

400GbE QSFP-DD DR4 1310nm Optical Transceiver



MMS1V00-WM

Mellanox® MMS1V00-WM transceiver is a single-mode, 4-channel (DR4), QSFP-DD optical transceiver designed for 400 Gigabit Ethernet (GbE) links on up to 500m of single mode fiber.

MMS1V00-WM converts 8 input channels of 50Gb/s PAM4 electrical data to 4 channels of 100Gb/s PAM4 optical signals, using a nominal wavelength of 1310nm, for 400Gb/s optical transmission.

The transceiver has a standard QSFP-DD 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 single mode optical cable via a standard MPO connector.

Rigorous production testing ensures the best out-of-the-box installation experience, performance and durability.

Table 1 - Absolute Maximum Ratings

Parameter	Min	Max	Units
Storage temperature	-40	85	°C
Operating case temperature	0	70	°C
Supply voltage (Vcc)	-0.5	3.6	V
Relative humidity (non-condensing)	5	95	%
Control input voltage	-0.3	Vcc + 0.5	V

Table 2 - Recommended Operating Conditions and Power Supply Requirements

Parameter	Min	Typical	Max	Units
Power supply voltage	3.135	3.3	3.465	V
Instantaneous peak current at hot plug	-	-	4800	mA
Sustained peak current at hot plug	-	-	3960	mA
Maximum power dissipation	-	-	12	W
Maximum power dissipation, low power mode	-	-	1.5	W
Signaling rate per lane	-	53.125	-	GBd
Two wire serial interface clock rate	-	-	400	kHz
Power supply noise tolerance (10Hz-10MHz)	-	-	66	mV
Rx differential data output load	-	100	-	Ohm
Operating distance	2	-	500	m

HIGHLIGHTS

- Two wire serial interface with digital diagnostic monitoring
- Operating case temperature 0-70°C
- Maximum power consumption 12W
- Compliant with IEEE 802.3bs-2017 standard:
 - 400GBASE-DR4 optical interface
 - 400GAUI-8 electrical interface
- QSFP-DD MSA HW Rev 5.0; Type 2 housing with MPO-12 connector compliant
- QSFP-DD CMIS Rev 4.0 compliant
- Complies with EU Directive 2011/65/ EU (RoHS compliant)

Mechanical Schematics

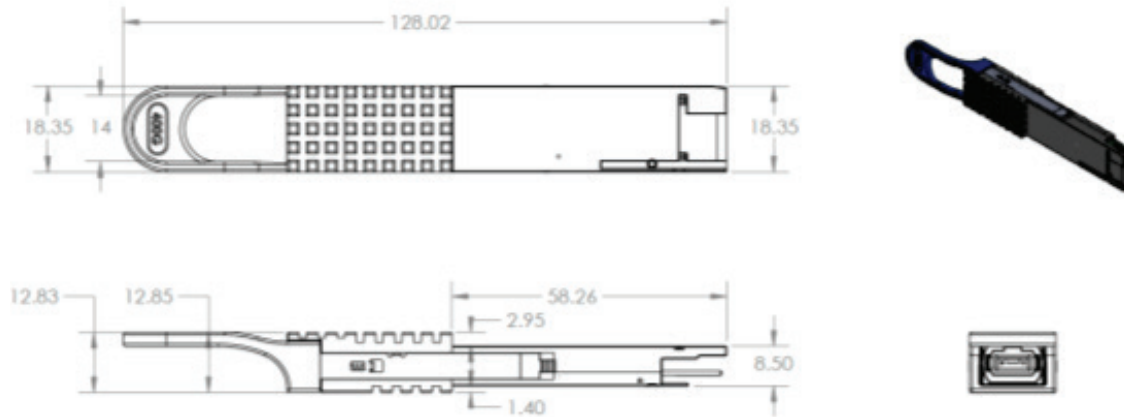


Table 3 - Part Number and Description

OPN	Description
MMS1V00-WM	Mellanox® transceiver, 400GbE, QSFP-DD, MPO, 1310nm, DR4

Warranty Information

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