



User Manual

802.11AC Dual Band Wireless Router

Model: LP-8096

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Notice

- This document is issued to guide users how to install and operate LP-8096 802.11AC Dual Band Wireless Router. Please read the document carefully to avoid any damage which is caused by inappropriate use excluding from the warranty.
- Loopcomm Technology Inc. reserves the right to revise/update the content of LP-8096 user manual without advance notice.

Scenario



Features

- Complies with IEEE 802.11a/b/g/n and ac Draft 2.0
- Maximum PHY data rate up to :
173.3Mbps using 20MHz bandwidth,
400Mbps using 40MHz bandwidth,
866.7Mbps using 80MHz bandwidth.
- 2x2 MIMO technology for extended reception robustness and exceptional throughput
- 5MHz / 10MHz / 20MHz / 40MHz / 80MHz bandwidth transmission
- OFDM with BPSK, QPSK, 16QAM, 64QAM and 256QAM modulation.
- Convolutional Coding Rate: 1/2, 2/3, 3/4, and 5/6
- Support Network Attached Storage
- All Giga RJ45 Ports
- Support USB2.0

Technical Specification

Wireless Standard: 802.11a/b/g/n and ac Draft 2.0

Frequency Band: 2.4GHz, 5.0GHz

Wireless Speed: 2.4GHz: 300Mbps (Tx/Rx)

5.0GHz: 300Mbps (Tx/Rx)

Amplifier: Dual 2.4GHz Amplifiers

Dual 5.0GHz Amplifiers

Dual Low Noise Amplifier

Wireless Sensitivity: -93dBm (Max)

Wireless Output Power: 18dBm (Max)

Wireless Security:

- WEP, WPA, WPA2, WPA Mixed, WPS

User Access Control:

- MAC address filtering

Wireless Access Scheduling:

- Specific day and time
(2.4GHz or 5.0GHz Separately)

Wireless Coverage Control:

- 15% - 100% Output Power
(2.4GHz or 5.0GHz Separately)

Antennas:

- 2 x Detachable Dual Band 5dBi Omnidirectional Antenna
- 2 x Reverse SMA Connector

Ports:

- 1 x RJ-45 10/100/1000M WAN ports (Local Ports)
- 4 x RJ-45 10/100/1000M LAN ports (Local Ports)
- USB 2.0 Port for Storage Devices

Mounting:

- Wall, Stand or Desktop

Setup Requirements:

- Wired or wireless PC/Mac and an available 802.11a/b/g/n or ac Draft2.0 wireless network
- Google Chrome, Internet Explorer (8.0 and up) or Safari Web browser

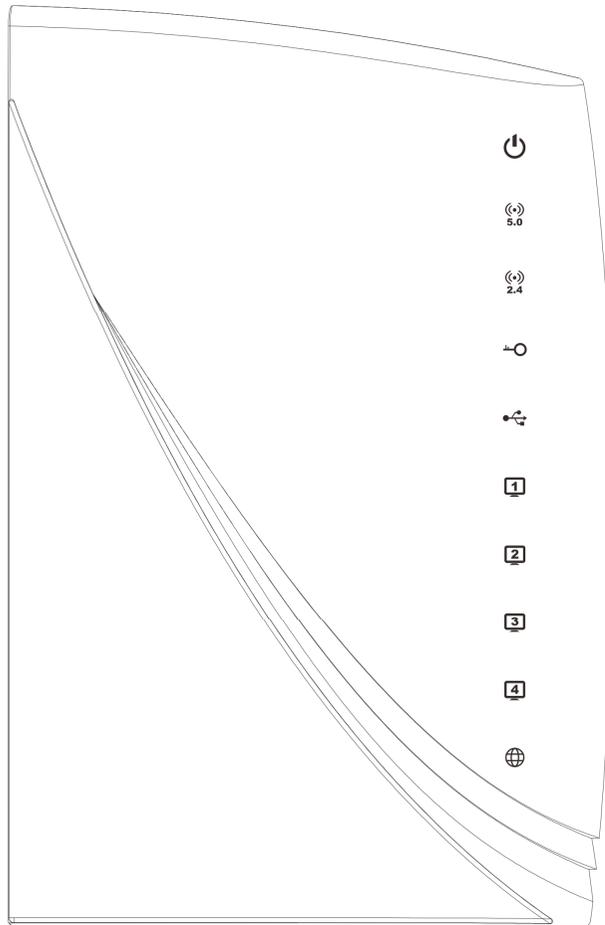
Getting Started

Package Contents

Check to make sure you have all the contents within your package:

- 802.11ac Dual Band Wireless Router
- Two Detachable 5dBi Omnidirectional Antennas
- Power Adapter (AC 100-240V, DC 5V/2A)
- Two RJ-45 Ethernet Cable
- Quick Installation Guide
- Product CD
- Stand for Vertical Mounting

LED Indicators



Power: Indicates when the Dual Band Wireless Router is powered on. The LED will remain on.

5.0GHz Wireless Activity: Blinks rapidly when wireless data traffic is transmitted or received over the 5.0GHz wireless network.

2.4GHz Wireless Activity: Blinks rapidly when wireless data traffic is transmitted or received over the 2.4GHz wireless network.

WPS: Wi-Fi Protected Setup activity. When the WPS mode is activated the WPS LED blinks as it awaits a connection.

USB Connection: Indicates when a USB storage device is connected to the USB port for local sharing.

Gigabit Wired Ports 1-4: Indicates when a networking device is connected to a wired port on the back of the Dual Band Wireless Router. The LED blinks rapidly when wired data traffic is transmitted or received.

Internet Connection: Indicates when the Dual Band Wireless Router is connected to a broadband modem. The LED will blink when Internet traffic is transmitted or received.

Back Panel Description



Antenna Connectors (1-2): SMA antenna connectors.

Attach the included high gain dual band antennas to these connectors

WPS: Hold down for 3 seconds to enable WPS push button configuration.

Reset: Push down once to reboot the Dual Band Wireless Router. Hold down for 5-10 seconds to reset the Dual Band Wireless Router back to factory settings.

Power: Power adapter port. AC Input: 100-240V, DC Output: 5V 2A

USB Port: Attach USB storage devices, such as USB flash drives and external hard drives, for file sharing.

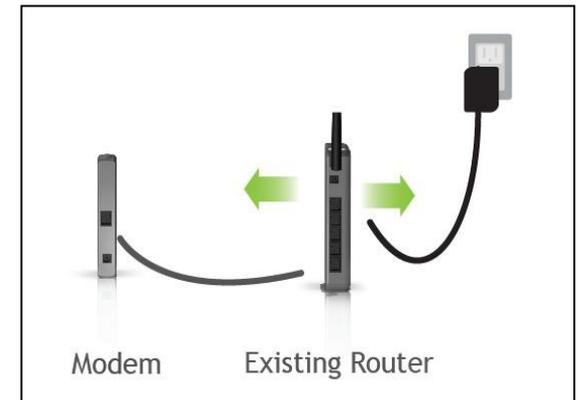
Wired Devices: Gigabit RJ-45 ports for connecting to wired computers or network devices.

Modem: RJ-45 port for connecting to your Broadband Modem.

Setup Guide

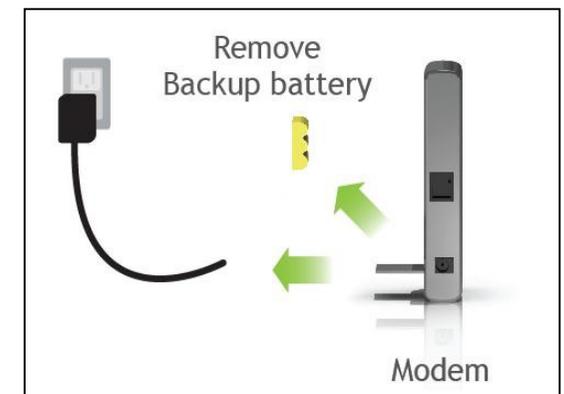
Setup Preparations

1. Disconnect and Power Off your Existing Wireless Router.
2. Disconnect your existing Wireless Router from your computer, your broadband modem and its power outlet. If you do not have an existing Wireless Router please continue to the next step.



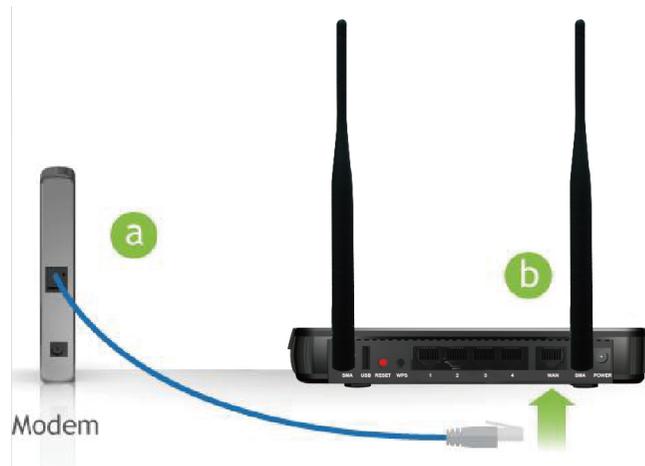
Power off your Modem

Please Power off the Modem by disconnecting the Modem's power adapter from the power outlet. If your Modem has a backup battery, remove the backup battery from your Modem. Do NOT power on the Modem until prompted at a later step.



Connect the Dual Band Wireless Router to your Modem

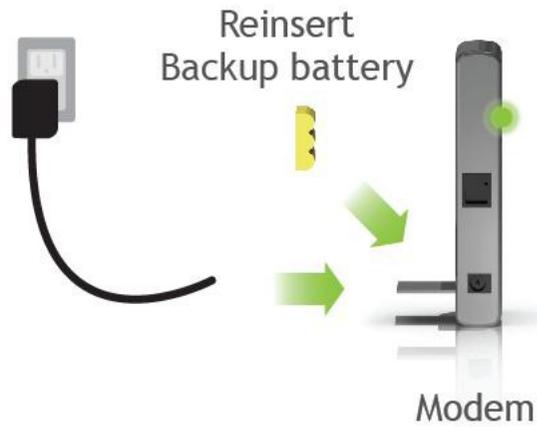
***Do NOT connect the power adapter to the Dual Band Wireless Router at this time**



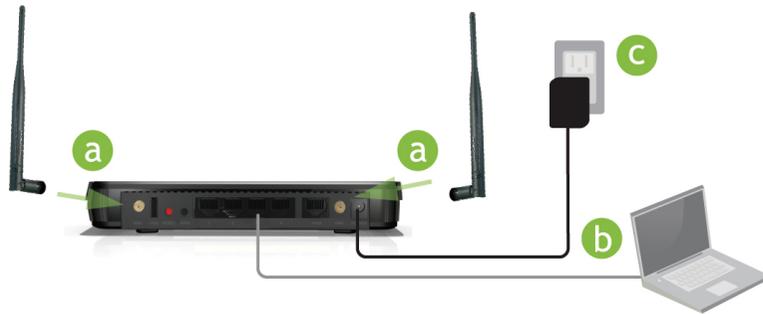
- a) Use the included Ethernet cable and connect one end of the cable to your Modem
- b) Connect the other end of the cable to the WAN port on the Dual Band Wireless Router

Power on your Modem

Plug in your Modem's power adapter and backup battery (if available):



Power ON the Dual Band Wireless Router and connect it to your Computer



- a) Attach the antennas of the Dual Band Wireless Router to the antenna ports labeled 1 and 2
- b) Connect the included grey network cable to an available port on your computer
- c) Attach the power adapter to the Dual Band Wireless Router's PWR port and a power outlet

Software Configuration

Open your Web Browser to Access the Setup Wizard

1. Open your web browser.
2. Type in: <http://setup.loopcomm.com> into the web address bar.



[http:// setup.loopcomm.com](http://setup.loopcomm.com)

3. If the web menu fails to open, type in the following IP address into your web address bar: **http://192.168.3.1_**
4. When prompted, enter the login and password.



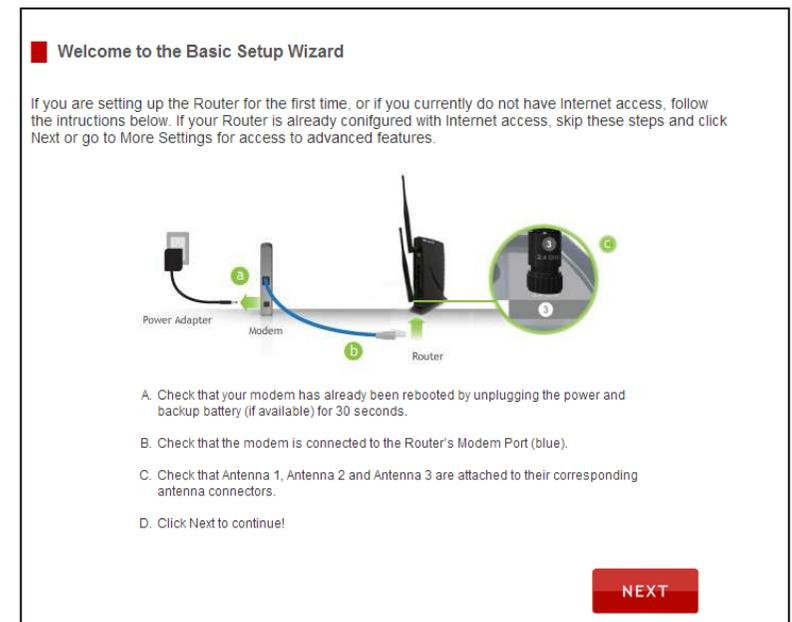
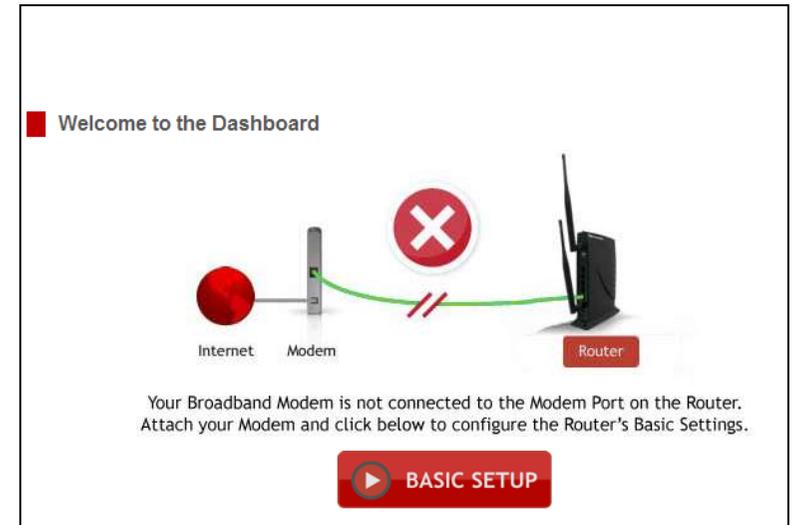
LOGIN:	admin
PASSWORD:	admin

Welcome to the Smart Setup Wizard

When the web menu appears, click **BASIC SETUP and NEXT** to proceed with the Smart Setup Wizard.

The Smart Setup Wizard will guide you through the following settings:

1. Internet Connection
2. System Clock
3. Wireless Connection



Configure your Internet Connection

Configure your Internet settings using the automatic configuration settings. The wizard will check the connection to your modem and attempt to automatically configure your Internet connection settings. If there is a problem with the connection the wizard will provide you with information regarding the problem.

Internet Connection Setup

The Smart Setup Wizard will attempt to detect your Internet connection and configure the settings of your Internet connection automatically.

[Automatic Configuration](#)

If you wish to configure your Internet connection manually, select Manual Configuration:

[Manual Configuration](#)

More advanced users may choose to configure their connections manually by selecting Manual Configuration. DSL users may require additional login information. Select the appropriate connection type and enter the required information.

Internet Connection > Automatic Configuration Failed

The Smart Setup Wizard cannot find the cable connection to your modem. Please check that:



1. An Ethernet cable is attached to the blue "Modem" port on the back of the High Power Router and the network port on your modem.

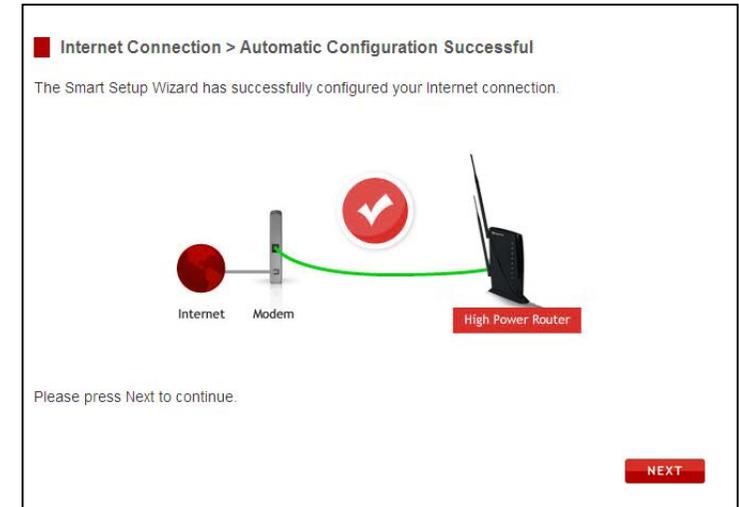
2. Your modem is powered on.

Once you have done so, click "Automatic Configuration" to try again or select "Manual Configuration" to manually set your internet connection settings.

[Automatic Configuration](#) [Manual Configuration](#)

If the Automatic configuration was successful, you will be directed to a Configuration Successful page.

Click **Next** to continue



Set the System Clock

The System Clock is used for system logs and setting schedules for Internet access.
Click **Sync** to synchronize the System Clock with the time on your computer.

Click **Next** to continue.

WELCOME 1 2 3 FINISH

System Clock

Update the System Clock for the High Power Router by clicking the Sync button below.

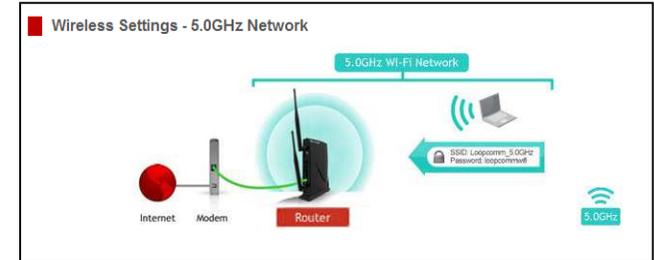
Current Time: Month Day Year
 Hour Minute Sec

Sync with your computer:

Click Next to confirm your settings and continue.

Configure your Wireless Settings

The default SSID of the Dual Band Wireless Router is “**Loopcomm_5.0GHz**”
To change it, enter a new name in the SSID field. Users connecting wirelessly to the Dual Band Wireless Router will use this ID to identify your wireless network.
The default Security Key (WPA/WPA2) for your wireless network is “**wireless**”.



To change it, enter a new key in the Security Key field. The key must be 8-characters minimum.

Click **Next** to continue.

Wi-Fi Network ID (SSID):

Security Settings
Your 5.0GHz Wi-Fi network is secured with the following (WPA/WPA2) security password/key. You must enter this key when connecting wirelessly for the first time to the Router. You may change the key below.

Note: To specify the use of another type of encryption please view the More Settings > Wireless Settings > Security menu for more security options after your setup is complete.

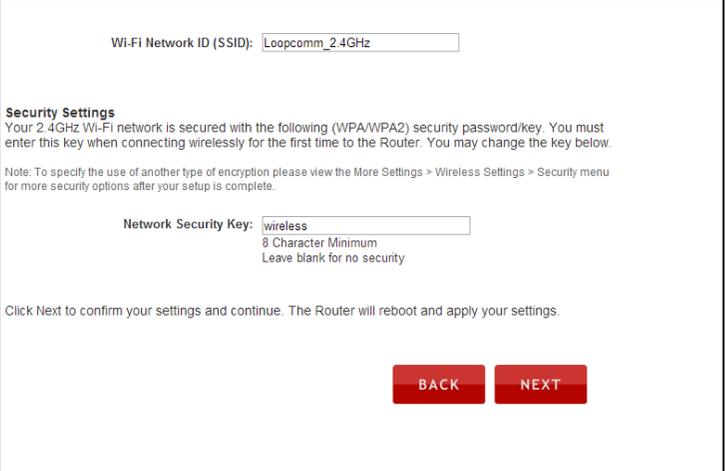
Network Security Key:
8 Character Minimum
Leave blank for no security

Click Next to confirm your settings and continue.

The default SSID of the Dual Band Wireless Router is “**Loopcomm_2.4GHz**”
To change it, enter a new name in the SSID field. Users connecting wirelessly to the Dual Band Wireless Router will use this ID to identify your wireless network.
The default Security Key (WPA/WPA2) for your wireless network is “**wireless**”.

To change it, enter a new key in the Security Key field. The key must be 8-characters minimum.

Click **Next** to apply your settings. The Dual Band Wireless Router will reboot. This process may take up to 1 minute. The page will automatically reload after the countdown. If it does not, you may need to refresh the page manually or check your connection to the Dual Band Wireless Router.



Wi-Fi Network ID (SSID):

Security Settings
Your 2.4GHz Wi-Fi network is secured with the following (WPA/WPA2) security password/key. You must enter this key when connecting wirelessly for the first time to the Router. You may change the key below.

Note: To specify the use of another type of encryption please view the More Settings > Wireless Settings > Security menu for more security options after your setup is complete.

Network Security Key:
8 Character Minimum
Leave blank for no security

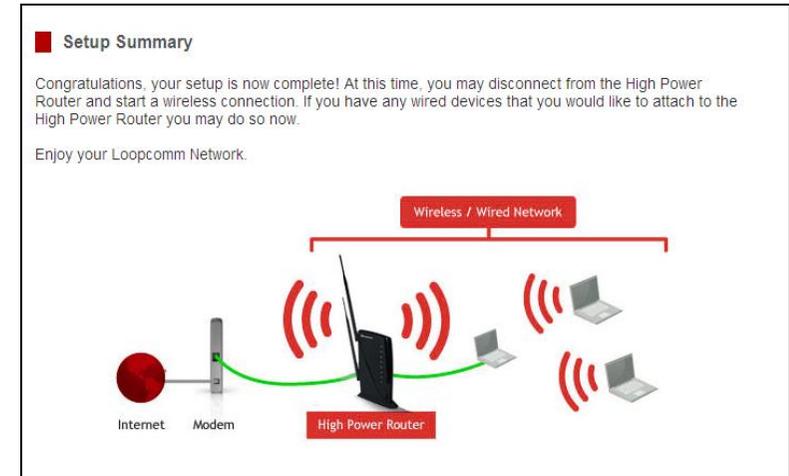
Click Next to confirm your settings and continue. The Router will reboot and apply your settings.

Setup Summary

Once the Dual Band Wireless Router has rebooted, it will load the Setup Summary page and provide you with the details of your setup.

Open a new web browser window and check that you have access to the Internet. At this time, you may disconnect from the Dual Band Wireless Router and start a wireless connection. If you have any wired devices that you would like to attach to the Dual Band Wireless Router you may do so now as well.

Enjoy your Loopcomm Wireless network.



5.0GHz WiFi Settings

Basic Settings (5.0GHz)

Disable All Wireless Connections: Disabling Wireless will turn off all Wi-Fi activity. Users will no longer be able to connect wirelessly to your network.

Band: Select the compatible Wi-Fi standard and speed for your wireless network

Broadcast SSID: Selecting Disable Broadcast SSID will hide the visibility of the Dual Band Wireless Router's SSID. Users must manually enter the SSID to connect.

Data Rate: Sets the maximum wireless data rate that your network will operate on.

Wireless Network ID (SSID): The name of your wireless network.

Channel Width: Wi-Fi operates in two separate channel widths, 20Hz and 40Hz. 20Hz allows operation on channels 1-11, while 40Hz is 5-11. 40Hz allows for faster speeds. Select the channel width you wish to use for your network. This setting must match that of your Home Network for a successful connection.

Channel Number: Wi-Fi networks operate on specific wireless channels. Some network channels may have more interference than others. If your performance is unstable, try a different channel number. If you are using a repeater with this network, it is recommended you set a static channel, instead of using "Auto."

WMM: Prioritizes multimedia data over the wireless network.

Associated Clients: Shows the active users connected wirelessly to your network

Basic Settings (5GHz)

Disable 5.0GHz Wi-Fi Connections:

Band: 5 GHz (A+N+AC) ▼

Broadcast SSID: Enable Disable

Data Rate: Auto ▼

Wi-Fi Network ID (SSID): Loopcomm_5.0GHz

Guest Networks

Channel Width: 80MHz ▼

Control Sideband: Auto ▼

Channel Number: 44 ▼

WMM: Enabled ▼

Associated Clients: Show Active Clients

APPLY RESET

Guest Networks (5.0GHz)

Click “Enable” to create a Guest Network. Guest Networks provide a separate wireless network, with unique settings for users to connect to.

Band: Restrict the Wi-Fi protocol and speed used for the specific Guest Network.

SSID: This is the name of your Guest Network.

Data Rate: Restrict access to the Guest Network by setting a lower bandwidth by changing the data rate.

Broadcast SSID: Disable to hide your SSID from public view. Users will need to manually enter the SSID into their wireless software interface to connect.

Access: Restrict access for Guest networks to allow Internet only connections and protect your local network.

Associated Clients: View all computers and network devices that are connected to your Guest Network wirelessly.

To set security settings for the Guest Network go to: 5.0GHz Wi-Fi Settings > Security.

Guest Networks

Configure the settings for additional Guest Networks. Each Guest Network may have its own specific settings.

No.	Enable	Band	SSID	Data Rate	Broadcast SSID	WMM	Access	Tx Restrict(Mbps)	Rx Restrict(Mbps)	Active Client List
Guest Network 1	<input checked="" type="checkbox"/>	5 GHz (A+N+AC) ▼	Loopcomm_5.0_Guest_1	Auto ▼	Enabled ▼	Enabled ▼	Internet and Local ▼	0	0	Show
Guest Network 2	<input type="checkbox"/>	5 GHz (A+N+AC) ▼	Loopcomm_5.0_Guest_2	Auto ▼	Enabled ▼	Enabled ▼	Internet and Local ▼	0	0	Show
Guest Network 3	<input type="checkbox"/>	5 GHz (A+N+AC) ▼	Loopcomm_5.0_Guest_3	Auto ▼	Enabled ▼	Enabled ▼	Internet and Local ▼	0	0	Show
Guest Network 4	<input type="checkbox"/>	5 GHz (A+N+AC) ▼	Loopcomm_5.0_Guest_4	Auto ▼	Enabled ▼	Enabled ▼	Internet and Local ▼	0	0	Show

APPLY **BACK** **RESET**

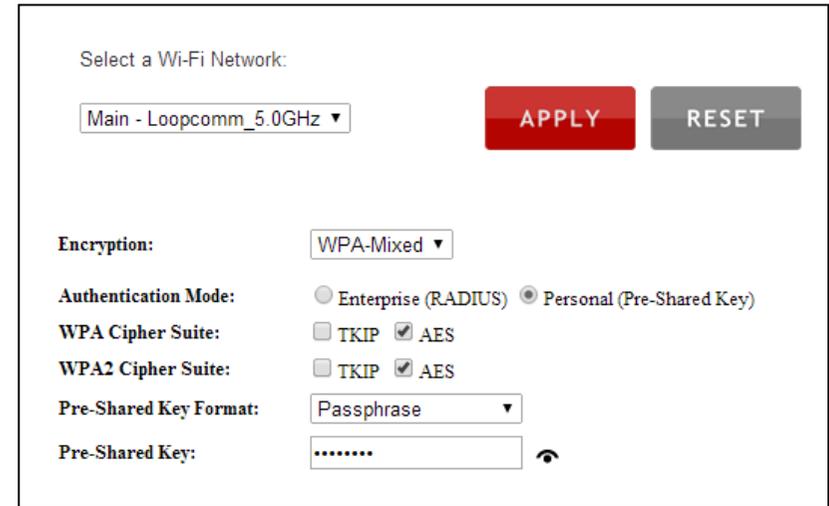
Security (5.0GHz)

Wireless security allows you to change the type of wireless security settings for your 5.0GHz Network, Home Network or Guest Networks.

Note. If you adjust the security of your Home Network and it is incorrect, the Dual Band Wireless Router will no longer have a successful connection to your Home Network.

Using the drop down menu, you can select which network you wish to configure and may adjust the security settings below.

If you are using the Guest Network feature, you will be able to adjust the security settings for those additional network SSIDs here as well.



The screenshot shows a web-based configuration interface for wireless security. At the top, there is a section titled "Select a Wi-Fi Network:" with a dropdown menu currently set to "Main - Loopcomm_5.0GHz". To the right of this dropdown are two buttons: a red "APPLY" button and a grey "RESET" button. Below this, the "Encryption:" dropdown is set to "WPA-Mixed". The "Authentication Mode:" section has two radio buttons: "Enterprise (RADIUS)" which is unselected, and "Personal (Pre-Shared Key)" which is selected. Underneath, there are two sections for cipher suites: "WPA Cipher Suite:" and "WPA2 Cipher Suite:", each with checkboxes for "TKIP" (unchecked) and "AES" (checked). The "Pre-Shared Key Format:" dropdown is set to "Passphrase". Finally, the "Pre-Shared Key:" field is a text input with seven dots and a toggle icon to its right.

Advanced Settings (5.0GHz)

Advanced Wireless Settings should only be adjusted by technically advanced users. It is not recommended that novice users adjust these settings to avoid degrading wireless performance. Here are a few definitions on some settings.

Fragment Threshold: The Default and Recommended setting is at 2346, meaning the Dual Band Wireless Router will never fragment any frames that it sends to wireless users.

RTS Threshold: Adjusts the size of RTS data packets. Lower values reduce throughput, but allow the system to recover quicker from interference/collisions. Higher values provide the fastest throughput.

Beacon Interval: Indicates the frequency interval of the beacon. A beacon is a packet broadcast by the Dual Band Wireless Router to sync the wireless network.

Preamble Type: Defines the length of the Cyclic Redundancy Check for communication between the Dual Band Wireless Router and roaming wireless users.

IAPP: Inter-Access Point Protocol

Aggregation: If it enabled, it will combine of several small data frames to enhance the transmission efficiency.

Short GI: If it enabled in 802.11n mode, it will bring the advantage of packet anti-interference. That means the performance will be also greater.

WLAN Partition: If it enabled, it will prohibit the communication between clients of LAN.

Advanced Settings (5.0GHz)

Advanced wireless settings are for technically advanced users. It is recommended that these settings not be changed unless it is understood what the effects will be on your local wireless network.

Fragment Threshold: (256-2346)

RTS Threshold: (0-2347)

Beacon Interval: (20-1024 ms)

IAPP: Enabled Disabled

Protection: Enabled Disabled

Aggregation: Enabled Disabled

Short GI: Enabled Disabled

WLAN Partition: Enabled Disabled

STBC: Enabled Disabled

TX Beamforming: Enabled Disabled

STBC: Space Time Block Coding improves reception by coding the data stream in blocks.

TX Beamforming: It's a technique implemented in digital signal processing (DSP) logic to improve range and data rate.

Wi-Fi Protected Setup – WPS (5.0GHz)

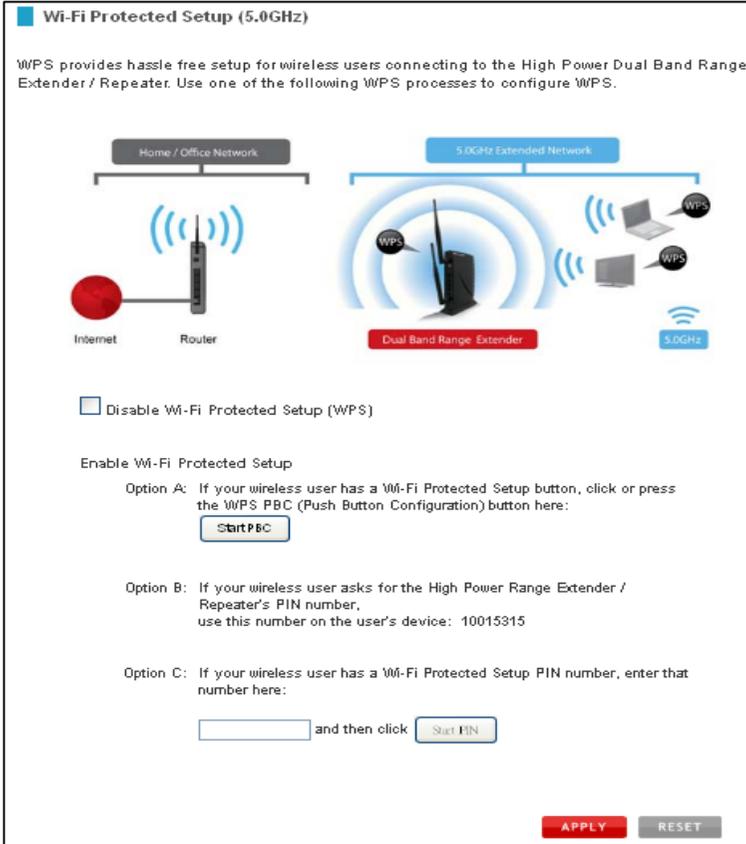
WPS is a Wi-Fi feature created to make Wi-Fi setup simple and easy. Some wireless routers and adapters support this feature with varying names (i.e. one touch setup or WPS).

You may enable WPS setup here by selecting the type of WPS setup you wish to use. The Dual Band Wireless Router supports all types of WPS setup:

Option A: Push button: You may push the WPS button on the web menu or use the physical button on the back of the Dual Band Wireless Router.

Option B: PIN: Some wireless devices use a PIN number to access wireless network. If your wireless device requests for a PIN number, then use the PIN code located here.

Option C: Enter PIN: Some wireless devices require that you use a PIN number to add them to the wireless network.



Wi-Fi Protected Setup (5.0GHz)

WPS provides hassle free setup for wireless users connecting to the High Power Dual Band Range Extender / Repeater. Use one of the following WPS processes to configure WPS.

The diagram illustrates the network topology: an Internet connection is linked to a Router, which is connected to a Home / Office Network. A Dual Band Range Extender is shown extending the 5.0GHz network, connecting to a laptop and a tablet, both labeled with WPS icons. A 5.0GHz Wi-Fi signal icon is also present.

Disable Wi-Fi Protected Setup (WPS)

Enable Wi-Fi Protected Setup

Option A: If your wireless user has a Wi-Fi Protected Setup button, click or press the WPS PBC (Push Button Configuration) button here:

Option B: If your wireless user asks for the High Power Range Extender / Repeater's PIN number, use this number on the user's device: 10015315

Option C: If your wireless user has a Wi-Fi Protected Setup PIN number, enter that number here:

and then click

If your wireless device has a PIN number, then locate the number and enter in the field, then press Start Pin.

Wireless Coverage Controls (5.0GHz)

Adjust the output power of the Dual Band Wireless Router to control the coverage distance of your 5.0GHz Wireless Network. For a smaller coverage area you can select a lower output power. For the maximum wireless coverage select the 100% selection. Note that if you select a lower output power, your connection to your 5.0GHz Home Network will also decrease in range. It is recommended that you test your signal strength after each adjustment.



Access Schedule (5.0GHz)

Access Schedules will enable or disable your 5.0GHz wireless access at a set time based on your predefined schedule. This feature is often used for restricting access to all users (such as children, employees, guests) during specific times of the day for parental control or security reasons.

- a. Enable Access Schedule.
- b. Select which days you wish for your Wi-Fi to be available.
- c. Select the time frame during that day that you wish for Wi-Fi to be available.
- d. Apply Changes.

Enabling Access Schedule will also disable internet access for wired connections on specified days.

Note. Make sure you have already configured your System Clock in order for your schedule to work correctly. Time Zone Settings can be adjusted from the web menu under Management > Time Zone Settings.

Access Schedule (5.0GHz)

Define a schedule for when the 5.0GHz Wi-Fi network is enabled or disabled on the Router. Please be sure that your time zone settings have been configured before using this feature.

Enable Access Schedule (5.0GHz)

Enable	Day	From		To	
<input type="checkbox"/>	Sunday	00 (hour)	00 (min)	00 (hour)	00 (min)
<input type="checkbox"/>	Sunday	00 (hour)	00 (min)	00 (hour)	00 (min)
<input type="checkbox"/>	Sunday	00 (hour)	00 (min)	00 (hour)	00 (min)
<input type="checkbox"/>	Sunday	00 (hour)	00 (min)	00 (hour)	00 (min)
<input type="checkbox"/>	Sunday	00 (hour)	00 (min)	00 (hour)	00 (min)
<input type="checkbox"/>	Sunday	00 (hour)	00 (min)	00 (hour)	00 (min)
<input type="checkbox"/>	Sunday	00 (hour)	00 (min)	00 (hour)	00 (min)
<input type="checkbox"/>	Sunday	00 (hour)	00 (min)	00 (hour)	00 (min)
<input type="checkbox"/>	Sunday	00 (hour)	00 (min)	00 (hour)	00 (min)
<input type="checkbox"/>	Sunday	00 (hour)	00 (min)	00 (hour)	00 (min)

2.4GHz WiFi Settings

Basic Settings (2.4GHz)

Disable All Wireless Connections: Disabling Wireless will turn off all Wi-Fi activity. Users will no longer be able to connect wirelessly to your network.

Band: Select the compatible Wi-Fi standard and speed for your wireless network

Broadcast SSID: Selecting Disable Broadcast SSID will hide the visibility of the Dual Band Wireless Router's SSID. Users must manually enter the SSID to connect.

Data Rate: Sets the maximum wireless data rate that your network will operate on.

Wireless Network ID (SSID): The name of your wireless network.

Channel Width: Wi-Fi operates in two separate channel widths, 20Hz and 40Hz. 20Hz allows operation on channels 1-11, while 40Hz is 5-11. 40Hz allows for faster speeds. Select the channel width you wish to use for your network. This setting must match that of your Home Network for a successful connection.

Channel Number: Wi-Fi networks operate on specific wireless channels. Some network channels may have more interference than others. If your performance is unstable, try a different channel number. If you are using a repeater with this network, it is recommended you set a static channel, instead of using "Auto."

WMM: Prioritizes multimedia data over the wireless network.

Associated Clients: Shows the active users connected wirelessly to your network

Basic Settings (2.4GHz)

Disable 2.4GHz Wi-Fi Connections:

Band: 2.4 GHz (B+G+N) ▼

Broadcast SSID: Enable Disable

Data Rate: Auto ▼

Wi-Fi Network ID (SSID): Loopcomm_2.4GHz

Guest Networks

Channel Width: 40MHz ▼

Control Sideband: Upper ▼

Channel Number: 11 ▼

WMM: Enabled ▼

Associated Clients: Show Active Clients

APPLY RESET

Guest Networks (2.4GHz)

Click “Enable” to create a Guest Network. Guest Networks provide a separate wireless network, with unique settings for users to connect to.

Band: Restrict the Wi-Fi protocol and speed used for the specific Guest Network.

SSID: This is the name of your Guest Network.

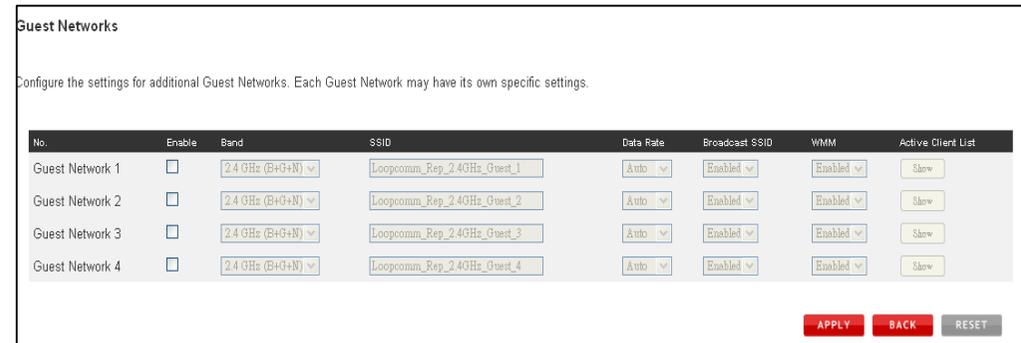
Data Rate: Restrict access to the Guest Network by setting a lower bandwidth by changing the data rate.

Broadcast SSID: Disable to hide your SSID from public view. Users will need to manually enter the SSID into their wireless software interface to connect.

Access: Restrict access for Guest networks to allow Internet only connections and protect your local network.

Associated Clients: View all computers and network devices that are connected to your Guest Network wirelessly.

To set security settings for the Guest Network go to: 2.4GHz Wi-Fi Settings > Security.



Guest Networks

Configure the settings for additional Guest Networks. Each Guest Network may have its own specific settings.

No.	Enable	Band	SSID	Data Rate	Broadcast SSID	WMM	Active Client List
Guest Network 1	<input type="checkbox"/>	2.4 GHz (B+G+N) ▾	Loopcomm_Rep_2.4GHz_Guest_1	Auto ▾	Enabled ▾	Enabled ▾	Slow
Guest Network 2	<input type="checkbox"/>	2.4 GHz (B+G+N) ▾	Loopcomm_Rep_2.4GHz_Guest_2	Auto ▾	Enabled ▾	Enabled ▾	Slow
Guest Network 3	<input type="checkbox"/>	2.4 GHz (B+G+N) ▾	Loopcomm_Rep_2.4GHz_Guest_3	Auto ▾	Enabled ▾	Enabled ▾	Slow
Guest Network 4	<input type="checkbox"/>	2.4 GHz (B+G+N) ▾	Loopcomm_Rep_2.4GHz_Guest_4	Auto ▾	Enabled ▾	Enabled ▾	Slow

APPLY BACK RESET

Security (2.4GHz)

Wireless security allows you to change the type of wireless security settings for your 2.4GHz Network, Home Network or Guest Networks.

Note. If you adjust the security of your Home Network and it is incorrect, the Dual Band Wireless Router will no longer have a successful connection to your Home Network.

Using the drop down menu, you can select which network you wish to configure and may adjust the security settings below.

If you are using the Guest Network feature, you will be able to adjust the security settings for those additional network SSIDs here as well.

Configure the Security Settings for your 2.4GHz Wi-Fi network.



Select a Wi-Fi Network:

Main - Loopcomm_2.4GHz ▾

APPLY **RESET**

Encryption: WPA-Mixed ▾

Authentication Mode: Enterprise (RADIUS) Personal (Pre-Shared Key)

WPA Cipher Suite: TKIP AES

WPA2 Cipher Suite: TKIP AES

Pre-Shared Key Format: Passphrase ▾

Pre-Shared Key: 🔒

Advanced Settings (2.4GHz)

Advanced Wireless Settings should only be adjusted by technically advanced users. It is not recommended that novice users adjust these settings to avoid degrading wireless performance. Here are a few definitions on some settings.

Fragment Threshold: The Default and Recommended setting is at 2346, meaning the Dual Band Wireless Router will never fragment any frames that it sends to wireless users.

RTS Threshold: Adjusts the size of RTS data packets. Lower values reduce throughput, but allow the system to recover quicker from interference/collisions. Higher values provide the fastest throughput.

Beacon Interval: Indicates the frequency interval of the beacon. A beacon is a packet broadcast by the Dual Band Wireless Router to sync the wireless network.

Preamble Type: Defines the length of the Cyclic Redundancy Check for communication between the Dual Band Wireless Router and roaming wireless users.

IAPP: Inter-Access Point Protocol

Aggregation: If it enabled, it will combine of several small data frames to enhance the transmission efficiency.

Short GI: If it enabled in 802.11n mode, it will bring the advantage of packet anti-interference. That means the performance will be also greater.

WLAN Partition: If it enabled, it will prohibit the communication between clients of LAN.

STBC: Space Time Block Coding improves reception by coding the data stream in blocks.

20/40MHz coexist: If it enabled, it means 20MHz and 40MHz bandwidth will coexist in use.

Advanced Settings (2.4GHz)

These settings apply to your 2.4GHz Wi-Fi network. Advanced Wi-Fi settings are for technically advanced users. It is recommended that these settings not be changed unless it is understood what the effects will be on your local Wi-Fi network.

Fragment Threshold: (256-2346)

RTS Threshold: (0-2347)

Beacon Interval: (20-1024 ms)

Preamble Type: Long Preamble Short Preamble

IAPP: Enabled Disabled

Protection: Enabled Disabled

Aggregation: Enabled Disabled

Short GI: Enabled Disabled

WLAN Partition: Enabled Disabled

STBC: Enabled Disabled

LDPC: Enabled Disabled

20/40MHz Coexist: Enabled Disabled

Wi-Fi Protected Setup – WPS (2.4GHz)

WPS is a Wi-Fi feature created to make Wi-Fi setup simple and easy. Some wireless routers and adapters support this feature with varying names (i.e. one touch setup or WPS).

You may enable WPS setup here by selecting the type of WPS setup you wish to use. The Dual Band Wireless Router supports all types of WPS setup:

Option A: Push button: You may push the WPS button on the web menu or use the physical button on the back of the Dual Band Wireless Router.

Option B: PIN: Some wireless devices use a PIN number to access wireless network. If your wireless device requests for a PIN number, then use the PIN code located here.

Option C: Enter PIN: Some wireless devices require that you use a PIN number to add them to the wireless network. If your wireless device has a PIN number, then locate the number and enter in the field, then press Start Pin.

Disable Wi-Fi Protected Setup (WPS)

Enable Wi-Fi Protected Setup

Option A: If your wireless user has a Wi-Fi Protected Setup button, click or press the WPS PBC (Push Button Configuration) button here:

Option B: If your wireless user asks for the High Power Range Extender / Repeater's PIN number, use this number on the user's device: **10015315**

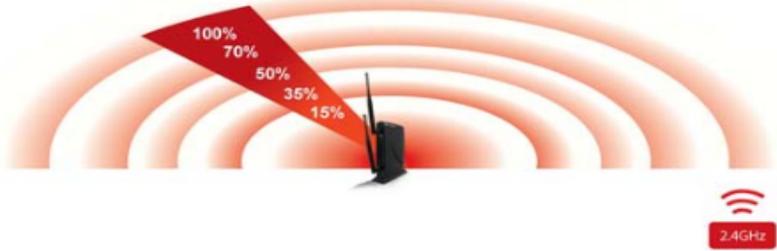
Option C: If your wireless user has a Wi-Fi Protected Setup PIN number, enter that number here:
 and then click

Wireless Coverage Controls (2.4GHz)

Adjust the output power of the Dual Band Wireless Router to control the coverage distance of your 2.4GHz Wireless Network. For a smaller coverage area you can select a lower output power. For the maximum wireless coverage select the 100% selection. Note that if you select a lower output power, your connection to your 2.4GHz Home Network will also decrease in range. It is recommended that you test your signal strength after each adjustment.

Wireless Coverage Controls (2.4GHz)

Adjust the output power and range of your Extended Wireless Network. For a smaller coverage area, choose a lower output power percentage. For a larger coverage area, select a higher output power percentage.



Wireless Output Power: 100% 70% 50% 35% 15%

APPLY **RESET**

Access Schedule (2.4GHz)

Access Schedules will enable or disable your 2.4GHz wireless access at a set time based on your predefined schedule.

This feature is often used for restricting access to all users (such as children, employees, guests) during specific times of the day for parental control or security reasons.

- a. Enable Access Schedule.
- b. Select which days you wish for your Wi-Fi to be available.
- c. Select the time frame during that day that you wish for Wi-Fi to be available.
- d. Apply Changes.

Enabling Access Schedule will also disable internet access for wired connections on specified days.

Note. Make sure you have already configured your System Clock in order for your schedule to work correctly. Time Zone Settings can be adjusted from the web menu under Management > Time Zone Settings.

Access Schedule (2.4GHz)

Define a schedule for when Wi-Fi is enabled or disabled on the High Power Dual Band Range Extender / Repeater. Please be sure that your time zone settings have been configured before using this feature.

Note: When Wi-Fi is disabled, wired users will no longer have access to the Internet.

Enable Access Schedule (2.4GHz)

Enable	Day	From				To			
<input type="checkbox"/>	Sunday	00	(hour)	00	(min)	00	(hour)	00	(min)
<input type="checkbox"/>	Sunday	00	(hour)	00	(min)	00	(hour)	00	(min)
<input type="checkbox"/>	Sunday	00	(hour)	00	(min)	00	(hour)	00	(min)
<input type="checkbox"/>	Sunday	00	(hour)	00	(min)	00	(hour)	00	(min)
<input type="checkbox"/>	Sunday	00	(hour)	00	(min)	00	(hour)	00	(min)
<input type="checkbox"/>	Sunday	00	(hour)	00	(min)	00	(hour)	00	(min)
<input type="checkbox"/>	Sunday	00	(hour)	00	(min)	00	(hour)	00	(min)
<input type="checkbox"/>	Sunday	00	(hour)	00	(min)	00	(hour)	00	(min)
<input type="checkbox"/>	Sunday	00	(hour)	00	(min)	00	(hour)	00	(min)
<input type="checkbox"/>	Sunday	00	(hour)	00	(min)	00	(hour)	00	(min)

Network Settings

Local Network (LAN)

These settings are for your local network only and do not apply to your Internet / ISP connection.

IP Address: The IP address of the Dual Band Wireless Router.

Subnet Mask: The subnet of the Dual Band Wireless Router.

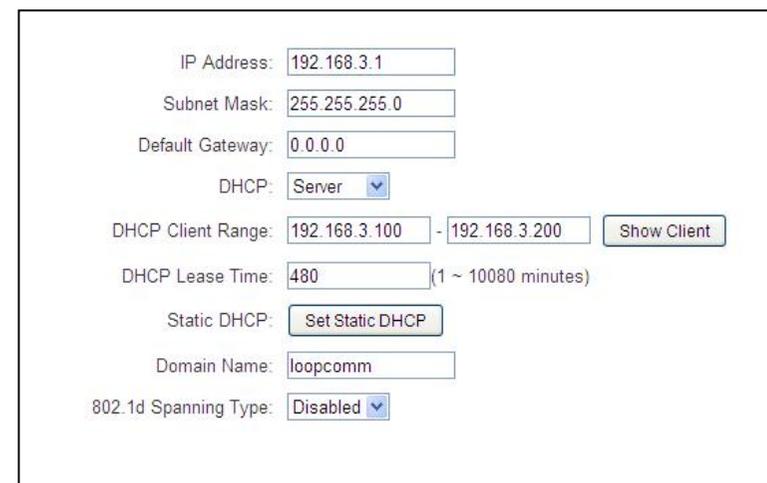
Default Gateway: The access point to another network.

DHCP: Each network device on your local network will have its own IP Address. The DHCP server automatically assigns the IP addresses to each device connected to your network. Disabling DHCP will require that each device on your network be assigned a manual or static IP address.

DHCP Client Range: The range of IP addresses provided by the DHCP server is defined by this field. You can limit how many IP addresses are used in your network by setting a smaller or larger range.

DHCP Lease Time: The amount of time each device is given a specific IP is decided by the DHCP lease time. After the Lease Time expires, the DHCP server will assign another IP address to the device.

Set Static DHCP: This allows specific devices to be given a specific IP address each time the device connects to the network. The DHCP server will always assign the same IP address to the same device. This feature is often used for shared devices such as network printers or servers.



The screenshot shows a network configuration interface with the following fields and values:

- IP Address: 192.168.3.1
- Subnet Mask: 255.255.255.0
- Default Gateway: 0.0.0.0
- DHCP: Server (dropdown menu)
- DHCP Client Range: 192.168.3.100 - 192.168.3.200 (with a "Show Client" button)
- DHCP Lease Time: 480 (with a note "(1 ~ 10080 minutes)")
- Static DHCP: Set Static DHCP (button)
- Domain Name: loopcomm
- 802.1d Spanning Type: Disabled (dropdown menu)

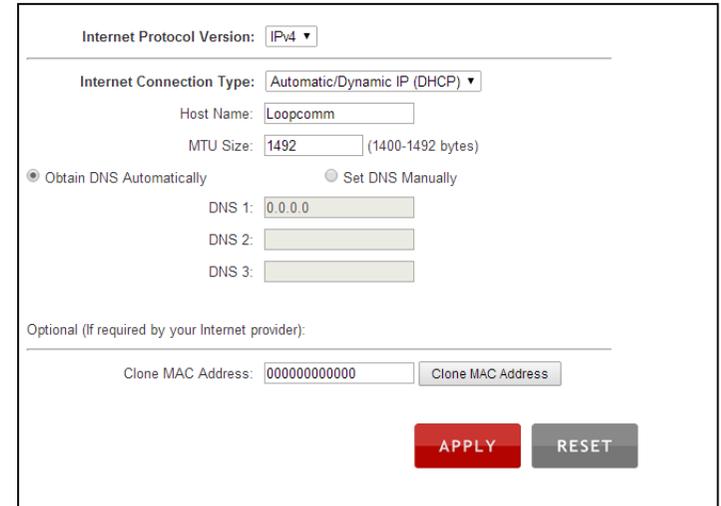
802.1d Spanning Type (STP): A network protocol that ensures a loop-free topology for networks that have Ethernet bridges. The STP prevents bridge loops and allows a network design to include redundant links to provide automatic backup paths if active links fails.

Clone MAC Address: The Dual Band Wireless Router can use a MAC address that you define as its own. This is often used when an Internet Provider only authorizes one MAC address to access the Internet. Cloning the MAC address will make it so that the cloned MAC address is the only MAC address seen by the Internet Provider.

Internet Network (WAN)

The Smart Setup Wizard will assist you in setting up your Internet connection. However in the case that you wish to adjust settings manually, the options on this page provide you with the tools to do this easily.

Select your Internet Connection type from the drop down menu:



Internet Protocol Version: IPv4

Internet Connection Type: Automatic/Dynamic IP (DHCP)

Host Name: Loopcomm

MTU Size: 1492 (1400-1492 bytes)

Obtain DNS Automatically Set DNS Manually

DNS 1: 0.0.0.0

DNS 2:

DNS 3:

Optional (If required by your Internet provider):

Clone MAC Address: 000000000000 Clone MAC Address

APPLY RESET

Manual IP (Static): For Internet connections where the Internet provider does not provide you with an IP address automatically. If you know the IP address and DNS settings that your Internet provider uses, select this option.

Automatic/Dynamic (DHCP): This is the configuration type most often used by Internet providers. Automatic configurations are used by both DSL and Cable as well as other providers. Under the Automatic Configuration method, the Internet provider will assign your Dual Band Wireless Router an Internet IP address automatically.

Note.

If for some reason you do not get an IP address and you know that your Internet provider uses DHCP, try resetting your Modem. Remove the power adapter from the Modem as well as the backup battery (if available). Wait about 30 seconds and then power the Modem back on. You can run through the Smart Setup Wizard again to see if that fixes your Internet connection issues.

PPPoE connections normally require login information. If you do not know the settings for your PPPoE connection, please contact your Internet provider.

PPTP and L2TP connections require login information as well as IP address settings. If you do not know the settings for your PPTP / L2TP connection, please contact your Internet provider.

Advanced Settings

These settings apply to the Local Network and your Internet Connection Network. If you are not familiar with these settings, please refer to a network administrator to avoid putting your network at risk.

Enable uPnP: Universal Plug and Play is a network feature that allows uPnP enabled devices to “just work” with each other when connected to the same network. UPnP can work across different network media, such as an Ethernet connection or wireless connection. With UPnP enabled, network devices may change security settings within the Dual Band Wireless Router’s firewall to allow access over the Internet. By default, UPnP is disabled to avoid exposing your network to security issues.

Enable IGMP Proxy: Internet Group Management Protocol is a communication protocol used by hosts and routers on the network to establish multicast group memberships. IGMP Proxy is typically used to implement multicast routing and commonly used when advanced protocols such as PIM is not suitable.

Enable Ping Access on WAN: Allows users to ping the WAN interface IP address from the internet.

Enable Web Server Access on WAN (Remote Management): Allows access to the Web Menu over the Internet

Enable IPsec pass through on VPN connection: Allows the IP security protocol suite to pass through on a VPN connection.

Enable IPv6 pass through on VPN connection: Allows the IPv6 protocol suite to pass through on a VPN connection.

Advanced Settings

These settings apply to the Local Network and your Internet Connection Network. If you are not familiar with these settings, please refer to a network administrator to avoid putting your network at risk.

- Enable uPnP (Universal Plug and Play)
- Enable IGMP Proxy
- Enable Ping Access on WAN
- Enable Web Server Access on WAN (Remote Management)
- Enable IPsec pass through on VPN connection
- Enable PPTP pass through on VPN connection
- Enable L2TP pass through on VPN connection

IPv6 Advanced Settings:

- Enable IPv6 Tunnel 6to4
- Enable IPv6 pass through on VPN connection

APPLY **RESET**

Smart Features

The Dual Band Wireless Router provides your network with Smart Features that help to provide convenience and protection for your wired and wireless network.

The Smart Features allow you to control access of your wireless network through: on/off schedules, specific user authorizations, and wireless coverage control.

These settings apply to your local wireless and wired network.

Block Websites

To block a website, you must first enable URL filtering. After it has been enabled you can begin adding as many websites as you wish into the URL Address field.

Note. If you wish to block www.google.com, simply type in "google" and the Dual Band Wireless Router will block all websites with the text "google" in the URL.

Block Websites (URL Filtering)

URL Filtering blocks users on your from accessing specific websites that you deem unsafe or inappropriate. Enter a keyword or the actual web address below to begin blocking.

Note: If you wish to block www.google.com, simply type in "google" and the Router will block all websites with the text "google" in the URL.

Enable URL Filtering

URL Address:

Current Filter Table

URL Address	Select
-------------	--------

User Access (MAC Address Filtering)

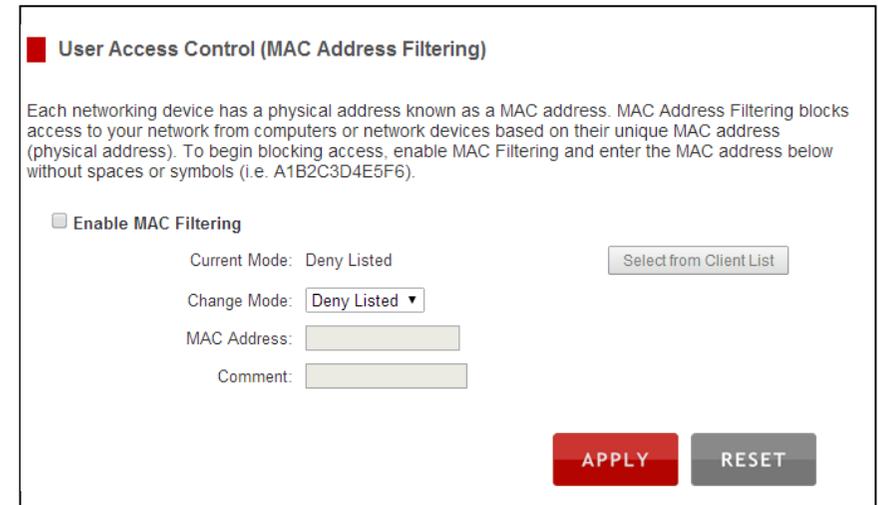
User Access allows you to deny access or allow access to specific users connecting to the network. Each networking device has a unique address called a MAC address (a 12 digit hex number).

By inputting the MAC address into the field, you can define whether that device is allowed into your network or not allowed.

A MAC Address may sometimes be referred to as a Physical Address. Most networking devices have their MAC Address located on a label on the actual device.

For Windows computers with internal networking adapters, the MAC Address can be found by viewing the Network Connection Details of the network adapter. The MAC Address will be listed as the Physical Address.

Be sure to enter the MAC Address without any symbols. For example, a MAC Address of 78-DD-78-AA-78-BB would be entered as 78DD78AA78BB.



User Access Control (MAC Address Filtering)

Each networking device has a physical address known as a MAC address. MAC Address Filtering blocks access to your network from computers or network devices based on their unique MAC address (physical address). To begin blocking access, enable MAC Filtering and enter the MAC address below without spaces or symbols (i.e. A1B2C3D4E5F6).

Enable MAC Filtering

Current Mode: Deny Listed Select from Client List

Change Mode: Deny Listed ▾

MAC Address:

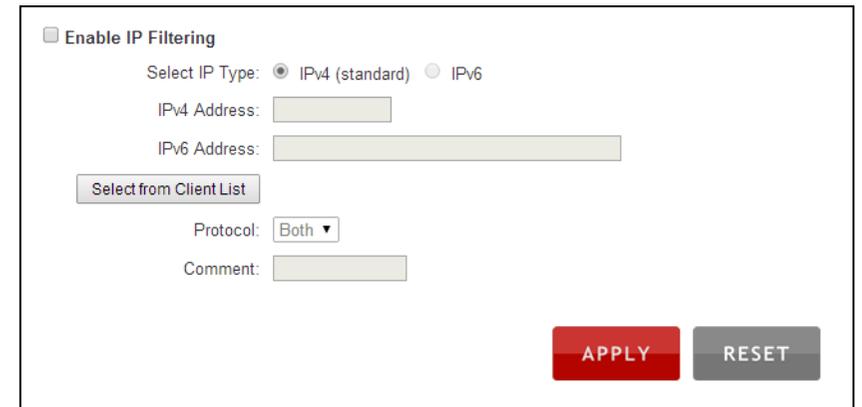
Comment:

APPLY **RESET**

User Access (IP Address Filtering)

User Access (IP Filtering) is similar to User Access (MAC filtering) except that the Dual Band Wireless Router uses the local IP address to filter the specific data from the specified network protocol. For example, if you chose to block TCP data packets from a specific computer, you would need to figure out what that device's IP address is and select TCP from the Protocol drop down menu.

If you are not sure which Protocol to filter, select "Both" as your Protocol selection.



The screenshot shows a configuration panel for IP filtering. It starts with a checkbox labeled "Enable IP Filtering". Below this, there are two radio buttons for "Select IP Type": "IPv4 (standard)" (which is selected) and "IPv6". There are input fields for "IPv4 Address" and "IPv6 Address". A button labeled "Select from Client List" is positioned below the IPv6 address field. A "Protocol" dropdown menu is set to "Both", and there is a "Comment" input field. At the bottom right, there are two buttons: a red "APPLY" button and a grey "RESET" button.

USB Storage

Local Sharing

Share a USB storage device with computers on the local network of the Dual Band Wireless Router.

Insert a USB storage device, such as a flash drive or external hard drive, to the USB port on the back of the Dual Band Wireless Router and follow the directions below for your operating system. The computer must be connected to your Home Network or Network to access the storage device. You may also want to Map the Network Drive so it shows up as a standard drive on your computer for easier access.

■ USB Storage Local Sharing

Share a USB storage device, such as a USB flash drive or external hard drive, locally among networked computers. Insert your USB storage device into the USB port on the back panel of the Router.

Check the [Elite Support Center](#) for new USB Storage features.

Local Network Sharing

USB Drive: ● Not Connected REFRESH

Partition	File System	Capacity	Free Space
-----------	-------------	----------	------------

[How to Access or Map your Network Drive](#)
Note: You may need to [Map your Network Drive](#) for it to appear in your computer's networked device list.

USB Device Name:

Work Group:

Shared Disk IP Address: 192.168.3.1
(For Mapping the Network Drive):

APPLY RESET

FTP Server

Create a FTP server to access files remotely using a FTP client. Insert your USB storage device into the USB port on the back panel of the Dual Band Wireless Router and configure your FTP settings below.

FTP Server: Enable or Disable FTP Server.

FTP port: Set up the port FTP server will use. The default port setting is 21.

Anonymous FTP: Allows any user to login FTP as anonymous.

Port Range: Select a range of ports for the designated IP address that you wish to be forwarded.

Comment: Create a name that you can use to easily identify this Port Forwarding entry.

■ USB Storage FTP Server

Create a FTP server to access files remotely using a FTP client. Insert your USB storage device into the USB port on the back panel of the Router and configure your FTP settings below.

Use the Internet Address to access the FTP server over the web.

FTP Connection Internet Address: 0.0.0.0

If your Internet connection uses a dynamic IP assignment, you may also add a [DDNS service](#) to access the FTP via a web address instead.

FTP Server Setup

FTP Server: Enabled Disabled

FTP Port:

Anonymous FTP: Enabled Disabled

Anonymous Write: Enabled Disabled

System Account List

System Account	Password	Access Type
admin	<input type="text" value="admin"/>	Read & Write
guest	<input type="text" value="Guest"/>	Read Only

Note: Login and password are case sensitive.

Firewall Settings

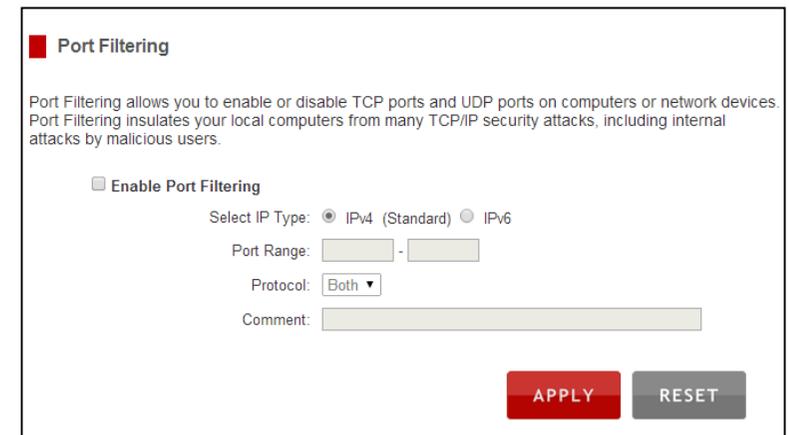
The Dual Band Wireless Router's Firewall is designed to prevent unauthorized users from accessing your network. This section will go over the different features of the Firewall and how to configure them.

Port Filtering

Port Filtering is a security measure that prevents users from using specific ports for reasons other than what those ports were originally intended for. For example, TCP port 21 is traditionally used for FTP. However, there is nothing stopping a user from using port 21 for purposes other than FTP access. By enabling Port Filtering on TCP port 21, only FTP communications would be allowed. No other types of communication would be allowed on this port.

Hackers may sometimes scan for all open ports on your network as a method of hacking into your network. Port Filtering and other firewall features help to prevent this from happening.

To set up Port Filtering, select a range of ports you wish to filter. If you are trying to filter a single port, enter the port number twice. (For example, Port 21: 21 – 21) Select the Protocol of the port you are filtering. If you do not know what protocol you wish to filter, select “Both.”



Port Filtering

Port Filtering allows you to enable or disable TCP ports and UDP ports on computers or network devices. Port Filtering insulates your local computers from many TCP/IP security attacks, including internal attacks by malicious users.

Enable Port Filtering

Select IP Type: IPv4 (Standard) IPv6

Port Range: -

Protocol:

Comment:

Port Forwarding

Port Forwarding is a rule that tells the Dual Band Wireless Router that if a specific type of request comes in on a specific port, then that request should be forwarded to a specific device on the private network.

Port Forwarding is often used for setting up servers, cameras and other devices that require remote access.

Port Forwarding

Port Forwarding allows you to automatically redirect common network services to a specific network device or computer on your local network. These settings are useful for hosting web servers, mail servers, network cameras and other specific network server devices behind your network firewall.

Enable Port Forwarding

IP Address:

Protocol:

Port Range: -

Comment:

Enable Port Forwarding: Enables designated ports to begin forwarding.

IP Address: The IP address of the device behind the Firewall that is being designated for Port Forwarding.

Protocol: Select UDP, TCP or Both for the protocols to be forwarded.

Port Range: Select a range of ports for the designated IP address that you wish to be forwarded.

Comment: Create a name that you can use to easily identify this Port Forwarding entry.

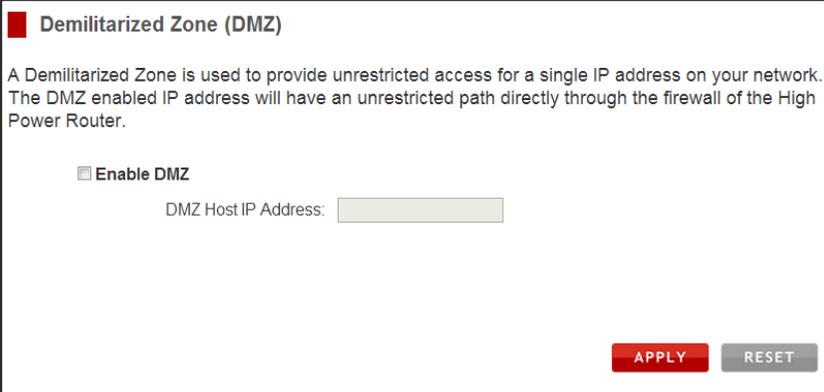
DMZ (Demilitarized Zone)

A DMZ is a network location or IP Address that is not protected by the firewall. When enabling DMZ it is important to note that the device on the IP Address designated as part of the DMZ does not have any protection from the Dual Band Wireless Router's firewall. The device's only security would be those built into the operating system.

As a general safety rule, devices placed on the DMZ should not have any other network connections to any other devices.

Enable DMZ: Enables the Demilitarized Zone.

DMZ Host IP Address: The designated IP Address of the network device to have unrestricted access through the Dual Band Wireless Router's Firewall.



Demilitarized Zone (DMZ)

A Demilitarized Zone is used to provide unrestricted access for a single IP address on your network. The DMZ enabled IP address will have an unrestricted path directly through the firewall of the High Power Router.

Enable DMZ

DMZ Host IP Address:

APPLY **RESET**

Virtual LAN

A VLAN has the same attributes as a physical local area network (LAN) but it allows for devices to be grouped together even if they are not located on the same physical network switch. The benefit of a VLAN is that it allows network traffic to flow more efficiently for computers or network devices that are within sections of mutual interest. In addition, changes to the VLAN can be made virtually via a user interface rather than manually changing cables and network switches.

VLAN are often used to segment network devices based on their department, user types or common applications. Bandwidth can then be more easily managed by adjusting the bandwidth to specific VLANs based on their priorities.

Virtual Local Area Network (VLAN)

A Virtual LAN is a local area network (LAN) that maps network devices virtually rather than on the basis of their geographic location or network switch configuration. For example, a VLAN may be used to map a network by department, user type or primary application.

Enable VLAN

Enable	Ethernet/Wireless	WAN/LAN	Tag	VID(1-4090)	Priority	CFI
<input type="checkbox"/>	Wired Port1	LAN	<input type="checkbox"/>	3022	0 ▾	<input type="checkbox"/>
<input type="checkbox"/>	Wired Port2	LAN	<input type="checkbox"/>	3030	7 ▾	<input type="checkbox"/>
<input type="checkbox"/>	Wired Port3	LAN	<input type="checkbox"/>	500	0 ▾	<input type="checkbox"/>
<input type="checkbox"/>	Wired Port4	LAN	<input type="checkbox"/>	1	3 ▾	<input type="checkbox"/>
<input type="checkbox"/>	Primary WLAN SSID	LAN	<input type="checkbox"/>	1	0 ▾	<input type="checkbox"/>
<input type="checkbox"/>	Guest SSID1	LAN	<input type="checkbox"/>	1	0 ▾	<input type="checkbox"/>
<input type="checkbox"/>	Guest SSID2	LAN	<input type="checkbox"/>	1	0 ▾	<input type="checkbox"/>
<input type="checkbox"/>	Guest SSID3	LAN	<input type="checkbox"/>	1	0 ▾	<input type="checkbox"/>
<input type="checkbox"/>	Guest SSID4	LAN	<input type="checkbox"/>	1	0 ▾	<input type="checkbox"/>
<input type="checkbox"/>	Modem Port	WAN	<input type="checkbox"/>	1	0 ▾	<input type="checkbox"/>

APPLY **RESET**

Denial of Service

A Denial of Service attack is an attempt by a user (or users) to make a server's or network's services unavailable. The user sends a server multiple requests with false return addresses.

The server will attempt to respond by sending a request back to the user; however, since the address is false, the server will wait for a response before closing the connection. When multiple requests like this occur, servers may often get overloaded with too many requests and stop functioning all together. This is a typical DoS attack, although DoS attacks may not be limited to this type of attack.

The Dual Band Wireless Router can assist in preventing these types of attacks by scanning the network for patterns of activity that represent DoS attacks. If a pattern comes in frequently, the Dual Band Wireless Router can attempt to block messages containing that pattern and thus protect the server from becoming overloaded and unresponsive.

Denial of Service

The High Power Router can prevent specific DoS attacks from entering your network. A Denial of Service (DoS) attack is characterized by an explicit attempt by malicious users to prevent legitimate users from use of a specific internet service. To activate your protection, enable the DoS Prevention below and configure the specific settings:

- Enable Denial of Service (DoS) Prevention
 - Whole System Flood: SYN Packet/Second
 - Whole System Flood: FIN Packet/Second
 - Whole System Flood: UDP Packet/Second
 - Whole System Flood: ICMP Packet/Second
 - Per-Source IP Flood: SYN Packet/Second
 - Per-Source IP Flood: FIN Packet/Second
 - Per-Source IP Flood: UDP Packet/Second
 - Per-Source IP Flood: ICMP Packet/Second
 - TCP/UDP PortScan Sensitivity
 - ICMP Smurf
 - IP Land
 - IP Spoof
 - IP TearDrop
 - PingofDeath
 - TCP Scan
 - TCP SynWithData
 - UDP Bomb
 - UDP EchoChargen

Enable Source IP Blocking Block Time (sec)

Quality of Service

QoS prioritizes and guarantees network performance for a specific IP Address range or MAC Address. QoS is often used for applications that require steady bandwidth. Common applications include VoIP phones, video streaming applications (i.e. DVRs, network cameras, video on demand), online gaming and servers.

It is important to note that while QoS helps to prioritize and guarantee bandwidth for a specific device, it does not provide you with more bandwidth than you currently have. For example, if your Internet Provider rates your internet connection speed at 5Mbps, QoS will not improve that connection. QoS helps you better manage the 5Mbps that you have so that the bandwidth is prioritized for devices on your network that may need the provided 5Mbps more than other devices. However, if you have an application that requires more than 5Mbps of steady bandwidth, the application will continue to experience “lag” with or without QoS since your available bandwidth is less than the required bandwidth of your application.

Quality of Service (Bandwidth Management)

Quality of Service (QoS) enables the prioritizing of specific data traffic through your network. With Quality of Service you can guarantee that a specific computer or network device has sufficient (user defined) bandwidth and is prioritized over all other network traffic.

Enable Quality of Service

Automatic Uplink Speed
Manual Uplink Speed (Kbps):

Automatic Downlink Speed
Manual Downlink Speed (Kbps):

Quality of Service Rules

Address Type: IP Address MAC Address

Local IP Address: -

MAC Address:

Mode:

Uplink Bandwidth (Kbps):

Downlink Bandwidth (Kbps):

Comment:

Routing Setup

Users can set up dynamic or static routing protocols on this page.

Dynamic Routing: If it enabled, the Dual Band Wireless Router will automatically build up the routing table according to present link quality, connectivity and bandwidth.

Static Routing: If it enabled, user can set up the fixed routing including IP address, Subnet Mask, Gateway for certain use of private network.

Routing Setup

Setup Dynamic or Static Routing protocols (for advanced users only).

Enable Dynamic Route

NAT: Enable Disable
Transmit: Disabled RIP 1 RIP 2
Receive: Disabled RIP 1 RIP 2

Enable Static Route

IP Address:
Subnet Mask:
Gateway:
Metric:
Interface: LAN ▾

Static Route Table:

Destination IP Address	Netmask	Gateway	Metric	Interface	Select
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Management

The Management Features on the Dual Band Wireless Router allow you to view the status of the system, your Internet connection, wireless network and local area network.

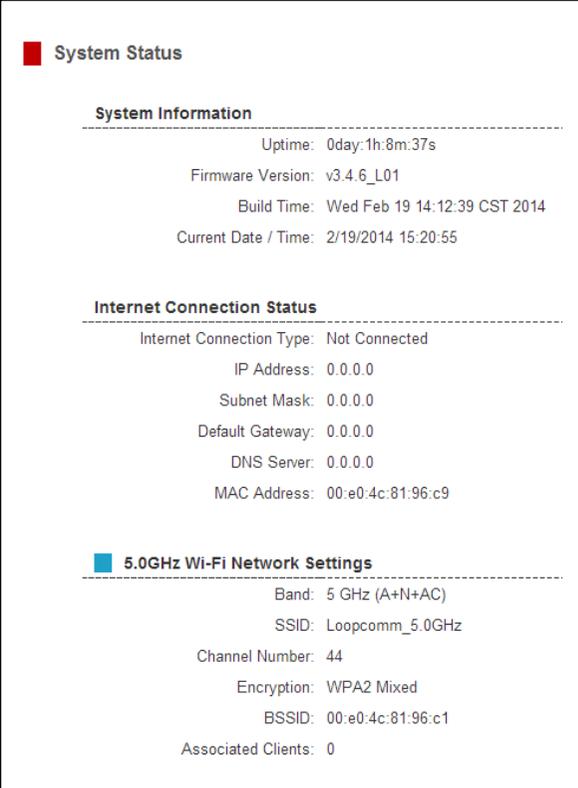
The Network Statistics page provides detailed traffic data for each connection type.

System Status

The System Status provides you with a snapshot of Dual Band Wireless Router current connections and settings.

System Information: This section provides you with information on the version and build time of your firmware. This is used to help our support department determine what firmware version your device is running. The Current Date / Time will display the current clock settings of Dual Band Wireless Router. If this time is off, go to the System Clock section and configure your system time.

Internet Connection Status: This shows the Internet connection type and related settings.



System Status

System Information

Uptime: 0day:1h:8m:37s
Firmware Version: v3.4.6_L01
Build Time: Wed Feb 19 14:12:39 CST 2014
Current Date / Time: 2/19/2014 15:20:55

Internet Connection Status

Internet Connection Type: Not Connected
IP Address: 0.0.0.0
Subnet Mask: 0.0.0.0
Default Gateway: 0.0.0.0
DNS Server: 0.0.0.0
MAC Address: 00:e0:4c:81:96:c9

5.0GHz Wi-Fi Network Settings

Band: 5 GHz (A+N+AC)
SSID: Loopcomm_5.0GHz
Channel Number: 44
Encryption: WPA2 Mixed
BSSID: 00:e0:4c:81:96:c1
Associated Clients: 0

5.0GHz/2.4GHz Wi-Fi Network Settings:

It includes present band (mode), SSID, operating channel number, security and linked clients.

Local Area Network Settings:

It indicates LP-8096's IP address, Subnet Mask, Default Gateway, DHCP server enabled/disable, and MAC address.

2.4GHz Wi-Fi Network Settings

Band: 2.4 GHz (B+G+N)
SSID: Loopcomm_2.4GHz
Channel Number: 11
Encryption: WPA2 Mixed
BSSID: 00:e0:4c:81:96:d1
Associated Clients: 0

Local Area Network Settings

Router IP Address: 192.168.3.1
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.3.1
DHCP Server: Enabled
MAC Address: 00:e0:4c:81:96:c1

Network Statistics

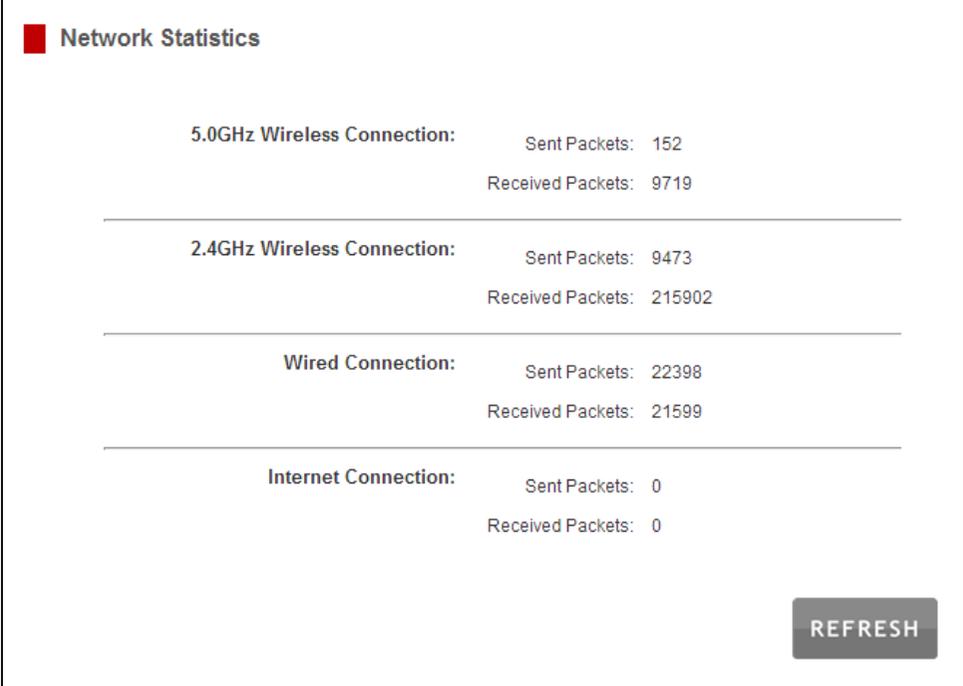
These statistics show the data activity for each network connection.

5.0GHz/2.4GHz Wireless Network:

These statistics shows all data activity for all users connected wirelessly to Dual Band Wireless Router.

Wired Connection: The Wired Connection statistics shows all data activity for all users physically connected to the wired ports on the Dual Band Wireless Router.

Internet Connection: The Wired Connection statistics shows all data activity for all users connected to Internet.



Network Statistics	
5.0GHz Wireless Connection:	Sent Packets: 152 Received Packets: 9719
2.4GHz Wireless Connection:	Sent Packets: 9473 Received Packets: 215902
Wired Connection:	Sent Packets: 22398 Received Packets: 21599
Internet Connection:	Sent Packets: 0 Received Packets: 0

REFRESH

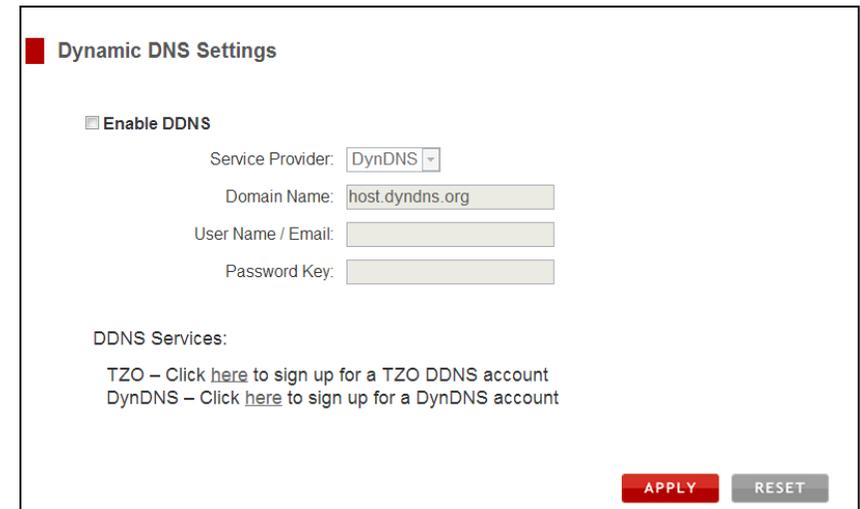
Dynamic DNS Settings

The Dynamic Domain Name System (DDNS) is a method to keep a Web domain name, or Web address, linked to a changing IP address as most Internet Providers do not provide static IP addresses.

To use DDNS, you must first set up an account with a DDNS provider. The Dual Band Wireless Router supports two of these providers (TZO and DynDNS).

Once the DDNS service has been set up and configured correctly on the Dual Band Wireless Router, the DDNS service will constantly track the IP address of your Internet connection. Each time your Internet Provider changes your IP address, the Dual Band Wireless Router will inform the DDNS service and the DDNS service will update your new IP address. The DDNS web domain that you have chosen to use will then be updated to redirect to your new Internet IP address.

The DDNS service makes it so you never have to check or remember your Internet IP address. This feature is typically used for users running servers, network cameras and other devices that require remote access.



The screenshot shows a web interface titled "Dynamic DNS Settings". It features a checkbox labeled "Enable DDNS" which is checked. Below this, there are four input fields: "Service Provider" with a dropdown menu set to "DynDNS", "Domain Name" with the text "host.dyndns.org", "User Name / Email" which is empty, and "Password Key" which is also empty. Underneath these fields, there is a section titled "DDNS Services:" containing two links: "TZO - Click [here](#) to sign up for a TZO DDNS account" and "DynDNS - Click [here](#) to sign up for a DynDNS account". At the bottom right of the form, there are two buttons: a red "APPLY" button and a grey "RESET" button.

System Clock

Maintain the internal clock for LP-8096 by syncing with your computer's time. Your system clock settings need to be accurate in order for logs and wireless access schedules to work correctly.

System Clock

Maintain the system clock settings by syncing the system time with the time on your computer. The High Power Range Extender / Repeater's clock is used to make sure your Access Schedules and logs function correctly and on time.

Current Time: Month Day Year
 Hour Minute Sec

Sync with your computer:

System Logs

System Logs are useful for viewing the activity and history of the Dual Band Wireless Router. The System Logs are also used to help troubleshoot when needed.

It is recommended that you enable all logs in the event that troubleshooting is required. All log entries are deleted each time the Dual Band Wireless Router reboots or is powered off.

System Logs

View network and system activity for your Router.

Enable Log

Current Time: System (ALL) Wireless DoS
 Enable Remote Log Log Server IP Address:

APPLY

Upgrade Firmware

Loopcomm continuously updates the firmware for all products in an effort to constantly improve our products and their user experiences.

Check the Loopcomm Website for your product frequently to see if there are any updates.

The firmware update is downloaded as a zip file from the Support Web page. You will need to have an unzipping program to open the file.

To manually upgrade your firmware:

- a. Download the file from Loopcomm Website and remember the location where you saved it.
- b. Click Choose File and locate the file
- c. Click Upload to begin upgrading.

Upgrade Firmware

The Router uses software (firmware) to operate. In the event that a new firmware file is available you may update it here. During the upgrade process DO NOT power off the device to avoid damage to the Router.

Current Firmware Version: v3.4.6_L02
Build Time: Thu Mar 13 09:53:32 CST 2014

Select File:

Save/Reload Settings

Saving your current settings allows you to back-up your current settings which may be reloaded at a later time. This feature may be useful for testing new features and settings without having to worry about returning to a stable platform.

To save current settings:

- a. Click Save
- b. Select a file name and location

To load previously saved settings:

- a. Click Browse
- b. Locate the previously saved settings file
- c. Click Upload to restore the settings to the saved file.

Save/Reload Settings

Save your current Router configurations to a file or reload previously saved configurations. If needed, you may also reset your Router to factory default settings.

Save Settings to File:

Load Settings from File:

Reset Settings to Default:

Password

By default, LP-8096 to require a password to log on to the Web page. If you wish to enable a password to protect unauthorized access to the Web menu, you may enter one here.

Password

Prevent unauthorized access to your Router's web-based configuration menu by providing a user name and password. If no protection is necessary, leave these fields blank and you will not be prompted for a login and password when accessing this web menu.

New Login:

New Password:

Confirmed Password:

APPLY **RESET**

Appendix

Default Settings

The default settings for your Dual Band Wireless Router are listed here. If for some reason you need to return LP-8096 back to default settings, hold down the Reset button on the back panel for 10 seconds. LP-8096 will reset back to factory settings as listed below:

IP Address: 192.168.3.1

Web Menu Access: <http://setup.loopcomm.com>

WLAN 2.4GHz SSID: **Loopcomm_2.4GHz**

Wireless Security Key (WPA/WPA2 Mixed Mode): loopcommwifi

WLAN 5.0GHz SSID: **Loopcomm_5.0GHz**

Wireless Security Key (WPA/WPA2 Mixed Mode): loopcommwifi