

## DESCRIPTION

The Single-Mode Gigabit Ethernet (GigE) Small Form-Factor Pluggable (SFP) plugs into ADTRAN GigE modules designed to accept SFPs. The SFP provides an optical interface to the GigE physical interface. Installed into an appropriate host module, the SFP provides a GigE tributary interface to the supporting system.

*NOTE: To ensure compatibility, refer to the documentation provided with the host module.*

- ◆ 1000Base-ZX: 1550 nm, single-mode, 2 fiber operation
- ◆ Maximum optical distance: 80 km

*CAUTION: Due to compliance certification requirements, only SFPs supplied by ADTRAN are to be used with ADTRAN modules. ADTRAN cannot certify system integrity with other SFPs.*

## Operational Specifications

- ◆ Optical Specifications:
  - Optical transmit level: +5 dBm to 0 dBm
  - Optical receive level: -3 dBm to -23 dBm
  - Optical budget: 22 dB
  - Optical connectors: LC
- ◆ Extended Environmental Support:
  - Operational Temperature Range: -20°C to +85°C
  - Storage Temperature Range: -40°C to +85°C
  - Relative Humidity: 95%, noncondensing

*CAUTION: The transmission distance is indicative only. An in-line optical attenuator should be inserted between the fiber-optic cable plant and the receiving port on the transceiver, according to the following guidelines:*

- Fiber span of 0 – 25 km: 10 dB attenuator
- Fiber span of 25 – 50 km: 5 dB attenuator
- Fiber span of 50 – 80 km: no attenuator

## INSTALLATION

To install the SFP into an appropriate module, complete the following steps:

1. Inspect the SFP. If damaged, file a claim with the carrier and then contact ADTRAN Customer Support.
2. Remove the safety cap from the optical connectors of the SFP.
3. Insert the SFP into the receptacle on the circuit board of the host module, with the manufacturer's label facing outward. Slide the SFP all the way into the receptacle.
4. Use thumb and forefinger to squeeze the receptacle and SFP together, to ensure a proper connection.

*NOTE: The latch on the SFP is for removal only.*

5. Continue the installation and turn-up of the host module using the instructions in the Job Aid provided with that module, or using the Installation and Maintenance Practice (I&M), available online at [www.adtran.com](http://www.adtran.com).

## PROVISIONING

The SFP is not directly provisionable. To provision the SFP, access the menu system of the host module. For more information, refer to the Job Aid or I&M of the host module for provisioning details.



**COMPLIANCE**

**CAUTION:** *Electrostatic Discharge (ESD) can damage electronic modules. When handling modules, wear an antistatic discharge wrist strap to prevent damage to electronic components. Place modules in antistatic packing material when transporting or storing. When working on modules, always place them on an approved antistatic mat that is electrically grounded.*

*The SFP is NRTL Listed to the applicable UL standards. The SFP meets or exceeds all the applicable requirements of NEBS, Telcordia GR-63-CORE, and GR-1089-CORE. The SFP is intended for deployment in Central Office type facilities, EEEs, EECs, and locations where the NEC applies (for example, Customer Premises). Install the SFP in an ADTRAN product located in a restricted access location.*

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference
2. This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by ADTRAN could void the user's authority to operate this equipment.

**CAUTION:** *Per GR-1089-CORE the ADTRAN system that the SFP is being deployed in is designed and intended for installation as part of a Common Bonding Network (CBN). The ADTRAN system that the SFP is being deployed in is not designed nor intended for installation as part of an Isolated Bonding Network (IBN).*

*Per GR-1089-CORE Section 9, the SFP does not have an internal DC connection between battery return and frame ground. The SFP can be installed in a DC-I (isolated) or DC-C (common) installation. For installations where other cards or the host system have internal connections between battery return and frame ground, the system would be intended for deployment only in a DC-C installation.*

*The ADTRAN system chassis frame ground terminal must be connected to an earth ground to ensure that the metal enclosure of the SFP is properly grounded via the backplane connector.*

**NOTE:** *The Gigabit Ethernet port is optical and therefore is not classified as any type of port as defined in Appendix B of GR-1089-CORE Issue 4.*

The SFP is designed to meet the following environmental classes:

- ◆ ETSI EN 300 019-1-1 "Classification of environmental conditions; Storage," Class 1.2
- ◆ ETSI EN 300 019-1-2 "Classification of environmental conditions, Transportation," Class 2.3
- ◆ ETSI EN 300 019-1-3 "Classification of environmental conditions, Stationary use at weather-protected locations," Class 3.3

The equipment is designed to function without degradation during exposure to all test severities per Class 3.3.

The SFP meets the EU's RoHS Directive 2002/95/EC and/or applicable exemptions. See [www.adtran.com](http://www.adtran.com) for further information on RoHS/WEEE.

**Warranty:** ADTRAN will replace or repair this product within the warranty period if it does not meet its published specifications or fails while in service. Warranty information can be found online at [www.adtran.com/warranty](http://www.adtran.com/warranty).

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