



MFM1T02A-T-OPC

Mellanox® MFM1T02A-T Compatible TAA 100/1000/10000Base-TX SFP+ Transceiver (Copper, 30m, RJ-45)

Features

- SFF-8432 Compliance
- RJ-45 Connector
- Copper Media Type
- Commercial Temperature 0 to 70 Celsius
- Hot Pluggable
- Metal with Lower EMI
- Excellent ESD Protection
- RoHS Compliant and Lead Free



Applications:

- 10GBase Ethernet
- Access and Enterprise

Product Description

This Mellanox® MFM1T02A-T compatible SFP+ transceiver provides 100/1000/10000Base-TX throughput up to 30m over a copper connection via a RJ-45 connector. It can operate at temperatures between 0 and 70C. This TX module supports 100/1000/10000Base auto-negotiation and can be configured to fit your needs. Our transceiver is built to meet or exceed OEM specifications and is guaranteed to be 100% compatible with Mellanox®. It has been programmed, uniquely serialized, and tested for data-traffic and application to ensure that it will initialize and perform identically. All of our transceivers comply with Multi-Source Agreement (MSA) standards to provide seamless network integration. This transceiver is Trade Agreements Act (TAA) compliant. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

OptioConnect's transceivers are RoHS compliant and lead-free.

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Maximum Supply Voltage	V _{CC}	3.135	3.6	VDC
Storage Temperature	T _S	-40	85	°C
Operating Case Temperature	T _C	0	70	°C
Operating Humidity	RH	5	95	%
Maximum Bitrate	B _{max}		11.4	Gbps

Electrical Characteristics (TOP=25°C, V_{CC}=3.3Volts)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Power Supply Voltage	V _{CC}	3.135	3.30	3.465	V	
Low Speed Input Voltage		-0.5		V _{CC} +0.3	V	
Two-Wire Interface Input Voltage		-0.3		V _{CC} +0.5	V	
Power (30m @ 25C ambient)			2.3	2.5	W	

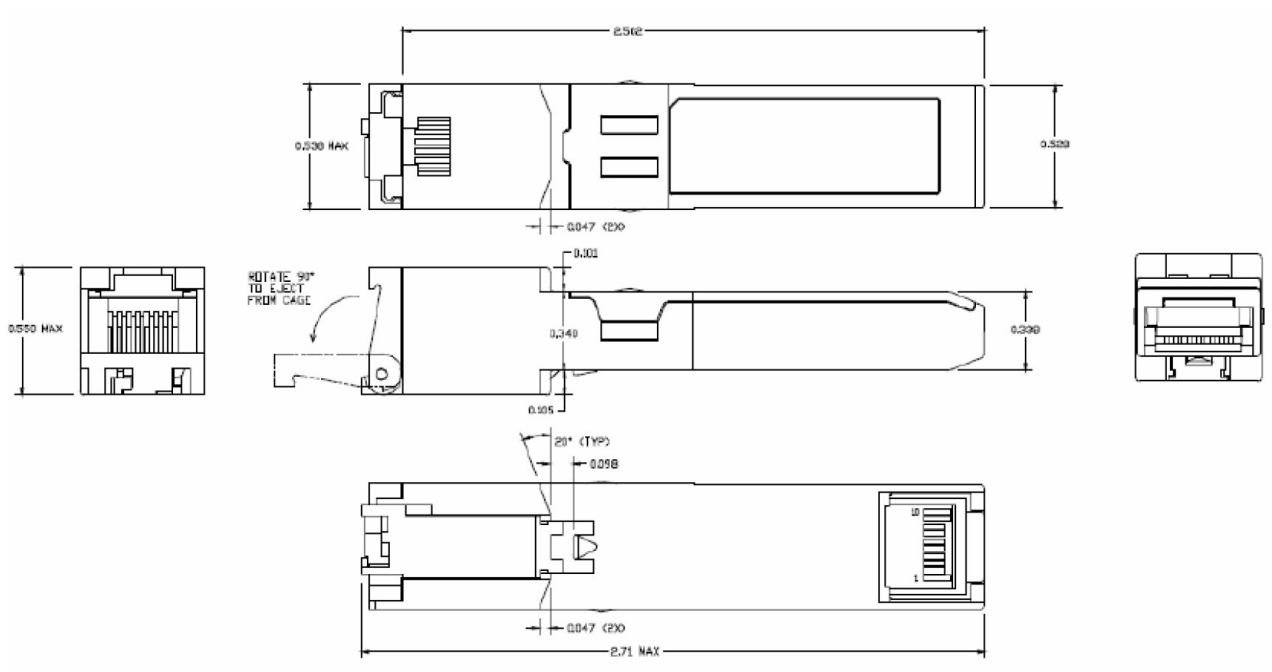
Pin Descriptions

Pin	Symbol	Name/Descriptions	Ref.
1	VeeT	Transmitter Ground	1
2	Tx_Fault	Transmitter Fault LVTTTL-O	
3	Tx_Disable	Transmitter Disable LVTTTL-I	
4	SDA	2-wire Serial Interface Data Line LVTTTL-I/O	
5	SCL	2-wire Serial Interface Clock LVTTTL-I/O	
6	Mod_ABS	Module Absent, connect to VeeT or VeeR in the module	
7	RS0	Rate Select 0 LVTTTL-I	
8	Rx_LOS	Receiver Loss of Signal Indication LVTTTL-O	
9	RS1	Rate Select 1 LVTTTL-I	
10	VeeR	Receiver Ground	1
11	VeeR	Receiver Ground	1
12	RD-	Receiver Inverted Data Output CML-O	
13	RD+	Receiver Non-Inverted Data Output CML-O	
14	VeeR	Receiver Ground	1
15	VccR	Receiver 3.3V Supply	
16	VccT	Transmitter 3.3V Supply	
17	VeeT	Transmitter Ground	1
18	TD+	Receiver Inverted Data Output CML-I	
19	TD-	Transmitter Inverted Data Input CML-I	
20	VeeT	Module Transmitter Ground	1

Notes:

1. The module signal grounds should be isolated from the module case.

Mechanical Specifications



OptioConnect

Innovation for the Future of High-Speed Networking

Who We Are

OptioConnect is reshaping the landscape of communication and high-speed networking through intelligent technology. With a core focus on cutting edge technology, we deliver smarter fiber optic solutions for enterprise networks, data centers, and next-gen telecom infrastructures.

What We Do

At OptioConnect, we fuse advanced engineering with intelligent automation to drive the future of networking. Our AI-integrated solutions are designed to optimize performance and streamline operations with:

- Superior Performance
- Network and traffic optimization
- Intelligent energy management
- Seamless OEM compatibility
- Scalable cost-efficiency

Smarter Networks by Design

Innovation isn't just a goal—it's our process. We embed AI and machine learning across our R&D and product lines, enabling adaptive performance, automated tuning, and faster deployment cycles. The result? Networks that don't just work—they learn, evolve, and outperform.

Our Team

Our engineers, data scientists, and network architects bring decades of experience and a future-focused mindset. We provide hands-on support with intelligent insights that turn complex challenges into simple solutions.

Our Mission

To deliver AI-enhanced connectivity that reduces cost, increases speed, and maximizes efficiency—empowering our partners to operate at the forefront of a rapidly evolving digital world.

Let's Connect

Discover how OptioConnect's intelligent infrastructure solutions can power your network's next leap forward.

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