



WAP-6121/WAP-8121/WAP-8122
N300/ AC750/ AC1200 PoE Wireless Access Point,
Ceiling Mount, Controller Managed

User's Manual

Attention:

1. Check box contents:

Ceiling Wireless AP

LAN cable

QIG

Setting Screws

2. Warning:



Attention

- Do not use the product in high humidity or high temperatures.
- Do not use the same power source for the Product as other equipment. Only use the power adapter that comes with the package. Using a different voltage rating power adapter may damage the device.
- Do not open or repair the case yourself. If the Product is too hot, turn off the power immediately and have it repaired at a qualified service center.
- Place the Product on a stable surface and avoid using this product and all accessories outdoors.

Contents

CHAPTER 1 HARDWARE AND OPERATION MODE INSTRUCTION	4
1.1 LED indicator:	5
1.2 AP Interface:.....	5
1.3 Power Supply:	5
1.4 AP Installation:	5
CHAPTER 2 CONNECT WIRELESS AP WITH PC:	7
CHAPTER 3 LOGIN	8
CHAPTER 4 WEB GUI INTERFACE SETTING:	11
4.1 Status:	11
4.2 Wizard Configuration:	13
4.2.1 Gateway Mode:	14
4.2.2 WiFi Repeater mode	15
4.2.3 WISP Operation mode:	19
4.2.4 AP Operation mode:	21
4.3 Advanced Setting:	22
4.3.1 Device Status:	22
4.3.2 Wireless Basic settings:	24
4.3.3 Virtual AP:	24
4.3.4 Access Control:	25
4.3.5 Advanced Settings:	25
4.3.6 Network:	26
4.3.7 Management:	27
CHAPTER 5 SHARE INTERNET AND OBTAIN IP ADDRESS AUTOMATICALLY ...	30
CHAPTER 6 TROUBLE SHOOTING:	31
APPENDIX A LICENSE STATEMENT / GPL CODE STATEMENT.....	32

Chapter 1 Hardware and Operation mode Instruction



▲ WAP-6121v1 & WAP-8121v2 - P1



▲ WAP-6121v2 & WAP-8121v3 - P2

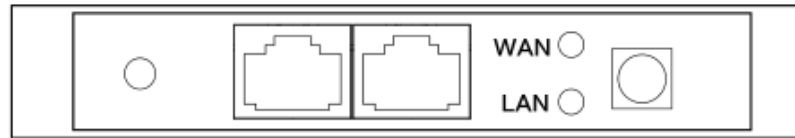


▲ WAP-8122v2 & WAP-8122v3 - P3

1.1 LED indicator:

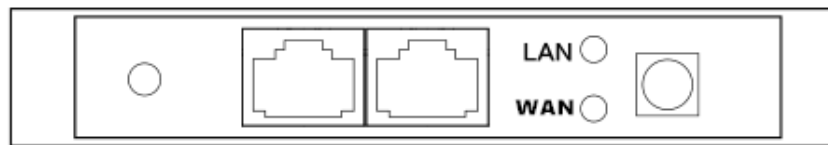
Green: Power Indicator
Blue: WiFi Indicator

1.2 AP Interface:



RST WAN LAN LED DC

WAP-6121/ WAP-8121



RST LAN WAN LED DC

WAP-8122

RST: Reset Button, it make AP revert to default data after press it 15 seconds.

WAN: WAN Port, connect with ADSL modem or Internet mainly. It will be LAN port under WISP and WiFi Repeater operation mode

LAN: LAN Port to end users

LED: LED Indicator of WAN port and LAN port

DC: DC power connector

1.3 Power Supply:

The connection diagram shows as P2, Internet cable from PoE Switch to Ceiling AP's WAN Port, then PC access into ceiling AP wired/wireless.

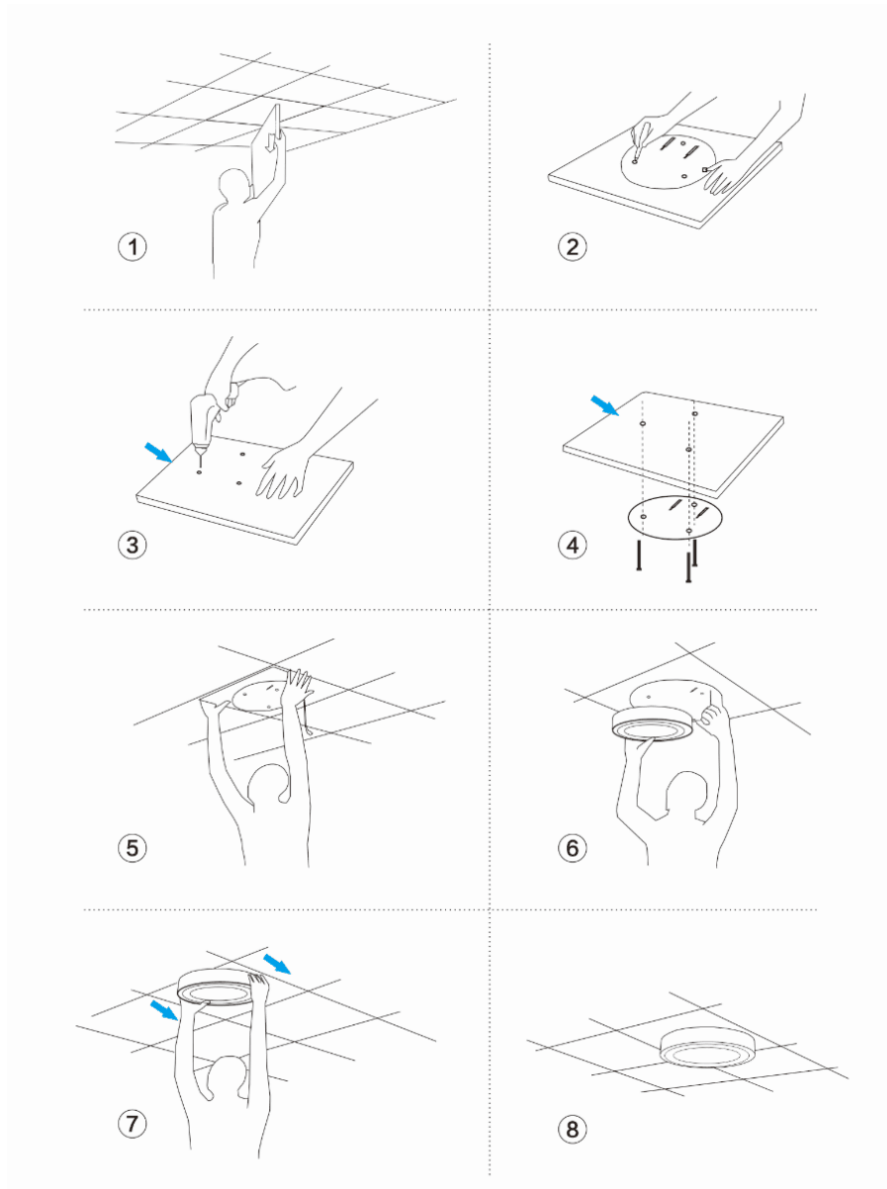
Pls note the PD wireless AP support 48V IEEE 802.3af standard PoE, the PoE switch should comply with 802.3af 48V PoE (WAP-6121 / WAP-8122) and 802.3at 48V PoE (WAP-8122) standard.



P2

1.4 AP Installation:

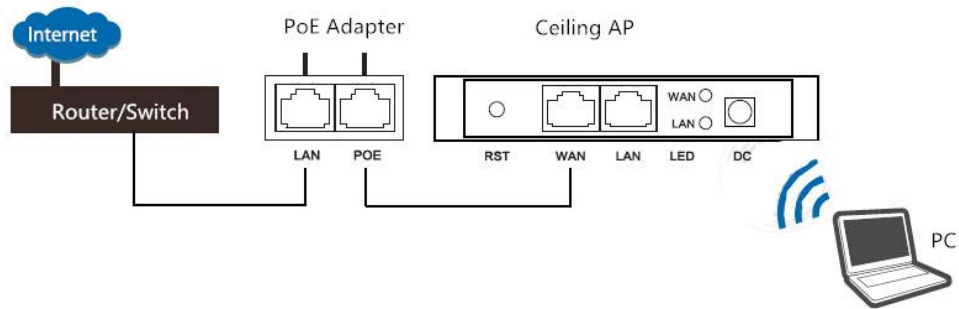
For the Ceiling Wireless AP, will be installed under ceiling based on following steps:



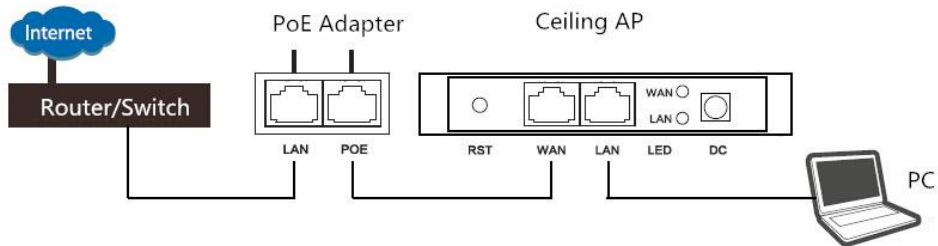
P3 AP installation

Chapter 2 Connect Wireless AP with PC:

Use can connect the PC with wireless AP by Wireless SSID and LAN cable:
The diagram of wireless connection showed as follow:
Pls note: the default SSID is **LevelOne**, **SSID's password is 66666666**



The diagram of LAN cable connection showed as follow:

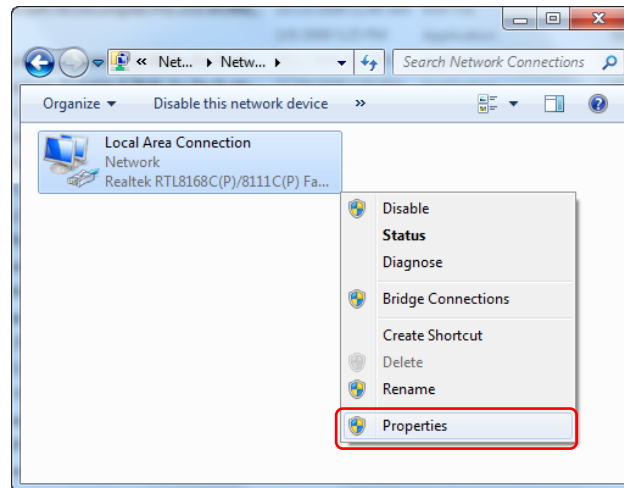


P4 Connection way

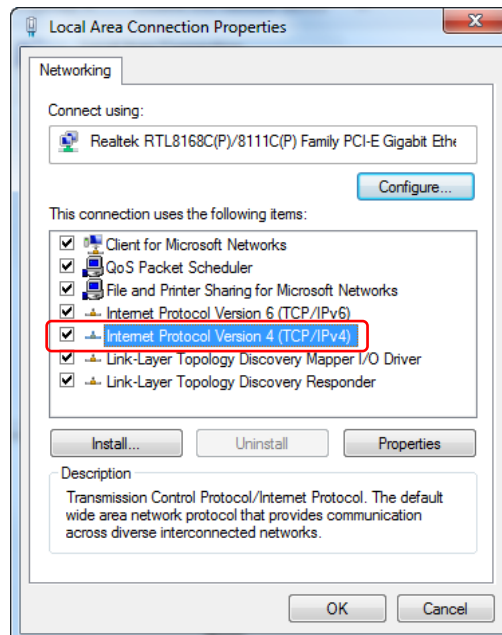
Chapter 3: Login

The necessary information about log in is displayed on the sticker of the product, including the URL, User Name and Pass Word

- 1) Connect the Ceiling AP with computer
- 2) Configure the PC's local connection IP address as 192.168.188.X (X is number from 2 to 252), subnet mask is 255.255.255.0, follow P5 and P6 to finish.

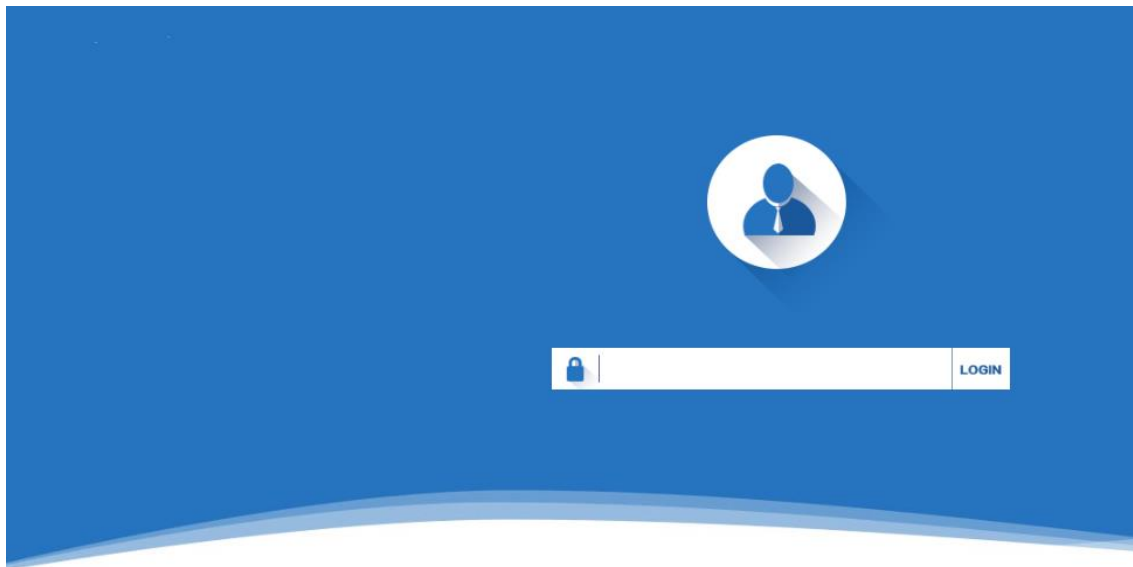


P5 Setting of computer's IP address



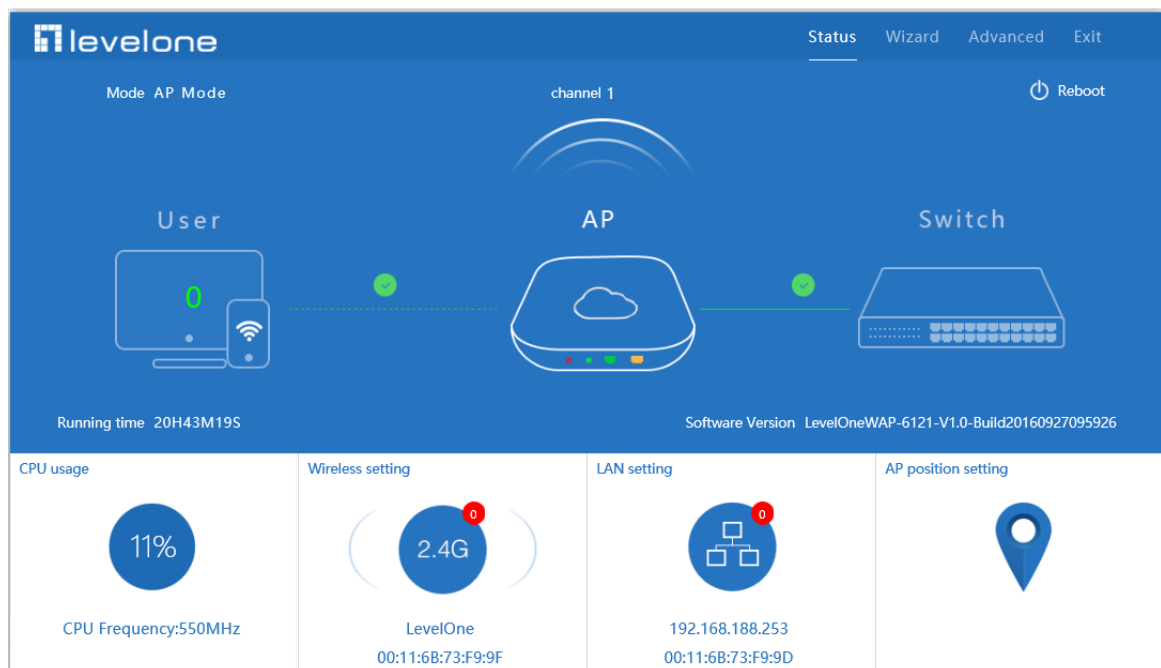
P 6 Setting of computer's IP address

- 3) Input 192.168.188.253 into IE browser, then pop up the login page, the default login password: admin, then login, pls do following P7

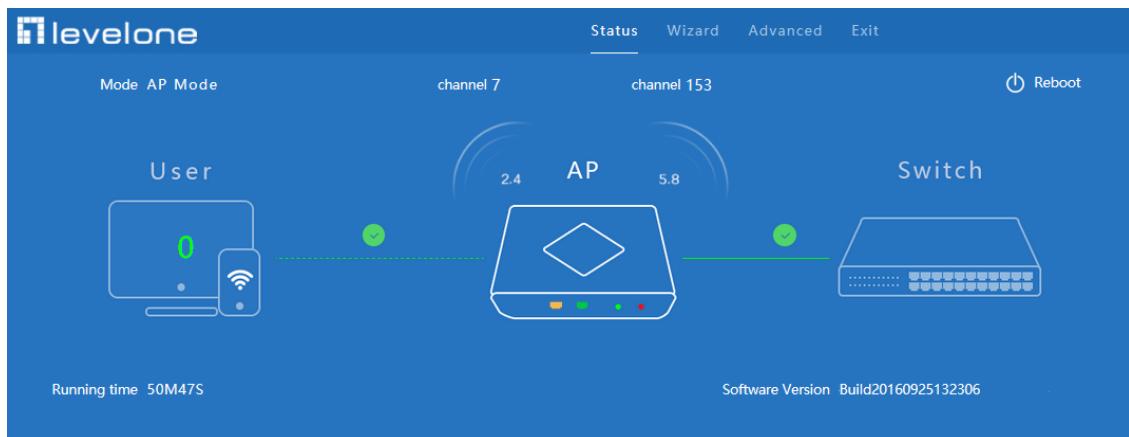






P7 Login

- 4) After login, then P8 and P9 Device Status will be showed;
This page will show the Wireless AP's default operation mode, channel, connection status, CPU usage, Wireless settings, LAN Setting, Wireless AP's Location, hardware/firmware version.



P8: WAP-6121 Device Status



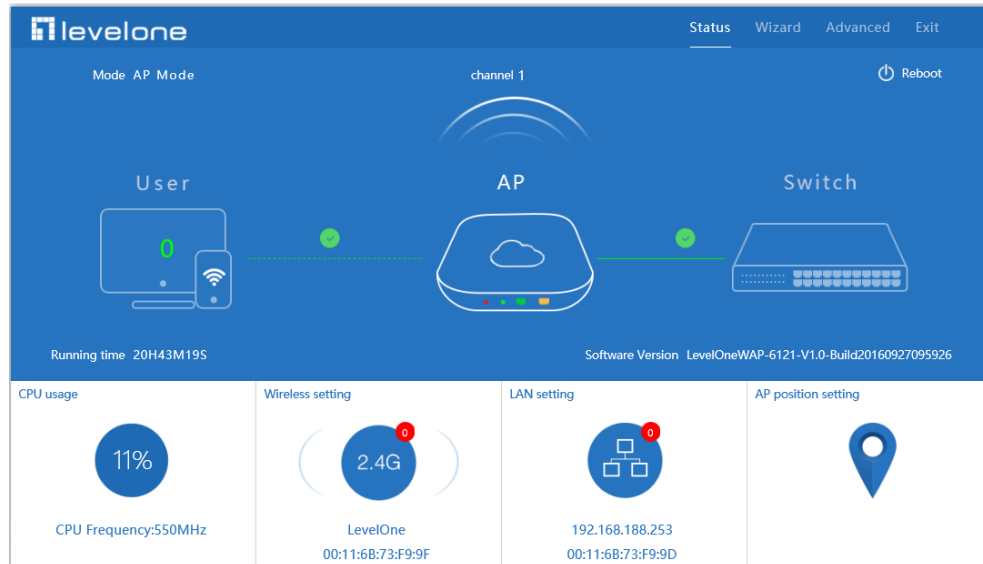
2.4G Wireless setting	5.8G Wireless setting	LAN setting	AP position setting
 Wireless 2.4G 78:D3:8D:D3:BF:89	 Wireless 5.8G 78:D3:8D:D3:BF:8A	 192.168.188.253 78:D3:8D:D3:BF:88	

P9: WAP-8121/WAP-8122 Device Status

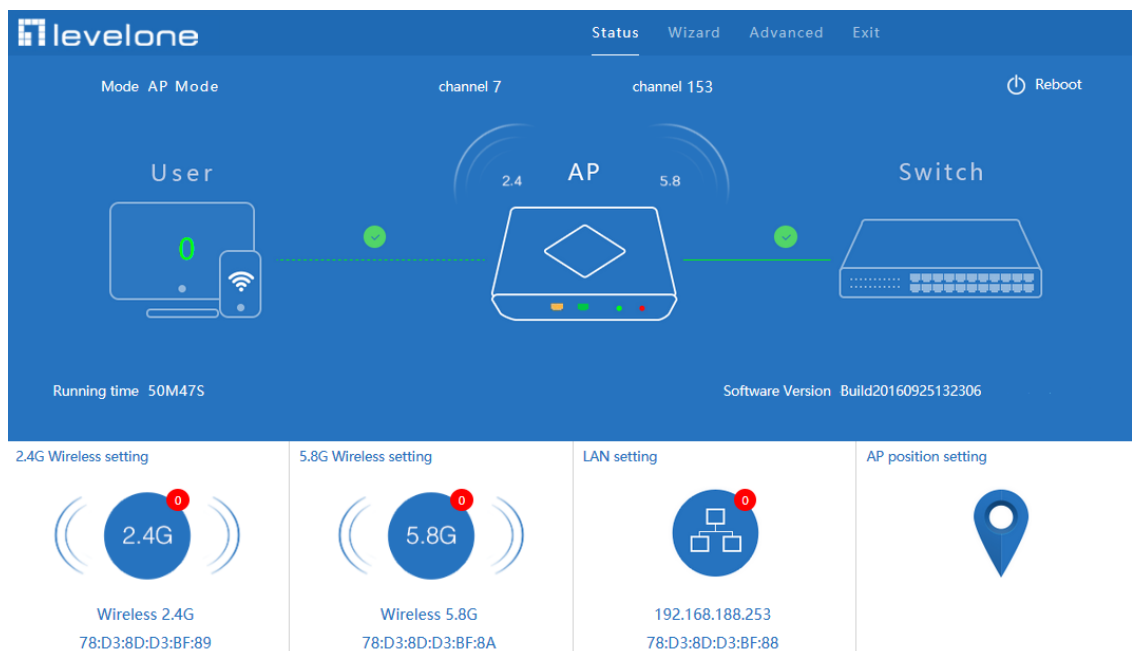
Chapter 4 : WEB GUI interface Setting:

4.1 Status:

After login, then P10 and P11 Device Status and home page will be showed:



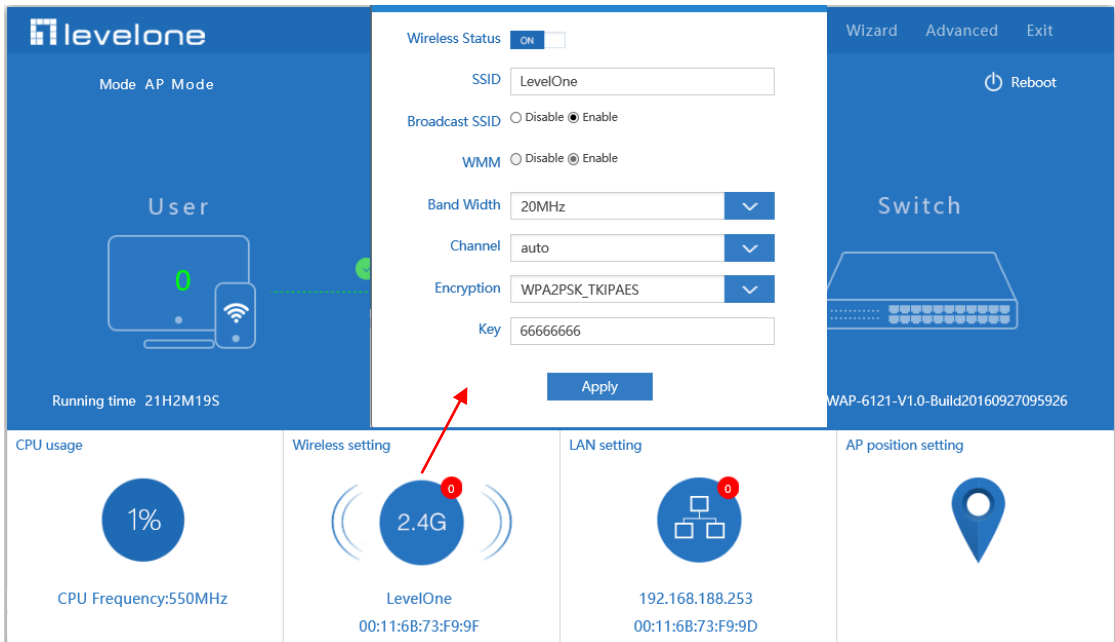
P10: WAP-6121 Device Status



P11: WAP-8121/WAP-8122 Device Status

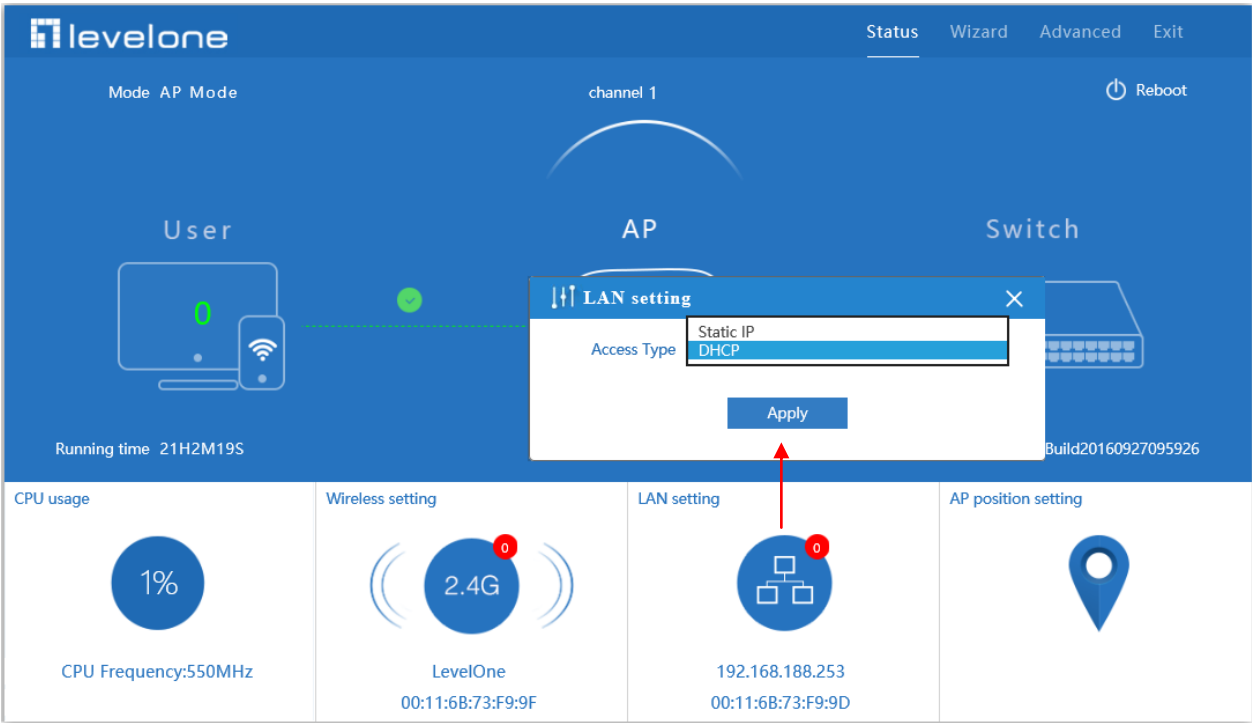
In this page, show the AP's default operation mode, channel, end user QTY, connection status, CPU usage status, Wireless, LAN and AP location info.

Then in Wireless Setting, GUI configuration page showed as below:
User can configure the SSID, password, band width, channel here, then Apply to finish.



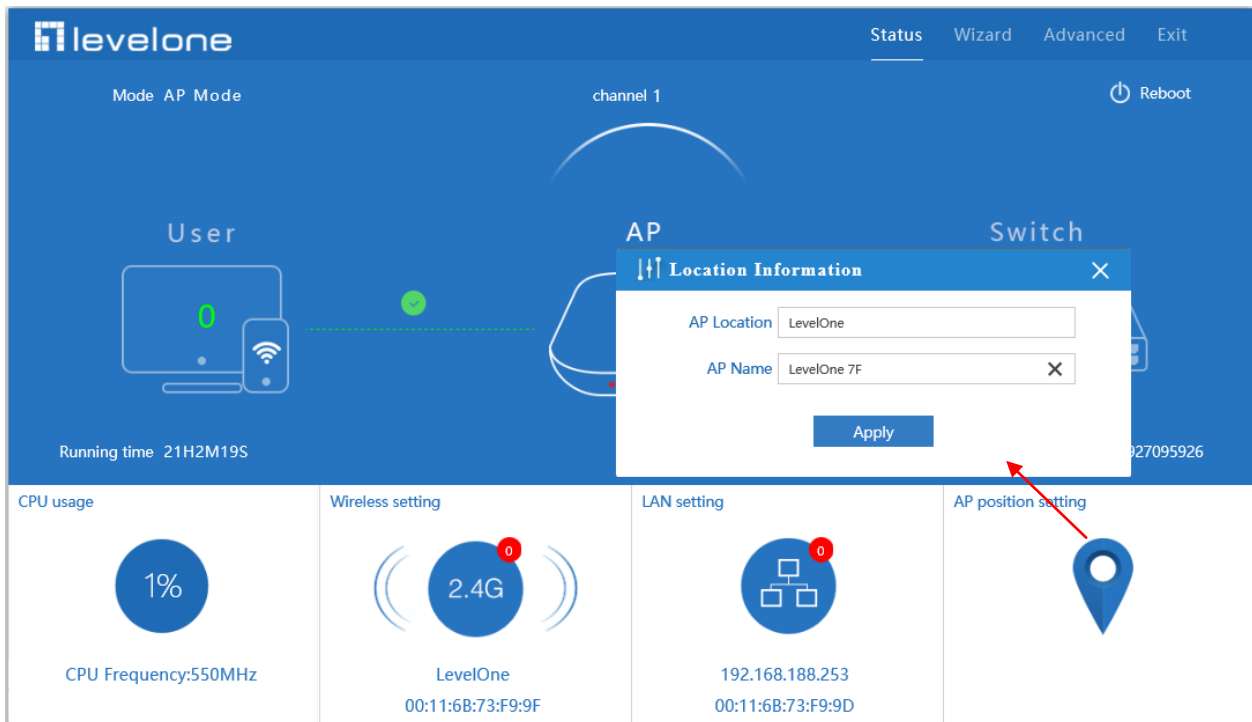
P12. Wireless setting

LAN Setting to configure the DHCP or Fix IP



P13 LAN Setting

AP location setting: can mark where the AP set up, and AP name as P12:

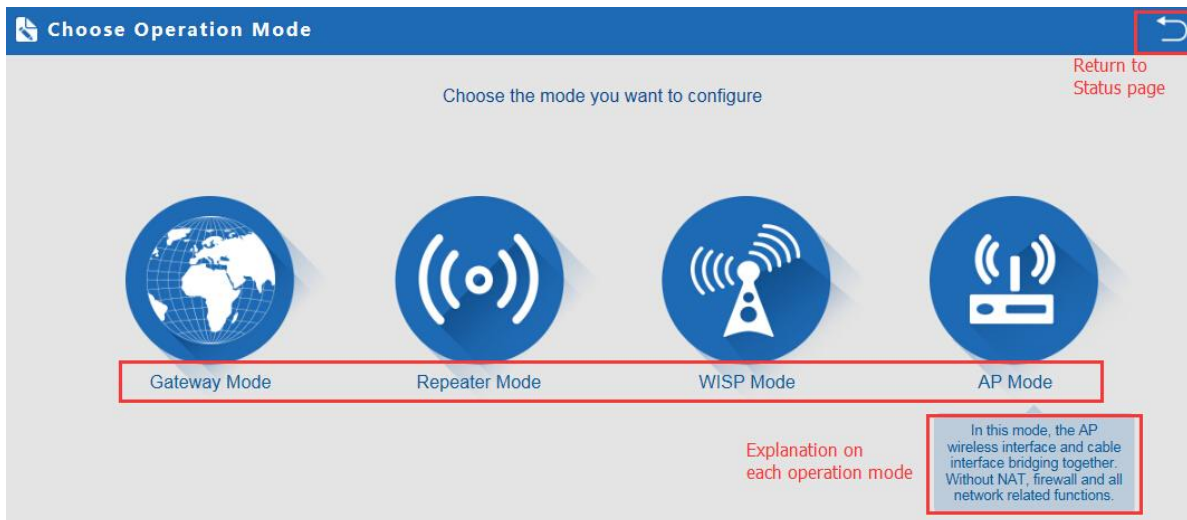


P14 AP Position setting

4.2 Wizard Configuration:

Wizard: It instructs users to configure wireless AP's operation mode based on needs: there are four operation modes including gateway, repeater, WISP, Wireless AP. Please confirm the operation mode first before configuration starting.

Click Wizard in Status page, will pop up following page to configure the operation mode and there is an explanation for each operation mode for better application.



P15 Operation mode

4.2.1 Gateway Mode:

Before Click Gateway mode, confirm your internet will be static IP, PPPoE, or DHCP:

Then will pop up following picture after click it, Please choose the right WAN setting mode, then click next to continue.

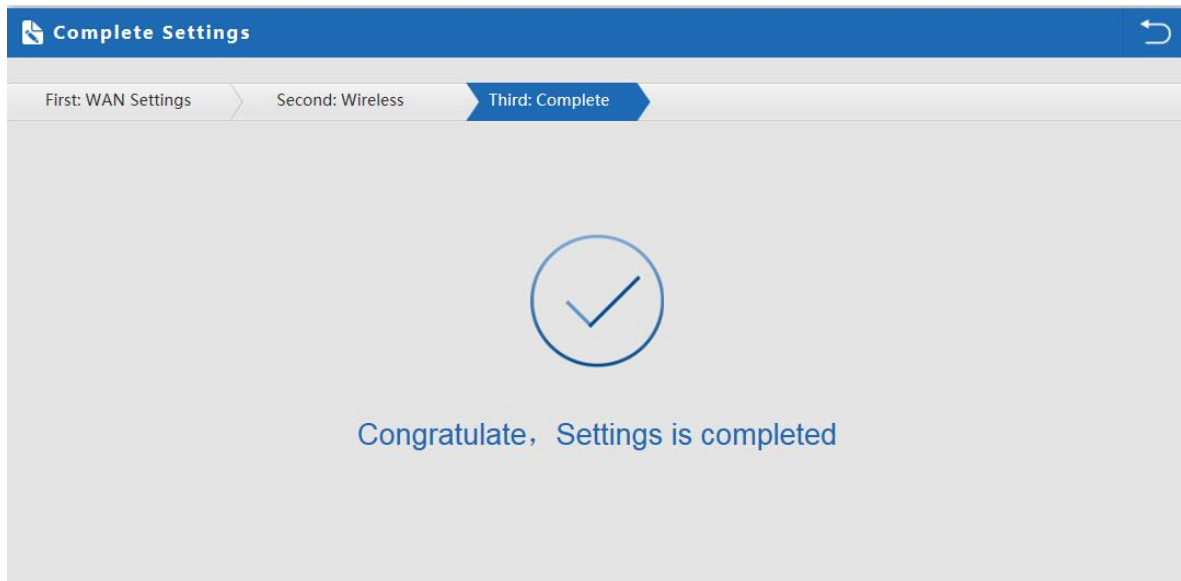
The screenshot shows the 'Gateway Mode' configuration interface. At the top, there's a blue header with a back arrow. Below it, a progress bar indicates three steps: 'First: WAN Settings' (highlighted with a red box and labeled '1st'), 'Second: Wireless', and 'Third: Complete'. Under the first step, three options are listed: 'Static IP', 'PPPOE(ADSL)', and 'DHCP' (highlighted with a red box and labeled '2nd'). A message box states: 'The current access mode is DHCP, Please click next to configure.' At the bottom, there are 'Back' and 'Next' buttons (both highlighted with a red box and labeled '3rd').

P16. WAN setting in Gateway Mode

The screenshot shows the 'Gateway Mode' configuration interface for wireless settings. The progress bar now shows 'First: WAN Settings' and 'Second: Wireless' (highlighted with a blue arrow), with 'Third: Complete' remaining. Under the 'Second: Wireless' step, the 'Wireless Settings' section is active. It includes a 'WLAN Status' toggle set to 'ON' with a 'wireless analyzer' button. Below this, there are input fields for 'SSID' (containing 'LevelOne'), 'Channel' (a dropdown menu set to 'auto'), 'Encryption' (a dropdown menu set to 'WPA2PSK_TKIPAES'), and 'Key' (containing '66666666'). At the bottom, there are 'Back' and 'Next' buttons.

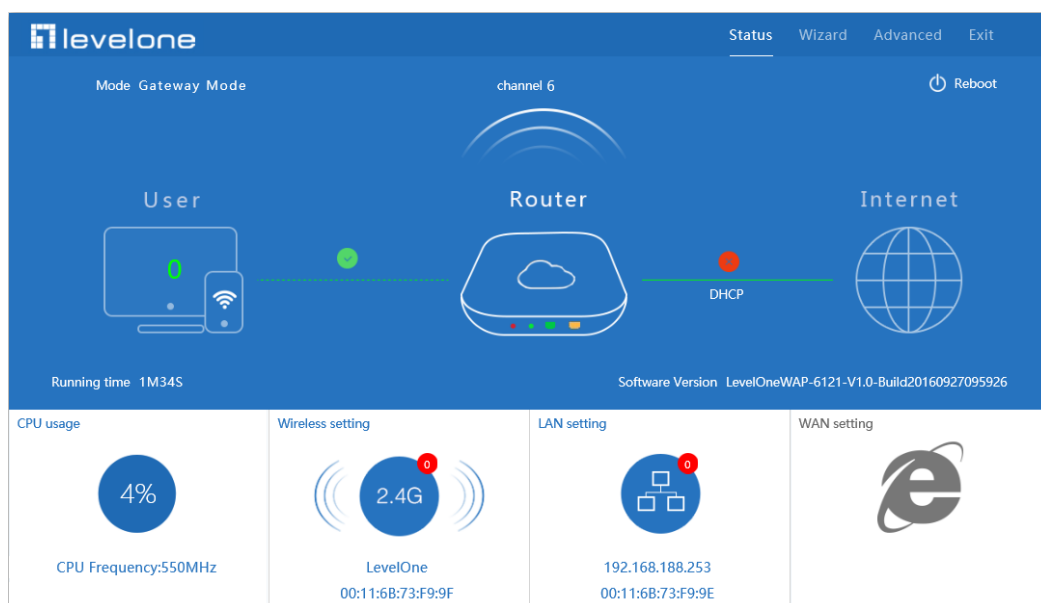
P17 Wireless Setting in Gateway Mode

When click Next, then will complete the Gateway mode setting and show following picture:



P18 Complete the setting in Gateway Mode

When return to Status, will show wireless router's SSID, internet connection, LAN connection status showed as follow:



P19 Status in Gateway Mode

4.2.2 WiFi Repeater mode

WAP-6121

- Login the Web management page, click “Wizard”, then “WiFi Repeater”
- Select the AP's SSID want to bridge, take “wireless 2.4G” for example, then input the AP's key, click next to complete.

Repeater Mode

First: Repeater Second: Complete

Wireless Repeater

Repeater SSID: Level1_9F Scan AP

Authentication: WPAPSK_TKIPAES

Key: 1234567890

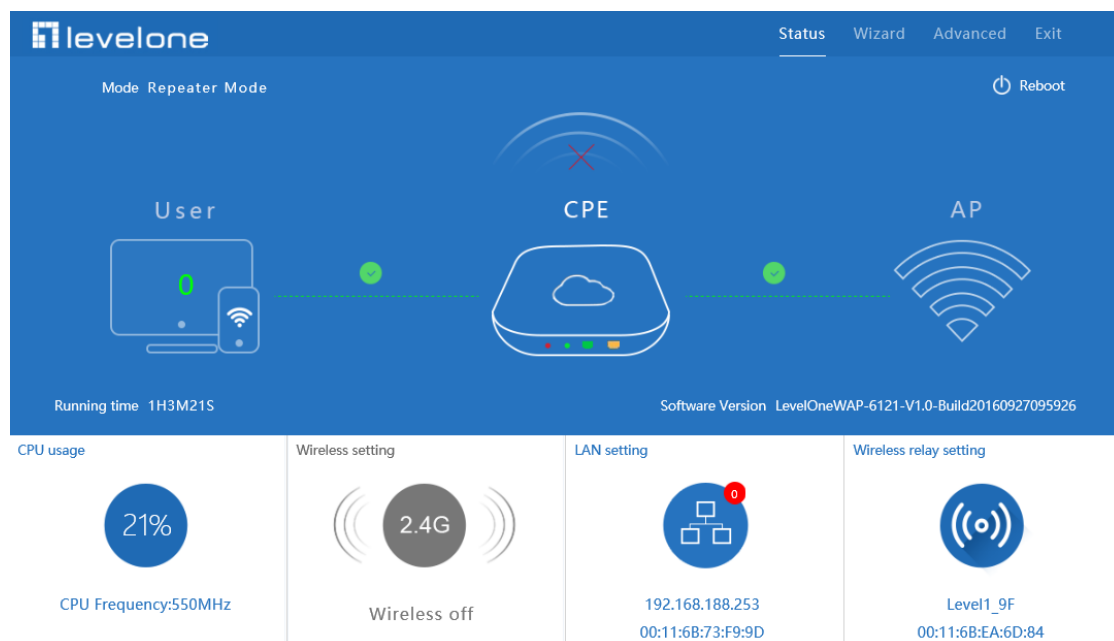
Band Width: 20MHz

☒ WDS Passthrough

Back Next

P20 WAP-6121 Repeater Mode

Click Return button, will back to Status, show Repeater mode data, show fail or success, and user can configure this data in this page if required.



P21 WAP-6121 Status in Repeater Mode

In wifi repeater operation mode, the default is SSID disable. If want to enable SSID, then click Wireless Setting. Pls note, when click wireless relay setting, following page will pop up, you can make change from here easy:

Repeater Mode

First: Repeater Second: Complete

Wireless Repeater

Repeater SSID: Level1_9F Scan AP

Authentication: WPAPSK_TKIPAES

Key: 1234567890

Band Width: 20MHz

☒ WDS Passthrough

Back Next

P22 WAP-6121 Wireless Relay Setting

WAP-8122/WAP-8121

- A. Login the Web management page, click “Wizard”, then “WiFi Repeater”
- B. Scan AP and select the AP’s SSID want to bridge, take “wireless 2.4G” for example, then input the AP’s key, click next to complete.

Repeater Mode

First: Repeater Second: Wireless Third: Complete

Wireless Repeater

Wireless Repeater: 2.4G Repeater SSID: WirelessAP Scan AP

Authentication: 5.8G Key:

Band Width: 20MHz

☒ WDS Passthrough

Back Next

P23 WAP-8122/WAP-8121 Repeater Mode 1

- C. Configure the SSID and password the AP going to broadcast. If you have repeated 2.4G WIFI, in default setting, you are only allowed to broadcast 5.8G WIFI.

Repeater Mode

First: Repeater **Second: Wireless** Third: Complete

Wireless Settings 2.4G/5.8G

5.8G Wireless Settings

5.8GHz WLAN Status: ☒ ON ☐ 5G wireless analyzer

SSID: Wireless 5.8G

Channel: * 5.765 GHz (Channel 153)

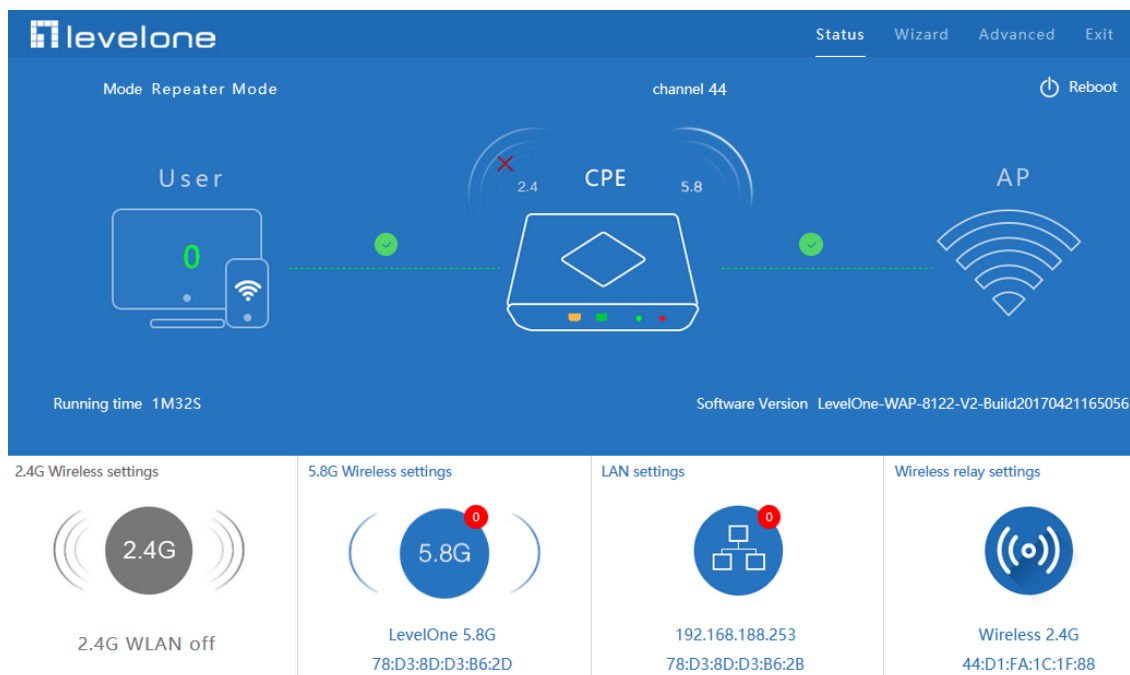
Encryption: WPA/WPA2PSK_TKIPAES

Key: 66666666

Back Next

P24 WAP-8122/WAP-8121-Repeater Mode 2

Click Return button, will back to Status, show Repeater mode data, show fail or success, and user can configure this data in this page if required.



P25 Status in Repeater Mode

In wifi repeater operation mode, only one band SSID can be broadcast. If want to enable dual band SSID, then click Wireless Setting. Pls note, when click wireless relay setting, following page will pop up. Turn on and there will be dual band WIFI SSID.



P26 Wireless Relay Setting

4.2.3 WISP Operation mode:

Click WISP operation mode in Wizard, then will pop up the configure page, pls set the WISP operation mode based on the steps showed in picture:

The repeater part please refer to 4.2.2 WiFi Repeater mode

P27 WISP Mode

Configure the right WAN setting in WISP operation mode, then next to complete

WISP Mode

First: Repeater

Second: WAN

Third: Complete

Static IP

PPPOE(ADSL)

DHCP

IP Address

Subnet Mask

Default Gateway

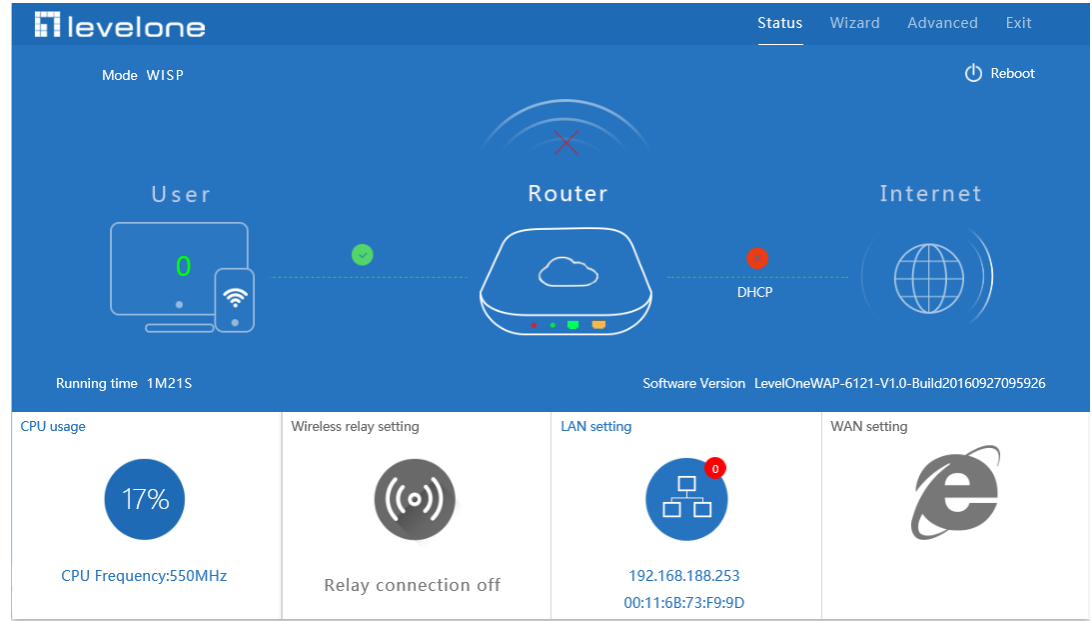
Primary DNS

Back

Next

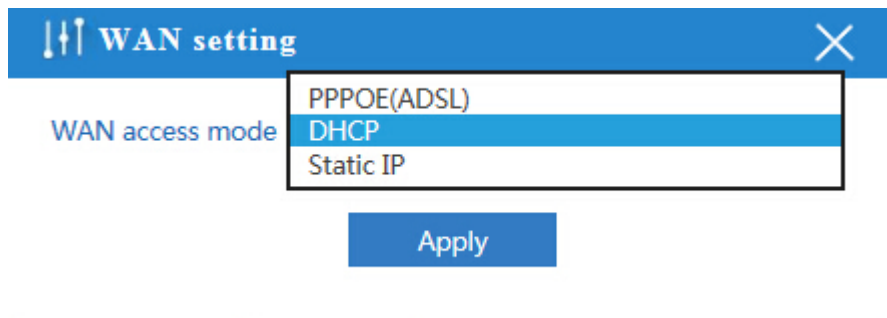
P28 WAN setting in WISP mode

Then complete and back to status, will show the connection fail or success, then can configure the data based on request:



P29 Status in WISP mode

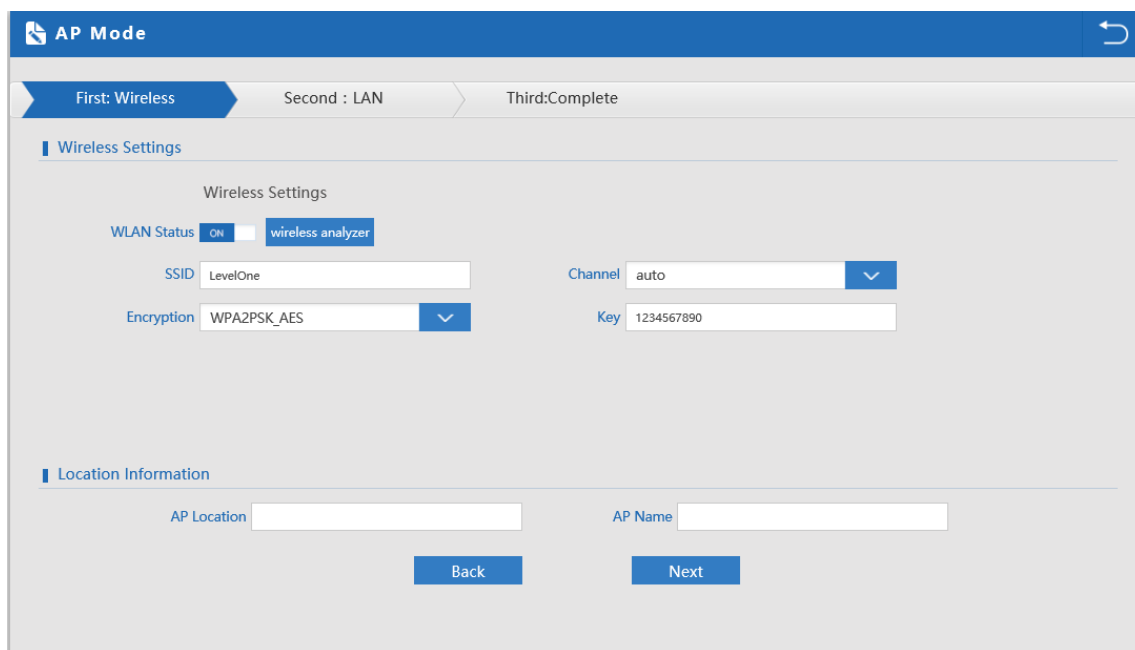
Remark: When click WAN Setting, will pop up following picture to ask you choose PPPoE, DHCP or Static IP



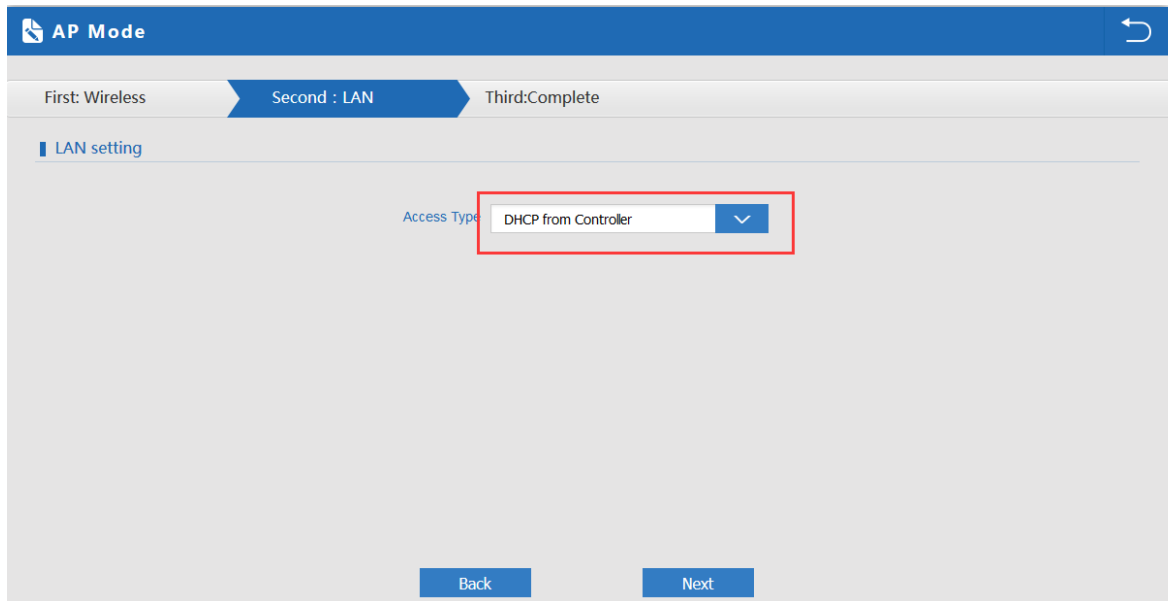
P30 WAN setting in WISP mode

4.2.4 AP Operation mode:

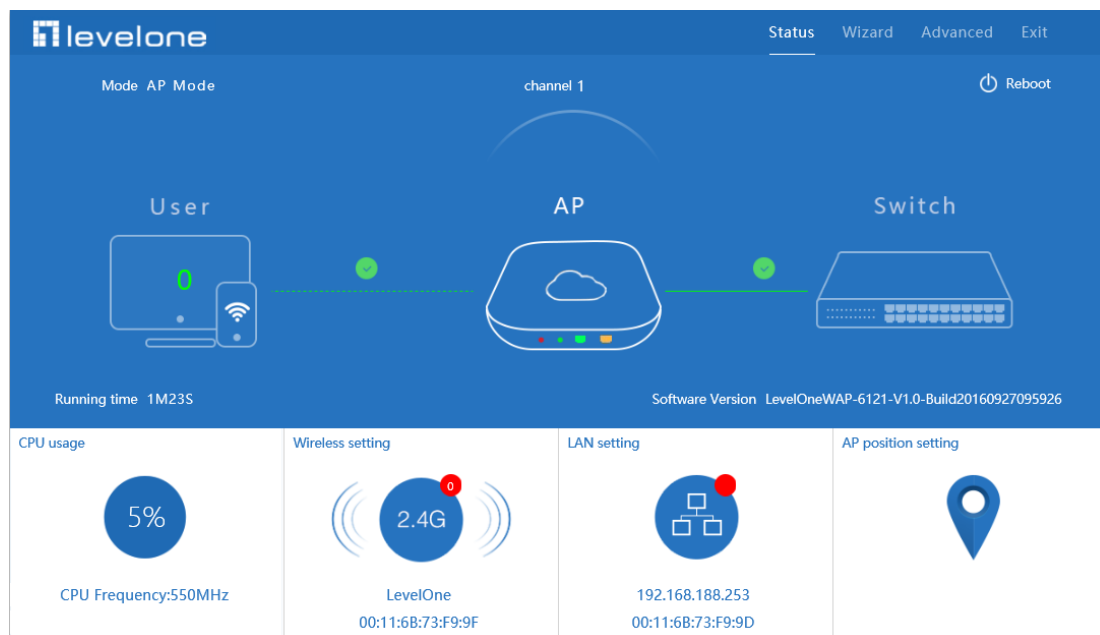
Set the wireless data, AP Location info as required, then click next to continue and enter into LAN setting. After LAN setting, complete the AP mode configuration and back to Status:



P31 Wireless setting in AP Mode



P32 LAN Setting in AP Mode



P33 Status in AP Mode

4.3 Advanced Setting:

In advanced setting, mainly for wireless AP's device status, wireless setting, Networking setting and AP management configure.

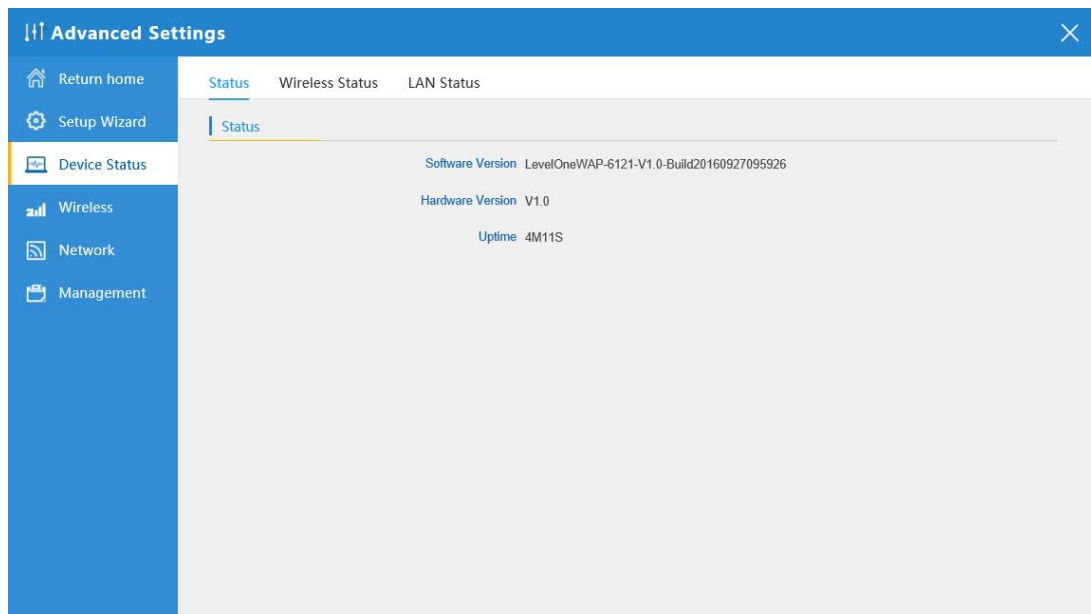
Let's Click Advanced Setting in status page, will show return home, Setup Wizard which we showed before.

Let's shown more in Device Status, Wireless, Network and Management in following pages:

4.3.1 Device Status:

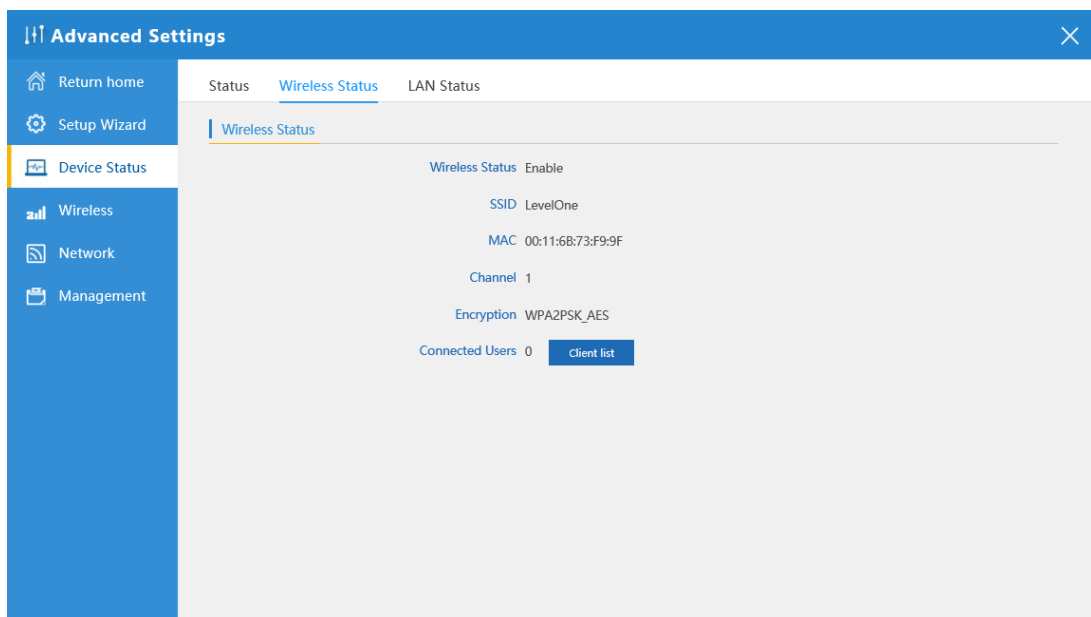
To show the Wireless AP's status, Wireless Status and LAN status.

In status, mainly to check the ceiling wireless AP's firmware version, hardware version, uptime info.:



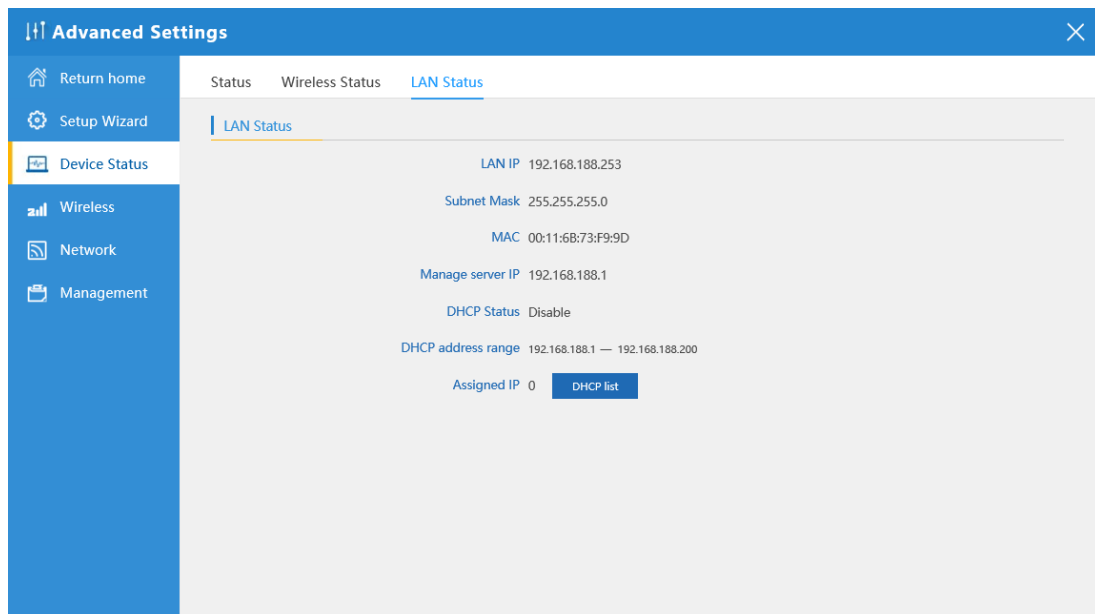
P34 Device Status

In wireless status, to show wireless AP's SSID, MAC address for WiFi, Channel, Encryption, Client List info.



P35 Wireless Status

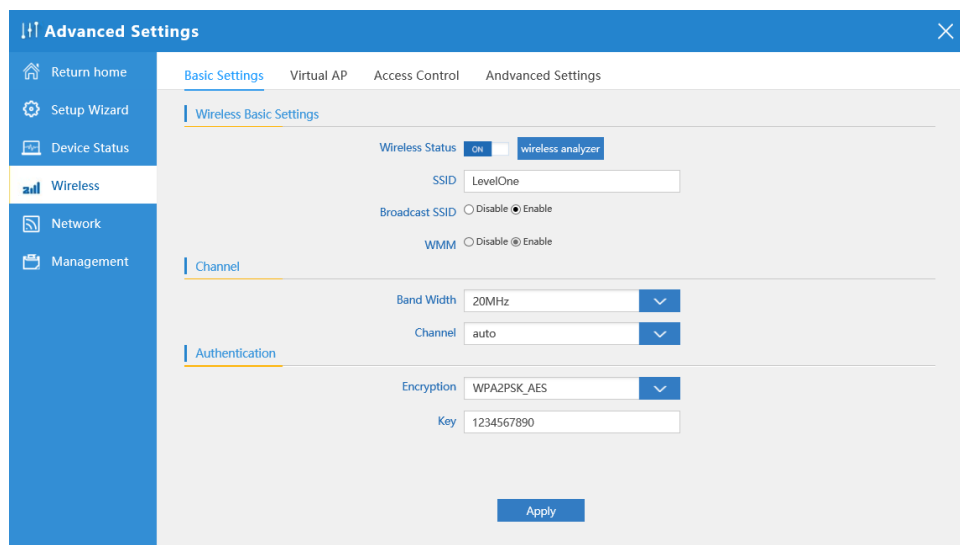
In LAN Status, we can check wireless AP's IP address, Subnet Mask, LAN MAC address and other info showed in following picture.



P36 LAN Status

4.3.2 Wireless Basic settings:

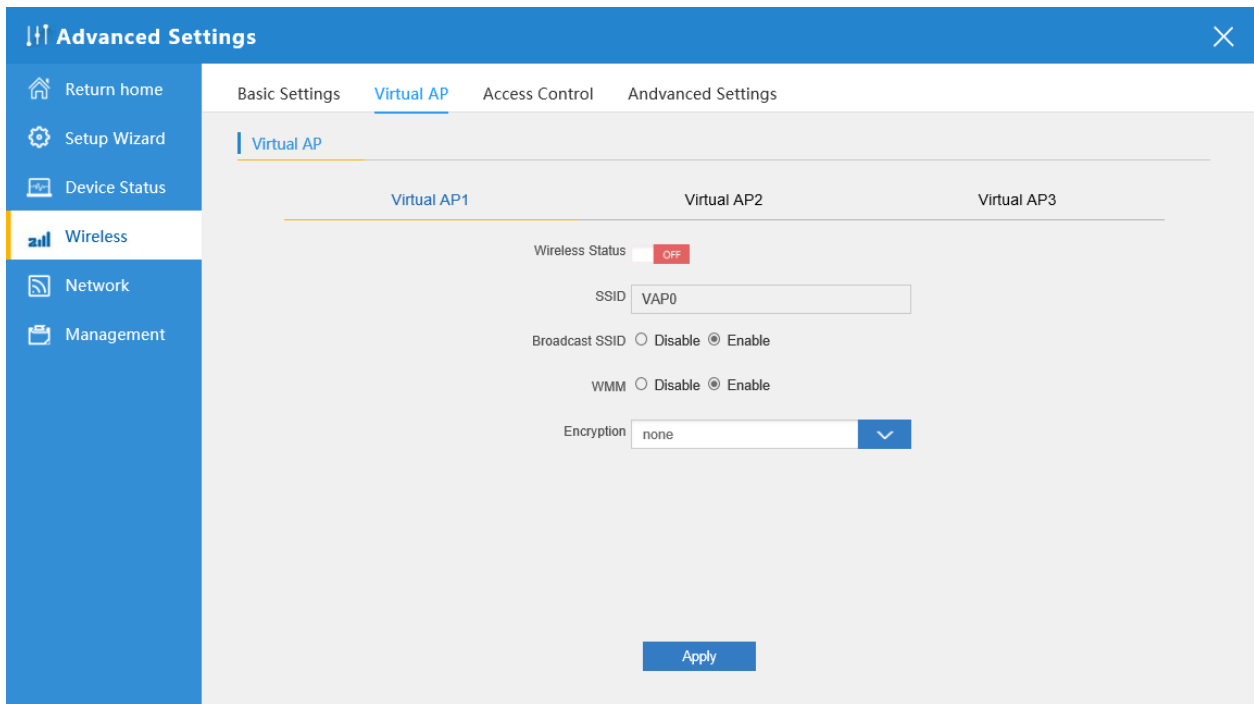
For wireless basic settings, mainly to configure the wireless SSID, password, band width ,encryption, channel, Multi SSID.



P37 Basic Setting in Wireless

4.3.3 Virtual AP:

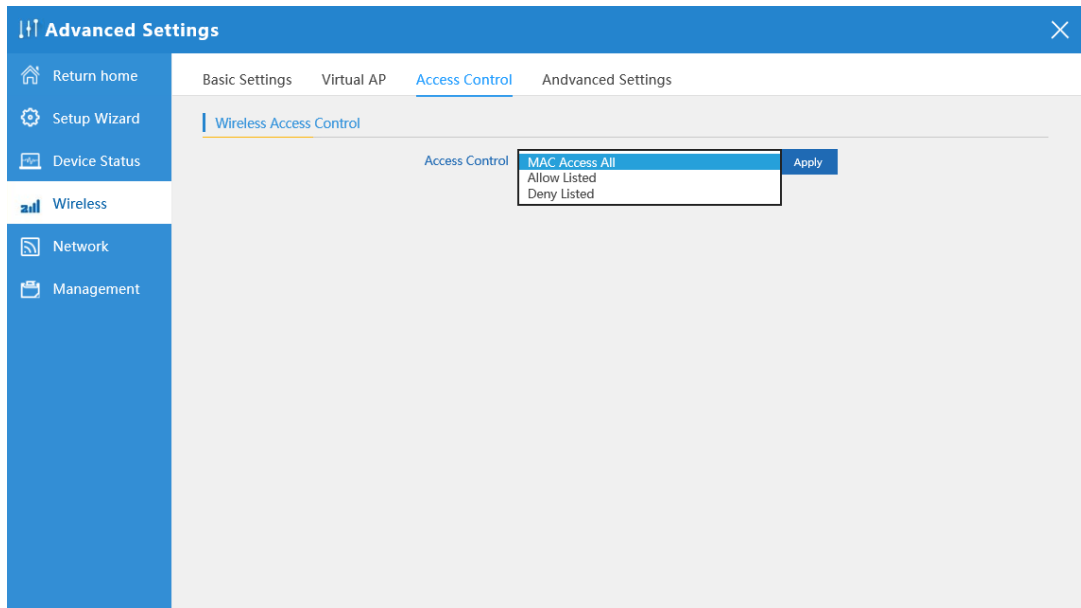
There are 3 virtual AP in 2.4G wireless, if need do multi SSID, then users can configure it showed in following picture:



P38 Virtual AP

4.3.4 Access Control:

Allow or deny the users access into this wireless AP based on MAC address.



P39 MAC Access Control

4.3.5 Advanced Settings:

In this page, will show the regional, mode, RF Power, Max user access...

P40 Advanced Setting

4.3.6 Network:

In network, mainly to show the LAN setting and tag VLAN as follow:

In LAN Settings, mainly including static IP and DHCP.

DHCP from controller means you are allowing controller to manage the IP of the AP and end users. That is to say only when DHCP from controller is chosen can the controller find and manage the AP.

Static IP means the AP has the right to manage its own IP address. When the IP segment of the AP is same as controller's, the AP can also be found and managed by controller.

P41 Network Setting

In VLAN part, need an VLAN switch and make sure the multi SSID is enable, then input the VLAN ID to different SSID.

⌵ ⌴ Advanced Settings
✕

Return home
 Setup Wizard
 Device Status
 Wireless
 Network
 Management

LAN Settings VLAN

VLAN-ID(3-4094)	AP	VAP1	VAP2	VAP3
<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Apply

4.3.7 Management:

In this part, show the system time, Logs, upgrade firmware, system, user info.

And we show System time, how to upgrade firmware and system page to users:

Get time from NTP server can only be available under Gateway and WISP Mode. Before sync with host, please select your Time zone.

⌵

Advanced Settings

✕

🏠

Return home

⚙️

Setup Wizard

📶

Device Status

📶

Wireless

🌐

Network

📁

Management

System Time

Logs

Upgrade Firmware

System

User

System Time

System Time 2015-10-29 19:14:24 Sync with Host

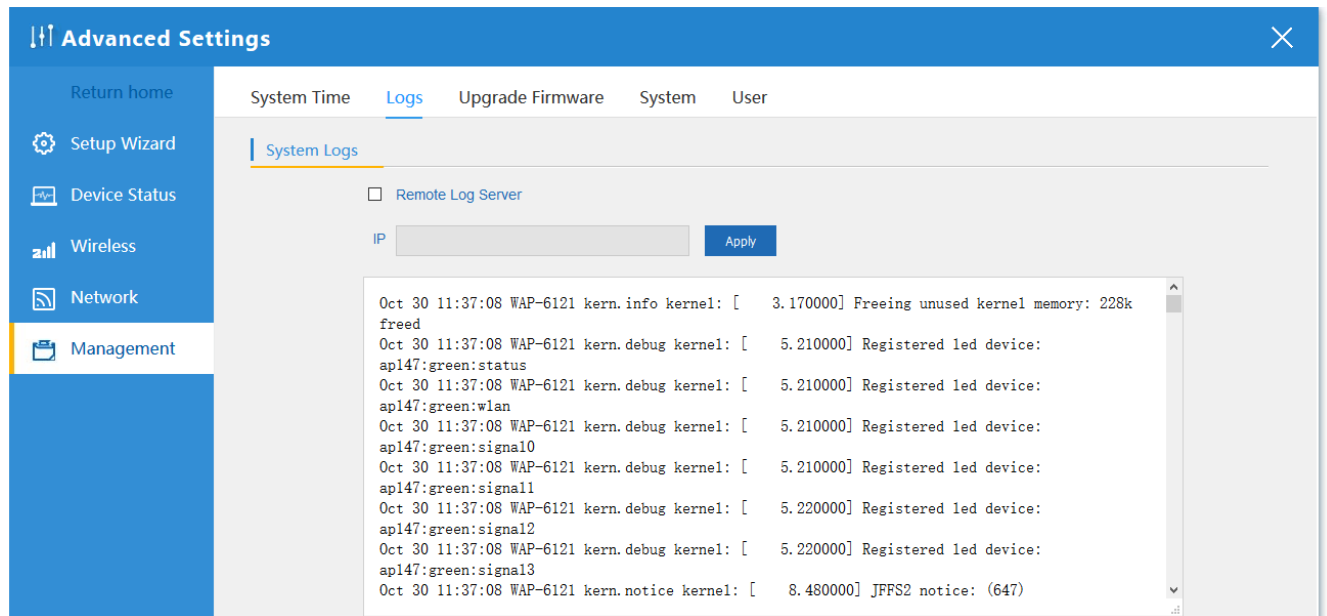
Choose Time Zone TaiPei

NTP Server time.windows.com

Equipment timing ☐ Auto restart 23:00

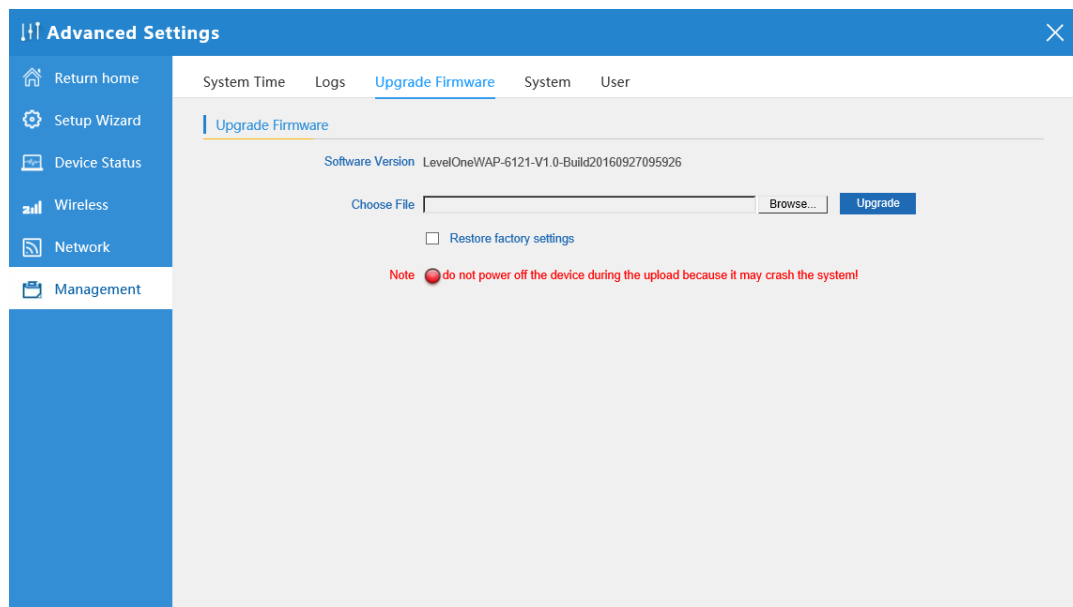
Apply

In Logs part, you can copy the running history of the device to consult the engineers when you have any trouble.



P44 Logs

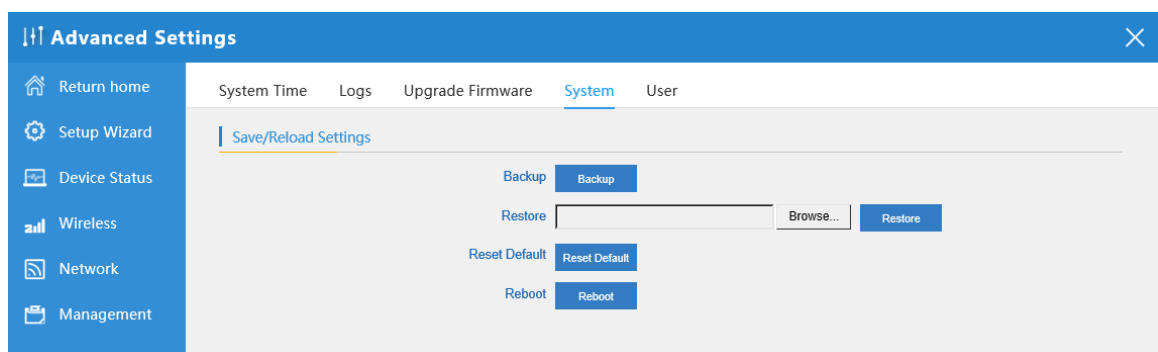
Upgrade Firmware allows you to browse the new firmware in your computer and upgrade. Please do not power off the device during upgrade.



P45 Firmware Upgrade

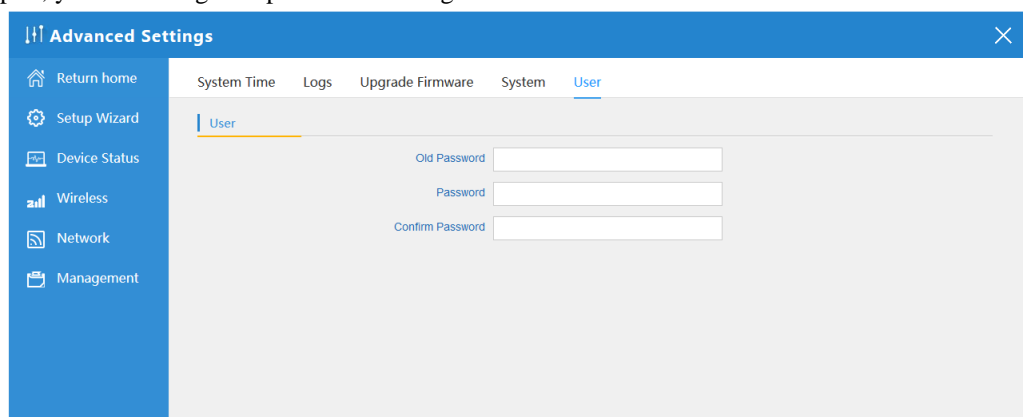
You are able to backup the current configuration to your PC and restore by applying the configuration file from your PC.

And you can Reset and Reboot the device with just one click.



P46 System info

In user part, you can change the password for Log in

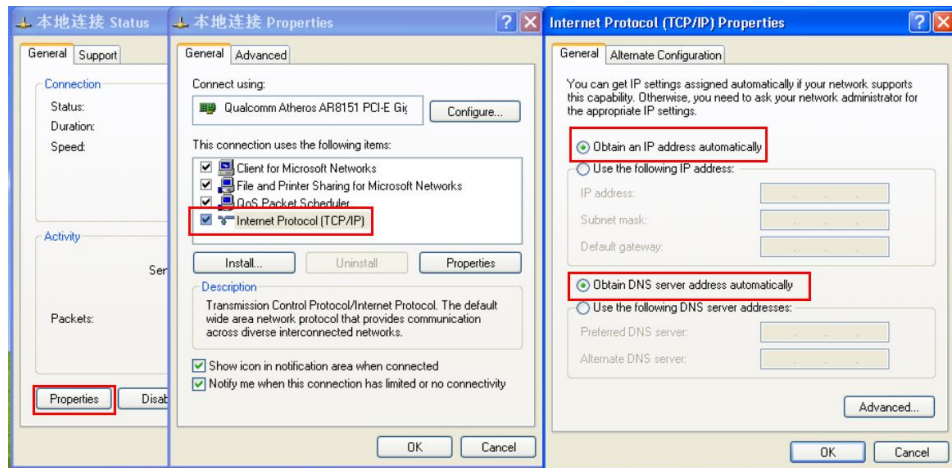


P47 User Information

Chapter 5 Share Internet and Obtain IP address automatically

Set computer's TCP/IP as Obtain an IP address automatically, Obtain DNS server address automatically as following picture showed.

the computer will obtain the IP address from router or base station to get Internet.



Chapter 6 Trouble Shooting:

F 1 The Failure phenomenon and solution

Failure phenomenon	Solution
SYS Indicator off	Pls make sure the PoE module connection is right. POE Port connect with AP, LAN port connect with computer
Can't land to Wireless AP through Web page	Pls check the IP address of computer and Wireless AP to see whether they are in same networking segment, The method is click "start"- "Run" input "cmd", ping 192.168.188.253 to test the Wireless AP connectivity. Reset Wireless AP and load it again; Pls make sure the IP address 192.168.188.253 is not occupied by other device in Wireless AP's networking; Check computer and cable problem, recommend to use 10/100M UTP unshielded cable; Clean up Arp binding from "Start"- "Run" input "cmd" arp -d Clean the IE Brower's temporary files and Cache file.
Wireless AP can't connect with AP (the status display unconnected)	Try to scan the available wireless networking again; Make sure the Wireless AP's wireless standard is correct; (2.4Ghz signal should connect 2.4Ghz.) The Security and passwords are matched between Wireless AP and AP; The signal strength of AP is too weak to connect, should be more than -75dBm;
Can't scan the wireless AP	Scan it several times more; If using 5Ghz to scan, please make sure there are 5G signal existed. Reset the Wireless AP, scan it again after Wireless AP restart;
The connection of Wireless AP and AP is success, but the computer can't share internet	Pls Check the computer's IP address and DNS setting. If it is dynamain, set the network card as automatically obtain. If it is static IP, pls contact with ISP for correct IP address and DNS address.
How to Reset Wireless AP	Press the "Reset" button more than 15 seconds after power on. The Wireless AP will restore factory default after the Wireless AP restart.

Appendix A LICENSE STATEMENT / GPL CODE STATEMENT

This product resp. the here

(<http://global.level1.com/downloads.php?action=init>) for

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