

# Sprint Printable User Guide

A downloadable, printable guide to your device's features.

# NETGEAR\* LTE GATEWAY 6100D



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# Get Started

The following topics give you all the information you need to set up your gateway and Sprint service the first time.

# Package Contents

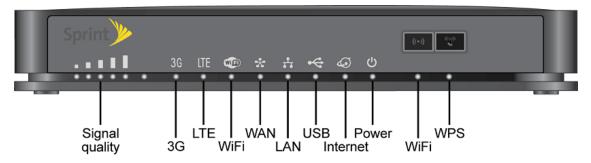
Your package includes several items.

- NETGEAR LTE Gateway 6100D
- Power adapter
- Micro-SIM (pre-installed)
- Ethernet cable
- Get Started poster

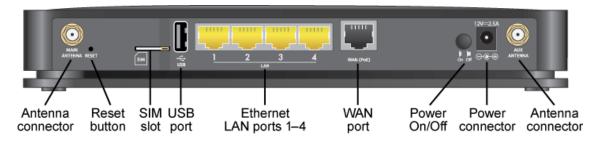
# Your Gateway

The following illustrations show your gateway's LEDs, buttons, and connectors.

#### Front View



#### **Back View**



## Care and Maintenance

As with any electronic device, you should handle the gateway with care to ensure reliable operation. Follow these guidelines in using and storing your device.

- Protect your device from liquids, dust, and excessive heat.
- Do not apply adhesive labels to your device. They may cause your device to overheat and may alter the antenna's performance.

# System Requirements

The following items are required to use your NETGEAR LTE Gateway 6100D.

- One or more computers that support Wi-Fi (802.11b/g/n or 11ac)
- Web browser (required if you'll be using the browser interface to view status and to configure settings). The following browsers are supported:
  - Internet Explorer (version 8 and above)
  - Firefox (version 3.6.24 and above)
  - Chrome (version 30 and above)
  - Safari (version 5.1.7 and above)

If you'll be connecting to your gateway through Ethernet:

Computer with an available Ethernet port

# Set Up Your Gateway

The following topics describe how to set up and start using your gateway.

#### Attach the Antennas

The gateway comes with two external antennas that are interchangeable.

1. Attach the antennas to the gateway.



2. Adjust the angle of the antennas so that they are vertical.

## Place Your Gateway

Place your gateway in a location with a good 3G or LTE signal.

1. Place your gateway in a location with good 3G or 4G coverage, such as near a window.



**Note:** When the gateway is powered on, you can use the Signal Quality LED to position the gateway in the location with the best signal strength.

- 2. Also, for best results, place your gateway:
  - Near the center of the area where your computers and other devices operate, and preferably within line of sight to your Wi-Fi devices.
  - So it is accessible to an AC power outlet and near Ethernet cables for wired computers.

- In an elevated location such as a high shelf, keeping the number of walls and ceilings between the gateway and your other devices to a minimum.
- Away from electrical devices that are potential sources of interference. Equipment that might
  cause interference includes ceiling fans, home security systems, microwaves, computers,
  the base of a cordless phone, or a 2.4 GHz cordless phone.
- Away from any large metal surfaces, such as a solid metal door or aluminum studs. Large
  expanses of other materials such as glass, insulated walls, fish tanks, mirrors, brick, and
  concrete can also affect your wireless signal.

## Start Your Gateway for the First Time

Learn how to start your gateway for the first time.

The gateway is designed to activate automatically the first time that it is turned on using 'hands-free activation'. Typically, the activation process will be seamless, not requiring any action on your part.

#### To start your gateway:

- 1. Connect the power adapter to the gateway and plug the power adapter into an electrical outlet.
- 2. Make sure that the Power On/Off button on the rear panel of the gateway is pressed in.
  - The Power U and Wi-Fi LEDs light.
  - The gateway automatically connects to a 3G or LTE network, and the 3G LED or the LTE LED lights.
  - The Internet LED lights to show that you have Internet access.

If your account did not activate for some reason, connect to the gateway network and use a Web browser to log in to the gateway. Alerts on the home page allow you to try the activation again. You must activate your account before you can use Sprint data services.

# Connect to Your Gateway's Network

You can connect with Wi-Fi or you can use an Ethernet cable for a wired connection to an Ethernet LAN port.

**Tip:** The Wi-Fi network name and password are on the label of the gateway.

**Tip:** Alternatively, you can use WPS to connect your computer or device to the gateway, if your computer or device supports WPS. (See Connect Through WPS.)

#### To find and select a Wi-Fi network, then connect with Wi-Fi:

1. Do one of the following, depending on your operating system.

- Windows 7: Right-click the Wi-Fi icon di in the system tray.
- Windows Vista: Click Control Panel > Network and Internet > Network and Sharing Center > Connect to a network.
- Windows XP: Click Control Panel > Network Connections > Wireless Network
   Connections > View available wireless networks.
- Mac: Click the AirPort icon (in the upper right corner of your screen).
- Linux: Please see the user documentation of the Linux distribution.
- Other operating systems: Please see the user documentation for your operating system or computer.
- 2. Select the Wi-Fi network for the gateway and connect to it. (If prompted for a network key/security key/password, enter the Wi-Fi password on the gateway label.)

#### To use WPS to connect with Wi-Fi:

- 1. Check the WPS instructions that came with your computer or wireless device.
- 2. Press the WPS button on the gateway.
  - For 2 minutes, the gateway tries to detect a computer or wireless device that is using WPS to connect to its Wi-Fi network.
- 3. On your computer or wireless device, press its WPS button or follow its WPS instructions.
  - Your computer or wireless device connects to the Wi-Fi network.

#### To connect with Ethernet:

A yellow Ethernet cable comes in the package with your gateway.

- 1. Connect an Ethernet cable (included in the package) to one of the yellow Ethernet LAN ports on the rear panel of the gateway.
- 2. Connect the other end of the Ethernet cable to an Ethernet port on your computer.





Your computer connects to the gateway's local area network (LAN). A message might display on your computer screen to notify you that an Ethernet cable is connected.

# Get Help

Learn where you can get more information or assistance.

## Visiting the Sprint Website

Sign on to sprint.com/mysprint to get up-to-date information on Sprint services and options.

- Review coverage maps.
- Access your account information.
- Add additional options to your service plan.
- Purchase accessories.
- Check out frequently asked questions.
- And more.

### Contacting Sprint Customer Service

You can reach Sprint Customer Service online or by calling toll-free.

- Log in to your account at sprint.com/mysprint.
- Call us toll-free at **1-888-788-4727** (business use) or **1-888-211-4727** (personal use).

# Gateway Basics

Learn about the buttons, connectors, and other components of your gateway.

Your gateway provides a simple way to use your Internet connection (3G or LTE) with any Wi-Fienabled device, and to share your Internet connection with friends and family.



# Components of Your Gateway

Your gateway consists of several main components.

- Main and Guest Wi-Fi networks: The Wi-Fi networks (access points) connect your computers and other Wi-Fi-enabled devices to the gateway.
- Main Wi-Fi dual-band: The gateway has two Main Wi-Fi networks, so you can connect with 2.4 GHz or 5 GHz Wi-Fi. To connect with 5 GHz, your computer or Wi-Fi-enabled device must support 5 GHz.

- Modem: The modem connects your gateway to the Internet via the best available network (customizable):
  - LTE Newer technology, faster speeds compared with 3G
  - 3G CDMA technology, more widely available compared with LTE
- **Routing hardware**: The routing hardware handles traffic between the modem, the Wi-Fi access point, and the Wi-Fi network.
- USB port: You can connect a USB drive and share it.

## 3G and LTE Networks

These wireless networks connect you to the Internet.

Depending on your coverage area, you may have:

- Only LTE coverage
- Only 3G coverage
- A combination of these networks

The gateway automatically connects to the fastest network that is available to you. If you have both 3G and LTE coverage and your connection happens to get disrupted, your gateway can automatically switch to the other network. (For more information, see Mobile Network Settings.)

Your gateway is designed to always connect to an available network if possible. If your gateway is not connected (dropped signal, roaming not supported, etc.) the Signal Strength LED is off. The connection status can also be seen on your gateway's Status Details.

Your gateway can be set to connect automatically to the best available network, or to connect to LTE or 3G networks only. See Set the Network Mode.

Your gateway can also be set to allow roaming on Sprint networks, domestically, and internationally. See Setting the Roaming Mode.

## Power Button

Use the Power button to turn your gateway on and off.

#### To turn your gateway on:

- 1. Make sure that power adapter for your gateway is plugged in to an electrical outlet.
- 2. Press the **Power On/Off** button so that it is in the on position.

**Note:** The LEDs on the gateway light unless you logged in to the gateway and turned off the LEDs from the Device page.

#### To turn your gateway off:

■ Press the **Power On/Off** button so that it is in the off position.

**Note:** The LEDs on the gateway turn off.

# **LEDs**

The LED status indicators show the gateway's Internet and network connections.

LED	Description
Signal Quality	<ul> <li>5 bars: Excellent coverage.</li> <li>4 bars: Strong coverage.</li> <li>3 bars: Moderate coverage.</li> <li>1 bar: Poor coverage.</li> <li>Off: No coverage.</li> </ul>
3G Connection 3G	Solid blue: The gateway has a connection with the 3G network.  Off: The gateway does not have a 3G connection.
LTE Connection LTE	Solid blue: The gateway has a connection with the 4G LTE network.  Off: The gateway does not have a 4G connection.
Wi-Fi	Solid green: The 2.4 GHz wireless radio is on. Solid purple: The 5 GHz wireless radio is on. Solid blue: Both the 2.5 GHz and the 5 GHz wireless radios are on. Off: The wireless radios are off.
Ethernet WAN	Solid blue: The Ethernet WAN port is connected to a device and is ready.  Off: The gateway does not detect a link on this port.
Ethernet LAN	Solid blue: One or more local Ethernet ports 1-4 have detected wired links.  Off: The gateway does not detect links on these ports.
USB •	Solid blue: The gateway has accepted the USB device and the USB device is ready.  Off: No USB device is connected.
Internet	Solid blue: The Internet connection is ready. Solid amber: Network error. Slow blinking amber: The gateway failed to cut over from an Internet WAN connection to a mobile broadband connection. Off: No Internet connection.

LED	Description
Power	Solid green: The gateway is ready. Slow blinking green: The gateway is powering up. Solid red: System failure. Slow blinking red: Thermal cut off alarm. Off: No power is supplied to the gateway.
Wi-Fi On/Off ((•))	Solid blue: The wireless radios are on.  Off: The wireless radios are off.
WPS	Solid blue: WPS security is enabled. Blinking blue: Someone is using WPS to join the gateway's Wi-Fi network. Off: WPS is not in use.

## Micro-SIM

Your gateway comes with a pre-installed micro-SIM that gives you access to the Sprint network.

## Launch Your Mobile Network Connection

After your gateway powers on and boots up, a connection to the best available network (3G, 4G, or LTE) is launched automatically.

Your gateway remains connected at all times, unless:

- You are out of signal range or the signal is blocked.
- You are in a roaming area and you have chosen not to allow roaming.

**Note:** Even though your gateway is connected, you are only billed when data is sent or received. See If the Connection is "Always On," Am I Always Being Billed?

## Web Browser Interface

When you connect to the gateway network (either with Wi-Fi or with an Ethernet cable), you can use a Web browser to log in to your gateway to view or change its settings.

# Log In to Your Gateway

Log in to your gateway via your computer's Web browser.

**Tip:** If you want to change your gateway's Wi-Fi settings, use a wired Ethernet connection to avoid being disconnected when the new Wi-Fi settings take effect.

#### To log in to your gateway:

- 1. On a computer or wireless device that is connected to your gateway's network, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)

**Note:** If you're using the Google Chrome Web browser, after typing in the address bar, press the **Down Arrow** key and then press the **Enter** key. (If you don't press the **Down Arrow** first, a Google search starts and you are not prompted to log in to your gateway.)

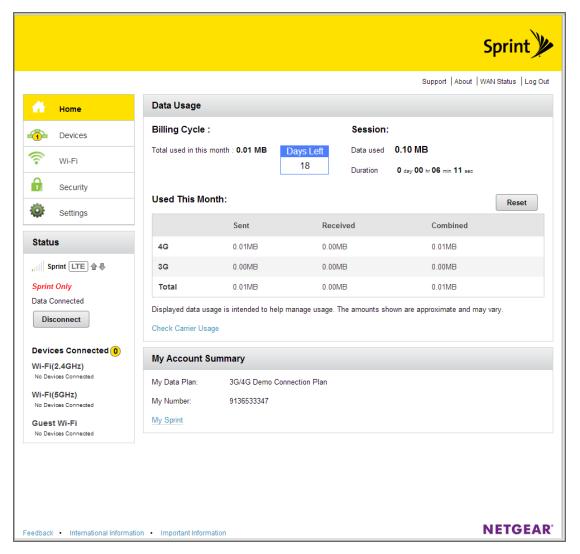
4. If your Web browser displays an error message, see Cannot Display the Home Page.

# Home Page

The home page is the entry page when you log in to the gateway.

#### You can:

- Activate your account if it did not automatically activate.
- View your data usage and status information for your data connection.
- Manage your mobile broadband network connection and Wi-Fi connections.
- View alert messages.



Item	Description
Home	Click to view the Home Page.
Devices	Click to view the Devices Page.
Wi-Fi	Click to view the Wi-Fi Connect Tab.
Security	Click to view the Security.
Settings	Click to view the General Settings.
Connection Details	Mobile broadband connection information – See Mobile Network Settings.
Devices Connected	List of devices connected to the gateway's Main or Guest Wi-Fi networks.
My Account Summary	Basic information about your Sprint data plan. For more details, click <b>My Sprint</b> to connect to your account at sprint.com/mysprint.
Feedback	Click to access the Sprint Twitter <sup>®</sup> feed and Facebook <sup>®</sup> page or to send your

ltem	Description
	comments on your gateway. See Feedback. (Your device must be connected to the network for this option to work.)
International Information	Click to view Sprint's International Coverage Areas search feature in a new browser window or tab. (Your device must be connected to the network for this option to work.)
Important Information	Click to read important safety information about the gateway.
Alerts	Alerts remain until issue is resolved.
Data Usage Session	Estimated data usage for current session.
Data Usage of This Month	Estimated data usage for current billing period.

#### **Alerts**

Alerts notify you about situations that require your attention and suggest the actions you need to take to resolve them.



The following information is displayed for each alert.

ltem	Description
Alert title	A short description of the issue to be addressed.
	The alert message and, if appropriate, links or buttons to take action on the alert. (For example, the "Update now" link in the second alert shown above would take you to the Software Update screen.)

The alerts disappear only when the issues they describe are resolved. Some of the alerts you may encounter include:

- Software Update Available
- Max Wi-Fi devices reached
- Mobile Broadband disconnected

- Wi-Fi is off
- Gateway is not activated
- SIM errors
- Roam Guard

## Activate Your Account from the Home Page

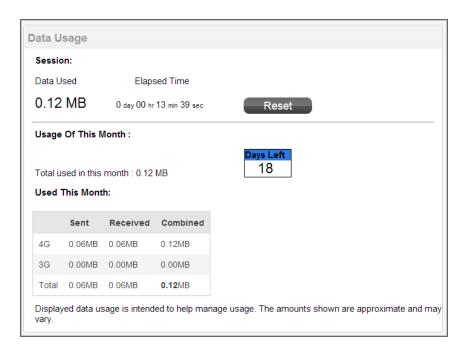
Until your account is activated, you cannot use Sprint data services.

#### To activate your account:

- 1. On the home screen, go through the alerts until you see the **Hotspot not activated** alert.
- 2. Click Retry Activation.
- 3. Follow any instructions that may appear.

## Data Usage

Data usage estimates are shown in the Data Usage section of the home page.



**Note:** Data usage amounts are approximate and should not be used for billing purposes. For accurate data usage amounts, check with Sprint or click the My Sprint link in the My Account Summary section to view your account details.

The Data Usage section displays monthly billing period statistics and current session statistics.

ltem	Description	
Current billing cy	rcle	
Usage of This Month	The amount of data sent and received during the billing period for each network type.	
Reset button	Click to set the displayed monthly usage values to 0MB.  Important: This does not reset the actual data usage for the billing cycle.	
Session		
Used	Data amount used since your device connected to the network	
Elapsed time	Length of time that your device has been connected to the network	

## My Account Summary

The My Account Summary section shows basic information about your plan, and includes a link to see more detailed information.

#### **My Account Summary**

My Data Plan: 3G/4G Demo Connection Plan

My Number: 9136536034

My Sprint

The following information is displayed.

Item	Description
My Data Plan	The type of Sprint data plan used on your gateway.
My Number	The telephone number linked to your data plan.
My Sprint	Click to connect to your account at mysprint.sprint.com/mysprint.

### **Connection Details**

The Connection Details section shows details about your mobile broadband service and connection state, and lists the devices that are connected to the Main and Guest Wi-Fi networks.



The following information is displayed.

ltem	Description
Signal strength and roaming status	The more bars, the stronger the signal. A triangle in the icon means your device is roaming.
Network carrier name	Name of the available network. For example, "Sprint".
Network type	LTE or 3G
Send / Receive indicators	●♥ Up (sending data) / Down (receiving data) This icon appears when you are connected to the mobile network.
Roaming message	Indicates whether your device is roaming on a Sprint network, domestically, or internationally.
Connect / Disconnect button	Click this button to connect or disconnect your device from the mobile network.
Devices Connected	Wi-Fi 2.4 GHz: A list of devices currently connected to the Main Wi-Fi 2.4 GHz network. Wi-Fi 5 GHz: A list of devices currently connected to the Main Wi-Fi 5 GHz

ltem	Description
	network <b>Guest Wi-Fi</b> : A list of devices currently connected to the Guest Wi-Fi network.
	You can click any of the device names to view their details, or to block them from using your network. See Display and Block Currently Connected Devices (Block List).

# Support

This page provides links to resources that can help you use your device and manage your Sprint account.

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click the **Support** link in the top right corner.

<u>User Guide</u>	Learn how to setup and use your router.
	Leant now to setup and use your router.
Web	Visit <u>sprint.com/support</u> for the complete User Guide, along with videos, tutorials, and community forums for your device.
Manage Account	1-888-211-4727

The following information is displayed.

ltem	Description
User Guide	Open an online copy of this guide in a new Web browser window or tab. (You must be connected to the Internet to use this link.)
Web	Click the link to open the online support website in a new Web browser window or tab where you can find a variety of resources to help you with your gateway. (You must be connected to the Internet to use this link.)
Manage Account	Contact Sprint Customer Service by telephone (for business use or personal use).
Voice Your Feedback	Send NETGEAR your comments on your device. See Feedback Page.

## **About**

View information about your gateway and account.

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click the **About** link in the top right corner.



The following information is displayed.

Item	Description
Account Details	
My number	The gateway's telephone number.

Item	Description
IMEI	International Mobile Equipment Identify number.
ICCID	The serial number of the SIM.
Wi-Fi Details	
Wi-Fi Name	The Main Wi-Fi network name.
Wi-Fi MAC Address	The MAC address of the LTE module. Each wireless device has a unique MAC address (assigned by its manufacturer).
Wi-Fi Security Type	The security standard used for the Wi-Fi network. (See Wi-Fi Security.)
Wi-Fi Range	Select the range for the Wi-Fi signal.
SSID Broadcast	Indicates whether the SSID (Wi-Fi network name) is being broadcast. (See Wi-Fi Options Tab.) You could choose to not broadcast, and give the Wi-Fi name directly to users.
Firmware	
Firmware Version	The gateway's firmware version.
Build Date	The date the firmware version was created.
PRI Version	The PRI version.
Network Status	
View Details	Click the link to jump to the Status Details Page.

# **WAN Status**

You can view the status of the WAN connection.

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click the **WAN Status** link in the top right corner.

WAN Status	
Interface Type	Mobile
IP Address	68.26.141.100
Connection Type	DHCP
IP Subnet	255.255.255.252
Domain Name Serve	rs
Server 1	68.29.1.7
Server 2	68.29.9.7
Default Gateway	68.26.141.101
DHCP Server	68.26.141.101

The following information is displayed.

Item	Description
Interface Type	Displays which WAN interface is being used, mobile or Ethernet.
IP Address	WAN IP address.
Connection Type	Displays whether the connection is static or dynamic (DHCP).
IP Subnet	IP subnet mask.
Domain Name Servers	The primary and secondary domain name servers for the WAN interface.
Default Gateway	IP address of the default gateway.
DHCP Server	IP address of the DHCP server.

## Feedback

Use the links on this page to access the Sprint Twitter<sup>®</sup> feed and Facebook<sup>®</sup> page and to send your comments on your device, look up support information, and participate in a customer survey.

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click the **Feedback** link in the bottom left corner of any page.

The following information is displayed.

<u>Item</u>	Description
Connect with us	
Facebook	Click to view the AirCard Facebook page in a new browser window or tab. (Your device must be connected to the network for this option to work.)
Twitter	Click to view the AirCard Twitter feed in a new browser window or tab. (Your device must be connected to the network for this option to work.)
Product Support	
User Guide	Open an online version of this user guide in a new window or tab.
FAQs	Read frequently asked questions and answers.
Survey	
Customer Feedback Survey	Participate in a NETGEAR customer survey.

# Your Network Connections

Find out how to launch, share, and end your Internet network connection.

### Launch Your Mobile Network Connection

After your gateway powers on and boots up, a connection to the best available network is launched automatically.

Your gateway remains connected at all times, unless:

- You are out of signal range or the signal is blocked.
- You are in a roaming area and you have chosen not to allow roaming.

**Note:** Even though your gateway is connected, you are only billed when data is sent or received. See If the Connection is "Always On," Am I Always Being Billed?

# Set up a Guest Wi-Fi Network

You can create a separate Guest Wi-Fi network that you can share with temporary users.

Computers and wireless devices on the Guest Wi-Fi network:

- Cannot access devices that are on the Main Wi-Fi network (such as printers or other computers)
- Cannot log in to the gateway to change its settings

#### Turn the Guest Wi-Fi Network On and Off

You can turn the Guest Wi-Fi network on and off from the gateway's Wi-Fi page.

#### To turn the guest Wi-Fi network on and off:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Wi-Fi.
- 5. In the Guest Wi-Fi area, click **Turn On** or click **Turn Off**.

#### Share Your Wi-Fi Network

Your gateway provides two ways of sharing your network connection with other users.

- Users find and select the Main or Guest Wi-Fi network information.
- User connects to the Main or Guest Wi-Fi network using WPS.

### Manually Enter the Wi-Fi Information

Users can connect to the network by manually entering the Wi-Fi information.

Share your network connection with others:

- 1. Provide the Main or Guest Wi-Fi network name and password to them.
- 2. Users must open their device's Wi-Fi network manager and connect to the Main or Guest Wi-Fi network using the password you provided. (See How Do I Connect to Wi-Fi?)

## Connect Through WPS

Wi-Fi Protected Setup (WPS) provides a fast, simple, and secure way to connect WPS-enabled devices to your Wi-Fi network.

With WPS, you don't have to give the name (SSID) and Wi-Fi password of your Main or Guest network to other users. The WPS feature is available on certain cameras, printers, smartphones, and laptops. These devices have either a hardware button or a WPS-related option in the software. Please consult the user documentation of your device.

WPS is always available for the Main and Guest Wi-Fi networks as long as the Wi-Fi radio is on.

WPS is not available in the following situations:

- The Wi-Fi radio is off because someone pressed the Wi-Fi On/Off button on the gateway.
- The Wi-Fi security option is WPA Personal, WEP, or WEP-related (for example, WEP 64 Bit Open). WPS is available if the Wi-Fi security option is WPA/WPA2 Personal. (See Wi-Fi Options Tab.)
- Broadcast network name is not enabled. (See Wi-Fi Options Tab.)
- MAC Filter Mode is "White list (Allow only those in list)", but no computers have been added to the list. (See Allow or Deny Computers Access to the Network (MAC Filter).)

If the maximum number of connected devices on the chosen network (Main or Guest) has already been met, an error message indicating that the maximum number of devices has been reached is displayed when you attempt WPS. Disconnect one of the connected devices and then retry.

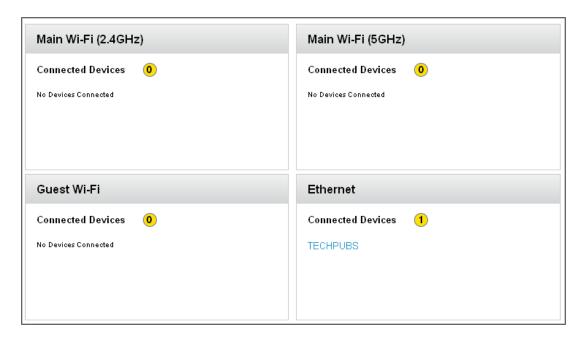
You can use the WPS button on the gateway or you can log in to the gateway and use the **Wi-Fi** > **Connect** page.

# Devices Page

The Devices page lets you see lists of devices that are connected to your Main and Guest Wi-Fi networks.

**Note:** These lists are also shown in the **Devices Connected** section on the left side of the page.

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Devices.



The following information is displayed.

Item	Description
Main Wi-Fi (2.4 GHz)	A list of devices currently connected to the Main Wi-Fi network in the 2.4 GHz band.
Main Wi-Fi (5 GHz)	A list of devices currently connected to the Main Wi-Fi network in the 5 GHz band.
Guest Wi-Fi	A list of devices currently connected to the Guest Wi-Fi network.

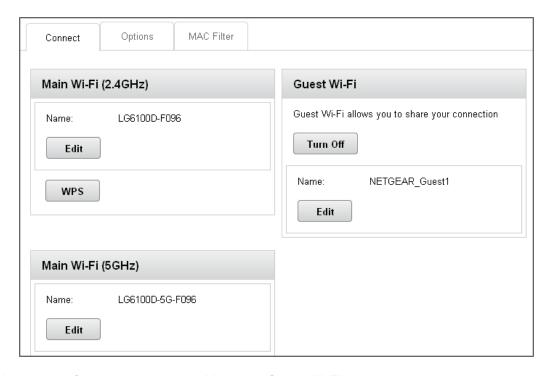
Item	Description
	A list of devices currently connected to the device through an Ethernet connection to an Ethernet LAN port.

You can click any of the device names to view detailed information, and to block them from using your network. See Enable or Disable the Block List.

## Wi-Fi Connect Tab

From the Wi-Fi tab, you can configure the Wi-Fi network, including Wi-Fi security.

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Wi-Fi and the Connect tab displays.



You can configure access to your Main and Guest Wi-Fi networks.

#### You can:

Edit the Main or Guest Wi-Fi names and passwords. See Change Wi-Fi Network Names and Passwords.

- Turn the Guest Wi-Fi network on or off. See Set up a Guest Wi-Fi Network.
- Connect devices using WPS. See Connecting Through WPS.

The following information is displayed.

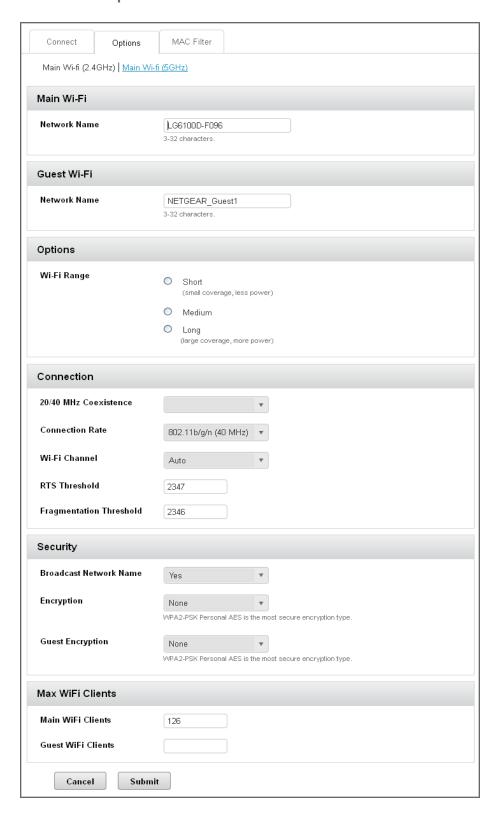
Item	Description	
Main Wi-Fi (2.4 GHz)		
Name	This is the name that identifies your Main Wi-Fi network and is visible to other Wi-Fi-enabled devices. See Change Wi-Fi Network Names and Passwords.	
WPS	Connect a device to the Main Wi-Fi network using WPS. See Connect Through WPS.	
Main Wi-Fi (5 GHz)		
Name	This is the name that identifies your Main Wi-Fi network and is visible to other Wi-Fi-enabled devices.	
WPS	Connect a device to the Main Wi-Fi network using WPS. See Connect Through WPS.	
Guest Wi-Fi (2.4 GHz)		
Turn Off / Turn On	Click this button to turn the Guest Wi-Fi network on or off. <b>Note:</b> The rest of the Guest Wi-Fi fields / buttons appear only when the Guest Wi-Fi network is on.	
Name	This is the name that identifies your Guest Wi-Fi network and is visible to other Wi-Fi-enabled devices. See Change Wi-Fi Network Names and Passwords.	

# Wi-Fi Options Tab

From the Wi-Fi Options tab, you can configure your Wi-Fi network's connection settings and security, and additional Wi-Fi options.

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)

#### 4. Click Wi-Fi > Options.



You can:

- Edit the Main or Guest Wi-Fi names and passwords. See Change Wi-Fi Network Names and Passwords.
- Configure your Wi-Fi network's connection parameters and security, and additional Wi-Fi options.
- Specify the maximum number of devices that can connect to the Wi-Fi network.

**Note:** For some of these Wi-Fi settings, if you change them, all connected devices will be disconnected and have to reconnect after the settings are saved.

The following information is displayed.

Item	Description	
Main Wi-Fi		
Network Name	This is the name that identifies your Main Wi-Fi network and is visible to other Wi-Fi-enabled devices. (See Change Wi-Fi Network Names and Passwords).	
Guest Wi-Fi		
Network Name	This is the name that identifies your Guest Wi-Fi network and is visible to other Wi-Fi-enabled devices. (See Change Wi-Fi Network Names and Passwords).	
Wi-Fi Options		
Wi-Fi Range	Short Medium Long	
Connection		
20/40 MHz Coexistence	The gateway can run in either 40 MHz mode or 20 MHz mode when the wireless mode is set to Up to 300 Mbps. The gateway uses 40 MHz mode unless a nearby Wi-Fi network is using 40 MHz mode. If that happens, the gateway uses 20 MHz mode to coexist with that network.	
Connection Rate	This setting determines the type of Wi-Fi devices that can connect to your network. For the Main and Guest 2.4 GHz networks, the default connection is <b>Up to 300 Mbps</b> . The other choices are <b>Up to 130 Mbps</b> and <b>Up to 54 Mbps</b> .	
	For the 5 GHz network, the default connection rate is <b>Up to 300 Mbps</b> . The other choices are <b>Up to 400</b> Mbps and <b>Up to 800 Mbps</b> .	
Wi-Fi Channel	This is the active channel of the Wi-Fi access point. If your network is having performance issues (possibly caused by other Wi-Fi networks in the vicinity using the same channel), try a different Wi-Fi channel.	
RTS Threshold	This setting specifies the smallest packet size, in bytes, for which RTS/CTS (Request to Send/Clear to Send) handshaking is used. The recommended value is 2347. Change this value only if you're experiencing inconsistent data flow. Make only minor changes to this value.	
Fragmentation	This setting specifies the largest allowable size, in bytes, for a packet. If the	

Item	Description
Threshold	packet is larger than this, it is fragmented into multiple packet before it is transmitted. To prevent poor network performance, it's recommended to keep this value as large as possible (up to 2346).
Security	
Broadcast Network Name	If broadcast is enabled ( <b>Yes</b> ), the wireless network is displayed in the list of Wi-Fi networks available in the local area. For increased security, set this field to <b>No</b> . You will need to give the Wi-Fi network name (Main or Guest) to the people who will be accessing your network, and WPS will not be available.
Encryption	The type of security used by the Main Wi-Fi network. See Wi-Fi Security.
Guest Encryption	The type of security used by the Guest Wi-Fi network. See Wi-Fi Security.
Max Wi-Fi Clients	The maximum number of Wi-Fi clients that can connect to the gateway Main Wi-Fi network and Guest Wi-Fi network.

#### **MAC** Filter

MAC (Media Access Control) filtering can prevent unauthorized wireless devices from connecting to your network.

The MAC filter is used to grant ("white list") or block ("black list") wireless devices access to the Wi-Fi and mobile broadband (3G or LTE) networks. Access is based on the MAC address of each wireless device.

MAC filtering increases security of your network. You can give access to your network, based on the MAC address of the wireless devices. This makes it harder for a hacker to use a MAC address to access your network.

#### To set up MAC filtering or turn it off:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)

4. Click Wi-Fi and then click the MAC Filter tab.

MAC Filter Mode	
•	None
0	Block List (Block all in list)
	Devices that you block manually will not access the router.
0	White List (Allow only those in list)  All devices will be locked out unless you add them to this list.

#### You can:

- Turn MAC filtering off ("None") or on ("Block List" or "White List").
- Add or remove a device from the list.

The following information is displayed.

Item	Description
MAC Filter Mode	None – Any device can connect to the Wi-Fi networks.
	Black List – The listed devices will not be able to connect to the Wi-Fi networks.
	White List – Only the listed devices will be allowed to connect to the Wi-Fi networks.
Black List or White List	
Name	A description of the device (the owner's name, the device's purpose, etc.)
MAC Address	The device's MAC address.

# Wi-Fi Security

Learn about the Wi-Fi security options available to you.

By default Wi-Fi security is enabled for your device and its Wi-Fi networks.

**Note:** All devices used with the gateway must support the selected security type.

**Note:** WPS is available only if you select either a WPA2 Personal option (including WPA/WPA2 Personal) or no security (not recommended). (See Connect Through WPS.)

**Note:** WEP is available only for the guest network.

You can change the security used for Wi-Fi:

1. On a computer or wireless device that is connected to your gateway, launch a Web browser.

- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Wi-Fi > Options.
- 5. In the list beside **Encryption** (for Main Wi-Fi) or **Guest Encryption** (for Guest Wi-Fi) select one of the following options. Note that not all options may be available, depending on the **Connection Rate**.
  - None: No security is used (no password is required to access the Wi-Fi network); this setting
    is not recommended. Anyone may access your device and use your Internet connection.
    (You are responsible for payment for data usage fees.)
  - WEP 64 Bit Open: This option provides security, but it's relatively weak. This option works
    with older and newer Wi-Fi devices, and is recommended only if any of your devices don't
    support WPA or WPA2.

Open WEP uses the key for encryption, but not for authentication.

WEP 64 Bit – Shared: This option provides security, but it's relatively weak. This option
works with older and newer Wi-Fi devices, and is recommended only if any of your devices
don't support WPA or WPA2.

Shared WEP uses the same key for encryption and authentication; some consider shared WEP to be less secure than open WEP.

 WEP 128 Bit – Open: This option provides security, but it's relatively weak (but stronger than WEP 64 Bit – Open). This option works with older and newer Wi-Fi devices, and is recommended only if any of your devices don't support WPA or WPA2.

Open WEP uses the key for encryption, but not for authentication.

 WEP 128 Bit – Shared: This option provides security, but it's relatively weak (but stronger than WEP 64 Bit – Shared). This option works with older and newer Wi-Fi devices, and is recommended only if any of your devices don't support WPA or WPA2.

Shared WEP uses the same key for encryption and authentication; some consider shared WEP to be less secure than open WEP.

- WPA PSK TKIP: This is a strong security standard that is supported by most Wi-Fi devices.
- WPA2 PSK AES: This is a stronger, newer security standard that is limited to newer Wi-Fi
  devices.
- WPA2 PSK TKIP: This is a stronger, newer security standard that is limited to newer Wi-Fi
  devices.
- 6. Click Submit.

The option you select determines the Wi-Fi security used and also the maximum length of the Wi-Fi password.

## Change Wi-Fi Network Names and Passwords

The Main and Guest Wi-Fi network names identify your Wi-Fi networks and are visible to other Wi-Fi-enabled devices.

You can change the names and passwords for your Main and Guest Wi-Fi networks on the gateway's **Wi-Fi** > **Options** page.

For optimal security, you should make your Wi-Fi network names and passwords unique, and change them on a regular basis.

**Note:** If you change either of the Wi-Fi network names or passwords, all connected devices will be disconnected and will have to reconnect using the new values.

**Note:** For security reasons, it's recommended you disable SSID Broadcast. (See Wi-Fi Options Tab.)

To make your Wi-Fi passwords more secure:

- Use numbers and both uppercase and lowercase letters.
- Use special characters (for example, '@', '#', etc.).

Also, the password length depends on the Wi-Fi encryption type that you've selected.

- None No password is required.
- WEP 64 bit Open: The password must be 5 ASCII characters.
- WEP 64 bit Shared: The password must be 5 ASCII characters.
- WEP 128 bit Open: The password must be 13 ASCII characters.
- WEP 128 bit Shared: The password must be 13 ASCII characters.
- WPA-Personal TKIP: The password must be 8 to 63 ASCII characters.
- WPA-Personal TKIP/AES: The password must be 8 to 63 ASCII characters.
- WPA2-Personal TKIP/AES: The password must be 8 to 63 ASCII characters.
- WPA/WPA2 Personal: The password must be 8 to 63 ASCII characters.

### To change the Wi-Fi network name and password:

1. On a computer or wireless device that is connected to your gateway, launch a Web browser.

- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Wi-Fi > Options.
- 5. In the Main Wi-Fi and Guest Wi-Fi sections, change the **Network Name** and **Password** fields as desired. (The required lengths appear beneath the fields.)
- Click Submit.
- 7. When prompted, click **Submit** again. (All devices that were connected will have to reconnect with the new settings.)

## Enable or Disable the Block List

You can enable your gateway's block list on the gateway's Wi-Fi MAC Filter page. This lets you identify devices that should not be allowed to access your Wi-Fi networks.

## To enable or disable the Wi-Fi block list (MAC filtering):

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- Click Wi-Fi and then click the MAC Filter tab.
- Beside MAC Filter Mode, select Black List to block devices, or select White List to prevent devices from being blocked.
- 6. Click Submit.

## Display and Block Currently Connected Devices (Block List)

To detect a potential intruder, you may want to display a list of the Wi-Fi-enabled devices that are currently connected to your gateway. You can view this list the gateway's home page.

To stop a device from connecting to your network, you can add it to your gateway's block list. The blocked device will not be able to connect again until you choose to unblock it.

**Note:** You have to enable the block list before you can block devices from using your Wi-Fi networks. (See Enable or Disable the Block List.)

### To manage the block list:

1. On a computer or wireless device that is connected to your gateway, launch a Web browser.

- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.) The **Devices Connected** section of the home page shows a list of the devices connected to your Main and Guest Wi-Fi networks.
- 4. To block a listed device, click its device name. The device's IP address and MAC address display.
- 5. Click Block Device.
- 6. Click **Block Device** again.

## View and Unblock Devices (Block List)

You can view a list of devices that you have blocked from connecting to your gateway on your gateway's Wi-Fi MAC Filter page.

To allow any of these devices to connect to the network again, you can remove them from your device's block list.

### To view and unblock devices on the block list:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click **Wi-Fi** > **MAC Filter**. A list of the devices blocked from using your Wi-Fi networks appears.
- 5. Click the beside the device you want to unblock. The device is removed from the list immediately.

# Allow or Deny Computers Access to the Network (MAC Filter)

MAC (Media Access Control) filtering can prevent unauthorized wireless devices from connecting to your network.

The MAC filter is used to grant ("white list") or block ("black list") wireless devices access to the Main and Guest Wi-Fi networks. Access is based on the MAC address of each wireless device.

In the MAC Filter page (Wi-Fi > Mac Filter), you can choose one of three modes:

- None All computers are allowed to access the network.
- Black list All computers are allowed to access the network, unless they're in this list.
- White list Only computers that are in this list are allowed to access the network.

Regardless of the mode, a user must provide the correct Wi-Fi password to access the network.

### To specify computers that can access the network:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- Click Wi-Fi and then click the MAC Filter tab.
- 5. Beside MAC Filter Mode, select White list.
- 6. In the empty **Name** field, enter a name for the device. For example, "Amy's PC".
- 7. In the empty **MAC Address** field, enter the MAC address of the device you're adding to the list. (If you don't know this address, see Finding the MAC Address.)
- 8. Click the beside the row. Repeat steps 6 through 8 for each computer for which you want to allow access.

**IMPORTANT**: Make sure you add the computer you are using, or else you will not be able to access the network after your device resets.

9. Click Submit.

### To specify computers that are not allowed to access the network:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Wi-Fi and then click the MAC Filter tab.
- 5. Beside MAC Filter Mode, select **Black list**.
- 6. Determine and block an unwanted user of your network:
  - In the Devices Connected section, if you see a device you don't recognize, you can click its name and compare its MAC address to the MAC address of each of the devices on your network.

**Tip:** To determine the MAC address of each device you have, see Finding the MAC Address. If none of your devices have this MAC address, that device might be an intruder.

• In the empty Name field, enter a name for the device. For example, "Amy's PC".

- In the empty MAC Address field, enter the MAC address of the device you're adding to the list.
- Click the O beside the row.
- 7. For each device you want to block, repeat steps 4-6.

**Tip:** You can also block the device from the device list. See Display and Block Currently Connected Devices (Block List).

### Removing a Device from the Allowed or Disallowed Lists

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Wi-Fi and then click the MAC Filter tab.
- 5. In the list of allowed/disallowed devices, click the beside the row.
- Click Submit.

# Wi-Fi Channel

The Wi-Fi channel is the active channel of the Wi-Fi access point. If your network is having performance issues (possibly caused by other Wi-Fi networks in the vicinity using the same channel), try a different Wi-Fi channel.

You can change the channel from your gateway's **Wi-Fi Options** tab.

**Note:** All connected devices will be disconnected and have to reconnect if the channel is changed.

### To change the Wi-Fi channel:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Wi-Fi > Options.
- 5. Select a different channel number in the **Wi-Fi Channel** list, or, to have your device automatically determine the channel to use, select **Auto**.

**Note:** If you choose Auto, your device could reselect the same channel. If this happens, try again.

6. Click Submit.

# Set the Maximum Number of Wi-Fi Devices

You can enter the maximum number of Wi-Fi devices that are allowed to connect to the gateway at the same time.

If your network is having performance issues, you might want to allow fewer Wi-Fi devices to connect to your gateway at the same time, or change the maximum number of devices that can connect to either the Main Wi-Fi or Guest Wi-Fi networks at the same time. (When Guest Wi-Fi is turned on, the maximum number of Wi-Fi devices is shared between Main Wi-Fi and Guest Wi-Fi.)

Note: Your gateway is factory preset to allow a maximum of 64 Wi-Fi devices

**Note:** If you change the Max Wi-Fi Devices value, the Main Wi-Fi and Guest Wi-Fi values automatically adjust to match the new total.

- 1. Set the Maximum Number of Wi-Fi DevicesWeb browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Wi-Fi > Options.
- 5. Scroll down to view the Max Wi-Fi section.
- 6. Beside Max Wi-Fi, select the total number of Wi-Fi devices that can connect to your device at the same time.

Note: The Main Wi-Fi limit cannot be set to 0.

7. Click Submit.

# Security

Learn about how to use security features to control access to the gateway through the Internet.

# Dynamic DNS

Learn about Dynamic DNS (DDNS), a service that lets you access your gateway by using a host name or domain.

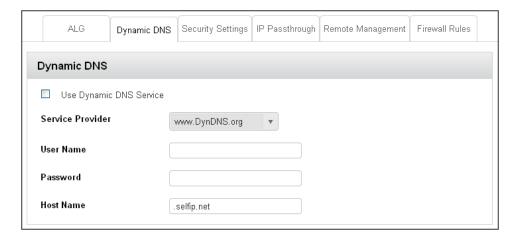
A Dynamic DNS (DDNS) service provides a central public database where information (such as email addresses, host names, and IP addresses) can be stored and retrieved. The Dynamic DNS server also stores password-protected information and accepts queries based on e-mail addresses.

If you want to use a DDNS service, you must register for it. The Dynamic DNS client service provider will give you a password or key.

**Note:** The gateway supports only basic DDNS, and the login and password might not be secure. If you have a private WAN IP address, do not use DDNS service as it can lead to problems

### To set up DDNS:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Security > Dynamic DNS.



5. If you have registered with a DDNS service provider, select the **Use a Dynamic DNS Service** check box.

- 6. Select the name of your Dynamic DNS service provider.
- 7. Type the host name that your Dynamic DNS service provider gave you. (The DDNS service provider might call this the domain name.)
- 8. Type the user name for your DDNS account.
- 9. Type the password (or key) for your DDNS account.
- 10. Click Submit.

# Remote Management

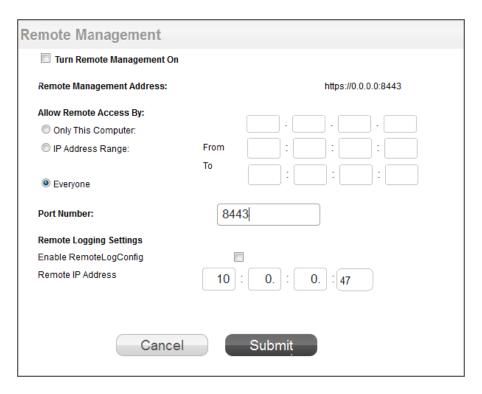
The remote management feature lets you access your gateway over the Internet to view or change its settings.

You need to know the gateway's WAN IP address to use this feature.

**Tip:** Be sure to change the password for admin to a secure password. The ideal password contains no dictionary words from any language and contains uppercase and lowercase letters, numbers, and symbols. It can be up to 30 characters. See Change the Admin Password.

### To set up remote management:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Security > Remote Management.



- 5. Select the **Turn Remote Management On** check box.
- 6. In the Allow Remote Access By section, specify the external IP addresses to be allowed to access the gateway's remote management.
- 7. For enhanced security, restrict access to as few external IP addresses as practical.
- 8. Select one of the following:
  - To allow access from a single IP address on the Internet, select the **Only This Computer** radio button. Enter the IP address to be allowed access.
  - To allow access from a range of IP addresses on the Internet, select the **IP Address Range** radio button. Enter a beginning and ending IP address to define the allowed range.
  - To allow access from any IP address on the Internet, select the **Everyone** radio button.
- 9. Specify the port number for accessing the Web browser interface.
  - Normal Web browser access uses the standard HTTP service port 80. For greater security, enter a custom port number for the remote Web management interface. Choose a number from 1024 to 65535, but do not use the number of any common service port. The default is 8080, which is a common alternate for HTTP.
- 10. Click Submit.

#### To use remote access:

1. Launch a Web browser on a computer that is not on your home network.

2. Type your gateway's WAN IP address into your browser's address or location field followed by a colon (:) and the custom port number.

For example, if your external address is 134.177.0.123 and you use port number 8080, enter http://134.177.0.123:8080 in your browser.

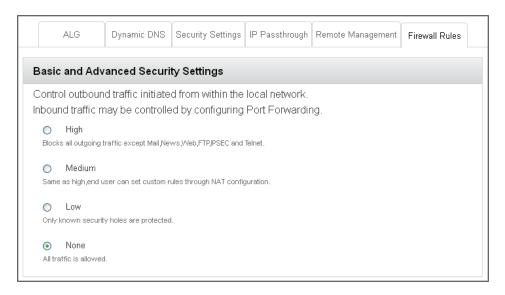
## Firewall Rules

The Firewall Rules page sets the level of security on your local network.

### To specify the firewall security level:

All security levels, except "None," protect against known Internet attacks and attempts at remote access to your modem.

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Security > Firewall Rules.



- 5. Select the radio button for the security level that you want.
- 6. Click the **OK** button to confirm the change.

The following settings are available.

ltem	Description
High	The high security setting only allows basic Internet functionality. The High

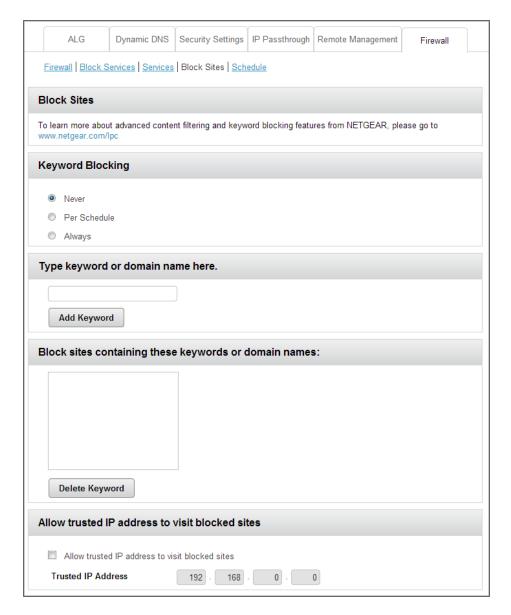
Item	Description
	security setting guarantees to only pass Mail, News, Web, FTP, IPSEC and Telnet. All other traffic is not allowed. High security restricts modification by NAT configuration options.
Medium	The medium security setting only allows basic Internet functionality by default, just like High level security. Medium security, however, allows customization through NAT configuration so certain traffic can pass
Low	The low security setting will allow all traffic except for known attacks. With low, your modem is visible by other computers on the Internet
Custom	Custom is an advanced configuration option that allows you to edit the firewall configuration directly. Only expert users should attempt this

# Use Keywords to Block Internet Sites

You can use keywords to block certain Internet sites from your network. You can use blocking all the time or based on a schedule.

### To block Internet sites:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Security > Firewall > Block Sites.



- 5. Select one of the keyword blocking options:
  - **Per Schedule**. Turn on keyword blocking according to the Schedule screen settings. (See Schedule When to Block Internet Sites and Services on page 57.)
  - Always. Turn on keyword blocking all the time, independent of the Schedule screen.
- 6. In the **Add Keyword** field, enter a keyword or domain that you want to block.

### For example:

- Specify XXX to block http://www.badstuff.com/xxx.html.
- Specify .com if you want to allow only sites with domain suffixes such as .edu or .gov.
- Enter a period (.) to block all Internet browsing access.
- 7. Click the **Add Keyword** button.

The keyword is added to the keyword list. The keyword list supports up to 32 entries.

### To delete keywords from the list, do one of the following:

- To delete a single word, select it and click the Delete Keyword button. The keyword is removed from the list.
- To delete all keywords on the list, click the Clear List button. All keywords are removed from the list.

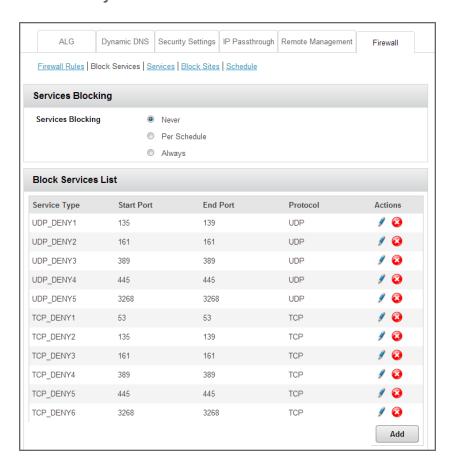
# Block Services from the Internet

You can block Internet services on your network based on the type of service. You can block the services all the time or based on a schedule.

### To block services:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)

4. Click Security > Block Services.



- 5. Specify when to block the services:
  - To block the services all the time, select the **Always** radio button.
  - To block the services based on a schedule, select the **Per Schedule** radio button.

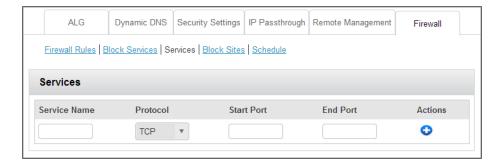
Tip: To specify the schedule, see Schedule When to Block Internet Sites and Services.

6. To add a service that is in the Service Type list, select the application or service.

The settings for this service automatically display in the fields.

7. To add a service or application that is not the list, click the **Add** button.

The Services screen displays.



- 8. In the **Service Name** field, type the name of the service.
- 9. If you know that the application uses either TCP or UDP, select the appropriate protocol; otherwise, select **TCP/UDP** (both).
- Enter the starting port and ending port numbers. If the service uses a single port number, enter that number in both fields.

**Tip:** To find out which port numbers the service or application uses, you can contact the publisher of the application, ask user groups or newsgroups, or search on the Internet.

11. Click the O Add button.

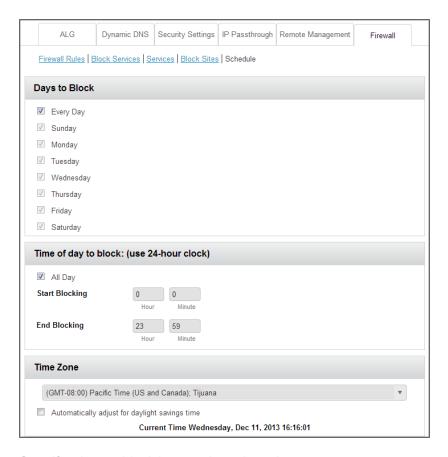
# Schedule When to Block Internet Sites and Services

When you schedule blocking, the same schedule is used to block sites and to block services.

For information about how to specify what you want the router to block, see Use Keywords to Block Internet Sites and Block Services from the Internet.

### To schedule blocking:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Security > Firewall > Schedule.



- 5. Specify when to block keywords and services:
  - Days to Block. Select the check box for each day that you want to block the keywords or select the Every Day check box, which automatically selects the check boxes for all days.
  - Time of Day to Block. Select a start and end time in 24-hour format, or select All Day for 24-hour blocking.
- 6. Select your time zone from the list.
- 7. If you use daylight saving time, select the **Automatically adjust for daylight savings time** check box.

# Avoid Keyword Blocking on a Trusted Computer

You can exempt one trusted computer from blocking.

The computer you exempt must have a fixed IP address. You can use the reserved IP address feature to specify the IP address. See Reserve LAN IP Addresses on page 101.

### To specify a trusted computer:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.

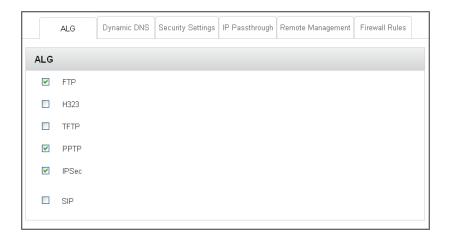
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Security > Firewall > Block Sites.
- 5. Scroll down and select the Allow trusted IP address to visit blocked sites check box.
- 6. In the **Trusted IP Address** field, enter the IP address of the trusted computer.

# **ALG Services**

This page is used to configure the ALG Services.

**Note:** When the firewall level is set to High, some services may not be configurable.

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- Click Security > ALG.



5. Select the check boxes for the ALG services that you want.

# IP Passthrough

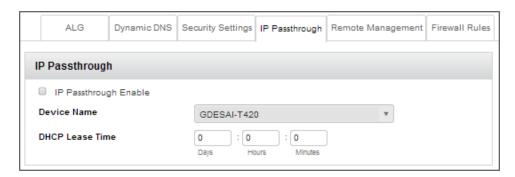
You can designate a computer behind the gateway to receive unsolicited traffic from the public network.

**Note:** The public WAN IP will be assigned to this computer.

### To set up IP passthrough:

1. Use an Ethernet cable to connect the computer to a LAN Ethernet port on the gateway.

- 2. On this computer, launch a Web browser.
- 3. In the address or URL field of your browser, type http://myrouter.
- 4. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 5. Click **Security** > **IP Passthrough**.



- 6. Select the IP Passthrough Enable check box.
- 7. In the Device Name drop-down list, select a computer.
- 8. In the DHCP Lease Time fields, enter the days, hours, minutes that you want to assign the public IP to this computer.
- 9. Click the **Submit** button.

**Note:** For detailed IP passthrough usage scenarios, consult the Sprint operator for details.

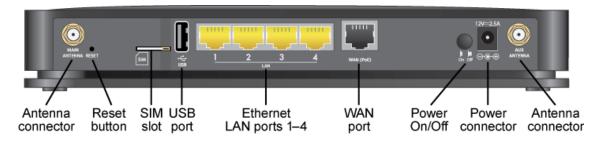
# USB File Sharing

You can connect a USB drive to the gateway's USB port and share it with others on your network.

You can specify how you want file sharing to be managed for files on a USB device attached to the gateway USB port.

### To set up file sharing for a USB drive:

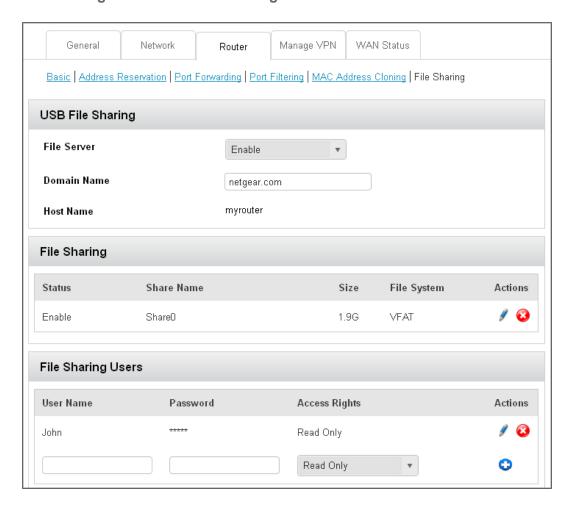
1. Connect a USB drive to the USB port on your gateway.



- 2. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 3. In the address or URL field of your browser, type http://myrouter.
- 4. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)

USB File Sharing 50

### 5. Click Settings > Router > File Sharing.



6. To allow file sharing, select **Enable** in the File Server field.

When this feature is enabled, all of the files on the USB drive are available as Windows Shared Files to other devices on the local area network (LAN). Shared files are not available to clients on the Internet outside of the local network.

7. In the Domain Name field, specify the network name.

This feature allows a computer on the LAN to access the shared files with a name rather than the IP address. The Host Name displays in the Windows Network on local network computers. Files can be accessed with the routers IP address (for example, \\192.168.15.1), the hostname (for example, \\dslrouter), or the link in the network neighborhood.

8. In the File Sharing Users section, specify user names and passwords for access to network file shares.

With this feature, anyone who tries to access the files on the USB device must enter a user name and password. Each user can be set to read only or have write access to the files on the USB drive. Existing passwords cannot be viewed. You must change it if it is forgotten.

USB File Sharing 51

9. To add a user, click the • Add button and type the user name and password.

10. To edit a user's credentials or password, click the user name.

USB File Sharing 52

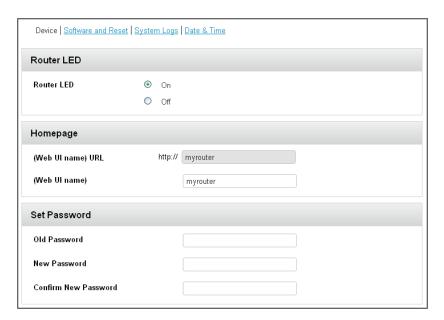
# Gateway Settings

Manage the gateway settings. From the Settings page, you can configure your device, network, and router settings.

# General Settings

From the General tab, you can configure your device's LED status indicators, the gateway's (web browser) URL and administrator password.

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click **Settings** and the General tab displays.



The following information is displayed.

Item	Description	
Router LED		
Router LED	Indicates whether the LEDs are used ( <b>On</b> ) or not ( <b>Off</b> ). See LED Settings.	
Homepage		
(Web UI name) URL	The URL used to show the homepage. See Changing the Gateway's URL.	

Item	Description
	The password used to show the homepage. See Changing the Admin Password.

## LED Settings

By default, the LEDs are on because they are status indicators. You can log in to the gateway and turn the LEDs off and on.

#### To turn the LEDs off and on:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > General > Device.
- 5. Beside **LED**, select **On** or **Off** as desired.)
- 6. Click Submit.

## Login Settings

You can customize the URL that you use to log in to the gateway and you can change the administrator password.

# Change the Gateway URL

You may want to change the URL for the gateway to something more memorable.

### To change the URL:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > General > Device.
- 5. In the **URL** field (in the **Homepage** section), type the new value (maximum 31 letters and

numbers).

6. Click Submit.

## Change the Admin Password

For security reasons, you should change the gateway's admin password on a regular basis.

It is strongly recommended that you enable password recovery, so that if you forget the password you can recover it.

**Note:** If you forget the admin password, you'll need to reset your device to its default settings and go through the device setup. (See What Do I Do if I Forget the Administrator Password?)

### To change the administrator password:

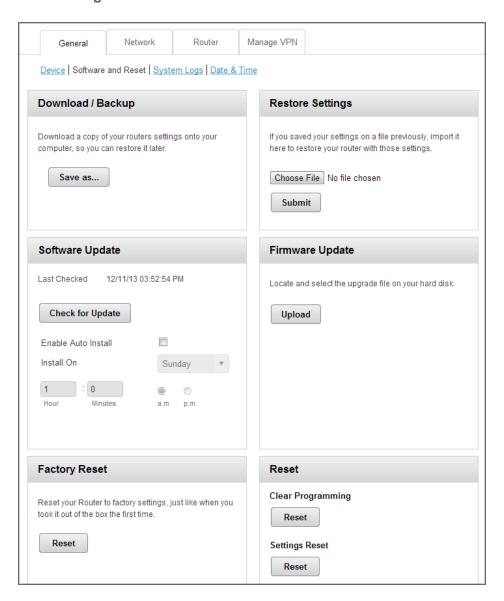
- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > General > Device.
- 5. In the **Old Password** field, type the old password.
- 6. In the **New Password** field, type the new password (1–31 letters, numbers, and symbols).
- 7. In the **Confirm New Password** field, type the new password again.
- 8. Click **Submit**.

## Software and Reset

From this page, you can save your current device settings and restore them later, update your software, reset your device to default settings, and set your device startup options.

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)

4. Click Settings > General > Software and Reset.



#### You can:

- Back up and restore your gateway's configuration, if needed. See Export and Import Settings.
- Update your gateway's software. See Update the Software and Firmware.
- Reset some or all of your gateway's settings. See Reset Device Settings Only, Reset the Gateway to Factory Default Settings, and Clear Account Details Only.

The following information is displayed.

Item	Description
Download / Backup	Click <b>Save</b> to make a copy (export) of the gateway's current configuration, so that you can restore it later if needed. See Exporting Settings.
Restore Settings	Click <b>Choose file</b> to use a previously saved copy of your device configuration. See Importing Settings.
Software Update	Click <b>Check for update</b> to see if a new version of software has been released and if there is, download and install it. The last time you checked is shown on the screen (Last checked at). See <b>Update</b> the Software and Firmware.
	Note: Software downloads count against your plan's data limit.
Firmware Update	Click <b>Upload</b> to see if a new version of your device's firmware has been released, and if there is, download and install it.
Factory Reset	Click to reset your device to factory default settings and clear your account details. See Reset the Gateway to Factory Default Settings. (You can only do this with assistance from Sprint.)
Reset	Settings Reset – Click to reset your device to factory default settings, but leave your Sprint account details unchanged. See Reset Device Settings Only.
	Clear Programming – Click to clear your account details. See Clear Account Details Only.

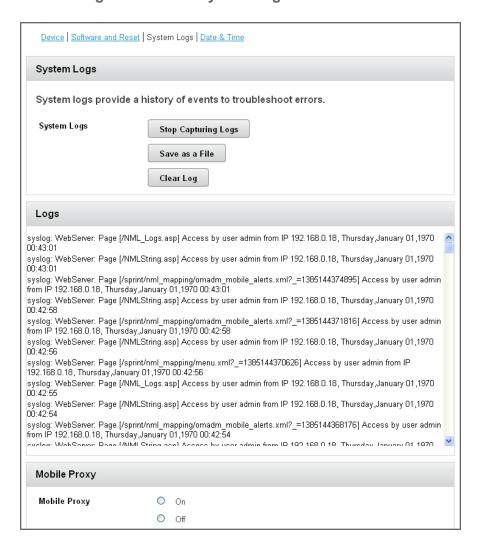
# System Logs

Technical support staff may need you to configure system logging in this page for the purpose of error diagnosis.

**Note:** You should only adjust settings on this page under the direction of technical support staff.

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)

4. Click Settings > General > System Logs.



#### You can:

- Stop Capturing Logs
- Save as a File
- Clear logs

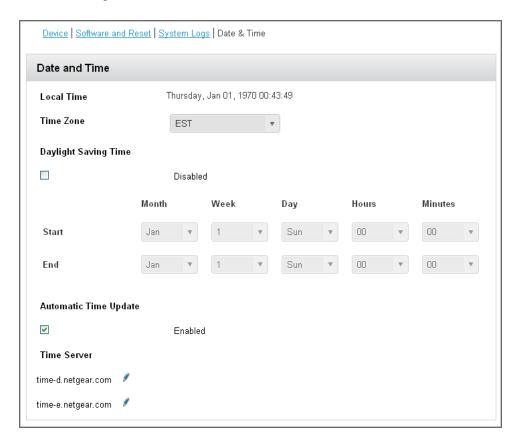
# Date & Time Settings

Configure the date and time settings.

### To specify the date and time settings:

1. On a computer or wireless device that is connected to your gateway, launch a Web browser.

- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Security > Date & Time.



**Note:** The Local Time field displays the local time.

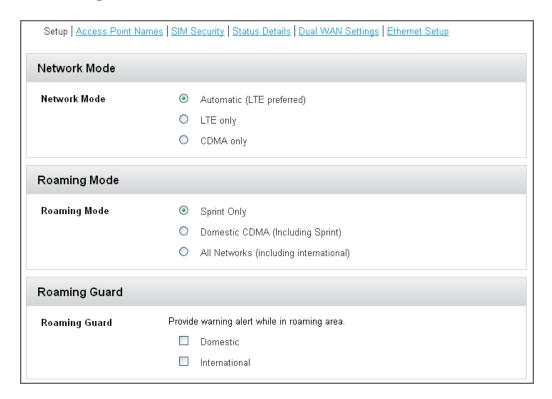
- 5. In the Time Zone field, select the time zone.
- 6. If your location uses daylight saving, select the **Daylight Saving Time** check box.
  - Selecting this check box enables daylight saving time. If the current time falls within the
    daylight saving period, then daylight saving time takes effect. The Start and End fields
    display.
- 7. If needed, change the settings in the Start and End fields.
- 8. Select or clear the Automatic Time Update check box.
  - This check box enables or disables the NTP server. You can edit the first NTP server entry and you can add, remove, or edit a second NTP server.
- 9. Click Submit.

Your changes are saved.

# Network Setup

From the Network Setup page, you can specify how the gateway selects mobile networks and roaming, and receive network configuration updates from Sprint.

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > Network.



### You can:

- Configure network selection and roaming options.
- Check the network for a new Preferred Roaming List.

The following information is displayed.

Item	Description
Network Mode	The type of network that your device can connect to. See Set the Network Mode.

Item	Description
Roaming Mode	The areas in which your device can roam. See Set the Roaming Mode.
Roaming Guard	If selected, the roaming areas where a warning will appear when you enter them. See Enabling or Disabling the Roaming Guard Warning Message.
Update PRL	Click to check if a new PRL (Preferred Roaming List) is available on the network, and use it to update your device.
Update Network Settings	Click to re-run HFA (Hands Free Activation).
Manual Configuration	Use only when instructed by Sprint.
Advanced Settings	Use only when instructed by Sprint.

## Network Access Point Names

In this page, you can add, modify, or remove access point names (APN)s for the networks you want to connect to.

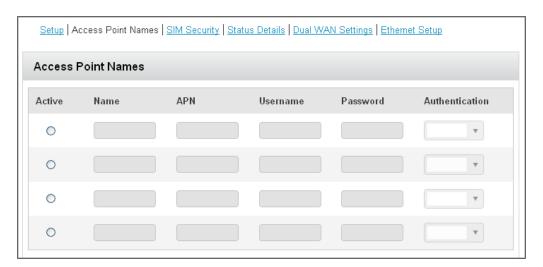
To connect to a carrier's network when roaming, your device must be configured with an Access Point Name (APN) for that carrier. The APN is checked by the carrier to determine the type of network connection to establish.

**Note:** Your gateway comes with the APN for Sprint preconfigured.

### To view or change the access point names:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)

4. Click Settings > Network > Access Point Names.



To add (or modify) an access point name, see Configuring Access Point Names.

The list of all APNs that have been set up includes the following information.

Item	Description
Active	The access point currently in use. Only one access point can be marked as active.
Name	Network carrier name (for example, "Sprint").
APN	The operator's access point name (obtained from the operator).
Username	If required, the username (obtained from the operator) used to connect to the APN.
Password	If required, the password (obtained from the operator) used to connect to the APN.
Authentication	The network authentication code (None, PAP, CHAP, PAP or CHAP).

## SIM Security

If you are using a SIM that has security enabled, you can disable SIM Security from this page.

This page shows the current status of this security feature, and allows you to disable SIM security if it has been enabled.

Note: The SIM PIN is required to disable SIM Security.

## To disable SIM security:

1. On a computer or wireless device that is connected to your gateway, launch a Web browser.

- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > Network > SIM Security.



If the SIM has security enabled, SIM Security will be Active. Click **Disable** to disable SIM security.

The following information is displayed.

Item	Description
•	The current state of the SIM PIN feature (Inactive or Active). Click <b>Disable</b> to disable SIM security.

### Status Details

This page shows you details about the current mobile broadband connection (3G or LTE).

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- Click Settings > Network > Status Details.



The information that is displayed depends on your current connection.

## 4G/LTE Details

Item	Description
Connected Status	Indicates whether you are connected to an LTE network.
Service type	Indicates the LTE service type.
RSRP	The signal strength of the LTE network. (Reference Signal Received Power)
RSRQ	The signal quality of the LTE network (Reference Signal Received Quality). RSRQ is the ratio between the RSRP and the Received Signal Strength Indicator (RSSI).
RS-SINR	Signal to Interference Noise Ratio based on Reference Signals (narrowband and wideband)
PLMN ID	Public land mobile network ID (Operator Network ID)
Serving Cell	The 3G/4G cell that is currently serving the gateway (router)
TX Power	The transmitter power. A higher number is better.
IP Address	The IP address of the 4G LTE connection.
Channel UL	The channel that is used to upload to the 4G LTE network.
Channel DL	The channel that is used to download from the 4G LTE network.
IMSI	The International Mobile Station Identity is an identifier of a device on the network.
Band	The LTE band being used for the connection.
Last Error Code	Technical support staff may request this value from you.
ICCID	The Integrated Circuit Card ID.

## 3G Details

Item	Description
Status	Indicates whether you are connected to a 3G network.
PS service type	Indicates the 3G service type (for example, CDMA, HRPD, CDMA_HRPD).
IP Address	The IP address of the 3G connection.
Coverage Type	The type of 3G network available.
RSSI	Signal strength of the network.
Ec/lo	Dimensionless ratio of the average power of a channel, typically the pilot channel, to the total signal power.
MDN	Mobile Directory Number. This is your 10-digit telephone number.

Item	Description
MSID	Mobile Station Identifier.
DRC Cover	Digital Rate Control Cover.
DRC Value	Digital Rate Control Value.
Channel	DRC Channel number.
Roaming	Indicates if you are roaming on Sprint, domestically, or internationally.
PRL Version	Preferred Roaming List version. To update the PRL, see Network Page.
1xRTT PN	Technical support staff may request this value from you.
EVDO PN	Technical support staff may request this value from you.
PRev	Technical support staff may request this value from you.
Rx Power	Technical support staff may request this value from you.
Serving SID	The Serving System ID identifies your home network area and is used to determine if you are 'home' or 'roaming'.
NID	Technical support staff may request this value from you.
Packet Zone ID	Technical support staff may request this value from you.
Frame Error Rate	Used to determine the quality of a signal connection. Technical support staff may request this value from you.
<b>Subnet Color Code</b>	Technical support staff may request this value from you.
AN-AAA	Technical support staff may request this value from you.
Packet Error Rate	Technical support staff may request this value from you.
MIP Error Code	The Mobile IP Error Code. Technical support staff may request this value from you.

# **Dual WAN Settings**

This page is used to configure the broadband dual WAN Settings.

The default setting is to always use mobile broadband.

## To specify broadband settings:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > Network > Dual WAN Settings.



#### Available options are:

- Always use Mobile Broadband connection
- Use WAN Ethernet with Mobile Backup on Failure
- Always use Fixedline Broadband Connection.

# Ethernet Setup

You do not need to change the settings on the Ethernet Setup screen unless instructed to do so by your service provider.

### To view or change the Ethernet setup:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > Network > Ethernet.

Internet IP Address	
<ul><li>Get Dynamically from IS</li></ul>	PP
<ul><li>Use Static IP Address</li></ul>	
IP Address	
IP Subnet Mask	
Gateway IP Address	
<ul><li>Get Automatically from I</li><li>Use These DNS Servers</li></ul>	
Use These DNS Servers	
<ul><li>Use These DNS Servers</li><li>Primary DNS</li></ul>	

- 5. To change the IP address setting, select one of the following radio buttons and click the **Submit** button.
  - **Get Dynamically from ISP**. This is the default setting, which works with most Internet connections. The ISP assigns IP addresses as needed.
  - Use Static IP Address. If your ISP has assigned you a static IP address, select this radio button and type the IP address, subnet mask, and gateway IP address into the fields.
- 6. To change the **Domain Name Server (DNS) Address** setting, select one of the following radio buttons and click the **Submit** button.
  - Get Automatically from ISP. This is the default setting. The ISP automatically assigns DNS servers.
  - Use These DNS Servers. To use specific DNS servers, select this radio button and type
    the appropriate IP addresses in the Primary DNS and Secondary DNS fields.
- 7. To change the MTU size, type a value in the **MTU** Size field and click the **Submit** button.

**Note:** The maximum transmission unit (MTU) is the largest data packet a network device transmits. For more information about this setting, see MTU Size.

## MTU Size

Learn about maximum transmission unit (MTU) size and how to change this setting.

The maximum transmission unit (MTU) is the largest data packet a network device transmits. When one network device communicates across the Internet with another, the data packets travel through many devices along the way. If a device in the data path has a lower MTU setting than the other devices, the data packets must be split or "fragmented" to accommodate the device with the smallest MTU.

The best MTU setting for your gateway is often the default value. In some situations, changing the value fixes one problem but causes another. Leave the MTU unchanged unless one of these situations occurs:

You have problems connecting to your ISP or other Internet service, and the technical support of either the ISP recommends changing the MTU setting. These Web-based applications might require an MTU change:

- A secure website that does not open, or only part of a Web page displays
- Yahoo! Mail
- MSN portal
- America Online's DSL service
- You use VPN and have severe performance problems.
- You used a program to optimize MTU for performance reasons, and now you have connectivity or performance problems.
- An incorrect MTU setting can cause Internet communication problems. For example, you might not be able to access certain websites, frames within websites, secure login pages, or FTP or POP servers.

If you suspect an MTU problem, a common solution is to change the MTU to 1400. If you are willing to experiment, you can gradually reduce the MTU from the maximum value of 1500 until the problem goes away. The following table describes common MTU sizes and applications.

The following table lists common MTU sizes.

MTU Size	Application
1500	The largest Ethernet packet size. This setting is typical for connections that do not use PPPoE or VPN, and is the default value for NETGEAR gateways, adapters, and switches
1492	Used in PPPoE environments
1472	Maximum size to use for pinging. (Larger packets are fragmented.)
1468	Used in some DHCP environments.
1460	Usable by AOL if you do not have large email attachments, for example.
1436	Used in PPTP environments or with VPN.
1400	Maximum size for AOL DSL.
576	Typical value to connect to dial-up ISPs.

# Router Settings

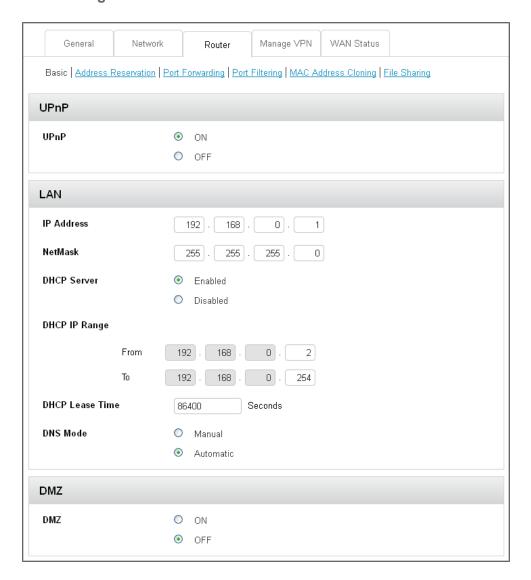
Adjust your gateway's router settings through the Basic, Port Forwarding, and Port Filtering pages.

## Router Basic Settings

From this page you can configure the router's UPnP feature, LAN settings, and DMZ settings.

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)

4. Click **Settings** > **Router**.



5. You can make changes to any of these fields. When you finish, click **Submit**.

The following information is displayed.

Item	Description
UPnP	
UPnP	Current state of the Universal Plug and Play feature (On or Off). (See UPnP (Universal Plug and Play).)
LAN	
IP Address	The routing hardware's IP address on the LAN.
Netmask	The routing hardware's internal LAN subnet mask.
DHCP Server	This field enables (On) or disables (Off) DHCP. See DHCP.

Item	Description
DHCP IP Range	This specifies the starting and ending address of the range of IP addresses available for your device to dynamically (that is, not permanently) assign to computers connected to it. See DHCP.
DHCP Lease Time	This is the amount of time, in minutes, a computer can use its assigned IP address before it is required to renew the lease. After this time is up, the computer is automatically assigned a new dynamic IP address. See DHCP. Enter a number between 2 and 10080.
DNS Mode	This specifies how the DNS servers (that the DHCP clients are to communicate with) are obtained.  Manual: The routing hardware assigns DHCP clients the DNS servers specified in the DNS 1 and DNS 2 fields Use this option to access a DNS server that provides customized addressing or if you have a local DNS server on your network.  Note: The DNS 1 and DNS 2 fields appear only if DNS Mode is Manual.  Auto: The DNS server specified by Sprint is used.
DMZ	
DMZ On/Off	Enable / disable demilitarized zone.
DMZ Address	If DMZ is enabled, this is the IP address of a single computer used to receive all unsolicited incoming connections.
Submit	

## UPnP (Universal Plug and Play)

UPnP provides simple and robust connectivity among consumer electronics, intelligent appliances, and mobile devices from many different vendors. (For more information, see upnp.org.)

Note: If UPnP is enabled, there are potential security risks.

### To enable UPnP:

Before you can use UPnP, you must enable it.

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click **Settings** > **Router**.

- 5. Next to UPnP, select On.
- 6. Click Submit.

### **DHCP**

DHCP (Dynamic Host Control Protocol) automatically assigns an IP address to each device on the network and manages other network configuration information for devices connected to your network. You do not need to manually configure the IP address on each device that's on your network.

The assigned IP addresses are not permanent (as opposed to when using static IP).

Most ISPs (Internet Service Providers) use DHCP.

Normally, you should enable DHCP, in which case you must configure each device on the network with one of the following:

- TCP/IP settings set to "Obtain an IP address automatically."
- TCP/IP bound to the Ethernet connection with DHCP.

If DHCP is disabled, you must configure each device on the network with:

- Fixed (permanent/static) IP address.
- DNS server addresses (provided by Sprint).

#### To enable DHCP:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click **Settings** > **Router**.
- Next to DHCP Server, select Enabled.
- 6. You can set the following DHCP settings:
  - DHCP IP Range: This is the starting and ending address of the range of IP addresses available for your device to dynamically (that is, not permanently) assign to computers connected to it.

**Note:** The start address must be 192.168.0.10 or above and the ending address must be 192.168.0.50 or below.

• **DHCP Lease Time**: This is the amount of time, in minutes, a computer can use its assigned IP address before it is required to renew the lease. After this time is up, the computer is automatically assigned a new dynamic IP address.

Note: Enter a number between 2 and 10080.

- DNS Mode This specifies how the DNS servers (that the DHCP clients are to communicate with) are obtained. (See DNS Mode.)
- 7. Click Submit.

## **DNS Mode**

The DNS Mode setting specifies how the DNS servers (that the DHCP clients are to communicate with) are obtained.

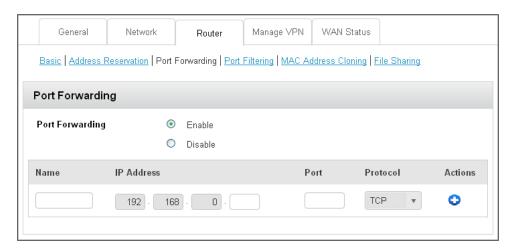
- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > Router.
- 5. Set **DNS Mode** to one of the following:
  - Auto: The DNS server specified by Sprint is used.
  - Manual: The routing hardware assigns DHCP clients the DNS servers specified in the
    DNS 1 and DNS 2 fields. (These fields appear when Manual is selected.)
    Use this option to access a DNS server that provides customized addressing or if you have a
    local DNS server on your network.
- 6. Click Submit.

## Port Forwarding

Port forwarding lets you forward incoming traffic to specific ports and devices (per their local IP address) on your network. (Normally, incoming traffic is blocked.)

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)

4. Click Settings > Router > Port Forwarding.



#### You can:

■ Enable or disable port forwarding. See Enable Port Forwarding.

Note: You must enable port forwarding before you can view and update the port forwarding list.

 Enter port forwarding details for an application. (See Enable Port Forwarding for an Application.)

For example, you can configure port forwarding so that:

- You can access your Remote Desktop from the Internet (by specifying the WAN [public] IP address that your device is using).
- Internet users can access a Web, FTP, or email server, or gaming or Internet application hosted by your computer.
- Remove an application from the port forwarding list. (See Disable Port Forwarding for an Application.)

**Note:** Port forwarding creates a security risk. When not required, port forwarding should be disabled.

**Note:** Port forwarding does not apply to normal browsing, file downloading, running most online games or other applications hosted on the Internet. (Some online games require port forwarding.)

The following information is displayed.

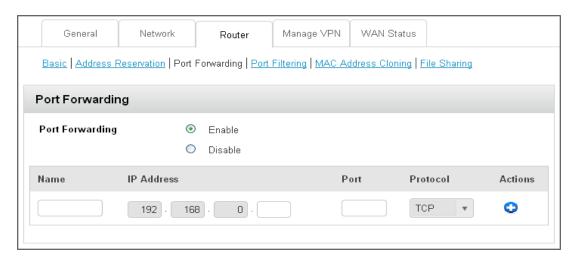
Item	Description
Port Forwarding	Indicates whether port forwarding is on (Enable) or off (Disable).
List of forwarded ports: This list appears only if port forwarding is on. Each port displays:	
Name	A name describing the application using the port.
IP Address	The IP address of the server being accessed.

Item	Description
	The port that is forwarded. If the application uses more than one port, each port must be forwarded separately.
Protocol	The protocol (TCP, UDP, etc.) being used for this application.
Actions	

## Enable Port Forwarding

Before you can use or configure Port Forwarding, you must enable it.

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > Router > Port Forwarding.



- 5. Next to Port Forwarding, select Enable.
- 6. Click Submit.

# Enable Port Forwarding for an Application

You can enable port forwarding for certain application types.

Note: Port forwarding must currently be enabled. (See Enabling Port Forwarding.)

1. On a computer or wireless device that is connected to your gateway, launch a Web browser.

- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > Router > Port Forwarding.
- 5. In the blank row of the list, enter a Name that describes the application (for example, "RandomEmailApp").
- 6. In the **IP** field, enter the IP address of the server to be accessed.
- 7. In the **Port** field, enter the port used by the application. (If the application uses more than one port, each port must be forwarded separately.)
- 8. In the **Protocol** list, click the protocol(s) used for this application (TCP, UDP).
- 9. Click the to add this row to the list.
- 10. Click Submit.

## Disable Port Forwarding for an Application

If you want to stop forwarding any ports, you can remove them from the forwarding list.

**Note:** Port forwarding must currently be enabled. (See Enabling Port Forwarding for an Application.)

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- Click Settings > Router > Port Forwarding.
- 5. Click the beside the row that you want to remove.
- 6. Click Submit.

## Port Filtering

Port filtering lets you either allow (white list) or prevent (black list) which applications (for example, http, ftp, email servers) can access the Internet.

1. On a computer or wireless device that is connected to your gateway, launch a Web browser.

- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > Router > Port Filtering.



#### You can:

- Enable port filtering. (See Enable Port Filtering.)
- Add an application to a port filtering list. (See Enable Port Filtering for an Application.)
- Remove an application from the port filtering list. (See Disable Port Filtering for an Application.)

The following information is displayed.

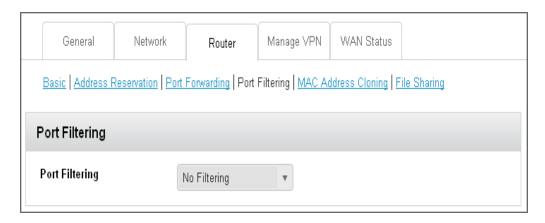
Item	Description
Port Filtering	Indicates which type of filtering is being used.
	No Filtering: All applications are allowed to access the Internet.
	<ul> <li>Black List: Applications in the list are not allowed to access the Internet.</li> </ul>
List of filtered ports: This list appears only if port filtering is on. Each port displays:	
Name	A name describing the application using the port.
Port	The port that the application uses to access the Internet.
Protocol	The protocol (TCP, UDP, etc.) being used by the application.
Actions	

# Enable Port Filtering

Before you can use or configure Port Filtering, you must enable it.

1. On a computer or wireless device that is connected to your gateway, launch a Web browser.

- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > Router > Port Filtering.



- 5. In the **Port Filtering** list, select **Black List** to prevent specific applications from using the Internet.
- 6. Click Submit.

## Enable Port Filtering for an Application

You can enable port filtering for certain application types.

Note: Port Filtering must currently be enabled. (See Enabling Port Filtering.)

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > Router > Port Filtering.
- 5. In the **Name** field, enter a name that describes the application being filtered (for example, "RandomEmailApp").
- 6. In the **Port** field, enter the port used by the application.
- 7. In the **Protocol** list, click the protocol(s) used for this application (TCP, UDP, or both).
- 8. Click the to add this filter to the list.
- 9. Click Submit.

## Disable Port Filtering for an Application

If you currently have port filtering enabled and some ports already in the list (Black List or White List), you can remove any of those rows.

**Note:** Port Filtering must currently be enabled. (See Enable Port Filtering.)

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > Router > Port Filtering.
- Select Black List.
- 6. To remove an application from the list click the 6. beside the row that you want to remove.
- 7. Click Submit.

### Address Reservation

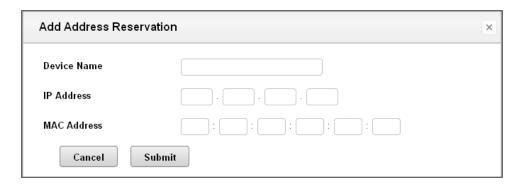
Address reservation lets you specify a specific IP address that the gateway assigns to a computer or device when it connects to the gateway's local area network (LAN).

When you specify a reserved IP address for a computer on the gateway's local area network (LAN), that computer always receives the same IP address each time it accesses the DHCP server. Reserved IP addresses should be assigned to servers that require permanent IP settings.

#### To reserve an IP address:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > Router > Address Reservation.

5. Click the Add button.



- 6. Enter the device name, IP address, and MAC address of the computer that you want to add.
- 7. Click the **Submit** button.

#### To edit a reserved IP address:

- 1. Select the radio button next to the reserved address.
- 2. Click the **Edit** button.
- 3. Edit the IP address, MAC address, or device name.
- 4. Click the **Accept** button when finished.

#### To delete a reserved IP address:

- 1. Select the radio button next to the reserved address.
- 2. Click the O Delete button.

## MAC Address Cloning

Your computer's local address is its unique address on your network. This is also referred to as the computer's MAC (Media Access Control) address. The format for the MAC address is XX:XX:XX:XX:XX:XX.

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > Router > MAC Address Cloning.



- 5. If your ISP does not require MAC authentication, select **Use Default MAC Address**.
- 6. If your ISP requires MAC authentication, select one of the following:
  - Use Computer MAC address. Disguise the router's MAC address with the MAC address of the computer that you are currently using to configure the gateway.
  - Use This MAC Address and manually type the MAC address. Disguise the router's MAC address with the MAC address of another computer (not the one that you are currently using).
- 7. Click Submit.

## DMZ – General

You can select one computer to receive all unsolicited incoming connections.

The IP address of the DMZ ("demilitarized zone") is the default recipient of incoming packets (from the Internet) that are not handled by port forwarding rules or NAT'd connections:

- If port forwarding is enabled, incoming traffic is routed according to the port forwarding rules or NAT'd connections.
- If incoming traffic was not routed as a result of the above:
  - If DMZ is enabled, then incoming traffic is routed to the computer that uses the IP address specified by the DMZ settings.
  - If DMZ is not enabled, the incoming traffic is blocked.

**Note:** Putting a computer in the DMZ opens all the ports of that computer, and exposes that computer to various security risks. Use this option only as a last resort — if possible, use other options instead (for example, port forwarding).

### Enable DMZ

Before you can use or configure DMZ, you must enable it.

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click **Settings** > **Router**.
- 5. Next to **DMZ Enabled**, select **ON**.
- 6. Click Submit.

## Configure DMZ

Specify which computer is to receive all unsolicited incoming connections.

**Note:** DMZ must currently be enabled. (See Enable DMZ.)

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click **Settings** > **Router**.
- 5. In the **DMZ Address**, enter the IP address of the computer that you want exposed to the Internet. (If you don't know how to find the IP address, see Finding the IP Address.)

# Mobile Network Settings

View information about your mobile network activation, data usage, and settings.

## View Network Activation Information

You can check whether network access is activated.

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click **About** in the top right corner of the page.
- 5. Check the **Activation Date** in the WWAN Info section. This is the date that the gateway was activated on the Sprint network.

# View Data Usage

You can view an estimate of your data usage on your device's home and Data Usage screens, and on the gateway's home page.

**Note:** The data usage shown is an estimate only and is not accurate for billing purposes.

**Note:** The session data counter resets automatically each time your device is powered off and on, and when the mobile broadband network connection disconnects and reconnects (for example, when going through a tunnel). The billing plan data counter resets automatically when the next billing cycle starts.

### To view an estimate of your data usage:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)

The Data Usage **Session** section displays:

- Amount of data used in the current session.
- The length of time the connection has been active.

The Data Usage Billing Cycle section displays:

Total amount of data used in the current billing cycle, and amounts used for each network type

- Number of days remaining in the current billing cycle.
- Date that the next billing cycle begins.
- Check Carrier Usage Click to connect to Sprint's website and view detailed billing plan information.

# Network Settings

Adjust your device's network settings to select the network types that can be connected, and set roaming options.

## Set the Roaming Mode

Use this feature to choose where your device can be used in roaming mode.

You can adjust this setting on your gateway's **Settings** > **Network** page, using the following options:

- **Sprint Only** Your device can be used only in Sprint service areas.
- **Domestic CDMA (Including Sprint)** Your device can roam only in North America.
- Any Network Your device can roam anywhere in the world.

#### To set the roaming mode:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click **Settings** > **Network**.
- 5. Beside **Roaming Mode**, select the desired value.
- Click Submit.

## Enable or Disable the Roaming Guard Warning Message

Use this feature to have your device display a warning when you enter a roaming area.

#### To enable or disable the roaming guard warning message:

1. On a computer or wireless device that is connected to your gateway, launch a Web browser.

- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > Network.
- 5. Beside Roaming Guard, select the warnings you would like to display (Domestic and/or International).
- Click Submit.

### Set the Network Mode

Use this feature to select the types of networks that your device can connect to.

You can adjust this setting on the gateway's **Settings** > **Network** page, to one of the following options:

- Automatic (LTE preferred) The connection will be established on the fastest available network.
- LTE only The connection can be established only on an LTE network. Your device will not connect to CDMA networks.
- CDMA only The connection can be established only on a CDMA (3G) network. Your device will not connect to LTE networks.

#### To set the network mode:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click **Settings** > **Network**.
- 5. Beside Network Mode, select the desired network mode that your device can connect to.
- 6. Click Submit.

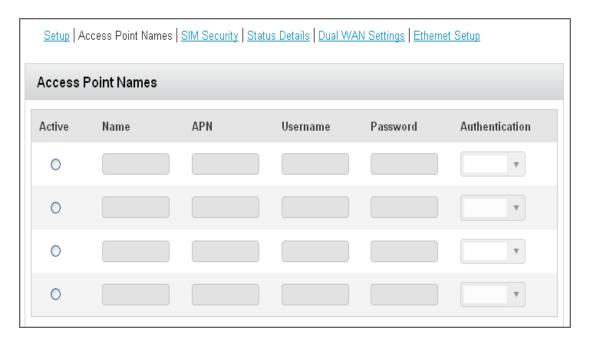
# Configure Access Point Names

Your gateway comes preconfigured with the Access Point Name (APN) for Sprint.

#### To add an APN for another network:

1. On a computer or wireless device that is connected to your gateway, launch a Web browser.

- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > Network > Access Point Names.



- 5. In the blank line, enter the APN details:
  - Active: If the new APN is going to be used now, select this button.
  - Name: Enter a short description (for example, the carrier name).
  - APN: Enter the APN you obtained from the carrier.
  - **Username**: Enter the username you obtained from the carrier (if required).
  - Password: Enter the password you obtained from the carrier (if required).
  - Select the Authentication mode to be used (None, PAP, CHAP, PAP or CHAP).
- 6. Click Submit
- 7. Click the obeside the new APN entry.

#### To select the APN to be used:

Select the Active button at the beginning of the entry.

#### To remove an APN from the list:

Click the beside the APN entry.

# Ethernet WAN Settings

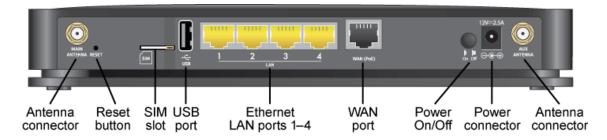
Your gateway has an Ethernet WAN port on the rear panel. You can use an Ethernet cable to connect the gateway to Internet service.

## Connect the Ethernet WAN Port

You can connect the gateway to a cable or DSL modem with an Ethernet cable and set up the router to use that modem's Internet service instead of the mobile service.

### To install the gateway with an Ethernet Internet connection:

- 1. Prepare your modem.
  - Unplug your modem's power.
  - If the modem has a battery backup, remove its batteries.
  - If your modem was already connected to another router, disconnect the cable between your modem and that router.
  - Make sure that your modem is turned off and is cabled only to the wall jack for your Internet service.
- 2. Connect your modem.
- 3. Plug in, then turn on your modem. (Replace the batteries if you removed them.)
- 4. Use an Ethernet cable to connect your modem to the Ethernet WAN port of your gateway.



- 5. Connect the power adapter to the gateway, and plug the power adapter into an outlet.
- 6. If no LEDs are lit, press the **Power On/Off** button on the rear panel of the gateway.
  - The Power U LED lights.
  - When the gateway connects to the Internet, the **Ethernet WAN** LED lights.

# Ethernet WAN Security Settings

The Security Settings page lets you configure advanced settings for the Ethernet WAN port.

### To specify security settings:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Security > Security Settings.



- 5. Specify the following settings:
  - Disable Port Scan and DoS Protection. DoS protection protects your LAN against denial
    of service attacks such as Syn flood, Smurf Attack, Ping of Death, Teardrop Attack, UDP
    Flood, ARP Attack, Spoofing ICMP, Null Scan, and many others. This feature should be
    disabled only in special circumstances.
  - Respond to Ping on Internet Port. If you want the gateway to respond to a ping from the Internet, select this check box. Use this feature only as a diagnostic tool because it allows your gateway to be discovered. Do not select this check box unless you have a specific reason.
  - **Disable IGMP Proxy**. IGMP proxying allows a computer on the local area network (LAN) to receive the multicast traffic it is interested in from the Internet. If you do not need this feature, you can select this check box to disable it.
- Click Submit.

# Software and Reset

The following topics concern configuring and resetting your device's software.

# Export and Import Settings

You can save your gateway settings so that you can make changes to your configuration and, if necessary, restore the original settings.

## Export Settings

Settings include configuration information for your gateway and its Wi-Fi networks.

You can, for example, export (save) the current configuration, then make some changes and test them. You can then import (restore) the saved configuration.

#### To export the settings to a text file:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > General > Software and Reset.
- 5. In the **Download / Backup Settings** section, click **Save as**.
- 6. Save the file to an appropriate location in your computer. By default, the file (export.cfg) is saved to your Downloads folder.

## Import Settings

This feature lets you restore a saved configuration.

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > General > Software and Reset.
- 5. In the **Restore Settings** section, click the **Choose File** button.

- 6. Navigate to the folder where your previously saved configuration file is stored.
- 7. Click **Open** to restore your device with the imported settings.

**Note:** Your device may reset, and you may need to reconnect to Wi-Fi and the Internet. (See How Do I Connect to Wi-Fi? and Launch Your Mobile Network Connection.)

# Update the Software and Firmware

From time to time, updates may become available for your gateway, and your gateway will receive an alert. You can also check for new updates manually.

The updates may improve performance and add or modify features. The updates may include the following:

- Firmware
- Software
- Other files

## Download Software Updates

You can download software updates from your device or from the Web page.

When a software update becomes available:

- If your device is connected to Sprint's LTE network, the update downloads automatically and an Alert message appears on the home page. Click Install now to install the update. Your device reboots automatically to use the new software. Any devices that were previously connected will have to be reconnected.
- If your device is connected to Sprint's 3G network, an Alert message appears on you're the home page. Click **Download now** to download and install the software update. Your device reboots automatically to use the new software. Any devices that were previously connected will have to be reconnected.

You can also check for updates manually without having received an alert.

There are two ways to get the software update. You can get it from the Alert message, or from the Software and Reset page.

#### To get the update from the Alert:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)

- 4. In the Alert message for the available update, click **Install Now**.
- Follow the onscreen instructions.

#### To get the update from the Software and Reset page:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > General > Software and Reset.
- 5. Click **Check for update**. If an update is available, an **Install Now** button appears.
- 6. Click Install Now.
- 7. Click Continue.

## Upgrade Firmware from a File

A one-click tool may be available for upgrading firmware from a file in enterprise environments. Contact Sprint for details.

# Reset Your Gateway

In some cases, you may want or need to clear your account information to use your gateway with another account, reset most settings (except for your account and network activation), or reset your device to its factory default settings.

You can clear these settings from your device's Reset screen, or from the gateway's Software and Reset page.

## Clear Account Details Only

If you want to use your device with another account, you need to clear your current account.

You can clear these settings from your gateway's Reset page, or from the Software and Reset page.

**Note:** All connected devices will be disconnected and your device will reboot automatically. You will have to activate your device with your new account before they can reconnect.

#### To clear account details:

1. On a computer or wireless device that is connected to your gateway, launch a Web browser.

- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > General > Software and Reset.
- 5. Below Clear Programming, click Reset.
- 6. Click Begin Reset.

## Reset Device Settings Only

If you want to reset your device to its default behavior, but don't want to change your account or network activation, you need to reset your device settings.

You can reset these settings from your gateway's Reset page or from the Software and Reset page.

**Note:** All connected devices will be disconnected and your device will reboot automatically. After the reset finishes, they can reconnect.

#### To reset device settings:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > General > Software and Reset.
- 5. Below **Settings Reset**, click **Reset**.
- 6. Click **Begin Reset**.

# Reset the Gateway to Factory Default Settings

In some cases you will need to reset your device's software to its factory default settings.

**WARNING:** If you reset the software to default settings, you must go through the device setup, as if you've just purchased your device. (See Start Your Device for the First Time.)

You'll need to reset the software to default settings if:

- You've forgotten the administrator password.
- You've changed the DHCP settings such that your device is inoperable. (For example, there's no communication with your device.)

You can reset your device to factory settings from the gateway's Software and Reset page.

Note: All connected devices will be disconnected and your device will reboot automatically.

#### To reset the gateway to its factory settings:

**Note:** You can only do a factory reset of your device with Sprint's assistance. Contact Sprint Customer Service to obtain an SPC code that you will need to enter to perform the reset.

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > General > Software and Reset.
- 5. Below Factory Reset, click Reset.
- 6. Enter the SPC code provided by Sprint, then click **Submit**.
- 7. Click **Begin Reset**.

# Set Up a Virtual Private Network (VPN)

Learn about and set up virtual private network (VPN) client-to-gateway and site-to-site tunnels.

A VPN is a network that uses primarily public telecommunication infrastructure, such as the Internet, to provide remote offices or traveling users an access to a central organizational network. You need networking knowledge to implement these features.

## VPN Overview

Learn about VPN client-to-gateway VPN tunnels and site-to-site VPN tunnels, which use IPSec IKEv1 (PSK/XAuth).

Remote-client to gateway VPN. The gateway must be connected to the public network either through an LTE connection or WAN uplink. Remote users on the Internet can create an IPSec tunnel from their computers to the gateway using the WAN IP address of the gateway. Once connected, the remote users can access the LAN-side resources of the gateway.

The gateway supports the following clients:

- NETGEAR ProSAFE VPN Client VPNG01L/VPNG05L Professional Software Version 5.14.003, available here: http://kb.netgear.com/app/answers/detail/a id/20316
- IPSecuritas VPN client Version 3.4 for MAC OS platforms from Lobotomo Software, available here: http://www.lobotomo.com/products/IPSecuritas/
- Site-to-site VPN. You can establish an IPSec tunnel between two gateways. The LAN-side
  users from either gateway can access the other through the site-to-site tunnel. When you are
  configuring the site-to-site tunnel, each gateway must have a unique IP address range for its
  LAN side.

# Set Up a Remote Client-to-Gateway VPN

To set up a remote client-to-gateway VPN, you must complete the following tasks.

- 1. Add the VPN users (the remote client users).
- 2. Specify the VPN connection information.
- Enable the VPN.
- 4. Use VPN client software to configure the remote clients.

## Add VPN Users

The VPN users are the remote users for client-to-gateway VPN tunnels.

#### To add VPN users:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click **Settings** > **Manage VPN**.



- 5. In the VPN Users section, click the (Add) button.
- 6. Enter the user name and password.
- 7. Click the **Save** button.

The new VPN user displays on the Manage VPN Connection screen.

### To edit a VPN user:

- 1. Select the VPN user from the VPN Users list.
- 2. Click the **Edit** button.
- 3. Type the changes for the user name and password
- 4. Click the Save button.

The changes are saved.

#### To delete a VPN user:

- 1. Select the VPN user from the VPN Users list.
- 2. Click the **Delete** button.

The user is removed from the VPN user list.

## Specify the Client-to-Gateway VPN Connection

Enter a pre-shared key to be used for the Phase 1 IKEv1 negotiation.

## To specify the VPN connection:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)

### 4. Click **Settings** > **Manage VPN**.



- 5. In the Remote Client to GW VPN Configuration section, click the **Edit** button next to the Pre-Shared Key field.
- 6. Type the pre-shared key.

**Note:** The key is an alphanumeric string with a maximum length of 32 characters.

7. Verify that the VPN remote virtual IP and Mask fields have the correct values.

**Note:** By default, these fields show the IP address and subnet mask for this gateway. This is how the remote clients will access this gateway.

8. Click the Save button.

### To change the PSK for a remote client:

- 1. Click Settings > General > VPN.
- 2. In the Remote Client to GW VPN Configuration section, click the **Edit** button next to the Pre-Shared Key field.
- 3. Enter the new value
- 4. Click the Save button.

The new pre-shared key is saved.

## Enable the Client-to-Gateway VPN

Enabling the VPN activates the remote client-to-gateway VPN server feature on the gateway. If you disable the VPN, your settings are retained.

#### To enable the VPN:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > General > VPN.
- 5. Select the VPN Status **Enable** radio button.
- 6. Click the **Apply** button.

The VPN connection is activated.

#### To disable the VPN:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- Click Settings > General > VPN.
- 5. Select the VPN Status **Disable** radio button.
- 6. Click the **Apply** button.

The VPN connection is disabled, but your VPN settings are retained.

## Configure a Windows Computer as a Remote Client

This example describes how to use NETGEAR ProSAFE VPN client software to set up a VPN client for the gateway.

### To use NETGEAR ProSAFE to set up a VPN client:

Download the trial version of NETGEAR ProSAFE VPN client (VPNG01L/VPNG05L Professional Software Version 5.14.003) and install it on the Windows computer.

- 1. This software is available here: http://kb.netgear.com/app/answers/detail/a id/20316.
- Launch the VPN client software.
- 3. In the left pane, select Global Parameters.
- 4. Specify the following settings:
  - Lifetime (sec):
    - Authentication (IKE): Enter **3600**, **360**, **28800**.
    - Encryption (IPSec): Enter **3600**, **300**, **28800**.
  - Dead Peer Detection (DPD):
    - o Check interval: Enter 30.
    - Max. number of retries: Enter 5.
    - Delay between retries: Enter **15**.
  - Miscellaneous:
    - Retransmissions: Enter 2.
    - X-Auth timeout: Enter **60**.
- 5. In the left pane, select **Gateway**, and click the **Authentication** tab.
- 6. In the Authentication screen, specify these settings:
  - In the Addresses section, specify the following:
    - In the **Remote Gateway** field, enter the WAN IP address.
    - Select the Pre-Shared Key radio button and enter the same key that is configured on the gateway.
  - In the IKE section, specify the following:
    - Encryption: Select **3DES**.

- Authentication: Select SHA-1.
- Key Group: Select DH2 (1024).
- 7. Click the **Advanced** tab.
- 8. Specify these settings in the Advanced screen:
  - In the Advanced Features section, select the Mode Config check box and leave the other settings as shown.
  - In the X-Auth section, specify how the client user enters credentials:
    - To enable a pop-up, select the X-Auth Popup check box.
       With this setting, the client opens a pop-up window prompting the user to enter the user name and password.
    - To avoid using a pop-up, clear the X-Auth Popup check box and type the user name and password in the Login and Password fields.
  - Leave the Local ID field and Remote ID field blank.
- 9. Under the Gateway heading, select **Tunnel**, and click the **IPSec** tab.
- 10. Specify these settings on the IPSec screen:
  - In the Address type list, select **Subnet Address**.
  - In the Remote LAN address and Subnet mask fields, enter the gateway IP address and subnet mask.

**Note:** The gateway and the client's network must have different subnet ranges that do not overlap.

- In the ESP section, specify the following:
  - Encryption. Select **3DES**.
  - Authentication. Select SHA-1.
  - Mode. Select **Tunnel**.
- In the PFS section, specify the following:
  - Select the PFS check box.
  - In the Group list, select **DH2(1024)**.
- 11. Leave the rest of the tabs with their default values.
- 12. Click the **Apply** button.
- 13. Click the **Save** button.
- 14. To initiate the VPN connection to the gateway, right-click the tunnel on the left pane and select **Open Tunnel**.

When the connection is initiated, the icon on the Tunnel menu on the left pane turns green to indicate that the tunnel is established.

The remote client device can access the LAN-side resources of the gateway including access to the gateway Web management interface.

# Configure a Mac Computer as a Remote Client

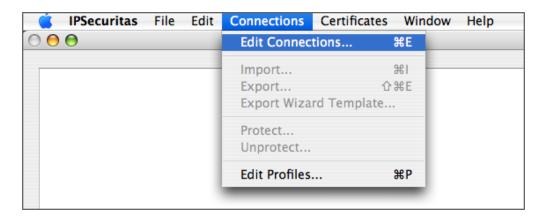
This example uses the IP Securitas VPN client software.

### To configure a Mac computer as a remote client:

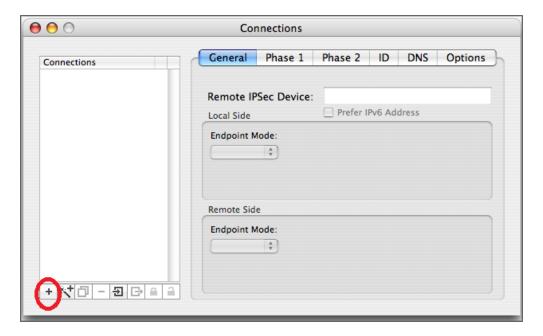
1. Download the trial version of IP Securitas VPN client and install it on the Mac computer.

IPSecuritas VPN client Version 3.4 for MAC OS platforms from Lobotomo Software is available here: http://www.lobotomo.com/products/IPSecuritas/

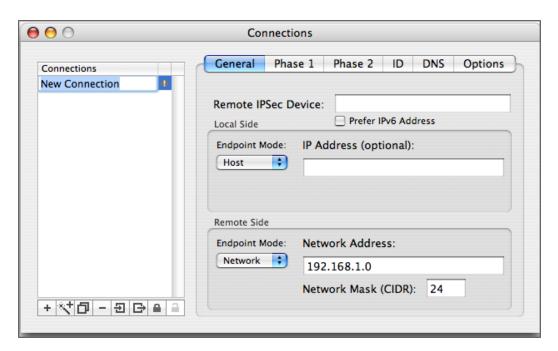
- 2. Launch the VPN client software.
- 3. Click Connections > Edit Connections.



4. In the Connections pane, click the + (plus) icon in the lower left corner.



- 5. Enter a connection name that is easy to understand.
- 6. Click the **General** tab.



- 7. Specify the following:
  - In the Remote IPSec Device field, enter the WAN IP address of the gateway.

 In the Remote Side section, enter the LAN-side IP subnet of the gateway with the subnet mask in CIDR format.

**Note:** The gateway and the client's network must have different subnet ranges that do not overlap.

- 8. Click the **Phase 1** tab.
- 9. Specify the following:
  - Lifetime: Enter 1800 and select Seconds.
  - DH Group: Select 1024 (2).
  - Encryption: Select 3DES.
  - Authentication: Select SHA-1.
  - Exchange Mode: Select Main.
  - Proposal Check: Select Obey.
  - Nonce Size: Enter 16.
- 10. Click the **Phase** 2 tab.
- 11. Specify the following:
  - Lifetime: Enter 1800 and select Seconds.
  - PFS Group: Select 1024 (2).
  - Encryption: Select the DES, 3DES, AES 2256, AES 192, and AES 128 check boxes.
  - Authentication: Select the HMAC MDS and HMAC SHA-1 check boxes.
- 12. Click the ID tab.
- 13. Specify the following:
  - Leave the Local Identifier and Remote Identifier fields set to Address.
  - Select XAuth PSK in the Authentication Method section and type the pre-shared key, user name, and password that you specified in the gateway.
- 14. Click the **Options** tab.
- 15. Specify the following:
  - Select these check boxes:
    - IPSec DOI
    - SIT\_IDENTITY\_ONLY
    - Initial Contact
    - Enable MODE\_CFG

- Request Certificate
- Send Certificate
- Unique SAs
- IKE Fragmentation
- Leave NAT-T set to Disable and the Action after connection timeout set to Give up.
- 16. Close the Edit Connection window. The settings are saved.
- 17. In the main screen, highlight the connection name and select **Start**.

Once the connection is established, the icon to the right of the connection name turns green. The client computer can access the LAN-side resources of the gateway including the Web management interface of the gateway.

# Set Up a Site-to-Site VPN

This example describes how to set up a site-to-site VPN tunnel between two gateways at different locations. The LAN subnets of these two gateways must each be in a unique range.

To do this, you must complete the following tasks:

- 1. Make sure that each gateway uses a different subnet range and that the ranges do not overlap.
- 2. Specify the VPN connection for each gateway.
- 3. Enable the VPN on each gateway.

## Specify the Site-to-Site VPN Connection

Follow the instructions below to specify the VPN connection information.

- 1. On the first gateway, select **Settings** > **General** > **VPN**.
- 2. In the Site-to-Site VPN configuration section, click the **Edit** button next to the Pre-Shared Key (PSK) field.
- 3. Type a unique pre-shared key.

Note: The key is an alphanumeric string with a maximum length of 32 characters.

**Note:** This pre-shared key is unique to the site-to-site VPN configuration. If you set up a client-to-gateway VPN tunnel with this gateway, you must use a different pre-shared key for the site-to-site VPN.

- 4. In the Site-to-Site Configuration Details section, click the **Add** button.
- 5. In the Site Name field, type a meaningful name that is easy to understand.

- 6. In the WAN IP field, enter the remote gateway's WAN IP address.
- 7. In the Remote Site IP address and Subnet field, enter these settings from the remote gateway.

**Note:** Each gateway must have a unique non-overlapping IP address range.

- 8. Click the **Save** button.
- 9. For the second gateway, repeat Steps 1–8 of this procedure.

## Enable the Site-to-Site VPN

Enabling the VPN activates the VPN server feature on the gateway.

#### To enable the VPN:

- 1. On the first gateway, select **Settings** > **General** > **VPN**.
- 2. Select the VPN Status **Enable** radio button.
- 3. Click the **Apply** button. The VPN connection is activated.
- 4. On the second gateway, select **Settings** > **General** > **VPN**.
- 5. Select the VPN Status **Enable** radio button.
- 6. Click the **Apply** button. The VPN connection is activated.

The IPSec VPN tunnel is established between the two gateways. The LAN-side resources from one gateway can access the other through this tunnel.

### To disable the VPN:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > General > VPN.
- 5. Select the VPN Status **Disable** radio button.
- 6. Click the **Apply** button.

The VPN connection is disabled, but your VPN settings are retained.

# Frequently Asked Questions

Find out answers to questions you may have.

# How Can I Tell I'm Connected to 3G or LTE?

When you log in to the gateway (http://myrouter), the network type icon (3G or LTE) appears in the Status section on the left side of the page, and the connection status is shown on the Status Details.

## How Do I Connect to Wi-Fi?

You may have to manually connect to Wi-Fi after certain events — for example, as part of the initial device setup, or after a software update.

**Tip:** The Wi-Fi network name and password are displayed on the label of the gateway.

**Tip:** Alternatively, you can use WPS to connect a device to the gateway, if your device supports WPS. (See Connecting Through WPS.)

To connect to Wi-Fi:

- 1. Do one of the following, depending on your operating system.
  - Windows 7: Right-click the Wi-Fi icon di in the system tray.
  - Windows Vista: Click Control Panel > Network and Internet > Network and Sharing Center > Connect to a network.
  - Windows XP: Click Control Panel > Network Connections > Wireless Network
     Connections > View available wireless networks.
  - Mac: Click the AirPort icon (in the upper right corner of your screen).
  - Linux: Please see the user documentation of the Linux distribution.
  - Other operating systems: Please see the user documentation for your operating system or computer.
- 2. Select one of the Wi-Fi networks provided by the gateway and connect to it. (If prompted for a network key/security key/password, enter the Wi-Fi password.)

# Is Roaming on LTE Supported?

At the time of this release, roaming (that is, using a network other than Sprint) on LTE is not supported.

To change the roaming setting, see Set the Roaming Mode.

# What Do I Do if I Forget the Main or Guest Wi-Fi Password?

Follow the instructions below to see the Main Wi-Fi password and Guest Wi-Fi password.

- 1. Look on the gateway's label.
- 2. If you changed the Wi-Fi password and have forgotten what it is, use an Ethernet cable to connect a computer to one of the gateway's yellow Ethernet LAN ports.
- 3. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 4. In the address or URL field of your browser, type http://myrouter.
- 5. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 6. Click Wi-Fi > Options.

# What Do I Do if I Forget the Administrator (admin) Password?

The default password is password. If you changed the password and forgot it, you will need to contact Sprint Customer Support for assistance with resetting the software to default settings. (See Reset the Gateway to Factory Default Settings.)

# If the Connection is "Always On," Am I Always Being Billed?

No. The connection to the network goes dormant after a period of inactivity, but the connection can be re-established faster than having to reconnect. Billing occurs only when data is passed across the network.

## Questions About WPS

Find answers to common questions about WPS.

## What is WPS?

Wi-Fi Protected Setup (WPS) provides a fast, simple, and secure way to connect WPS-enabled devices to your Wi-Fi network. You don't have to give the name (SSID) and Wi-Fi password of your network to other users.

The WPS feature is available on certain cameras, printers, smartphones, and laptops. These devices have either a hardware button or a WPS-related option in the software. Please consult the user documentation of your device.

## How do I Use WPS?

Please see Connecting Through WPS.

# If a Wireless Device has a WPS Button or a WPS Software Option, Must I Use it to Connect Via Wi-Fi?

If this is the only way your device provides to connect through Wi-Fi, then you must use the WPS button or the WPS software option. Some laptops support two methods — a WPS button or software option, and Wi-Fi network manager software where you can connect by entering the Wi-Fi network name (SSID) and password, as described in How Do I Connect to Wi-Fi?.

Please consult the user documentation of your device.

## What Should I Do If the Antenna Is Loose?

If you attached the antennas and they seem loose, remove the antennas and tighten the locking nuts on the gateway as show. Then reattach the antennas. See Attach the Antennas.



# How Do I Access My Corporate Network Through a VPN?

Once you complete a wireless connection, you may need to launch an extranet client provided by your company and supply the appropriate user name and password to gain access. For support, contact your company help desk.

# Are Terminal Sessions Supported?

Terminal sessions (for example, via telnet or ssh) are not supported.

# **Tips**

The following topics provide information on getting the most out of your device and your network connection.

# Gateway Location

Follow these guidelines in placing your device.

- Avoid moisture or extreme temperatures.
- For improved reception, place your gateway near a closed window.
- Place your device within easy reach of a reliable power supply and the computer to which it will be connected.

# Improving Signal Strength

There are several ways you can improve the signal strength.

- Make sure you're inside a network coverage area.
- Try reorienting your device.
- Move your device and your computer to another location you may be in or near a structure that is blocking the signal. Every obstacle (for example, walls, ceilings, furniture) between the gateway and other wireless devices decreases the signal strength.
- Place your gateway in a centralized location, as high as possible in the room.
- Make sure there's plenty of space around your gateway to provide the best signal reception.
- Keep your gateway at least 3–6 feet away from electrical devices that generate RF interference (for example, microwaves, TVs, 2.4 GHz cordless phones, cellular phones, baby monitors, wireless speakers). If you're not using these electrical devices, turn them off.
- If possible, place your gateway and your computers and devices so that the signal passes through open doorways or drywall, as opposed to concrete, brick, metal, walls with insulation, and so on.
- If you cannot obtain service, contact Sprint a network or account problem may be preventing you from obtaining service.

# Improving 3G Network Service

To improve your network service, periodically check for PRL and profile updates.

The PRL (Preferred Roaming List) is an account configuration item set by your service provider. It controls the radio channels and network carrier used by the 3G modem.

## To check for these updates:

- 1. On a computer or wireless device that is connected to your gateway, launch a Web browser.
- 2. In the address or URL field of your browser, type http://myrouter.
- 3. When prompted to log in, enter **admin** for the user name and type the password. (The default password is **password**.)
- 4. Click Settings > Network > Preferences.
- 5. Click Update PRL.

# Improving Wi-Fi Performance

There are several ways you can improve Wi-Fi performance.

- Try a different channel number. (See Wi-Fi Channel.)
- Check whether any device updates are available. (See Update Software and Firmware.)
- See the tips in Improving Signal Strength.

#### Windows XP and Windows 7 Users

- 1. Open the Device Manager.
  - In Windows XP:
    - Click Start > Settings > Control Panel.
    - Double-click System.
    - Click Hardware.
    - Click Device Manager.
  - In Windows 7:
    - Click Start > Control Panel.
    - Click **Device Manager**.

- 2. Double-click Network adapters.
- 3. Double-click the Wi-Fi client network adapter of your computer for example, "Intel(R) WiFi Link 5100 AGN" in the screenshot below.



4. If the Wi-Fi client network adapter is by Intel, click **Advanced** and, in the **Property** list, click **Power Management** and move the slider all the way to the right (to **Highest**). Click **OK**.

- or -

If the Wi-Fi client network adapter is not by Intel, select a configuration with minimal power savings (to maximize throughput).

**Note:** The above settings are often controlled by 3rd-party value-add applications and may be automatically changed. If Wi-Fi performance improves for a while after performing the above steps, but then declines, recheck the above settings.

# Security Tips

Follow these tips to minimize security risks.

- Change the Wi-Fi network name (SSID) and Wi-Fi password on a regular basis. (See Change Wi-Fi Network Names and Passwords.)
- Disable SSID Broadcast. (See Wi-Fi Options Tab.)
- Use the highest level of Wi-Fi security that your devices support. (See Wi-Fi Security.)
- Change the login password. (See Change the Admin Password.)
- Use MAC filtering to specify computers that are or aren't allowed to connect to the network. (See Allow or Deny Computers Access to the Network (MAC Filter).)

# Finding the MAC Address

You'll need to know the MAC address of a device in a couple of cases.

 Allowing or denying computers access to the network. (See Allow or Deny Computers Access to the Network (MAC Filter).)

**Tip:** You can display a list of connected devices, including the MAC address of each device. See View and Unblock Devices (Block List).

The steps to finding the MAC address of a device vary, depending on your operating system.

#### Windows

- 1. Open a command prompt window.
  - Click Start and Run.
  - Type cmd or command, and click OK.
- At the command prompt, type ipconfig/all and press Enter.
- 3. Write down the Physical Address for the entry that relates to the wireless network connection; it appears as a series of numbers and letters this is the MAC address of your wireless adapter.

## Mac OS X

- 1. From the Apple menu, select **System Preferences**.
- Select Network.
- 3. Select the adapter that is connecting to the routing hardware.
- 4. Select Advanced.
- 5. Select **Ethernet**. The Ethernet ID is listed. This is the same as the MAC address.

### Linux

Please see the user documentation of the Linux distribution.

## Other Operating Systems

Please see the user documentation for your operating system or computer.

# Finding the IP Address

You'll need to know the IP address of a device when configuring certain features.

- Port forwarding
- DMZ

The steps to finding the IP address of a device vary, depending on your operating system.

### Windows

- 1. Open a command prompt window.
- 2. Type cmd or command, and click OK.

- 3. At the command prompt, type **ipconfig** and press **Enter**.
- 4. Write down the IP Address for the entry that relates to the wireless network connection. (The IP address might be listed under "Ipv4 Address," or something similar.)

## Mac OS X

- 1. From the Apple menu, select **System Preferences**.
- 2. Select Network.
- 3. Select the wireless adapter. The IP address is displayed in the right pane.

## Other Operating Systems

Please see the user documentation for your operating system or computer.

# Troubleshooting

Learn about various troubleshooting tips, and what to do when a specific message is displayed.

# General Tips

Here are some general tips to get you started.

- If some settings are preventing you from connecting to Wi-Fi, connect via Ethernet. Cable your computer to an Ethernet LAN port on your device.
- Go to sprint.com/support to access troubleshooting and other resources.
- The knowledge base at the NETGEAR website (support.netgear.com) may also be useful.

# Insufficient Signal Strength

If you have insufficient signal strength, an icon is displayed on your device's home screen, and on the Web page's Connection Details section.

Insufficient signal strength, indicated by , may occur because:

- You are outside network coverage areas.
- Your device's internal antenna is pointing in the wrong direction.
- You are in or near a structure that is blocking the signal.
- You are near a device that is causing radio signal interference.
- A network or account problem is preventing you from obtaining service.

See also Improving Signal Strength.

## Cannot Connect to Wi-Fi

If your computer cannot connect to the Main or Guest Wi-Fi networks of the NETGEAR 6100D, there are several things you should check.

Make sure that:

- The maximum number of Wi-Fi devices has not been reached. (To determine the number of connected Wi-Fi devices and set the maximum, see View and Unblock Devices (Block List) and Set the Maximum Number of Wi-Fi Devices.)
- You're connecting to the correct Wi-Fi network (SSID), and you're using the correct Wi-Fi password.

- Nobody has changed the name or password of the Wi-Fi network.
- Your computer supports the type of Wi-Fi security that the network is set to use.

**Note:** To connect to the gateway's Wi-Fi network, each computer or Wi-Fi device must support the gateway's Wi-Fi security type.

- Your computer supports Wi-Fi 802.11g (if Connection Rate is set, in the Wi-Fi Wi-Fi Options Tab to 802.11g only).
- Your computer has not been blocked through MAC filtering. (See Allow or Deny Computers Access to the Network (MAC Filter).)

# Cannot Display the Home Page

Your Web browser may display an error message when you try to display the home page. The error message depends on your Web browser.

- "Could not connect to remote server" (Opera)
- "Internet Explorer cannot display the webpage" (Internet Explorer)
- "Oops! This link appears to be broken" (Google Chrome)
- "Safari can't open the page" (Safari)
- "The connection has timed out" (FireFox)

#### Check the following:

- Your gateway is turned on. (See Power Button.)
- You have established a connection to your device (through Wi-Fi or through an Ethernet cable).
- Make sure that you're typing the correct address in the Web browser.
  - Try http://myrouter (unless you've changed the URL in Changing the Gateway URL.)
  - If the home page is still not displayed, try **http://192.168.0.1** or, if you're using custom routing settings, replace "192.168.0.1" with the appropriate IP address.
- The Web browser is a recent version, and Java-enabled. The following are recommended:
  - Internet Explorer 10.0 or higher
  - Firefox 21.0
  - Google Chrome (version 30 or higher)
  - Safari (version 5.1.7 or higher)
- If your computer has other adapters (for example, Ethernet) connected to other networks, disable or remove them from your computer.

- If Internet security software is running on your computer, disable it and see whether the error message still occurs. Some firewall software may block access to the home page.
- If DHCP is enabled on your device, make sure DHCP is enabled on your computer. (See DHCP.)
- Check your Web browser settings:
- 1. Open the Control Panel in Windows.
- Double-click Internet Options.
- 3. From the **Security** tab, restore the default settings.
- 4. From the **Connections** tab, select **Never dial a connection**.
- 5. From the **Advanced** tab, restore the default settings.
- 6. Close and reopen your Web browser.
- Disconnect your device from your computer (if you're using the micro-USB cable). Remove the battery from your device. Reinsert the battery.

If, after checking all of the above, you still cannot display the home page, consider resetting the software to default settings. (See Reset the Gateway to Factory Default Settings.)

## Cannot Connect to the Mobile Broadband Network

If this message is displayed, go through the following steps.

- Make sure your computer is connected to your device (through Wi-Fi or with an Ethernet cable).
   (See Connect to Your Gateway's Network.)
- Make sure you're in a network coverage area.
- Check the Network Mode setting (See Set the Network Mode). For example, if it's set to LTE Only, you won't be able to connect if you don't have LTE coverage.
- If you're roaming on 3G, make sure that roaming is enabled. (See Set the Roaming Mode.) (Roaming is not supported on LTE.)

#### **Note:** Roaming charges may apply.

- If you're roaming internationally, make sure that Any Network is selected. (See Set the Roaming Mode.)
- Try the tips in Improving Signal Strength.
- Check with Sprint a network or account problem may be preventing your device from obtaining service.

# Cannot Check for Updates

Make sure your device is connected to the AC charger or computer through the micro-USB cable.

# Technical Specifications

The following topics list the electrical, radio frequency, and other parameters of your device for those who require technical information.

# Radio Frequency and Electrical Specifications

This section lists the radio frequency and electrical parameters of your device.

Item	Description
Approvals	FCC
Current	Maximum: 1.66A (full load of system)
Transmit	PCS: 1850-1910 MHz Cellular: 824-849 MHz Secondary 800 MHz: 817-824 MHz LTE:
	■ Band 25: 1850-1915 MHz
	■ Band 26: 814-849 MHz
	■ Band 41 (TDD): 2496-2690 MHz
Receive	PCS: 1930-1990 MHz Cellular: 869-894 MHz Secondary 800 MHz: 862-869 MHz LTE:
	■ Band 25: 1930-1995 MHz
	■ Band 26: 859-894 MHz
	■ Band 41 (TDD): 2496-2690 MHz

# Software Specifications

This section lists the specifications that your device supports.

Item	Description
CDMA (3G) specification	IS-2000 Release 0
Data service	IS-707A
3GPP	Release 9
	IEEE 802.11b IEEE 802.11g

Item	Description
	IEEE 802.11n (2x2 MIMO support) IEEE 802.11a IEEE 802.11ac (2x2 MIMO support)
Wi-Fi security and encryption protocols	WEP Open & Shared WEP-64 WEP-128 WPA-Personal TKIP & AES (Pre-Shared Key or WPA-PSK) WPA2-Personal TKIP & AES (WPA2-PSK) WPA+WPA2-Personal (WPA+WPA2 PSK)
WPS	Wi-Fi Simple Configuration 2.0 (WSC 2.0) based Wi-Fi Protected Setup (WPS)
SMS (IS-637)	Not supported
FAX	Not supported
IOTA	Supported
OTASP (IS-683A, IS-683B, IS-683C)	Supported
OTAPA	Supported
PRL (Preferred Roaming List)	Supported
Authentication	Supported
Voice	Not supported
NAM	Single
Position Location	Standalone
TTY/Accessibility	Not supported
Mobile IP	Supported
Network protocols (routing hardware)	TCP, UDP, ARP, RARP, ICMP
VPN	Pass-through of the following VPN types: PPTP IPSec Tunneling of multiple VPN sessions simultaneously is supported.

# Environmental Specifications

This section describes the environmental conditions that your gateway can be used in.

ltem	Description
Operating temperature	32 to 140°F

Item	Description
Storage temperature	14 to +140°F
Humidity	149°F, 90% relative humidity for 24 hours

# Mechanical Specifications

This section describes the dimensions and physical features of your device.

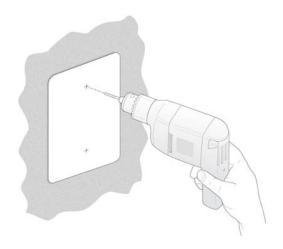
Item	Description
Dimensions (W x L x H)	6.5" x 9.5" x.1.8"
0	23.4 oz. without antenna 25.9 oz. with antenna
Headset jack	Not supported
LED	Blue / Amber / Orange

# Wall Mounting

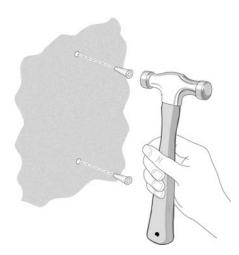
You can wall-mount your gateway.

## To wall-mount the gateway:

1. Drill holes in the wall where you will wall-mount the gateway.



2. Install wall anchors in the holes.



**Note:** Use pan head Phillips wood screws, 3.5 x 20 mm (diameter x length, European) or #6 type screw, 1 inch long (U.S.).

3. Insert screws into the wall anchors, leaving 3/16 in. (0.5 cm) of each screw exposed.

# Regulatory Notices

This section contains regulatory information for your device.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

For product available in the Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

Pour les produits disponibles aux Canada du marché, seul le canal 1 à 11 peuvent être exploités. Sélection d'autres canaux n'est pas possible.

This device and its antennas(s) must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with IC multi-transmitter product procedures.

Cet appareil et son antenne (s) ne doit pas être co-localisés ou fonctionnement en association avec une autre antenne ou transmetteur.

L'émetteur ne doit pas être placé près d'une autre antenne ou d'un autre émetteur, ou fonctionner avec une autre antenne ou un autre émetteur.

The device could automatically discontinue transmission in case of absence of information to transmit, or operational failure. Note that this is not intended to prohibit transmission of control or signaling information or the use of repetitive codes where required by the technology.

Le dispositif pourrait automatiquement cesser d'émettre en cas d'absence d'informations à transmettre, ou une défaillance opérationnelle. Notez que ce n'est pas l'intention d'interdire la transmission des informations de contrôle ou de signalisation ou l'utilisation de codes répétitifs lorsque requis par la technologie.

The device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems;

les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux:

The maximum antenna gain permitted for devices in the band 5725-5825 MHz shall comply with the e.i.r.p. limits specified for point-to-point and non point-to-point operation as appropriate.

le gain maximal d'antenne permis (pour les dispositifs utilisant la bande 5725-5825 MHz) doit se conformer à la limite de p.i.r.e. spécifiée pour l'exploitation point à point et non point à point, selon le cas.

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## **IMPORTANT NOTE:**

## **IC Radiation Exposure Statement:**

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Pour les appareils qui transmettent des données sans fil: Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

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Version 2, June 1991

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Version 3, 29 June 2007

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Version 2.1, February 1999

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Version 3, 29 June 2007

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hash.c: chained hash tables

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