ALL02880ND

Wireless N 300Mbit Dual Band AP PoE

User´s Manual

Table of Contents

1 Introduction

The **ALL02880ND** is a high-powered, long-range dual-band concurrent wireless 802.11a/b/g/n access point with six major functional modes. It is 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 ALL02880ND supports IEEE 802.11b/g/n standards in the 2.4GHz frequency band while at the same time supporting IEEE 802.11a/n standards in the less congested 5GHz frequency band ideal for streaming or transferring other large files.

The ALL02880ND delivers up to 6x faster wireless speeds and 7x extended coverage than legacy 802.11a/b/g wireless devices. Even though the ALL02880ND 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 ALL02880ND offers different encryption settings for wireless transmissions including industry-standard WPA and WPA2 encryption. The ALL02880ND 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 300 Mbps for each band (2.4GHz / 5GHz)	**Capable of handling heavy data payloads such as HD multimedia streaming.**
10/100/1000 Gigabit Ethernet	**Supports up to 1000Mbps wired networking speed.**
IEEE 802.11n Compliant and Backwards Compatible with	**Fully compatible with IEEE 802.11 a/b/g/n devices.**

802.11 a/b/g devices	
Multiple Operation Modes	**Allowing users to select any one of the following modes: Access Point, Client Bridge, WDS AP, WDS Bridge, WDS Station and Repeater depending on their specific networking deployment need.**
Support Multiple SSIDs in AP mode (up to 8 in each frequency band)	**Allows clients to access different networks through a single access point and assign different policies and functions for each SSID through the built-in software.**
WPA/WPA2/IEEE 802.1x Support	**Supports industry-standard wireless encryption.**
MAC Address Filtering in AP Mode	**For more secure network connections with known users and devices.**
User Isolation Support (AP mode)	**Offers an additional layer of protection within the network by isolating specific client users.**
Power-over-Ethernet (IEEE802.3at/af)	**Allows installers to deploy the ALL02880ND in locations via a PoE connection (Ethernet cable) where a power outlet may not be available.**
Save User Settings	**Enables network administrators to save their device settings so firmware upgrades do not permanently delete previous device settings.**
SNMP Remote Configuration Management	**Allows remote connection to configure or manage the ALL02880ND easily.**
QoS (WMM) support	**Prioritizes bandwidth-intensive and sensitive data traffic.**
IPv6 Address support	**ALL02880ND supports IPv6, you can use IPv6 address in ALL02880ND.**
Band Steering	**When Band Steering is activated dual-band client devices are associated to the ALL02880ND access point on the 5 GHz frequency band.**

1.2 Package Contents

The ALL02880ND package contains the following items (Resellers and dealers require that all items must be in package to issue a refund):

- ALL02880ND Access Point/Client Bridge
- 12V/2A 100V~240V Power Adapter
- RJ-45 Ethernet LAN Cable

- 2.4 GHz Detachable Antenna x 2
- 5 GHZ Detachable Antenna x 2
- Wall Mount Screw Kit
- CD with User's Manual
- Quick Installation Guide

- Please use only the power supply unit that is delivered with the device.
- Bitte verwenden Sie nur das mitgelieferte Netzteil.

1.3 System Requirements

The following are the Minimum System Requirements in order configure the device.

- Computer with an Ethernet interface or wireless network capability
- Windows OS (XP, Vista, 7), Mac OS X, or Linux-based operating systems
- Web-Browsing Application (i.e.: Internet Explorer, Firefox, Safari, or other similar browser application)

1.4 Applications

Wireless LAN (WLAN) products are easy to install and highly efficient. The following list describes the benefits of deploying a wireless access point:

a) Difficult-to-Wire Environments

There are many situations where wires cannot be installed, deployed easily or cannot be hidden from view. Many older buildings sites, or areas within a building may make the installation of an Ethernet-based LAN impossible, impractical or expensive.

b) Temporary Workgroups

A deployed wireless access point or several access points, gives businesses the flexibility to create temporary workgroups/networks in more open areas within a building – auditoriums, amphitheater classrooms, ballrooms, arenas, exhibition centers, and temporary offices.

c) The Ability to Access Real-Time Information

Doctors/Nurses, Point-of-Sale Employees, and/or Warehouse Workers can access real-time information on their network via the access point while dealing with patients, serving customers, and/or processing information.

d) Frequently Changing Environments

Setting up an access point, like the ALL02880ND, to provide access to a company network or its Internet connection is quick and easy which also makes

it ideal for establishing network access in temporary venues like exhibits, special events, or show rooms.

e) Small Office and Home Office (SOHO) Networks

A wireless access point, like the ALL02880ND, is ideal for SOHO users who need a cost-effective way to expand their existing network to provide more access for more devices, easy and quick installation of a small network.

f) Wireless Extensions to Existing Ethernet-based Networks

Wireless access points, like the ALL02880ND, 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 and universities deploy wireless access points to provide connectivity their networks and the Internet connection for their employees and students.

2 Before you Begin

This section will guide you through the installation process. Placement of the EnGenius ALL02880ND is essential to maximize the access point's performance. Avoid placing the ALL02880ND in an enclosed space such as a closet, cabinet, or stairwell.

2.1 Considerations for Wireless Installation

Generally, the exact operating distance of a wireless device, like the ALL02880ND, cannot be pre-determined due to a number of unknown variables or obstacles in the environment in which the device will be deployed. These could be the number, thickness, and location of walls, ceilings, elevator shafts, stairwells, or other objects that the device's wireless signals must pass through. Here are some key guidelines to allow the ALL02880ND to have optimal wireless range.

- Keep the number of walls and/or ceilings between the ALL02880ND and other network devices to a minimum. Each wall and/or ceiling can reduce the signal strength, resulting in lower signal strength.

- Building materials make a difference. A solid metal door and/or aluminum studs may have a significant negative effect on the signal strength of the ALL02880ND. Locate your wireless devices carefully so the signal can pass through drywall and/or open doorways. Materials such as glass, steel, metal, concrete, water (example: fish tanks), mirrors, file cabinets and/or brick can also diminish wireless signal strength.

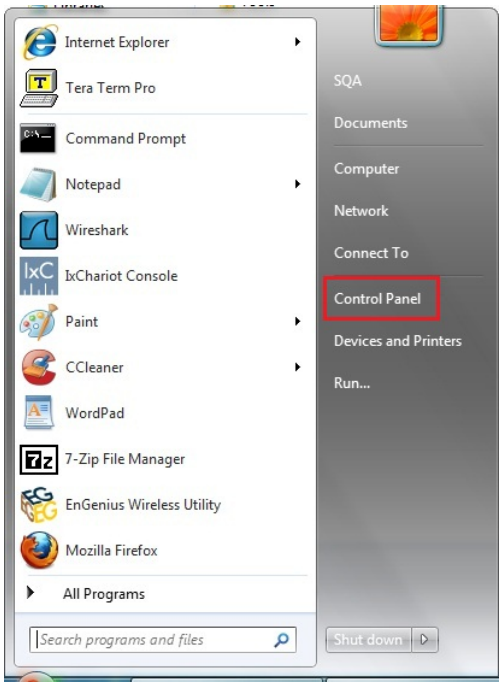
- Interference from other electrical devices and/or appliances that generate RF noise can also diminish the ALL02880ND's signal strength. The most common types of devices are microwaves or cordless phones.

2.2 Computer Settings (in Windows XP/Windows 7)

In order to use the ALL02880ND, you must first configure the TCP/IPv4 connection of your Windows OS computer system.

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

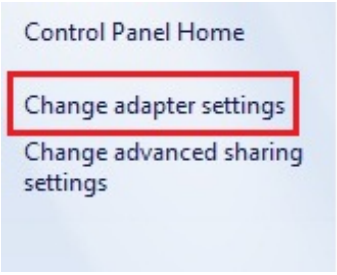
Windows XP



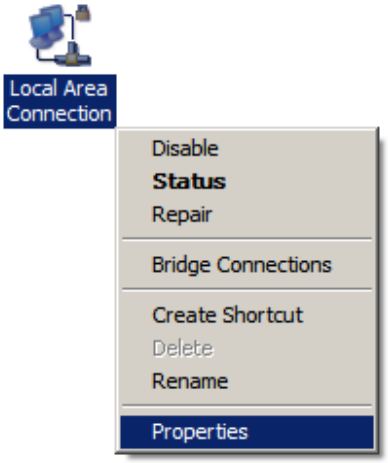
Windows 7

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

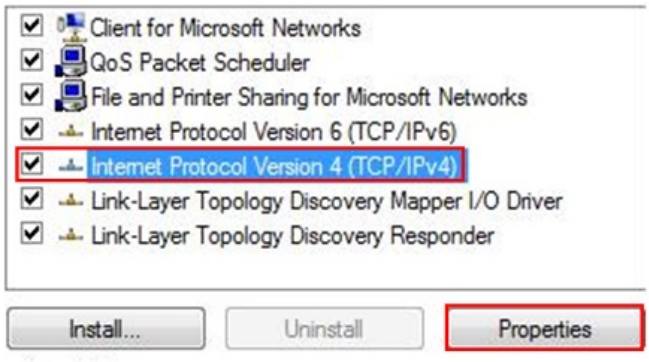
- In **Windows 7**, click **View Network Status and Tasks** in the **Network and Internet** section, then select **Change adapter settings**



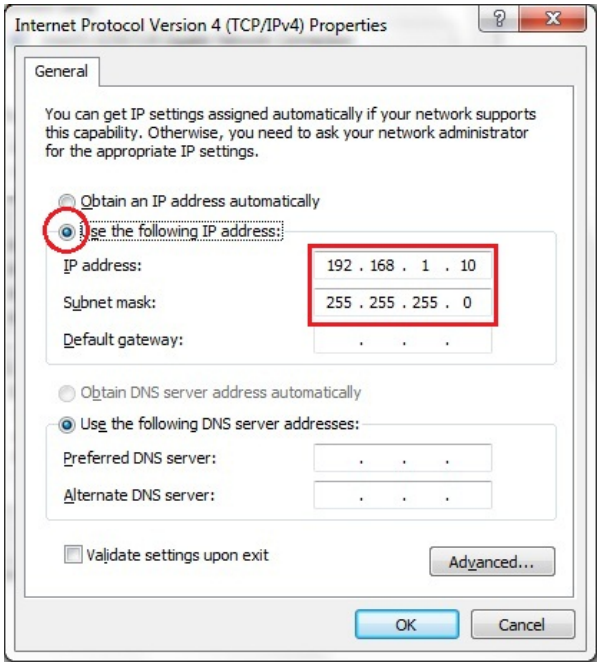
- Right click on **Local Area Connection** and select **Properties**



- 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 ALL02880ND and subnet mask then click **OK**.



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

3 For example: ALL02880ND IP address: 192.168.1.1

4 PC IP address: 192.168.1.2 – 192.168.1.255

5 PC subnet mask: 255.255.255.0

2.3 Computer Settings in Apple Mac OS X

- 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 ALL02880ND and subnet mask then press **OK**

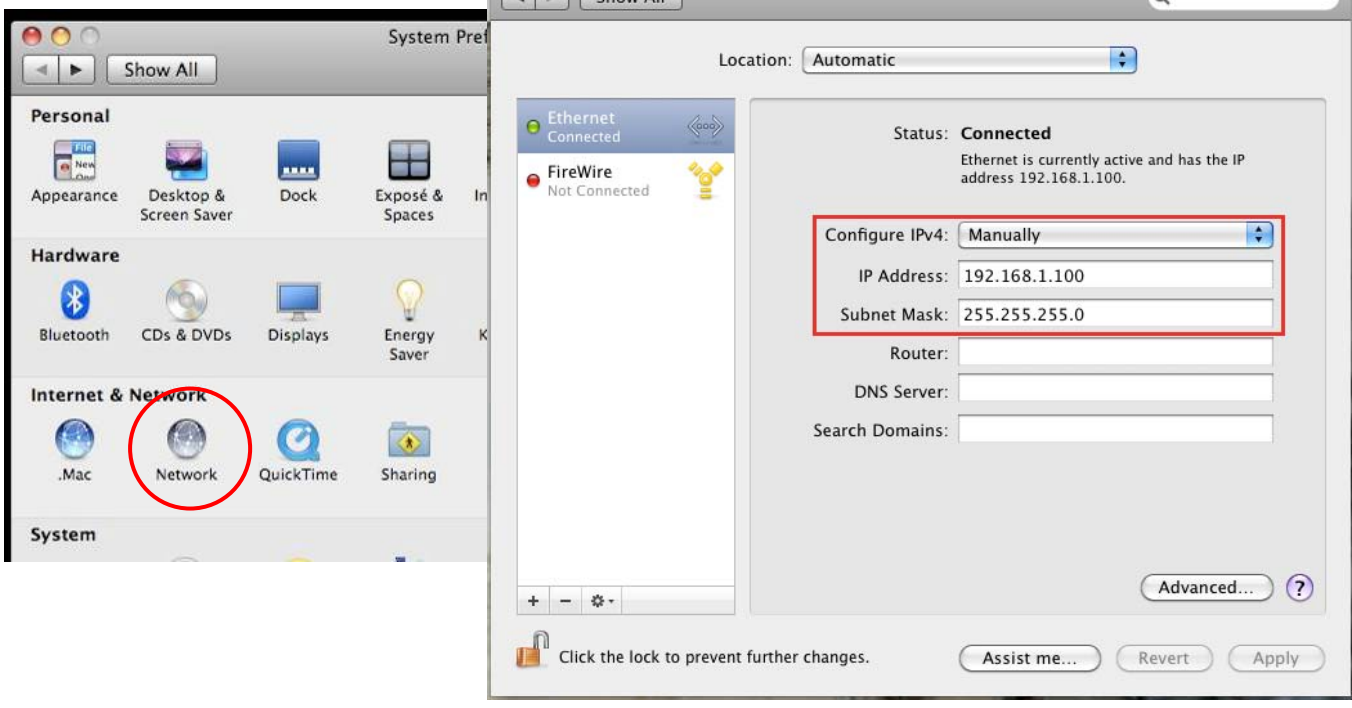
Note: Ensure that the IP address and subnet mask are on the same subnet as the device.

For example: ALL02880ND IP address: 192.168.1.1

PC IP address: 192.168.1.2 – 192.168.1.255

PC subnet mask: 255.255.255.0

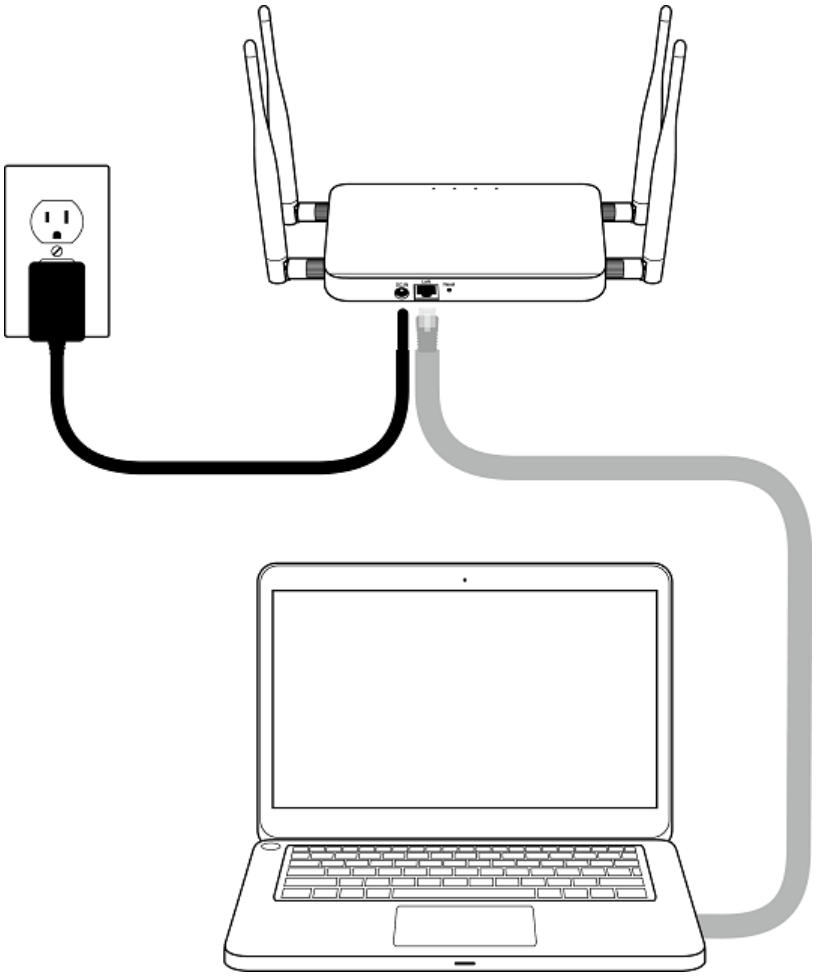
- Click **Apply** when done.

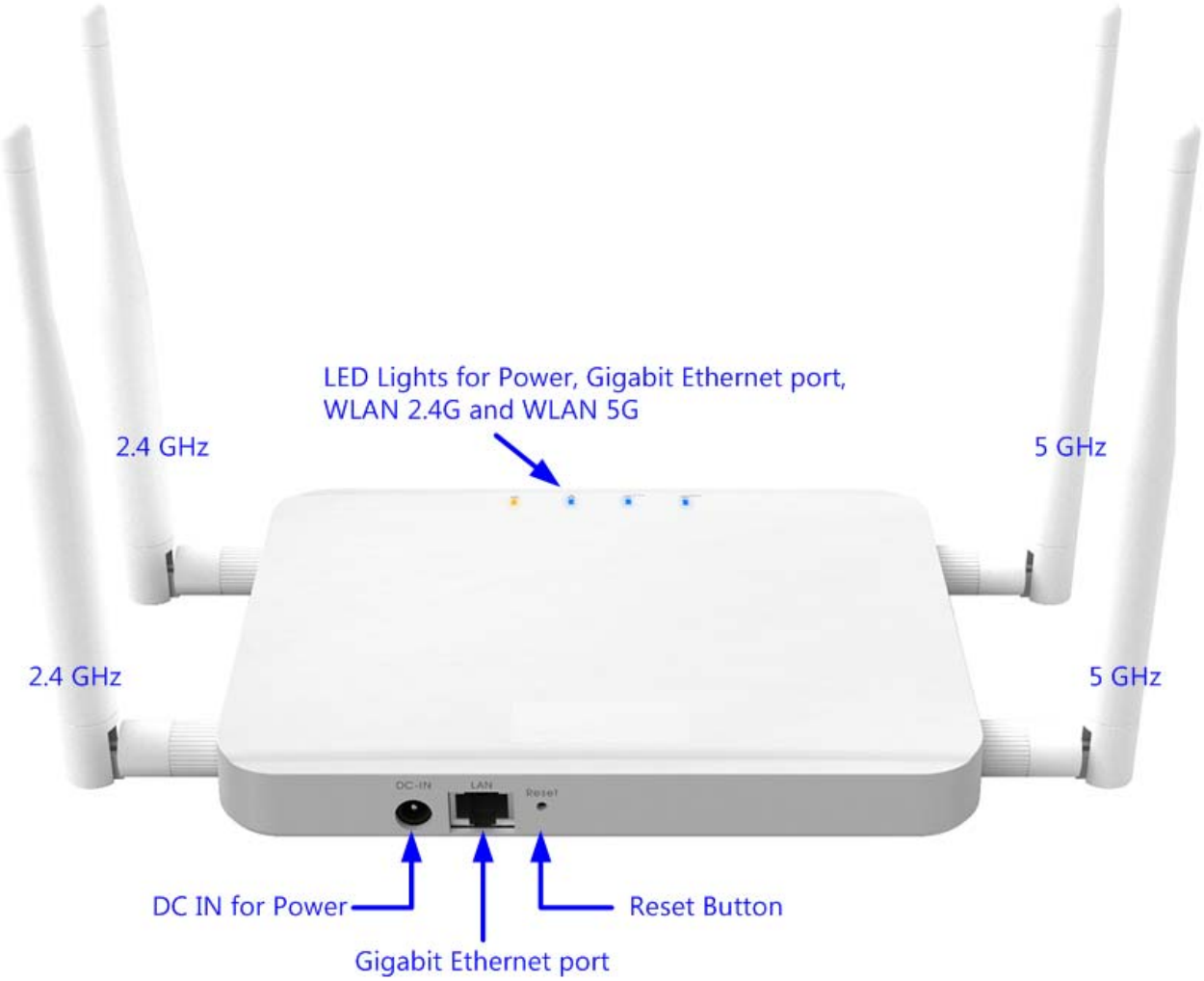


2.4 Hardware Installation

1. Ensure that the computer in use has an available Ethernet (RJ-45) Port. For more information, verify with your computer's user manual.
2. Connect one end of the Category 5e Ethernet cable into the RJ-45 port of the ALL02880ND and the other end to the RJ-45 port of the computer. Ensure that the cable is securely connected to both the ALL02880ND and the computer.
3. Connect the Power Adapter DC connector to the DC-IN port of the ALL02880ND and the Power Adapter to an available electrical outlet. Once both connections are secure, verify the following:
   a) Ensure that the **POWER** light is on (it will be orange).
   b) Ensure that the **2.4GHz/5GHz WLAN** light is on (they will be blue).
   c) Ensure that the **LAN (Computer/ALL02880ND Connection)** light is on (it will be blue).
   d) Once all lights are on, proceed to set up the ALL02880ND using the computer.

This diagram depicts the hardware configuration.





Front Panel	
LED Lights	LED lights for Power, Gigabit Ethernet port, WLAN 2.4G and WLAN 5G.
Rear Panel	
Power	DC IN for Power.
Gigabit Ethernet Port	Gigabit Ethernet port for RJ-45 cable.
Reset Button	One click for reset the device. Press over 10 seconds for reset to factory default.

3 Configuring Your ALL02880ND

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 ALL02880ND.

	Default Settings
IP Address	192.168.1.1
Username / Password	admin / admin
Operation Mode	AP / AP

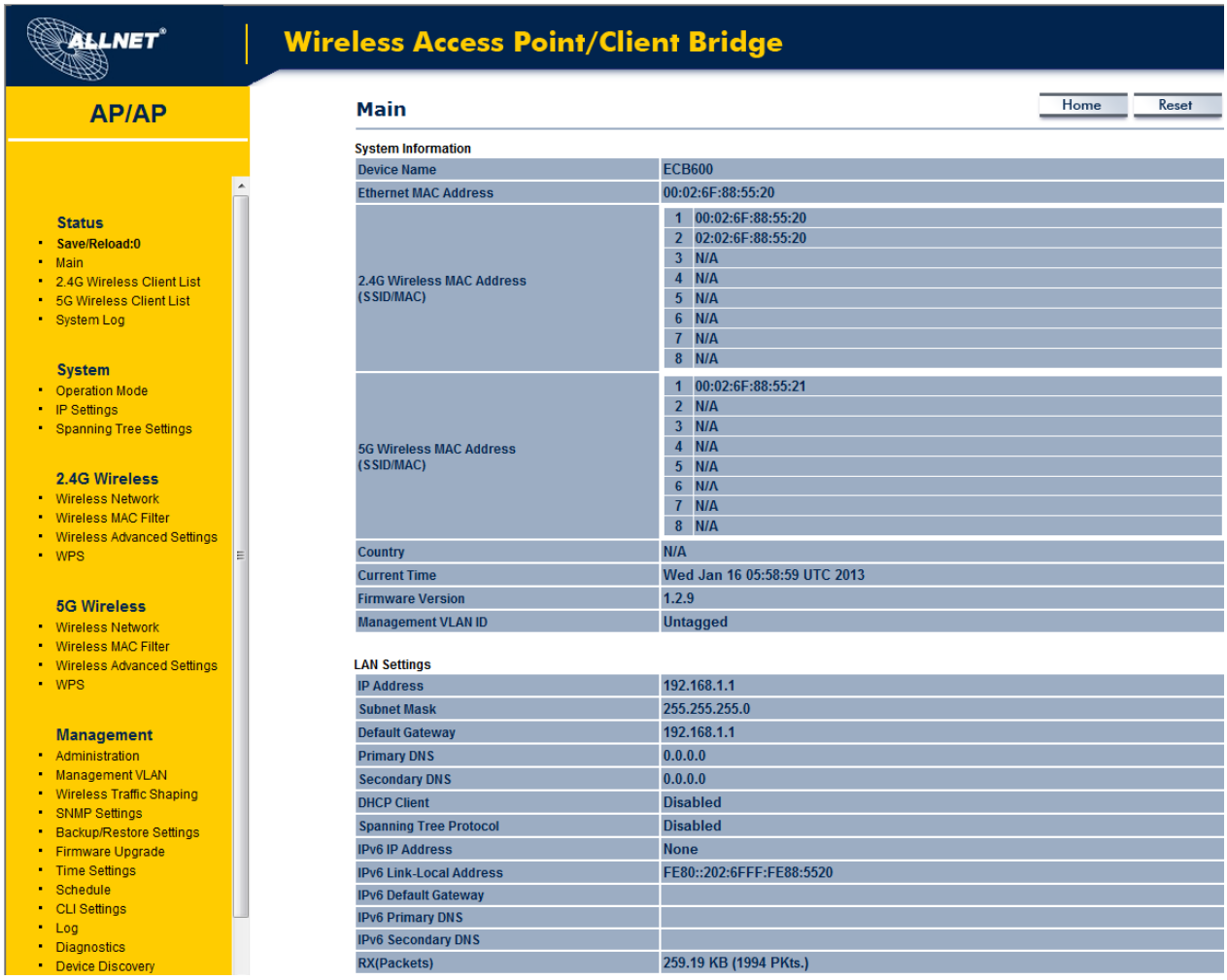
3.2 Web Configuration

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

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

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

- If successful, you will be logging in and see the ALL02880ND User Menu.

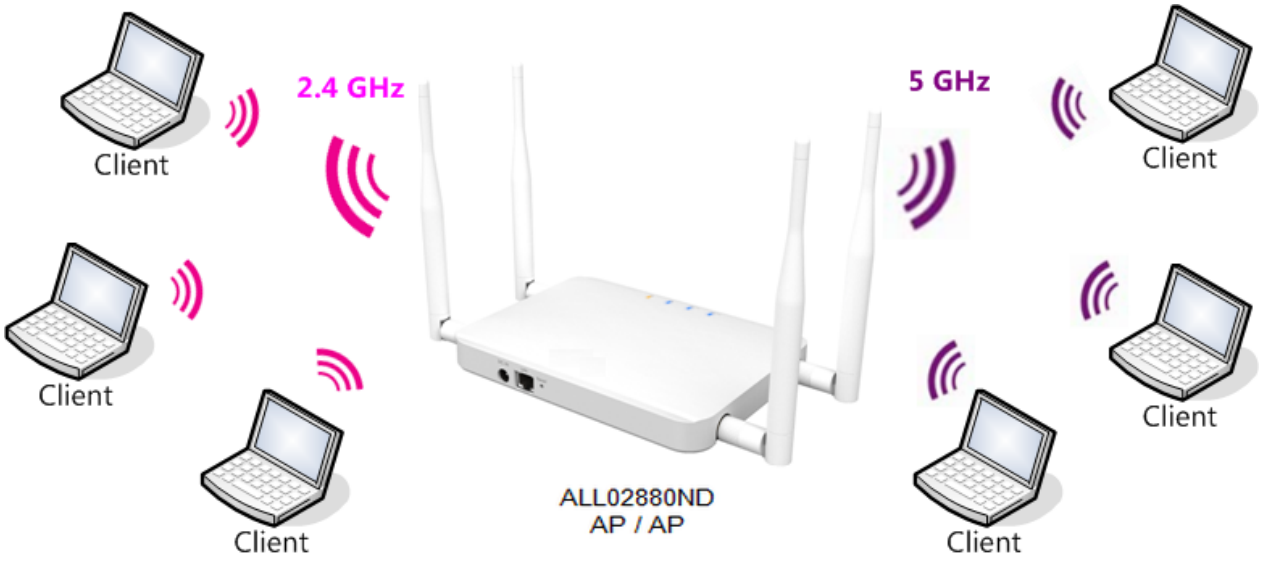

ALLNET
Wireless Access Point/Client Bridge
AP/AP
Status
Save/Reload:0
Main
2.4G Wireless Client List
5G Wireless Client List
System Log
System
Operation Mode
IP Settings
Spanning Tree Settings
2.4G Wireless
Wireless Network
Wireless MAC Filter
Wireless Advanced Settings
WPS
5G Wireless
Wireless Network
Wireless MAC Filter
Wireless Advanced Settings
WPS
Management
Administration
Management VLAN
Wireless Traffic Shaping
SNMP Settings
Backup/Restore Settings
Firmware Upgrade
Time Settings
Schedule
CLI Settings
Log
Diagnostics
Device Discovery
Main
Home
Reset
System Information
Device Name ECB600
Ethernet MAC Address 00:02:6F:88:55:20
2.4G Wireless MAC Address (SSID/MAC)
1 00:02:6F:88:55:20
2 02:02:6F:88:55:20
3 N/A
4 N/A
5 N/A
6 N/A
7 N/A
8 N/A
5G Wireless MAC Address (SSID/MAC)
1 00:02:6F:88:55:21
2 N/A
3 N/A
4 N/A
5 N/A
6 N/A
7 N/A
8 N/A
Country N/A
Current Time Wed Jan 16 05:58:59 UTC 2013
Firmware Version 1.2.9
Management VLAN ID Untagged
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
Spanning Tree Protocol Disabled
IPv6 IP Address None
IPv6 Link-Local Address FE80::202:6FFF:FE88:5520
IPv6 Default Gateway
IPv6 Primary DNS
IPv6 Secondary DNS
RX(Packets) 259.19 KB (1994 PKts.)

4 Building a Wireless Network

The ALL02880ND has the ability to operate in various modes. This chapter describes the operating modes of the ALL02880ND.

4.1 Access Point Mode

In Access Point Mode, ALL02880ND behaves likes a central connection for stations or clients that support IEEE 802.11a/b/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 ALL02880ND. The ALL02880ND supports up to eight SSIDs at the same time for secure access.



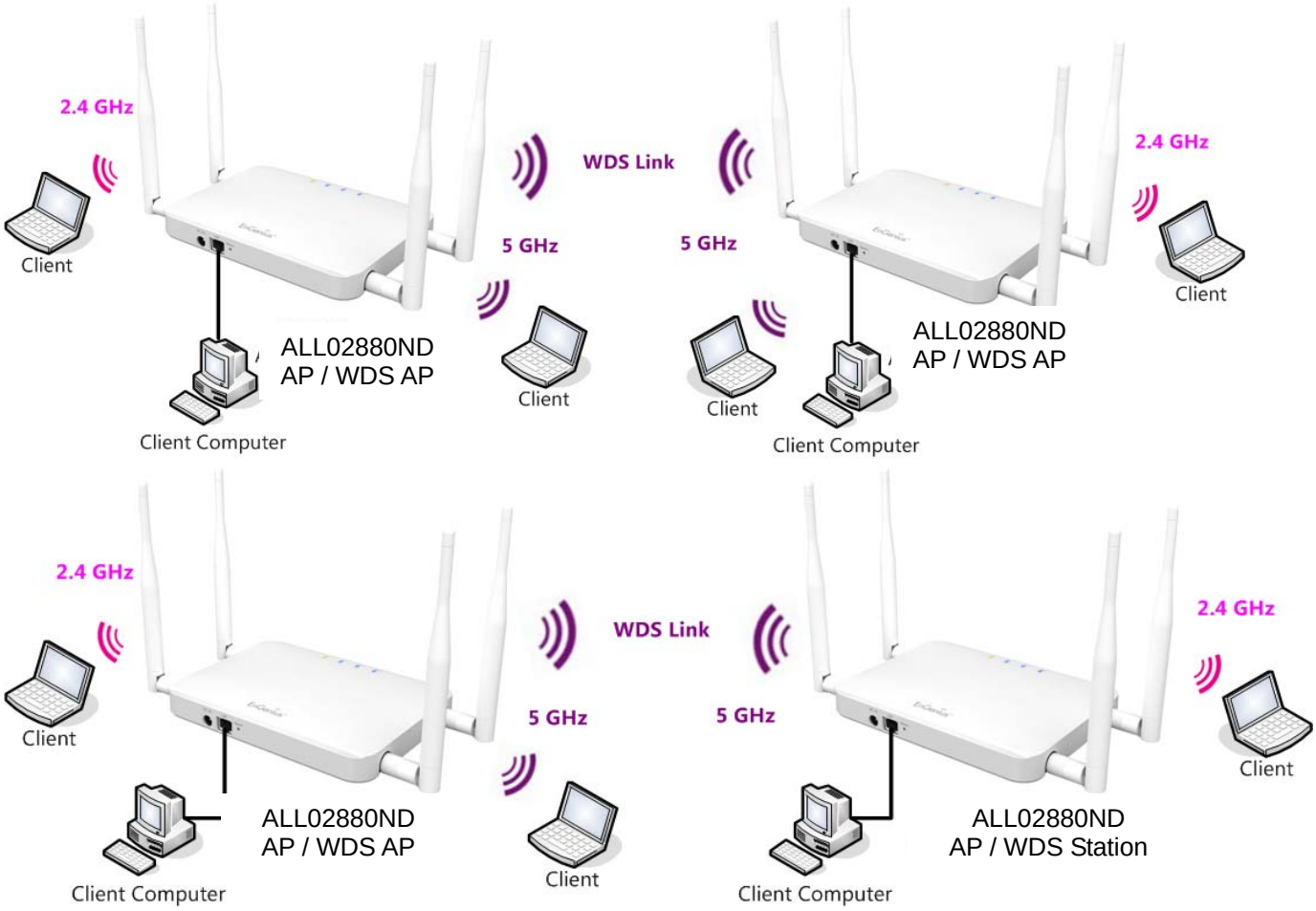
4.2 Client Bridge Mode

In Client Bridge Mode, the ALL02880ND essentially acts as a wireless adapter that connects to an access point to allow a system wireless access to the network. This mode requires you to connect the Ethernet port on your PC to the ALL02880ND LAN port.

If you use the client bridge operating mode, use the ALL02880ND Site Survey feature to scan for Access Points within range. When you find an Access Point, configure the ALL02880ND to use the same SSID and Security Password as the Access Point to associate with it.

4.3 WDS AP / WDS Station Mode

The ALL02880ND also supports WDS AP mode. This operating mode allows wireless connections to the ALL02880ND using WDS technology. In this mode, configure the MAC addresses in both Access Points to enlarge the wireless area by enabling WDS Link settings. WDS supports four AP MAC addresses.



Note: WDS Station Mode does not support Access Point feature.

4.4 WDS Bridge Mode

In WDS Bridge Mode, the ALL02880ND can wirelessly connect different LANs by configuring the MAC address and security settings of each ALL02880ND device. Use this mode when two wired LANs located a small distance apart want to communicate with each other. The best solution is to use the ALL02880ND to wirelessly connect two wired LANs, as shown in the following figure. WDS Bridge Mode can establish four WDS links, creating a star-like network.

Note: WDS Bridge Mode does not act as an Access Point. Access Points linked by WDS are using the same frequency channel. More Access Points connected together may lower throughput. This configuration can be susceptible to generate endless network loops in your network, so it is recommended to enable the Spanning Tree setting (see 6.3 Spanning Tree Setting, below) to prevent this from happening.

4.5 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 ALL02880ND, the ALL02880ND 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.

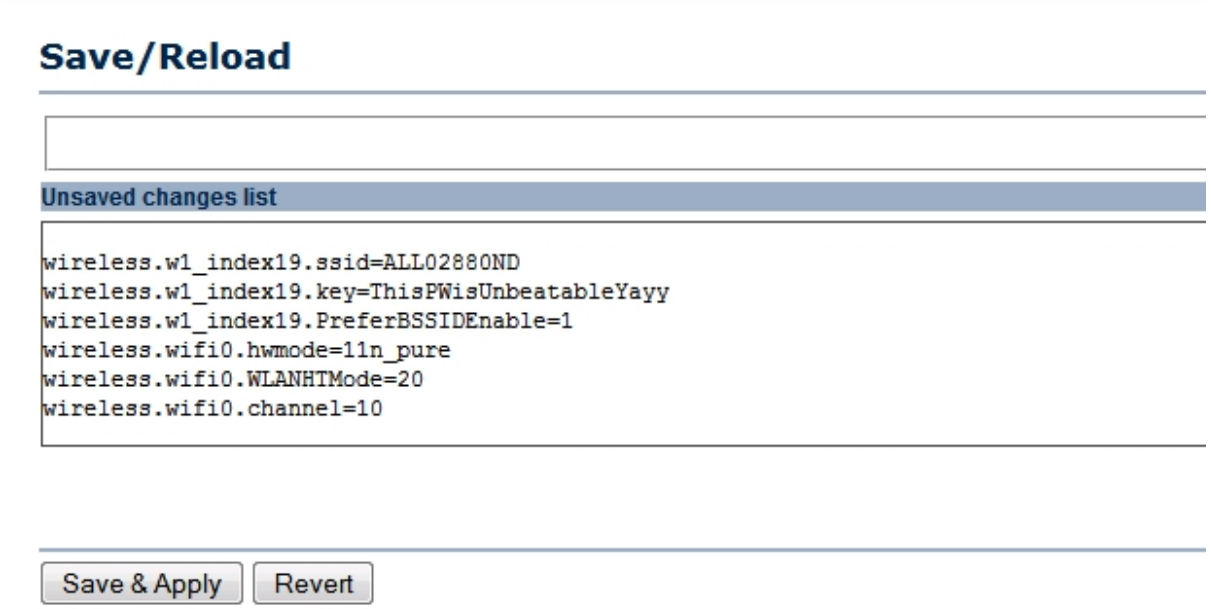
5 Status

The **Status** section contains the following options: **Main**, **2.4G/5G Wireless Client List**, **2.4G/5G Connection Status**, **2.4G/5G WDS Link 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 ALL02880ND 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 / WDS AP mode).

System Information

Device Name	ALL02880ND	
Ethernet MAC Address	00:02:6F:FE:94:16	
2.4G Wireless MAC Address (SSID/MAC)	1	00:02:6F:FE:94:16
	2	N/A
	3	N/A
	4	N/A
	5	N/A
	6	N/A
	7	N/A
	8	N/A
5G Wireless MAC Address (SSID/MAC)	1	00:02:6F:FE:94:17
	2	N/A
	3	N/A
	4	N/A
	5	N/A
	6	N/A
	7	N/A
	8	N/A
Country	Germany	
Current Time	Thu Aug 8 11:09:00 UTC 2013	
Firmware Version	1.3.8	
Management VLAN ID	Untagged	

- The **LAN Settings** section shows the Local Area Network settings such as the LAN IP Address, Subnet Mask, 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
Spanning Tree Protocol	Disabled
IPv6 IP Address	None
IPv6 Link-Local Address	FE80::202:6FFF:FE53:25FE
IPv6 Default Gateway	
IPv6 Primary DNS	
IPv6 Secondary DNS	
RX(Packets)	80.9775 KB (712 PKts.)
TX(Packets)	468.795 KB (693 PKts.)

- The **Current 2.4G/5G Wireless Settings** section shows wireless information such as Operating Mode, Frequency, Channel, Distance, RX and TX. Since the ALL02880ND supports multiple-SSIDs, information about each SSID, the ESSID and security settings, are displayed (**Note:** Profile Settings is only applicable in Access Point / WDS AP mode).

Current 2.4G Wireless Settings

Operation Mode	Access Point	
Wireless Mode	802.11 N only	
Channel Bandwidth	40 MHz	
Frequency/Channel	2.472 GHz (Channel 13)	
Profile Settings (SSID/Security/VID/802.1Q)	1	Test_ALL0288ND/WPA2-PSK AES/1/OFF
	2	N/A
	3	N/A
	4	N/A
	5	N/A
	6	N/A
	7	N/A
	8	N/A
Distance	1 Km	
RX(Packets)	0 B (0 PKts.)	
TX(Packets)	42.8271 KB (179 PKts.)	

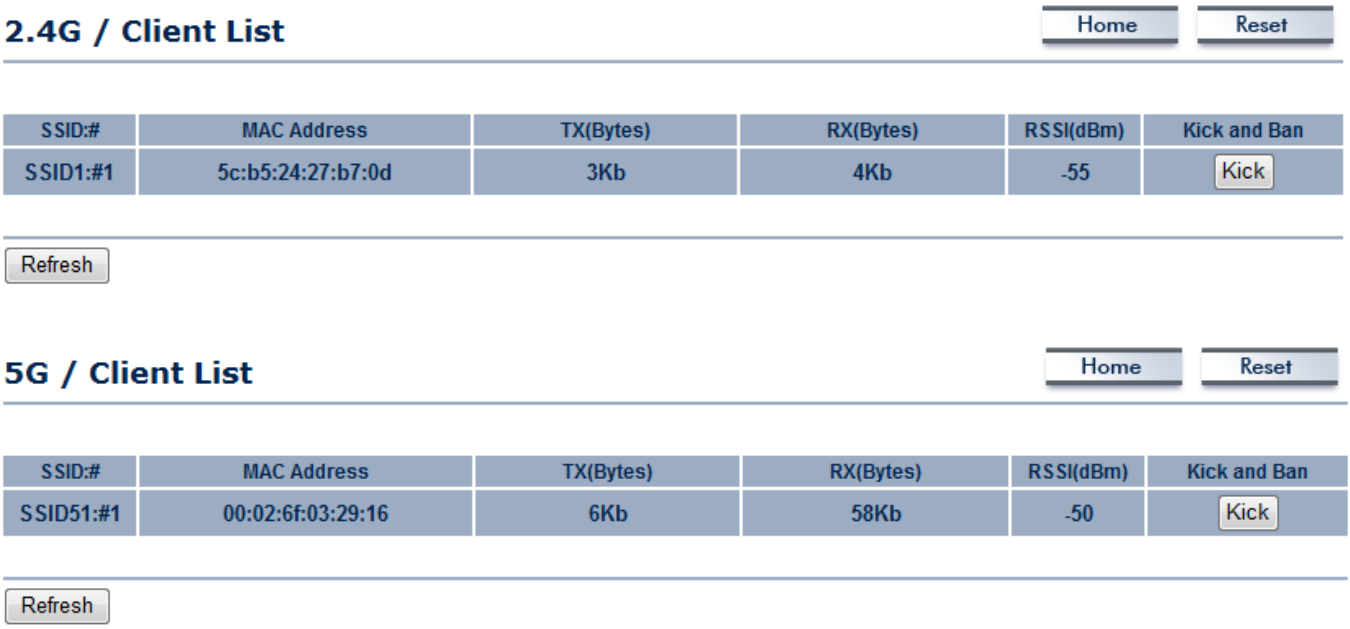
Current 5G Wireless Settings

Operation Mode	Access Point	
Wireless Mode	802.11 A/N Mixed	
Channel Bandwidth	40 MHz	
Frequency/Channel	5.22 GHz (Channel 44)	
Profile Settings (SSID/Security/VID/802.1Q)	1	0288ND-5ghz/WPA2-PSK AES/51/OFF
	2	N/A
	3	N/A
	4	N/A
	5	N/A
	6	N/A
	7	N/A
	8	N/A
Distance	1 Km	
RX(Packets)	0 B (0 PKts.)	
TX(Packets)	0 B (0 PKts.)	

5.3 2.4G/5G Wireless Client List

Clicking the **2.4G/5G Wireless Client List** link under the **Status** menu displays the list of clients associated to the ALL02880ND's 2.4GHz/5GHz, along with the MAC address, TX, RX and signal strength for each client. Clicking **Kick** in the Kick and Ban column removes this client. Clicking **Refresh** updates the client list.

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



5.4 2.4G/5G Connection Status

Click on the **2.4G/5G Connection Status** link under the **Status** menu. This page displays the current status of the Network, including Network Type, SSID, BSSID, Connection Status, Wireless Mode, Current Channel, Security, Data Rate, Noise Level, and Signal Strength.

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

2.4G / Connection Status

Network Type	Repeater
SSID	Test2013
BSSID	00:08:54:A2:B2:C6
Connection Status	Associated
Wireless Mode	IEEE 802.11b/g/n Mixed
Current Channel	2.437 GHz(Channel 6)
Security	WPA2-PSK AES
Tx Data Rates(Mbps)	150 Mbps
Current noise level	-95 dBm
Signal strength	-40 dBm

Refresh

5G / Connection Status

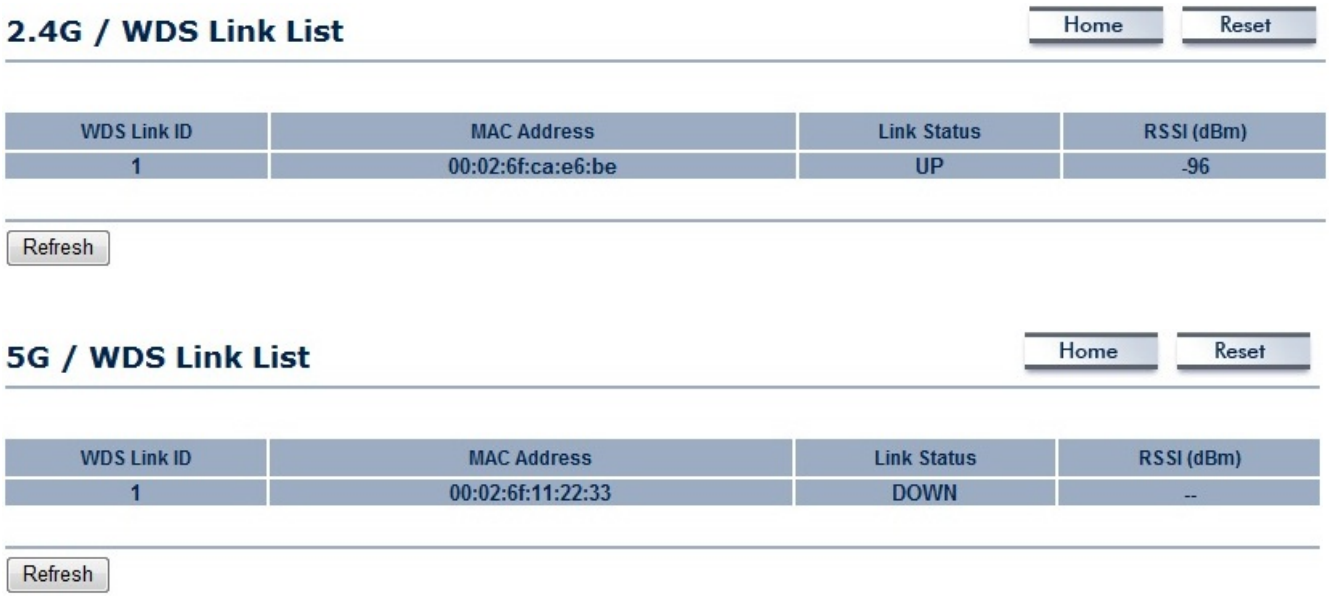
Network Type	Repeater
SSID	ALL-Guest
BSSID	74:91:1A:51:76:CC
Connection Status	Associated
Wireless Mode	IEEE 802.11n/a Mixed
Current Channel	5.54 GHz(Channel 108)
Security	None
Tx Data Rates(Mbps)	300 Mbps
Current noise level	-95 dBm
Signal strength	-48 dBm

Refresh

5.5 2.4G/5G WDS Link List

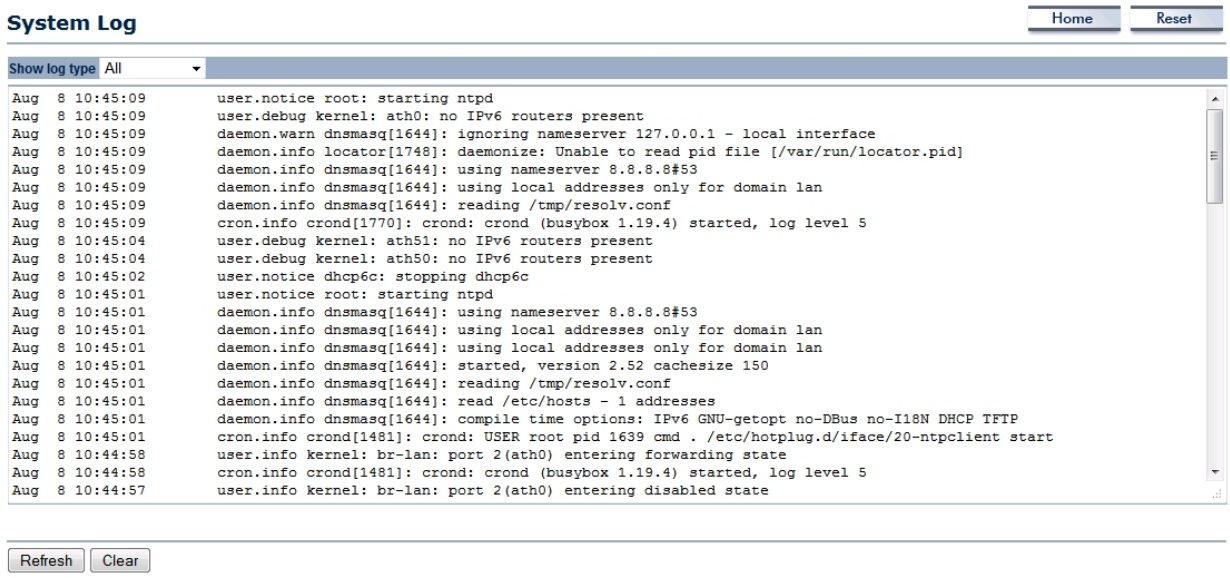
Click on the **2.4G/5G WDS Link List** link under the **Status** menu. This page displays the current status of the WDS link, including WDS Link ID, MAC Address, Link Status and RSSI.

Note: Only applicable in WDS AP and WDS Bridge mode.



5.6 System Log

The ALL02880ND 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.

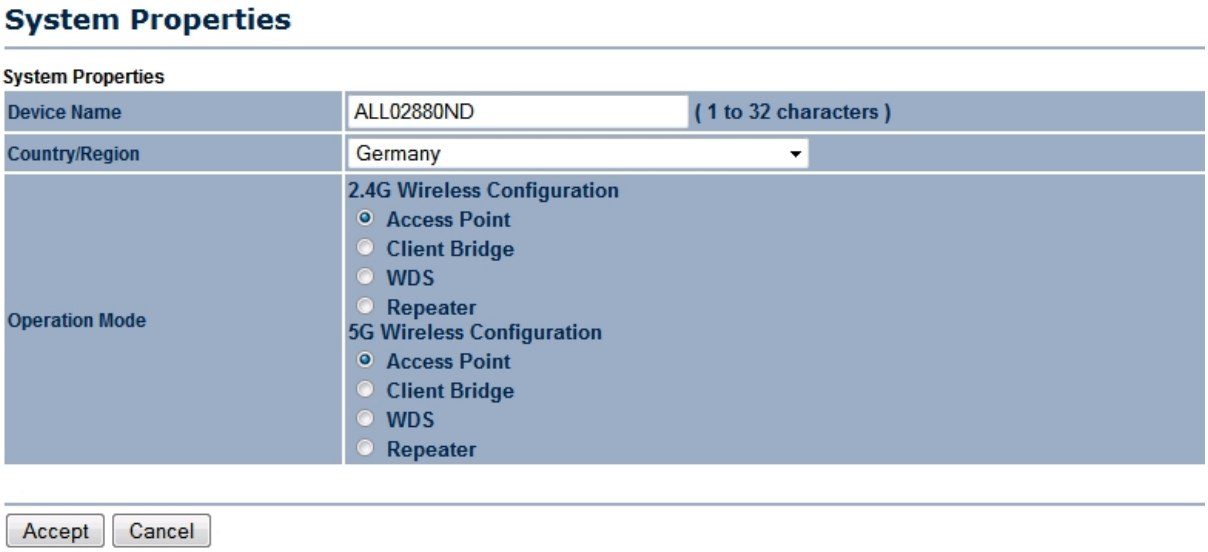


System Log	
Refresh	Update the log.
Clear	Clear the log.

6 System

6.1 Operation Mode

The ALL02880ND supports six operating modes: Access Point, Client Bridge, WDS AP, WDS Bridge, WDS Station and Repeater.



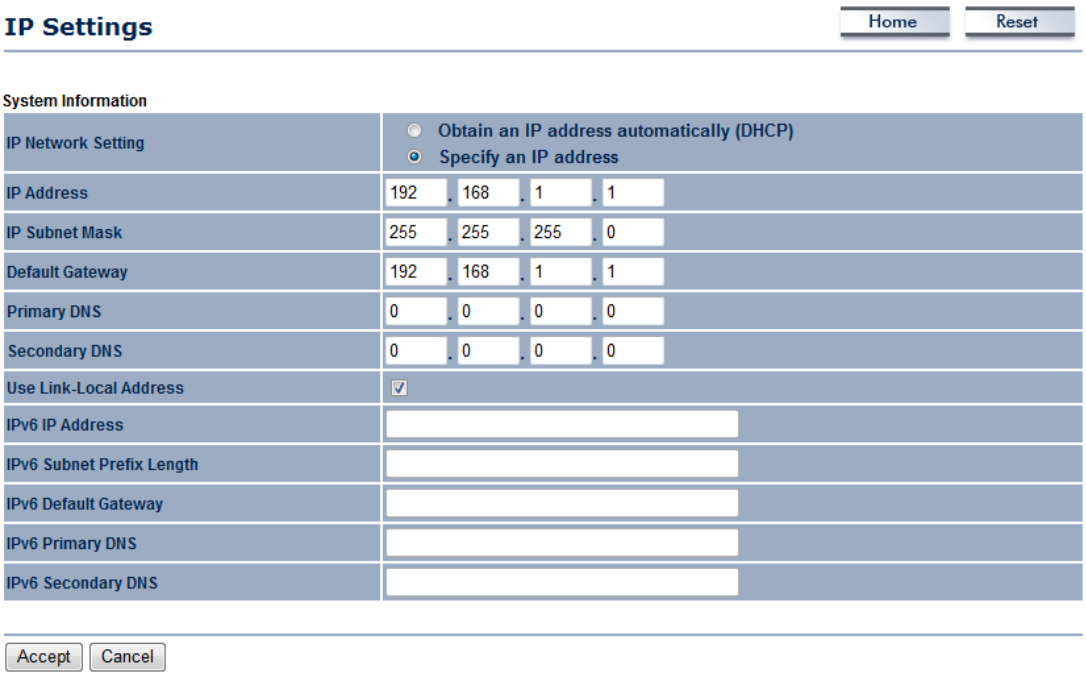
System Properties	
Device Name	Enter a name for the device. The name you type appears in SNMP management. This name is not the SSID and is not broadcast to other devices.
Country/Region	Select a Country/Region to conform to local regulations.
Operation Mode	Use the radio button to select an operating mode.
Accept / Cancel	Click **Accept** to confirm the changes or **Cancel** to cancel and return previous settings.

Since ALL02880ND is a dual band device, you can use operating modes which marked with ● concurrently.

2.4GHz / 5GHz	Access Point	Client Bridge	WDS AP	WDS Bridge	WDS Station	Repeater
Access Point	●	●	●	●	●	●
Client Bridge	●	**X**	●	**X**	**X**	**X**
WDS AP	●	●	●	●	●	●
WDS Bridge	●	**X**	●	**X**	**X**	**X**
WDS Station	●	**X**	●	**X**	**X**	**X**
Repeater	●	**X**	●	**X**	**X**	**X**

6.2 IP Settings

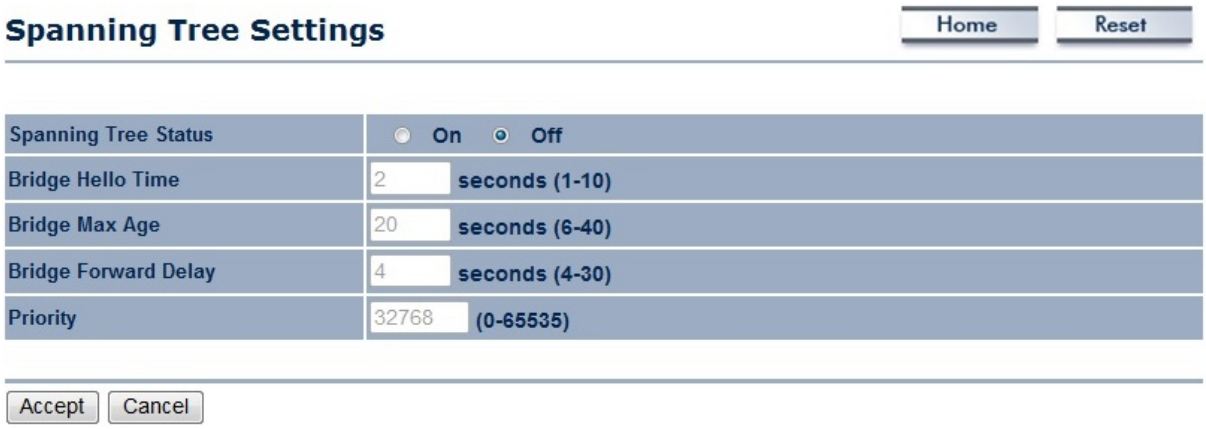
This page allows you to modify the device's IP settings.



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.
Use Link-Local Address	Check this if you want to use Link-Local Address.
IPv6 IP Address	The IPv6 IP Address of this device.
IPv6 Subnet Prefix Length	The IPv6 Subnet Prefix Length of this device.
IPv6 Default Gateway	The IPv6 Default Gateway of this device. Leave it blank if you are unsure of this setting.
IPv6 Primary / Secondary DNS	The primary / secondary DNS address for this device.

6.3 Spanning Tree Setting

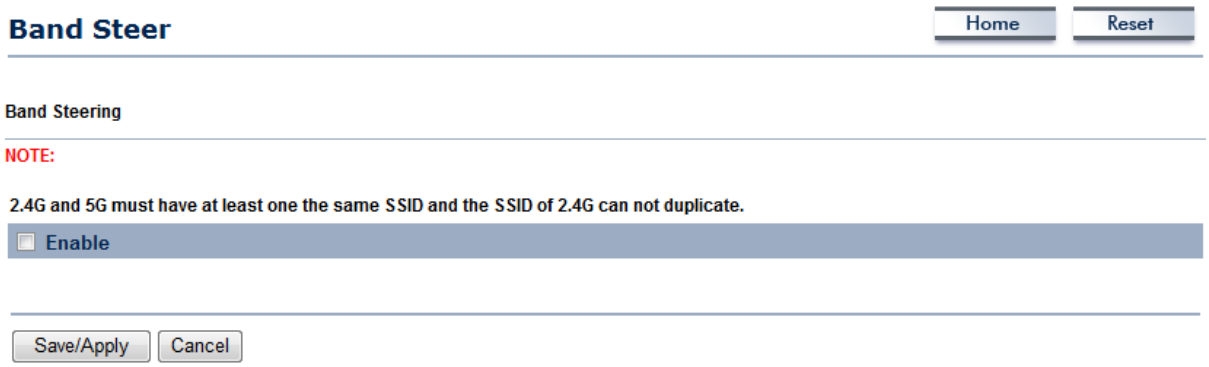
This page allows you to modify the Spanning Tree settings. Enabling Spanning Tree protocol will prevent network loops in your LAN network.



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.

6.4 Band Steering

When Band Steering is activated dual-band client devices are associated to the ALL02880ND access point on the 5 GHz frequency band. Check **Enable** and then click **Save/Apply** to use band steering.

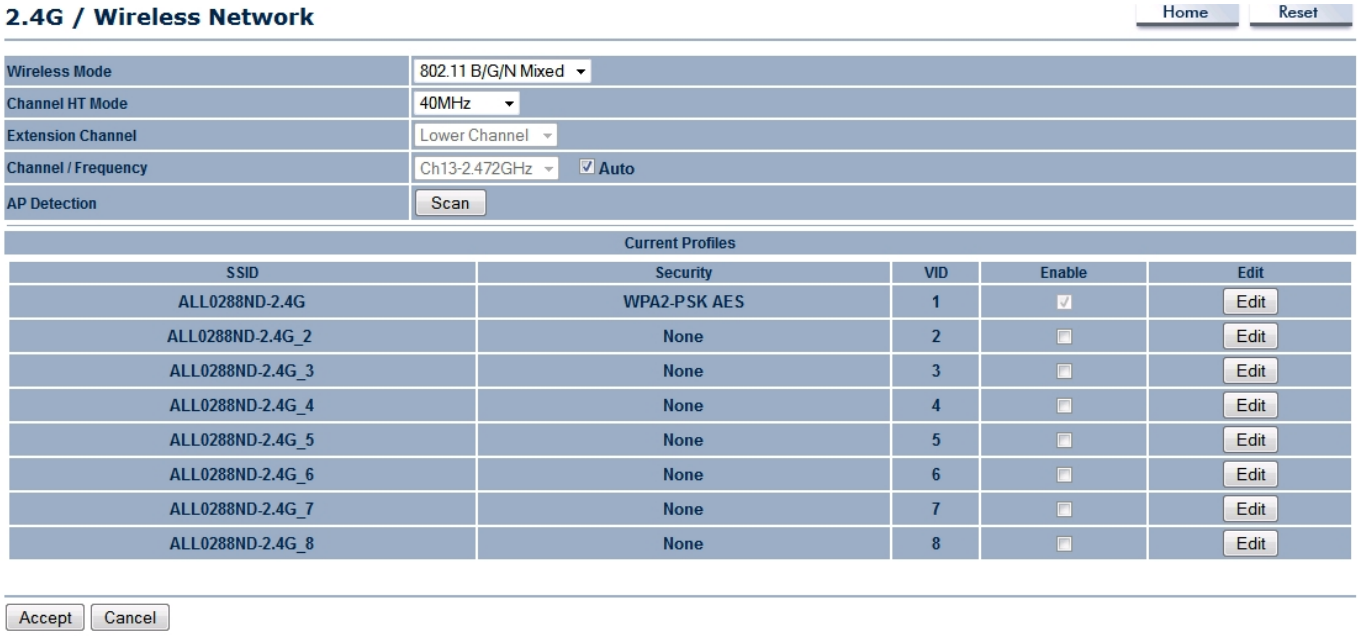


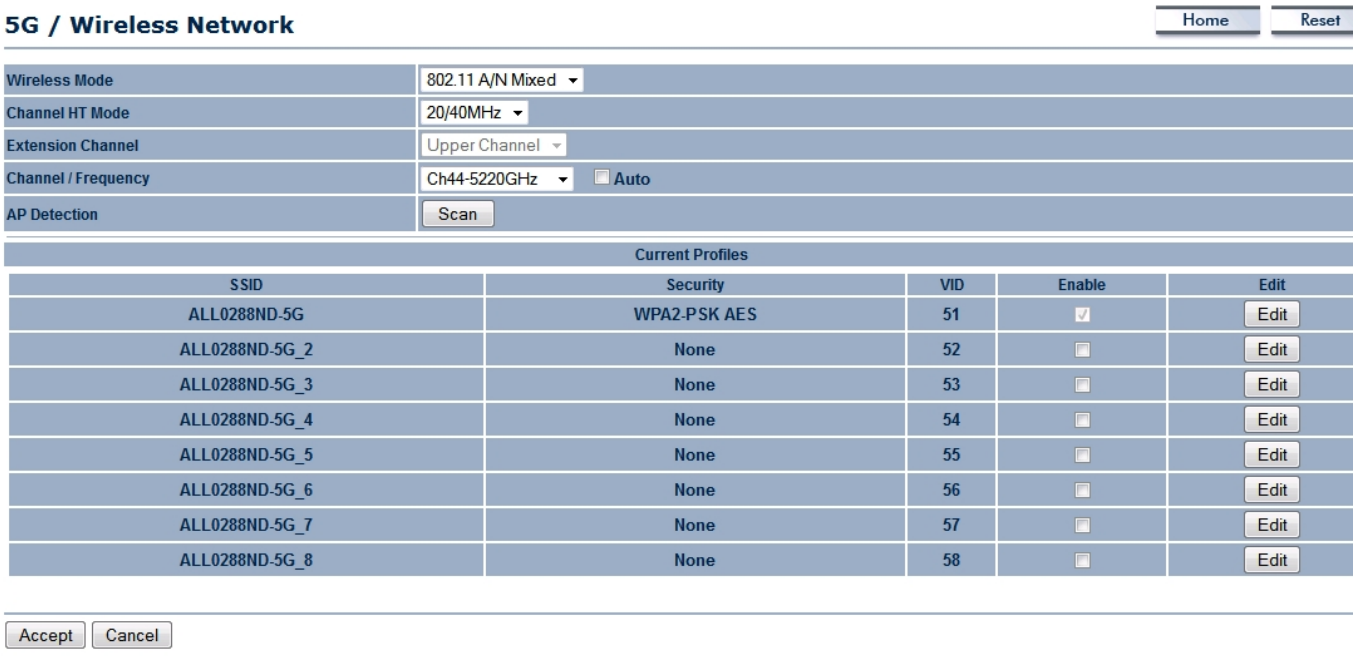
7 2.4G/5G Wireless

7.1 Wireless Network

This page displays the current status of the Wireless settings of the ALL02880ND.

Access Point / WDS AP mode:

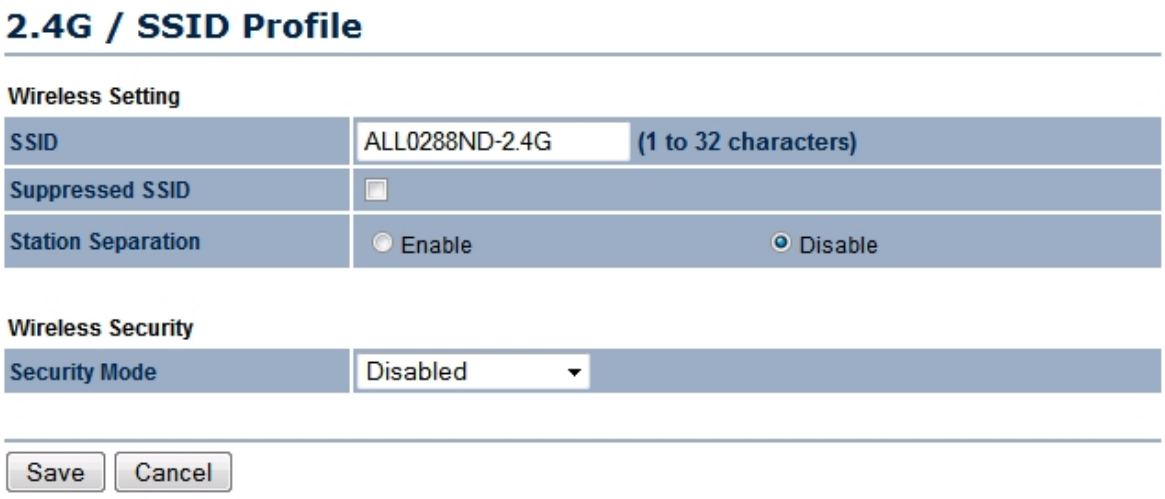


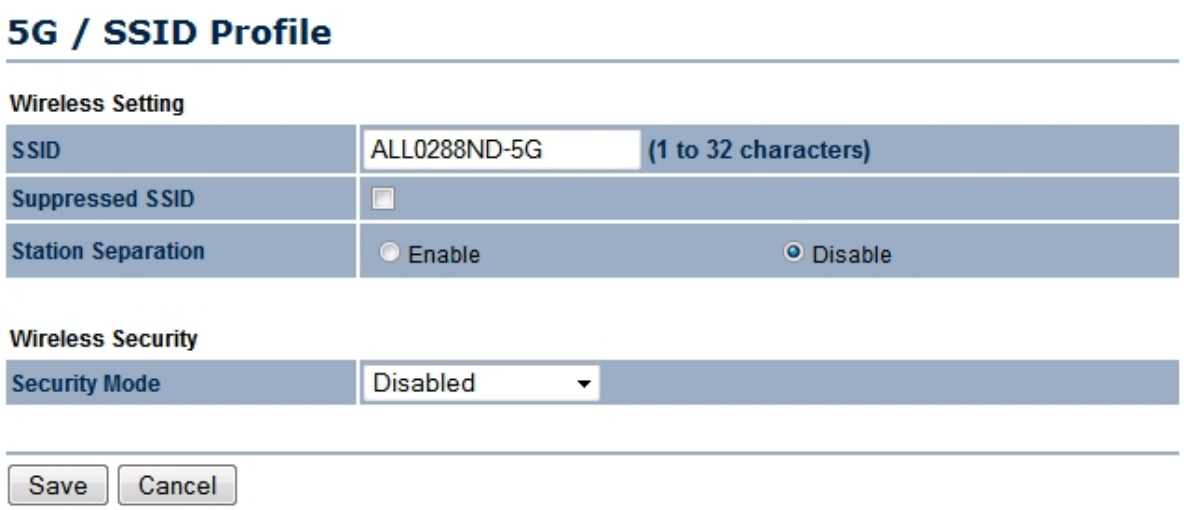


2.4G/5G Wireless Network (Access Point / WDS AP mode)	
Wireless Mode	Wireless mode supports 802.11b/g/n mixed mode in 2.4G and 802.11a/n mixed mode in 5G.
Channel HT Mode	The default channel bandwidth is 20/40MHz. The larger the channel, the better the transmission quality and speed.
Extension Channel	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 eight different SSIDs (four in WDS AP mode). 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.

Note: Only support four SSID in WDS AP mode.

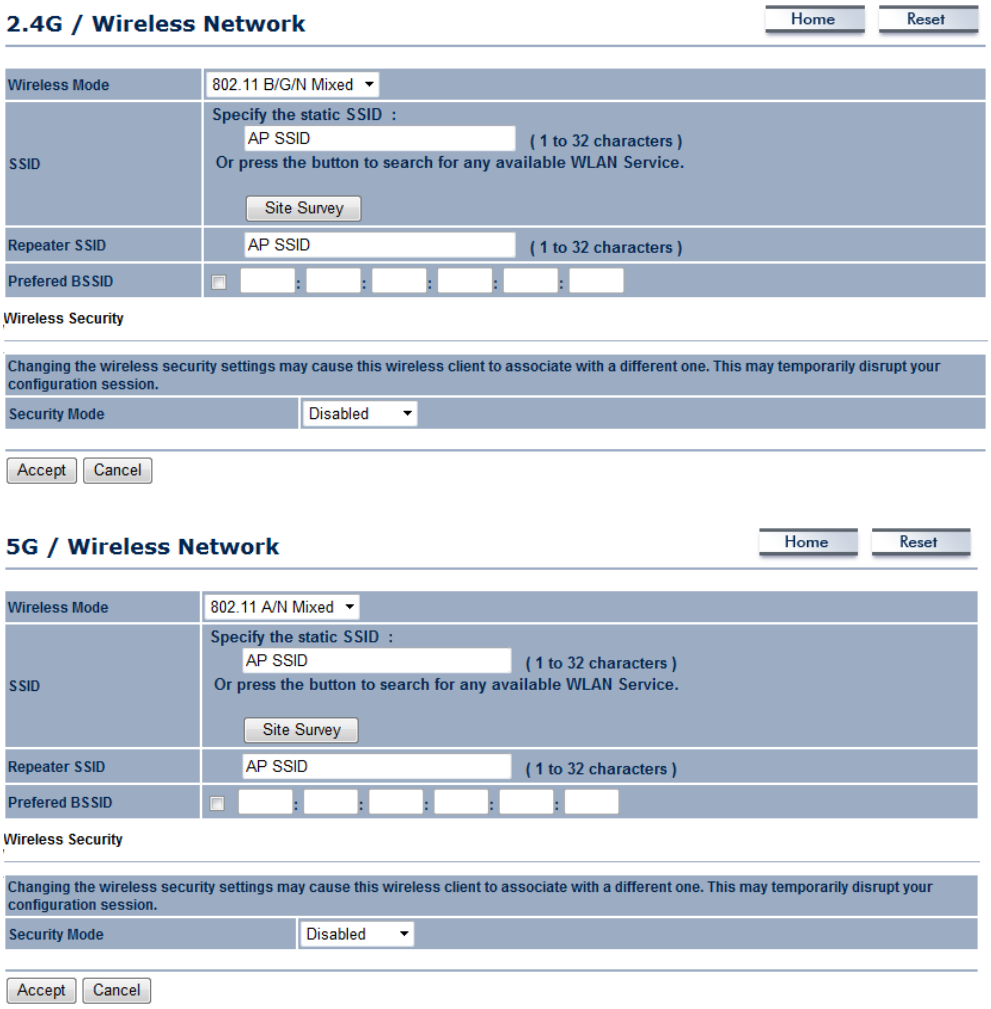
2.4G/5G SSID Profile





2.4G/5G SSID Profile	
SSID	Specify the SSID for the current profile.
Suppressed SSID	Check this option to hide the SSID from clients. If checked, the SSID will not appear in the site survey.
Station Separation	Click the appropriate radio button to allow or prevent communication between client devices.
Wireless Security	See the Wireless Security section.
Save / Cancel	Click **Save** to accept the changes or **Cancel** to cancel and return previous settings.

Client Bridge / WDS Station / Repeater mode:

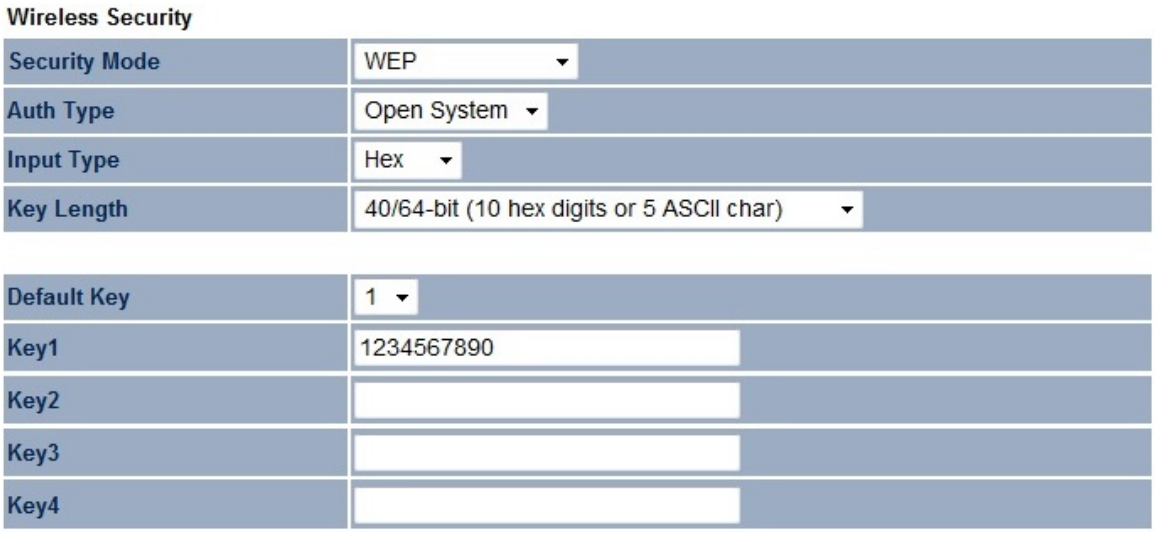


2.4G/5G Wireless Network (Client Bridge / WDS Station / Repeater mode)	
Wireless Mode	Wireless mode supports 802.11b/g/n mixed mode in 2.4G and 802.11a/n mixed mode in 5G.
SSID	The SSID is a unique named shared amongst all the points of the wireless network. The SSID must be identical on all points of the wireless network and cannot exceed 32 characters. You may specify an SSID or select one from the **Site Survey**.
Site Survey	Click on **Site Survey** to search the existing Access Points.
Preferred SSID	Specify the SSID for the repeater. It can be different from Access Point's SSID. (**Note:** Only in Repeater mode)
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 ALL02880ND'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:

Wireless Security

Security Mode	WPA-PSK Mixed
Encryption	Both(TKIP+AES)
Passphrase	12345678 (8 to 63 characters) or (64 Hexadecimal characters)
Group Key Update Interval	3600 seconds(30~3600, 0: disabled)

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 ASCII format, the Key must be from 8 to 63 characters in length. If using HEX format, the Key must be 64 HEX characters in length.
Group Key Update Interval	Specify how often, in seconds, the group key changes.

WPA Encryption: Only in Access Point / WDS AP mode

Wireless Security

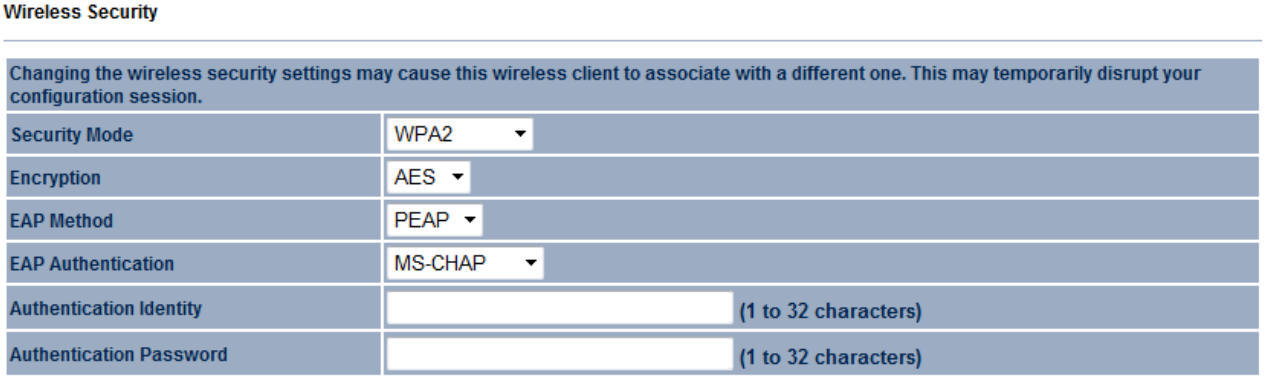
Security Mode	WPA Mixed
Encryption	Both(TKIP+AES)
Radius Server	. . .
Radius Port	1812
Radius Secret	
Group Key Update Interval	3600 seconds(30~3600, 0: disabled)
Radius Accounting	Enable
Radius Accounting Server	. . .
Radius Accounting Port	1813
Radius Accounting Secret	
Interim Accounting Interval	600 seconds(60~600)

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 802.11a/g.

WPA Encryption: Client Bridge / WDS Station mode



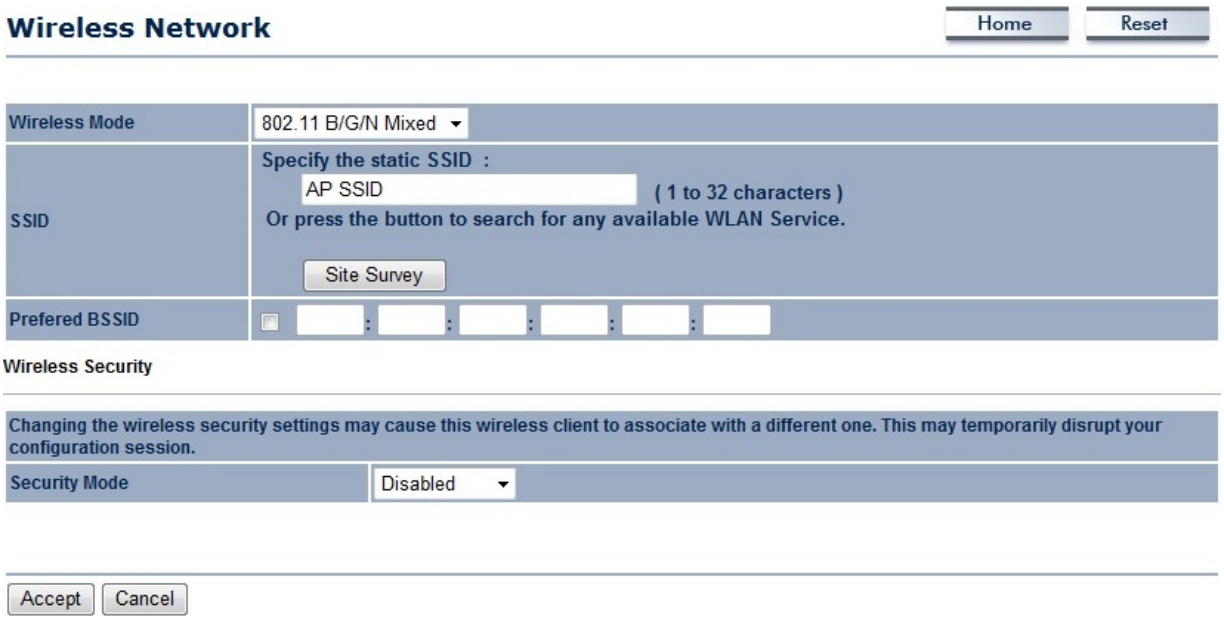
WPA Encryption	
Encryption	Select the WPA encryption type: **TKIP** or **AES**.
EAP Method	Select EAP Method: **PEAP** or **TTLS**.
EAP Authentication	Select EAP Authentication: **MS-CHAP** or **MS-CHAPV2**.
Authentication Identity	Enter the Identity required for the Radius server.
Authentication Password	Enter the Password required for the Radius server.

7.3 Site Survey

Use this feature to scan for nearby access points.

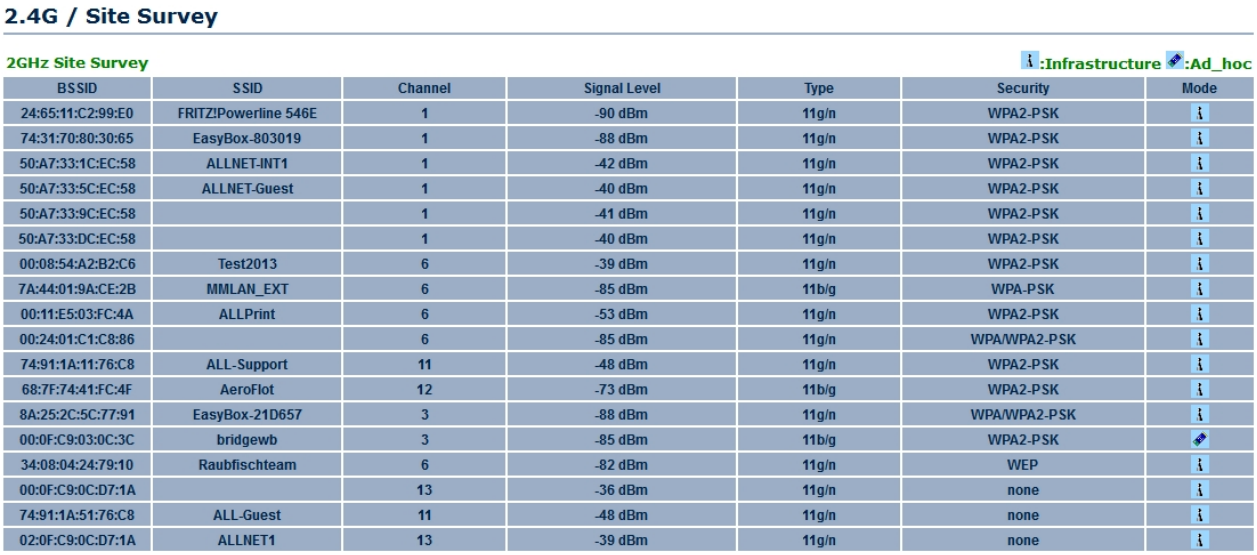
Note: Only applicable in Client Bridge, WDS Station and Repeater mode.

1. Click **Site Survey**.



2. Scanning for the nearby access points

3. The ALL02880ND will list the available access points after site survey.



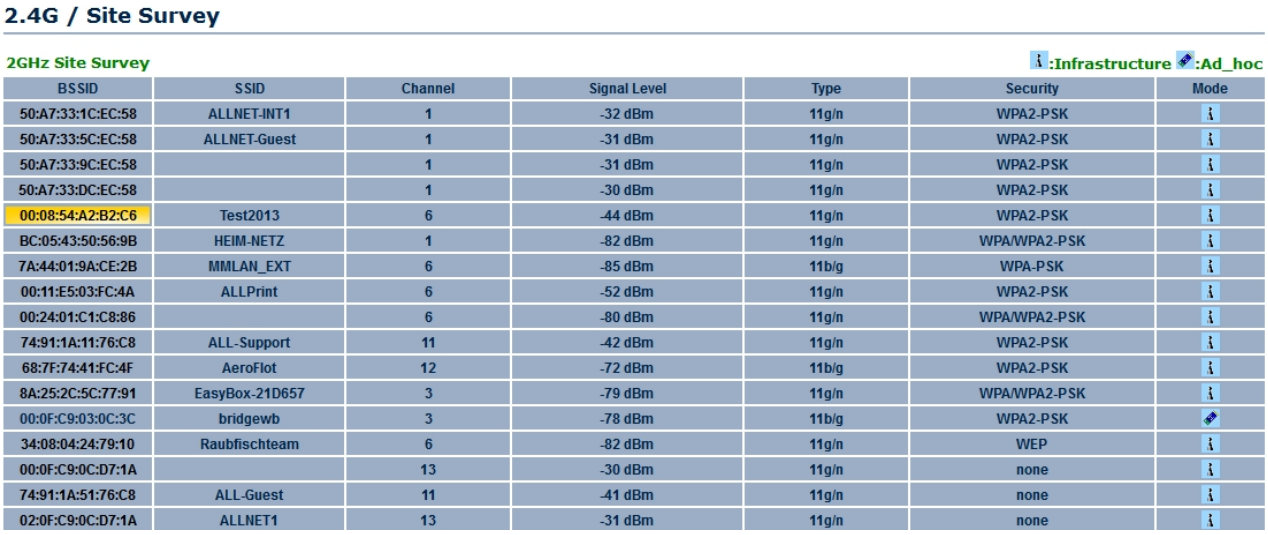
2.4G / Site Survey

2GHz Site Survey — :Infrastructure :Ad_hoc

BSSID	SSID	Channel	Signal Level	Type	Security	Mode
24:65:11:C2:99:E0	FRITZ!Powerline 546E	1	-90 dBm	11g/n	WPA2-PSK	
74:31:70:80:30:65	EasyBox-803019	1	-88 dBm	11g/n	WPA2-PSK	
50:A7:33:1C:EC:58	ALLNET-INT1	1	-42 dBm	11g/n	WPA2-PSK	
50:A7:33:5C:EC:58	ALLNET-Guest	1	-40 dBm	11g/n	WPA2-PSK	
50:A7:33:9C:EC:58		1	-41 dBm	11g/n	WPA2-PSK	
50:A7:33:DC:EC:58		1	-40 dBm	11g/n	WPA2-PSK	
00:08:54:A2:B2:C6	Test2013	6	-39 dBm	11g/n	WPA2-PSK	
7A:44:01:9A:CE:2B	MMLAN_EXT	6	-85 dBm	11b/g	WPA-PSK	
00:11:E5:03:FC:4A	ALLPrint	6	-53 dBm	11g/n	WPA2-PSK	
00:24:01:C1:C8:86		6	-85 dBm	11g/n	WPA/WPA2-PSK	
74:91:1A:11:76:C8	ALL-Support	11	-48 dBm	11g/n	WPA2-PSK	
68:7F:74:41:FC:4F	AeroFlot	12	-73 dBm	11b/g	WPA2-PSK	
8A:25:2C:5C:77:91	EasyBox-21D657	3	-88 dBm	11g/n	WPA/WPA2-PSK	
00:0F:C9:03:0C:3C	bridgewb	3	-85 dBm	11b/g	WPA2-PSK	
34:08:04:24:79:10	Raubfischteam	6	-82 dBm	11g/n	WEP	
00:0F:C9:0C:D7:1A		13	-36 dBm	11g/n	none	
74:91:1A:51:76:C8	ALL-Guest	11	-48 dBm	11g/n	none	
02:0F:C9:0C:D7:1A	ALLNET1	13	-39 dBm	11g/n	none	

Site Survey (Client Bridge / WDS Station / 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.



2.4G / Site Survey

2GHz Site Survey — :Infrastructure :Ad_hoc

BSSID	SSID	Channel	Signal Level	Type	Security	Mode
50:A7:33:1C:EC:58	ALLNET-INT1	1	-32 dBm	11g/n	WPA2-PSK	
50:A7:33:5C:EC:58	ALLNET-Guest	1	-31 dBm	11g/n	WPA2-PSK	
50:A7:33:9C:EC:58		1	-31 dBm	11g/n	WPA2-PSK	
50:A7:33:DC:EC:58		1	-30 dBm	11g/n	WPA2-PSK	
00:08:54:A2:B2:C6	Test2013	6	-44 dBm	11g/n	WPA2-PSK	
BC:05:43:50:56:9B	HEIM-NETZ	1	-82 dBm	11g/n	WPA/WPA2-PSK	
7A:44:01:9A:CE:2B	MMLAN_EXT	6	-85 dBm	11b/g	WPA-PSK	
00:11:E5:03:FC:4A	ALLPrint	6	-52 dBm	11g/n	WPA2-PSK	
00:24:01:C1:C8:86		6	-80 dBm	11g/n	WPA/WPA2-PSK	
74:91:1A:11:76:C8	ALL-Support	11	-42 dBm	11g/n	WPA2-PSK	
68:7F:74:41:FC:4F	AeroFlot	12	-72 dBm	11b/g	WPA2-PSK	
8A:25:2C:5C:77:91	EasyBox-21D657	3	-79 dBm	11g/n	WPA/WPA2-PSK	
00:0F:C9:03:0C:3C	bridgewb	3	-78 dBm	11b/g	WPA2-PSK	
34:08:04:24:79:10	Raubfischteam	6	-82 dBm	11g/n	WEP	
00:0F:C9:0C:D7:1A		13	-30 dBm	11g/n	none	
74:91:1A:51:76:C8	ALL-Guest	11	-41 dBm	11g/n	none	
02:0F:C9:0C:D7:1A	ALLNET1	13	-31 dBm	11g/n	none	

5. Enter the correct security setting and then click **Accept**.

2.4G / Wireless Network

Wireless Mode	802.11 B/G/N Mixed
SSID	Specify the static SSID : Test2013 (1 to 32 characters) Or press the button to search for any available WLAN Service. Site Survey
Prefered BSSID	00 : 08 : 54 : A2 : B2 : C6

Wireless Security

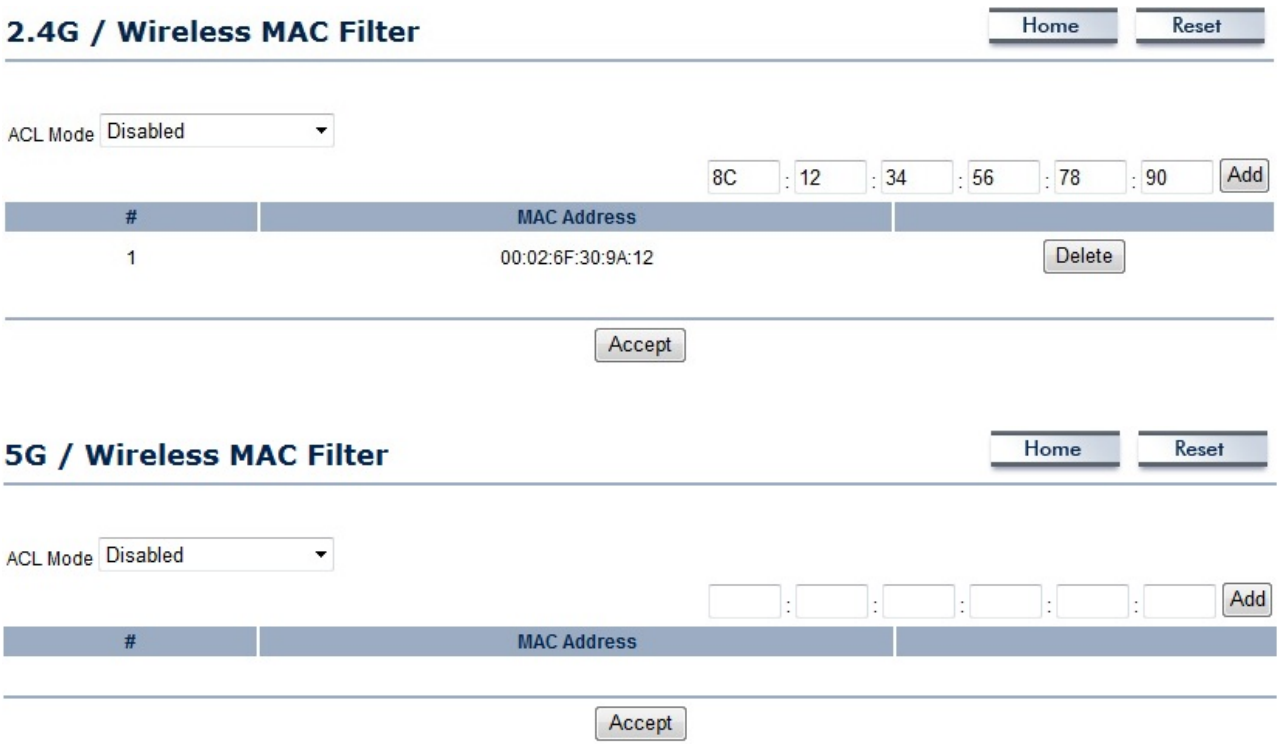
Changing the wireless security settings may cause this wireless client to associate with a different one. This may temporarily disrupt your configuration session.	
Security Mode	WPA2-PSK
Encryption	AES
Passphrase	Pa$$w0rd (8 to 63 characters) or (64 Hexadecimal characters)

Accept Cancel

7.4 Wireless MAC Filtering

Wireless MAC Filtering is used to allow or deny network access to wireless clients (computers, tablet PCs, NAS, smartphones, etc.) according to their MAC addresses. You can manually add a MAC address to restrict the permission to access ALL02880ND. The default setting is **Disable Wireless MAC Filter**.

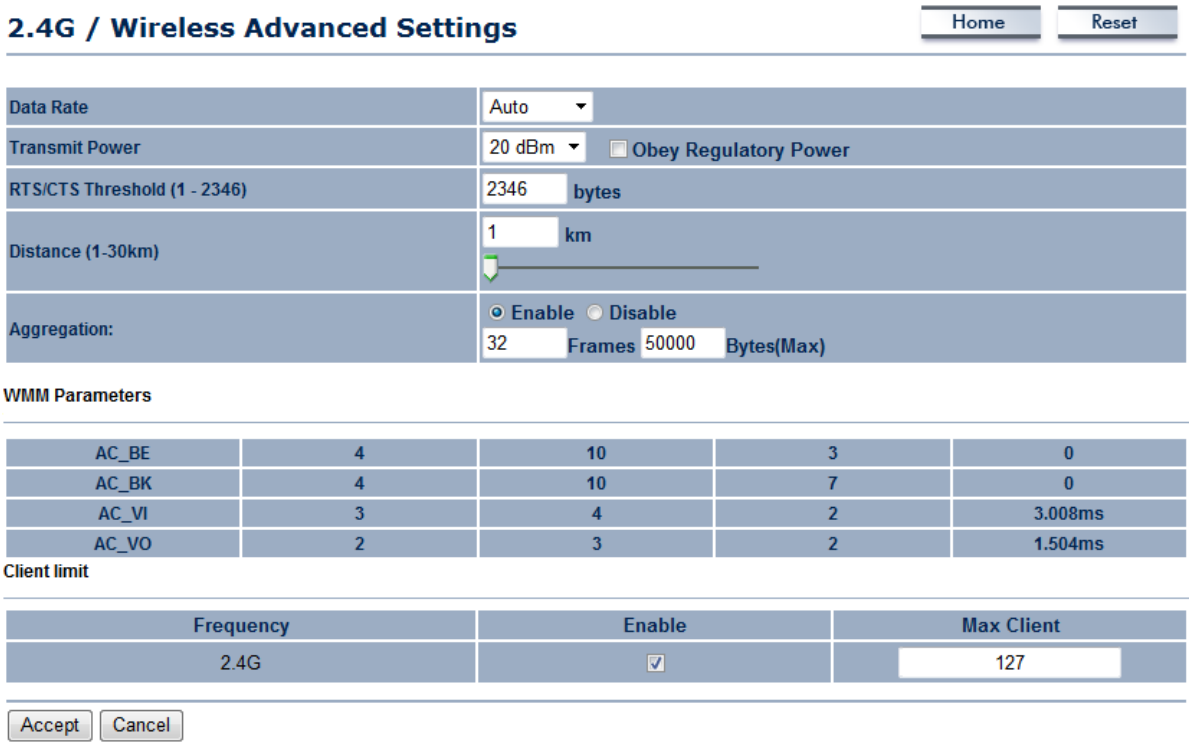
Note: Only applicable in Access Point, WDS AP and Repeater mode.

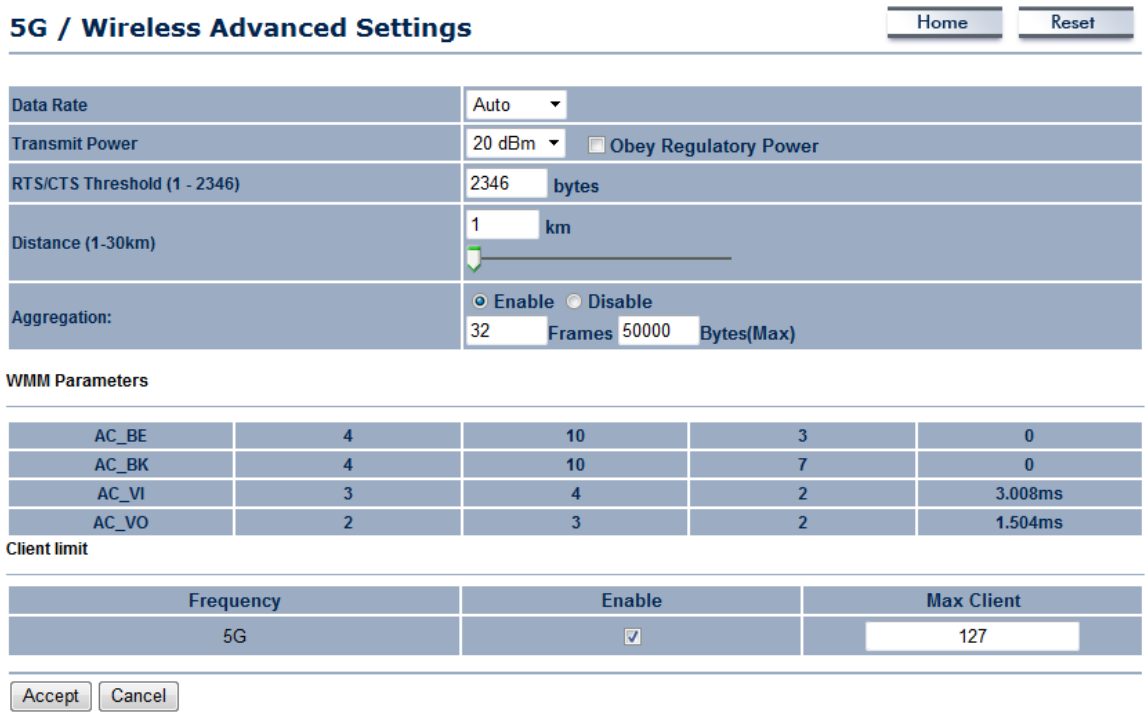


Wireless MAC Filter (Access Point / WDS AP / Repeater mode)	
ACL Mode	Determines whether network access is granted or denied to clients whose MAC appear in the MAC Address table on this page. Choices are: **Disabled**, **Deny MA** **Allow MAC in the list**.
MAC Address	Enter the MAC address of the wireless 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 Settings

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.





2.4G/5G Wireless Advanced	
Data Rate	Select a data rate from the drop-down list. The data rate affects throughput of data in the ALL02880ND. 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.
WMM Parameters	WMM (Wi-Fi Multimedia) manages the priority of audio, video and voice data over a Wi-Fi network so that data from other applications are less likely to interfere with transmission. The parameters CWmin, CWmax and AIFS together control the priority of the four access categories (AC). **Note**: Only applicable in Access Point and WDS AP mode.
Client Limit	Check **Enable** and enter a number to limit the maximum client connection (The maximum is 127). **Note**: Only applicable in Access Point, WDS AP and Repeater mode.
Accept / Cancel	Click **Accept** to confirm the changes or **Cancel** to cancel and return previous settings.

Note: WMM Parameters is only applicable in Access Point and WDS AP mode.

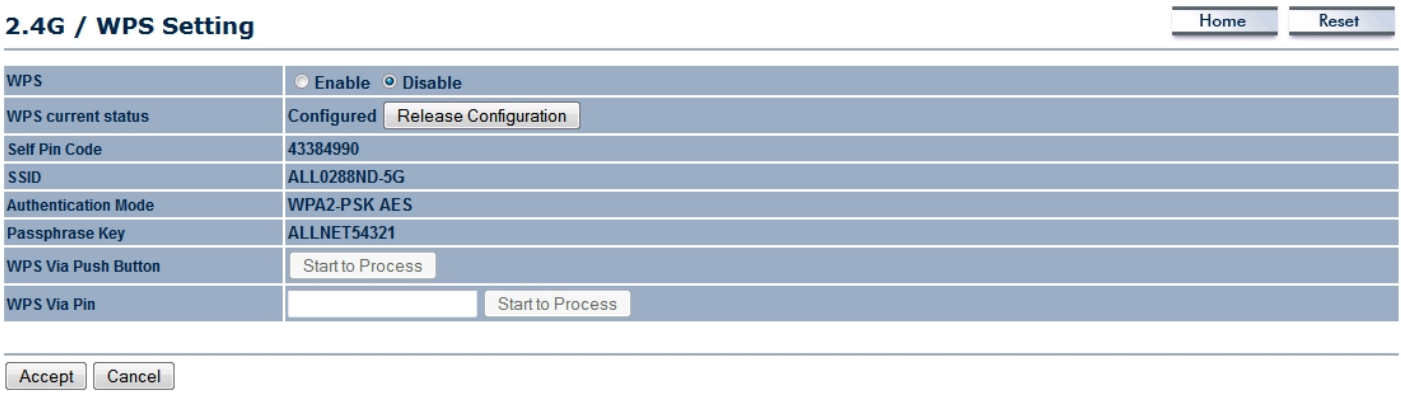
Client Limit is only applicable in Access Point, WDS AP and Repeater mode.

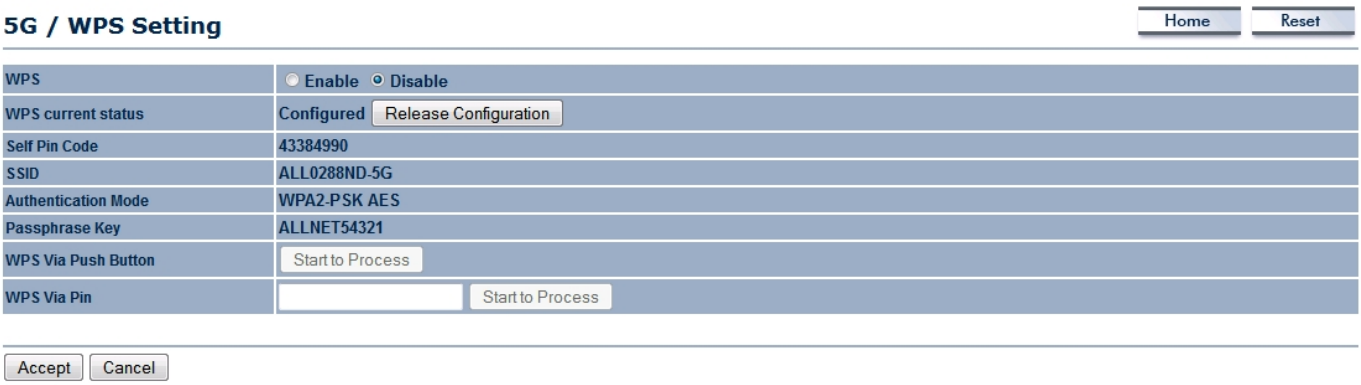
7.6 WPS (Wi-Fi Protected Setup)

Wi-Fi Protected Setup (WPS) feature complies with the Wi-Fi Alliance WPS standard and makes it easier to quickly add client devices to an established, security-enabled Wi-Fi network.

WPS 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 and WDS AP mode.





WPS (Wi-Fi Protected Setup)	
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.

7.7 WDS Link Settings

Using WDS (Wireless Distribution System) will allow a network administrator or installer to connect to Access Points wirelessly. Doing so will extend the wired infrastructure to locations where cabling is not possible or inefficient to implement.

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

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

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

Note: Only applicable in WDS AP and WDS Bridge mode.

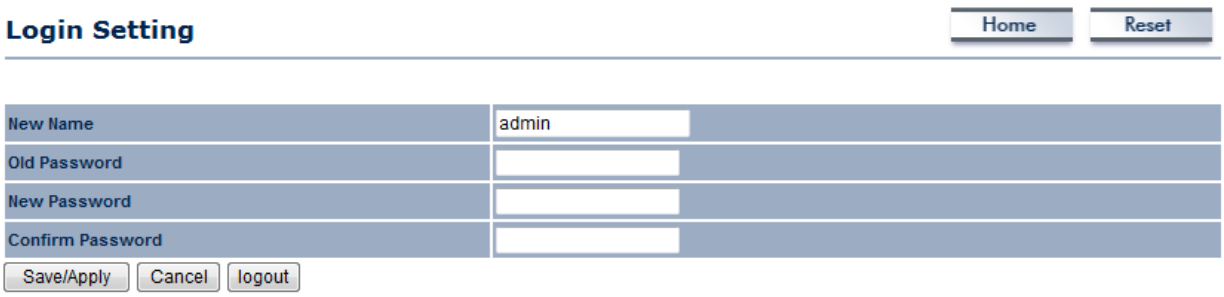
2.4G/5G WDS Link Settings	
Security	Select **None** or **WEP** or **AES** from drop-down list.
WEP Key	Enter the key values you wish to use if selecting WEP.
AES Passphrase	Enter the key values you wish to use if selecting AES.
MAC Address	Enter the Access Point's MAC address to which you want to extend the wireless area.
Mode	Select **Disable** or **Enable** from the drop-down list.
Accept / Cancel	Click **Accept** to confirm the changes or **Cancel** to cancel and return previous settings.

Note: Other AP(s) must use the same security and key to establish WDS link.

8 Management

8.1 Administration

This page allows you to change the ALL02880ND username and password. By default, the username is **admin** and the password is: **admin**. The password can contain 0 to 12 alphanumeric characters and is case sensitive.

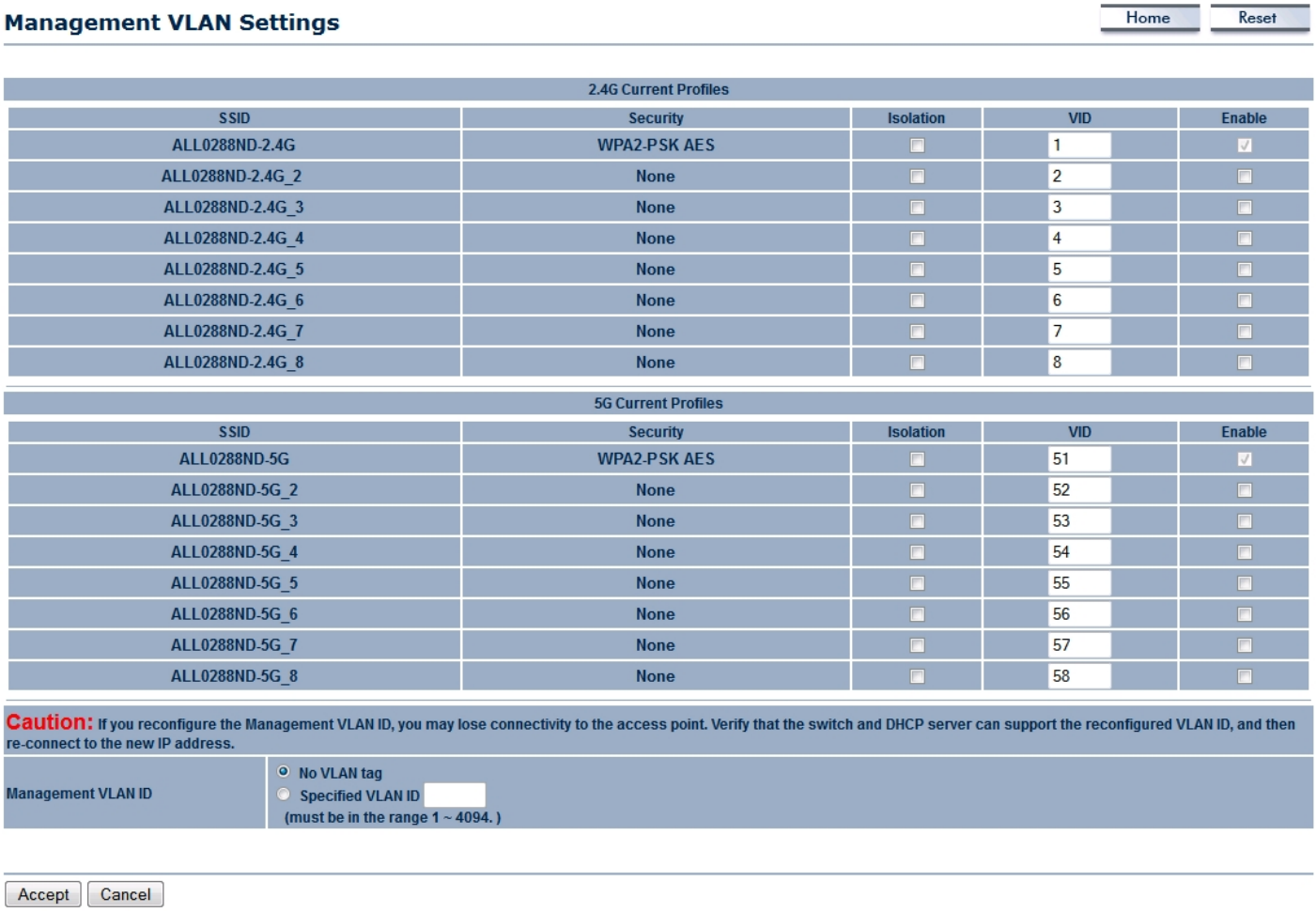


Login Setting	
New Name	Enter a new username for logging in to the New Name entry box.
Old Password	Enter the old password for logging in to the Old Password entry box.
New Password	Enter the new password for logging in to the New Password entry box.
Confirm Password	Re-enter the new password in the 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.

8.2 Management VLAN Settings

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

Note: Only applicable in Access Point and WDS AP mode.



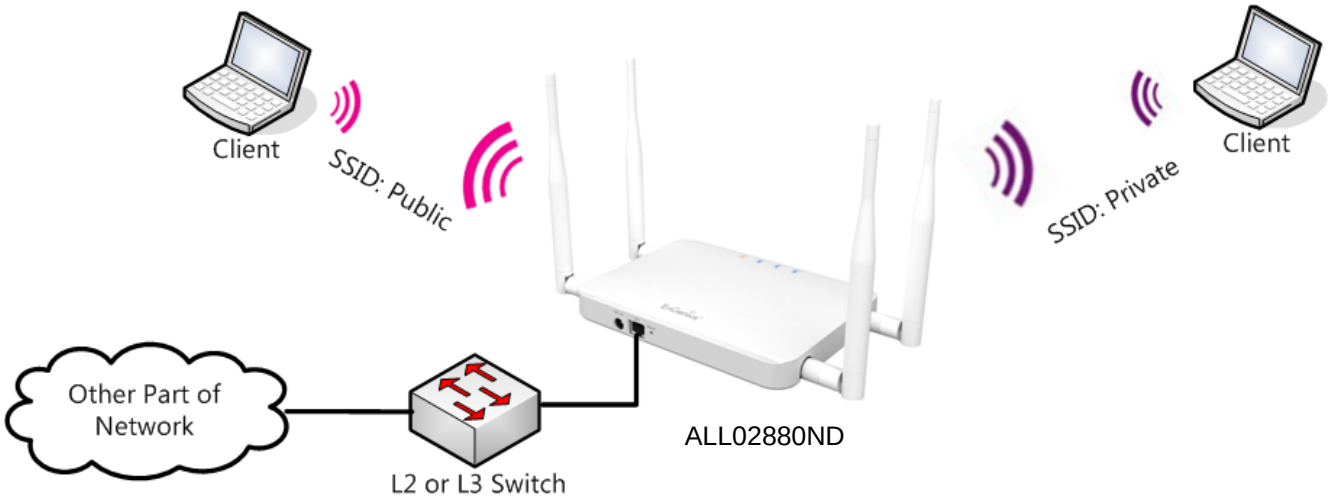
Management VLAN (Access Point / Repeater mode)	
Profile Isolation	Restricted client to communicate with different VID by selecting the radio button.
VLAN ID	Specify the VLAN tag for each profile.
Management VLAN ID	If your network includes VLANs, you can specify a VLAN ID for packets pass through the 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.

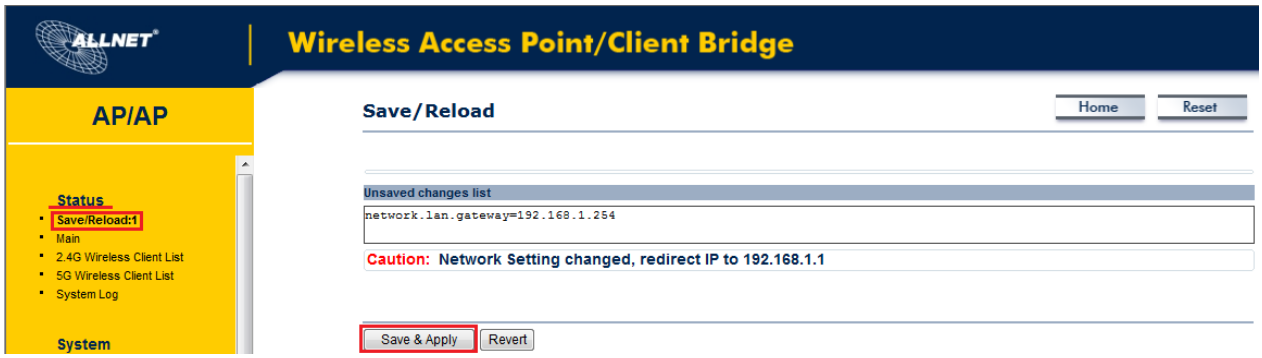
Note:
1. If you reconfigure the Management VLAN ID, you may lose your connection to the ALL02880ND. Verify that the DHCP server supports the reconfigured VLAN ID and then reconnect to the ALL02880ND using the new IP address.
2. Clicking **Accept** does not apply the changes. To apply them, use Status > Save/Load (see section 5.1).

VLAN Setup

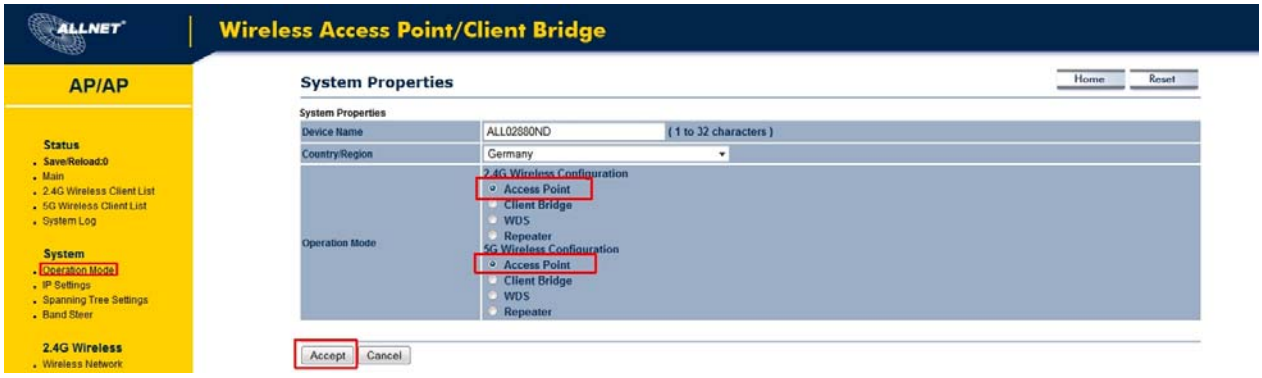
Below is a sample network diagram for VLAN.



Please note that in order for the settings to save on this unit you need to click **Save & Apply** under the **Save/Reload** option under **Status**.



Step 1. Setup Operation mode to **Access Point**.



Step 2. Click on whichever band you want to configure.

Step 3. Click **Edit** on the SSID you want to configure. Note the Enable checkbox is if you want the AP to have an SSID accessible via the wireless side of the AP.

SSID	Security	VID	Enable	Edit
Untagged SSID	WPA2-PSK AES	1	☑	Edit
Public	WPA2-PSK AES	10	☑	Edit
Private	WPA2-PSK AES	20	☑	Edit

Step 4. Configure the AP with the SSID you want, and the type of encryption you desire.

Wireless Setting

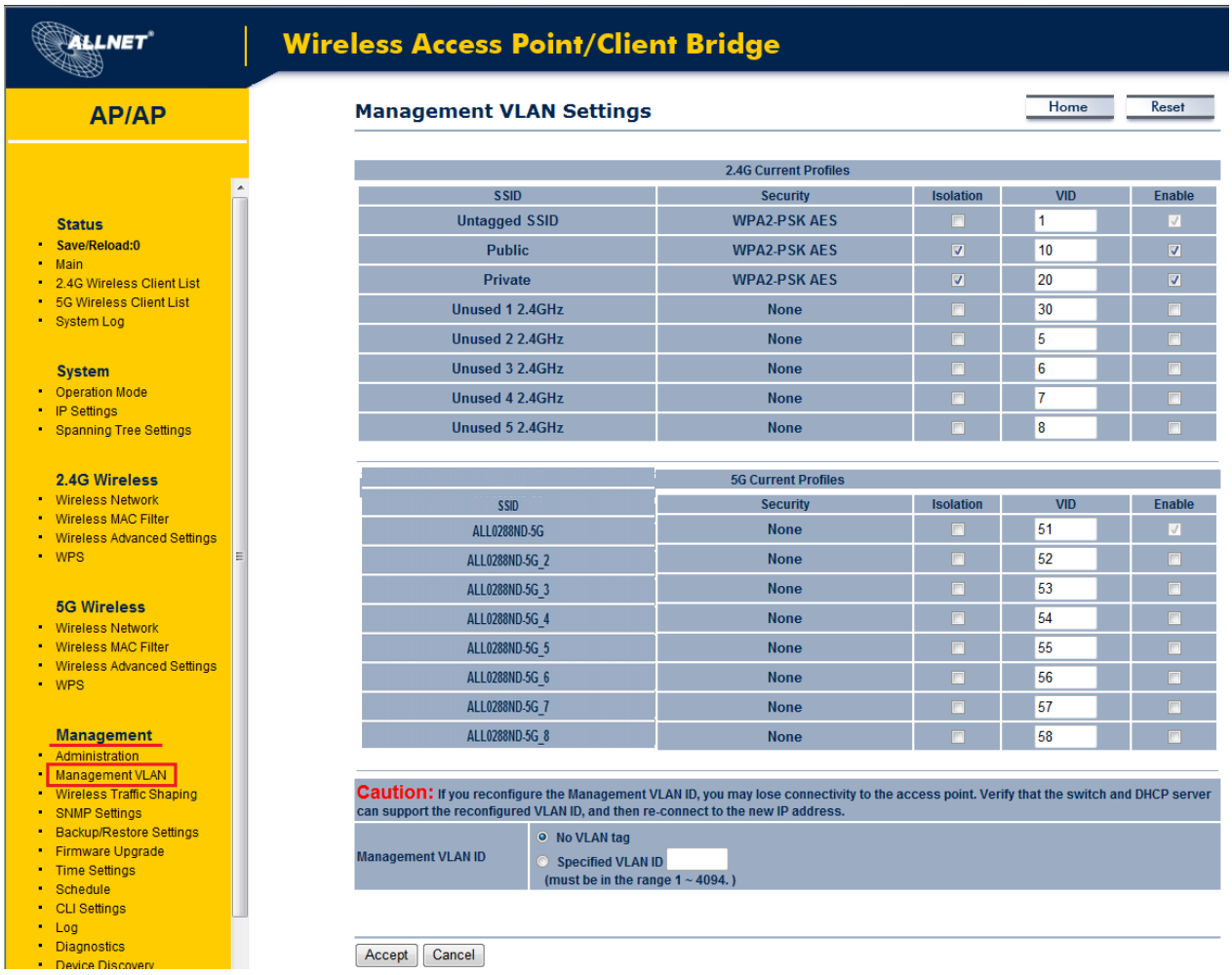
SSID	Untagged SSID (1 to 32 characters)
Suppressed SSID	☐
Station Separation	○ Enable ◉ Disable

Wireless Security

Security Mode	WPA2-PSK
Encryption	AES
Passphrase	******** (8 to 63 characters) or (64 Hexadecimal characters)
Group Key Update Interval	3600 seconds(30~3600, 0: disabled)

Save Cancel

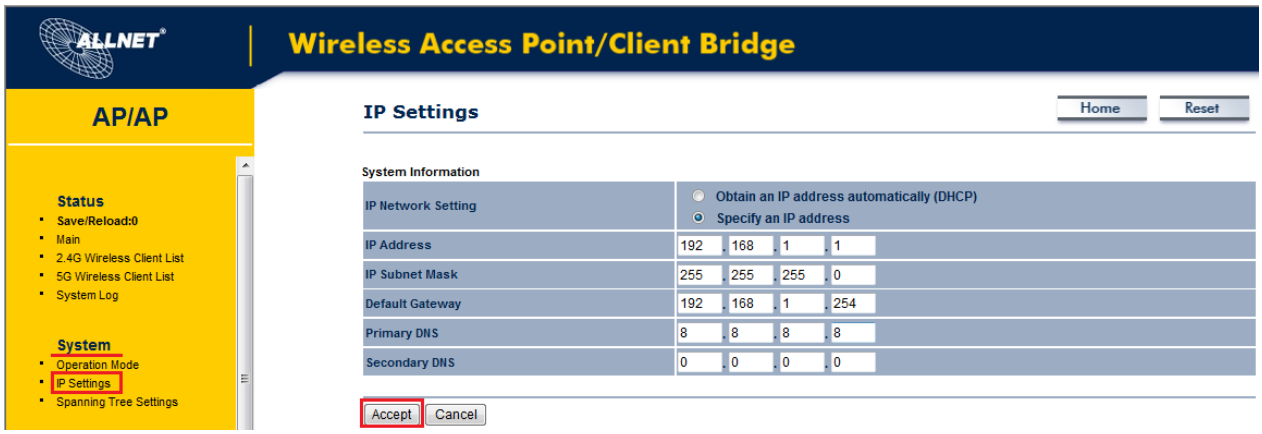
Step 5. Under **Management** > **Management VLAN** is where you configure the SSID to VLAN map.



Step 6. The **Isolation** checkbox tells the unit that you want the SSID to be mapped to a VID specified in the **VID** field. If the Isolation box is not checked the SSID will not be tied to the VLAN that is not tagged off the trunk port. The **Enable** box performs the same as it did in Step 3.

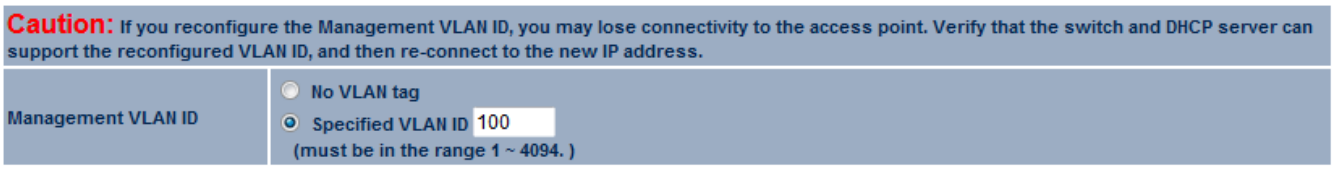
SSID	Security	Isolation	VID	Enable
Untagged SSID	WPA2-PSK AES	☐	1	☑
Public	WPA2-PSK AES	☑	10	☑
Private	WPA2-PSK AES	☑	20	☑

Step 7. Please set your unit to be in the subnet that you want to mange the device in, pointing to the proper default gateway and outside of your DHCP scope.



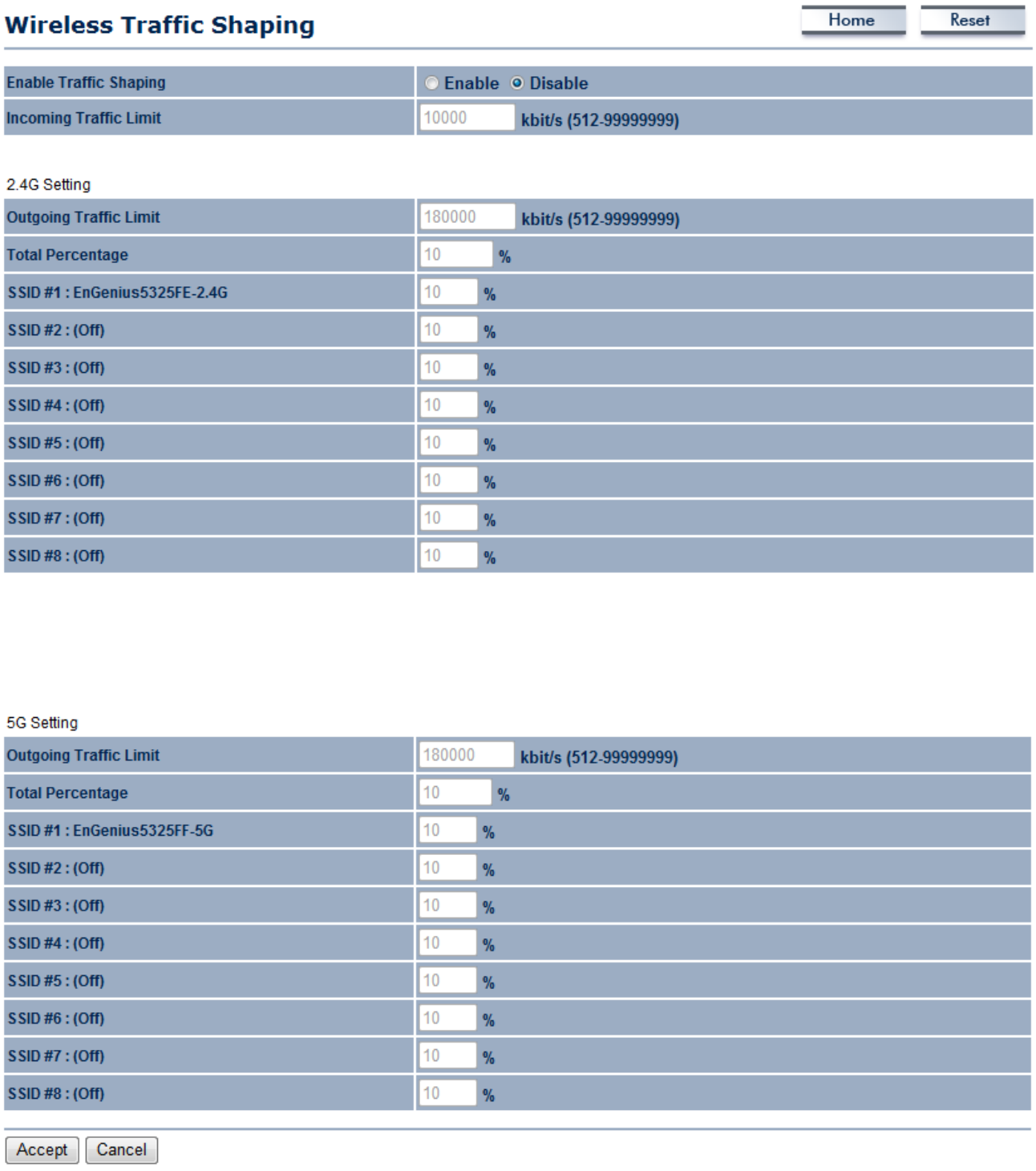
Optional:

If using a tagged VLAN to manage the unit then please place unit in the proper subnet and set the management VLAN tag to the tagged LAN you want to manage the device from.



8.3 Wireless Traffic Shaping

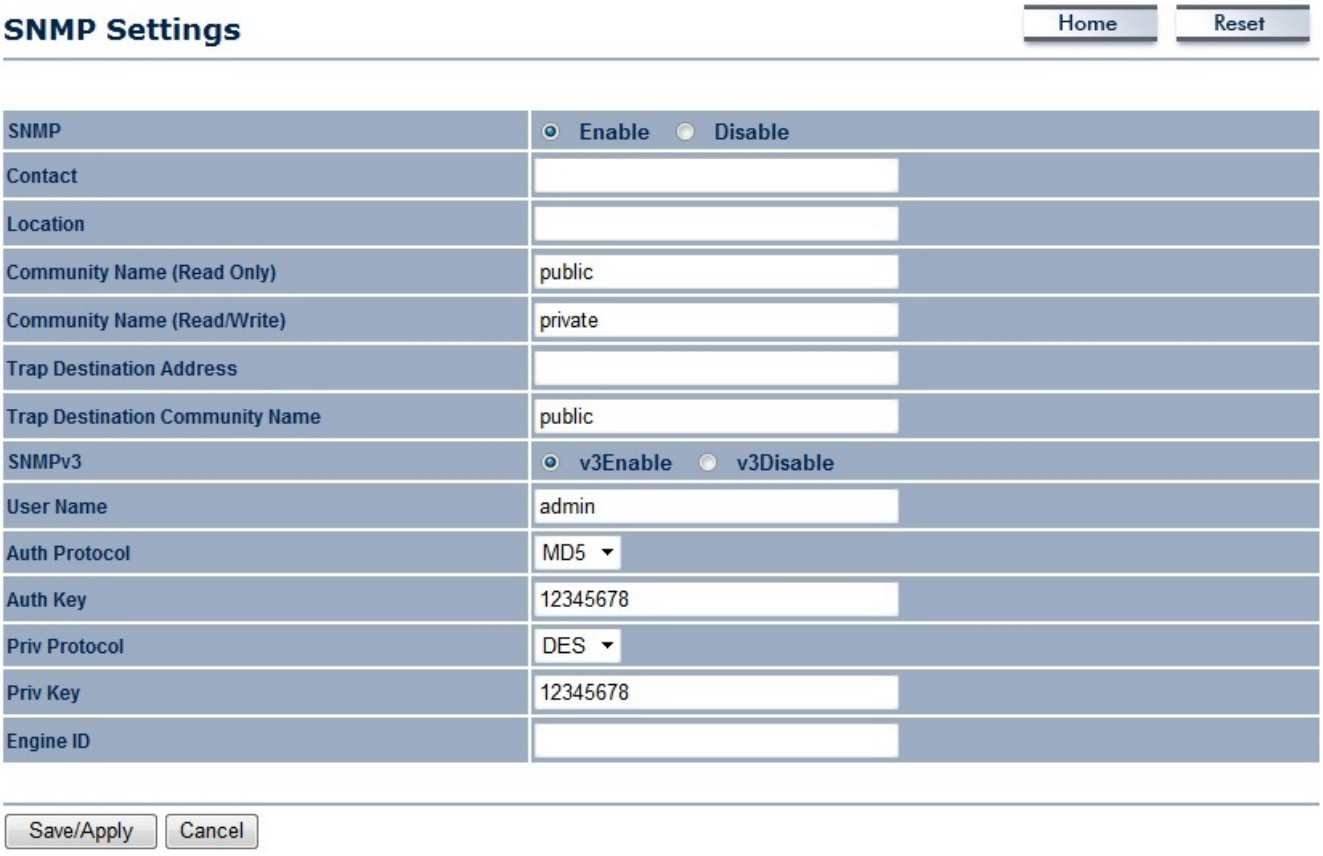
Traffic shaping regulates the flow of packets leaving an interface to deliver improved Quality of Service.



Wireless Traffic Shaping	
Enable Traffic Shaping	Check this option to enable wireless traffic shaping.
Incoming Traffic Limit	Specify the wireless transmission speed used for downloading.
2.4G / 5G Setting	
Outgoing Traffic Limit	Specify the wireless transmission speed used for uploading.
Total Percentage	It shows how much percentage has been used.
SSID #1~#8	Specify the wireless transmission speed used for each SSID.
Accept / Cancel	Click **Accept** to confirm the changes or **Cancel** to cancel and return previous se

8.4 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.

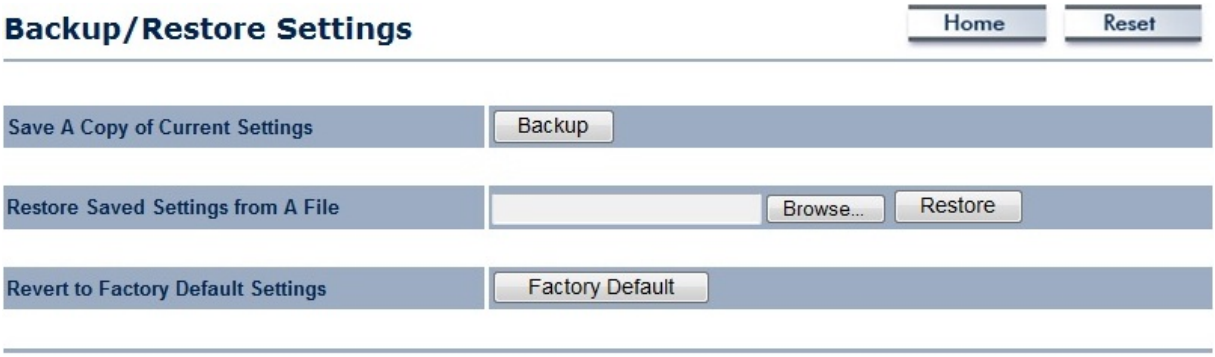


SNMP	
SNMP Enable/Disable	Enable or Disable SNMP feature.
Contact	Specify the contact details of the device
Location	Specify the location of the device.
Community Name (Read Only)	Specify the password for the SNMP community for read only access.
Community Name (Read/Write)	Specify the password for the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

8.5 Backup/Restore

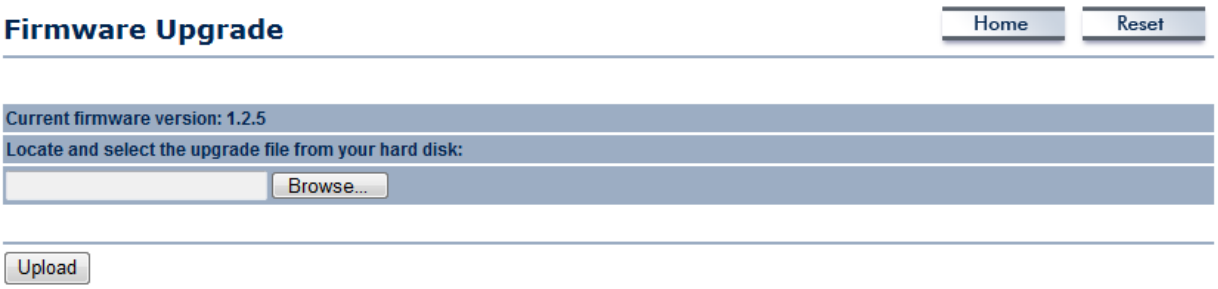
This page allows you to save the current device configurations. When you save the configurations, you also can reload the saved configurations into the device through the **Restore Saved Settings from A File** section. If extreme problems occur, or if you have set up the ALL02880ND incorrectly, you can use the **Factory Default** button in the **Revert to Factory Default Settings** section to restore all the configurations of the ALL02880ND 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 ALL02880ND to its factory default settings.

8.6 Firmware Upgrade

This page allows you to upgrade the firmware of the ALL02880ND.



To perform the Firmware Upgrade:

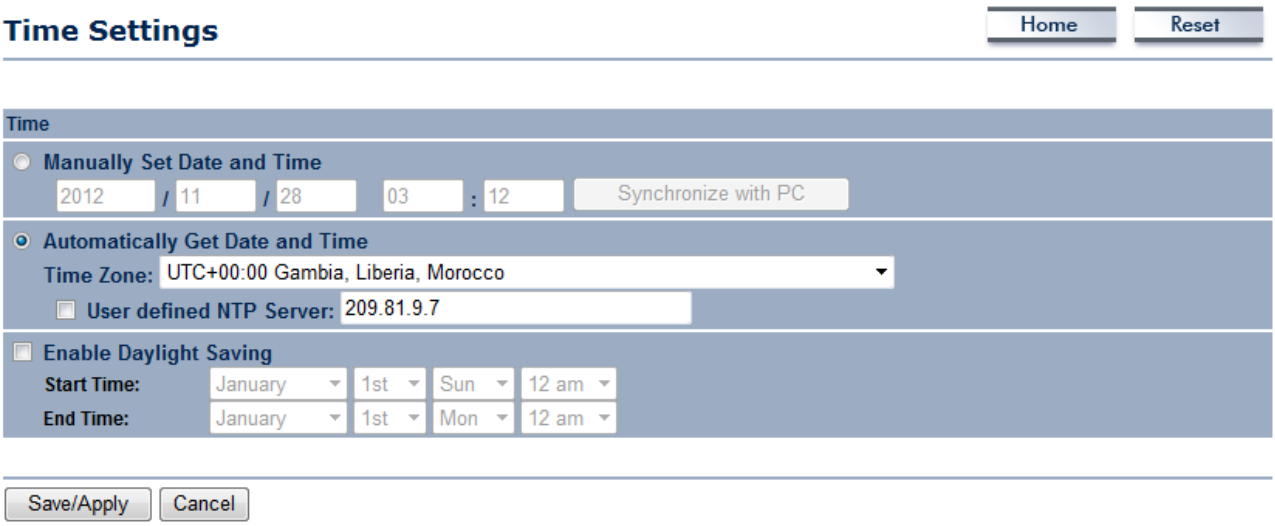
1) Click the **Browse** button and navigate the OS File System to the location of the upgrade file.
2) Select the upgrade file. The name of the file will appear in the *Upgrade File* field.
3) Click the **Upload** button to commence the firmware upgrade.

e)

f) **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 Settings

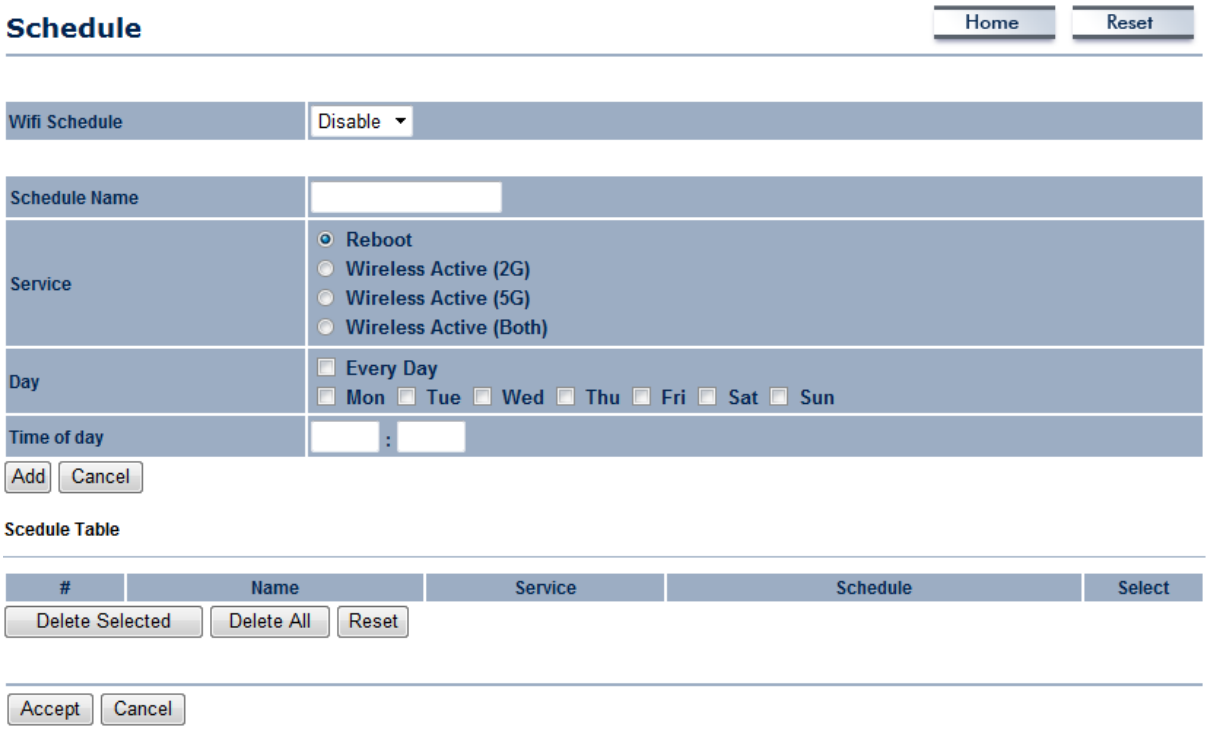
This page allows you to set the internal clock of the ALL02880ND.



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 Schedule

Use the schedule function to control the wireless on/off or reboot ALL02880ND on a routine basis. The Schedule function relies on the GMT time setting acquired from a network time protocol (NTP) server. For details on how to connect the ALL02880ND to an NTP server, see *Time Settings*.

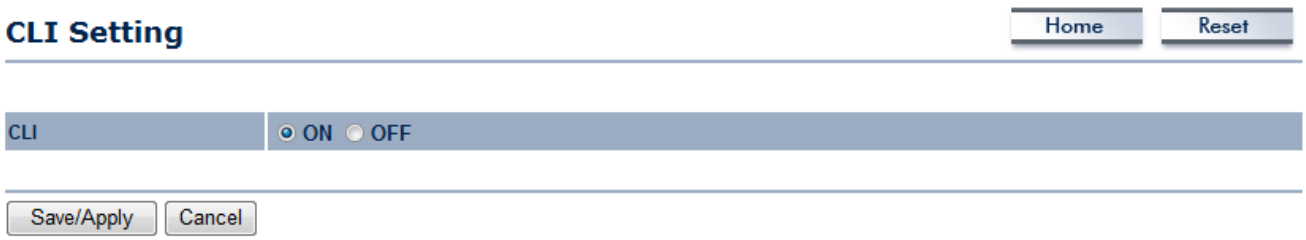


Schedule	
Wifi Schedule	Select to **Enable** or **Disable** schedule function.
Schedule Name	Enter the description of the schedule service.
Service	Select the type of schedule service, either Wireless Power ON or Wireless Power OFF.
Day	Select the days of the week to enable the schedule service.
Time of Day	Set the start time that the service is active.
Add / Cancel	Click **Add** to append the schedule service to the schedule service table, or **Cancel** to discard changes.
Schedule Table	
#	Displays the ID number of the service in the table.
Name	Displays the description of the service.
Service	Displays the type of service.

Schedule	Displays the schedule information of when the service is active.
Select	Select one or more services to edit or delete.
Delete Selected / Delete All	Click **Delete Selected** to delete the selected services or **Delete All** to delete all services.
Accept / Cancel	Click **Accept** to save the settings or **Cancel** to discard changes.

8.9 CLI Setting

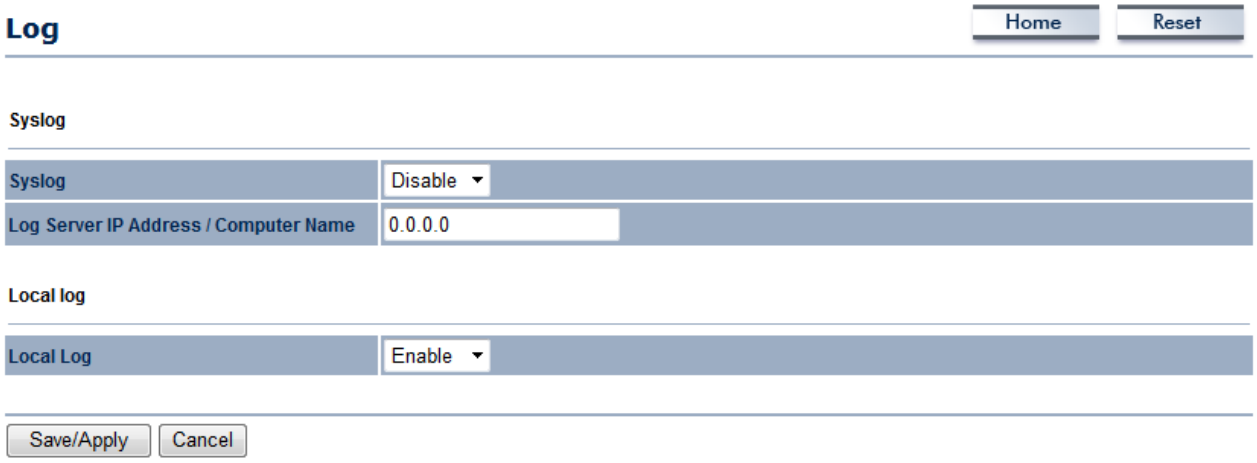
Most users will configure the ALL02880ND through the graphical user interface (GUI). However, for those who prefer an alternative method there is the command line interface (CLI). The CLI can be access through a command console, modem or Telnet connection.



CLI Setting	
CLI	Select **ON** or **OFF** to enable or disable the ability to modify the ALL02880ND via a command line interface (CLI).
Save/Apply / Cancel	Click **Save/Apply** to apply the changes or **Cancel** to return previous settings.

8.10 Log

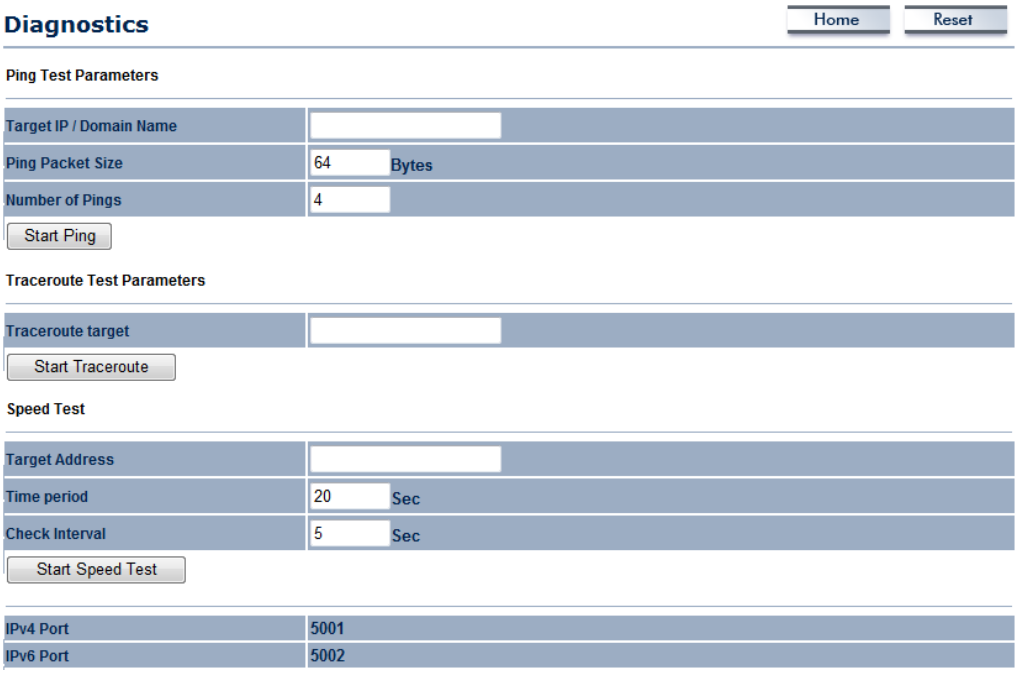
Display a list of events that are triggered on the ALL02880ND Ethernet and wireless interfaces. You can consult this log if an unknown error occurs on the system or when a report needs to be sent to the technical support department for debugging purposes.



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

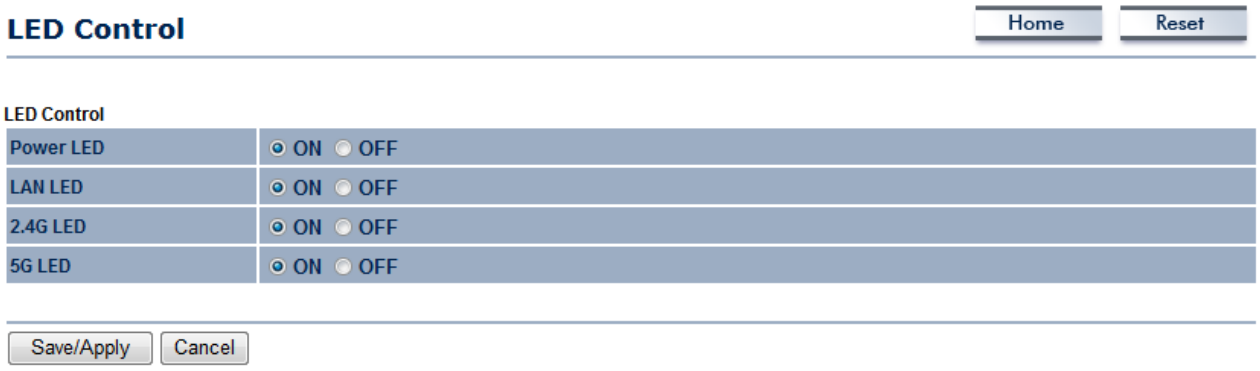
The diagnostics feature allows the administrator to verify that another device is available on the network and is accepting request packets. If get ping packet response, it means a device is on line. This feature does not work if the target device is behind a firewall or has security software installed.



Diagnostics	
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.
Target Address	Enter the IP address of the target PC.
Time period	Enter time period for the speed test.
Check Interval	Enter the interval for the speed test.
Start Speed Test	Click **Start Speed Test** to begin the speed test operation.
IPv4 / IPv6 Port	ALL02880ND use IPv4 port 5001 and IPv6 port 5002 for the speed test.

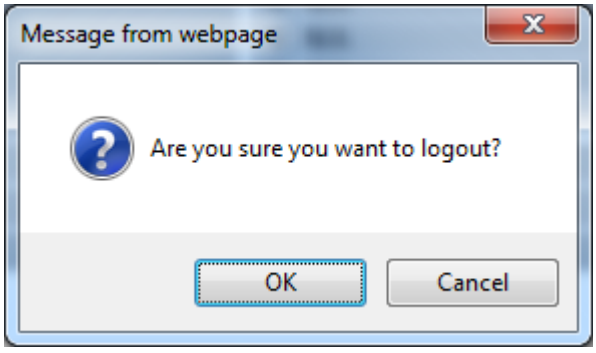
8.12 LED Control

This page allows you to control LED on/off for Power, LAN interface and 2.4G/5G WLAN interface.



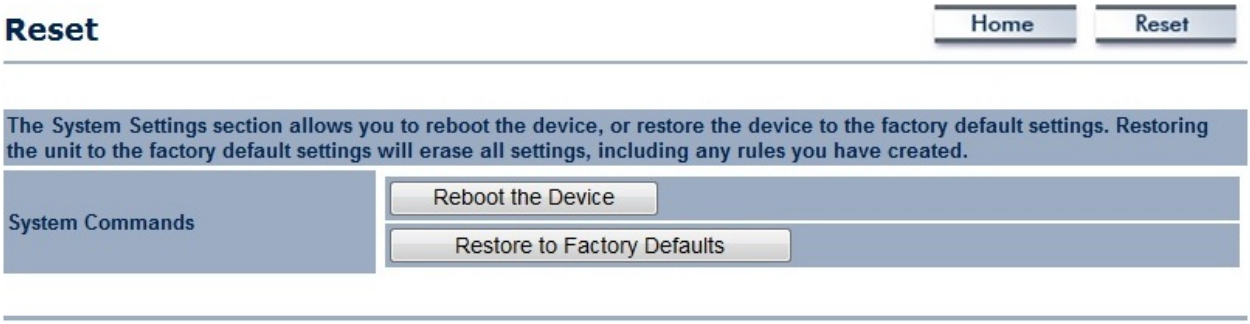
8.13 Logout

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



8.14 Reset

In some circumstances, it may be required to force the device to reboot. Click on **Reboot the Device** to reboot the ALL02880ND.



CE-Declaration of Conformity

For the following equipment:

Germering, 1st of August, 2013

Wireless N 300Mbit Dual Band AP PoE

ALL02880ND

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 ALLNET ALL02880ND conforms to the Council EMC Directives of 2006/95/EC.

This equipment meets the following conformance standards:

EN 60950-1:2006 +A11:2009 + A1:2010 + A12:2011
EN 300 328 V1.7.1 (2006-10) **EN 301 893 V1.6.1 (2011-11)**
EN 301 489-1 V1.9.2 (2011-09) **EN 301 489-17 V2.2.1 (2012-09)** EN 55022:2010 +AC:2011, Class B EN 61000-3-2:2006 +A1:2009 +A2:2009, Class A EN 61000-3-3:2008 EN 61000-4-2:2009 EN 61000-4-3:2006 +A1:2008 +A2:2010 EN 61000-4-4:2012 EN 61000-4-5:2006 EN 61000-4-11:2004
EN 50385:2002

This equipment is intended to be operated in all countries.

This declaration is made by

ALLNET Computersysteme GmbH

Maistraße 2

82110 Germering

Germany

Germering, 01.08.2013

Wolfgang Marcus Bauer
CEO