ADTRAN Pluggable Optics

April 2020
61442861G1-13A

SFP

3.125 GE CWDM SFP

Quick Start

Description

The Small Form-factor Pluggable CWDM 3.125 Gigabit Ethernet (SFP) is a single-mode fiber SFP that plugs into ADTRAN Gigabit Ethernet modules designed to accept SFPs. The SFP provides a dual optical interface to a 3.125 Gbps physical interface, with a 2.5 GbE service rate.

Installed into an appropriate module, the SFP provides a 3.125 Gigabit Ethernet Interface to the supporting system.

> **i** **NOTE**
>
> This SFP should not be used in applications requiring standard Gigabit (1000 Base) Ethernet services.

This document provides information for the following SFPs listed in the table below. These SFPs are designed for use in Coarse Wavelength Division Multiplexing (CWDM) applications. The available CWDM wavelengths are available in the table below.

Part Number	Center Wavelength
1442861G1	1511 nm
1442861G2	1531 nm
1442861G3	1551 nm
1442861G4	1571 nm
1442861G5	1591 nm
1442861G6	1471 nm
1442861G7	1491 nm
1442861G8	1611 nm

Features

The following features are supported on the SFP:

- Data rate: 3.125 Gbps
- LC optical connectors
- Transmit Wavelength: 1471 to 1611 nm
- Receive Wavelength: 1260 to 1620 nm
- Optical distance: 60 km maximum

Operational Specifications

General

- Module type: SFP
- Media type: Fiber
  - Single Mode
  - UNI
- Signal Data Rate: 3.125 Gbps
- Optical Connector: LC
- Applications:
  - OC-48/STM-16 CWDM
  - 2.5 Gigabit Ethernet
- Diagnostic Monitoring: SFF-8074i, SFF-8472, ITU-T G.695
- Distance: 60 km

Optical

- Transmitter
  - Laser Diode Type: DFB
  - Tx Power: 0.0 dBm to +5.0 dBm
  - Tx Spectral width: 1 nm
  - SMSR: 30 dB
  - Extinction Ratio: 8.2 dB
  - Optical Rise Time: 160 ps
  - Optical Fall time: 160 ps
- Receiver
  - Rx Type: APD
  - Rx Central Wavelength:1260 to 1620 nm
  - Rx Power: –25.0 dBm to –8.0 dBm

Environmental

- **Protected Equipment Environment (Outdoor)**
  - System Ambient Operational Temperature Range: –40°C to +65°C
    - Case temperature hardened range: –40°C to +85°C
  - Storage temperature range: –40°C to +85°C
  - Relative humidity 5 to 95%, non-condensing

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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.

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

ⓘ NOTE
Do not remove the protective dust cover from the SFP until the fiber optic cable is ready to be connected.

1. Insert the SFP into the SFP cage on the module. Ensuring that the latch handle 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, the SFP should easily slide out of the cage.

2. Do not remove the protective dust cover until the optical fiber connection is made.

❗ NOTICE
It is recommended that the protective dust cover remain on whenever the transceiver optical fiber connector is not inserted.

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

SAFETY AND REGULATORY

English

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

☀ CAUTION!
This product is a Class 1 Laser module that complies with FDA 21 CFR 1040.10, 1040.11 and IEC 60825-1. The product is NRTL Listed and CB Certified to all applicable American and European safety standards.

⚠ CAUTION!
- Electrostatic Discharge (ESD) can damage electronic devices. When handling devices, wear an antistatic discharge wrist strap to prevent damage to electronic components. Place devices in antistatic packing material when transporting or storing. When installing or maintaining, always place devices on an approved antistatic mat that is electrically grounded.
- Per GR-1089-CORE, the ADTRAN system that this product is being deployed in is designed and intended for installation as part of a Common Bonding Network (CBN). The ADTRAN system that this product is being deployed in is not designed nor intended for installation as part of an Isolated Bonding Network (IBN).
- This product is designed and intended only for deployment in a DC-C (common) bonding and grounding configuration. This product is not intended or designed for deployment in a DC-I (isolated) bonding and grounding system.
- If the host system has a protective earth (PE) terminal, the PE terminal of the host system must be connected to PE to ensure that the exposed metal (i.e., front panels, optical modules) on the product is properly grounded.

ⓘ 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 or 2.
- This product is intended for deployment in locations such as telecommunications facilities (such as Central Offices), outdoor electronic equipment cabinets, inside remote DSLAMs and DPUs. This product is to be installed and serviced by trained and qualified service personnel only.
- 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.
- 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 3.3
- The equipment is designed to function without degradation during exposure to all test severities per Class 3.3.
- This product meets the EU RoHS Directive. Refer to www.adtran.com for further information on RoHS/WEEE.

Français

⚠ **AVERTISSMENT!**

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 IEC 60825-1. Le produit est NRTL et CB certifiée à toutes les normes de sûreté américaines et européennes.

⚠ **ATTENTION!**

- Les décharges électrostatiques (ESD) peuvent endommager les appareils électroniques.Lors de la manipulation des appareils, portez un bracelet antistatique, afin d'éviter d'endommager les composants électroniques.Mettez les appareils dans un emballage antistatique, lors de leur transport ou de leur entreposage.Lors de leur installation ou de leur entretien, les appareils doivent toujours être placés sur un tapis antistatique homologué, qui est mis à terre.
- Ce produit est conçu et prévu uniquement pour être déployé dans une configuration de circuit de régulation et de mise à la terre DC-C (commun). Ce produit n'est pas prévu ou conçu pour être déployé dans une configuration de circuit de régulation et de mise à la terre DC-I (isolé).
- 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 métaliques à découvert (panneaux frontaux, modules optiques) du produit soient correctement mis à terre.
- Ce produit est conforme à la directive européenne RoHS. Reportez-vous à www.adtran.com pour de plus amples renseignements sur RoHS.

Deutsch

⚠ **WARNUNG!**

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 IEC 60825-1 entspricht. Das Produkt ist NRTL gelistet und CB Certified allen geltenden amerikanischen und europäischen Sicherheitsnormen.

⚠ **VORSICHT!**

- Elektrostatische Entladung (ESD) kann elektronische Geräte beschädigen. Tragen Sie bei der Handhabung von Geräten ein Antistatik-Armband mit Erdungskabel, um Schäden an elektronischen Komponenten zu vermeiden.Während des Transports oder bei der Lagerung müssen Geräte in antistatischem Verpackungsmaterial gelegt werden. Geräte bei der Installation oder Wartung immer auf einer zugelassenen antistatischen, elektrisch geerdeten Matte stellen.
- Dieses Produkt ausschließlich in einer DC-C (gemeinsamen) Anlage zum Potentialausgleich und Erdung installiert werden. Es ist hingegen nicht für DC-I (isolierte) Anlagen zum Potentialausgleich und Erdung bestimmt.
- 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.
- Dieses Produkt erfüllt die EU RoHS Richtlinie. Bitte besuchen Sie www.adtran.com für ausführlichere Informationen zu RoHS/WEEE.

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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.   1.888.423.8726
From outside the U.S. +1 256.963.8716

PRICING AND AVAILABILITY 1.800.827.0807

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