ADTRAN®

Small Form-Factor Pluggable OC-12 Bidirectional 1550/1310 nm

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DESCRIPTION

The Small Form-Factor Pluggable OC-12 Bidirectional 1550/1310 nm (Bidirectional SFP) plugs into ADTRAN equipment designed to accept Small Form-factor Pluggables (SFPs). Installed into an appropriate host unit, the Bidirectional SFP provides an OC-12 interface to the supporting system.

NOTE

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

The following features are supported on the Bidirectional SFP:

- ♦ SONET OC-12 compatible (622 Mb/s), single-fiber operation
- ♦ 15 km maximum optical span

⚠ CAUTION

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

SPECIFICATIONS

- ♦ Optical Specifications:
  - ◊ Optical transmit level: –8 dBm to –15 dBm
  - ◊ Optical receive level: –8 dBm to –28 dBm
  - ◊ Transmit Wavelength: 1550 nm
  - ◊ Receive Wavelength: 1310 nm
  - ◊ Optical budget: 12 (±1) dBm
  - ◊ Optical connectors: LC

- ♦ Extended Environmental Support:
  - ◊ Operational temperature range: –40°C to +65°C
  - ◊ Storage temperature range: –40°C to +85°C
  - ◊ Relative humidity to 95%, noncondensing

INSTALLATION

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

1. Inspect the Bidirectional 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.

2. Insert the Bidirectional SFP into the SFP cage on the module. Ensure that the manufacturer's label on the SFP is facing upward for correct installation.

3. Slide the Bidirectional SFP all the way into the receptacle 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.

SAFETY AND REGULATORY 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 meets or exceeds all the applicable requirements of NEBS, Telcordia GR-63-CORE, GR-1089-CORE, and ETSI EN 300368. The Bidirectional SFP is intended for deployment in Central Office type facilities, EEEs, EECs, and locations where the NEC applies (for example, Customer Premises). The SFP is to be installed in ADTRAN products in Restricted Access Locations only, and installed by trained service personnel.

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.

![ADTRAN logo]

⚠ 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 Bidirectional SFP does not have an internal DC connection between battery return and frame ground. The Bidirectional 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 a reliable earth ground to ensure that the metal enclosure of the Bidirectional SFP is properly grounded via the backplane connector.

⚠ CAUTION

The Small Form-Factor Pluggable OC-12 Bidirectional 1550/1310 nm is a Class 1 Laser Product and complies with the Laser Safety requirements of FDA 21 CFR 1040.11, EN60825-1, and EN60825-2. The Bidirectional SFP is NRTL Listed and CB Certified to all applicable American and European safety standards.

NOTE

The Gigabit Ethernet port(s) are optical and therefore are not classified as any type of port as defined in Appendix B of GR-1089-CORE Issue 5.

The Bidirectional 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 Small Form-Factor Pluggable OC-12 Bidirectional 1550/1310 nm meets EU RoHS Directive 2002/95/EC and/or applicable exemptions. Refer to www.adtran.com for further information on RoHS/WEEE.

NOTE

♦ This Bidirectional SFP is compliant with SFF-8472 "Digital Diagnostics Monitoring Interface for Optical Transceivers," Revision 9.3.

♦ This Bidirectional SFP is compliant with the Small Form-Factor Pluggable (SFP) Multi-Source Agreement (MSA).

♦ This Bidirectional SFP is designed to be deployed in GR-3108-CORE environmental class 1 or 2 as defined in GR-3108-CORE Issue 2.

⚠ **C A U T I O N !**
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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