Dual Radio Concurrent AP/CB

ALL0305

User Manual

Version : 1.0

Table of Contents

1 Product Overview

Thank you for using ALL0305. ALL0305 is a dual core wireless outdoor Access Point/Client Bridge. It is a powerful, enhanced, enterprise scale product with 3 multi-functions Access Point, Client Bridge, and Client Router in both 2.4G and 5G operation mode. ALL0305 can help with reducing costs with wired internet/intranet and even constructing wireless environment.

ALL0305 is easily to install almost anywhere by wall mount. It supports Power over Ethernet for quick outdoor installation. External N-type antenna provides better wireless signal quality and the antenna is upgradeable.

ALL0305 can manage power level control, Wireless Access Control, WMM and Real-time RSSI indicator. ALL0305 is fully support of security encryption including Wi-Fi Protected Access (WPA-PSK/WPA2-PSK), 64⁄128⁄152-bit WEP Encryption and IEEE 802.1x Radius encryption.

1.1 Benefits

The following list describes the design of the ALL0305 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, open areas and across busy streets make the installation of LANs either impossible or very expensive.

b) **Temporary workgroups**

   Consider situations in parks, athletic arenas, exhibition centers, disaster-recovery, temporary offices and construction sites where one wants a temporary WLAN established and removed.

c) **The ability to access real-time information**

   Doctors/nurses, point-of-sale employees, and warehouse workers can access real-time information while dealing with patients, serving customers and processing information.

d) **Frequently changed environments**

   Show rooms, meeting rooms, retail stores, and manufacturing sites where frequently rearrange the workplace.

e) **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.

f) Wired LAN backup

Network managers implement wireless LANs to provide backup for mission-critical applications running on wired networks.

g) Training/Educational facilities

Training sites at corporations and students at universities use wireless connectivity to ease access to information, information exchanges, and learning.

Benefits	
Dual Core Wireless Network	Capable of functioning both 2.4G and 5G network at the same time.
High Output Power up to 28 dBm	Extended excellent Range and Coverage.
IEEE 802.11b/g Compliant	Fully Interoperable with IEEE 802.11b/IEEE 802.11g compliant devices.
IEEE 802.11a	Fully Interoperable with IEEE 802.11a compliant devices.
Watertight and Weatherproof	Avoid water invaded and weather corroded for outdoor environment.
Wall mount and mast mounting kit support	Building on indoor environment easily.
Internal smart antenna	Diversity antenna gives better coverage of wireless signal for indoor environment.
3 Multi-Function	Users can use different mode in various environment.
Point-to-point, Point-to-multipoint Wireless Connectivity	Let users transfer data between two buildings or multiple buildings.
Support RSSI Indicator	Access Point will show the signal quality for each client.
Power-over-Ethernet	Flexible Access Point locations and cost savings. ALL0305 must uses the adapter provided in the package.
Support Multi-SSID function (4 SSID) in AP mode	Allow clients to access different networks through a single access point and assign different policies and functions for each SSID by manager.
WPA2/WPA/ WEP/ IEEE 802.1x support	Fully support all types of security types.
MAC address filtering in AP mode	Ensures secure network connection.
SNMP Remote Configuration Management	Help administrators to remotely configure or manage the Access Point easily.
QoS (WMM) support	Enhance user performance and density.
Detachable antenna support (N-Type)	Collocate with any antenna for user's environment
PPPoE/PPTP function support (CR mode)	Easy to access internet via ISP service authentication

1.2 Feature

Dual Mode	Use this feature to configure 2.4G and 5G at the same time. Both 2.4G and 5G are functioning in the Access Point mode and it can save much time of configuration.
Separate Mode	Use this feature to configure 2.4G and 5G separately. 2.4G and 5G can function with different operation modes and it gives flexible choice of the wireless network.
Access Point Mode	Use this feature to setup the access point's configuration information. It has support adjusting transmit power and channel. Client can access the network with different regulatory settings and automatically change to the local regulations.
Client Bridge Mode	Use this feature to connect to an Access Point and enjoy the great speed of surfing internet
Client Router Mode	Client Router Mode has the same abilities as Client Bridge Mode but it also supports WAN type of internet connection.
Multiple SSIDs	ALL0305 supports up to 4 SSIDs on your access point. The following options can be set to each SSID: - SSID for public or private network - Each SSID can be suppressed. - Authentication is fully supported - VLAN identifier
VLAN	Specify a VLAN number for each SSID to separate the services among clients.
WMM	Use this feature to limit the incoming or outgoing throughput.
Wi-Fi Protect Access	Wi-Fi Protect Access is a standard-based interoperable security enhancement that increases the level of data protection and access control for existing and future wireless LAN system. It is compatible with IEEE 802.11i standard WPA leverages TKIP and 802.1X for authenticated key management.

1.3 Package Contents

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

- 1* ALL0305 Dual Concurrent Wireless Outdoor Access Point / Client Bridge (ALL0305)
- 1* 48V/0.375A Power Adapter
- 1* Mounting kit
- 1* QIG
- 1* CD (User Manual)
- 2*Dipole Antennas

Caution: Using other Power Adapter than the one included with ALL0305 may cause damage of the device.

1.4 System Requirement

The following conditions are the minimum system requirement.

- A computer with an Ethernet interface and operating under Windows XP, Vista, 7 or Linux.
- Internet Browser that supports HTTP and JavaScript.

1.5 Hardware Overview

MCU	Atheros AR7161
RF	Atheros AR5413 (Radio1) + Atheros AR5413 (Radio2)
Memory	64MB SDRAM
Flash	8MB
Physical Interface	One 10/100 Ethernet RJ-45 One Reset Button
Power Requirements	Power over Ethernet, 48V DC IN

2 ALL0305 Multi-Function Instruction Guide

2.1 Access Point

In the Access Point Mode with WDS Function, ALL0305 function likes a central connection for any stations or clients that support IEEE 802.11b/g network. Stations and Client must configure the same SSID and Security Password to associate within the range. ALL0305 supports 4 different SSIDs to separate different clients at the same time.

2.2 Client Bridge

In the Client Bridge Mode, the ALL0305 function likes a wireless dongle. Connected to an Access Point wirelessly and surf internet whenever you want. Using Site Survey to scan all the Access Point within the range and configure its SSID and Security Password to associate with it. Connect your station to the LAN port of the ALL0305 via Ethernet.

2.3 Client Router

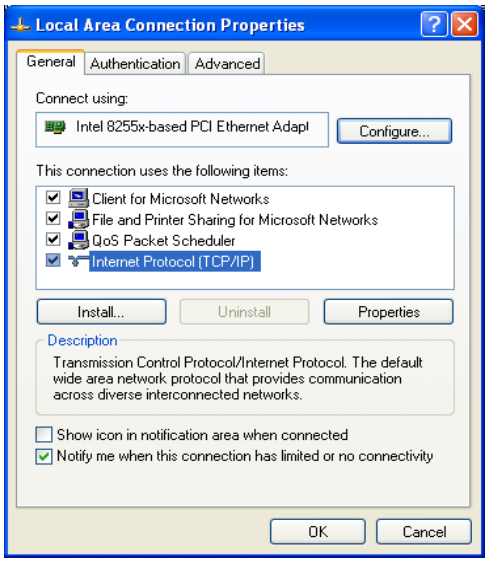
In the Client Router Mode, the ALL0305 has DHCP Server build inside that allows many LANs automatically generate an IP address to share the same Internet. Connect an AP/WISP Wirelessly and connect to LANs via wired. Client Router Mode is act completely opposite to the AP Router Mode.

3 Computer Configuration Instruction

3.1 Obtain an IP Automatically

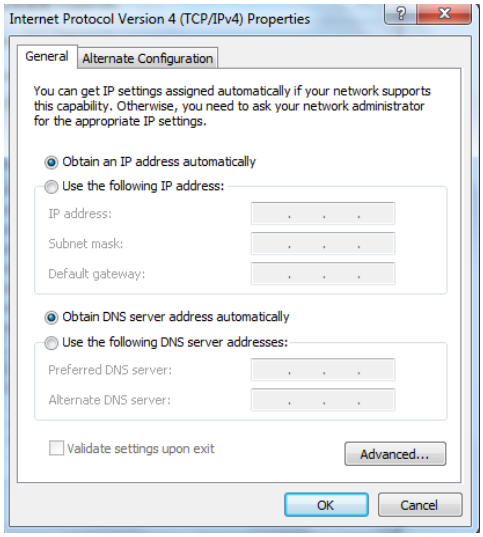
In order to configure ALL0305, please follow the instruction below:

1. In the **Control Panel**, double click **Network Connections** and then double click on the connection of your **Network Interface Card (NIC)**. You will then see the following screen.



2. Select **Internet Protocol (TCP/IP)** and then click on the **Properties** button. This will allow you to configure the TCP/IP settings of your PC/Notebook

3. Select **Obtain an IP Address automatically** radio button and then enter the IP address and subnet mask. Ensure that the IP address and subnet mask are on the same subnet as the device.



4. Click on the **OK** button to close this window, and then close LAN properties window.

Caution: ALL0305 has provided DHCP server in the default setting. You should automatically retrieve an IP address otherwise use an IP address which is in the same subnet as the device.

3.2 Logging Method

After complete the IP settings from last section, you can now access the web-based configuration menu.

1. Open web browser

2. Enter IP **192.168.1.1** into you address filter.

3. The default Username is **root** Password is **admin**.

4 Wireless Configuration

4.1 Switching Operation Mode

The ALL0305 supports 3 different operation modes: Access Point, Client Bridge, and Client Router. Each mode can be used in both 2.4G and 5G wireless network at the same time or separately.

Click **Operation Mode** under Management Section to begin.

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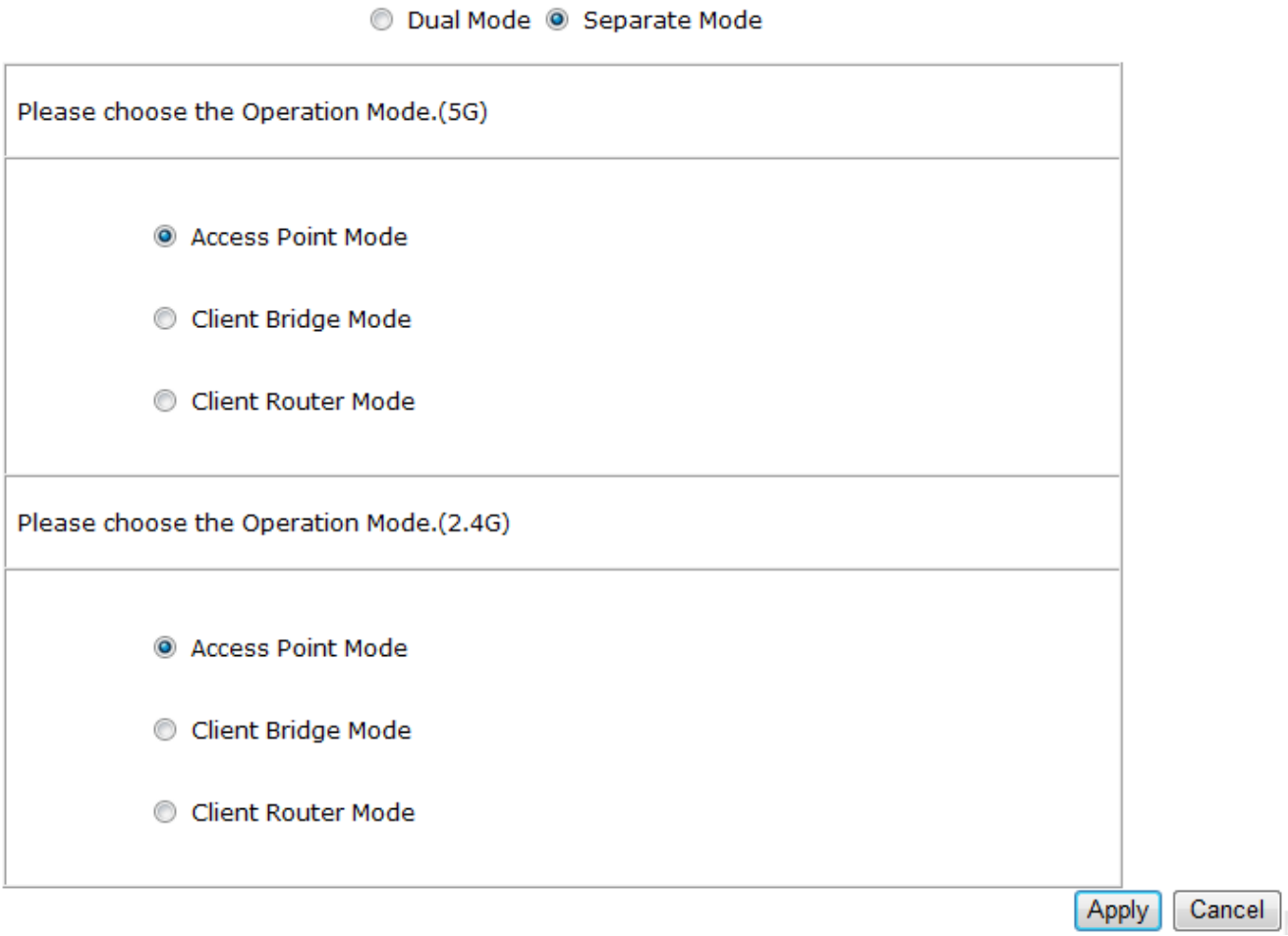
4.1.1 Separate Mode

5G's and 2.4G's networks can operate separately by selecting **Separate Mode**'s radio button.

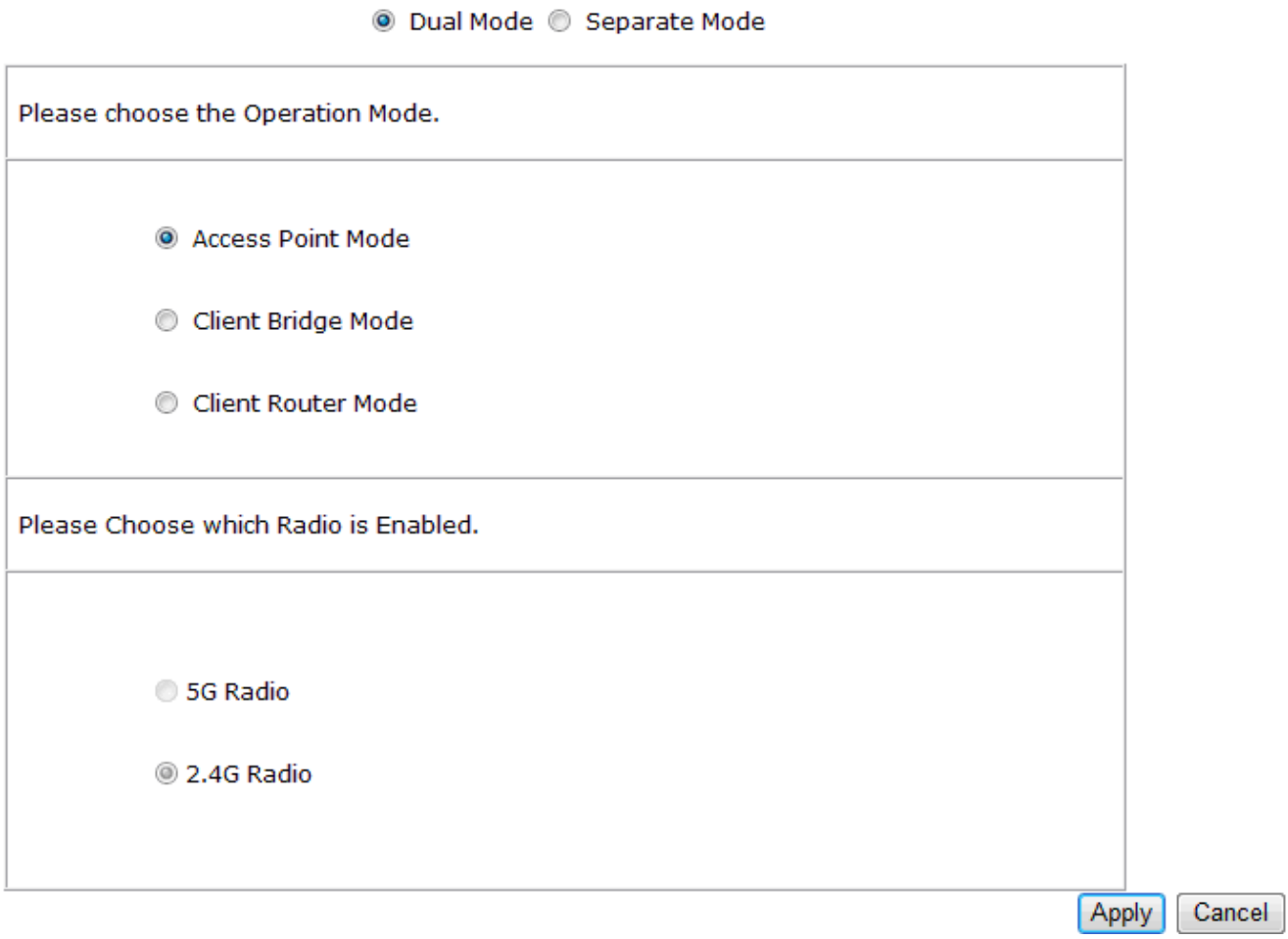


Operation Mode (5G): Select which operation modes you would like to use in 5G network.
Operation Mode (2.4G): Select which operation modes you would like to use in 2.4G network.
Apply / Cancel: Press **Apply** to save the changes or **Cancel** to return previous settings.

Caution: **Client Bridge Mode** and **Client Router Mode** can not be used at the same time.
Note: If you would like to use the Access Point mode in both 5G and 2.4G network, please check next section for details.

4.1.2 Dual Mode

Only Access Point Mode can operate 2.4G and 5G at the same time. However, Client Bridge/Client Router can still select 2.4G and 5G network in the wireless basic settings. Please select the **Dual Mode**'s radio button to begin.



Operation Mode: Only Access Point mode can be worked in 5G and 2.4G at the same time.
5G / 2.4G Radio Button: In the Access Point mode, the radio buttons will be locked because both bands can work at the same time. Select the 5G or 2.4G radio button to access the wireless network. You can still change bands in the wireless basic settings.
Apply / Cancel: Press **Apply** to save the changes or **Cancel** to return previous settings.

4.2 Wireless Settings

Configuration is under **Wireless** Section on the left-hand-side menu.

4.2.1 Access Point Mode (Dual Mode)

Radio	Select the radio button to enable or disable wireless function.
Enable SSID#	ALL0305 can support up to 4 different SSID with different VLAN tag.
ESSID	Specify the broadcast SSID and VLAN ID for each ESSID.
5G Wireless Settings	
Band	Standard IEEE 802.11a band.
Channel	Select a channel from drop down menu.
Data Rate	Select the data rate from drop down menu. Data rate will affect the efficiency of the

	throughput. If the data rate is set to a small number, the lower through will get but it can transmit to longer distance.
Auto Channel	Select the radio button to enable auto channel function.
2.4G Wireless Settings	
Band	Standard IEEE 802.11b and 802.11g band.
Channel	Select a channel from drop down menu.
Data Rate	Select the data rate from drop down menu. Data rate will affect the efficiency of the throughput. If the data rate is set to a small number, the lower through will get but it can transmit to longer distance.
Auto Channel	Select the radio button to enable auto channel function.
Apply / Cancel	Press **Apply** to apply the changes or **Cancel** to return previous settings.

Caution: Both 5G and 2.4G bands are using the same SSID.

4.2.2 Access Point Mode (5G)

Radio	Select the radio button to enable or disable wireless function.
Enable SSID#	ALL0305 can support up to 4 different SSID with different VLAN tag.
ESSID	Specify the broadcast SSID and VLAN ID for each ESSID.
5G Wireless Settings	
Band	Standard IEEE 802.11a band.
Channel	Select a channel from drop down menu.
Data Rate	Select the data rate from drop down menu. Data rate will affect the efficiency of the throughput. If the data rate is set to a small number, the lower through will get but it can transmit to longer distance.
Auto Channel	Select the radio button to enable auto channel function.
Apply / Cancel	Press **Apply** to apply the changes or **Cancel** to return previous settings.

Caution: If you do not have experience of data rate setting, please remain as default setting.

4.2.3 Access Point Mode (2.4G)

Radio	Select the radio button to enable or disable wireless function.
Enable SSID#	ALL0305 can support up to 4 different SSID with different VLAN tag.
ESSID	Specify the broadcast SSID and VLAN ID for each ESSID.
2.4G Wireless Settings	
Band	Standard IEEE 802.11b and 802.11g band.

Channel	Select a channel from drop down menu.
Data Rate	Select the data rate from drop down menu. Data rate will affect the efficiency of the throughput. If the data rate is set to a small number, the lower through will get but it can transmit to longer distance.
Auto Channel	Select the radio button to enable auto channel function.
Apply / Cancel	Press **Apply** to apply the changes or **Cancel** to return previous settings.

Caution: If you do not have experience of data rate setting, please remain as default setting.

4.2.4 Client Bridge Mode/Client Router Mode (Dual Mode)

ESSID	Specify the SSID is given by Access Point if known. Otherwise, you may use **Site Survey** to scan nearby Access Point.
Preferred BSSID	Specify the MAC address from the Access Point that you would like to associate with.
5G Wireless Setting	Select the radio button to use 5G network as your default wireless network.
2.4G Wireless Setting	Select the radio button to use 2.4G network as your default wireless network.
Apply / Cancel	Press **Apply** to apply the changes or **Cancel** to return previous settings.

Caution: ALL0305 can not operate Client Bridge in 5G and 2.4G at the same time.
Note: For more details of **Site Survey**, please refer to the Site Survey section.

4.2.5 Client Bridge Mode/Client Router Mode (5G)

ESSID	Specify the SSID is given by Access Point if known. Otherwise, you may use **Site Survey** to scan nearby Access Point.
Preferred BSSID	Specify the MAC address from the Access Point that you would like to associate with.
5G Wireless Setting	Standard IEEE 802.11a wireless band.
Apply / Cancel	Press **Apply** to apply the changes or **Cancel** to return previous settings.

Note: For more details of **Site Survey**, please refer to the Site Survey section.

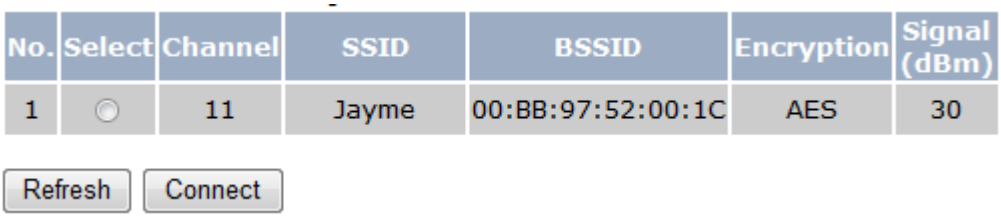
4.2.6 Client Bridge Mode/Client Router Mode (2.4G)

ESSID	Specify the SSID is given by Access Point if known. Otherwise, you may use **Site Survey** to scan nearby Access Point.
Preferred BSSID	Specify the MAC address from the Access Point that you would like to associate with.
2.4G Wireless Setting	Standard IEEE 802.11b and IEEE 802.11g wireless band.
Apply / Cancel	Press **Apply** to apply the changes or **Cancel** to return previous settings.

Note: For more details of **Site Survey**, please refer to the Site Survey section.

4.3 Site Survey

Use this feature to scan nearby Access Point.



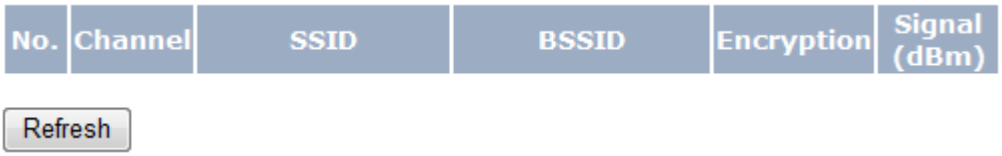
No	Numbers of Access Points have been found in the site survey.
Select	Select the Access Point you would like to associate with via select the radio button.
Channel	Access Point is currently uses which channel.
SSID	Access Point is broadcast the SSID.
BSSID	Access Point's wireless MAC address.
Encryption	Access Point is currently uses which security type.
Signal(dBm)	Signal strength from Access Point to your station.
Refresh	Press Refresh to rescan nearby Access Point.

Connect	After you selected the radio button, press Connect to process the connection.

Caution: If you select 5G as your default wireless network, you can not scan the Access Point which is operated in 2.4G band.

4.4 AP Scan List (5G / 2.4G)

This feature can help you to select the Access Point Channel by scan nearby Access Point status.



Refresh	Press Refresh to scan again.

4.5 Wireless Security Settings

Wireless Security Settings section will guide you to the entire Security modes configuration: WEP, WPA(TKIP), WPA2(AES), WPA2-Mixed, and Radius. WPA(TKIP), WPA2(AES), and WPA2-Mixed are all under **WPA pre-shared key** section.
We are strongly recommended that uses WPA2-PSK AES as your security settings.

4.5.1 WEP (Access Point)

ESSID Selection	ALL0305 supports up to 4 different SSIDs. Each SSID can be set to different authentication type.
Hidden SSID	Select **Enable** or **Disable** broadcast SSID.
WMM	Select **Enable** or **Disable** WMM function. WMM is based on the four Access Categories: voice, video, best effort and background. WMM function is not used to guarantee transmission speed.
Encryption	Select **WEP** from the drop down list to begin the configuration.
Authentication Type	Select **Open System** or **Shared Key** as your authentication type.
Key Length	Select Key Length in 64/128bit password length.
Key Type	Select Input Type in **Hex** or **ASCII**.
Default Key	Select the default index key for wireless security.
Key1	Specify password for security key index No.1.
Key2	Specify password for security key index No.2.
Key3	Specify password for security key index No.3.

Key4	Specify password for security key index No.4.
Apply / Cancel	Press **Apply** to save the changes or **Cancel** to return previous settings.

4.5.2 WEP (Client Bridge / Client Router)

Network Name (SSID)	Specify the Access Point's SSID that you would like to associate with.
Encryption	Select **WEP** from the drop down list to begin the configuration.
Authentication Type	Select **Open System** or **Shared Key** as your authentication type.
Key Length	Select Key Length in 64/128bit password length.
Key Type	Select Input Type in **Hex** or **ASCII**.
Default Key	Select the default index key for wireless security.
Key1	Specify password for security key index No.1.
Key2	Specify password for security key index No.2.
Key3	Specify password for security key index No.3.
Key4	Specify password for security key index No.4.
Apply	Press **Apply** to save the changes.

4.5.3 WPA pre-shared Key (Access Point)

ESSID Selection	ALL0305 supports up to 4 different SSIDs. Each SSID can be set to different authentication type.
Hidden SSID	Select **Enable** or **Disable** broadcast SSID.
WMM	Select **Enable** or **Disable** WMM function. WMM is based on the four Access Categories: voice, video, best effort and background. WMM function is not used to guarantee transmission speed.
Encryption	Select **WPA pre-shared Key** from the drop down list to begin the configuration.
WPA Type	Select **WPA(TKIP)**, **WPA2(AES)**, or **WPA2 Mixed** as your authentication type.
Pre-shared Key Type	Select **Passphrase** or **Hex (64 characters)** as your key type.
Pre-shared Key	Specify password for security key.
Apply / Cancel	Press **Apply** to save the changes or **Cancel** to return previous settings.

Caution: Hex key type does not allow special characters in the password.

4.5.4 WPA pre-shared Key (Client Bridge / Client Router)

Network Name (SSID)	Specify the Access Point's SSID that you would like to associate with.
Encryption	Select **WPA pre-shared key** from the drop down list to begin the configuration.
WPA Type	Select **WPA(TKIP)**, or **WPA2(AES)** as your authentication type.
Pre-shared Key Type	Select **Passphrase** or **Hex (64 characters)** as your key type.
Pre-shared Key	Specify password for security key.
Apply	Press **Apply** to save the changes.

Caution: Hex key type does not allow special characters in the password.

4.5.5 Radius (Access Point Only)

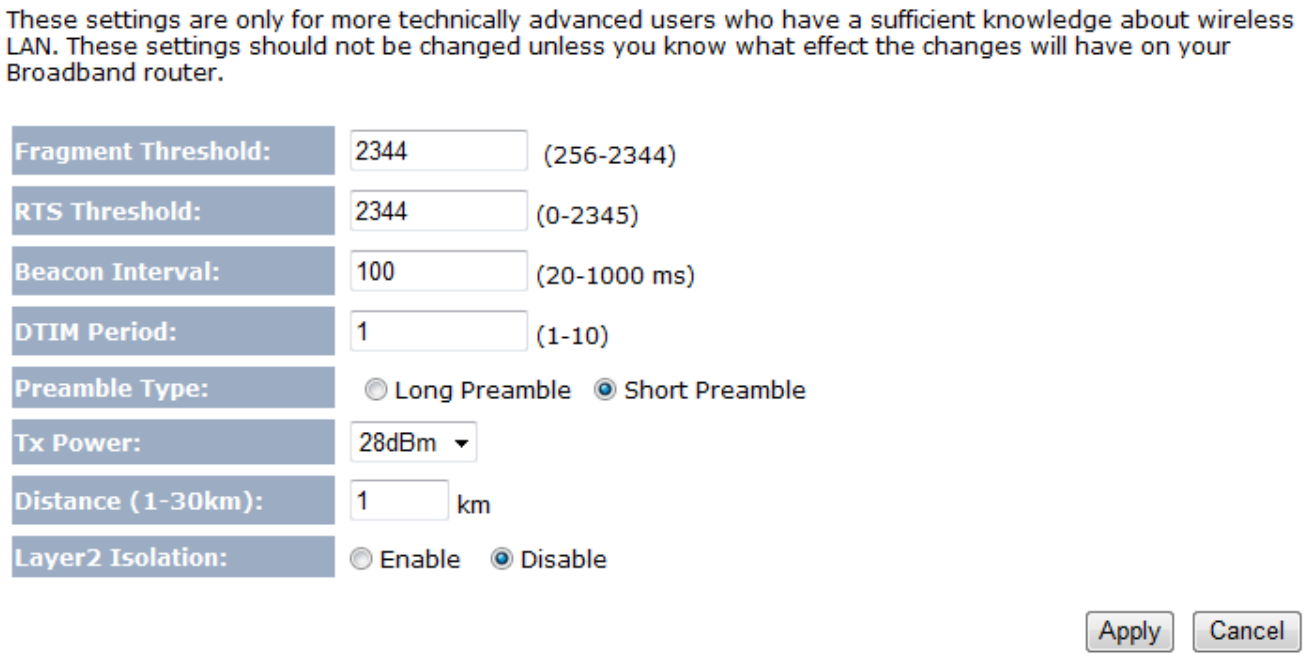
Radius authentication type is only available in Access Point Mode. Use this feature if you have Radius Server. It also supports WPA(TKIP), WPA2(AES) and WPA2 Mixed encryption types.

ESSID Selection	ALL0305 supports up to 4 different SSIDs. Each SSID can be set to different authentication type.
Hidden SSID	Select **Enable** or **Disable** broadcast SSID.
WMM	Select **Enable** or **Disable** WMM function. WMM is based on the four Access Categories: voice, video, best effort and background. WMM function is not used to guarantee transmission speed.
Encryption	Select **WPA RADIUS** from the drop down list to begin the configuration.
WPA Type	Select **WPA(TKIP)**, **WPA2(AES)**, or **WPA2 Mixed** as your encryption type.
RADIUS Server IP Address	Specify your Radius Server's IP address.
RADIUS Server Port	Specify your Radius Server Port number.
RADIUS Server Password	Specify the Radius Server's password that used to negotiate with Radius server authentication.
Apply / Cancel	Press **Apply** to save the changes or **Cancel** to return previous settings.

4.6 Wireless Advanced Settings

If you do not have experience with Wireless Advanced Settings, we suggest remain all settings to default. Any modifies may cause insufficient wireless connection quality.

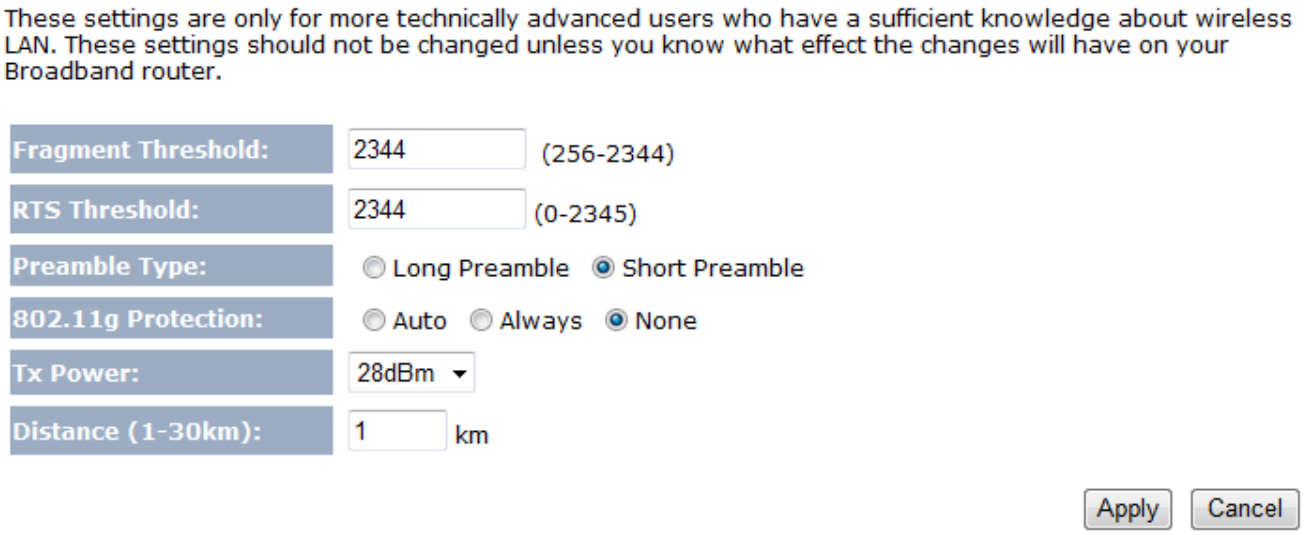
4.6.1 Advanced Settings (Access Point)



Fragment Threshold	Specify package size during transmission. If large amount of client are accessing to the network, specify small number of the fragment length in order to avoid collision.
RTS Threshold	Specify Threshold package size for **Request To Send** (RTS). Using small number of the threshold will cause RTS packets to be sent more often to consuming more of the available bandwidth. In addition, if the heavy load traffic occurs, the wireless network can be recovered easily from interferences or collisions.
Beacon Interval	Specify the time of Beacon Interval. Beacon is used to let wireless client scan the wireless AP is available. **Site Survey** scans the Beacon to verify which AP is in the nearby area.
DTIM Period	Delivery Traffic Indication Map (DTIM) is for the Power Saving purpose. Access Point sends the packet with beacon frame in the period of time. If the DTIM sets larger number, the wireless client may affect the latency throughput but save more power.
Preamble Type	Select the Radio button to choose Long Preamble or Short Preamble. Long Preamble can increase the capability of wireless network and wireless signal range. Short Preamble can increase the efficiency of the wireless network.
Tx Power	Select Tx Power to increase or decrease Transmit Power. Higher transmit power will

	sometimes cause unable to connect to the network. On the other hand, the lower transmit power will cause client unable to connect to the device.
Distance	Specify distance rage between AP and Clients. Longer distance may lose high connection speed.
Layer 2 Isolation	Select the Radio button to enable or disable Layer 2 Isolation. Layer 2 isolation prevents communication between wireless stations associated to different APs

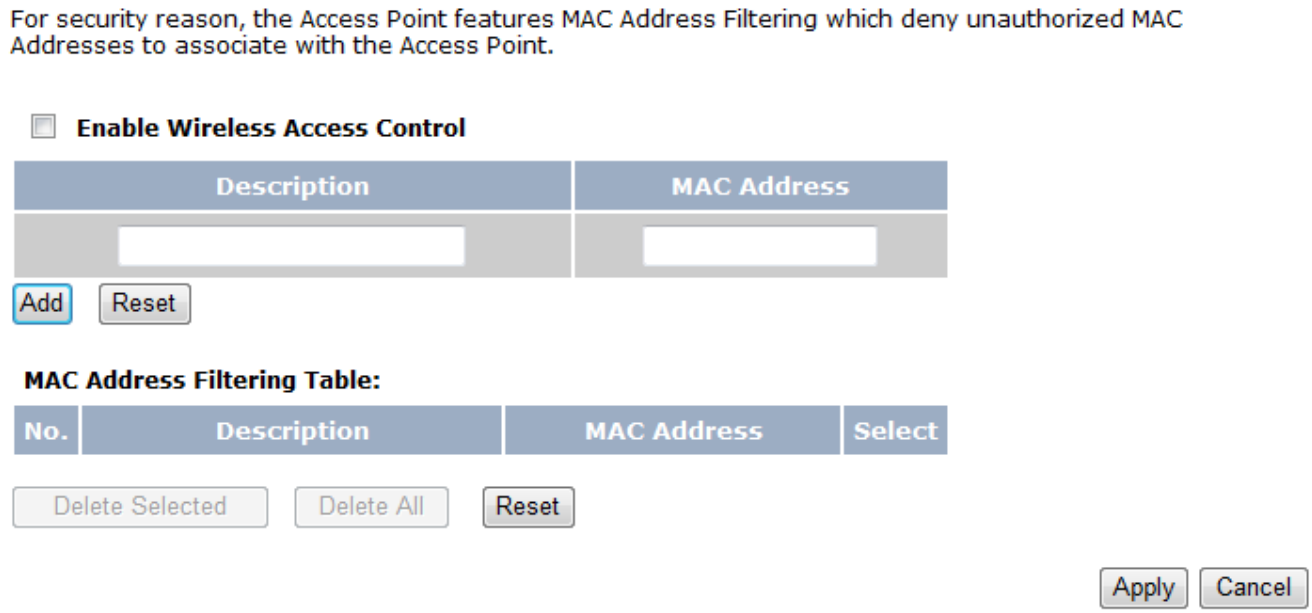
4.6.2 Advanced Settings (Client Bridge / Client Router)



Fragment Threshold	Specify package size during transmission. If large amount of client are accessing to the network, specify small number of the fragment length in order to avoid collision.
RTS Threshold	Specify Threshold package size for **Request To Send** (RTS). Using small number of the threshold will cause RTS packets to be sent more often to consuming more of the available bandwidth. In addition, if the heavy load traffic occurs, the wireless network can be recovered easily from interferences or collisions.
Preamble Type	Select the Radio button to choose Long Preamble or Short Preamble. Long Preamble can increase the capability of wireless network and wireless signal range. Short Preamble can increase the efficiency of the wireless network.
802.11g Protection	Select the Radio button to Protect types. When enable the protection mode, every time the packet is transmitted, it has to wait the CTS is received. In addition, Protection mode can prevent the collision but it will slow the wireless transmission speed.
Tx Power	Select Tx Power to increase or decrease Transmit Power. Higher transmit power will sometimes cause unable to connect to the network. On the other hand, the lower transmit power will cause client unable to connect to the device.
Distance	Specify distance rage between AP and Clients. Longer distance may lose high connection speed.

4.7 Wireless Access Control List

Wireless Access Control List is used to Allow or Deny wireless clients by their MAC addresses, accessing the Network. You can manually add a MAC address to restrict the permission to access ALL0305.



Enable Wireless Access Control	Place a **Check** to enable Wireless Access Control.
Description	Specify the description for the MAC address you about to add.
MAC Address	Specify the MAC Address.
Add	Press **Add** to add the MAC address.
Reset	Press Reset to cancel the condition of description and MAC Address.
MAC Address Filtering Table	Check all the conditions you had added.
Delete Selected	Place a **Check** at **Select** section, and then press **Delete Selected** to delete the option.
Delete All	Press **Delete All** to erase all options in the table.
Reset	Press **Reset** to cancel the selection.
Apply / Cancel	Press **Apply** to save the changes or **Cancel** to return previous settings.

5 LAN Setup

This section will guide you to the Local Area Network (LAN) settings

5.1 LAN Settings

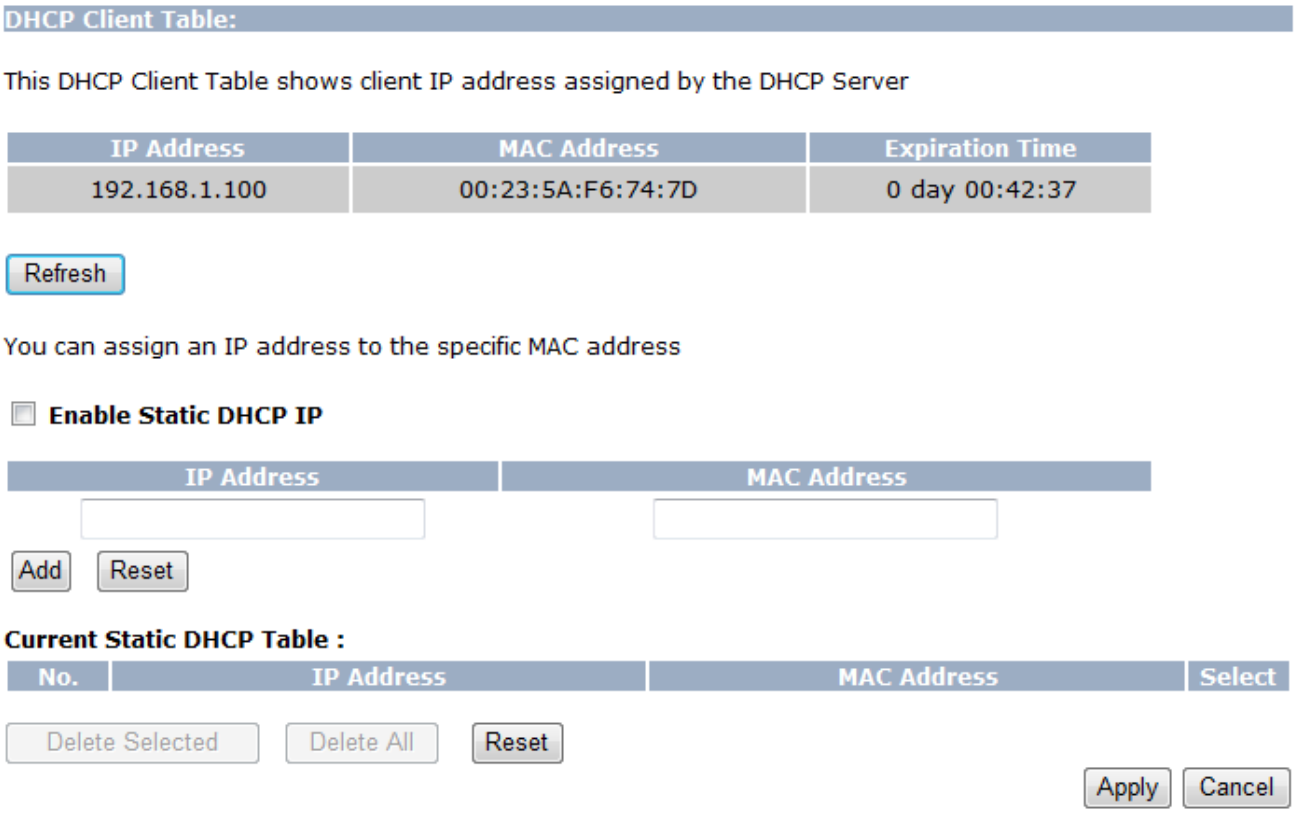
Caution: Changing LAN IP Address will change LAN Interface IP address. Webpage will automatically redirect to the new IP address after Apply.

LAN IP	
IP Address	Specify LAN port IP address.
IP Subnet Mask	Specify Subnet Mask.
Default Gateway	Specify Default Gateway
802.1d Spanning Tree	Select the drop down menu to enable or disable Spanning Tree.
DHCP Server	
DHCP Server	Select the drop down menu to enable or disable DHCP server.
Lease Time	Specify the expiring time of IP address given by DHCP server.
Start IP	Specify IP Pool's first IP.
End IP	Specify IP Pool's last IP.
Domain Name	Specify the Domain Name of the device.
Apply / Cancel	Press **Apply** to apply the changes or **Cancel** to return previous settings.

Caution: If you have disabled the **DHCP Server**, you must configure your PC's local IP in order to access the web-based interface. **Start IP** and **End IP** must at the same subnet.

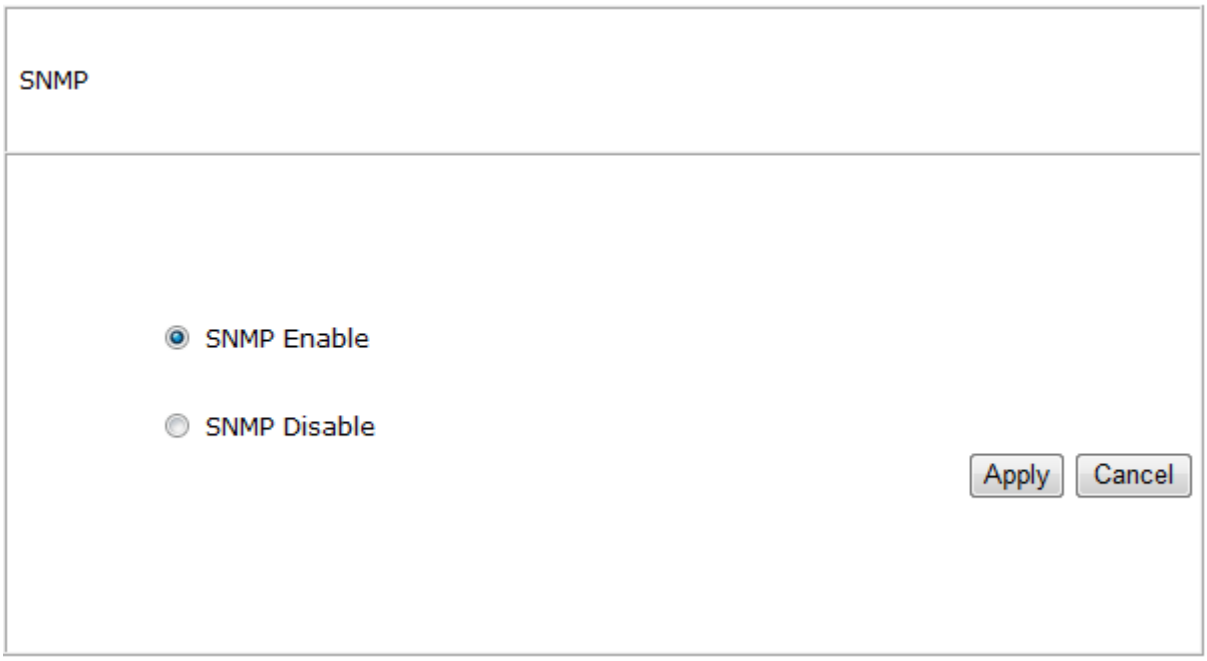
5.2 DHCP Info

Click on the **DHCP Info** link under the **TCP/IP** section. This page displays the list of Clients that are associated to the EOA3630 through DHCP. You can also assign an IP address for certain MAC Address.
The **IP Address, MAC Address** and **Expiration Time** for each IP Address are displayed. Click on the **Refresh** button to refresh the client list.



Enable Static DHCP IP	Place a **Check** to enable **Static DHCP IP**.
IP Address	Specify the IP Address for the MAC address you about to add.
MAC Address	Specify the MAC Address.
Add	Press **Add** to add the MAC address.
Reset	Press **Reset** to cancel the condition of description and MAC Address.
Current Static DHCP Table	Check all the conditions you had added.
Delete Selected	Place a **Check** at **Select** section, and then press **Delete Selected** to delete the option.
Delete All	Press **Delete All** to erase all options in the table.
Reset	Press **Reset** to cancel the selection.
Apply / Cancel	Press **Apply** to save the changes or **Cancel** to return previous settings.

5.3 SNMP Settings

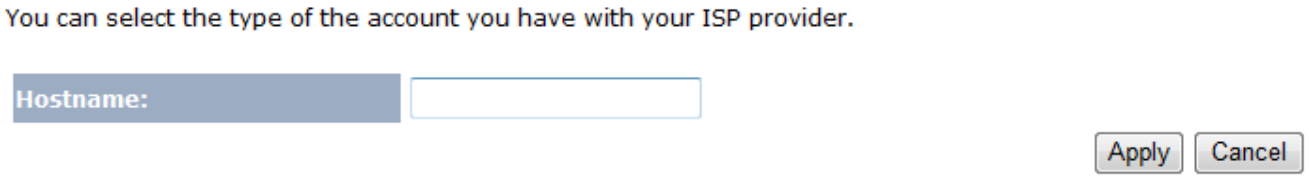


SNMP Enable	Select the Radio button to enable SNMP feature.
SNMP Disable	Select the Radio button to disable SNMP feature.
Apply / Cancel	Press **Apply** to apply the changes or **Cancel** to return previous settings.

6 Internet Settings

6.1 DHCP (Dynamic IP)

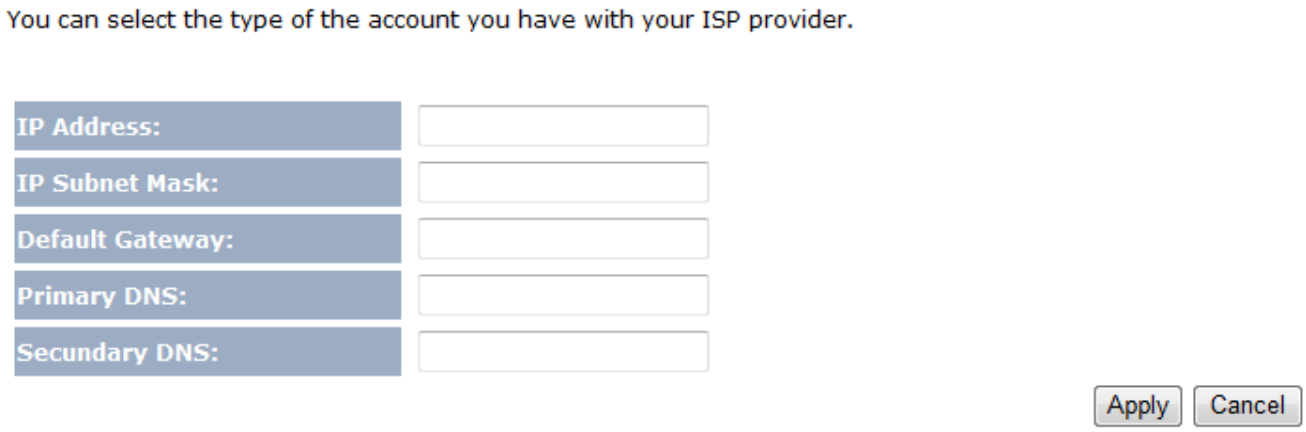
Select Dynamic IP as your WAN connection type to obtain your IP address automatically. You will need to enter Hostname



Hostname	Specify the **Hostname** is given by your Internet Service Provider.
Apply / Cancel	Press **Apply** to apply the changes or **Cancel** to return previous settings.

6.2 Static IP

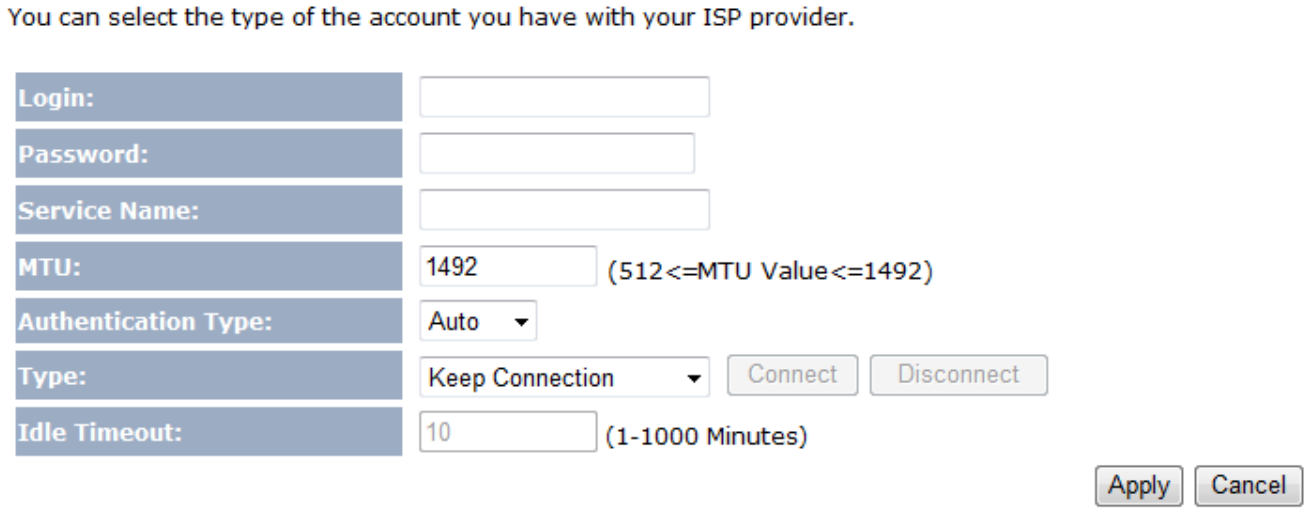
Select **Static IP** in WAN connection if your ISP gives all the information about IP address, Subnet Mask, Default Gateway, Primary DNS and Secondary DNS.



IP Address	Specify WAN port IP address.
IP Subnet Mask	Specify WAN IP Subnet Mask.
Gateway IP Address	Specify WAN Gateway IP address.
Primary DNS	Specify Primary DNS IP.
Secondary DNS	Specify Secondary DNS IP.
Apply / Cancel	Press **Apply** to apply the changes or **Cancel** to return previous settings.

6.3 PPPoE (Point-to-Point Protocol over Ethernet)

Select PPPoE as your WAN connection type if your ISP provides Username and Password. PPPoE is a DSL service and please remove your PPPoE software from your computer, the software is not worked in EOA3630.



Login	Specify the **Username** that is given by your ISP.
Password	Specify the **Password** that is given by your ISP.
Service Name	Specify the **Service Name** that is given by your ISP.
MTU	Specify the Maximum Transmit Unit size. Suggest remain in Auto.
Authentication Type	Select the **PAP**, **CHAP**, or **Auto** as your encryption type from drop down menu.
Type	Select Connection Type from drop down menu. **Keep Connection**: Device is connected to internet automatically. **Automatic Connection**: Device is automatically connected to internet when the traffic goes through internet but it will disconnect when a period of idle time **Manual Connection**: Connect to internet manually.
Idle Timeout	Specify the maximum idle time for **Automatic Connection**.
Apply / Cancel	Press **Apply** to apply the changes or **Cancel** to return previous settings.

Caution: If the router's MTU is set too high, packets will be fragmented downstream. If the router's MTU is set too low, the router will fragment packets unnecessarily and in extreme cases may be unable to establish some connections. In either case, network performance can suffer.

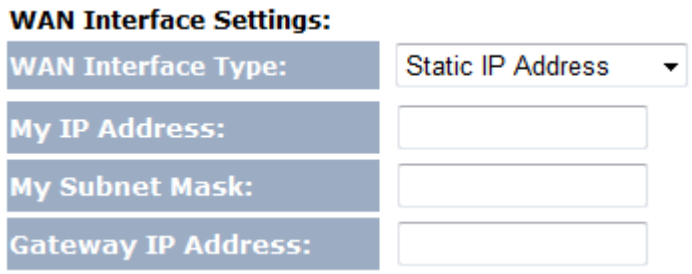
6.4 PPTP (Point-to-Point Tunneling Protocol)

Select PPTP as your WAN connection type if your ISP provides information about IP Address, Subnet Mask, Default Gateway (Optional), DNS (Optional), Server IP, Login Username, and Login Password. There are two types of PPTP connection: Dynamic IP Address and Static IP Address.

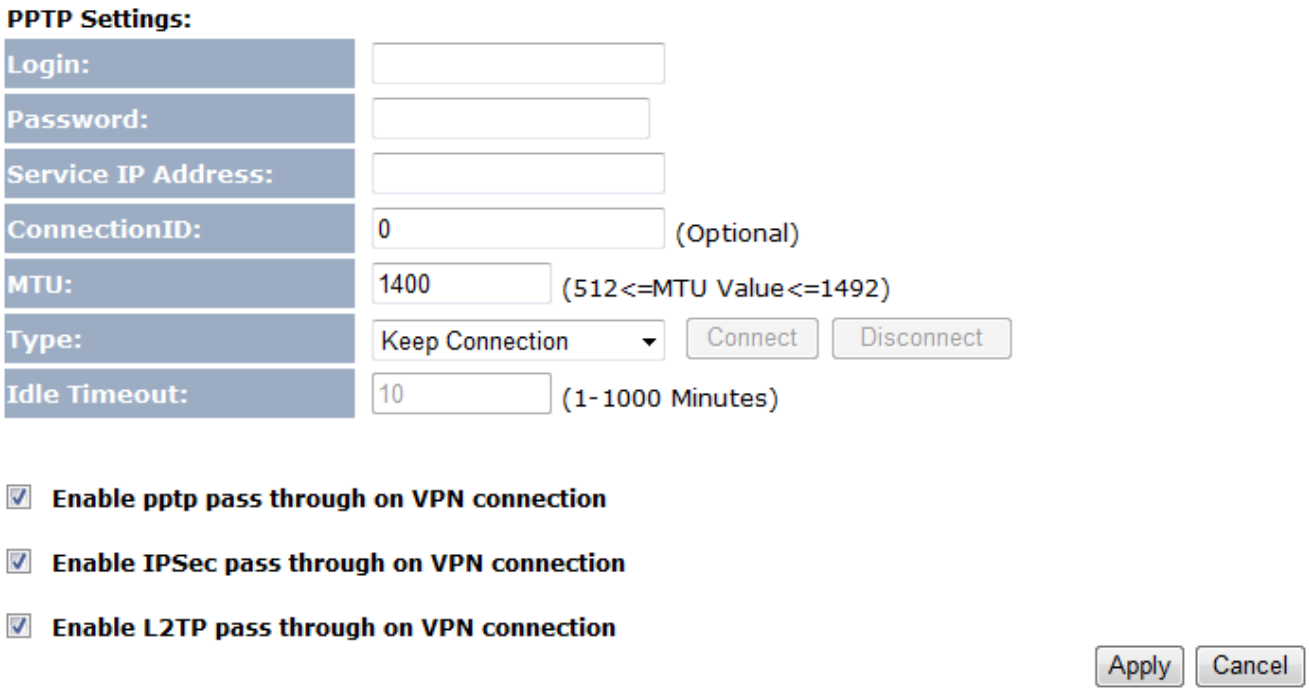
Dynamic IP Address

WAN Interface Type	Select **Dynamic IP Address** as your WAN Interface.
Hostname	Specify the **Hostname** is given by your Internet Service Provider.

Static IP Address



WAN Interface Type	Select Static IP Address as your WAN Interface.
IP Address	Specify WAN port IP address.
IP Subnet Mask	Specify WAN IP Subnet Mask.
Gateway IP Address	Specify WAN Gateway IP address.



Login	Specify the **Username** that is given by your ISP.
Password	Specify the **Password** that is given by your ISP.
Service IP Address	Specify the **Service IP Address** that is given by your ISP.
Connection ID	Specify the **Connection ID** that is given by your ISP.
MTU	Specify the Maximum Transmit Unit size. Suggest remain in Auto.
Type	Select Connection Type from drop down menu. **Keep Connection**: Device is connected to internet automatically. **Automatic Connection**: Device is automatically connected to internet when the traffic goes through internet but it will disconnect when a period of idle time **Manual Connection**: Connect to internet manually.
Idle Timeout	Specify the maximum idle time for **Automatic Connection**.
Enable PPTP pass through on VPN Connection	Place a Check to enable **PPTP pass through on VPN Connection.** If this feature disabled, it will cause unable to connect to internet via PPTP.
Enable IPSec pass through on VPN Connection	Place a Check to enable **IPSec pass through on VPN Connection.** If this feature disabled, it will cause unable to transmit IPSec Protocol.
Enable L2TP pass through on VPN Connection	Place a Check to enable **L2TP pass through on VPN Connection.** If this feature disabled, it will cause unable to connect to internet via L2TP.
Apply / Cancel	Press **Apply** to apply the changes or **Cancel** to return previous settings.

Caution: If the router's MTU is set too high, packets will be fragmented downstream. If the router's MTU is set too low, the router will fragment packets unnecessarily and in extreme cases may be unable to establish some connections. In either case, network performance can suffer.

7 Information Status

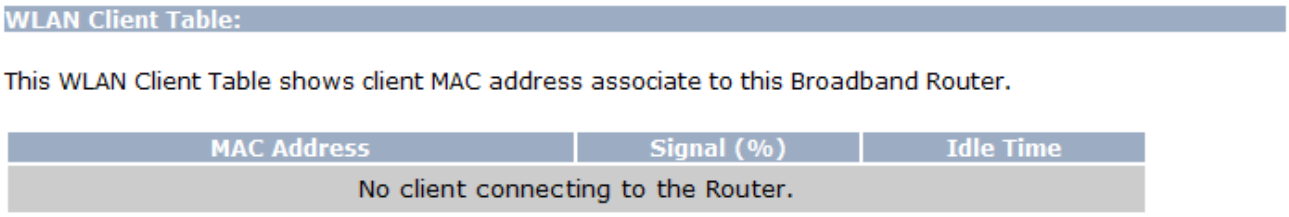
Status section is used to check the status of device information such as System up time, Firmware version, Wireless Client List, and Internet Status.

7.1 Status

Click on the **Status** link under the **Management** section. This page display information of the device such as Current Time, Hardware Version, Kernel Version, and Application version are displayed in the 'System' section. LAN IP address, Subnet Mask, DHCP Status, and MAC address are displayed in the 'LAN Settings' section. Access Point, Client Bridge and Client Router's basic settings are displayed in the "Wireless Information" section.

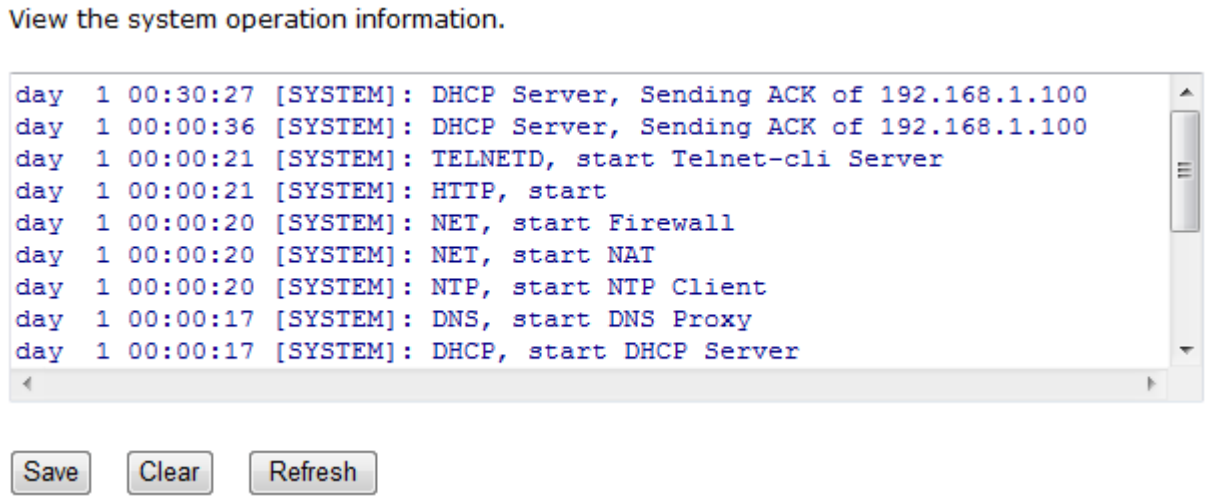
7.2 Wireless Client List

Click on the **Client List** link under the **5G/2.4G Wireless** section. This page displays the list of Clients that are associated to the ALL0305.
The MAC addresses, signal strength, and Idle Time for each client is displayed. Click on the **Refresh** button to refresh the client list



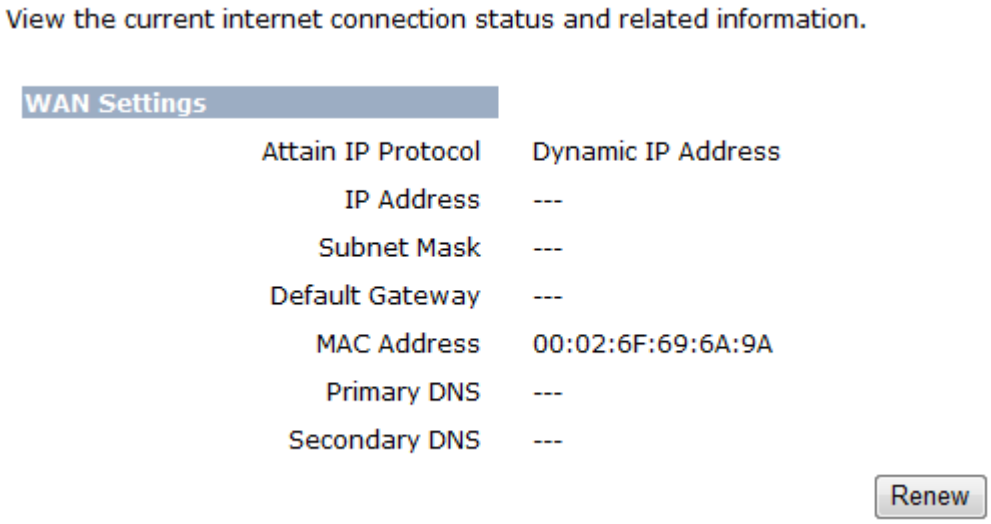
7.3 System Log

Click on the **Log** link under the **Management** section. The device automatically logs (records) events of possible interest in its internal memory. If there is not enough internal memory for all events, logs of older events are deleted, but logs of the latest events are retained. You can **Save** your current system operation information to a text file or clear all logs.



7.4 Internet Status

Click on the **Status** link under the **Internet** section. This page displays the current connection type status of the network, including network type, SSID, BSSID, connection status, wireless mode, current channel, security, data rate, noise level and signal strength.



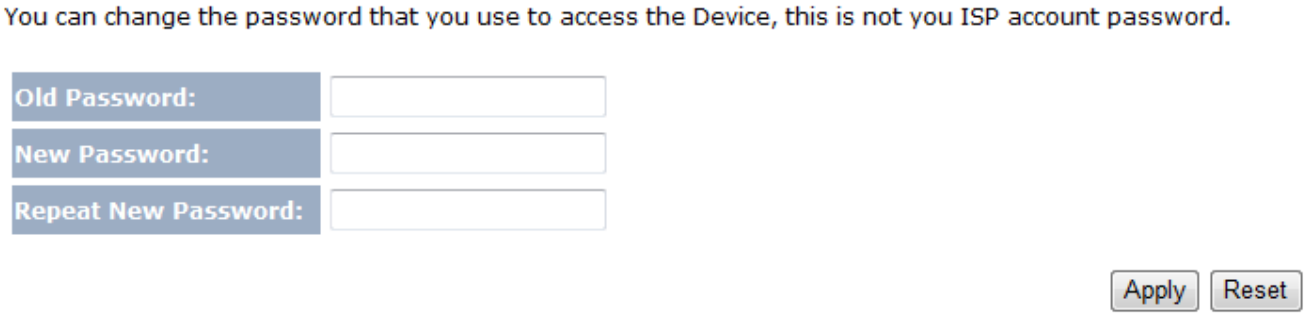
Note: If your internet connection type is **PPPoE** or **PPTP** with **Manual Connection**, you can connect to internet at this page.

8 Management Settings

Management section is on the navigation drop-down menu. This section can help you to manage your device and adjust system settings such as Password, Time Zone, Diagnosis, Remote Control, Upgrade Firmware, Save/Load Settings. Each option is described below.

8.1 Password Settings

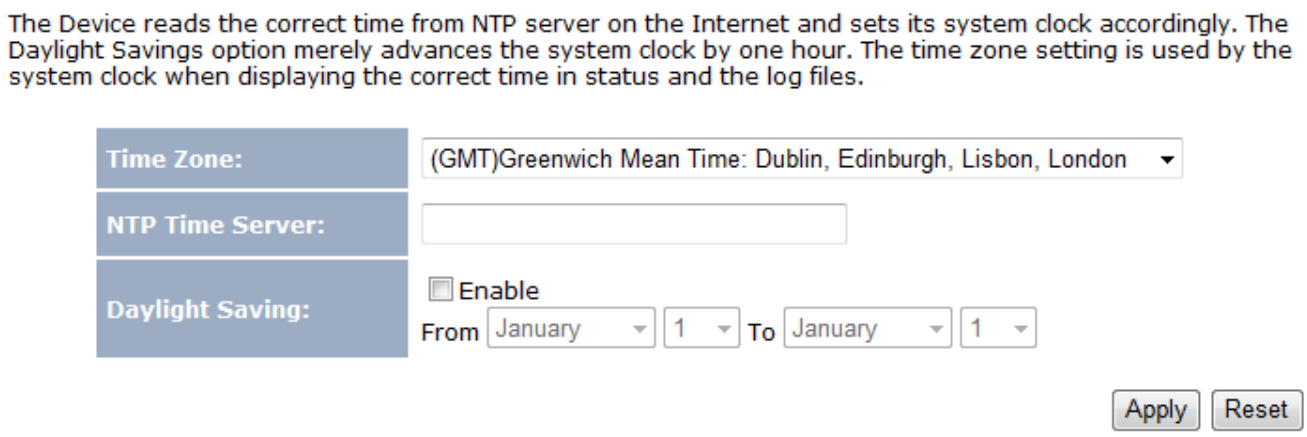
Click on the **Password** link under the **Management** section. This option allows you to change password for the device. By default, the default password is **admin**. For security reasons it is highly recommended that you create a new password.



Old Password	Enter the current password.
New Password	Specify a new Password for login
Repeat New Password	Re-enter the new Password for confirmation.
Apply / Cancel	Press **Apply** to apply the changes or **Cancel** to return previous settings.

8.2 Time Zone Settings

Click on the **Time Zone** link under the **Management** menu. This page allows you to configure the time on the device.

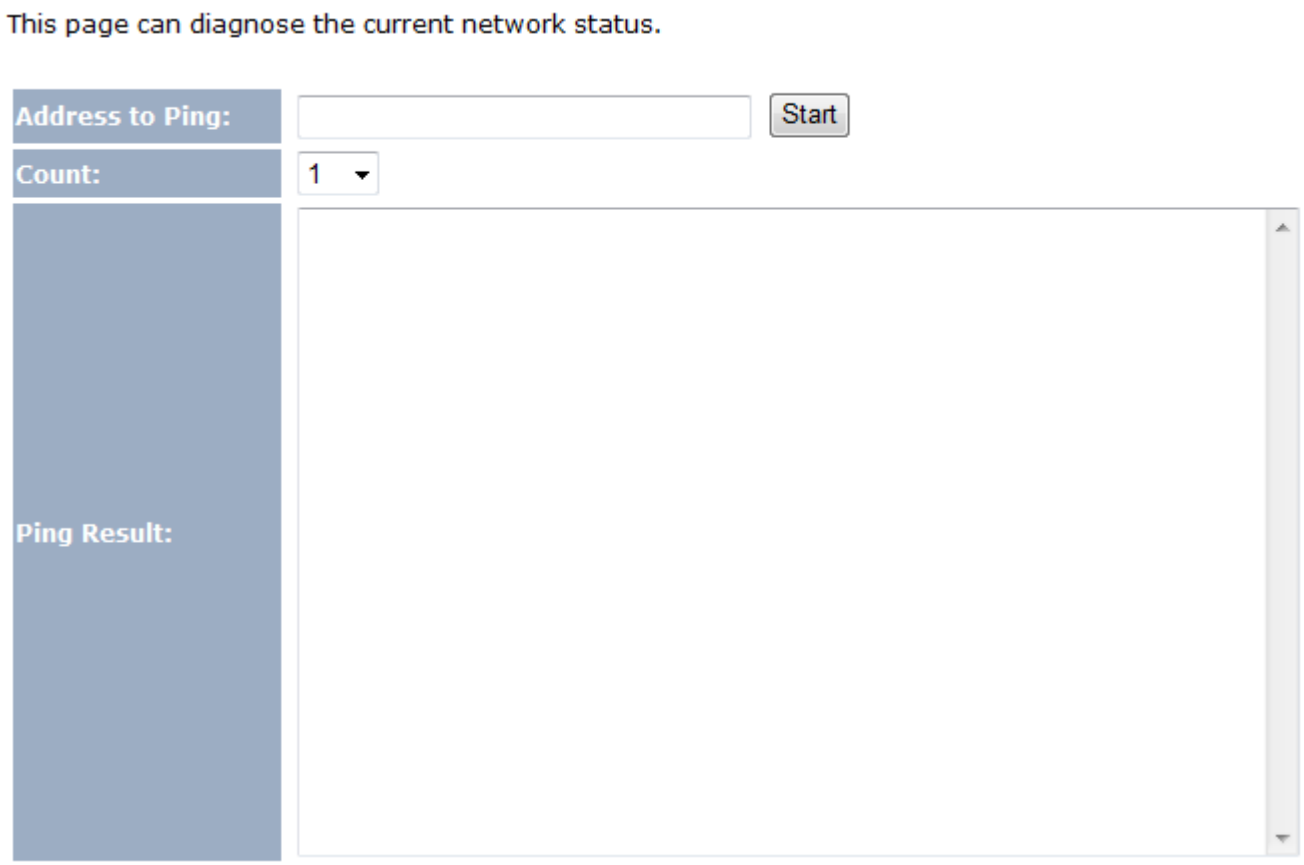


Time Zone	Select your Country or Region from the drop down list.

NTP Time Server	Specify the NTP Server's Domain name or IP Address.
Daylight Saving	Place a **Check** to enable Daylight Saving feature. Configure the starting date and ending date.
Apply / Cancel	Press **Apply** to save the changes or **Cancel** to return previous settings.

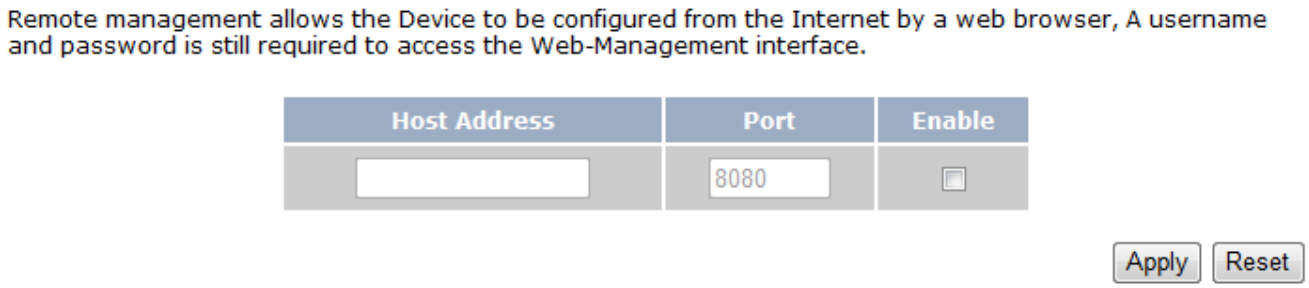
8.3 Diagnosis

Click on the **Diagnostics** link under the **Management** menu. This function allows you to detect connection quality and trace the routing table to the target.



Address to Ping	Specify the IP address you would like to Ping.
Start	Press **Start** to begin.
Count	Specify numbers of time to ping.
Ping Result	Display Ping result.

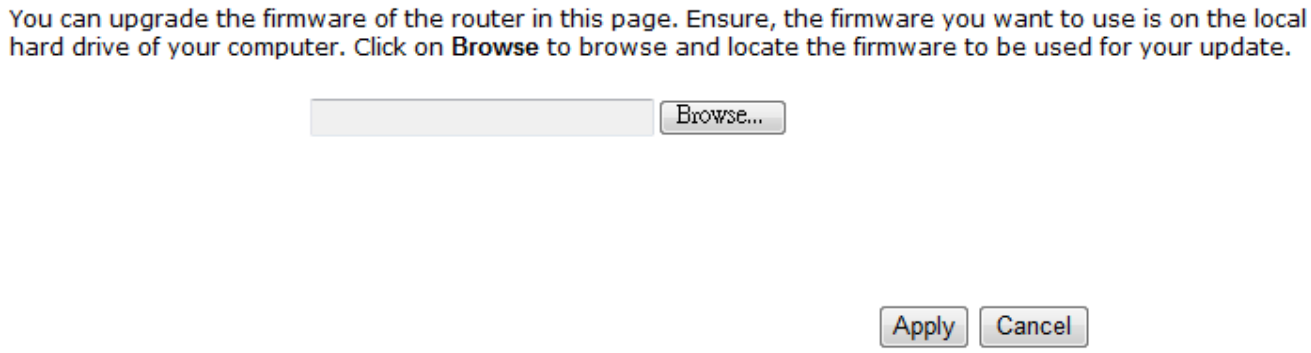
8.4 Remote Control



Host Address	Specify the IP Address you would like to use as your remote controller.
Port	Specify the Port number.
Enable	Place a Check to enable Remote management.
Apply/Reset	Press **Apply** to save the changes or **Reset** to return previous settings.

8.5 Upgrade Firmware

Click on the **Upgrade Firmware** link under the **Management** menu. This page is used to upgrade the firmware of the device. Make sure that downloaded the appropriate firmware from your vendor.

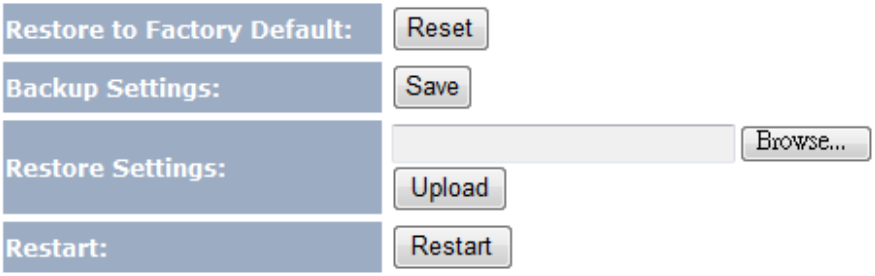


Caution: Upgrade process may take few minutes, please do not power off the device and it may cause the device crashed or unusable. ALL0305 will restart automatically once the upgrade is completed.

8.6 Save/Reload Settings

Click on the **Save/Reload Setting** link under the **Management** menu. This option is used to save the current settings of the device in a file to your local disk or load settings to the device from your local disk. This feature is very handy for administrators who have several devices that need to be configured with the same settings.

Use **BACKUP** to save the Device current configuration to a file named config.dlf. You can use **RESTORE** to restore the saved configuration. Alternatively, you can use **RESTORE** TO FACTORY DEFAULT to force the Device to restore the factory default settings.



Restore to Factory Default Settings	Click on **Reset** button to reset all the settings to the default values.
Backup Settings	Click on **Save** to save current configured settings.
Restore Settings	ALL0305 can restore a previous setting that has been saved. Click on Browse to select the file and Upload.
Restart	Press **Restart** to reboot the device.

Caution: If you choose to **Restore to Factory Default**, all the settings will be erased. It is strongly suggested to save current settings before your process.

9 Network Configuration Example

This chapter describes the role of the ALL0305 with three different modes. The Access Point mode's default configuration is a central unit of the wireless network or as a root device of the wired environment. Repeater mode and Mesh network mode need future configuration.

9.1 Access Point Mode + Client Bridge Mode

Access Point	
Step1	Login to the web-based configuration interface with default IP 192.168.1.1
Step2	Select 802.11b/g mixed and/or 802.11a as your wireless mode.
Step3	Use **AP Scan** to scan channels that have been used in nearby area.
Step4	Select channel with less interferences.
Step5	Specify the SSID for your broadcast SSID and you can also configure multiple SSID at the same time.
Step6	Verify VLAN identifier to separate services among clients
Step7	Setup the authentication settings.
Step8	Press Apply to save all changes.

Caution: Dual mode uses the same SSID on 5G and 2.4G wireless network.

Note: For more advanced settings, please refer to the previous chapters.

Client Bridge	
Step1	Login to the web-based configuration interface with default IP 192.168.1.1
Step2	Change operation mode to **Client Bridge**.
Step3	Select 5G or 2.4G as your wireless mode.
Step4	Use site survey to scan nearby Access Point and select the certain AP you would like to connect with or enter SSID manually.
Step5	Select correct authentication type and then enter password.

Caution: Wireless Client IP address must configure manually at the same subnet in Local Area Network or enable DHCP server of ALL0305 to retrieve IP automatically.

9.2 Client Router Mode

Please refer to last section for the configuration of **Access Point**.

Step1	Login to the web-based configuration interface with default IP 192.168.1.1
Step2	Change operation mode to **Client Router**.
Step3	Select 5G or 2.4G as your wireless mode.
Step4	Use site survey to scan nearby Access Point and select the certain AP you would like to connect with or enter SSID manually.
Step5	Select correct authentication type and then enter password.
Step6	Select your internet connection type base on your Internet Service Provider.

Note: For more details of Internet Connection Settings, Please refer to the Internet chapter.

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.

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.

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

21.07.2010

EC – Declaration of conformity
ALL0305 Dual-Radio Wireless System

This equipment conforms with the requirements of the Council Directive **R&TTE 1999/5/EC** on the approximation of the laws of the member states relating to Radio and Telecommunication Terminal Equipment and the mutual recognition of their conformity.

The safety advice in the documentation accompanying the products shall be obeyed. The conformity to the above directive is indicated by the CE sign on the device.
The ALL0305 Dual-Radio Wireless System conforms to the European Directives 1999/519/EC.
This equipment meets the following conformance standards:

EN 300 328 V1.7.1 (2006-10)
EN 301 489-1 V1.8.1 (2008-04)
EN 301 893 V1.5.1 (2008-12)
EN 301 489-17 V2.1.1 (2009-05)
EN 55022: 2006+A1:2007, Class B
EN 61000-3-2: 2006, Class A
EN 61000-3-3: 2008
EN 61000-4-2: 2009
EN 61000-4-3: 2006+A1: 2008
EN 61000-4-4: 2004
EN 61000-4-5: 2006
EN 61000-4-6: 2009
EN 61000-4-11: 2004
EN 50385: 2002

This equipment is intended to be operated in all countries.

This declaration is made by

ALLNET GmbH Computersysteme
Maistraße 2
82110 Germering
Germany

and can be downloaded from http://www.allnet.de/ce-certificates/