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AT&T 5G Cell Booster Pro

Create more wireless coverage with a mission-ready mini-cell tower that creates a 5G C-band network inside your agency

Welcome

Thank you for choosing AT&T 5G Cell Booster Pro. You chose a powerful solution to create a wireless network with AT&T 5G licensed spectrum inside your agency location. AT&T 5G Cell Booster Pro provides coverage for any FirstNet and AT&T 5G and 4G-capable device.

AT&T 5G Cell Booster Pro is a first responder-ready mini-cell tower that generates 5G C-band coverage inside your agency. Enjoy better productivity as you access critical data, complete mission critical activities, and conduct video calls with first responders when your site gains coverage for your needs. If you need to solve a coverage problem in less than 90,000 square feet, AT&T 5G Cell Booster Pro devices are your simple-to-install and easy-to-use solution.

This document provides information about the AT&T 5G Cell Booster Pro product and how to set it up, use it, and obtain support.

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How AT&T 5G Cell Booster Pro works

Connect to broadband	Place and connect GPS antenna	Connect device to power
• Register the AT&T 5G Cell Booster Pro device serial number(s) in the portal • Connect your AT&T broadband router to your AT&T 5G Cell Booster Pro WAN port to create a data transport for the cellular traffic	• Insert the GPS antenna into the GPS port on the backside of the device • Place the GPS antenna onto an exterior window to obtain and maintain a 5G signal	• Connect the AT&T 5G Cell Booster Pro device to a power source using the provided power supply • Your AT&T 5G Cell Booster Pro admin receives email notification of service activation • AT&T 5G and 4G capable devices automatically connect to the coverage created

AT&T 5G Cell Booster Pro features

AT&T 5G network coverage

- **AT&T 5G C-band** network coverage inside your agency within the coverage area of your AT&T 5G Cell Booster Pro device(s)

- **Omni-directional propagation** to generate a 360-degree signal

- **Connects to a 1G port on your broadband** router or switch for cellular data transport via an ethernet cable

- **Provides coverage** for up to 15,000 square feet per AT&T 5G Cell Booster Pro device

  o Areas with thick interior building materials or multiple barrier walls may need more than one AT&T 5G Cell Booster Pro device to achieve the desired coverage.

- **Supports up to 64 simultaneos connections** per device

  o 32 5G C-band connections and

  o 32 4G Band 14 connections

- **Add up to 6 devices per site** to serve up to 384 simultaneous connections spanning up to 90,000 square feet

  o 192 5G C-band connections and

  o 192 4G connections

- **Automatic connectivity** for the following device types:

  o AT&T 4G and 5G devices, including phones, tablets, wearables, and other devices

  o FirstNet Band 14 devices

  o AT&T IoT devices, excluding those with SIM type CAT-M, LTE-M, NB-IoT, or RedCap

- **Peak data throughput** of up to 800 Mbps downlink and 150 Mbps uplink

  o The number of AT&T 5G Cell Booster Pro devices, the site's maximum broadband speed, the number of simultaneous user sessions, and the type of session (voice, data, streaming) will influence AT&T 5G Cell Booster Pro's performance.

- **External GPS antenna** obtains and maintains the 5G signal, timing, and E911 compliance.

Simple to install

- **Simple to install** by using the AT&T 5G Cell Booster Pro mobile app or web portal

- **Device placement options** include tabletop, wall, or ceiling

- **Professional installation** service available for agency locations

Easy to use

- **Any FirstNet or AT&T 5G or 4G capable device**, including phone, tablet, laptop, connected wearable, or other device, automatically connects to the AT&T 5G Cell Booster Pro cellular network

  o Excludes devices with IoT SIM type CAT-M, LTE-M, NB-IoT, or RedCap

- **Easy to manage** by using the AT&T 5G Cell Booster Pro mobile app or web portal

- **Real-time service status** and performance metrics from LED lights on the front of the AT&T 5G Cell Booster Pro device and within the Cell Booster portal

Site requirements

- **U.S. location**

- **Interior location** needing coverage for an area of up to 15,000 square feet per AT&T 5G Cell Booster Pro device

  o Maximum number of devices per site: 6 to support up to 90,000 square feet of coverage area

- **AT&T 5G Cell Booster Pro is available** for any location in the domestic U.S. where AT&T provides 5G C-band or 4G coverage

  o Use this link to verify AT&T 5G coverage in your location's zip code

  o The service also provides 4G coverage, while 5G C-band is unavailable in Hawaii and Alaska.

- **An exterior window** for placing and keeping the GPS antenna that obtains and maintains the cellular signal per industry standards

Broadband requirements

AT&T 5G Cell Booster Pro uses your site's broadband as a data transport to create a reliable 5G network inside your building.

- Requires an available 1G port on your broadband router or switch

- Connects to the broadband router or switch via the provided Cat 6 ethernet cable

To enable the best possible coverage from your AT&T 5G Cell Booster Pro device, we recommend that your broadband meets or exceeds these downlink and uplink bandwidths:

Recommended broadband downlink	Recommended broadband uplink
1 GB or higher	100 Mbps or higher

To activate and have basic AT&T 5G Cell Booster Pro service, your broadband must at least meet these minimum broadband downlink and uplink requirements:

Minimum broadband downlink	Minimum broadband uplink
100 Mbps	25 Mbps

You can check your current downlink and uplink broadband speeds using this link.

Easy to use

Your site's internet firewall may need updating if it uses specific IP addresses to accept and pass data traffic.

- Your firewall must recognize specific IP addresses necessary to broadcast AT&T cellular traffic via AT&T 5G Cell Booster Pro.

- See Appendix C: Activation troubleshooting and firewall updates

The number of AT&T 5G Cell Booster Pro devices, the site's maximum broadband speed, and the number of simultaneous user sessions plus the type of session (voice, data, streaming) will influence the AT&T 5G Cell Booster Pro's performance.

Device specifications

CBP device dimensions	• 9.5 inches high, 9.5 inches wide, 3.8 inches deep • 8.8 pounds
Power source	• External AC to 12-volt DC converter <u>OR</u> • Ethernet PoE++ splitter optional accessory available from AT&T if an accessible AC power outlet is not available for the AT&T 5G Cell Booster Pro device
Power consumption	• Maximum power consumption at ambient temperature: less than 26W
Interior environmental conditions	• Temperature ranges from 23°F to 113°F • Relative humidity up to 95% • Passive cooling
Intrinsic safe standards	• UL-certified, which includes Intrinsic Safe standards
CBP device placement options	• Flat surface tabletop: for the best performance of the CBP omnidirectional antenna, attach the device to the desk stand accessory available from AT&T before connecting the device to the Ethernet cable, GPS antenna, or power supply. • Wall mount: the back of the CBP device has a twist-off disk with pre-drilled holes for mounting the device on a wall.
Separating multiple CBP devices	• Place AT&T 5G Cell Booster Pro devices at least 50 feet away from each other as measured by a straight line through the walls of the building • Place no more than 100 feet away from each other to prevent dropped calls when walking in the building
Security	• 889 compliant to protect National Security by limiting the government's access to "covered" equipment or services manufactured or provided by certain companies or their subsidiaries or affiliates with known ties to the People's Republic of China • Uses industry-standard encryption techniques and algorithms, including Advanced Encryption Standard (AES) 128 and 256, Triple Data Encryption Standard (3DES), and commercial algorithms, including RC4, with a minimum equivalent of 128-bit • Complies with the <u>AT&T corporate security policy</u>

Ordering AT&T 5G Cell Booster Pro

Ordering AT&T 5G Cell Booster Pro

You may order a AT&T 5G Cell Booster Pro and rate plan in one of these ways:

- Contact your FirstNet seller, who can create the order for you
- Call a FirstNet care center to place an order (800) 574-7000
- Visit an AT&T retail store to place your order

Your order will include these components:

- **AT&T 5G Cell Booster Pro rate plan:** monthly recurring charge
    - Each AT&T 5G Cell Booster Pro device requires a AT&T 5G Cell Booster Pro rate plan
- **AT&T 5G Cell Booster Pro device:** one-time charge
    - Agency customers can pay for the device in installments spanning 24, 30, or 36 months
    - Consumer customers can choose a 36-month installment plan
- **AT&T 5G Cell Booster Pro** optional accessories:
    - **Desk stand**: recommended for devices placed on a tabletop. You will experience better performance by inserting the device into the desk stand instead of laying it flat on the tabletop.
    - **AT&T 60' or 200' High Gain GPS Antenna**: recommended if the distance between the device's location and the window used for the GPS antenna exceeds 35 feet
    - **PoE++ splitter**: an alternate power source if the location for the AT&T 5G Cell Booster Pro device does not have an accessible AC power outlet
- **Installation service options:**
    - Do it yourself
    - AT&T professional installation service for agency locations (not available for homes)
        - Your FirstNet seller or FirstNet care center can order the installation service for you.

Receiving AT&T 5G Cell Booster Pro devices

You may order a AT&T 5G Cell Booster Pro and rate plan in one of these ways:

- AT&T ships the AT&T 5G Cell Booster Pro device and accessories included in your order to an address you provided during the order creation.
- AT&T ships AT&T 5G Cell Booster Pro devices and accessories to your address for orders placed in retail stores, with AT&T sellers, or at FirstNet care centers.

Included in the AT&T 5G Cell Booster Pro kit

Each AT&T 5G Cell Booster Pro device kit includes the following components to install and activate the device:

- **AT&T 5G Cell Booster Pro device** to create 5G wireless coverage in your building
    - It consists of a detachable wall mount with pre-drilled holes for mounting the device on a wall or ceiling
- **Ethernet CAT6 cable** to connect the AT&T 5G Cell Booster Pro device to your broadband router or switch
    - Length: 9 feet
- **GPS antenna** to obtain and maintain the AT&T 5G network signal, timing, and E911 compliance
    - Cable length: 33 feet
    - 60' or 200' high gain GPS antenna optional accessories available from AT&T and needed if the distance between the AT&T 5G Cell Booster Pro device and exterior window exceeds 33 feet
- **Power cable** to connect the AT&T 5G Cell Booster Pro device to a power source
    - Length, including power supply and cable: 9 feet
    - AC to 12 V DC power supply
    - If the AT&T 5G Cell Booster Pro device location cannot access an AC power source, consider ordering an AT&T's PoE++ Splitter as an accessory.

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Real-time LED status:

- **Power** on/off status
- **Internet** connection status
- **Status**
- **GPS** lock status
- **4G** radio 1 status
- **4G** radio 2 status
- **5G** radio status

Front view of the AT&T 5G Cell Booster Pro device

Ports & connections

GPS: insert GPS antenna cable into this port

- **LAN:** use the WAN rather than the LAN port to connect the device to your broadband router

- **WAN:** insert the cat6 ethernet cable into this port to connect the device to your broadband router

- **Power:** insert the power outlet into this port

- **Reset:** press to restart the device until the LEDs turn back on

Rear view of the AT&T 5G Cell Booster Pro device

Installation options

Many customers choose to install their AT&T 5G Cell Booster Pro device themselves. Here are the steps to activate your AT&T 5G Cell Booster Pro device:
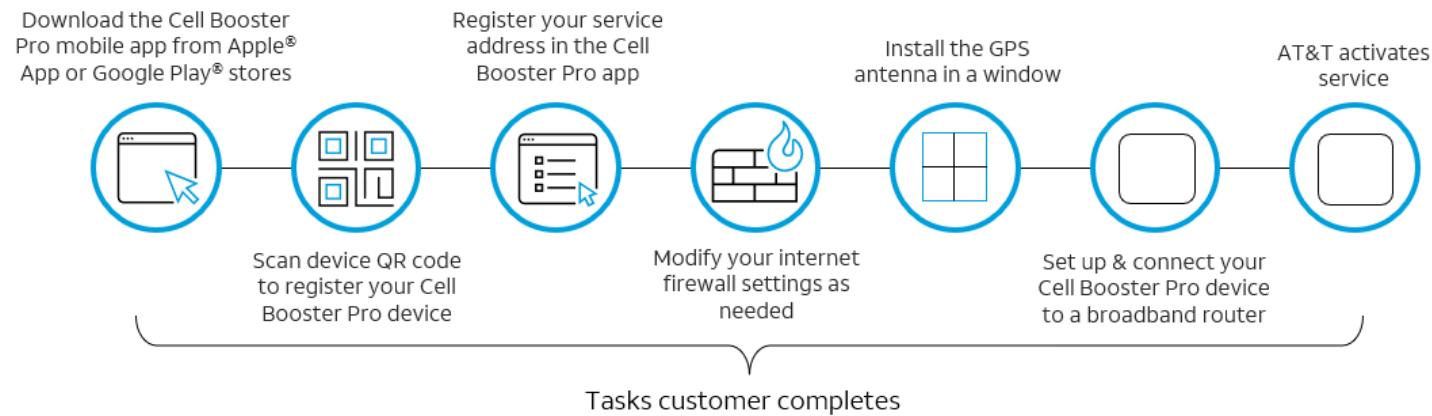
AT&T 5G Cell Booster Pro do-it-yourself installation task sequence

See Installing AT&T 5G Cell Booster Pro for step-by-step installation instructions, and refer to Appendix C: Activation troubleshooting and firewall updates for details about the firewall changes you may need to make.

Professional installation is available. Ordering professional installation from AT&T is an excellent choice if you need more than one or two devices installed in your location or do not want to add another item to your to-do list. These are the steps involved in the professional installation service:
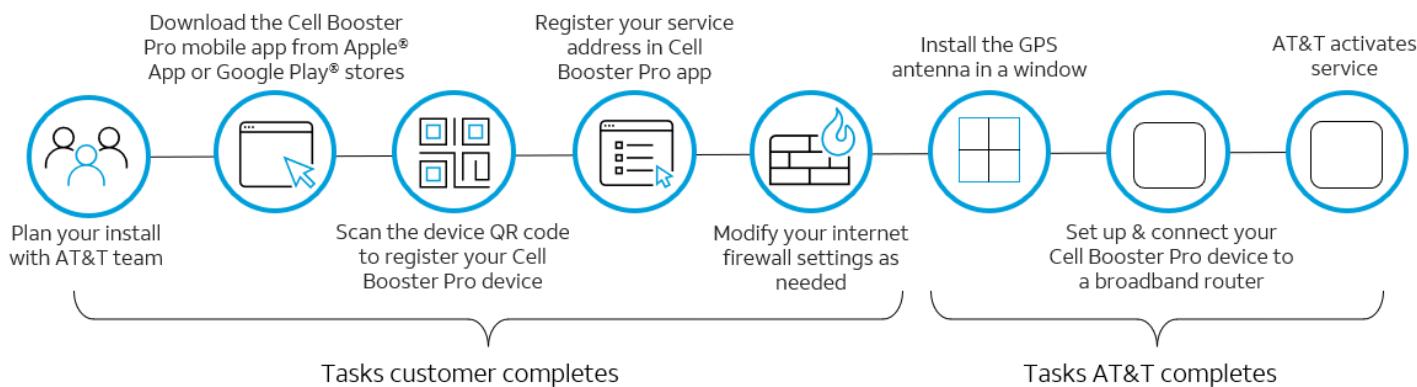
AT&T 5G Cell Booster Pro professional installation task sequence

Professional installation excludes installing devices on walls or ceilings over 10 feet high in a agency location and is unavailable for non-agency locations.

You can add the professional installation service to a AT&T 5G Cell Booster Pro order created by your FirstNet sales executive or care center manager.

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AT&T 5G Cell Booster portal

Use the AT&T 5G Cell Booster Pro portal to register your device before installing equipment:

Register	1. **Scan the QR code** on the device to register the AT&T 5G Cell Booster Pro device's serial number in the portal OR manually enter the device's serial number in the web portal. 2. **Input the name, email address, and AT&T phone number to register** the person who will be your AT&T 5G Cell Booster Pro administrator. 3. **Input the AT&T 5G Cell Booster Pro installation address** to register the service address. 4. **Scan the QR code on the next device** if you are installing more than one AT&T 5G Cell Booster Pro device at the same site.

Use the portal to change or check service status:

Add	• **Scan the QR code** on the device to register a new AT&T 5G Cell Booster Pro serial number in the portal for an existing service address. • **Input other AT&T 5G Cell Booster Pro technical contact name(s)** to add them as portal administrators. • **Input the installation address** for Cell Booster Pro to register a new service address.
Remove	• **Delete a Cell Booster Pro device** you no longer use after contacting AT&T to deactivate the Cell Booster Pro rate plan. • **Delete a Cell Booster Pro administrator**, provided you keep at least one registered administrator. • **Delete a service address** with no linked Cell Booster Pro devices.
Check	Select an activated Cell Booster Pro device and: • **Select Device status** to view the status for power, internet, activation status, GPS, 4G radios, and 5G radios • **Select Performance reports** to view the current month plus the previous twelve months' results for retainability and accessibility for voice and data traffic.
Move	If you need to move all AT&T 5G Cell Booster Pro devices from one location to another: • **Delete their current service address** from the portal. • **Delete each device serial number** from the portal. • Physically move the devices to the new location. • **Scan the QR code** on the device to register a new Cell Booster Pro serial number in the portal. • **Input the AT&T 5G Cell Booster Pro technical contact name** to add them as portal administrators if different from the original portal administrator. • **Input the new installation address** for the relocated AT&T 5G Cell Booster Pro devices. • Set up the 5G Cell Booster Pro device per the installation instructions available in the portal. If you need to move some but not all Cell Booster Pro devices to a different address • **Delete the serial number** of the device(s) you will move. • Physically move the device(s) to the new location. • **Scan the QR code** on the device to register the Cell Booster Pro serial number in the portal. • **Input the AT&T 5G Cell Booster Pro technical contact name** if it differs from the original portal administrator. • **Input the new installation address** for the relocated AT&T 5G Cell Booster Pro devices. • Set up the AT&T 5G Cell Booster Pro device per the installation instructions available in the portal.

The 5G Cell Booster Pro portal is available in two formats:

- **Free mobile app** available in Apple and Google Play stores by searching for AT&T Cell Booster

  Cell Booster Pro App

- **The online portal** is accessible via a web browser: www.firstnet.com/cellboosterpro

Login for the AT&T 5G Cell Booster Pro portal

Accessing the AT&T 5G Cell Booster Pro Portal requires you to input your login name and password for one of these AT&T systems:

- Premier Wireless Business
- FirstNet Central
- myATT (att.com)

What if you do not have a login to one of those systems? What if you do not want to share your FirstNet account login credentials with the person you assign to be your AT&T 5G Cell Booster Pro portal administrator? Your AT&T 5G Cell Booster Pro technical contact can create a free att.com email address to gain direct access to the AT&T 5G Cell Booster Pro portal. This email address does not provide access to any other AT&T system.

See Appendix A: Login Information to create an email address to log into the AT&T 5G Cell Booster Pro web portal or mobile app.

Installing AT&T 5G Cell Booster Pro

Register your AT&T 5G Cell Booster Pro device

Complete these steps for a DIY install or before your installation appointment if you ordered AT&T's installation service:

1. Know your login and password for the AT&T 5G Cell Booster Pro portal.

2. Download the AT&T 5G Cell Booster Pro app from the Google Play or Apple app store OR log into the web portal (www.firstnet.com/cellboosterpro).

3. Scan the blue-stick QR code on the AT&T 5G Cell Booster Pro device. The portal app automatically opens.

4. Tap the account type applicable to your login type.

5. Input your login name and password.

6. Review and accept the application's end-user license and terms of service agreements.

7. Tap Set up an AT&T 5G Cell Booster Pro to continue.

8. Notice that the serial number field displays the serial number of the device you scanned.

Cell Booster Pro portal login page →

Tap and enter your myATT (att.com) or "@currently.com" email address and password

Tap and enter your Premier Business Wireless username and password

Tap and enter your FirstNet Central username and password
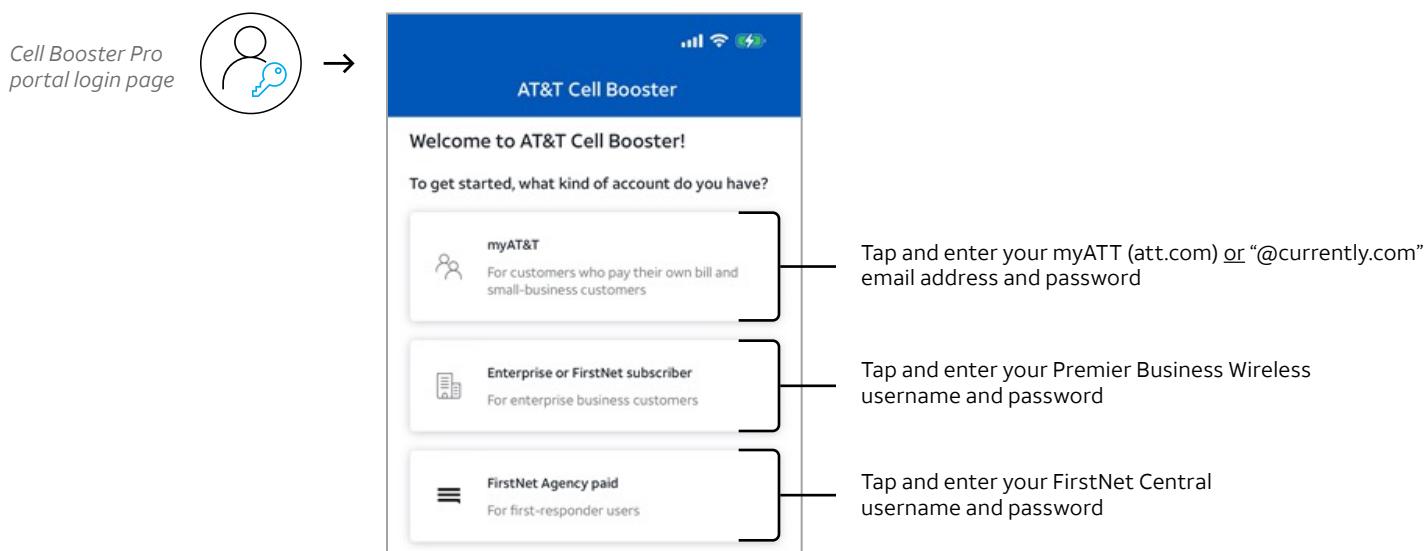
9. Input your AT&T 5G Cell Booster Pro's technical contact information in the following fields:

   a. **First name, Last name**

   b. **AT&T mobile phone number**

   c. **Preferred email**

   d. **Cell Booster nickname**

   (hint: use the device's location in your building as a nickname)

10. In the **AT&T 5G Cell Booster Pro Type** field, you should select **FirstNet** to enable Band 14.

11. In the **Enter AT&T 5G Cell Booster Pro Location** screen, input the complete address for the AT&T 5G Cell Booster Pro site.

12. Review the information you entered and make needed changes. Tap Confirm if the information is correct.

13. You should see the "Registration Successful" message within the portal.

14. If you are installing multiple AT&T 5G Cell Booster Pro devices at the same site,

   a. Return to the portal home page and tap the location name you just created.

   b. Tap the + sign to add a new device.

   c. Position your device over the blue-label QR code on the next device and scan the serial number.

Modify your firewall settings

Complete these steps for a DIY installation or before your installation appointment if you ordered AT&T's installation service:

- [Appendix C: Activation troubleshooting and firewall updates](#) provide detailed information about changes you may need to make to your internet firewall settings.

- Because of the wide variety of network configurations, AT&T recommends consulting a network specialist, router manufacturer, and/or Internet Service Provider to answer specific network setup questions.

- AT&T is unable to help you change your firewall settings.

Setup AT&T 5G Cell Booster Pro equipment

Complete these steps for a DIY installation:

1. **Find a place for your AT&T 5G Cell Booster Pro device.** For best results, have a direct connection to the broadband router or switch connected to the broadband switch.

   d. If setting up multiple AT&T 5G Cell Booster Pro devices within the same site, keep at least 50 feet of space between devices so they do not create interference.

2. **Plug the provided ethernet cable** into the AT&T 5G Cell Booster Pro WAN port and then into your broadband router or switch, e.g., wi-fi gateway.

3. The **GPS antenna must remained plugged in at all times**, otherwise the CBP will stop working. There is no way to override this requirement.

4. **Attach the GPS antenna** to a window to receive the AT&T network signal.

5. **Plug the power supply** into the AT&T 5G Cell Booster Pro and a nearby AC outlet.

The AT&T 5G Cell Booster Pro activation sequence should begin and may require approximately 90 minutes to complete.

AT&T 5G Cell Booster Pro placement guidelines

Complete these steps for a DIY installation:

• For wall-mount installation, place the top edge of the AT&T 5G Cell Booster Pro device at least 1 (one) foot below the ceiling.

• The coverage radius for a AT&T 5G Cell Booster Pro in a typical office/drywall environment is 50-70 feet. The coverage radius may be as little as 15-20' in an environment with cinderblock or thick concrete walls.

• Separate your AT&T 5G Cell Booster Pro devices by at least 50 feet as measured by a straight line between the devices.

• Do not place your AT&T 5G Cell Booster Pro devices inside MDF/IDF or other types of closets, containers, or small enclosed areas.

• Separate each AT&T 5G Cell Booster Pro device approximately 3-5 inches from other electronic equipment for general equipment hygiene. The AT&T 5G Cell Booster Pro device will not interfere due to FCC-regulated broadcast frequencies, but separating electronic devices is still a good practice.

Upon service activation for your AT&T 5G Cell Booster Pro device, your AT&T 5G Cell Booster Pro administrator receives an email from AT&T.

    a. All LED lights on the front of your AT&T 5G Cell Booster Pro device display a white, non-blinking light for an activated AT&T 5G Cell Booster Pro device.

    b. AT&T devices within the AT&T 5G Cell Booster Pro coverage area automatically gain improved cellular connectivity.

    c. The AT&T 5G Cell Booster Pro device's blinking white LEDs indicate active calls and data sessions for your user devices.

6. Place the AT&T 5G Cell Booster Pro device within 5-8 inches of the A/C power connection.

7. Choose a window for the GPS antenna no more than 30 feet from the AT&T 5G Cell Booster Pro device or a maximum of 95 feet if you purchase the optional GPS extension cable. Try to avoid using a south-facing or coated window.

NOTE: The activation process can take 2-3 hours to complete. Once all lights are white, activation is complete.

NOTE: AT&T and FirstNet customers won't see a different Alpha Tag on their phone when connected to the AT&T 5G Cell Booster Pro

Troubleshooting

• Refer to [Appendix C: Activation troubleshooting and firewall updates](#)

• Refer to [Appendix D: AT&T 5G Cell Booster Pro service troubleshooting guide](#) for detailed guidance about how to detect and solve an issue

Use AT&T 5G Cell Booster Pro

What do you need to do for your user devices to use the activated AT&T 5G Cell Booster Pro coverage in your building? Nothing. The following device types automatically connect to the network when they are inside the AT&T 5G Cell Booster Pro coverage range:

• AT&T 4G and 5G phones, tablets, connectable devices, laptops, and other devices

• FirstNet Band 14 devices

• AT&T IoT devices, excluding CAT-M, LTE-M, NB-IoT, and RedCap devices

Suppose you leave the building while using a device connected to AT&T 5G Cell Booster Pro. Your call continues as you leave the AT&T 5G Cell Booster Pro coverage area. You lose connectivity only if no other mobile network is available outside your workplace.

What if the AT&T 5G Cell Booster Pro device loses connection with your broadband or stops working for other reasons? Your site's coverage degrades if your AT&T 5G Cell Booster Pro device goes offline, so you may experience coverage issues while using your wireless devices inside the AT&T 5G Cell Booster Pro coverage area.

Warranty and support

Device warranty process

The AT&T 5G Cell Booster Pro device has a twelve-month warranty effective the date you order the device.

- If you experience an issue with a AT&T 5G Cell Booster Pro device, contact the AT&T 5G Cell Booster Pro Product support team at (800) 574-7000.

- Be prepared to provide the cellular phone number your AT&T 5G Cell Booster Pro admin used when they registered your AT&T 5G Cell Booster Pro device.

The Technical Support Expert who answers your call collaborates with you to troubleshoot your issue. If the Technical Support Expert finds that the AT&T 5G Cell Booster Pro device is the root cause of the problem, they check the warranty status of your device.

- If your device is out of warranty, the Technical Support Expert can order a new device for you.

- If your device is under warranty, the Technical Support Expert issues a return merchandise order that starts the following process:

AT&T 5G Cell Booster Pro warranty exchange process
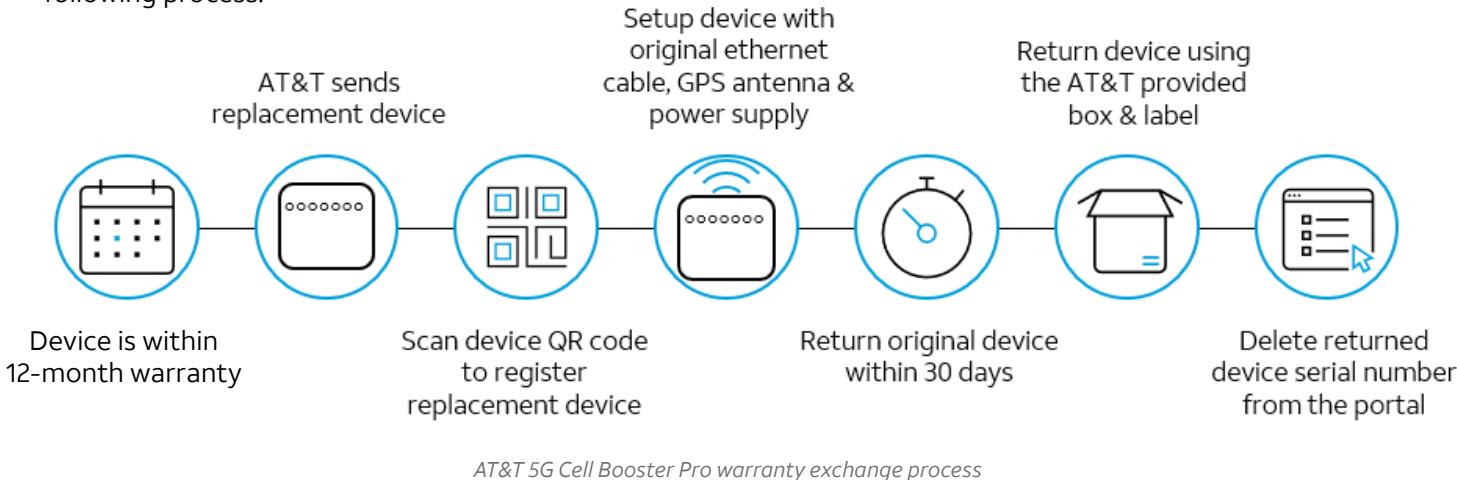
AT&T 5G Cell Booster Pro device warranty

One-Year Limited Warranty: AT&T warrants to the first retail purchaser of an AT&T 5G Cell Booster Pro device that, should this product or any part be proved defective in materials or workmanship from the date of purchase, as evidenced by AT&T billing records for a period of one (1) year, then it is subject to the terms of this one-year limited warranty. Such defects are repaired or replaced without charge for parts or labor directly related to the defect.

Limitations and Exclusions: This warranty does not apply to any cost incurred for removal or reinstallation or to any product or part thereof which has suffered through normal wear and tear, alteration, improper installation, physical abuse, misuse, neglect, or accident. Damage resulting from an act of God, including but not limited to fire, flood, earthquake, and other natural disasters, will be excluded. This limited warranty is in lieu of all other warranties, express or implied, either in fact or by operations of law, statutory or otherwise, including, but not limited to, any implied warranty of merchantability or fitness for a particular use. AT&T does not authorize any other person to assume any liability beyond the warranty herein described. In no event, whether based on contract, tort, or any other legal theory, shall AT&T or any of its agents or sellers be liable for incidental, consequential, indirect, special, or punitive damages of any kind resulting from the use of this product, including but not limited to interrupted or incomplete phone calls, omissions or negligence arising or its agents or sellers be liable for any damages defined in an amount in excess of the purchase price.

Customers who believe they need warranty service should call AT&T Customer Care at (877) 996-7017.

A Customer Care representative takes information over the phone to diagnose and remedy the issue. The customer care representative provides instructions on returning the device for repair or replacement where the warranty service applies.

Contacting AT&T for support

FirstNet Mobility & Technical Support team is available 24x7 to your AT&T 5G Cell Booster Pro administrators and technical support team. Contact the FirstNet support team at (800) 574-7000. Please share the following information with the AT&T 5G Cell Booster Pro Product support expert who answers your call:

- Please provide the cellular phone number your AT&T 5G Cell Booster Pro admin used when they registered your device.

- The colors of each LED status indicator on the front of the AT&T 5G Cell Booster Pro device

- Any information you can share about when you noticed the issue

Changes your business makes to its internet firewall settings may block AT&T 5G Cell Booster Pro's connectivity to your broadband.

- The AT&T 5G Cell Booster Pro support team cannot see or change your internet firewall settings.

- Before contacting support, review the information in this document's Appendix C: Activation troubleshooting and firewall updates to make necessary changes to your firewall settings.

> Because of the wide variety of network configurations, AT&T recommends consultation with a network specialist, router manufacturer, or internet service provider to answer specific network setup questions.
>
> AT&T cannot update the firewall settings for your internal network.

Security

AT&T 5G Cell Booster Pro uses industry-standard encryption techniques and algorithms, including:

- Advanced Encryption Standard (AES) 128 and 256

- Triple Data Encryption Standard (3DES)

- Commercial algorithms, including RC4 with a minimum equivalent of 128-bit

All traffic between the AT&T 5G Cell Booster Pro and AT&T's secure core network travels within a highly secure Internet Protocol Security (IPSec) tunnel.

The AT&T 5G Cell Booster Pro is 889 Compliant to protect National Security by limiting the government's access to "covered" equipment or services manufactured or provided by certain companies or their subsidiaries or affiliates with known ties to the People's Republic of China.

The AT&T 5G Cell Booster Pro follows AT&T security policies. The corporate certification is available at https://cso.att.com/ISO27001/index.html.

Appendix A: Login information

Accessing the Cell Booster Portal

You will use your standard myAT&T / AT&T Premier / FirstNet Central to login to the AT&T Cell Booster Portal. If you do not know your login, please reach out to your AT&T / FirstNet Account Manager.

Appendix B: Broadband requirements

To maximize the AT&T 5G Cell Booster Pro network performance, we recommend that your broadband meets or exceeds these bandwidths:

Recommended broadband downlink	Recommended broadband uplink
1 GB or higher	100 Mbps or higher

Appendix B: Broadband requirements (continued)

At a minimum, your broadband must at least meet these bandwidth standards for AT&T 5G Cell Booster Pro to activate and provide network coverage to your location:

Minimum broadband downlink	Minimum broadband uplink
100 Mbps	25 Mbps

Uncertain if your broadband meets the recommended or minimum standards for AT&T 5G Cell Booster Pro? Click this link to run a speed test for your current in-building broadband.

The number of AT&T 5G Cell Booster Pro devices, the site's maximum broadband speed, and the number of simultaneous user sessions plus the type of session (voice, data, streaming) will influence the AT&T 5G Cell Booster Pro's performance.

Appendix C: Activation troubleshooting and firewall updates

Initial broadband transport troubleshooting

1. Confirm a tight ethernet cable connection between the AT&T 5G Cell Booster Pro device and the internet gateway/router.

2. Power off and then power on the internet gateway. Then, power off and power on the AT&T 5G Cell Booster Pro device.

3. If your configuration is internet gateway/router + ISP modem:

   a. Connect the ethernet cable directly to the port on the ISP model

   b. This step helps you isolate whether the internet gateway/router is causing the connectivity issues

   c. If this resolves the issue, check settings or ports to find the connectivity issue with your internet gateway/router.

If connectivity issues persist, confirm that your internet Gateway/Router has the following settings and update custom settings as follows:

1. DHCP is on

   a. AT&T 5G Cell Booster Pro data routing does not support static IP. For sites requiring static assignment of an IP address, use MAC binding and static DHCP reservation

2. MTU size is set to 1500 or higher

3. MAC address filtering is either turned off or allows the MAC address of the AT&T 5G Cell Booster Pro device

4. IPSec Pass-Through is enabled

5. Block fragmented packets are off

6. If using multiple routers, the AT&T 5G Cell Booster Pro device must connect to the first router connected to the broadband modem.

7. Disable NAT in the router or the modem when the following conditions exist:

   a. The AT&T 5G Cell Booster Pro device connects to a router connected to a modem AND

   b. The router and the modem are NAT-enabled

Because of the wide variety of network configurations, AT&T recommends consultation with a network specialist, router manufacturer, or internet service provider to answer specific network setup questions.

AT&T cannot update the firewall settings for your internal network.

Firewalls and UDP ports troubleshooting

If the "Internet" LED on the front of the Cell Booster Pro device is flashing or solid orange, check that the following ports are open if your network has a firewall.

1. The following UDP ports need to be open for AT&T 5G Cell Booster Pro to make inbound and outbound connections:

2. UDP ports 123, 500, 4500, 33434, 33435, 33436

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IP address pass-through updates for your firewall

If the local network has a firewall that accepts traffic from or passes traffic to specific IP addresses, be sure you add the addresses in the following table to your firewall settings:

· It may be helpful to perform a packet trace of messaging between the AT&T 5G Cell Booster Pro device and the AT&T network to add in troubleshooting.

AT&T Cell Booster & AT&T Cell Booster Pro Broadband Connectivity Configuration Requirements

AT&T Cell Booster & AT&T Cell Booster Pro require a customer-provided direct internet broadband connection for connectivity with the AT&T Network. The required bandwidth depends on the number of simultaneous users you want to support and whether data-intensive applications will be used. The minimum required bandwidth recommended:

Cell Booster Pro	BROADBAND MINIMUM BANDWIDTH	
	Downlink	Uplink
Cell Booster	5 Mbps	1 Mbps
1 Cell Booster Pro	25 Mbps	5 Mbps
2 Cell Booster Pro Devices	30 Mbps	7 Mbps
3 Cell Booster Pro Devices	35 Mbps	9 Mbps
4 Cell Booster Pro Devices	40 Mbps	11 Mbps
5 Cell Booster Pro Devices	45 Mbps	13 Mbps
6 Cell Booster Pro Devices	50 Mbps	15 Mbps
5G Cell Booster Pro	Downlink	Uplink
1 5G Cell Booster Pro	100 Mbps	25 Mbps
2 5G Cell Booster Pros	200 Mbps	50 Mbps
3 5G Cell Booster Pros	300 Mbps	75 Mbps
4 5G Cell Booster Pros	400 Mbps	100 Mbps
5 5G Cell Booster Pros	500 Mbps	125 Mbps
6 5G Cell Booster Pros	600 Mbps	150 Mbps

Because of the wide variety of network configurations, router/switch manufacturers, Internet Service Providers, and corporate internet policies; **AT&T cannot assist with making modifications to your firewall settings**. AT&T recommends consultation with a network specialist, corporate IT organization, router manufacturer, and/or Internet Service Provider to answer specific network setup questions.

Local Broadband Settings

For users with custom local Network settings, confirm the following router/switch settings are set for your AT&T Cell Booster to establish connectivity with the Network:

1. DHCP is ON
   Note: For installations where static assignment of an IP address is desired the use of MAC Binding and static DHCP Reservation is suggested. Static IP is not supported.

2. Public DNS is reachable

3. MTU size is set to 1500 or higher

4. MAC address filtering is either turned off or allows the MAC address of the AT&T Cell Booster

5. IPSec Pass-Through is Enabled

6. Block Fragmented Packets is Disabled

If using multiple routers, AT&T Cell Booster must be connected to the first router connected to the broadband modem. If AT&T Cell Booster is connected to a router that is connected to a modem, and both the router and the modem have NAT (Network Address Translation) enabled, disable NAT either in the router or in the modem.

Broadband Connectivity and Port Configuration

Installing AT&T Cell Booster behind a firewall or router with firewall capabilities requires the following port settings to allow communication with the AT&T Network. All ports listed need to be open for inbound and outbound connections:

· UDP / 500 IPSEC Port

· UDP / 4500 IPSEC Port

· UDP / 33434 thru 33450

· ESP Protocol 50

· UDP / 123 NTP Port (timing sync)

Unimpeded inbound and outbound traffic on UDP ports 500 and 4500 and/or ESP Protocol 50 is required to establish a secure IPSec tunnel. AT&T Cell Booster uses NTP for timing synchronization and requires UDP port 123 to be open for this traffic.

If the local network has a firewall with specific IP addresses allowed to pass through, traffic to and from the following addresses must be allowed to pass:

Fully Qualified Domain Names & IP Addresses

AT&T uses multiple Fully Qualified Domain Names (FQDNs) across the country with dynamic IP addressing and FQDNs may resolve to multiple IP addresses. The following tables identify

IPSec IP addresses

Note: Both IP addresses and IP address subnets are listed below. For IP address subnets notated as /26, the IP address range includes all IP addresses from **x.x.x.65 to x.x.x.126**.

IP Address	Port	Protocol
107.122.134.64/26	UDP 500, 4500, 33434 – 33450	UDP and/or ESP
107.122.135.64/26	UDP 500, 4500, 33434 – 33450	UDP and/or ESP
107.122.136.64/26	UDP 500, 4500, 33434 – 33450	UDP and/or ESP
166.192.42.64/26	UDP 500, 4500, 33434 – 33450	UDP and/or ESP
166.192.80.64/26	UDP 500, 4500, 33434 – 33450	UDP and/or ESP
166.192.81.64/26	UDP 500, 4500, 33434 – 33450	UDP and/or ESP
166.194.142.64/26	UDP 500, 4500, 33434 – 33450	UDP and/or ESP
166.198.56.64/26	UDP 500, 4500, 33434 – 33450	UDP and/or ESP
166.198.57.64/26	UDP 500, 4500, 33434 – 33450	UDP and/or ESP
166.198.58.64/26	UDP 500, 4500, 33434 – 33450	UDP and/or ESP
166.198.59.64/26	UDP 500, 4500, 33434 – 33450	UDP and/or ESP
108.144.26.64/26	UDP 500, 4500, 33434 – 33450	UDP and/or ESP

NTP IP addresses

IP Address	Port
216.239.35.8	UDP 123
216.239.35.12	UDP 123
129.134.25.123	UDP 123
17.253.4.125	UDP 123

IPSec FQDNs

Fully Qualified Domain Name
bootstrap-ipsecrouter1.ngfemto.wireless.att.com
initial-ipsecrouter.ngfemto.wireless.att.com
akr3-oam.ngfemto.wireless.att.com
akr3-4gb.ngfemto.wireless.att.com
all4-oam.ngfemto.wireless.att.com
all4-4gb.ngfemto.wireless.att.com
atn3-oam.ngfemto.wireless.att.com
atn3-4gb.ngfemto.wireless.att.com
atl3-oam.ngfemto.wireless.att.com
atl3-4gb.ngfemto.wireless.att.com
brp1-oam.ngfemto.wireless.att.com
brp1-4gb.ngfemto.wireless.att.com
chg3-oam.ngfemto.wireless.att.com
chg3-4gb.ngfemto.wireless.att.com
fro2-oam.ngfemto.wireless.att.com
fro2-4gb.ngfemto.wireless.att.com
hst5-oam.ngfemto.wireless.att.com
hst5-4gb.ngfemto.wireless.att.com
lsa4-oam.ngfemto.wireless.att.com
lsa4-4gb.ngfemto.wireless.att.com
scr1-oam.ngfemto.wireless.att.com
scr1-4gb.ngfemto.wireless.att.com
wah2-oam.ngfemto.wireless.att.com
wah2-4gb.ngfemto.wireless.att.com
wnd4-oam.ngfemto.wireless.att.com
wnd4-4gb.ngfemto.wireless.att.com

AT&T is not responsible and cannot help a customer configure their router/ firewall. If your AT&T Cell Booster has a blinking white power light, it has either not been registered in the Cell Booster Portal, or it is not receiving a proper connection to AT&T's servers. The end customer is responsible for configuring their local settings - AT&T Support cannot help with these settings

Preliminary troubleshooting steps

The following checkpoints apply regardless of the number of AT&T 5G Cell Booster Pro devices at your site.

LED indicator lights and troubleshooting

The LED indicator lights on the front of the 5G Cell Booster Pro device provide status from left to right for:

- Power
- Internet
- GPS
- LTE 4G C1
- LTE 4G C2
- 5G

Solid white LEDs show success. Each LED can display one of the following states:

- Off (no light displayed)
- Flashing orange
- Solid orange
- Flashing white
- Solid white

Troubleshooting notes:

- **Power cycle the device**: turn the power off for 10 minutes and then turn the device on. Please wait at least 15 minutes to allow the device to cycle through its processes and gain network connectivity,

- **Check portal device status page**: select the device in the AT&T 5G Cell Booster portal and choose Device status to see available troubleshooting tips for the LED in question.

- **Call FirstNet Support**: call AT&T Business Mobility Technical Support at (800) 574-7000 if the issue persists.

STEP 1: Check the Power LED

The Power LED shows the overall status of the AT&T 5G Cell Booster Pro (CBP) device.

Power LED	Other LEDs	Explanation	Action
Off	Off	All LEDs are off when there is no power to the CBP device	• Check the power cord connection and whether the device is receiving power • Power cycle the device
Flashing orange	Flashing orange	A hardware fault exists on the CBP device	• Check that the ambient temperature is within the stated operating range • Call FirstNet Support
Solid orange	Solid orange	A CBP hardware fault is degrading the service	• Call FirstNet Support
Flashing white	Any/off	CBP device has issues connecting to the AT&T Network	• Review all local transport requirements in Appendix C
Solid white		CBP device power is on	• Continue to step 2

STEP 2: Check the Internet LED

Power LED	Explanation	Action
Off	CBP device is going through a software download and initialization	• Check the power cord connection and whether the device is receiving power
Flashing orange	CBP device has issues connecting to the AT&T Network	• Review local transport requirements in Appendix C
Solid orange	CBP device has issues connecting to the AT&T Network	• Review local transport requirements in Appendix C • Power cycle the device
Flashing white	Timing or CBP device software download issues *(depending on the status of other LEDs)*	• Check the portal device status page • Power cycle the device • Contact FirstNet Support
Solid white	CBP device can complete the activation process as it has an active connection to the AT&T network	• Continue to step 3

STEP 3: Check the Status LED

Power LED	Explanation	Action
Off	CBP device is going through the activation process	• Check the power cord connection and whether the device is receiving power
Flashing orange	A potential fault detected in the activation sequence	
Solid orange	A potential fault detected in the activation sequence	• Check the portal device status page • Power cycle the device • Contact FirstNet Support
Flashing white	No capacity exists for more user connections <u>OR</u> CBP device is having issues connecting to the FirstNet Network	
Solid white	CBP device is progressing through the activation process	• Continue to step 4

STEP 4: Check the GPS LED

Power LED	Explanation	Action
Off	CBP device is going through the activation process AND/OR obtained the GPS signal	• Check the power cord connection and whether the device is receiving power
Flashing orange	CBP device is searching for a GPS signal	• Verify that the GPS antenna is connected to the AT&T 5G Cell Booster Pro device • Verify that the GPS antenna is positioned in an exterior window
Solid orange	CBP device activation process experienced a fault	• Power cycle the device • Contact FirstNet support

STEP 5: Check the LTE 4G C1, LTE 4G C2 or 5G LED

Power LED	Explanation	Action
Off	CBP device is going through the activation process AND/OR obtained the GPS signal	• Check the power cord connection and whether the device is receiving power
Flashing orange	A potential fault detected in the activation process	• Check the portal device status page • Power cycle the device • Contact AT&T Support
Solid orange	A potential fault detected in the activation process	
Flashing white	LED session in progress. The LED flashes if there is 1 active session on the device	• No action
Solid white	CBP device is ready for service	• No action

If LTE 4G C1 and LTE 4G C2 lights are white, but 5G LED is off, your GPS signal is not strong enough. It is recommended that you first reboot the Cell Booster Pro and wait 90 minutes. If it still doesn't illuminate, either relocate or purchase the AT&T 60'/200' High Gain GPS Antenna.

Appendix D: AT&T 5G Cell Booster Pro service troubleshooting guide

If you cannot make a voice call or use data applications with a device within the coverage area of a AT&T 5G Cell Booster Pro device, follow these troubleshooting steps.

Multiple AT&T 5G Cell Booster Pros at a single site

If you experience poor voice quality, slow data speeds, or dropped calls at a site with multiple AT&T 5G Cell Booster Pro devices:

- You may have interference between devices.
  - Options to mitigate the interference between devices: increase the physical distance between the devices or shield them from each other with a physical barrier
  - Recommended distance between two AT&T 5G Cell Booster Pro devices: 50 feet
- If you experience poor voice quality, check that your broadband bandwidth has the recommended bandwidth.

Preliminary steps for one or more AT&T 5G Cell Booster Pro devices

1. Select the device in the AT&T 5G Cell Booster Pro portal and select Check Status to see the device's real-time status for helpful hints and troubleshooting.

2. Power down the AT&T 5G Cell Booster Pro device and wait 10 minutes.

3. Power up the AT&T 5G Cell Booster Pro device and wait at least 15 minutes.

4. Use an AT&T mobile device to assess voice call quality and data throughput.
   a. Be sure the user list includes the device's cellular phone number if you configured AT&T 5G Cell Booster Pro as "closed" mode.

5. Check that the broadband router is working correctly.

6. Ensure you have administrative access to the router, AT&T 5G Cell Booster Pro device, and portal.

Broadband requirements

Verify that the site's broadband meets or exceeds the local transport requirements specified in Appendix C: Activation troubleshooting and firewall updates. You may need to adjust specific router parameters.

Appendix E: FAQ's

What if a customer does not have AT&T wireless online credentials to log into the portal?

- Customers without AT&T wireless online credentials can create a free email account and use that username and password to log into the AT&T 5G Cell Booster Pro app or portal.

- Follow these instructions to set up your username and password quickly.

- To log into the AT&T 5G Cell Booster Pro portal with your new credentials, tap Personal or Small Business and input your new username and password.

How long does it take for the AT&T 5G Cell Booster Pro to activate?

- Activating a AT&T 5G Cell Booster Pro device may require up to 90 minutes following equipment setup.

- Your AT&T 5G Cell Booster Pro administrator will receive a service activation email.

- You can also verify device status within the AT&T 5G Cell Booster Pro portal.

Does AT&T 5G Cell Booster Pro support IoT devices?

- AT&T IoT devices can use AT&T 5G Cell Booster Pro, except for devices with Cat-M, LTM-M, NB-IoT, and Red Cap SIMs.

Are there accessories available for 5G Cell Booster Pro?

- Each AT&T 5G Cell Booster Pro includes a CAT6 ethernet cable, an AC power supply, and a GPS antenna.

- Optional accessories available from AT&T:
  - AT&T 5G Cell Booster Pro 60' or 200' High-Gain GPS Antenna
  - AT&T 5G Cell Booster Pro power over ethernet++ splitter (PoE splitter)
  - AT&T 5G Cell Booster Pro desk stand

- Replacement accessories available from AT&T:
  - AT&T 5G Cell Booster Pro mounting kit
  - AT&T 5G Cell Booster Pro GPS antenna
  - AT&T 5G Cell Booster Pro power supply

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Are there more details about the PoE++ Splitter for the AT&T 5G Cell Booster Pro?

• A PoE++ splitter is an optional accessory that is necessary only if the location for the AT&T 5G Cell Booster Pro device does not have accessible AC power.

• In that case, a PoE++ splitter for each AT&T 5G Cell Booster Pro that needs power over ethernet.

• A PoE power source is necessary if your router or switch does not support PoE++.

What guidelines should we follow for where we place our AT&T 5G Cell Booster Pro devices?

1. Place at least 50 feet of space between AT&T 5G Cell Booster Pro devices so they do not interfere with each other.

2. Purchase the desk stand accessory for any AT&T 5G Cell Booster Pro device you position on a tabletop surface. The device performs better when upright and not lying flat on the tabletop.

3. AT&T installers can mount your devices up to 10 feet high on a wall. The field technician cannot install a device over 10 feet above the floor.

Where is the AT&T 5G Cell Booster Pro available?

The AT&T 5G Cell Booster Pro is only available in the 48 states. It is not available in Alaska, Hawaii, and the U.S. Territories.

Can non-business customers purchase AT&T 5G Cell Booster Pro for use in their homes or other locations?

• AT&T 5G Cell Booster Pro is available to any AT&T customer, person, or business wishing to become an AT&T customer for a location where AT&T provides 5G C-band or 4G coverage.

• Non-business customers can order AT&T 5G Cell Booster Pro in an AT&T retail store.

Who do we contact if we need support for our AT&T 5G Cell Booster Pro device and service?

• Call the AT&T 5G Cell Booster Pro support team at (800) 574-7000.

Does the AT&T 5G Cell Booster Pro meet the intrinsic standard?

• The AT&T 5G Cell Booster Pro is UL certified, which includes Intrinsic Safe standards.

Does the AT&T 5G Cell Booster Pro signal propagate evenly over 360 degrees, or is it directional?

• The AT&T 5G Cell Booster Pro signal is omnidirectional, providing 360 degrees of signal.

Can multiple people log into our AT&T 5G Cell Booster Pro portal account?

• The AT&T 5G Cell Booster Pro portal allows you to have multiple AT&T 5G Cell Booster Pro administrators.

• Any AT&T 5G Cell Booster Portal admin can add new or remove existing admins.

  o Select a AT&T 5G 5G Cell Booster Pro device registered in your portal.

  o Scroll down the page and select Admin list to see existing administrators.

  o Tap + to add a new admin and select an admin's name to remove their portal access.

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