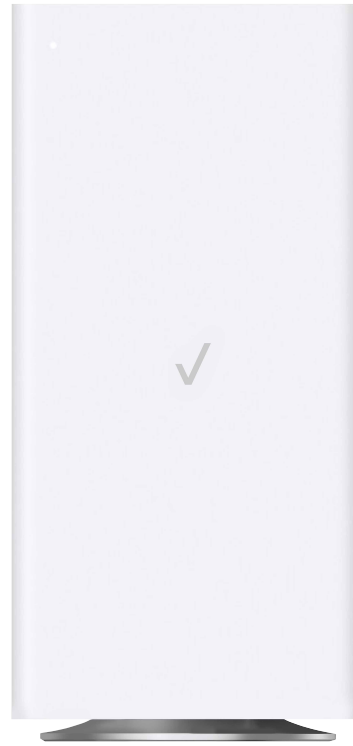
verizon

Verizon Wi-Fi Extender

USER GUIDE



Model CE1000A

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01/

INTRODUCTION

1.0 Package Contents

1.1 System Requirements

1.2 Features

1.3 Getting to Know Your Verizon Wi-Fi Extender

Verizon Wi-Fi Extender lets you transmit and distribute digital entertainment and information to multiple devices in your home/office.

Your Extender supports networking using coaxial cables, Ethernet, or Wi-Fi, making it one of the most versatile and powerful Wi-Fi extenders available.

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PACKAGE CONTENTS, SYSTEM REQUIREMENTS AND FEATURES

1.0/ PACKAGE CONTENTS

Your package contains:

- Verizon Wi-Fi Extender
- Power adapter
- Ethernet cable

1.1/ SYSTEM REQUIREMENTS

System and software requirements are:

- A computer or other network device supporting Wi-Fi or wired Ethernet
- A web browser, such as Chrome™, Firefox®, Internet Explorer 8® or higher, or Safari® 5.1 or higher

1.2/ FEATURES

Your Verizon Wi-Fi Extender features include:

- Support for multiple networking standards:
  - LAN: 802.11 a/b/g/n/ac/ax, Gigabit Ethernet and MoCA 2.5 interfaces
- Integrated wired networking with 2-port Ethernet switch and Coax (MoCA LAN)
  - Ethernet supports speeds up to 2.5 Gbps.
  - MoCA 2.5 LAN enabled to support speeds up to 2.5 Gbps over coaxial cable

- Self-organizing Network (SON) offers seamless roaming, band steering, and AP steering to improve the performance of your Wi-Fi network
- Integrated Wi-Fi networking with 802.11a/b/g/n/ac/ax access point featuring:
  - Backward compatible to 802.11a/b/g/n/ac
  - 2.4 GHz 11ax 4x4
  - 5 GHz 11ax 4x4
  - 6 GHz 11ax 4x4
- Enterprise-level security, including:
  - Advanced Wi-Fi protection featuring WPA2 & WPA3 Modes and MAC address filtering
  - Wi-Fi Multimedia (WMM) for Wi-Fi QoS (quality-of-service)
- Secure remote management using HTTPS

1.3/ GETTING TO KNOW YOUR VERIZON WI-FI EXTENDER

1.3a/ FRONT PANEL

The Status LED will be solid white when your Verizon Wi-Fi Extender is turned on, connected to the internet, and functioning normally.

Front Panel Status LED

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GETTING TO KNOW YOUR VERIZON WI-FI EXTENDER

Status LED

Condition Status	LED Color	Verizon Wi-Fi Extender
Normal	WHITE	Normal operation (50% solid)
		Setup complete (solid)
		Extender is booting (soft blink)
		System restart (fast blink)
	BLUE	Pairing mode (hard blink)
		WPS pairing successful (fast blink)
	GREEN	Wi-Fi has been turned off (solid)
Issue(s)	YELLOW	No internet connection (solid)
		Extender is too far from the Router. Poor backhaul signal (hard blink)
		Extender is too close to the Router. Poor Wi-Fi coverage (fast blink)
	RED	Hardware/System failure detected (hard blink)
		Overheating (fast blink)
		WPS pairing failure (fast blink)
Power	OFF	Power off

1.3b/ REAR PANEL

The rear panel of your Verizon Wi-Fi Extender has a label that contains important information about your device, including the default settings for the Verizon Wi-Fi Extender's Wi-Fi network name (SSID), Wi-Fi password (WPA2 key), local URL for accessing

the Verizon Wi-Fi Extender's administrative pages, and administrator password. The label also contains a QR code that you can scan with your smartphone, tablet, or other camera-equipped Wi-Fi device to allow you to automatically connect your device to your Wi-Fi network without typing in a password (requires a QR code reading app with support for Wi-Fi QR codes).

Wi-Fi Name: Verizon_HHYN49
Wi-Fi Password: uptown_woo7_web
Network Settings URL: mynetworksettings.com
Network Settings Password: P9K9DSZ7V
Support URL: support.verizon.com/wifiextender

The rear panel has three ports; F-type coax and Ethernet LAN [two]. The rear panel also includes WPS and reset buttons, and a DC power jack.

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GETTING TO KNOW YOUR VERIZON WI-FI EXTENDER

- **WPS Button** - allows quick access to the Wi-Fi Protected Setup (WPS) feature and pairing mode. This is an easy way to add your Extender to your Wi-Fi network.
- **Ethernet LAN** - connects devices to your Verizon Wi-Fi Extender using Ethernet cables to join the local area network (LAN). The two Ethernet LAN ports are 10/100/1000/2500 Mbps auto-sensing and can be used with either straight-through or crossover Ethernet cables.
- **Coax LAN** - connects your Verizon Wi-Fi Extender to the LAN and/or to other MoCA devices using a coaxial cable.
- **Reset Button** - allows you to reset your Verizon Wi-Fi Extender to the factory default settings. To perform a soft reboot, press and hold the button for at least three seconds. To reset your Verizon Wi-Fi Extender to the factory default settings, press and hold the button for at least ten seconds.
- **Power** - connects your Verizon Wi-Fi Extender to an electrical wall outlet using the supplied power adapter.

  Warning: The included power adapter is for home use only, supporting voltages from 105-125 voltage in AC. Do not use in environments with greater than 125 voltage in AC.

1.3c/ REAR LIGHTED INDICATORS

LAN Ethernet

- Unlit – Indicates no Ethernet link or dims after 5 minutes idle

Left LED

- Solid yellow – Indicates less than 1 Gbps link
- Flash yellow – Indicates LAN activity. The traffic can be in either direction.

Right LED

- Solid white – Indicates 1/2.5 Gbps link
- Flash white – Indicates LAN activity. The traffic can be in either direction.

1.3d/ MOUNTING THE VERIZON WI-FI EXTENDER TO A WALL

For optimum performance, the Verizon Wi-Fi Extender is designed to stand in a vertical upright position. Verizon does not recommend wall mounting the Verizon Wi-Fi Extender. However, if you wish to mount your Verizon Wi-Fi Extender, you can purchase a wall mount bracket from the Verizon Accessories Store at verizon.com/smallbusiness/accessories/all-accessories/fios/

To mount your Verizon Wi-Fi Extender to a wall:

1. Select a mounting spot near a power outlet and within reach of an Ethernet cable connected to the device that provides internet on your premises.
2. Mark screw hole positions on the wall. Drill holes for the wall anchors using a 1/4 inch (6.35 mm) drill bit.

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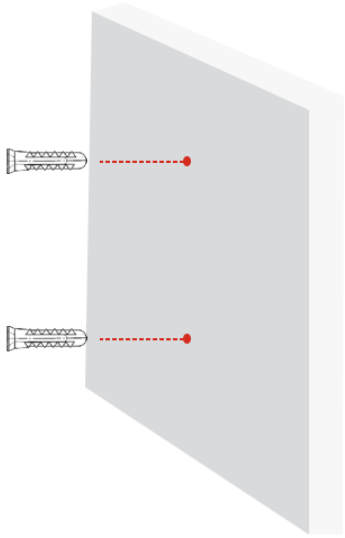
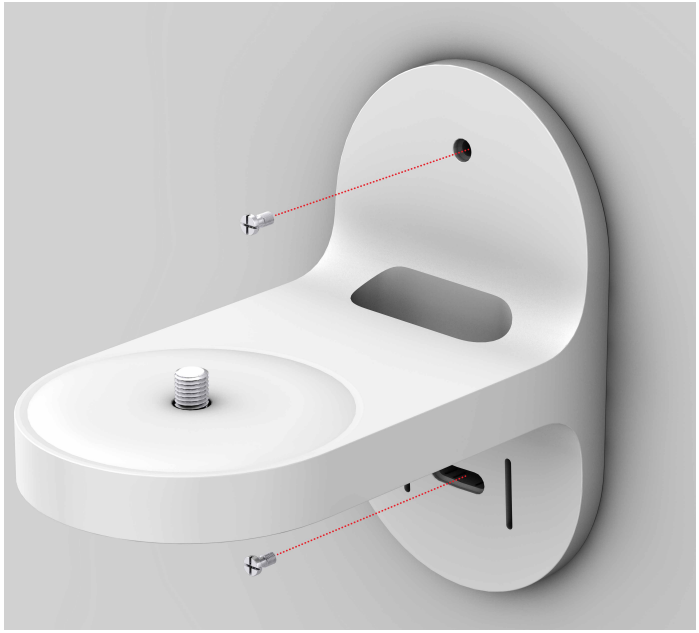
GETTING TO KNOW YOUR VERIZON WI-FI EXTENDER

3. Insert the anchors in the drilled holes and hammer until they are flush with the wall.



4. Place the screws into the small holes of the bracket and tighten the screws into your wall for securing the wall mount bracket.



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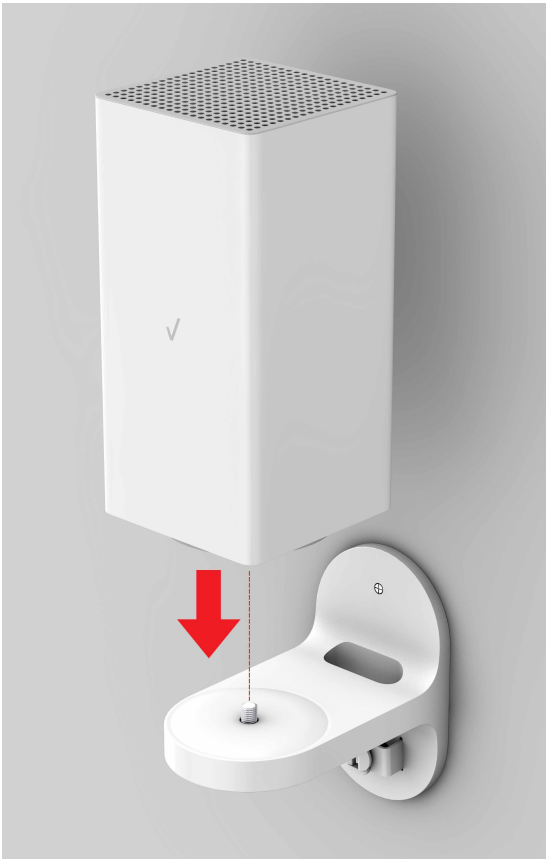
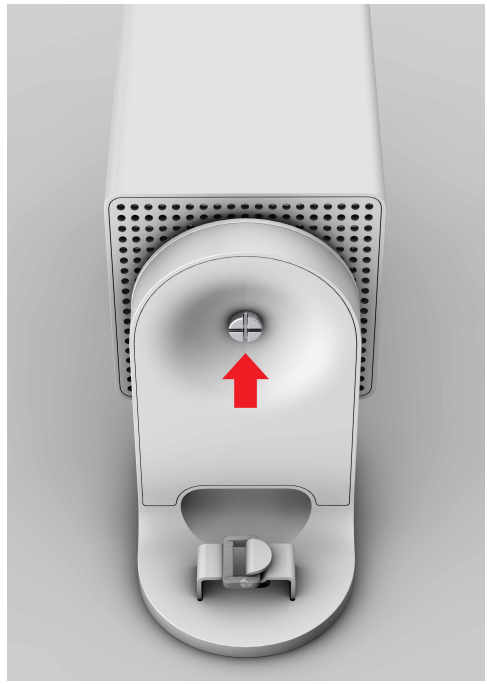
GETTING TO KNOW YOUR VERIZON WI-FI EXTENDER

5. Align the mounting hole located on the bottom of the Extender to the screw of the wall mount bracket.



6. Rotate and align the Extender to the preferred position. While using the hole in the mounting bracket, connect the Ethernet cable providing internet to the Extender's Ethernet port and other cables as needed. Tighten the bracket screw to lock the device in place.



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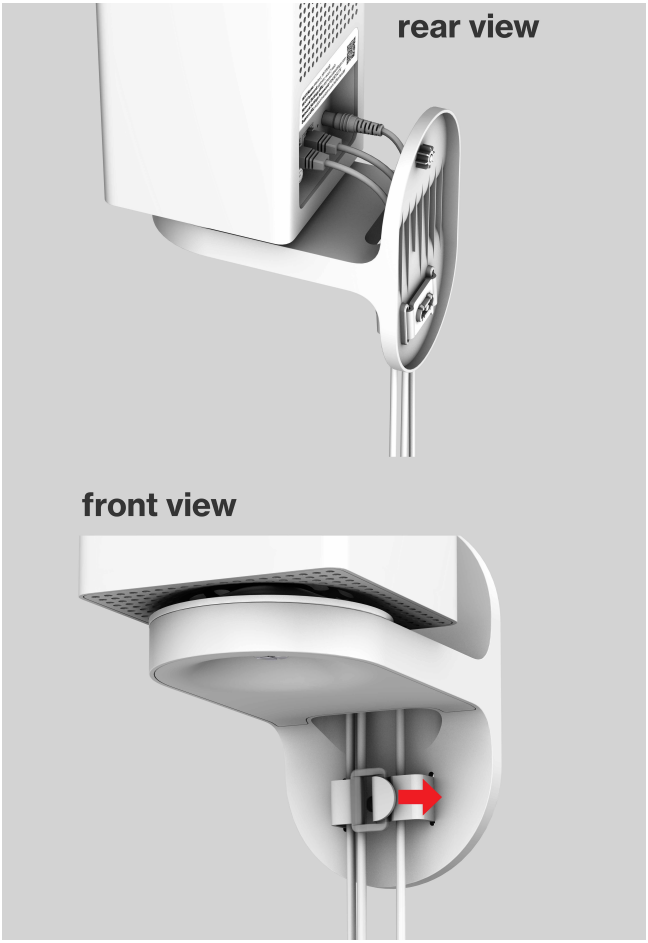
GETTING TO KNOW YOUR VERIZON WI-FI EXTENDER

7. To fasten the attached cables of the Extender, manage the cables, then tighten the Velcro® strap with buckle.



02 /

CONNECTING YOUR VERIZON WI-FI EXTENDER

2.0 Setting up Your Verizon Wi-Fi Extender

2.1 Main Screen

Connecting your Verizon Wi-Fi Extender and accessing its web-based User Interface (UI) are both simple procedures.

Accessing the UI may vary slightly, depending on your device's operating system and web browser.

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SETTING UP YOUR VERIZON WI-FI EXTENDER

2.0/ SETTING UP YOUR VERIZON WI-FI EXTENDER

Note: Using a wired backhaul, the Verizon Wi-Fi Extender can be placed at a location distant from the Verizon Router, and positioned for optimum coverage. Using Wi-Fi backhaul, performance can be slower and the distance from the Router will be determined by the reach of Wi-Fi from the Verizon Router, the materials in the office, and neighboring Wi-Fi traffic. Wi-Fi backhaul is effective and convenient for Wi-Fi configuration, but based on Wi-Fi interference characteristics, does not perform as well as a wired connection.

2.0a/ WIRED INSTALLATION

A. Connect the Verizon Router to a coax outlet.

B. Connect the Verizon Wi-Fi Extender to a coax outlet - ideally in an area with spotty Wi-Fi coverage.

C. Connect the power cords to the Router and Extender then to an electrical outlet.

D. After 10 minutes, the light on the Extender should turn solid white, indicating the connection is complete.

Note: If office is wired for Ethernet, follow same steps as above using an Ethernet cable instead of a coax cable.

2.0b/ WI-FI INSTALLATION

A. Place the Verizon Wi-Fi Extender directly next to the Verizon Router.

B. Take the Ethernet cable from the packaging and connect one end to the LAN port on the Router and the other end to the LAN port on the Extender.

C. Connect the power cord to your extender then to an electrical outlet.

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SETTING UP YOUR VERIZON WI-FI EXTENDER

D. After 10 minutes, the light on the Extender should turn solid white, indicating the connection is complete.

E. Unplug and move the Extender to an area between the Router and an area with spotty Wi-Fi coverage. Once the Extender is plugged in, the light should turn solid white again within a few minutes.

You're all set! Your devices will automatically connect to your Wi-Fi network, there is nothing more to do.

Note: The Verizon Wi-Fi Extender has a Wi-Fi Name/Password that is different from the Verizon Router. When the Extender connects to the Router via Coax, Ethernet, or Wi-Fi, the Extender is assigned the Wi-Fi Name/Password of the Router. At this time, the Extender doesn't have the ability to use the Wi-Fi Name/Password on the rear label and only uses the same Wi-Fi Name/Password as the Router.

CONNECTING A WI-FI DEVICE USING WPS

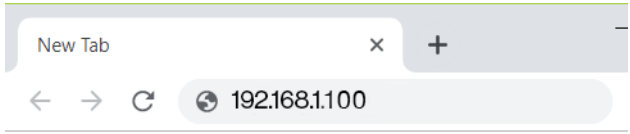
For instructions on how to connect devices to Wi-Fi using WPS, refer to section 3.4 "Wi-Fi Protected Setup" on page 41.

2.1/ MAIN SCREEN

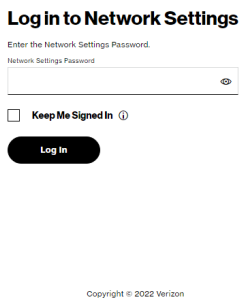
2.1a/ Login Primary Option

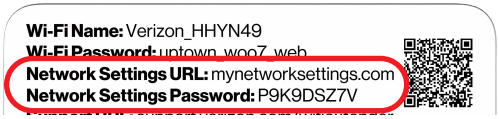
1. Open a web browser on the device connected to your Verizon Wi-Fi Extender network.
2. In the browser address field (URL), enter the Extender's IP address found in the UI of the Verizon Router, then press the **Enter** key on your keyboard.

Note: The IP address of the Verizon Wi-Fi Extender was assigned by the Verizon Router if the Extender connects to the Router.



3. Enter the password that is printed next to the **Network Settings Password** on the label on the rear of your Verizon Wi-Fi Extender.





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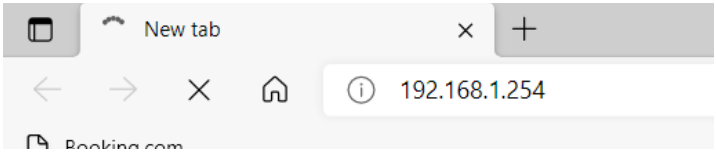
MAIN SCREEN

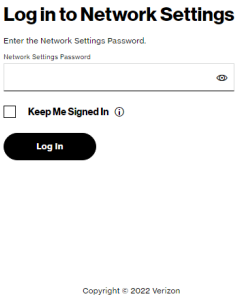
Note: The rear label of the Verizon Wi-Fi Extender has a Network Settings password that is different from that of the Verizon Router. When the Extender connects to the Router via Coax, Ethernet, or Wi-Fi, the extender is assigned the Network Settings password of the Router. At this time, the Network Settings password on the rear label of the Extender should be ignored.

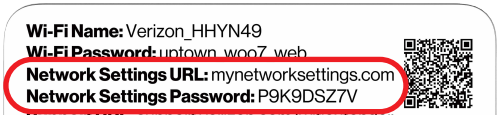
2.1b/ Login Alternative Option

1. Open a web browser on the device directly connected to your Verizon Wi-Fi Extender.
2. In the browser address field (URL), enter the IP address 192.168.1.254

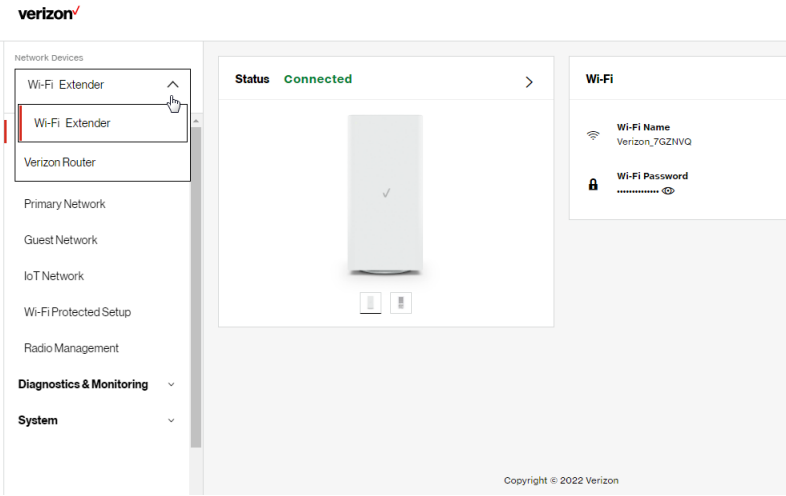


3. Enter the password that is printed next to the **Network Settings Password** on the label on the rear of your Verizon Wi-Fi Extender.





When you log into your Extender, the main screen displays a dashboard as well as a navigation menu to Wi-Fi, Status, and Advanced settings.



2.1c/ MENU

Information about the main menu options can be found in the following chapters:

- System - this chapter
- Wi-Fi - Chapter 3
- Diagnostics & Monitoring - Chapter 4

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SYSTEM SETTINGS

2.2/ SYSTEM SETTINGS

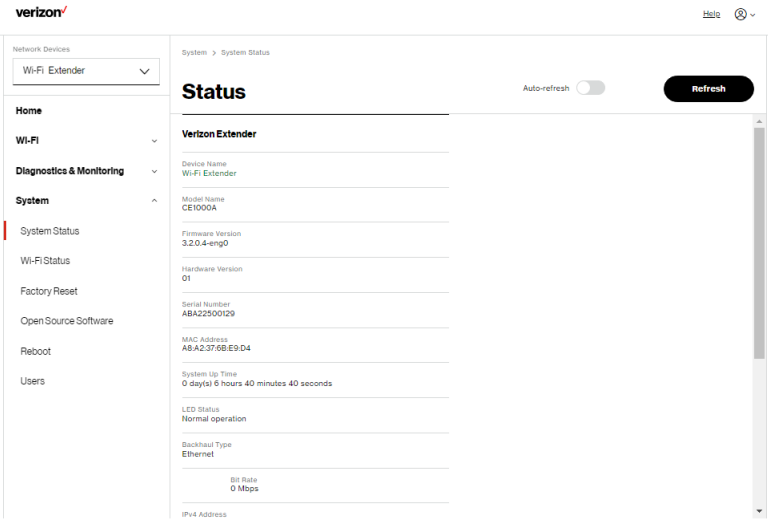
Caution: Many of the settings described in this section should only be configured by experienced network technicians. Changes could adversely affect the operation of your Verizon Wi-Fi Extender and local network.

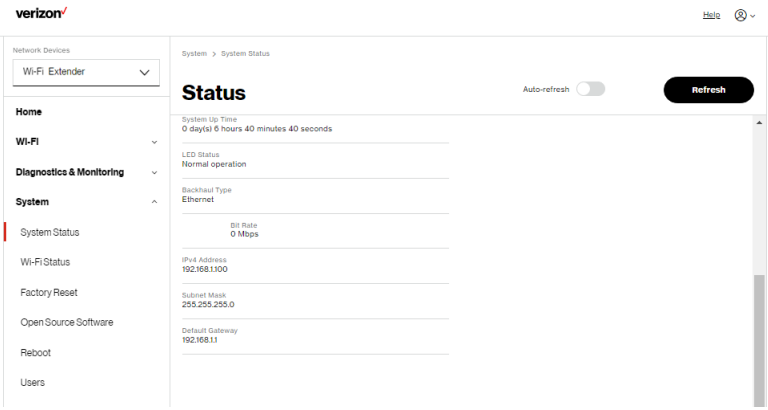
You can access the following advanced settings:

- Factory Reset - resets your Verizon Wi-Fi Extender to its default settings.
- Reboot - restarts your Verizon Wi-Fi Extender.
- Users - sets the password for administrator access.

2.2a/ SYSTEM STATUS

This section displays information such as the device name and model, firmware and hardware versions, connection status as well as the MAC Address and IP information of your Extender.





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SYSTEM SETTINGS

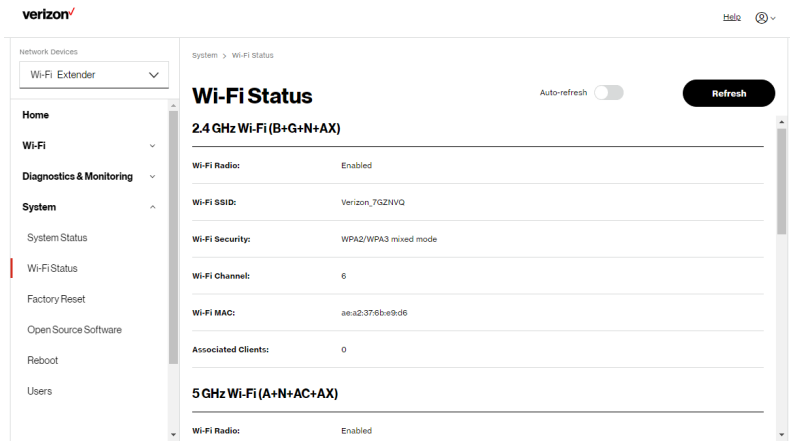
To view:

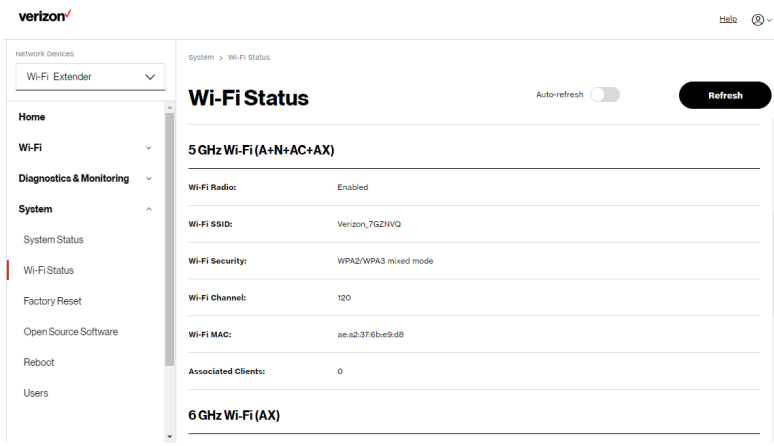
1. Select **System** from the left pane.
2. Click **System Status** to view the device information and network settings of your Verizon Wi-Fi Extender.

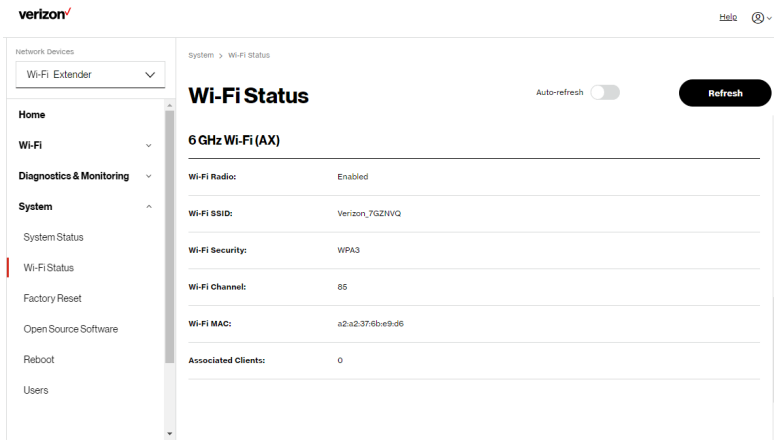
2.2b/ WI-FI STATUS

Use the Wi-Fi status feature to view the status for either 2.4 GHz, 5 GHz or 6 GHz of your Extender's Wi-Fi network.

You can view the security settings, such as SSID, WPA security key, Wi-Fi MAC address, and the number of associated clients connected to your Wi-Fi network.







To view the Wi-Fi security settings:

1. Select **System** from the left pane.
2. Click **Wi-Fi Status** to view the Wi-Fi settings of your Verizon Wi-Fi Extender.

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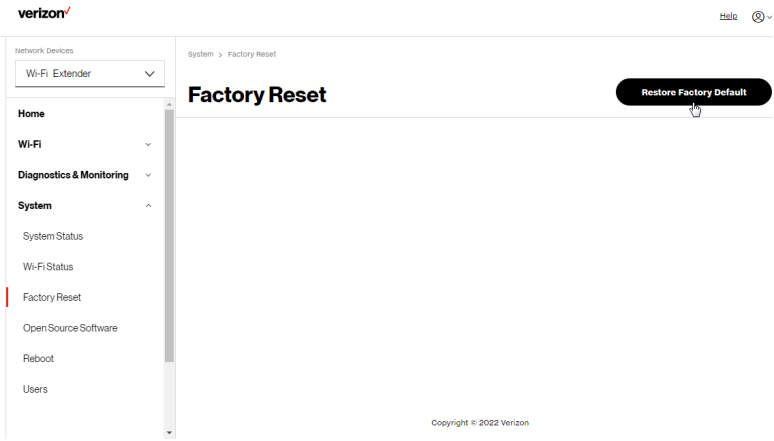
SYSTEM SETTINGS

2.2c/ FACTORY RESET

You can restore the configuration settings to the factory default settings for your Verizon Wi-Fi Extender. Restoring the default settings erases the current configuration, including user defined settings and network connections.

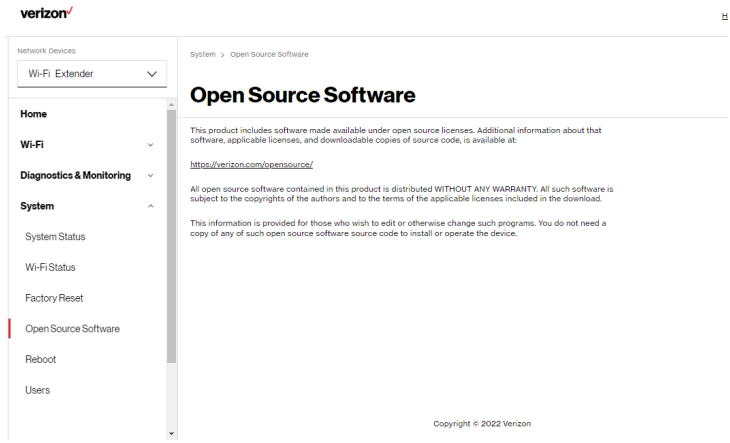
To restore your Verizon Wi-Fi Extender's factory default settings:

1. Select **Factory Reset** in the **System** section.



2. Click the **Restore Factory Default** button. The factory default settings are applied and your Verizon Wi-Fi Extender restarts. Once complete, the Login page for the First Time Easy Setup Wizard displays.

2.2d/ OPEN SOURCE SOFTWARE



To view:

1. Select **System** from the left pane.
2. Click **Open Source Software** to view the information.

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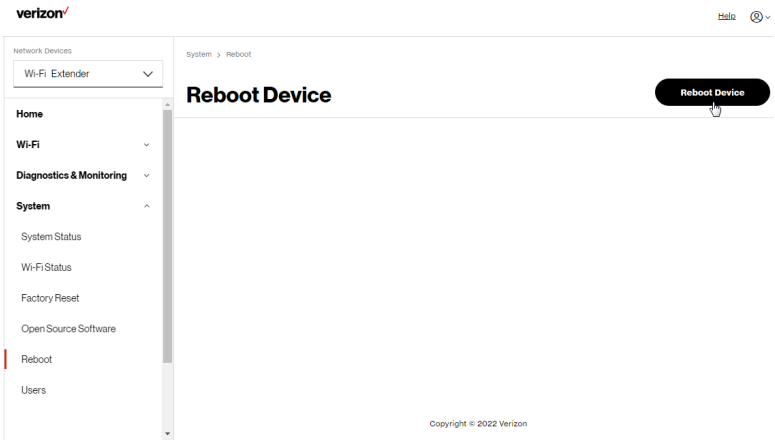
SYSTEM SETTINGS

2.2e/ REBOOT EXTENDER

You can reboot your Verizon Wi-Fi Extender using the Reboot feature. Refer to 1.3b/ REAR PANEL for power reset button option.

To reboot your Verizon Wi-Fi Extender using the user interface:

1. Select **Reboot Extender** in the **System** section.



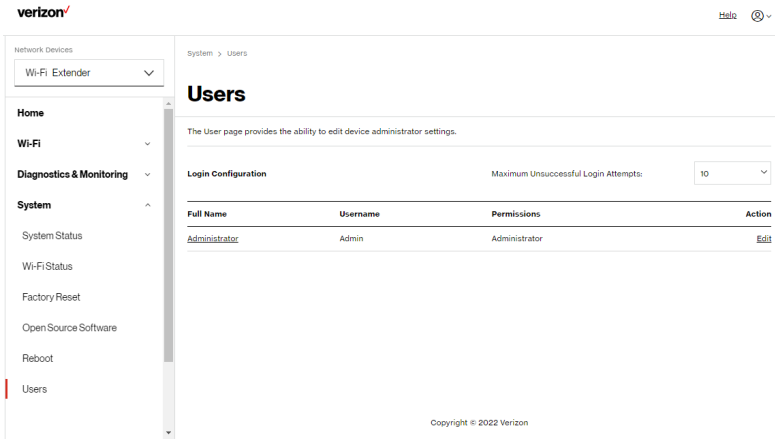
2. Click the **Reboot Extender** button on the screen. Your Extender will reboot. This may take up to a minute.
3. To access your Verizon Wi-Fi Extender user interface, refresh your web browser.
4. After the front panel Status LED turns solid white, you will automatically be sent to the web browser login page.

2.2f/ USERS

The Verizon Wi-Fi Extender clones the **Users** password of the Verizon Router. Use the login password of the Verizon Router for managing your Extender settings. If you want to change your password, please log into the Verizon Router's web interface and go to **System/System Settings/User Settings** section to make changes.

*To view the **Users** password:*

Select **Users** in the **System** section.



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03 /

WI-FI SETTINGS

3.0 Overview
3.1 Primary Network
3.2 Guest Network
3.3 IoT Network
3.4 Wi-Fi Protected Setup
3.5 Radio Management

Wi-Fi networking enables you to free yourself from wires, making your devices more accessible and easier to use.

You can create a Wi-Fi network, including accessing and configuring Wi-Fi security options.

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OVERVIEW

3.0/ OVERVIEW

Your Verizon Wi-Fi Extender provides you with Wi-Fi connectivity using the 802.11a, b, g, n, ac or ax standards. These are the most common Wi-Fi standards.

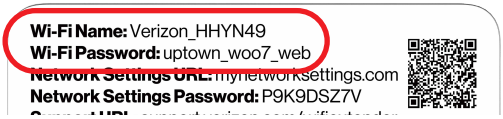
The Verizon Wi-Fi Extender contains 2.4 GHz, 5 GHz and 6 GHz Wi-Fi bands, and the operation modes and speeds are listed as follows:

- 2.4 GHz
  - Legacy operation mode: supports IEEE 802.11b/g/n with maximum data rate up to 600 Mbps
  - Compatibility mode: supports IEEE 802.11ax
    - backward compatible with IEEE 802.11b/g/n/ac
    - maximum data rate up to 1.1 Gbps
- 5 GHz
  - Legacy operation mode: supports IEEE 802.11a/n/ac with maximum data rate up to 2.2 Gbps
  - Compatibility mode: supports IEEE 802.11ax
    - backward compatible with IEEE 802.11a/n/ac
    - maximum data rate up to 2.4 Gbps
- 6 GHz
  - Operation mode: supports IEEE 802.11ax
  - Maximum data rate up to 4.8 Gbps

Note: 802.11a, 802.11b, and 802.11g are legacy modes and are not recommended. Even one such device connected to the network will slow your entire Wi-Fi network.

The Wi-Fi service and Wi-Fi security are activated by default. The level of security is preset to WPA2 encryption using a unique default WPA2 key (also referred to as a passphrase or password) pre-configured at the factory. This information is displayed on a sticker located on the rear of your router.

Your Extender integrates multiple layers of security. These include Wi-Fi Protected Access, and firewall.



3.1/ PRIMARY NETWORK

You can view the security settings for either 2.4 GHz, 5 GHz or 6 GHz of your Wi-Fi network.

Self-Organizing Network (SON) Wi-Fi Enabled - allows for smart roaming to provide reliable Wi-Fi network with full signal strength in all areas.

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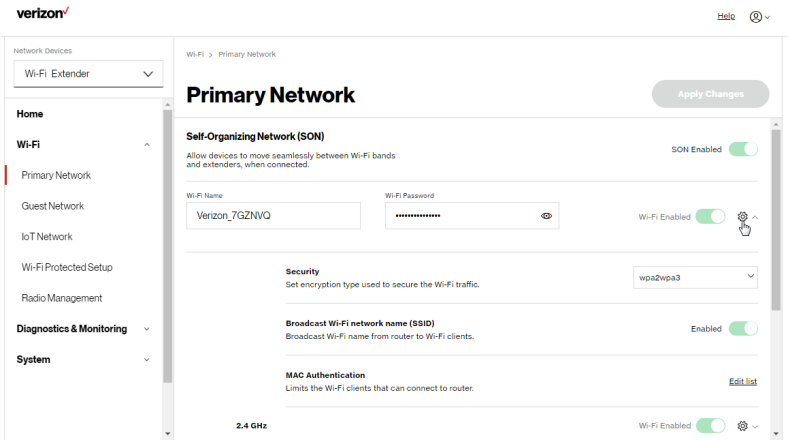
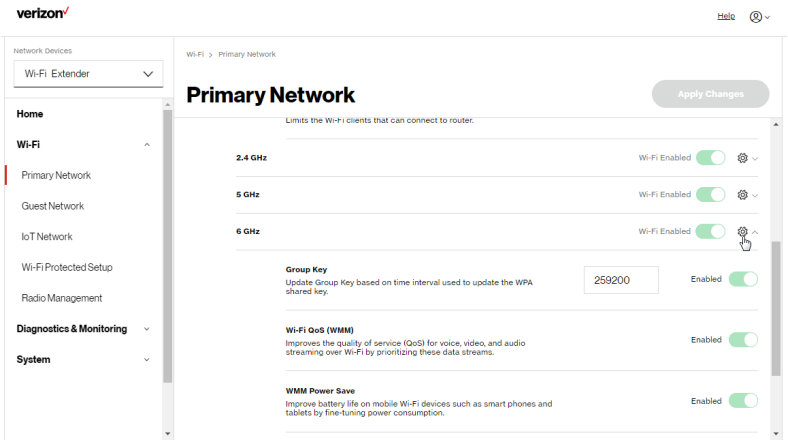
PRIMARY NETWORK





To view the Wi-Fi security settings:

1. Select **Wi-Fi** from the left pane and then click **Primary Network**.
2. To view the Wi-Fi security, click the setup ⚙ button.

Comment: We recommend using the default settings unless otherwise directed.

- **Wi-Fi Security** - WPA2 or WPA3
- **Broadcast Wi-Fi network name (SSID)** - broadcasts the Wi-Fi name to client devices
- **MAC Authentication** - allows or blocks specific devices from accessing your Wi-Fi network.

To view Wi-Fi MAC authentication: Click on **Edit List**.

  – **Allow access to all devices** – allows the listed devices to access the Wi-Fi network.

  Warning: This will block Wi-Fi network access for all devices not in the list. Only devices in the list will be able to connect to the Wi-Fi network.

  – **Deny access to all devices** – denies access to the listed devices. All other Wi-Fi devices will be able to access the Wi-Fi network if they use the correct Wi-Fi password.

- **Group key** - updates the WPA shared key.
- **Wi-Fi QoS (WMM)** - improves the quality of service (QoS) for voice, video, and audio streaming over Wi-Fi by prioritizing these data streams.
- **WMM Power Save** - improves battery life on mobile Wi-Fi devices such as smart phones and tablets by fine-tuning power consumption.

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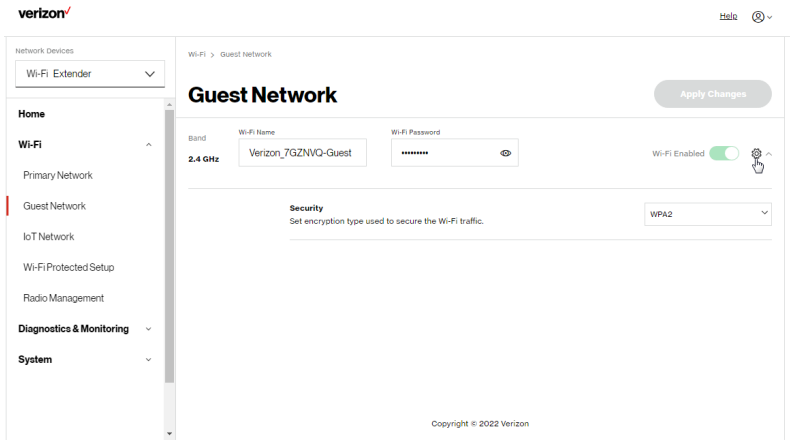
GUEST NETWORK

3.2/ GUEST NETWORK

The **Guest Network** is designed to provide internet connectivity to your guests but restricts access to your primary network and shared files. The primary network and the guest network are separated from each other through firewalls. **Guest Wi-Fi** can be managed using the Verizon Router's web interface. If you want to enable/disable your **Guest Wi-Fi** or to change the **Guest Wi-Fi SSID** (Name) or **Password**, please log into the Verizon Router's web interface for management.

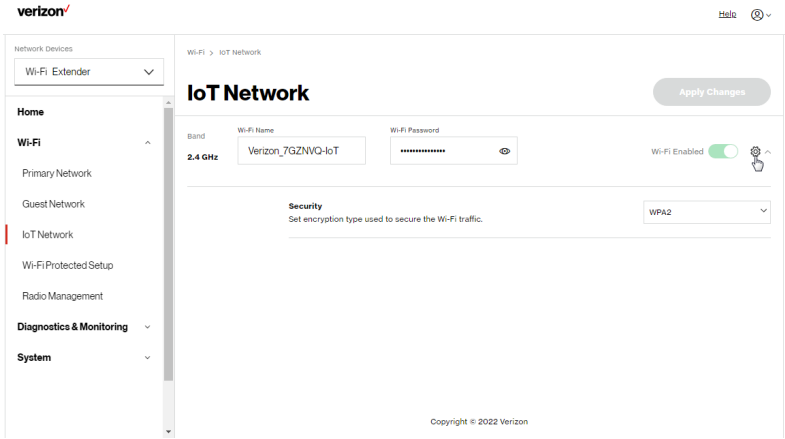


To view Guest Network settings:

Select **Wi-Fi** from the left pane and then click **Guest Network**.

3.3/ IOT NETWORK

The **IoT Network** is designed to provide an easier setup experience for your Internet of Things (IoT) devices which benefit from connecting to the 2.4 Ghz band while keeping your Primary Network settings unchanged. IoT devices and Primary devices can communicate unrestricted. IoT Wi-Fi can be managed using the Verizon Router's web interface. If you want to enable/disable your **IoT Wi-Fi** or to change the **IoT Wi-Fi SSID** (Name) or **Password**, please log into the Verizon Router's web interface for management.



To view IoT Network Settings:

Select **Wi-Fi** from the left pane and then click **IoT Network**.

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WI-FI PROTECTED SETUP

3.4/ WI-FI PROTECTED SETUP

Wi-Fi Protected Setup (WPS) is an easier way for many devices to set up a secure Wi-Fi network connection. Instead of manually entering passwords or multiple keys on each Wi-Fi client, such as a laptop, printer, or external hard drive, your Verizon Wi-Fi Extender creates a secure connection to your Wi-Fi client device.

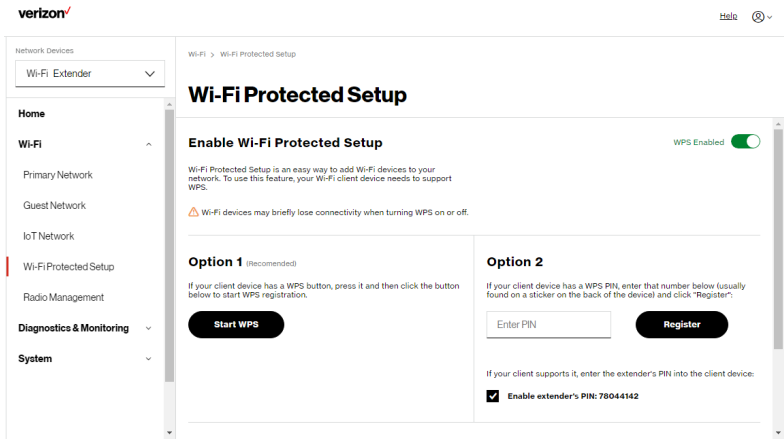
In most cases, this only requires the pressing of two buttons – one on your Verizon Wi-Fi Extender and one on the Wi-Fi client. This could be either a built-in button or one on a compatible Wi-Fi adapter/card, or a virtual button in software. Once completed, this allows Wi-Fi clients to join your Wi-Fi network.

To initialize the WPS process, you can either press and hold the WPS button located on the rear of your Verizon Wi-Fi Extender for more than two seconds or use the UI and press the on-screen button.

You can easily add Wi-Fi devices to your Wi-Fi network using the WPS option if your Wi-Fi device supports the WPS feature.

To access WPS using the user interface:

1. From the main menu, select **Wi-Fi** settings, then select **Wi-Fi Protected Setup** (WPS).



2. Use one of the following methods:
   - If your Wi-Fi client device has a WPS button, press the WPS button on your Extender for more than two seconds, then click the **Start WPS** button in **Option 1** to start the WPS registration process.
   - If your client device has a WPS PIN, locate the PIN printed on the client's label or in the client documentation. Enter the PIN number in **Option 2** on the user interface.
   - Click **Register**.
   - Alternatively, you can enter the Extender's PIN shown on this screen into the WPS user interface of your device, if this PIN mode is supported by your Wi-Fi device.

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3. After pressing the WPS button on your Verizon Wi-Fi Extender, you have two minutes to press the WPS button on the client device before the WPS session times out.

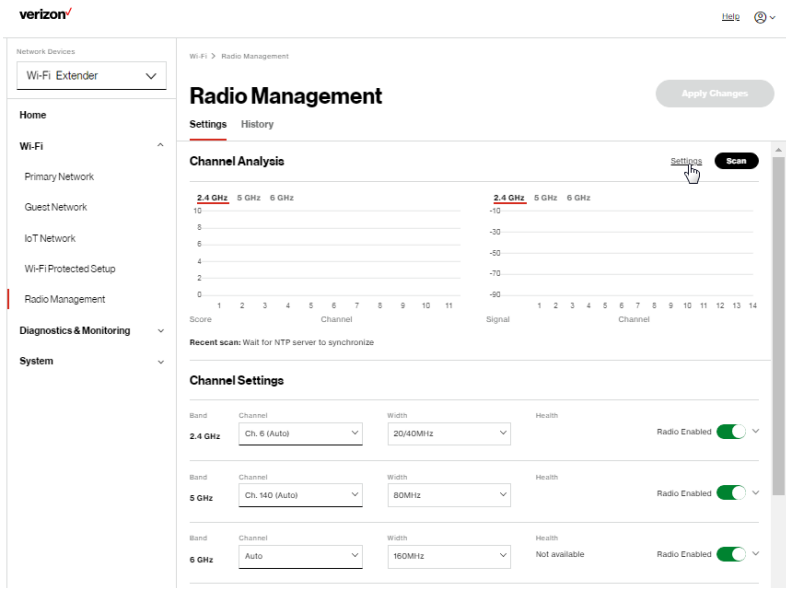
   When the WPS button on your Verizon Wi-Fi Extender is pressed, the Status LED on the front of your Verizon Wi-Fi Extender begins flashing blue. The flashing continues until WPS pairing to the client device completes successfully. At this time, the Status LED turns solid blue.

   If WPS fails to establish a connection to a Wi-Fi client device within two minutes, the Status LED on your Verizon Wi-Fi Extender flashes red for two minutes to indicate the WPS pairing process was unsuccessful. After flashing red, the light returns to solid white to indicate that Wi-Fi is on.

Note: Wi-Fi Protected Setup (WPS) cannot be used if WPA3 security is enabled or SSID broadcast is disabled or if MAC address authentication is enabled with an empty white list.

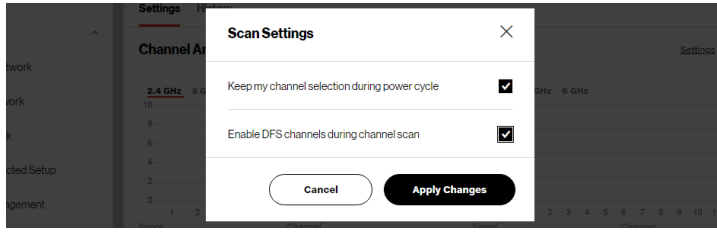
3.5/ RADIO MANAGEMENT

You can view the channel settings for either 2.4 GHz, 5 GHz or 6 GHz of your Wi-Fi network.



To view the channel settings:

1. Select **Radio Management** in the **Wi-Fi** section.
2. Click on **Settings** on the top right-hand side of the **Radio Management** page to configure the channel scan settings:



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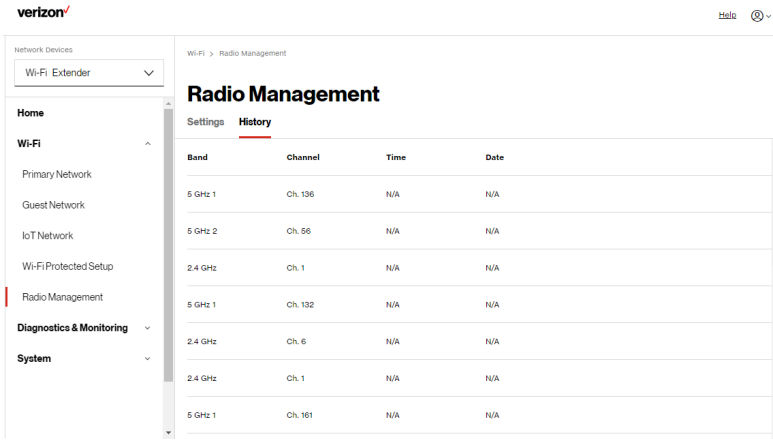
- Select the **Keep my channel selection during power cycle** check box to save your channel selection when your Verizon Wi-Fi Extender is rebooted.
- **Enable DFS channels during channel scan**: DFS channels are enabled by default during channel scans.

3. Click **Scan** to perform a channel availability scan for the Verizon Wi-Fi Extender to identify the radio channels providing the best Wi-Fi performance.
4. On the **Channel Settings** page for either 2.4 GHz, 5 GHz or 6 GHz, the following information displays and can be configured:
   - **Channel Analysis** - scans and displays channel bandwidth and signal strength of available APs. **Channel Score** displays a network congestion score of one to ten in each Wi-Fi channel. It can be used to determine which channels to use or to avoid. Higher score indicates less congestion in a channel.
   - **Channel Settings** - this is the radio channel used by the Wi-Fi router and its clients to communicate with each other. The channel must be the same on the router and all of its Wi-Fi clients. Select the channel you want the Wi-Fi radio to use to communicate, or accept the default **(Auto)** channel selection. Then the router will automatically assign itself a radio channel.
   - **Width** - displays the bandwidth available to the Wi-Fi channel currently in use on each band. Users can select from available channels.

To view the channel settings history:

1. Select **Radio Management** in the **Wi-Fi** section.
2. Click on **History** to display the channel settings history.



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04 /

DIAGNOSTICS & MONITORING

4.0 System Logging
4.1 Backhaul Logging

Diagnostics & Monitoring displays the details and status of bandwidth monitoring, system logging, traffic monitoring and backhaul logging.

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SYSTEM LOGGING

You can view the following information:

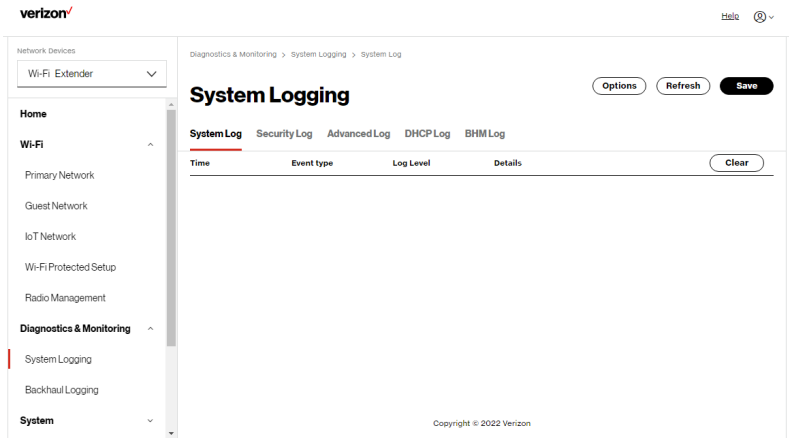
- System Logging
  - System Log - view the most recent activity of your Verizon Wi-Fi Extender.
  - Security Log - view a summary of the remote security notifications collected for your Verizon Wi-Fi Extender.
  - Advanced Log - view a summary of the monitored data collected for your Verizon Wi-Fi Extender.
  - DHCP Log - view a list of all DHCP clients connected to your Verizon Router.
  - BHM Log - view detailed information of the monitored backhaul modes of your Verizon Wi-Fi Extender.
- Backhaul Logging - view an activity summary of the backhaul modes of your Verizon Wi-Fi Extender.

4.0/ SYSTEM LOGGING

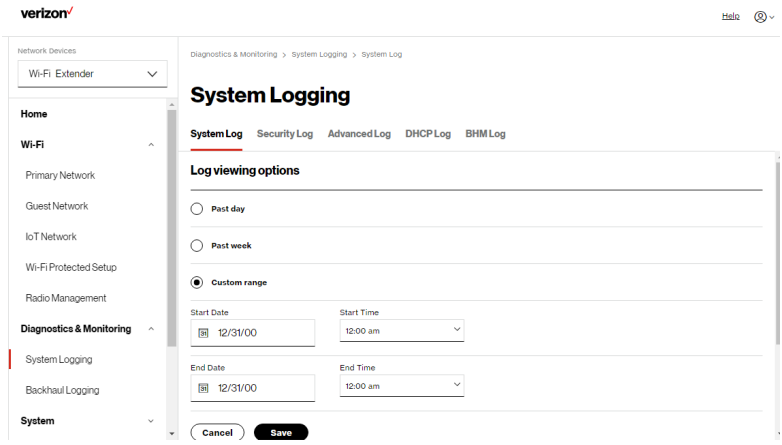
System Logging provides a view of the most recent activity of your Verizon Wi-Fi Extender. In addition, you can view additional logs, such as the security, advanced, firewall, WAN DHCP and LAN DHCP.

To view the system log:

1. Select **System Logging** in the **Diagnostics & Monitoring** section.



2. To view logged events for a specific timeframe, click the **Options** button.



3. Select your preferred logging time.

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BACKHAUL LOGGING

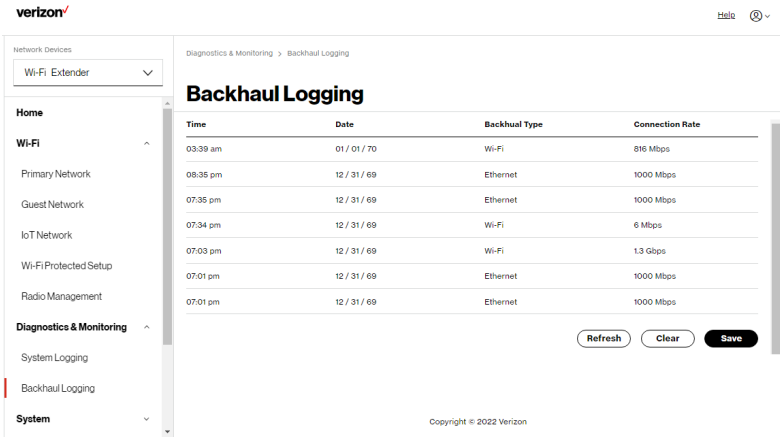
4. Click **Save** to save changes.
5. To view a specific type of log event such as Security Log, DHCP Log, etc., click the appropriate link in the menu on the top.
6. To update the data, click **Refresh**.

4.1/ BACKHAUL LOGGING

You can view a summary of the BHM (backhaul modes: Ethernet, coax and Wi-Fi) status of your Verizon Wi-Fi Extender.

To view the backhaul log:

1. Select **Backhaul Logging** in the **Diagnostics & Monitoring** section.



2. To refresh the page, click **Refresh**.
3. To delete the log information, click **Clear**.
4. To save the log information, click **Save**.

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05/

TROUBLE SHOOTING

5.0 Troubleshooting Tips
5.1 Frequently Asked Questions

This chapter lists solutions for issues that may be encountered while using your Verizon Wi-Fi Extender as well as frequently asked questions.

Although the majority of the Verizon Wi-Fi Extender's LAN and internet connectivity is automatic and transparent, if an issue does occur accessing the internet (e.g. complete loss of connectivity, inability to access services, etc.), you may need to take additional steps to resolve the problem.

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TROUBLESHOOTING TIPS

Note: The advanced settings should only be configured by experienced network technicians to avoid adversely affecting the operation of your Verizon Wi-Fi Extender and your local network.

5.0/ TROUBLESHOOTING TIPS

5.0a/ IF YOU ARE UNABLE TO CONNECT TO THE INTERNET:

- The first thing to check is whether your Verizon Wi-Fi Extender is powered on and is connected to the Router. Check the Status LED on the front of the Verizon Wi-Fi Extender. Be sure to refer to the "1.3a/ FRONT PANEL" on page 7 to determine status of the Verizon Wi-Fi Extender. Check the WAN cable (Ethernet or coaxial) connecting your Router to the internet to make sure it is properly connected on both ends.
- If the prior tips do not resolve your connection issue, try restarting (rebooting) the Verizon Wi-Fi Extender by manually pressing the 'red' reset button on the rear panel of the Verizon Wi-Fi Extender for 2-4 seconds (the Status LED should go off) to begin rebooting your Verizon Wi-Fi Extender. Your Verizon Wi-Fi Extender will begin rebooting and will return to service in 3-5 minutes depending on your network connection. Check Status LED and if it is solid white, try again to access the internet.
- If rebooting your Verizon Wi-Fi Extender does not resolve your connection issue, try power cycling the Extender by unplugging the power cable from the adapter or the wall and

wait 2 minutes. During the 2 min. wait period, also power cycle the network device (e.g. the computer, tablet, etc.) and then plug the power cable back into the Verizon Wi-Fi Extender. After 3-5 minutes, recheck the Status LED and try again to access the internet.

5.0b/ IF YOU ARE UNABLE TO CONNECT TO YOUR VERIZON WI-FI EXTENDER USING WI-FI:

- Be sure your Wi-Fi device is within range of your Verizon Wi-Fi Extender; move it closer to see if your connection improves.
- Check your network device's Wi-Fi settings to be sure your device's Wi-Fi is on (enabled) and that you have the correct Wi-Fi network and password (if using a Wi-Fi password) as configured on your Verizon Wi-Fi Extender.
- Be sure you are connecting to the correct Wi-Fi network; check to be sure you are using your Verizon Wi-Fi Extender's SSID. In some cases, if using a Wi-Fi password, you may need to enter the Wi-Fi password into your network device again to be sure your device accepts the password.
- Check to be sure you are running the latest software for your network device.
- Try turning your network device's Wi-Fi off and on, and try to connect.

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TROUBLESHOOTING TIPS

- If you have made any changes in your network settings and turning your network device's Wi-Fi off and on does not help, try to restart your network device.
- You may need to turn the Wi-Fi settings from on to off, and back to on again and apply the changes.
- If you are still unable to access your Verizon Wi-Fi Extender, you may need to try connecting to the Extender using another network device. If the issue goes away with another network device, the issue is likely with that individual network device's configuration.

5.0c/ ACCESSING YOUR VERIZON WI-FI EXTENDER IF YOU ARE LOCKED OUT

- If your Verizon Wi-Fi Extender connection is lost while making configuration changes, a setting that locks access to your Verizon Wi-Fi Extender's UI may have inadvertently been activated.

The common ways to lock access to your Verizon Wi-Fi Extender are:

- Scheduler - If a schedule has been created that applies to the computer over the connection being used, your Verizon Wi-Fi Extender will not be accessible during the times set in the schedule.

- Access Control - If the access control setting for the computer is set to block the computer, access to your Verizon Wi-Fi Extender is denied.

To gain access, restore the default settings to your Extender.

5.0d/ RESTORING YOUR VERIZON WI-FI EXTENDER'S DEFAULT SETTINGS

There are two ways to restore your Verizon Wi-Fi Extender's default settings. It is important to note that after performing either procedure, all previously saved settings on your Verizon Wi-Fi Extender will be lost.

- Using the tip of a ballpoint pen or pencil, press and hold the Reset button on the back of your Verizon Wi-Fi Extender for at least ten seconds.
- Access the UI and navigate to the Advanced Settings page. Select the Factory Reset option. Click the Restore Default Settings button. For additional details, refer to the section 2.2c/ Factory Reset section of this guide.

Note: If you reset or reboot your Verizon Wi-Fi Extender, you may also need to disconnect your Verizon Wi-Fi Extender's power supply for a few minutes (3 or more) and then reconnect the power cable. However, in order to provide full synchronization to the coaxial network, disconnecting and reconnecting the power may be required.

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TROUBLESHOOTING TIPS

5.0e/ LAN CONNECTION FAILURE

To troubleshoot a LAN connection failure:

- Verify your Verizon Wi-Fi Extender is properly installed, LAN connections are correct, and that the Verizon Wi-Fi Extender and communicating network devices are all powered on.
- Confirm that the computer and Verizon Wi-Fi Extender are both on the same network segment.

If unsure, let the computer get the IP address automatically by initiating the DHCP function, then verify the computer is using an IP address within the default range of 192.168.1.2 through 192.168.1.254. If the computer is not using an IP address within the correct IP range, it will not connect to your Verizon Wi-Fi Extender.

- Verify the subnet mask address is set to 255.255.255.0.

5.0f/ TIMEOUT ERROR OCCURS WHEN ENTERING THE URL OR IP ADDRESS

Verify the following:

- All computers are working properly.
- IP settings are correct.
- Verizon Wi-Fi Extender is on and connected properly.

For connections experiencing lag or a slow response:

- Check for other devices on the network utilizing large portions of the bandwidth and if possible temporarily stop their current utilization and recheck the connection.
- If lag still exists, clear the cache on the computer and if still needed, unplug the Ethernet cable or disable the Wi-Fi connection to the computer experiencing the slow connection and then reconnect or enable the Wi-Fi connection and try the connection again.

In rare cases you may also need to:

- Unplug the Ethernet cable to Verizon Wi-Fi Extender and restart the Verizon Wi-Fi Extender, wait 1-2 mins. and insert the Ethernet cable again.
- Under limited circumstances you may use a port forwarding configuration on the Router, based on the application you are using (refer to Verizon's support online help for more details).

5.0g/ FRONT LIGHTED INDICATORS

The Status LED on the front panel provides a visual display of the Verizon Wi-Fi Extender's current condition. Refer to the chart below for details.

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TROUBLESHOOTING TIPS

Condition Status	LED Color	Verizon Wi-Fi Extender
Normal	WHITE	Normal operation (50% solid) Setup complete (solid) Extender is booting (soft blink) System restart (fast blink)
	BLUE	Pairing mode (hard blink) WPS pairing successful (fast blink for 1 sec.)
	GREEN	Wi-Fi has been turned off (solid)
Issue(s)	YELLOW	No internet connection (solid) Extender is too far from the Router. Poor backhaul signal (hard blink) Extender is too close to the Router. Poor Wi-Fi coverage (fast blink)
	RED	Hardware/System failure detected (hard blink) Overheating (fast blink) WPS pairing failure (fast blink for 1 sec.)
Power	OFF	Power off

Flash Speed

- Soft blink: 1000ms on 1000ms off
- Hard blink: 800ms on, 800ms off
- Fast blink: 200ms on, 200ms off

5.0h/ REAR LIGHTED INDICATORS

Left LED

- Solid yellow – Indicates less than 1 Gbps link
- Flash yellow – Indicates LAN activity. The traffic can be in either direction.

Right LED

- Solid white – Indicates 1/2.5 Gbps link
- Flash white – Indicates LAN activity. The traffic can be in either direction.

5.1/ FREQUENTLY ASKED QUESTIONS

5.1a/ I'VE RUN OUT OF ETHERNET PORTS ON MY VERIZON WI-FI EXTENDER. HOW DO I ADD MORE COMPUTERS OR DEVICES?

Plugging in an Ethernet hub or switch expands the number of ports on your Verizon Wi-Fi Extender.

- Run a straight-through Ethernet cable from the Uplink port of the new hub to the Verizon Wi-Fi Extender.

Use a crossover cable if there is no Uplink port/switch on your hub, to connect to the Verizon Wi-Fi Extender.

- Remove an existing device from the Ethernet port on your Verizon Wi-Fi Extender and use that port.

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FREQUENTLY ASKED QUESTIONS

5.1b/ IS THE WI-FI OPTION ON BY DEFAULT ON MY VERIZON WI-FI EXTENDER?

Yes, your Verizon Wi-Fi Extender's Wi-Fi option is activated out of the box.

5.1c/ IS THE WI-FI SECURITY ON BY DEFAULT WHEN THE WI-FI OPTION IS ACTIVATED?

Yes, with the unique WPA2 (Wi-Fi Protected Access II) key, also called the Wi-Fi Password, that is printed on the sticker on the rear panel of your Verizon Wi-Fi Extender.

5.1d/ ARE MY VERIZON WI-FI EXTENDER'S ETHERNET PORTS AUTO-SENSING?

Yes. Either a straight-through or crossover Ethernet cable can be used.

5.1e/ CAN I USE AN OLDER WI-FI DEVICE TO CONNECT TO MY VERIZON WI-FI EXTENDER?

Yes, your Verizon Wi-Fi Extender can interface with 802.11a, b, g, n, ac or ax devices. Your Verizon Wi-Fi Extender also can be setup to handle only n Wi-Fi cards, g Wi-Fi cards, b Wi-Fi cards, or any combination of the three.

5.1f/ CAN MY WI-FI SIGNAL PASS THROUGH FLOORS, WALLS, AND GLASS?

The physical environment surrounding your Extender can have a varying effect on signal strength and quality. The denser the object, such as a concrete wall compared to a plaster wall, the greater the interference. Concrete or metal reinforced structures experience a higher degree of signal loss than those made of wood, plaster, or glass.

5.1g/ HOW DO I LOCATE THE IP ADDRESS THAT MY COMPUTER IS USING?

In Windows 8 or Windows 10, click the Windows button and select **Settings**, then click **Network & Internet** and **Status**. Click the **Properties** button for details of IP address.

On Mac OS X, open System Preferences and click the Network icon. The IP address displays near the top of the screen.

5.1h/ I USED DHCP TO CONFIGURE MY NETWORK. DO I NEED TO RESTART MY COMPUTER TO REFRESH MY IP ADDRESS?

No. In Windows 7, Windows 10 and OSX, unplug the Ethernet cable or Wi-Fi card, then plug it back in.

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FREQUENTLY ASKED QUESTIONS

5.1i/ I CANNOT ACCESS MY VERIZON WI-FI EXTENDER UI. WHAT SHOULD I DO?

If you cannot access the UI, verify the computer connected to your Verizon Wi-Fi Extender is set up to dynamically receive an IP address.

06/

SPECIFICATIONS

6.0 General Specifications
6.1 LED Indicators
6.2 Environmental Parameters

The specifications for your Verizon Wi-Fi Extender are as follows.

This includes standards, cabling types and environmental parameters.

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GENERAL SPECIFICATIONS

Note: The specifications listed in this chapter are subject to change without notice.

6.0/ GENERAL SPECIFICATIONS

Model Number:	CE1000A
Standards:	IEEE 802.3x, 802.3u
	IEEE 802.11a/b/g/n/ac/ax
IP:	IP versions 4 and 6
Speed:	Wired:
	MoCA LAN: 1125 – 1675 MHz, 2.5 Gbps
	1GE LAN Ethernet: 10/100 Mbps, 1 Gbps auto-sensing
	2.5GE LAN Ethernet: 10/100 Mbps, 1/2.5 Gbps auto-sensing
	Wi-Fi:
	2.4 GHz - IEEE 802.11b/g/n: maximum up to 600 Mbps IEEE 802.11ax: maximum up to 1.1 Gbps

	5 GHz - IEEE 802.11a/n/ac: maximum up to 2.2 Gbps IEEE 802.11ax: maximum up to 2.4 Gbps 6 GHz - IEEE 802.11ax: maximum up to 4.8 Gbps
Cabling Type:	Ethernet 100BaseT: UTP/STP Category 5 Ethernet 1000BaseT: UTP/STP Category 5e Ethernet 2.5/5/10GBaseT: UTP/STP Category 6a
Firewall:	ICSA certified

6.1/ LED INDICATORS

Front Panel:	Status LED
Rear Panel:	LAN Ethernet [2]

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ENVIRONMENTAL PARAMETERS

6.2/ ENVIRONMENTAL PARAMETERS

DIMENSIONS AND WEIGHT

Verizon Wi-Fi Extender (unit only):

Size: 4.72” wide x 9.85” high x 4.72” deep

Weight: 2.822lbs/1.28kg

Complete System (inc. packaging):

Size: 10.71” wide x 7” high x 8.66” deep

Weight: 4.669 lbs / 2.118 kg

Power: External, 12V, 5A

Mounting Bracket (optional):

Size: 3.97” wide x 6.86” high x 6.6” deep

Weight: 0.39 lbs / 175 g

Screws (optional): PH TP+N: 0.157” x 0.984”

PE Anchor: 0.236” x 0.984”

Certifications:	FCC, UL 62368, WFA
Operating Temperature:	5° C to 40° C (41° F to 104° F)
Storage Temperature:	-5° C to 50° C (23° F to 122° F)
Operating Humidity:	5% to 85%
Storage Humidity:	5% to 93% (non-condensing)

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07/

NOTICES

7.0 Regulatory Compliance Notices

This chapter lists various compliance and modification notices, as well as the NEBS requirements and GPL.

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REGULATORY COMPLIANCE NOTICES

7.0/ REGULATORY COMPLIANCE NOTICES

7.0a/ Class B Equipment

Federal Communication Commission Interference Statement

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.

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 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 party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

FOR MOBILE DEVICE USAGE (>20cm/low power)

Radiation Exposure Statement:

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

FOR COUNTRY CODE SELECTION USAGE (WLAN DEVICES)

Note: The country code selection is for non-US models only and is not available to all US models. Per FCC regulation, all WiFi products marketed in the US must be fixed to US operation channels only.

- 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.

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REGULATORY COMPLIANCE NOTICES

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

7.0b/ Safety Warning:

1. The circuit of cable distribution system under consideration is TNV-1 circuit.
2. The common sides or earthed side of the circuit are connected to the screen of the coaxial cable through an antenna connector of tuner and to all accessible parts and circuits (SELV, LCC and accessible metal parts).
3. The screen of the coaxial cable is intended to be connected to earth in the building installation.

7.0c/ Alerte de sécurité:

1. Le circuit de distribution par câble considéré est le circuit TNV-1.
2. Les côtés communs ou côté terre du circuit sont connectés à l'écran du câble coaxial via un connecteur d'antenne du syntoniseur et à toutes les parties et circuits accessibles (SELV, LCC et parties métalliques accessibles).
3. L'écran du câble coaxial est destiné à être mis à la terre dans l'installation du bâtiment.

The cable distribution system should be grounded (earthed) in accordance with ANSI/NFPA 70, the National Electrical Code (NEC), in particular Section 820.93, Grounding of Outer Conductive Shield of a Coaxial Cable.

Le système de distribution par câble doit être mis à la terre conformément à ANSI / NFPA 70, Code national de l'électricité (NEC), en particulier à la section 820.93, Mise à la terre du blindage conducteur extérieur d'un câble coaxial.

7.0d/ NEBS (Network Equipment Building System) Statement

An external SPD is intended to be used with CR1000B/CE1000A.

WARNING: The intra-building ports of the equipment or subassembly is suitable for connection to intra-building or unexposed wiring or cabling only. The intra-building port(s) of the equipment or subassembly MUST NOT be metallically connected to interfaces that connect to the OSP or its wiring. These interfaces are designed for use as intra-building interfaces only (Type 4 ports as described in GR-1089) and require isolation from the exposed OSP cabling. The addition of Primary Protectors is not sufficient protection in order to connect these interfaces metallically to OSP wiring.

Caution: The Verizon Wi-Fi Extender must be installed inside the office. The Extender is not designed for exterior installation.

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REGULATORY COMPLIANCE NOTICES

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