

100-05656-AO

Calix® 100-05656 Compatible TAA 10/100/1000Base-TX SFP Transceiver (Copper, 100m, RJ-45, Rugged)

Features

- INF-8074 Compliance
- RJ-45 Connector
- Industrial Temperature -40 to 85 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 Calix® 100-05656 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 Calix® 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 Calix®, 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 limited lifetime warranty.

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."



Absolute Maximum Ratings

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Notes |
|-----------------------|--------|------|------|------|--------|-------|
| Data Rate | DR | 10 | | 1000 | Mb/sec | 2 |
| Cable Length | CL | | | 100 | m | 3 |
| Bit Error Rate | BER | | | 10 | | |
| Operating Temperature | TOP | -40 | | 85 | °C | 4 |
| Storage Temperature | TSTO | -40 | | 85 | °C | 5 |
| Supply Current | IS | | 320 | 375 | mA | 6 |
| Input Voltage | VCC | 3.14 | 3.3 | 3.46 | V | 7 |
| Maximum Voltage | VMAX | | | 4 | V | 6 |

Notes:

1. 10/100/1000M operation requires the host system to have an SGMII interface with no clock. With a SERDES interface, this transceiver will operate at 1000M only
2. IEEE 802.3 compatible
3. Category 5 UTP
4. Case Temperature
5. Ambient Temperature
6. For electrical power interface
7. Referenced to GND. For electrical power interface

Electrical Characteristics

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Notes | |
|--|---------|------|---------------|------|---------------|-------|---|
| High Speed Electrical Interface Host-SFP | | | | | | | |
| Single ended Input Swing | VIN | 250 | | 1200 | mV | 1 | |
| Single ended output Swing | VOUT | 275 | | 800 | mV | 1 | |
| Rise time (20%-80%) | TR | | 175 | | ps | | |
| Fall Time (20%-80%) | TF | | 175 | | ps | | |
| Tx Input Impedance | ZIN | | 50 | | ohm | 1 | |
| Rx Output Impedance | ZOUT | | 50 | | ohm | 1 | |
| High Speed Electrical Interface Transmission Line-SFP | | | | | | | |
| Line Frequency | FL | | 125 | | MHz | 2 | |
| Tx Output Impedance Differential | ZOUT_TX | | 100 | | Ohm | 3 | |
| Rx Input Impedance Differential | ZIN_RX | | 100 | | Ohm | 3 | |
| Low Speed Electrical Signal | | | | | | | |
| SFP Output | Low | VOL | 0 | | 0.5 | V | 4 |
| | High | VOH | Host_Vcc -0.5 | | Host_Vcc +0.3 | V | 4 |
| SFP Input | Low | VIL | 0 | | 0.8 | V | 4 |
| | High | VIH | 2 | | VCC + 0.3 | V | 4 |

Notes:

1. Single ended
2. 5-level encoding
3. For all frequencies between 1MHz and 125MHz
4. External 4.7-10k ohm pull-up resistor required

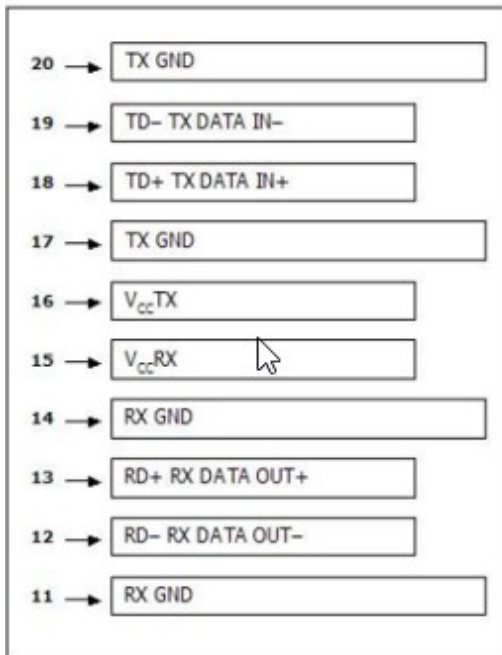
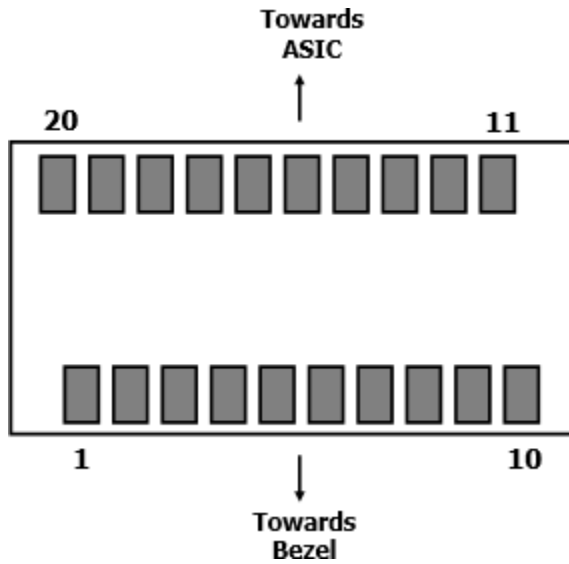
Pin Descriptions

| Pin | Symbol | Name/Descriptions | Ref. |
|-----|-------------|---|------|
| 1 | VEET | Transmitter ground (common with receiver ground) | 1 |
| 2 | TX_FAULT | Transmitter Fault. Not supported | |
| 3 | TX_DISABLE | Transmitter Disable. 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 | RX_LOS | Loss of Signal | |
| 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 |

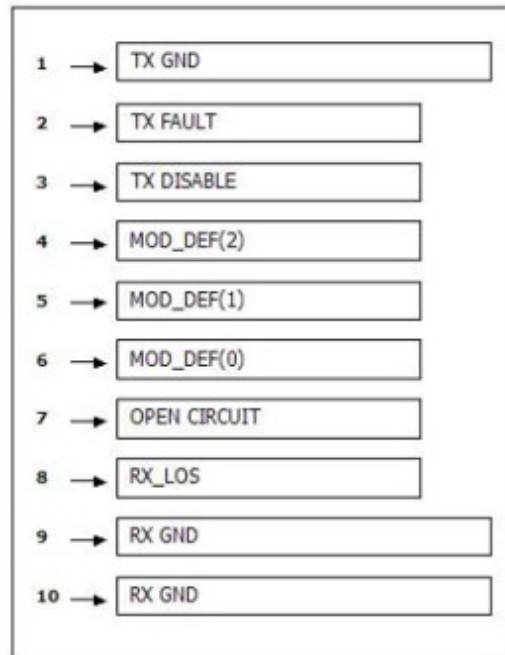
Notes:

1. Circuit ground is connected to chassis ground
2. Disabled: TX_DISABLE > 2V or open, Enabled: TX_DISABLE < 0.8V
3. Should be pulled up with 4.7k-10k ohm on host board to a voltage between 2V and 3.6V

Electrical Pad Layout

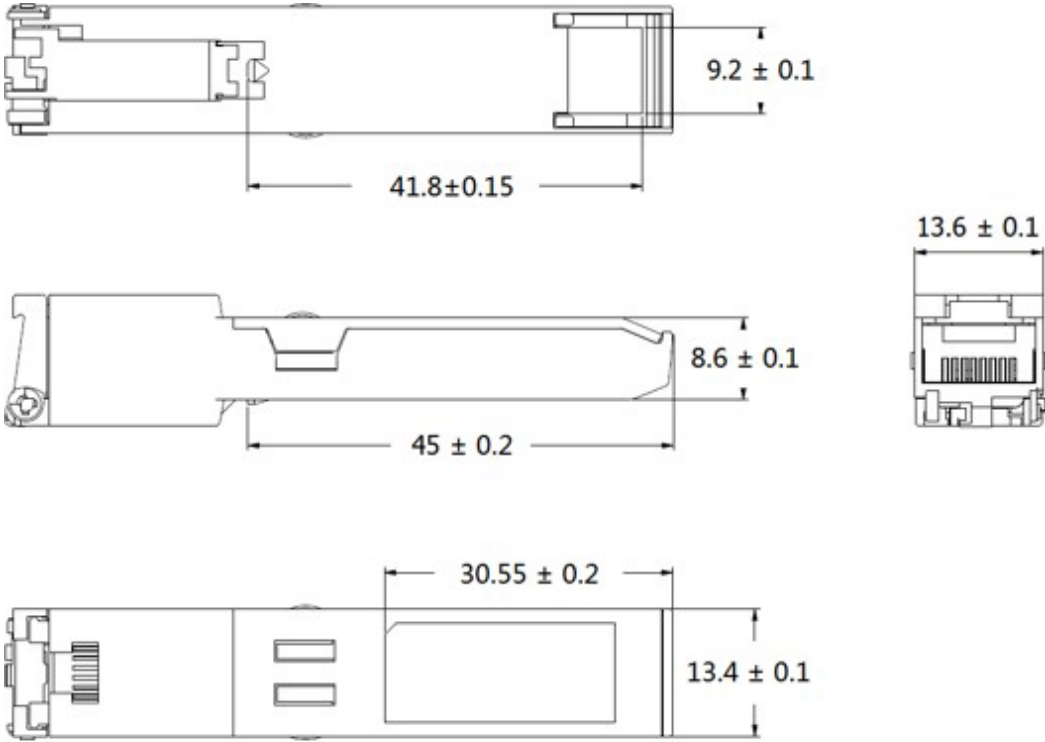


Top of Board



Bottom of Board

Mechanical Specifications



UNIT: mm

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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