cable to a QSFP28 port of an Nx100Gbps switch or network interface card (NIC).

The QSA28 should be installed into a QSFP28 port, and is intended to either connect a switch QSFP28 port to a NIC SFP28 port, or connect a NIC QSFP28 port to a switch SFP28 port. For example, an SFP28-based cable can be connected to Mellanox's 100GbE ConnectX®-4 NIC and to the 32 x 100GbE SN2700 Ethernet switch. The QSA28 conforms to the SFF-8402 for the SFP28 side and to SFF-8665 for the QSFP28 standards and is thoroughly tested to meet strict quality requirements. The adapter has a QSFP28 form factor with a receptacle for SFP28 transceiver/AOC/DAC connector. The QSA28 provides a solution for integrating systems using different vendors' equipment, since it is vendor agnostic and provides a direct path to the SFP unit's memory. The QSA28 interoperates with all major optical module and direct attach copper cable vendors.

Its design ensures minimum loss on the conversion path between the QSFP28 cage and the SFP28 receptacle. The RF (high speed data) channel of the SFP28 receptacle is connected to lane 1 of the QSFP28 connector. The three remaining RF channels on the QSFP28 connector are not connected. Dynamix QSA28 is qualified for 10GbE SFP+ and 1GbE SFP transceivers meeting the Small Form Factor Pluggable (SFP) Transceiver Multi-source Agreement (MSA).

Table 1 - Absolute Maximum Ratings

Parameter	Minimum	Maximum	Units
Supply voltage	-0.3	3.6	V
Data input voltage	-0.3	3.6 <sup>†</sup>	V
Control input voltage	-0.3	3.6	V

Note 1. Subject to the SFP's specifications.

Table 2 - Operational Specifications

Parameter	Minimum	Typical	Maximum	Units
Supply voltage (Vcc)	3.135	3.3	3.465	V
Power consumption	---	---	0.1	W
Operating case temperature for MAM1Q00A-QSA28	0	---	70	°C
Operating case temperature for MAM1Q00A-QSA28_E	-10	---	85	°C
Operating relative humidity	5	---	85	%
Storage temperature	-40	---	85	°C

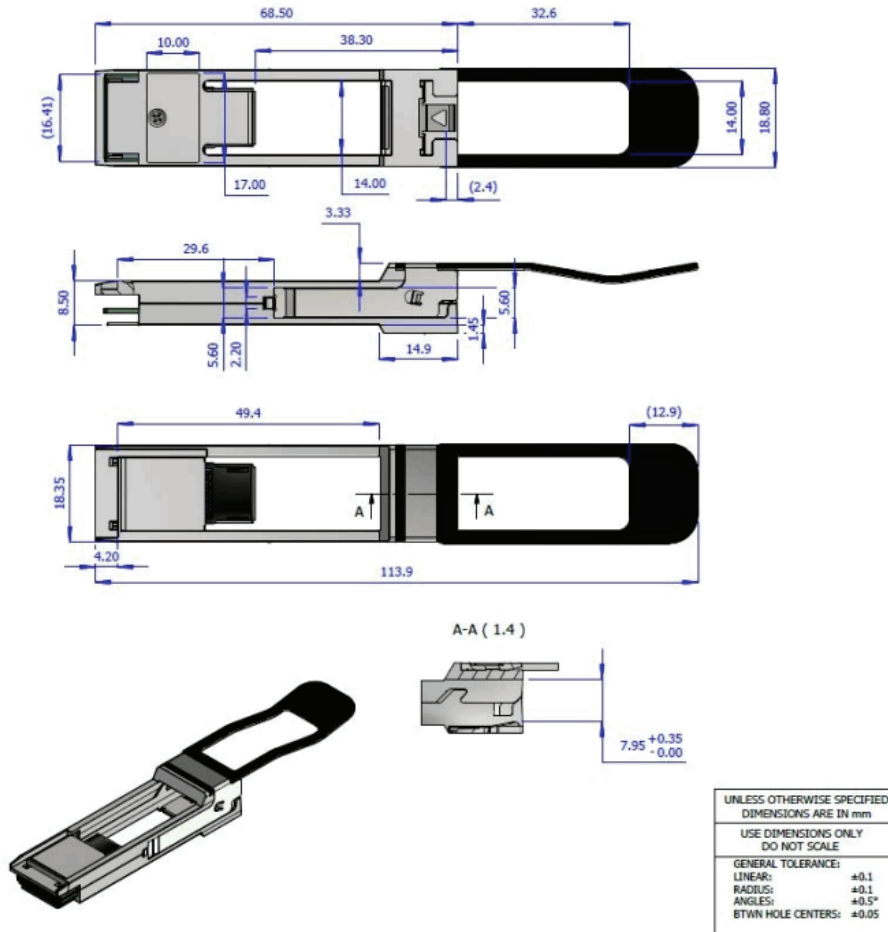
## HIGHLIGHTS

- Industry-leading price and performance
- Trouble-free installation and network bring-up
- Compliant to industry standards
  - QSFP28 MSA SFF-8665
  - SFP28 MSA SFF-8402
- Low insertion loss
- Registered US patent 7,934,959
- Matched impedance
- Secure latching mechanism
- Built-in EEPROM for product identification
- RoHS compliant
- SFF-8636 compliant I<sup>2</sup>C management interface

Table 3 - Electrical Specifications

Parameter	Minimum	Typical	Maximum	Units
Characteristic impedance	90	100	110	$\Omega$

## Mechanical Schematics



Note: The SFP+/SFP mating paddle card dimension A10 (length of component/solder mask keep-out area, refer to SFF-8071) shall be >6.0mm instead of >5.5mm. The reason for this requirement is to prevent damaging the adapter when trying to insert an SFP upside down.

Table 4 - Part Number and Description

OPN	Description
MAM1Q00A-QSA28	Mellanox® cable module, ETH 25GbE, 100Gb/s to 25Gb/s, QSFP28 to SFP28
MAM1Q00A-QSA28_E	Mellanox® cable module, ETH 25GbE, 100Gb/s to 25Gb/s, QSFP28 to SFP28, extended temperature

## Warranty Information

Mellanox DynamiX QSA28 adapters include a 1-year limited hardware warranty, which covers parts repair or replacement.