SDG-8610 Service Delivery Gateway WiFi 6 Gigabit Router

Adtran
Quick Start Guide

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6SDG8610-13A
P/N: 17600078F1S, 17600078F2S, 17600078F3S, 17600078F4S

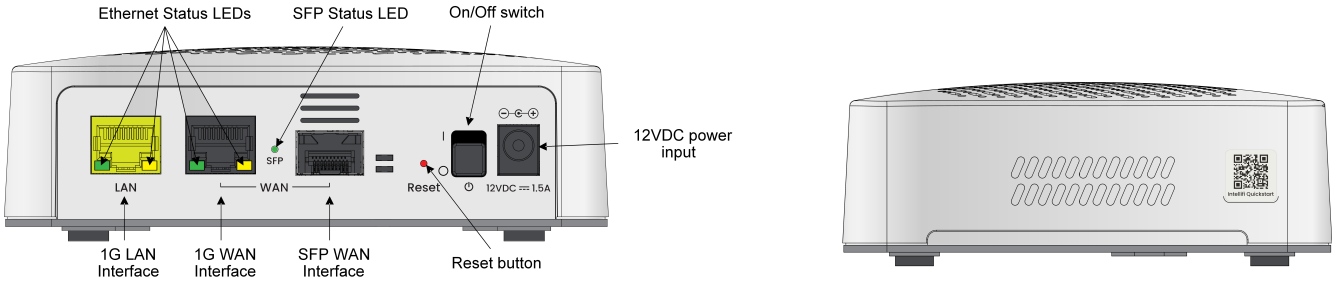
Overview

WARNING!

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

The SDG-8610 is a carrier-class, dual-band, WiFi 6 Gigabit Router designed to deliver top-end WiFi 6 performance, gigabit wired and wireless throughput, and advanced service delivery capabilities.

Figure 1: SDG-8610 WiFi 6 Gigabit Router



WARNING!

A warning indicates a hazard that, if not avoided, could result in death, injury, or serious property damage.

CAUTION!

A caution indicates a hazard that, if not avoided, could result in service interruption, damage to the equipment, or minor property damage.

NOTE

A note highlights additional, but important, information or features.

Features

The features of the SDG-8610 include the following:

- 1G LAN interface (RJ-45)
- 1G WAN 1 interface (RJ-45)
- WAN 2 interface (SFP cage)

This quick start describes how to install and connect to the device.

Installing the SDG-8610 Gigabit Router

NOTE

Refer to the national, state and local electrical codes for the requirements for power, grounding, wiring, and installation methods.

Package Contents

- Adtran's SDG-8610 Wi-Fi 6 Gigabit Router
- 12V DC power adapter
- Ethernet cable
- SDG 8610 Quick Install Guide

CAUTION!

The product is intended for indoor use only. Ethernet and attached equipment are intended for use within the same building with equipotential bonding, and not intended to be placed in separate buildings or structures. Failure to deploy as described could result in permanent damage from lightning or other electrical events and voids the warranty. Furthermore, all connections from outside of the building must be disconnected prior to use.

Prior to Installation

Before installing the equipment, inspect the device. If damage has occurred during shipping, file a claim with the carrier, and then contact Adtran Customer Support. For more information, refer to the product warranty available online at https://adtran/wp_support_warranty.

Required Tools

No special tools are required for installing the SDG-8610.

Mounting Options

There are two options to install the SDG-8610: desktop and wall mount. Be sure to route and secure the cables in a manner that will prevent damage. These options are described below.

Desktop Installation

The SDG-8610 can be placed on a desk or table. Table 1 shows the recommended minimum distance (in feet and meters) between the device and household appliances to reduce interference.

Table 1: Recommended Minimum Distance Between the SDG and Household Appliances

Household Appliance	Recommended Minimum Distance (in feet and meters)
Microwave ovens	30 feet / 9 meters
Baby monitor – analog	20 feet / 6 meters
Baby monitor – digital	40 feet / 12 meters
Cordless phone – analog	20 feet / 6 meters
Cordless phone – digital	30 feet / 9 meters
Bluetooth devices	20 feet / 6 meters
ZigBee	20 feet / 6 meters

WARNING!

Ensure that the SDG-8610 does not come in contact with water or other liquids.

CAUTION!

Ensure that the SDG-8610 is not located in direct sunlight or next to any thermal obstructions.

Wall Mount Installation

The SDG-8610 can be mounted on a wall. Two #6x1 in. (3.5x25 mm) screws with plastic anchors are required (not supplied). Install mounting hardware per Manufacturer's directions. The distance between mounting screws is 3 5/32 in. (80 mm).

Supplying Power to the device

1. Connect the barrel plug of the power adapter to the **Power** port on the back panel of the SDG.
2. Plug the power adapter into the wall outlet.
3. Turn the power switch to ON. The SDG will begin powering up.
4. Confirm that the power is connected properly. The **Multi-function Status** LED should be lit on the front of the gateway.

Subscriber Connections

The following subscriber connections are available on the back of the SDG-8610:

- 1x 1G Ethernet interface (RJ45 Connector) – **LAN** port
- 1x 1G Ethernet interface (RJ45 Connector) -**WAN-1** port
- 1x SFP cage -**WAN-2** port

To connect the Ethernet interfaces, refer to Features and insert a Category 5E (or better) RJ45 cable into the LAN port (labeled **LAN**) and the WAN port (**labeled WAN**) until there is an audible "click".

If an SFP pluggable is used, insert it in the SFP port. Now connect a fiber-optic cable according to your cabling plan.

CAUTION!

This product is intended for use with a Class 1 Laser module that complies with FDA 21 CFR 1040.10, 1040.11 and IEC 60825-1. For continued compliance with the above standards, only approved Class 1 laser modules from an ADTRAN approved vendor list should be installed in this product. ADTRAN cannot certify system integrity with other laser modules. Refer to the ADTRAN Pluggable Optics Compatibility Matrix (online tool, go to www.adtran.com/pluggableoptics).

Resetting the SDG

A reset button is available if the SDG-8610 needs to be rebooted or restored to factory defaults. To reboot the SDG-8610, press the **Reset** button on the back panel of the device for less than **5 seconds**. To reset the device to factory defaults, press the **Reset** button for **5 seconds** or more.

Understanding the Status LEDs

A multifunction status LED on the front of the unit and status LED's on the back panel allow you monitor the device status.

Multifunction Status LED

The multifunction status LED on the front of the unit indicates the device status. Table 2 defines the multifunction status LED state when running SmartOS.

Table 2: Multifunction Status LED for SmartOS

Color	LED State	Event
Blue	Solid	Cold boot
Red	Pulsing	Reboot and System Upgrade (persists over uboot)
Green	Pulsing	Linux booting up
Light Blue	Pulsing	Quick start
White	Solid	Controller WAN up, Internet
Amber	Pulsing	Controller WAN down, no Internet
Purple	Pulsing	Satellite Set Up
White	Solid	Satellite up
Red	Pulsing	Satellite up, fair signal
Amber	Pulsing	Satellite up, poor signal
White	Pulsing	Reverting

Quick Setup for the SDG-8610 SDG

The SDG product line uses SmartOS. Scan the QR code labeled Intellifi QuickStart located on the back of the unit. You will be presented with a series of self-guided steps to choose your account password, select gateway or access point mode, and configure the WiFi SSID and passphrase. The specified account password will be used when logging into the GUI in the SDG.

Logging Into the SDG-8610

Using SmartOS

A browser-based user interface (GUI) is used to manually configure the SDG-8610. The following steps describe how to connect and login to the device:

1. Ensure your computer is connected to the SDG-8610 either via Wi-Fi or Ethernet connection to the LAN port.
2. Configure your computer's network interface to acquire an IP address automatically using DHCP.
3. Open a web browser and enter the following: **http://router** or **http://setup**. A sign-in page should appear. If you are unable to connect to the SDG-8610 using either of these shortcuts, you can also enter the IP address of the unit. The default IP address is **192.168.1.1**.
4. The default username is **admin**. The password is the account password that was specified during the quick setup.

   NOTE

   If you have forgotten the password for this device, select **Forgot password**? and follow the instructions to reset the gateway configuration to the factory defaults. Next, follow the instructions under Using SmartOS.

5. Select **Sign In**. The **Dashboard** page appears, showing data about the system.

Product Specifications

Electrical

Power is provided by a 12V DC power adapter that is included with the SDG-8610. The power adapter operates from a power source of 100 to 240V AC, 50 - 60 Hz. The nominal output is 12V DC ±5 % with a minimum current rating of 1.5 Amps. For US and Canadian applications, a UL Listed limited power source (LPS) is supplied and required for use. For deployment outside of North America, an LPS specifically approved for that country, such as a CE Mark, is supplied and required for use.

NOTE

It is strongly suggested that the power supply (a 5 ft. (1.5 m) power cord) included with the SDG-8610 be connected to a surge suppressor device which can have its own extension cable. The surge protection device should provide L-N, L-G, and N-G protection. It is also recommended that the device contains a visual 'GOOD' indicator.

Environment

- Operating Temperature: 41° F to 104° F (5° C to 40° C)
- Storage Temperature: -13° F to 158° F (-25° C to 70° C)
- Relative Humidity: 5 to 85 percent, non-condensing

NOTE

Changes or modifications not expressly approved by Adtran will void the warranty.

Compliance

This product meets the following compliance requirements:

- UL /cUL Listed
- FCC Part 15, Class B
- ICES-003 (Class B)

- IEC 62368-1, EN 62368-1, AS/NZS 62368.1
- RoHS Compliant

Safety and Regulatory

CAUTION!

- Connect the DC power input to an approved Limited Power Source (LPS) power supply ONLY.
- This product is intended to operate in ambient temperatures up to 40° C.
- It is recommended that an external AC Surge Protection Device be installed at the AC input connection to the local AC-Powered product. The Surge Protection device should provide L-N, L-G, and N-G protection. It is also recommended that the device contains a visual 'GOOD' indicator.
- The product is intended for indoor use only. Ethernet, Voice, and attached equipment are intended for use within the same building with equipotential bonding, and not intended to be placed in separate buildings or structures. Failure to deploy as described could result in permanent damage from lightning or other electrical events and voids the warranty.

NOTE

This product meets the following compliance requirements:

- This equipment contains no parts that can be serviced by the user.
- This product meets EU RoHS Directive. Refer to www.adtran.com/environmental for further information on RoHS/WEEE.
- This product is NRTL Safety Listed to the applicable UL/CSA Standards.
- This product has also been evaluated to applicable international standards as indicated by CE, UKCA, and RCM marking.
- The AC branch circuit socket-outlet must be installed near the equipment and must be easily accessible.
- The RJ-45 jacks are not used for telephone line connection.

Regulatory Compliance

This section includes user requirements for operating this product in accordance with National laws for usage of radio spectrum and operation of radio devices. Failure of the end-user to comply with the applicable requirements may result in unlawful operation and adverse action against the end-user by the applicable National regulatory authority.

This product's firmware limits operation to only the channels allowed in a particular Region or Country. Therefore, all options described in this user's guide may not be available in your version of the product.

Europe – EU Declaration of Conformity

Products bearing the marking comply with the following EU directives:

- EMC Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU
- WEEE Directive reference: 2012/19/EU

If this product has telecommunications functionality, it also complies with the requirements of the following EU Directive:

- RED 2014/53/EU

Compliance with these directives implies conformity to harmonized European standards that are noted in the EU Declaration of Conformity.

For indoor use only. Valid in all EU member states, EFTA states, and Switzerland.

This device may not be used for setting up outdoor radio links in France and in some areas the RF output power may be limited to 10 mW EIRP in the frequency range of 2454 - 2483.5 MHz. For detailed information the end-user should contact the national spectrum authority in France.

FCC Requirements for Operation in the United States

FCC Information to User

This product does not contain any user serviceable components and is to be used with approved antennas only. Any product changes or modifications will invalidate all applicable regulatory certifications and approvals.

FCC Guidelines for Human Exposure

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 25 cm between the radiator and your body.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with FCC multi-transmitter product procedures.

FCC Declaration of Conformity

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

FCC Radio Frequency Interference Warnings & Instructions

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)

Canadian Department of Communications Radio Interference Regulations

This digital apparatus (Wi-Fi 6 Gigabit Router Model SDG-8610) does not exceed the Class B limits for radio-noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

Industry Canada

This device complies with RSS-247 of the Industry Canada 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.

ATTENTION!

Déclaration d'exposition aux radiations: Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

CAUTION!

Radiation Exposure Statement: This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

This radio transmitter has been approved by Industry Canada to operate with the antenna types listed below. Antenna types not included in this list are strictly prohibited for use with this device.

ATTENTION!

i. les dispositifs fonctionnant dans la bande 5150-5250MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;

ii. le gain maximal d'antenne permis pour les dispositifs utilisant les bandes de 5250 à 5350 MHz et de 5470 à 5725 MHz doit être conforme à la limite de la p.i.r.e;

iii. le gain maximal d'antenne permis (pour les dispositifs utilisant la bande de 5725 à 5850MHz) doit être conforme à la limite de la p.i.r.e. spécifiée pour l'exploitation point à point et l'exploitation non point à point, selon le cas;

iv. les pires angles d'inclinaison nécessaires pour rester conforme à l'exigence de la p.i.r.e. applicable au masque d'élévation, et énoncée à la section 6.2.2 3), doivent être clairement indiqués.

CAUTION!

i. The device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;

ii. The maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the EIRP limits specified for point-to-point and non-point-to-point operation as appropriate.

iii. The worst-case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in Section 6.2.2(3) shall be clearly indicated.

iv. Users should also be advised that high-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

Documentation for Adtran Network Solutions products is available for viewing and download directly from the Adtran Support Community website. Go to:
https://supportcommunity.adtran.com

For Adtran training inquiries, visit:
https://adtran.com/training

Access additional safety information and product documentation using the QR code or website link below.

http://adtran.com/sdg-info

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 https://adtran.com/warranty.

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6SDG8610-13A

CAUTION!

SUBJECT TO ELECTROSTATIC DAMAGE OR DECREASE IN RELIABILITY

HANDLING PRECAUTIONS REQUIRED