



SURFboard® G54 DOCSIS® 3.1 Wi-Fi® Cable Modem

User Guide, Revision x.1

P/N 819846-001-00

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Safety and regulatory information

Important safety instructions

- The model number, serial number, and electrical rating are on a label on the base of the device.
- Do not locate the device near water.
- Do not locate the device in direct sunlight or near a heat source.
- Do not use liquids, aerosols, or forced air to clean the device. It may be cleaned using a dry, lint-free cloth.
- Do not block the ventilation holes on this device. Do not stand it on soft furnishings or carpets.
- Do not use the device in an environment that exceeds 104° F (40° C).
- Use only the power supply and cord provided with the device. Do not use the power supply with any other devices.
- Ground coaxial cable shield at building/residence either close to point of entrance or at point of attachment. Ground as close as practical to building/residence to minimize grounding connector length and reduce potential voltage differences between coaxial cable and other grounding system.
- Telephones should be connected directly to this device. Physical connections to a previous telephone provider must be removed. Failure to do so may cause hazardous conditions, loss of service, and/or permanent damage.



Note: This device will be unable to make or receive telephone calls if there is a loss of power.

FCC compliance

ARRIS, 3871 Lakefield Dr, Suwanee, GA 30024.

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.

Note: 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 uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorient or relocate the receiving antenna. Increase the separation between the equipment and set-top. Connect the equipment into an outlet on a circuit different from that to which the set-top is connected. Consult the dealer or an experienced radio/TV technician for help.



CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This product contains a radio transmitter and accordingly has been certified as compliant with 47 CFR Part 15 of the FCC Rules for intentional radiators. Products that contain a radio transmitter are labeled with FCC ID and the FCC logo.



CAUTION: Exposure to Radio Frequency Radiation. To comply with the FCC RF exposure compliance requirements, the separation distance between the antenna and any person's body (including hands, wrists, feet and ankles) must be at least 52cm (21 inches).

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



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 US must fix to US operation channels only. FCC regulations restrict the operation of this device to indoor use only. This device cannot be used to provide connections between separate building or structures.

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

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

Wireless LAN information



Note: This applies to devices that provide Wi-Fi capability.

This device is a wireless network product that uses Direct Sequence Spread Spectrum (DSSS) and Orthogonal Frequency-Division Multiple Access (OFDMA) radio technologies. The device is designed to be interoperable with any other wireless DSSS and OFDMA products that comply with:

- The IEEE 802.11 Standard on Wireless LANs (Revision AC, Revision B, Revision G, Revision N, and Revision ax), as defined and approved by the Institute of electrical electronics engineers.
- The wireless fidelity (Wi-Fi) certification as defined by the Wireless Ethernet Compatibility Alliance (WECA).



Caring for the environment by recycling



When you see this symbol on a product, do not dispose of the product with residential or commercial waste.



Please recycle product packaging and this document.

Recycling your equipment

Some countries or regions have set up systems to collect and recycle electrical and electronic waste items. Recycling information can be obtained from the WEEE recycling section at <http://www.CommScope.com>.

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Introduction

Welcome to the next generation of ultra, high-speed ARRIS® DOCSIS 3.1® G54. Your Wi-Fi cable modem G54 is a combination of DOCSIS 3.1 cable modem and multi-port Ethernet router with Wi-Fi. It uses DOCSIS 3.1 technology to provide ultra, high-speed Internet access in your home or small business network. Using the connection capabilities of your G54, you can upgrade your entire existing Wi-Fi network by connecting your computer and other network-enabled devices using the five Ethernet ports or the 2.4 GHz, 5 GHz, and 6GHz wireless connections. Your G54 connects to the existing coaxial cable connection in your home.

The ARRIS SURFboard Central mobile app assists you with your Wi-Fi cable modem setup and functions. It takes you through the steps to install your home Wi-Fi network using your iOS or Android mobile device and lets you manage your home network access, Parental Control, Guest Access, and more on all your connected devices (e.g., smartphones, cameras, tablets, computers, smart TVs, gaming consoles, and more) across your home Wi-Fi network.

This guide provides instructions for installing and configuring your G54, setting up secure Wi-Fi network connections for your network devices, and managing your Wi-Fi home network configuration.

In your G54 box

Before installing your G54 Wi-Fi cable modem, check that the items listed in the table below are included in your G54 product box. If any items are missing, call ARRIS technical support at **1-877-466-8646** for assistance.

Table 1: G54 packaging contents

Item	Description
G54	High-speed DOCSIS 3.1 Wi-Fi cable modem, wireless access point, and five-port Ethernet router.



Item		Description
Wall power supply		Power supply for an electrical wall outlet connection.
A Quick Start Card		Provides information on how to install your G54 and setting up a secure Wi-Fi network connection in your home or small business network.

System requirements

- High-speed Internet access account
- Web browser access – Internet Explorer, Google Chrome, Firefox, or Safari
- Compatible operating systems:
 - Windows® 11
 - Windows® 10
 - Windows 8
 - Windows 8.1
 - Windows 7 service pack 1 (SP1)



Note: Although older versions of Microsoft Windows operating systems are no longer specifically supported, they should still function with your G54.

- Mac® 10.4 or higher
- UNIX®
- Linux®

Contact information

For technical support and additional ARRIS product information:

- Visit the ARRIS Support website: <https://community.surfboard.com/>
- Call ARRIS Technical Support: **1-877-466-8646**

Front panel and LED behavior



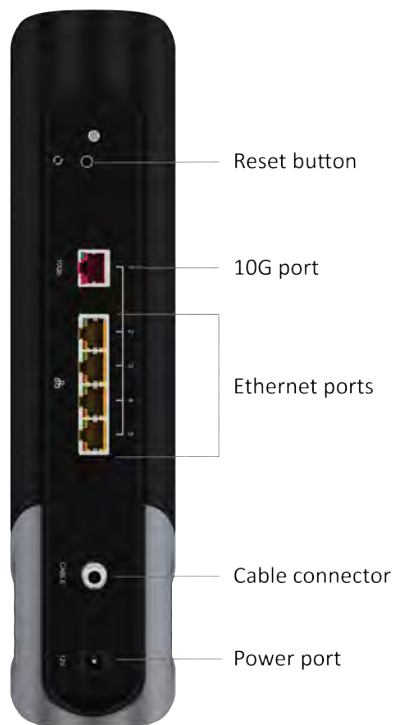
Figure 1: Front view

LED behavior

LED behavior	Description
Amber (Solid)	Power is initially applied.
Amber (OFF)	No power. Check the power and cable connections. You may have to restart your G54 using the reset button. For details, see Rebooting your G54 (page 65).
Amber (Flashing)	Firmware download is in progress
White (Flashing five times)	Series of white flashes while holding down the reset PIN indicates a factory reset has been initiated
Green (Blinking)	Downstream/upstream channel search (unlocked status)
Green (Solid)	Online status is in DOCSIS 3.0 mode
Blue (Solid)	Online status is in DOCSIS 3.1 mode

LED behavior	Description
Light Blue (Blinking)	WAN over Ethernet mode, cable is unplugged or no Internet
Light Blue (Solid)	WAN over Ethernet mode, Internet is connected
Blue and Green (Alternating colors)	Error mode. Check the power and cable connections. You may have to restart your G54 using the reset button. For details, see Rebooting your G54 (page 65).

Rear panel and connectors



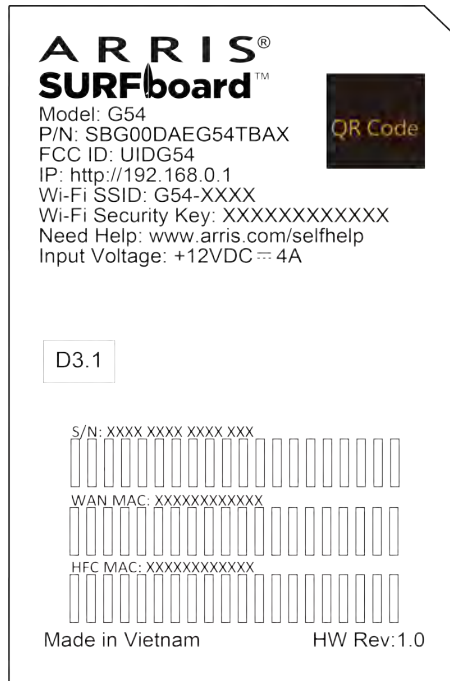
G54 Rear view

Rear panel and connectors

Port name	Description
Reset button	The Reset button located on the rear panel of your cable modem G54 can be used to either reboot or reset your G54 configuration settings.

Port name	Description
 ETHERNET 10/100/1000	Four one-gigabit Ethernet ports for RJ-45 network cable connections: ■ Green: LED is ON - Indicates a data transfer rate of one gigabit per second ■ Green: LED is Blinking - Indicates data traffic is in progress ■ Amber: LED is ON - Indicates a data transfer rate of less than one gigabit per second ■ Amber: LED is Blinking - Indicates data traffic is in progress
 ETHERNET 10G (available in G54 unit)	One 10G port for RJ-45 network cable connection: Note: CAT6 Ethernet cable and 10G Ethernet capable device is required to achieve Ethernet connection upto 10 Gbps. ■ Green: LED is ON: Indicates a data transfer rate of 10Gbps per second ■ Green: LED is Blinking: Indicates data traffic is in progress ■ Amber: LED is ON: Indicates a data transfer rate of less than 10Gbps per second ■ Amber: LED is Blinking: Indicates data traffic is in progress
 CABLE	Coaxial cable connector
Power port	100 - 240 VAC Power connector must reflect a 12 VDC @2.5A power adapter. Warning: To avoid any damage to your cable modem, only use the power supply included in your G54 box.

Sample G54 Product label



The product label is located on the bottom of your cable modem . The labels contain the information you need to activate your cable modem for your home Internet service or technical support issues.

To activate your Internet service, contact your service provider for assistance. When contacting your service provider or [ARRIS Technical Support](#) (page 10), you may have to provide the following information listed on the product labels:

- Model name (G54)
- Serial number (SN)
- MAC address (HFC MAC)

Getting started

This product is for indoor use only. Do not route the Ethernet cable(s) outside of the building. Exposure of the cables to lightning could create a safety hazard and damage the product.

Before installing your G54, check with your service provider (or local cable company) to ensure broadband cable service is available in your area.

The images used in this document are for references only and may contain images of a different model. The SBC app on your mobile device should represent the model you are configuring.

You can set up your G54 home Wi-Fi network in one of the following ways.

- **Using the SURFboard Central app (SBC app):** It is recommended that you set up your home Wi-Fi network using the SBC app. For details on how to set up, refer to the SURFboard Central User Guide for Wi-Fi Cable modems available on the <https://community.surfboard.com/>.
- Using client device (laptop/desktop): If you are using your client device (laptop/Desktop) with a wired Ethernet connection to set up your home Wi-Fi network then perform the following task.
 - [Setting up your G54 home Wi-Fi network using your client device](#) (page 15)

Setting up your G54 home Wi-Fi network using your client device

To set up Internet connection in your home network using your client device (laptop/desktop):

- Ensure to choose a location in your home where your computer and your G54 are preferably near existing cable and electrical wall outlets.
- Ensure to keep the information such as your G54 model name, HFC MAD ID, and the serial number (SN) listed on your cable modem label (available on the bottom of your modem and on the last page of the Quick Start Card) ready as you may need them while contacting your service provider. For more information, see [Sample G54 Product label](#) (page 14).



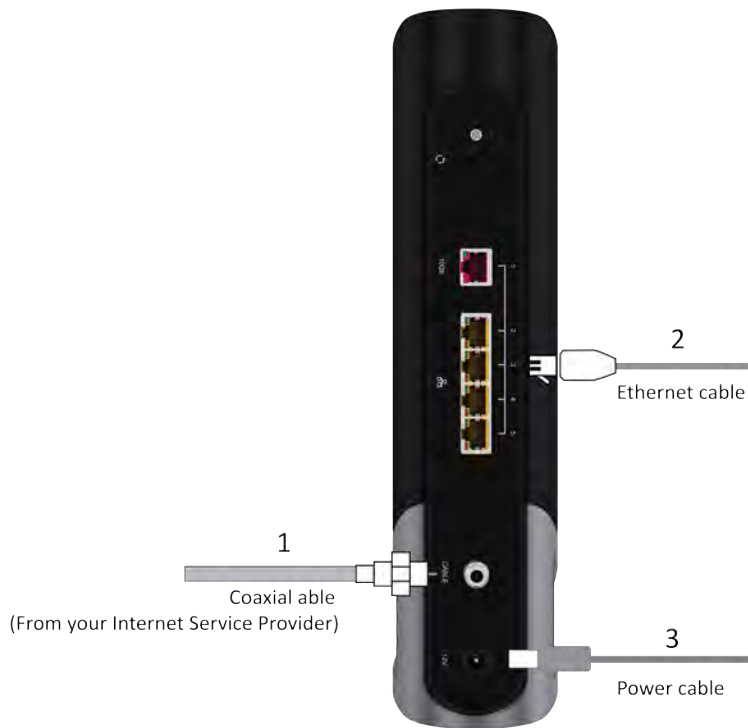
Note: You can use the 10G Ethernet port on your G54 as the WAN input in place of the RF cable connection. You should be able to connect to an alternate Internet connection and use your G54 as your router and a Wi-Fi source. This is a useful feature if you choose to change your Internet service to a provider that is not a cable

operator. You can still use your G54 as your Wi-Fi router. This is a useful feature if you choose to change your Internet service to a provider that is not a cable operator.



Note:

You can enable or disable this feature which is available for the 10G as WAN over Ethernet. For more information, see [Setting up an Ethernet port connection for your data input](#) (page 63).



G54 connection diagram

1. You can choose to connect using one of the following ways:
 - If you are using a coaxial cable, then follow step 2 and proceed with step 4 onwards (skip step 3).
 - If you are using WAN via an Ethernet cable, then perform step 3 onwards.
2. If you are connecting through a coaxial cable, connect one end of a coaxial cable to the **Cable** connector on the rear panel of your G54 and the other end to a cable wall outlet or RF splitter (not included).
3. If you are using WAN via Ethernet cable, connect the other end of the Ethernet cable from the WAN provider to the **10G** Ethernet port on the rear panel of your G54.
4. Connect one end of the power cord to the **Power** port on the rear panel of your G54 and the other end to an electrical outlet.



Note: This automatically powers ON your G54. There may be up to a 15 second delay for the LED on the front panel of your G54 to light up after the power is connected.

Although your computer may be configured to automatically access the Internet, you should still perform the following connectivity test to verify that the devices are connected.

5. To proceed further with setting up your G54, follow the on-screen instructions on your SBC app. For more information, refer to the SURFboard Central Mobile App User Guide for Wi-Fi Cable modems.



Note: You can also use the WEB GUI interface to complete the set up of your G54.

6. To activate (provision) your G54, contact your service provider.
7. Open a web browser (such as Internet Explorer, Google Chrome, Firefox, or Safari) on your computer and type www.surfboard.com or type a valid URL in the address bar and then press **Enter**.

The ARRIS website or the URL of your choice must open. If the website fails to open, please contact your service provider for assistance.

8. To ensure you are connected successfully to your G54 Wi-Fi network, you can check for the front panel LED on your G54 lights up in a sequential order. Refer to the section [Front panel](#) for LED status information.



Note:

- If the LED does not light up and you do not have an Internet connection, you may have to contact your service provider to reactivate your G54 or check for signal issues.
- If you still cannot connect to the Internet, please call ARRIS Technical Support at **1-877-466-8646** for assistance.

Adding devices to your home Wi-Fi network



Note: You can prefer to modify the default SSID details using the SBC app or from the WEB GUI interface. However, we recommended you way to set up your SSID using the SBC app. For more information about setting up your Wi-Fi network, refer to the SURFboard Central Mobile App for Wi-Fi Cable Modems User Guide.



Note: The **Wi-Fi Network Name (SSID)** and the **Wi-Fi Security Key (Network Password)** details are required to connect your client devices to your home network. The default network name and network password are listed on your G54 [Sample G54 Product label](#) (page 14).

Choose from one of the options listed here for setting up a Wi-Fi network connection on your home network using the default SSID. Repeat for each additional device.

- **Windows Computer** – You can connect using the Windows task bar or using the Windows control panel. For more details, refer to your Windows OS documentation.

- **Android device**

From any screen on your Android device:

1. Select  to open the  Settings screen.
2. Select  to open the Wi-Fi settings screen.
3. Slide to turn on the **Wi-Fi** option.

Your device will automatically start searching and then display a list of available Wi-Fi networks.

4. Select your Wi-Fi network name (SSID) from the list.
5. If prompted, type your Wi-Fi Security Key (network password). Note that your network password may be case-sensitive.
6. Select **Connect**. If your Wi-Fi network connection is successful, "Connected" message displays below the selected Wi-Fi network name.

- **Apple computer (for example: A MacBook)**

From any screen on your apple computer:

1. Click  (Wi-Fi icon) to display a list of available Wi-Fi networks.
2. Select the Wi-Fi network name (SSID) for your home network from the list.
3. If prompted, enter your network password in the Password field.



Note: Select **Remember this network** if you want your Mac device to automatically connect to your home network when you log on. Ensure your device must be within range of your Wi-Fi network to connect to it.

4. Click **OK**.

■ **Apple mobile device**

From the Home screen on your Apple device:

1. Select **Settings** to open the Wi-Fi screen.
2. Select **Wi-Fi** to turn it ON.

Your device will automatically start searching and then list the available Wi-Fi networks.

3. Select the Wi-Fi network name (SSID) for your home network from the list to connect.
4. If prompted, enter your network password in the Password field.

If your Wi-Fi connection is successful, ✓ will display next to the Wi-Fi network name.



Note: For more information on setting up your Wi-Fi network connections, refer to the user documentation for your specific client device.

Quick connect using the Windows task bar

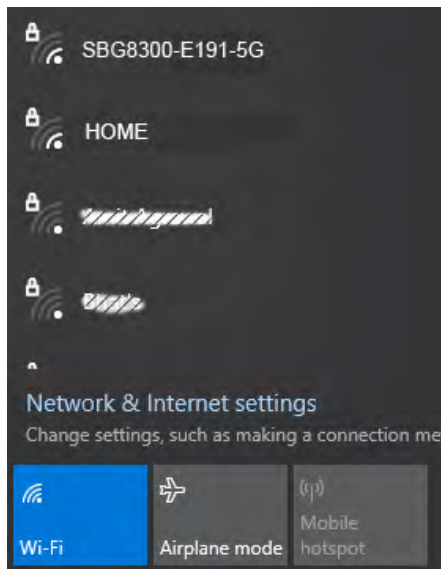
1. From the Windows taskbar on your computer, click the **Wi-Fi Link** icon to open the list of available Wi-Fi networks.



Sample Microsoft Windows taskbar icons



Note: If the **Wi-Fi Link** icon is not visible, left click on the **Show hidden icons** button on the Windows taskbar to open the list of additional icons.



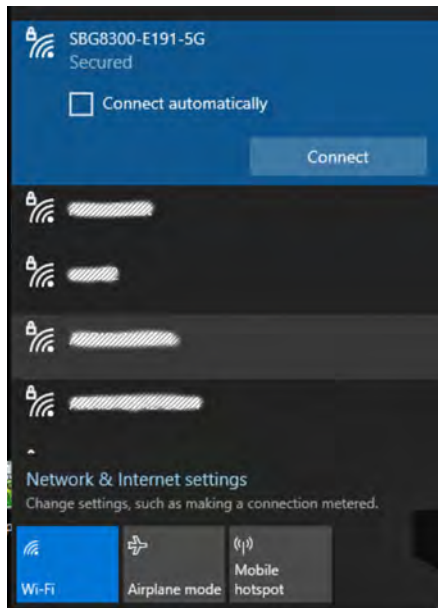
Sample available Wi-Fi networks Microsoft Window

2. Locate and left-click on the G54 Wi-Fi network name or SSID (for example, G54-####) for your G54 from the list of available Wi-Fi networks.

The default SSID is located on the bottom of your G54.

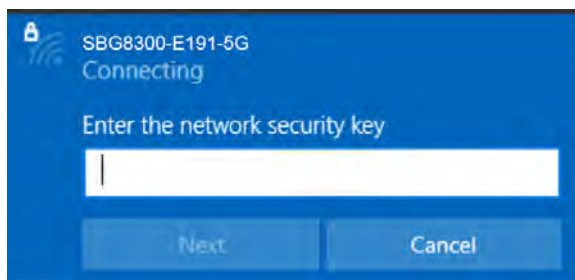


Note: You must use the default SSID listed on the product label when installing your G54 and setting up your first Wi-Fi network connection. You can change the SSID after your network connections are up and running. For more information, See [Configuring your Wi-Fi network](#) (page 33).



Sample Wi-Fi network connection screen

3. Select **Connect automatically** to set up your Wi-Fi devices to automatically connect to your Wi-Fi network without having to log on using a user password.
4. Click **Connect** to open the Connect to a Network window and set up your new network password.



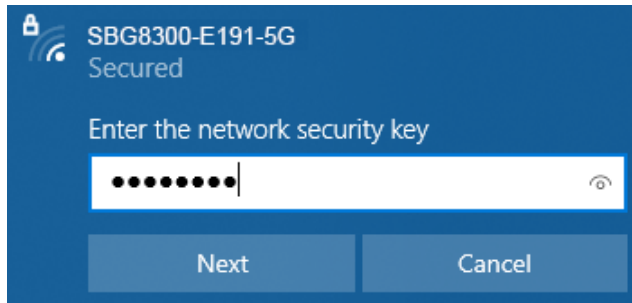
Network security key window

5. Enter the **Network Security Key** (your Wi-Fi network password) in the **Security key** field.



Note: You can use the default Wi-Fi Security Key code listed on the product label or enter your own personal Wi-Fi network password.

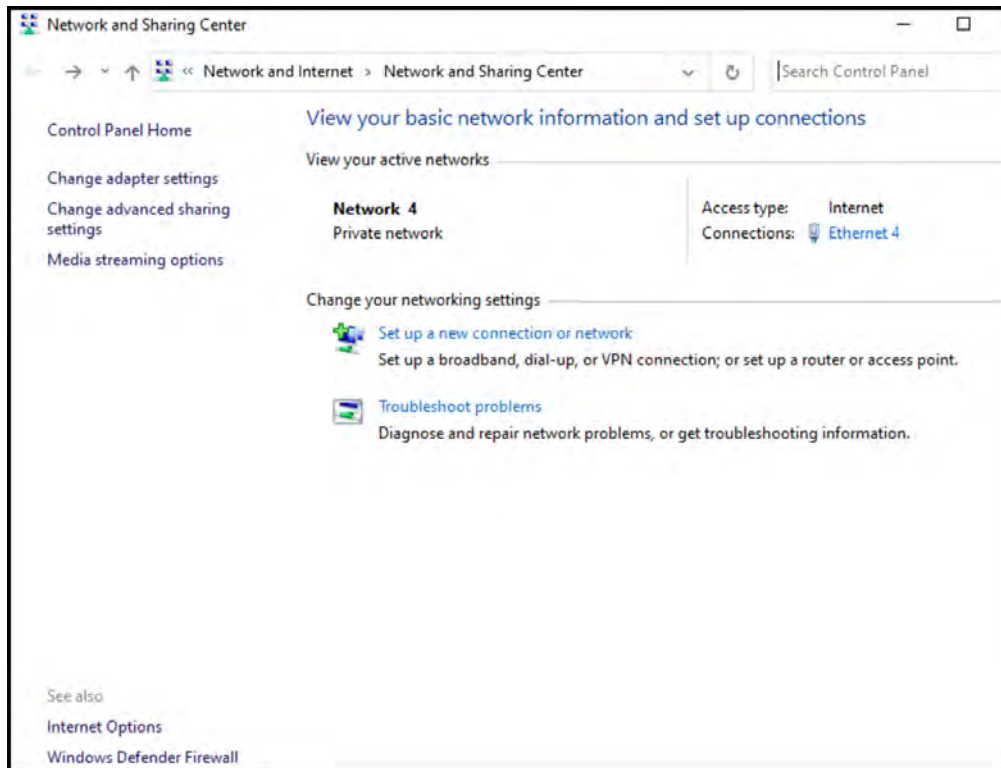
If you have already changed your Wi-Fi network password using the G54 Web Manager, enter that password in the **Enter the network security key** field and then click **Next**.



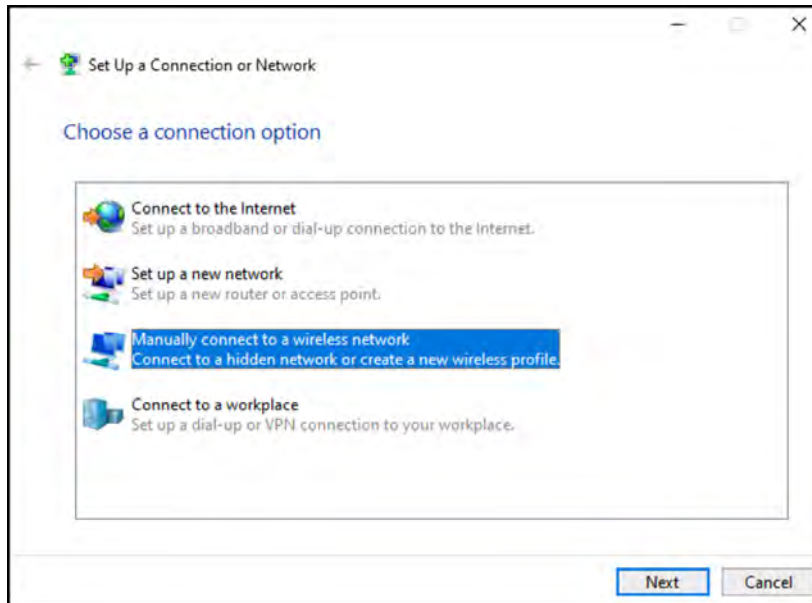
Network connection-create network password window

Connecting using the Windows control panel

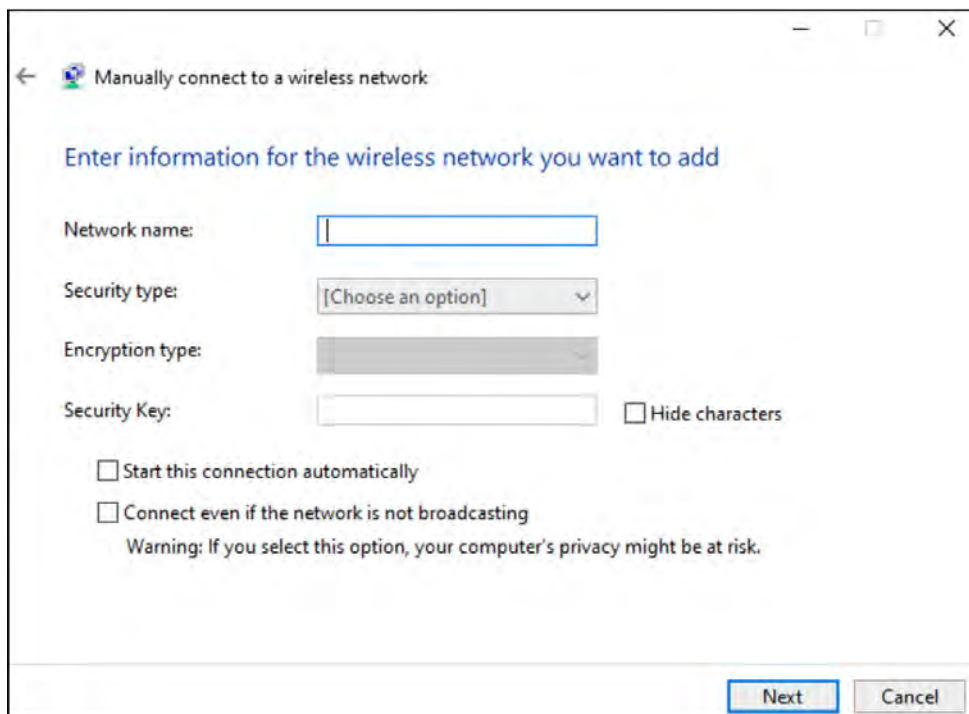
1. From the Windows taskbar on your computer, click **Start** button and then click **Control Panel**.
2. Click **Network and Sharing Center** to open the Network and Sharing Center window.



3. Click **Set up a new connection or network** under Change your networking settings panel.



4. Click **Manually connect to a wireless network** and then click **Next**.



5. Enter the G54 Wi-Fi network name or SSID (G54-####) in the **Network name** field. The default SSID is listed on the product label on the bottom of your G54 modem.



Note: You have the option to change your Wi-Fi network name or SSID after setting up your Wi-Fi network connection. However, you must use the default SSID listed on the product label after installing your G54.

6. Select the wireless Security level for your Wi-Fi network from the **Security type** drop-down list.



Note: **WPA2-Personal** is the recommended wireless security level for your Wi-Fi home network. It is the default security level for your G54 and the highest security level available.

7. Select the password encryption type from the **Encryption type** drop-down list.

This is used for securing your Wi-Fi network.

- TKIP – Temporal Key Integrity Protocol
- AES – Advanced Encryption Standard (recommended). AES is the default encryption type for your G54.

8. Enter a security code (passphrase) for your Wi-Fi network password in the **Security Key** field.

You can use the default **WI-FI SECURITY KEY** listed on the product label or create your own personal network password.



Note: Remember to use a unique combination of letters, numbers, and special characters to create a more secure password.

9. Select **Hide characters** checkbox to prevent your Security Key (network password) from displaying in the field.

10. Select **Start this connection automatically** so that your Wi-Fi devices will automatically connect to your Wi-Fi network when they are powered on.

11. Click **Next** to complete the Wi-Fi network setup.

The `Successfully added <Network name>` message for your new Wi-Fi network should appear.

12. Click **Close** to exit.

Testing your Wi-Fi network connectivity

Perform the following connectivity test to check your Wi-Fi network is established and you are able to connect your devices to your G54 home Wi-Fi network.

1. Check if your Wi-Fi devices are successfully connected to your G54 Wi-Fi network and then disconnect the Ethernet cable from your computer and your G54.
2. Check that the LED on your G54 front panel is lit SOLID Green in DOCSIS 3.0 mode and SOLID Blue in DOCSIS 3.1 mode.
3. Open a web browser on your device (computer) and Type a valid URL (such as www.surfboard.com) in the address bar and then press **Enter**.

If the website fails to open, then contact your service provider or call ARRIS Technical Support at **1-877-466-8646** for assistance.

Using the Wi-Fi Cable Modem Web Manager

You can view, monitor, and modify the network configuration settings of your G54 using the SBC app and the WEB GUI option. We recommend you to use the SBC app to modify the network settings. For more information, refer to the SURFboard Central Mobile App for Wi-Fi Cable Modems User Guide.

To configure the network settings using the WEB GUI option, see [Protecting and monitoring your Wi-Fi network](#) (page 40).

To ensure that your Wi-Fi home network is secure, we recommend that you follow the following best practices for creating your login password:

- Always create a secure password or pass phrase that is not easily guessed.
- Use phrases instead of names so that it may be easier for you to remember.
- Use a combination of upper and lowercase letters, numbers, and symbols.

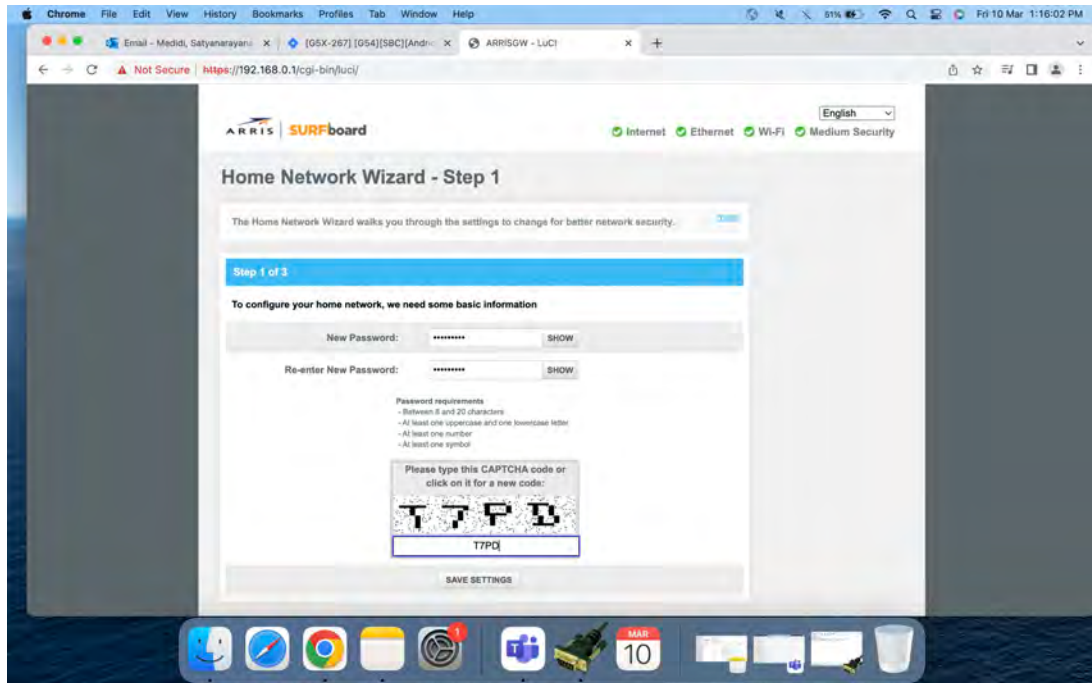
Starting your G54 Web Manager (first-time login)



Note: To ensure the safety of your network, we recommend you to set up your login password the first time you log on to your G54 Web Manager, the Gateway Home Network Wizard opens for you to set up your login password. Your G54 Home Network wizard walks you through a set of instructions.

1. Open a web browser (such as Internet Explorer, Google Chrome, Firefox, or Safari) on your client device (for example, a computer or a laptop) that is connected to your G54.
2. Type the default LAN IP address, 192.168.0.1, in the Address bar and then press Enter to log onto your G54.

The Home Network Wizard Step-1 screen displays.



3. Enter your password in the **New Password** field.



Note:

The password is case-sensitive and must include each of the following:

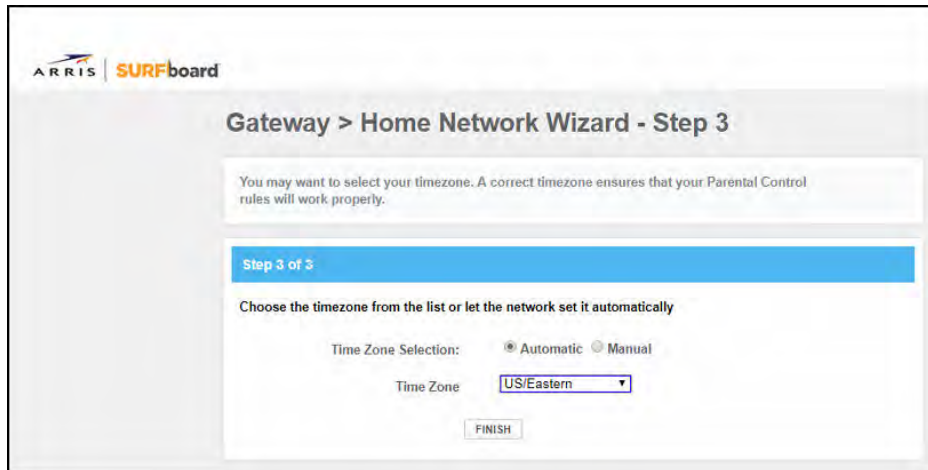
- Minimum of eight characters
- At least one uppercase alphabetic character: A through Z
- At least one number: 0 to 9
- One of the following special characters:
~ ! @ # \$ % ^ * () - _ = + [] { } | ; : , . / ?

4. Enter your password again in the **Re-enter New Password** field.
5. Click **SHOW** to confirm that both passwords match.

Please note that this password is required to log in to the Web Manager. Write it down and place it in a secure place for future reference and availability, if needed.

6. Enter the CAPTCHA code in the CAPTCHA entry box and then click **SAVE SETTINGS** .
The Home Network Wizard – Step 2 screen displays.

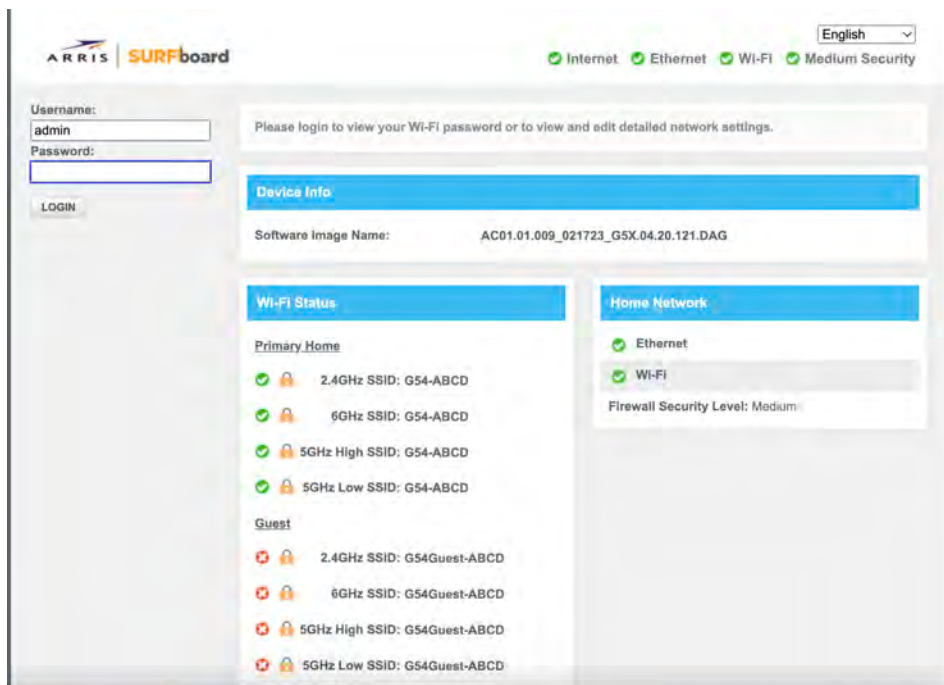
7. In the **Setting Selection** field, click **Single SSID** or **Per Band** based on your requirement.
8. You may choose to retain the current default Wi-Fi network name or enter a new name in the **Wi-Fi Network Name** field.
The Wi-Fi network name can consist of any combination of up to 32 alphanumeric characters.
9. Select one of the following Wi-Fi network security options for your G54 Wi-Fi home network from the **Encryption Method** drop-down list:
 - **Open** (risky): Network security is not set, and your Wi-Fi network is not secure. This network security option allows unauthorized access to your Wi-Fi network without a Wi-Fi Security Key (network password).
 - **WPA2-PSK (AES)**: Wi-Fi Protected Access version 2 with Pre-Shared Key.
 - **WPAWPA2-PSK (TKIP/AES) (Recommended)**: Wi-Fi Protected Access version 2 with Pre-Shared Key (most compatible).
 - **WPA3 Personal (AES)**: Wi-Fi Protected Access version 3 with Pre-Shared Key.
 - **WPA 2/WPA3 Mixed Personal (AES) (Recommended)**: Combination Wi-Fi Protected Access version 2 and Wi-Fi Protected Access version 3 and provides additional network security.
10. Keep or change the current default Wi-Fi network password in the **Network Password** field.
11. Click **NEXT** to continue.



12. Select **Automatic** or **Manual** to set up your time zone.

- Select **Automatic** to allow the network to automatically set your time zone.
- Select **Manual** to choose your time zone from the **Time Zone** drop-down list.

13. Click **FINISH** and the Web Manager Login screen appears.



14. Type your new custom password in the **Password** field and then click **LOGIN** to access your G54 Web Manager.

Starting your G54 Web Manager

When you start your G54 Web Manager, you should be able to see the summary page of your network and connected devices.

To start your G54 Web Manager:

1. Open a web browser (such as Internet Explorer, Google Chrome, Firefox, or Safari) on the computer or laptop connected to your G54.
2. Type the default LAN IP address, 192.168.0.1, in the Address bar and then press **Enter** to log into your G54 Web Manager Login screen.

ARRIS SURFboard

English

Internet Ethernet Wi-Fi Medium Security

Username: admin

Password:

LOGIN

Notice: In case you have setup this device through the SURFboard Central App, the login password can be located in the "Access Web Interface" option under the hamburger menu of the app.

Please login to view your Wi-Fi password or to view and edit detailed network settings.

Device Info

Software Image Name: AC01.01.012_041423_G5X.04.20.121

Wi-Fi Status

Primary Home

SSID: G54-1665

Guest

SSID: G54Guest-1665

Home Network

Ethernet

Wi-Fi

Firewall Security Medium Level:

3. Type **admin** (case-sensitive) in the **Username** field.
4. Type your new custom password in the **Password** field.
5. Click **LOGIN** to open the Web Manager page.

The Product Registration screen appears.

Product Registration

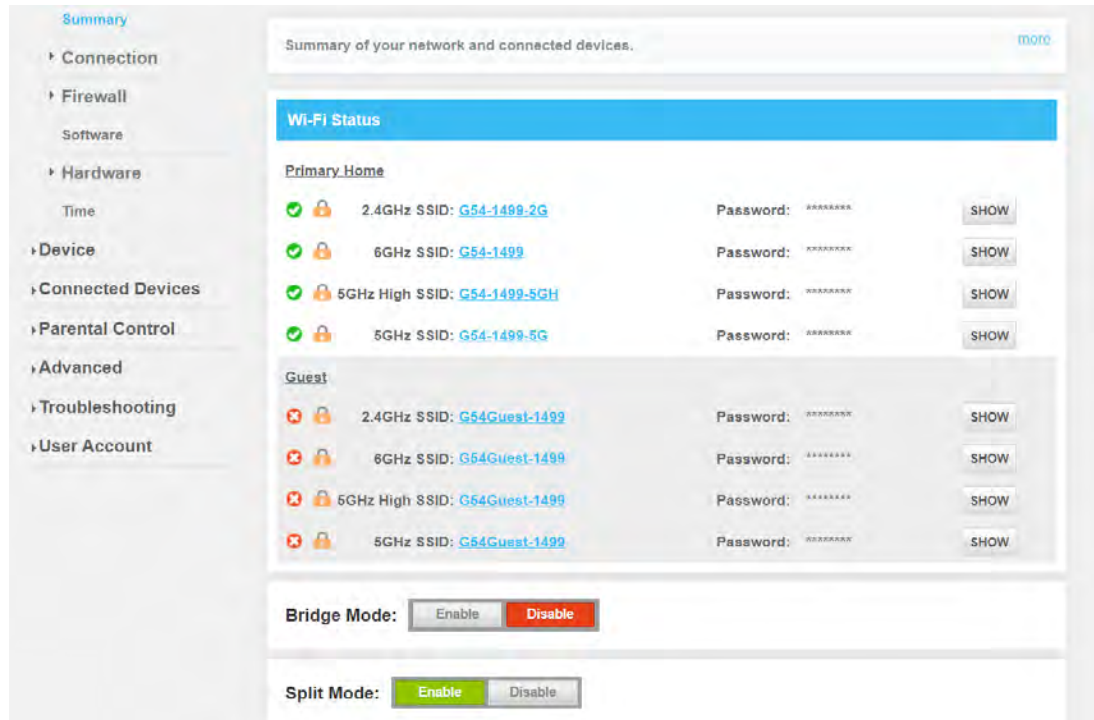
Thank you for purchasing an ARRIS SURFboard® product. Please take a few minutes to register your product to take advantage of the following benefits:

- Enhanced product support
- Product warranty registration
- Promotional offers from ARRIS

Register Ask me later Stop asking

The Product Registration screen

6. Click **Register**, **Ask me later**, or **Stop asking** to proceed.
- Your G54 Summary page appears.



- To disable Wi-Fi network, click **Enable** under the **Bridge Mode** field.

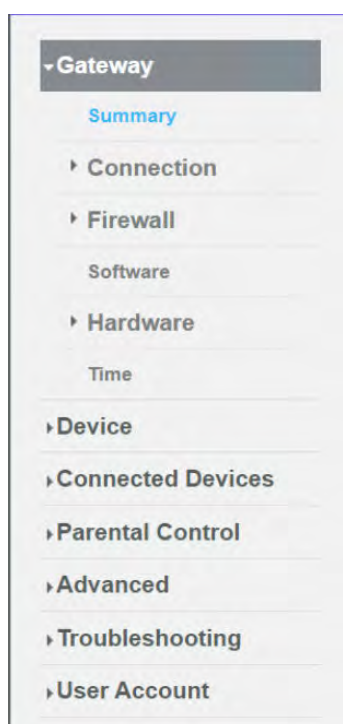


CAUTION: If you enable Bridge mode then you shall not be able to access the WEB GUI portal. To disable the bridge mode and allowing access to WEB GUI portal, you need to factory reset your G54. For more information on how to reset your G54, see [Rebooting your G54 using the Reset button](#) (page 65)

- To split the SSID and broadcast for each network (2.4GHz, 5GHz, and 6GHz) individually, click **Enable** under the **Split Mode** field.

Web Manager menu links

The G54 Web Manager main menu links and its related sub menu options are displayed along the left side of your G54 Web Manager screen. Click the main menu link to expand the list of sub menu options.



The Web Manager menu links

Table 4: G54 Web Manager menu links

Menu link	Function
Gateway	Displays a summary of your network connections and a list of the connected devices on your home network.
Summary	Displays the Wi-Fi status for your home network and network-connected devices.
Connection	Displays the network connection and status information for the G54 network, Local IP network, and your private Wi-Fi network.
Firewall	Configures the G54 firewall settings to protect your home network from possible attacks from hackers or viruses.
Software	Displays information related to the G54 software version.
Hardware	Displays status information for the G54 hardware, such as the battery status, Ethernet connection(s), and Wi-Fi connections.
Time	Allows you to set the time on your G54 based on your selected time zone.
Device	Allows you to view details about the flash operations.
Connected Devices	Provides general information for the connected devices on your home network.
Parental Control	Allows you to manage and limit the usage activity for specific users and client devices connected to your home network.

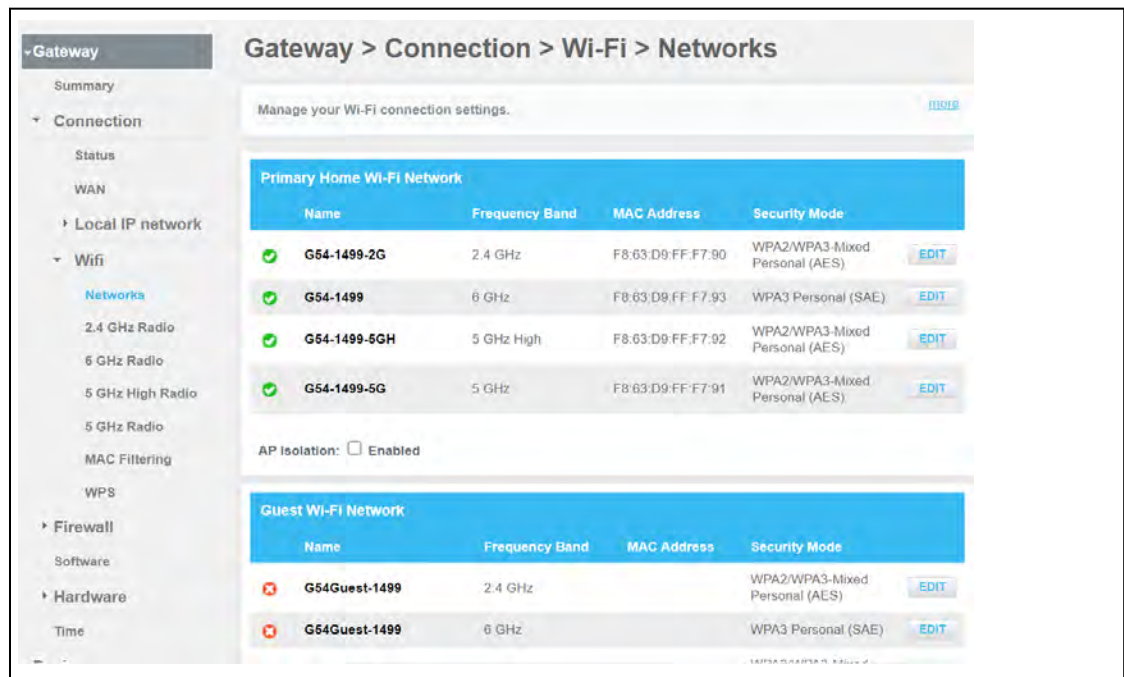
Menu link	Function
Advanced	Allows you to set up Port Forwarding, Port Triggering, Remote Management for troubleshooting or maintenance purposes, the DMZ Host, and manage the UPnP network on your home network.
Troubleshooting	Provides several options to help you resolve certain problems that may occur with your G54.

Configuring your Wi-Fi network

You have the option to either use the default network settings which are unique to your G54 for security purposes or you can configure different network settings. It also supports a secure method for setting up multiple Wi-Fi networks.

Setting up your Wi-Fi network

1. Open a web browser and log on to open your G54 Web Manager screen.
For information about starting your G54 Web Manager, see [Starting your G54 Web Manager](#) (page 28).
2. Click the menu links **Gateway > Connection > Wi-Fi > Networks**.
The Gateway Connection Wi-Fi screen appears.



3. To set up the Network Security mode on your primary Home Wi-Fi network, on the Primary Home Wi-Fi Network tab, click **EDIT** respective to the Frequency Band.
The Wi-Fi Networks Edit screen appears.

4. You can choose to retain the default network name SSID (Service Set Identifier) for your Wi-Fi home network. If you prefer to choose a new network name then in the **Network Name (SSID)** field, enter a new network name of your choice.



Note: The Wi-Fi network name cannot be the same name as any other SSID on your home network. You can use any combination of lowercase and uppercase letters, numbers, and/or special characters (symbols) up to a maximum of 32 characters.

5. Select one of the following Wi-Fi network security options for your G54 from the **Security Mode** drop-down list:
 - **WPA 2/WPA3 Mixed Personal (AES) (Recommended):** Combination Wi-Fi Protected Access version 2 and Wi-Fi Protected Access version 3 and provides additional network security.
 - **None** (not secure and not recommended): This network security option does not provide any level of network security for your Wi-Fi network. It allows outside users to connect to your Wi-Fi network without having to use a Wi-Fi Security Key (network password).
 - **WPA3 Personal (SAE):** Wi-Fi Protected Access version 3 with Pre-Shared Key.
 - **WPA2-PSK (AES) security mode:** It is an advanced encryption mechanism which safeguard network access and data transfer.
6. Enter your Wi-Fi network password in the **Network Password** field.



Note: Keep in mind that network passwords are case-sensitive. You can use any combination of uppercase and lowercase letters, special characters, and numbers. Spaces are not acceptable.

7. Select the **Show Network Password** checkbox to view and confirm your network password.
8. If you prefer to display your SSID as an available Wi-Fi network to other users, select the **Broadcast Network Name (SSID) Enabled** checkbox.
9. To enable multi-media functionality, select the **Enable WMM** checkbox.

Enabling WMM can help control latency and jitter when transmitting multi-media content over a Wi-Fi connection. This quality of service mechanism uses four access categories:

 - Voice
 - Video
 - Best effort
 - Background

WMM ensures that applications with low tolerance for latency and jitter are treated with higher priority than less sensitive data applications. WMM sets different wait times for the above four categories to provide priority network access for applications that are less tolerant of packet delays.
10. Enter the CAPTCHA code located in the **Type CAPTCHA Here** entry box.
11. Click **SAVE** to save the settings.
12. To set up the Network Security mode on your Guest Wi-Fi network, on the Guest Wi-Fi Network tab, click **EDIT** and then perform steps 4 through 11.
13. If you do not want your devices connected to this network to communicate with each other, then select the **AP Isolation** checkbox.
14. Under the **Network Options** tab, you can choose to enable or disable the **Network Priorities** checkbox and the **Band Steering** checkbox.
15. Click **SAVE NETWORK SETTINGS**.

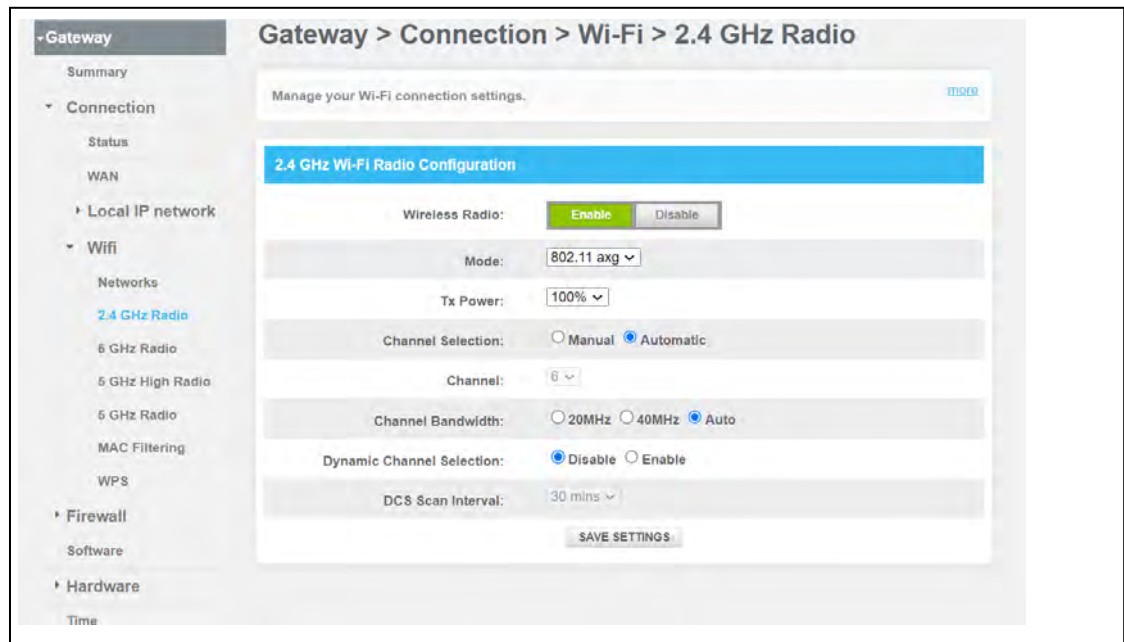
Changing the Wi-Fi Radio configuration settings

You can manage your Wi-Fi connection settings such mode selection, channel selection, dynamic channel selection, and setting the DCS scan interval.

To change the Wi-Fi Radio configuration settings for 2.4GHz, 5GHz and 6GHz

1. Open a web browser and log on to open your G54 Web Manager page.

For more information, see [Starting your G54 Web Manager](#) (page 28).
2. From any of the G54 Web Manager screen, click the **Gateway** menu link and then click the **Connection** submenu options link.
3. Click **Wi-Fi > 2.5GHz Radio** on the left pane.



Wi-Fi Network 2.4GHz Radio Connection screen

4. To turn on the 2.4GHz Wi-Fi frequency range for your Wi-Fi home network, click the **2.4GHz Radio** submenu on the left pane and then click the **Enable** button.
5. To specify the Wi-Fi standards that your G54 should use to communicate with your client devices, choose from the **Mode** drop-down list.
6. Select the Tx (Transmit) Power level of the Wi-Fi radio from the **Tx Power** drop-down list.
7. Select a channel number (Auto, 1 through 11) from the **Channel** drop-down list to determine how the channel in your Wi-Fi network is selected.



Note: In Automatic mode, which is the default selection, your G54 shall select the channel with the least amount of Wi-Fi interference. But in Manual mode, you can specify the channel to be used.



Note: For 2.4 GHz Wi-Fi networks, it is recommended to use Channel 1, 6, or 11, if it is not listed as the Current Channel. In the Wi-Fi spectrum, there are multiple channels that overlap and thus degrade Wi-Fi network performance. Channels 1, 6, and 11 are used for better network performance and stability because they do not overlap.

8. Set the channel bandwidth for your G54 modem from the **Channel Bandwidth** box.
9. Click **Enable** under the **Dynamic Channel Selection** option if you want your G54 modem to periodically scan other Wi-Fi channels and switch to a channel with least amount of interference.



Note: During scanning of the Wi-Fi channels, your Wi-Fi clients may get temporarily disconnected. This option is available if you have set Channel selection to **Automatic**.

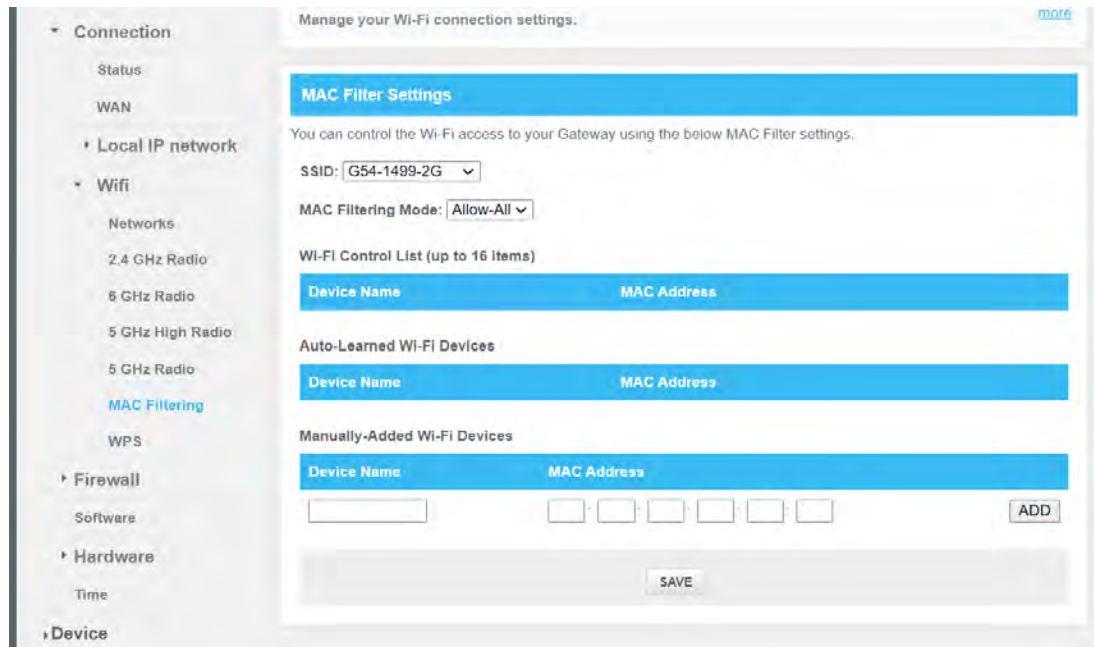
10. To determine the time period between Dynamic Channel Selection scans, set the DCS scan interval from the **DCS Scan Interval** drop-down list.
11. Click **SAVE SETTINGS**.
12. You can change the Wi-Fi connection settings for 5GHz Radio, 5GHz High Radio, and 6GHz Radio as well.
 - 5GHz Radio: and then perform
To change the 5GHz Radio Configuration settings:
 - a. Click **Wi-Fi > 5GHz Radio** on the left pane of the Wi-Fi Connection screen.
 - b. Perform previous steps 5 through 11.
 - c. To enable 5GHz supported devices on DFS channels, select **Enable** under the **DFS** option. During this time your system shall scan for DFS channels and disconnects your 5GHz clients that do not support DFS functionality. These clients shall reconnect to your Wi-Fi network using 2.4GHz.
 - d. Click **SAVE SETTINGS**.**To change the 5GHz High Radio Configuration settings:**
 - a. Click **Wi-Fi > 5GHz High Radio** on the left pane of the Wi-Fi Connection screen.
 - b. Perform previous steps 5 through 11.
 - c. To enable 5GHz High supported devices on DFS channels, select **Enable** under the **DFS** option. During this time your system shall scan for DFS channels and disconnects your 5GHz clients that do not support DFS functionality. These clients shall reconnect to your Wi-Fi network ranging between 2.4GHz to 160GHz.
 - d. MU-MIMO: Enable or disable
 - e. Click **SAVE SETTINGS**.**To change the 6GHz Radio Configuration settings:**
 - a. Click **Wi-Fi > 6GHz Radio** on the left pane of the Wi-Fi Connection screen.
 - b. Perform previous steps 5 through 11.
 - c. **MU-MIMO**: You can choose to enable or disable the MU-MIMO option.
 - d. **PSC**: You can choose to enable or disable the PSC option.
 - e. Click **SAVE SETTINGS**.

Changing MAC filtering settings

You can control the Wi-Fi access to your G54 using the MAC filtering settings. These settings are specific to each Network name (SSID).

To change the MAC filtering mode:

1. Open a web browser and log on to open the G54 Web Manager.
 For more information, see [Starting your G54 Web Manager](#) (page 28).
2. Click the **Gateway** menu link and then click the **Connection** submenu options link.
3. Click **Wi-Fi > MAC Filtering** to open the MAC Filtering settings screen.



MAC Filtering settings screen

4. Select the SSID to which you prefer to apply the MAC filtering mode.
5. From the **MAC Filtering Mode** drop-down list, select one of the following:
 - **Allow-All:** No Mac filtering rules are applied. All wireless clients can connect to your G54.
 - **Allow:** On the devices in the "Wi-Fi Control list" are allowed to connect to your G54.
 - **Deny:** Wireless devices in the "Wi-Fi Control list" are not allowed to connect to your G54.

Under the **Wi-Fi Control List**, you can view all the wireless devices (by Network name and MAC address) that are added manually or auto-learned.

Under the **Auto-Learned Wi-Fi Devices** tab, it displays all the wireless devices that are auto-learned by your G54.

6. Under the **Manually-Added Wi-Fi Devices** tab, type a unique name and MAC address for the wireless device that you want to manually add and then click **ADD**.
7. Click **SAVE**.

Setting up WPS on your G54 Wi-Fi network

You can set up the Wi-Fi Protected Setup (WPS) PIN option on your G54 to connect WPS-enabled devices on your Wi-Fi home network.

1. Open a web browser and log on to open the G54 Web Manager.
For more information, see [Starting your G54 Web Manager](#) (page 28).
2. Click the **Gateway** menu link and then click the **Connection** submenu options link.
3. Click **Wi-Fi > WPS** to open the Gateway Connection Wi-Fi screen.

Add Wi-Fi Client (WPS)

Wi-Fi Protected Setup (WPS): **Enable** **Disable**

AP PIN: 16618442

WPS PIN Method: **Enable** **Disable**

☒ **Push Button (recommended)**

Click PAIR button below to connect your Wireless client to your network.

☐ **PIN Method**

If your Wireless client supports WPS (PIN Type), enter the PIN number here

Enter Wireless Client's PIN:

Press PAIR button to begin pairing

PAIR

4. Do one of the following:
 - Click the Wi-Fi Protected Setup (WPS) **Enable** button to turn ON WPS Wi-Fi networking on your home network using the provided AP PIN number.
 - Click the Wi-Fi Protected Setup (WPS) **Disable** button to turn OFF WPS Wi-Fi networking on your home network.
5. Do one of the following:
 - Click the WPS Pin Method **Enable** button to turn ON WPS Wi-Fi networking.
 - Click the WPS Pin Method **Disable** button to turn OFF WPS Pin connections.
6. To proceed with the PIN method, click the **PIN Method** option and then Enter the WPS Pin number listed in the **AP PIN** field when you are prompted on your WPS device screen.
7. Click **PAIR** to connect your WPS-enabled device.
8. Repeat steps 6 through 8 for each additional WPS-enabled device that you want to connect to your Wi-Fi home network.
9. To proceed with the Push button option, click the **Push Button (recommended)** option to connect your wireless client to your network.
10. Click **PAIR** to connect your WPS-enabled device.

Protecting and monitoring your Wi-Fi network

After you have successfully connected your G54 and your Wi-Fi devices, you should configure your G54 to protect your Wi-Fi network from unwanted and unauthorized access by any Wi-Fi devices that are within range of your Wi-Fi network. Although you have configured the network security for your G54, you can use your G54 Web Manager to set the level of security and network access that you want to allow on your Wi-Fi network.

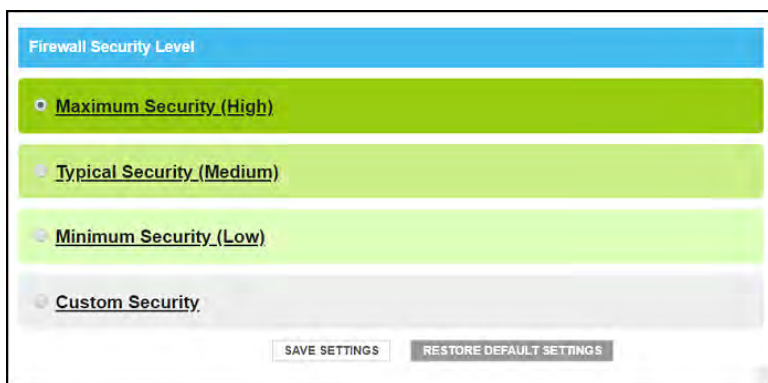
Setting up firewall protection

You can set up firewall filters and firewall alert notifications to protect your computer(s) and other connected network devices on your Wi-Fi home network. You can also block Java Applets, Cookies, ActiveX controls, popup windows, Proxies, and website access to protect the network devices on your home network from hackers, viruses, and other attacks from the Internet.

To set the firewall protection level on your Wi-Fi network:

1. From the G54 Web Manager screen, click the **Gateway** menu link.
2. Click the **Firewall** submenu link and then click [IPv4 security](#) (page 40) or [IPv6 security](#) (page 42) to display the Gateway Firewall Security Level screens.
3. Select the security level that you want to set for your G54 firewall.
4. Click **SAVE SETTINGS**.

IPv4 security



Firewall IPv4 available security levels screen

- **High:** Safest configuration, maximum security level

The screenshot shows the 'Firewall Security Level' configuration page. The 'Maximum Security (High)' option is selected and highlighted in green. Below it, the configuration details are listed: LAN-to-WAN (Allow as per below) with specific ports for HTTP/HTTPS, DNS, NTP, email, and iTunes; and WAN-to-LAN (Block all unrelated traffic and enable IDS). Other options like Typical Security (Medium), Minimum Security (Low), and Custom Security are visible but not selected. At the bottom, there are buttons for 'SAVE SETTINGS' and 'RESTORE DEFAULT SETTINGS'.

Firewall Security Level

☒ **Maximum Security (High)**

LAN-to-WAN: Allow as per below.

- HTTP and HTTPS (TCP port 80, 443)
- DNS (TCP/UDP port 53)
- NTP (TCP port 119, 123)
- email (TCP port 25, 110, 143, 465, 587, 993, 995)
- iTunes (TCP port 3689)

WAN-to-LAN: Block all unrelated traffic and enable IDS.

☐ Typical Security (Medium)

☐ Minimum Security (Low)

☐ Custom Security

SAVE SETTINGS RESTORE DEFAULT SETTINGS

Firewall IPv4 high security level screen

- **Medium:** Safer configuration, medium security level

The screenshot shows the 'Firewall Security Level' configuration page. The 'Typical Security (Medium)' option is selected and highlighted in green. Below it, the configuration details are listed: LAN-to-WAN (Allow all); WAN-to-LAN (Block as per below and enable IDS) with specific ports for IDENT, ICMP, and peer-to-peer apps (Kazaa, BitTorrent, Gnutella). Other options like Maximum Security (High), Minimum Security (Low), and Custom Security are visible but not selected. At the bottom, there are buttons for 'SAVE SETTINGS' and 'RESTORE DEFAULT SETTINGS'.

Firewall Security Level

☐ Maximum Security (High)

☒ **Typical Security (Medium)**

LAN-to-WAN: Allow all.

WAN-to-LAN: Block as per below and enable IDS.

- IDENT (port 113)
- ICMP request
- Peer-to-peer apps:
 - kazaa - (TCP/UDP port 1214)
 - bittorrent - (TCP port 6881-6999)
 - gnutella - (TCP/UDP port 6346)

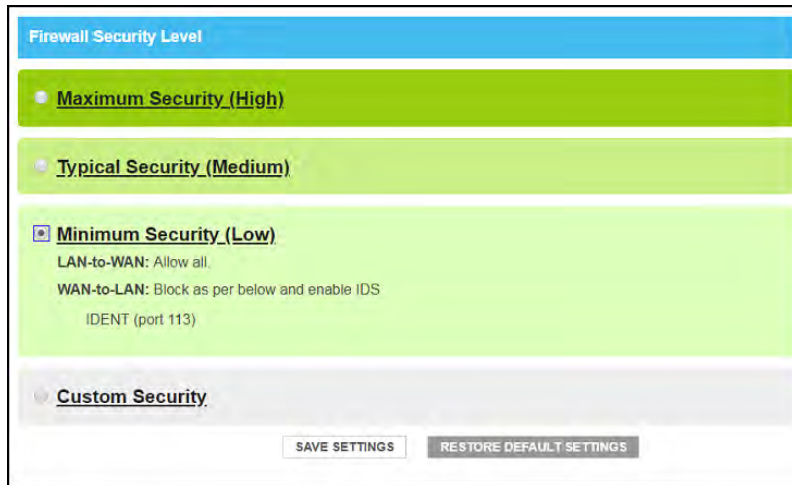
☐ Minimum Security (Low)

☐ Custom Security

SAVE SETTINGS RESTORE DEFAULT SETTINGS

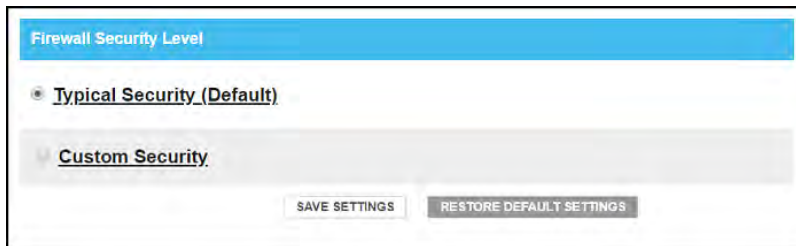
Firewall IPv4 medium security level screen

- **Low:** Common security, low security level, higher risk



Firewall IPv4 low security level screen

IPv6 security



Firewall IPv6 available security levels screen

Setting up Parental Control

You can set up the following parental controls to manage and limit the usage and activity for specific users and client devices on your home network:

- Allow or block access to specific Internet sites.
- Allow or block access to specific MAC addresses.
- Allow or block access based on specific keywords.
- Set time limitations for computer usage or Internet access.



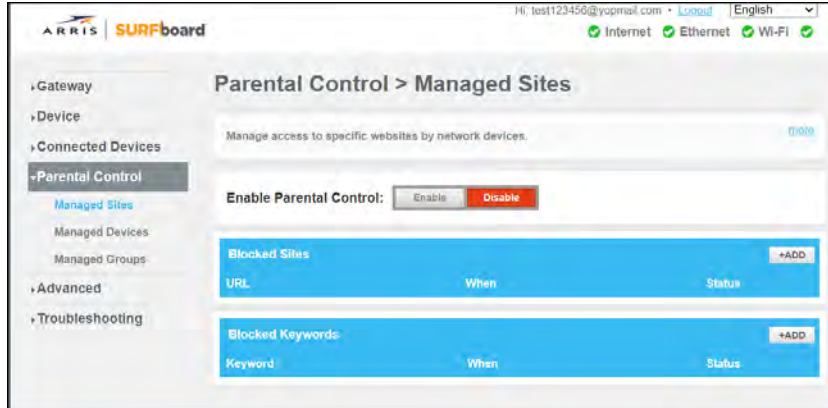
Note: Any Parental Control filters that do not include assigned ports, will apply to all ports. This also applies to MAC addresses.

You can also link each user or client device on your home network to specific rules for login, time-access, and content filtering.

► To set up Parental Control on your home network:

1. From the Web Manager screen, click the **Parental Control** menu link.
2. Click **Managed Sites** from the Parental Control submenu options list to display the Parental Control Managed Sites screen.

- Click the Managed Sites **Enable** button to turn ON website and keyword blocking. The Parental Control Managed Sites screen appears.



- Click **+ADD** button in the Blocked Sites section. The Add Site to be Blocked screen appears.

- To fully block a website, enter the website address in the URL field and then click **Yes** in the **Always Block?** field.
- Click **SAVE**.
- Repeat steps 5 and 6 for each website that you want to block.
- To block a website for specific days and times, enter the website address in the URL field and then click **No** in the **Always Block?** field.
- Select the **Start from** and **End on** times of the day in the Set Block Time section.
- Select the days of the week in the Set Blocked Days section.
- Click **SAVE**.
- To manage access by multiple devices in a group on your network, click **Manage Groups** from the submenu and then click **Enable**.
- To manage from Groups, under Managed Groups tab, you can choose to add groups.

- a. Click **+ADD GROUP**.
The Manually Add GROUP page appears.
 - b. Enter the group name in the **Group Name** field.
 - c. Enter the number of devices in the **Total Device** field that you want to group.
 - d. Select Yes or No under **Block All** option to block all the devices connected to this network.
 - e. Click **SAVE** to save the changes.
- 14.If you want to block sites, then under **Blocked Sites** tab, click **+ADD** and specify the following details: such as Group name, URL that you prefer to block.
- **Group**: Select the group under which you want to block the sites.
 - **URL**: Specify the URL that you want to block.
 - **Date**: Select the checkbox specific to the days on which you want the site to be blocked.
 - **Time**: Specify the time during which the site has to be blocked.
 - **Enable**: Select **Enable** to block the site.
- 15.If you want to block keywords, then under **Blocked Keywords** tab, click **+ADD** and specify the following details: such as Group name, Keyword that you prefer to block.
- **Group**: Select the group under which you want to block the sites.
 - **Keyword**: Specify the keyword that you want to block.
 - **Date**: Select the checkbox specific to the days on which you want the site to be blocked.
 - **Time**: Specify the time during which the site has to be blocked.
 - **Enable**: Select **Enable** to block the keywords.
- 16.If you want to restrict by time, then under **Restricted Times** tab, click **+ADD** and specify the following details: such as Group name and time.
- **Group**: Select the group under which you want to block the sites.
 - **Date**: Select the checkbox specific to the days on which you want the site to be blocked.
 - **Time**: Specify the time during which the site has to be blocked.
 - **Enable**: Select **Enable** to block the keywords.
- 17.Click **+ADD** button in the Blocked Services section to add a service to be blocked. The Add Blocked Service screen appears.

The screenshot shows the 'Add Blocked Service' configuration page. On the left is a sidebar with navigation links: Gateway, Connected Devices, Parental Control (selected), Managed Sites, Managed Services, Managed Devices, Reports, Advanced, Troubleshooting, and User Account. The main content area is titled 'Parental Control > Managed Services > Add Blocked Service'. It features a blue header 'Add Service to be Blocked'. Below this, there are fields for 'User Defined Service' (a text input), 'Protocol' (a dropdown menu currently showing 'TCP'), 'Start Port' (a text input), 'End Port' (a text input), and 'Always Block?' (radio buttons for 'No' and 'Yes', with 'Yes' selected). There are also sections for 'Set Blocked Time' with 'Start from' and 'End on' time pickers, and 'Set Blocked Days' with a 'Select all' button and checkboxes for each day of the week (Monday through Sunday). At the bottom are 'SAVE' and 'CANCEL' buttons.

18. Type the service that you want to block in the **User Defined Service** field.
19. Select **UDP**, **TCP**, or **TCP/UDP** for the port filter type from the **Protocol** drop-down list.
20. Enter the range of port numbers for the port filter range in the **Start Port** and **End Port** fields.
21. To fully block a service, click **Yes**, in the **Always Block?** field.
22. To block a service for specific days and times, click **No**, in the **Always Block?** field and then specify the time and days in the **Set Block Time** and **Set Block Days** fields.
23. Click **SAVE** to save the changes.
24. To manage access to specific devices on your network, click **Manage Devices** from the submenu. The Managed Devices screen appears.

The screenshot shows the 'Managed Devices' configuration page. The sidebar is the same as the previous screenshot. The main content area is titled 'Parental Control > Managed Devices'. It has a subtitle 'Manage access by specific devices on your network.' with a 'TOOL' link. Below this is a blue header 'Managed Devices'. There are two toggle switches: 'Managed Devices' (set to 'Enable') and 'Access Type' (set to 'Allow All'). Below these is a section titled 'Blocked Devices' with a '+ADD BLOCKED DEVICE' button. At the bottom is a table with three columns: 'Device Name', 'MAC Address', and 'When Blocked'.

25. To manage devices, click **Enable**.
26. If you do not want to restrict your devices, click **Allow All** and then click **+ADD BLOCKED DEVICE** to add only the device you want to restrict.
27. If you want to restrict your devices, click **Block All** and then click **+ADD ALLOWED DEVICE** to add only the device you do not want to restrict.

- 28.To manually block a device, type the **Device name** and the **MAC address** fields.
- 29.To fully block a device, click **Yes**, in the **Always Block?** field.
- 30.To block a device for specific days and times, click **No**, in the **Always Block?** field and then specify the time and days in the **Set Block Time** and **Set Block Days** fields.
- 31.Click **SAVE** to save the changes.
- 32.To generate, download and print reports based on your parental controls, click **Reports** from the sub menu. The Reports screen appears.

- 33.Select the report type from the **Report Types** drop-down list and the time frame from the **Time Frame** drop-down list.
- 34.Click **GENERATE REPORTS**.

Setting up Port Forwarding

Your G54 firewall may be set up to block all device or application connections from the Internet to the devices on your Wi-Fi home network. Port Forwarding allows you to open specific ports or IP addresses on the Internet behind the firewall on your home or small business network. It also allows for remote access to your wireless computer or other client devices. The inbound traffic from the Internet, such as specific websites or online gaming applications, is forwarded to the designated open ports that you set up.



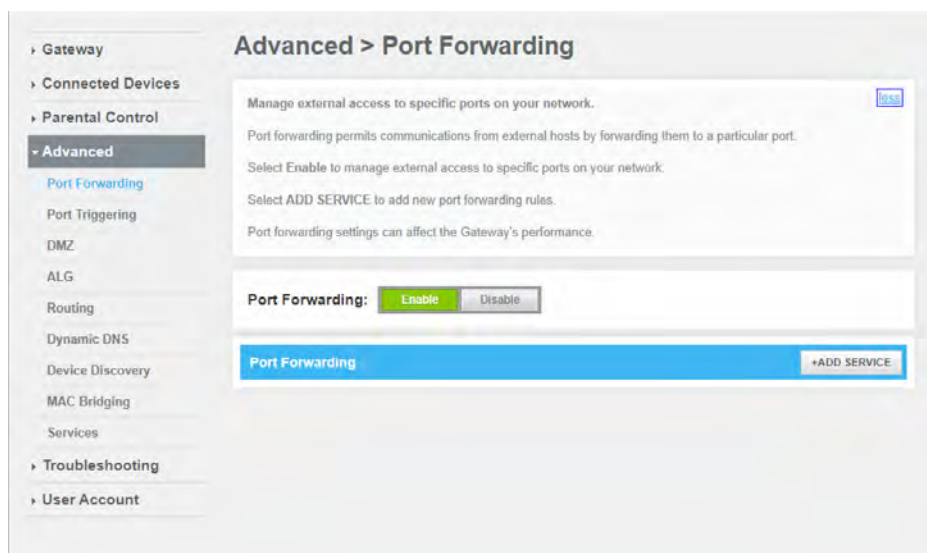
Note:

ARRIS recommends that you manually configure the TCP/IP settings listed below on the client device you are setting up for remote access. Otherwise, remote access to your client device will not be available on the Internet.

- IP address
- Subnet mask
- Default gateway
- DNS address (at least one)

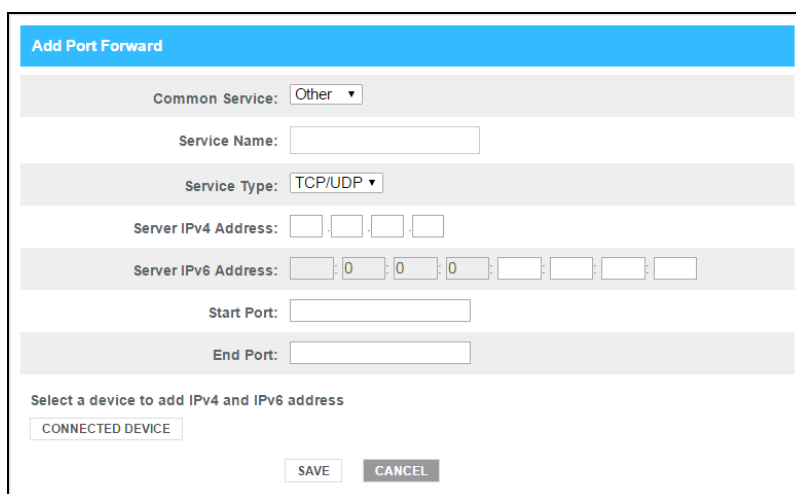
To set up Port Forwarding:

1. From the G54 Web Manager screen, click the **Advanced** menu link.
2. Click **Port Forwarding** from the Advanced submenu options list to display the Port Forwarding Configuration screen.



Advanced Port Forwarding screen

3. Click the Port Forwarding **Enable** button.
4. Click the **+ADD SERVICE** button to open the Add Port Forward screen.



The 'Add Port Forward' screen features a blue header bar. Below it, the 'Common Service' dropdown is set to 'Other'. The 'Service Name' field is empty. The 'Service Type' dropdown is set to 'TCP/UDP'. The 'Server IPv4 Address' field consists of four empty boxes. The 'Server IPv6 Address' field consists of eight empty boxes, with the first two containing '0'. The 'Start Port' and 'End Port' fields are empty. At the bottom, there is a 'Select a device to add IPv4 and IPv6 address' section with a 'CONNECTED DEVICE' button. 'SAVE' and 'CANCEL' buttons are at the very bottom.

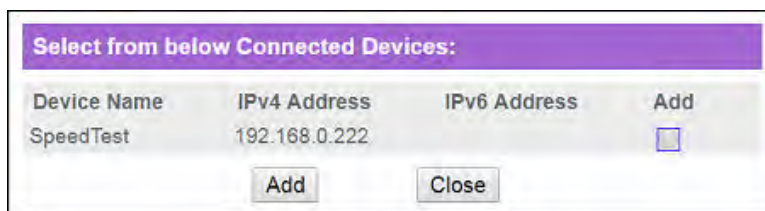
Add Port Forward screen

5. Select **FTP**, **AIM**, **HTTP**, **PPTP**, **HTTPs**, **Telnet**, **SSH**, or **Other** for the Internet data transfer protocol from the **Common Service** drop-down list.



Note: When **Other** is selected, the **Service Name** field will display. Enter a name for the service type you will be using.

6. Select **TCP/UDP**, **TCP**, or **UDP** for the Internet data transmission protocol from the **Service Type** drop-down list.
7. Do one of the following:
 - Enter the IP address of your local computer that you are setting up for port forwarding in the **Server IPv4 Address** field.
 - Enter the IP address for your local computer that you are setting up for port forwarding in the **Server IPv6 Address** field.
8. Enter the starting port number of the website or online application in the **Start Port** field.
9. Enter the ending port number of the website or online application in the **End Port** field.
10. Click **CONNECTED DEVICE** button to display the list of connected devices on your Wi-Fi home network.



The 'Select from below Connected Devices' screen has a purple header bar. Below it is a table with four columns: 'Device Name', 'IPv4 Address', 'IPv6 Address', and 'Add'. The first row shows 'SpeedTest' with IPv4 address '192.168.0.222' and an empty 'Add' checkbox. At the bottom are 'Add' and 'Close' buttons.

Device Name	IPv4 Address	IPv6 Address	Add
SpeedTest	192.168.0.222		☐

Connected Devices screen

11. Select the **Add** selection box for the device or website you want to connect to.
12. Click **Add** to exit.
13. Click **SAVE**.

Setting up Port Triggers

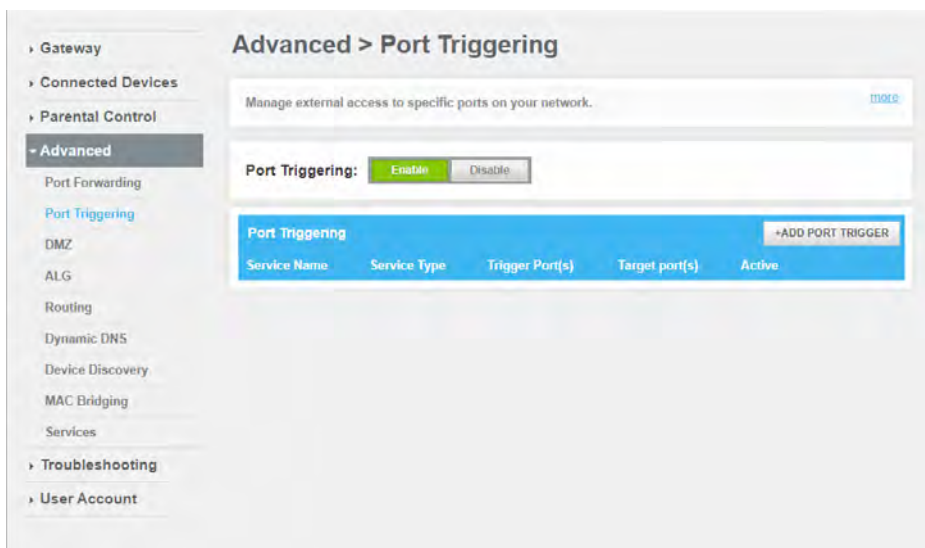
You can use Port Triggers to set up your G54 to monitor outgoing traffic on specific ports on your home network. Port Triggering can be useful for some applications such as video conferencing, online chatting, and online gaming that may require specific port numbers with bi-directional traffic to function properly.



Note: If your G54 firewall is enabled and custom port triggers are set up, then you must configure the firewall to allow traffic through those custom ports. For more information see [Setting up firewall protection](#) (page 40).

To configure Port Triggers:

1. From the G54 Web Manager screen, click the **Advanced** menu link.
2. Click **Port Triggering** from the Advanced submenu options list to display the Port Triggering Configuration screen.



Advanced Port Triggering screen

3. Click the Port Triggering **Enable** button.

Advanced Add Port Trigger screen

4. Click the **+ADD PORT TRIGGER** button to open the Add Port Trigger screen.
5. Enter a name or description for the Port Trigger in the **Service Name** field.
6. Select **TCP/UDP**, **TCP**, or **UDP** from the **Service Type** drop-down list.
7. Enter the starting port number in the **Trigger Port From** field.
8. Enter the ending port number in the **Trigger Port To** field.
9. Enter the starting port number in the **Target Port From** field.
10. Enter the ending port number in the **Target Port To** field.
11. Click **ADD** to create the port trigger.
12. Repeat steps 4 through 11 to create additional port triggers.

Advanced Add Port Trigger screen

Setting up the DMZ host



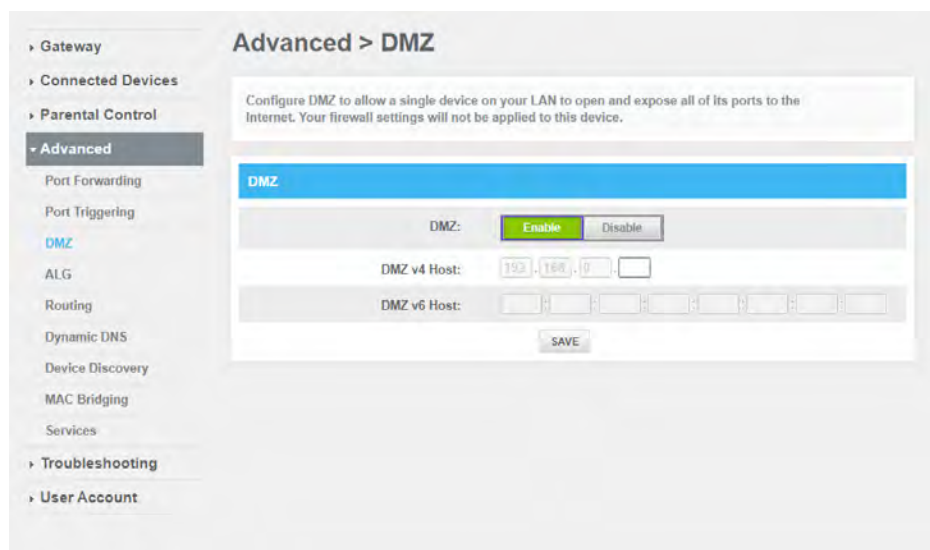
Warning: The gaming DMZ host is not protected by the G54 firewall. It is exposed to the Internet which makes it vulnerable to attacks or hacking from any client device

(e.g., computer or laptop) on the Internet. Consider carefully before configuring a device to be in the DMZ.

You can configure one client device on your home network to be the DMZ Host. That client device will operate outside of the G54 firewall and allow remote access from the Internet to your client device, gaming device, or other IP-enabled device. The DMZ Host feature will only allow outside users to have direct access to the designated DMZ Host device and not your home network.

To create the DMZ host:

1. From the G54 Web Manager screen, click the **Advanced** menu link.
2. Click **DMZ** to display the Advanced DMZ screen.



3. Click the **DMZ Enable** button to set up the DMZ Host on your home network.
4. Enter the last one to three digits (from 2 to 254) of the IP address of the computer or gaming device that you are setting up as the DMZ host
5. Click **SAVE** when you are finished.



Note: To disable the DMZ Host, click the **DMZ Disable** button and then click **SAVE**.



Note: Remember to reset the IP address back to **0** (zero) to close all the ports when you are finished with the needed application. If you do not reset the IP address, that computer will be exposed to the public Internet.

Setting up the ALG

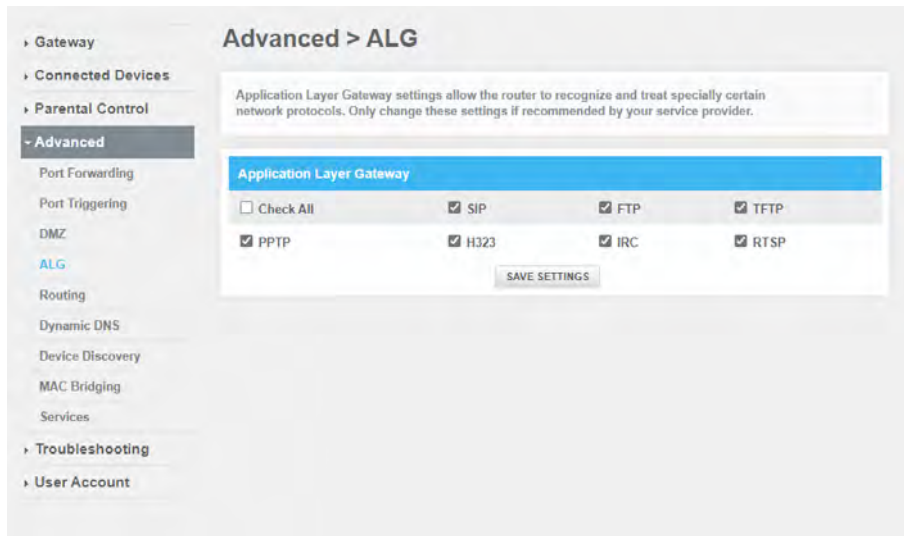
Application Layer Gateway (ALG) allows your router to recognize and treats certain network protocols.



Note: Please change these settings if recommended by your service provider.

To set up the ALG:

1. From the G54 Web Manager screen, click the **Advanced** menu link.
2. Click **ALG** to display the ALG screen.



3. Click the required check boxes and then click **SAVE SETTINGS**.

Restoring the default configuration settings using your G54 Web Manager



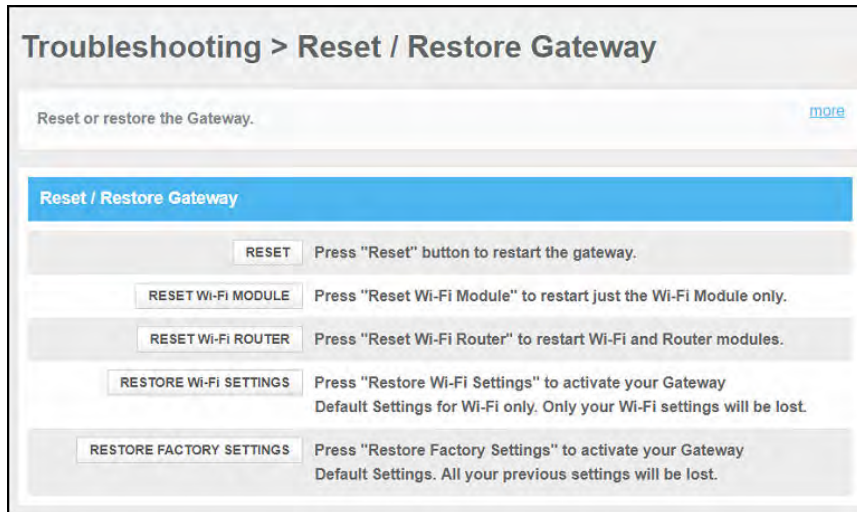
Warning: This action will delete your current G54 configuration settings and allow you to restore the default (original) G54 configuration.



Note: After the configuration settings are restored, the G54 automatically reboots and you will have to log in using the default username (**admin**) and your current admin password.

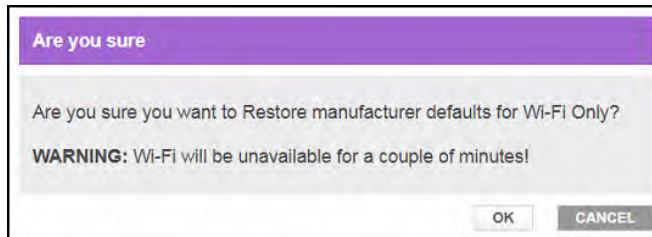
To open the Restart/Restore Gateway screen:

1. From the Web Manager screen, click the **Troubleshooting** menu link.
2. Click **Restart/Restore** from the Troubleshooting submenu links to display the Troubleshooting **Restart/Restore Gateway** screen.



Restore settings screen

3. Click **RESTORE Wi-Fi SETTINGS** to reset your G54 Wi-Fi settings.



Restore settings screen

4. Click **OK** to restore the Wi-Fi factory defaults.

The `Operation in Progress` for restarting the Wi-Fi radios message displays.

Exchanging the routing information

The RIP protocol is used to exchange the routing information between the gateway and the headend.

To enable routing information:

1. From the Web Manager screen, click the **Advanced** menu link.
2. Click **Routing** to display the Routing screen.

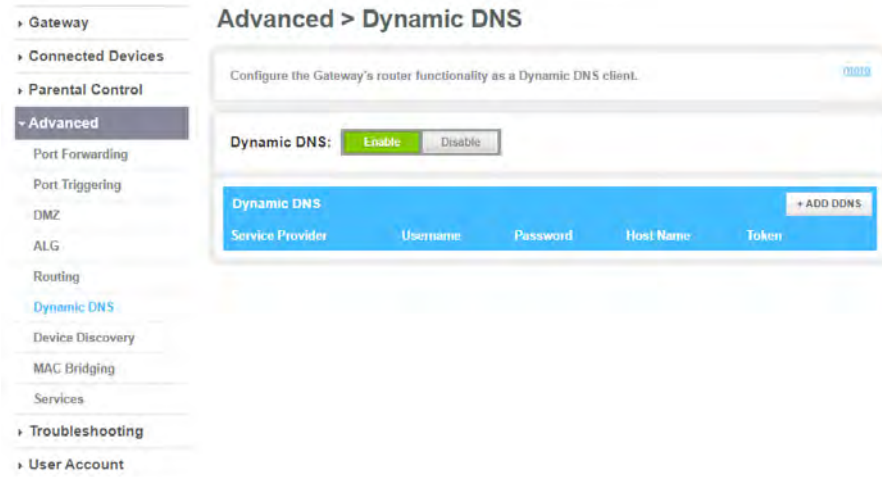
3. Click **Enable** button to set up the routing information.
4. Specify the details for the RIP (Routing Information Protocol) and Routed Subnet Configuration.
5. Click **SAVE** to save the changes.

Setting up Dynamic DNS client

You can configure your Gateway's router functionality as a Dynamic DNS client.

To create as DNS client:

1. From the G54 Web Manager screen, click the **Advanced** menu link.
2. Click **Dynamic DNS** to display the Dynamic DNS client screen.



3. Click the **Enable** button to configure your Gateway's router functionality as DNS client.
4. Click **+ADD DDNS** to configure new DDNS.
5. Click **SAVE** to save the changes.



Note: To disable configuring the DNS client, click the **Disable** button and then click **SAVE**.

Managing the UPnP network

The UPnP enabled gateway discovers all UPnP devices such as printers and computers. Using UPnP, the ports are automatically open for appropriate services and applications.

1. From the G54 Web Manager screen, click the **Advanced** menu link.
2. Click **Device Discovery** to manage UPnP screen.



3. Click the **Enable** button for the managing UPnP.

4. Enter the time in the **Advertisement Period** field to allow your gateway to advertise the UPnP information.
5. Enter the number of steps each UPnP advertisement is allowed to propagate before disappearing in the **Time To Live** field.
6. Click the **Enable** button to allow devices such as printers and computers to connect to a network automatically.
7. Click **SAVE**.

Setting up MAC bridging

Using MAC bridging mechanism, you can allow devices on your LAN network to directly connect to the WAN network. The bridged device will get the IP address from your Internet provider and does not have access to your local network.

To set up the MAC bridging:

1. From the G54 Web Manager screen, click the **Advanced** menu link.
2. Click **MAC Bridging** to display the MAC Bridging screen.

Advanced > MAC Bridging

MAC bridging provides a mechanism for allowing devices on your LAN network to have a direct connection to the WAN. A bridged device will get an IP address directly from your internet provider and not have access to your local network.

MAC Bridged Addresses

MAC Address(es)

There are no devices to display.

Auto-Learned Devices

	Device Name	MAC Address	
1	AE-Lab-Retail-2	90:E2:BA:6D:79:4F	ADD

Custom Device

[ADD](#)

Custom Range

MAC Range Prefix: [ADD](#)

Bridged Range: 00:00:00:00:00:00 — FF:FF:FF:FF:FF:FF

3. Enter the MAC addresses of the device or the MAC range that you want to allow to connect to the WAN.

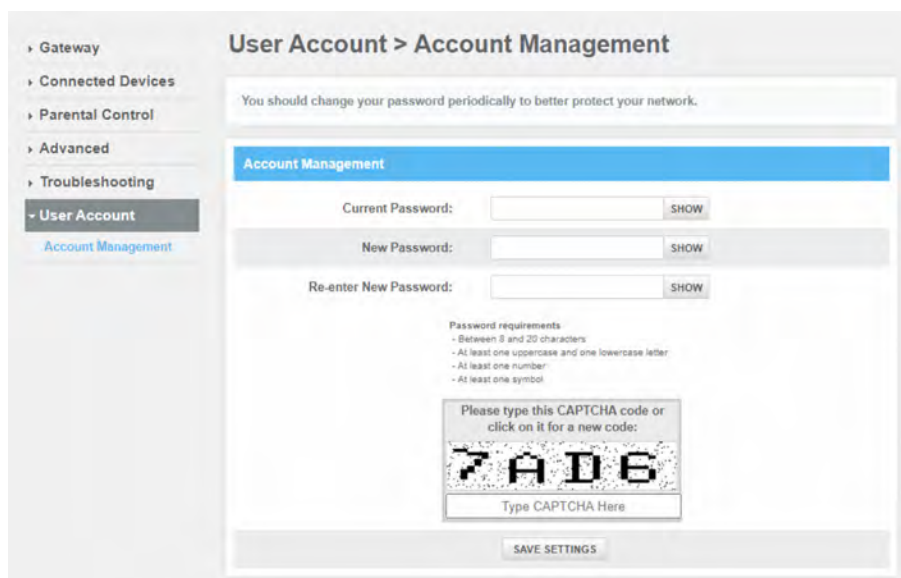
Changing your login password

When logging in to the G54 Web Manager for the first time, you will be prompted to enter a new password. However, you can also change your login password again if you want to based on your requirement.

1. Open a web browser and log on to open the G54 Web Manager.

For more information, see [Starting your G54 Web Manager](#) (page 28).

2. Click the **Gateway** menu link and then click the **User Account** submenu option.
3. Click **Account Management** and the Account Management page appears.



4. Enter the current admin password in the **Current Password** field.
5. Enter your new admin password in the **New Password** field.



Note: Remember passwords are case-sensitive and that you can use any combination of the following letters, numbers, and special characters:

- Letters: **A** through **Z** (uppercase and lowercase)
- Numbers: **0** to **9**
- Special characters: **! @ # \$ % & ***

6. Enter your new admin password in the **Re-enter New Password** field.
7. Select the **Show Typed Password** checkbox to view the new passwords and confirm that both passwords match.
8. Enter the CAPTCHA code located in the **Type CAPTCHA Here** entry box.
9. Click **SAVE** to update your admin password.
10. Find a secure place to write down and keep your new password for future reference.

Managing your Wi-Fi cable modem and connected networks

You can also use the Web Manager to view and monitor the network configuration settings and operational status of your G54.

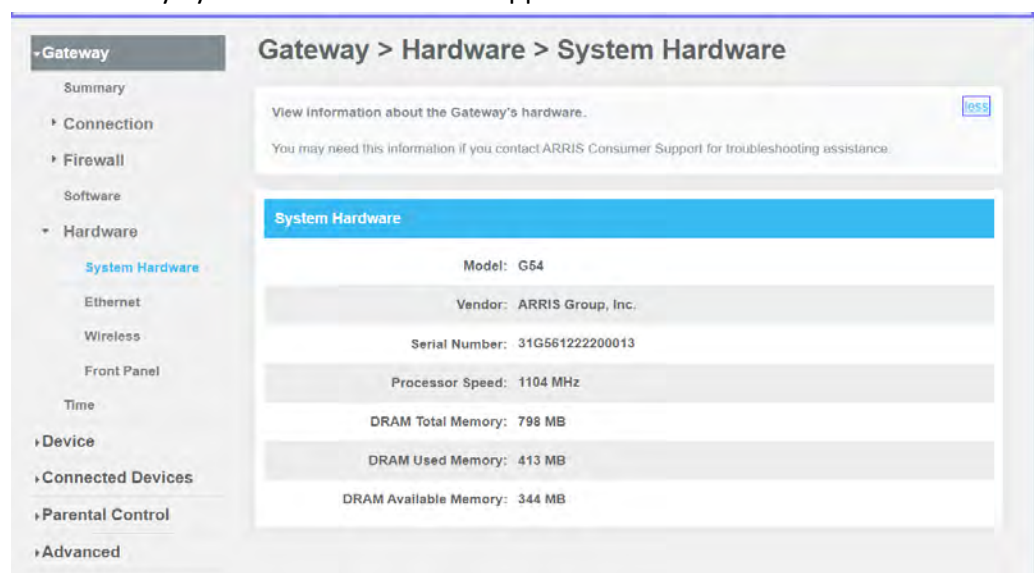
Viewing the G54 system hardware information

The Gateway Hardware screen displays system hardware information for your G54. This information may be helpful if you contact ARRIS, Comcast, or Cox for technical assistance.

To open the G54 Hardware information screen:

1. From the G54 Web Manager screen, click the **Gateway** menu link.
2. Click **Hardware** from the Gateway submenu links and then click **System Hardware** from the Hardware submenu options.

The Gateway System Hardware screen appears.



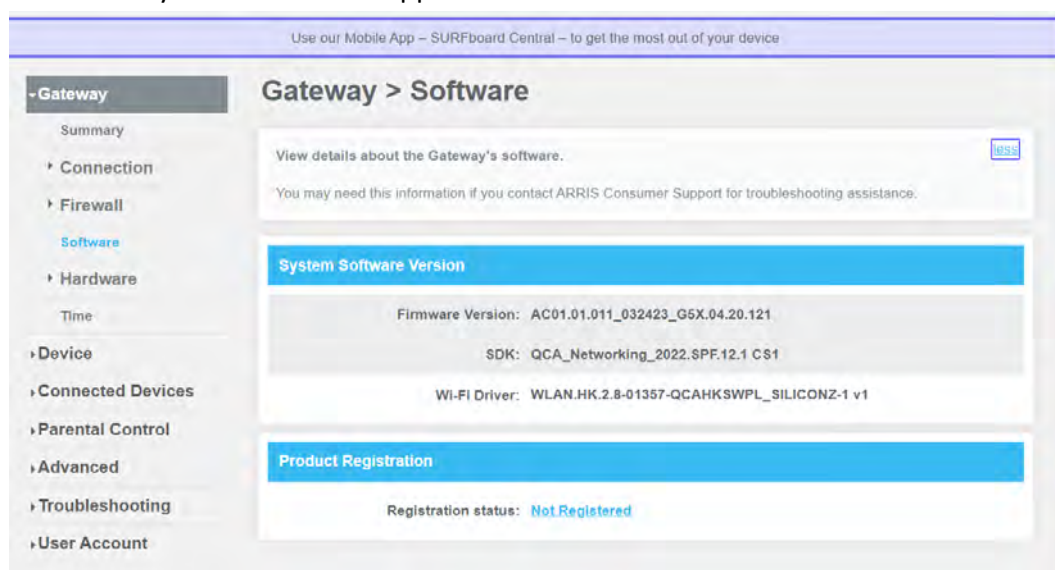
Viewing the G54 software version

The Gateway Software Version screen displays device software related information for your G54. This information may be helpful if you have to contact ARRIS or Comcast for technical support.

To open the Software screen of your G54:

1. From the G54 Web Manager screen, click the **Gateway** menu link.
2. Click **Software** from the Gateway submenu links.

The Gateway Software screen appears.

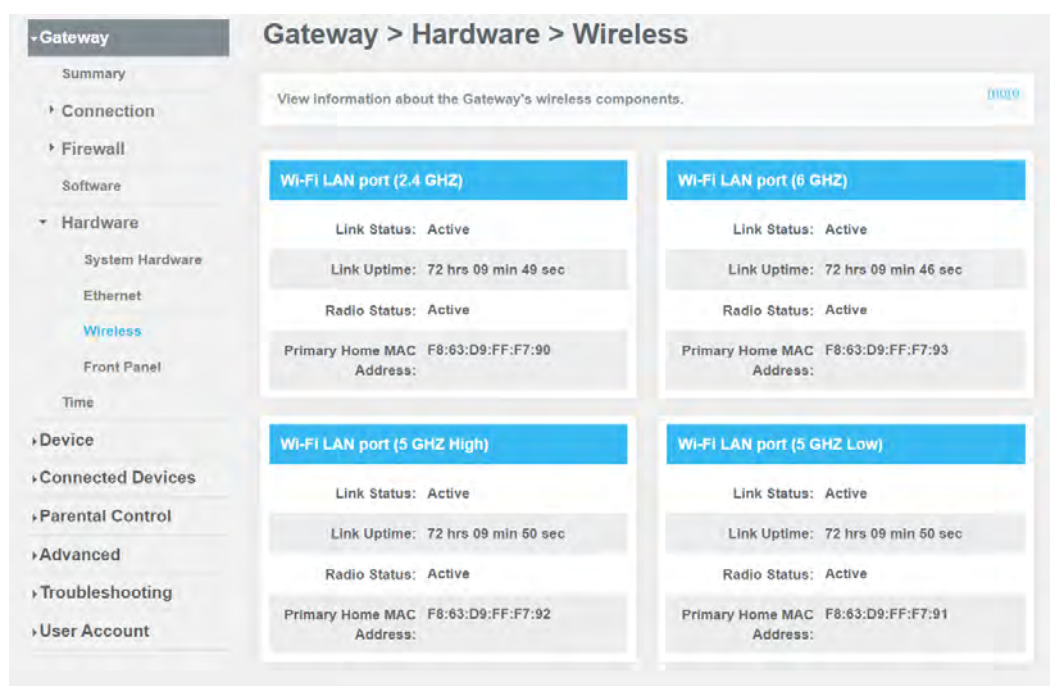


Viewing the wireless information

You can view your G54 wireless components.

To view the wireless information screen:

1. From the G54 Web Manager screen, click the **Gateway** menu link.
2. Click **Hardware** from the Gateway submenu links and then click **Wireless** from the Hardware submenu options to display your wireless information screen.



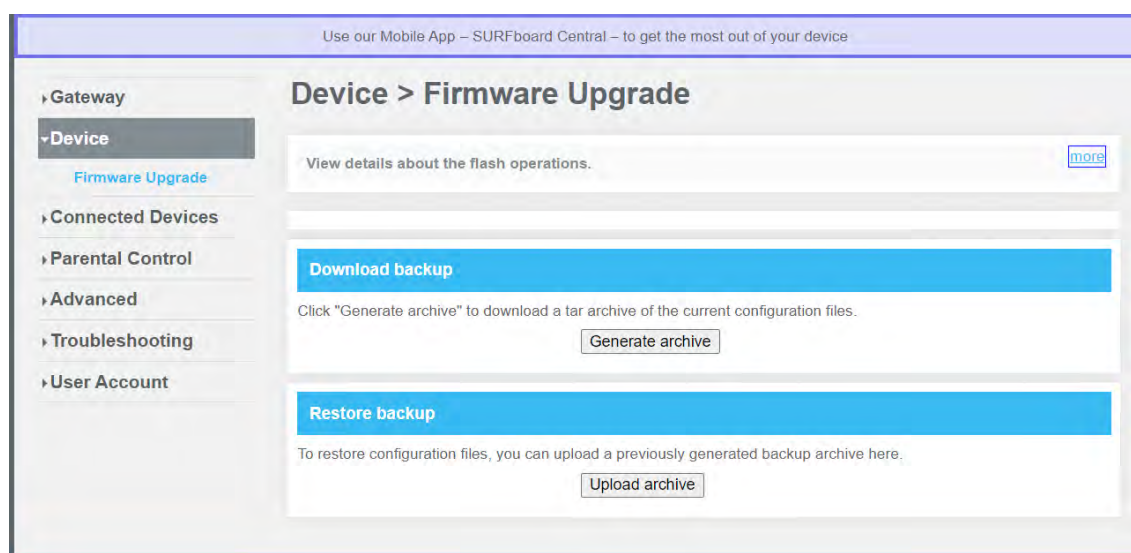
Viewing and downloading the device firmware details

The Gateway Hardware screen displays system hardware information for your G54. This information may be helpful if you contact ARRIS, Comcast, or Cox for technical assistance.

To open the G54 Hardware information screen:

1. From the G54 Web Manager screen, click the **Gateway** menu link.
2. Click **Device** from the Gateway submenu links and then click **Firmware Upgrade** from the Hardware submenu options.

The Device Firmware Upgrade screen appears.



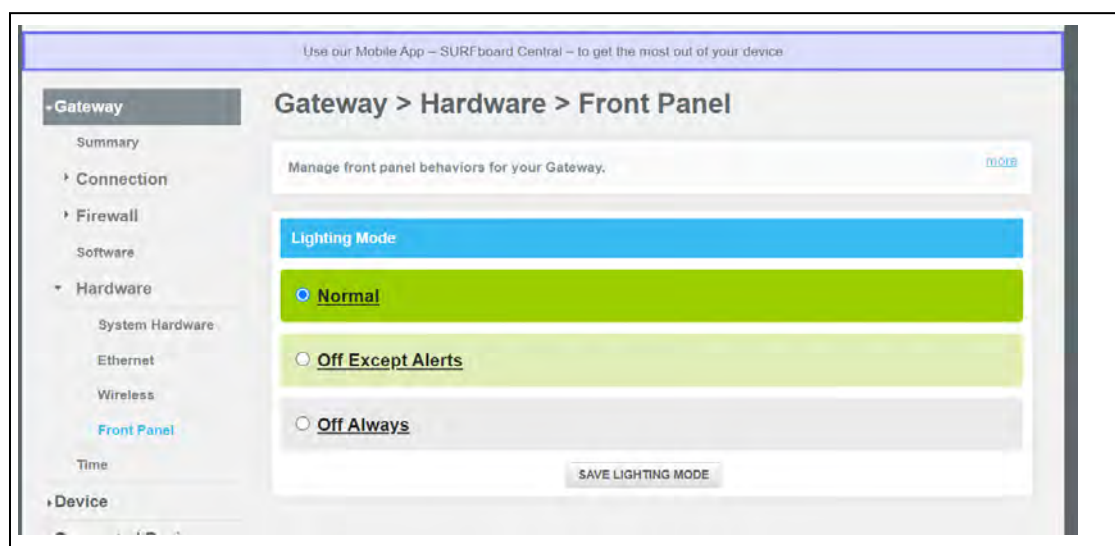
3. Under **Download backup** tab, click **Generate archive** to download a set of current configuration files.
4. Under **Restore backup** tab, click **Upload archive** to restore the configuration files.
You can upload the previously generated backup archive configuration files.

Managing the front panel LED behavior

You can manage the front panel LED behavior of your G54.

To manage the front panel LED behavior:

1. From the G54 Web Manager screen, click the **Gateway** menu link.
2. Click **Hardware** from the Gateway submenu links and then click **Front Panel** from the Hardware submenu options to display the Gateway Front Panel LED screen.



3. You can choose the following settings to manage your front panel LED behavior:
 - **Normal**

- Off Except Alerts
 - Off Always
4. Click **SAVE LIGHTING MODE** to save your changes.

Managing time servers

You can use this feature to provision accurate time on your G54. The time is retrieved from the servers listed in the order. If the first server is not accessible, then the next server shall be used. You can also choose your preferred timezone for accurate local time.

To provision accurate time and to modify the time zone selection:

1. From the G54 Web Manager screen, click the **Gateway** menu link.
2. Click **Hardware** from the Gateway submenu links and then click **Time** from the Hardware submenu options.

The Time screen appears.

3. Under the **Time Server** tab, if you prefer to retrieve time from the servers, then click the **Enable** button under **Enable Time Server**.
4. Under the **Time Zone** tab, you can choose to select **Automatic** or **Manual** time zone selection and also specify the **Time Format** and **Date Format**.
5. Click **SAVE TIME SETTINGS**.

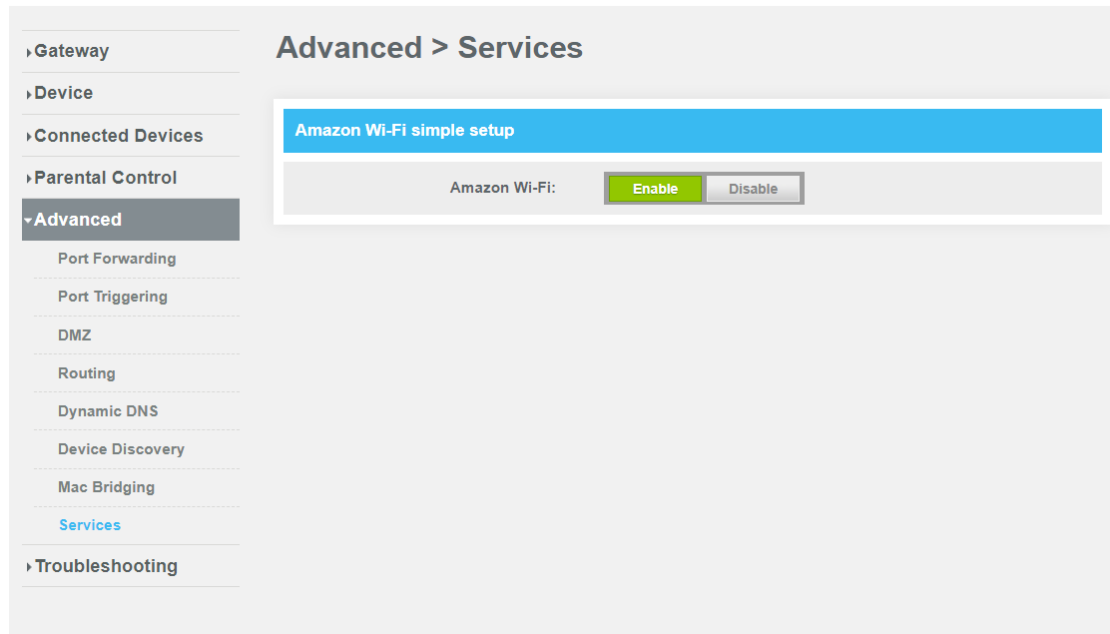
Managing Advanced service (Amazon)

You can use this feature to setup/install your device easily using Amazon Frustration Free Setup (AFFS) technique offered by Amazon.

To enable this feature:

1. From the G54 Web Manager screen, click **Advanced** from the Gateway submenu links and then click **Services**.

The Amazon Services screen appears.



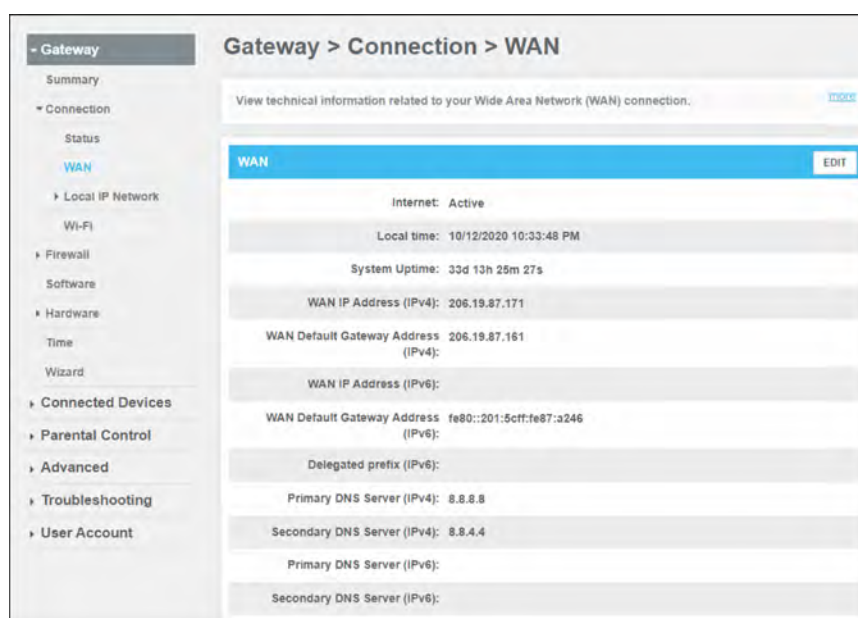
2. Under the **Amazon Wi-Fi** tab, click the **Enable** button allowing you to setup/install the device easily using the ADFS technique offered by Amazon.

Setting up an Ethernet port connection for your data input

If you have installed your G54 using an Ethernet port for your data input, perform the following to activate the Ethernet port.

To open the Gateway hardware Ethernet screen:

1. From the G54 Web manager screen, click the **Connection** menu link to display the **Status** and **WAN** submenu links.
2. Click the **WAN** submenu link to open the Gateway Connection WAN screen.

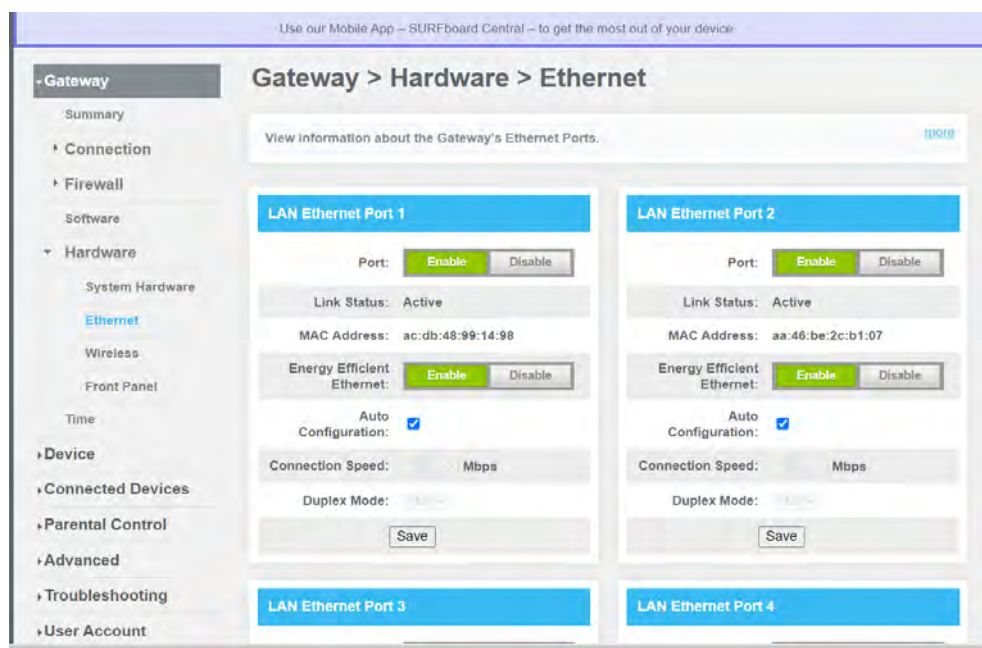


3. Click **EDIT** on the WAN screen.
4. Click **Interface CHANGE** to select either **DOCSIS** (for a regular cable connection) or Ethernet (for an input signal from a different modem device) with an Ethernet connection from the modem device to your G54 10G port.

From the G54 Web manager screen, click the **Gateway** menu link.

1. Click **Software** from the Gateway submenu links to display the Gateway Software screen.
2. Click **Ethernet** from the Hardware submenu links.

The Gateway Hardware Ethernet screen appears.



3. Click the **Enable** button in the **LAN Ethernet Port 4** box.

Rebooting your G54

Choose one of the following options to reboot (or restart) your G54:

- Using the Reboot/restore option available on your G54 Web Manager screen: [Rebooting your G54 using the Web Manager](#) (page 65)
- OR
- Using the Reset button on the rear panel of your G54: [Rebooting your G54 using the Reset button](#) (page 65)

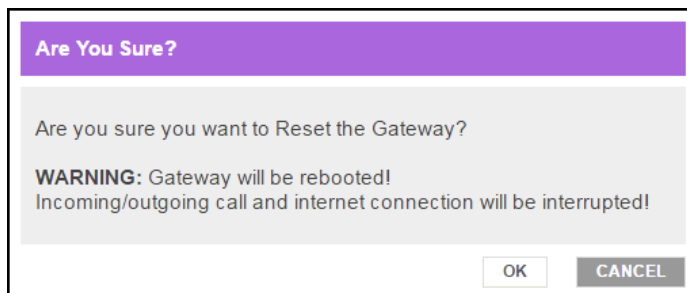
Rebooting your G54 using the Web Manager

To reboot (or restart) your G54 modem using the Web Manager:

1. From any of the G54 Web Manager screen, click the **Troubleshooting** menu link.
2. Click **Restart/Restore Gateway** from the Troubleshooting submenu links.



3. Click **RESTART GATEWAY** located in the Reset / Restore Gateway table.
The following Reset your Gateway message appears.



4. Click **OK** to reboot your G54 modem and then log back in.

Rebooting your G54 using the Reset button

To reboot (or restart) your G54 using the **Reset** button:

1. Insert the end of a paper clip (or other small object with a narrow tip) into the indented **Reset** button opening on the rear panel of your G54.
2. Press and hold the small object in place for three to four seconds.



Warning: Do not press the **Reset** button for more than five seconds. If you do, your G54 modem shall reset automatically and your custom gateway configuration settings (e.g., admin password, network name (SSID) and password) shall be deleted and replaced with the factory default configuration.

3. Remove the paper clip or small object from the **Reset** button opening.

Restoring the default configuration settings using your G54 Web Manager



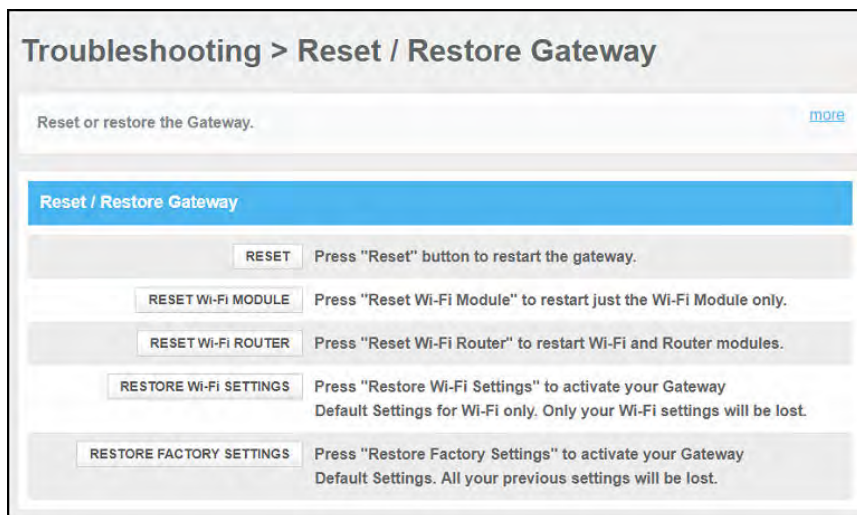
Warning: This action will delete your current G54 configuration settings and allow you to restore the default (original) G54 configuration.



Note: After the configuration settings are restored, the G54 automatically reboots and you will have to log in using the default username (**admin**) and your current admin password.

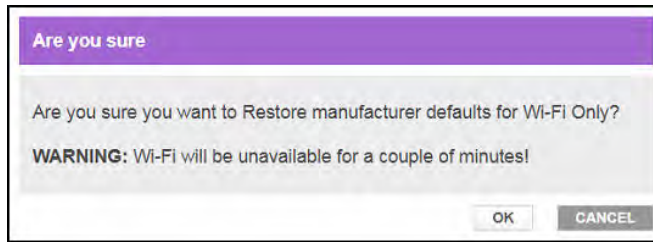
To open the Restart/Restore Gateway screen:

1. From the Web Manager screen, click the **Troubleshooting** menu link.
2. Click **Restart/Restore** from the Troubleshooting submenu links to display the Troubleshooting **Restart/Restore Gateway** screen.



Restore settings screen

3. Click **RESTORE WI-FI SETTINGS** to reset your G54 Wi-Fi settings.



Restore settings screen

4. Click **OK** to restore the Wi-Fi factory defaults.

The *Operation in Progress* for restarting the Wi-Fi radios message displays.

Troubleshooting tips

If the solutions listed in the Troubleshooting Solutions table below do not solve your problem, please contact your service provider for assistance.

You may have to reset your G54 configuration to its original factory settings if your G54 is not functioning properly.

Solutions

G54 problem	Possible solution
Cannot Send or Receive Data	Check each end of the coaxial cable connection on the G54 and cable wall outlet. Use your hand to tighten each connector, if necessary. Check the Ethernet cable (if connected) to make sure it is properly connected to your G54 and computer. If you have cable television service, check your television to ensure your cable service is operating properly. If none of the above solutions resolves the problem, contact your service provider or call ARRIS Technical Support at 1-877-466-8646 for assistance.
Cannot Access the Internet	Check that all cable and power connections on your G54 and computer are properly connected. Check that the front panel LED is lit up solid. Contact your service provider for assistance.
Wi-Fi Devices Cannot Send or Receive Data	If the problem continues after checking the coaxial cable and Ethernet connections and your IP address, check the Wi-Fi Security Mode setting on the Gateway Wi-Fi Connection screen. If you enabled Wi-Fi security and configured a passphrase on your G54, be sure each affected Wi-Fi client has the identical passphrase. If this does not solve the problem, check if the Wi-Fi client supports the selected Wi-Fi security method.

Warranty Information

CommScope, Inc. ("ARRIS")

Retail Purchasers

If you purchased this Product directly from ARRIS or from an authorized ARRIS retail reseller, ARRIS warrants to you, the original end user customer, that (A) the Product, excluding Software, will be free from defects in materials and workmanship under normal use, and (B) with respect to Software, (i) the media on which the Software is provided will be free from defects in material and workmanship under normal use, and (ii) the Software will perform substantially as described in its documentation. This Limited Warranty to you, the original end user customer, continues (A) for Software and the media upon which it is provided, for a period of ninety (90) days from the date of purchase from ARRIS or an authorized ARRIS reseller, and (B) for the Product (excluding Software), for a period of two (2) years from the date of purchase from ARRIS or from an authorized ARRIS reseller. To take advantage of this Limited Warranty or to obtain technical support, you must call the ARRIS toll-free phone number: **1-877-466-8646**. ARRIS' sole and exclusive obligation under this Limited Warranty for retail sales shall be to repair or replace any Product or Software that does not meet this Limited Warranty. All warranty claims must be made within the applicable Warranty Period.

Cable Operator or Service Provider Arrangements

If you did not purchase this Product directly from ARRIS or from a ARRIS authorized retail reseller, ARRIS does not warrant this Product to you, the end-user. A limited warranty for this Product (including Software) may have been provided to your cable operator or Internet Service Provider ("Service Provider") from whom you obtained the Product. Please contact your Service Provider if you experience problems with this Product.

General Information

The warranties described in this Section shall not apply: (i) to any Product subjected to accident, misuse, neglect, alteration, Acts of God, improper handling, improper transport, improper storage, improper use or application, improper installation, improper testing, or unauthorized repair; or (ii) to cosmetic problems or defects which result from normal wear and tear under ordinary use, and do not affect the performance or use of the Product. ARRIS' warranties apply only to a Product that is manufactured by ARRIS and identified by ARRIS owned trademark, trade name or product identification logos affixed to the Product. ARRIS does not warrant to you, the end user, or to anyone else that the Software will perform error free or without bugs.

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