

# EnGenius<sup>®</sup>

Wireless-N Pocket AP/Router

**ETR9360**

Wireless-N Pocket AP/Router

V1.0



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## Revision History

Version	Date	Notes
1.0	2010/03/31	Initial Release version

## 1. Package Contents

- EnGenius TRAVEL ROUTER
- Li-ion Battery
- AC Adapter
- RJ-45 Ethernet LAN Cable
- CD-ROM with User Manual and Setup Utility
- Quick Guide

## 2. System Requirements

- RJ-45 Ethernet Based Internet Connection
- Computer with Wireless Network function
- Windows, Mac OS or Linux based operating systems
- Internet Explorer or Firefox or Safari Web-Browser Software

### 3. Introduction

TRAVEL ROUTER is the world's smallest 11n Wireless Router and Access Point connectivity that brings superior convenience for users who need to create a wireless network to share the Internet, documents or multimedia files quickly between computers at speeds of up to 150Mbps.

Also, you can leave the bulky power adapter behind as the power supply unit is embedded in the device, so it can be slipped into your pocket easily.

The TRAVEL ROUTER can be connected to the Internet through a DSL/Cable modem at any available location. It can even share the connection in your hotel's room if a RJ-45 network cable is used.

To ensure your data is secure, the TRAVEL ROUTER supports Wi-Fi Protected Setup (WPS) for simple and easy setup of WPA2 encryption of the wireless signal.

## 4. Features

- **WORLD'S SMALLEST AP**

Superior design to bring you the world's smallest 11n AP Router for a true portable wireless solution.

- **INTERNAL POWER**

No need to bring bulky power adapters for improved space saving convenience.

- **INTERNET SHARING**

Wirelessly share your Internet connection to multiple computers.

- **Multiple OPERATION MODES**

AP Router, Access Point and Client Bridge modes for flexible usage in different scenarios.

- **802.11n COMPLIANT**

Fully 802.11n standard compliant to bring you 6x faster and 3x farther wireless connections at speeds up to 300Mbps.

- **WPS PUSH BUTTON**

Wi-Fi Protected Setup (WPS) Push Button Configuration support for simple and secure setup of your wireless network.

- **MULTI-SSID**

Up to 4 different wireless networks can be created with different security encryption methods. They can even be isolated so each wireless network has their own access policies.

- **ADVANCED FIREWALL AND ACCESS CONTROL**

Dual Firewall is featured to prevent unwanted access from the Internet. URL, MAC and IP Filters allow control over who can connect to your LAN, and what Internet sites they can connect to.

## 5. Hardware Overview









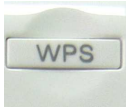
### **RJ-45**

This RJ-45 port can be configured as WAN or LAN modes.

WAN: Connect to the Internet using DSL/Cable modem.

LAN: Connect to a computer, switch or hub.



LED Lights	icon	Description
<b>Wireless LAN</b>		Color – Blue Lights when Wireless signal is activated. Blinks when Wireless data transfer.
<b>WPS</b>		Color – Blue Blinks when WPS handshake is initialized.
<b>LAN</b>		Color – Blue Lights when wired network device is connected to RJ-45 port. Blinks when data transfer occurs on RJ-45 port.
<b>Power</b>		Color – Blue Lights when device is powered ON. Blinks device is Reset.
<b>Mode</b>		Indicates which mode the TRAVEL ROUTER is set to. Orange – AP Router Blue – Access Point Green – Client Bridge
<b>Battery</b>		Indicates current battery level. (RED light signifies low in battery)
Buttons	icon	Description
<b>WPS</b>		Press this button to initialize WPS process. Hold this button for 10 seconds to Reset to Factory Defaults.

## 6. Before you Begin

This section will guide you through the installation process. Placement of the TRAVEL ROUTER is very important to avoid poor signal reception and performance. Avoid placing the device in enclosed spaces such as a closet, cabinet or wardrobe.

### 6.1 Considerations for Wireless Installation

The operating distance of all wireless devices cannot be predetermined due to a number of unknown obstacles in the environment that the device is deployed. These could be the number, thickness and location of walls, ceilings or other objects that the wireless signals must pass through. Here are some key guidelines to ensure that you have the optimal wireless range.

1. Keep the number of walls and ceilings between the EnGenius access point and other network devices to a minimum. Each wall or ceiling can reduce the signal strength, the degradation depends on the building's material.
2. Building materials makes a difference. A solid metal door or aluminum studs may have a significant negative effect on range. Locate your wireless devices carefully so the signal can pass through a drywall or open doorways. Materials such as glass, steel, metal, concrete, water (fish tanks), mirrors, file cabinets and brick will also degrade your wireless signal.
3. Interferences can also come from your other electrical devices or appliances that generate RF noise. The most usual types are microwaves, or cordless phones.



## 6.2 AP Router / AP / Client Bridge Modes

There are three main modes to select from which will influence the installation of the TRAVEL ROUTER. This section will help you determine which mode works with your setup.

### AP Router Mode

AP Router Mode allows you to share an Internet connection to multiple computers.

### AP Mode

AP mode establish a network with the Access Point. It does not have NAT function and the ability connecting to internet.

### Client Bridge Mode

Client Bridge Mode allows a wired network device to connect to your wireless network, or create a point-to-point bridge.

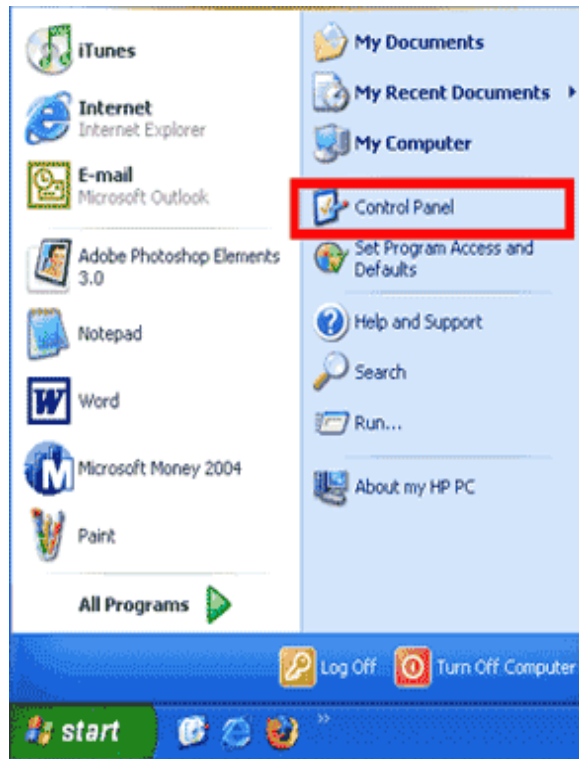
Change modes from the top-right of the User Interface.



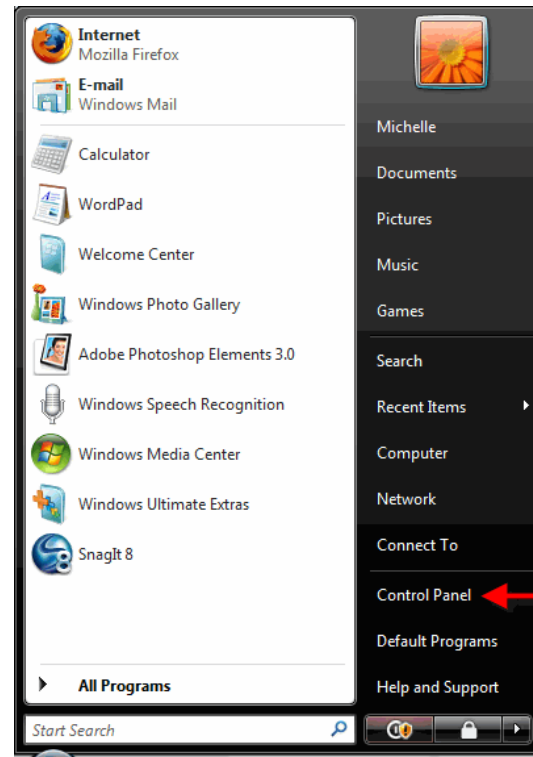
Please see *Configuring the TRAVEL ROUTER* for instructions to access the Web-Based User Interface.

## 6.3 Computer Settings (Windows XP/Vista)

1. Click Start button and open Control Panel.



Windows XP



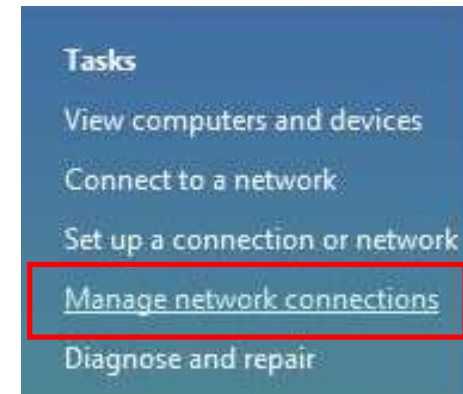
Windows Vista

12

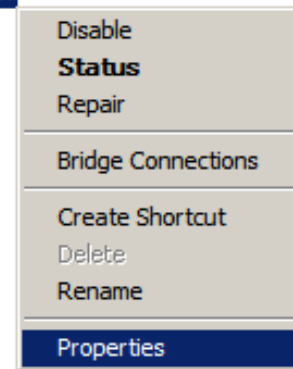
2. Windows XP, click [**Network Connection**]



Windows Vista, click [**View Network Status and Tasks**] then [**Manage Network Connections**]

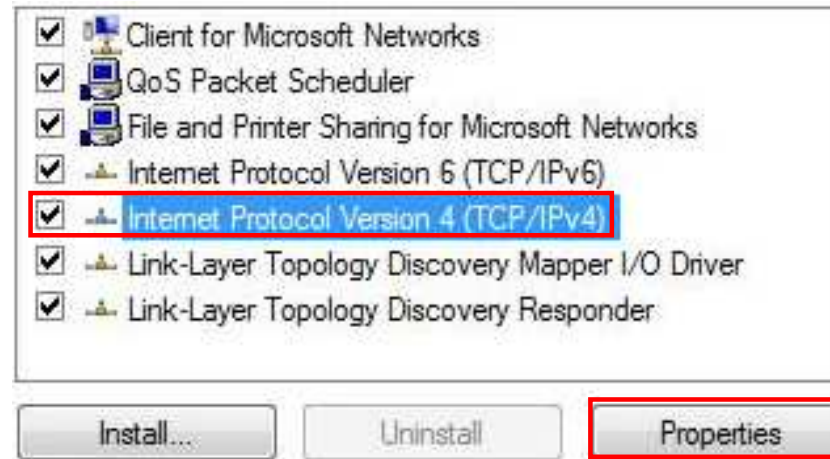


3. Right click on [**Local Area Connection**] and select [**Properties**].

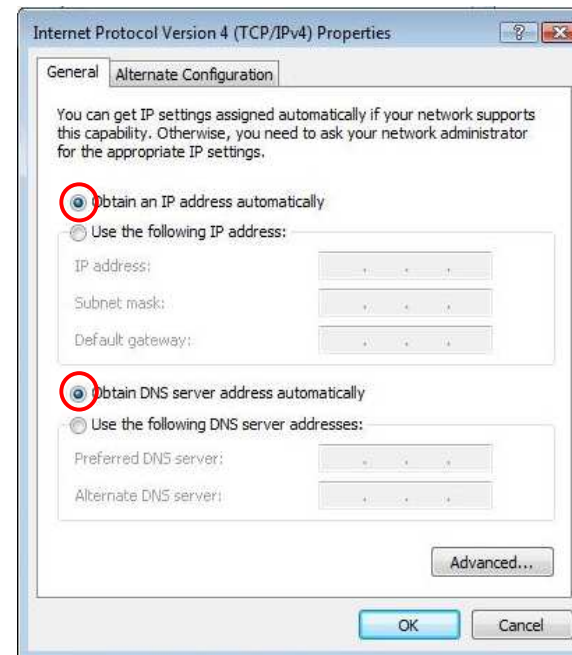


4. Check “Client for Microsoft Networks”, “File and Printer Sharing”, and “Internet Protocol (TCP/IP)” is ticked. If not, please install them.

5. Select “Internet Protocol (TCP/IP)” and click [Properties]



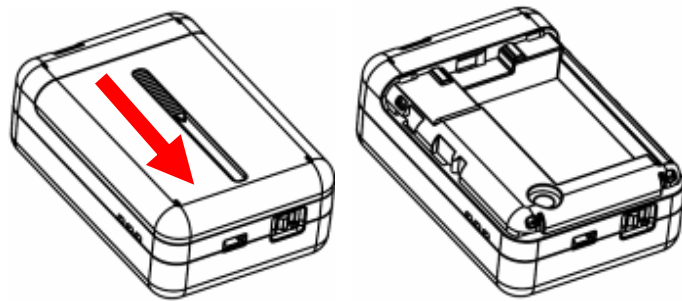
6. Select “Obtain an IP Address automatically” and “Obtain DNS server address automatically” then click [OK].



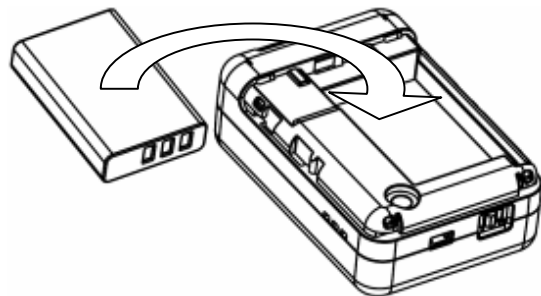
## 7. Hardware Installation

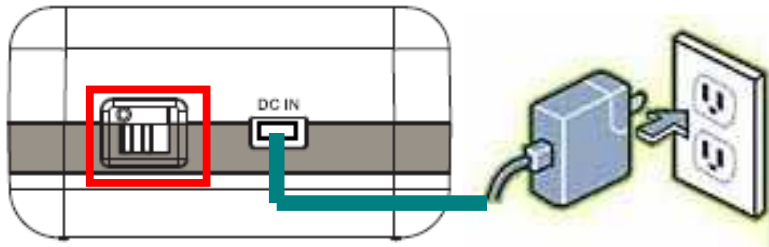
### CHARGE THE BATTERY

Slide to open the battery cover and insert the battery into place.



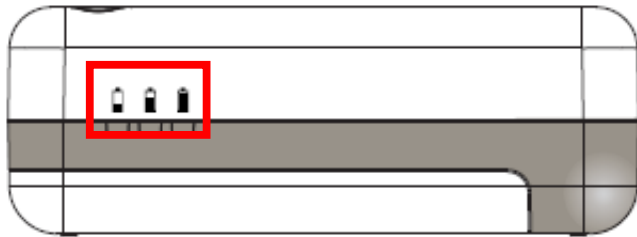
Insert the battery as shown below.





Please lay the device safely on flat surface while charging.

Make sure on/off switch is flipped to “O” sign and plug in the included adapter (DC-IN) to start charging the battery.



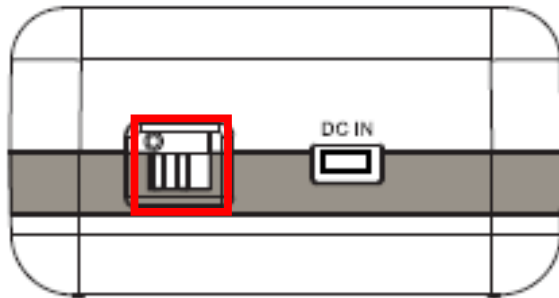
Red light indicates low in battery. It's recommended to fully charge the battery before use.



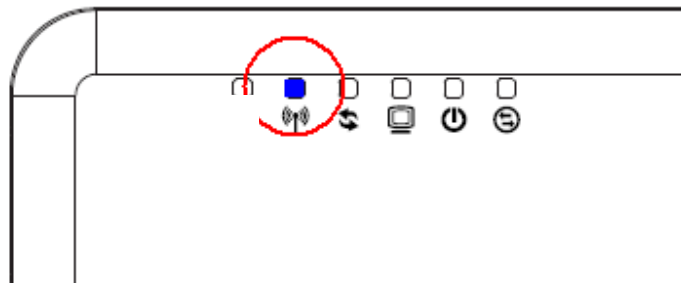
## POWER ON

**Recommended uses the device after fully charged the battery.**

Make sure On/Off switch is flipped to the “I” sign.



Please wait after Wireless starts blinking.



**Note1: Please flip on/off switch to “O” when charging the battery.**

**Note2: It takes about 2 hours to fully charge the battery.**

**AP Router Mode:**

One type of Internet connection is required. Please either connect the network cable from your DSL/Cable modem to the RJ-45 port on the TRAVEL ROUTER.

### AP Mode:

Connect the network cable to the RJ-45 port.



Wired Network

## 8. Configuring Travel Router

This section will show you how to configure the device using the web-based configuration interface.

Please use your wireless network adapter to connect the TRAVEL ROUTER.

### Default Settings

IP Address	192.168.0.1
Username / Password	admin / admin
Wireless Mode	Enable
Wireless SSID	EnGeniusxxxxxx
Wireless Security	None



**Note:** xxxxxx represented in the wireless SSID above is the last 6 characters of your device MAC Address. This can be found on the device body label and is unique for each device.

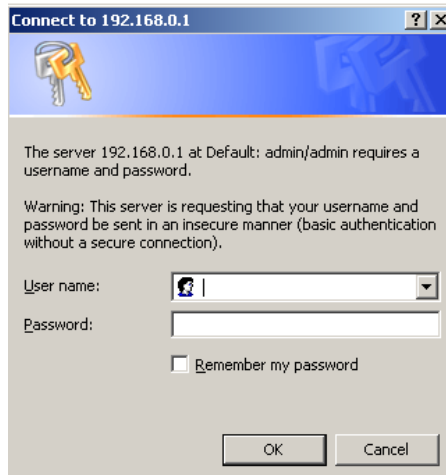
## 8.1 Setup Wizard

1. Open a web browser (Internet Explorer/Firefox/Safari) and enter the IP Address <http://192.168.0.1>

**Note:** If you have changed the default LAN IP Address of the TRAVEL ROUTER, ensure you enter the correct IP Address.



2. The default username and password are **admin**. Once you have entered the correct username and password, click the **OK** button to open the web-base configuration page.



3. You will see the following webpage if login successful.

The screenshot displays the web interface of a Wireless-N Pocket AP/Router. The title bar reads "Wireless-N Pocket AP/Router" and "AP Router Mode". A navigation menu includes "Status", "LAN", "DHCP", "Schedule", "Log", "Monitor", and "Language". The "Status" page is active, providing information about the router's connection status, firmware, hardware, and DHCP clients.

You can use the Status page to monitor the connection status for the WAN/LAN interfaces, firmware and hardware version numbers, any illegal attempts to access your network and information on all DHCP client PCs currently connected to your network.

**System**

Model	3G Wireless Travel Router
Mode	AP Router
Uptime	10 min 57 sec
Current Date/Time	2009/01/01 00:14:00
Hardware version	1.0.0
Serial Number	09B260553
Kernel version	1.0.2
Application version	1.0.2

**WAN Settings**

Attain IP Protocol	Dynamic IP Address
IP address	---
Subnet Mask	---

4. Click **Wizard** to enter the Setup Wizard.  
Then click **Next** to begin the wizard.

The screenshot displays the web interface for an EnGenius ETR9360 router. On the left is a dark blue sidebar with the EnGenius logo and model number. The sidebar menu includes 'System', 'Wizard' (highlighted with a red box), 'Internet', 'Wireless', 'Firewall', 'Advanced', and 'Tools'. The main content area has a dark header with 'Wireless-N Pocket AP/Router' and a dropdown menu set to 'AP Router Mode'. Below the header is a 'Setup Wizard' section with a white background. It contains a welcome message: 'Welcome to the router's web interface. From here you will continue the setup process using your browser. To continue, click "Next".' At the bottom right of this section is a 'Next' button, also highlighted with a red box.

## 5. Select the Operation Mode.

Please ensure you have the proper cables connected as described in the Hardware Installation section.

WAN Configuration

Please choose your service type or select Others to setup WAN configurations manually.

**No Services found in WAN port.** Please click rescan or manual configuration to setup WAN connection manually or skip this step.

Setup Wizard

Please choose the Operation Mode.

AP Router Mode: AP Router is the most common Wireless LAN device with which you will work as a Wireless LAN administrator and Internet Access Point. AP Router provides clients with a point of access into the Internet.

AP Mode: AP Mode allows wireless communication devices to connect to a wireless network using Wi-Fi.

Client Bridge Mode: The Wireless Client Bridge can operate as a point-to-point bridge to link networks in different buildings.



### 8.1.1 AP Router Mode

- a) The device will now automatically search for the correct Internet settings.

WAN Configuration

Automatically detecting the Services on WAN port. Please wait  seconds

- b) The most appropriate WAN type will be determined and selected automatically. If it is incorrect, please select **Others** to set up the WAN settings manually.

WAN Configuration

Please choose your service type or select Others to setup WAN configurations manually.

No.	Service	Description
<input checked="" type="radio"/> 1.	DHCP	DHCP is used when your Modem is controlling your internet connection the Username & Password is stored on the Modem.
<input type="radio"/> 2.	PPPoE	PPPoE is used when your modem is set in Bridge Mode and your Router is used to control the internet connection. IE: router houses ISP's Username & Password.
<input type="radio"/> 3.	Others	

- c) There are many WAN service types available. Please obtain the correct settings from your Internet Service Provider (ISP).

Setup Wizard

Please, enter the data which is supplied by your ISP.

Login Method:

Static IP Address  
Dynamic IP Address  
PPP over Ethernet  
PPPoE

Next

### Static IP Address

If your ISP Provider has assigned you a fixed IP address, enter the assigned IP address, Subnet mask, Default Gateway IP address, and Primary DNS and Secondary DNS (if available) of your ISP provider.

Login Method:

Static IP Address

IP address :

Subnet Mask :

Default Gateway :

Primary DNS :

Secondary DNS (Optional) :

### Dynamic IP Address

The IP Address is allocated automatically. However some ISP's will also recognize the MAC address and will reject connections if the MAC address does not match.

If your ISP has recorded the MAC address of your computer's Ethernet LAN card, please connect only the computer with the authorized MAC address, and click the **Clone MAC Address** button.

This will replace the AP Router MAC address to the computer MAC address. The correct MAC address is used to initiate the connection to the ISP.

Login Method:

Hostname :

Mac :

#### Dynamic IP Address

<b>Hostname:</b>	This is optional. Only required if specified by ISP
<b>MAC:</b>	The MAC Address that is used to connect to the ISP.

**PPP over Ethernet**

ISP requires an account username and password.

Login Method:  ▼

**Username :**

**Password :**

**Service :**

**MTU :**  (512<=MTU Value<=1492)

PPP over Ethernet	
<b>Username:</b>	Username assigned to you by the ISP
<b>Password:</b>	Password for this username.
<b>Service:</b>	You can assign a name for this service. (Optional)
<b>MTU:</b>	The maximum size of packets. Do not change unless mentioned by the ISP.

### Point-to-Point Tunneling Protocol (PPTP)

PPTP is used by some ISPs.

Login Method:	<input type="text" value="PPTP"/>
<b>WAN Interface Settings :</b>	
<b>WAN Interface Type :</b>	<input type="text" value="Dynamic IP Address"/>
<b>Hostname :</b>	<input type="text"/>
<b>MAC Address :</b>	<input type="text" value="000000000000"/> <input type="button" value="Clone Mac"/>
<b>PPTP Settings :</b>	
<b>Login :</b>	<input type="text"/>
<b>Password :</b>	<input type="text"/>
<b>Service IP address :</b>	<input type="text"/>
<b>Connection ID :</b>	<input type="text" value="0"/> (Optional)
<b>MTU :</b>	<input type="text" value="1400"/> (512<=MTU Value<=1492)

<b>PPTP WAN Interface Settings</b>	
<b>WAN Interface Type:</b>	Select whether the ISP is set to Static IP or Dynamic IP addresses.
<b>Hostname:</b>	This is optional. Only required if specified by ISP
<b>MAC:</b>	The MAC Address that is used to connect to the ISP.
<b>PPTP Settings</b>	
<b>Login:</b>	Username assigned to you by the ISP
<b>Password:</b>	Password for this username.
<b>Service IP Address:</b>	The IP Address of the PPTP server.
<b>Connection ID:</b>	This is optional. Only required if specified by ISP
<b>MTU:</b>	The maximum size of packets. Do not change unless mentioned by the ISP.

## Layer-2 Tunneling Protocol (L2TP)

Login Method:

**WAN Interface Settings :**

**WAN Interface Type :**

**Hostname :**

**MAC Address :**

**L2TP Settings :**

**Login :**

**Password :**

**Service IP address :**

**MTU :**  (512<=MTU Value<=1492)

<b>L2TP WAN Interface Settings</b>	
<b>WAN Interface Type:</b>	Select whether the ISP is set to Static IP or Dynamic IP addresses.
<b>Hostname:</b>	This is optional. Only required if specified by ISP
<b>MAC:</b>	The MAC Address that is used to connect to the ISP.
<b>L2TP Settings</b>	
<b>Login:</b>	Username assigned to you by the ISP
<b>Password:</b>	Password for this username.
<b>Service IP Address:</b>	The IP Address of the PPTP server.
<b>MTU:</b>	The maximum size of packets. Do not change unless mentioned by the ISP.




- d) Setup the level of wireless security to be used.  
EnGenius recommends the **Highest** level of security to be used.

**Note:** 802.11n wireless speeds may not be achievable if the security is setup to Lowest and Low level.

WLAN Configuration

**Please choose the security level in the security bar**

Lowest  Highest

Type of wireless security: WPA2  
Strength: Highest

WPA2 security offers the highest strength wireless security but lowest compatibility with older wireless network equipment.

Enter a security key that is between 8-63 characters long. Make sure the key is not a word or number that is easy to guess.

SSID :

Key :

Skip Next

**SSID:** Enter the name of your wireless network.

**Key:** Enter the security key for your wireless network.

e) Check the settings are correct, and then click **Reboot** to apply the settings.

Setup Successfully

**System Configuration:**  
**Operation Mode :** AP Router

**WAN Configuration:**  
**Connection Type :** Dynamic IP Address

**WLAN Configuration :**  
**SSID :** EnGenius5FA6E8  
**Security :** WPA2 pre-shared key  
**WLAN Key :** 1234567890

WLAN Router setup successfully. Please click reboot button to reboot system.

### 8.1.2 AP Mode

- a) Select the level of wireless security to be used.  
EnGenius recommends the **Highest** level of security to be used.

**Note:** 802.11n wireless speeds may not be achievable if the security is setup to Lowest and Low level.

WLAN Configuration

**Please choose the security level in the security bar**

Lowest      Highest

Type of wireless security: WPA2  
Strength: Highest

WPA2 security offers the highest strength wireless security but lowest compatibility with older wireless network equipment.

Enter a security key that is between 8-63 characters long. Make sure the key is not a word or number that is easy to guess.

SSID :

Key :

Skip Next

**SSID:** Enter the name of your wireless network.

**Key:** Enter the security key for your wireless network.

b) Check the settings are correct, and then click **Reboot** to apply the settings.

Setup Successfully

**System Configuration:**  
**Operation Mode :** AP Router

**WLAN Configuration :**  
**SSID :** EnGenius5FA6E8  
**Security :** WPA2 pre-shared key  
**WLAN Key :** 1234567890

WLAN Router setup successfully. Please click reboot button to reboot system.

**Reboot**

### 8.1.3 Client Bridge Mode

- a) In this mode, the TRAVEL ROUTER will connect to a wireless network as a client device. Please enter the SSID and security settings of that wireless network.

Setup Wizard

#### AP Profile Settings

Network Name (SSID) :	<input type="text" value="EnGenius"/>
Encryption :	<input type="text" value="WPA pre-shared key"/>
WPA type :	<input type="radio"/> WPA(TKIP) <input checked="" type="radio"/> WPA2(AES)
Pre-shared Key type :	<input type="text" value="Passphrase"/>
Pre-shared Key :	<input type="text" value="0987654321"/>

This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.

- b) Check the settings are correct, and then click **Reboot** to apply the settings.

#### System Configuration:

Operation Mode : Client Bridge

## 8.2 Web-Based Configuration

### 8.2.1 System

#### *Status*

This page allows you to monitor the status of the device.

#### System

Mode	AP Router
Uptime	33 min 35 sec
Current Date/Time	2009/01/01 00:53:01
Hardware version	1.0.0
Serial Number	000000111
Kernel version	1.0.2
Application version	1.0.2

<b>Status</b>	
<b>Model:</b>	Description of this device.
<b>Mode:</b>	The device is currently in which mode.
<b>Uptime:</b>	The duration about the device has been operating without powering down or reboot.
<b>Current Date/Time:</b>	The device's system time. If this is incorrect, please set the time in the Tools / Time page.
<b>Hardware version and Serial Number:</b>	Hardware information for this device.
<b>Kernel and Application version:</b>	Firmware information for this device.

### WAN Settings

Attain IP Protocol	Dynamic IP Address
IP address	10.0.174.29
Subnet Mask	255.255.254.0
Default Gateway	10.0.175.254
MAC address	00:02:6F:5F:A9:1E
Primary DNS	10.0.200.101
Secondary DNS	10.0.200.102

WAN Settings	
<b>Attain IP Protocol:</b>	Method used to connect to the Internet
<b>IP address:</b>	The WAN IP Address of the device.
<b>Subnet Mask</b>	The WAN Subnet Mask of the device.
<b>MAC address</b>	The MAC address of the device's WAN Interface.
<b>Primary and Secondary DNS:</b>	Primary and Secondary DNS servers assigned to the WAN connection.



**LAN Settings**

IP address 192.168.0.1  
 Subnet Mask 255.255.255.0  
 DHCP Server Enabled

LAN Settings	
<b>IP address:</b>	The LAN IP Address of the device.
<b>Subnet Mask</b>	The LAN Subnet Mask of the device.
<b>DHCP Server</b>	Whether the DHCP server is Enabled or Disabled.

**WLAN Settings**

Channel 11

**SSID\_1**

ESSID EnGenius5FA6E8  
 Security Disable  
 BSSID 00:02:6F:5F:A6:E8  
 Associated Clients 1

**SSID\_2**

ESSID EnGenius5FA6E8\_2  
 Security Disable  
 BSSID 00:02:6F:5F:A6:E9  
 Associated Clients 0

**WLAN Settings**

<b>Channel:</b>	The wireless channel in use.
<b>ESSID:</b>	The SSID (Network Name) of the wireless network. (up to 4 SSID's are supported)
<b>Security:</b>	Wireless encryption is enabled for this SSID.
<b>BSSID:</b>	The MAC address of this SSID.
<b>Associated Clients:</b>	The number of wireless clients connected to this SSID.

## LAN

This page allows you to modify the device's LAN settings.

**Wireless-N Pocket AP/Router** AP Router Mode ▾

[Status](#) [LAN](#) [DHCP](#) [Schedule](#) [Log](#) [Monitor](#) [Language](#)

You can enable the Broadband routers DHCP server to dynamically allocate IP Addresses to your LAN client PCs. The broadband router must have an IP Address for the Local Area Network.

**LAN IP**

IP address :

IP Subnet Mask :

802.1d Spanning Tree :

**DHCP Server**

DHCP Server :

Lease time :

Start IP :

End IP :

Domain name :

**DNS Servers**

DNS Servers Assigned by DHCP Server \_\_\_\_\_

**LAN IP**

IP address :

IP Subnet Mask :

802.1d Spanning Tree :

LAN IP	
<b>IP address:</b>	The LAN IP Address of this device.
<b>IP Subnet Mask:</b>	The LAN Subnet Mask of this device.
<b>802.1d Spanning Tree:</b>	When Enabled, the Spanning Tree protocol will prevent network loops in your LAN network.

### DHCP Server

DHCP Server :	Enabled ▾
Lease time :	Forever ▾
Start IP :	192.168.0.100
End IP :	192.168.0.200
Domain name :	etr9350

DHCP Server	
<b>DHCP Server:</b>	The DHCP Server automatically allocates IP addresses to your LAN devices.
<b>Lease Time:</b>	The duration of the DHCP server allocates each IP address to a LAN device.
<b>Start / End IP:</b>	The range of IP addresses of the DHCP server will allocate to LAN devices.
<b>Domain name:</b>	The domain name for this LAN network.

**DNS Servers**

DNS Servers Assigned by DHCP Server

First DNS Server

Second DNS Server

From ISP  
User-Defined  
DNS Relay  
None

Two DNS servers can be assigned for use by your LAN devices.  
There are four modes available.

DNS Servers	
<b>From ISP:</b>	The DNS server IP address is assigned from your ISP.
<b>User-Defined:</b>	The DNS server IP address is assigned manually.
<b>DNS Relay:</b>	LAN clients are assigned the device's IP address as the DNS server. DNS requests are relayed to the ISP's DNS server.

## DHCP

This page shows the status of the DHCP server and also allows you to control how the IP addresses are allocated.

**Wireless-N Pocket AP/Router** AP Router Mode

[Status](#) [LAN](#) [DHCP](#) [Schedule](#) [Log](#) [Monitor](#) [Language](#)

### DHCP Client Table

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

IP address	MAC address	Expiration Time
192.168.0.100	00:1A:4D:49:1E:3A	Forever
192.168.0.101	00:0C:F6:5C:06:14	Forever

You can assign an IP address to the specific MAC address

**Enable Static DHCP IP**

IP address	MAC address
<input type="text"/>	<input type="text"/>

**Current Static DHCP Table :**

NO.	IP address	MAC address	Select
-----	------------	-------------	--------

The DHCP Client Table shows the LAN clients that have been allocated an IP address from the DHCP Server

#### DHCP Client Table

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

IP address	MAC address	Expiration Time
192.168.0.100	00:1A:4D:49:1E:3A	Forever
192.168.0.101	00:0C:F6:5C:06:14	Forever

Refresh

DHCP Client Table	
<b>IP address:</b>	The LAN IP address of the client.
<b>MAC address:</b>	The MAC address of the client's LAN interface.
<b>Expiration Time:</b>	The time that the allocated IP address will expire.
<b>Refresh:</b>	Click this button to update the DHCP Client Table.

**Enable Static DHCP IP**

IP address	MAC address
<input type="text" value="192.168.0.155"/>	<input type="text" value="000AF43C1516"/>
<input type="button" value="Add"/>	<input type="button" value="Reset"/>

**Current Static DHCP Table :**

NO.	IP address	MAC address	Select
1	192.168.0.150	00:0C:C6:3C:06:17	<input type="checkbox"/>

You can also manually specify the IP address that will be allocated to a LAN client by associating the IP address with its MAC address.

Type the IP address you would like to manually assign to a specific MAC address and click **Add** to add the condition to the Static DHCP Table.



## Schedule

This page allows you to schedule times that the Firewall and Power Saving features will be activated / deactivated.

Click **Add** to create a Schedule entry.

**Wireless-N Pocket AP/Router**
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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	From 08:00 to 20:00---Mon, Wed, Fri	<input type="checkbox"/>
2	schedule 02	Power Saving	From 21:00 to 23:30---Mon, Tue, Wed, Thu, Fri, Sat, Sun	<input type="checkbox"/>

Add
Edit
Delete Selected
Delete All

Apply
Cancel

<b>Schedule Description :</b>	<input type="text" value="schedule 01"/>
<b>Service :</b>	<input checked="" type="checkbox"/> Firewall <input type="checkbox"/> Power Saving
<b>Days :</b>	<input type="checkbox"/> Every Day <input checked="" type="checkbox"/> Mon <input type="checkbox"/> Tue <input checked="" type="checkbox"/> Wed <input type="checkbox"/> Thu <input checked="" type="checkbox"/> Fri <input type="checkbox"/> Sat <input type="checkbox"/> Sun
<b>Time of day :</b>	<input type="checkbox"/> All Day (use 24-hour clock) From <input type="text" value="8"/> : <input type="text" value="0"/> To <input type="text" value="20"/> : <input type="text" value="0"/>

Schedule	
<b>Schedule Description:</b>	Assign a name to the schedule.
<b>Service:</b>	The service provides for the schedule.
<b>Days:</b>	Define the Days to activate or deactivate the schedule.
<b>Time of day:</b>	Define the Time of day to activate or deactivated the schedule. Please use 24-hour clock format.

## Log

This page displays the system log of the device. When powered down or rebooted, the log will be cleared.

**Wireless-N Pocket AP/Router**
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View the system operation information.

```

day 1 02:01:25 [SYSTEM]: WLAN, start LLTD
day 1 02:01:25 [SYSTEM]: WLAN, LLTD Stopping
day 1 02:01:25 [SYSTEM]: UPnP, Stopping
day 1 02:01:24 [SYSTEM]: NET, start Firewall
day 1 02:01:24 [SYSTEM]: NET, start NAT
day 1 02:01:24 [SYSTEM]: NET, stop Firewall
day 1 02:01:24 [SYSTEM]: NET, stop NAT
day 1 02:01:24 [SYSTEM]: SCHEDULE, stop Power Save
day 1 02:01:24 [SYSTEM]: SCHEDULE, Schedule Stopping

```

Log	
<b>Save:</b>	Save the log to a file.
<b>Clear:</b>	Clears the log.
<b>Refresh:</b>	Updates the log.

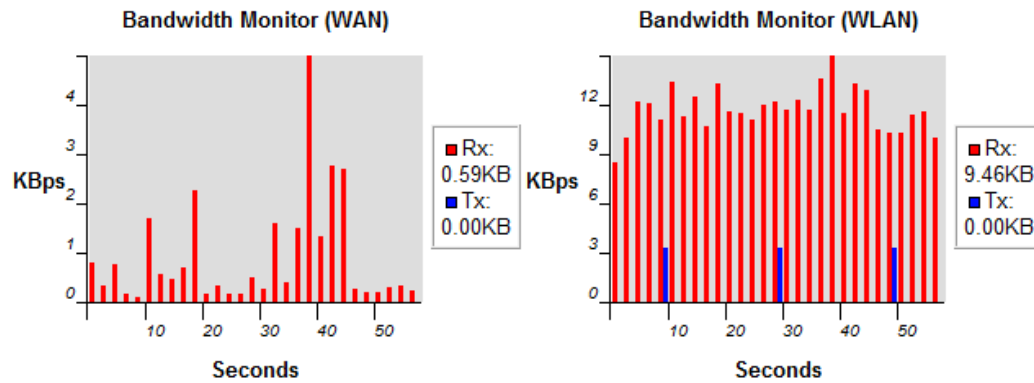
### Monitor

This page shows a histogram of the WAN and Wireless LAN traffic. The information is automatically updated every five seconds.

**Wireless-N Pocket AP/Router** AP Router Mode ▾

[Status](#) | [LAN](#) | [DHCP](#) | [Schedule](#) | [Log](#) | **Monitor** | [Language](#)

You can monitor the bandwidth in different interface. This page will refresh in every five seconds.

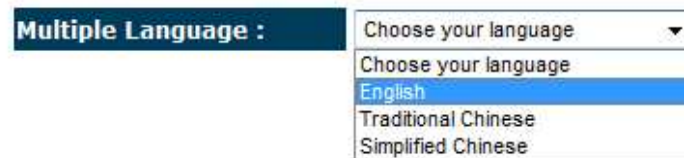


## Language

This page allows you to change the Language of the User Interface.



You can select other language in this page.



## 8.2.2 Internet

The Internet section allows you to manually set the WAN type connection and its related settings.

### Status

This page shows the current status of the device's WAN connection.

**Wireless-N Pocket AP/Router** AP Router Mode ▾

[Status](#) [Dynamic IP](#) [Static IP](#) [PPPoE](#) [PPTP](#) [L2TP](#)

View the current internet connection status and related information.

**WAN Settings**

Attain IP Protocol	Dynamic IP Address
IP address	10.0.174.29
Subnet Mask	255.255.254.0
Default Gateway	10.0.175.254
MAC address	00:02:6F:5F:A9:1E
Primary DNS	10.0.200.101
Secondary DNS	10.0.200.102

### ***Dynamic IP Address***

The IP Address is allocated automatically. However some ISP's will also recognize the MAC address and will reject connections if the MAC address does not match.

If your ISP has recorded the MAC address of your computer's Ethernet LAN card, please connect only the computer with the authorized MAC address, and click the **Clone MAC Address** button.

This will replace the AP Router MAC address to the computer MAC address. The correct MAC address is used to initiate the connection to the ISP.

**Wireless-N Pocket AP/Router** AP Router Mode ▾

**Status** **Dynamic IP** **Static IP** **PPPoE** **PPTP** **L2TP**

You can select the type of the account you have with your ISP provider.

<b>Hostname :</b>	<input type="text"/>
<b>MAC address :</b>	<input type="text" value="000000000000"/> <input type="button" value="Clone MAC"/>
<b>DNS Servers</b>	
<b>DNS Servers Type</b>	<input type="text" value="From ISP"/> ▾
<b>First DNS Server</b>	<input type="text" value="10.0.200.101"/>
<b>Second DNS Server</b>	<input type="text" value="10.0.200.102"/>

<b>Dynamic IP Address</b>	
<b>Hostname:</b>	This is optional. Only required if specified by ISP
<b>MAC address:</b>	The MAC Address that is used to connect to the ISP.
<b>DNS Servers</b>	
Two DNS servers can be assigned for use by your LAN devices. There are two modes available.	
<b>From ISP:</b>	LAN devices are assigned the DNS server IP address of your ISP.
<b>User-Defined:</b>	Set the DNS server IP address manually.

### ***Static IP Address***

If your ISP Provider has assigned you a fixed IP address, enter the assigned IP address, Subnet mask, Default Gateway IP address, and Primary DNS and Secondary DNS (if available) of your ISP provider.



**Wireless-N Pocket AP/Router** AP Router Mode ▾

[Status](#) [Dynamic IP](#) [Static IP](#) [PPPoE](#) [PPTP](#) [L2TP](#)

You can select the type of the account you have with your ISP provider.

<b>IP address:</b>	<input type="text"/>
<b>IP Subnet Mask :</b>	<input type="text"/>
<b>Default Gateway :</b>	<input type="text"/>
<b>Primary DNS :</b>	<input type="text"/>
<b>Secondary DNS :</b>	<input type="text"/>

## PPP over Ethernet

ISP requires an account username and password.

Wireless-N Pocket AP/Router		AP Router Mode ▾			
<u>Status</u>	<u>Dynamic IP</u>	<u>Static IP</u>	<b>PPPoE</b>	<u>PPTP</u>	<u>L2TP</u>
You can select the type of the account you have with your ISP provider.					
<b>Login :</b>	<input type="text" value="username"/>				
<b>Password :</b>	<input type="password" value="••••••••"/>				
<b>Service Name</b>	<input type="text" value="ISP"/>				
<b>MTU :</b>	<input type="text" value="1492"/>	(512<=MTU Value <=1492)			
<b>Authentication type :</b>	Auto ▾				
<b>Type :</b>	Keep Connection ▾				
<b>Idle Timeout :</b>	<input type="text" value="10"/>	(1-1000 Minutes )			
<input type="button" value="Apply"/> <input type="button" value="Cancel"/>					

PPP over Ethernet (PPPoE)	
<b>Username:</b>	Username assigned to you by the ISP
<b>Password:</b>	Password for this username.
<b>Service:</b>	You can assign a name for this service. (Optional)
<b>MTU:</b>	The maximum size of packets. Do not change unless mentioned by the ISP.
<b>Authentication type</b>	Select whether the ISP uses PAP or CHAP methods for authentication. Select <b>Auto</b> if unsure.
<b>Type:</b>	You can choose the method that the router maintains connection with the ISP.  <b>Keep Connection:</b> The device will maintain a constant connection with the ISP.  <b>Automatic Connection:</b> The device will only initiate connection to the ISP when there is an Internet connection request made from a LAN device.  <b>Manual Connection:</b> The user will need to manually connect to the ISP by clicking the <b>Connect</b> button.
<b>Idle Timeout:</b>	When the connection type is <b>Automatic Connection</b> , when Internet traffic is idle, then the device will automatically disconnect from the ISP.  Please specify the Idle time in minutes.

## Point-to-Point Tunneling Protocol (PPTP)

PPTP is used by some ISPs.

### Wireless-N Pocket AP/Router

AP Router Mode

Status Dynamic IP Static IP PPPoE **PPTP** L2TP

You can select the type of the account you have with your ISP provider.

**WAN Interface Settings :**

**WAN Interface Type :** Dynamic IP Address

**Hostname :**

**MAC address :** 000000000000

**PPTP Settings :**

**Login :**

**Password :**

**Service IP address :**

**Connection ID :** 0 (Optional)

**MTU :** 1400 (512<=MTU Value <=1492)

**Type :** Keep Connection

**Idle Timeout :** 10 (1-1000 Minutes)

Point-to-Point Tunneling Protocol (PPTP)	
<b>WAN Interface Type:</b>	Select whether the ISP is set to Static IP or will allocate Dynamic IP addresses.
<b>Hostname:</b>	This is optional. Only required if specified by ISP
<b>MAC address:</b>	The MAC Address that is used to connect to the ISP.
<b>Login:</b>	Username assigned to you by the ISP
<b>Password:</b>	Password for this username.
<b>Service IP Address:</b>	The IP Address of the PPTP server.
<b>Connection ID:</b>	This is optional. Only required if specified by ISP
<b>MTU:</b>	The maximum size of packets. Do not change unless mentioned by the ISP.
<b>Type:</b>	<p>You can choose the method that the router maintains connection with the ISP.</p> <p><b>Keep Connection:</b> The device will maintain a constant connection with the ISP.</p> <p><b>Automatic Connection:</b> The device will only initiate connection to the ISP when there is an Internet connection request made from a LAN device.</p> <p><b>Manual Connection:</b> The user will need to manually connect to the ISP by clicking the <b>Connect</b> button.</p>
<b>Idle Timeout:</b>	<p>When the connection type is <b>Automatic Connection</b>, when Internet traffic is idle, then the device will automatically disconnect from the ISP.</p> <p>Please specify the Idle time in minutes.</p>

## Layer-2 Tunneling Protocol (L2TP)

L2TP is used by some ISPs.

**Wireless-N Pocket AP/Router** AP Router Mode ▾

[Status](#) [Dynamic IP](#) [Static IP](#) [PPPoE](#) [PPTP](#) [L2TP](#)

You can select the type of the account you have with your ISP provider.

**WAN Interface Settings :**

**WAN Interface Type :**

**Hostname :**

**MAC address :**

**L2TP Settings :**

**Login :**

**Password :**

**Service IP address :**

**MTU :**  (512<=MTU Value <=1492)

**Type :**

**Idle Timeout :**  (1-1000 Minutes )

Layer-2 Tunneling Protocol (L2TP)	
<b>WAN Interface Type:</b>	Select whether the ISP is set to Static IP or will allocate Dynamic IP addresses.
<b>Hostname:</b>	This is optional. Only required if specified by ISP
<b>MAC:</b>	The MAC Address that is used to connect to the ISP.
<b>Login:</b>	Username assigned to you by the ISP
<b>Password:</b>	Password for this username.
<b>Service IP Address:</b>	The IP Address of the PPTP server.
<b>MTU:</b>	The maximum size of packets. Do not change unless mentioned by the ISP.
<b>Type:</b>	<p>You can choose the method that the router maintains connection with the ISP.</p> <p><b>Keep Connection:</b> The device will maintain a constant connection with the ISP.</p> <p><b>Automatic Connection:</b> The device will only initiate connection to the ISP when there is an Internet connection request made from a LAN device.</p> <p><b>Manual Connection:</b> The user will need to manually connect to the ISP by clicking the <b>Connect</b> button.</p>
<b>Idle Timeout:</b>	<p>When the connection type is <b>Automatic Connection</b>, when Internet traffic is idle, then the device will automatically disconnect from the ISP.</p> <p>Please specify the Idle time in minutes.</p>

## 8.2.3 Wireless

The Wireless section allows you to configure the Wireless settings.

### Status

This page shows the current status of the device's Wireless settings.

**Wireless-N Pocket AP/Router** AP Router Mode ▾

[Basic](#) | [Advanced](#) | [Security](#) | [Filter](#) | [WPS](#) | [Client List](#) | [Policy](#)

This page allows you to define SSID, and Channel for the wireless connection. These parameters are used for the wireless stations to connect to the Access Point.

<b>Radio :</b>	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
<b>Mode :</b>	AP ▾
<b>Band :</b>	2.4 GHz (B+G+N) ▾
<b>Enable SSID#:</b>	2 ▾
<b>SSID1 :</b>	EnGenius5FA6E8
<b>SSID2 :</b>	EnGenius5FA6E8_2
<b>Auto Channel :</b>	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
<b>Channel :</b>	11 ▾



Basic	
<b>Radio:</b>	Enable or Disable the device's wireless signal.
<b>Mode:</b>	Select between Access Point or Wireless Distribution System (WDS) modes.
<b>Band:</b>	Select the types of wireless clients that the device will accept.  <b>eg: 2.4 GHz (B+G)</b> Only 802.11b and 11g clients will be allowed.
<b>Enable SSID#:</b>	Select the number of SSID's (Wireless Network names) you would like.  You can create up to 4 separate wireless networks.
<b>SSID#</b>	Enter the name of your wireless network. You can use up to 32 characters.
<b>Auto Channel:</b>	When enabled, the device will scan the wireless signals around your area and select the channel with the least interference.
<b>Check Channel Time:</b>	When Auto Channel is Enabled, you can specify the period of the device will scan the wireless signals around your area.

### Wireless Distribution System (WDS)

Using WDS to connect Access Point wirelessly, and in doing so extend a wired infrastructure to locations where cabling is not possible or inefficient to implement.

Note that compatibility between different brands and models is not guaranteed. It is recommended that the WDS network be created using the same models for maximum compatibility.

Also note that all Access Points in the WDS network needs to use the same Channel and Security settings.

*To create a WDS network, please enter the MAC addresses of the Access Points that you want included in the WDS. There can be a maximum of four access points.*

Radio :	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Mode :	WDS ▾
Band :	2.4 GHz (B+G+N) ▾
Enable SSID#:	2 ▾
SSID1 :	EnGenius5FA6E8
SSID2 :	EnGenius5FA6E8_2
Channel :	11 ▾
MAC address 1 :	000000000000
MAC address 2 :	000000000000
MAC address 3 :	000000000000
MAC address 4 :	000000000000
WDS Data Rate :	300M ▾
Set Security :	Set Security

## Advanced

This page allows you to configure wireless advance settings. It is recommended the default settings are used unless the user has experience with these functions.

**Wireless-N Pocket AP/Router**AP Router Mode ▾

Basic**Advanced**SecurityFilterWPSClient ListPolicy

These settings are only for more technically advanced users who have a sufficient knowledge about wireless LAN. These settings should not be changed unless you know what effect the changes will have on your Broadband router.

<b>Fragment Threshold :</b>	<input type="text" value="2346"/>	(256-2346)
<b>RTS Threshold :</b>	<input type="text" value="2347"/>	(1-2347)
<b>Beacon Interval :</b>	<input type="text" value="100"/>	(20-1024 ms)
<b>DTIM Period :</b>	<input type="text" value="1"/>	(1-255)
<b>N Data rate :</b>	<input type="text" value="Auto"/>	
<b>Channel Bandwidth :</b>	<input checked="" type="radio"/> Auto 20/40 MHZ <input type="radio"/> 20 MHZ	
<b>Preamble Type :</b>	<input type="radio"/> Long Preamble <input checked="" type="radio"/> Short Preamble	
<b>CTS Protection :</b>	<input checked="" type="radio"/> Auto <input type="radio"/> Always <input type="radio"/> None	
<b>Tx Power :</b>	<input type="text" value="100 %"/>	

Advanced	
<b>Fragment Threshold:</b>	Specifies the size of the packet per fragment. This function can reduce the chance of packet collision. However when this value is set too low, there will be increased overheads resulting in poor performance.
<b>RTS Threshold:</b>	When the packet size is smaller than the RTS Threshold, then the packet will be sent without RTS/CTS handshake which may result in incorrect transmission.
<b>Beacon Interval:</b>	The time interval that the device broadcasts a beacon. This beacon is used to synchronize all wireless clients on the network.
<b>DTIM Period:</b>	A Delivery Traffic Indication Message informs all wireless clients that the access point will be sending Multi-casted data.
<b>N Data Rate:</b>	You can limit the transfer rates between the device and wireless clients. Each Modulation Coding Scheme (MCS) refers to a specific transfer speed.
<b>Channel Bandwidth:</b>	Set whether each channel uses 20 or 40Mhz. To achieve 11n speeds, 40Mhz channels must be used.
<b>Preamble Type:</b>	A preamble is a message that helps access points synchronize with the client.  Long Preamble is standard based so increases compatibility. Short Preamble is non-standard, so it decreases compatibility but increases performance.
<b>CTS Protection:</b>	When Enabled, the performance is slightly lower however the chances of packet collision is greatly reduced.
<b>Tx Power:</b>	Set the power output of the wireless signal.

## Security

This page allows you to set the wireless security settings.

**Wireless-N Pocket AP/Router** AP Router Mode ▾

[Basic](#) [Advanced](#) [Security](#) [Filter](#) [WPS](#) [Client List](#) [Policy](#)

This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.

<b>SSID Selection :</b>	EnGenius5FA6E8 ▾
<b>Broadcast SSID :</b>	Enable ▾
<b>WMM :</b>	Enable ▾
<b>Encryption :</b>	Disable ▾

**Enable 802.1x Authentication**