EnGenius®

11N Long Range Multi-Function Gigabit Client Bridge

ECB350

11N Long Range Multi-Function Gigabit Client Bridge

V1.0

Table of Contents

Revision History

Version	Date	Notes
1.0	2011/12/15	First Release

1 Introduction

The **ECB350** is a multi-functioned 802.11b/g/n product with 8 major multi-functions. It is designed to operate in every working environment for enterprises.
The ECB350 is a Wireless Network device that delivers up to 6x faster speeds and 7x extended coverage than 802.11b/g devices. The ECB350 supports use in the home network with superior throughput, performance, and unparalleled wireless range.
To protect data during wireless transmissions, the ECB350 encrypts all wireless transmissions through WEP data encryption and supports WPA/WPA2 encryption. Its MAC address filter allows users to select stations to access the network. The ECB350 is an ideal product to ensure network safety for both home and enterprise environments.

1.1 Features and Benefits

Features	Benefits
High Speed Data Rate Up to 300Mbps	**Capable of handling heavy data payloads such as HD multimedia streaming.**
10/100/1000 Fast Ethernet	**Support up to 1000Mbps networking speed.**
IEEE 802.11n draft Compliant and backward compatible with 802.11b/g	**Fully compatible with IEEE 802.11b/g/n devices.**
Multi-Function	**Allowing users to select Access Point, Client Bridge, WDS AP, WDS Bridge, WDS Station, Universal Repeater, Router or Client Router mode in various applications.**
Point-to-Point or Point-to-Multipoint Wireless Connectivity	**Allows transfer of data from building to building.**
Support Multiple SSID (up to 4) in AP mode	**Allows clients to access different networks through a single access point and assign different policies and functions for each**

	SSID through the built in software.
WPA2/WPA/ IEEE 802.1x support	**Powerful data security.**
MAC address filtering in AP mode	**Ensuring secure network connection.**
User isolation support (AP mode)	**Protecting the private network between client users.**
Power-over-Ethernet (IEEE802.3af)	**Flexible Access Point locations and saving cost.**
Save User Settings	**Firmware upgrade does not delete user settings.**
SNMP Remote Configuration Management	**Allows remote connection to configure or manage the ECB350 easily.**
QoS (WMM) support	**Enhanced user performance and density.**

1.2 Package Contents

The ECB350 package contains the following items (all items must be in package to issue a refund):

- ECB350
- 12V/1A 100V~240V Power Adapter
- RJ-45 Ethernet LAN Cable
- CD-ROM with User's Manual
- Quick Guide

1.3 System Requirements

The following are the minimum system requirements in order configure the device.

- Computer with an Ethernet interface or Wireless Network function.
- Windows, Mac OS or Linux based operating systems
- Web-Browsing Application (example: Internet Explorer, FireFox, Safari, or other similar software)

1.4 Applications

The wireless LAN products are easy to install and highly efficient. The following list describes some of the many applications made possible through the power and flexibility of wireless LANs:

a) **Difficult-to-Wire Environments**
   There are many situations where wires cannot be laid easily. Historic buildings, older buildings, multiple buildings, and/or open areas make the installation of a Wired LAN impossible, impractical, and/or expensive.

b) **Temporary Workgroups**
   Consider situations in open areas such as parks, athletic arenas, exhibition centers, temporary offices, and construction sites where one wants a temporary Wireless LAN established and easily removed.

c) **The Ability to Access Real-Time Information**
   Doctors/Nurses, Point-of-Sale Employees, and/or Warehouse Workers can access real-time information while dealing with patients, serving customers, and/or processing information.

d) **Frequently Changed Environments**
   Show rooms, meeting rooms, retail stores, and manufacturing sites where the network connection needs to frequently be taken down.

e) **Small Office and Home Office (SOHO) Networks**
   SOHO users need a cost-effective, easy and quick installation of a small network.

f) **Wireless Extensions to Ethernet Networks**
   Network managers in dynamic environments can minimize the overhead caused by moves, extensions to networks, and other changes with wireless LANs.

g) **Wired LAN Backup**
   Network managers implement wireless LANs to provide backup for mission-critical applications running on wired networks.

h) **Training/Educational Facilities**
   Training sites at corporations and students at universities use wireless connectivity to ease access to information, information exchanges, and learning.

2 Before you Begin

This section will guide you through the installation process. Placement of the ENGENIUS ECB350 is very important to maximize the ECB350's performance. Avoid placing the ECB350 in an enclosed space such as a closet, cabinet, or wardrobe.

2.1 Considerations for Wireless Installation

The operating distance of all wireless devices cannot be pre-determined due to a number of unknown obstacles in the environment that the device is deployed. in. 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 most optimal wireless range.

- Keep the number of walls and/or ceilings between the ECB350 and other network devices to a minimum. Each wall and/or ceiling can reduce the signal strength, resulting in lower signal strength.

- Building materials makes a difference. A solid metal door and/or aluminum stubs may have a significant negative effect on the signal strength of the ECB350. Locate your wireless devices carefully so the signal can pass through a drywall and/or open doorways. Materials such as glass, steel, metal, concrete, water (example: fish tanks), mirrors, file cabinets and/or brick can also lower your wireless signal strength.

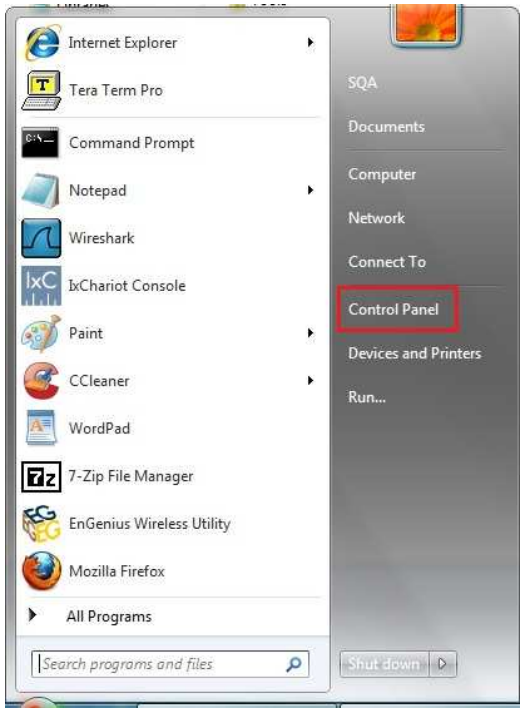
- Interferences can also come from your other electrical devices and/or appliances that generate RF noise. The most usual types are microwaves, or cordless phones.

2.2 Computer Settings (Windows XP/Windows 7)

In order to use the ECB350, you must first configure the TCP/IPv4 connection of your computer system.

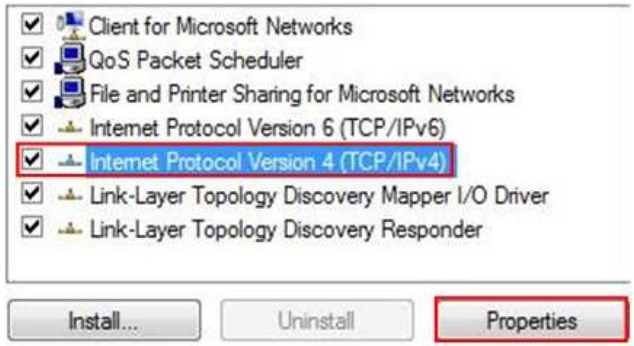
- Click **Start** button and open **Control Panel**.

Windows XP

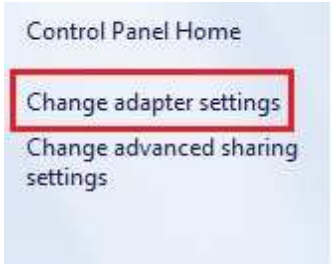


Windows 7

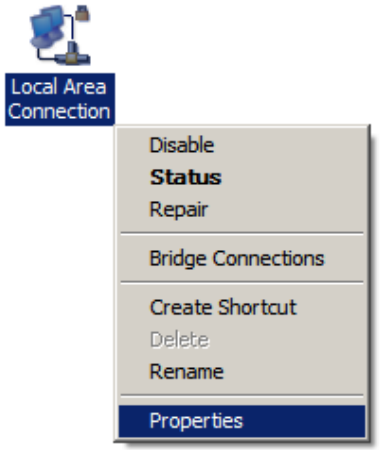
- In **Windows XP**, click **Network Connections**



- In **Windows 7**, click **View Network Status and Tasks** in the **Network and Internet** section, then select **Change adapter settings**



- Right click on **Local Area Connection** and select **Properties**



- Select "**Internet Protocol Version 4 (TCP/IPv4)**" and select **Properties**

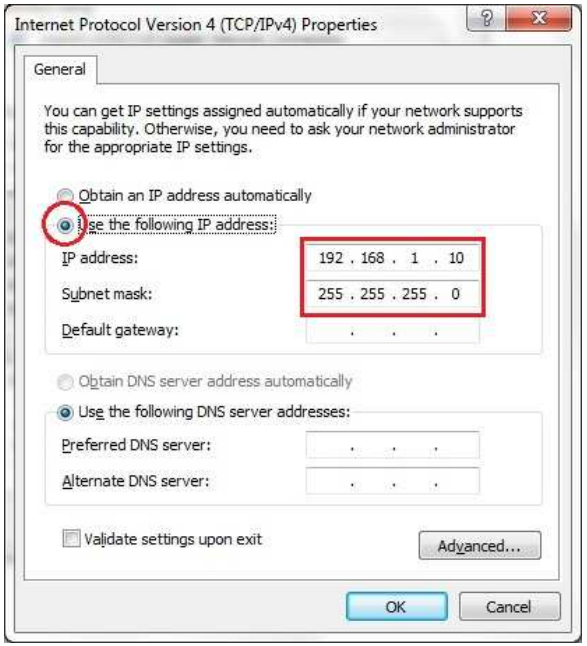
- Select **Use the following IP address** and enter IP address and subnet mask then click **OK**.

Note: Ensure that the IP address and subnet mask are on the same subnet as the device.

For example: Device IP address: 192.168.1.1

PC IP address: 192.168.1.2 – 192.168.1.254

PC subnet mask: 255.255.255.0



2.3 Apple Mac X OS

- Go to **System Preferences** (can be opened in the **Applications** folder or selecting it in the Apple Menu)
- Select **Network** in the **Internet & Network** section
- Highlight **Ethernet**
- In **Configure IPv4**, select **Manually**
- Enter IP address and subnet mask then press **OK**

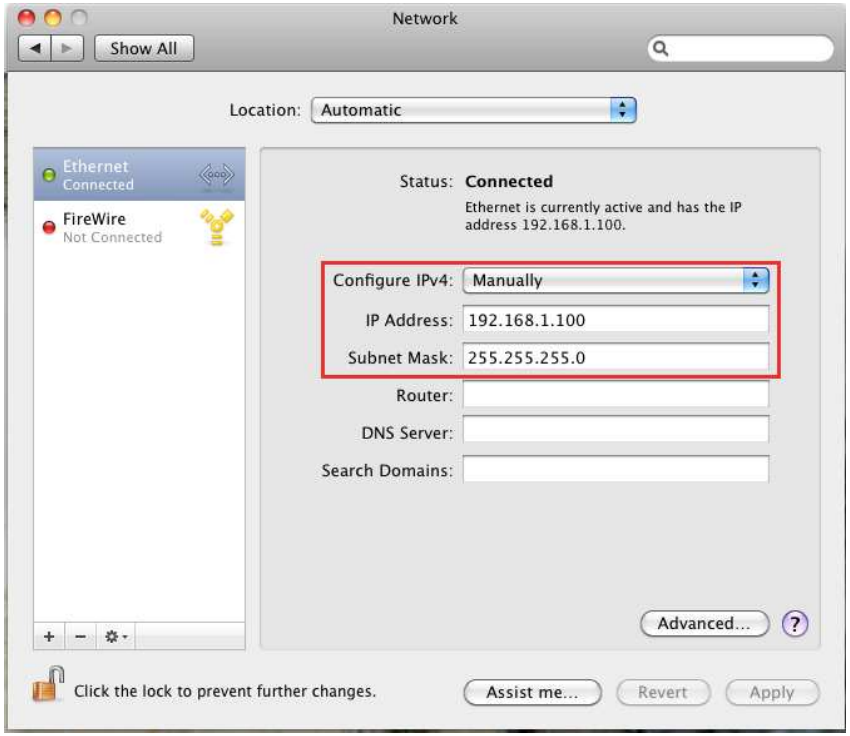
Note: Ensure that the IP address and subnet mask are on the same subnet as the device.

For example: Device IP address: 192.168.1.1

PC IP address: 192.168.1.2 – 192.168.1.254

PC subnet mask: 255.255.255.0

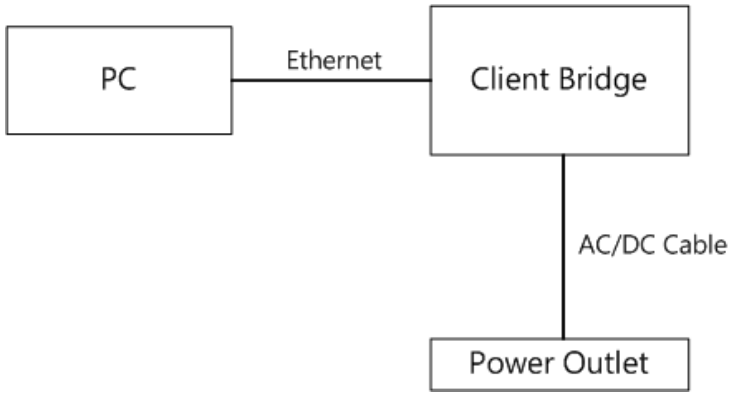
- Click **Apply** when done.

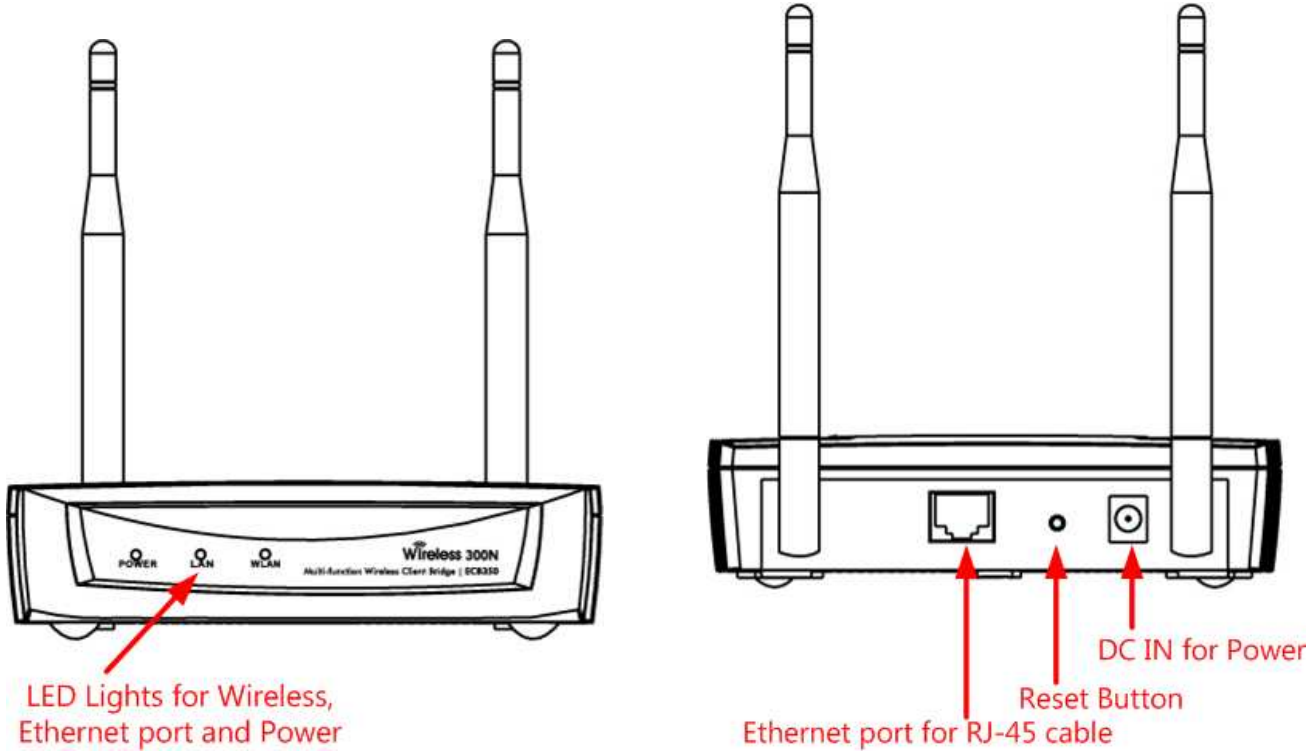


2.4 Hardware Installation

1. Ensure that the computer in use has an Ethernet Card (RJ-45 Ethernet Port). For more information, verify with our computer user manual.
2. Connect one end of the Category 5 Ethernet cable into RJ-45 port of the ECB350 and the other end to the RJ-45 port on the computer that will use the ECB350. Ensure that the cable is securely connected to both the ECB350 and the Computer.
3. Connect the Power Adaptor DC Inlet to the DC-IN port of the ECB350 and the Power Adaptor to the electrical out. Once both connections are secure, verify the following:
    a) Ensure that the **POWER** light is on (it will be green).
    b) Ensure that the **WLAN** light is on (it will be green).
    c) Ensure that the **LAN (Computer/ECB350 Connection)** light is on (it will be green).
    d) Once all three lights are on, proceed to setting up the computer.

This diagram depicts the hardware configuration.





Front Panel Rear Panel

Front Panel	
LED Lights	LED lights for Wireless, Ethernet port and Power.
Rear Panel	
DC IN	DC IN for Power.
Reset Button	One click for reset the device. Press over 10 seconds for reset to factory default.
Ethernet Port	Ethernet port for RJ-45 cable.

3 Configuring Your Client Bridge

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

3.1 Default Settings

Please use your Ethernet port or wireless network adapter to connect the Client Bridge.

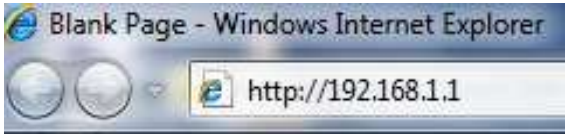
Default Settings

IP Address	192.168.1.1
Username / Password	admin / admin
Operation Mode	Client Bridge

3.2 Web Configuration

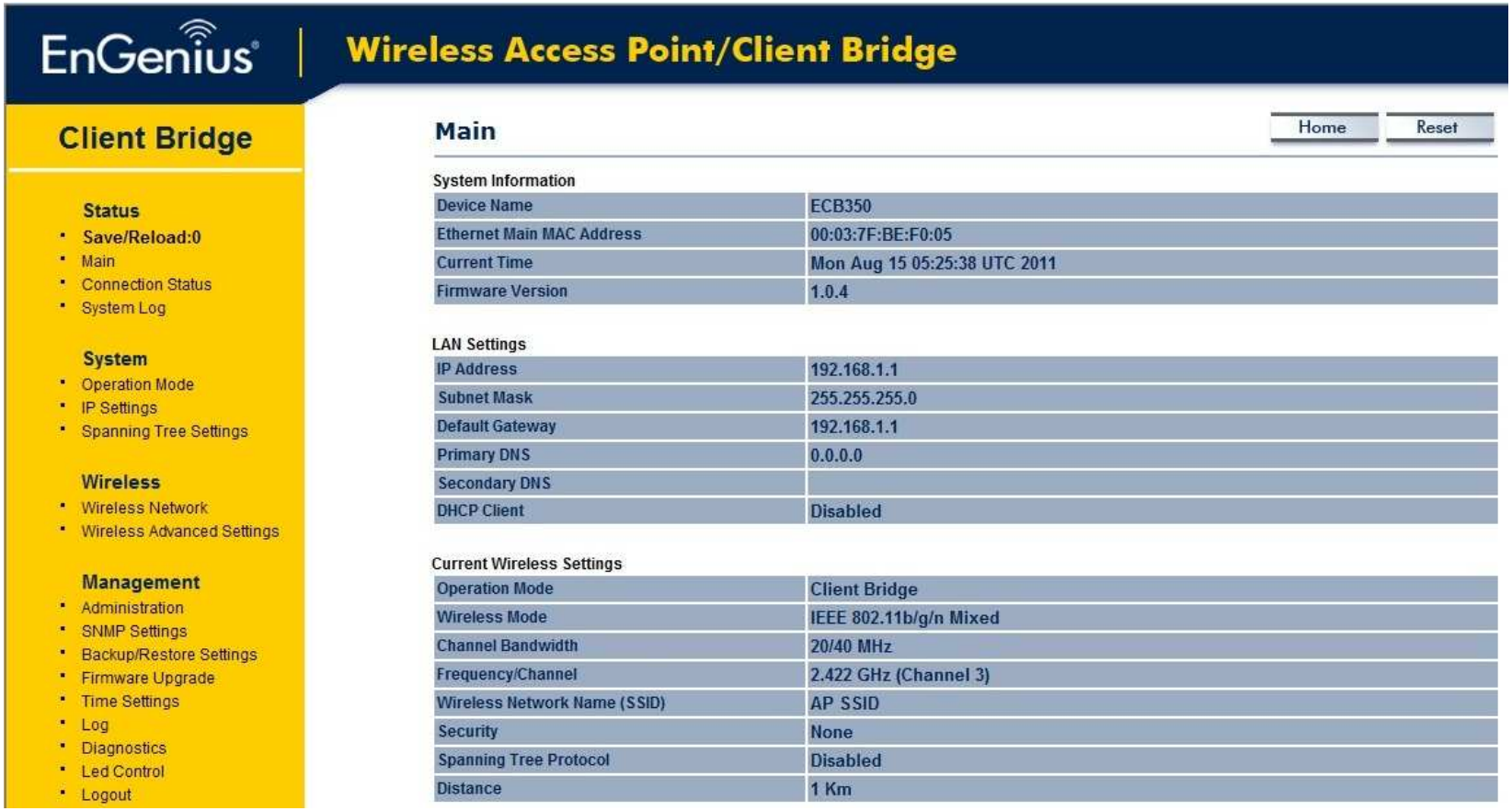
- Open a web browser (Internet Explorer/Firefox/Safari) and enter the IP Address **http://192.168.1.1**

Note: If you have changed the default LAN IP Address of the Access Point, ensure you enter the correct IP Address.



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

- If successful, you will see the ECB350 User Menu.

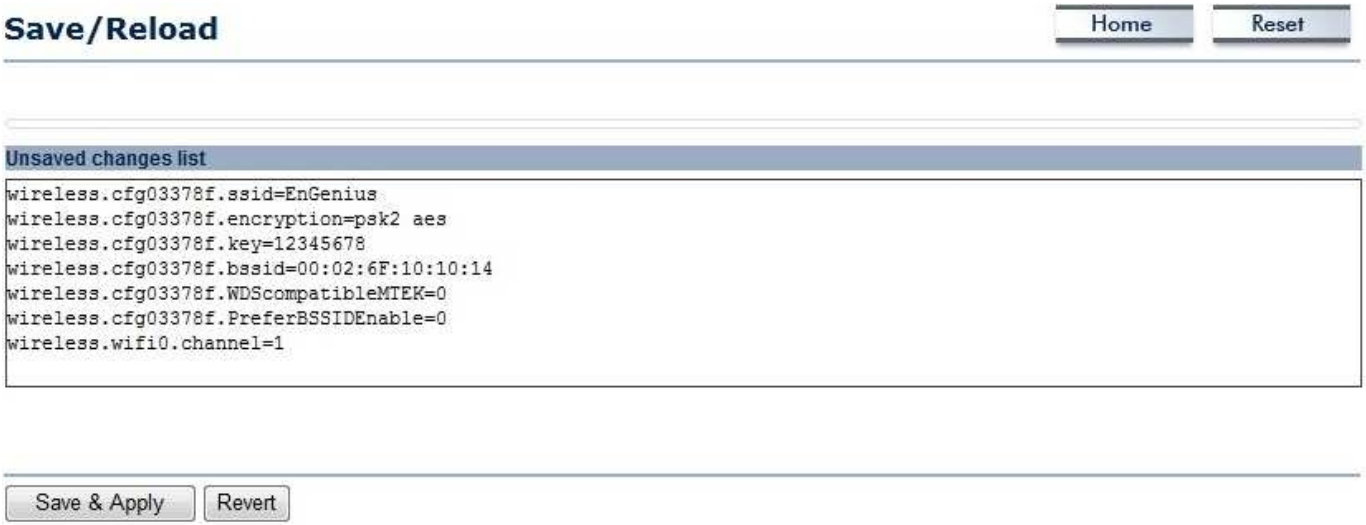

EnGenius
Wireless Access Point/Client Bridge
Client Bridge
Status
Save/Reload:0
Main
Connection Status
System Log
System
Operation Mode
IP Settings
Spanning Tree Settings
Wireless
Wireless Network
Wireless Advanced Settings
Management
Administration
SNMP Settings
Backup/Restore Settings
Firmware Upgrade
Time Settings
Log
Diagnostics
Led Control
Logout
Main
Home
Reset
System Information
Device Name ECB350
Ethernet Main MAC Address 00:03:7F:BE:F0:05
Current Time Mon Aug 15 05:25:38 UTC 2011
Firmware Version 1.0.4
LAN Settings
IP Address 192.168.1.1
Subnet Mask 255.255.255.0
Default Gateway 192.168.1.1
Primary DNS 0.0.0.0
Secondary DNS
DHCP Client Disabled
Current Wireless Settings
Operation Mode Client Bridge
Wireless Mode IEEE 802.11b/g/n Mixed
Channel Bandwidth 20/40 MHz
Frequency/Channel 2.422 GHz (Channel 3)
Wireless Network Name (SSID) AP SSID
Security None
Spanning Tree Protocol Disabled
Distance 1 Km

4 Status

The **Status** section contains the following options: Main, Wireless Client List and System Log.
The following sections describe these options.

4.1 Save/Reload

This page lets you save and apply the settings shown under **Unsaved changes list**, or cancel the unsaved changes and revert to the previous settings that were in effect.



4.2 Main

Clicking the **Main** link under the **Status** menu or clicking **Home** at the top-right of the Web Configurator shows status information about the current operating mode.

- The **System Information** section shows general system information such as device name, MAC address, current time, firmware version and management VLAN ID (**Note:** VLAN ID is only in Access Point and WDS AP mode).

System Information

Device Name	ECB350
Ethernet Main MAC Address	00:03:7F:BE:F0:05
Current Time	Mon Aug 15 04:48:57 UTC 2011
Firmware Version	1.0.4
Management VLAN ID	Untagged

- The **LAN Settings** section shows Local Area Network setting such as the LAN IP address, subnet mask, and DNS address.

LAN Settings

IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.1
Primary DNS	0.0.0.0
Secondary DNS	
DHCP Client	Disabled

- The **WAN Settings** section shows WAN setting such as the MAC Address, Connection Type, Connection Status, IP Address, Subnet Mask, and DNS Address.

Note: WAN Settings is only in Client Router and Router mode.

WAN Settings	
MAC Address	00:03:7F:BE:F0:05
Connection Type	Static IP
Connection Status	Down
IP Address	
IP Subnet Mask	255.255.255.0
Primary DNS	0.0.0.0
Secondary DNS	

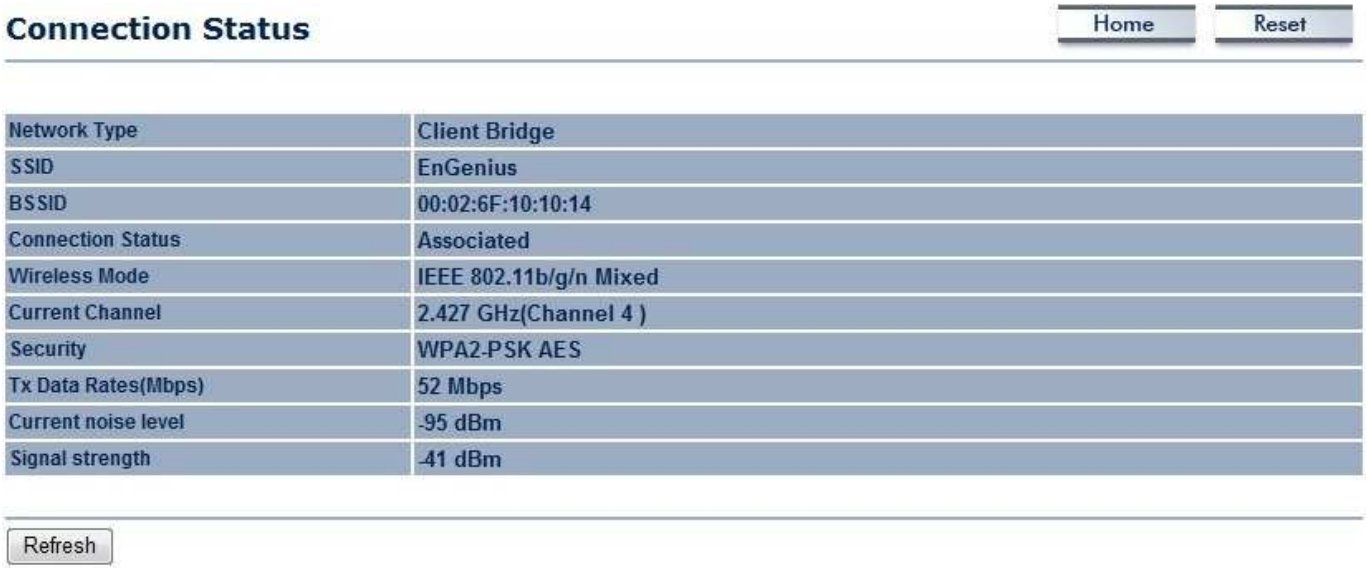
- The **Current Wireless Settings** section shows wireless information such as operating mode, frequency and channel. Since the ECB350 supports multiple-SSIDs, information about each SSID, such as its ESSID and security settings, are displayed (**Note:** Profile Settings is only in Access Point, WDS AP and Router mode).

Current Wireless Settings		
Operation Mode	Access Point	
Wireless Mode	IEEE 802.11b/g/n Mixed	
Channel Bandwidth	20-40 MHz	
Frequency/Channel	2.437 GHz (Channel 6)	
Profile Isolation	No	
Profile Settings (SSID/Security/VID)	1	EnGeniusBEF005/None/1
	2	N/A
	3	N/A
	4	N/A
Spanning Tree Protocol	Disabled	
Distance	1 Km	

4.3 Connection Status

Click on the **Connection Status** link under the **Status** menu. This page displays the current status of the network, including Network Type, SSID, BSSID, Connection Status, Wireless Mode, Current Channel, Security, Data Rate, Noise Level and Signal Strength.

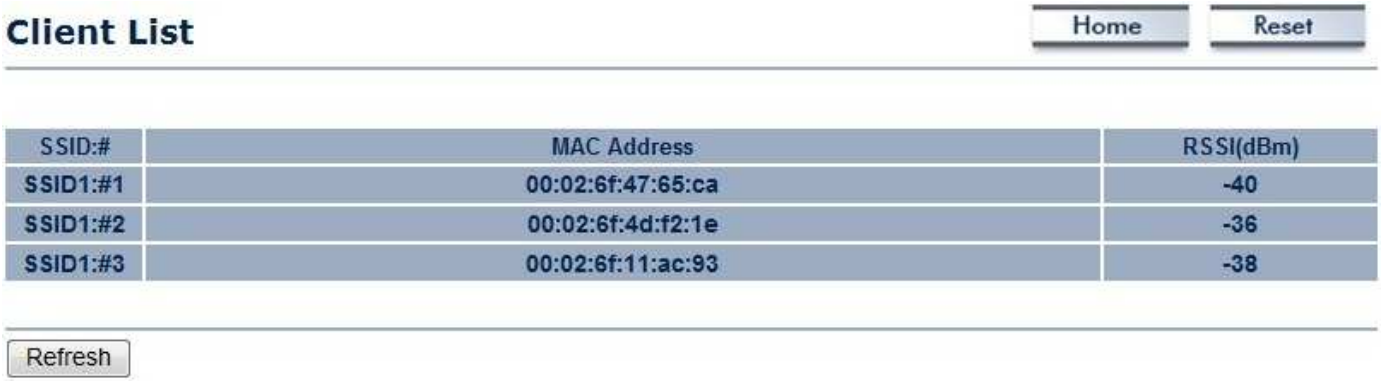
Note: Only in Client Bridge, Client Router, WDS Station and Repeater mode.



4.4 Wireless Client List

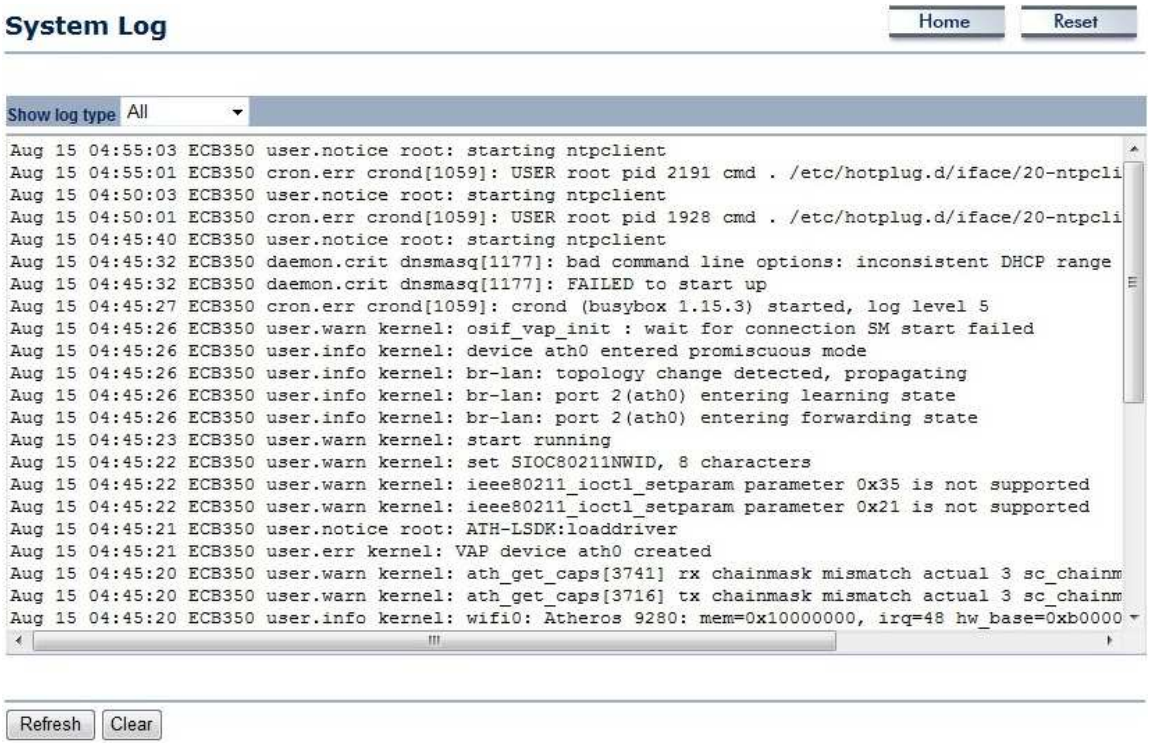
Clicking the **Wireless Client List** link under the **Status** menu displays the list of clients associated to the ECB350, along with the MAC addresses and signal strength for each client. Clicking the [**Refresh**] button updates (refreshes) the client list.

Note: Only in Access Point, WDS AP, Repeater and Router mode.



4.5 System Log

The ECB350 automatically logs (records) events of possible interest in its internal memory. To view the logged information, click the **System Log** link under the **Status** menu. If there is not enough internal memory to log all events, older events are deleted from the log. When powered down or rebooted, the log will be cleared.

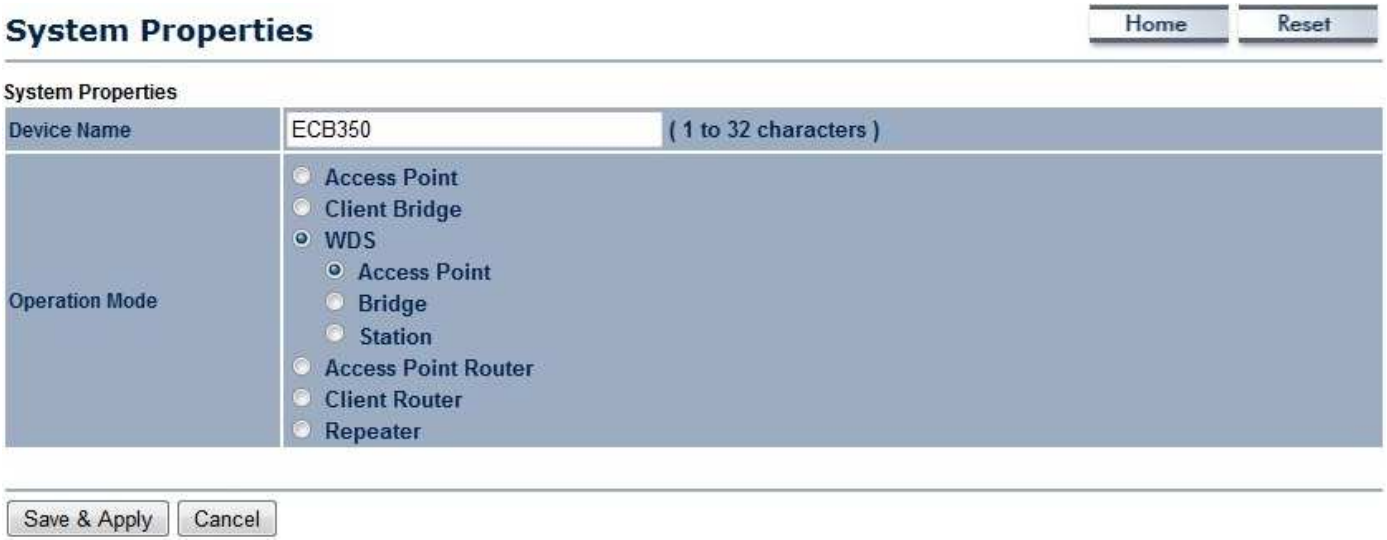


System Log	
Refresh	Update the log.
Clear	Clear the log.

5 System

5.1 Operation Mode

The ECB350 supports 8 operating modes: Access Point, Client Bridge, WDS AP, WDS Bridge, WDS Station, Universal Repeater, Router and Client Router.

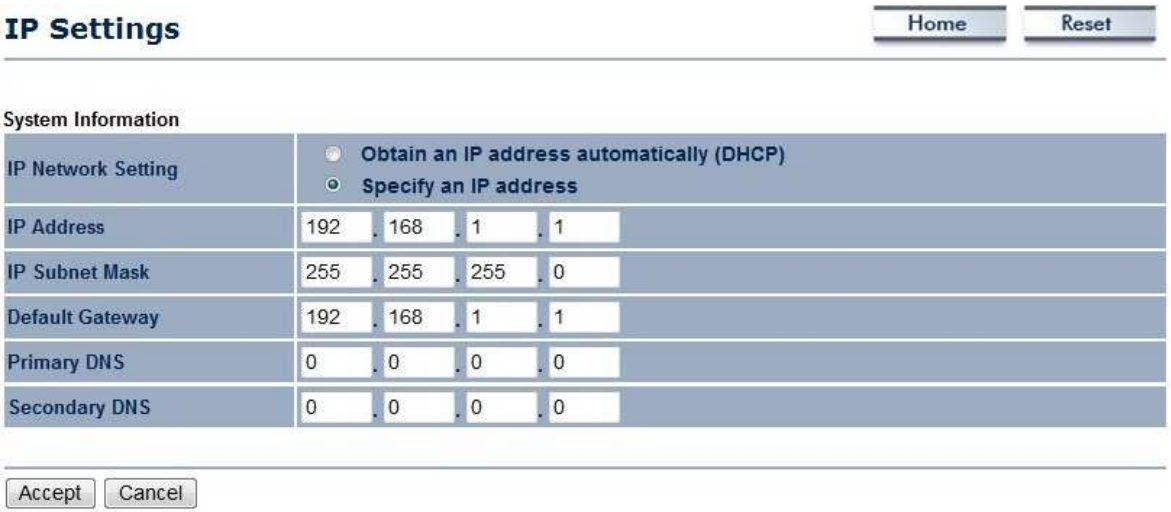


System Properties	
Device Name	Enter a name for the device. The name you type appears in SNMP management. This name is not the SSID and is not broadcast to other devices.
Operation Mode	Use the radio button to select an operating mode.
Save & Apply / Cancel	Click [**Save & Apply**] to confirm the changes or [**Cancel**] to cancel and return previous settings.

5.2 IP Settings

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

Note: Only in Access Point, Client Bridge, WDS AP, WDS Bridge, WDS Station and Repeater mode.

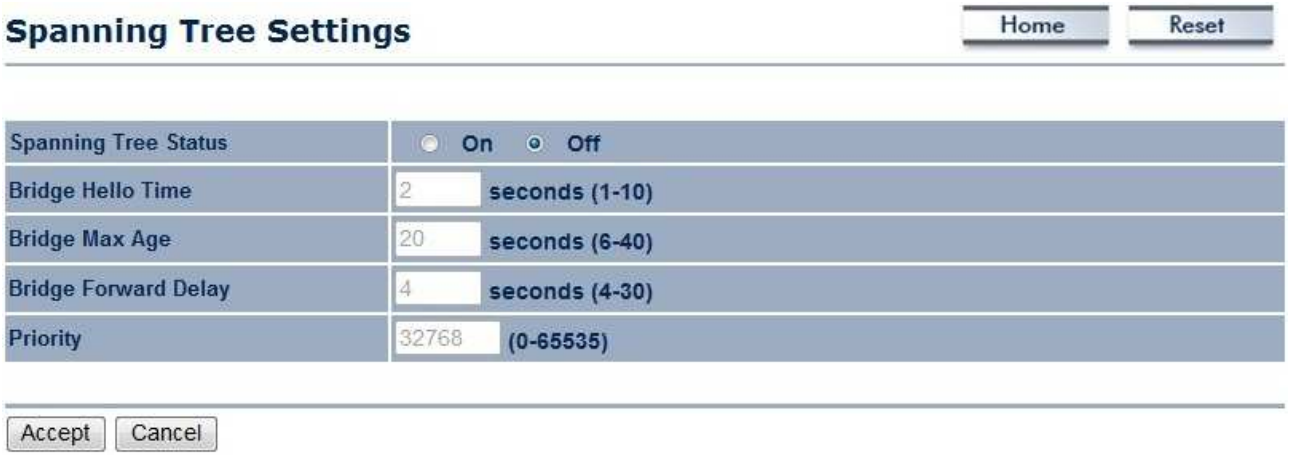


IP Settings	
IP Network Setting	Select whether the device IP address will use the static IP address specified in the IP Address field or be obtained automatically when the device connects to a DHCP server.
IP Address	The IP Address of this device.
IP Subnet Mask	The IP Subnet Mask of this device.
Default Gateway	The Default Gateway of this device. Leave it blank if you are unsure of this setting.
Primary / Secondary DNS	The primary / secondary DNS address for this device.

5.3 Spanning Tree Setting

This page allows you to modify the Spanning Tree settings. Enabling Spanning Tree protocol will prevent network loops in your LAN network.

Note: Only in Access Point, Client Bridge, WDS AP, WDS Bridge, WDS Station and Repeater mode.



Spanning Tree	
Spanning Tree Status	Enable or disable the Spanning Tree function.
Bridge Hello Time	Specify Bridge Hello Time, in seconds. This value determines how often the device sends hello packets to communicate information about the topology throughout the entire Bridged Local Area Network.
Bridge Max Age	Specify Bridge Max Age, in seconds. If another bridge in the spanning tree does not send a hello packet for a long period of time, it is assumed to be dead.
Bridge Forward Delay	Specify Bridge Forward Delay, in seconds. Forwarding delay time is the time spent in each of the Listening and Learning states before the Forwarding state is entered. This delay is provided so that when a new bridge comes onto a busy network, it looks at some traffic before participating.

Priority	Specify the Priority number. Smaller number has greater priority.
Accept / Cancel	Click [**Accept**] to confirm the changes or [**Cancel**] to cancel and return previous settings.

6 Router

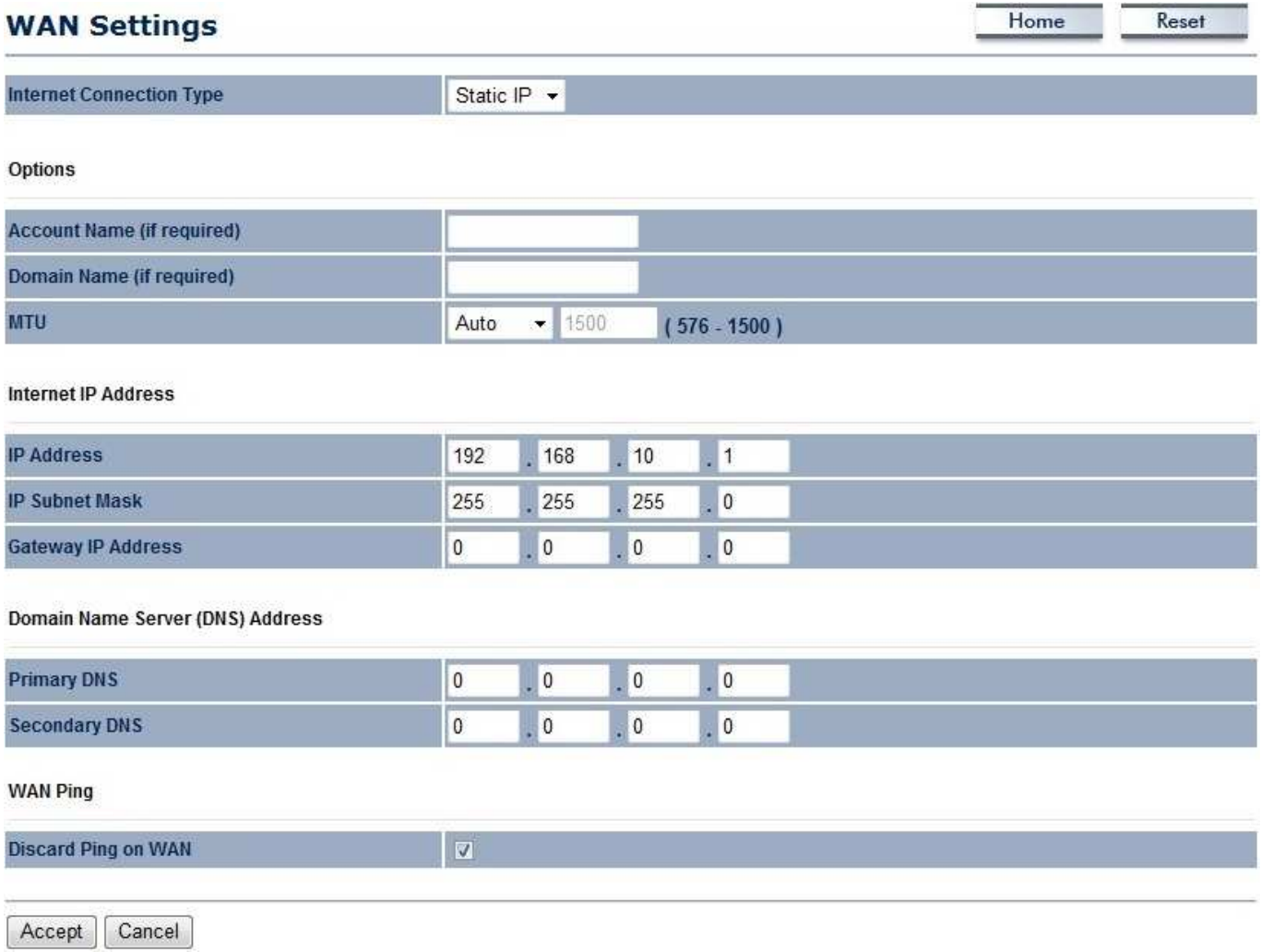
This section is only available for **AP Router Mode** and **Client Router Mode**.

6.1 WAN Settings

There are four types of WAN connections: Static IP, DHCP, PPPoE and PPTP. Please contact your ISP to find out which settings you should choose.

6.1.1 Static IP

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.


WAN Settings
Home
Reset
Internet Connection Type
Static IP
Options
Account Name (if required)
Domain Name (if required)
MTU
Auto
1500
(576 - 1500)
Internet IP Address
IP Address
192 . 168 . 10 . 1
IP Subnet Mask
255 . 255 . 255 . 0
Gateway IP Address
0 . 0 . 0 . 0
Domain Name Server (DNS) Address
Primary DNS
0 . 0 . 0 . 0
Secondary DNS
0 . 0 . 0 . 0
WAN Ping
Discard Ping on WAN
Accept
Cancel

Static IP	
Internet Connection Type	Select Static IP to begin configuration of the Static IP connection.
Account Name	Enter the account name provided by your ISP.
Domain Name	Enter the domain name provided by your ISP.
MTU	Specify the Maximum Transmit Unit size. It is recommended you accept the default setting of **Auto**. Otherwise, packets will be fragmented downstream if the MTU is set too high or too low, which impacts network performance. In extreme cases, an MTU setting that is too low can prevent the ECB350 from establishing some connections.
IP Address	Assign an IP address Manually.
IP Subnet Mask	Specify an IP address's subnet mask.
Gateway IP Address	Specify the gateway of your network.
Primary DNS	Specify the primary DNS server's IP address.
Secondary DNS	Specify the second DNS server's IP address.
Discard Ping on WAN	Check to Enable to recognize pings on the ECB350 WAN interface or Disable to block pings on the ECB350 WAN interface. Note: Pinging IP addresses is a common method used by hackers to test whether the IP address is valid. Blocking pings provides some extra security from hackers.
Accept / Cancel	Click **Accept** to confirm the changes or **Cancel** to cancel and return previous settings.

Note: Clicking **Accept** does not apply the changes. To apply them, use **Status** > **Save/Load** (see section 4.1).

6.1.2 DHCP

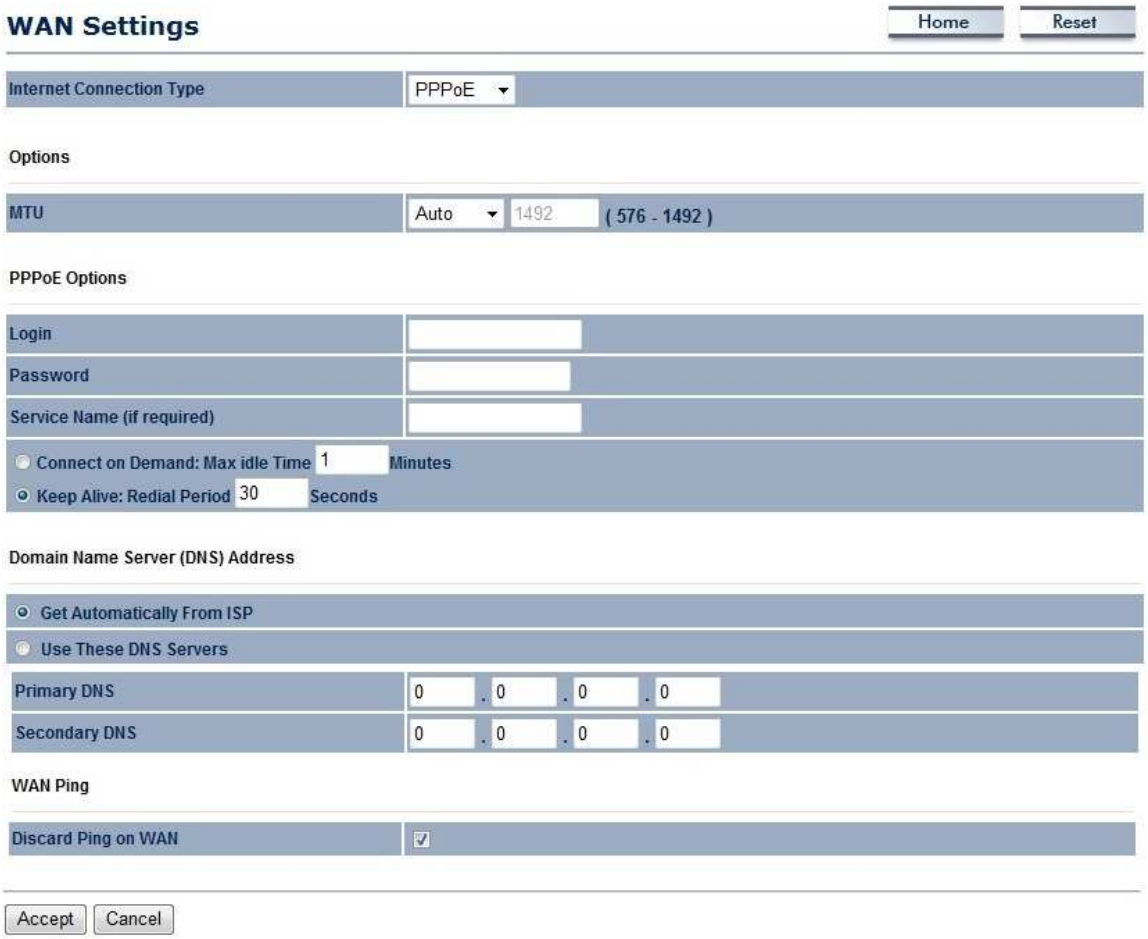
Select DHCP as your WAN connection type to obtain an IP address automatically. You will need to enter account name as your hostname and, optionally, DNS information.

DHCP

Internet Connection Type	Select **DHCP** to begin configuration of the DHCP connection.
Account Name	Enter the account name provided by your ISP.
Domain Name	Enter the domain name provided by your ISP.
MTU	Specify the Maximum Transmit Unit size. It is recommended you accept the default setting of **Auto**. Otherwise, packets will be fragmented downstream if the MTU is set too high or too low, which impacts network performance. In extreme cases, an MTU setting that is too low can prevent the ECB350 from establishing some connections.
Get Automatically From ISP	Click this radio button to obtain the DNS automatically from the DHCP server.
Use These DNS Servers	Click the radio button to set up the Primary DNS and Secondary DNS servers manually.
Discard Ping on WAN	Check to Enable to recognize pings on the ECB350 WAN interface or Disable to block pings on the ECB350 WAN interface. Note: Pinging IP addresses is a common method used by hackers to test whether the IP address is valid. Blocking pings provides some extra security from hackers.
Accept / Cancel	Click **Accept** to confirm the changes or **Cancel** to cancel and return previous settings.

6.1.3 PPPoE

Select Point to Point Protocol over Ethernet (PPPoE) if your ISP uses a PPPoE connection. Your ISP will provide you with a username and password. This selection is typically used for DSL services. Remove your PPPoE software from your computer, as it is not needed and will not work with your ECB350.

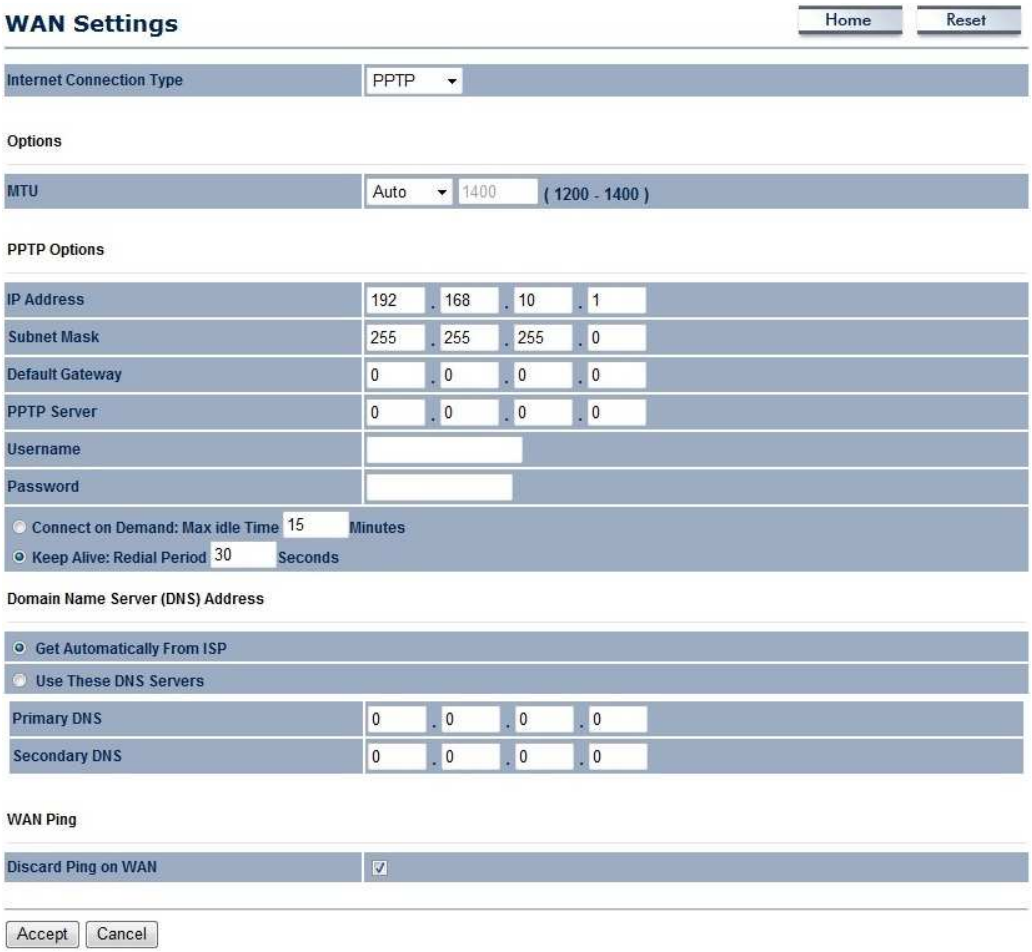


PPPoE

Internet Connection Type	Select **PPPoE** to begin configuration of the PPPoE connection.
MTU	Specify the Maximum Transmit Unit size. It is recommended you accept the default setting of **Auto**. Otherwise, packets will be fragmented downstream if the MTU is set too high or too low, which impacts network performance. In extreme cases, an MTU setting that is too low can prevent the ECB350 from establishing some connections.
Login	Enter the Username provided by your ISP.
Password	Enter the Password provided by your ISP.
Service Name	Enter the Service Name provided by your ISP.
Connect on Demand	Select the radio button to specify the maximum idle time. Internet connection will disconnect when it reach the maximum idle time, but it will automatically connect when user tries to access the network.
Keep Alive	Select whether to keep the Internet connection always on, or enter a redial period once the internet lose connection.
Get Automatically From ISP	Click this radio button to obtain the DNS automatically from the DHCP server.
Use These DNS Servers	Click the radio button to set up the Primary DNS and Secondary DNS servers manually.
Discard Ping on WAN	Check to Enable to recognize pings on the ECB350 WAN interface or Disable to block pings on the ECB350 WAN interface. Note: Pinging IP addresses is a common method used by hackers to test whether the IP address is valid. Blocking pings provides some extra security from hackers.
Accept / Cancel	Click **Accept** to confirm the changes or **Cancel** to cancel and return previous settings.

6.1.4 PPTP

Select PPTP as your WAN connection type if your ISP uses a Point-to-Point-Tunneling Protocol (PPTP) connection. You will need to provide the IP address, subnet mask, default gateway (optional), DNS (optional), server IP, username, and password provided by your ISP.

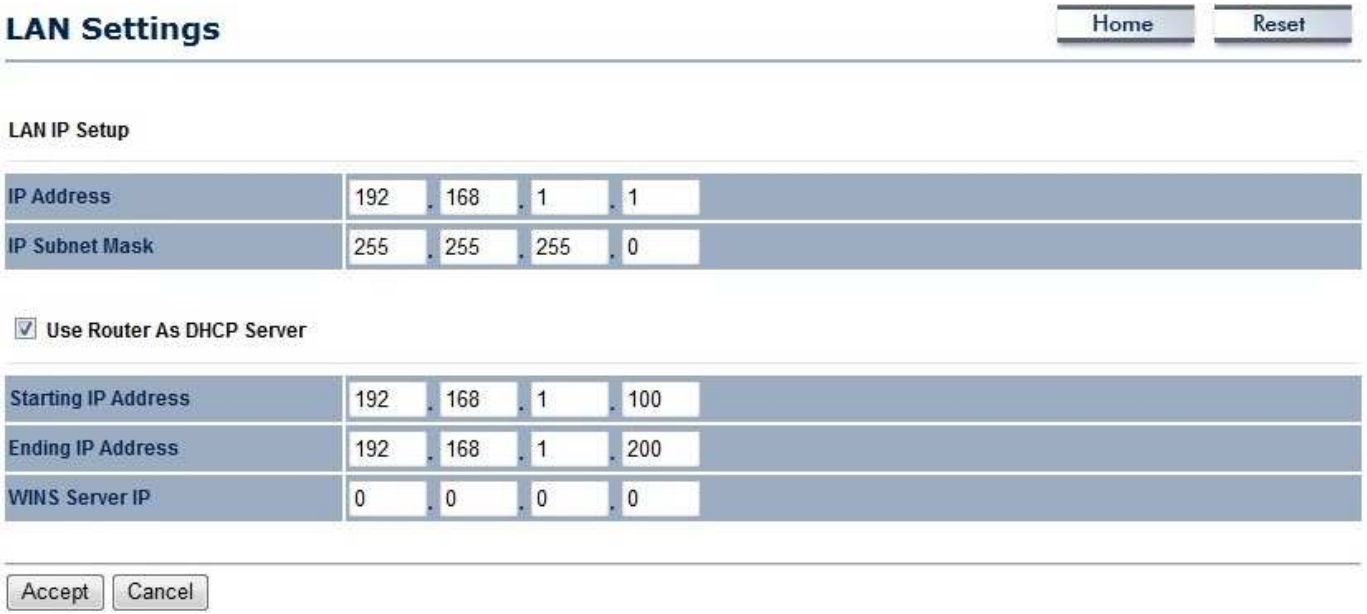


PPTP

Internet Connection Type	Select **PPTP** to begin configuration of the PPTP connection.
MTU	Specify the Maximum Transmit Unit size. It is recommended you accept the default setting of **Auto**. Otherwise, packets will be fragmented downstream if the MTU is set too high or too low, which impacts network performance. In extreme cases, an MTU setting that is too low can prevent the ECB350 from establishing some connections.
IP Address	Enter the WAN port IP address.
Subnet Mask	Enter the WAN IP subnet mask.
Default Gateway	Enter the WAN gateway IP address.
PPTP Server	Enter the IP address of the PPTP server.
Username	Enter the Username provided by your ISP.
Password	Enter the Password provided by your ISP.
Service Name	Enter the Service Name provided by your ISP.
Connect on Demand	Select the radio button to specify the maximum idle time. Internet connection will disconnect when it reach the maximum idle time, but it will automatically connect when user tries to access the network.
Keep Alive	Select whether to keep the Internet connection always on, or enter a redial period once the internet lose connection.
Get Automatically From ISP	Click this radio button to obtain the DNS automatically from the DHCP server.
Use These DNS Servers	Click the radio button to set up the Primary DNS and Secondary DNS servers manually.
Discard Ping on WAN	Check to Enable to recognize pings on the ECB350 WAN interface or Disable to block pings on the ECB350 WAN interface. Note: Pinging IP addresses is a common method used by hackers to test whether the IP address is valid. Blocking pings provides some extra security from hackers.
Accept / Cancel	Click **Accept** to confirm the changes or **Cancel** to cancel and return previous settings.

6.2 LAN Settings

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



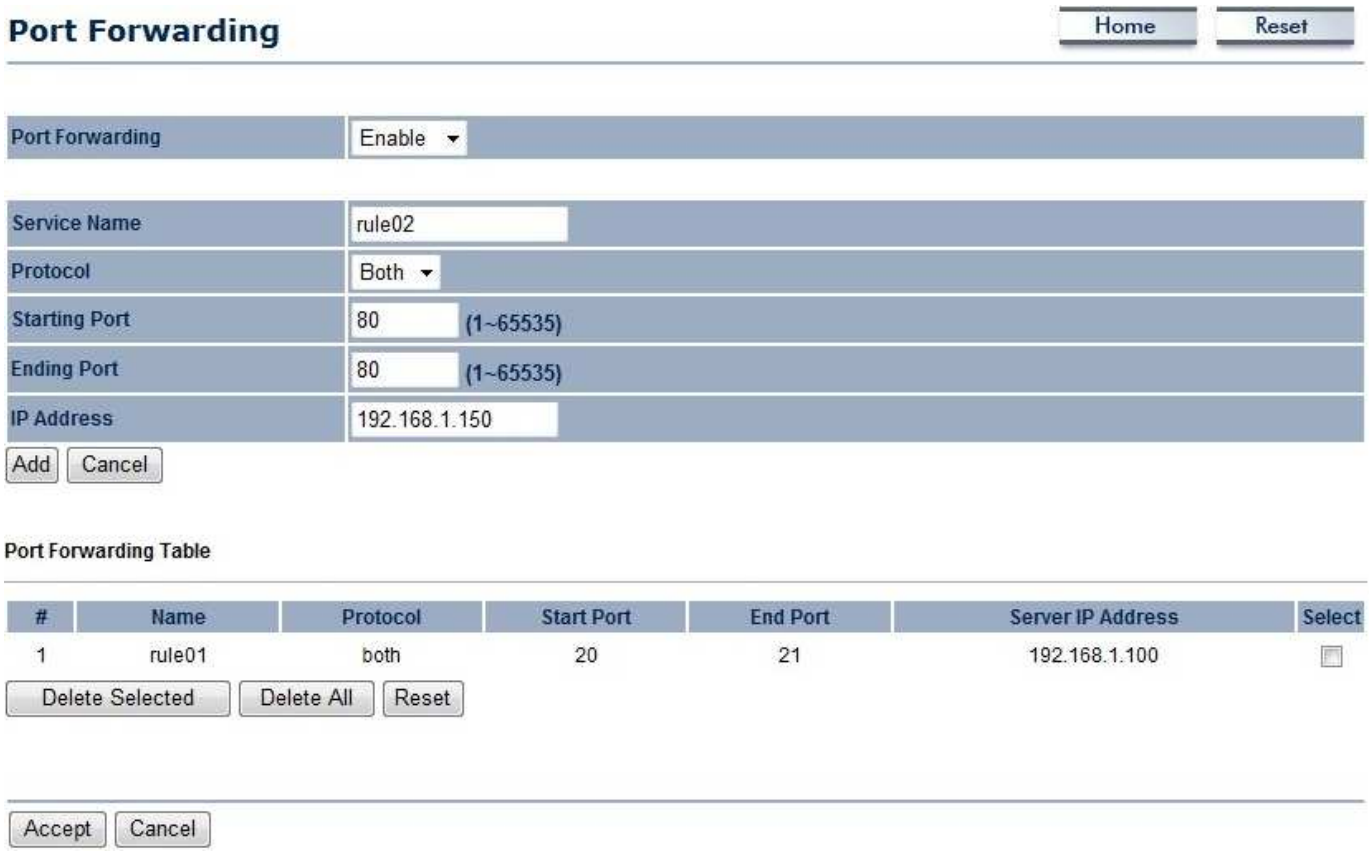
LAN Settings	
IP Address	The LAN IP Address of this device.
IP Subnet Mask	The LAN Subnet Mask of this device.
Use Router As DHCP Server	Check this option to enable the internal DHCP server.
Starting /Ending IP Address	The range of IP addresses of the DHCP server will allocate to LAN device.
WINS Server IP	Enter the IP address of the WINS server.
Accept / Cancel	Click **Accept** to confirm the changes or **Cancel** to cancel and return previous settings.

6.3 VPN Pass Through

VPN Passthrough allows a secure virtual private network (VPN) connection between two computers. Enabling the options on this page opens a VPN port and enables connections to pass through the ECB350 without interruption.

6.4 Port Forwarding

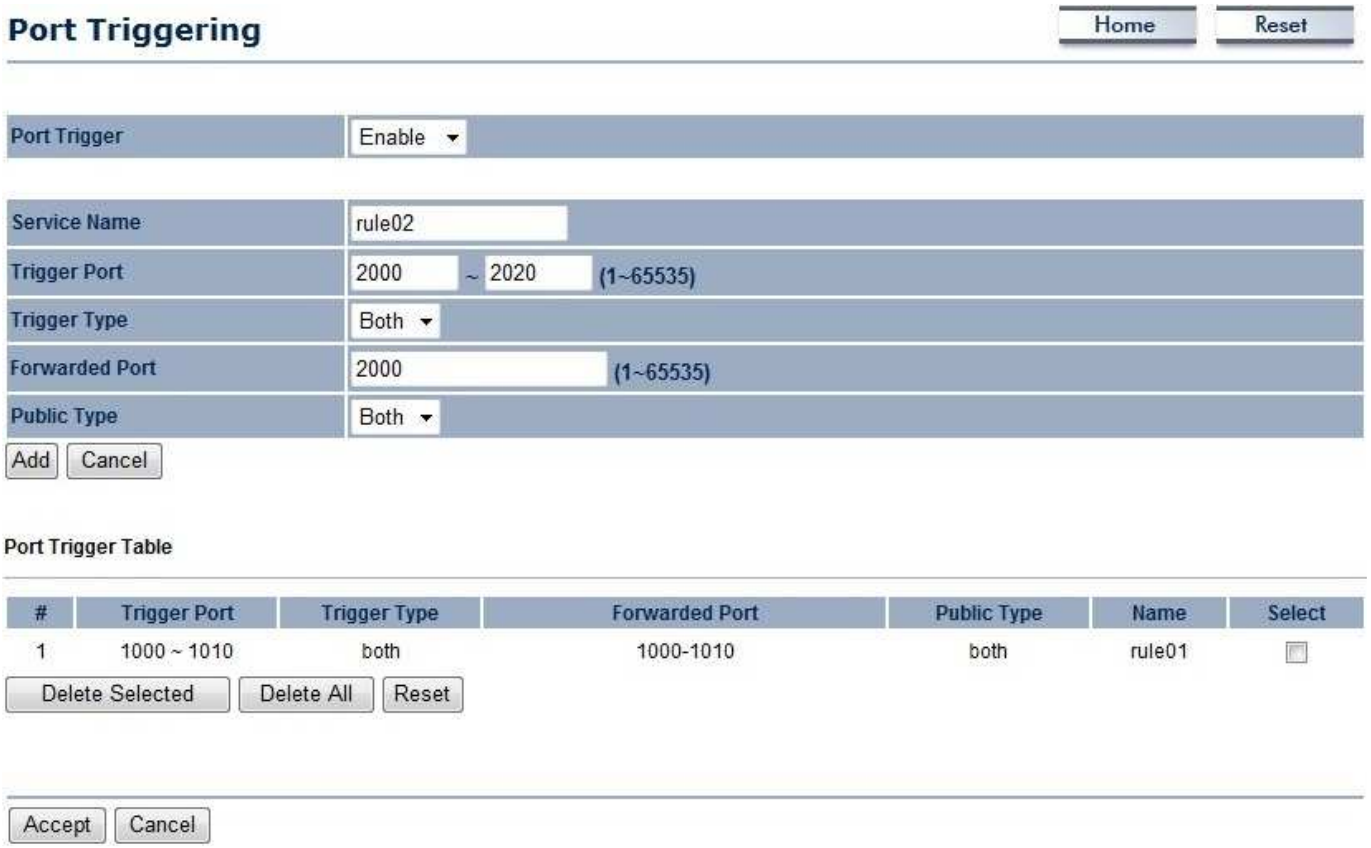
Port forwarding can be used to open a port or range of ports to a device on your network. Using port forwarding, you can set up public services on your network. When users from the Internet make certain requests on your network, the ECB350 can forward those requests to computers equipped to handle the requests. If, for example, you set the port number 80 (HTTP) to be forwarded to IP address 192.168.1.150, all HTTP requests from outside users are forwarded to 192.168.1.150.



Port Forwarding	
Port Forwarding	Enables or disables the Port Forwarding feature.
Service Name	Enter a name or description to help you identify this entry.
Protocol	Select a protocol for the application. Choices are **Both**, **TCP**, and **UDP**.
Start / End Port	The port range that the server is running on the local computer.
IP Address	The local IP address of the computer the server is hosted on.
Add / Cancel	Click **Add** to add port forwarding rule or **Cancel** to discard the settings
Accept / Cancel	Click **Accept** to confirm the changes or **Cancel** to cancel and return previous settings.

6.5 Port Triggering

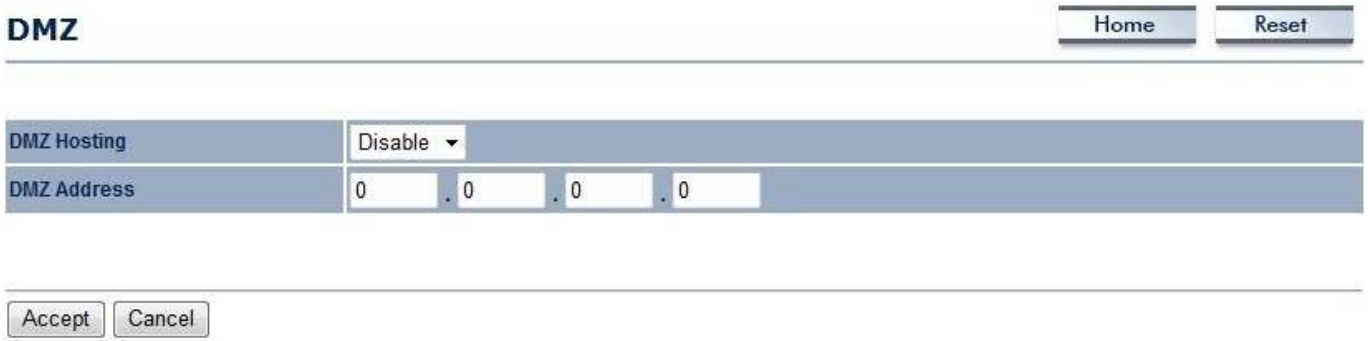
If you use Internet applications which use non-standard connections or port numbers, you may find that they do not function correctly because they are blocked by the device's firewall. Port Triggering will be required for these applications to work.



Port Triggering	
Port Triggering	Enables or disables the Port Triggering feature.
Service Name	Enter a name or description to help you identify this entry.
Trigger Port	This is the outgoing (outbound) port numbers for this application.
Trigger Type	Select whether the application uses TCP, UDP or Both types of protocols for outbound transmissions.
Forwarded Port	These are the inbound (incoming) ports for this application.
Public Type	Select whether the application uses TCP, UDP or Both types of protocols for inbound transmissions.
Add / Cancel	Click **Add** to add port forwarding rule or **Cancel** to discard the settings
Accept / Cancel	Click **Accept** to confirm the changes or **Cancel** to cancel and return previous settings.

6.6 DMZ

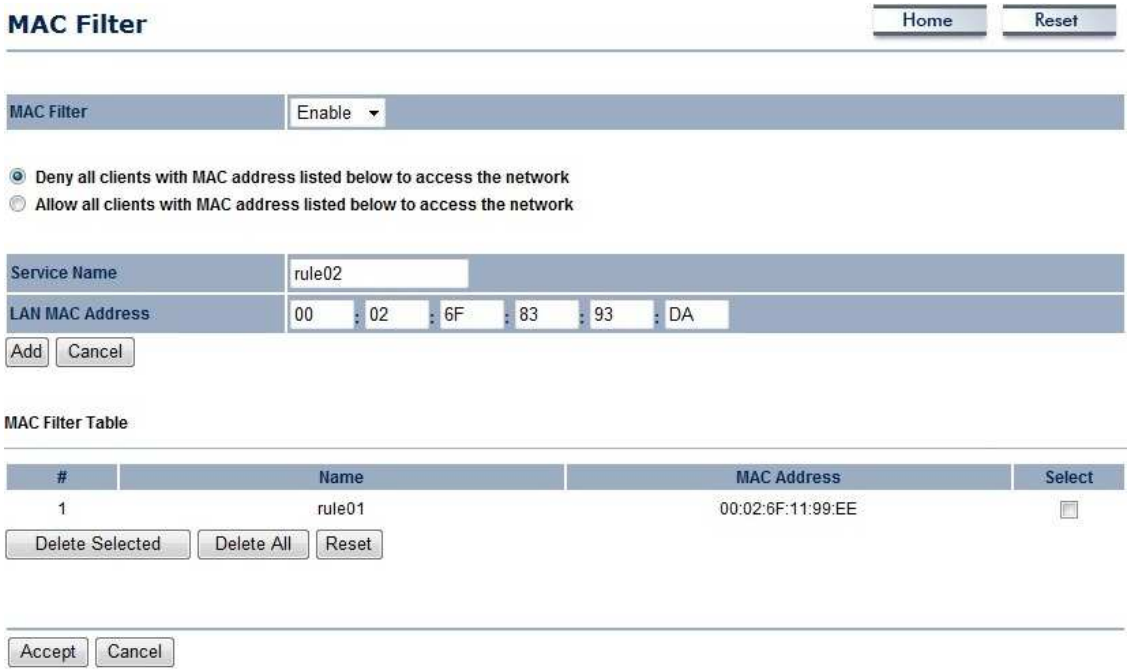
If you have a computer that cannot run Internet applications properly from behind the ECB350, you can allow the computer to have unrestricted Internet access. Enter the IP address of that computer as a Demilitarized Zone (DMZ) host with unrestricted Internet access. Adding a client to the DMZ may expose that computer to a variety of security risks, so use this option as a last resort.



DMZ	
DMZ Hosting	Enables or disables the DMZ function.
DMZ Address	Enter an IP address of the computer that will have unlimited Internet access.
Accept / Cancel	Click **Accept** to confirm the changes or **Cancel** to cancel and return previous settings.

6.7 MAC Filter

You can choose whether to Deny or Allow only those devices listed in the MAC Filtering table to access the Internet.

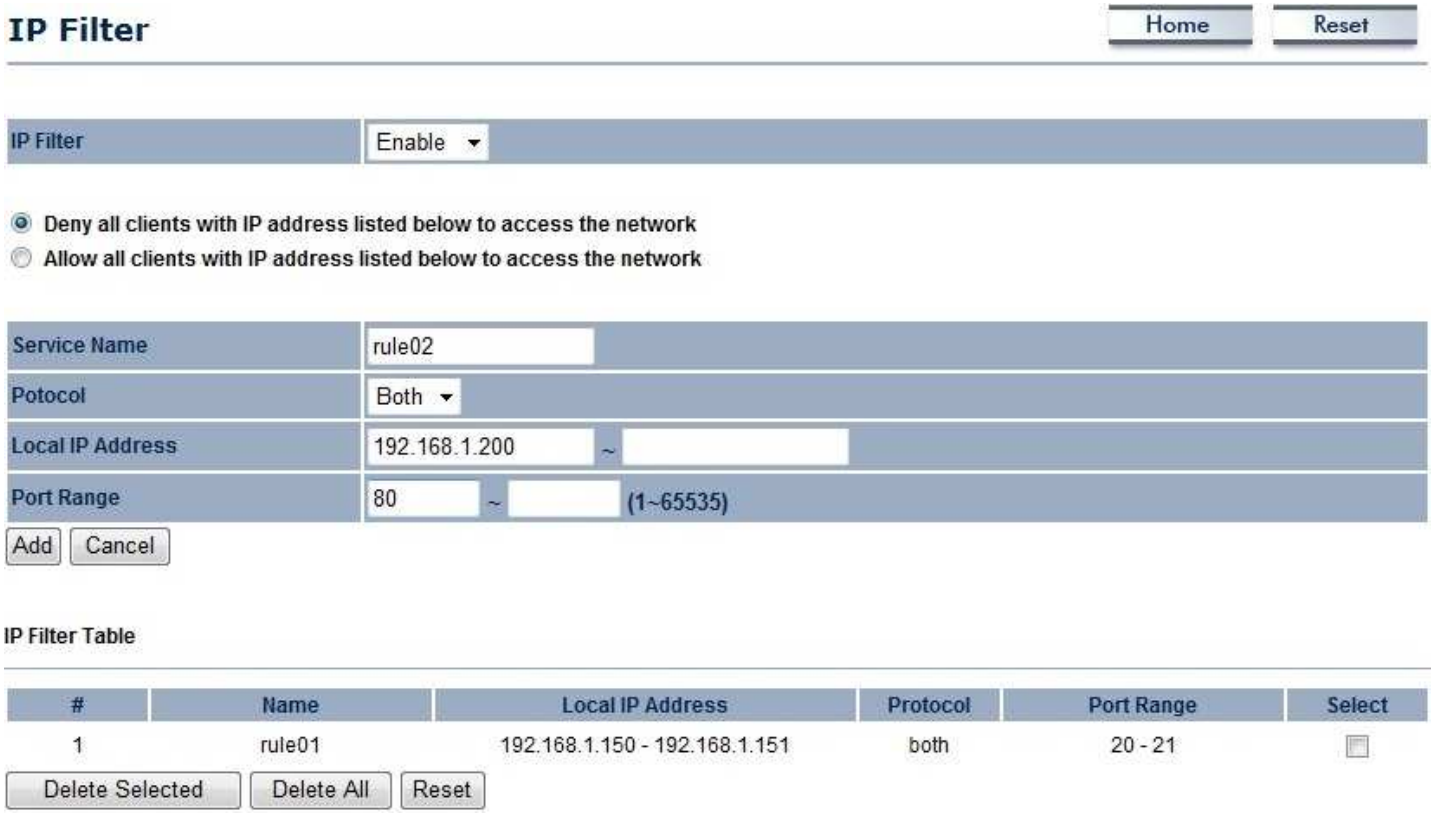


MAC Filter	
MAC Filter	Enables or disables the MAC Filter function.
Deny all clients with MAC addresses listed below to access the network	When selected, the computers listed in the MAC Filter table will be **Denied** to access the Internet.
Allow all clients with MAC addresses listed below to access the network	When selected, only the computers listed in the MAC Filter table will be **Allowed** to access the Internet.

6.8 IP Filter

You can choose whether to Deny or Allow only devices with those IP Addresses listed on the IP Filter Table from accessing certain ports. This can be used to control which Internet applications the computers can access.

Note: You will need to have knowledge of what Internet port numbers each application uses.



IP Filter

IP Filter	Enables or disables the IP Filter function.
Deny all clients with IP addresses listed below to access the network	When selected, the computers listed in the IP Filter table will be **Denied** to access the Internet.
Allow all clients with IP addresses listed below to access the network	When selected, only the computers listed in the IP Filter table will be **Allowed** to access the Internet.

6.9 URL Filter

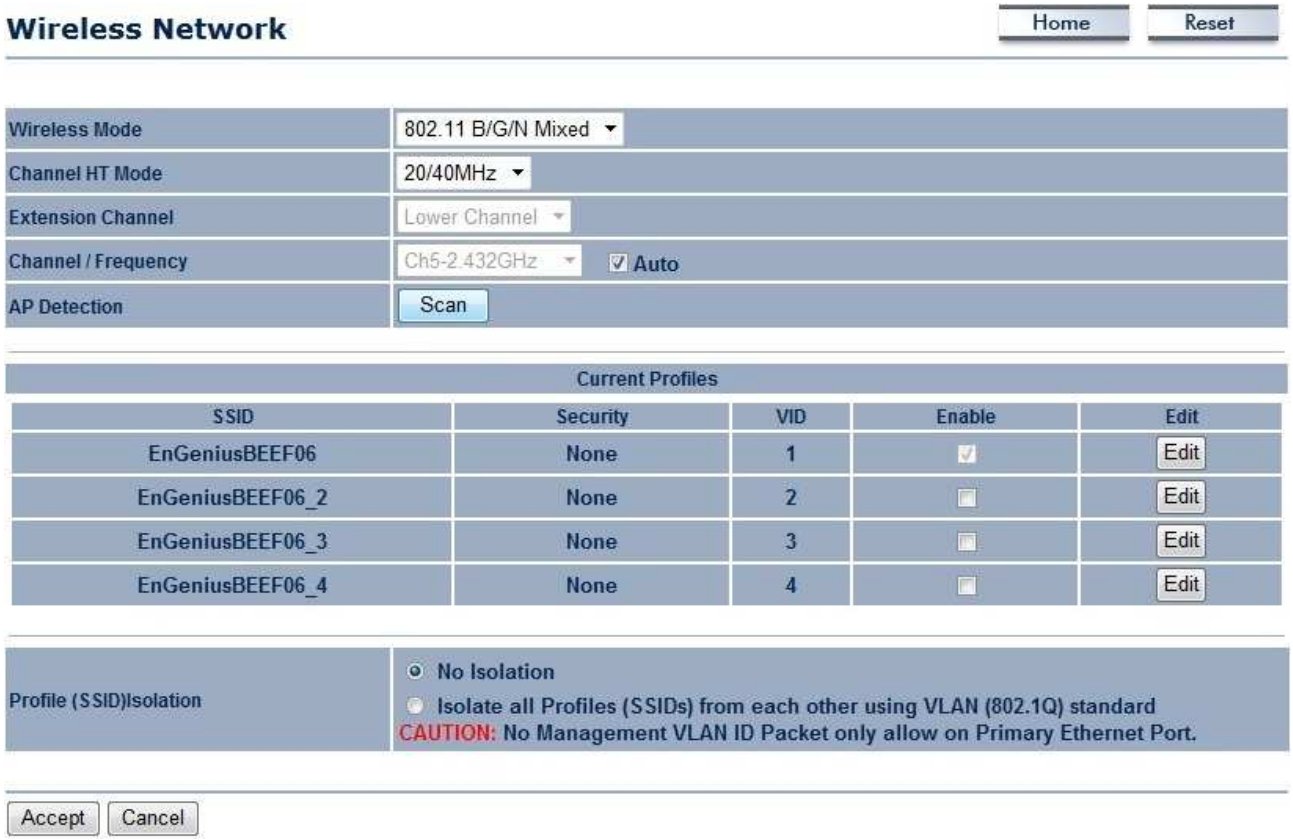
You can deny access to certain websites by blocking keywords in the URL web address.
For example, “gamer” has been added to the URL Filter Table. Any web address that includes “gamer” will be blocked.

7 Wireless

7.1 Wireless Network

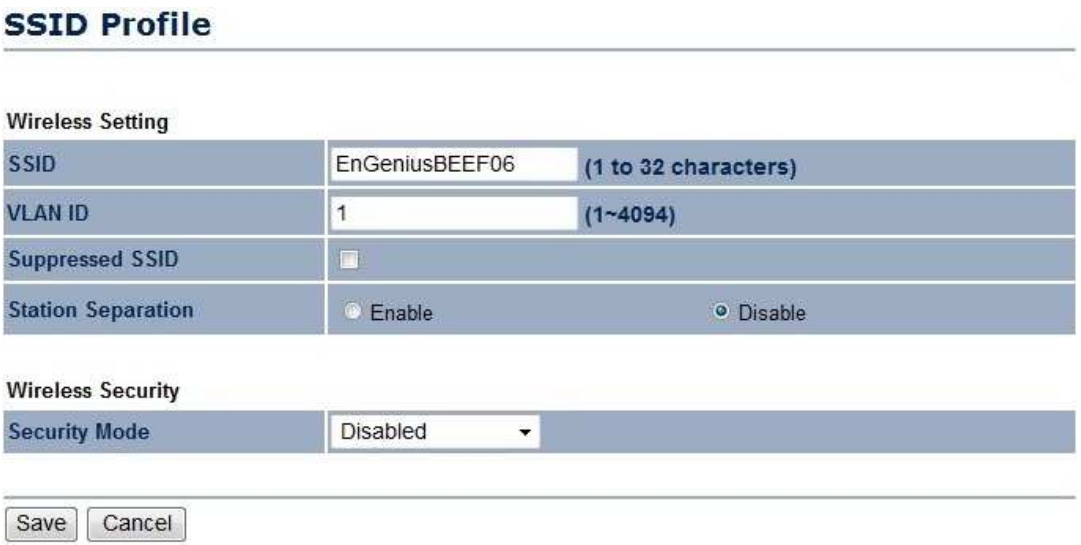
This page shows the current status of the device's Wireless settings.

Access Point / WDS AP / Router mode:



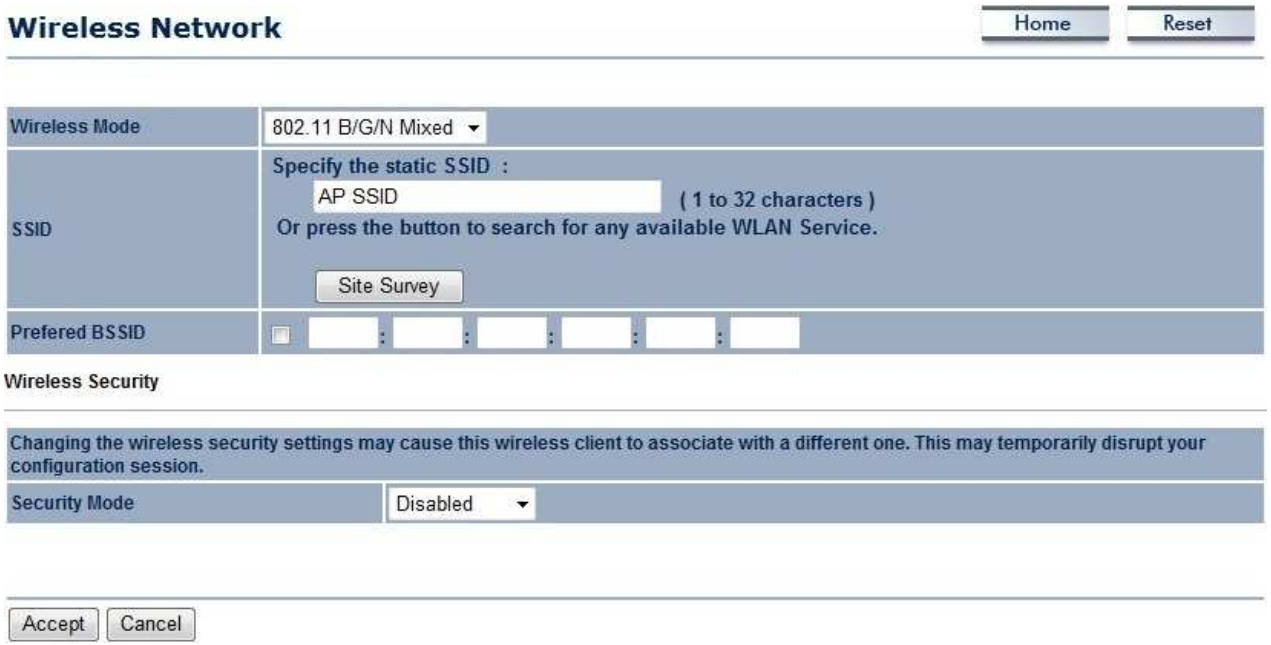
Wireless Network (Access Point / WDS AP / Router mode)	
Wireless Mode	Wireless mode supports 802.11b/g/n mixed mode.
Channel HT Mode	The default channel bandwidth is 20/40MHz. The larger the channel, the better the transmission quality and speed.
Extension Channel	Select upper or lower channel. Your selection may affect the Auto channel function.
Channel / Frequency	Select the channel and frequency appropriate for your country's regulation.
Auto	Check this option to enable auto-channel selection.
AP Detection	AP Detection can select the best channel to use by scanning nearby areas for Access Points.
Current Profile	Configure up to four different SSIDs. If many client devices will be accessing the network, you can arrange the devices into SSID groups. Click [**Edit**] to configure the profile and check whether you want to enable extra SSID.
Profile Isolation	Restricted client to communicate with different VID by selecting the radio button.
Accept / Cancel	Click [**Accept**] to confirm the changes or [**Cancel**] to cancel and return previous settings.

SSID Profile



SSID Profile	
SSID	Specify the SSID for the current profile.
VLAN ID	Specify the VLAN tag for the current profile.
Suppressed SSID	Check this option to hide the SSID from clients. If checked, the SSID will not appear in the site survey.
Station Separation	Click the appropriate radio button to allow or prevent communication between client devices.
Wireless Security	See the Wireless Security section.
Save / Cancel	Click [**Save**] to accept the changes or [**Cancel**] to cancel and return previous settings.

Client Bridge / Client Router / WDS Station / Repeater mode:

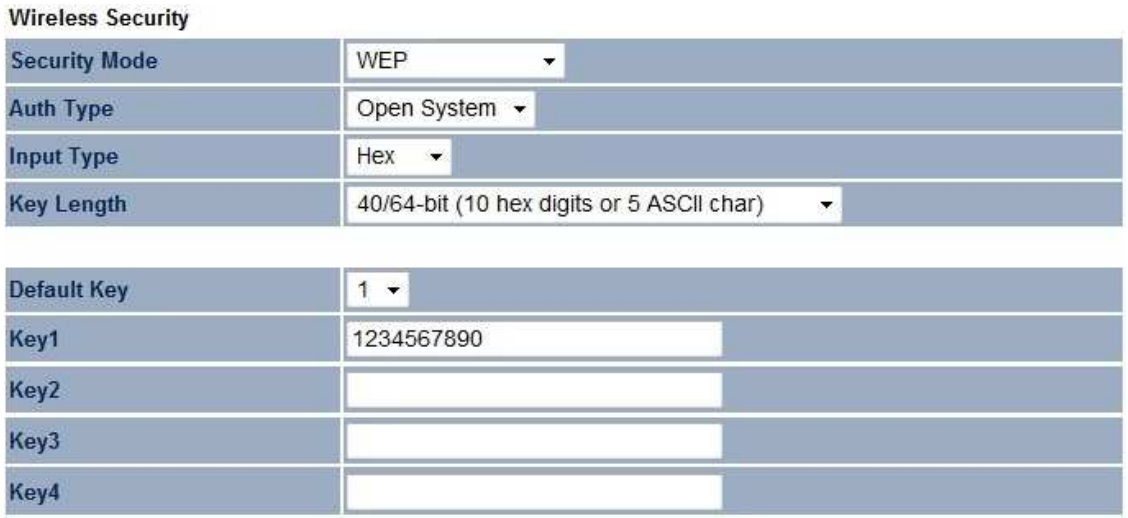


Wireless Network (Client Bridge / Client Router / WDS Station / Repeater mode)	
Wireless Mode	Wireless mode supports 802.11b/g/n mixed mode.
SSID	The SSID is a unique named shared amongst all the points of the wireless network. The SSID must be identical on all points of the wireless network and cannot exceed 32 characters. You may specify an SSID or select one from the **Site Survey**.
Site Survey	Click on **Site Survey** to search the existing Access Points.
Preferred BSSID	Specify the BSSID (Access Point's MAC address).
Wireless Security	The encryption is using. It's must the same as Access Point's encryption.
Accept / Cancel	Click [**Accept**] to confirm the changes or [**Cancel**] to cancel and return previous settings.

7.2 Wireless Security

The Wireless Security section lets you configure the ECB350's security modes: WEP, WPA-PSK, WPA2-PSK, WPA-PSK Mixed, WPA, WPA2, and WPA Mixed. We strongly recommend you use WPA2-PSK.

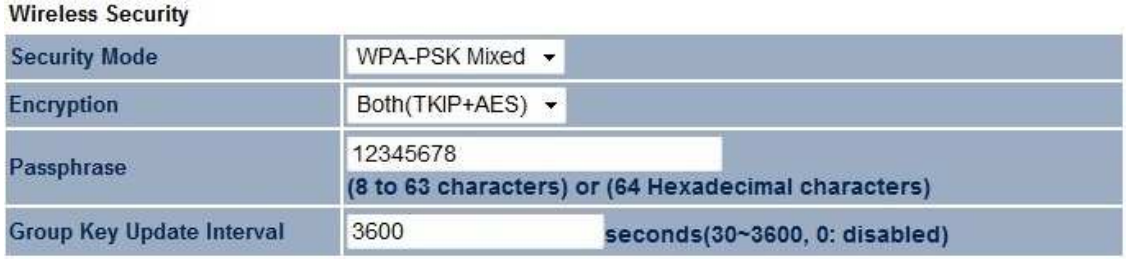
WEP Encryption:



WEP Encryption	
Auth Type	Select **Open System** or **Shared Key**.
Input type	**ASCII**: regular text (recommended) **HEX**: for advanced users
Key Length	Select the desired option, and ensure the wireless clients use the same setting. Choices are 64, 128, 152-bit password lengths.
Default Key	Select the key you wish to be the default. Transmitted data is ALWAYS encrypted using the Default Key; the other Keys are for decryption only. You must enter a **Key Value** for the **Default Key**.
Encryption Key #	Enter the key value or values you wish to use. Only the Key selected as Default is required. The

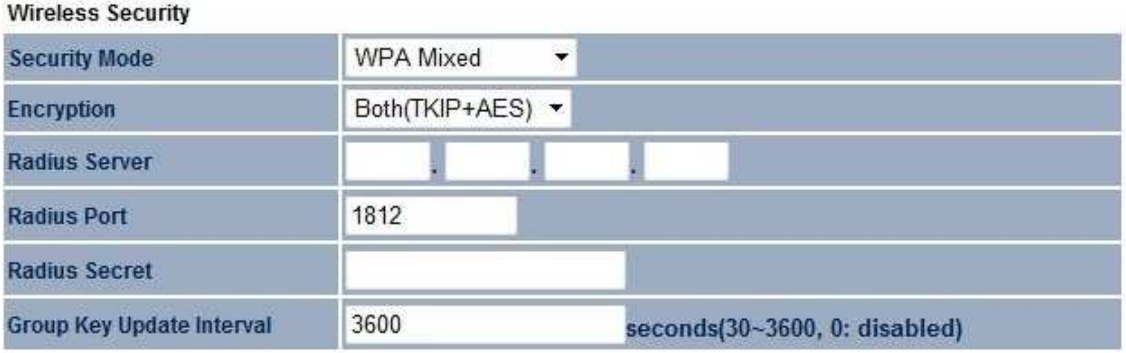
	others are optional.

WPA-PSK (WPA Pre-Shared Key) Encryption:



WPA-PSK (WPA Pre-Shared Key) Encryption	
Encryption	Select the WPA encryption you would like. Please ensure that your wireless clients use the same settings.
Passphrase	Wireless clients must use the same key to associate the device. If using passphrase format, the Key must be from 8 to 63 characters in length.
Group Key Update Interval	Specify how often, in seconds, the group key changes.

WPA Encryption: Only in Access Point / WDS AP / Router mode



WPA Encryption	
Encryption	Select the WPA encryption you would like. Please ensure that your wireless clients use the same settings.
Radius Server	Enter the IP address of the Radius Server
Radius Port	Enter the port number used for connections to the Radius server.
Radius Secret	Enter the secret required to connect to the Radius server.
Group Key Update Interval	Specify how often, in seconds, the group key changes.

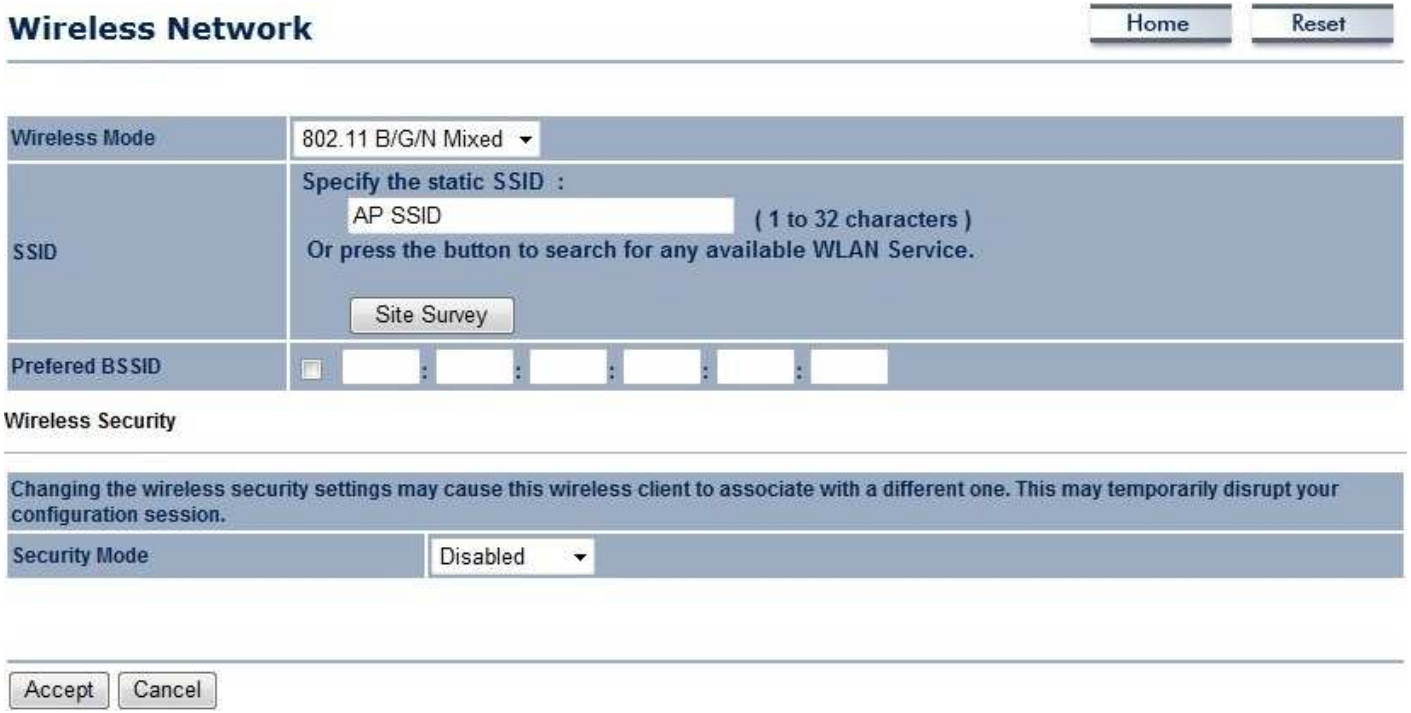
Note: 802.11n does not allow WEP/WPA-PSK TKIP/WPA2-PSK TKIP security mode. The connection mode will change from 802.11n to 802.11g.

7.3 Site Survey

Use this feature to scan nearby Access Points.

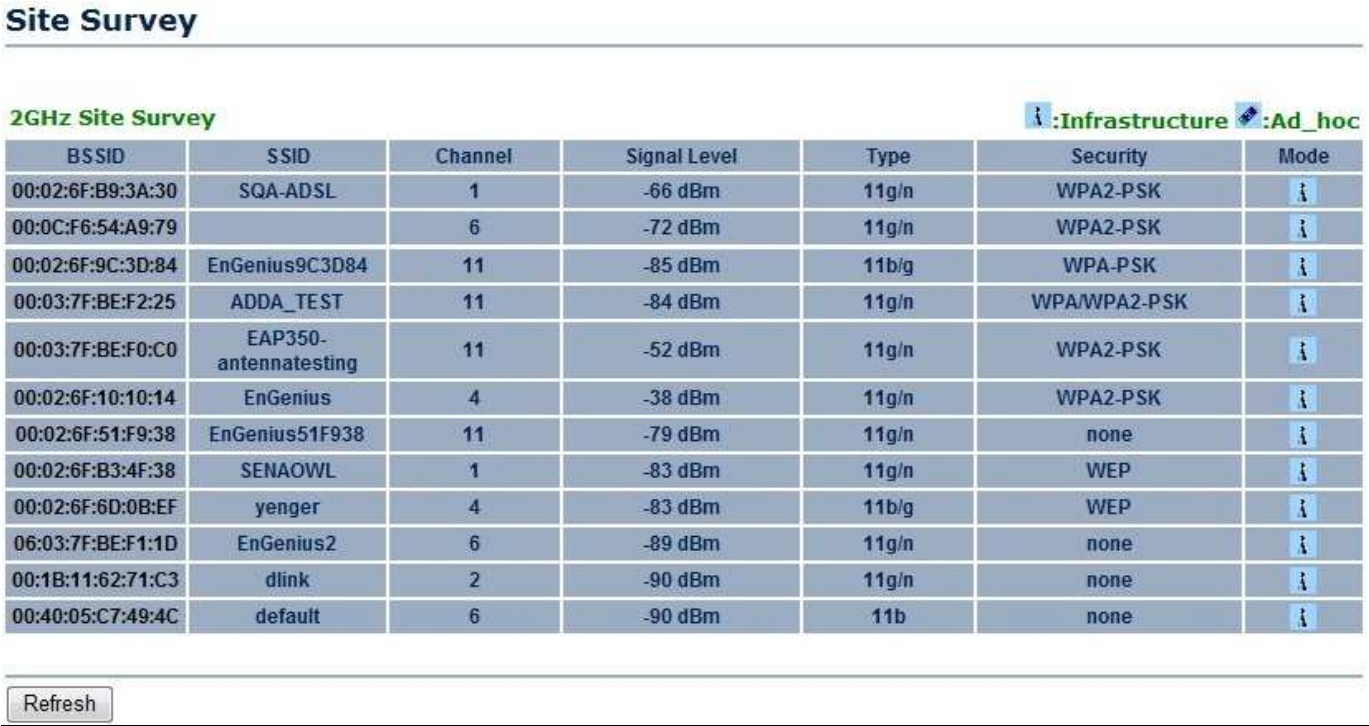
Note: Only in Client Bridge, Client Router and Repeater mode.

1. Click **Site Survey**.



2. Scanning the nearby Access Points

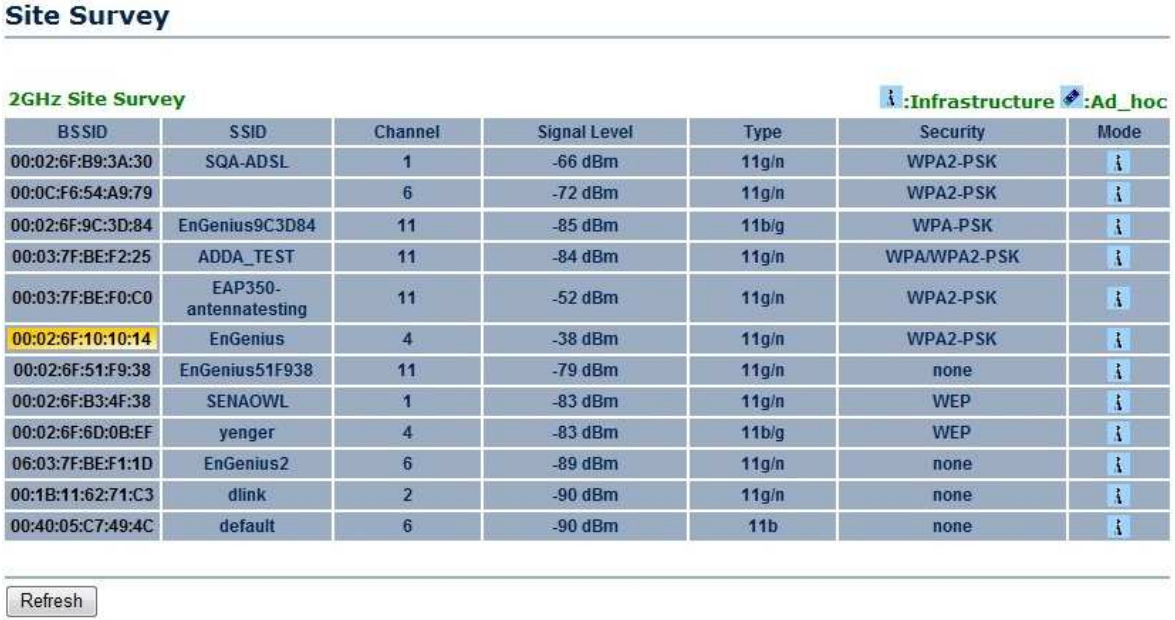
3. Access Point list after site survey



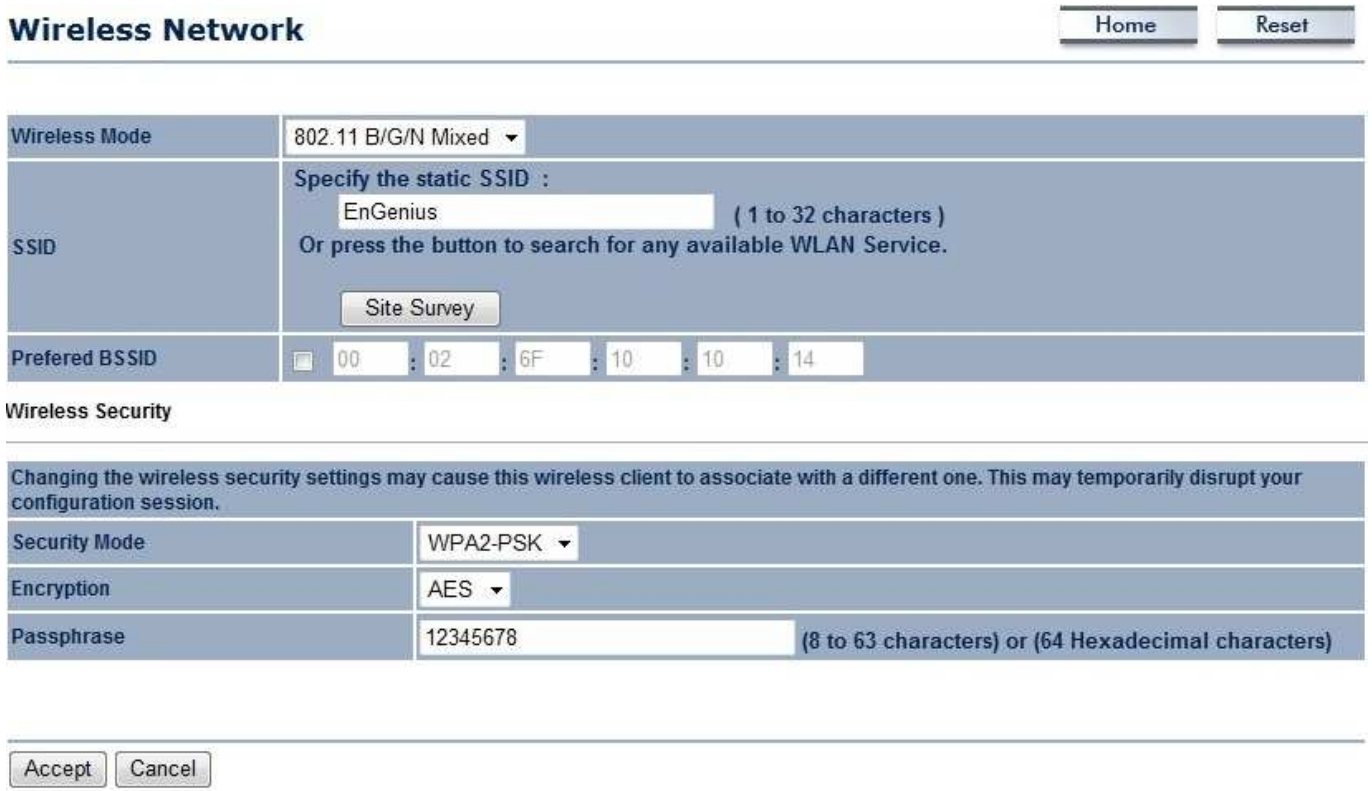
Site Survey (Client Bridge / Client Router / Repeater mode)

BSSID	Access Point's wireless MAC address.
SSID	SSID that the Access Point is broadcasting.
Channel	Channel that the Access Point is using.
Signal Level (dBm)	Signal strength from the Access Point to your station.
Type	The band that the Access Point is using.
Security	Encryption method that the Access Point is using to secure data over the WLAN.
Refresh	Click **Refresh** to rescan nearby Access Point.

4. Select an Access Point and click that Access Point's BSSID.



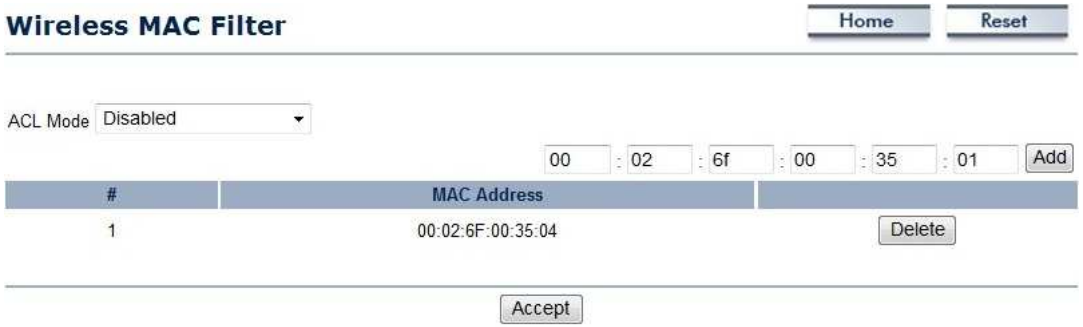
5. Enter the correct security setting.


Wireless Network
Home
Reset
Wireless Mode
802.11 B/G/N Mixed
SSID
Specify the static SSID :
EnGenius
(1 to 32 characters)
Or press the button to search for any available WLAN Service.
Site Survey
Prefered BSSID
00 : 02 : 6F : 10 : 10 : 14
Wireless Security
Changing the wireless security settings may cause this wireless client to associate with a different one. This may temporarily disrupt your configuration session.
Security Mode
WPA2-PSK
Encryption
AES
Passphrase
12345678
(8 to 63 characters) or (64 Hexadecimal characters)
Accept
Cancel

7.4 Wireless MAC Filter

Wireless MAC Filters are used to allow or deny network access to wireless clients according to their MAC addresses. You can manually add a MAC address to restrict the permission to access ECB350. The default setting is Disable Wireless MAC Filter.

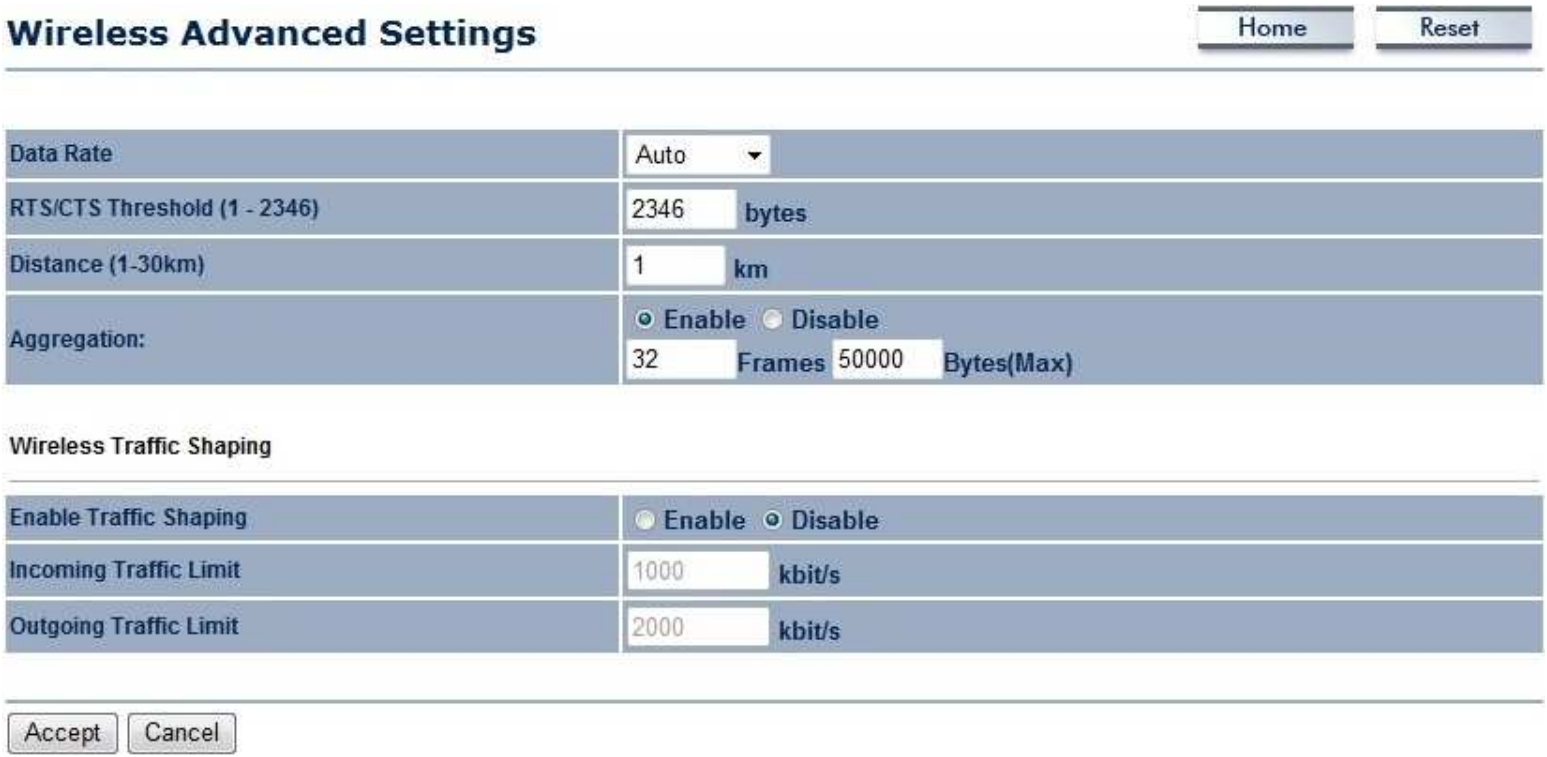
Note: Only in Access Point, WDS AP and Router mode.



Wireless Filter (Access Point / WDS AP / Router mode)	
ACL Mode	Determines whether network access is granted or denied to clients whose MAC addresses appear in the MAC Address table on this page. Choices are **Disable**, **Deny MAC in the list**, or **Allow MAC in the list**.
MAC Address	Enter the MAC address of the wireless client.
Add	Click **Add** to add the MAC address to the **MAC Address** table.
Delete	Delete the selected entries.
Apply	Click Apply to apply the changes.

7.5 Wireless 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 Advanced

Data Rate	Select a data rate from the drop-down list. The data rate affects throughput. If you select a low data rate value, for example, the throughput is reduced but the transmission distance increases.
RTS/CTS Threshold	Specify the threshold package size for RTC/CTS. A small number causes RTS/CTS packets to be sent more often and consumes more bandwidth.
Distance	Specify the distance between Access Points and clients. Longer distances may drop high-speed connections.
Aggregation	Merges data packets into one packet. This option reduces the number of packets, but increases packet sizes.
Wireless Traffic Shaping	Check this option to enable wireless traffic shaping. Traffic shaping regulates the flow of packets leaving an interface to deliver improved Quality of Service.
Incoming Traffic Limit	Specify the wireless transmission speed used for downloading.
Outgoing Traffic Limit	Specify the wireless transmission speed used for uploading.
Accept / Cancel	Click [**Accept**] to confirm the changes or [**Cancel**] to cancel and return previous settings.

7.6 WPS (Wi-Fi Protected Setup)

WPS feature is following the Wi-Fi Alliance WPS standard and it eases the set up of security-enabled Wi-Fi networks in the home and small office environment.

It reduces the user steps required to configure a network and supports two methods that are familiar to most consumers to configure a network and enable security.

Note: Only in Access Point, WDS AP and Router mode.

Wi-Fi Protected Setup (WPS)

WPS	Select Enable or Disable the WPS feature.
WPS Current Status	Shows whether the WPS function is **Configured** or **unConfigured**. Configured means that WPS has been used to authorize connection between the device and wireless clients.
Self Pin Code	The PIN code of this device.
SSID	The SSID (wireless network name) used when connecting using WPS.
Authentication Mode	Shows the encryption method used by the WPS process.
Passphrase Key	This is the passphrase key that is randomly generated during the WPS process. It is required if wireless clients that do not support WPS attempts to connect to the wireless network.
WPS Via Push Button	Click this button to initialize WPS feature using the push button method.
WPS Via PIN	Enter the PIN code of the wireless device and click this button to initialize WPS feature using the PIN method.

7.7 WDS Link Settings

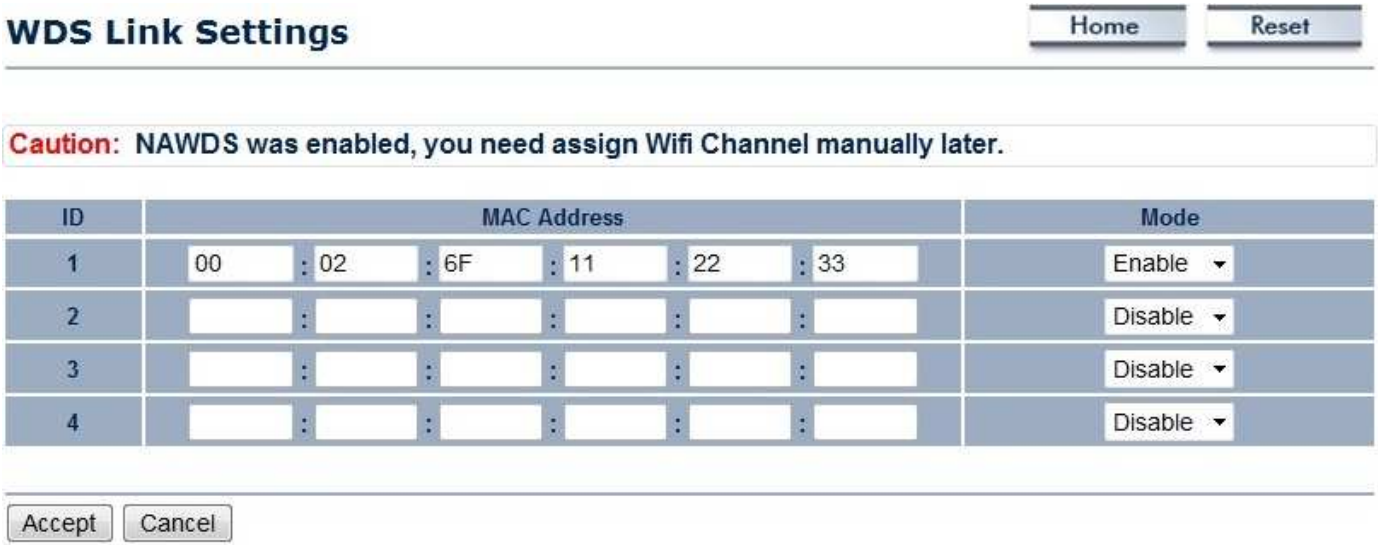
Using WDS (Wireless Distribution System) to connect Access Point wirelessly, and in doing so extend a wired infrastructure to locations where cabling is not possible or inefficient to implement.

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.

Note: Only in WDS AP and WDS Bridge mode.



WDS Link Settings	
MAC Address	Enter the Access Point's MAC address to which you want to extend the wireless area.

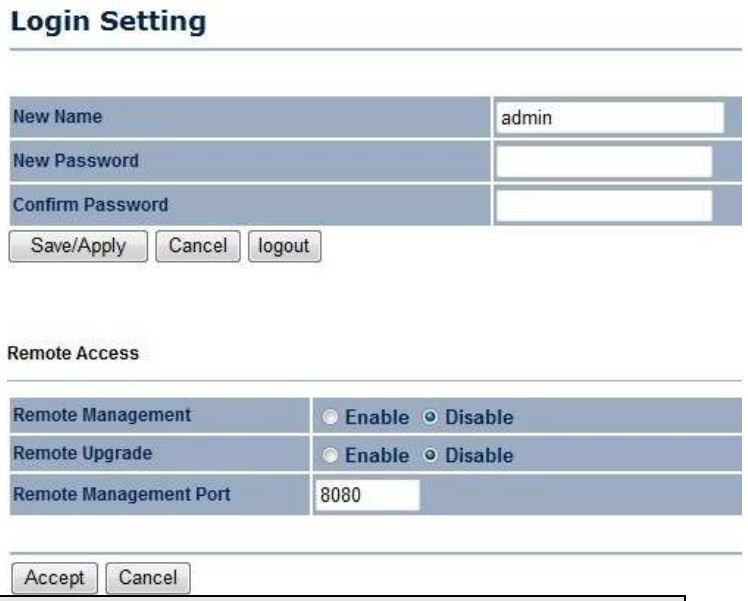
Mode	Select **Disable** or **Enable** from the drop-down list.
Accept / Cancel	Click [**Accept**] to confirm the changes or [**Cancel**] to cancel and return previous settings.

8 Management

8.1 Administration

This page allows you to change the system password and to configure remote access. By default, the user name is **admin** and the password is: **admin**. Password can contain 0 to 12 alphanumeric characters and are case sensitive.

Note: Remote Access is only in AP Router and Client Router mode.

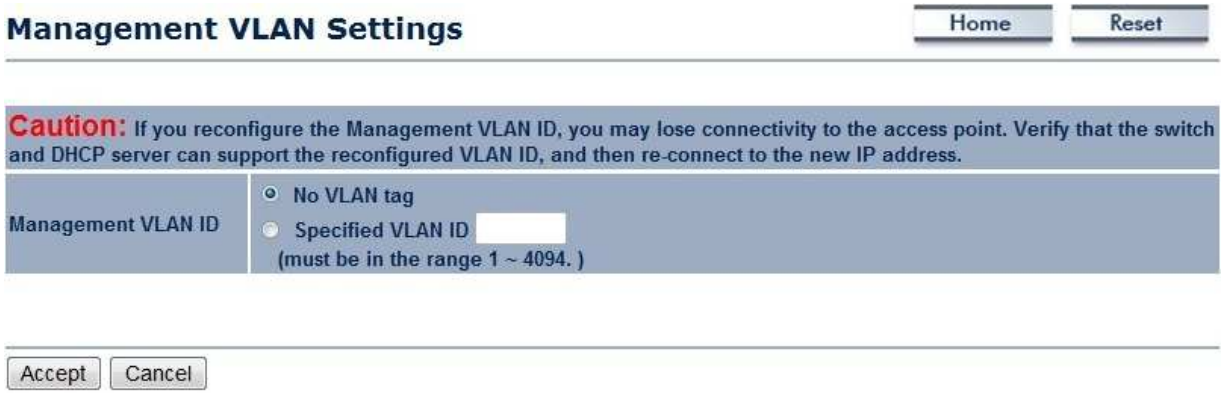


Change Password	
Name	Enter a new username for logging in to the Web Configurator.
Password	Enter a new password for logging in to the Web Configurator.
Confirm Password	Re-enter the new password for confirmation.
Save/Apply / Cancel	Click **Save/Apply** to apply the changes or **Cancel** to return previous settings.
Remote Access (only in AP Router and Client Router mode)	
Remote Management	Enable or disable remote management.
Remote Upgrade	Specify whether the firmware can be upgraded remotely.
Remote Management Port	If remote management is enabled, enter the port number to be used for remote management. For example: If you specify the port number **8080**, enter ***http://<IP address>:8080*** to access the device Web Configurator.

8.2 Management VLAN

This page allows you to assign a VLAN tag to the packets. A VLAN is a group of computers on a network whose software has been configured so that they behave as if they were on a separate Local Area Network (LAN). Computers on VLAN do not have to be physically located next to one another on the LAN.

Note: Only in Access Point and WDS AP mode.



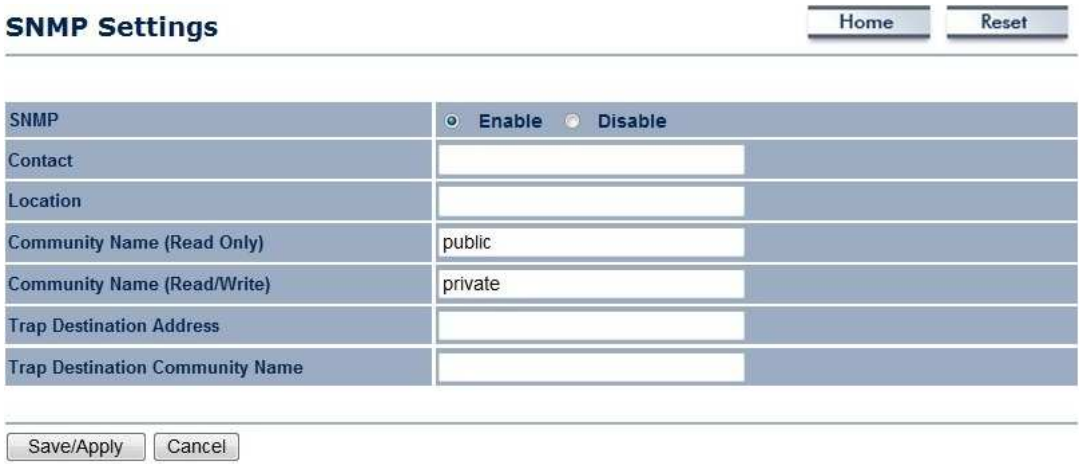
Management VLAN (Only in Access Point mode)	
Management VLAN ID	If your network includes VLANs and if tagged packets need to pass through the Access Point, enter the VLAN ID. Otherwise, click **No VLAN tag**.
Accept / Cancel	Click **Accept** to confirm the changes or **Cancel** to cancel and return previous settings.

Note:

1. If you reconfigure the Management VLAN ID, you may lose your connection to the ECB350. Verify that the DHCP server supports the reconfigured VLAN ID and then reconnect to the ECB350 using the new IP address.
2. Clicking **Accept** does not apply the changes. To apply them, use Status > Save/Load (see section 4.1).

8.3 SNMP Settings

This page allows you to assign the contact details, location, community name and trap settings for SNMP. This is a networking management protocol used to monitor network-attached devices. SNMP allows messages (called protocol data units) to be sent to various parts of a network. Upon receiving these messages, SNMP-compatible devices (called agents) return data stored in their Management Information Bases.

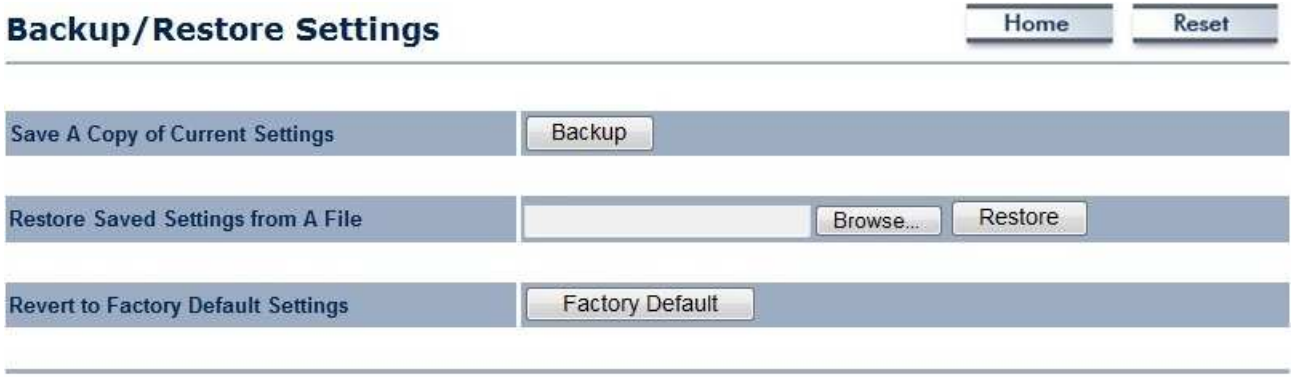


SNMP	
SNMP Enable/Disable	Enable or disable SNMP feature.
Contact	Specify the contact details of the device
Location	Specify the location of the device.
Community Name (Read Only)	Specify the password for access the SNMP community for read only access.
Community Name (Read/Write)	Specify the password for access to the SNMP community with read/write access.

Trap	
Trap Destination Address	Specify the IP address of the computer that will receive the SNMP traps.
Trap Destination Community Name	Specify the password for the SNMP trap community.

8.4 Backup/Restore

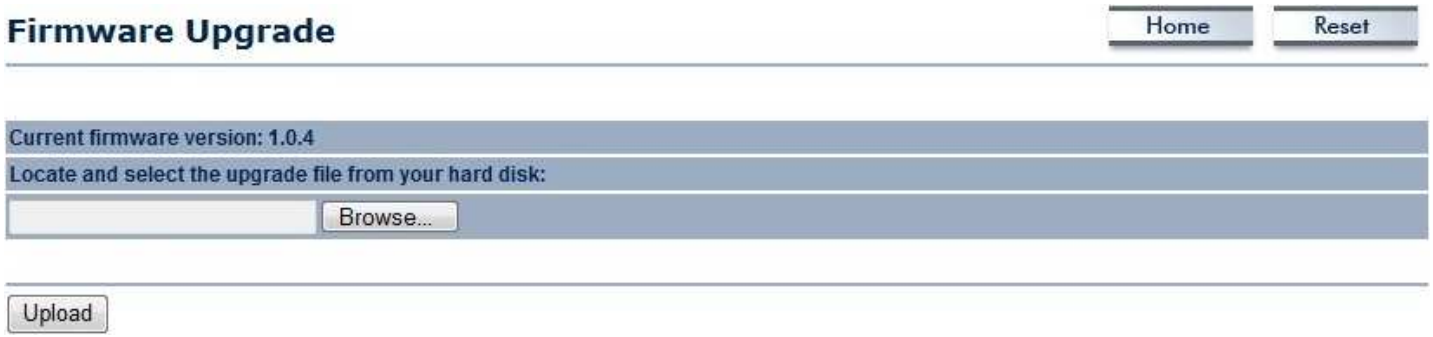
This page allows you to save the current device configurations. When you save the configurations, you also can re-load the saved configurations into the device through the [**Restore Saved Settings from A File**]. If extreme problems occur you can use the [**Revert to Factory Default Settings**] to set all configurations to its original default settings.



Backup/Restore	
Save A Copy of Current Settings	Click [**Backup**] to save the current configured settings.
Restore Saved Settings from A File	To restore settings that have been previously backed up, click [**Browse**], select the file, and click [**Restore**].
Revert to Factory Default Settings	Click [**Factory Default**] button to restore the ECB350 to its factory default settings.

8.5 Firmware Upgrade

This page allows you to upgrade the device's firmware.



To perform the Firmware Upgrade:

1. Click the [**Browse**] button and navigate to the location of the upgrade file.
2. Select the upgrade file. Its name will appear in the *Upgrade File* field.
3. Click the [**Upload**] button to commence the firmware upgrade.

Note: The device is unavailable during the upgrade process, and must restart when the upgrade is completed. Any connections to or through the device will be lost.

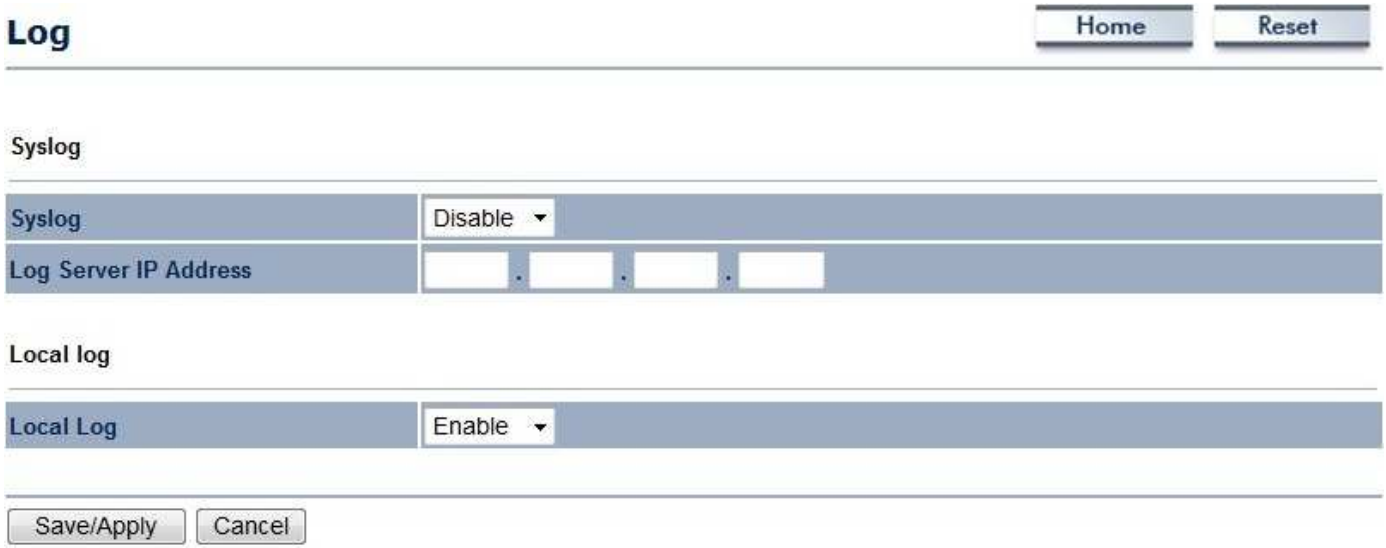
8.6 Time Setting

This page allows you to set the system time.

Time	
Manually Set Date and Time	Manually specify the date and time.
Automatically Get Date and Time	Select a time zone from the drop-down list and check whether you want to enter the IP address of an NTP server or use the default NTP server.

8.7 Log

This page allows you to setup Syslog and local log functions.



Log	
Syslog	Enable or disable the syslog function.
Log Server IP Address	Enter the IP address of the log server.
Local Log	Enable or disable the local log service.
Save/Apply / Cancel	Click **Save/Apply** to apply the changes or **Cancel** to return previous settings.

8.8 Diagnosis

This page allows you to ascertain connection quality and trace the routing table to the target.

Diagnosis	
Target IP	Enter the IP address you would like to search.
Ping Packet Size	Enter the packet size of each ping.
Number of Pings	Enter the number of times you want to ping.
Start Ping	Click [**Start Ping**] to begin pinging.
Traceroute Target	Enter an IP address or domain name you want to trace.
Start Traceroute	Click [**Start Traceroute**] to begin the trace route operation.

8.9 LED Control

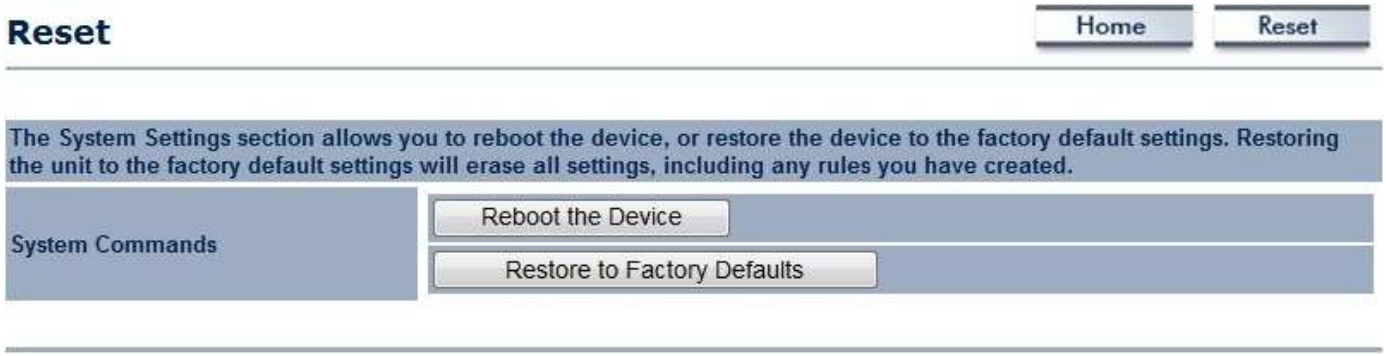
This page allows you to control LED on/off for Power, LAN interface and WLAN interface.

8.10 Logout

Click [**Logout**] in **Management** menu to logout.

8.11 Reset

In some circumstances it may be required to force the device to reboot. Click on [**Reboot the Device**] to reboot.



9 Building a Wireless Network

With its ability to operate in various operating modes, your ECB350 is the ideal device around which you can build your WLAN. This chapter describes how to build a WLAN around your ECB350 using this device's operating modes.

9.1 Client Bridge Mode

In Client Bridge Mode, the ECB350 acts as a wireless dongle that connects to an Access Point to gain wireless access to the Internet. This mode requires you to connect the Ethernet port on your PC to the ECB350 LAN port.

If you use the client bridge operating mode, use the ECB350 Site Survey feature to scan for Access Points within range. When you find an Access Point, configure the ECB350 to use the same SSID and Security Password as the Access Point to associate with it.

9.2 Access Point Mode

In Access Point Mode, ECB350 behaves likes a central connection for stations or clients that support IEEE 802.11b/g/n

networks. Stations and client must be configured to use the same SSID and security password to associate with the ECB350. The ECB350 supports four SSIDs at the same time for secure guest access.

9.3 Access Point Mode with WDS Function (WDS AP mode)

The ECB350 also supports WDS AP mode. This operating mode allows wireless connections to the ECB350 using WDS technology. In this mode, configure the MAC addresses in both Access Points to enlarge the wireless area by enabling WDS Link settings. WDS supports four AP MAC addresses.

9.4 WDS Bridge Mode

In WDS Bridge Mode, the ECB350 can wirelessly connect different LANs by configuring the MAC address and security settings of each ECB350 device. Use this mode when two wired LANs located a small distance apart want to communicate with each other. The best solution is to use the ECB350 to wirelessly connect two wired LANs, as shown in the following figure.

WDS Bridge Mode can establish four WDS links, creating a star-like network.

Note: WDS Bridge Mode is unlike Access Point. Access Points linked by WDS are using the same frequency channel, more Access Points connected together may lower throughput. Please be aware to avoid loop in your wireless connection, otherwise enable Spanning Tree Function.

9.5 Repeater mode

Repeater is used to regenerate or replicate signals that are weakened or distorted by transmission over long distances and through areas with high levels of electromagnetic interference (EMI).

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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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

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

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.

Note: The country code selection is for non-US model only and is not available to all US model. Per FCC regulation, all WiFi product marketed in US must fixed to US operation channels only.

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.
Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

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.

NOTE IMPORTANTE: (Pour l'utilisation de dispositifs mobiles)
Déclaration d'exposition aux radiations:
Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

This device has been designed to operate with a diople antenna have a maximum gain of [5] dB. Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is 50 ohms.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

This radio transmitter (IC: 10103A-ECB350 / Model: ECB350) has been approved by Industry Canada to operate with the antenna type, maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this user's manual, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Ce dispositif a été conçu pour fonctionner avec une antenne ayant un gain maximal de diople antenne avec dB [5]. Une antenne à gain plus élevé est strictement interdite par les règlements d'Industrie Canada. L'impédance d'antenne requise est de 50 ohms.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peutfonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pourl'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectriqueà l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que lapuissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire àl'établissement d'une communication satisfaisante.

Le présent émetteur radio (IC: 10103A-ECB350 / Modèle: ECB350) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Appendix C – CE Interference Statement

Europe – EU Declaration of Conformity

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC:

- EN60950-1:2006 A11:2009+A1:2010
- Safety of Information Technology Equipment

- EN50385 : 2002
- Generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz - 300 GHz)

- EN 300 328 V1.7.1: 2006-10
- Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband Transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive

- EN 301 489-1 V1.8.1: 2008-04
- Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements

- EN 301 489-17 V2.1.1 2009-05
- Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for 2,4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment

This device is a 2.4 GHz wideband transmission system (transceiver), intended for use in all EU member states and EFTA countries, except in France and Italy where restrictive use applies.

In Italy the end-user should apply for a license at the national spectrum authorities in order to obtain authorization to use the device for setting up outdoor radio links and/or for supplying public access to telecommunications and/or network services.

This device may not be used for setting up outdoor radio links in France and in some areas the RF output power may be limited to 10 mW EIRP in the frequency range of 2454 – 2483.5 MHz. For detailed information the end-user should contact the national spectrum authority in France.

CE 0560 ⓘ

Česky [Czech]	*[Jméno výrobce]* tímto prohlašuje, že tento *[typ zařízení]* je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
Dansk [Danish]	Undertegnede *[fabrikantens navn]* erklærer herved, at følgende udstyr *[udstyrets typebetegnelse]* overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
Deutsch [German]	Hiermit erklärt *[Name des Herstellers]*, dass sich das Gerät *[Gerätetyp]* in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
Eesti [Estonian]	Käesolevaga kinnitab *[tootja nimi = name of manufacturer]* seadme *[seadme tüüp = type of equipment]* vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
English	Hereby, *[name of manufacturer]*, declares that this *[type of equipment]* is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Español [Spanish]	Por medio de la presente *[nombre del fabricante]* declara que el *[clase de equipo]* cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ *[name of manufacturer]* ΔΗΛΩΝΕΙ ΟΤΙ *[type of equipment]* ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
Français [French]	Par la présente *[nom du fabricant]* déclare que l'appareil *[type d'appareil]* est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
Italiano [Italian]	Con la presente *[nome del costruttore]* dichiara che questo *[tipo di apparecchio]* è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo *[name of manufacturer / izgatavotāja nosaukums]* deklarē, ka *[type of equipment / iekārtas tips]* atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių [Lithuanian]	Šiuo *[manufacturer name]* deklaruoja, kad šis *[equipment type]* atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.

Nederlands [Dutch]	Hierbij verklaart *[naam van de fabrikant]* dat het toestel *[type van toestel]* in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
Malti [Maltese]	Hawnhekk, *[isem tal-manifattur]*, jiddikjara li dan *[il-mudel tal-prodott]* jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
Magyar [Hungarian]	Alulírott, *[gyártó neve]* nyilatkozom, hogy a *[... típus]* megfelel a vonatkozó alapvetõ követelményeknek és az 1999/5/EC irányelv egyéb elõírásainak.
Polski [Polish]	Niniejszym *[nazwa producenta]* oświadcza, że *[nazwa wyrobu]* jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
Português [Portuguese]	*[Nome do fabricante]* declara que este *[tipo de equipamento]* está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Slovensko [Slovenian]	*[Ime proizvajalca]* izjavlja, da je ta *[tip opreme]* v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky [Slovak]	*[Meno výrobcu]* týmto vyhlasuje, že *[typ zariadenia]* spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
Suomi [Finnish]	*[Valmistaja = manufacturer]* vakuuttaa täten että *[type of equipment = laitteen tyyppimerkintä]* tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]	Härmed intygar *[företag]* att denna *[utrustningstyp]* står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.