



## DESCRIPTION

The OC-12 Small Form-Factor Pluggable CWDM 1511 nm (SFP OC-12) plugs into ADTRAN OC-12 equipment designed to accept Small Form-factor Pluggables (SFPs).

Installed into an appropriate host unit, the SFP OC-12 provides an OC-12 CWDM 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 SFP OC-12:

- ◆ SONET OC-12 compatible (622.08 Mb/s) 1511 nm, long reach, single-mode, 2-fiber operation
- ◆ 80 km maximum optical span

### CAUTION

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

## SPECIFICATIONS

- ◆ Optical Specifications:
  - ◇ Optical transmit level: -3 dBm to +5 dBm
  - ◇ Optical receive level: -28 dBm to -8 dBm
  - ◇ Power penalty: -1 dB
  - ◇ Optical budget: 24 (±1) dBm
  - ◇ Minimum span attenuation: 13 dB
  - ◇ 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 SFP OC-12 into an appropriate module, complete the following steps:

1. Inspect the SFP OC-12. 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 SFP OC-12 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 SFP OC-12 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.

## PROVISIONING

The SFP OC-12 is not directly provisionable. To provision the SFP OC-12, access the menu system of the host module. Refer to the "Provisioning" section of the Job Aid or I&M provided with the host module for provisioning details.

## 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 OC-12 is NRTL Listed to the applicable UL standards. The SFP OC-12 meets or exceeds all the applicable requirements of NEBS, Telcordia GR-63-CORE, GR-1089-CORE, and ETSI EN 300368.

The SFP OC-12 is intended for deployment in Central Office type facilities, EEEs, EECs, and locations where the NEC applies (for example, Customer Premises). The SFP OC-12 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

The SFP OC-12 contains a Class 1 laser that complies with the Laser Safety requirements of FDA 21 CFR 1040.10 and 1040.11, and EN 60825-1, and -2. The SFP OC-12 is NRTL Listed and CB Certified to all applicable American and European safety standards.

### CAUTION

- ◆ Per GR-1089-CORE Section 9, the SFP OC-12 does not have an internal DC connection between battery return and frame ground.
- ◆ The ADTRAN system that the SFP OC-12 is being deployed in is designed and intended for installation as part of a Common Bonding Network (CBN), or Isolated Bonding network (IBN).
- ◆ The SFP OC-12 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 OC-12 is properly grounded via the backplane connector.

### NOTE

- ◆ The OC-12 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.
- ◆ This SFP OC-12 is compliant with SFF-8472 "Digital Diagnostics Monitoring Interface for Optical Transceivers," Revision 9.3.
- ◆ This SFP OC-12 is compliant with the Small Form-Factor Pluggable (SFP) Multi-Source Agreement (MSA).
- ◆ This product is designed to be deployed in GR-3108-CORE environment class 1 or 2 as defined in GR-3108-CORE issue 2.

The SFP OC-12 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

This product has been evaluated to international safety standards EN 60950-1, AS/NZS 60950.1, and IEC 60950-1. This product meets the requirements for CE marking under the EMC Directive and Low Voltage Directive. Standards used to demonstrate Compliance are EN 300 386 and EN 60950.

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](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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