



### **SFP1FTE-AB-OPC**

Allen-Bradley® SFP1FTE-AB Compatible TAA 100Base-TX SFP Transceiver (Copper, 100m, RJ-45)

#### **Features**

- INF-8074 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:**

- 100Base Ethernet
- Access and Enterprise

#### **Product Description**

This Allen-Bradley® SFP1FTE-AB compatible SFP transceiver provides 100Base-TX throughput up to 100m over a copper connection via a RJ-45 connector. It can operate at temperatures between 0 and 70C. This TX module supports 100Base 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 Allen-Bradley®. 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. | 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                                          | Isurge   |              | 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                                    | Zout, TX |              | 100  |              | Ohm  | 4     |
| RX Input Impedance                                     | Zin, RX  |              | 100  |              | Ohm  | 4     |
| High-Speed Electrical Interface, Host-SFP              |          |              |      |              |      |       |
| Single ended data input swing                          | Vin      | 250          |      | 1200         | mV   | 5     |
| Single ended data output swing                         | Vout     | 300          |      | 800          | mV   | 5     |
| Rise/Fall Time                                         | Tr, Tf   |              | 175  |              | Nsec | 6     |
| TX Input Impedance                                     | Zin      |              | 50   |              | Ohm  | 5     |
| RX Output Impedance                                    | Zin      |              | 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%

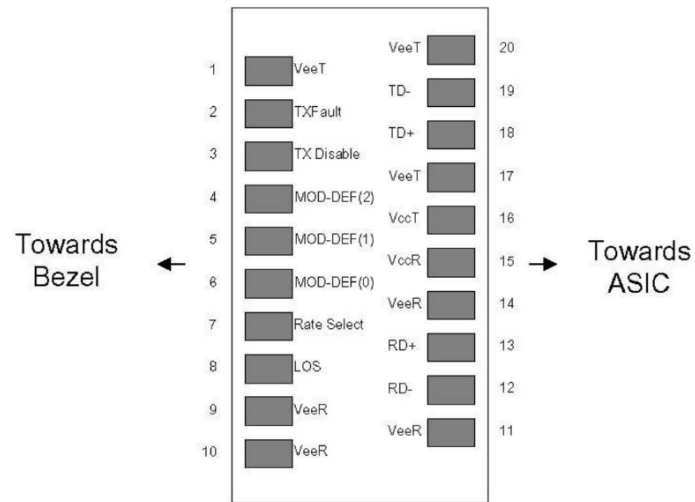
**Pin Descriptions**

| 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:**

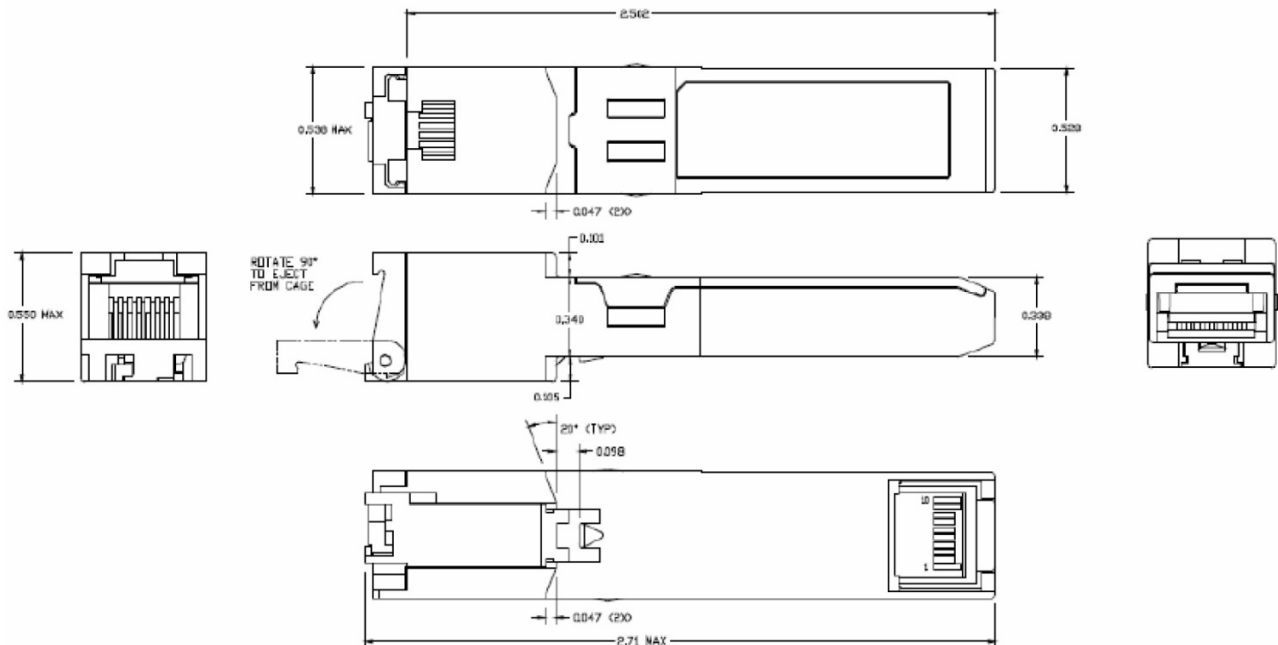
1. Circuit ground is connected to chassis ground
2. PHY disabled on TDIS > 2.0V or open, enabled on TDIS <0.8V
3. Should be pulled up with 4.7k-10k Ohms on host board to a voltage between 2.0V and 3.6V. MOD\_DEF (0) pulls line low to indicate module is plugged in.

4. 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



## **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.

[www.optioconnect.com](http://www.optioconnect.com) | [info@optioconnect.com](mailto:info@optioconnect.com)

