ADTRAN 814-v6 Home Gateway Unit User Guide

Contents

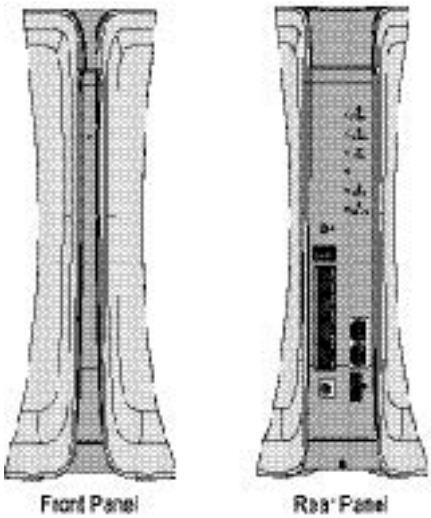
ADTRAN 814-v6 Home Gateway Unit

Overview

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

This quickstart describes how to install ADTRAN's 814-v6 Home Gateway Unit.
The 814-v6 Wi-Fi 6 GPON HGU is an indoor gateway that leverages GPON technology for delivering premium, multi-Gigabit services via an integrated GPON WAN and Dual-band Wi-Fi 6, along with Voice services.

Figure 1 illustrates the front and back of the 814-v6 gateway.



WARNING!

- WARNING indicates a hazard which, if not avoided, could result in death, injury or serious property damage.
- CAUTION indicates a hazard which, if not avoided, could result in service interruption, damage to the

equipment, or minor property damage.
- NOTES inform the user of additional, but important, information or features.

Features

The features of the 814-v6 gateway include the following:

- SC/APC connector (Standard Connector/Angled Physical Contact) for GPON/Active Ethernet network uplink
- Subscriber interfaces
  - 4x Gigabit Ethernet (RJ-45) interfaces
  - 3×3 802.11ax @ 2.4GHz
  - 4×4 802.11ax @ 5GHz
  - 2x voice (RJ-11) interfaces
- Remote activation and deactivation
- Remote firmware upgrades
- Remote OMCI management as per ITU-T G.988

Installing the 814-v6 Gateway

The following are guidelines for the basic installation of the 814-v6.

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

Caution: The product is intended for indoor use only. Ethernet, POTS cables, 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, such as old POTS wiring, must be disconnected prior to use.

Package Contents

- ADTRAN’s 814-v6 GPON gateway
- 12V DC power adapter

Prior to Installation
Before installing the equipment, inspect the gateway. 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
Standard technician tools and, if installing the gateway on a wall, a #2 Phillips-head screwdriver, are required for installing the 814-v6.

Mounting Options
There are two options to install the 814-v6: desktop and wall mount. Be sure to route and secure the fiber and cables in a manner that will prevent damage. These options are described below.

Desktop Installation
The 814-v6 can be placed on a desk or table. The following table shows the recommended minimum distance (in feet and meters) between ADTRAN equipment and household appliances to reduce interference.

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

Household Appliance	Recommended Minimum Distance (in feet and meters)
Cordless phone – digital	30 feet / 9 meters
Bluetooth devices	20 feet / 6 meters
ZigBee	20 feet / 6 meters

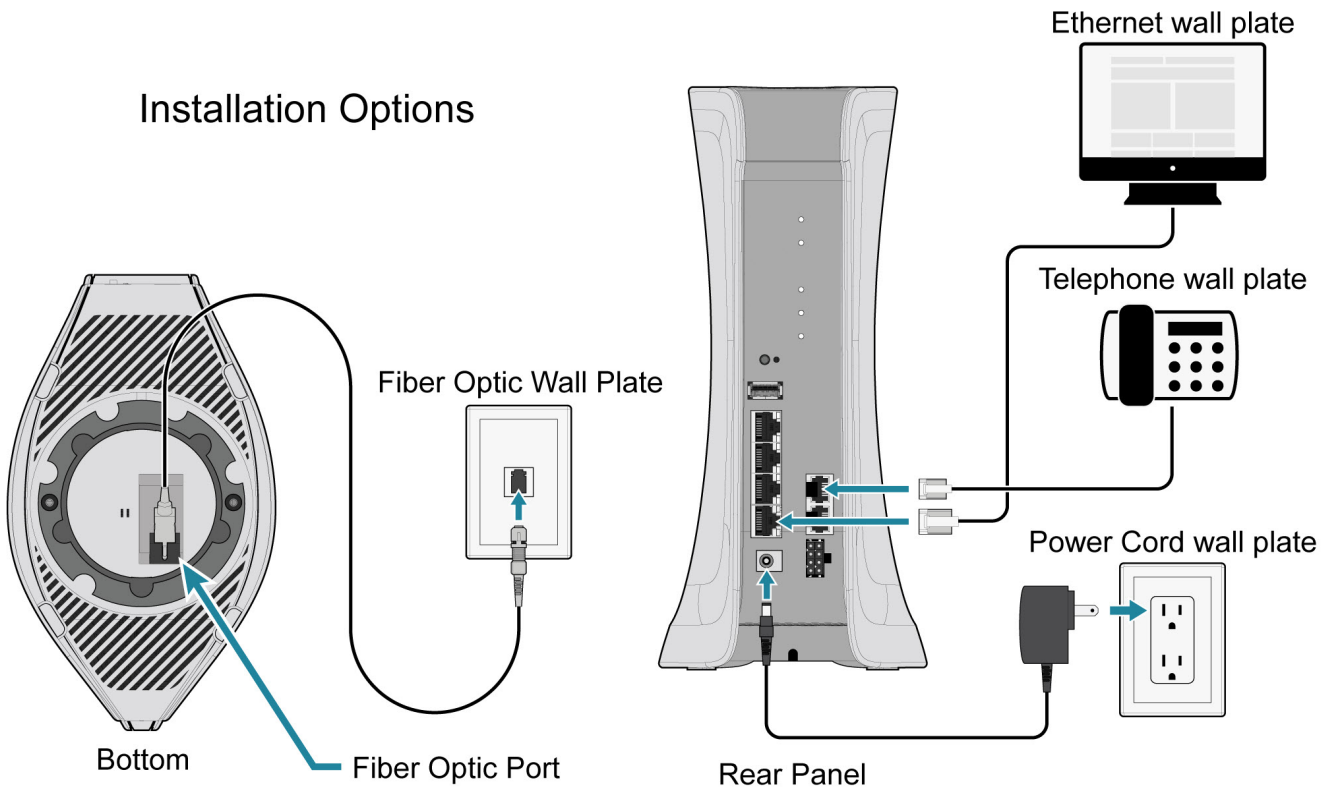
WARNING!

- Ensure that the 814-v6 does not come in contact with water or other liquids.
- Ensure that the 814-v6 is not located in direct sunlight or next to any thermal obstructions.

Wall Mount Installation
The 814-v6 can be mounted on a wall. Wall Mount Kit (17600192F1) can be ordered for mounting the 814-v6. Instructions are provided in the related Quick Start Guide (617600192F1-13A).

Connecting the 814-v6 Gateway

Figure 2 illustrates the installation (connection) options for the 814-v6 gateway.



The following subscriber connections are available on the rear of the 814-v6:

- 4x Gigabit Ethernet (RJ-45 Connectors) – LAN 1-4 ports
- 2x Telephone (RJ-11 Connectors) – Tel 1 and Tel 2 ports
- 1x USB 3.0 (Type A Connector) – port

To connect the subscriber interfaces, refer to Figure 2 and complete the following:

1. For an Ethernet connection, insert a Category 5E (or better) RJ-45 cable into one of the LAN ports (labeled LAN 1-4) until there is an audible “click”.
2. For a Voice connection, insert an RJ-11 cable into one of the telephone ports (labeled Tel 1 or Tel 2) until there is an audible “click”.
3. Before connecting to the service provider interface, clean the optical Interfaces of the SC/APC connectors.
4. Insert the fiber cable into the WAN port on the bottom of the gateway.

The following safety actions are recommended:

- Do not allow disconnected optical connectors to touch surrounding unrelated surfaces and do not touch optical surfaces for any reason other than performing the cleaning process.
- Do not use compressed air to clean optical connectors.
- Clean the optical surfaces as follows:
  - Use a fiberscope or video scope to verify proper cleaning of connectors prior to connecting components together.
  - Use pure alcohol (reagent grade, 99.5% pure) when cleaning the end face of the connectors. The alcohol can be applied with either laboratory-grade lint-free tissues or with pre-moistened optical grade wipes.

    - Use microporous fabric spiral-wrapped cleaning tips to clean bulkhead ferrules.
- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

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

Connecting the Power Supply

1. Connect the end of the power adapter to the Power port on the rear panel of the gateway
2. Plug another end of the power adapter into the wall outlet.
3. Confirm that the power is connected properly. The Power LED should be lit on the front of the gateway.

NOTE: Alternately, the device may be powered by a supported third-party UPS which may be connected via 7-pin Molex connector, labeled UPS.

Resetting the Gateway
A reset button is available if the 814-v6 needs to be rebooted. To reboot the 814-v6, press the Reset button on the rear panel of the gateway for 5 seconds or less. To reset the device to custom defaults, press the Reset button for 5 seconds or more.

Understanding the Status LEDs

The LEDs on the back panel of the 814-v6 gateway enable you to monitor the device status. This section describes the four types of LEDs available on the 814-v6 gateway. See Figure 3 for details.

Fiber Status LED
The Fiber status LED indicates if the device is powered up correctly.

LED	Color	State	Description
Fiber	Green	On	Fiber optic connection is UP.
		Flashing	Fiber optic connection is discovering or activating the ONT on the PON.
	None	Off	Fiber optic connection is DOWN.

2.4GHz / 5GHz Status LEDs
The 2.4GHz and 5GHz status LEDs indicate the state of the wireless connections on the gateway.

LED	Color	State	Description
2.4GHz / 5GHz	Green	On	Wi-Fi radio is UP.
		Flashing	Wi-Fi radio is transferring data.
	None	Off	Wi-Fi connection is DOWN.

WPS Status LED
The WPS status LED indicates the status of WPS (Wi-Fi protected setup).

LED	Color	State	Description
WPS	Green	On	WPS is enabled.
		Flashing	WPS is passing traffic.
	None	Off	WPS is not active.

Tel 1/2 Status LED
The Tel 1/2 status LED indicate the state of the phone line ports.

LED	Color	State	Description
Tel 1/2	Green	On	Telephone is off-hook; a call is in progress.
		Flashing	Telephone is off-hook.
	None	Off	Telephone is on-hook.

Product Specifications

Electrical

Power is provided by a 12V DC power adapter that is included with the 814-v6. 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 4.0 Amps. For US and Canadian applications, a UL Listed limited power source (LPS) is required. For deployment outside of North America, an LPS specifically approved for that country, such as a CE Mark, is required.

NOTE: It is strongly suggested that the power supply (a 5-foot (1.5 m) power cord) included with the 814-v6 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: 32°F to 104°F (0°C to 40°C)
- Storage Temperature: -40°F to 158°F (-40°C to 70°C)
- Relative Humidity: 10 to 95 percent, non-condensing

NOTE: Changes or modifications not expressly approved by ADTRAN will void the warranty.

Safety and Regulatory

This product meets the following safety and regulatory requirements:

- UL/cUL Safety Listed
- IEC 62368-1
- EN 62368-1, AS/NZS 60950.1
- IEC 60825-1: 2014; CLASS 1 LASER PROUCT
- RoHS Compliant

This equipment contains no parts that can be serviced by the user.
Refer to the Safety and Regulator Notice for this product (P/N: 617600132F1-17) for detailed safety and regulatory information.

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**
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**

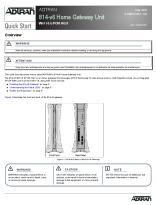
Access additional safety information and product documentation using the QR code or website.

https://supportcommunity.adtran.com

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**.

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

Documents / Resources

	**ADTRAN 814-v6 Home Gateway Unit** [pdf] User Guide 814-v6 Home Gateway Unit