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Chapter 1: Product Overview

Thank you for choosing the model RAC2V1S router, manufactured by Sagemcom for use with Spectrum services. The model RAC2V1S router (referred to throughout this manual as the RAC2V1S) is built with a host of features to deliver maximum speed and performance:

- **Wireless-AC technology.** Using the latest 802.11ac wireless technology, the router provides you with maximum speed and range without the hassle of cumbersome wires.

- **Double your bandwidth.** The dual-band feature supports next-generation technology while providing compatibility for legacy devices. Designed to avoid wireless interference, the model RAC2V1S router ensures high WiFi speeds and smooth, reliable connections for gaming, HD video streaming and file transfers.

- **Security.** Protects your network from intruders using WPA2 encryption and an SPI firewall.

- **Customizable to your needs.** The web graphical user interface (GUI) lets you easily tailor the router settings and manage your devices.

- **Parental controls.** Enables you to easily control access to the internet.

- **Built-in USB port and DLNA media server.** The RAC2V1S lets you easily plug-in your USB storage devices or printer and share them throughout your network.

- **Gigabit Connections.** Transfers files at blazing fast speeds with Gigabit Ethernet technology.

- **IPv6 enabled.** Built with IPv6 technology, the RAC2V1S supports next-generation networks.

This chapter will quickly familiarize you with the hardware and review important information which you will need to install the router.
Chapter 1: Product Overview

Package Contents

• Model RAC2V1S router.
• Power adapter.
• Ethernet cable.
• WiFi configuration labels.
• Quick Install Guide.
• Safety Sheet.

Hardware Overview

The lower front side of the router has a status light that can have the following conditions:

• Fast flashing blue indicates booting up.
• Pulsing blue (blue on/off) indicates connecting to the internet.
• Solid blue indicates connected to the internet.
• Flashing red (red on/off) indicates connectivity issues.
• Alternating red and blue indicates the device should not be interrupted, such as during a firmware upgrade.
• Solid red indicates a critical issue.
Chapter 1: Product Overview

The back side of the router has the following features:

1. Factory Reset. Resets the RAC2V1S to factory settings.
2. WPS. Can be used for both the 2.4 and 5GHz networks if enabled through the web GUI.
3. LAN network ports. Connects to your devices using network (Ethernet) cables.
4. Internet port (or WAN Network port). Connects to the modem using the provided Ethernet cable.
5. USB port. Connects to USB storage devices or printers.
6. Power input. Connects to the provided power adapter.
Each network port is flanked with a pair of indicator lights. See the descriptions below to understand what each type of light indicates.

<table>
<thead>
<tr>
<th>Light Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>Off. No Ethernet link present.</td>
</tr>
<tr>
<td>Solid Green LED</td>
<td>Solid Green LED. Ethernet link present.</td>
</tr>
<tr>
<td>Flashing Green LED</td>
<td>Flashing Green LED. Passing Ethernet traffic.</td>
</tr>
<tr>
<td>Solid Orange LED</td>
<td>Solid Orange LED. Gigabit Ethernet link present.</td>
</tr>
<tr>
<td>Solid Orange LED with Flashing Green LED</td>
<td>Solid Orange LED with Flashing Green LED. Gigabit Ethernet link present with passing Ethernet traffic.</td>
</tr>
</tbody>
</table>
Chapter 1: Product Overview

Labels
The labels are located on the back of the router. They contain important information that you will need to set up the router, such as your WiFi Network Name (SSID), WiFi Password (Network Key), Router login, Username and Password, as well as your WAN MAC address and serial number.
Chapter 1: Product Overview

Router Positioning
The model RAC2V1S router provides network access from anywhere within range of your wireless (WiFi) network. However, WiFi signal strength diminishes over distance as it passes through the construction material of your home such as drywall, metal and water.

For best results, follow the guidelines below.

• Improve range by positioning the router at a central location and minimizing the number of walls or ceilings between the router and network devices.

• Ensure optimum reception by positioning your device so that the signal moves straight through drywall or open doorways instead of at an angle.

• Maintain wireless signal strength by positioning the router away from glass, metal, water, mirrors, brick and concrete.

• Avoid signal interference by keeping the router away from electrical devices such as microwaves, baby monitors and wireless headsets.

• Keep the router and its cables accessible by placing it in an open area near a power outlet.
Chapter 2: Getting Started

Before you Begin

This chapter will outline the procedures required for installing and configuring the router.

Installing the router is comprised of two parts:

• Installing the hardware.
• Configuring the router through the web GUI.

Before you begin, please review the system requirements outlined below and write down the router information located on the router’s label.

System Requirements

Wireless Network Requirements:
WPA or WPA2 security enabled device.

Web-based Graphic User Interface Requirements:
Computers with Windows®, Macintosh® or Linux®-based operating system.

Supported browsers:
• Internet Explorer 11 or higher
• Firefox 44 or higher
• Chrome 48 or higher
• Safari 8 or higher

For mobile:
• Safari for iOS 9 and higher
• Chrome for iOS 9 and higher
• Opera 22.0.1485.78487 for Android 4.4 and higher
• Chrome 35.0.1916.141 for Android 4.4 and higher
Chapter 2: Getting Started

Router and Account Information
For future use, print this page and write the router information below.

<table>
<thead>
<tr>
<th>Network Names (SSIDs):</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Password:</td>
<td></td>
</tr>
<tr>
<td>Web GUI Address (Router login):</td>
<td></td>
</tr>
<tr>
<td>Web GUI Username (Router login Username):</td>
<td></td>
</tr>
<tr>
<td>Web GUI Password (Router login Password):</td>
<td></td>
</tr>
</tbody>
</table>

Install your Wireless Router

**NOTE:**
If there is an Ethernet cable currently connecting your modem to another device, disconnect the Ethernet cable from the device before you install the router.

1. Unplug your modem.
2. Plug your modem back in. Wait approximately 2 minutes until your modem turns on.
3. Connect one end of the Ethernet cable to your modem, and the other end to the yellow internet port on the router.
4. Connect the power adapter to the power input of the router, then plug it into an outlet. The light will be flashing blue indicating that the device is booting up, and will turn solid blue when connected to the internet.
5. On your device (PC, laptop, phone, tablet, etc.) open the software utility that manages WiFi connections.
6. Find the Network Name (SSID) as listed on the label of the router.
Chapter 2: Getting Started

NOTE:
When searching on your device, there are 2 network names that may appear:
- MySpectrumWiFixx-2G
- MySpectrumWiFixx-5G
(where xx is specific to the router)
If you see the name ending in ‘5G’, your device is 5GHz-capable. Connecting to the ‘5G’ network may provide a better experience.

7. Enter the Network Password listed on the label of the router. You should now be connected to the internet.
If you want to customize the router settings further, see the instructions below.
Configure your Wireless Router

The model RAC2V1S router can be easily configured to meet your wireless needs. This section provides instructions on how to:

- Sign in to the web GUI
- Change your local access password
- Change your network name and password
- Configure your WiFi
- Enable WPS
- Change your time zone
- Customize your device lists
- Set up parental controls

Configuration of the router begins with signing into your Web GUI.

Sign in to the Web GUI


2. Enter the router login username and password listed on the back of the router. (You can change this later.)

The default username and password are as follows:

   Username: admin
   Password: admin

The router’s home page (or dashboard) will load after a few seconds.
Chapter 2: Getting Started

A Tour of your Web GUI Dashboard

Settings

Configures router reset and local network settings.

Router Settings

Provides access to parental controls, passwords and your firewall.

Access Control

Connectivity

Provides status and configuration information about your internet connection.

Internet Connectivity

Connected
Chapter 2: Getting Started

Configures 2.4GHz WiFi settings.
The connection status appears below the network identification.

The network name (SSID) appears if the option was selected to broadcast the SSID and the speed.

Devices connected to the 2.4GHz WiFi are displayed.

Configures 5GHz WiFi settings.
The connection status appears below the network identification.

The network name (SSID) appears if the option was selected to broadcast the SSID and the speed.

Devices connected to the 5GHz WiFi are displayed.
Chapter 2: Getting Started

Provides statistics on LAN Ethernet ports.

Storage

Configures or safely removes USB-connected devices. Information on connected devices is displayed below the icon.
A Tour of your Web GUI (Mobile Edition)

You can also access the web GUI through your mobile device (mobile phone, tablet, etc.). The mobile version of the web GUI allows you to access the same controls as the PC version. The dashboard will appear condensed as follows to fit your mobile screen.
Chapter 2: Getting Started
Chapter 2: Getting Started

Change your Local Access Password
Your local access username and password provide access to your web GUI account. Do not share this information as it allows users to change the router settings or disable your internet connection.

1. Sign in to the web GUI.
2. Click on Access Control.
3. Click on the User tab.
4. Ensure “admin” is selected for the Username.
5. Enter your old password in the Old Password field.
6. Enter your new password in the Password field.
7. Confirm the new password in the Confirm Password field.
8. Click Apply.

Change your Wireless Network Name and Password
Your wireless (WiFi) network name and password provide internet access to your network. Provide this information to users whom you want to give access to your wireless internet connection.
1. Sign in to the web GUI.
2. Select the network of interest (2.4GHz or 5GHz).
3. Select the Basic tab.
4. In the Basic section, enter the new network name in the SSID field.
5. By default, your network name will be broadcast. See directions below to disable.
6. In the Security Setting section, select the security encryption mode. The default is WPA2 Personal. It is highly recommended that you retain the default setting unless you have devices that do not support WPA2.
7. Enter the new WiFi Password in the WiFi Password field.
8. Confirm the WiFi Password.
9. Click Apply.
Chapter 2: Getting Started

Configure your WiFi Network

Turn your WiFi ON/OFF

1. Sign in to the web GUI.
2. Select the network that you want to turn on or off. By default, both the 2.4GHz and 5GHz WiFi networks are enabled.
3. Select the Basic tab.
4. In the Basic section, slide the Enable switch to ON to access the network. Or, slide the Enable switch to OFF to power off the network.
5. Turning the network OFF will cause the Status to change from UP to DOWN. The other options in the Basic tab will no longer be accessible.
6. Click Apply.
Chapter 2: Getting Started

The network will be shown as Disconnected in the dashboard.

**Broadcast your Network Name (SSID)**

Broadcasting your network name (SSID) allows you to more easily detect and identify your WiFi network. By default, your SSID Broadcast is enabled. Should you wish to stop broadcasting your SSID, follow the instructions below.

1. Sign in to the web GUI.
2. Select the network you want to stop broadcasting.
3. In the Basic Tab, uncheck the Visible box.
4. Click Apply.
5. Should you wish to enable SSID broadcast, return to this screen and check the Visible box.
Change the WiFi Channel

You may want to change your WiFi network channel to avoid other WiFi networks or interfering devices such as microwaves. If you select “Auto,” the router will select the best available channel for your wireless network.

1. Sign in to the web GUI.
2. Select the network where you want to change the WiFi channel.
3. In the Basic Tab, select the drop-down menu under Channel Selection then select the channel you want to use.
4. Click Apply.

Enabling WPS Push Button Pairing

WPS (WiFi Protected Setup) push button pairing provides an easy way to join devices to your WiFi network with the push of a button. By default, WPS is disabled. To enable it, follow the instructions below.

1. Sign in to the web GUI.
2. Select the network you want to configure. Enable WPS on both WiFi networks to easily pair devices to either network using the WPS button.
3. In the WPS Tab, slide the Enable WPS switch to ON.
4. Under WPS Mode, select both Push Button and PIN defaults.
5. Click Apply. The connection methods will display at the bottom of the screen.
Adding a Device Using WPS Pairing

You can now connect a device by pressing the WPS button located on the router. On the back of the router, press and hold the WPS button for 5 seconds. Alternatively, select the Wi-Fi Protected Setup button on the router GUI WPS Setup screen (see figure above). The light on the router will flash indicating that the WPS function is activated.

You can then enable pairing with your device by one of four methods.

1. Go to your laptop, tablet or smartphone and select the network you want to connect to. The device should connect as soon as you select the WiFi network name.

2. If the device has a WPS button, select the Wi-Fi Protected SETUP button on the router WPS Setup screen (see figure above), then press the WPS button on the device within 2 minutes.
Chapter 2: Getting Started

3. If your device supports WPS but does not have a button, it may request a gateway PIN that can be generated from the router. Select the Generate New Pin Number button on the router WPS Setup screen (see figure above) to generate a PIN. Once you enter this PIN in the device, it will authenticate itself and connect to the network.

4. If your device supports WPS but does not have a button, it may generate a device PIN. Enter this PIN in the Device pin field on the router WPS Setup screen (see figure above), and then click the Register button.

Change your Time Zone
You may want to change your time zone to ensure that times for parental controls are administered accurately.

1. Sign in to the web GUI.
2. Click on Router Settings.
3. Click on the Maintenance tab.
4. Click on Internet Time (NTP) in the navigation panel on the left side of the screen.
5. Select your time zone from the pull-down menu under Time Zone.
   - DST Enabled options automatically adjust for daylight savings time
   - Options without the preface “DST” can be used where daylight savings time is not followed.

6. Click Apply.

**Customize your Device List**
Customizing your device list allows you to change the name and icon of your devices to help you easily identify those that are connected to your network.

1. Sign in to the web GUI.

2. Search for the device to be configured under the network it is connected to, and hover the cursor over the device. If the cursor changes to the hand cursor, the device is active. Click to open it.

3. Click on the device you want to customize.

4. Select the Device Info tab.

5. Type the name you want to appear in the Friendly Name field to identify your device.
Chapter 2: Getting Started

6. Click on the dropdown menu in the Icon field, then select the icon you want displayed for your device.

7. Click Apply. Note that the friendly name for the device will appear in the header when you return to this screen.

How to set up Parental Controls

Parental Controls can be configured to:

- Limit access to the internet at certain times on particular devices.
- Block certain websites across all devices.
Chapter 2: Getting Started

To access parental controls:

1. Sign in to the web GUI.
2. Click on Access Control.
3. Select the Parental Control tab.
4. Click on Internet access control planning in the navigation panel under the Parental Control tab.

Limit Internet Access times

1. In the Internet access control planning area, click on the desired device or, click on All devices. The Internet access control planning screen shown below will display.

![Internet access control planning](image)

2. Review the internet access control planning schedule. Click and drag across a block of time during which you want to limit internet access, then click Deny.
3. After you have made a selection for each day of the week, click Apply.
Blocking Web Sites

1. Sign in to the web GUI.
2. Click on Access Control.
3. Click on URL Filter in the navigation panel under the Parental Control tab.
4. On the URL Filter screen, click on the Add Address button. You can block multiple websites by clicking on the Add Address button multiple times.
5. Make sure the Enable option is ON.
6. Type or copy/paste the website address you wish to block into the internet Link box.
7. Click Apply.
8. If you want to unblock a website, click on the delete icon under options.

Entering a site on the blocked sites list prohibits all devices connected to your network from accessing the site at all times of the day.
Chapter 3: USB Sharing

The router lets you share storage and media files as well as printers and multi-function devices with others on your network. This chapter provides instruction on how to:

• Share files using a USB storage device.
• Share a printer or multi-function device.

USB Storage

Files may be shared within your network by connecting a USB storage device (e.g. flash drive, external hard drive, etc.) to the router. All users connected to your network will be able to view, add, modify and delete any files on your storage device.

Connecting a Storage Device

To connect a USB hard drive or flash drive, attach it to the USB port located on the back panel of the router.

The RAC2V1S supports USB storage. The following file systems are supported: FAT16, FAT32, NTFS, Ext2, Ext3, HFS, HFS+. Some file systems function as read only depending on the permissions.

WARNING:

To safeguard your data, ensure that you:

• Always keep a second copy (backup) of all data.
• Stop the USB storage device BEFORE removing it from the router.
Chapter 3: USB Sharing

Enabling File Sharing

File sharing is enabled by default. Should you need to enable it manually:

1. Sign in to the web GUI.
2. Click on Router Settings.
3. Select the Media tab.
4. In the File Sharing section, slide the tab to **ON**.
5. Click Apply.

**Media Sharing**

Enabling DLNA (Digital Living Network Alliance) allows you to play media files such as pictures, music and movies through media devices such as game consoles, mobile video players and other network connected devices.
Chapter 3: USB Sharing

DLNA is off by default. To enable DLNA:

1. Sign in to the web GUI.
2. Click on Router Settings.
3. Select the Media tab.
4. In the DLNA section slide the tab to ON.
5. Click Apply.

Safely Disconnecting a Storage Device

WARNING:
To safeguard your data, ensure that you:

- Always keep a second copy (backup) of all data.
- Stop the USB storage device **BEFORE** removing the USB connection.
Chapter 3: USB Sharing

To safely disconnect a USB storage device from the router, you must first eject it. Wait at least 5 minutes after connecting a USB storage device before ejecting it from your drive.

To safely disconnect a USB storage device from the router:

1. Sign in to the web GUI.
2. Under the USB icon, click on the device you want to eject.
3. Select the Device Info tab.
4. Click the Eject button.
5. If the ejection was successful, you will then be taken back to the web GUI dashboard and the device will no longer appear.
6. If the Eject button does not work, select the Force to eject checkbox, then click on the Eject button again.
Accessing Shared Files

If you want to access USB storage devices that are connected to the router, follow the instructions below according to your computer and operating system.

For Windows:
1. Connect a USB storage device to the router’s USB port.
2. Open the File Explorer.
3. Enter \192.168.1.1 in the address bar.

Your window will now show your connected USB storage device.

WARNING:
To safely disconnect a USB storage device, please ensure that you follow the directions outlined in this manual (page 31). It is your responsibility to create data backups prior to using USB storage devices with your Wireless Router.

For Mac:
1. Connect a USB drive to the router.
2. On your Mac, click on Go, then Connect to Server.
3. Type smb://192.168.1.1 under Server Address.
4. Click Connect.
5. You will be asked for your Mac password. Enter the password and click Connect.
6. A window will appear with the contents of your USB drive.
7. You can locate the USB storage device under Computer.

WARNING:
To safely disconnect a USB storage device, please ensure that you follow the directions outlined in this manual (page 31). It is your responsibility to create data backups prior to using USB storage devices with your Wireless Router.
Chapter 3: USB Sharing

**Printer Sharing**

Printers may be shared within your network by connecting a USB printer device to the router. All users connected to your network will be able to use the device attached to the router.

**Connecting a Printer**

Printer sharing is enabled by default. To connect a printer, attach it to the USB port located on the back panel of the router.

**NOTE:**
- Check your printer’s specifications to ensure that it supports IPP/1.1 as not all USB printers support this protocol.
- Ensure the printer driver supports your operating system.
- To ensure that your printer driver is working properly on a PC, you can connect the printer to the PC directly before attempting to install the printer over the network.

**Configuring a Printer**

**Configuring a Printer for Windows XP**

1. Start the Add Printer Wizard:
   - Click Start.
   - Select Settings → Printers and Faxes → Add Printer. OR
   - Select Control Panel → Printers and Faxes → Add Printer.
2. Choose “A network printer, or a printer attached to another computer.” Click Next.
Chapter 3: USB Sharing

3. Choose "Connect to a printer on the internet or on a home or office network."

4. Enter the URL: http://192.168.1.1:631/IPP.

5. Click Next.

The specific URL may vary for different models of printer. Refer to the printer manufacturer's documentation. Some common printer URLs are:

- http://192.168.1.1:631/IPP/port1

**NOTE:**
This step will fail if your printer is not connected or does not support IPP.

You may also have to power-cycle your printer when changing USB hosts.

6. Choose correct printer driver. Click Ok.
Chapter 3: USB Sharing

If the printer was previously installed on this PC, then the driver should appear in the list under the proper manufacturer and printer name.

Check the bottom of the list for your manufacturer. Printers are not always listed alphabetically.

If your driver does not appear, you will need to locate the correct driver and click Have Disk to install it.

7. (Optional). You can choose to set this printer as your system Default Printer. Click Next.

8. If everything is configured correctly, the printer setup Wizard will display the message, "You have successfully completed the Add Printer Wizard." Click Finish to complete.

Configuring a Printer for Windows 7

1. Start the Add Printer Wizard:
   • Click Start.
   • Select Devices and Printer → Add Printer. OR
   • Select Control Panel → Devices and Printer → Add Printer.
Chapter 3: USB Sharing

2. Choose "Add a network, wireless or Bluetooth printer." Click Next.

3. Skip the search by clicking "The printer that I want is not listed."

4. Choose "Select a shared printer by name."
   • Enter the URL: http://192.168.1.1:631/IPP.
   • Click Next.
Chapter 3: USB Sharing

The specific URL may vary for different models of printer. Refer to the printer manufacturer's documentation. Some common printer URLs are:

- http://192.168.1.1:631/IPP/port1

NOTE:
This step will fail if your printer is not connected or does not support IPP.
You may also have to power-cycle your printer when changing USB hosts.

5. Choose correct printer driver. Click Ok.
If the printer was previously installed on this PC, then the driver should appear in the list under the proper manufacturer and printer name. If your driver does not appear, you will need to locate the correct driver and click Have Disk to install it.

6. (Optional). You can choose to set this printer as your system Default Printer by selecting the checkbox next to "Set as default printer." Click Next.

7. If everything is configured correctly, the Wizard will display the message, "You have successfully completed the Add Printer Wizard." Installation can be verified using the "Print Test Page" button. Click Finish to complete.
Chapter 3: USB Sharing

Configuring a Printer for Windows 10

1. Click Start, then go to settings 🛠.

2. Select Devices → Add printers & scanners, OR

3. Select Control Panel → Devices and Printer → Add a printer.

4. Skip the search by clicking "The printer that I want isn't listed."
5. Choose "Select a shared printer by name."

6. Enter the URL: http://192.168.1.1:631/IPP.

7. Click Next.
Chapter 3: USB Sharing

The specific URL may vary for different models of printer. Refer to printer the manufacturer's documentation. Some common printer URLs are:

- http://192.168.1.1:631/IPP/port1

**NOTE:**

This step will fail if your printer is not connected or does not support IPP.

You may also have to power-cycle your printer when changing USB hosts.

8. Choose the applicable printer driver, then click OK.

If the printer was previously installed on this PC, then the driver should appear in the list under the proper manufacturer and printer name.

If you don’t see your printer, check the bottom of the list for your manufacturer. Printers are not always listed alphabetically.
9. If your driver does not appear, you will need to locate the correct driver and click Have Disk to install it.

10. If everything is configured correctly, the Wizard will display the message, "You've successfully added 'your printer name' on 'IP address'.” Click Next.

11. (Optional). You can choose to set this printer as your system Default Printer by selecting the checkbox next to "Set as the default printer.”

12. Installation can be verified using the Print a test page button. Click Finish to complete.
Chapter 3: USB Sharing

Configuring a Printer (MAC)

1. In the "Print & Fax" dialog, click + to add a printer.
2. Click the IP tab.
   • Change the protocol to IPP.
   • Set address to http://192.168.1.1:631/IPP
   • Set Queue name to (blank).
   • Under Print Using, choose "Select a device driver to use."

The specific URL may vary for different models of printer. Please refer to printer manufacturer's documentation. Some common printer URLs are:

- http://192.168.1.1:631/IPP/port1
Chapter 3: USB Sharing

NOTE:
This step will fail if your printer is not connected or does not support IPP. You may also have to power-cycle your printer when changing USB hosts.

3. Locate and select your printer’s specific driver. Click Add.

![Driver selection screen]

4. If everything is in order, the printer will be listed. The status will read as "Idle" and will be lit as green.
Chapter 4: Administration

Restarting the Router

Occasionally, the router may encounter difficulties in connecting to the internet and you may need to restart the router. There are three ways you can do this:

- Disconnecting then reconnecting the power cable
- Through the web GUI
- Using the reset button

Disconnecting and Reconnecting the Power Cable

1. Unplug the router power cable from the power outlet.
2. Wait 2 minutes, then plug the power cable back into the power outlet.
3. If this procedure does not work, try one of the options below.

Web GUI
Chapter 4: Administration

1. Sign in to the web GUI.
2. Click on Router Settings.
3. Select the Maintenance tab.
4. Click on Resets in the navigation panel on the left side of the screen.
5. In the Restart Gateway section, click the Restart button.

Reset Button
The reset button is located on the back panel of the router. Press and hold the button for less than 15 seconds, then release for a reboot.

Press and hold for 15 seconds or more for a factory reset.

Back Up and Restore Router Configuration
If you reset the router to its factory defaults, some customized settings will be lost. Follow the directions below to backup and restore the router settings. Restoring to factory defaults will reset the network name and password to those on the router label.
Chapter 4: Administration

Back Up Router Configuration
1. Sign in to the web GUI.
2. Click on Router Settings.
3. Select the Maintenance tab.
4. Click on Backup & Restore in the navigation panel on the left side of the screen.
5. In the Backup section, click on the Backup Configuration button.

Restore Router Configuration
1. Sign in to the web GUI.
2. Click on Router Settings.
3. Select Maintenance tab.
4. Click on Backup & Restore in the navigation panel on the left side of the screen (refer to the figure above).
5. In the Restore section, click on the Choose File button and select the file to restore.
6. Click the Restore Configuration button.

Upgrade Router’s Firmware
The RAC2V1S automatically searches and installs upgrades which may add features or fix issues in the router.

IMPORTANT:
While the firmware is upgrading, the Power light will alternate between red and blue. Do NOT interrupt the upgrade process as it may permanently damage the router.

Restore Factory Defaults
There are two ways to restore factory defaults:
• Through the web GUI
• Using the reset button
Chapter 4: Administration

CAUTION:
Restoring Factory Defaults will erase customized router settings. Ensure that you backup customized settings before continuing.

1. Sign in to the web GUI.
2. Click on Router Settings.
3. Select the Maintenance tab.
4. Click on Resets, in the navigation panel on the left side of the screen.
5. In the Factory Settings section, click on the Reset button. The router will reboot to complete the factory reset.

Reset Button on the Router
The reset button is located on the back panel of the router. Depress and hold the button for 15 seconds or more for factory reset.

Note: The Power light on the front of the router will turn off to indicate that the factory reset function is being performed. The router will then reboot to complete the factory reset.
Chapter 5: Troubleshooting

This chapter provides information on how to resolve some common problems you may encounter with the router.

Problem 1: Light does not turn solid blue.

Refer to the table below to understand the expected light behavior.

<table>
<thead>
<tr>
<th>Router State</th>
<th>Light Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>Off</td>
</tr>
<tr>
<td>Restarting</td>
<td>Fast flashing, blue on/off</td>
</tr>
<tr>
<td>Connecting to the internet</td>
<td>Flashing, blue on/off</td>
</tr>
<tr>
<td>Connected to the internet</td>
<td>Solid blue</td>
</tr>
<tr>
<td>Router connectivity issues</td>
<td>Flashing, red on/off</td>
</tr>
<tr>
<td>Router must not be interrupted</td>
<td>Flashing, blue on/off followed by red on/off</td>
</tr>
<tr>
<td>Critical issues; cannot restart</td>
<td>Solid red</td>
</tr>
</tbody>
</table>

1. Check the cables.
   - Check and tighten the coaxial cable connected from the wall to the back of your modem. Verify that the coaxial connectors are not damaged at each end. The connector's metal pins should be intact and straight.
   - Ensure that one end of the Ethernet cable is plugged into the Ethernet port on the back of the modem, and the other end is connected to the WAN/internet (yellow) port on the back of the router.
Chapter 5: Troubleshooting

2. If you still do not see a solid blue light then restart your network.
   • Disconnect the modem and the router from the power supply. If you are using a battery backup, you will also need to disconnect the battery from the modem.
   • Wait 2 minutes.
   • Reconnect the modem and wait 2 minutes.
   • Reconnect the router and wait 2 minutes.

3. If you still do not see a solid blue light, contact Customer Support.

Problem 2: The internet stopped working.

1. Check from your wireless device (smartphone, laptop, etc.) to see if your WiFi signal is on. If it is off, sign in to the web GUI and check that your wireless network is enabled.

2. Restart your computer and attempt to reconnect to your WiFi.

3. Check cables.
   • Check and tighten the coaxial cable connection from the wall to the back of your modem. Verify that the coaxial connectors are not damaged at each end. The connector’s metal pins should be intact and straight.
   • Ensure that one end of the Ethernet cable is plugged into the Ethernet port on the back of the modem and that the other end is connected to the WAN/internet (yellow) port on the back of the router.

4. If you still cannot reconnect, restart your network.
   • Disconnect the modem and the router from the power supply. If you are using a battery backup, you will also need to disconnect the battery from the modem.
   • Wait 2 minutes.
   • Reconnect the modem and wait two minutes.
   • Reconnect the router and wait two minutes.

5. If you still cannot connect, contact Customer Support.
Chapter 5: Troubleshooting

Problem 3: The internet is slow.

Try one of the following solutions:
1. Reset the router. Refer to page 45 "Restarting the Router" for instructions.
2. Check your WiFi band. Most devices including the router work on the 2.4GHz band (e.g. microwave ovens, baby monitors, and other electronic devices). Reposition the router away from other electronic devices to avoid interference.
3. On your device, if you see the network name ending in 5G, your device is 5GHz-capable. Connecting to the ‘5G’ network may provide a better experience.
4. Change the WiFi channel used on your device. For instructions, refer to page 21.
5. Reposition your device to be within 10 feet of the router. Connection speed decreases as you move farther away from the router. By repositioning your device, you can determine whether the performance is related to wireless range.

Problem 4: The WiFi signal drops.

Check to see if another device is using the 2.4GHz band or a material such as glass, water or metal are causing interference. If so, reposition the router away from the item. Refer to page 6 "Router Positioning”.

Problem 5: Cannot connect wireless device to router.

Try one of the following solutions:
1. Ensure that your device’s WiFi is enabled and that the device’s WiFi light is on.
2. If it is not, refer to page 19 to enable WiFi.
3. Ensure that your device supports WPA2 encryption. If not, refer to page 18 to change the encryption mode.
4. Verify that you are connecting to the correct network by checking the SSID (name of network) and its password.
Chapter 5: Troubleshooting

Problem 6: Locked out of the Web GUI.

1. Restore factory defaults on the router. Refer to page 46 for instructions.
2. Thereafter, sign in to the web GUI using the default username and password listed on the router label.
3. Refer to page 16 to change your local access password.
Appendices

Appendix A: Technical Specifications

Router Model RAC2V1S Specifications

<table>
<thead>
<tr>
<th>Model Name</th>
<th>RAC2V1S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethernet Port Speed</td>
<td>IEEE 802.3 Ethernet: 10-BASE-T, 100-BASE-T, 1000-BASE-T</td>
</tr>
</tbody>
</table>
| Wireless Standards          | 5GHz: IEEE 802.11ac 2.0, 802.11n, 802.11a  
                                | 2.4GHz: IEEE 802.11n, 802.11g, 802.11b |
| Wireless Frequencies        | 2400MHz – 2483.5MHz  
                                | 5150MHz – 5350MHz  
                                | 5470MHz – 5850MHz (excluding 5600MHz – 5650MHz) |
| Wireless Security Support   | WEP, WPA, WPA2, WPA2-Enterprise with RADIUS |
| Ports                       | Power, USB, Ethernet WAN, Ethernet LAN (1-4) |
| Buttons                     | Reset, WiFi Protected Setup |
| LEDs                        | Front: one status LED.  
                                | Back: Ethernet WAN, Ethernet LAN (1-4) |
| UPnP                        | Supported |
| DLNA                        | Supported |
| Storage File System Support | FAT16, FAT32, NTFS, Ext2, Ext3, HFS, HFS+ |
| Printer Protocol            | IPP |
| Browser Support             | Internet Explorer 11 or higher, Firefox 44 or higher,  
                                | Chrome 48 or higher, and Safari 8 or higher |
| Mobile Support              | Safari for iOS 9 and higher, Chrome for iOS 9 and  
                                | higher, Opera 22.0.1485.78487 for Android 4.4 and  
                                | higher, Chrome 35.0.1916.141 for Android 4.4 and higher |
## Router Model RAC2V1S Physical Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimensions</strong></td>
<td>3.5” x 4” x 9” (88.9 x 101.6 x 228.6 mm)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>1.8 lbs (816.5 g)</td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>Input: 100V to 120V -60Hz</td>
</tr>
<tr>
<td></td>
<td>Output: 12V DC @ 2.5A</td>
</tr>
<tr>
<td><strong>Environmental</strong></td>
<td>Temperature 32°F to 104°F (0 °C to  40 °C)</td>
</tr>
<tr>
<td><strong>Characteristics</strong></td>
<td>Relative humidity 20% to 90%, non-condensing</td>
</tr>
<tr>
<td></td>
<td>Altitude 6562 ft (2000m)</td>
</tr>
</tbody>
</table>
Appendix B: Notification of Compliance

Federal Communications Commission (FCC) Statements
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.

(2) This device must accept any interference received, including interference that may cause undesired operation.

Modifications:
You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

FCC Responsible Party: Sagemcom USA LLC
14651 N. Dallas Parkway, Suite 900
Dallas, Texas 75254
Phone: 972-674-4100

Radio Frequency 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 installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.
FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This device produces radio frequency energy in the 2.4GHz and 5GHz spectrums. The antenna must be positioned to keep a minimum distance of 20 cm (0.65 ft) from the radiating element to any nearby person.