Small Form-Factor Pluggable GPON OLT Transceiver SFP

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jobAid

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DESCRIPTION

The Small Form-Factor Pluggable (SFP) is a single-mode fiber SFP that plugs into an ADTRAN optical interface designed to accept SFPs. The SFP provides a single optical interface to a physical interface, and is intended for use with a Gigabit Passive Optical Network (GPON) Optical Line Termination (OLT) module.

Installed into an appropriate module, the SFP provides a GPON interface to the supporting system.

This SFP is designed for use in Wavelength Division Multiplexing (WDM) applications.

This SFP has a Digital Diagnostic Monitoring (DDM) function with internal calibration.

The following features are supported on the SFP:

- Data rate downstream: 2.488 Gbps
- Date rate upstream: 1.244 Gbps
- Transmit Wavelength: 1490 nm
- Receive Wavelength: 1310 nm
- Optical distance: 30 km maximum
- Hot Pluggable

Operational Specifications

- Optical Specifications:
  - Optical transmit level: +1.5 dBm to +5 dBm
  - Optical receive level: –30 dBm minimum
  - Optical connectors: SC
- Extended Environmental Support:
  - Operational temperature range: –40°C to +85°C
  - Storage temperature range: –40°C to +85°C
  - Relative humidity to 95%, noncondensing
  - Operating Altitude Range: –197 feet (–60 meters) to 13000 feet (3962 meters)

NOTE

The operating ambient temperature is derated by 1°C/1000 feet (3.3°C/km).

⚠ CAUTION

Due to compliance certification requirements, only SFPs approved by ADTRAN are to be used with the host module. ADTRAN cannot certify system integrity with other SFPs.

INSTALLATION

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

Inspect the SFP. If damaged, file a claim with the carrier and then contact ADTRAN Customer Support.

⚠ CAUTION

Do not remove the protective end cap from the SFP until the fiber optic cable is ready to be connected.

1. Insert the SFP into the SFP cage on the module. Ensure the latch on the SFP is facing upward for correct installation.
2. Slide the SFP all the way into the SFP cage until there is an audible “click”.

NOTE

- The latch on the SFP is used to remove the SFP from the cage on the circuit card.
- The SFP meets or exceeds all the applicable requirements of NEBS, Telcordia GR-63-CORE, and GR-1089-CORE.

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.

NOTE

- The SFP is a Class 1 Laser Product and complies with the Laser Safety requirements of FDA 21CFR 1040.10 and 1040.11, and EN60825-1 and -2. The SFP is NRTL Listed and CB Certified to all applicable American and European safety standards.
- The SFP has been evaluated to international safety standards EN 60950-1, AS/NZS 60950.1, and IEC 60950-1. The SFP meets the requirements for CE marking under the EMC Directive and Low Voltage Directive. Standards used to demonstrate Compliance are EN 300 386, EN 50222, EN 55024 as applicable and EN 60950.

⚠ CAUTION

The SFP is intended for deployment in Central office type facilities, EEEs, EECs, and locations where NEC applies (for example, Customer Premises). The SFP must be installed by trained service personnel in ADTRAN products that are located in Restricted Access Locations.

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) configuration. 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 configuration.
- The ADTRAN system chassis frame ground terminal must be connected to a reliable earth ground to ensure that the metal enclosure of the SFP is properly grounded via the backplane connector.

NOTE

- The GPON is optical and therefore is not classified as any type of port as defined in Appendix B of GR-1089-CORE Issue 5.
- The SFP is designed for deployment in GR-3108-CORE environmental class 1 and 2, as defined in GR-3108, Issue 2.

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.

NOTE

- This SFP is compliant with SFF-8472 "Digital Diagnostics Monitoring Interface for Optical Transceiver," Revision 9.3
- This SFP is compliant with Small Form-Factor Pluggable (SFP) Multi-Source Agreement (MSA).
- The SFP complies with G984.2 Class B+ optics requirements with the following exceptions:
  1. Enhanced Receiver Sensitivity of –30 dBm
  2. Minimum Receiver Overload of –10 dBm

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.

CAUTION!
SUBJECT TO ELECTROSTATIC DAMAGE OR DECREASE IN RELIABILITY.
HANDLING PRECAUTIONS REQUIRED.

ADTRAN CUSTOMER CARE:
From within the U.S. 1.800.726.8663
From outside the U.S. +1 256.963.8716
PRICING AND AVAILABILITY 1.800.827.0807

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