



ADTRAN 831-T5 Service Delivery Gateway User Guide

[Home](#) » [ADTRAN](#) » **ADTRAN 831-T5 Service Delivery Gateway User Guide** 



Quick Start

ADTRAN

August 2021 617600031F1-13A

Contents

- [1 831-t5 Service Delivery Gateway](#)
- [2 Overview](#)
 - [2.1 Features](#)
- [3 Installing the 831-t5 Gateway](#)
 - [3.1 Package Contents](#)
 - [3.2 Prior to Installation](#)
 - [3.3 Required Tools](#)
 - [3.4 Mounting Options](#)
 - [3.5 Connecting the 831-t5 Gateway](#)
 - [3.6 Connecting the Power Supply](#)
 - [3.7 Resetting the Gateway](#)
- [4 Product Specifications](#)
 - [4.1 Electrical](#)
 - [4.2 Environment](#)
- [5 Safety and Regulatory](#)
- [6 Safety and Regulatory Notice](#)
- [7 Regulatory Compliance Information](#)
- [8 Europe - EU Declaration of Conformity](#)
- [9 FCC Requirements for Operation in the United States](#)
- [10 CAN ICES-3\(B\)/NMB-3\(B\)](#)
- [11 SDG-WM2 Wall Mount Kit Quick Start](#)
- [12 Overview](#)
 - [12.1 Package Contents](#)
 - [12.2 Prior to Installation](#)
 - [12.3 Required Tools](#)
- [13 Installing the Wall Mount Kit](#)
- [14 Documents / Resources](#)
 - [14.1 References](#)
- [15 Related Posts](#)

Overview



WARNING!

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

The ADTRAN® 831-t5 is a carrier-class Dual-Band Wi-Fi 5 Gigabit Ethernet router, built to deliver top-end Wi-Fi 5 performance, true gigabit routing throughput, and advanced service delivery capabilities. This quick start describes how to install ADTRAN's 831-t5 Service Delivery Gateway.




The 831-t5 WiFi 5 Mesh Extender Access Point (AP) is an indoor gateway delivering premium multi-gigabit services.

- “Installing the 831-t5 Gateway” on page 2
- “Product Specifications” on page 4
- “Safety and Regulatory” on page 4

Figure 1 illustrates the front and back of the 831-t5 gateway.



Figure 1. Front and Back of the 831-t5 Gateway

 WARNING! WARNING indicates a hazard which, if not avoided, could result in death, injury or serious property damage.	 CAUTION! CAUTION indicates a hazard which, if not avoided, could result in service interruption, damage to the equipment, or minor property damage.	 NOTE NOTES inform the user of additional, but important, information or features.
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Features

The features of the 831-t5 gateway include the following Subscriber interfaces:

- 2x Gigabit Ethernet (RJ-45) interfaces
- 1x USB 3.0 (Type A) Host port

Installing the 831-t5 Gateway

The following are guidelines for basic installation of the 831-t5.



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



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 831-t5 WiFi 5 Mesh Extender Access Point
- 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

No special tools are required for installing the 831-t5 gateway.

There are two options to install the 831-t5: 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 831-t5 can be placed on a desk or table. The following table shows the recommended minimum distance (in feet and meters) between the gateway 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
Cordless phone – digital	30 feet / 9 meters
Bluetooth devices	20 feet / 6 meters
ZigBee	20 feet / 6 meters



WARNING!

Ensure that the 831-t5 does not come in contact with water or other liquids.



CAUTION!

Ensure that the 831-t5 is not located in direct sunlight or next to any thermal obstructions.

Wall Mount Installation

The 831-t5 can be mounted on a wall. Wall Mount Kit (17600192F1) can be ordered for mounting the 831-t5. Instructions are provided in the related Quick Start Guide (617600192F1-13A).

Connecting the 831-t5 Gateway

Figure 2 illustrates the installation (connection) options for the 831-t5 gateway.



Figure 2. 831-t5 Gateway Installation Options (placeholder)

The following subscriber connections are available on the rear of the 831-t5:

- 2x Gigabit Ethernet (RJ-45 Connectors) **LAN 1** and **2** ports
- 1x USB 3.0 (Type A Connector) – **SS** port

To connect the subscriber Ethernet interfaces, refer to Figure 2 and insert a Category 5E (or better) RJ-45 cable into one of the LAN ports (labeled **LAN 1** and **2**) until there is an audible “click”.

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 other end of the power adapter into the wall outlet.
3. Press the **On/Off** switch to On.
4. Confirm that the power is connected properly. The **Power** LED should be lit on the front of the gateway.

Resetting the Gateway

A reset button is available if the 831-t5 needs to be rebooted. To reboot the 831-t5, 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.

Product Specifications

Electrical

- Power is provided by a 12V DC Power Adapter that is included with the 831-t5. 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 maximum

current rating of 2.5 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 831-t5 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 compliance requirements:

- UL /cUL Listed
- FCC Part 15, Class B
- ICES-003 (Class B)
- IEC 62368-1
- EN 62368-1, AS/NZS 60950.1
- 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: 617600031F1-17) 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>

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



<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>

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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PRICING AND AVAILABILITY 1.800.827.0807



August 2021 617600031F1-17a

Safety and Regulatory Notice



WARNING!

- Read all warnings, cautions, notes, and installation instructions before installing or servicing this equipment.
- Refer to the national, state, and local electrical codes for the requirements for power, grounding, wiring, and installation methods.
- This product may be powered by multiple sources. Disconnect all sources of power prior to servicing.



CAUTION!

- Connect the DC power input to an approved Limited Power Source (LPS) power supply ONLY.
- This equipment contains no parts that can be serviced by the user.

- 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 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.



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 UL Listed to the applicable UL/CSA Standards.
- This product has also been evaluated to applicable international standards including CE and RCM marking.
- The AC branch circuit socket-outlet must be installed near the equipment and must be easily accessible.

This radio transmitter (IC: 2250A-W338E0) 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.

- Dynamic Frequency Selection (DFS) for devices operating in the bands 5250 – 5350 MHz, 5470 – 5600 MHz and 5650 – 5725 MHz.
- The device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems.
- 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.
- The maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the equivalent isotropically radiated power (EIRP). limit.
- 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.

Regulatory Compliance Information

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 20 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

We, ADTRAN, Inc., 901 Explorer Blvd, Huntsville, AL 35806, declare under our sole responsibility that the 831-t5 complies with Part 15 Subpart B of FCC CFR47 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.

Canadian Department of Communications Radio Interference Regulations

This digital apparatus (WiFi 5 Mesh Extender Access Point Model 831-t5) 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.

IMPORTANT NOTE: 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 **20cm**  between the radiator & your body.



dcassidy

Change 20 cm to 22 cm



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 bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit;
- (iii) the maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits specified for point-to-point and non-point-to-point operation as appropriate; and
- (iv) 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.
- (v) 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.

Installation Instructions:

Refer to the Quick Start or Job Aid for this product (P/N: 617600031F1-13) for detailed installation instructions.

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Quick Start

ADTRAN

September 617600193F1-13A

Overview

This quick start guide describes how to install ADTRAN's SDG-WM2 Wall Mount kit. This kit can be used with ADTRAN's 831-t5, 834-6/v6 and 841-t6 Home Gateway Units.

Package Contents

- ADTRAN's SDG-WM2 Wall Mount bracket
- Screws and wall anchors

Prior to Installation

Before installing the wall mount bracket, inspect it for damage. If damage has occurred during shipping, file a claim with the carrier, and then contact ADTRAN Customer Support.

Required Tools

A #2 Phillips-head screwdriver, drill and 6mm drill bit are required for installing the SDG-WM2 Wall Mount bracket.

Installing the Wall Mount Kit

1. Decide on a location for the gateway you want to mount on a wall.

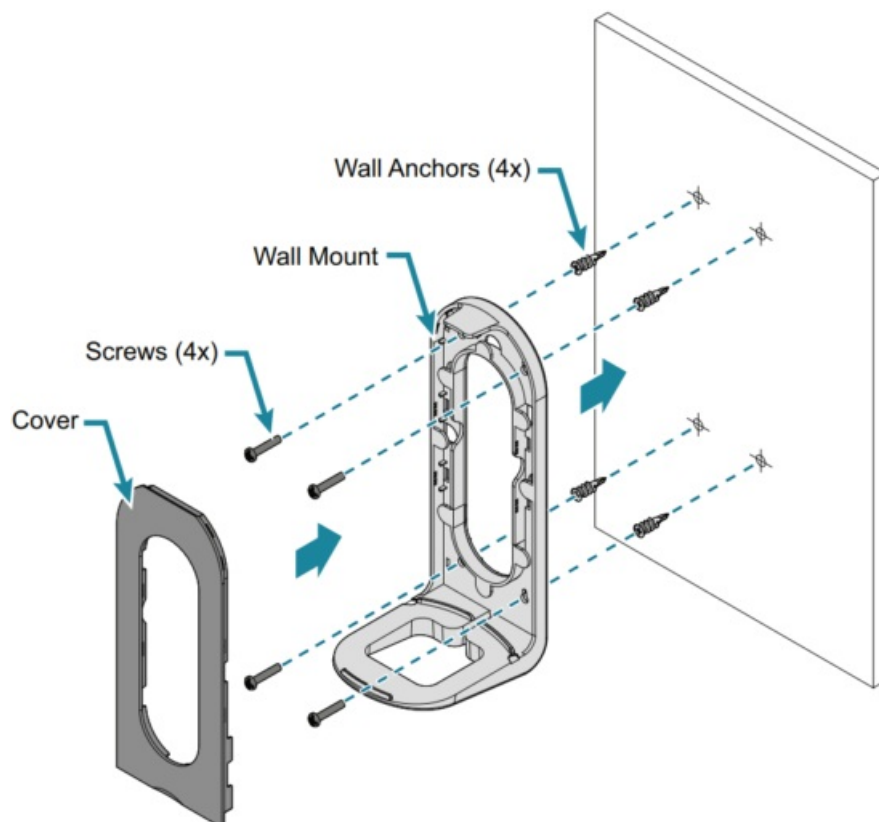


Figure 1. Wall Mount Installation Kit



WARNING!

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CAUTION!

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



NOTE

NOTES inform the user of additional, but important, information or features.

2. Use the keyholes on the wall mount kit as a template and mark the wall accordingly. See Figure 1.
3. Drill holes using a 1/4" (6mm) drill bit into the marks on the wall.
4. Use a hammer to lightly tap the included wall anchors into the drilled holes until anchors are flush with the wall.
5. Install four screws (included) into the anchor heads. Leave approximately 1/4 inch (6 mm) protruding from the mounting surface.
6. Slide the wall mount over the screws and exert a small amount of downward pressure to ensure that the top of the slots are resting on the shafts of the screws.
7. Secure the wall mount cover plate (snap-in). See Figure 2.

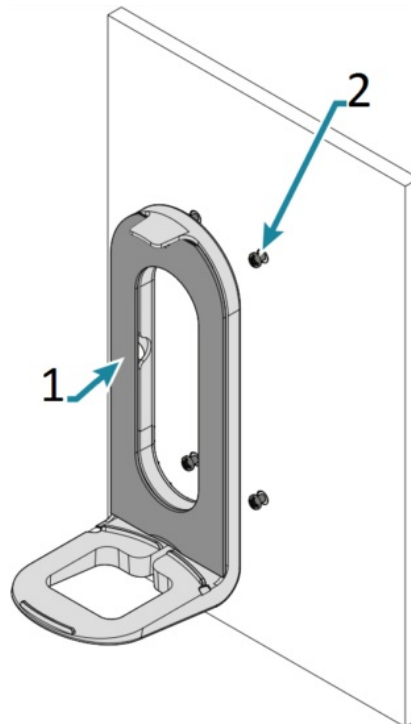


Figure 2. Wall-Mount Ready for Device

1. Wall Mount with Cover
2. Wall Anchors (4x)

8. Insert the device into the wall mount, base first. Then, snap the top support of the wall mount into place on the device. Installation is completed.

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Documents / Resources

	<p>ADTRAN 831-T5 Service Delivery Gateway [pdf] User Guide 17600031F1, HDC17600031F1, 831-T5 Service Delivery Gateway, 831-T5, Service Delivery Gateway</p>
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References

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