verizon✓

Wi-Fi Extender
USER GUIDE

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INTRODUCTION

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.

PACKAGE CONTENTS, SYSTEM REQUIREMENTS AND FEATURES

1.0/ PACKAGE CONTENTS

Your package contains:

- Wi-Fi Extender
- Power adapter

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 Wi-Fi Extender features include:

- Support for multiple networking standards, including
  - 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 1000 Mbps
  - MoCA 2.5 LAN enabled to support speeds up to 2500 Mbps 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

  – Two 5 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 WI-FI EXTENDER

1.3a/ FRONT PANEL

The front panel's unified button allows quick access to the Wi-Fi Protected Setup (WPS) feature and pairing mode.

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

front panel unified button
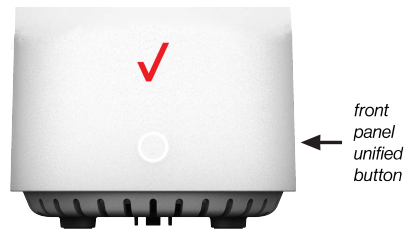
GETTING TO KNOW YOUR WI-FI EXTENDER

Status LED

| Condition Status	LED Color	Wi-Fi Extender
Normal	WHITE	Normal operation (solid) Wi-Fi Extender is booting (fast blink)
	BLUE	Pairing mode (slow blink) Pairing successful (solid)
	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 (slow blink)
		Extender is too close to the Router. Poor Wi-Fi coverage (fast blink)
	RED	Hardware/System failure detected (solid) Overheating (fast blink) Pairing Failure (slow blink)
Power	OFF	Power off

Please refer to section 5.0 for details on the rear LEDs.

1.3b/ REAR PANEL

The rear panel of your Wi-Fi Extender has a label that contains important information about your device, including the default settings for the Wi-Fi Extender's Wi-Fi network name (SSID), Wi-Fi password (WPA2 key), local URL for accessing the 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_BG6H44		Model Number: E3200
Wi-Fi Password:	can4-early-form		Serial #. E303120082400001
Admin URL:	mynetworksettings.com		WAN MAC: B8.F8.53.9F.01.B8
Admin Password:	B4QC49SWQ		HW ver.: 1103
	support.verizon.com/wifiextender		Shipped FW ver.: 3.0.0.x

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

Ethernet LAN (2 ports)

SSID Label

Coax LAN

Reset Button

Power
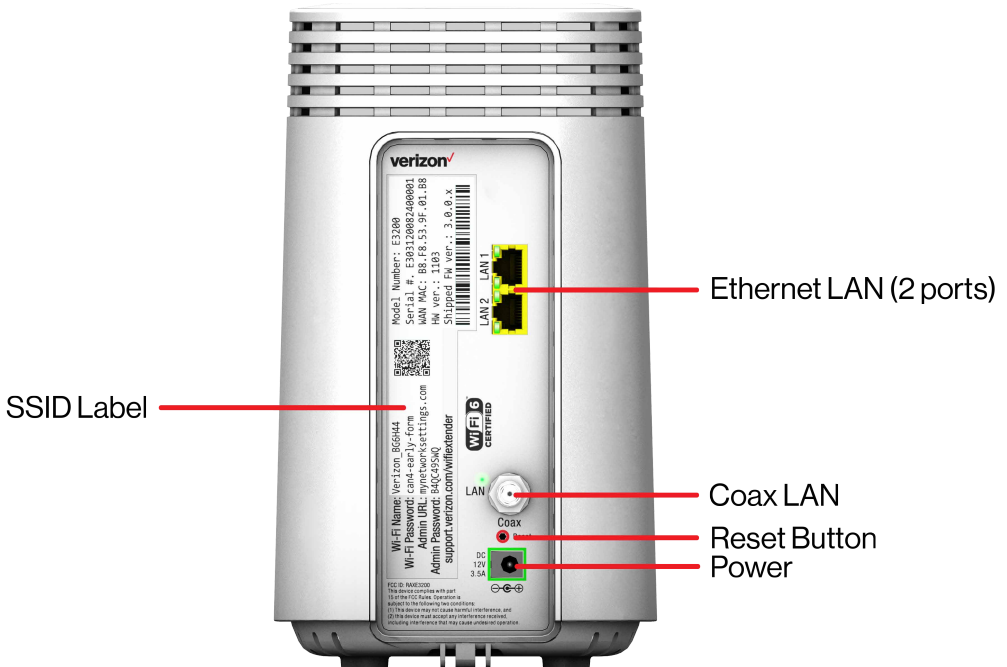
GETTING TO KNOW YOUR WI-FI EXTENDER

- **Ethernet LAN** - connects devices to your Wi-Fi Extender using Ethernet cables to join the local area network (LAN). The two Ethernet LAN ports are 10/100/1000 Mbps auto-sensing and can be used with either straight-through or crossover Ethernet cables.

- **Coax LAN** - connects your Wi-Fi Extender to the LAN and/or to other MoCA devices using a coaxial cable.

- **Reset Button** - allows you to reset your 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 Wi-Fi Extender to the factory default settings, press and hold the button for at least ten seconds.

- **Power** - connects your 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.

02 /

CONNECTING YOUR WI-FI EXTENDER

Connecting your 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.

SETTING UP YOUR WI-FI EXTENDER

2.0/ SETTING UP YOUR WI-FI EXTENDER

Note: Using a wired backhaul, the 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 home, 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. (If the coax outlet is already in use, use the coax splitter included in the box.)

B. Connect the 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.
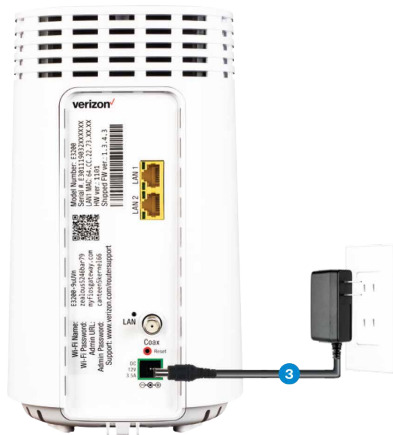

Coax splitter
(optional)

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

Note: If home is wired for Ethernet, follow same steps as above using an Ethernet cable instead of a coax cable.
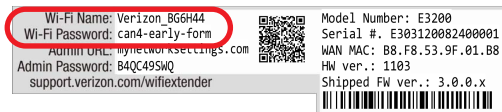
2.0b/ WIRELESS (WPS) PAIRING

1. Before setting up the Wi-Fi Extender, make sure the internet gateway or router you use to connect to the internet is working properly.

2. Plug the Wi-Fi Extender into a power outlet, next to the internet gateway or router, and wait for its light to turn solid yellow.

SETTING UP YOUR WI-FI EXTENDER

3. Press and hold the pair button on the Wi-Fi Extender for 3 seconds and then press the pair button on the router or internet gateway (within 2 minutes). Both devices' lights will blink blue while pairing. Once you see a solid white or blinking yellow light, it's paired. After 10 minutes, the light on the Extender should turn solid white, indicating the connection is complete.

4. Unplug the Wi-Fi Extender, move it between the internet gateway and the weak Wi-Fi coverage area, then plug it in. If you see a fast blinking yellow light, try moving it a bit further away from the internet gateway. If you see a slow-blinking yellow light, try a bit closer. A solid white light means you have it in the right spot and your setup is complete.

Note: The 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.

Wi-Fi Name: Verizon_BG6H44
Wi-Fi Password: can4-early-form
Admin URL: mynetworksettings.com
Admin Password: B4QC49SWQ
support.verizon.com/wifiextender

Model Number: E3200
Serial #. E30312008240001
WAN MAC: B8.F8.53.9F.01.B8
HW ver.: 1103
Shipped FW ver.: 3.0.0.x

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 33.
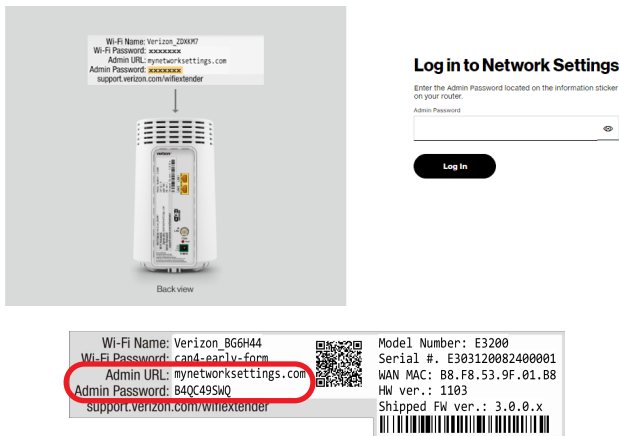
2.1/ MAIN SCREEN
2.1a/ Login Primary Option

1. Open a web browser on the device connected to your 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 Wi-Fi Extender was assigned by the Verizon Router if the Extender connects to the Router.
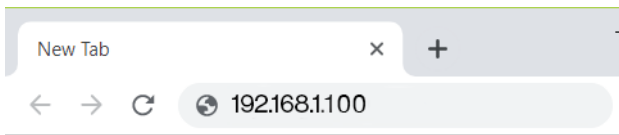
3. Enter the password that is printed next to the Admin Password on the label on the rear of your Wi-Fi Extender.

MAIN SCREEN

Note: The rear label of the Wi-Fi Extender has an admin 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 admin password of the Router. At this time, the admin password on the rear label of the Wi-Fi Extender should be ignored.

2.1b/ Login Alternative Option

1. Open a web browser on the device directly connected to your Wi-Fi Extender.

2. In the browser address field (URL), enter the IP address 192.168.1.254
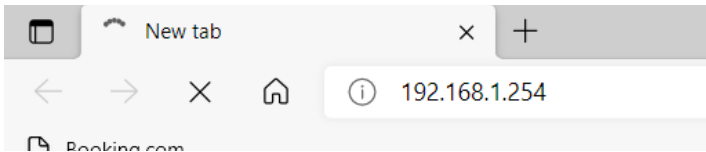
3. Enter the password that is printed next to the Admin Password on the label on the rear of your Wi-Fi Extender.

```
Wi-Fi Name: Verizon_BG6H44          Model Number: E3200
Wi-Fi Password: can4-early-form      Serial #. E303120082400001
Admin URL: mynetworksettings.com     WAN MAC: B8.F8.53.9F.01.B8
Admin Password: B4QC49SWQ            HW ver.: 1103
support.verizon.com/wifiextender     Shipped FW ver.: 3.0.0.x
```

When you log into your Wi-Fi Extender, the main screen displays a dashboard as well as a navigation menu to Wi-Fi, Status, and Advanced settings.
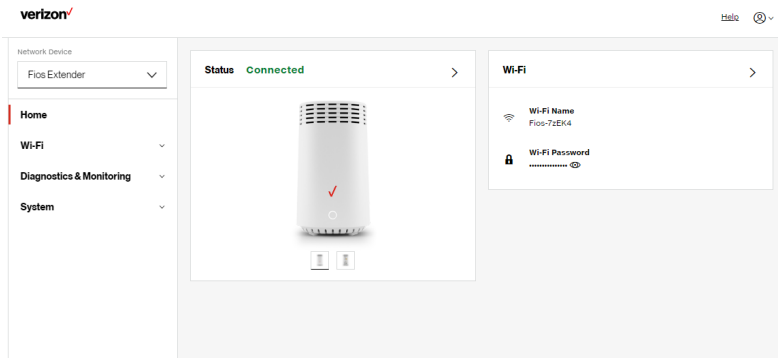
2.1c/ MENU

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

• System - this chapter

• Wi-Fi - Chapter 3

• Diagnostics & Monitoring - Chapter 4

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 Wi-Fi Extender and local network.

You can access the following advanced settings:

- Factory Reset - resets your Wi-Fi Extender to its default settings.
- Reboot - restarts your 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.

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 Wi-Fi Extender.
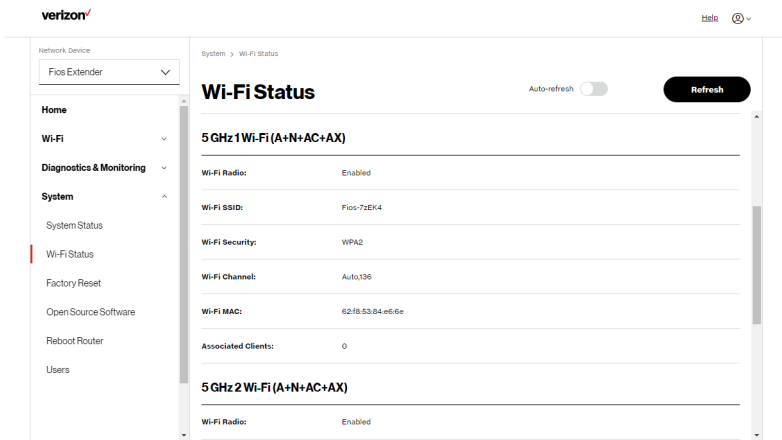
2.2b/ WI-FI STATUS

Use the Wi-Fi status feature to view the status for either 2.4 GHz or 5 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 Wi-Fi Extender.

2.2c/ FACTORY RESET

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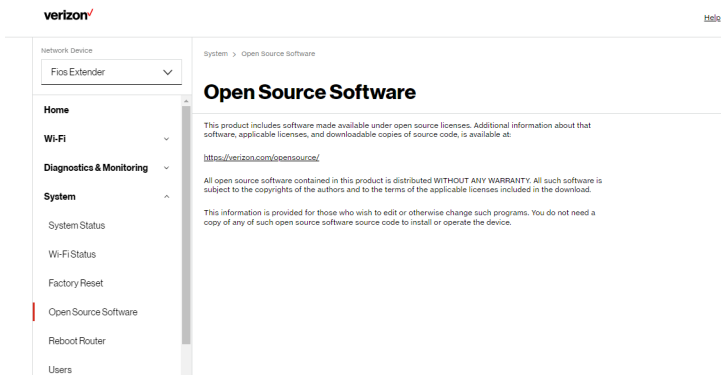
SYSTEM SETTINGS

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

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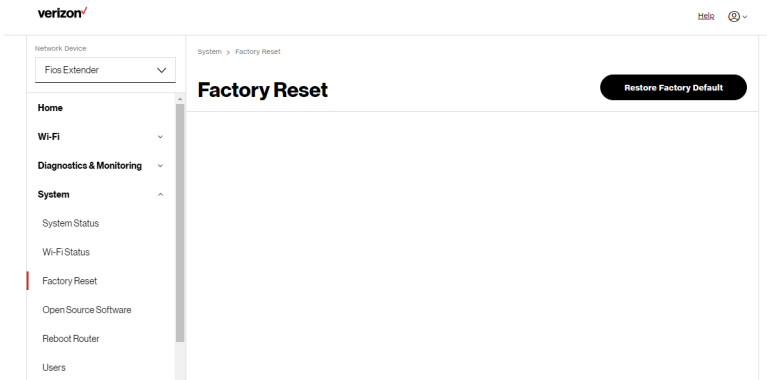
2. Click **Restore Factory Default** button. The factory default settings are applied and your Wi-Fi Extender restarts. Once complete, the Login page for the First Time Easy Setup Wizard displays.

2.2d/ OPEN SOURCE SOFTWARE

To view:

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

2.2e/ REBOOT ROUTER

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

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

1. Select **Reboot Router** in the **System** section.
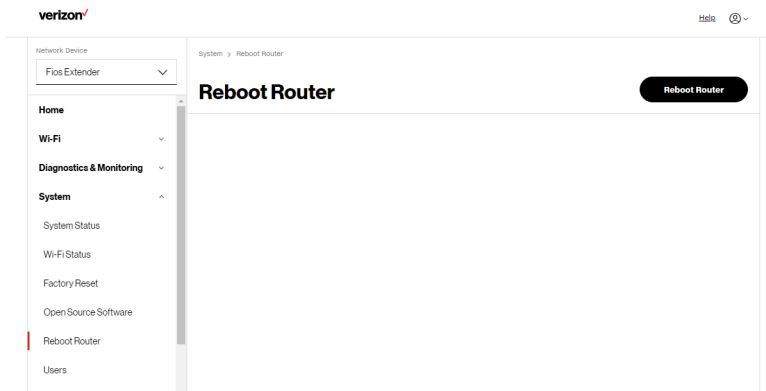
2. Click **Reboot Router** button on the screen. Your Extender will reboot. This may take up to a minute.
3. To access your Wi-Fi Extender user interface, refresh your web browser.

SYSTEM SETTINGS
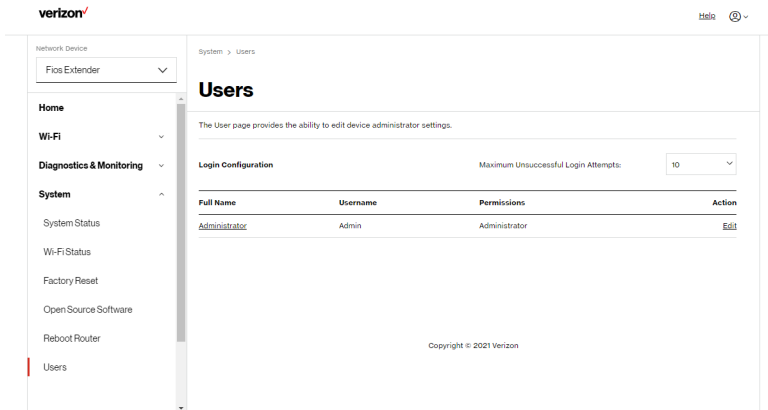
4. After the front panel Status LED turns solid white, you will automatically be sent to the web browser login page.

2.2f/ USERS

The 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 in 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.

03 /

WI-FI SETTINGS

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.

OVERVIEW

3.0/ OVERVIEW

Your 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.

802.11b has a maximum data rate of 11 Mbps, 802.11a, and 802.11g have a maximum data rate of 54 Mbps, 802.11n has a maximum data rate of 600 Mbps, 802.11ac has a maximum data rate of 1.73 Gbps, and 802.11ax has a maximum data rate of 4.8 Gbps.

802.11b and g standards operate in the 2.4 GHz range. 802.11ac operates in the 5 GHz range. 802.11n and ax operate in both the 2.4 GHz and 5 GHz ranges.

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.

3.1/ PRIMARY NETWORK

You can view the security settings for either 2.4 GHz or 5 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.

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.

PRIMARY NETWORK

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.

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.
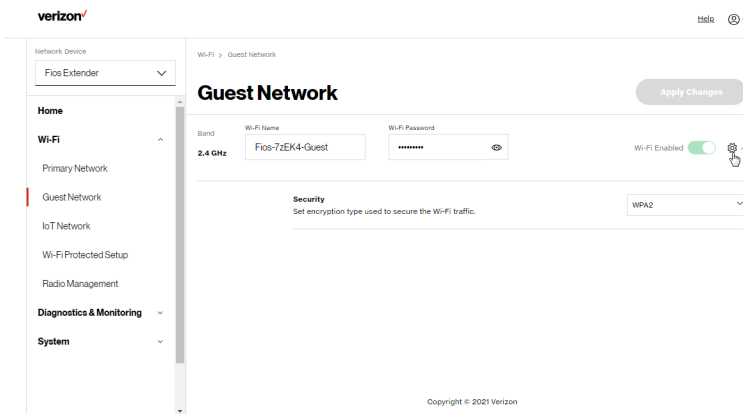
To view Guest Network settings:

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

IOT 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.

Note: IoT function may not be supported by the Routers.
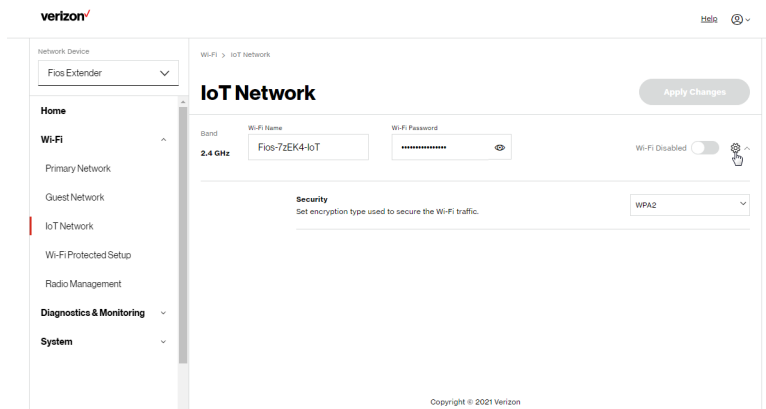
To view IoT Network Settings:

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

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 Wi-Fi Extender creates a secure Wi-Fi network.

In most cases, this only requires the pressing of two buttons – one on your 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 unified button located on the front of your 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).

WI-FI PROTECTED SETUP
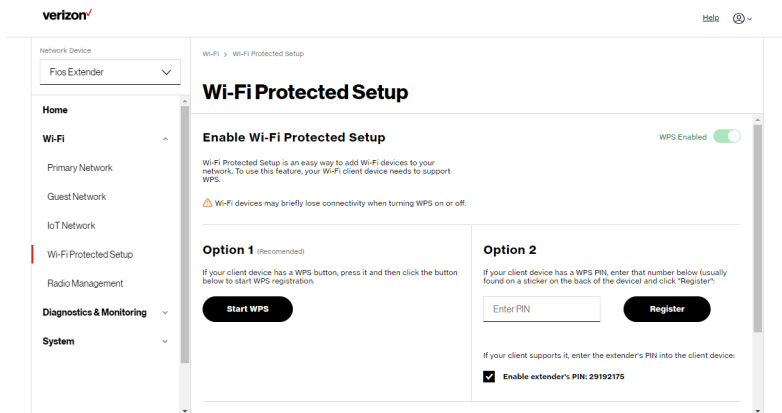
2. Use one of the following methods:

    - If your Wi-Fi client device has a WPS button, press the unified button on your router for more than two seconds, then click the **Start WPS** button in the **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 the **Option 2** on the user interface.

    - Click **Register**.

    - Alternatively, you can enter the router'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.

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

    When the unified button (WPS) on your Wi-Fi Extender is pressed, the Status LED on the front of your 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 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.

RADIO MANAGEMENT

3.5/ RADIO MANAGEMENT

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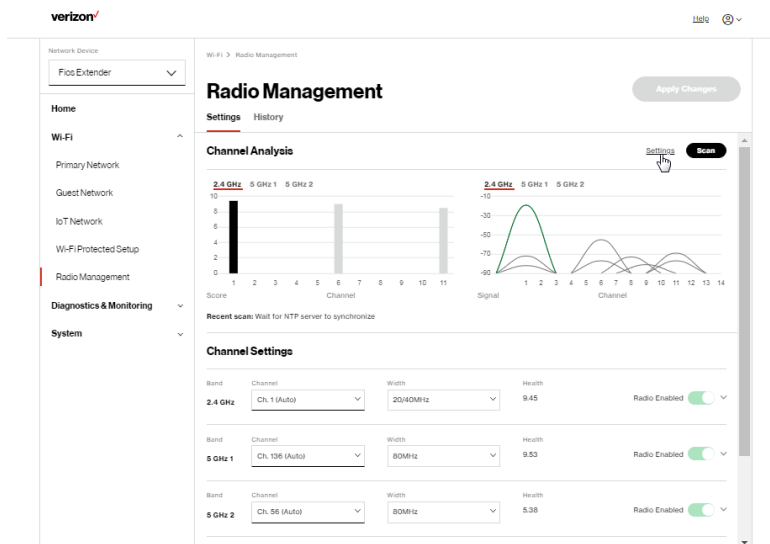
To view the channel settings:

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:
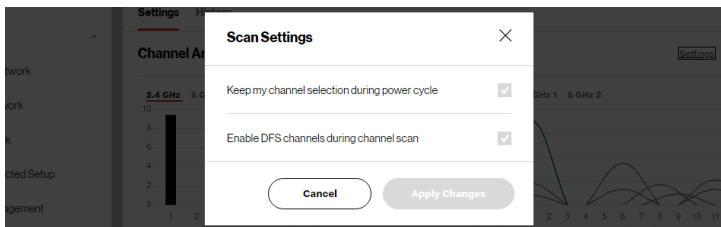
- Select the **Keep my channel selection during power cycle** check box to save your channel selection when your Wi-Fi Extender is rebooted.

- **Enable DFS channels during channel scan**: DFS channels are enabled by default during channel scans.

3. Click **Scan** to perform channel availability scan for the Wi-Fi Extender accommodating the best radio channel and providing the best Wi-Fi performance.

4. On the **Channel Settings** page for either 2.4 GHz or 5 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 Wi-Fi channel currently in use on each band. Users can select from available channels.

RADIO MANAGEMENT

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.

04 /

DIAGNOSTICS &
MONITORING

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

SYSTEM LOGGING

You can view the following information:

- System Logging
  - System Log - view the most recent activity of your Wi-Fi Extender.
  - Advanced Log - view a summary of the monitored data collected for 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 Wi-Fi Extender.
- Backhaul Logging - view an activity summary of the backhaul modes of Wi-Fi Extender.

4.0/ SYSTEM LOGGING

System Log

System Log provides a view of the most recent activity of your Wi-Fi Extender.

To view the system log:

1. Select **System Logging** in the **Diagnostics & Monitoring** section.
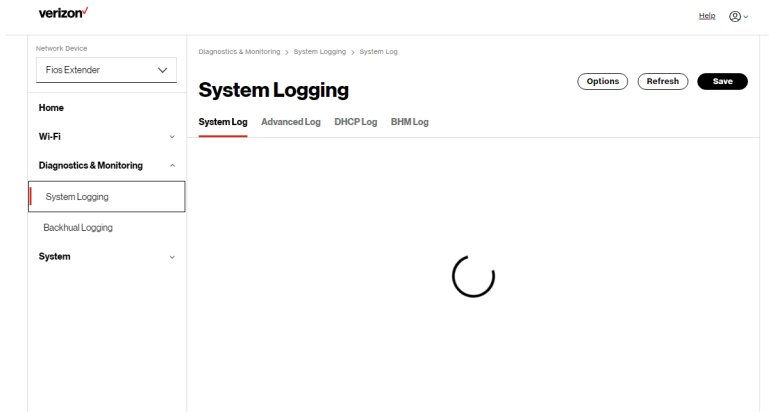
2. To view logged events for a specific timeframe, click the **Options** button.
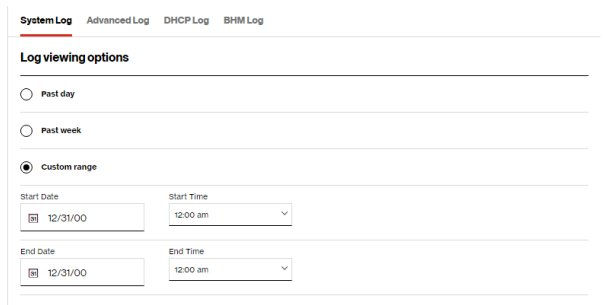
3. To refresh the page, click **Refresh**.

4. To delete the log information, click **Clear**.

5. To save the log information, click **Save**.

SYSTEM LOGGING

4.0a/ Advanced Log

You can view a summary of the monitored data collected for your Wi-Fi Extender.

To view your Wi-Fi Extender's full system status and traffic monitoring data:

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

2. Click on the **Advanced Log** from the top of the **System Logging** page.
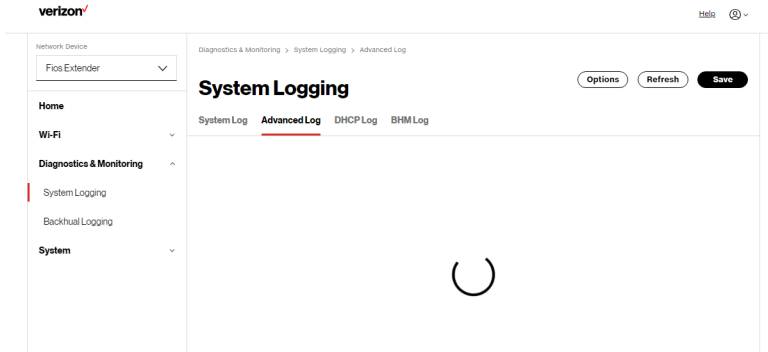
3. To view logged events for a specific timeframe, click the **Options** button.

4. To refresh the page, click **Refresh**.

5. To delete the log information, click **Clear**.

6. To save the log information, click **Save**.

4.0b/ DHCP Log

You can view a list of the connected DHCP clients on your network.

To view a list of the connected DHCP clients *status:*

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

2. Click on the **DHCP Log** from the top of the **System Logging** page.
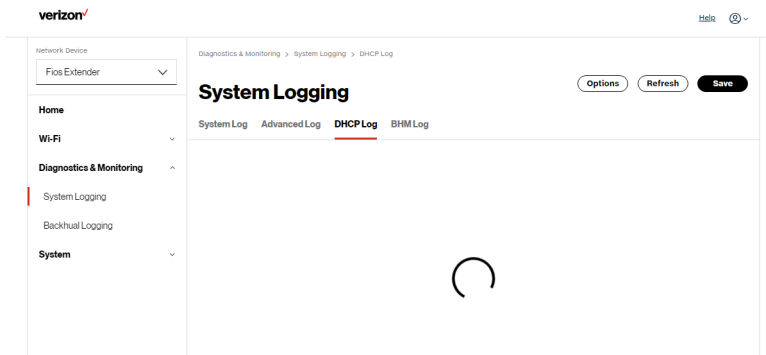
3. To view logged events for a specific timeframe, click the **Options** button.

4. To refresh the page, click **Refresh**.

5. To delete the log information, click **Clear**.

6. To save the log information, click **Save**.

SYSTEM LOGGING

4.0c/ BHM Log

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

To view the backhaul modes log:

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

2. Click on the **BHM Log** from the top of the **System Logging** page.
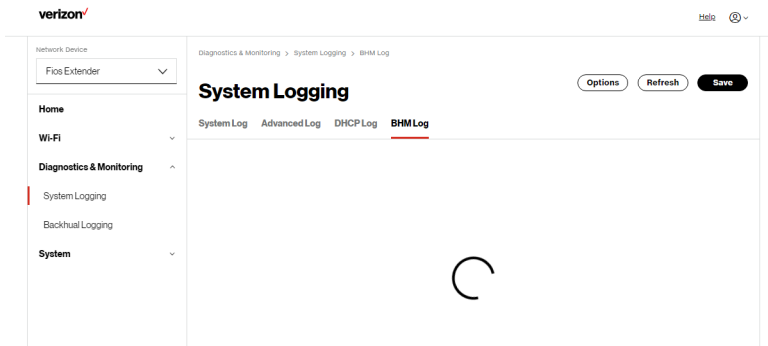
3. To view logged events for a specific timeframe, click the **Options** button.

4. To refresh the page, click **Refresh**.

5. To delete the log information, click **Clear**.

6. To save the log information, click **Save**.

4.1/ BACKHAUL LOGGING

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

05 /

TROUBLE SHOOTING

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

Although the majority of the 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.

TROUBLESHOOTING TIPS

Note: *The advanced settings should only be configured by experienced network technicians to avoid adversely affecting the operation of your 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 Wi-Fi Extender is powered on and is connected to the Verizon Router. Check the Status LED on the front of the Wi-Fi Extender. Be sure to refer to the "1.3a/ FRONT PANEL" on page 7 to determine status of the Wi-Fi Extender. Check the WAN cable (Ethernet or coaxial) connecting your Verizon 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 Wi-Fi Extender by manually pressing the 'red' reset button on the rear panel of the Wi-Fi Extender for 2-4 seconds (the Status LED should go off) to begin rebooting your Wi-Fi Extender. Your 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 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 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 WI-FI EXTENDER USING WI-FI:

- Be sure your Wi-Fi device is within range of your 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 Wi-Fi Extender.

- Be sure you are connecting to the correct Wi-Fi network; check to be sure you are using your 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.

- 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.

TROUBLESHOOTING TIPS

- If you are still unable to access your 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 WI-FI EXTENDER IF YOU ARE LOCKED OUT

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

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

- Scheduler - If a schedule has been created that applies to the computer over the connection being used, your 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 Wi-Fi Extender is denied.

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

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

There are two ways to restore your Wi-Fi Extender's default settings. It is important to note that after performing either procedure, all previously saved settings on your 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 Wi-Fi Extender for at least ten seconds.

- Access the UI and navigate to the Advanced Settings page. Select 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 Wi-Fi Extender, you may also need to disconnect your 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.

5.0e/ LAN CONNECTION FAILURE

To troubleshoot a LAN connection failure:

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

- Confirm that the computer and 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.

TROUBLESHOOTING TIPS

If the computer is not using an IP address within the correct IP range, it will not connect to your 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.
- 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 Wi-Fi Extender and restart the 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 Verizon Router, based on the application you are using (refer to Verizon's support online help for more details).

5.0g/ FRONT UNIFIED BUTTON

The front panel's Unified Button allows quick access to the Wi-Fi Protected Setup (WPS) feature and handset paging/pairing mode. In addition, the Unified Button provides a visual display of the Wi-Fi Extender's current condition. Refer to the chart below for details.

Condition Status	LED Color	Wi-Fi Extender
Normal	WHITE	Normal operation (solid) Router is booting. (fast blink)
	BLUE	Pairing mode (slow blink) Pairing successful (solid)
	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 (slow blink)
		Extender is too close to the Router. Poor Wi-Fi coverage (fast blink)
	RED	Hardware/System failure detected (solid) Overheating (fast blink) Pairing Failure (slow blink)
Power	OFF	Power off

FREQUENTLY ASKED QUESTIONS

5.0h/ REAR LIGHTED INDICATORS

Flash Speed

- Slow flash – Two times per second
- Fast flash – Four times per second

LAN Ethernet – Upper LED

- Unlit – Indicates no 1 Gbps link
- Solid green – Indicates 1 Gbps link
- Fast flash green – Indicates LAN activity. The traffic can be in either direction.

LAN Ethernet – Lower LED

- Unlit – Indicates no 10/100/1000 Mbps link
- Solid green – Indicates 10/100/1000 Mbps link

LAN Coax

- Unlit – Indicates no MoCA network connection to the device
- Solid green – Indicates network link

5.1/ FREQUENTLY ASKED QUESTIONS

5.1a/ I'VE RUN OUT OF ETHERNET PORTS ON MY 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 Wi-Fi Extender.

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

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

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

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

Yes, your 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 that is printed on the sticker on the rear panel of your Wi-Fi Extender.

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

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

FREQUENTLY ASKED QUESTIONS

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

Yes, your Wi-Fi Extender can interface with 802.11a, b, g, n, ac or ax devices. Your 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 Wi-Fi 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.

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

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

5.1j/ HOW MANY COMPUTERS CAN BE CONNECTED THROUGH MY WI-FI EXTENDER?

Your Wi-Fi Extender is capable of maximum 60 Wi-Fi connections for each radio channel and maximum 30 Ethernet connections.

Note: The number of connections increases, the available speed for each computer decreases.

06 /

SPECIFICATIONS

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

This includes standards, cabling types and environmental parameters.

GENERAL SPECIFICATIONS

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

6.0/ GENERAL SPECIFICATIONS

Model Number:	E3200
Standards:	IEEE 802.3x, 802.3u
	IEEE 802.11a/b/g/n/ac/ax
IP:	IP versions 4 and 6
MoCA LAN:	1125 – 1675 MHz 2500 Mbps
Speed:	Wired LAN Ethernet: 10/100/1000 Mbps auto-sensing
Cabling Type:	Ethernet 10BaseT: UTP/STP Category 3 or 5
	Ethernet 100BaseT: UTP/STP Category 5
	Ethernet 1000BaseT: UTP/STP Category 5e
Firewall:	ICSA certified

6.1/ LED INDICATORS

Front Panel: Unified Button

Rear Panel: LAN Coax and LAN Ethernet [2]

6.2/ ENVIRONMENTAL PARAMETERS
DIMENSIONS AND WEIGHT

Wi-Fi Extender (unit only):

Size: 5.32" wide x 9.27" high x 5.94" deep

Weight: 2.50 lbs / 1.138 kg

Complete System (inc. packaging):

Size: 12.24" wide x 6.26" high x 7.09" deep

Weight: 4.00 lbs ~ 4.05 lbs / 1.81 kg ~ 1.83 kg

Power: External, 12V, 3.5A

Screws (optional):   PH TP+N: 0.157" x 0.984"
Anchor PE: 0.197" x 0.984"

ENVIRONMENTAL PARAMETERS

Certifications: FCC, UL 60950-1

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)

07/

NOTICES

7.0   Regulatory Compliance Notices

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

REGULATORY COMPLIANCE NOTICES

7.0/ REGULATORY COMPLIANCE NOTICES
7.0a/ Class B Equipment

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 grantee of this device could void the user's authority to operate the equipment.

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

RF Exposure:

To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 31cm from all persons (indoor), and must not be co-located or operating in conjunction with any other antenna or transmitter.

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.

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.

REGULATORY COMPLIANCE NOTICES

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 G3100/E3200.

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 Wi-Fi Extender must be installed inside the home. The Extender is not designed for exterior installation.

7.0e/ GENERAL PUBLIC LICENSE

This product includes software made available under open source licenses. Additional information about that software, applicable licenses, and downloadable copies of source code, is available at:

https://verizon.com/opensource/

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