



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

User Guide, STANDARD Revision x.1

P/N 365-095-xxxxx

CommScope legal statements

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Safety and regulatory information

Read all safety and regulatory information before installing your device and setting up your home network connection.

Important safety instructions

Read this before you begin — When using your equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

- Read all the instructions listed here and/or in the user manual before you operate this device. Give attention to all safety precautions. Retain the instructions for future reference.
- This device must be installed and used in strict accordance with manufacturer's instructions, as described in the user documentation that is included with the device.
- Comply with all warning and caution statements in the instructions. Observe all warning and caution symbols that are affixed to this device.
- To prevent fire or shock hazard, do not expose this device to rain or moisture. The device must not be exposed to dripping or splashing. Do not place objects filled with liquids, such as vases, on the device.
- This device was qualified under test conditions that included the use of the supplied cables between system components. To ensure regulatory and safety compliance, use only the provided power and interface cables and install them properly.
- Different types of cord sets may be used for connections to the main POWER supply circuit. Use only a main line cord that complies with all applicable device safety requirements of the country of use.
- Installation of this device must be in accordance with national wiring codes and conform to local regulations.
- Operate this device only from the type of power source indicated on the device's marking label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.
- Do not overload outlets or extension cords, as this can result in a risk of fire or electric shock. Overloaded AC outlets, extension cords, frayed power cords, damaged or cracked wire insulation, and broken plugs are dangerous. They may result in a shock or fire hazard.
- Route power supply cords so that they are not likely to be walked on or pinched by items placed upon or against them. Pay attention to cords where they are attached to plugs and convenience receptacles; and examine the point where they exit from the device.
- Place this device in a location that is close enough to an electrical outlet to accommodate the length of the power cord.
- Place the device to allow for easy access when disconnecting the power cord of the device from the AC wall outlet.

- Do not connect the plug into an extension cord, receptacle, or other outlet unless the plug can be fully inserted with no part of the blades exposed.
- Place this device on a stable surface.
- Avoid damaging the device with static by touching the coaxial cable when it is attached to the earth-grounded coaxial cable-TV wall outlet.
- Always first touch the coaxial cable connector on the device when disconnecting or reconnecting the Ethernet cable from the device or user's PC.
- Installation of an AC surge protector in the AC outlet to which this device is connected is recommended. This is to avoid damaging the device by local lightning strikes and other electrical surges.
- Postpone installation until there is no risk of thunderstorm or lightning activity in the area.
- Avoid using a telephone (other than a cordless type) during an electrical storm. There is a remote risk of electric shock from lightning. For added protection, unplug the device from the wall outlet and disconnect the cables to avoid damage to this device from lightning and power surges.
- Do not use this product near water. For example, near a bathtub, washbowl, kitchen sink, laundry tub, swimming pool, or in a wet basement.
- Do not use the telephone to report a gas leak located near the leak.
- Do not cover the device or block the airflow to the device with any other objects. Keep the device away from excessive heat and humidity and keep the device free from vibration and dust.
- Wipe the device with a clean, dry cloth. Never use cleaning fluid or similar chemicals. Do not spray cleaners directly on the device or use forced air to remove dust.
- For added protection, unplug the device from the wall outlet and disconnect the cables to avoid damage to this device during lightning activity or power surges.



CAUTION: To reduce the risk of fire, use only No. 26 AWG or larger (e.g., 24 AWG) UL Listed or CSA Certified Telecommunication Line Cord, or national equivalent.

- Upon completion of any service or repairs to this device, ask the service technician to perform safety checks to determine that the device is in safe operating condition.
- Do not open the device. Do not perform any servicing other than that contained in the installation and troubleshooting instructions. Refer all servicing to qualified service personnel.
- This device should not be used in an environment that exceeds 104° F (40° C).

SAVE THESE INSTRUCTIONS



Note: To CATV system installer — This reminder is provided to call the CATV system installer's attention to Section 820.93 of the National electric code, which provides guidelines for proper grounding and, in particular, specifies that the coaxial cable shield must be connected to the grounding system of the building, as close to the point of cable entry as practical.

FCC statements

FCC Interference statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential environment. 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 device 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 device 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.

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.



CAUTION: Any changes or modifications not expressly approved by ARRIS for compliance could void the user's authority to operate the equipment.

FCC Declaration of Conformity

ARRIS International, plc, 3871 Lakefield Drive, Suwanee, GA 30024, declares that the SURFboard device complies with 47 CFR Parts 2 and 15 of the FCC rules as a Class B digital device.

FCC Radiation Exposure statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. 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 52 centimeters.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter except those already approved in this filing.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destinations. The firmware setting is not accessible by the end user.

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, and Revision N), 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).



Restrictions on the use of wireless devices

In some situations, or environments, the use of wireless devices may be restricted by the proprietor of the building or responsible representatives of the organization. For example, using wireless equipment in any environment where the risk of interference to other devices or services is perceived or identified as harmful.

If you are uncertain of the applicable policy for the use of wireless equipment in a specific organization or environment, you are encouraged to ask for authorization to use the device prior to turning on the equipment.

The manufacturer is not responsible for any radio or television interference caused by unauthorized modification of the devices included with this product, or the substitution or attachment of connecting cables and equipment other than specified by the manufacturer. Correction of the interference caused by such unauthorized modification, substitution, or attachment is the responsibility of the user.

The manufacturer and its authorized resellers or distributors are not liable for any damage or violation of government regulations that may arise from failing to comply with these guidelines.



Note: The use of the 5150-5250 MHz frequency band is restricted to indoor use only.



Warning: This device allows you to create a wireless network. Wireless network connections may be accessible by unauthorized users. For more information on how to protect your network, refer to the relevant chapters in this document or visit our Consumer Support website at <http://www.arris.com/selfhelp>.

Caring for the environment by recycling your ARRIS equipment



Please do not dispose of this product with your residential or commercial waste. Contact your local authorities for information about practices established for your region. If collection systems are not available, call ARRIS Technical Support at **1-877-466-8646** for assistance.

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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 four 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 steps you through installing 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 user 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 four-port Ethernet router
Wall power supply		Power supply for an electrical wall outlet connection

Item		Description
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® 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 .

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

Contact information

For technical support and additional ARRIS product information:

- Visit the ARRIS Support website: www.arris.com/selfhelp
- Call ARRIS Technical Support: **1-877-466-8646**

Front panel and LED behavior



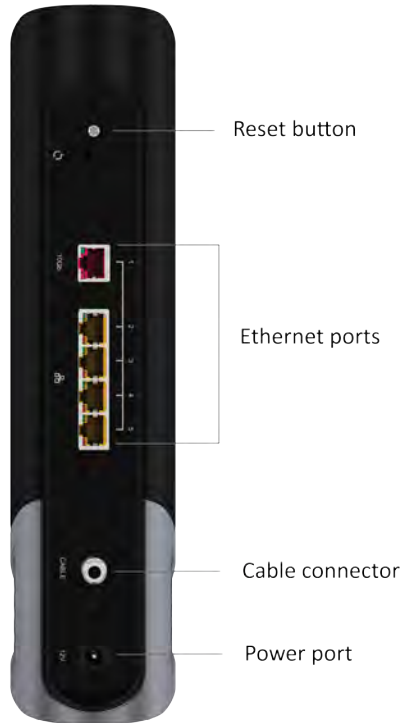
Figure 1: Front view

LED behavior

LED behavior	LED action
Amber (Solid)	Power is connected
Amber (OFF)	No power. Check for all cable connections and if required, you may have to reset your modem.
Amber (Flashing)	Firmware download is in progress
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
Light Blue (Blinking)	WAN over Ethernet mode, cable is unplugged or no Internet
Light Blue (Solid)	WAN over Ethernet mode, Internet is connected

LED behavior	LED action
Blue and Green (Alternating colors)	Error mode. Check for all cable connections and if required, you may have to reset your modem.

Rear panel and connectors



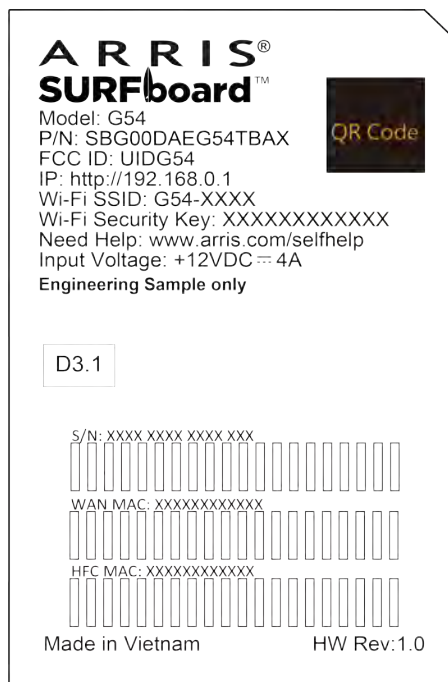
G54 Rear view

Rear panel and connectors

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

Port name	Description
 ETHERNET 2.5 GE (available in G54 unit)	One 2.5 Gigabit Ethernet port for RJ-45 network cable connection: Note: CAT6 Ethernet cable and 2.5-Gigabit Ethernet capable device is required to achieve Ethernet connection throughout up to 2.5 Gbps. ■ Green: LED is ON: Indicates a data transfer rate of 2.5 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 2.5 gigabit 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.

Product label



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 11), 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 <http://www.arris.com/selfhelp>.
- **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 16)

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 [#unique_15](#).



Note: Your G54 supports using an Ethernet port connection for your data input in place of an 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.

You can enable or disable this feature which is available for the LAN Ethernet port 4 as WAN over Ethernet. For more information, see [Setting up an Ethernet port connection for your data input](#) (page 56).



G54 connection diagram

1. You can choose to connect using one of the following ways:
 - Connect one end of a coaxial cable to the **Cable** connector on the rear panel of your G54 and ensure the other end is connected to a cable wall outlet or RF splitter (not included).
 - Connect an Ethernet cable to the fourth **Ethernet** port on the rear panel of your G54 and proceed with step 3.
2. Connect one end of an Ethernet cable to any of the **Ethernet** port on the rear panel of your G54 and the other end to the **Ethernet** port on your computer.

Repeat the above step for an additional computer or any other network device that you want to install as a wired connection on your home network.
3. 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 were connected properly.

4. Power ON the computer connected to your G54 and then log in.
5. Contact your service provider to activate (provision) your G54. You may have to provide the **HFC MAC ID** listed on your modem label.
6. Enter your service provider's web browser URL:
 - Comcast/Xfinity: <http://www.xfinity.com/activate>
 - Cox: <http://www.cox.com/activate>
 - Spectrum: <http://spectrum.net/selfinstall>

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. Check that 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: 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 [Product label](#) (page 14).

Choose from one of the options listed here for setting up a Wi-Fi network connection on your home network. 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 **Wi-Fi** to turn it ON.

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

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

- **Apple computer (MacBook[®])**

From any screen on your apple device:

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 client 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.

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.

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

Using your G54 Web Manager, you can view and monitor the network configuration settings and the operational status of your G54. You can also configure your network connections and Wi-Fi security settings. For more information, see [#unique_21](#).

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 G54 Home Network Wizard screen displays.

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



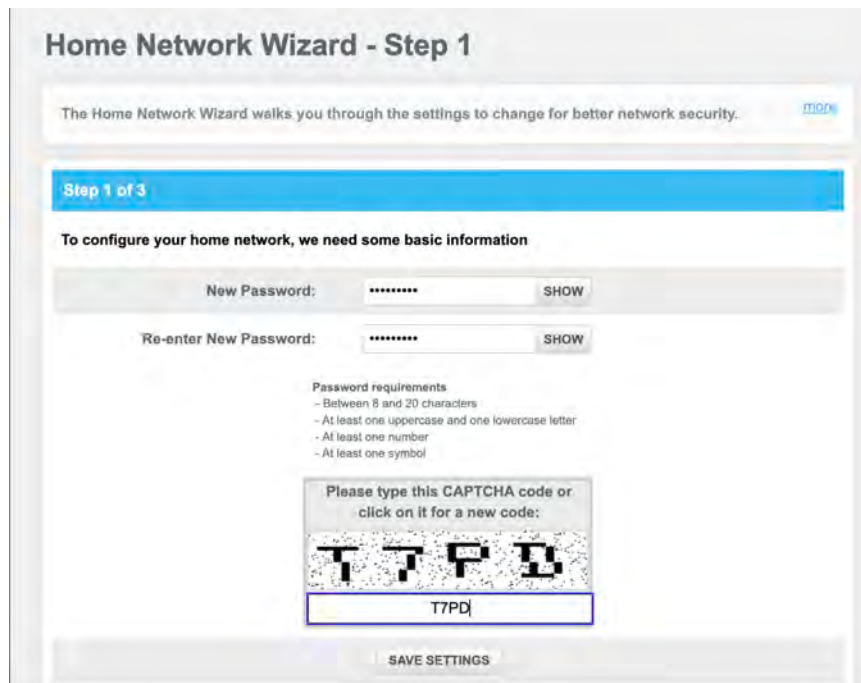
Note:

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.



The Home Network Wizard - Step 1 screen displays a wizard interface for configuring a home network. It includes a title bar, a progress indicator (Step 1 of 3), and a description of the wizard's purpose. The main section contains fields for a new password and its re-entry, each with a 'SHOW' button. Below these fields are password requirements: between 8 and 20 characters, at least one uppercase and one lowercase letter, at least one number, and at least one symbol. A CAPTCHA section shows a code 'T7PD' and a text input field where the user has entered 'T7PD'. At the bottom is a 'SAVE SETTINGS' button.

Home Network Wizard - Step 1

The Home Network Wizard walks you through the settings to change for better network security. [more](#)

Step 1 of 3

To configure your home network, we need some basic information

New Password: [password field] [SHOW](#)

Re-enter New Password: [password field] [SHOW](#)

Password requirements

- Between 8 and 20 characters
- At least one uppercase and one lowercase letter
- At least one number
- At least one symbol

Please type this CAPTCHA code or click on it for a new code:

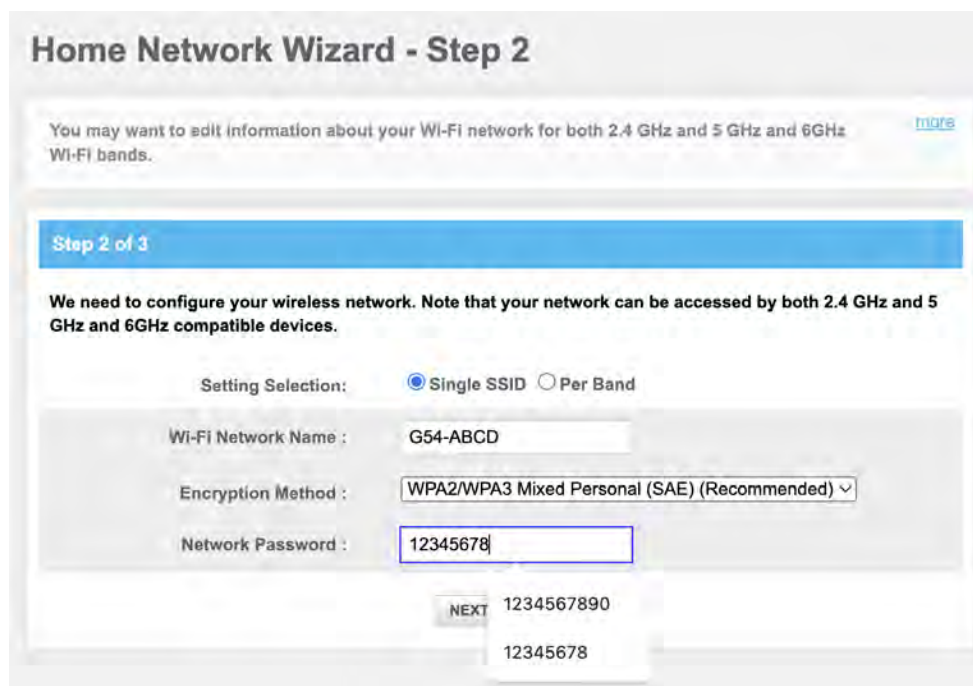
T7PD

T7PD

[SAVE SETTINGS](#)

Home Network Wizard-Step 1 screen

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



The Home Network Wizard - Step 2 screen displays a wizard interface for configuring a wireless network. It includes a title bar, a progress indicator (Step 2 of 3), and a description of the wizard's purpose. The main section contains a 'Setting Selection' field with radio buttons for 'Single SSID' (selected) and 'Per Band'. Below this are fields for 'Wi-Fi Network Name' (G54-ABCD), 'Encryption Method' (WPA2/WPA3 Mixed Personal (SAE) (Recommended)), and 'Network Password' (12345678). At the bottom is a 'NEXT' button.

Home Network Wizard - Step 2

You may want to edit information about your Wi-Fi network for both 2.4 GHz and 5 GHz and 6GHz Wi-Fi bands. [more](#)

Step 2 of 3

We need to configure your wireless network. Note that your network can be accessed by both 2.4 GHz and 5 GHz and 6GHz compatible devices.

Setting Selection: ☒ Single SSID ☐ Per Band

Wi-Fi Network Name : G54-ABCD

Encryption Method : WPA2/WPA3 Mixed Personal (SAE) (Recommended) ▼

Network Password : 12345678

[NEXT](#) 1234567890

12345678

G54 Home Network Wizard-Step 2 screen

7. In the **Setting Selection** field, click **Single SSID** or **Per Band** based on your requirement.

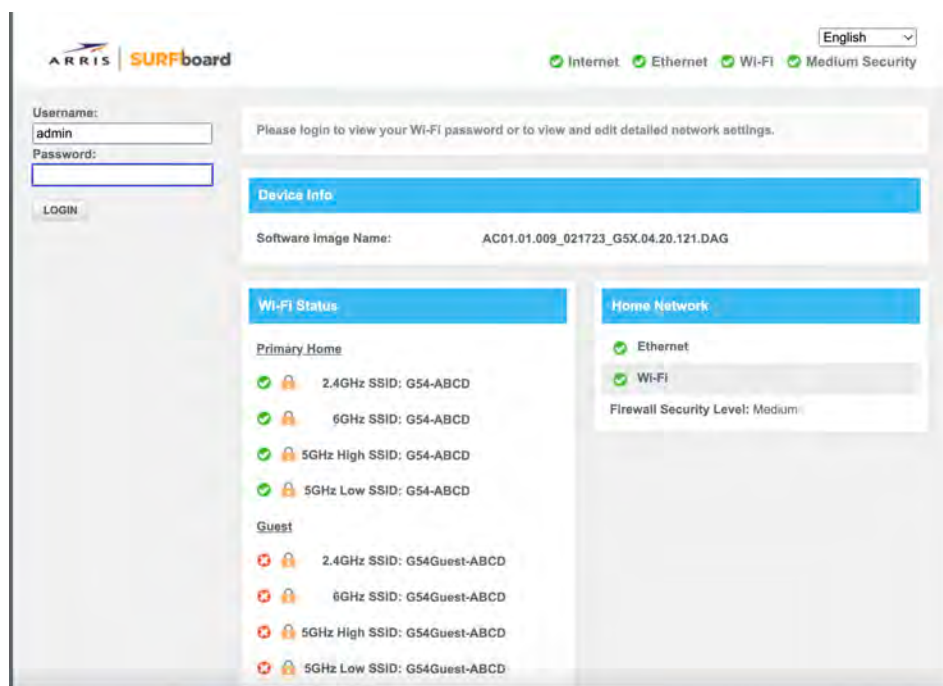
8. You may choose to retain the current default Wi-Fi network name or enter a new name in the **Wi-Fi Network Name** field.

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.

Home Network Wizard-Step 3 screen

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**.



Web Manager Login screen

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

Starting the 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 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 Web Manager Login screen.

ARRIS SURFboard

English

Internet Ethernet Wi-Fi Medium Security

Username: admin

Password:

LOGIN

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

Device Info

Software Image Name: AR01.04.024_011421_7241.NCS.20

Wi-Fi Status

Primary Home

- 2.4GHz SSID: G34-D399
- 5GHz SSID: G34-D399-5G

Secondary Home

- 2.4GHz SSID: G34-D399-2
- 5GHz SSID: G34-D399-5G-2

Guest

- 2.4GHz SSID: G34Guest-D399
- 5GHz SSID: G34Guest-D399-5G

Home Network

- Ethernet
- Wi-Fi

Firewall Security Level: Medium

Web Manager Login screen

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

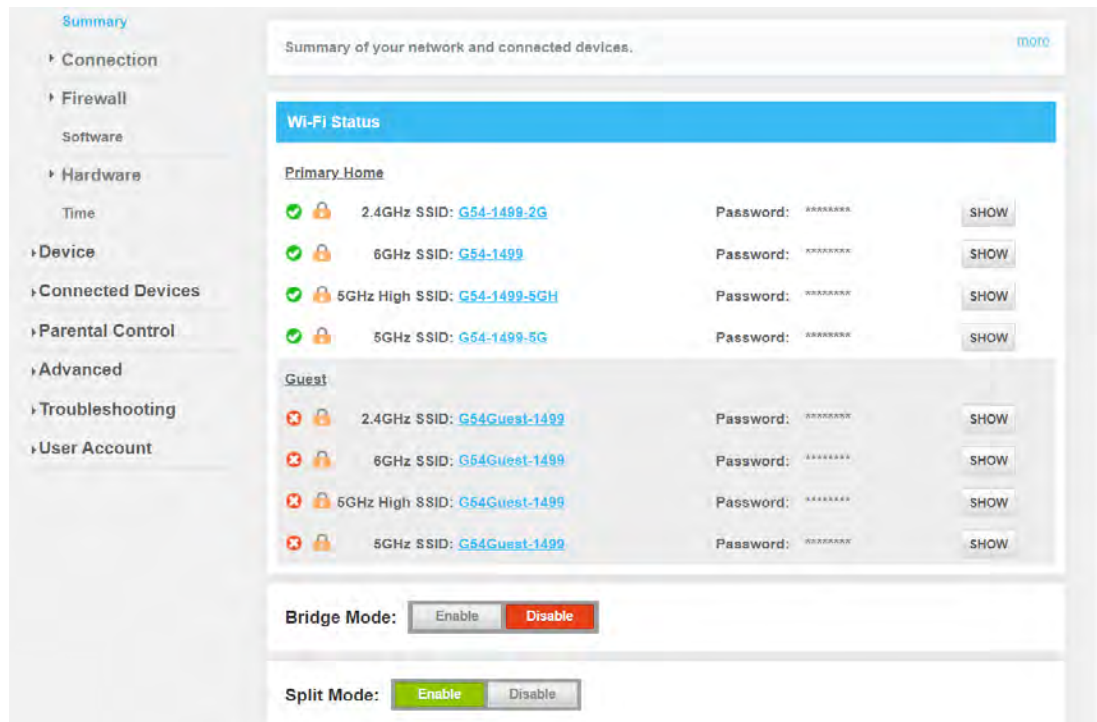
Thank you for purchasing an ARRIS SURFboard® product. Please take a few minutes to register your product to take advantage of the following benefits:

- 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.

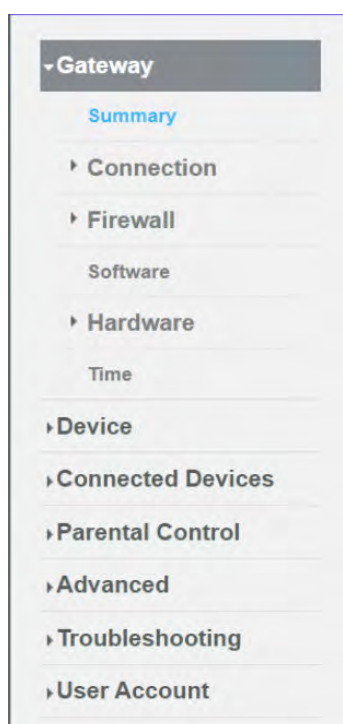


G54 Summary page

7. To disable Wi-Fi network, click **Enable** under the **Bridge Mode** field.
8. 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.

Set up your Wi-Fi network

1. Open a web browser and log on to open the Web Manager.
See [#unique_27](#) for more information, if necessary.
2. Click the menu links **Gateway > Connection > Wi-Fi > Networks**.
The Gateway Connection Wi-Fi screen appears.

Gateway > Connection > Wi-Fi > Networks

Manage your Wi-Fi connection settings. [Help](#)

Primary Home Wi-Fi Network

Name	Frequency Band	MAC Address	Security Mode	
✓ G34-D399	2.4 GHz	40:2B:50:FE:3D:52	WPA2WPA3-PSK (AES)	EDIT
✓ G34-D399-5G	5 GHz	40:2B:50:FE:3D:53	WPA2WPA3-PSK (AES)	EDIT

AP Isolation: ☐ Enabled

Secondary Home Wi-Fi Network

Name	Frequency Band	MAC Address	Security Mode	
✗ G34-D399-2	2.4 GHz	42:2B:50:FE:3D:53	WPA2-PSK (AES)	EDIT
✗ G34-D399-5G-2	5 GHz	42:2B:50:FE:3F:54	WPA2-PSK (AES)	EDIT

AP Isolation: ☐ Enabled

Guest Wi-Fi Network

Name	Frequency Band	MAC Address	Security Mode	
✗ G34Guest-D399	2.4 GHz	42:2B:50:FE:3D:55	WPA2-PSK (AES)	EDIT
✗ G34Guest-D399-5G	5 GHz	42:2B:50:FE:3F:56	WPA2-PSK (AES)	EDIT

AP Isolation: ☒ Enabled

Network Options

Network Priorities: ☒ Disable ☐ Enable

Band Steering: ☒ Disable ☐ Enable

[SAVE NETWORK SETTINGS](#)

Wi-Fi connection screen

- To set up the Network Security mode for your Wi-Fi home network, click the Home Wi-Fi Network **2.4 GHz EDIT** button.

Wi-Fi network setup screen

The screenshot shows the 'Edit Home 2.4 GHz' configuration page. On the left is a sidebar menu with options like Gateway, Connection, Status, WAN, Local IP Network, Wi-Fi, Networks, 2.4 GHz Radio, 5 GHz Radio, MAC Filtering, WPS, Firewall, Software, Hardware, Time, Wizard, Connected Devices, Parental Control, Advanced, Troubleshooting, and User Account. The main content area is titled 'Gateway > Connection > Wi-Fi > Edit Home 2.4 GHz' and includes a 'Manage your Home 2.4 GHz network settings.' link. The settings include: 'Wireless Network' with 'Enable' and 'Disable' buttons; 'Network Name (SSID)' with a text field containing 'G34-D399'; 'Security Mode' with a dropdown menu set to 'WPA2WPA3-PSK (AES) (Recommended)'; 'Network Password' with a masked field and a 'SHOW' button; 'Broadcast Network Name (SSID)' with a checked 'Enabled' checkbox; and 'Enable WMM' with a checked 'Enabled' checkbox. At the bottom, there is a 'Save Settings' button and a CAPTCHA challenge with the code 'W6Y3' and a 'Type CAPTCHA Here' input field.

- Choose to either keep the default network name SSID (Service Set Identifier) for your Wi-Fi home network in the **Network Name (SSID)** field or 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.

- Select one of the following Wi-Fi network security options for your G54 from the **Security Mode** drop-down list:
 - **WPA2-PSK (TKIP/AES) (Recommended):** Wi-Fi Protected Access version 2 with Pre-Shared Key (most compatible).
This is the default network security option for your G54. It provides the highest security and performance for your Wi-Fi network.
 - **WPA2-PSK (AES):** Wi-Fi Protected Access version 2 with Pre-Shared Key.
 - **Open (risky)** (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 (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.

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. Perform one of the following:

- Select the **Broadcast Network Name (SSID) Enabled** checkbox to display your SSID as an available Wi-Fi network to outside users.
- Deselect the **Broadcast Network Name (SSID) Enabled** checkbox to disable displaying your SSID as an available Wi-Fi network to outside users.



Note: When **Broadcast Network Name (SSID)** is enabled, your SSID is visible to unauthorized Wi-Fi clients that are within range of your Wi-Fi network to connect to your home network.

9. Select the **Enable WMM** checkbox to turn ON Wi-Fi Multi-media functionality.

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.

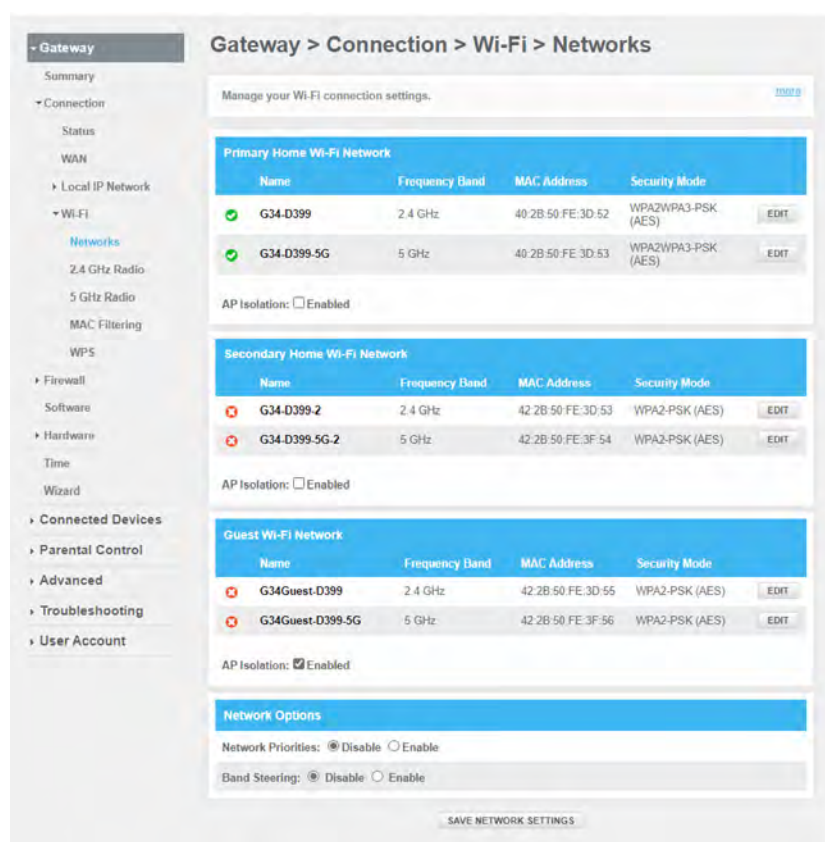
10. Enter the CAPTCHA code located in the Type CAPTCHA Here entry box.

11. Click **SAVE** to save the settings.

12. To set up the Network Security mode for your Wi-Fi home network, click the Home Wi-Fi Network **5 GHz EDIT** button.

13. Perform steps 4 through 11.

14. To enable separate virtual networks for your Wi-Fi clients, in the Wi-Fi connection screen, select the **AP Isolation** checkbox.



Wi-Fi connection screen (1 of 2)



Note: When AP Isolation is enabled, each of your Wi-Fi clients will be in its own virtual network and will not be able to communicate with the other Wi-Fi clients. This may be useful if several guests are using your Wi-Fi network.

15. To turn ON the 2.4 GHz Wi-Fi frequency range for your Wi-Fi home network, click the **2.4 GHz Radio** submenu and then click **Enable** button .
16. Select the wireless networking standard mode for your Wi-Fi home network from the **Mode** drop-down list.
17. Select the Tx (Transmit) Power level of the Wi-Fi radio from the **Tx Power** drop-down list.
18. Select a channel number (Auto, 1 through 11) from the **Channel** drop-down list to set the communications channel for your Wi-Fi cable modem.



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.

19. Set the channel bandwidth for your Wi-Fi cable modem from the **Channel Bandwidth** box.
20. To enable the dynamic channel selection option, click **Enable** .
21. To set the DCS scan interval, you can choose from the **DCS Scan Interval** drop-down list.
22. Click **SAVE SETTINGS** to save the changes.

23. To turn ON the 5 GHz Wi-Fi frequency range for your Wi-Fi home network, click the **5 GHz Radio** submenu and then click **Enable** button .

Wi-Fi connection 5GHz Radio screen

Gateway > Connection > Wi-Fi > 5 GHz Radio

Manage your Wi-Fi connection settings. [more](#)

5 GHz Wi-Fi Radio Configuration

Wireless Radio:

Mode:

Tx Power:

DFS: ☒ Disable ☐ Enable

Channel Selection: ☐ Manual ☒ Automatic

Channel:

Channel Bandwidth: ☐ 20 ☐ 20/40 ☒ 20/40/80 ☐ 20/40/80/160 ☐ Auto

Dynamic Channel Selection: ☐ Disable ☒ Enable

DCS Scan Interval:

MU-MIMO: ☐ Disable ☒ Enable

24. Perform steps 16 through 22.

Changing your Wi-Fi network name (SSID)

The SSID (Service Set Identification) is the Wi-Fi network name assigned to your G54 Wi-Fi network. The default SSID (listed on the product label) is automatically populated in the network configuration screens. A list of available Wi-Fi networks (SSIDs) near your home (for example, neighbors or local businesses) will display when you or someone else in your home attempts to establish a Wi-Fi network connection. For security purposes and quick recognition of your Wi-Fi network, ARRIS recommends that you change the default SSID.



Note: When you change the SSID, any Wi-Fi devices that are connected to your Wi-Fi network will be disconnected. The Wi-Fi devices must be reconnected to your Wi-Fi network using the new SSID.

To change your Wi-Fi network name (SSID):

1. Open a web browser and log on to open the Web Manager.
See [#unique_29](#) for more information, if necessary.
2. From any of the G54 Web Manager screen, click the **Gateway** menu link and then click the **Connection** submenu options link.

- Click **Wi-Fi** under the **Connection** submenu options to open the Gateway Connection Wi-Fi screen.

Gateway > Connection > Wi-Fi > Networks

Manage your Wi-Fi connection settings.

Primary Home Wi-Fi Network

Name	Frequency Band	MAC Address	Security Mode	
G34-D399	2.4 GHz	40:2B:50:FE:3D:52	WPA2WPA3-PSK (AES)	EDIT
G34-D399-5G	5 GHz	40:2B:50:FE:3D:53	WPA2WPA3-PSK (AES)	EDIT

AP Isolation: ☐ Enabled

Secondary Home Wi-Fi Network

Name	Frequency Band	MAC Address	Security Mode	
G34-D399-2	2.4 GHz	42:2B:50:FE:3D:53	WPA2-PSK (AES)	EDIT
G34-D399-5G-2	5 GHz	42:2B:50:FE:3F:54	WPA2-PSK (AES)	EDIT

AP Isolation: ☐ Enabled

Guest Wi-Fi Network

Name	Frequency Band	MAC Address	Security Mode	
G34Guest-D399	2.4 GHz	42:2B:50:FE:3D:55	WPA2-PSK (AES)	EDIT
G34Guest-D399-5G	5 GHz	42:2B:50:FE:3F:56	WPA2-PSK (AES)	EDIT

AP Isolation: ☒ Enabled

Network Options

Network Priorities: ☒ Disable ☐ Enable

Band Steering: ☒ Disable ☐ Enable

SAVE NETWORK SETTINGS

Change Wi-Fi network name (SSID) screen

- Click the **2.4 GHz EDIT** or **5 GHz EDIT** button in the Home Wi-Fi Network section to select the current Wi-Fi frequency range for your Wi-Fi home network.

Wi-Fi network setup screen

5. Ensure to select **Enable** in the **Wireless Network** field.
6. Enter a new network name in the **Network Name (SSID)** field.
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.
7. Enter a new network password in the **Network Password** field if you want to change it.



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

8. Select the **Show Network Password** checkbox to view your network password.
9. Enter the CAPTCHA code located in the **Type CAPTCHA Here** entry box.
10. Click **SAVE SETTINGS** to update your new SSID.

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.
See [#unique_29](#) for more information, if necessary.
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

WPS device connection screen

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

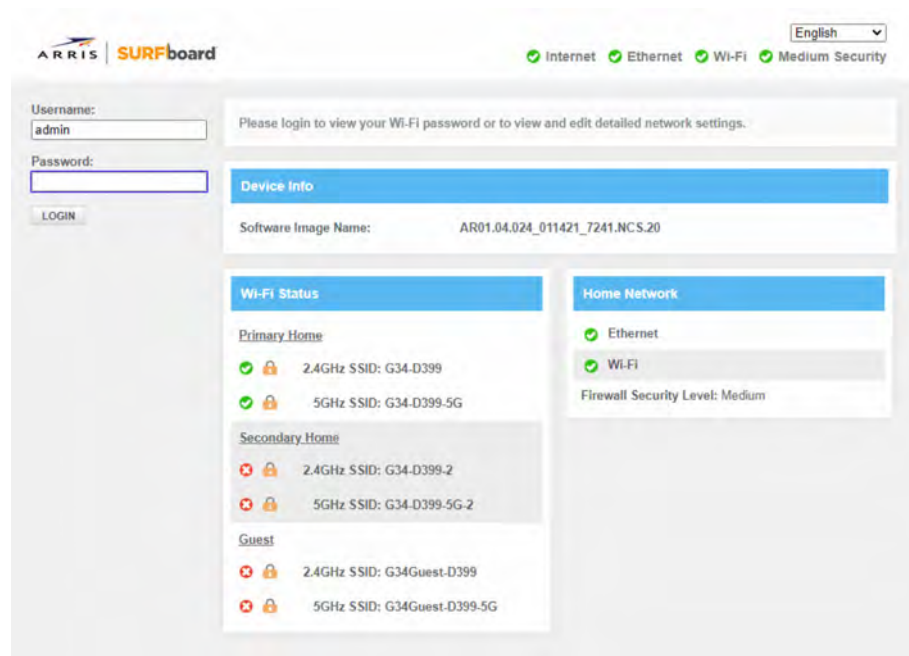
After you have successfully connected your G54 and your Wi-Fi devices, you should configure your G54 to protect your Wi-Fi network from unwanted and unauthorized access by any Wi-Fi devices that are within range of your Wi-Fi network. Although you have configured the network security for your G54, you 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.

Changing the login password

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

1. Open a web browser 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 on to your G54.

The G54 Login screen displays.



3. Type **admin** for the default username (case-sensitive) in the **Username** field.

4. Type your password (case-sensitive) in the **Password** field.
5. Click **LOGIN** to open the Web Manager.
6. Click the **User Account** main menu link to change the password.

The Account Management screen

7. Enter the current admin password in the **Current Password** field.
8. 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: **! @ # \$ % & ***
9. Enter your new admin password in the **Re-enter New Password** field.
10. Select the **Show Typed Password** checkbox to view the new passwords and confirm that both passwords match.
11. Enter the CAPTCHA code located in the **Type CAPTCHA Here** entry box.
12. Click **SAVE** to update your admin password.
13. Find a secure place to write down and keep your new password for future reference.

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 [#unique_34](#) or [#unique_35](#) to display the Gateway Firewall Security Level screens.
3. Select the security level that you want to set for your G54 firewall.
4. When done, click **SAVE SETTINGS**.

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.

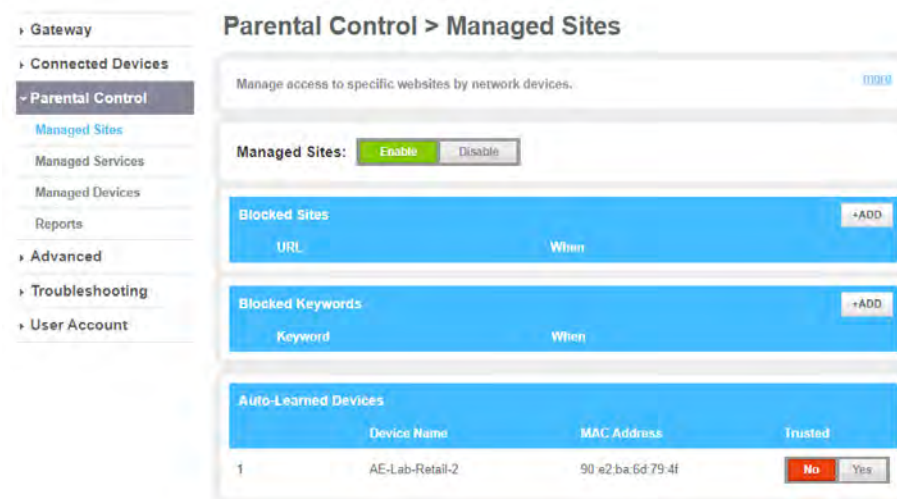


Note: Any Parental Control filters that do not include assigned ports, will apply to all ports. This also applies to MAC addresses.

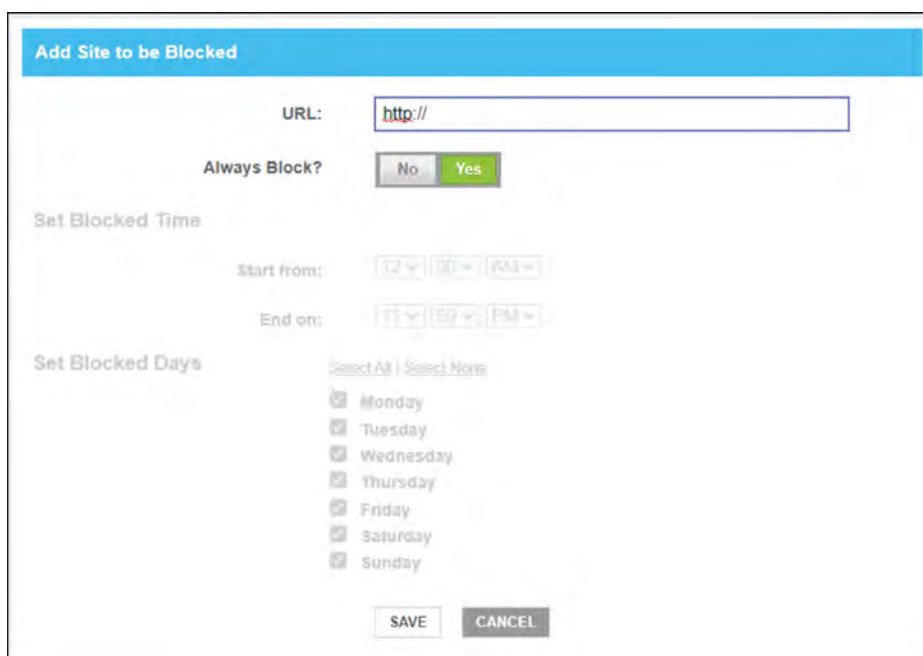
You can also link each user or client device on your home network to specific rules for login, time-access, and content filtering.

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



4. Click **+ADD** button in the Blocked Sites section to open the Add Site to be Blocked screen.



The screenshot shows a web interface titled "Add Site to be Blocked". It contains the following fields and controls:

- URL:** A text input field containing "http://".
- Always Block?:** Two buttons, "No" and "Yes". The "Yes" button is highlighted in green.
- Set Blocked Time:** Two time selection fields. "Start from:" is set to 12:00 AM, and "End on:" is set to 11:59 PM.
- Set Blocked Days:** A section with a "Select All" link and a "Select None" link. Below them are checkboxes for each day of the week: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, and Sunday. All checkboxes are checked.
- Buttons:** "SAVE" and "CANCEL" buttons at the bottom.

Add Site to be Blocked screen

5. To fully block a website, enter the website address in the URL field and then click the **Yes Always Block?** button.
6. Click **SAVE**.
7. Repeat steps 5 and 6 for each website that you want to block.
8. To block a website for specific days and times, enter the website address in the URL field and then click the **No Always Block?** button.
9. Select the **Start from** and **End on** times of the day in the Set Block Time section.
10. Select the days of the week in the Set Blocked Days section.
11. Click **SAVE**.
12. To manage network devices' access to specific services and applications, click **Manage Services** from the submenu and then click **Enable**.
13. Click **+ADD** button in the Blocked Services section to add a service to be blocked.

Managed Services screen - Add Blocked Service screen

14. Type the service that you want to block in the **User Defined Service** field.
15. Select **UDP**, **TCP**, or **TCP/UDP** for the port filter type from the **Protocol** drop-down list.
16. Enter the range of port numbers for the port filter range in the **Start Port** and **End Port** fields.
17. To fully block a service, click **Yes**, in the **Always Block?** field.
18. 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.
19. Click **SAVE** to save the changes.
20. To manage access to specific devices on your network, click **Manage Devices** from the submenu.

Manage Devices screen

21. To manage devices, click **Enable**.

22. 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.
23. 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.

Add Device to be Blocked

Set Blocked Device

Auto-Learned Devices:

Device Name	MAC Address
AE-Lab-Retail-2	90:e2:ba:6d:79:4f

Custom Device:

Device Name	MAC Address

Always Block?

Set Blocked Time

Start from:

End on:

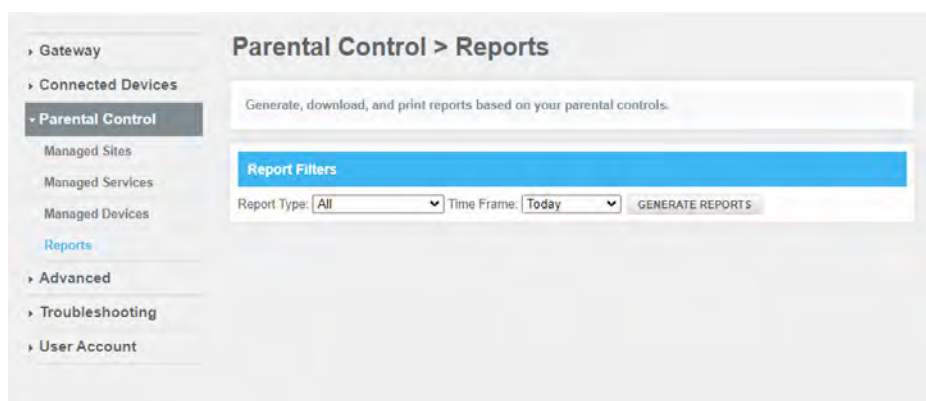
Set Blocked Days

[Select All](#) | [Select None](#)

- ☒ Monday
- ☒ Tuesday
- ☒ Wednesday
- ☒ Thursday
- ☒ Friday
- ☒ Saturday
- ☒ Sunday

Add Blocked device screen

24. To manually block a device, type the **Device name** and the **MAC address** fields.
25. To fully block a device, click **Yes**, in the **Always Block?** field.
26. 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.
27. Click **SAVE** to save the changes.
28. To generate, download and print reports based on your parental controls, click **Reports** from the sub menu.



Generate report screen

29. Select the report type from the **Report Types** drop-down list and the time frame from the **Time Frame** drop-down list.
30. 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.



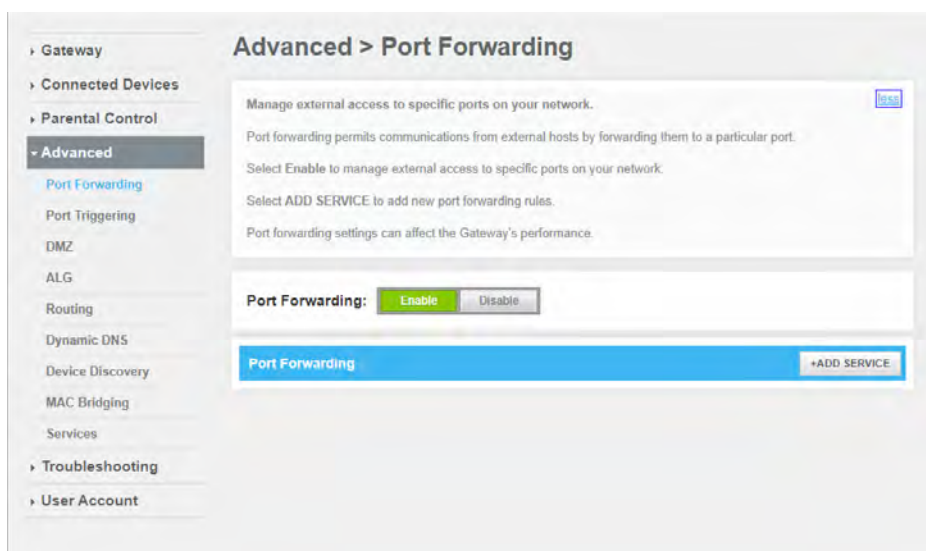
Note:

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.

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.



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

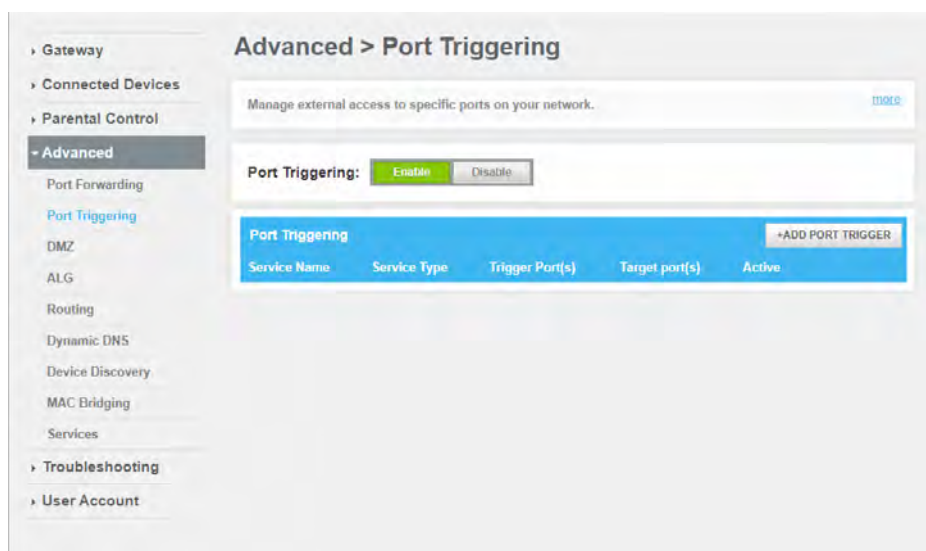
You can use Port Triggers to set up your G54 to monitor outgoing traffic on specific ports on your home network. Port Triggering can be useful for some applications such as video conferencing, online chatting, and online gaming that may require specific port numbers with bi-directional traffic to function 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. See [#unique_39](#) for more information.

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.

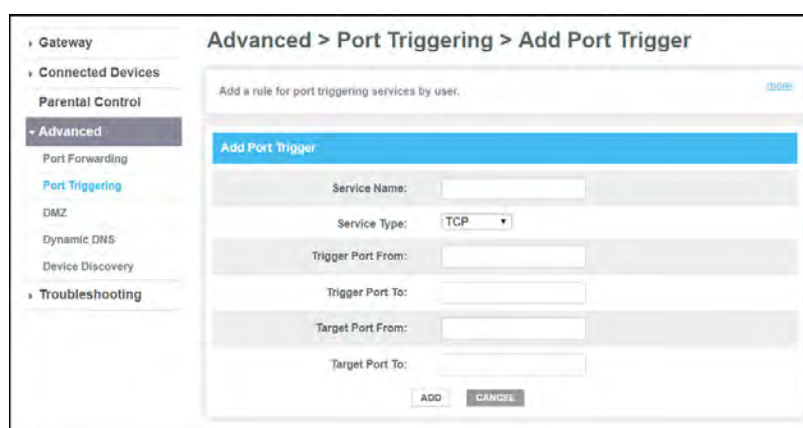


Advanced Port Triggering screen

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

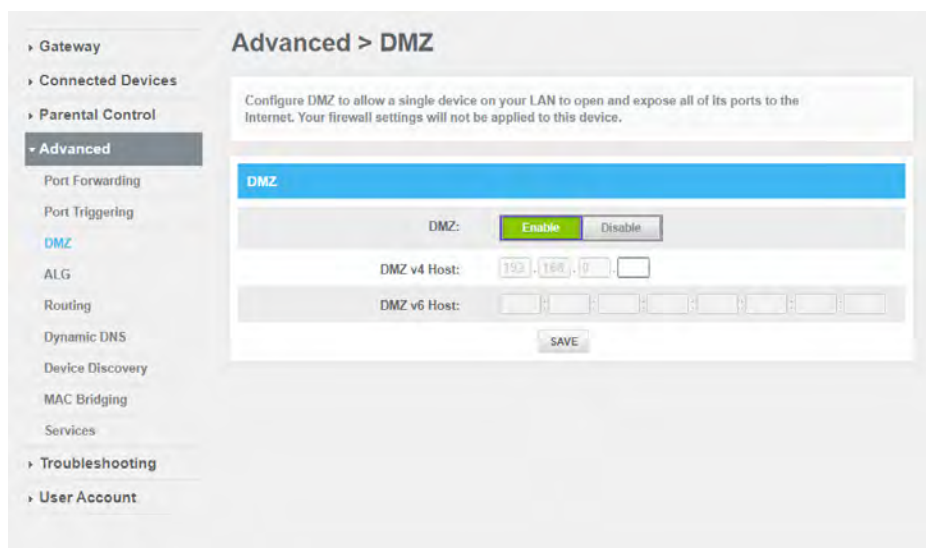


Warning: The gaming DMZ host is not protected by the G54 firewall. It is exposed to the Internet which makes it vulnerable to attacks or hacking from any client device (e.g., computer or laptop) on the Internet. Consider carefully before configuring a device to be in the DMZ.

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.



Advanced DMZ host 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

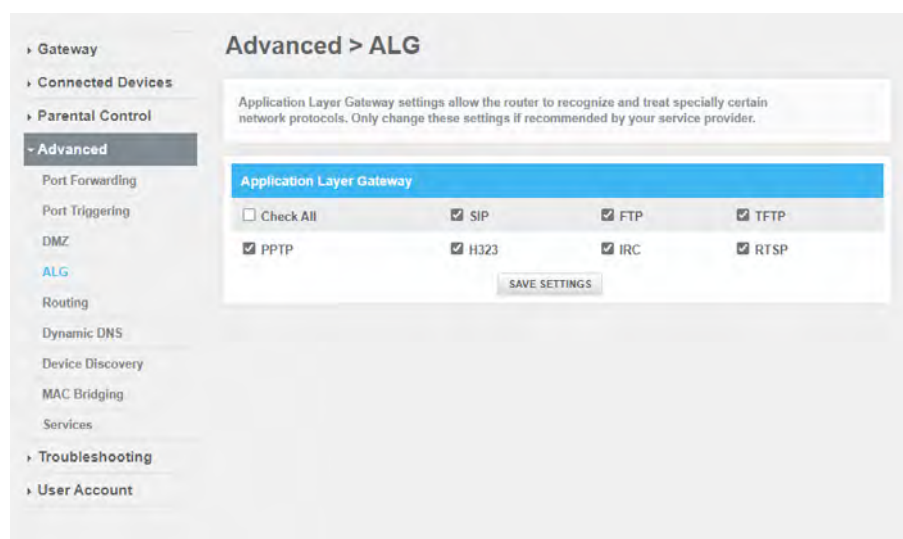
Application Layer Gateway (ALG) allows your router to recognize and treats certain network protocols.



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.



Advanced ALG screen

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

Restoring the default configuration settings



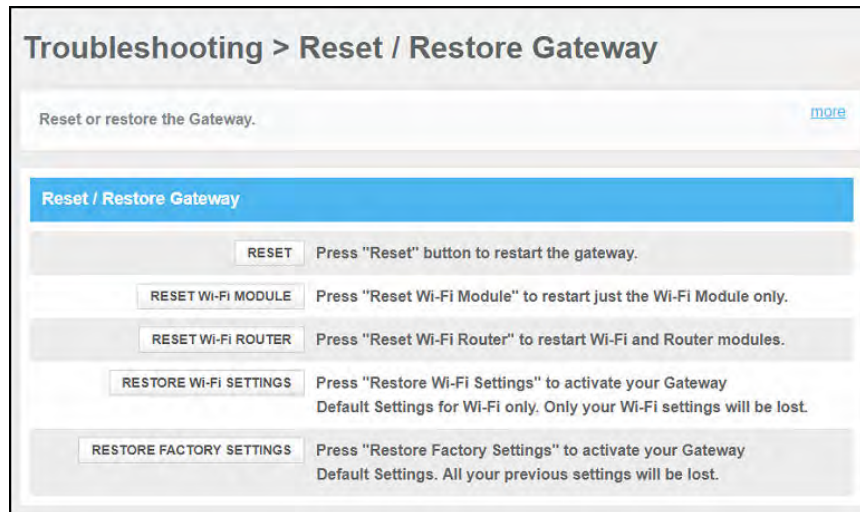
Warning: This action will delete your current G54 configuration settings and allow you to restore the default (original) G54 configuration.



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.

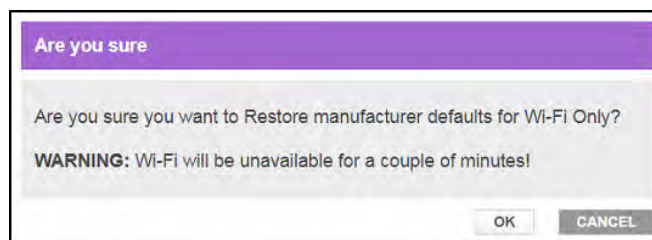
To open the Restart/Restore Gateway screen:

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.

Advanced > Routing

The RIP protocol is used to exchange the routing information between the gateway and headend. [Help](#)

If Routed Subnet is enabled, the Routed Subnet Address will be advertised with the next hop as the CM IP address.

RIP (Routing Information Protocol)

RIP:

Interface Name:

RIP Send Version:

RIP Receive Version:

Update Interval: sec

Default Metric:

Authentication Type:

Authentication Key & ID: ID:

Neighbor:

Routed Subnet Configuration

Routed Subnet:

Routed Subnet Address:

Routed Subnet Netmask:

Routing Information screen

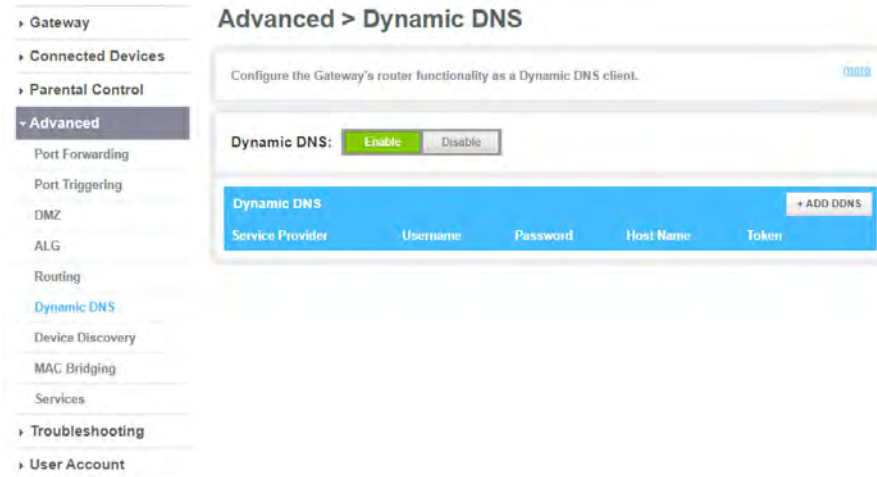
3. Click **Enable** button to set up the routing information.
4. Specify the details for the RIP (Routing Information Protocol) and Routed Subnet Configuration.
5. Click **SAVE** to save the changes.

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.



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.

Advanced Device Discovery screen



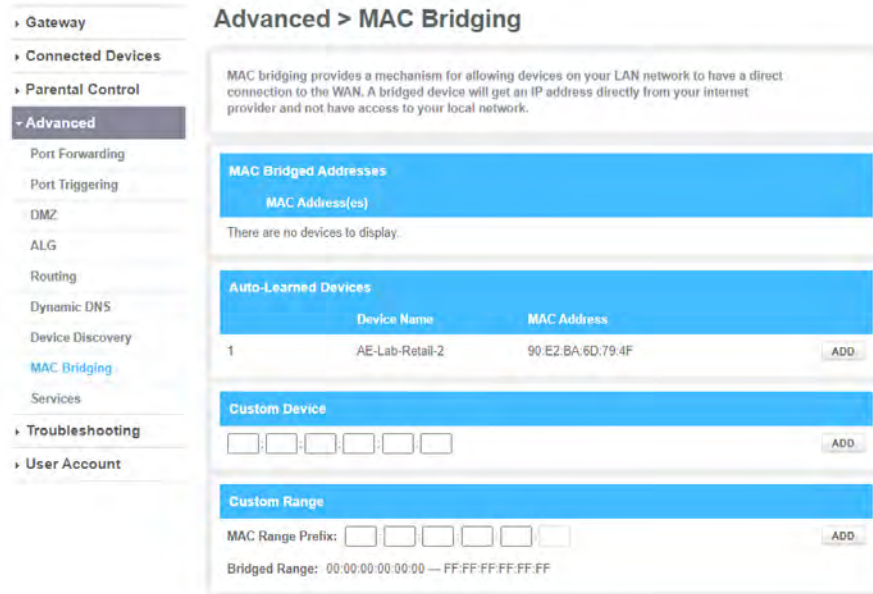
3. Click the **Enable** button for the managing UPnP.
4. Enter the time in the **Advertisement Period** field to allow your gateway to advertise the UPnP information.
5. Enter the number of steps each UPnP advertisement is allowed to propagate before disappearing in the **Time To Live** field.
6. Click 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

MAC Bridging screen

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

Managing your Wi-Fi cable modem and connected networks

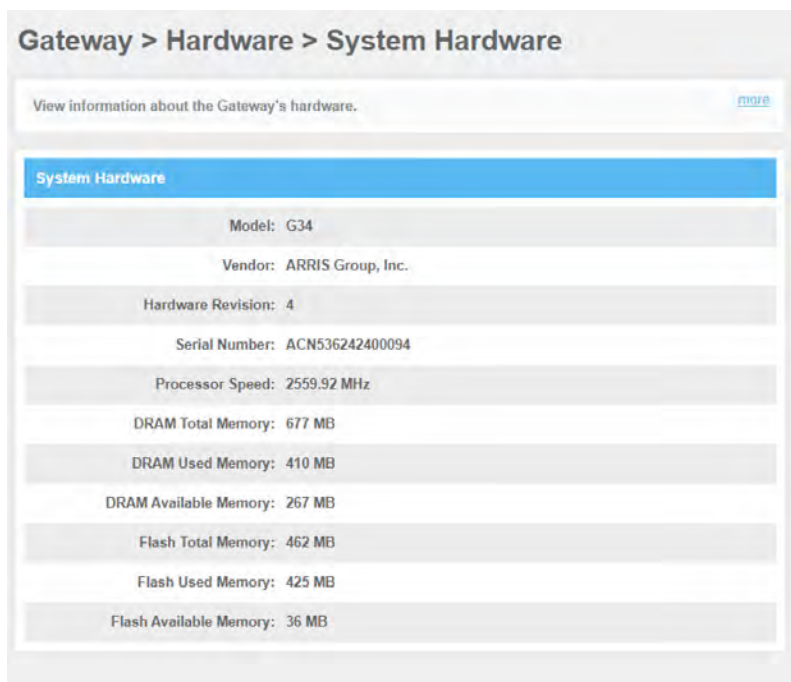
You can also use the Web Manager to view and monitor the network configuration settings and operational status of your G54 .

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 to display the Gateway System Hardware screen.



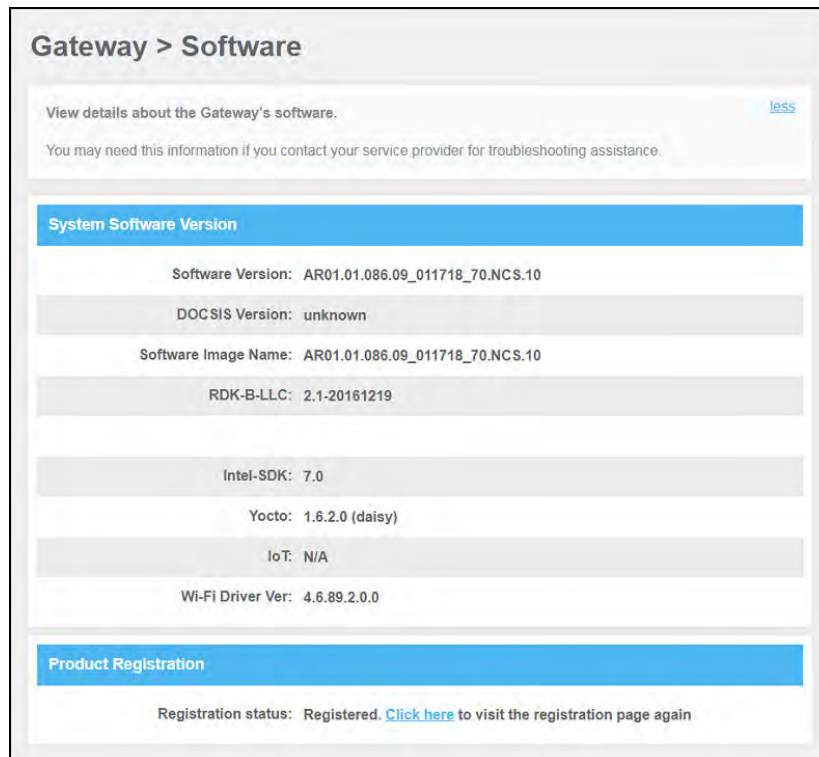
System Hardware screen

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 to display the Gateway Software screen.



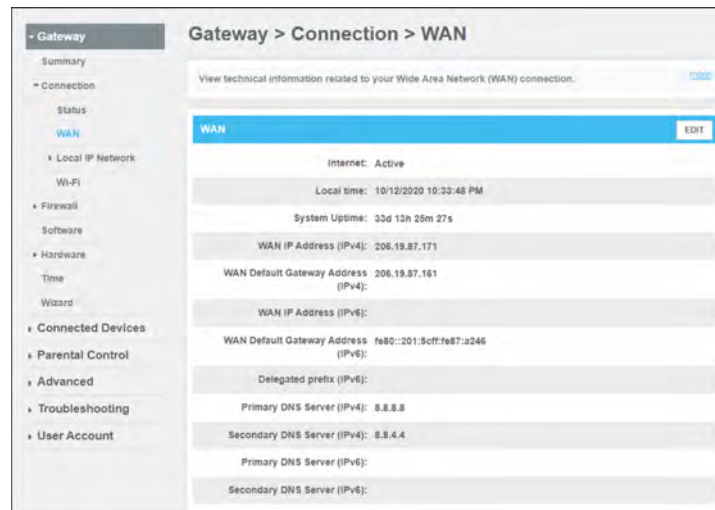
Software information screen

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.

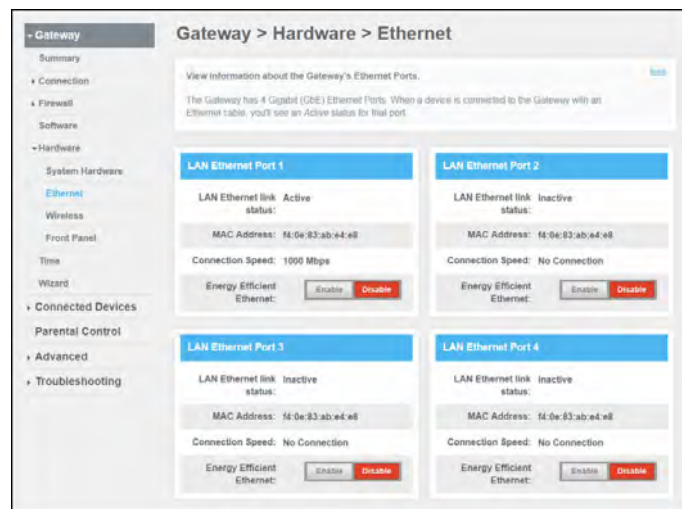


Connection WAN screen

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 Ethernet port 4.

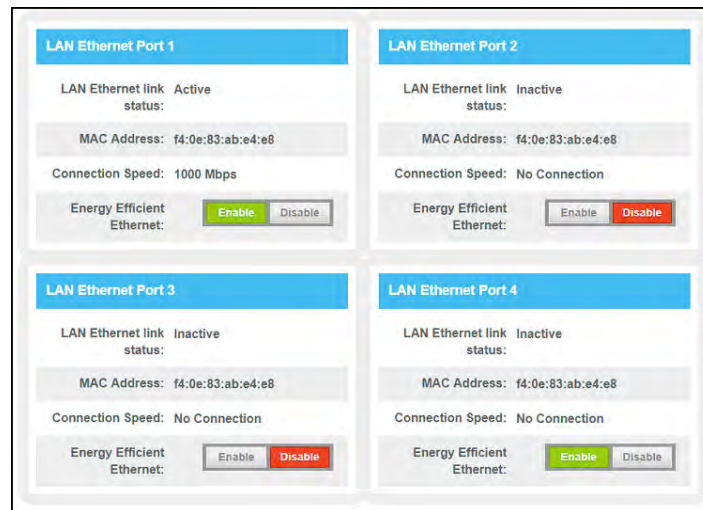
From the G54 Web manager screen, click the **Gateway** menu link.

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



Gateway Hardware Ethernet screen

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



LAN Ethernet Port screen

Reboot your G54

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

- [#unique_51](#)
- OR
- [#unique_52](#)

Restoring the default configuration settings



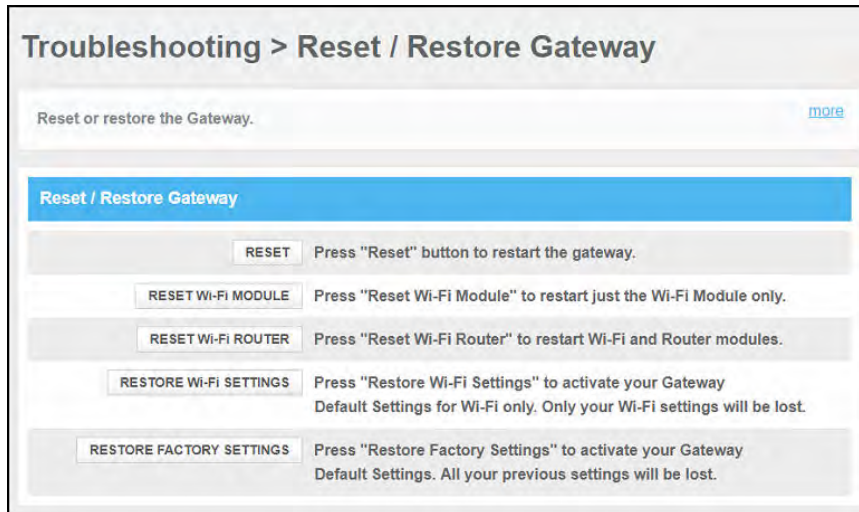
Warning: This action will delete your current G54 configuration settings and allow you to restore the default (original) G54 configuration.



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.

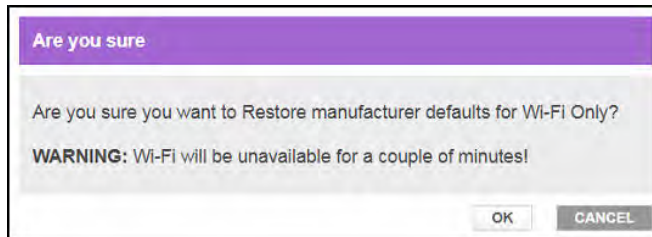
To open the Restart/Restore Gateway screen:

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. See [#unique_54](#) for more information.

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.

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