

Quick Start

The Enhanced Small Form-factor Pluggable SFP+ is a single mode fiber optics that plugs into an ADTRAN optical interface designed to accept SFPs. The SFP+ is an Industrial Temperature (ITEMP) device that provides a single optical interface to a physical interface, and is intended for use with a 10 Gigabit Passive Optical Network (10G PON) Optical Network Unit (ONU) unit. Installed into an appropriate ONT, the SFP+ provides a 10G XGS-PON interface to the supporting system.

INSTALLATION

Before installing the equipment, inspect the 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 Steps

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

1. Insert the SFP+ into the SFP+ cage on the module. Ensuring that the latch on the SFP+ is facing upward, slide the SFP+ all the way into the SFP+ cage until there is an audible “click”.



NOTE

The latch on the SFP+ is for removal only. When removing the SFP+, rotate the latch away from the SFP+. It should easily slide out of the cage.



NOTICE

Do not remove the dust cover until the optical fiber connection is made. Ensure that you keep the dust cover on whenever the transceiver optical fiber connector is not inserted.

2. Continue the installation and turn-up of the host module using the instructions in the Job Aid or Quick Start provided with the module or other system-level documentation available online at www.adtran.com.

SPECIFICATIONS

General

- Module Type: SFP+
- Media Type: Fiber
 - ◆ Single Mode Fiber
 - ◆ Single Fiber
- Signal Data Rate:
 - ◆ Upstream: 9.9532 Gbps
 - ◆ Downstream: 9.9532 Gbps
- Distance: 20 km
- Applications: XGS-PON ONU
- Optical Connector: SC/UPC

Optical

- Transmitter
 - ◆ Laser Diode Type: DFB
 - ◆ Transmit Central Wavelength: 1270 nm
 - ◆ Tx Output Optical Power: +4.0 dBm to +9.0 dBm
 - ◆ Tx Spectral Width: 1 nm
 - ◆ SMSR: 30 dB
 - ◆ Extinction Ratio: 6 dB
- Receiver
 - ◆ Type: CW APD/TIA
 - ◆ Input Optical Power: -28.0 dBm to -8.0 dBm
 - ◆ Receive Central Wavelength: 1577 nm
 - ◆ Receiver Sensitivity: -28.0 dBm
 - ◆ Receiver Overload: -8.0 dBm

Environmental

- Protected Equipment Severe Environment (Outdoor)
 - ◆ System Ambient Operational temperature range: -40°C to +70°C
 - ◆ Storage temperature range: -40°C to +85°C
 - ◆ Relative humidity 5 to 95%, noncondensing

SAFETY AND REGULATORY

ENGLISH



WARNING!

Read all warnings, cautions, notes and installation instructions before installing or servicing this equipment.



CAUTION!

This product contains a Class 1 Laser that complies with FDA 21 CFR 1040.10, 1040.11 and 60825-1.



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 and the host system are designed and intended for installation as part of a Common Bonding Network (CBN).
- This product's outer case may not be "electrically isolated" from other circuits. As a result, this product can only be used in systems that are installed in a DC-C (common) configuration.
- If the host system has a protective earth (PE) terminal, the PE terminal of the host system must be connected to protective earth (PE) to ensure that the exposed metal (i.e., front panels, optical modules) on the product is properly grounded.



NOTE

- This product is NRTL listed to the applicable UL Standards.
- The product is designed to meet the applicable requirements of Telcorida GR-3108-CORE and GR-1089-CORE. This product has also been evaluated to applicable international standards and meets the requirements of CE marking.
- This product is intended for deployment in locations such as business, residential, outside plant cabinets, and inside remote DSLAMs and DPUs. This product is to be installed and serviced by trained and qualified Service Personnel only.
- This product is designed to be deployed in GR-3108-CORE environmental Class 1, 2 or 3.
- 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, and (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.
- This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
 - ◆ Reorient or relocate the receiving antenna.
 - ◆ Increase the separation between the equipment and receiver.
 - ◆ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 - ◆ Consult the dealer or an experienced radio/TV technician for help.
- CAN ICES-3(B)/NMB-3(B)
- This 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 3.4
- The equipment is designed to function without degradation during exposure to all test severities per Class 3.4.
- This product meets EU RoHS Directive. Refer to www.adtran.com for further information on RoHS/WEEE.

FRANÇAIS

WARNING!

Lisez toutes les mentions de danger et de prudence et les remarques, ainsi que la notice d'installation, avant d'effectuer l'installation ou l'entretien de cet équipement.

ATTENTION!

Ce produit est un laser de classe 1 conforme à la norme FDA 21 CFR 1040.10 et 1040.11 et 60825-1.

ATTENTION!

- L'ESD (décharge électrostatique) peut endommager les modules électroniques. Lors de la manipulation des modules, portez un bracelet de décharge antistatique pour éviter d'endommager les composants électroniques. Placez les modules dans un emballage antistatique lors du transport ou du stockage. Lorsque vous travaillez sur les modules, placez-les toujours sur un tapis antistatique certifié muni d'un branchement de mise à la terre.
- Ce produit et le système hôte sont conçus et destinés à être installés dans le cadre d'un réseau Bonding commun (CBN).
- Le boîtier extérieur de ce produit pourrait ne pas être "isolé galvaniquement" des autres circuits. Donc ce produit peut être utilisé uniquement dans des systèmes dotés d'une configuration de retour commun d'alimentation en courant continu (c.c.-C).
- Si le système hôte est doté d'une borne de mise à la terre de protection (PE), la borne PE du système hôte doit être connectée à la mise à terre de protection (PE), afin d'assurer que les parties métalliques à découvert (panneaux frontaux, modules optiques) du produit soient correctement mis à terre.

REMARQUE

Ce produit est conforme à la directive européenne RoHS. Reportez-vous à www.adtran.com pour de plus amples renseignements sur RoHS/WEEE.

DEUTSCH

WARNING!

Lesen Sie alle Warnungen, Gefahrenhinweise, Anmerkungen und Installationsanweisungen bevor Sie dieses Gerät installieren oder warten.

VORSICHT!

Dieses Produkt ist ein Klasse 1 Laser, die mit FDA 21 CFR 1040.10 und 1040.11 und 60825-1 entspricht.

VORSICHT!

- Elektrostatische Entladungen können elektronische Module beschädigen. Tragen Sie beim Umgang mit Modulen ein Erdungsarmband, um Schäden an den elektronischen Komponenten zu vermeiden. Transportieren oder lagern Sie Module in antistatischem Verpackungsmaterial. Bei der Arbeit an den Modulen, achten Sie darauf, diese stets auf antistatische, elektrisch geerdete Matten zu legen.
- Dieses Produkt und das Host-System entworfen und für die Installation als Teil einer gemeinsamen Bonding Network (CBN) vorgesehen.
- Das äußere Gehäuse dieses Produktes mag nicht von anderen Stromkreisen "elektrisch isoliert" sein. Deshalb kann dieses Produkt nur in Systemen verwendet werden, die in einer gemeinsamen Gleichstrom-Rücklauf-Konfiguration installiert sind.
- Falls das Host-System über einen Schutzleiteranschluss (PE) verfügt, muss der PE-Anschluss des Host-Systems mit dem Schutzleiteranschluss (PE) verbunden werden, um sicherzustellen, dass das freiliegende Metall (d. h. Frontblenden, Optikmodule) am Produkt ordnungsgemäß geerdet ist.

HINWEIS

Dieses Produkt erfüllt die EU RoHS Richtlinie. Bitte besuchen Sie www.adtran.com für ausführlichere Informationen zu RoHS/WEEE.

Documentation for ADTRAN Network Solutions 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 online documents and resources provide additional information for this product:

ADTRAN Pluggable Optics Compatibility Matrix (online tool, go to: <http://www.adtran.com/pluggableoptics>)

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.

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CAUTION!

SUBJECT TO ELECTROSTATIC DAMAGE
OR DECREASE IN RELIABILITY
HANDLING PRECAUTIONS REQUIRED

ADTRAN CUSTOMER CARE:

From within the U.S. 1.888.423.8726

From outside the U.S. +1 256.963.8716

PRICING AND AVAILABILITY 1.800.827.0807

