NETGEAR®

Universal WiFi Range Extender WN3000RP

User Manual

Technical Support

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http://support.netgear.com .

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Trademarks

Statement of Conditions

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Getting Started

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This chapter covers the following topics:

- *Hardware Features*
- *How the Extender Works*
- *Connect a PC to the Extender with an Ethernet Cable*
- *Log In to the Extender*
- *Use the Smart Wizard to Set Up the Extender*

For more information about the topics covered in this manual, visit the Support website at *http://support.netgear.com*.

Hardware Features

Note: For best performance, position antennas pointing up.

- Device On/Off button
- WPS button
- Factory Reset button
- Ethernet port
- Link Rate
- WPS
- PC to Extender
- Status
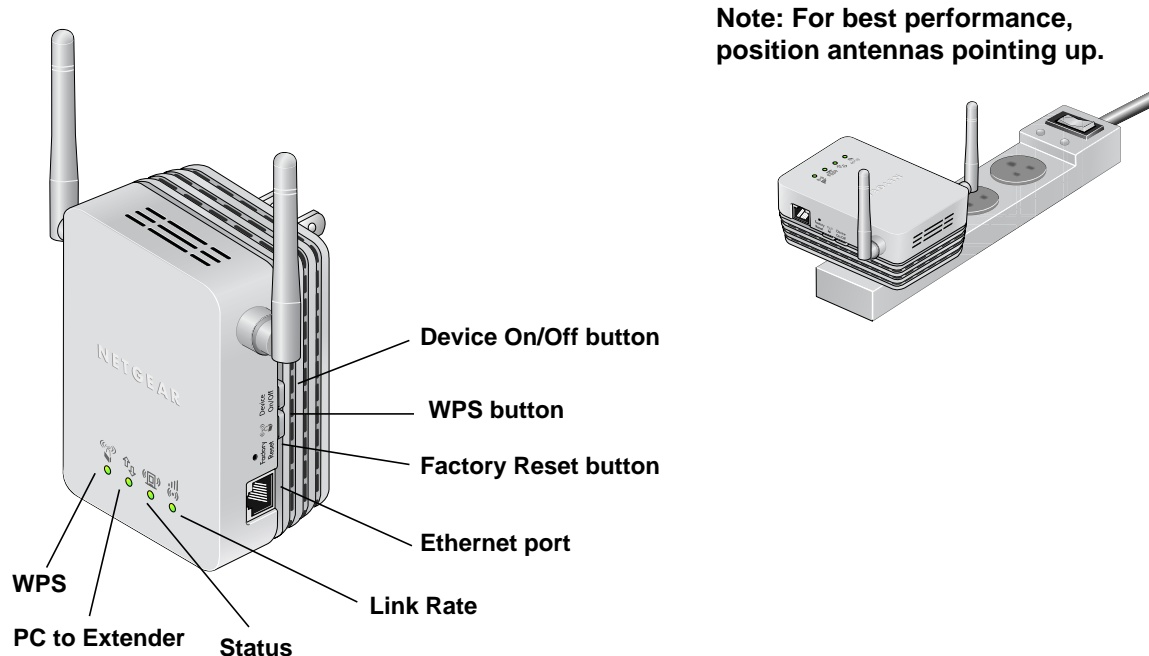
Figure 1. Extender

The LEDs on the front show how the Extender is working:

- **WPS**. This LED indicates a WPS wireless connection.
  - **Solid green**. There is wireless security (WPA or WPA2).
  - **Blinking green**. A WPS connection is in progress.
- **PC to Extender**. The LED is lit when the Extender is connected to a PC.
- **Status**. This LED is lit when the Extender is powered on.
- **Link Rate**. This LED indicates a wireless connection between the Extender and the router.
  - Green is best.
  - Amber is good.
  - Red is poor.

The side panel has the following features:

- **Ethernet port**. You can use this for a wired connection to a computer or other device as described in the *User Manual*.
- **Factory Reset button**. To use this button, stick a paper clip into the reset hole and hold it until the Status LED flashes.
- **WPS button**. Press the WPS button to wirelessly connect the Extender to your router or wireless adapter.
- **Device On/Off button**. Turns the device on and off.

How the Extender Works

The Extender works like a bridge between a wireless router and a computer or wireless device outside the wireless router's range. To do this, the Extender has two main jobs:

1. The Extender connects to a wireless network that is up and running.

   When the Extender connects wirelessly to a network, it acts as a network client. This is similar to how a computer connects to a network.

2. The Extender acts as an access point for computers.

   The Extender has its own wireless network called NETGEAR_EXT that wireless computers can join. In its role as an access point, the Extender performs tasks that wireless routers do, such as broadcasting its network name (SSID).

The Extender must do each of these jobs so that both ends of the bridge are in place.
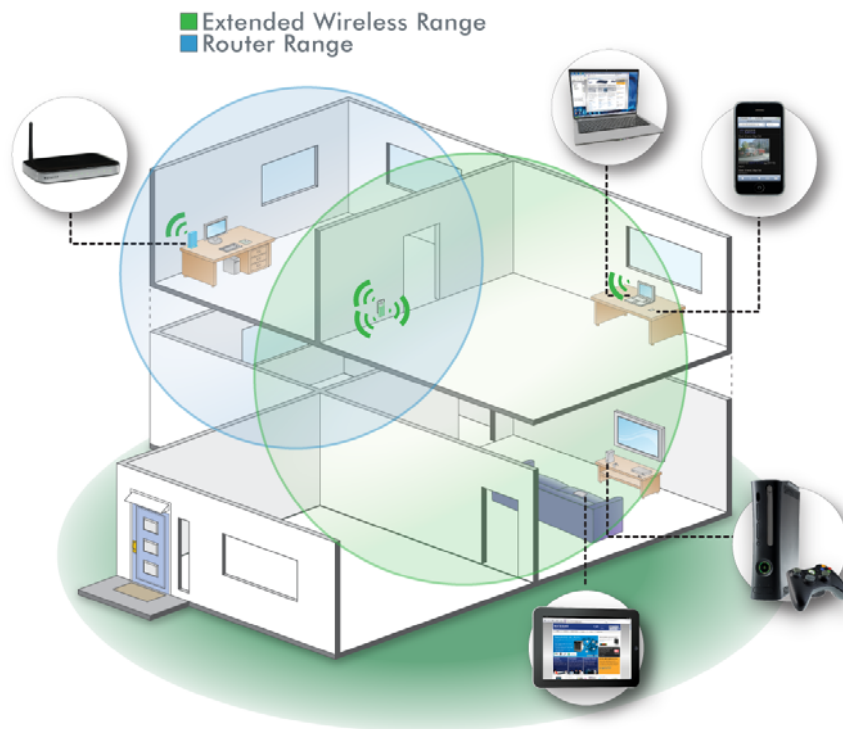
Figure 2. Range Extender in a home

When to Use Your Extender

NETGEAR recommends that you connect to the Extender only when your home network connection is poor. Because data traffic routed through the Extender is inherently slower than traffic routed directly from the network, the computer should stay on the network if the connection is good enough. NETGEAR recommends that you connect through the Extender network only when the computer is in a "dead zone" where connection from the network is very poor or non-existent.

The Extender LEDs can help you tell if the extender is correctly set up and working as it should.

- The best performance is delivered when both the Link Rate LED and the PC to Extender Connection LED are green.
- A workable performance is delivered when the Link Rate LED is amber and the PC to Extender Connection LED is green.

Positioning Your Extender

The ideal location to place the Extender is half-way between your wireless router and your computer.
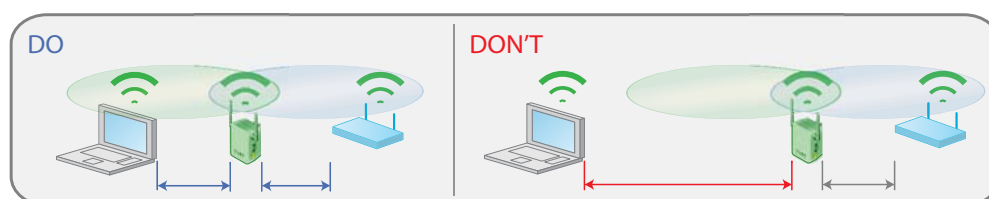
Figure 3. Range extender location

The best connection is established when there is a clear line of sight between the Extender and the wireless router and also a clear line of sight between the Extender and the computer you are using. If this straight path is blocked by a thick wall or other materials, move the Extender to a different location half-way between the computer and the router.

If there is no power outlet nearby, or you prefer to place the Extender elsewhere, move the Extender closer to the computer. If the Link Rate LED is green or amber and the PC to Extender Connection LED is green, the Extender is working as expected.

To improve the Link Rate LED from red or amber to green:

- Once you successfully connect to the Extender from a computer that is outside the range of your router and log in to www.mywifiext.net, the Smart Wizard guides you through the process to connect the Extender to a router.
- If the Link Rate LED is red or the Smart Wizard cannot connect the Extender to a router, move the Extender closer to the router or to a different spot where it provides a better line of sight. As you move the Extender, continue to check the Link Rate and the PC to Extender Connection LEDs on the front panel until you find a location where the Link Rate LED is green or amber, and the PC to Extender Connection LED is green. Note that you might have to unplug the Extender as you move it to a different location. If you do, from the new location, power up the Extender and continue to check the LEDs.

  Once the LEDs show that the Extender is in a good location, open a browser and go to *http://www.mywifiext.net* to continue the setup process.

Connect a PC to the Extender with an Ethernet Cable

Usually, you connect to the Extender wirelessly, but you can use its LAN port to connect a wired device such as an Ethernet-enabled gaming console, printer, or PC.

Note: Before you connect wired devices or computers, first install and set up your Extender as described in the *Universal WiFi Extender WN3000RP Installation Guide* that came in the package.

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1. Connect your computer to the Extender with an Ethernet cable.
2. Plug the Extender into an electrical outlet.

⚠ **CAUTION:**

Do not use Ethernet cable to connect the Extender to a router. If you do so, the Extender does not work because it is designed to use only a wireless connection to the router.

3. Log in as described in the following section.

If you have trouble connecting:
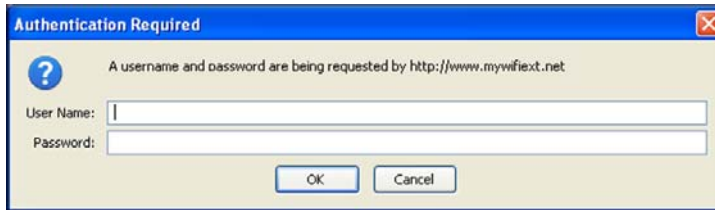
- If you start your computer, connect the Ethernet cable to the Extender, and launch your browser quickly, the computer might still need a couple of minutes to recognize the Ethernet LAN connection before you can connect.

- Make sure that your Ethernet cable is securely connected to the Extender and the computer, and that the Extender LAN LED is on. If the LED is not lit reconnect the Ethernet cable, and relaunch your Internet browser.

Log In to the Extender

You can log in to the Extender to use the Smart Wizard or to use the menu selections to view or change the extender's settings.

1. On your computer, launch an Internet browser such as Mozilla Firefox or Microsoft Internet Explorer.

2. In the address field of your browser, enter **http://www.mywifiext.net**. You are prompted to enter a user name and password:

If you do not see the log in prompt, make sure to include *http://* when you type **http://www.mywifiext.net** in your browser.

3. Type **admin** for the user name. The default password is **password**. NETGEAR recommends that you set a more secure password after you log in (see *Set the Password* on page 23).

- If your Extender has an Internet connection, the Firmware Upgrade screen displays (see *Upgrade the Firmware* on page 23), and the software automatically checks for new firmware at the NETGEAR website.

- The Status screen displays with the menu on the left. This screen shows what the current settings are for the Extender:

Menu

Status screen

Use the Smart Wizard to Set Up the Extender

The Smart Wizard can help you set up your Extender to connect to a wireless network. For information about more configuration options, see *Chapter 2, Extender Network Settings*.

The *Universal WiFi Extender WN3000RP Installation Guide* (included in the package) explains how to install your Extender. During installation, when you launch your Internet browser, the Smart Wizard automatically displays.

After installation, to use the Smart Wizard again:

1. Log in to the Extender as described previously.

    Note: Once you begin using the Smart Wizard, you must complete all of its
               steps before you can exit.

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2. From the menu, select **Setup Wizard**. The following screen displays:

This is the same Smart Wizard that displays during installation as described in the
installation guide.

3. Either select a network from the list, or select the **Manually input my wireless SSID** radio
button and type the SSID.

4. Enter the passphrase for your wireless network and click **Continue**. The next screen displays:

5. Make sure that the correct network name is shown, and then click **Continue**.

The Extender connects to your existing wireless network.

The Extender's wireless network name (SSID) changes to the name of your wireless network name with _EXT added to the end. The following screen displays:
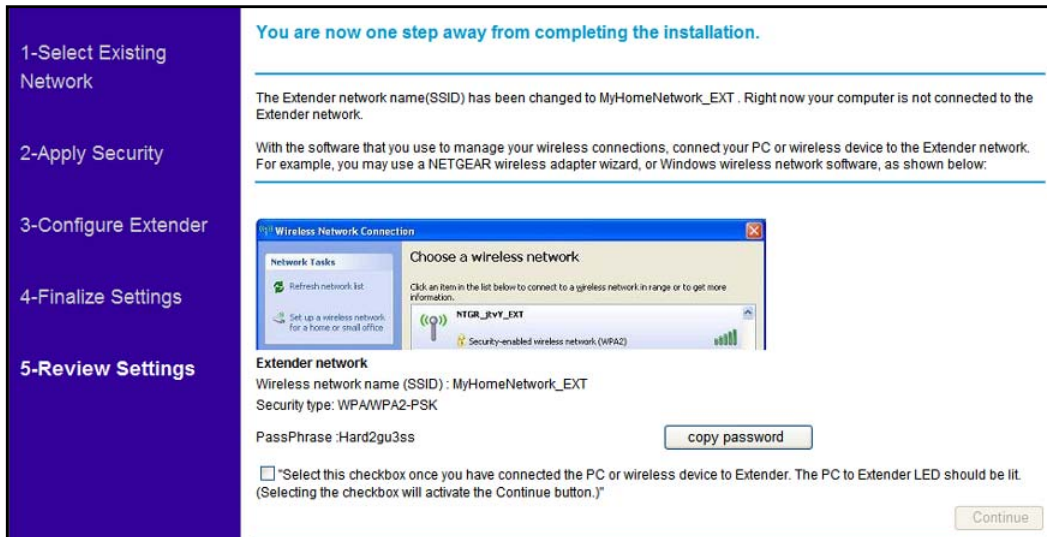
When this happens, your computer is automatically disconnected from the Extender wireless network.

6. If you want to use the same password to access the Extender's wireless network that you use for wireless access to your existing network, click the **copy password** button.

7. With the software that you use to manage your wireless connections, join the Extender wireless network. For instance, if you use Windows, you might use a screen like this:
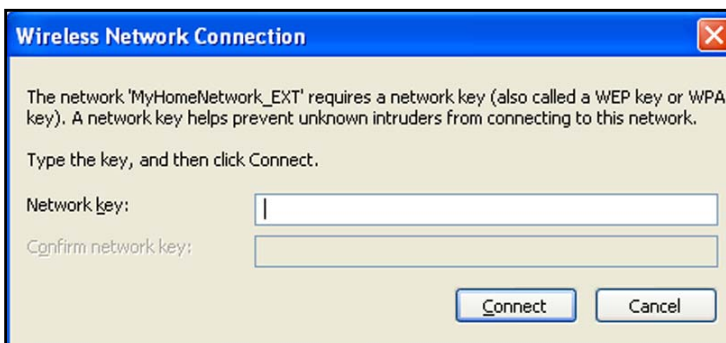
8. Then go back to the Extender wizard screen and select the check box to confirm that you have connected to the Extender network:
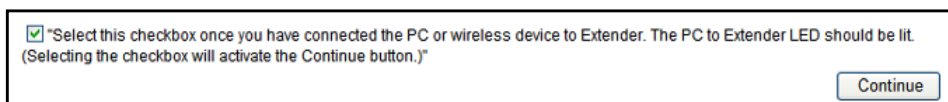
9. Click **Continue**.

Extender Network Settings

<div style="text-align: right; font-size: 4em; color: #1a237e;">2</div>

To change settings, connect the Extender to your computer and use your Internet browser to go to **http://www.mywifiext.net** as described in *Connect a PC to the Extender with an Ethernet Cable* on page 8.

- *Connect the Extender to an Existing Network*
- *Use WPS to Add a PC to the Extender's Wireless Network*
- *Extender Wireless Settings*
- *Extender IP Address Setup*
- *Status Screen*
- *Attached Devices*
- *Back Up and Manage Extender Settings*
- *Set the Password*
- *Upgrade the Firmware*
- *Advanced Wireless Settings*

Connect the Extender to an Existing Network

You can use this menu selection to wirelessly connect the Extender to your home network.

1. From the Extender menu at http://www.mywifiext.net, select **Setup > Connect to an Existing Network**. The Extender scans for wireless networks, and displays a list.

If your wireless network is not on the list, and it is up and running, see *Positioning Your Extender* on page 7 for suggestions.

2. Click the radio button to select your network from the list and click **Continue**. The next screen displays:

3. Enter your network's passphrase or key and click **Continue**.

   The Extender joins your wireless network.

Use WPS to Add a PC to the Extender's Wireless Network

WPS (Wi-Fi Protected Setup) lets you connect a computer or wireless device to the Extender's network without entering the wireless network passphrase or key. Instead, you use a WPS button or enter a PIN to connect. WPS supports WPA and WPA2 wireless security. If your Extender network is open (no wireless security is set), then connecting with WPS automatically sets WPA2 + WPA wireless security on the Extender network.

The *Universal WiFi Extender WN3000RP Installation Guide* explains how to use WPS during installation.

You can connect with WPS by using either the WPS button on the side of the Extender, or by logging in to the Extender and clicking an onscreen WPS button.

➢ **To use the Extender WPS button to connect:**

1. Locate the WPS button on the side of the Extender.
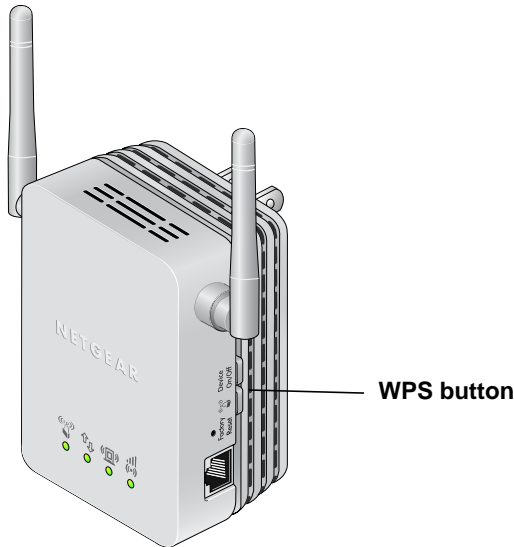
WPS button

2. Press the Extender's WPS button.

    For 2 minutes, the Extender attempts to add a wireless client (a computer or other wireless device) to its wireless network.

3. Within 2 minutes, press the WPS button on your wireless device, or follow the WPS instructions that came with your wireless device.

    Your wireless device is now connected to the Extender.

To log in to the Extender and use WPS to connect:

1. From the Extender menu at http://www.mywifiext.net, select **Setup > Add WPS Client**. The following screen displays:

2. Select a radio button.

    • **Push Button (recommended)**. Either click the 🐾 button or press the   **WPS** button on the front of the Extender.

    • **PIN Number**. Select the **PIN number** radio button and enter the client PIN in the field that displays.

The Extender tries to find the wireless client (the computer) that is attempting to join the network. If you are using a WPS button, it tries for 2 minutes. If you are using a PIN, it tries for 4 minutes.

3. Go to your wireless computer. Use its WPS software to try to connect to the Extender.

   The first time you add a WPS client, WPS automatically sets the Extender's wireless security to WPA2 + WPA with a random passphrase. You can view these settings in the Wireless Settings screen, described in the following section.

Extender Wireless Settings

You can use the Wireless Settings screen to change the network name (SSID) for the Extender's network and to set up wireless security. If you do not change these settings, the network name is NETGEAR_EXT, and the network is open (no wireless security is set up).

> **Note:** If you use a wireless computer to change the extender's wireless settings, you will be disconnected when you click **Apply**. To reconnect, you must select the new network name that you created, and enter the passphrase or wireless security key that you set up.

To change the wireless settings for the extender's network:

1. From the Extender menu at http://www.mywifiext.net, select Setup > **Wireless Settings** to display the following screen:

Wireless Settings

Wireless Network
Name (SSID): Millers-Guest_EXT
Region: United States
Security Options
- None
- WEP
- WPA-PSK [TKIP]
- ● WPA2-PSK [AES]
- WPA-PSK [TKIP] + WPA2-PSK [AES]

Security Options (WPA2-PSK)
Passphrase: _____ (8-63 characters or 64 hex digits)

[Apply] [Cancel]

2. In the **Name (SSID)** field, you can type in a new name to customize your extender network.

3. In the Security Options section of the screen, select the type of wireless security that you want to use on your network.

- **None**. This is an open wireless network. Any wireless computer or device is allowed to join this network.

- **WEP**. WEP is an older standard, and is less secure than WPA or WPA2. WEP uses encryption keys and data encryption for data security. You can select 64-bit or 128-bit encryption.

- **WPA-PSK [TKIP]**. WPA is more secure than WEP. When using wireless computers or devices that support WPA, you can enter a passphrase to join the extender's wireless network.

- **WPA2-PSK [AES]**. WPA2 is even more secure, but some older computers do not support this standard. When using wireless computers or devices that support WPA2, you can enter the passphrase to join the extender's wireless network.

- **WPA-PSK [TKIP] + WPA2-PASK [AES]**. When using wireless computers or devices that support either WPA or WPA2, you can enter the passphrase to join the extender's wireless network.

4. Click **Apply** to save your settings.

5. Use your wireless computer to connect to the Extender's network with its new settings. The Smart Wizard can guide you through this process.

Set Up WEP

1. In the Wireless Settings screen, in the Security Options section, select the **WEP** radio button.

2. Select the authentication type: **Automatic**, **Open System**, or **Shared Key**. The default is Open System.

> **Note:** The authentication is separate from the data encryption. You can select authentication that requires a shared key, but still leaves data transmissions unencrypted. Security is stronger if you use both the Shared Key and WEP encryption settings.

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3. Select the encryption strength setting:
    - **WEP 64-bit encryption**. Enter 10 hexadecimal digits (any combination of 0–9, a–f, or A–F).
    - **WEP 128-bit encryption**. Enter 26 hexadecimal digits (any combination of 0–9, a–f, or A–F).

4. Enter the encryption keys. You can manually or automatically program the four data encryption keys. These values must be identical on all computers and access points in your network:
    - **Passphrase**. To use a passphrase to generate the keys, enter a passphrase, and click **Generate**. This automatically creates the keys. Wireless computers must use the passphrase or keys to access the Extender.

> **Note:** Not all wireless computers support passphrase key generation. If your computer does not support the passphrase, then you will need to type the encryption key in order to join the wireless network.

- **Key 1**–**Key 4**. These values are *not* case-sensitive. You can manually enter the four data encryption keys. These values must be identical on all computers and access points in your network. Enter 10 hexadecimal digits (any combination of 0–9, a–f, or A–F).

5. Select which of the four keys will be the default.

   Data transmissions are always encrypted using the default key. The other keys can be used only to decrypt received data. The four entries are disabled if WPA-PSK or WPA authentication is selected.

6. Click **Apply** to save your settings.

Set Up WPA, WPA2, or WPA + WPA2

Both WPA and WPA2 provide strong data security. WPA with TKIP can be used on Windows systems with Service Pack 2 or later. WPA2 with AES is a hardware implementation; see your device documentation before implementing it.

To set up WPA or WPA2 in the Extender:

1. On the Wireless Setting screen, select the radio button for the WPA or WPA2 option of your choice.
2. The settings displayed on the screen depend on which security option you select.
3. For WPA-PSK or WPA2-PSK, enter the passphrase.
4. Click **Apply** to save your settings.

Extender IP Address Setup

From the Extender menu at http://www.mywifiext.net, under the Maintenance heading, select **IP Address**.

The IP Address screen shows whether the Extender is set to get its IP address dynamically from the router (this is the most common setting), or is set as a static IP address.

- **Get Dynamically From Router**. The wireless network router assigns an IP address when the Extender connects to its wireless network. Most networks are set up so that the router automatically does this.
- **Use Static IP Address.** Specify a static IP address. This is not usually necessary. If you set this up, you should be technically experienced or have a technically experienced person help you.

- **IP Address**. The static IP address.
- **IP Subnet Mask**. The subnet mask associated with the IP address.
- **Gateway IP Address**. The IP address for the gateway.
- **Primary DNS**. The primary domain name server (DNS).
- **Secondary DNS**. The secondary domain name server (DNS).

Status Screen

When you connect to http://www.mywifiext.net, after the automatic firmware check, the Status screen displays. You can also select **Status** from the menu to display this screen:

Status

Hardware Version	WN3000RPT
Firmware Version	V1.0.0.18_1.0.3
GUI Language Version	V1.0.0.6_2.1.9.1

Connection Status to Existing Network

Name (SSID)	Millers-Guest
Link Rate	130 Mbps
Connection Status	connected

Extender IP Info

MAC Address	E0:91:F5:FC:DA:84
IP Address	192.168.1.250
DHCP Client	ON
IP Subnet Mask	255.255.255.0
Gateway IP Address	192.168.1.1
Domain Name Server	192.168.1.1

Extender Wireless Setting

Name (SSID)	Millers-Guest_EXT
Region	United States
Channel	6
Mode	Up to 145 Mbps
Wireless AP	On
Broadcast Name	On
Wi-Fi Protected Setup	Configured

Show Statistics

This screen shows the current settings and the status of your Extender.

You can click **Show Statistics** to see device performance statistics such as the number of packets sent and number of packets received for each port. See *Show Statistics* on page 20.

Hardware and Firmware Version. The model of the hardware and the currently running firmware version.

GUI Language Version. The currently selected language.

Connection Status to Existing Network

- **Name (SSID)**. Your Extender is set up to connect to this SSID, also called the wireless name.
- **Connection Status**. The status of your wireless connection (connected or disconnected).
- **Link Rate**. The actual transmission (Tx) and receive (Rx) link rate in the current wireless connection.

Extender IP Info

- **MAC Address**. The physical address of the Extender, as seen from the local area network (LAN).

- **IP Address**. The IP address of the Extender. The default is 192.168.1.250.

- **DHCP Client**. Identifies the network DHCP client on the wireless network.

- **IP Subnet Mask**. The IP subnet mask associated with the LAN IP address of the Extender. The default is 255.255.255.0.

- **Gateway IP Address**. he IP address of the wireless network gateway.

- **Domain Name Server**. The IP address of the Domain Name Server (DNS) of the wireless network.

Extender Wireless Settings

- **Name (SSID)**. the name (SSID) of the wireless network.

- **Region**. The country where the Extender is set up for use.

- **Channel**. The current channel, which determines the operating frequency.

- **Wireless AP**. Indicates if the access point (AP) feature is enabled.

- **Broadcast Name**. Indicates if the Extender is configured to broadcast its SSID.

- **Wi-Fi Protected Setup**. This indicates whether Wi-Fi Protected Setup is configured.

Show Statistics

On the Device Status screen, click **Show Statistics** to display the following screen:

System Up Time 00:04:58

Port	Status	TxPkts	RxPkts	Collisions	Tx B/s	Rx B/s	Up Time
LAN	100M/Full	1143	1224	0	1506	657	00:04:31
WLAN	145M	0	0	0	0	0	00:04:53

Poll Interval :: 5 (secs) [Set Interval] [Stop]

Table 1. Show Statistics Fields

Field	Description
LAN or WLAN (Port)	The statistics for the LAN (local), and wireless LAN (WLAN) ports. For each port, the screen displays the following:
Status	The link status of the port.
TxPkts	The number of packets transmitted on this port since reset or manual clear.
RxPkts	The number of packets received on this port since reset or manual clear.

Table 1. Show Statistics Fields (Continued)

Field	Description
Collisions	The number of collisions on this port since reset or manual clear.
Tx B/s	The current line utilization—percentage of current bandwidth used on this port.
Rx B/s	The average line utilization for this port.
Up Time	The time elapsed since the last power cycle or reset.
Poll Interval	Specify the poll interval frequency. If you change this value, click **Set Interval** so that your change takes effect.

Attached Devices

From the Extender menu at http://www.mywifiext.net, under the Maintenance heading, select **Network Devices** to display the following screen:

Back Up and Manage Extender Settings

From the Extender menu at http://www.mywifiext.net, under the Maintenance heading, select **Backup Settings** to display this screen.

The Backup and Restore options in the Backup Settings screen let you save and retrieve a file containing your Extender's configuration settings. Once you have your Extender working

correctly, you should back up the information to have it available if something goes wrong. When you back up the settings, they are saved as a file on your computer. You can restore the device's settings from this file.

Back Up Settings

1. Click **Backup**. Your browser extracts the configuration file from the Extender.
2. If you do not have your browser set up to save downloaded files automatically, locate where you want to save the file.
3. You can give the file a meaningful name at this time, such as internet_adapter.cfg.

Restore Settings

1. On the Backup Settings screen, click **Browse**.
2. Locate and select the previously saved backup file.
3. Click **Restore**.

   A screen displays letting you know that the device has been successfully restored to the previous settings. The Extender restarts. This takes about 1 minute.

   CAUTION:

   Do not try to go online, turn off the Extender, shut down the computer, or do anything else to the Extender until it finishes restarting!

4. Close the message window.

To restore your settings from a saved configuration file, enter the full path to the file on your computer, or click **Browse** to browse to the file. When you have located it, click **Restore** to send the file to the Extender. The Extender then reboots automatically.

Erase the Settings

Under some circumstances (for example, if you have lost track of the changes that you made to the Extender settings), you might want to erase the configuration. After an erase, the Extender returns to its factory settings (see *Factory Settings* on page 5).

To erase the configuration, click the **Erase** button in the Backup Settings screen.

CAUTION:

Do not try to go online, turn off the Extender, shut down the computer, or do anything else to the Extender until it finishes restarting!

Set the Password

The user name to access the Extender is admin, and its default password is password. NETGEAR strongly recommends that you set a more secure password.

From the Extender menu at http://www.mywifiext.net, select **Maintenance > Set Password**. The following screen displays:

Set Password

Old Password
Set Password
Repeat New Password

Apply Cancel

Type the old password, type the new password twice, and then click **Apply**.
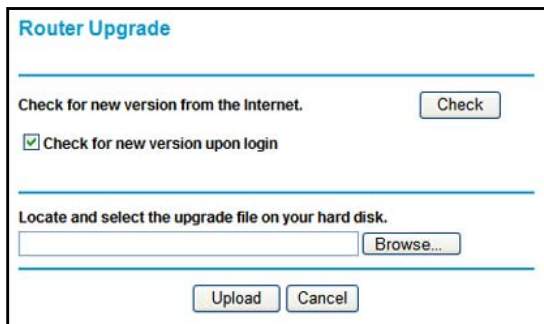
Upgrade the Firmware

Unless you changed the settings in the Firmware Upgrade screen previously, the Extender is set up to check for new firmware automatically at log in.

If you do not want to use the automatic firmware check, clear the **Check for New Version Upon Login** check box.

To check for firmware and upgrade if it is available:

1. From the Extender menu at http://www.mywifiext.net, under the Maintenance heading, select **Firmware Upgrade**. The following screen displays:

Router Upgrade

Check for new version from the Internet.   Check
☑ Check for new version upon login

Locate and select the upgrade file on your hard disk.
[   ] Browse...

Upload Cancel

2. Click **Check** to see if new firmware is available. If it is, follow the onscreen prompts to download it onto your computer.
3. Use the Browse field to locate and select the new firmware.
4. Click **Upload** to install the new firmware on your Extender.

⚠️ **CAUTION:**

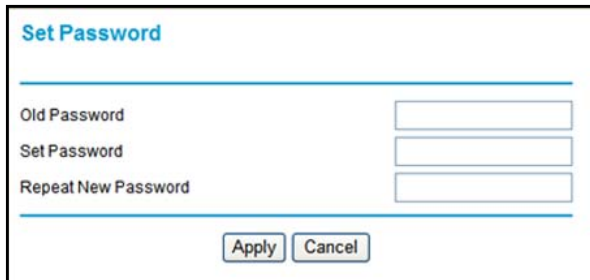Once you start the firmware upgrade, do not try to go online, turn off the Extender, shut down the computer, or do anything else to the Extender until it finishes restarting.

Advanced Wireless Settings

The Extender is already set up with the optimum settings. Do not alter these settings unless directed by NETGEAR support. Incorrect settings might disable the Extender unexpectedly.

To view or change the advanced wireless settings:

From the Extender menu at http://www.mywifiext.net, under the Advanced heading, select **Wireless Settings**. The following screen displays:

You can view or configure the following settings:

- **Enable Wireless Access Point**. Enable the extender to work as a wireless access point. If this check box is cleared, then computers or wireless devices cannot connect wirelessly to the extender.

- **Enable SSID Broadcast.** Enable the extender to broadcast its wireless network name (SSID). If this check box is cleared, then the wireless network is hidden. To join a hidden wireless network, you have to type the wireless name.

- **Disable Device's PIN**. Selecting this check box disables the extender's PIN. The PIN can be used for a WPS wireless connection.

- **Keep Existing Wireless Settings**. When this check box is selected, the settings in the Wireless Settings screen stay the same when WPS is used for a wireless connection.

- **Setup Access List**. Specify a list of computers or wireless devices that are allowed to connect to the network. If you use an access list, then computers that are not on the list are not allowed to join the wireless network.

Troubleshooting

3

Smart Wizard FAQs

1. When I connect to the network, Smart Wizard keeps asking me for my passphrase, and I am sure I've entered the correct passphrase. What can I do?

    It is very likely that the Extender is placed at the borderline of the range covered by the router. See *Positioning Your Extender* on page 7.

2. I got an error message in the Review Settings screen in the Smart Wizard. What should I do?

    Make sure that your computer is connected to the Extender by using the SSID and the passphrase that you have just set up, and clicking the **Refresh** button in your browser. This will return you to the Smart Wizard.

3. I connected to NETGEAR_EXT and launched a browser, but why can't I see the Smart Wizard?

    *   Make sure that your computer is set up to use DHCP. If you set up your computer to use a static IP address, you have to change the settings back so that it uses Dynamic Host Configuration Protocol (DHCP).
    *   Make sure the PC to Extender Connection LED is green.
    *   Relaunch the browser and enter **www.mywifiext.net**.
    *   Check to make sure that your computer has an IP address in the IP Address screen (see *Extender IP Address Setup* on page 18).

Connecting to http://www.mywifiext.net

If you have trouble connecting, try to locate the source of the problem:

*   For help with passwords, see *Log In to the Extender* on page 8.
*   If your browser displays an error page, make sure that you include *http://* when you type this URL in the address field of your Internet browser. If you leave it out, you might not be able to connect.
*   The Extender LEDs can help you tell if the extender is correctly set up and working as it should.

- The best performance is delivered when both the Link Rate LED and the PC to Extender Connection LED are green.
- A workable performance is delivered when the Link Rate LED is amber and the PC to Extender Connection LED is green.

If you cannot get a wireless connection working, you can use an Ethernet cable to connect your computer to the Extender. See *Connect a PC to the Extender with an Ethernet Cable* on page 8.

Joining Wireless Networks

To join a wireless network you must know its network name (also called the SSID) so that you can select it. If the network is secure, you must know the passphrase or wireless key. If the Extender does not connect to the network that you chose, the following message displays:

Connection was not established to the selected network.

If this happens it could be due to one of these reasons:

- The network name, passphrase, or key might have been typed incorrectly. Click **Cancel**, use the Smart Wizard to select the network from the list, and retype the passphrase or key. This is case-sensitive. PASSWORD25 is not the same as Password25 or password25. See *Use the Smart Wizard to Set Up the Extender* on page 9.

- If the Smart Wizard does not find your wireless network (it is not displayed in the Select Existing Network screen), check to see if your wireless network is still up and running. Make sure that the router is turned on. If possible, move the Extender closer to the router and click **Try Again**.

- If the Extender WLAN LED is red, this indicates a poor wireless connection. The best connection is established when there is a clear line of sight between the Extender and the router you are connecting to. Make sure that there are no physical obstacles between the Extender and the router, and try to move the Extender closer to the router.

If you use the Smart Wizard, and the Extender cannot connect to the router or cannot get an IP address from the router, it displays the following message:

*You are not able to connect to the Internet. Click **Continue** to run through set up again to connect to your network.*

If you click **Continue**, the Smart Wizard starts again (see *Use the Smart Wizard to Set Up the Extender* on page 9). If you click **Exit**, the Status screen displays with menu selections on the left (see *Log In to the Extender* on page 8).

Supplemental Information

A

Factory Settings

You can press and hold the **Factory Settings** button on the side panel for 7 seconds. The Extender resets, and returns to its factory settings.

Table 2.

Factory Settings		
Smart Wizard		Enabled
Wireless	Wireless communication	Enabled
	Wireless Network Name (SSID)	NETGEAR_EXT
	Security	Disabled
	Transmission speed	Auto[1]
	Country/Region	United States (varies by region)
	Operating mode	802.11n, 802.11g, 802.11b
	Data rate	Up to 300 Mbps

1. *Maximum wireless signal rate (IEEE Standard 802.11). Actual throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate.*

Technical Specifications

Table 3.

Technical Specifications	
Network protocol and standards compatibility	Data and Routing Protocols: TCP/IP, DHCP server and client
AC input	100-240V~, 0.3A (Max)
Physical specifications	• Dimensions: 112 x 74 x 45 mm (4.41 x 2.91 x 1.77 in) • Weight: 0.245 kg (0.54 lb)
Environmental	• Operating temperature: 32° to 140° F (0° to 40° C) • Operating humidity: 90% maximum relative humidity, noncondensing • Electromagnetic emissions: Meets requirements of: FCC Part 15 Class B.
Interface	• Local: 10BASE-T, 100BASE-Tx, RJ-45 • 802.11n/g/b

Compliance Notification B

Regulatory Compliance Information

This section includes user requirements for operating this product in accordance with National laws for usage of radio spectrum and operation of radio devices. Failure of the end-user to comply with the applicable requirements may result in unlawful operation and adverse action against the end-user by the applicable National regulatory authority.

Note: This product's firmware limits operation to only the channels allowed in a particular Region or Country. Therefore, all options described in this user's guide may not be available in your version of the product.

FCC Requirements for Operation in the United States

FCC Information to User

This product does not contain any user serviceable components and is to be used with approved antennas only. Any product changes or modifications will invalidate all applicable regulatory certifications and approvals

FCC Guidelines for Human Exposure

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

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

FCC Declaration of Conformity

We, NETGEAR, Inc., 350 East Plumeria Drive, San Jose, CA 95134, declare under our sole responsibility that the Universal WiFi Range Extender WN3000RP complies with Part 15 Subpart B of FCC CFR47 Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

FCC Radio Frequency Interference Warnings & Instructions

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following methods:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an electrical outlet on a circuit different from that which the radio receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution

- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- For product available in the USA market, only channel 1~11 can be operated. Selection of other channels is not possible.
- This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.

Canadian Department of Communications Radio Interference Regulations

This digital apparatus, Universal WiFi Range Extender WN3000RP, does not exceed the Class B limits for radio-noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

Europe – EU Declaration of Conformity

CE ①

Marking with the above symbol indicates compliance with the Essential Requirements of the R&TTE Directive of the European Union (1999/5/EC).

This equipment meets the following conformance standards:

- EN300 328 (2.4Ghz), EN301 489-17, EN301 893 (5Ghz), EN60950-1
- This device is a 2.4 GHz wideband transmission system (transceiver), intended for use in all EU member states and EFTA countries, except in France and Italy where restrictive use applies.
- In Italy, the end-user should apply for a license at the national spectrum authorities in order to obtain authorization to use the device for setting up outdoor radio links and/or for supplying public access to telecommunications and/or network services.
- This device may not be used for setting up outdoor radio links in France, and in some areas the RF output power may be limited to 10 mW EIRP in the frequency range of 2454 – 2483.5 MHz. For detailed information contact the national spectrum authority in France.

For complete DoC, visit the NETGEAR EU Declarations of Conformity website at::
http://kb.netgear.com/app/answers/detail/a_id/11621/

Table 1. EDOC in Languages of the European Community

Language	Statement
Cesky [Czech]	*NETGEAR* Inc. tímto prohlašuje, že tento Radiolan je ve shode se základními požadavky a dalšími príslušnými ustanoveními smernice 1999/5/ES.
Dansk [Danish]	Undertegnede *NETGEAR Inc.* erklærer herved, at følgende udstyr Radiolan overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
Deutsch [German]	Hiermit erklärt *NETGEAR Inc.*, dass sich das Gerät Radiolan in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
Eesti [Estonian]	Käesolevaga kinnitab *NETGEAR Inc.* seadme Radiolan vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.

Table 1. EDOC in Languages of the European Community

Language	Statement
English	Hereby, *NETGEAR Inc.*, declares that this Radiolan is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Español [Spanish]	Por medio de la presente *NETGEAR Inc.* declara que el Radiolan cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ *NETGEAR Inc.* ΔΗΛΩΝΕΙ ΟΤΙ Radiolan ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
Français [French]	Par la présente *NETGEAR Inc.* déclare que l'appareil Radiolan est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
Italiano [Italian]	Con la presente *NETGEAR Inc.* dichiara che questo Radiolan è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo *NETGEAR Inc.* deklarē, ka Radiolan atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių [Lithuanian]	Šiuo *NETGEAR Inc.* deklaruoja, kad šis Radiolan atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
Nederlands [Dutch]	Hierbij verklaart *NETGEAR Inc.* dat het toestel Radiolan in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
Malti [Maltese]	Hawnhekk, *NETGEAR Inc.*, jiddikjara li dan Radiolan jikkonforma mal-htigijiet essenzjali u ma provvedimenti ohrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
Magyar [Hungarian	Alulírott, *NETGEAR Inc.* nyilatkozom, hogy a Radiolan megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
Polski [Polish]	Niniejszym NETGEAR Inc. oświadcza, że Radiolan jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
Português [Portuguese]	*NETGEAR Inc.* declara que este Radiolan está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Slovensko [Slovenian]	NETGEAR Inc. izjavlja, da je ta Radiolan v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky [Slovak]	*NETGEAR Inc.* týmto vyhlasuje, že Radiolan spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.

Table 1. EDOC in Languages of the European Community

Language	Statement
Suomi [Finnish]	*NETGEAR Inc.* vakuuttaa täten että Radiolan tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]	Härmed intygar *NETGEAR Inc.* att denna Radiolan står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.
Íslenska [Icelandic]	Hér með lýsir *NETGEAR Inc.* yfir því að Radiolan er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 1999/5/EC.
Norsk [Norwegian]	*NETGEAR Inc.* erklærer herved at utstyret *Radiolan* er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.

Interference Reduction Table

The table below shows the recommended minimum distance between NETGEAR equipment and household appliances to reduce interference (in feet and meters).

Table 2. Interference Reduction Table

Household Appliance	Recommended Minimum Distance (in feet and meters)
Microwave ovens	30 feet / 9 meters
Baby Monitor - Analog	20 feet / 6 meters
Baby Monitor - Digital	40 feet / 12 meters
Cordless phone - Analog	20 feet / 6 meters
Cordless phone - Digital	30 feet / 9 meters
Bluetooth devices	20 feet / 6 meters
ZigBee	20 feet / 6 meters