ADTRAN®

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

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Documentation for ADTRAN Carrier Networks products is available for viewing and download directly from the ADTRAN Support Community website.

Go to: https://supportforums.adtran.com/welcome

Registration is required.

ADTRAN offers training courses on our products, including customized training and courses taught at our facilities or at customer sites.

For inquiries, go to: http://adtran.com/training

The following documents provide additional information for this product:
SFP/XFP/SFP+ Compatibility Matrix and Engineering Guide

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

Before installing the equipment, inspect the Bidirectional SFP. If damage has occurred during shipping, file a claim with the carrier, and then contact ADTRAN Customer Support. For more information, refer to the warranty.

Installation Guidelines

The following are guidelines for this installation.

- Do not remove the protective end cap from the SFP until the fiber optic cable is ready to be connected.
- Ensure that the manufacturer's label on the SFP is facing upward for correct installation.

Installation Steps

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

1. Insert the Bidirectional SFP into the SFP cage on the module.
2. 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

To remove the SFP from the cage on the circuit card, use the latch on the SFP.

SAFETY AND REGULATORY COMPLIANCE

> ⚠ **WARNING**

Read all warnings and cautions before installing or servicing this equipment.

> ⚠ **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.

♦ This product meets or exceeds all the applicable requirements of NEBS, Telcordia GR-63-CORE, GR-1089-CORE, and ETSI EN 300368. The product is intended for deployment in Central Office type facilities, EEEs, EECs, and locations where the NEC applies (for example, Customer Premises). The product 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.

> ⚠ **CAUTION**

♦ Per GR-1089-CORE the ADTRAN system that the product is being deployed in is designed and intended for installation as part of a Common Bonding Network (CBN). The ADTRAN system that the product 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 product does not have an internal DC connection between battery return and frame ground. The product 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 product is properly grounded via the backplane connector.

> ⚠ **CAUTION**

This product 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 product 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.

The product 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.

This product meets EU RoHS Directive 2002/95/EC and/or applicable exemptions. Refer to www.adtran.com for further information on RoHS/WEEE.

> **NOTE**

♦ This product is compliant with SFF-8472 "Digital Diagnostics Monitoring Interface for Optical Transceivers," Revision 9.3.
♦ This product is compliant with the Small Form-Factor Pluggable (SFP) Multi-Source Agreement (MSA).
♦ This product is designed to be deployed in GR-3108-CORE environmental class 1, 2, and 3, as defined in GR-3108-CORE.

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

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