ERB9250

300Mbps Wireless N Range Extender

User Manual

Version: 1.0

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1. Introduction

ERB9250 is a 2.4GHz 802.11b/g/n 300Mbps Repeater & Client Bridge (Range Booster / Extender). Range Extender solves the signal attenuation (limited coverage) problem by literally repeating / extending AP radio signal to dead-spots. While repeater clones AP and serves as a subsidiary entity to its clients, client bride offers an extension of wired network to the AP.

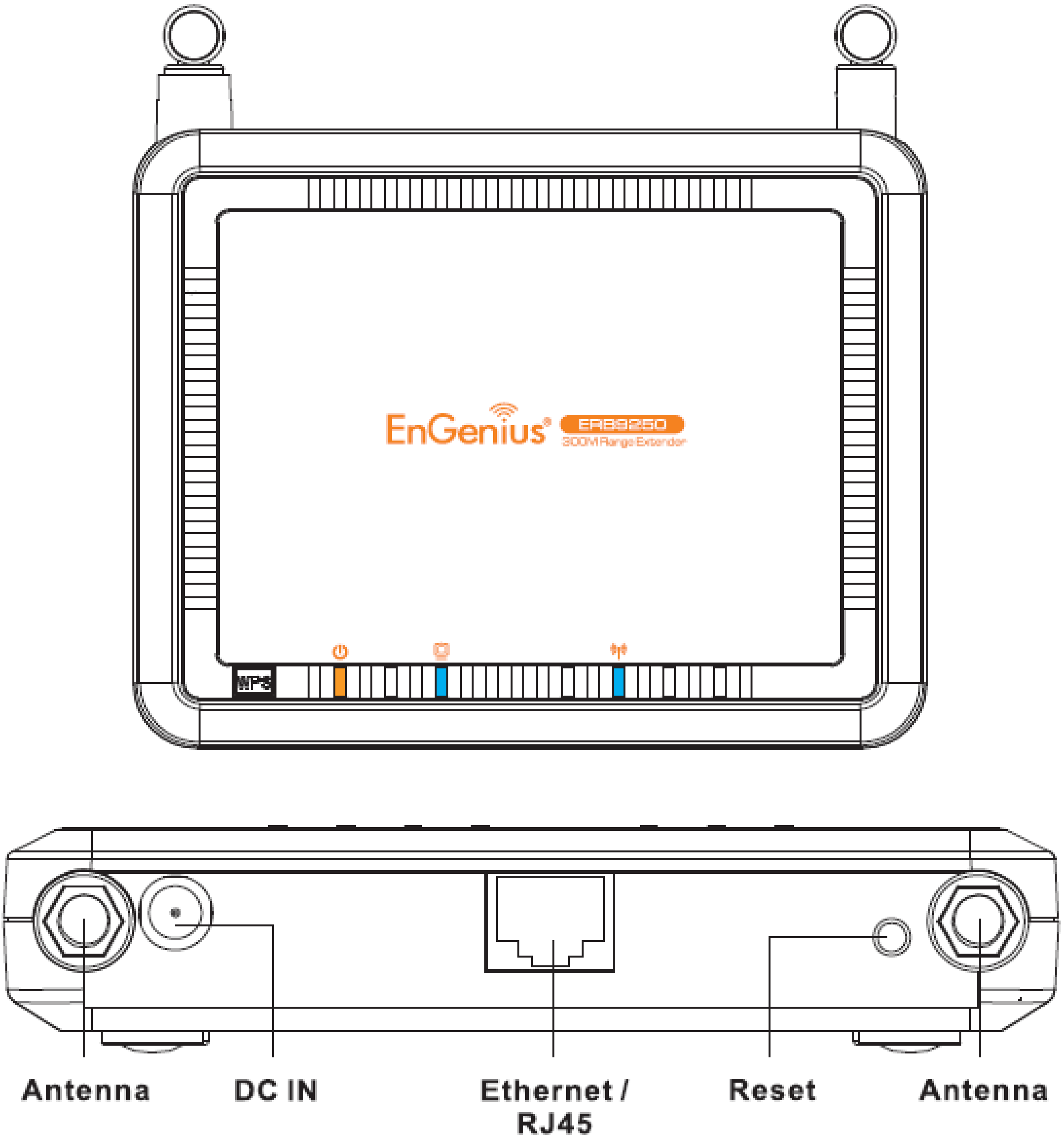
At 300 Mbps wireless transmission rate, Access Point built into the Router uses advanced MIMO (Multi-Input, Multi-Output) technology to transmit multiple steams of data in a single wireless channel giving you seamless access to multimedia content. Robust RF signal travels farther, eliminates dead spots and extends network range. For data protection and privacy, ERB9250 encodes all wireless transmissions with WEP, WPA, and WPA2 encryption.

1.1. Package Contents

Open the package carefully, and make sure that none of the items listed below are missing. Do not discard the packing materials, in case of return; the unit must be shipped back in its original package.

- 802.11n SOHO Range Extender
- 100V~240V Power Adapter
- 2dBi 2.4GHz SMA Upgradable Antennas x 2 pcs
- Quick Install Guide
- CD (User’s Manual)

1.2. Product Layout



LED	Description
LAN	1 (Link-> blue on, traffic->blink)
WLAN	1 (Link-> blue on, traffic->blink)
Power/Status	1 (On-> red Test/reset default->blink)

1.3. System Requirements

To begin using the ERB9250, make sure you meet the following as minimum requirements:

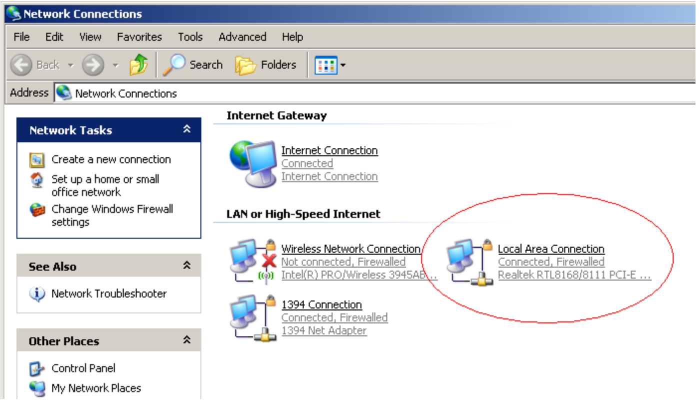
- Existing AP / Router
- PC/Notebook.
- Operating System – Microsoft Windows 98SE/ME/XP/2000/VISTA
- 1 Free Ethernet port.
- WiFi card/USB dongle (802.11b/g/n) – optional.
- External xDSL (ADSL) or Cable modem with an Ethernet port (RJ-45).
- PC with a Web-Browser (Internet Explorer, Safari, Firefox, Opera etc.)
- Few Ethernet compatible CAT5 cables.

2. Installation

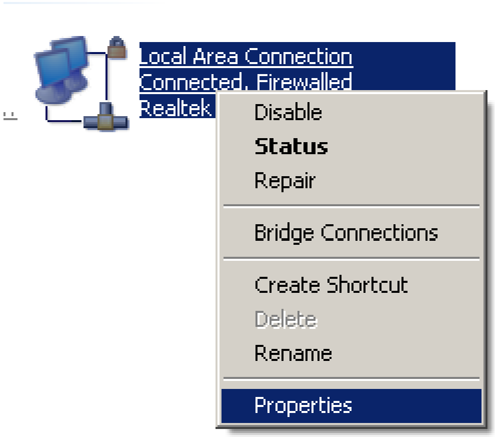
Please configure your PC / Notebook Ethernet card IP address before device configuration.

2.1. PC Network Adapter setup (Windows XP)

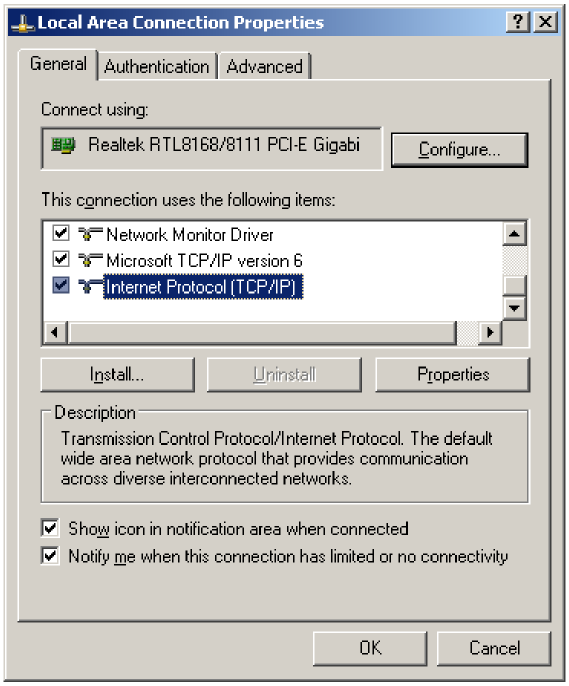
- Enter [Start Menu] → select [Control panel] → select [Network].



- Select [Local Area Connection]) icon=>select [properties]



- Select [Internet Protocol (TCP/IP)] =>Click [Properties].



Connect using:

Realtek RTL8168/8111 PCI-E Gigabi

This connection uses the following items:

☑ Network Monitor Driver

☑ Microsoft TCP/IP version 6

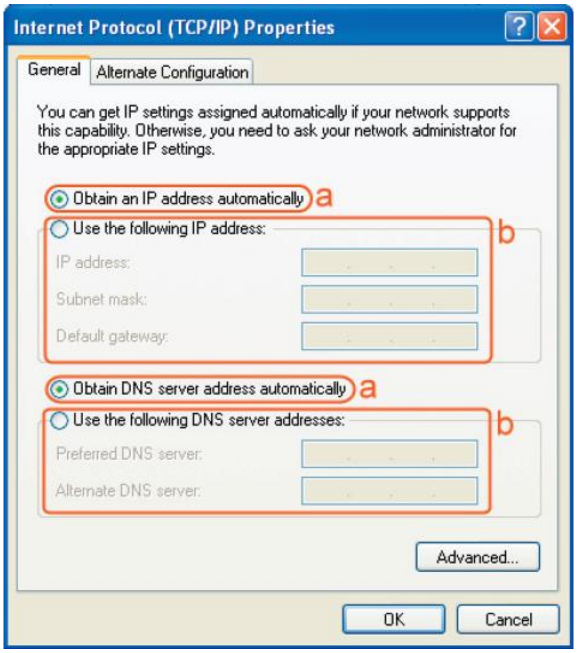
☑ Internet Protocol (TCP/IP)

Description

Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

☑ Show icon in notification area when connected

☑ Notify me when this connection has limited or no connectivity



You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

● Obtain an IP address automatically

○ Use the following IP address:

IP address:

Subnet mask:

Default gateway:

● Obtain DNS server address automatically

○ Use the following DNS server addresses:

Preferred DNS server:

Alternate DNS server:

- Select the [General] tab.
- ERB9250 supports [DHCP] function, please select both [Obtain an IP address automatically] and [Obtain DNS server address automatically].

2.2. Bring up ERB9250

Connect the supplied power-adapter to the power inlet port and connect it to a wall outlet. Then, ERB9250 automatically enters the self-test phase. Once WLAN LED is on and blinking randomly to indicate that it is in normal operation.

3. Quick Setup Range Extender

Prerequisite:

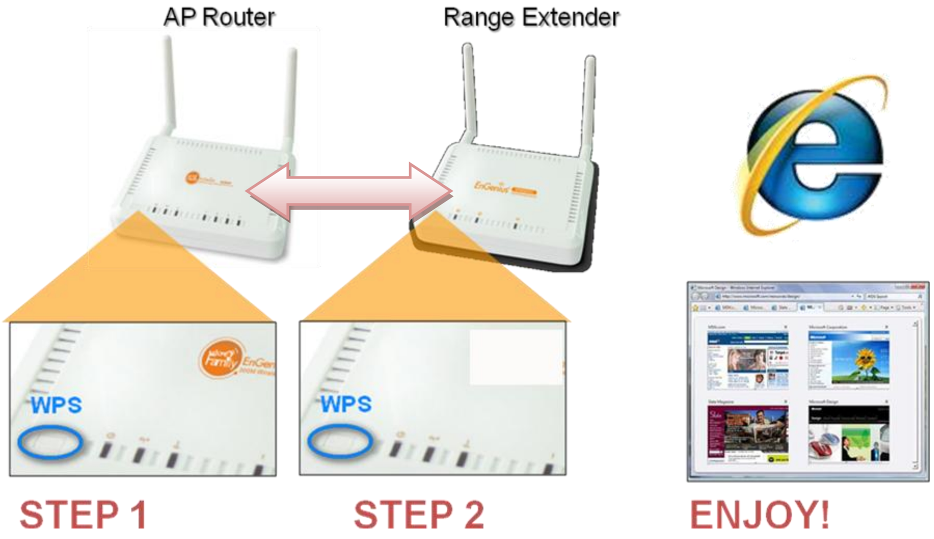
Before we start, please make sure the extender is within the coverage of your existing AP. We suggest you place your extender right next to your AP for the initial setup. We can move the extender to further location after configuration is completed.

ERB9250 default IP address is 192.168.1.2, please ensure it is not occupied by any other devices.

Power On:

Connect the supplied power-adapter to the power inlet port and connect it to a wall outlet. Then, ERB9250 automatically enters the self-test phase. Once WLAN LED is on and blinking randomly to indicate that it is in normal operation.

3.1. One-Touch Setup Extender



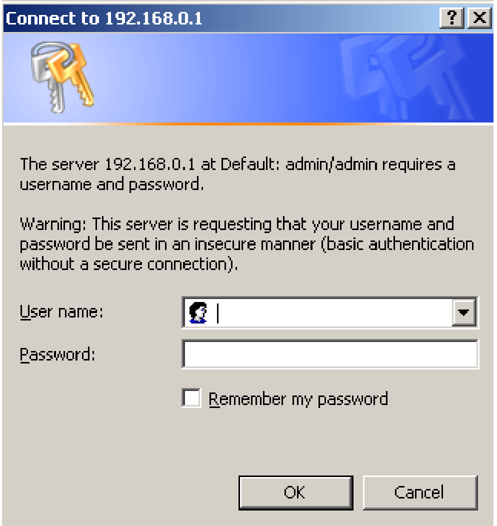
1. Make sure your AP/Router WPS function is enabled (some router may require you to press WPS button and hold for a few second to enable WPS).
2. Press the button on ERB9250 once. You will see Orange WLAN LED blinking.
3. Wait for a few seconds.

4. Once the orange WLAN LED stop blinking and staying on, the setup is then completed.

- If the LED does not stay on, this means the configuration is not successful.
- In case you do not have the extender right next to your AP, please move your extender closer and make sure the antennas are properly screwed firmly on the devices. Repeat steps 1~4 again.
- If the configuration fails again, this probably means your AP does not support one-touch setup function. Please configure your extender manually.

3.2. Manual Configuration

1. It is advised to configure your extender through Ethernet cable. You may need to disconnect other network connections to avoid confusion.
2. Connect your Ethernet port to the extender RJ45/Ethernet port with the cable included in the package.
3. Configure your computer network interface to IP address 192.168.1.10.
4. Open your Web Browser and type in 192.168.1.2 (the device default IP address).

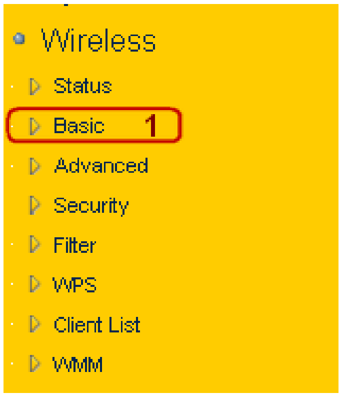


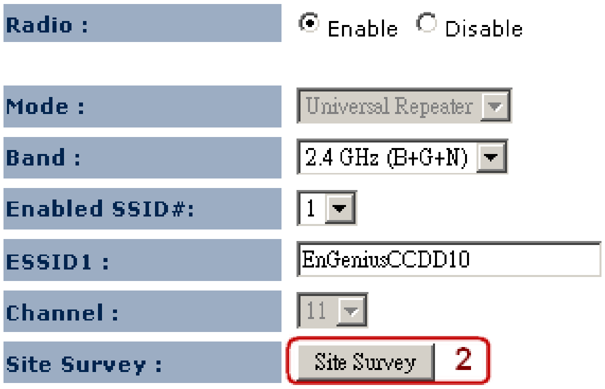
The server 192.168.0.1 at Default: admin/admin requires a username and password.

Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).

5. Type in admin for both user name and password.
6. Once get accessed, you will see the administration page
7. Click [**Basic**] under section **Wireless**.

8. Click on [**Site Survey**] to search the existing AP.

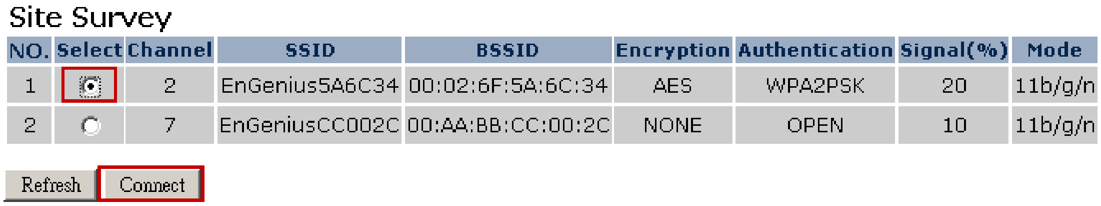




Radio :	● Enable ○ Disable
Mode :	Universal Repeater
Band :	2.4 GHz (B+G+N)
Enabled SSID#:	1
ESSID1 :	EnGeniusCCDD10
Channel :	11
Site Survey :	Site Survey

9. Few seconds later, a window will pop up a list of available APs.

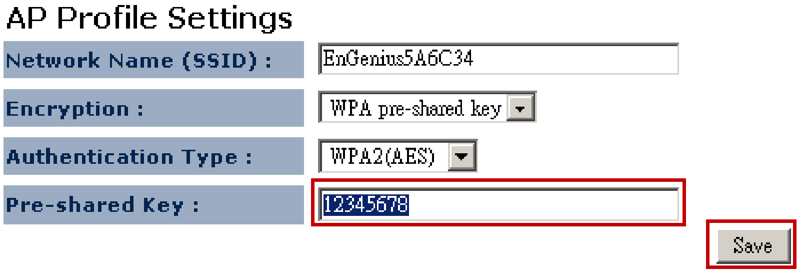
10. Select your target AP and click on [**Connect**].



Site Survey

NO.	Select	Channel	SSID	BSSID	Encryption	Authentication	Signal(%)	Mode
1	●	2	EnGenius5A6C34	00:02:6F:5A:6C:34	AES	WPA2PSK	20	11b/g/n
2	○	7	EnGeniusCC002C	00:AA:BB:CC:00:2C	NONE	OPEN	10	11b/g/n

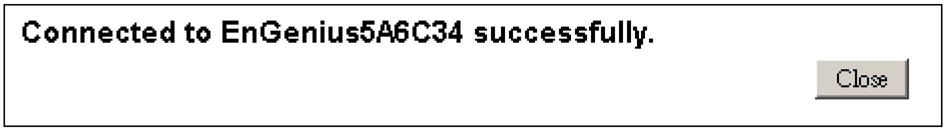
11. Enter the access key for the target AP and click on [**Save**].



AP Profile Settings

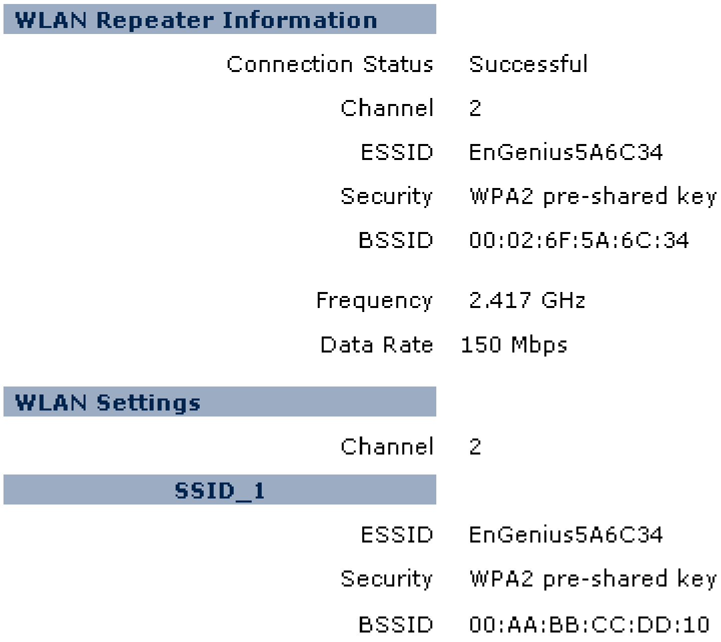
Network Name (SSID) :	EnGenius5A6C34
Encryption :	WPA pre-shared key
Authentication Type :	WPA2(AES)
Pre-shared Key :	12345678

12. Pop-up box showing the connection established between AP and the extender.



Connected to EnGenius5A6C34 successfully.

13. On the extender status page, you should see AP security information being cloned here.



WLAN Repeater Information

Connection Status	Successful
Channel	2
ESSID	EnGenius5A6C34
Security	WPA2 pre-shared key
BSSID	00:02:6F:5A:6C:34
Frequency	2.417 GHz
Data Rate	150 Mbps

WLAN Settings

Channel	2

SSID_1

ESSID	EnGenius5A6C34
Security	WPA2 pre-shared key
BSSID	00:AA:BB:CC:DD:10

4. ERB9250 Placement

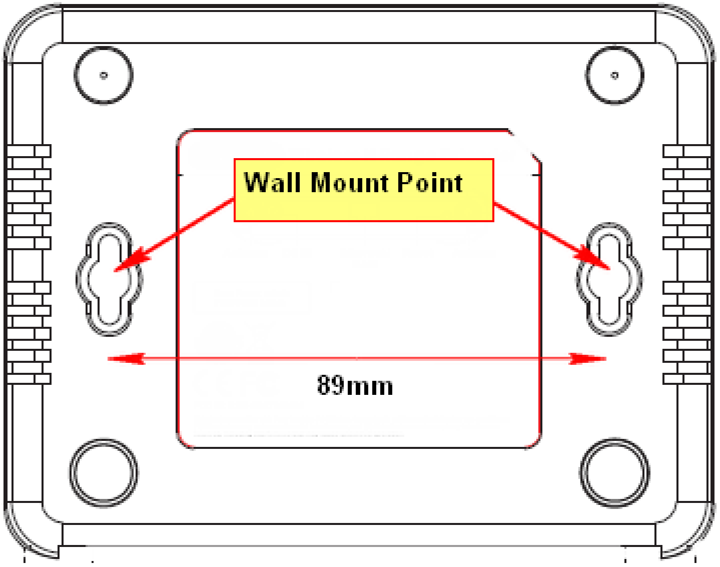
4.1. Placement

Please note that there may be various interferences and obstacles in the environment that can impact wireless network performance. Most of the wireless driver utility provides signal strength visualization. You can make use of it to measure the signal strength of your AP.

You may need to experiment a few times to find out the best location for the range extender. Generally, placing extender at where the AP signal strength greater than 30% considered suitable.

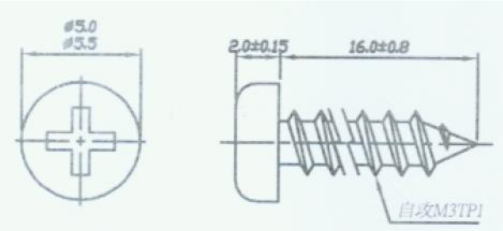
You can place ERB9250 on a desk or other flat surface, or you can mount it on a wall. For optimal performance, place your extender within the coverage of your existing AP from which the signal you would like to extend. Like any other wireless device, it must be away from any potential source of interference, such as a metal wall or microwave oven. This location must be close to a power connection. If the antennas are not screwed properly, performance loss can occur.

4.2. Wall Mounting

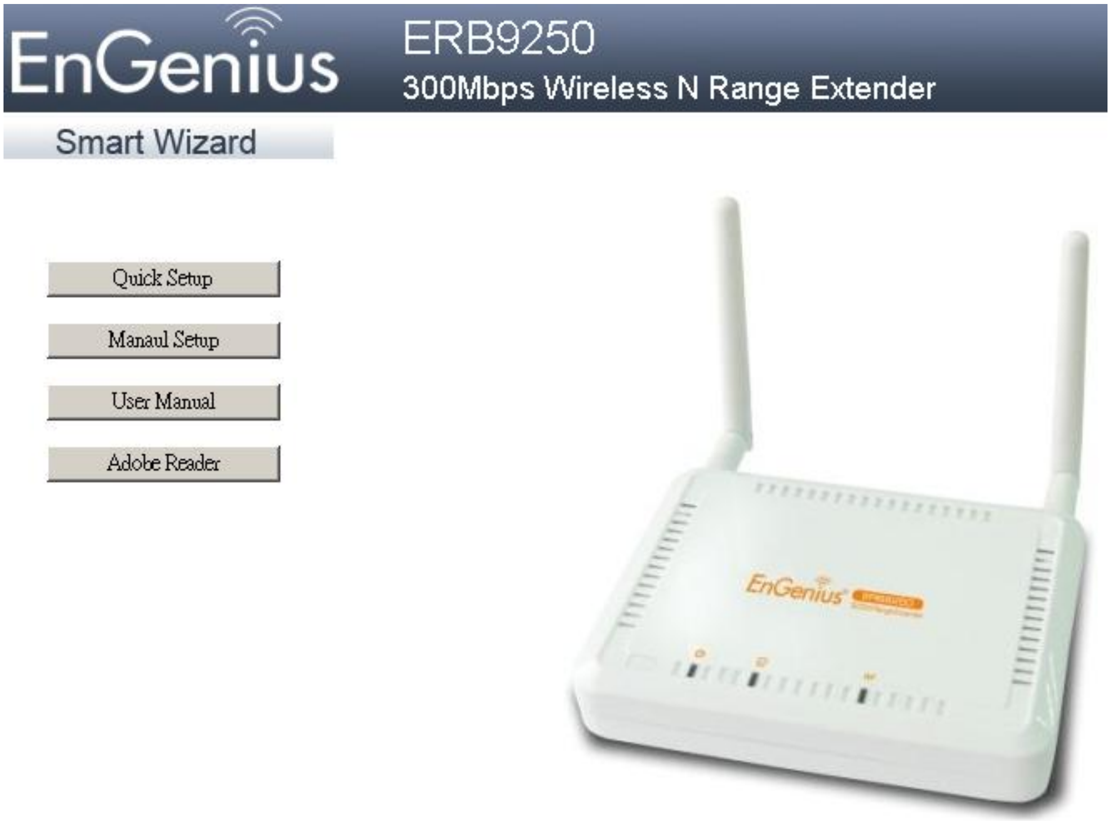


You can mount the device on the wall. There are two mounting points on the bottom of the device. Please find a proper spot where two nails can be applied. The distance between the two nails is 89mm. Finally, carefully mount the device onto the wall and make sure the nails are firmly locked on the mount points.

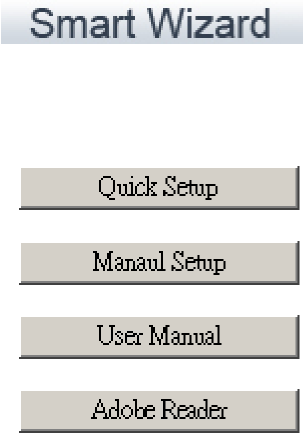
Recommended Screw Dimension: 18mm x 5mm



5. Smart Wizard



- Please insert the Wizard CD into your CD-ROM driver.
- If you are using MacOS or other operation system, please browse your CD and click on **index.html** to start Smart Wizard.



- Click on [Quick Setup] if you would like go for Quick Setup.
- Click on [Manual Setup] if your AP does not support WPS button or Quick Setup does not work on your AP.
- Click [User Manual] to view user manual
- Click on [Adobe Reader] to install PDF reader

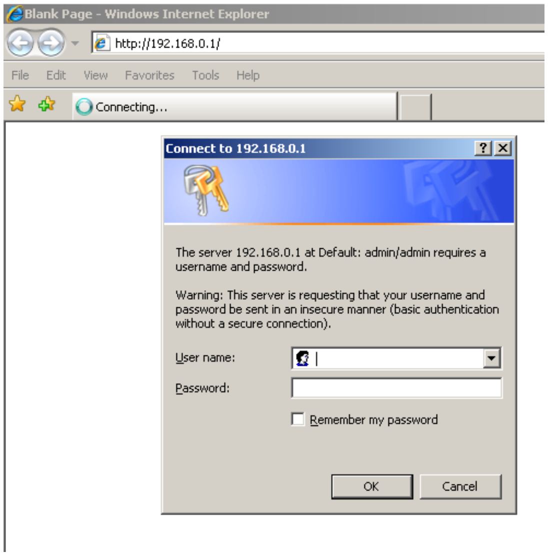
Please follow the instructions given on the screen to proceed.

6. Initial Setup ERB9250

ERB9250 uses web-interface for configuration to be accessed through your web browser, such as Internet Explorer or Firefox.

1. OPEN your browser (e.g. Internet Explorer).

- Type **http://192.168.1.2** in address bar and hit [Enter] button on your keyboard.



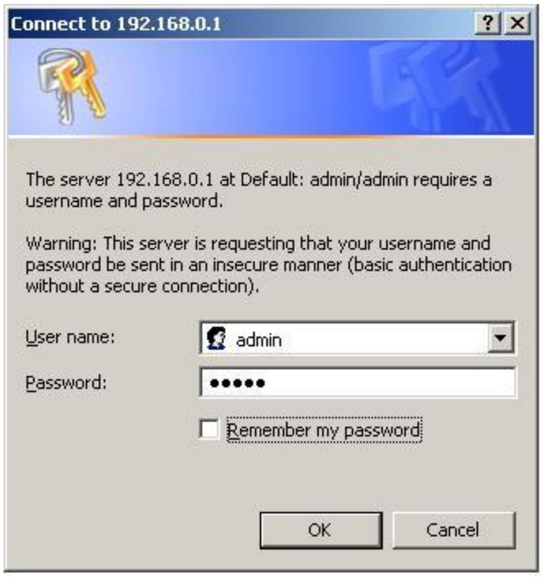
The server 192.168.0.1 at Default: admin/admin requires a username and password.

Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).

User name:

Password:

□ Remember my password



The server 192.168.0.1 at Default: admin/admin requires a username and password.

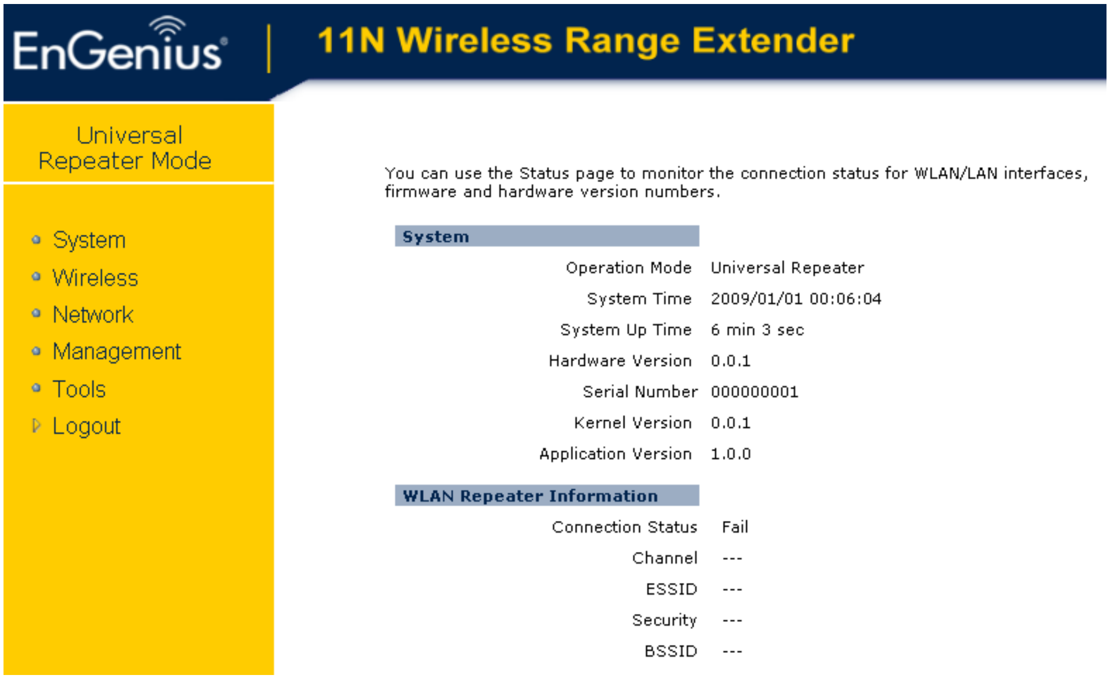
Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).

User name: admin

Password: •••••

□ Remember my password

- Click **<OK>** to navigate into ERB9250 configuration home page.
- You will see the home page of ERB9250 as follows.



You can use the Status page to monitor the connection status for WLAN/LAN interfaces, firmware and hardware version numbers.

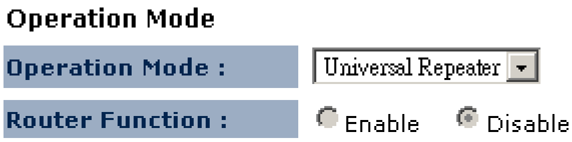
System	
Operation Mode	Universal Repeater
System Time	2009/01/01 00:06:04
System Up Time	6 min 3 sec
Hardware Version	0.0.1
Serial Number	000000001
Kernel Version	0.0.1
Application Version	1.0.0

WLAN Repeater Information	
Connection Status	Fail
Channel	---
ESSID	---
Security	---
BSSID	---

7. System

7.1. Operation Mode

This page allows you to change device operation mode. ERB9250 supports Universal Repeater (Range Extender) and Client Bridge mode. By default it is configured as an Universal Repeater (also known as Extender).

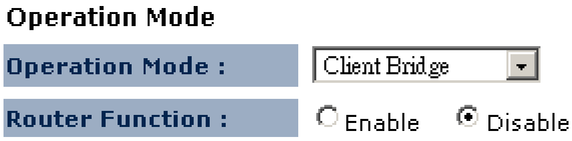


Operation Mode

Operation Mode :	Universal Repeater
Router Function :	○ Enable ● Disable

If you are not sure what Client Bridge is, please do not use this mode. Client Bridge is not an AP extender but an “Ethernet Wireless Extender”. CB serves as a bridge between wired network and wireless network. Once enabled, you can only access the device through Ethernet cable.

For Client Bridge mode, you can choose whether to enable router mode. Router mode will enable NAT and DHCP server. Please disable router mode if you are not familiar with these terms.

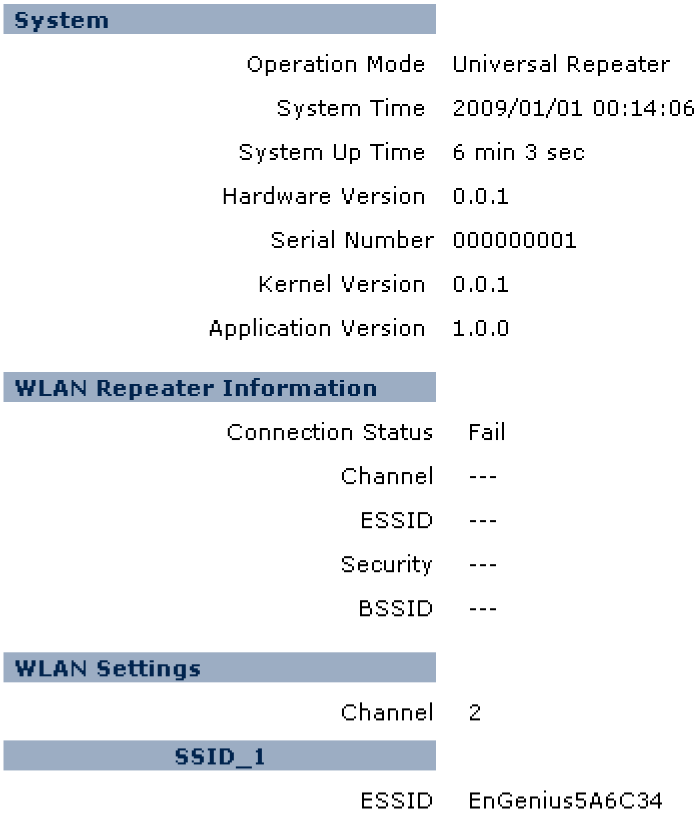


Operation Mode

Operation Mode :	Client Bridge
Router Function :	○ Enable ● Disable

7.2. Status

This page allows you to monitor the current status of your router.



System	
Operation Mode	Universal Repeater
System Time	2009/01/01 00:14:06
System Up Time	6 min 3 sec
Hardware Version	0.0.1
Serial Number	000000001
Kernel Version	0.0.1
Application Version	1.0.0

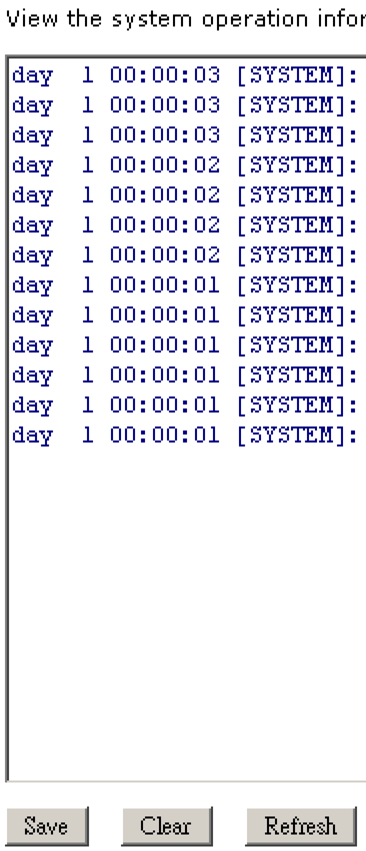
WLAN Repeater Information	
Connection Status	Fail
Channel	---
ESSID	---
Security	---
BSSID	---

WLAN Settings	
Channel	2
SSID_1	
ESSID	EnGenius5A6C34

7.3. Event Log

View operation event log. This page shows the current system log of the Broadband router. It displays any event occurred after system start up.

At the bottom of the page, the system log can be saved <Save> to a local file for further processing or the system log can be cleared <Clear> or it can be refreshed <Refresh> to get the most updated information. When the system is powered down, the system log will be cleared if not saved to a local file.

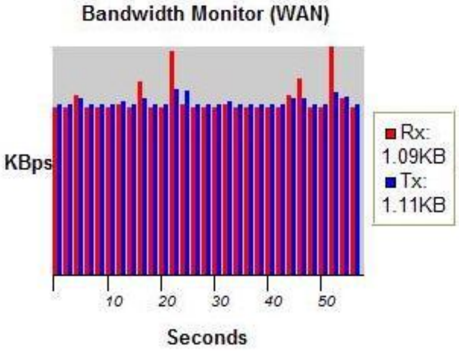


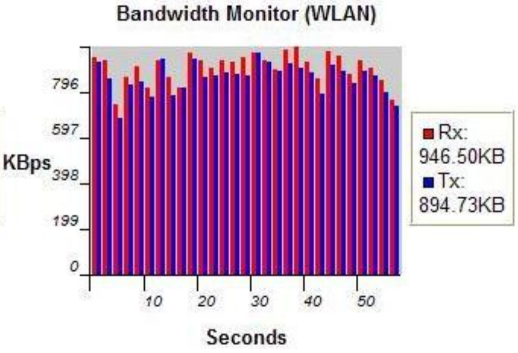
View the system operation information.

```
day  1 00:00:03 [SYSTEM]: WLAN, start LLTD
day  1 00:00:03 [SYSTEM]: TELNETD, start Telnet-cli Server
day  1 00:00:03 [SYSTEM]: HTTP, start
day  1 00:00:02 [SYSTEM]: NET, Firewall Disabled
day  1 00:00:02 [SYSTEM]: NET, NAT Disabled
day  1 00:00:02 [SYSTEM]: SCHEDULE, stop Power Save
day  1 00:00:02 [SYSTEM]: NTP, start NTP Client
day  1 00:00:01 [SYSTEM]: LAN, IP address=192.168.1.2
day  1 00:00:01 [SYSTEM]: LAN, start
day  1 00:00:01 [SYSTEM]: BR, start
day  1 00:00:01 [SYSTEM]: SYS, Kernel Version: 0.0.1
day  1 00:00:01 [SYSTEM]: SYS, Application Version: 1.0.0
day  1 00:00:01 [SYSTEM]: Start Log Message Service!
```

7.4. Monitor

Show histogram for network connection on WAN, LAN & WLAN. Auto refresh keeps information updated frequently.



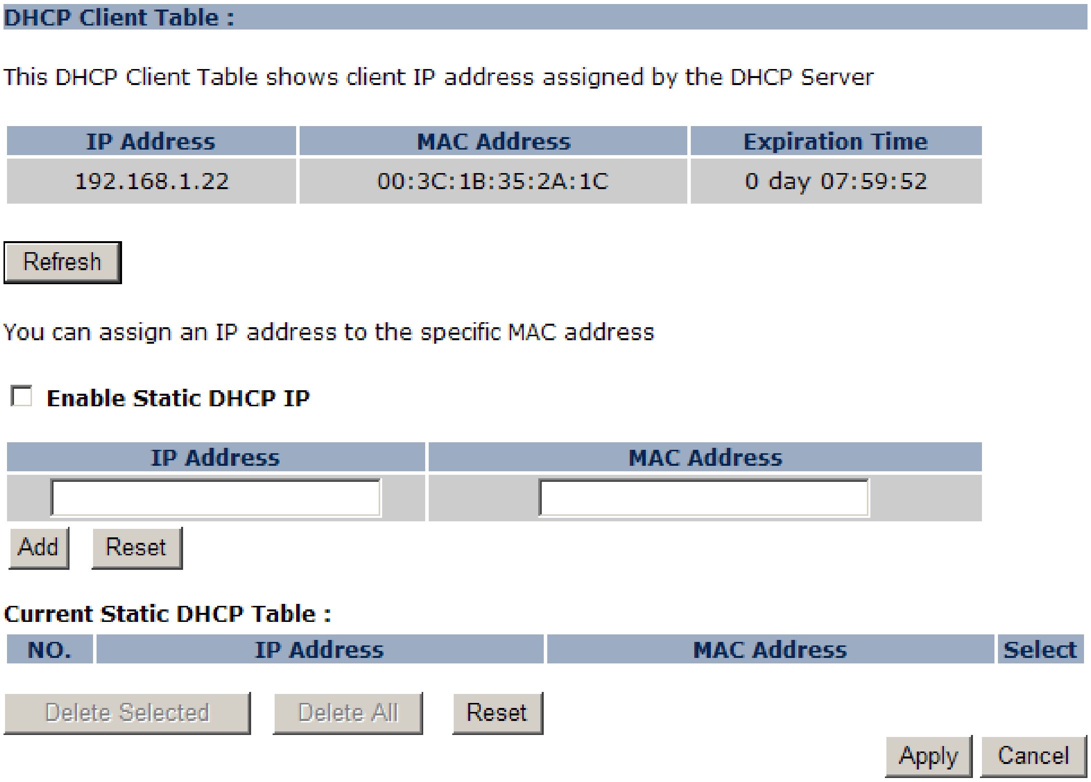


7.5. DHCP (CR Mode)

View the current LAN clients which are assigned with an IP Address by the DHCP-server. This page shows all DHCP clients (LAN PCs) currently connected to your network. The table shows the assigned IP address, MAC address and expiration time for each DHCP leased client. Use the **<Refresh>** button to update the available information. Hit **<Refresh>** to get the updated table.

You can check "**Enable Static DHCP IP**". It is possible to add more static DHCP IPs. They are listed in the table "**Current Static DHCP Table**". IP address can be deleted at will from the table.

Click **<Apply>** button to save the changed configuration.



DHCP Client Table :

This DHCP Client Table shows client IP address assigned by the DHCP Server

IP Address	MAC Address	Expiration Time
192.168.1.22	00:3C:1B:35:2A:1C	0 day 07:59:52

You can assign an IP address to the specific MAC address

□ **Enable Static DHCP IP**

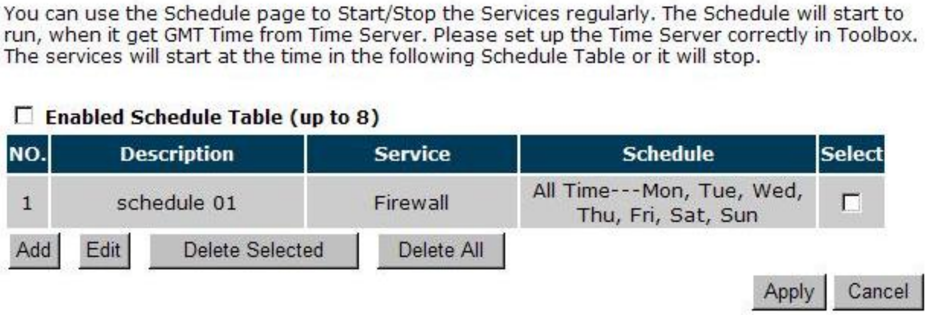
IP Address	MAC Address

Current Static DHCP Table :

NO.	IP Address	MAC Address	Select

7.6. Schedule (CR Mode)

This page allows users to set up schedule function for Firewall and Power Saving

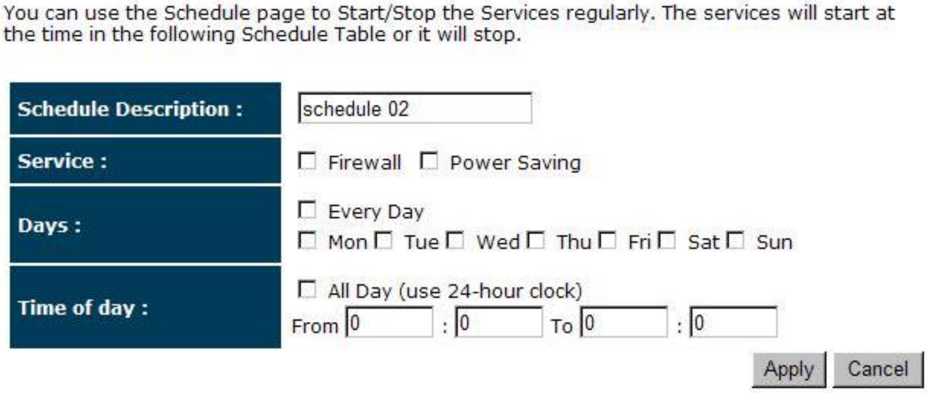


You can use the Schedule page to Start/Stop the Services regularly. The Schedule will start to run, when it get GMT Time from Time Server. Please set up the Time Server correctly in Toolbox. The services will start at the time in the following Schedule Table or it will stop.

□ **Enabled Schedule Table (up to 8)**

NO.	Description	Service	Schedule	Select
1	schedule 01	Firewall	All Time---Mon, Tue, Wed, Thu, Fri, Sat, Sun	□

Edit schedule options to allow configuration of firewall and power savings services. Fill in the schedule and select type of service. Click <**Apply**> to keep the settings.

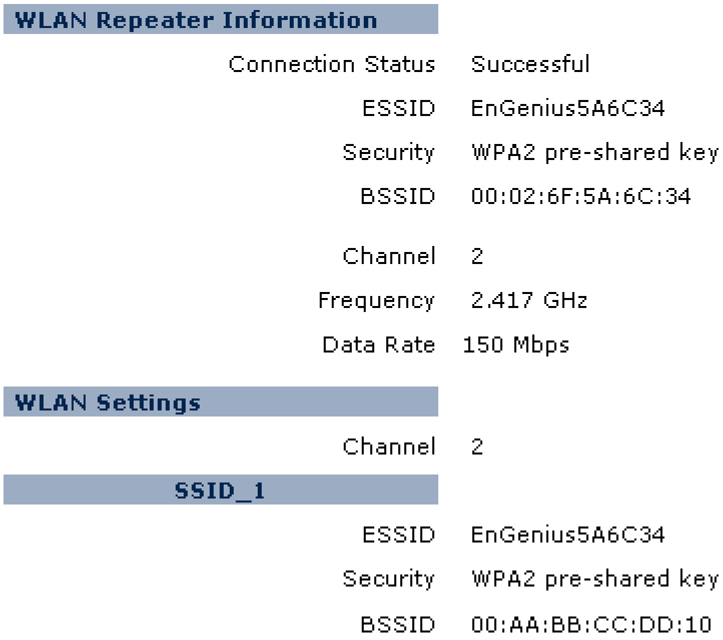


You can use the Schedule page to Start/Stop the Services regularly. The services will start at the time in the following Schedule Table or it will stop.

Schedule Description :	schedule 02
Service :	□ Firewall □ Power Saving
Days :	□ Every Day □ Mon □ Tue □ Wed □ Thu □ Fri □ Sat □ Sun
Time of day :	□ All Day (use 24-hour clock) From 0 : 0 To 0 : 0

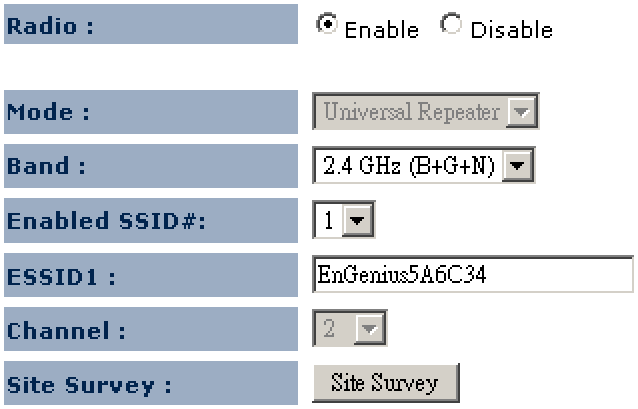
8. Wireless

8.1. Status



WLAN Repeater Information	
Connection Status	Successful
ESSID	EnGenius5A6C34
Security	WPA2 pre-shared key
BSSID	00:02:6F:5A:6C:34
Channel	2
Frequency	2.417 GHz
Data Rate	150 Mbps
WLAN Settings	
Channel	2
SSID_1	
ESSID	EnGenius5A6C34
Security	WPA2 pre-shared key
BSSID	00:AA:BB:CC:DD:10

8.2. Basic



Radio :	● Enable ○ Disable
Mode :	Universal Repeater
Band :	2.4 GHz (B+G+N)
Enabled SSID#:	1
ESSID1 :	EnGenius5A6C34
Channel :	2
Site Survey :	Site Survey

- **Radio:** You can turn on/off wireless radio. If wireless Radio is off, you cannot associate with AP through wireless.

- **Mode:** In this device, we support three operation modes which are **AP router** and **AP route with WDS**. If you choose AP Router Mode, you can select AP or WDS function in the drop-down menu.

- **Band:** You can select the wireless standards running on your network environment.

  2.4 GHz(B): If all your clients are 802.11b, select this one.

  2.4 GHz(N): If all your clients are 802.11n, select this one.

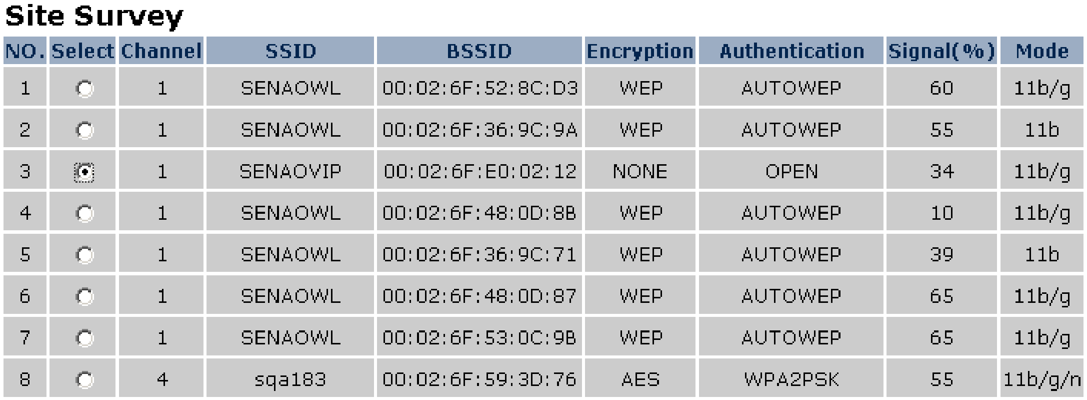
  2.4 GHz(B+G): Either 802.11b or 802.11g wireless devices are in your environment.

  2.4 GHz(G): If all your clients are 802.11g, select this one.

  2.4 GHz(B+G+N): Either 802.11b, 802.11g, or 802.11n wireless devices are in your environment.

- **Channel:** Shows current target AP wireless channel

- **Site Survey:** scan for current existing APs

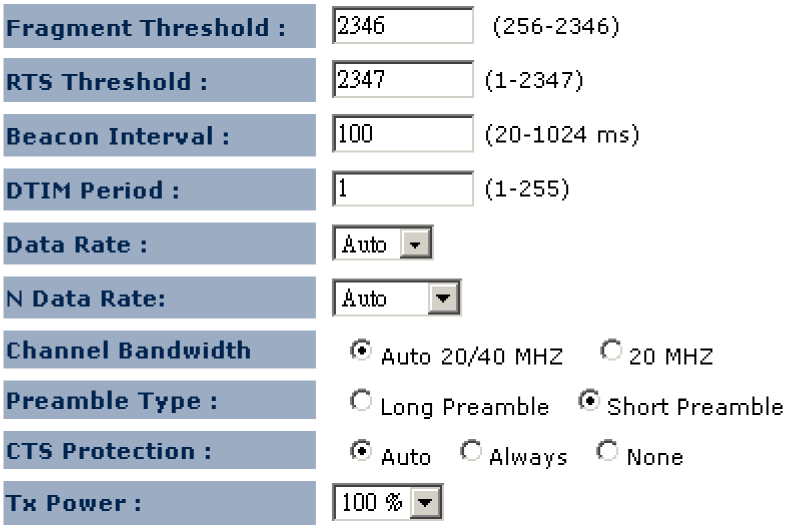


Site Survey

NO.	Select	Channel	SSID	BSSID	Encryption	Authentication	Signal(%)	Mode
1	○	1	SENAOWL	00:02:6F:52:8C:D3	WEP	AUTOWEP	60	11b/g
2	○	1	SENAOWL	00:02:6F:36:9C:9A	WEP	AUTOWEP	55	11b
3	●	1	SENAOVIP	00:02:6F:E0:02:12	NONE	OPEN	34	11b/g
4	○	1	SENAOWL	00:02:6F:48:0D:8B	WEP	AUTOWEP	10	11b/g
5	○	1	SENAOWL	00:02:6F:36:9C:71	WEP	AUTOWEP	39	11b
6	○	1	SENAOWL	00:02:6F:48:0D:87	WEP	AUTOWEP	65	11b/g
7	○	1	SENAOWL	00:02:6F:53:0C:9B	WEP	AUTOWEP	65	11b/g
8	○	4	sqa183	00:02:6F:59:3D:76	AES	WPA2PSK	55	11b/g/n

To connect to the chosen AP, click on the AP radio button and then click [Connect]. See Chapter 6 or 11.4 for more security detail.

8.3. Advanced



Fragment Threshold :	2346 (256-2346)
RTS Threshold :	2347 (1-2347)
Beacon Interval :	100 (20-1024 ms)
DTIM Period :	1 (1-255)
Data Rate :	Auto
N Data Rate:	Auto
Channel Bandwidth	● Auto 20/40 MHZ ○ 20 MHZ
Preamble Type :	○ Long Preamble ● Short Preamble
CTS Protection :	● Auto ○ Always ○ None
Tx Power :	100 %

Fragment Threshold: This specifies the maximum size of a packet during the fragmentation of data to be transmitted. If you set this value too low, it will result in bad performance.

RTS Threshold: When the packet size is smaller than the RTS threshold, the wireless router will not use the RTS/CTS mechanism to send this packet.

Beacon Interval: This is the interval of time that this wireless router broadcasts a beacon. A Beacon is used to synchronize the wireless network.

DTIM Period: Enter a value between 1 and 255 for the Delivery Traffic Indication Message (DTIM). A DTIM is a countdown informing clients of the next window for listening to broadcast and multicast messages.

Data Rate: The “Data Rate” is the rate that this access point uses to transmit data packets. The access point will use the highest possible selected transmission rate to transmit the data packets.

N Data Rate: The “Data Rate” is the rate that this access point uses to transmit data packets for N compliant wireless nodes. Highest to lowest data rate can be fixed.

Channel Bandwidth: This is the range of frequencies that will be used.

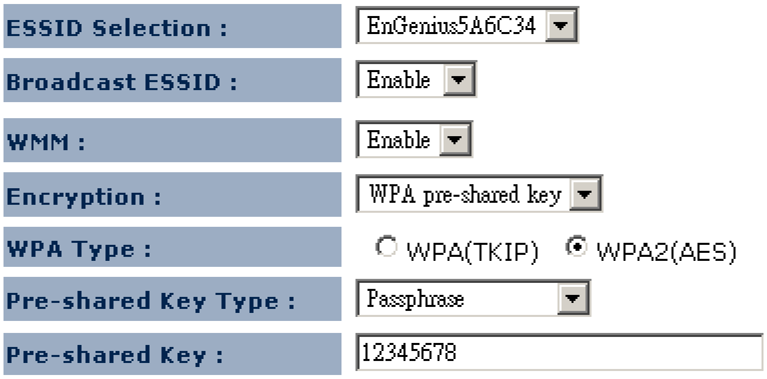
Preamble Type: The “Long Preamble” can provide better wireless LAN compatibility while the “Short Preamble” can provide better wireless LAN performance.

CTS Protection: It is recommended to enable the protection mechanism. This mechanism can decrease the rate of data collision between 802.11b and 802.11g wireless stations. When the protection mode is enabled, the throughput of the AP will be a little lower due to a lot of frame-network that is transmitted.

TX Power: This can be set to a bare minimum or maximum power.

8.4. Security

This Access Point provides complete wireless LAN security functions, included are WEP, IEEE 802.1x, IEEE 802.1x with WEP, WPA with pre-shared key and WPA with RADIUS. With these security functions, you can prevent your wireless LAN from illegal access. Please make sure your wireless stations use the same security function, and are setup with the same security key.



ESSID Selection :	EnGenius5A6C34
Broadcast ESSID :	Enable
WMM :	Enable
Encryption :	WPA pre-shared key
WPA Type :	○ WPA(TKIP) ● WPA2(AES)
Pre-shared Key Type :	Passphrase
Pre-shared Key :	12345678

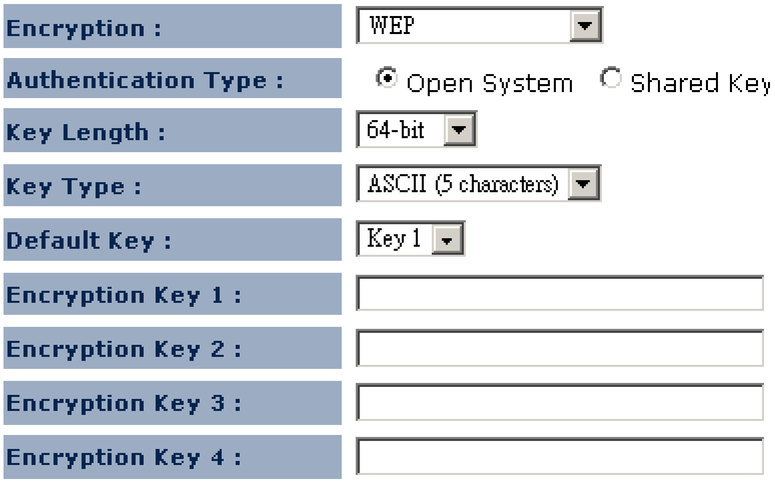
- **ESSID Selection:** This broadband router support multiple ESSID, you could select and set up the wanted ESSID.

- **Broadcast ESSID:** If you enabled “Broadcast ESSID”, every wireless station located within the coverage of this AP can discover this AP easily. If you are building a public wireless network, enabling this feature is recommended. Disabling “Broadcast ESSID” can provide better security.

- **WMM:** Wi-Fi MultiMedia if enabled supports QoS for experiencing better audio, video and voice in applications.

- **Encryption:** When you choose to disable encryption, it is very insecure to operate ERB9250.

8.4.1.WEP Encryption



Encryption :	WEP
Authentication Type :	◉ Open System ○ Shared Key
Key Length :	64-bit
Key Type :	ASCII (5 characters)
Default Key :	Key 1
Encryption Key 1 :	
Encryption Key 2 :	
Encryption Key 3 :	
Encryption Key 4 :	

When you select 64-bit or 128-bit WEP key, you have to enter WEP keys to encrypt data. You can generate the key by yourself and enter it. You can enter four WEP keys and select one of them as a default key. Then AP can receive any packet encrypted by one of the four keys.

- **Authentication Type:** There are two authentication types: **"Open System"** and **"Shared Key"**. Both AP and wireless client must be configured with the same authentication type.

- **Key Length:** You can select the WEP key length for encryption, 64-bit or 128-bit. The larger the key will be the higher level of security is used, but the throughput will be lower.
-
- **Key Type:** You may select ASCII Characters (alphanumeric format) or Hexadecimal Digits (in the "A-F", "a-f" and "0-9" range) to be the WEP Key.

- **Default Key:** It’s the key used to encrypt data.

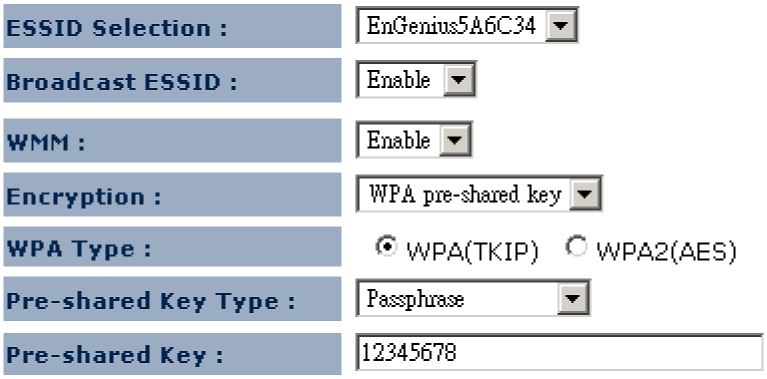
- **Key1 - Key4:** The WEP keys are used to encrypt data transmitted in the wireless network. Use the following rules to setup a WEP key on the device.

- **64-bit WEP:** input 10-digits Hex values (in the "A-F", "a-f" and "0-9" range) or 5-digit ASCII character as the encryption keys.

- **128-bit WEP:** input 26-digit Hex values (in the "A-F", "a-f" and "0-9" range) or 13-digit ASCII characters as the encryption keys.

- Click **<Apply>** at the bottom of the screen to save the above configurations.

8.4.2.WPA Pre-Shared Key Encryption

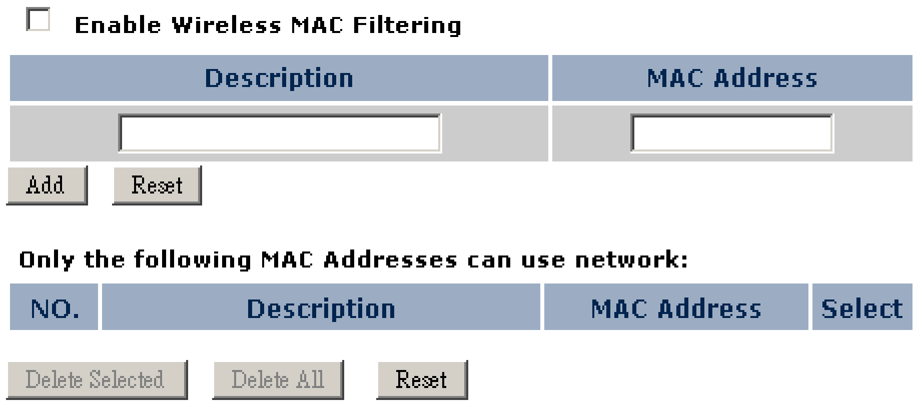


ESSID Selection :	EnGenius5A6C34
Broadcast ESSID :	Enable
WMM :	Enable
Encryption :	WPA pre-shared key
WPA Type :	● WPA(TKIP) ○ WPA2(AES)
Pre-shared Key Type :	Passphrase
Pre-shared Key :	12345678

- Wi-Fi Protected Access (WPA) is an advanced security standard. You can use a pre-shared key to authenticate wireless stations and encrypt data during communication. It uses TKIP or CCMP (AES) to change the encryption key frequently. So the encryption key is not easy to be cracked by hackers. This is the best security available.

8.5. Filter

This wireless router supports MAC Address Control, which prevents unauthorized clients from accessing your wireless network.



☐ Enable Wireless MAC Filtering

Description	MAC Address

Only the following MAC Addresses can use network:

NO.	Description	MAC Address	Select

Enable wireless access control: Enable the wireless access control function

Adding an address into the list

Enter the "MAC Address" and "Description" of the wireless station to be added and then click **<Add>**. The wireless station will now be added into the "MAC Address Filtering Table" below. If you are having any difficulties filling in the fields, just click "Reset" and both "MAC Address" and "Description" fields will be cleared.

Remove an address from the list

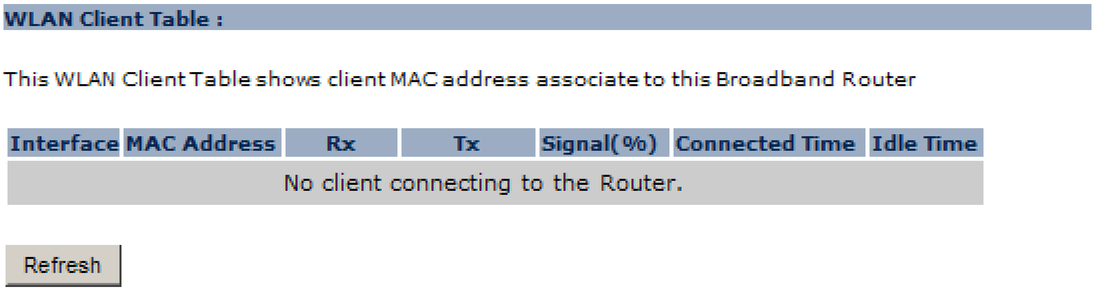
If you want to remove a MAC address from the "MAC Address Filtering Table", select the MAC address that you want to remove in the list and then click "Delete Selected". If you want to remove all the MAC addresses from the list, just click the **<Delete All>** button. Click **<Reset>** will clear your current selections.

Click **<Apply>** at the bottom of the screen to save the above configurations.

8.6. Client List

This page shows all the connected current wireless client users.

Click on [**Refresh**] to get the latest user list and information update.



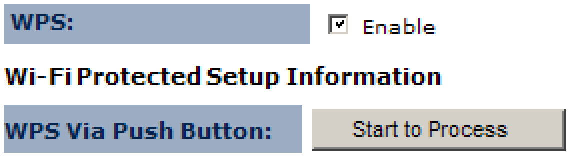
WLAN Client Table :

This WLAN Client Table shows client MAC address associate to this Broadband Router

Interface	MAC Address	Rx	Tx	Signal(%)	Connected Time	Idle Time
No client connecting to the Router.						

8.7. WPS

This interface allows you to activate client WPS and synchronize with other AP. Click [**Start to Process**] to initiate WPS process. It serves the same purpose as the WPS button on the device.

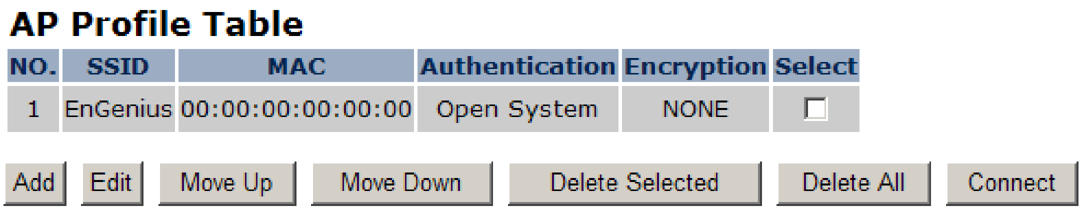


WPS: ☑ Enable

Wi-Fi Protected Setup Information

WPS Via Push Button:

8.8. AP Profile (CB/ CR Mode)

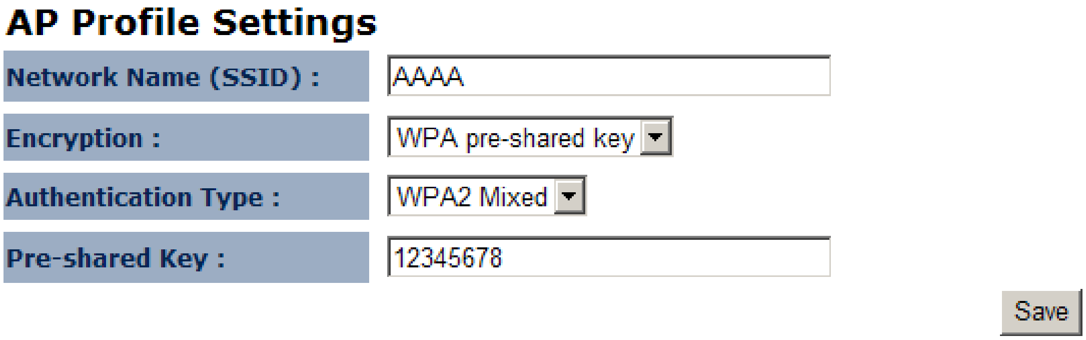


AP Profile Table

NO.	SSID	MAC	Authentication	Encryption	Select
1	EnGenius	00:00:00:00:00:00	Open System	NONE	□

This page allows you to edit your AP profiles. ERB9250 allows you to keep multiple AP candidates. AP on the top of the list has higher precedence than those on the bottom.

Click [**Add**] to create new profile.
Click [**Edit**] to create new profile.



AP Profile Settings

Network Name (SSID) :	AAAA
Encryption :	WPA pre-shared key
Authentication Type :	WPA2 Mixed
Pre-shared Key :	12345678

SSID: enter the SSID of the target AP

Encryption: select the Encryption method

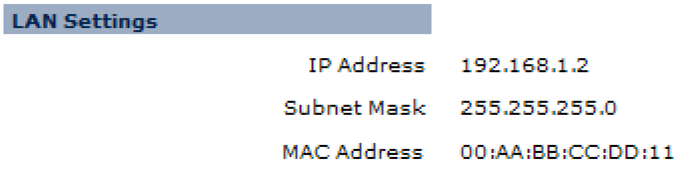
Authentication Type: select authentication type

Pre-shared key: enter the key of for security setting.

Click [**Move Up**] to move the record up
Click [**Move Down**] to move the record down
Click [**Delete Selected**] to remove the chosen profile
Click [**Delete All]** to remove all profiles.
Click [**Connect**] to activate the chosen AP profile

9. Network

9.1. Status



LAN Settings

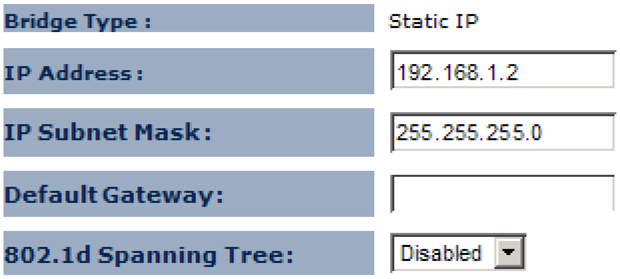
IP Address	192.168.1.2
Subnet Mask	255.255.255.0
MAC Address	00:AA:BB:CC:DD:11

IP address: current IP address of the device

IP Subnet Mask: 255.255.255.0.

MAC Address: MAC address of the device Ethernet port

9.2. LAN



Bridge Type :	Static IP
IP Address :	192.168.1.2
IP Subnet Mask :	255.255.255.0
Default Gateway :	
802.1d Spanning Tree:	Disabled

IP address: 192.168.0.1. It is the router's LAN IP address (the "Default Gateway" IP address of your LAN clients). It can be changed based on your own choice.

IP Subnet Mask: 255.255.255.0 Specify a Subnet Mask for your LAN segment.

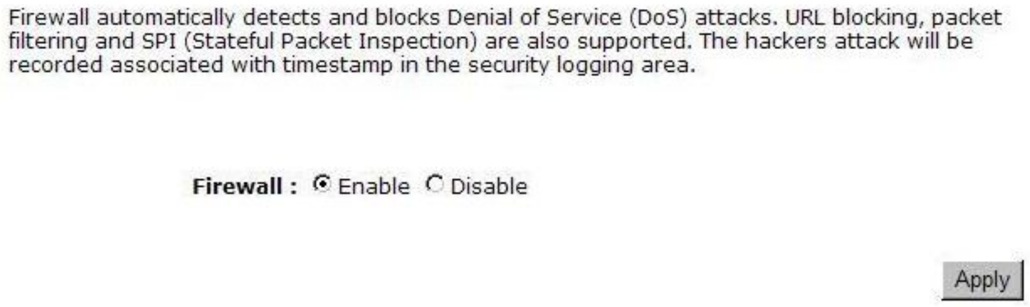
Default Gateway: please specify gateway IP if any. Leave it blank if you are unsure of this setting.

802.1d Spanning Tree: This is disabled by default. If 802.1d Spanning Tree function is enabled, this router will use the spanning tree protocol to prevent network loops.

10. Firewall (CR Mode)

10.1. Enable

The Broadband router provides extensive firewall protection by restricting connection parameters, thus limiting the risk of hacker attacks, and defending against a wide array of common Internet attacks. However, for applications that require unrestricted access to the Internet, you can configure a specific client/server as a Demilitarized Zone (DMZ).

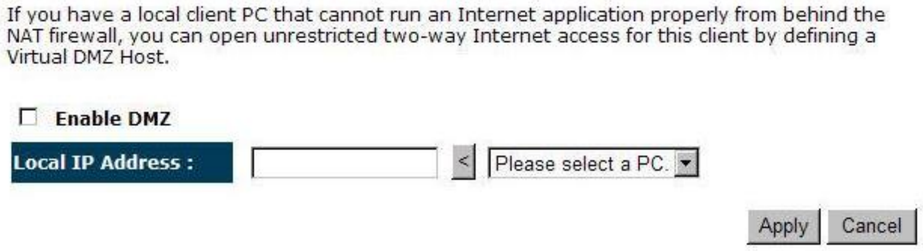


Firewall automatically detects and blocks Denial of Service (DoS) attacks. URL blocking, packet filtering and SPI (Stateful Packet Inspection) are also supported. The hackers attack will be recorded associated with timestamp in the security logging area.

Firewall : ● Enable ○ Disable

10.2. DMZ (Demilitarized Zone)

If you have a client PC that cannot run an Internet application (e.g. Games) properly from behind the NAT firewall, then you can open up the firewall restrictions to unrestricted two-way Internet access by defining a DMZ Host. The DMZ function allows you to re-direct all packets going to your WAN port IP address to a particular IP address in your LAN. The difference between the virtual server and the DMZ function is that the virtual server re-directs a particular service/Internet application (e.g. FTP, websites) to a particular LAN client/server, whereas DMZ re-directs all packets (regardless of services) from your WAN IP address to a particular server or client.



If you have a local client PC that cannot run an Internet application properly from behind the NAT firewall, you can open unrestricted two-way Internet access for this client by defining a Virtual DMZ Host.

□ **Enable DMZ**

Local IP Address :

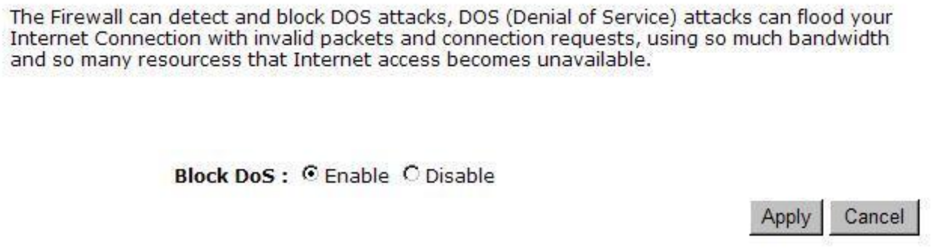
Enable DMZ: Enable/disable DMZ

LAN IP Address: Fill-in the IP address of a particular host in your LAN Network or select a PC from the list on the right that will receive all the packets originally from the WAN port/Public IP address.

Click **<Apply>** at the bottom of the screen to save the above configurations.

10.3. DoS (Denial of Service)

The Broadband router's firewall can block common hacker attacks, including Denial of Service, Ping of Death, Port Scan and Sync Flood. If Internet attacks occur the router can log the events.



The Firewall can detect and block DOS attacks, DOS (Denial of Service) attacks can flood your Internet Connection with invalid packets and connection requests, using so much bandwidth and so many resourcess that Internet access becomes unavailable.

Block DoS : ● Enable ○ Disable

Ping of Death: Protections from Ping of Death attack.

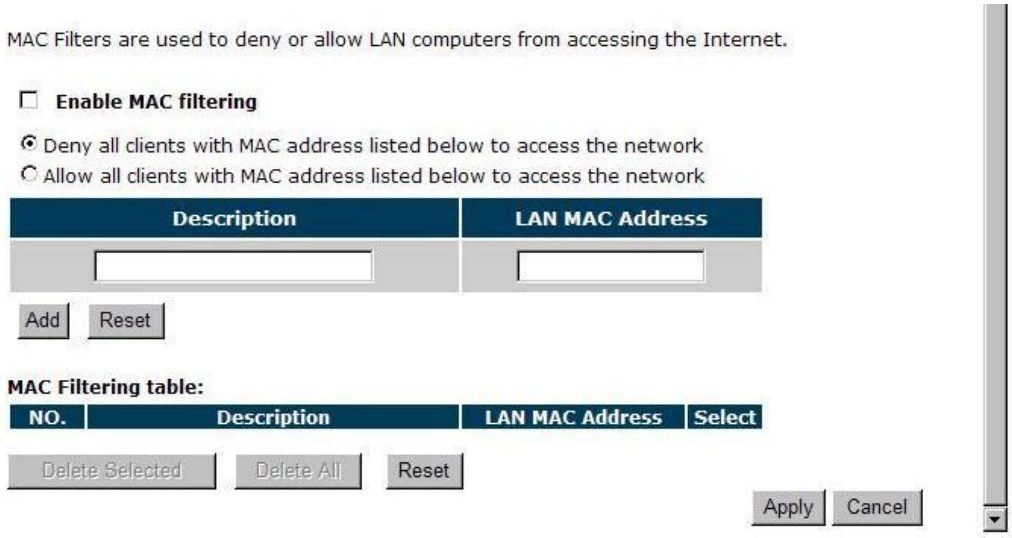
Discard Ping From WAN: The router’s WAN port will not respond to any Ping requests

Port Scan: Protects the router from Port Scans.

Sync Flood: Protects the router from Sync Flood attack.

10.4. MAC Filter

If you want to restrict users from accessing certain Internet applications / services (e.g. Internet websites, email, FTP etc.), and then this is the place to set that configuration. MAC Filter allows users to define the traffic type permitted in your LAN. You can control which PC client can have access to these services.



MAC Filters are used to deny or allow LAN computers from accessing the Internet.

□ **Enable MAC filtering**

● Deny all clients with MAC address listed below to access the network
○ Allow all clients with MAC address listed below to access the network

Description	LAN MAC Address

MAC Filtering table:

NO.	Description	LAN MAC Address	Select

Enable MAC Filtering: Check to enable or disable MAC Filtering.

Deny: If you select “**Deny**” then all clients will be allowed to access Internet except the clients in the list below.

Allow: If you select “**Allow**” then all clients will be denied to access Internet except the PCs in the list below.

Add PC MAC Address

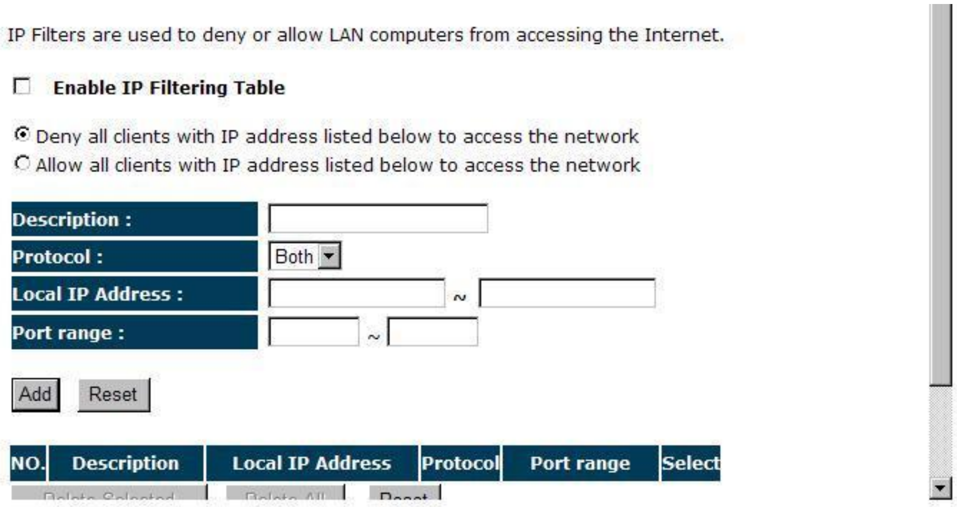
Fill in “**LAN MAC Address**” and **<Description>** of the PC that is allowed / denied to access the Internet, and then click **<Add>**. If you find any typo before adding it and want to retype again, just click **<Reset>** and the fields will be cleared.

Remove PC MAC Address

If you want to remove some PC from the "**MAC Filtering Table**", select the PC you want to remove in the table and then click **<Delete Selected>**. If you want to remove all PCs from the table, just click the **<Delete All>** button. If you want to clear the selection and re-select again, just click **<Reset>**.

Click **<Apply>** at the bottom of the screen to save the above configurations.

10.5. IP Filter



IP Filters are used to deny or allow LAN computers from accessing the Internet.

□ **Enable IP Filtering Table**

● Deny all clients with IP address listed below to access the network
○ Allow all clients with IP address listed below to access the network

Description :	
Protocol :	Both
Local IP Address :	~
Port range :	~

NO.	Description	Local IP Address	Protocol	Port range	Select

Enable IP Filtering: Check to enable or uncheck to disable IP Filtering.

Deny: If you select "**Deny**" then all clients will be allowed to access Internet except for the clients in the list below.

Allow: If you select "**Allow**" then all clients will be denied to access Internet except for the PCs in the list below.

<u>Add PC IP Address</u>

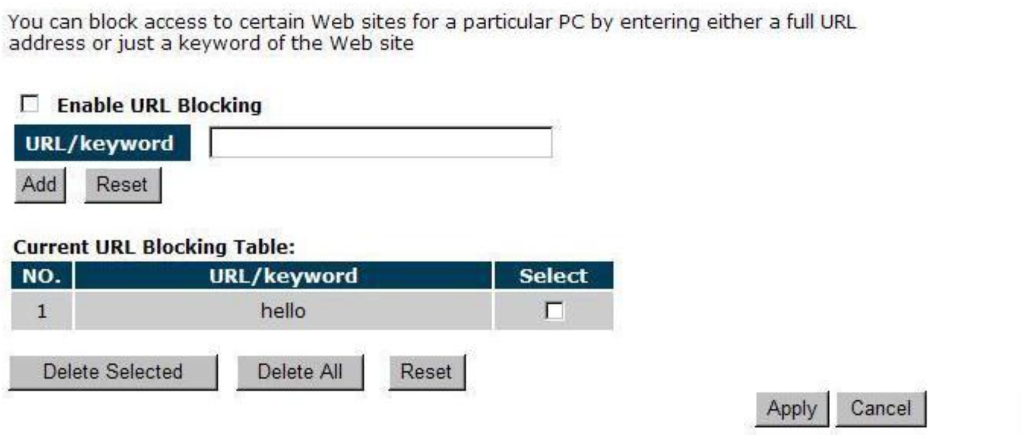
You can click **<Add>** PC to add an access control rule for users by an IP address or IP address range.

<u>Remove PC IP Address</u>

If you want to remove some PC IP from the **<IP Filtering Table>**,
select the PC you want to remove in the table and then click **<Delete Selected>**. If you want to remove all PCs from the table, just click the **<Delete All>** button.

Click **<Apply>** at the bottom of the screen to save the above configurations.

10.6. URL Filter



You can block access to certain Web sites for a particular PC by entering either a full URL address or just a keyword of the Web site

☐ Enable URL Blocking

URL/keyword

Current URL Blocking Table:

NO.	URL/keyword	Select
1	hello	☐

Enable URL Blocking: Enable or disable URL Blocking

Add URL Keyword

Fill in “URL/Keyword” and then click **<Add>**. You can enter the full URL address or the keyword of the web site you want to block. If you happen to make a mistake and want to retype again, just click "Reset" and the field will be cleared.

Remove URL Keyword

If you want to remove some URL keywords from the "**Current URL Blocking Table**", select the URL keyword you want to remove in the table and then click **<Delete Selected>**.

If you want remove all URL keywords from the table, click **<Delete All>** button. If you want to clear the selection and re-select again, just click **<Reset**>.

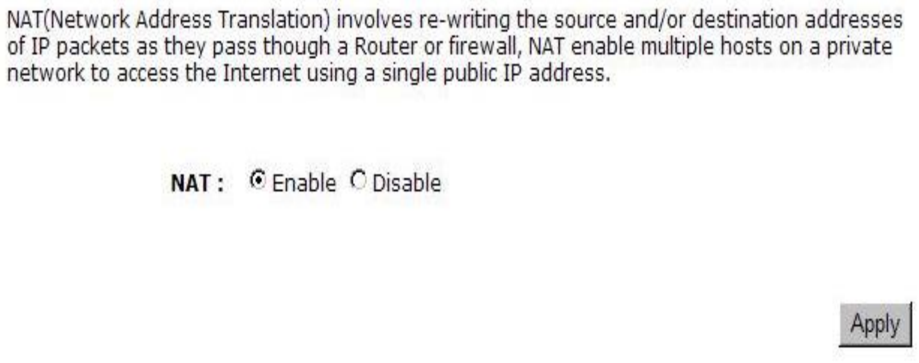
Click **<Apply>** at the bottom of the screen to save the above configurations

11. Advanced (CR Mode)

11.1. NAT

Network Address Translation (NAT)

Network Address Translation (NAT) allows multiple users at your local site to access the Internet through a single Public IP Address or multiple Public IP Addresses. NAT provides Firewall protection from hacker attacks and has the flexibility to allow you to map Private IP Addresses to Public IP Addresses for key services such as Websites and FTP. Select Disable to disable the NAT function.

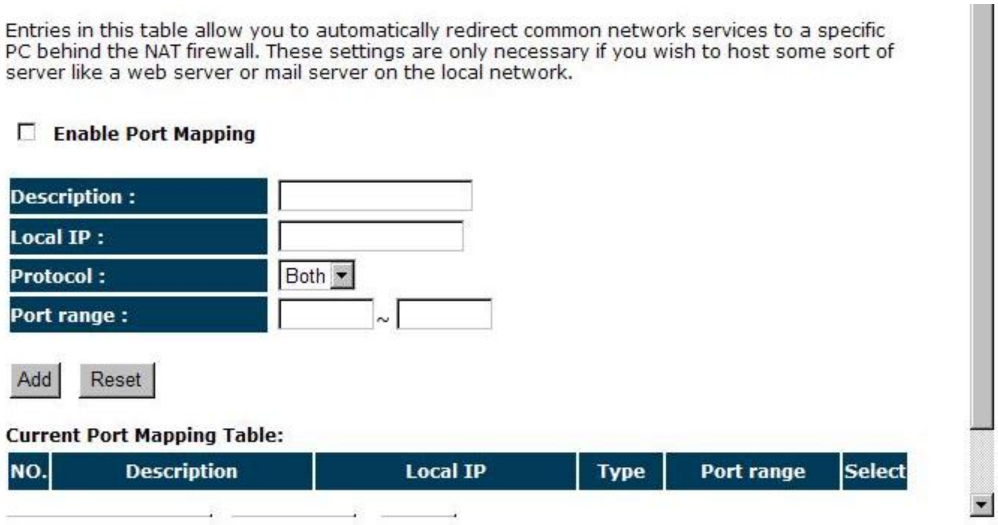


NAT(Network Address Translation) involves re-writing the source and/or destination addresses of IP packets as they pass though a Router or firewall, NAT enable multiple hosts on a private network to access the Internet using a single public IP address.

NAT : ● Enable ○ Disable

11.2. Port Mapping

Port Mapping allows you to re-direct a particular range of service port numbers (from the Internet / WAN Port) to a particular LAN IP address. It helps you to host servers behind the router NAT firewall.



Entries in this table allow you to automatically redirect common network services to a specific PC behind the NAT firewall. These settings are only necessary if you wish to host some sort of server like a web server or mail server on the local network.

□ Enable Port Mapping

Description :	
Local IP :	
Protocol :	Both
Port range :	~

Current Port Mapping Table:

NO.	Description	Local IP	Type	Port range	Select

Enable Port Mapping: Enable or disable port mapping function.

Description: description of this setting.

Local IP: This is the local IP of the server behind the NAT firewall.

Protocol: This is the protocol type to be forwarded. You can choose to forward "**TCP**" or "**UDP**" packets only, or select "**BOTH**" to forward both "**TCP**" and "**UDP**" packets.

Port Range: The range of ports to be forward to the private IP.

Add Port Mapping

Fill in the "**Local IP**", "**Protocol**", "**Port Range**" and "**Description**" of the setting to be added and then click "**Add**". Then this Port Mapping setting will be added into the "**Current Port Mapping Table**" below. If you find any typo before adding it and want to retype again, just click **<Reset>** and the fields will be cleared.

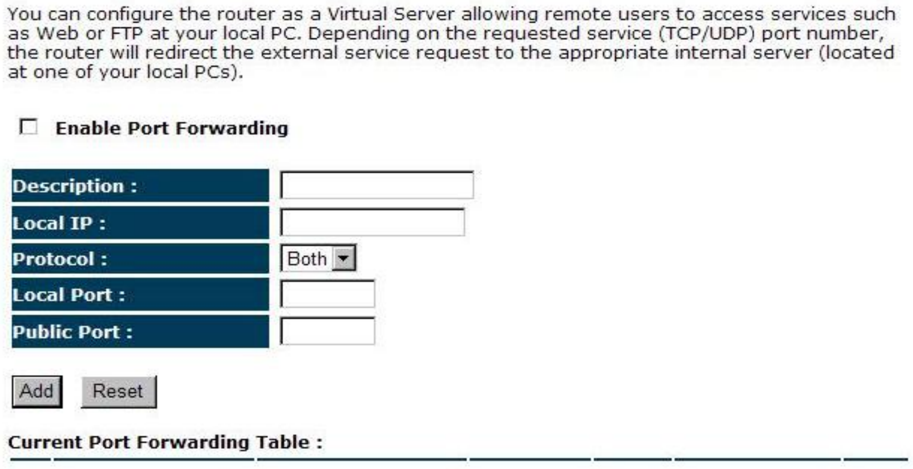
Remove Port Mapping

If you want to remove a Port Mapping setting from the "**Current Port Mapping Table**", select the Port Mapping setting that you want to remove in the table and then click **D<Delete Selected>**. If you want to remove all Port Mapping settings from the table, click **<Delete All>** button. Click **<Reset>** will clear your current selections.

Click <**Apply**> at the bottom of the screen to save the above configurations.

11.3. Port Forwarding

Use the Port Forwarding (Virtual Server) function when you want different servers/clients in your LAN to handle different service/Internet application type (e.g. Email, FTP, Web server etc.) from the Internet. Computers use numbers called port numbers to recognize a particular service/Internet application type. The Virtual Server allows you to re-direct a particular service port number (from the Internet/WAN Port) to a particular LAN private IP address (See Glossary for an explanation on Port number).



You can configure the router as a Virtual Server allowing remote users to access services such as Web or FTP at your local PC. Depending on the requested service (TCP/UDP) port number, the router will redirect the external service request to the appropriate internal server (located at one of your local PCs).

□ **Enable Port Forwarding**

Description :	
Local IP :	
Protocol :	Both
Local Port :	
Public Port :	

Current Port Forwarding Table :

Enable Port Forwarding: Enable or disable Port Forwarding.

Description: The description of this setting.

Local IP / Local Port: This is the LAN Client/Host IP address and Port number that the Public Port number packet will be sent to.

Protocol: Select the port number protocol type (TCP, UDP or both). If you are unsure, then leave it to the default "both" setting. Public Port enters the service

(service/Internet application) port number from the Internet that will be re-directed to the above Private IP address host in your LAN Network.

Public Port: Port number will be changed to Local Port when the packet enters your LAN Network.

Add Port Forwarding

Fill in the "**Description**" , "**Local IP**", "**Local Port**", "**Protocol**" and “**Public Port**” of the setting to be added and then click **<Add>** button. Then this Virtual Server setting will be added into the "**Current Port Forwarding Table**" below. If you find any typo before adding it and want to retype again, just click **<Reset>** and the fields will be cleared.

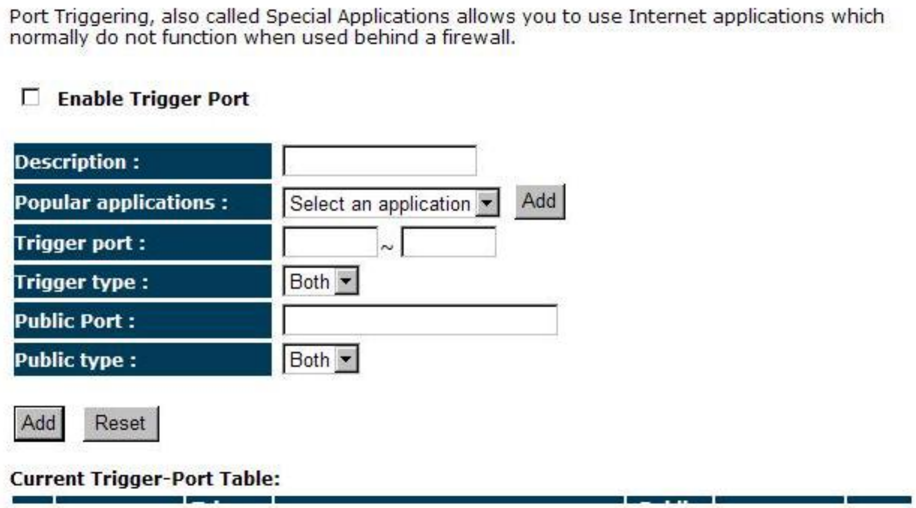
Remove Port Forwarding

If you want to remove Port Forwarding settings from the "**Current Port Forwarding Table**", select the Port Forwarding settings you want to remove in the table and then click "**Delete Selected**". If you want to remove all Port Forwarding settings from the table, just click the **<Delete All>** button. Click **<Reset>** will clear your current selections.

Click <**Apply**> at the bottom of the screen to save the above configurations.

11.4. Port Triggering

Some applications require multiple connections, such as Internet games, video Conferencing, Internet telephony and others. In this section you can configure the router to support multiple connections for these types of applications.



Port Triggering, also called Special Applications allows you to use Internet applications which normally do not function when used behind a firewall.

□ **Enable Trigger Port**

Description :	
Popular applications :	Select an application ▾ Add
Trigger port :	~
Trigger type :	Both ▾
Public Port :	
Public type :	Both ▾

Current Trigger-Port Table:

Enable Trigger Port: Enable or disable the Port Trigger function.

Trigger Port: This is the outgoing (Outbound) range of port numbers for this particular application.

Trigger Type: Select whether the outbound port protocol is “**TCP**”, “**UDP**” or “**BOTH**”.

Public Port: Enter the In-coming (Inbound) port or port range for this type of application (e.g. 2300-2400, 47624)

Public Type: Select the Inbound port protocol type: “**TCP**”, “**UDP**” or “**BOTH**”

Popular Applications: This section lists the more popular applications that require multiple connections. Select an application from the Popular Applications selection. Once you have selected an application, select a location (1-5) in the “Add” selection box and then click the <Add> button. This will automatically list the Public Ports required for this popular application in the location (1-5) you specified.

Add Port Triggering

Fill in the "**Trigger Port**", "**Trigger Type**”, “**Public Port**”, "**Public Type**", "**Public Port**" and "**Description**" of the setting to be added and then Click **<Add>**. The Port

Triggering setting will be added into the "**Current Trigger-Port Table**" below. If you happen to make a mistake, just click **<Reset>** and the fields will be cleared.

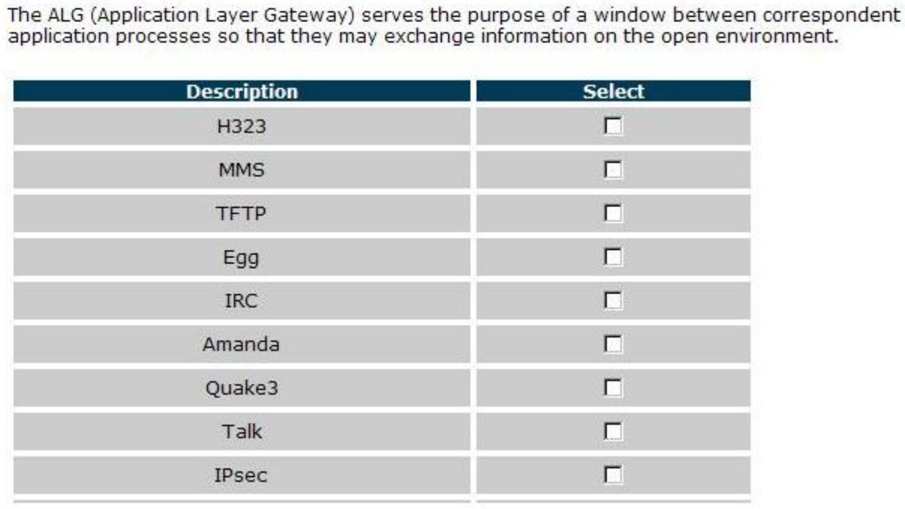
Remove Port Triggering

If you want to remove Special Application settings from the "**Current Trigger-Port Table**", select the Port Triggering settings you want to remove in the table and then click **<Delete Selected>**. If you want remove all Port Triggering settings from the table, just click the **<Delete All>** button. Click **<Reset>** will clear your current selections.

11.5. ALG

Application Layer Gateway (ALG)

You can select applications that need **ALG** support. The router will let the selected application to correctly pass through the NAT gateway.

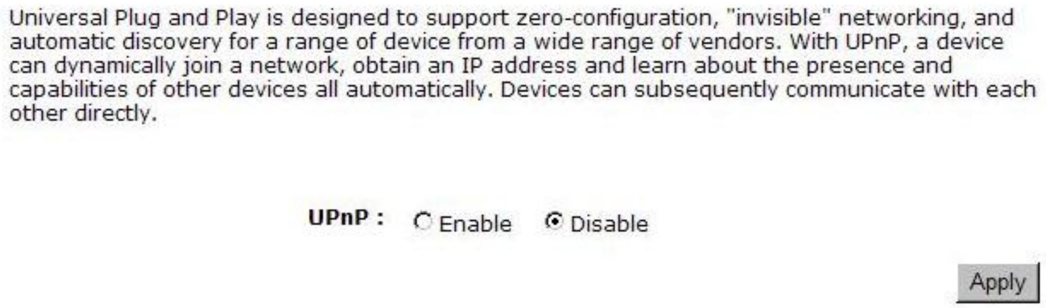


The ALG (Application Layer Gateway) serves the purpose of a window between correspondent application processes so that they may exchange information on the open environment.

Description	Select
H323	☐
MMS	☐
TFTP	☐
Egg	☐
IRC	☐
Amanda	☐
Quake3	☐
Talk	☐
IPsec	☐

11.6. UPnP

With UPnP, all PCs in you Intranet will discover this router automatically. So, you don’t have to configure your PC and it can easily access the Internet through this router.



Universal Plug and Play is designed to support zero-configuration, "invisible" networking, and automatic discovery for a range of device from a wide range of vendors. With UPnP, a device can dynamically join a network, obtain an IP address and learn about the presence and capabilities of other devices all automatically. Devices can subsequently communicate with each other directly.

UPnP : ○ Enable ● Disable

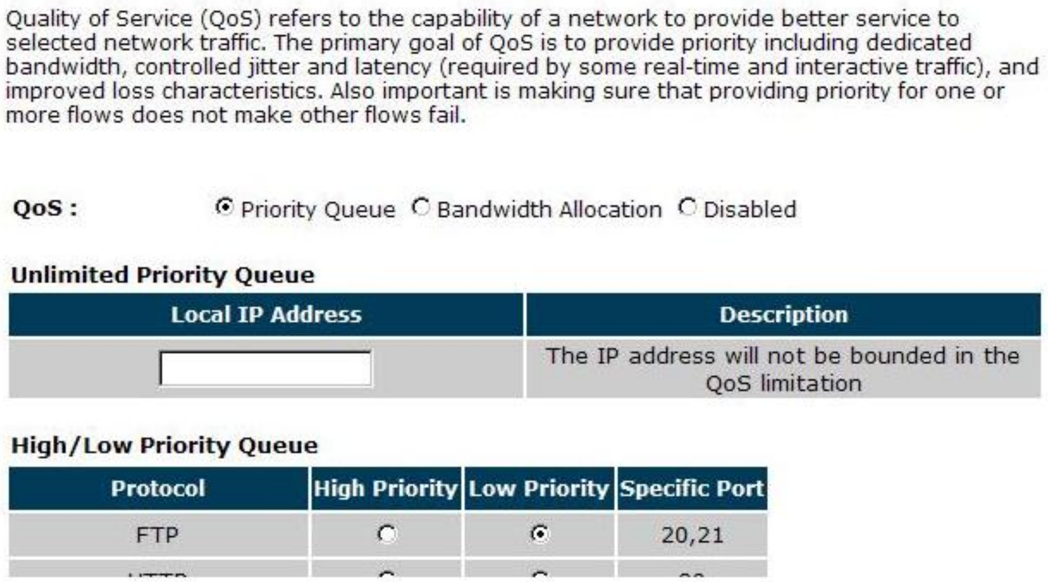
Enable/Disable UPnP: You can enable or Disable the UPnP feature here. After you enable the UPnP feature, all client systems that support UPnP, like Windows XP, can discover this router automatically and access the Internet through this router without having to configure anything. The NAT Traversal function provided by UPnP can let applications that support UPnP connect to the internet without having to configure the virtual server sections.

11.7. QoS

QoS can let you classify Internet application traffic by source/destination IP address and port number. You can assign priority for each type of application and reserve bandwidth for it. The packets of applications with higher priority will always go first. Lower priority applications will get bandwidth after higher priority applications get enough bandwidth. This can let you have a better experience in using critical real time services like Internet phone, video conference …etc. All the applications not specified by you are classified as rule “Others”.

Priority Queue

This can put the packets of specific protocols in High/Low Queue. The packets in High Queue will process first.



Quality of Service (QoS) refers to the capability of a network to provide better service to selected network traffic. The primary goal of QoS is to provide priority including dedicated bandwidth, controlled jitter and latency (required by some real-time and interactive traffic), and improved loss characteristics. Also important is making sure that providing priority for one or more flows does not make other flows fail.

QoS : ● Priority Queue ○ Bandwidth Allocation ○ Disabled

Unlimited Priority Queue

Local IP Address	Description
	The IP address will not be bounded in the QoS limitation

High/Low Priority Queue

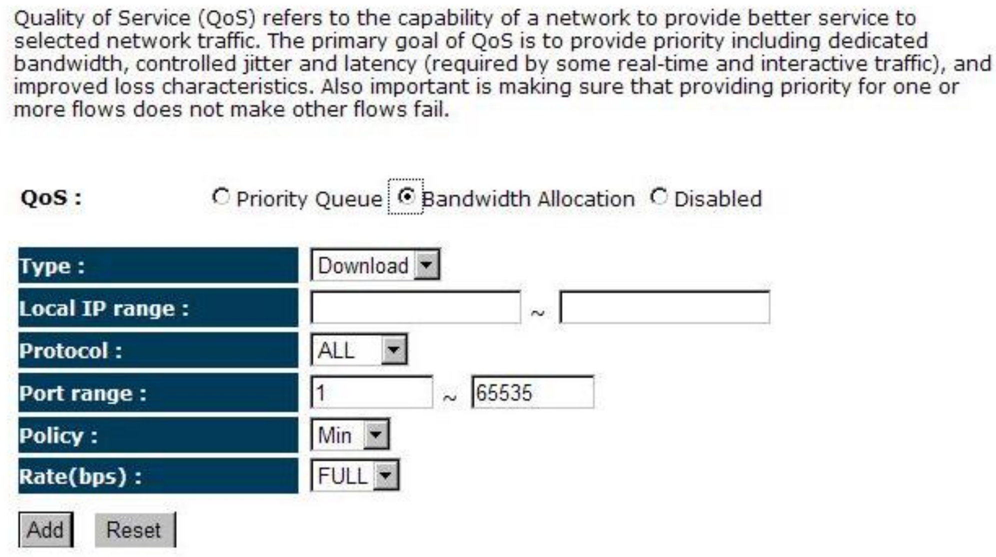
Protocol	High Priority	Low Priority	Specific Port
FTP	○	●	20,21

Unlimited Priority Queue: The LAN IP address will not be bounded in the QoS limitation.

High/Low Priority Queue: This can put the packets in the protocol and port range to High/Low QoS Queue.

Bandwidth Allocation:

This can reserve / limit the throughput of specific protocols and port range. You can set the upper bound and Lower bound.



Quality of Service (QoS) refers to the capability of a network to provide better service to selected network traffic. The primary goal of QoS is to provide priority including dedicated bandwidth, controlled jitter and latency (required by some real-time and interactive traffic), and improved loss characteristics. Also important is making sure that providing priority for one or more flows does not make other flows fail.

QoS : ○ Priority Queue ● Bandwidth Allocation ○ Disabled

Type :	Download
Local IP range :	~
Protocol :	ALL
Port range :	1 ~ 65535
Policy :	Min
Rate(bps) :	FULL

Type: Specify the direction of packets. Upload, download or both.

IP range: Specify the IP address range. You could also fill one IP address

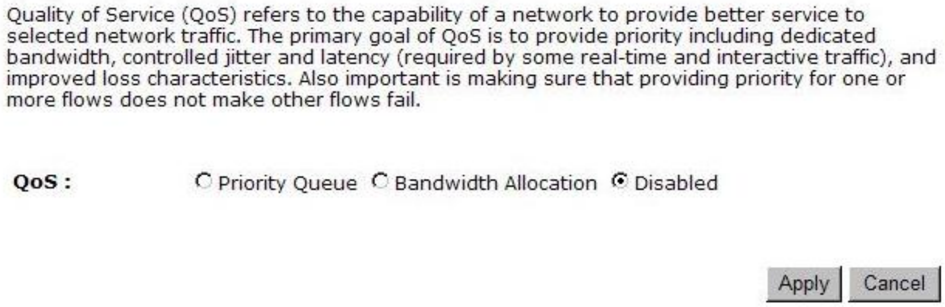
Protocol: Specify the packet type. The default ALL will put all packets in the QoS priority Queue.

Port range: Specify the Port range. You could also fill one Port.

Policy: Specify the policy the QoS, **Min** option will reserve the selected data rate in QoS queue. **Max** option will limit the selected data rate in QoS queue.

Rate: The data rate of QoS queue.

Disabled: This could turn off QoS feature.

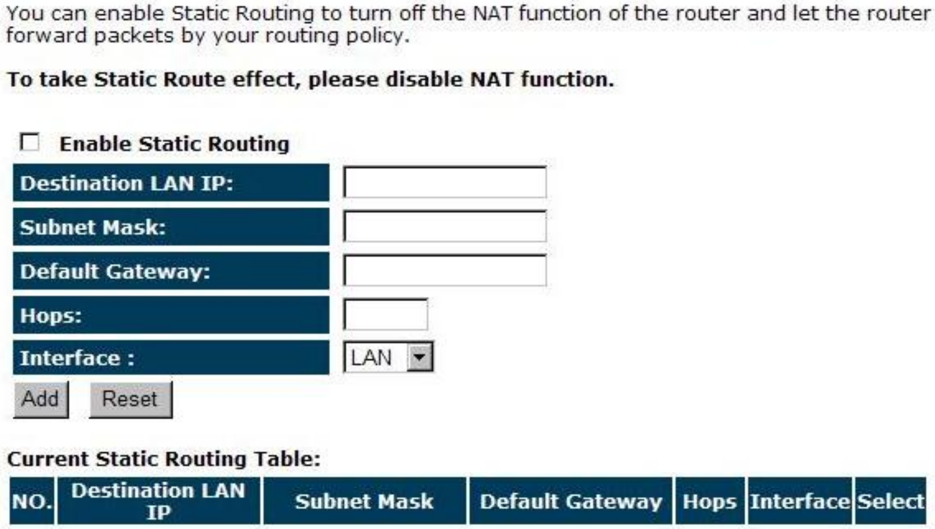


Quality of Service (QoS) refers to the capability of a network to provide better service to selected network traffic. The primary goal of QoS is to provide priority including dedicated bandwidth, controlled jitter and latency (required by some real-time and interactive traffic), and improved loss characteristics. Also important is making sure that providing priority for one or more flows does not make other flows fail.

QoS : ○ Priority Queue ○ Bandwidth Allocation ● Disabled

11.8. Static Routing

You can set enable Static Routing to let the router forward packets by your routing policy.



You can enable Static Routing to turn off the NAT function of the router and let the router forward packets by your routing policy.

To take Static Route effect, please disable NAT function.

☐ **Enable Static Routing**

Destination LAN IP:	
Subnet Mask:	
Default Gateway:	
Hops:	
Interface :	LAN

Current Static Routing Table:

NO.	Destination LAN IP	Subnet Mask	Default Gateway	Hops	Interface	Select

Destination LAN IP: Specify the destination LAN IP address of static routing rule.

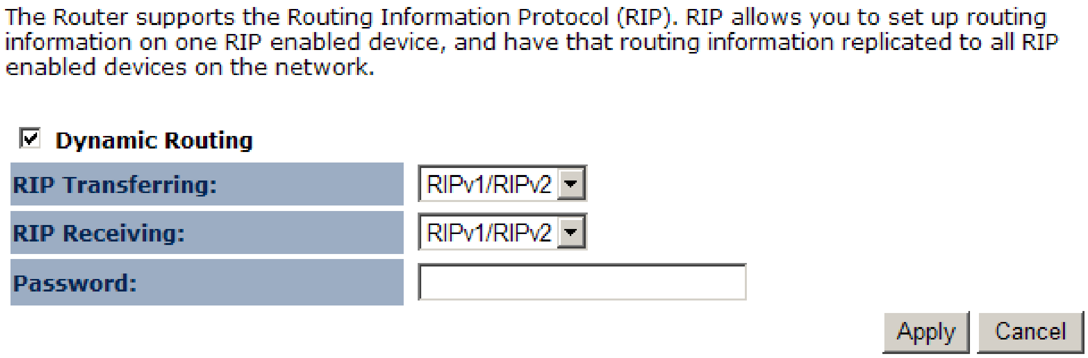
Subnet Mask: Specify the Subnet Mask of static routing rule.

Default Gateway: Specify the default gateway of static routing rule.

Hops: Specify the Max Hops number of static routing rule.

Interface: Specify the Interface of static routing rule.

11.9. Dynamic Routing



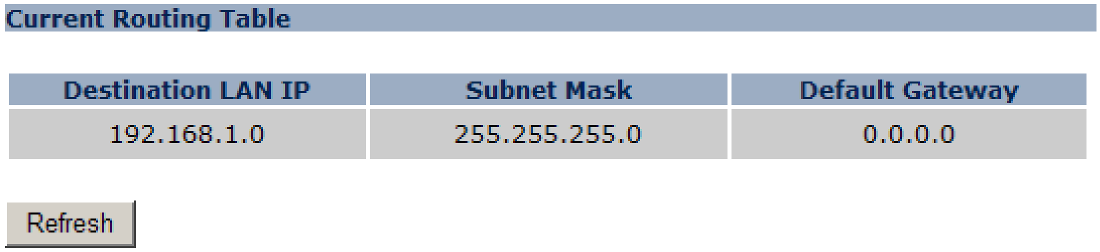
The Router supports the Routing Information Protocol (RIP). RIP allows you to set up routing information on one RIP enabled device, and have that routing information replicated to all RIP enabled devices on the network.

☑ **Dynamic Routing**

RIP Transferring:	RIPv1/RIPv2
RIP Receiving:	RIPv1/RIPv2
Password:	

This page allows you to configure Dynamic Routing.

11.10. Routing Table



Current Routing Table

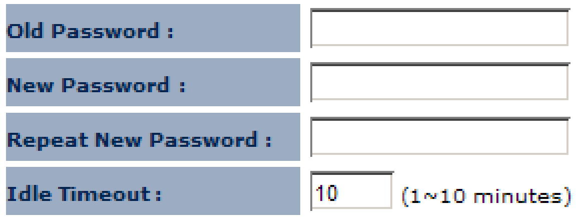
Destination LAN IP	Subnet Mask	Default Gateway
192.168.1.0	255.255.255.0	0.0.0.0

The page shows the device routing table.

12. Management

12.1. Admin

You can change the password required to log into the broadband router's system web-based management. By default, the password is: admin. Passwords can contain 0 to 12 alphanumeric characters, and are case sensitive.



Old Password :	
New Password :	
Repeat New Password :	
Idle Timeout :	10 (1~10 minutes)

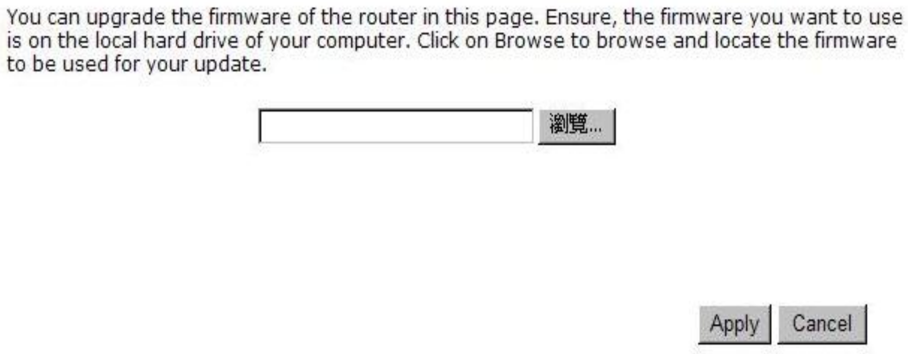
Old Password: Fill in the current password to allow changing to a new password.

New Password: Enter your new password and type it again in **Repeat New Password** for verification purposes

Idle Timeout: enter Administration Page timeout.

12.2. Firmware

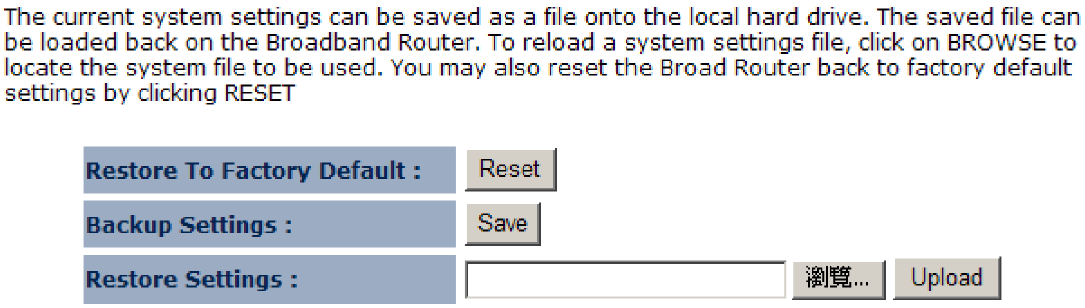
This page allows you to upgrade the router's firmware. To upgrade the firmware of your Broadband router, you need to download the firmware file to your local hard disk, and enter that file name and path in the appropriate field on this page. You can also use the Browse button to find the firmware file on your PC.



You can upgrade the firmware of the router in this page. Ensure, the firmware you want to use is on the local hard drive of your computer. Click on Browse to browse and locate the firmware to be used for your update.

Once you've selected the new firmware file, click <**Apply**> at the bottom of the screen to start the upgrade process

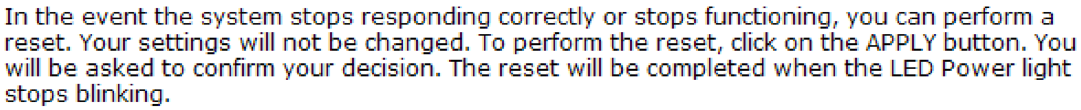
12.3. Configure



The current system settings can be saved as a file onto the local hard drive. The saved file can be loaded back on the Broadband Router. To reload a system settings file, click on BROWSE to locate the system file to be used. You may also reset the Broad Router back to factory default settings by clicking RESET

This page allows you to save the current router configurations. When you save the configurations, you also can re-load the saved configurations into the router through the **Restore Settings**. If extreme problems occur you can use the **Restore to Factory Defaults** to set all configurations to its original default settings.

12.4. Reset



In the event the system stops responding correctly or stops functioning, you can perform a reset. Your settings will not be changed. To perform the reset, click on the APPLY button. You will be asked to confirm your decision. The reset will be completed when the LED Power light stops blinking.

Click on **[Apply**] to reset to default.

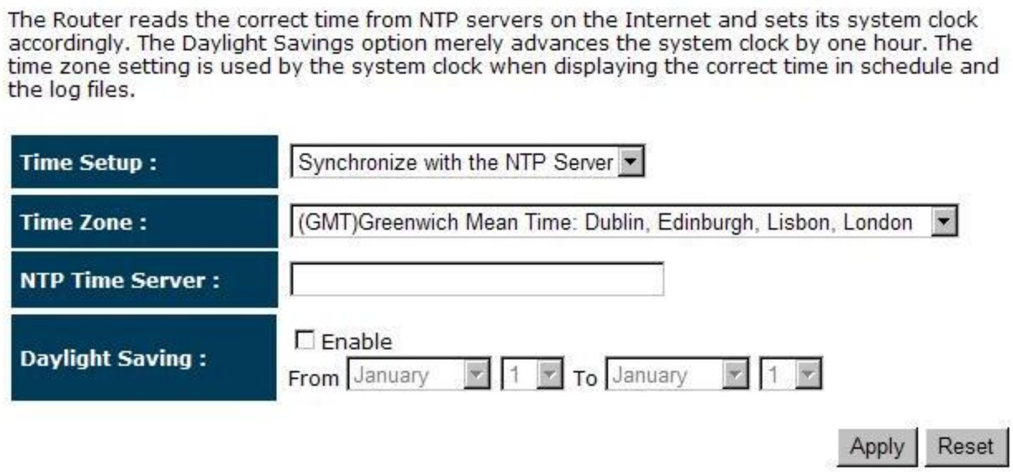
13. Tools

13.1. Time Setting

The Time Zone allows your router to reference or base its time on the settings configured here, which will affect functions such as Log entries and Firewall settings.

Time Setup:

Synchronize with the NTP server



The Router reads the correct time from NTP servers on the Internet and sets its system clock accordingly. The Daylight Savings option merely advances the system clock by one hour. The time zone setting is used by the system clock when displaying the correct time in schedule and the log files.

Time Setup :	Synchronize with the NTP Server
Time Zone :	(GMT)Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London
NTP Time Server :	
Daylight Saving :	□ Enable From January 1 To January 1

Time Zone: Select the time zone of the country you are currently in. The router will set its time based on your selection.

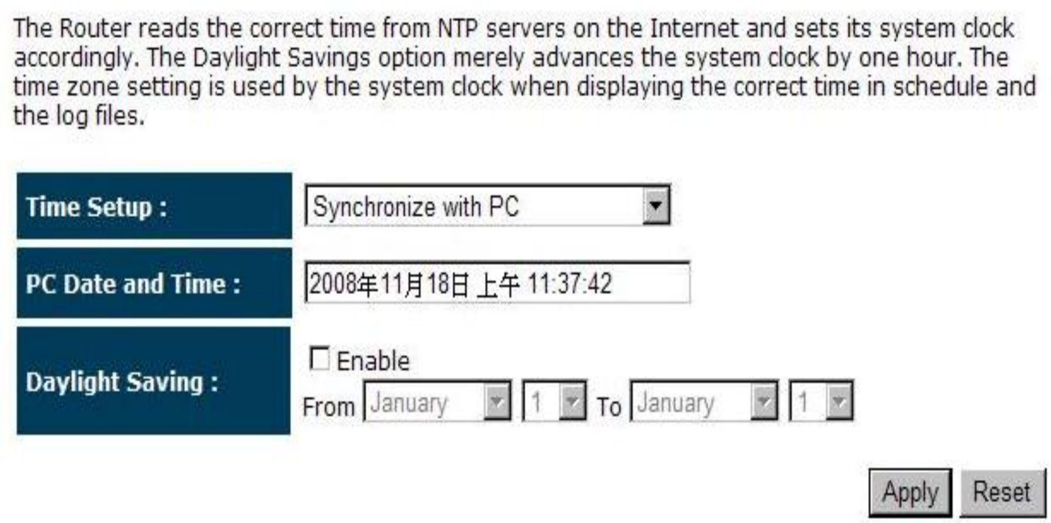
NTP Time Server: The router can set up external NTP Time Server.

Daylight Savings: The router can also take Daylight Savings into account. If you wish to use this function, you must select the Daylight Savings Time period and check/tick the enable box to enable your daylight saving configuration.

Click **<Apply>** at the bottom of the screen to save the above configurations.

Synchronize with PC

You could synchronize timer with your Local PC time.



The Router reads the correct time from NTP servers on the Internet and sets its system clock accordingly. The Daylight Savings option merely advances the system clock by one hour. The time zone setting is used by the system clock when displaying the correct time in schedule and the log files.

Time Setup :	Synchronize with PC
PC Date and Time :	2008年11月18日 上午 11:37:42
Daylight Saving :	□ Enable From January 1 To January 1

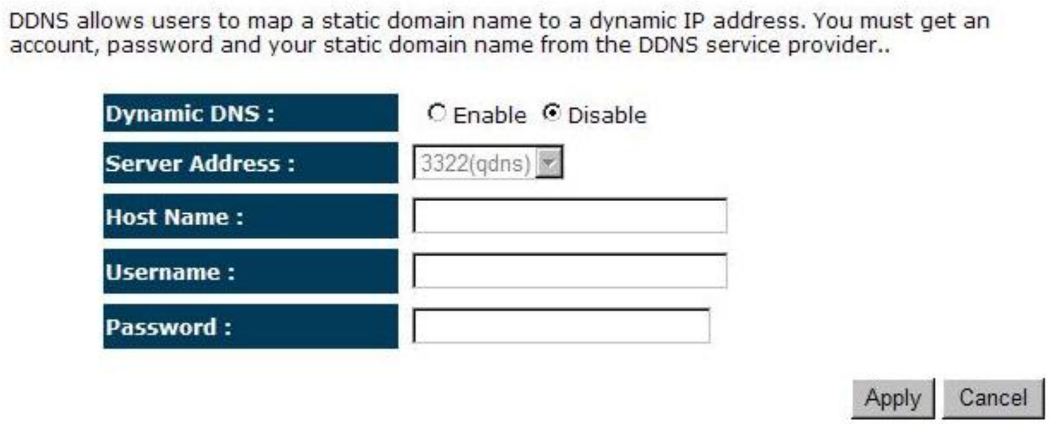
PC Date and Time: This field would display the PC date and time.

Daylight Savings: The router can also take Daylight Savings into account. If you wish to use this function, you must select the Daylight Savings Time period and check/tick the enable box to enable your daylight saving configuration.

Click **<Apply>** at the bottom of the screen to save the above configurations.

13.2. DDNS (CR Mode)

DDNS allows you to map the static domain name to a dynamic IP address. You must get an account, password and your static domain name from the DDNS service providers. This router supports DynDNS, TZO and other common DDNS service providers.



DDNS allows users to map a static domain name to a dynamic IP address. You must get an account, password and your static domain name from the DDNS service provider..

Dynamic DNS : ○ Enable ● Disable

Server Address : 3322(qdns)

Host Name :

Username :

Password :

Enable/Disable DDNS: Enable or disable the DDNS function of this router

Server Address: Select a DDNS service provider

Host Name: Fill in your static domain name that uses DDNS.

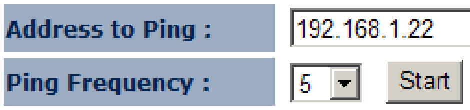
Username: The account that your DDNS service provider assigned to you.

Password: The password you set for the DDNS service account above

Click **<Apply>** at the bottom of the screen to save the above configurations.

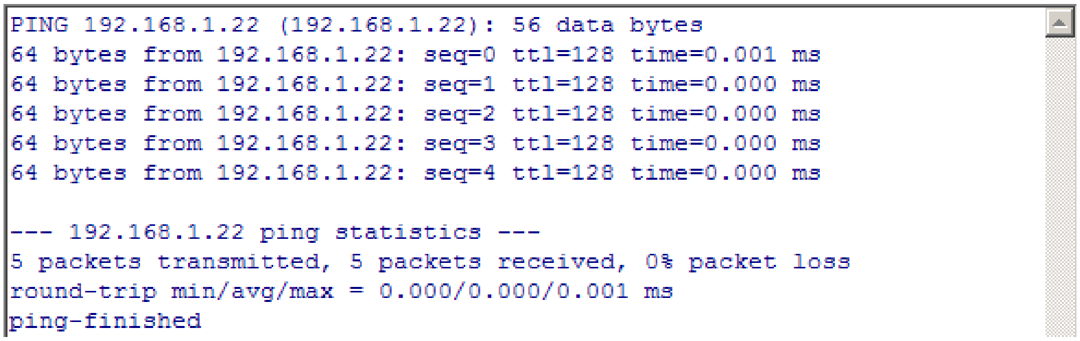
13.3. Diagnosis

This page allows you to test your network. Type in the address for diagnosis.



Address to Ping : 192.168.1.22

Ping Frequency : 5

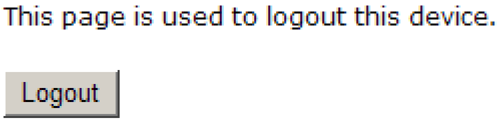


```
PING 192.168.1.22 (192.168.1.22): 56 data bytes
64 bytes from 192.168.1.22: seq=0 ttl=128 time=0.001 ms
64 bytes from 192.168.1.22: seq=1 ttl=128 time=0.000 ms
64 bytes from 192.168.1.22: seq=2 ttl=128 time=0.000 ms
64 bytes from 192.168.1.22: seq=3 ttl=128 time=0.000 ms
64 bytes from 192.168.1.22: seq=4 ttl=128 time=0.000 ms

--- 192.168.1.22 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max = 0.000/0.000/0.001 ms
ping-finished
```

14. Logout

Click on [**Logout**] button to logout.



This page is used to logout this device.

Appendix A – FCC Interference Statement

Federal Communication Commission Interference Statement

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

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

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

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

We declare that the product is limited in CH1~CH11 by specified firmware controlled in the USA.

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

Appendix B – IC Interference Statement

Industry Canada statement:

This device complies with RSS-210 of the Industry Canada 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.

IMPORTANT NOTE:
Radiation Exposure Statement:
This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment.
This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This device has been designed to operate with an antenna having a maximum gain of 2 dBi. Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is 50 ohms.