

# 5G Residential Gateway User Guide

Version 01

# 5G Residential Gateway



## Federal Communication Commission Interference Statement

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.

FCC Caution: Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

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.

FCC regulations restrict the operation of this device to indoor use only.

The operation of this device is prohibited on oil platforms, cars, trains, boats, and aircraft, except that operation of this device is permitted in large aircraft while flying above 10,000 feet.

Operation of transmitters in the 5.925-7.125 GHz band is prohibited for control of or Communications with unmanned aircraft systems.

## **RF Exposure Statement**

To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 91 cm from all persons (indoor), and must not be co-located or operating in conjunction with any other antenna or transmitter.

## **Important Notice**

The user is responsible for determining whether surfaces and installation environment is appropriate. Please remember that many factors influence installation safety. Please follow the user manual. Materials, flatness, cleanliness of surfaces, humidity, wind speed, time and many other factors can affect the adhesion and fixedness of this product. WNC does not guarantee the product can be fixed and will not fall. Given the variety of factors that can affect the adhesion and fixedness, it is essential that the user evaluates the conditions of surfaces and the environment to determine whether they are suitable for installation.

## **DISCLAIMER**

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, WNC MAKES NO OTHER WARRANTIES, EITHER EXPRESS, IMPLIED OR STATUTORY. WNC DISCLAIMS ANY LIABILITY CAUSED BY ANY USER'S NON-COMPLIANCE WITH THE USER MANUAL.

## **Safety Warnings**

### **Adapter**

Do not use any other power adaptor except the one that accompanies this unit or a power adaptor identified in the list below.

Use of another adapter could result in damage to the unit.

The following power adaptor is qualified for use with this WNC 5G Residential Gateway:

This unit must be powered by Delta Electronics, model EPS-72R0 or equivalent UL listed power source rated @ output 12Vdc, Maximum 6A.

## Chapter 1

### Introduction

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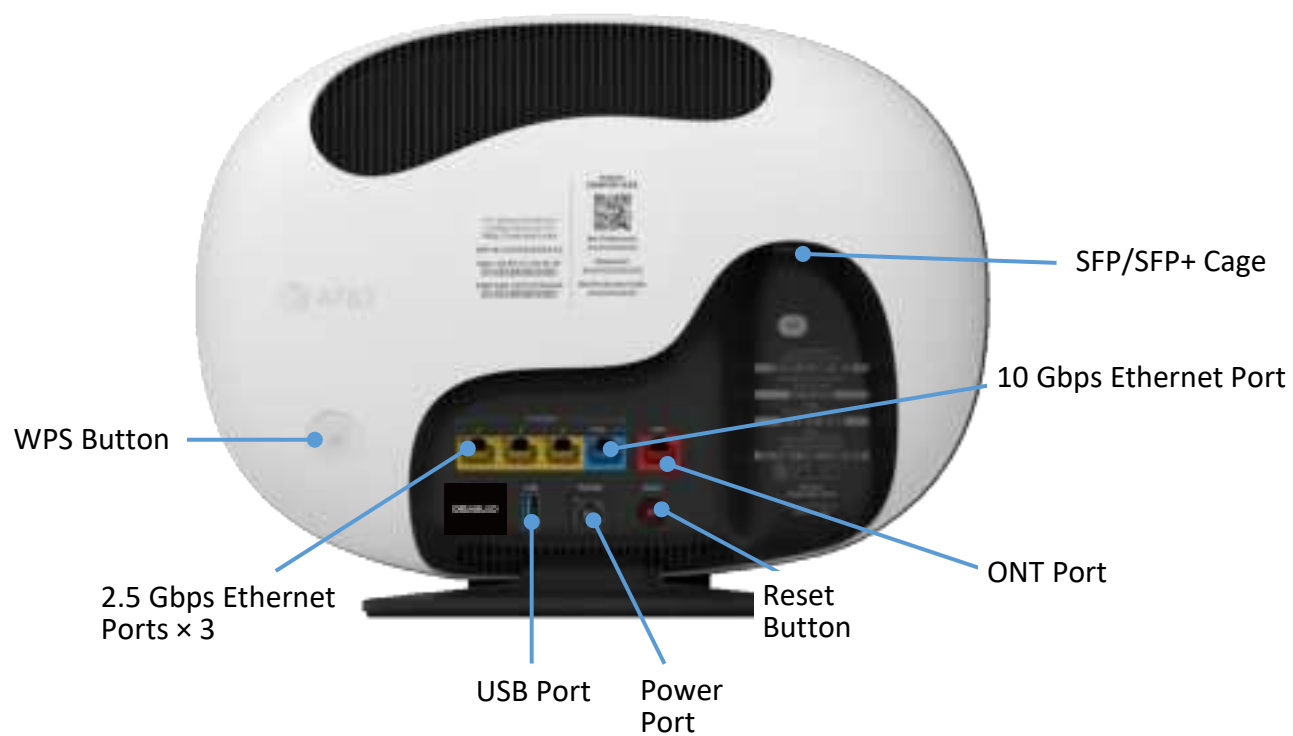
WNC's 5G Residential Gateway provides customers with an improved solution for 5G home service. The innovative design of the 5G Residential Gateway allows customers to connect their favorite devices to 5G networks.

#### 1.1 Unboxing Information

Inside the product package for the 5G Residential Gateway, you should find the following items:

- 5G Residential Gateway × 1
- Power adaptor × 1
- Accessory box × 1
  - Wall Mount Bracket Sets × 1
  - Wall Mount Screw bag × 1
  - Sill Mount Bracket Sets × 1
  - Sill Mount Screw bag × 1
  - Privacy Label × 2

## 1.2 Front and Rear Panel



Part	Description
<b>LED Light Pipe</b>	The LED light pipe lights up in different ways to indicate the connectivity status of the 5G Residential Gateway.
<b>LED Array</b>	The LED array can show the time and device status notifications
<b>WPS Button</b>	Press this button once to connect the 5G Residential Gateway to the Wi-Fi Extender or Wi-Fi Extender Mini devices via WPS. If the pairing is successful, the LED light pipe will stop blinking blue.
<b>RJ45 Ethernet Ports</b>	Use these ports to connect the 5G Residential Gateway to a PC or switch via an Ethernet cable.
<b>Power Port</b>	Connect the power adaptor to this port to provide power to the 5G Residential Gateway from an electrical outlet.
<b>Reset Button</b>	Reset the device to factory settings by pressing and holding down this button for at least 5 seconds.
<b>ONT Port</b>	Use this port to connect the device to an Optical Network Terminal (ONT).
<b>SFP/SFP+ Cage</b>	Use this port to connect optic modules to the device.

### 1.3 LED Behavior

Conditions for LED behavior	LED light pipe	WPS LED	DC jack LED	Ethernet port LEDs
<b>LED hardware colors</b>	Multiple	Red / Green	Green	Green
Not powered	Off	Off	Off	Off
Dead board (including issues such as corrupted boot code or the memory subsystem not being able to run code)	Off	Off	Green	Off
Initial power up	White / Slow Flash	Off	Green	Off
Device is not bootable (POST failure)	Red	Red	Green	Off
During POST process	Orange	Off	Green	Off
If POST process successful	White / Slow Flash	Current setting	Green	Green if connected device
Broadband physical detection and signal sync begins	White / Slow Flash	Current setting	Green	Green if connected device
Awaiting ONT SN	Green/ Fast Flash	Current setting	Green	Green if connected device
Attempting upper layer network access	White / Fast Flash	Current setting	Green	Green if connected device
802.1X / IP address failure	RED / Fast Flash	Current setting	Green	Green if connected device
Broadband physical detection and signal sync fails	RED / Slow Flash	Current setting	Green	Green if connected device
Broadband sync and network access successful	White	Current setting	Green	Green if connected device
Unit up and running (non-ALERT mode)	White	Current setting	Green	Green if connected device
Unit up and running (ALERT mode)	White	Current setting	Green	Green if connected device
Device is overheating	Red	Off	Green	Green if connected device
Phone registration fails	Yellow / Fast Flash	Current setting	Green	Green if connected device
Phone registration successful	White	Current setting	Green	Green if connected device

VoIP available - no call in progress	White	Current setting	Green	Green if connected device
VoIP available - phone off hook or ringing	White	Current setting	Green	Green if connected device
Upgrade in progress (lasts up to xx seconds, then goes back to the status listed in row 4)	Orange / Slow Flash	Current setting	Green	Green if connected device
Downgrade in progress (lasts up to xx seconds, then goes back to the status listed in row 6)	Orange / Slow Flash	Current setting	Green	Green if connected device
During WPS attempt for user managed (e.g. data) SSIDs	Current setting	Green / Slow Flash	Green	Green if connected device
Session overlap detected during WPS attempt	Current setting	Red / Fast Flash	Green	Green if connected device
Failure detected during or by end of WPS attempt	Current setting	Red	Green	Green if connected device
Success following WPS attempt	Current setting	Green	Green	Green if connected device
First press of RBR button	Last known setting	Last known setting	Green	Green if connected device
RBR button held for less than 5s - Standard reset	RED / Fast Flash	RED / Fast Flash	Green	Green if connected device
RBR button held for 5-10s - Standard reset (While holding button down)	RED / Fast Flash	RED / Fast Flash	Green	Green if connected device
Button held for 5-10s - Standard reset (After releasing button)	White	Off	Green	Green if connected device
Button held for 10s - 15s - Factory reset (While holding button down)	White / Fast Flash	GREEN/Fast Flash	Green	Green if connected device
Button held for 10s - 15s - Factory reset (5 second period after releasing button)	White / Fast Flash	GREEN/Fast Flash	Green	Green if connected device
Button held for > 15s - Factory reset (While holding button down)	White	Off	Green	Green if connected device
Button held for > 15s - Factory reset (5 second period after releasing button)	White	Off	Green	Green if connected device
Button held for > 20s - Factory reset (While holding button down)	White	Off	Green	Green if connected device



## Chapter 2

### Product Specifications

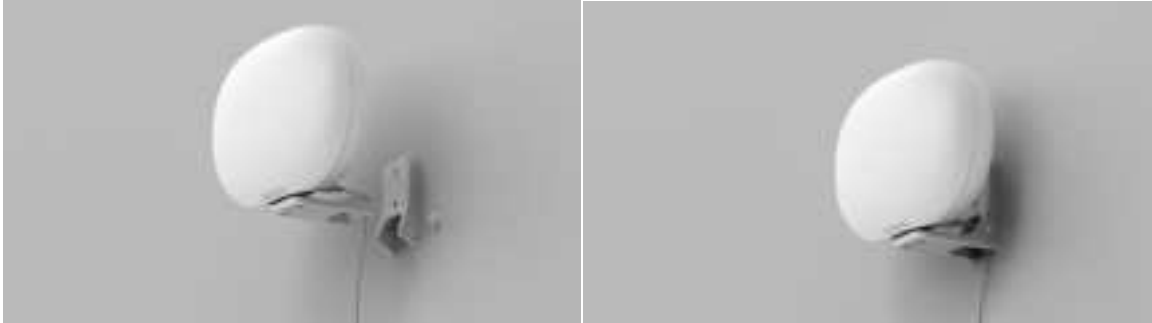
<b>5G</b>	<ul style="list-style-type: none"><li>• Network options: Option 3X, 3A (NSA), and Option 2 (SA)</li><li>• CA configuration:<ul style="list-style-type: none"><li>• DL 3CA</li><li>• UL 2CA</li></ul></li><li>• Band support: n2/5/12/30/66/77</li><li>• MIMO:<ul style="list-style-type: none"><li>• DL (8RX, on n77)</li><li>• DL (4RX, on 2/30/66)</li><li>• DL (2RX, on n12/5)</li></ul></li></ul>
<b>4G</b>	<ul style="list-style-type: none"><li>• CA configuration:<ul style="list-style-type: none"><li>• DL 2CA, 3CA, 4CA</li><li>• UL 2CA</li></ul></li><li>• Band support: B2/4/5/12/29/30/66</li><li>• MIMO:<ul style="list-style-type: none"><li>• DL (4x4, on B2/30/66)</li><li>• DL (2x2, on B5/12/29)</li></ul></li></ul>
<b>Wi-Fi</b>	<ul style="list-style-type: none"><li>• 802.11a/b/g/n/ac/ax</li><li>• MU-MIMO<ul style="list-style-type: none"><li>• 2.4 GHz 4x4/40 MHz</li><li>• 5 GHz: 4x4/160 MHz</li><li>• 6 GHz: 4x4/160 MHz</li></ul></li></ul>
<b>Connector</b>	<ul style="list-style-type: none"><li>• 10 Gbps WAN Ethernet port × 1</li><li>• 10 Gbps LAN Ethernet port × 1</li><li>• 2.5 Gbps LAN Ethernet port × 3</li><li>• SFP+ (XGS-PON) × 1</li><li>• USB 3.2 Type A × 1</li><li>• Nano SIM Slot (4FF) × 1</li></ul>
<b>Button</b>	<ul style="list-style-type: none"><li>• Reset button × 1</li><li>• WPS button × 1</li></ul>
<b>LED</b>	<ul style="list-style-type: none"><li>• Signal strength LED Matrix</li><li>• Status LEDs</li></ul>

<b>Dimensions</b>	<ul style="list-style-type: none"> <li>• 295 × 112 × 224 mm</li> </ul>
<b>Weight</b>	<ul style="list-style-type: none"> <li>• 2.0 kg</li> </ul>
<b>Operating Temperature/Humidity</b>	<ul style="list-style-type: none"> <li>• 0 °C (32 °F) to 41.7 °C (107.1 °F)</li> <li>• Humidity: Up to 85% (non-condensing)</li> </ul>

## Appendix

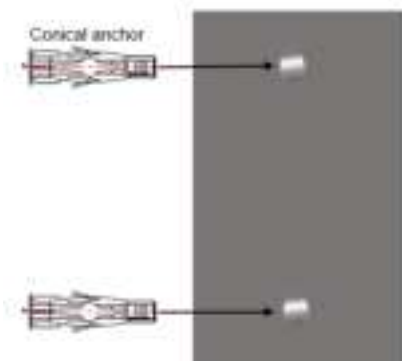
### Installation Guide

#### Wall Mount Installation

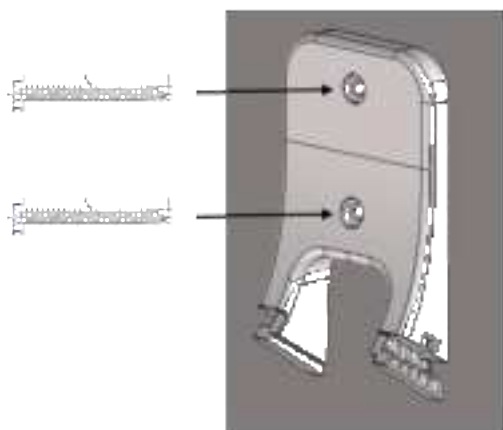


Step 1: Drill two holes in the wall

Step 2: Put conical anchor in the wall (optional)



Step 3: Install wall part onto the wall with screw



Step 4: Disassemble stand & switch to the device part

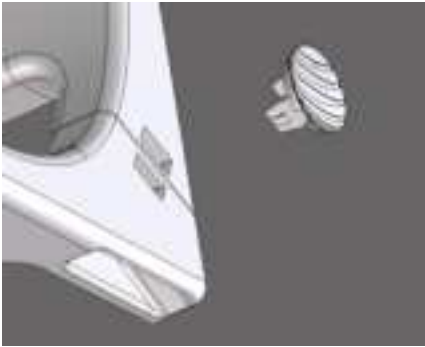


Step 5: Hang device part to the wall part

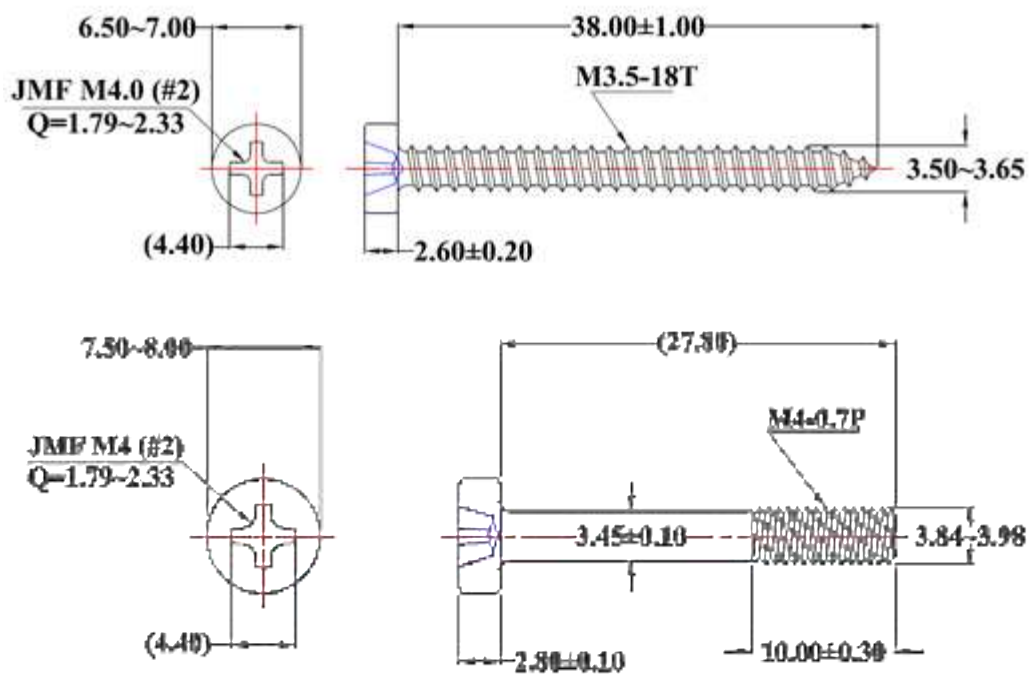


Click!

Step 6: Install plug (optional)



### Wall Mount Screws

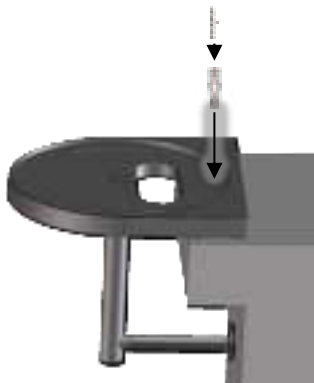


## Sill Mount Installation



Step 1: Pre-locate the bracket to decide screw location

Step 2: Drill a hole and put conical anchor (optional) in the sill

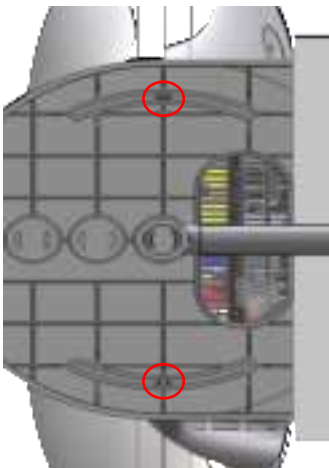


Step 3: Install bracket on sill

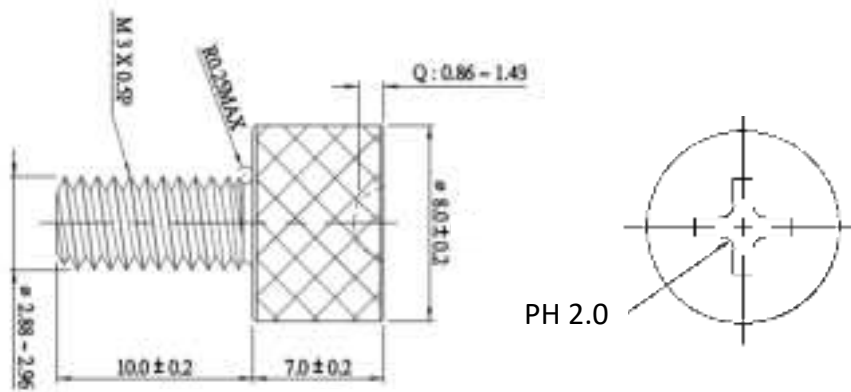
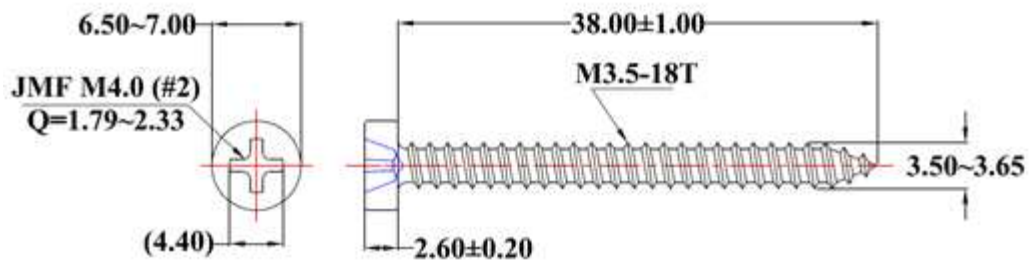
Step 4: Put device on bracket and pre-fix with snap



Step 5: Install 2 screws from bottom to prevent rotation (optional)



## Sill Mount Screws



PH 2.0