

E1MG-TX-AO

Brocade® (Formerly) E1MG-TX Compatible TAA Compliant 10/100/1000Base-TX SFP Transceiver (Copper, 100m, RJ-45)

Features

- INF-8074 Compliance
- RJ-45 Connector
- Commercial Temperature 0 to 70 Celsius
- Copper Media Type
- Hot Pluggable
- Excellent ESD Protection
- Metal with Lower EMI
- RoHS Compliant and Lead Free



Applications

- 1000Base Ethernet
- Access and Enterprise

Product Description

This Brocade® (Formerly) E1MG-TX compatible SFP transceiver provides 10/100/1000Base-TX throughput up to 100m over a copper connection via a RJ-45 connector. This TX module supports 10/100/1000Base auto-negotiation and can be configured to fit your needs. It is guaranteed to be 100% compatible with the equivalent Brocade® (Formerly) transceiver. This easy to install, hot swappable transceiver has been programmed, uniquely serialized and data-traffic and application tested to ensure that it will initialize and perform identically. It is built to meet or exceed the specifications of Brocade® (Formerly), as well as to comply with MSA (Multi-Source Agreement) standards to ensure seamless network integration. This transceiver is Trade Agreements Act (TAA) compliant. We stand behind the quality of our products and proudly offer a AddOn’s transceivers are RoHS compliant and lead-free.

TAA refers to the Trade Agreements Act (19 U.S.C. & 2501-2581), which is intended to foster fair and open international trade. TAA requires that the U.S. Government may acquire only “U.S. – made or designated country end products.”



Regulatory Compliance

- ESD to the Electrical PINs: compatible with MIL-STD-883E Method 3015.4
- ESD to the LC Receptacle: compatible with IEC 61000-4-3
- EMI/EMC compatible with FCC Part 15 Subpart B Rules, EN55022:2010
- Laser Eye Safety compatible with FDA 21CFR, EN60950-1& EN (IEC) 60825-1,2
- RoHS compliant with EU RoHS 2.0 directive 2015/863/EU

Absolute Maximum Ratings

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Notes |
|-----------------------------|--------|------|--------|------|------|-------|
| Storage Temperature | Ts | -40 | | 85 | °C | |
| Operating Temperature | Top | 0 | | +70 | °C | |
| Maximum Supply Voltage | Vmax | -0.5 | | 4.0 | V | |
| Operating Relative Humidity | RH | | | 85 | % | |
| Data Rate | | | 10/100 | | Mbps | |
| Distance | | | | 100 | m | |

Electrical Specifications +3.3 Volt Electrical Power Interface

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Notes |
|---|---------------------------------|--------------|------|--------------|------|-------|
| Power Supply Voltage | Vcc | 3.13 | 3.3 | 3.47 | V | |
| Supply Current | Icc | | 300 | 350 | mA | |
| Surge Current | I _{surge} | | 30 | | A | |
| Low-Speed Signals, Electronic Characteristics | | | | | | |
| SFP Output LOW | VOL | 0 | | 0.5 | V | 1 |
| SFP Output HIGH | VOH | host_Vcc-0.5 | | host_Vcc+0.3 | V | 1 |
| SFP Input LOW | VIL | 0 | | 0.8 | V | 2 |
| SFP Input HIGH | VIH | 2 | | Vcc + 0.3 | V | 2 |
| High-Speed Electrical Interface, Transmission Line-SFP | | | | | | |
| Line Baud Rates | fL | | 125 | | MHz | 3 |
| TX Output Impedance | Z _{out} , TX | | 100 | | Ohm | 4 |
| RX Input Impedance | Z _{in} , RX | | 100 | | Ohm | 4 |
| High-Speed Electrical Interface, Host-SFP | | | | | | |
| Single ended data input swing | V _{in} | 250 | | 1200 | mV | 5 |
| Single ended data output swing | V _{out} | 300 | | 800 | mV | 5 |
| Rise/Fall Time | T _r , T _f | | 175 | | Nsec | 6 |
| TX Input Impedance | Z _{in} | | 50 | | Ohm | 5 |
| RX Output Impedance | Z _{in} | | 50 | | Ohm | 5 |

Notes:

1. 4.7k to 10k pull-up to host_Vcc, measured at host side of connector
2. 4.7k to 10k pull-up to Vcc, measured at SFP side of connector
3. 5 level encoding per IEEE802.3
4. Differential, for all frequencies between 1MHz and 125MHz
5. Single ended
6. 20%-80%

Pin Descriptions

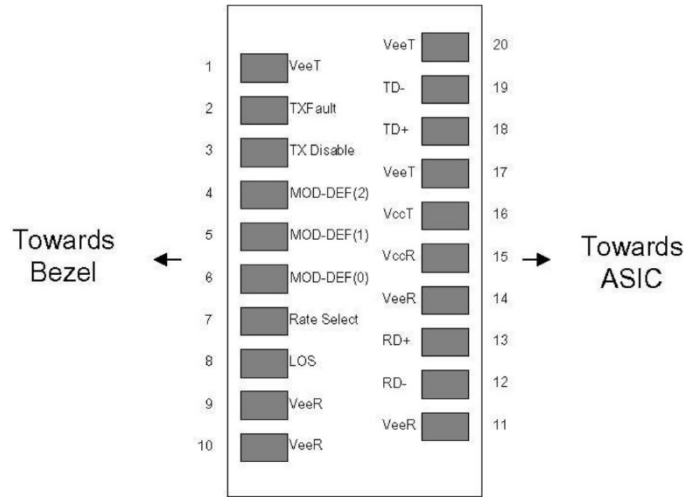
| Pin | Symbol | Name/Descriptions | Ref. |
|-----|-------------|--|------|
| 1 | VeeT | Transmitter Ground (Common with Receiver Ground). | 1 |
| 2 | TX Fault | Transmitter Fault. Not Supported | |
| 3 | TDIS | Transmitter Disabled. PHY disabled on high or open | 2 |
| 4 | MOD_DEF(2) | Module Definition 2. Data line for serial ID | 3 |
| 5 | MOD_DEF(1) | Module Definition 1. Clock line for serial ID | 3 |
| 6 | MOD_DEF(0) | Module Definition 0. Grounded within the module | 3 |
| 7 | Rate Select | No connection required | |
| 8 | LOS | Loss of Signal indication. | 4 |
| 9 | VeeR | Receiver Ground (common with Transmitter ground) | 1 |
| 10 | VeeR | Receiver Ground (common with Transmitter ground) | 1 |
| 11 | VeeR | Receiver Ground (Common with Transmitter Ground). | 1 |
| 12 | RD- | Receiver Inverted DATA out. AC Coupled. | |
| 13 | RD+ | Receiver Non-inverted DATA out. AC Coupled. | |
| 14 | VeeR | Receiver Ground (Common with Transmitter Ground). | 1 |
| 15 | VccR | Receiver Power Supply. | |
| 16 | VccT | Transmitter Power Supply. | |
| 17 | VeeT | Transmitter Ground (Common with Receiver Ground). | 1 |
| 18 | TD+ | Transmitter Non-Inverted DATA in. AC Coupled. | |
| 19 | TD- | Transmitter Inverted DATA in. AC Coupled. | |
| 20 | VeeT | Transmitter Ground (Common with Receiver Ground). | 1 |

Notes:

1. Circuit ground is connected to chassis ground
2. PHY disabled on TDIS > 2.0V or open, enabled on TDIS <0.8V
3. Should be pulled up with 4.7k-10k Ohms on host board to a voltage between 2.0V and 3.6V.MOD_DEF

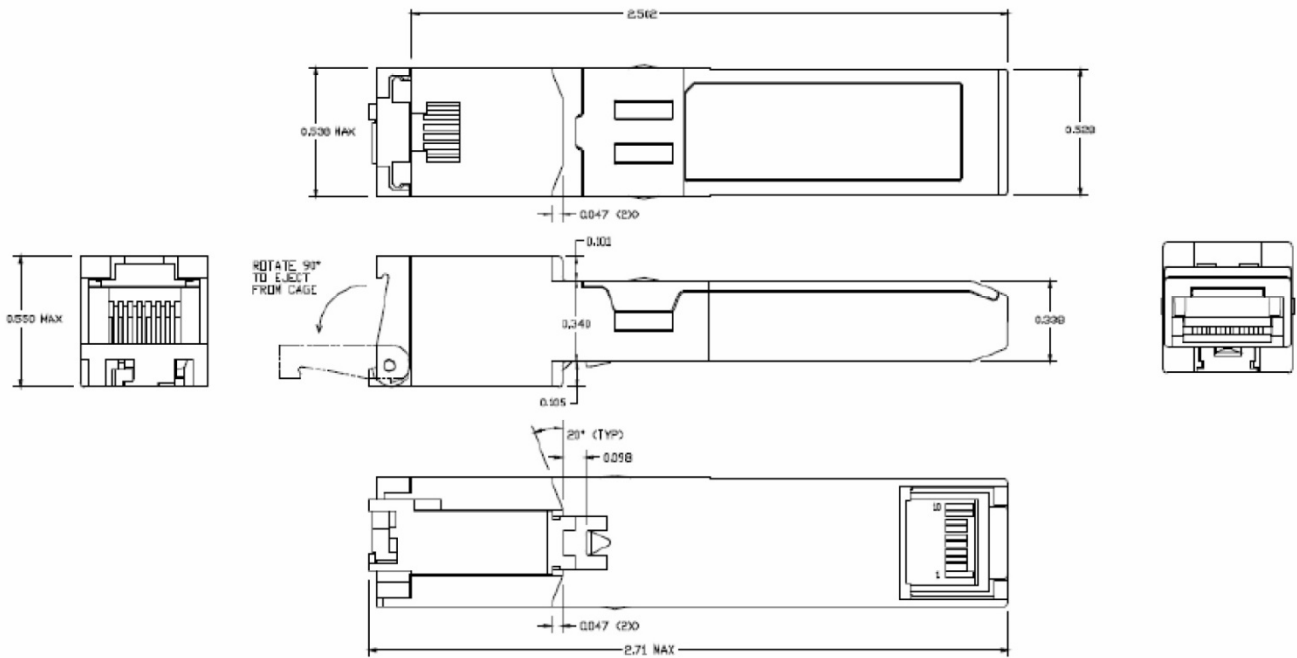
(0) pulls line low to indicate module is plugged in.

- LVTTTL compatible with a maximum voltage of 2.5V. Not supported on GE-GB-P



Pin-out of connector Block on Host board

Mechanical Specifications



About AddOn Networks

In 1999, AddOn Networks entered the market with a single product. Our founders fulfilled a severe shortage for compatible, cost-effective optical transceivers that compete at the same performance levels as leading OEM manufacturers. Adhering to the idea of redefining service and product quality not previously had in the fiber optic networking industry, AddOn invested resources in solution design, production, fulfillment, and global support.

Combining one of the most extensive and stringent testing processes in the industry, an exceptional free tech support center, and a consistent roll-out of innovative technologies, AddOn has continually set industry standards of quality and reliability throughout its history.

Reliability is the cornerstone of any optical fiber network and is engrained in AddOn's DNA. It has played a key role in nurturing the long-term relationships developed over the years with customers. AddOn remains committed to exceeding industry standards with certifications from ranging from NEBS Level 3 to ISO 9001:2005 with every new development while maintaining the signature reliability of its products.

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