EnGenius®

Wireless-N 150Mbps Long Range Wall Mount AP/Repeater

ERA150

Wireless-N 150Mbps Long Range Wall Mount AP/Repeater

V1.0

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Revision History

Version	Date	Notes
1.0	2012/08/14	First Release

1 Introduction

The **ERA150** is a high-powered, long-range wall mount wireless 802.11b/g/n access point with two major functional modes. The ERA150 was designed to operate in numerous environments from large homes, small and medium-sized businesses, multiple-floor offices, hotels and other venues to larger enterprise deployments. Its high-powered, long-range characteristics make it a cost-effective alternative to ordinary access points that don't have the range and reach to connect to a growing number of wireless users who wish to connect to a large home or business network.

The ERA150 delivers up to 3x faster wireless speeds and 7x extended coverage than legacy 802.11b/g wireless devices. Even though the ERA150 has been designed and engineered for traffic heavy and demanding business environments it is also quite at home in larger house scenarios because it efficiently extends the wireless range of an existing home router, especially in very architecturally-challenging structures to provide whole home connectivity.

To protect sensitive data during wireless transmissions, the ERA150 offers different encryption settings for wireless transmissions including industry-standard WPA and WPA2 encryption. The ERA150 also includes MAC address filtering to allow network administrators to offer network access only to known computers and other devices based on their MAC addresses.

1.1 Features and Benefits

Features	Benefits
High Speed Data Rate Up to 150 Mbps	**Capable of handling heavy data payloads such as HD multimedia streaming.**
10/100 Fast Ethernet	**Support up to 100Mbps networking speed.**
IEEE 802.11n Compliant and Backwards Compatible with 802.11b/g devices	**Fully compatible with IEEE 802.11b/g/n devices.**
Multi-Function	**Allowing users to select Access Point or Repeater mode in various applications.**
Support Multiple SSID in AP mode (up to 4)	**Allow clients to access different networks through a single access point and assign different policies and functions for each SSID through the built in software.**
WPA/WPA2/IEEE 802.1x Support	**Powerful data security.**
MAC Address Filtering in AP Mode	**Ensure a secure network connection.**
User Isolation Support (AP mode)	**Protect the private network between client users.**
Power-over-Ethernet (IEEE802.3af)	**Allows installers to deploy the access point in locations via a PoE connection (Ethernet cable) where a power outlet may not be available.**
Save User Settings	**Firmware upgrade does not delete user settings.**
SNMP Remote Configuration Management	**Allows remote connection to configure or manage the ERA150 easily.**
QoS (WMM) support	**Enhanced user performance and density.**

1.2 Package Contents

The ERA150 package contains the following items (all items must be in package to issue a refund):

- ERA150 Access Point
- Detachable 5dBi antenna * 1
- 12V/1A 100V~240V Power Adapter
- RJ-45 Ethernet Cable
- Wall Mount Screw Kit
- Wiring Belt * 2
- CD (User Manual and EZ Controller Software)
- Quick Installation 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 OS (XP, Vista, 7), Mac OS, or Linux based operating systems
- Web-Browsing Application (i.e.: Internet Explorer, FireFox, Safari, Chrome or other similar software)

1.4 Applications

Wireless LAN (WLAN) 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 WLANs:

a) Difficult-to-Wire Environments

There are many situations where wires cannot be installed or deployed easily or cannot be hidden from view. Older

buildings, sites with multiple buildings, and/or areas make the installation of a Ethernet-based LAN impossible, impractical or expensive.

b) Temporary Workgroups

Create temporary workgroups/networks in more open areas within a building – auditoriums, amphitheater classrooms, ballrooms, arenas, exhibition centers, temporary offices where one wants either a permanent or temporary Wireless LAN established.

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 Changing Environments

Set up networks in environments that change frequently (i.e.: Show Rooms, Exhibits, etc.).

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

Devices like the ERA150 enable network administrators, installers and end-users to extend the range and reach of an existing Ethernet-based network.

g) Training/Educational Facilities

Training sites at corporations or 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 ERA150 is essential to maximize the ERA150's performance. Avoid placing the ERA150 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 ERA150's wireless signals must pass through. Here are some key guidelines to allow the ERA150 to have optimal wireless range.

- Keep the number of walls and/or ceilings between the ERA150 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 ERA150. 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.

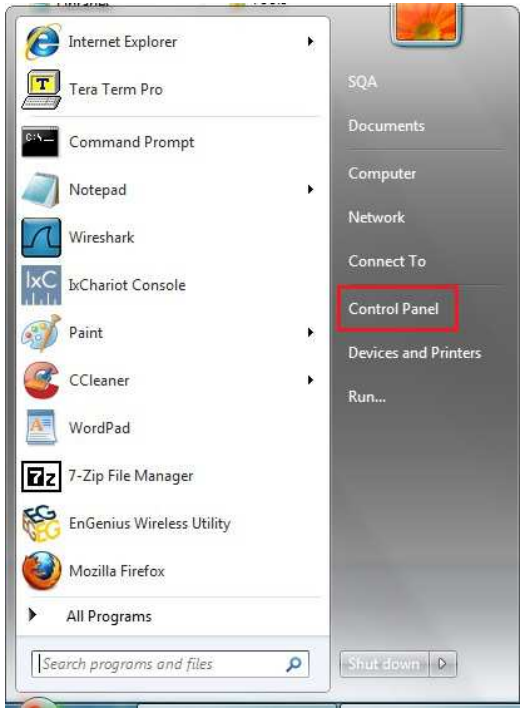
- Interferences can also come from your other electrical devices and/or appliances that generate RF noise. The most usual types are microwaves, or cordless phones.

2.2 Computer Settings (Windows XP/Windows 7)

In order to use the ERA150, you must first configure the TCP/IPv4 connection of your Windows OS computer system.

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

Windows XP

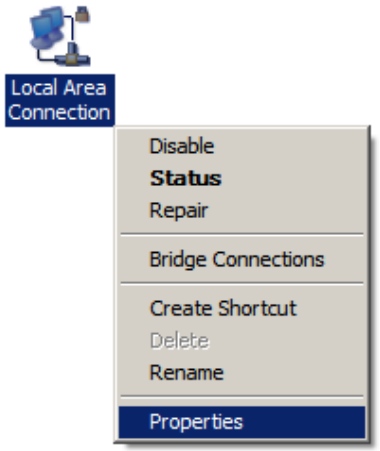


Windows 7

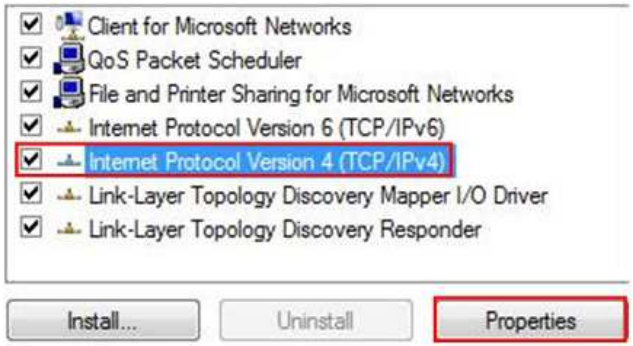
- In **Windows XP**, click **Network Connections**

- 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**



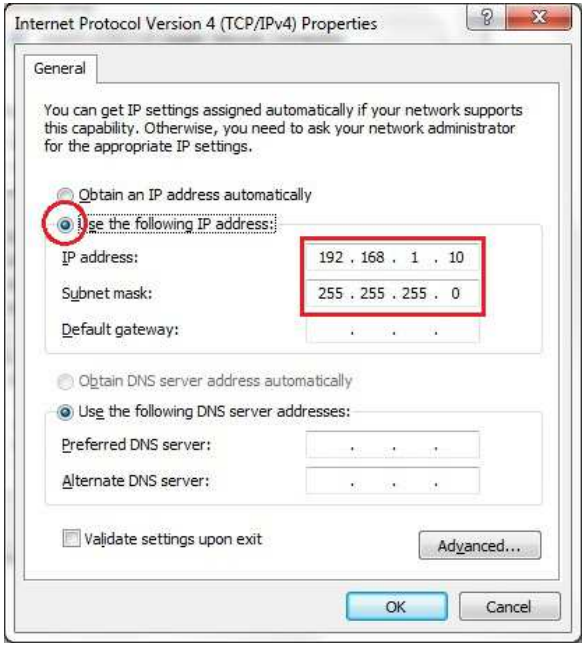
- Select "**Internet Protocol Version 4 (TCP/IPv4)**" and then select **Properties**



- Select **Use the following IP address** and enter an IP address that is different from the ERA150 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: ERA150 IP address: 192.168.1.1
PC IP address: 192.168.1.2 – 192.168.1.255
PC subnet mask: 255.255.255.0



2.3 Computer Settings in 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 an IP address that is different from the ERA150 and subnet mask then press **OK**

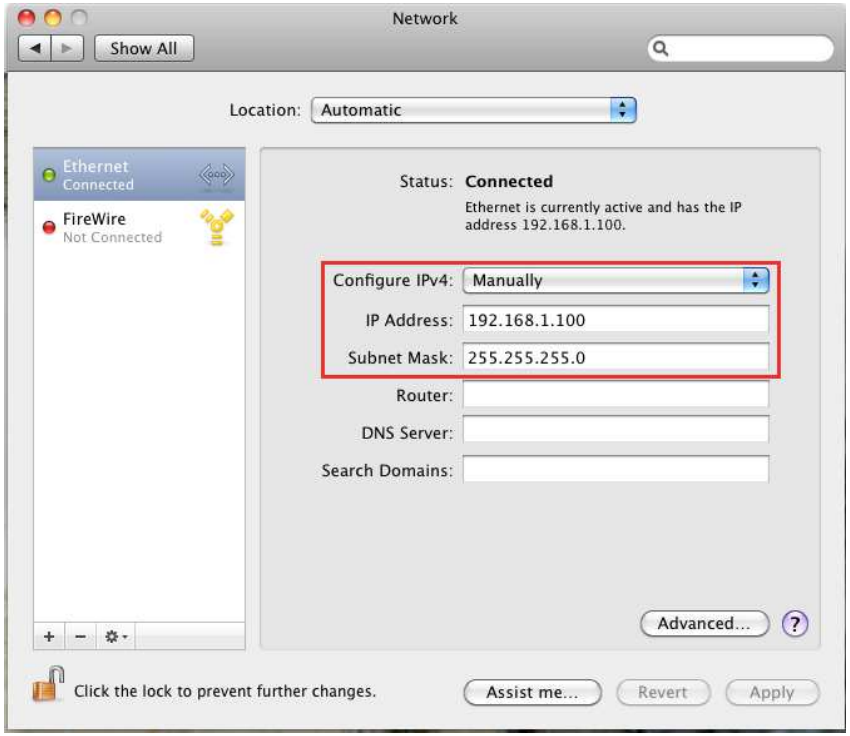
Note: Ensure that the IP address and subnet mask are on the same subnet as the device.

For example: ERA150 IP address: 192.168.1.1

PC IP address: 192.168.1.2 – 192.168.1.255

PC subnet mask: 255.255.255.0

- Click **Apply** when done.



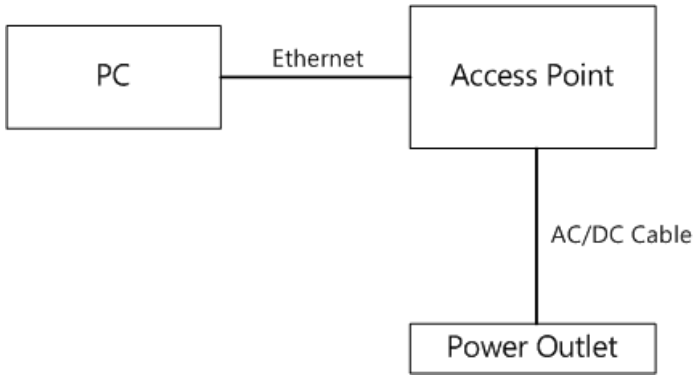
2.4 Hardware Installation

1. Ensure that the computer in use has an Ethernet Card (RJ-45 Ethernet Port). For more information, verify User Manual.
2. Connect one end of the Category 5e Ethernet cable into RJ-45 port of the ERA150 and the other end to the RJ-45 port on the computer that will use the ERA150. Ensure that the cable is securely connected to both the ERA150 and the Computer.
3. Connect the Power DC inlet to the DC-IN port of the ERA150 and the Power adapter to the electrical outlet.

   Once both connections are secure, verify the following:

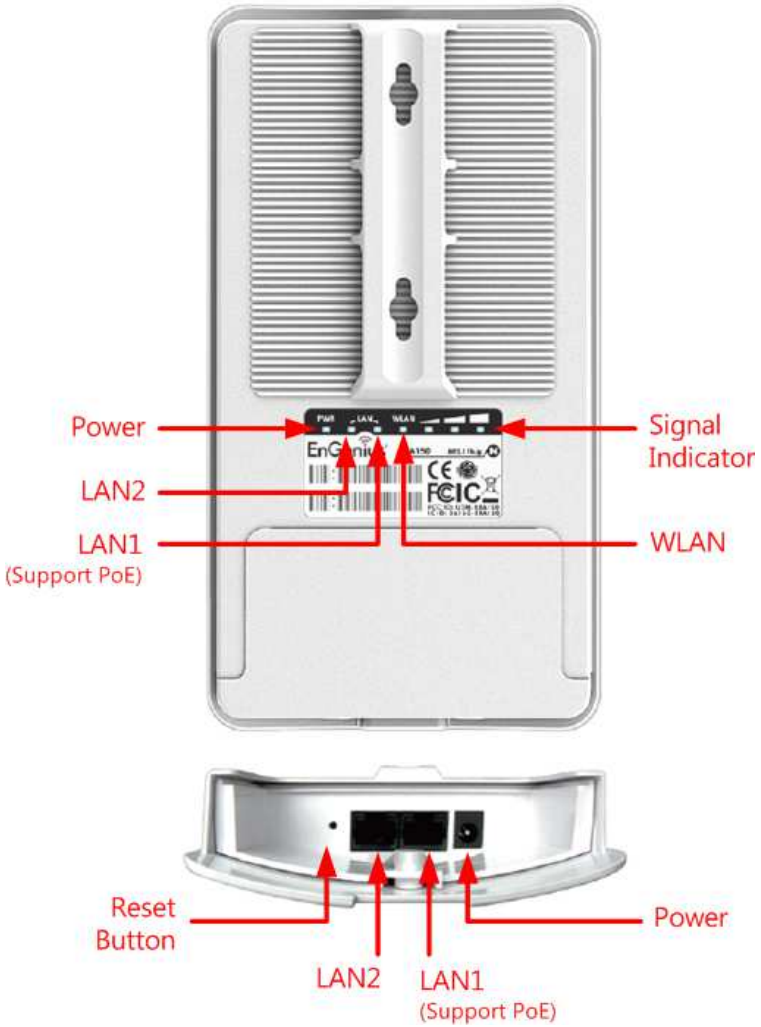
   a) Ensure that the **POWER** light is on (it will be green).
   b) Ensure that the **WLAN** light is on (it will be green).
   c) Ensure that the **LAN (Computer/ERA150 Connection)** light is on (LAN1 will be green and LAN2 will be orange).
   d) Once all three lights are on, proceed to setting up the computer.

This diagram depicts the hardware configuration.



Note: ERA150 supports both IEEE 802.3af PoE (Power over Ethernet) and regular power adapter. You should use either one as the power source. Please do not apply both at the same time.

Top and Front Panel



Rear and Bottom Panel

Top and Front Panel	
Detachable Antenna	External interface for the antenna.
Rear and Bottom Panel	
LED Lights	LED lights for Power, LAN1, LAN2, WLAN and Signal Indicator.
Reset Button	One click for reset the device. Press over 10 seconds for reset to factory default.
Ethernet Port	Two Ethernet ports for RJ-45 cable. (LAN1 supports PoE)
DC IN	DC IN for Power.

3 Configuring Your Access Point

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 Access Point.

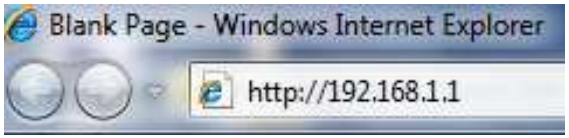
Default Settings

IP Address	192.168.1.1
Username / Password	admin / admin
Operation Mode	Access Point

3.2 Web Configuration

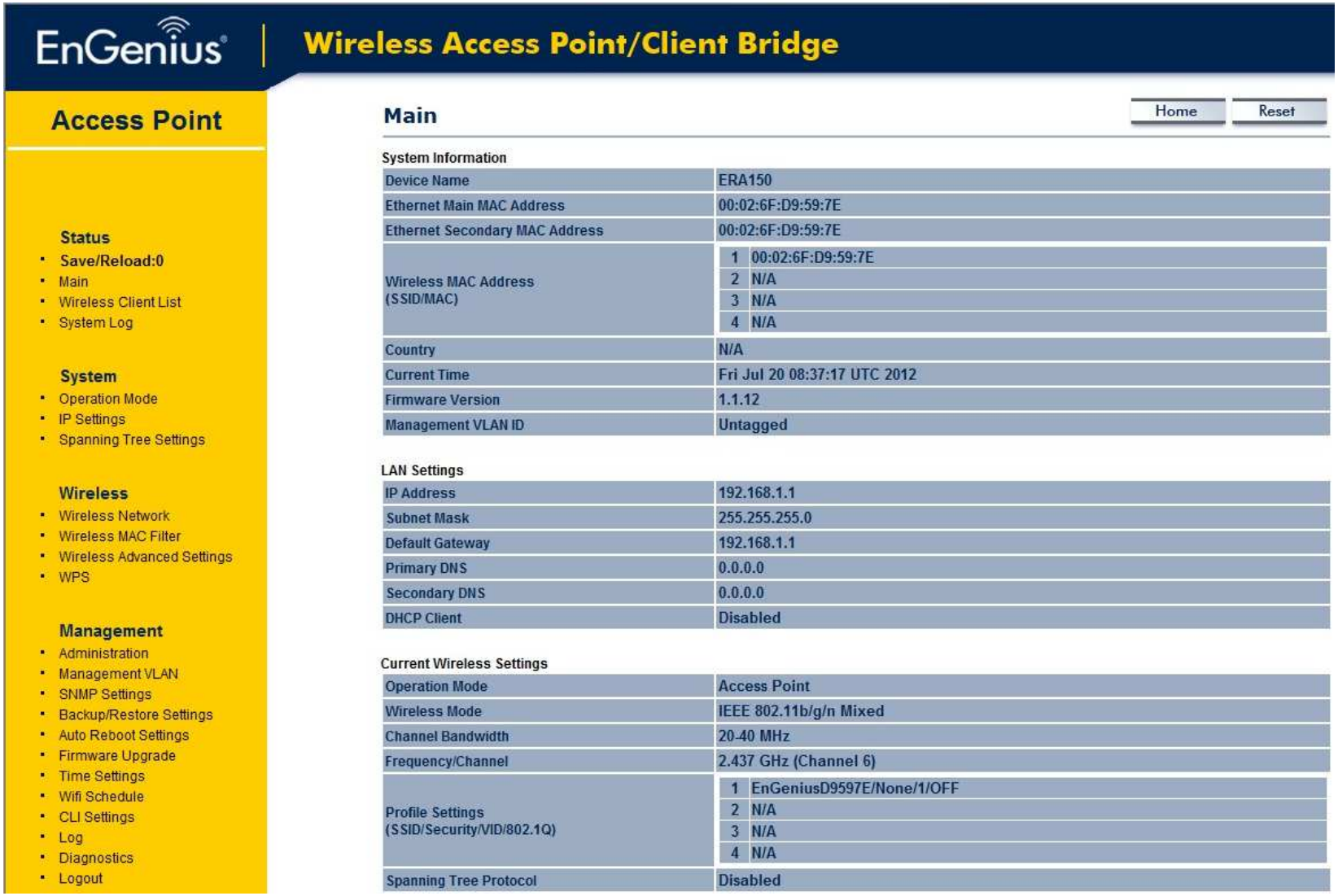
- Open a web browser (Internet Explorer/Firefox/Safari/Chrome) and enter the IP Address **http://192.168.1.1**

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 be logging in and see the ERA150 User Menu.



4 Building a Wireless Network

The ERA150 has the ability to operate in various modes. This chapter describes the operating modes of the ERA150.

4.1 Access Point Mode

In Access Point Mode, ERA150 behaves likes a central connection for stations or clients that support IEEE 802.11b/g/n networks. The stations and clients must be configured to use the same SSID (Service Set Identifier) and security password to associate with the ERA150. The ERA150 supports up to four SSIDs at the same time for secure guest access.

4.2 Repeater mode

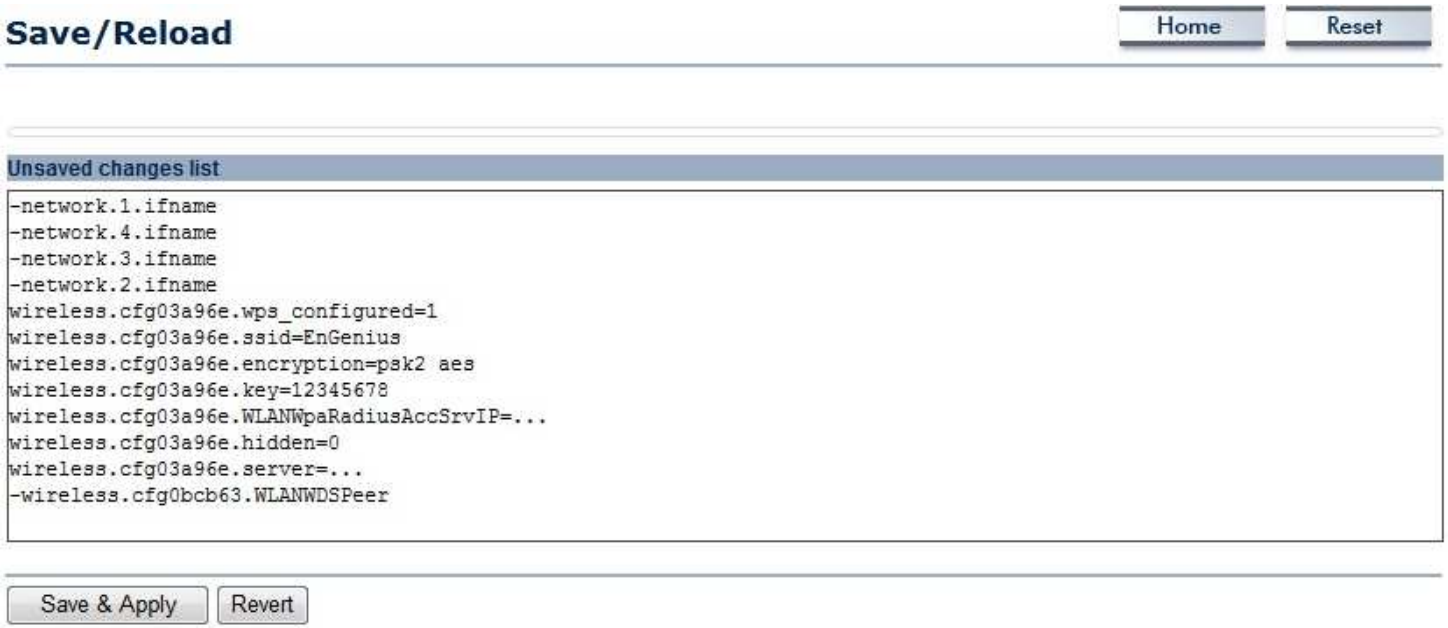
The Repeater mode is used to regenerate or replicate signals from a wireless router or other access point/station that is unable to reach certain areas in a building. When this mode is activated in the ERA150, the ERA150 receives the wireless signal from an existing router or AP and relays it to other devices within its range so they can join the network.

5 Status

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

5.1 Save/Reload

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



5.2 Main

Clicking the **Main** link under the **Status** menu or clicking **Home** at the top-right of the ERA150 Page shows the 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 applicable in Access Point mode).

System Information

Device Name	ERA150
Ethernet Main MAC Address	00:02:6F:D9:59:7E
Ethernet Secondary MAC Address	00:02:6F:D9:59:7E
Wireless MAC Address (SSID/MAC)	1 00:02:6F:D9:59:7E 2 N/A 3 N/A 4 N/A
Country	N/A
Current Time	Fri Jul 20 08:37:17 UTC 2012
Firmware Version	1.1.12
Management VLAN ID	Untagged

- The **LAN Settings** section shows the Local Area Network settings 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	0.0.0.0
DHCP Client	Disabled

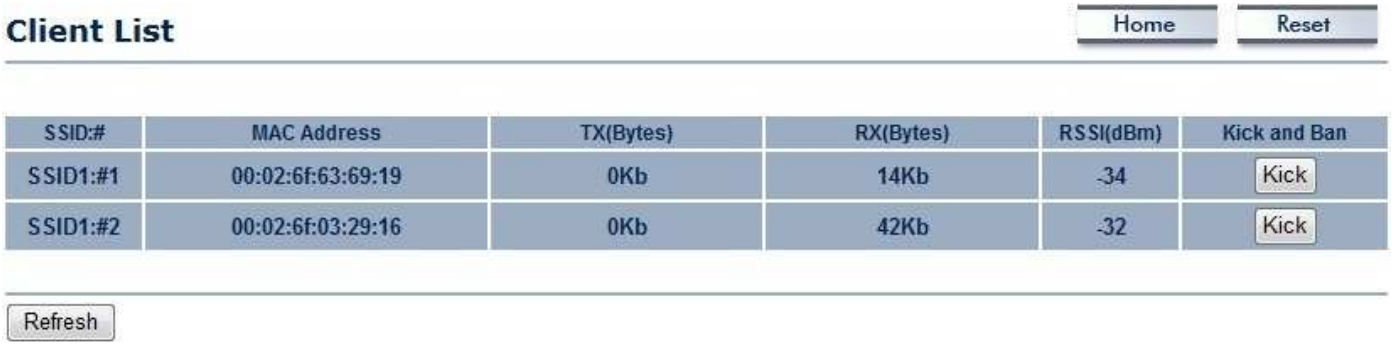
- The **Current Wireless Settings** section shows wireless information such as Operating Mode, Frequency, and Channel. Since the ERA150 supports multiple-SSIDs, information about each SSID, the ESSID and security settings, are displayed (**Note:** Profile Settings is only applicable in Access Point mode).

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 Settings (SSID/Security/VID/802.1Q)	1 EnGeniusD9597E/None/1/OFF 2 N/A 3 N/A 4 N/A
Spanning Tree Protocol	Disabled
Distance	1 Km

5.3 Wireless Client List

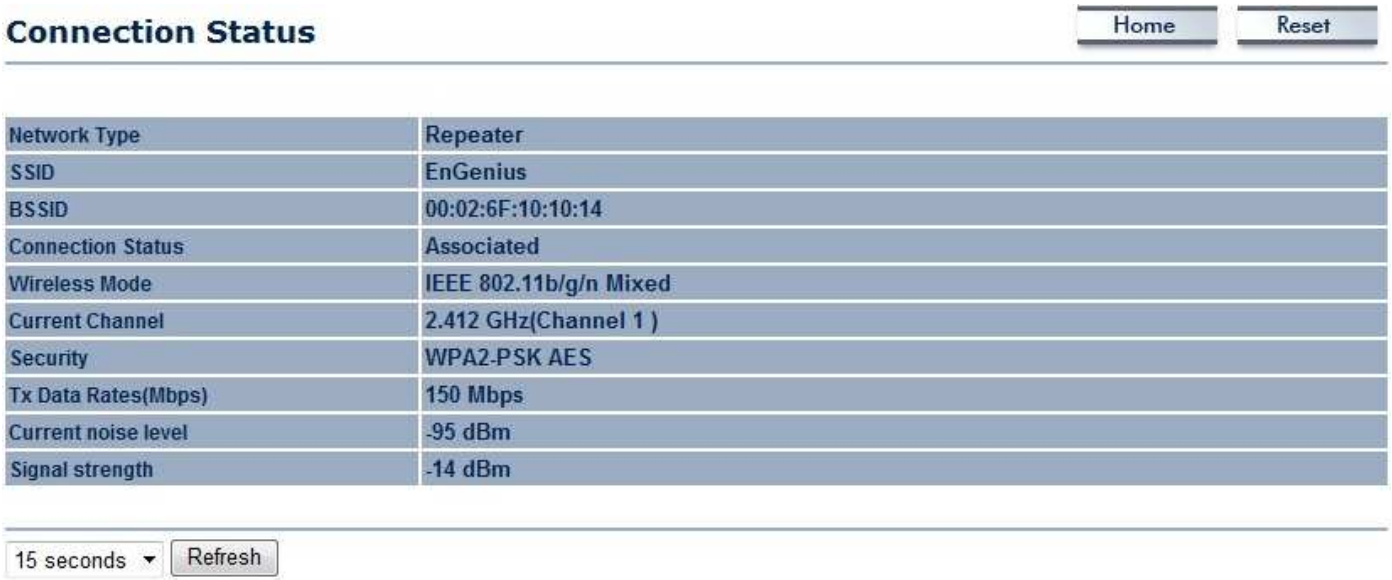
Clicking the **Wireless Client List** link under the **Status** menu displays the list of clients associated to the ERA150, along with the MAC addresses and signal strength for each client. Clicking **Kick** can kick and ban this client. Clicking **Refresh** updates the client list.



5.4 Connection Status

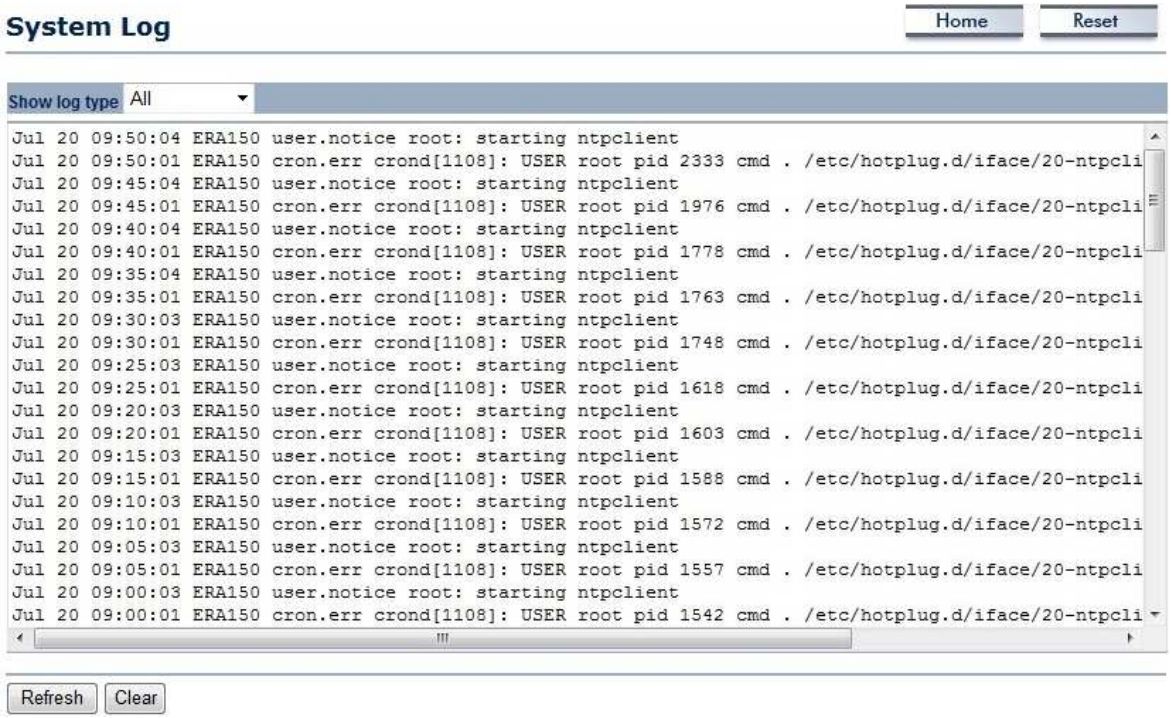
Click on the **Connection Status** link under the **Status** menu. This page displays the current status of the Network, including Network Type, SSID, BSSID, Connection Status, Wireless Mode, Current Channel, Security, Data Rate, Noise Level, and Signal Strength. You can specify the time of refresh duration.

Note: Only applicable in Repeater mode.



5.5 System Log

The ERA150 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.

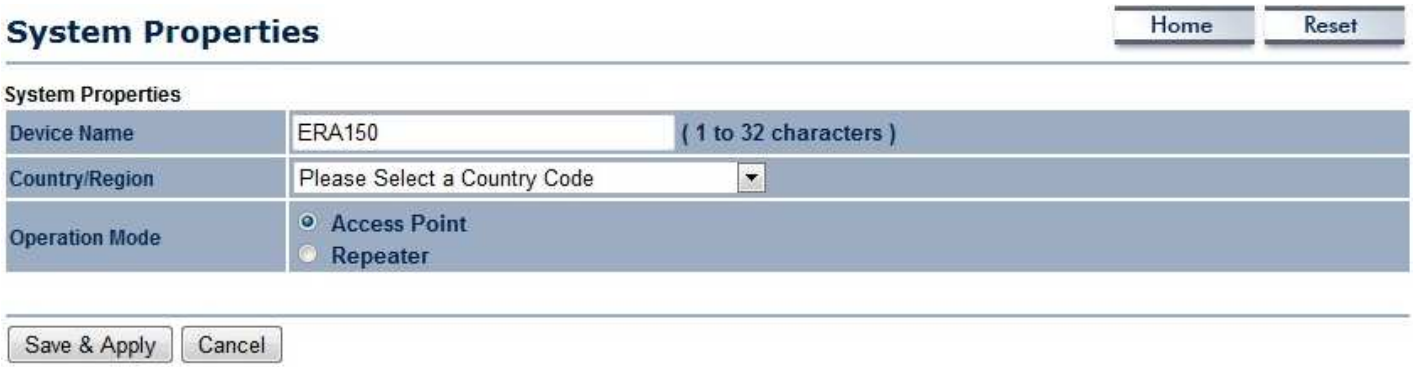


System Log	
Refresh	Update the log.
Clear	Clear the log.

6 System

6.1 Operation Mode

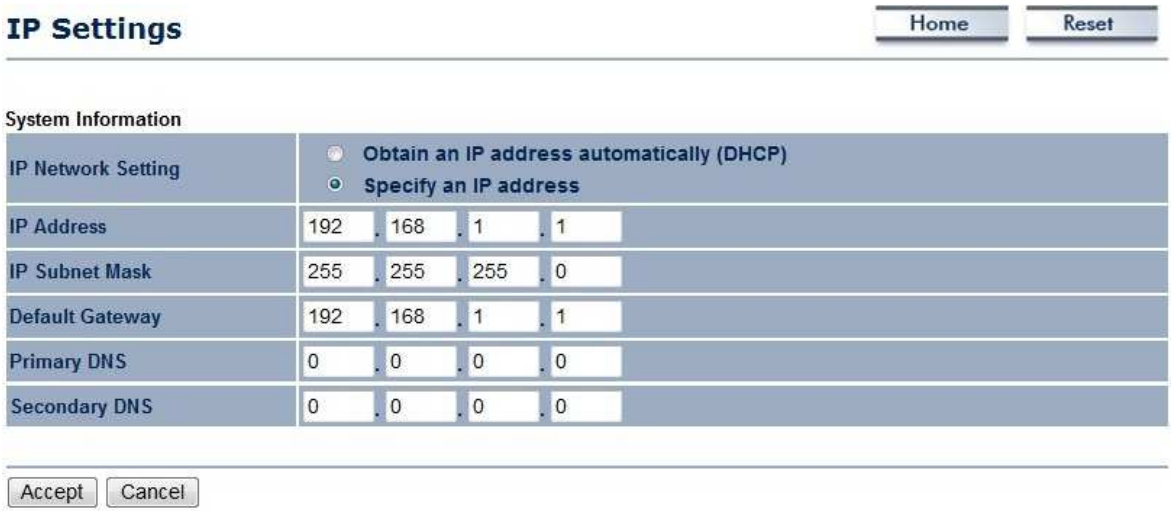
The ERA150 supports 2 operating modes: Access Point and Repeater.



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.
Country/Region	Select a Country/Region to conform to local regulations.
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.

6.2 IP Settings

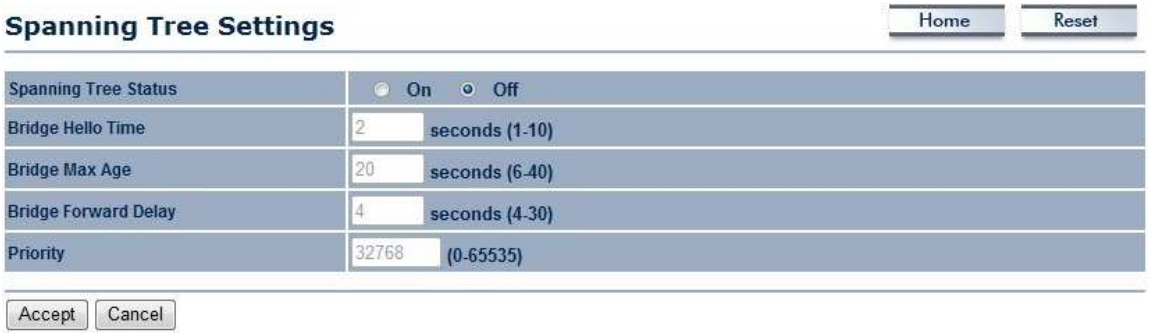
This page allows you to modify the device's IP settings.



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.

6.3 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.



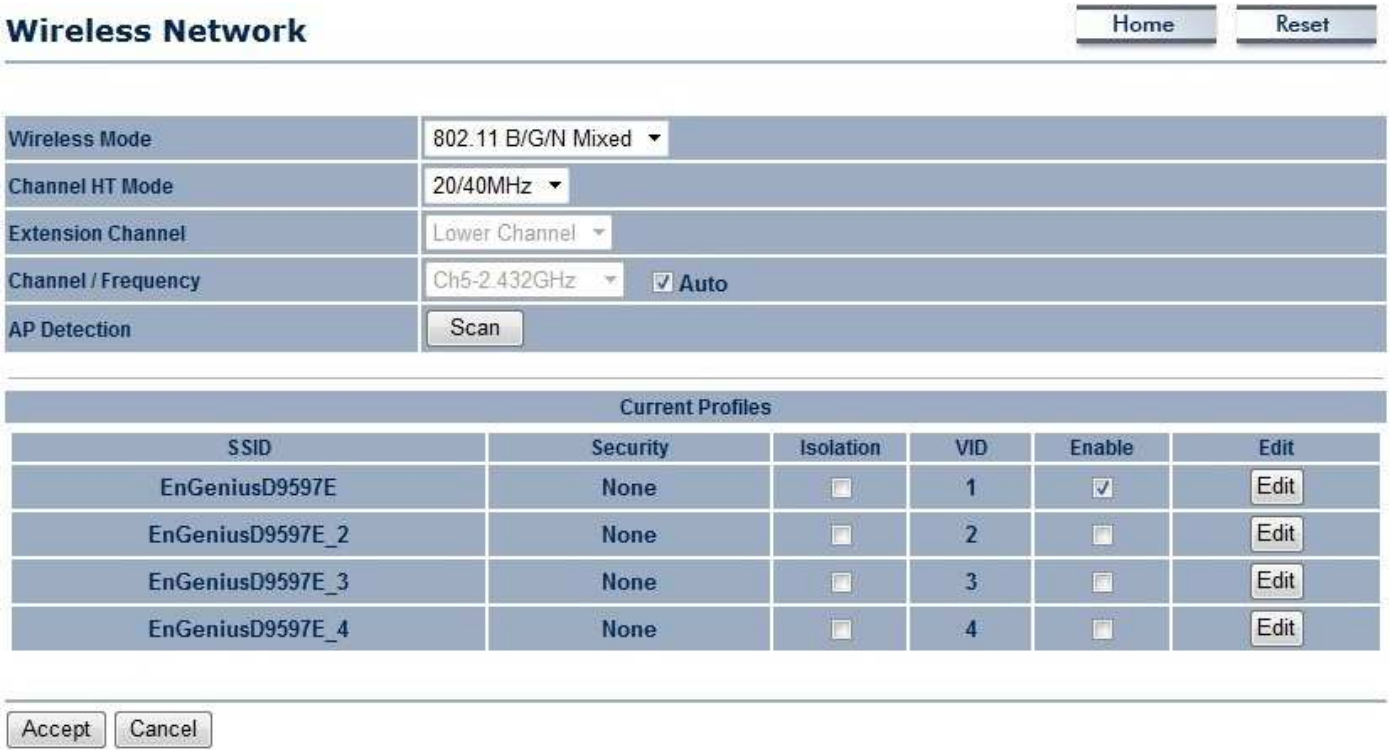
Spanning Tree	
Spanning Tree Status	Enable or disable the Spanning Tree function.
Bridge Hello Time	Specify Bridge Hello Time, in seconds. This value determines how often the device sends handshake packets to communicate information about the topology throughout the entire Bridged Local Area Network.
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 analyzes data traffic before participating.
Priority	Specify the Priority Number. A smaller number has greater priority.
Accept / Cancel	Click **Accept** to confirm the changes or **Cancel** to cancel and return previous settings.

7 Wireless

7.1 Wireless Network

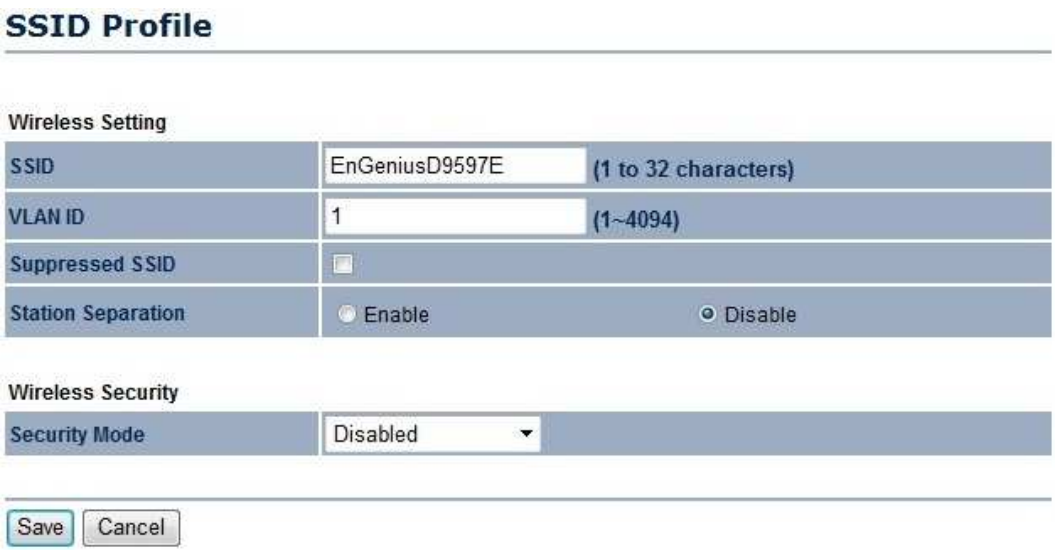
This page displays the current status of the Wireless settings of the ERA150.

Access Point:



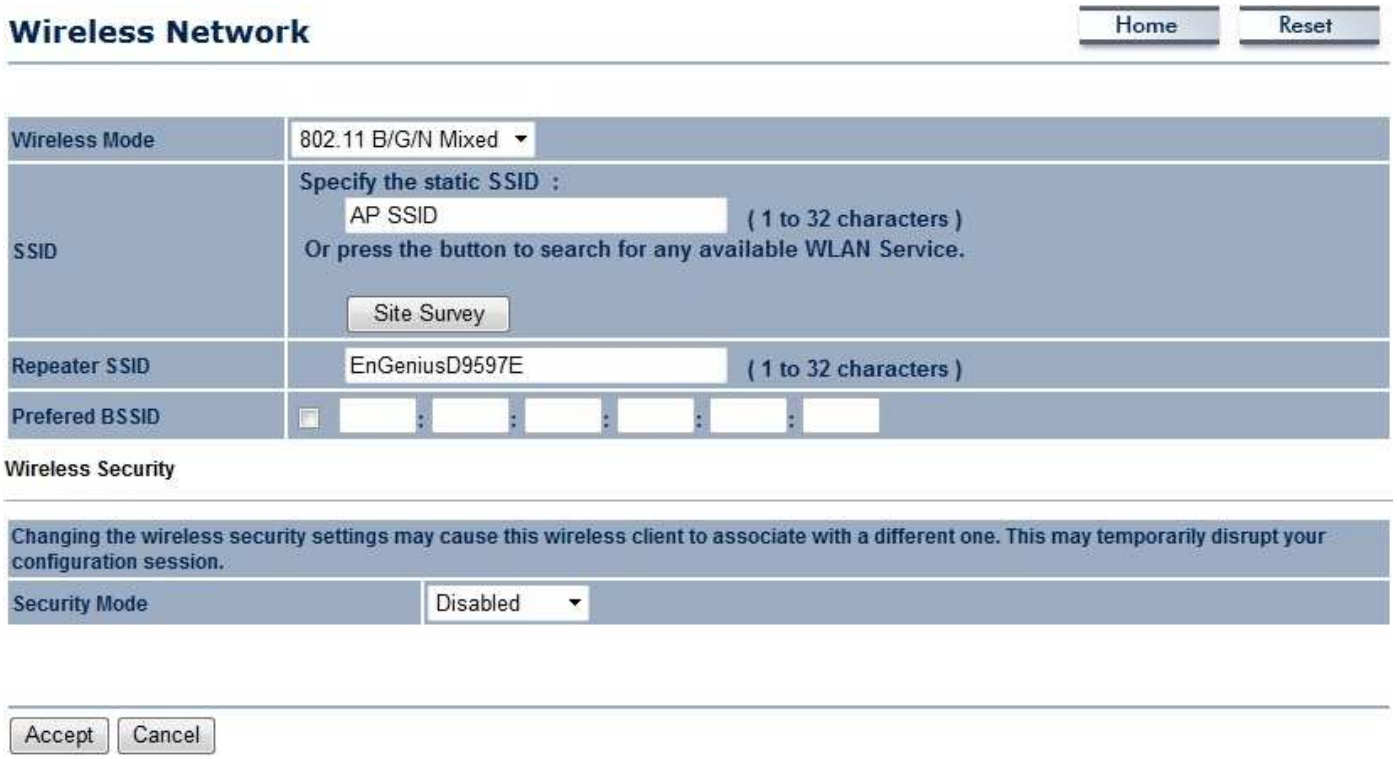
Wireless Network (Access Point mode)	
Wireless Mode	Wireless mode supports 802.11b/g/n mixed mode.
Channel HT Mode	The default channel bandwidth is 20/40MHz. The larger the channel, the better the transmission quality and speed.
Extension Channel	Select upper or lower channel. Your selection may affect 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.
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.

Repeater mode:



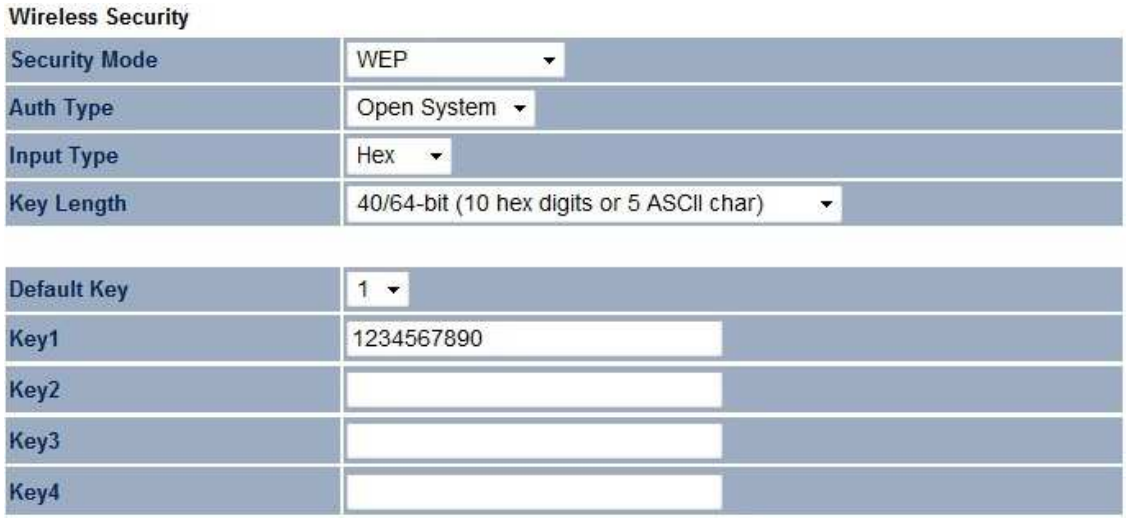
Wireless Network (Repeater mode)	
Wireless Mode	Wireless mode supports 802.11b/g/n mixed mode.
SSID	The SSID is a unique named shared amongst all the points of the wireless network. The SSID must be identical on all points of the wireless network and cannot exceed 32 characters. You may specify an SSID or select one from the **Site Survey**.
Site Survey	Click on **Site Survey** to search the existing Access Points.
Repeater BSSID	Specify the SSID for the repeater. It can be different from Access Point's SSID.

Preferred BSSID	Specify the BSSID (Access Point's MAC Address).
Wireless Security	The encryption is using. It 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 ERA150's security modes: WEP, WPA-PSK, WPA2-PSK, WPA-PSK Mixed, WPA, WPA2, and WPA Mixed. It is strongly recommend to use WPA2-PSK.

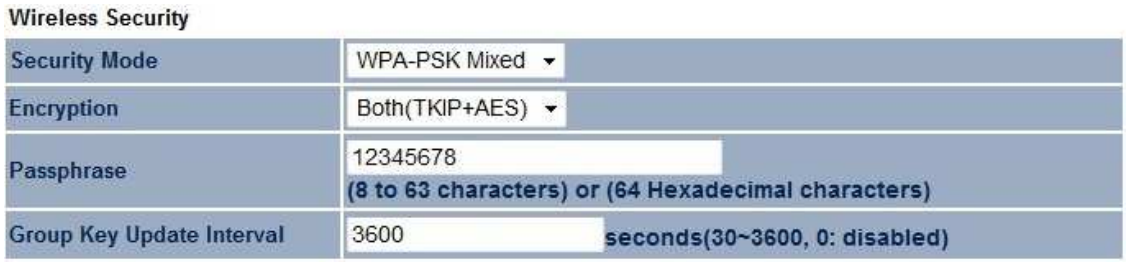
WEP Encryption:



WEP Encryption	
Auth Type	Select **Open System** or **Shared Key**.
Input type	**ASCII**: Regular Text (recommended) **HEX**: Hexadecimal Numbers (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 default. Transmitted data is ALWAYS encrypted using the Default

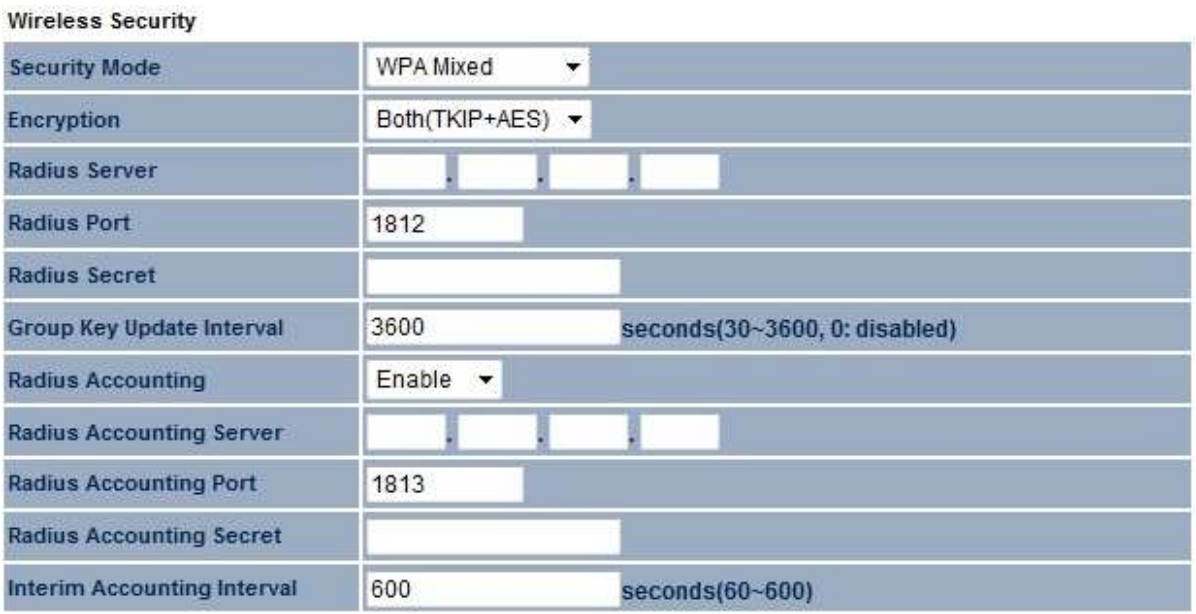
	Key; the other Keys are for decryption only. You must enter a **Key Value** for the **Default Key**.
Encryption Key #	Enter the key value or values you wish to use. Only the Key selected as Default is required. The others are optional.

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



WPA-PSK (WPA Pre-Shared Key) Encryption	
Encryption	Select the WPA encryption type 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 mode



WPA Encryption	
Encryption	Select the WPA encryption type 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.
Radius Accounting	Enable or disable accounting feature.
Radius Accounting Server	Enter the IP address of the Radius accounting server.

Radius Accounting Port	Enter the port number used for connections to the Radius accounting server.
Radius Accounting Secret	Enter the secret required to connect to the Radius accounting server.
Interim Accounting Interval	Specify how often, in seconds, the accounting data sends.

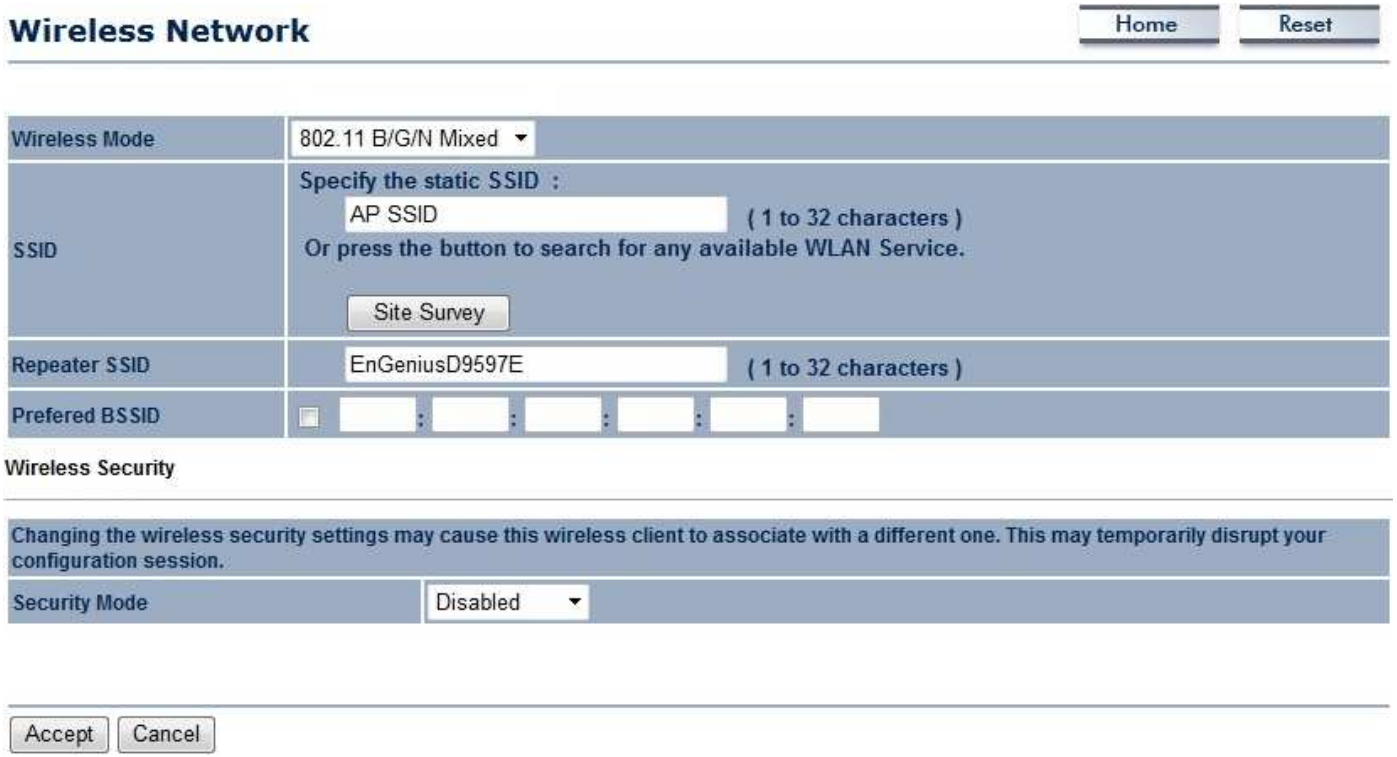
Note: 802.11n does not allow WEP/WPA-PSK TKIP/WPA2-PSK TKIP security mode. The connection mode will automatically change from 802.11n to 802.11g.

7.3 Site Survey

Use this feature to scan nearby Access Points.

Note: Only applicable in Repeater modes.

1. Click **Site Survey**.



2. Scanning the nearby Access Points

3. The ERA150 will list the available access points after site survey.

Site Survey

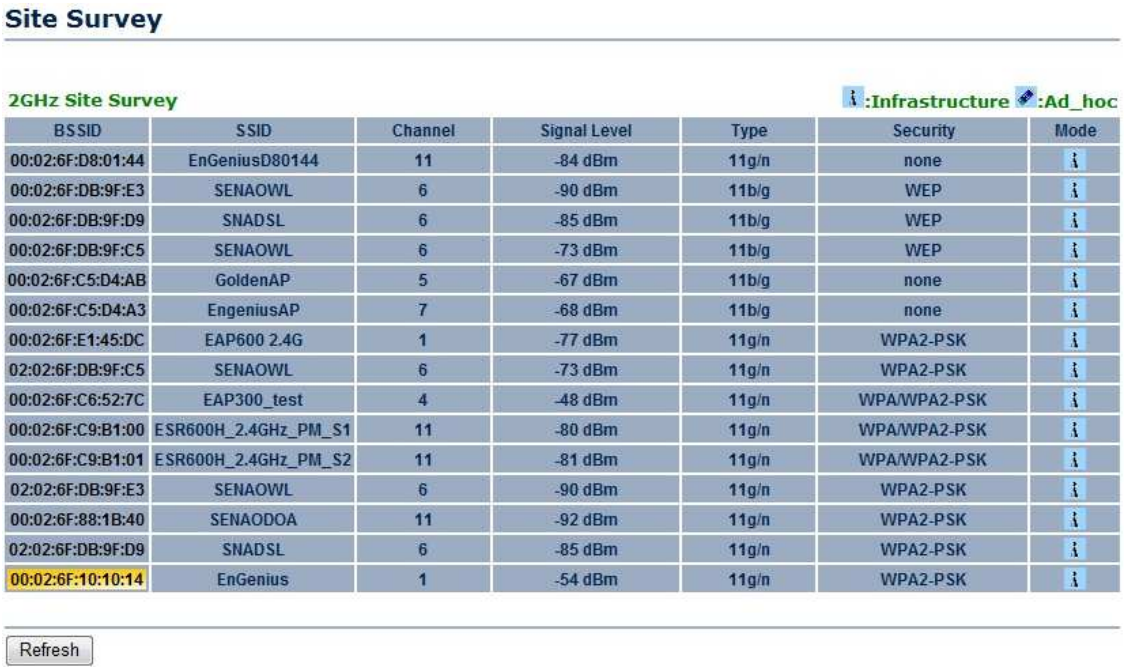
2GHz Site Survey :Infrastructure :Ad_hoc

BSSID	SSID	Channel	Signal Level	Type	Security	Mode
00:02:6F:D8:01:44	EnGeniusD80144	11	-84 dBm	11g/n	none	
00:02:6F:DB:9F:E3	SENAOWL	6	-90 dBm	11b/g	WEP	
00:02:6F:DB:9F:D9	SNADSL	6	-85 dBm	11b/g	WEP	
00:02:6F:DB:9F:C5	SENAOWL	6	-73 dBm	11b/g	WEP	
00:02:6F:C5:D4:AB	GoldenAP	5	-67 dBm	11b/g	none	
00:02:6F:C5:D4:A3	EngeniusAP	7	-68 dBm	11b/g	none	
00:02:6F:E1:45:DC	EAP600 2.4G	1	-77 dBm	11g/n	WPA2-PSK	
02:02:6F:DB:9F:C5	SENAOWL	6	-73 dBm	11g/n	WPA2-PSK	
00:02:6F:C6:52:7C	EAP300_test	4	-48 dBm	11g/n	WPA/WPA2-PSK	
00:02:6F:C9:B1:00	ESR600H_2.4GHz_PM_S1	11	-80 dBm	11g/n	WPA/WPA2-PSK	
00:02:6F:C9:B1:01	ESR600H_2.4GHz_PM_S2	11	-81 dBm	11g/n	WPA/WPA2-PSK	
02:02:6F:DB:9F:E3	SENAOWL	6	-90 dBm	11g/n	WPA2-PSK	
00:02:6F:88:1B:40	SENAODOA	11	-92 dBm	11g/n	WPA2-PSK	
02:02:6F:DB:9F:D9	SNADSL	6	-85 dBm	11g/n	WPA2-PSK	
00:02:6F:10:10:14	EnGenius	1	-54 dBm	11g/n	WPA2-PSK	

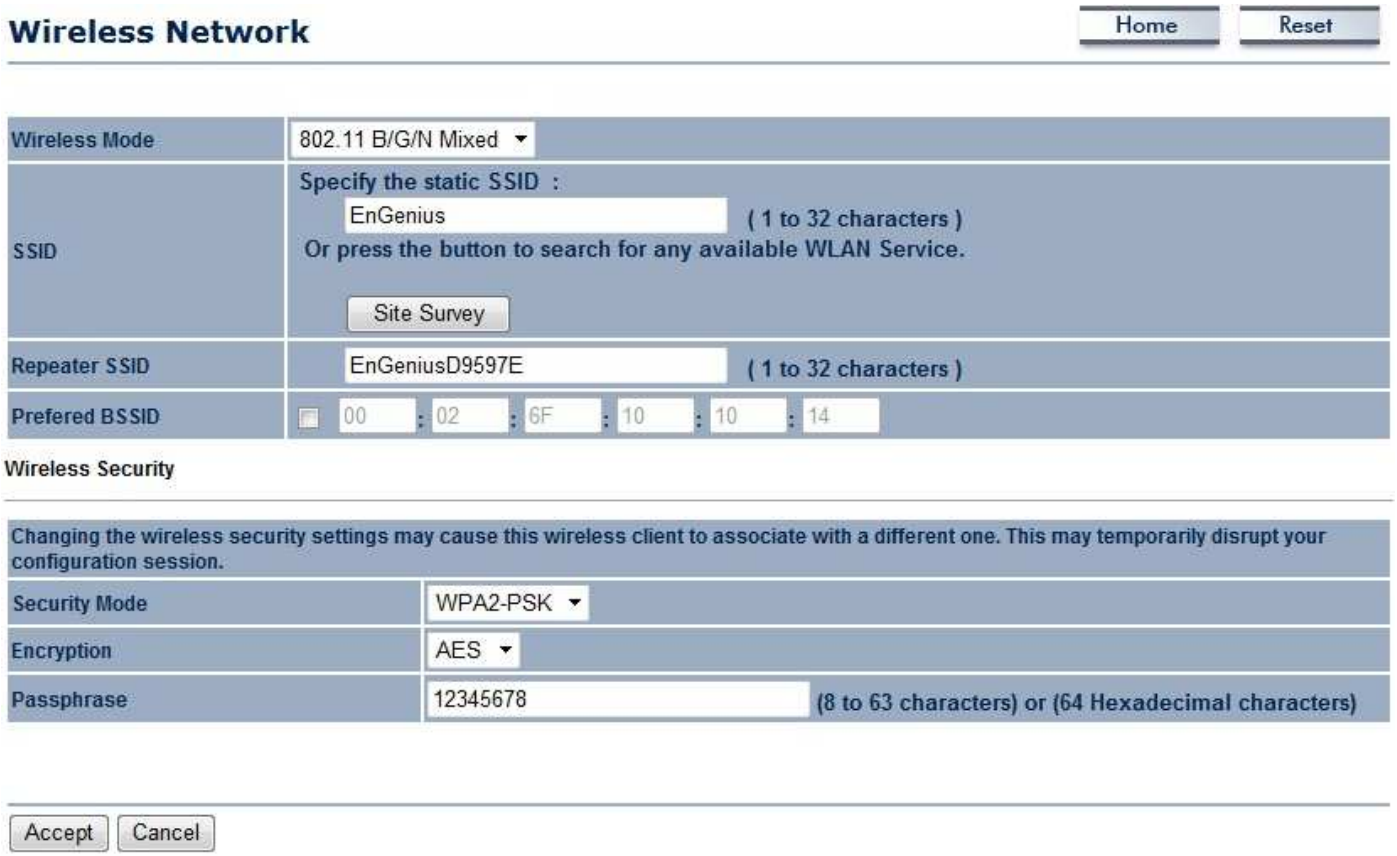
Refresh

Site Survey (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.

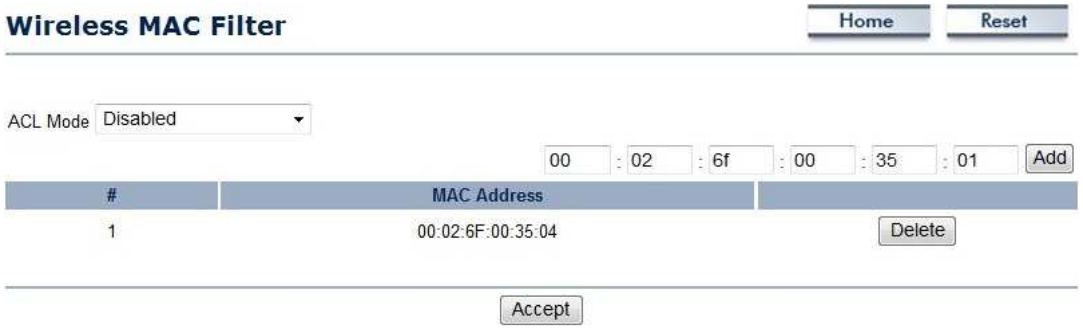


5. Enter the correct security setting.



7.4 Wireless MAC Filter

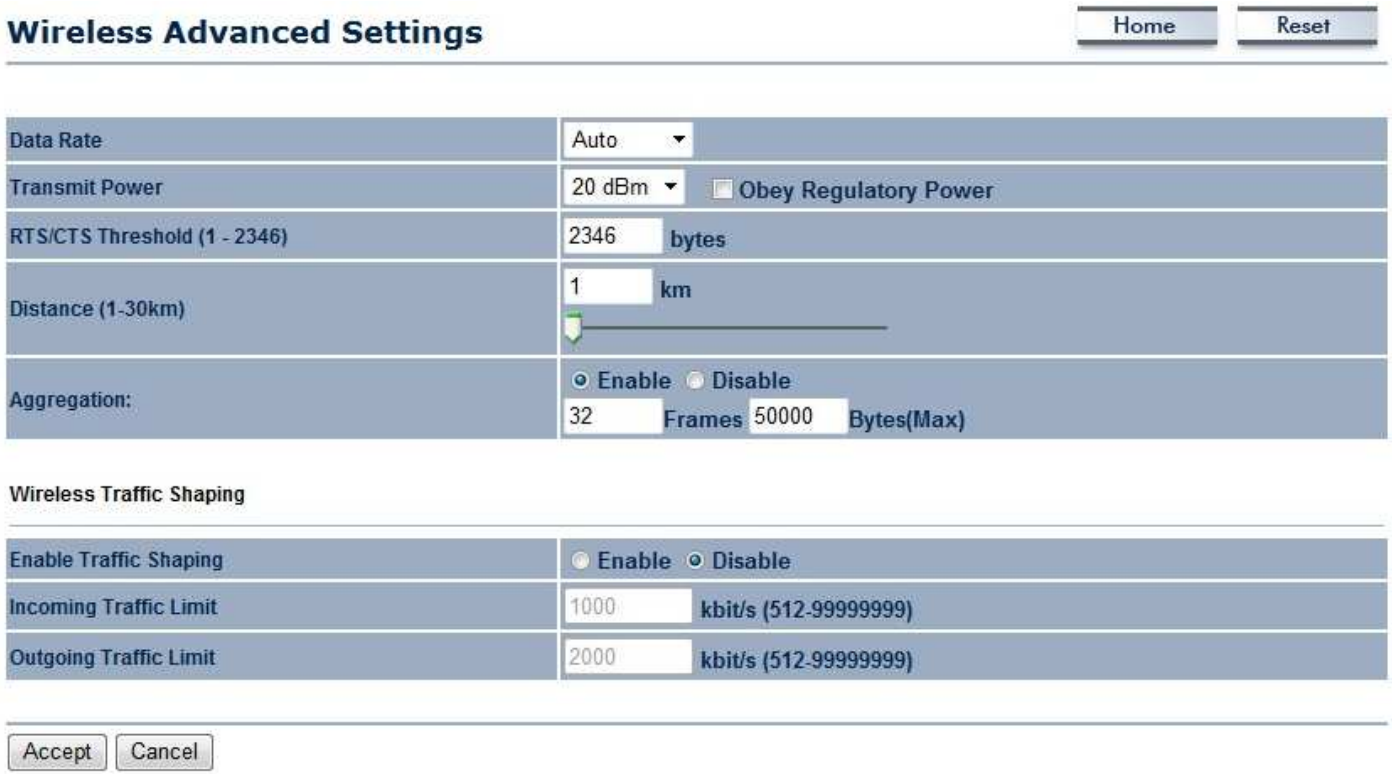
Wireless MAC Filters are used to allow or deny network access to wireless clients according to their MAC addresses. You can manually add a MAC address to restrict the permission to access ERA150. The default setting is **Disable Wireless MAC Filter**.



Wireless Filter	
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: **Disabled**, **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 that the default settings are used unless the user has experience with more advanced networking features.



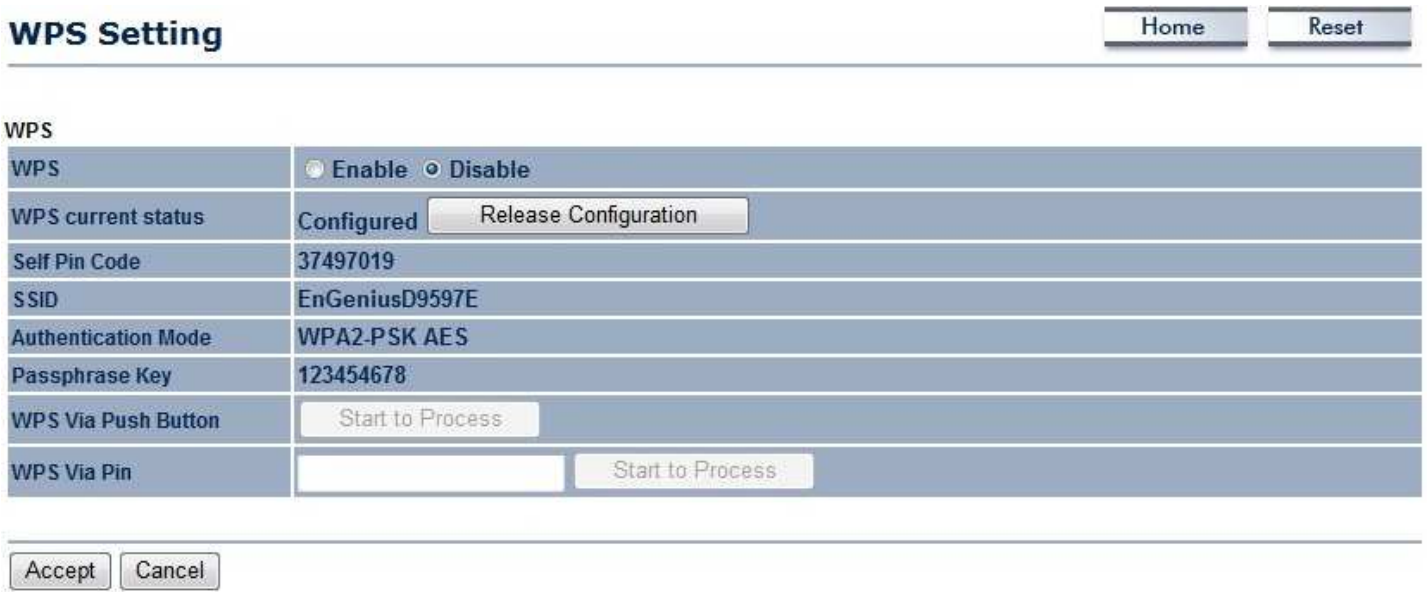
Wireless Advanced	
Data Rate	Select a data rate from the drop-down list. The data rate affects throughput of data in the ERA150. The lower the data rate, the throughput will be lower, but so will the transmission distance.
Transmit Power	Set the power output of the wireless signal.
RTS/CTS Threshold	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)

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 applicable in Access Point mode.

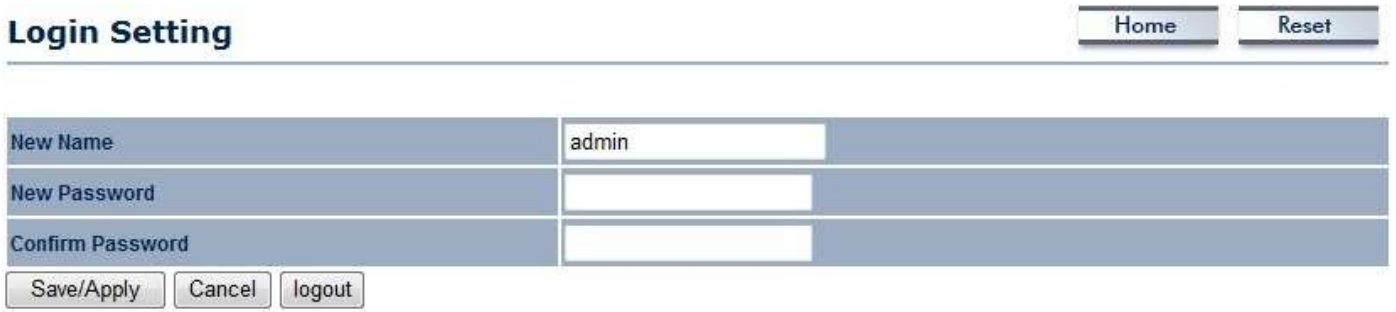


Wi-Fi Protected Setup (WPS)	
WPS	Select to Enable or Disable the WPS feature.
WPS Current Status	Shows whether the WPS function is **Configured** or **unConfigured**. When it is Configured, the WPS has been used to authorize connection between the device and wireless clients.
Self Pin Code	The PIN code 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.

8 Management

8.1 Administration

This page allows you to change the ERA150 password as well as configure the device by remote access. By default, the username is **admin** and the password is: **admin**. The password can contain 0 to 12 alphanumeric characters and is case sensitive.

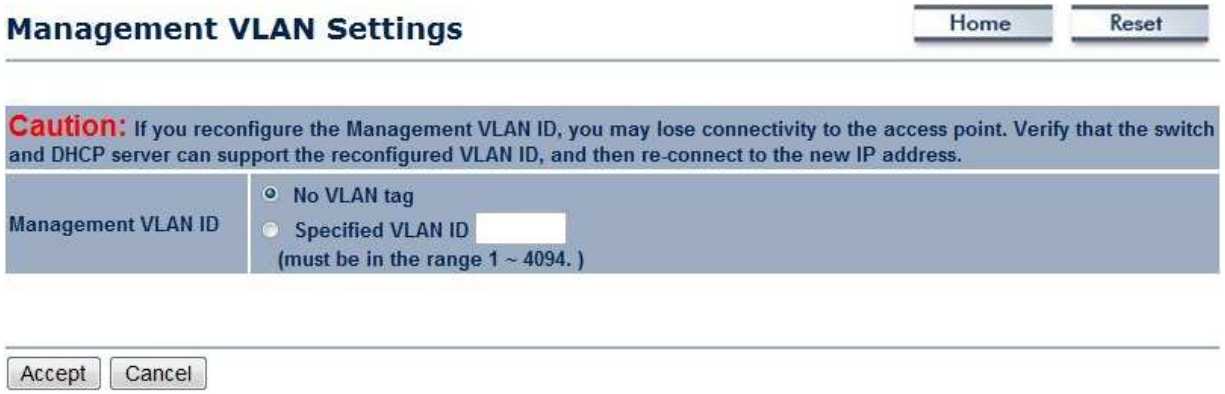


Login Setting	
New Name	Enter a new username for logging in to the New Name entry box.
New Password	Enter a new password for logging in to the New Password entry box.
Confirm Password	Re-enter the new password in the Confirm Password entry box for confirmation.
Save/Apply / Cancel	Click **Save/Apply** to apply the changes or **Cancel** to return previous settings.
Logout	Click **Logout** to logout of the ERA150 interface.

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 to behave as if they were on a separate Local Area Network (LAN). Computers on a VLAN do not have to be physically located next to one another on the LAN.

Note: Only applicable in Access Point mode.



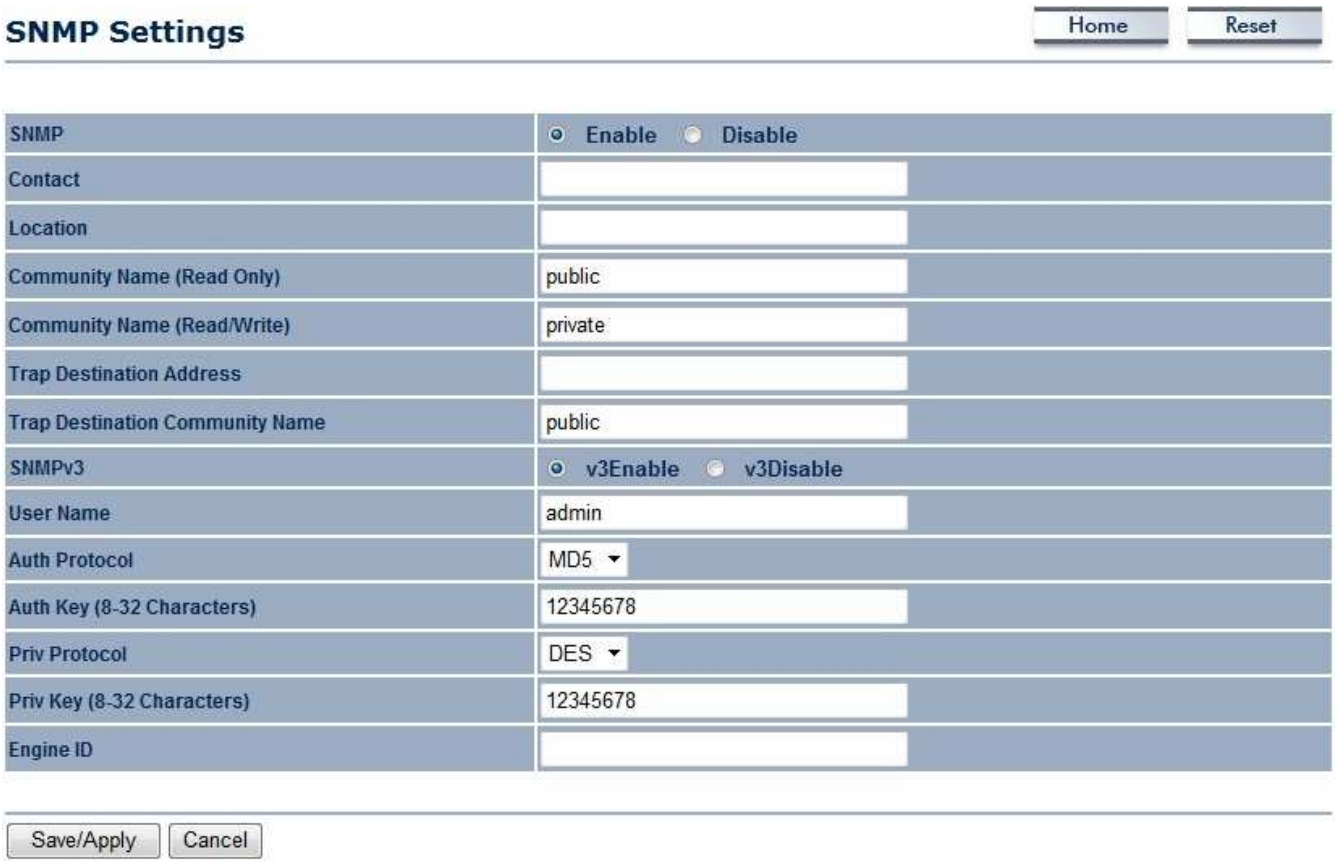
Management VLAN (Only applicable in Access Point mode)	
Management VLAN ID	If your network includes VLANs, you can specify a VLAN ID for packets pass through the Access Point with a tag. Otherwise, select **No VLAN tag**.
Accept / Cancel	Click **Accept** to confirm the changes or **Cancel** to cancel and return previous settings.

Note:

1. If you reconfigure the Management VLAN ID, you may lose your connection to the ERA150. Verify that the DHCP server supports the reconfigured VLAN ID and then reconnect to the ERA150 using the new IP address.
2. Clicking **Accept** does not apply the changes. To apply them, use Status > Save/Load (see section 5.1).

8.3 SNMP Settings

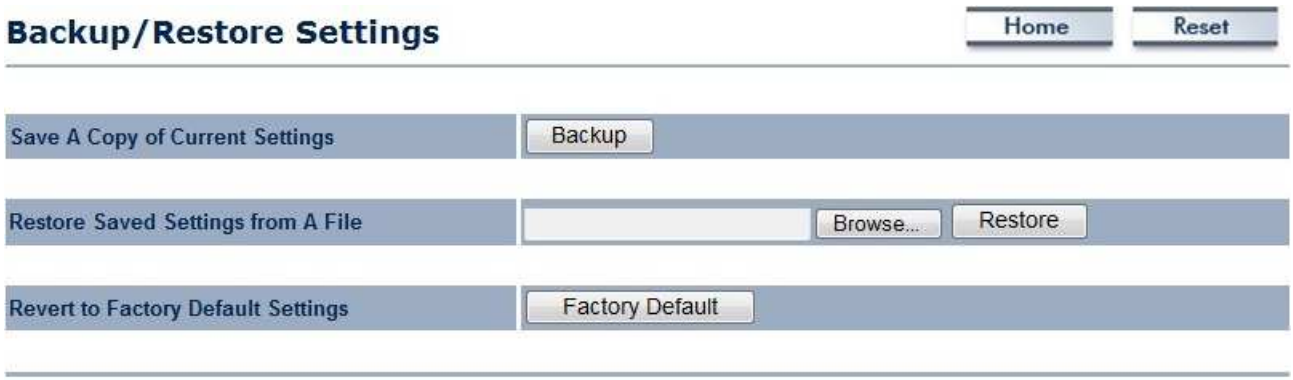
This page allows you to assign the Contact Details, Location, Community Name, and Trap Settings for Simple Network Management Protocol (SNMP). This is a networking management protocol used to monitor network attached devices. SNMP allows messages (called protocol data units) to be sent to various parts of the network. Upon receiving these messages, SNMP compatible devices (called agents) return the 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 the SNMP community for read only access.
Community Name (Read/Write)	Specify the password for 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.
SNMPv3	
SNMPv3 Enable/Disable	Enable or Disable SNMPv3 feature.
User Name	Specify the username for SNMPv3.
Auth Protocol	Select the authentication protocol type: **MD5** or **SHA**.
Auth Key	Specify the authentication key for authentication.
Priv Protocol	Select the privacy protocol type: **DES**.
Priv Key	Specify the privacy key for privacy.
Engine ID	Specify the engine ID for SNMPv3.
Save/Apply / Cancel	Click **Save/Apply** to apply the changes or **Cancel** to return previous settings.

8.4 Backup/Restore

This page allows you to save the current device configurations. When you save the configurations, you also can reload the saved configurations into the device through the **Restore Saved Settings from A File** section. If extreme problems occur, or if the you have set the ERA150 wrongly, you can use the **Factory Default** button in the **Revert to Factory Default Settings** section to restore all the configurations of the ERA150 to the 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 ERA150 to its factory default settings.

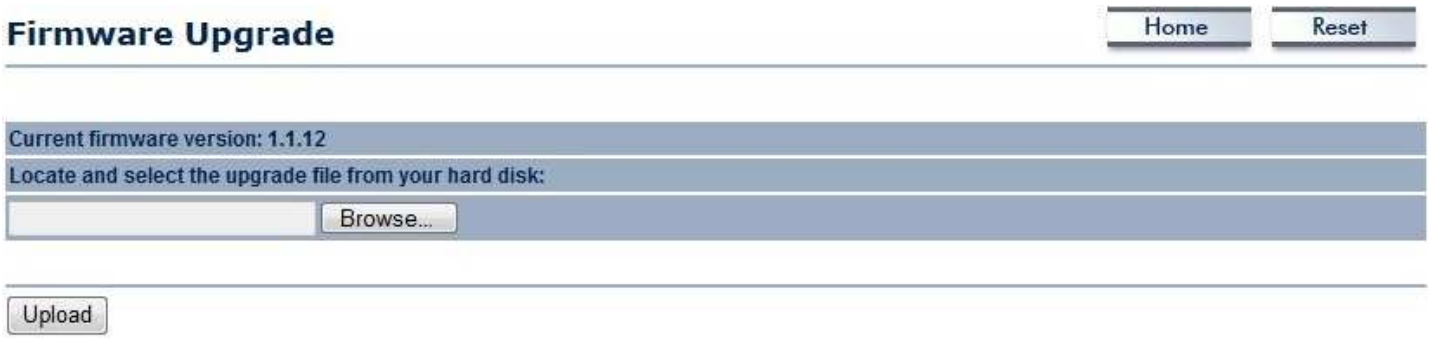
8.5 Auto Reboot Settings

You can specify how long to reboot the ERA150 periodically.

Auto Reboot Settings	
Auto Reboot Setting	Enable or disable the auto reboot function.
Frequency of Auto Reboot	To specify the time to reboot the ERA150 by Min, Hour, Day or Week.
Save/Apply / Cancel	Click **Save/Apply** to apply the changes or **Cancel** to return previous settings.

8.6 Firmware Upgrade

This page allows you to upgrade the firmware of the ERA150.



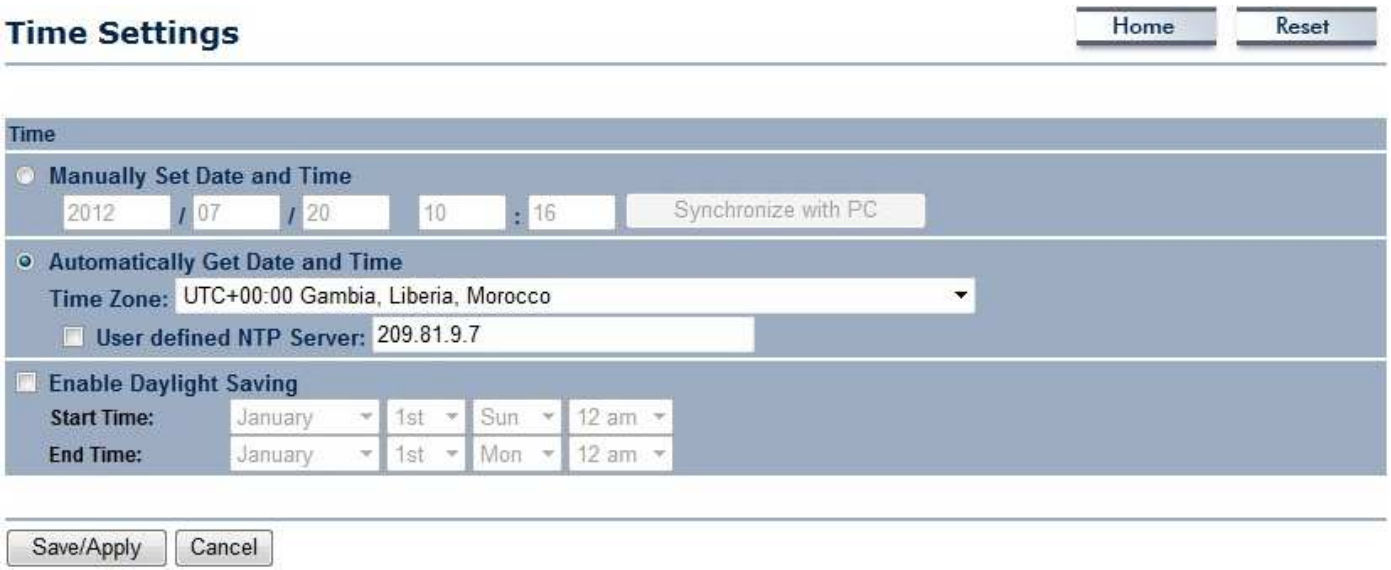
To perform the Firmware Upgrade:

1. Click the **Browse** button and navigate the OS File System to the location of the upgrade file.
2. Select the upgrade file. The name of the file 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.

8.7 Time Setting

This page allows you to set the internal clock of the ERA150.

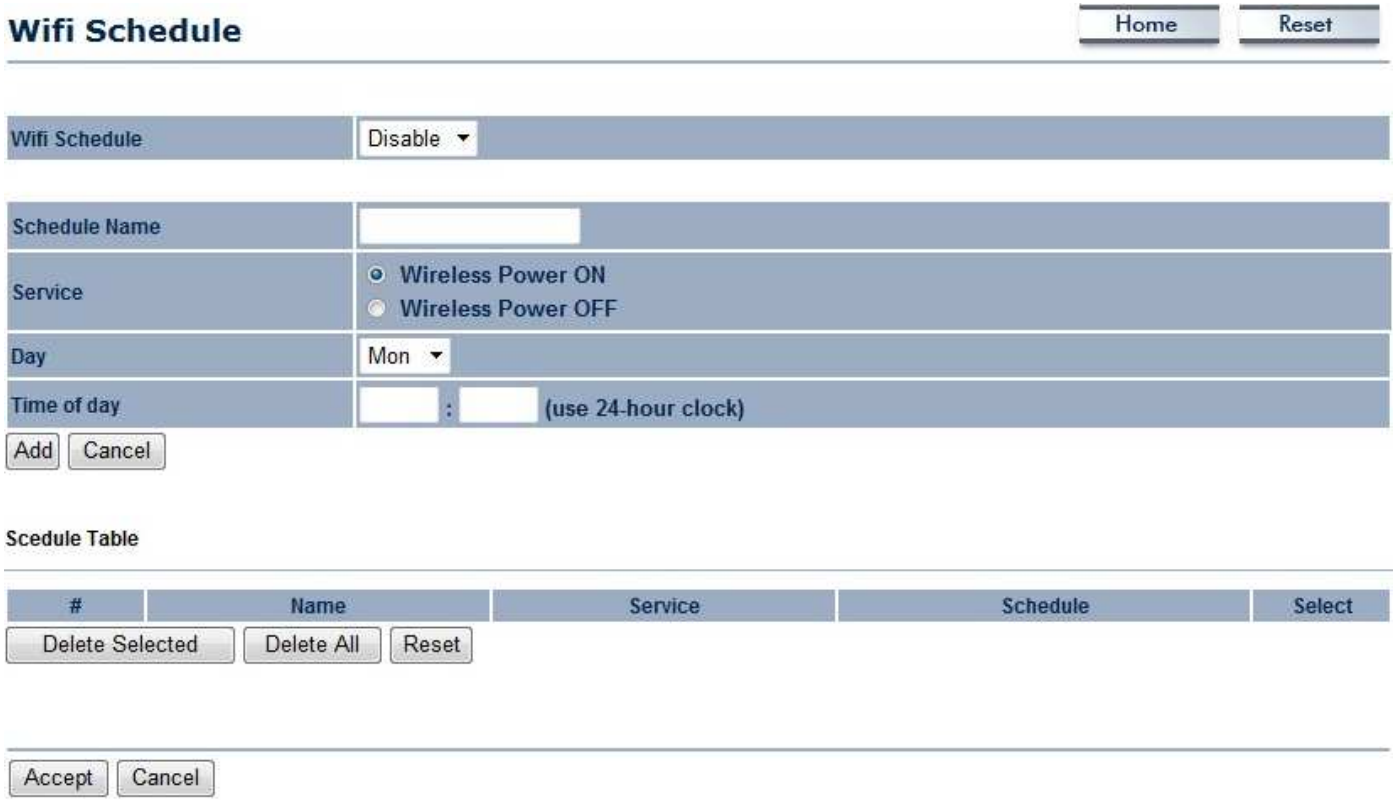


Time	
Manually Set Date and Time	Manually specify the date and time.
Automatically Get Date and Time	Select a time zone from the drop-down list and check whether you want to enter the IP address of an NTP server or use the default NTP server to get have the internal clock set automatically.
Enable Daylight Saving	Check whether daylight savings applies to your area.
Save/Apply / Cancel	Click **Save/Apply** to apply the changes or **Cancel** to return previous settings.

8.8 Wifi Schedule

This page allows you to setup Wifi Schedule function of the ERA150. You can set a schedule when the ERA150's Wireless is on or off.

Note: Only applicable in Access Point mode.



Wifi Schedule	
Wifi Schedule	Select to Enable or Disable the Wifi schedule feature. Default is Disable.
Schedule Name	Assign a name to the schedule.
Service	The service (Wireless Power ON /OFF) provided for the schedule.
Day	Select which day the Wifi schedule will be active.
Time of day	Set what time of the selected day the Wifi schedule will be active.
Add/Cancel	Click **Add** to new schedule or **Cancel** to return previous settings.

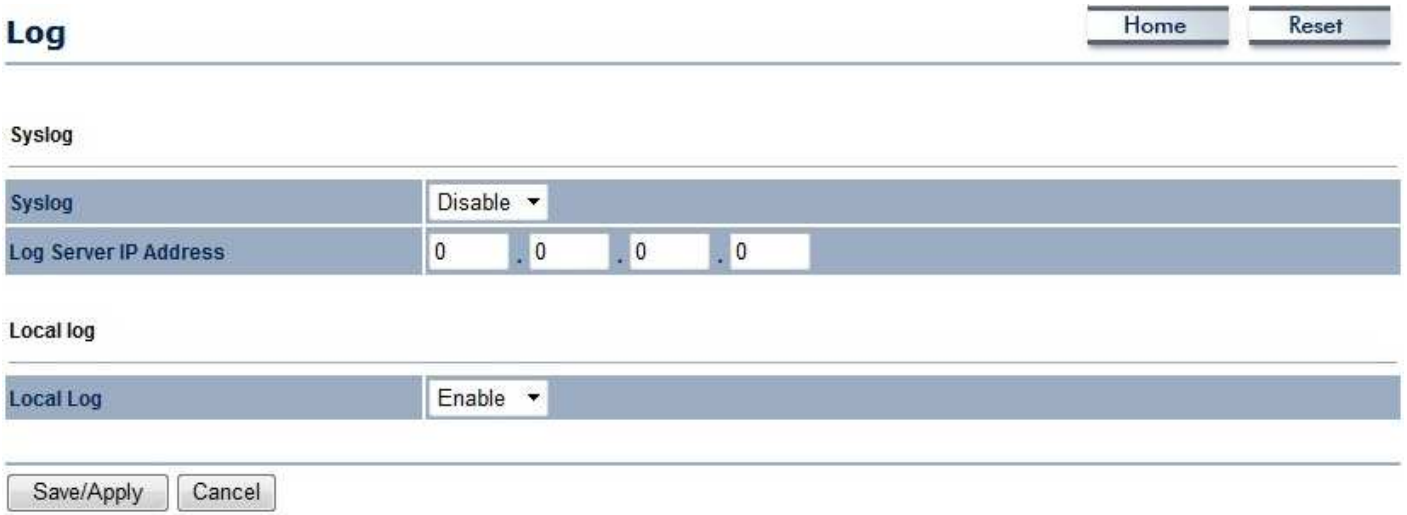
Schedule Table	
#	The entry number of the schedule.
Name	The name given to the schedule.
Service	Displays whether the wireless service will be activate or not during the scheduled time.
Schedule	Displays when the schedule will execute.
Delete Selected	Delete the selected entries.
Delete All	Delete all entries.
Reset	Deselect all entries.
Accept/Cancel	Click **Accept** to confirm the changes or **Cancel** to cancel and return previous settings.

8.9 CLI Setting

This page allows you to setup CLI (Command Line Interface) function of the ERA150.

8.10 Log

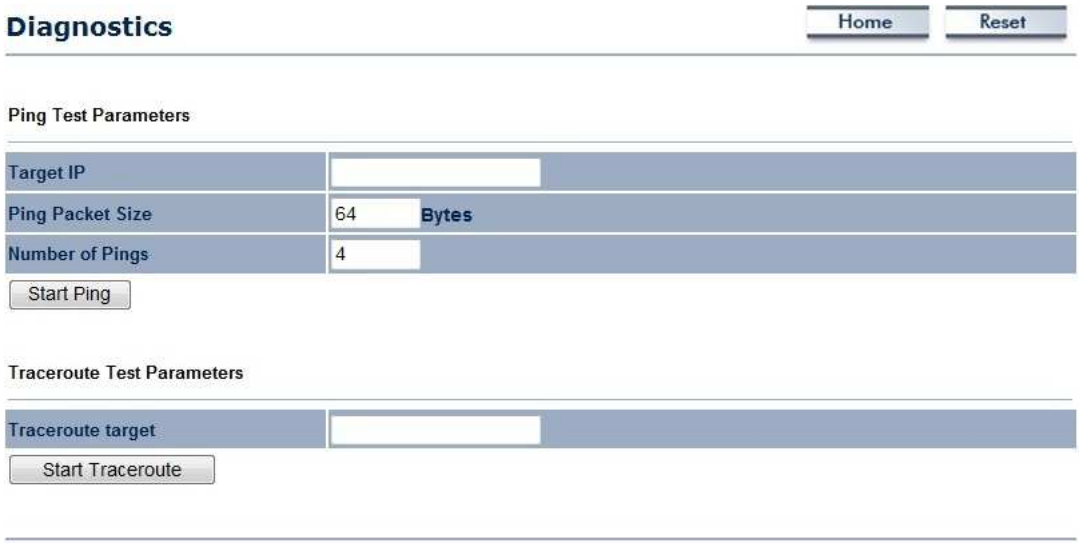
This page allows you to setup Syslog and local log functions of the ERA150.



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.

8.11 Diagnostics

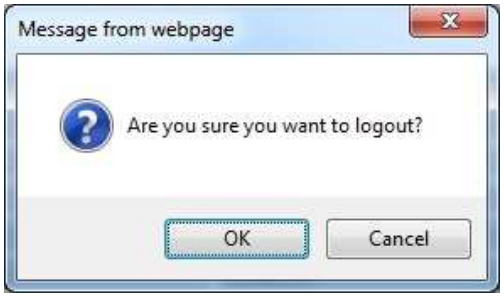
This page allows you to analyze the connection quality of the ERA150 and trace the routing table to a target in the network.



Diagnositics	
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 target device (via IP).
Traceroute Target	Enter an IP address or domain name you want to trace.
Start Traceroute	Click **Start Traceroute** to begin the trace route operation.

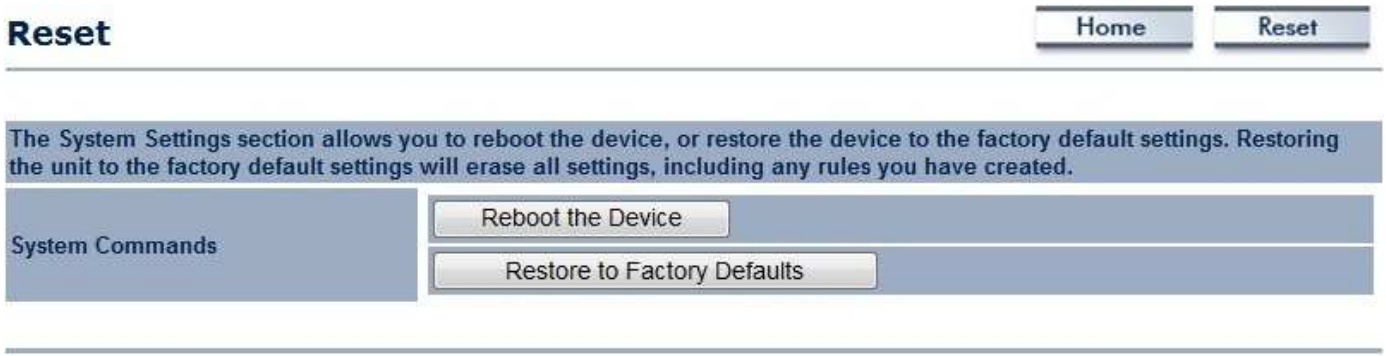
8.12 Logout

Click **Logout** in the **Management** menu to logout of the ERA150 interface.



8.13 Reset

In some circumstances, it may be required to force the device to reboot. Click on **Reboot the Device** to reboot the ERA150.



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:

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 20cm 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.

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.

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
- Safety of Information Technology Equipment

- EN50385
- 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
- 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
- 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
- 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.

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cs Česky [Czech]	*[Jméno výrobce]* tímto prohlašuje, že tento *[typ zařízení]* je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
da 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.
de 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.
et 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.
en 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.
es 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.
el 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.
fr 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.
it 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.