GGM WAPEXT24
Quick Installation Guide

May, 2016

Thank you for purchasing Enterprise High Gain Outdoor CPE. This manual will instruct you how to configure and manage this CPE, enable you to use it in a perfect status. After installed the CPE, you will be able to enjoy the surfing freely.
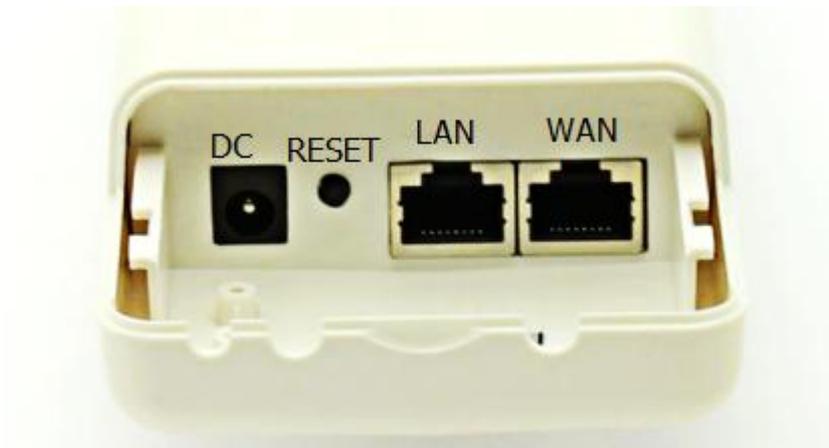
Pls check the Package before use it:

- Outdoor CPE *1
- Metal strap*1
- Quick Configuration Guide*1

Quick Configuration Guide

1St How to connect and charge the outdoor CPE

- CPE's Interface Description


P 1   CPE's Interface

Reset: Press it for 10-15 seconds, the CPE will restore to factory default.

WAN: Connect with internet cable, in WiFi Repeater, bridge, WISP operation mode, it change to LAN port.

LAN: connect the CPE with computer by LAN cable.

DC: for Power supply, the DC's electronic standard is 12V/24V.

- POE: this equipment can be powered over Ethernet, Connect CPE's WAN/LAN Port with PoE adapter's POE port by LAN Cable
- Pls refer to P2 for PoE Power and CPE configure
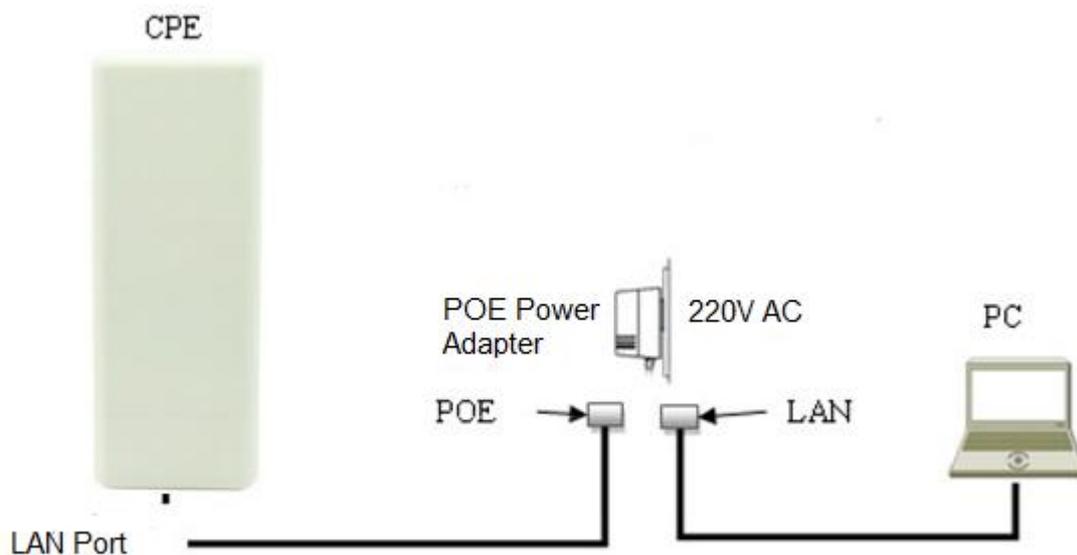
P2   diagram of PoE Power and CPE configure

2ⁿᵈ :CPE Start and Log in

1)   Power the CPE as P2 show

2) Set an fixed IP address for computer: The default operation mode of this outdoor CPE is Wireless AP, end users should set an IP address for computer, then can access into Outdoor CPE's IP : Set the computer's IP address as **192.168.188.X** (X is number between 1-252), make it same as CPE's network segment, then set
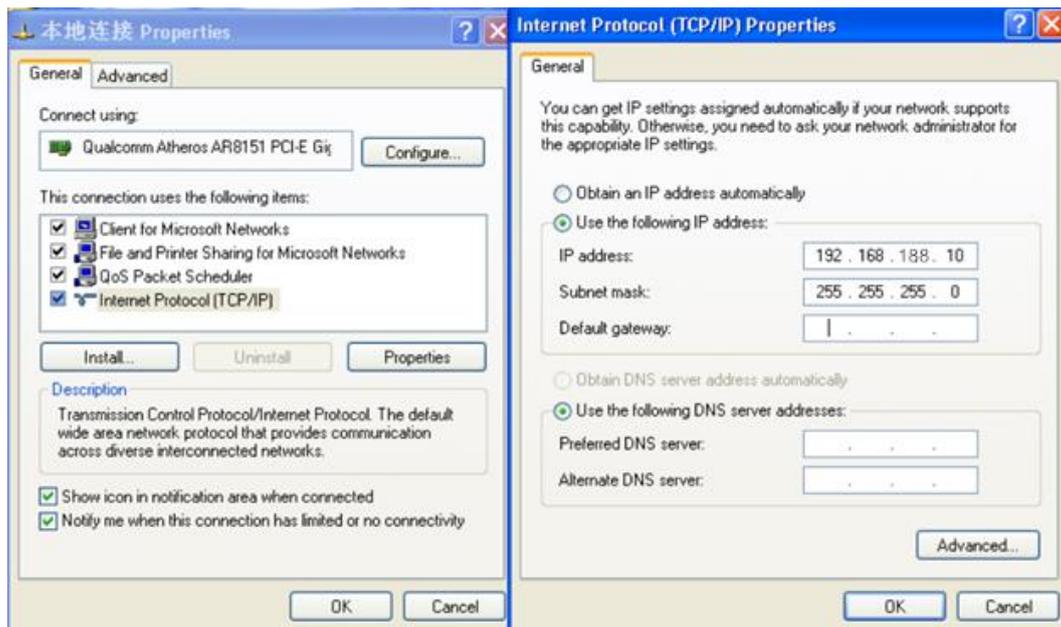
Subnet mask is **255.255.255.0,** Default gateway leave it blank, then click **OK.**

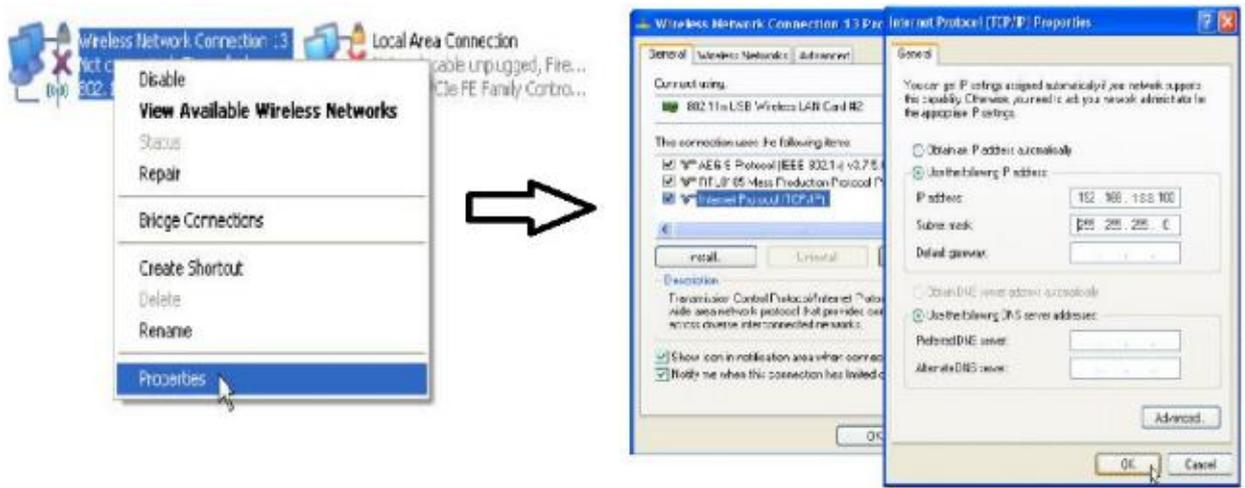**A**.: Pls follow P3 and P4 for wired configuration.

:

P3　Configure the computer's IP address by wired

P4　configure the computer's IP by wired

**B.** Pls follow P5 to Configure the computer's IP address by wireless

P5 Configure the computer's IP Address by wireless

If you want to connect our CPE by wireless after IP address configuration, pls right click **Wireless networking Connection**, then **View Available Wireless Networks,** our CPE's default **SSID** is **Wireless AP, passwords: 66666666,** Click **Refresh network list ,** double click the correct SSID and input the passwords, if have, then **connect, pls refer to P6 and P7**

P6   CPE Wireless Connection
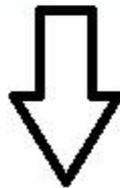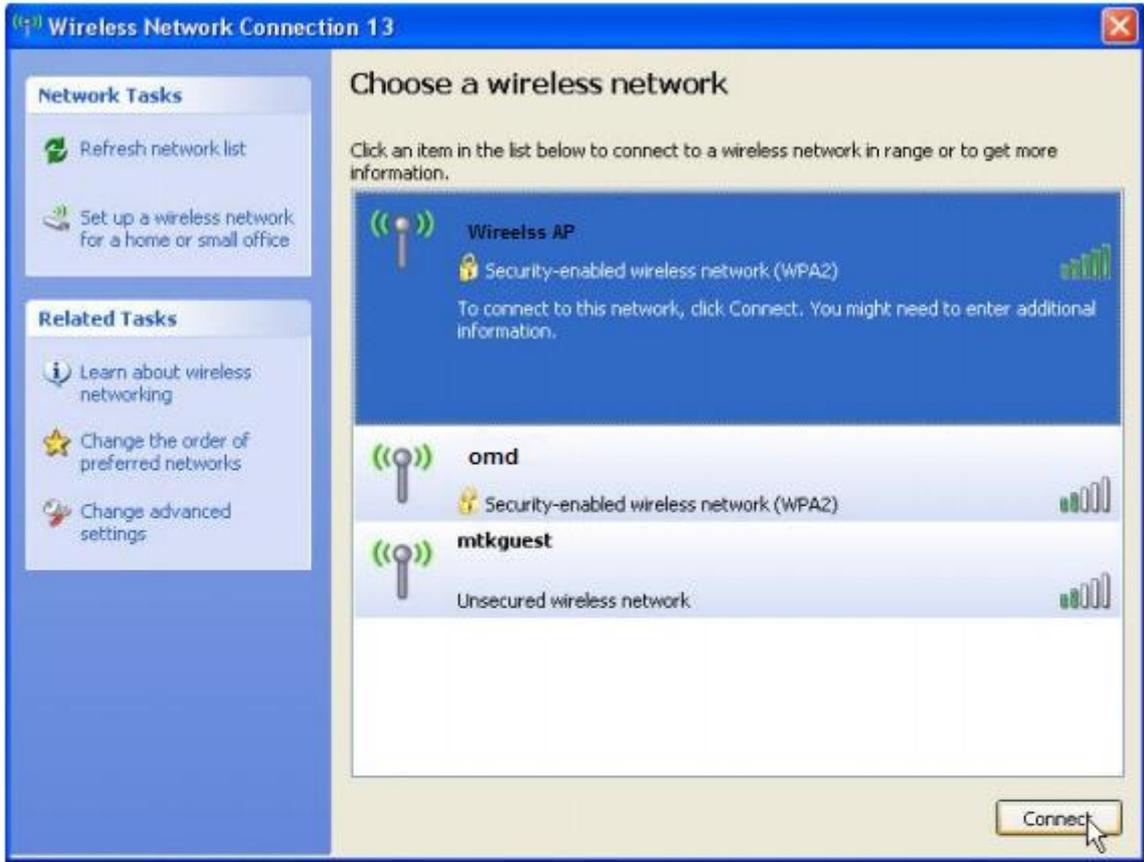
P7   CPE Wireless Connection

⚠ **Indicator**

If your computer with build in 802.11b/g/n wireless adapter, but can't search the available wireless networking after refresh, pls contact with computer supplier or after-sale department after appear following points:

1. Right click **My Network Places,** select **Proferties,** appear **Local Area Connection** or **Other Connection,** No **Wireless Network Connection**
2. There is **Wireless Network Connection** in **My Network Places,** Show **General** and **Advanced** after right click **Wireless Network Connection** and select **Properties,** but no **Wireless Network Configuration** in Window

3) Log in the CPE: Open your web browser, type in 192.168.188.253 in the address bar, enter **admin** in white blank bar, then login.

HIGH PERFORMANCE INTELLIGENT WIRELESS OUTDOOR CPE/AP
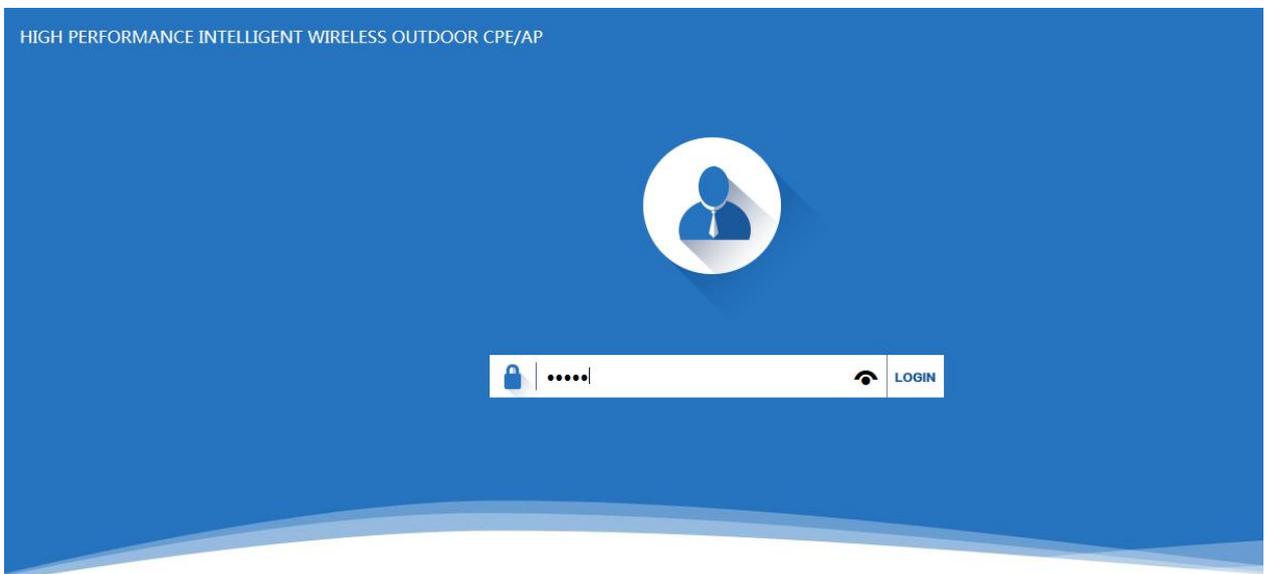
●●●●● LOGIN
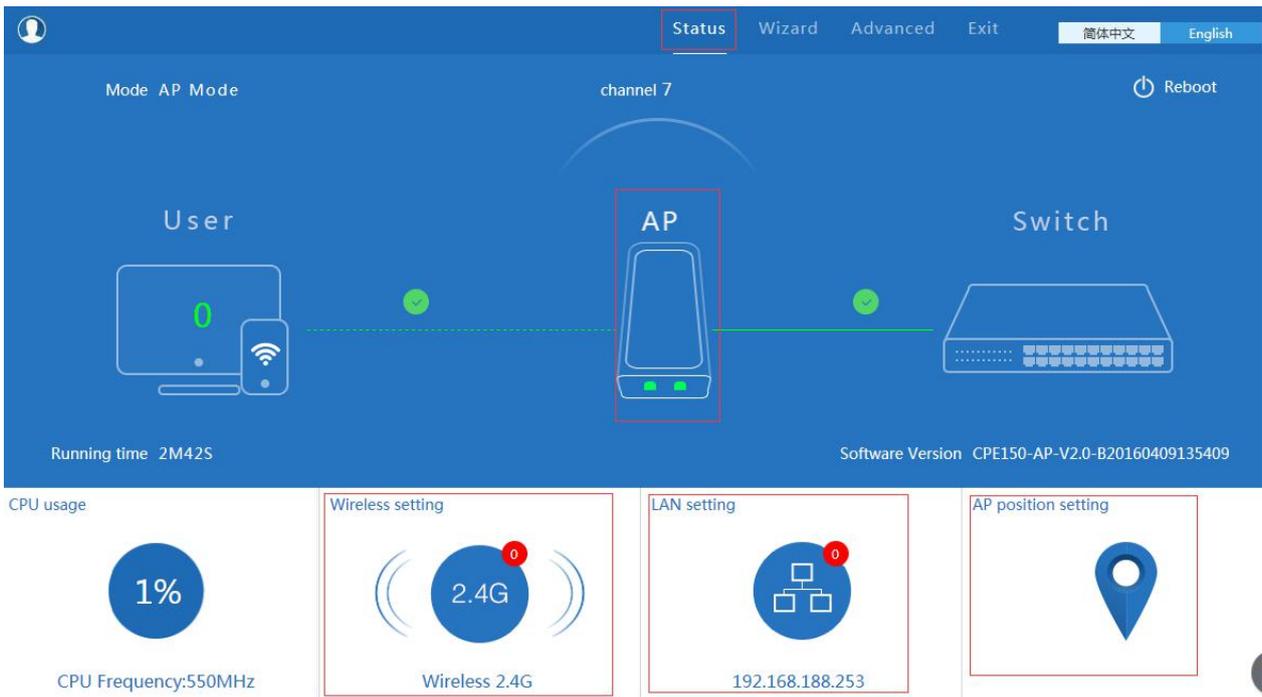
Version CPE150-AP-V2.0-B20160409135409

P8   Log in

3rd : WEB GUI interface Setting:

1) Status

After login, then P9 Device Status will be showed:

In this page, will show the outdoor CPE's default operation mode, channel, connection status, CPU usage, Wireless settings, LAN Setting, CPE's Location, CPE's hardware/firmware version.
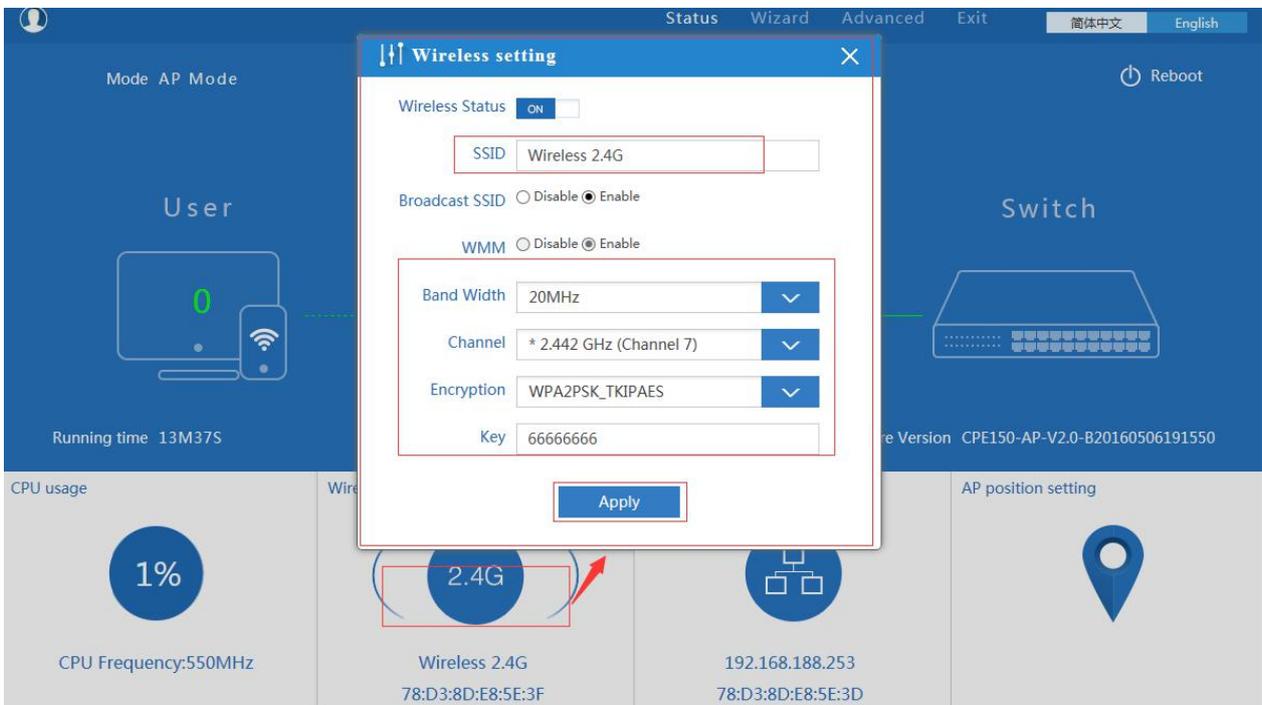
P9 Status

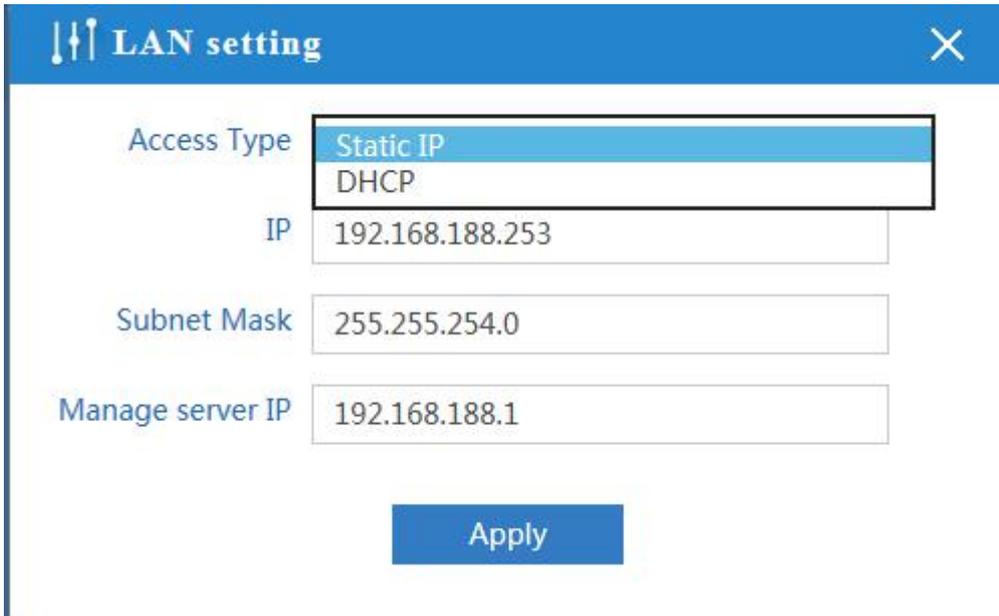In this Outdoor CPE, the default operation mode is AP mode.

Then in 2.4G Wireless Setting, GUI configuration page showed as below:

User can configure the SSID, password, band width, channel here, then Apply to finish.

P10 Wireless Setting

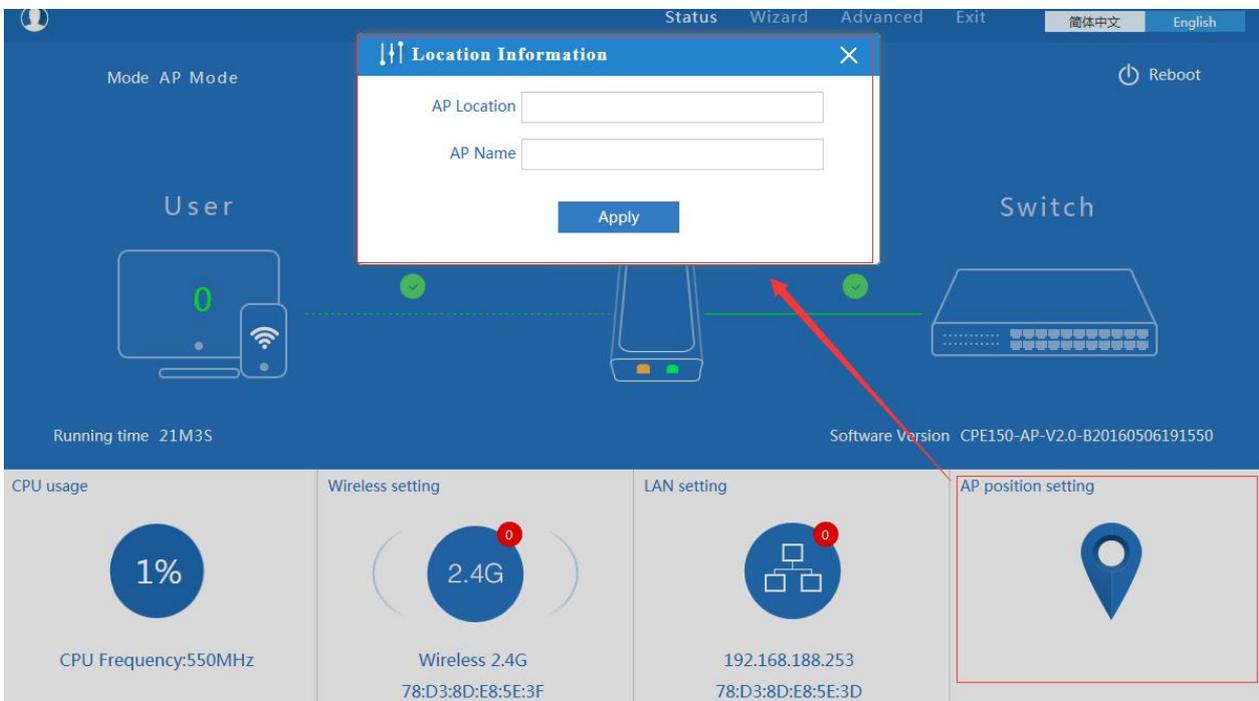LAN Setting to configure the DHCP or Fix IP for local LAN.

P11 LAN Setting

P12 AP Position setting

2) Wizard Configuration:

Click Wizard in Status page, will pop up following page to configure the operation mode:

There are four operation mode of this ceiling wireless AP, and there are explanation for each operation mode for better application.
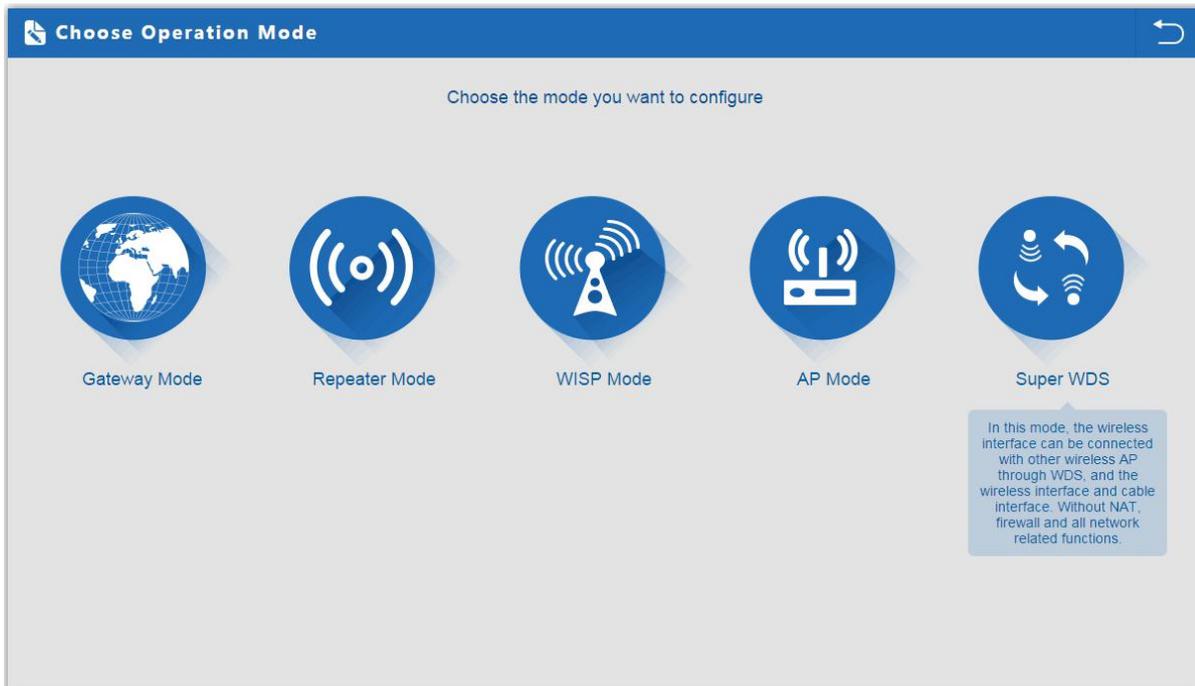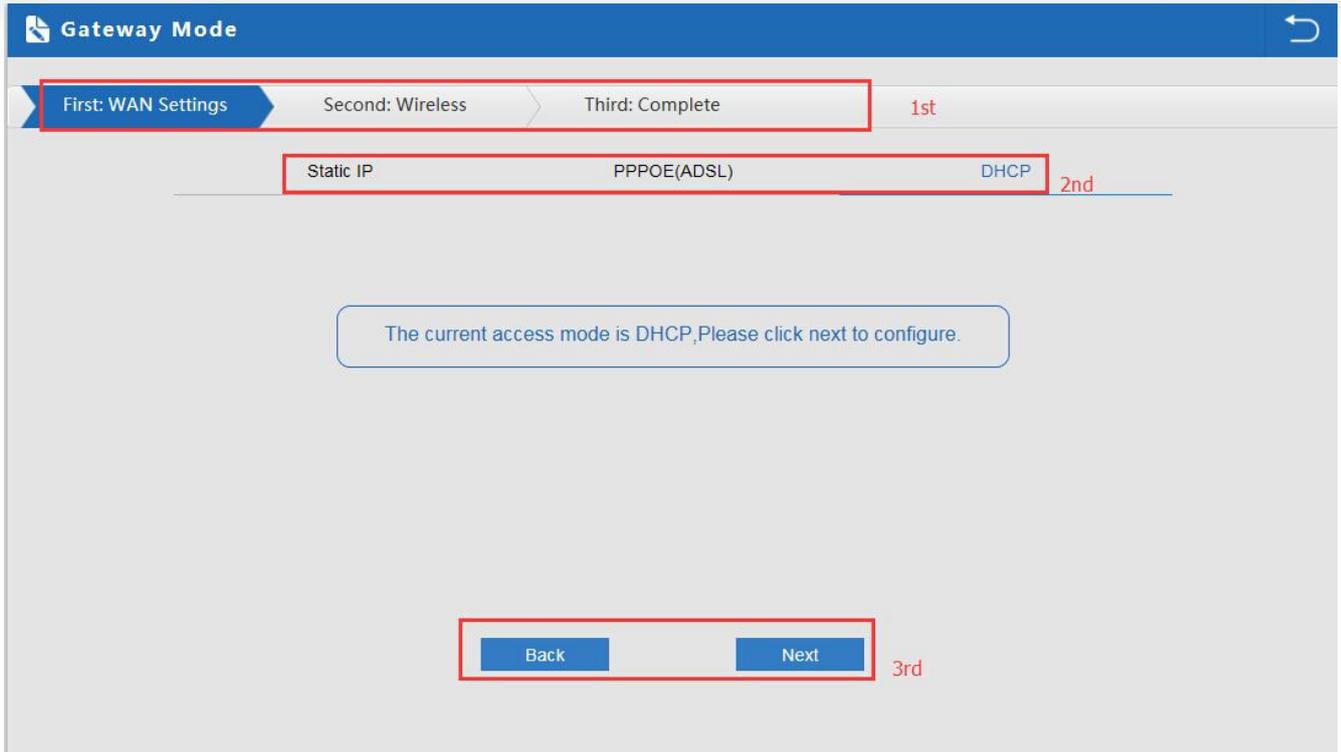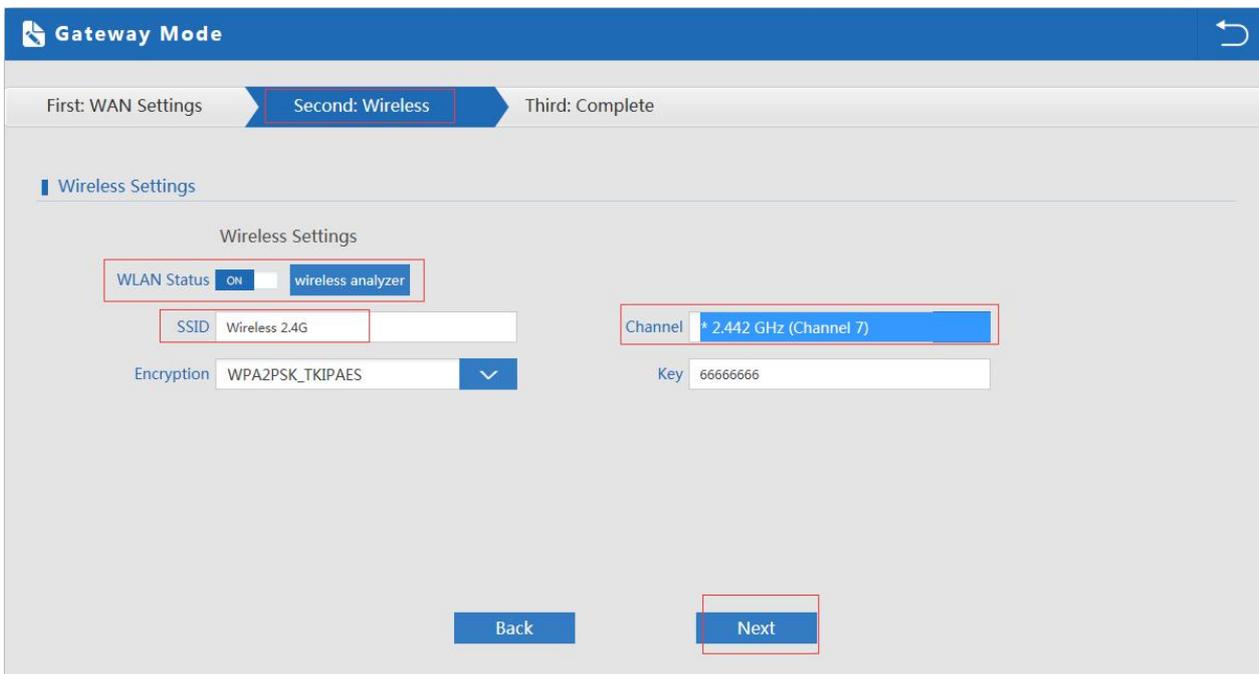

P13 Operation mode

1. Gateway Mode:

Click Gateway mode, will pop up following pictures:

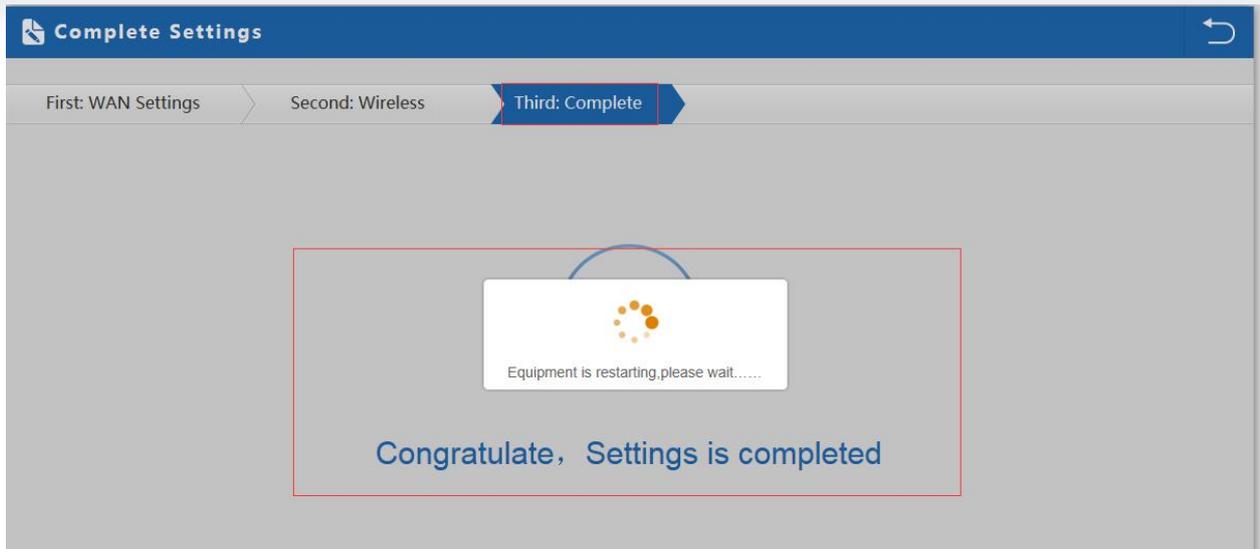Pls choose the right WAN setting mode, then click next to continue.

P14. WAN setting in Gateway Mode

P15 Wireless Setting in Gateway Mode
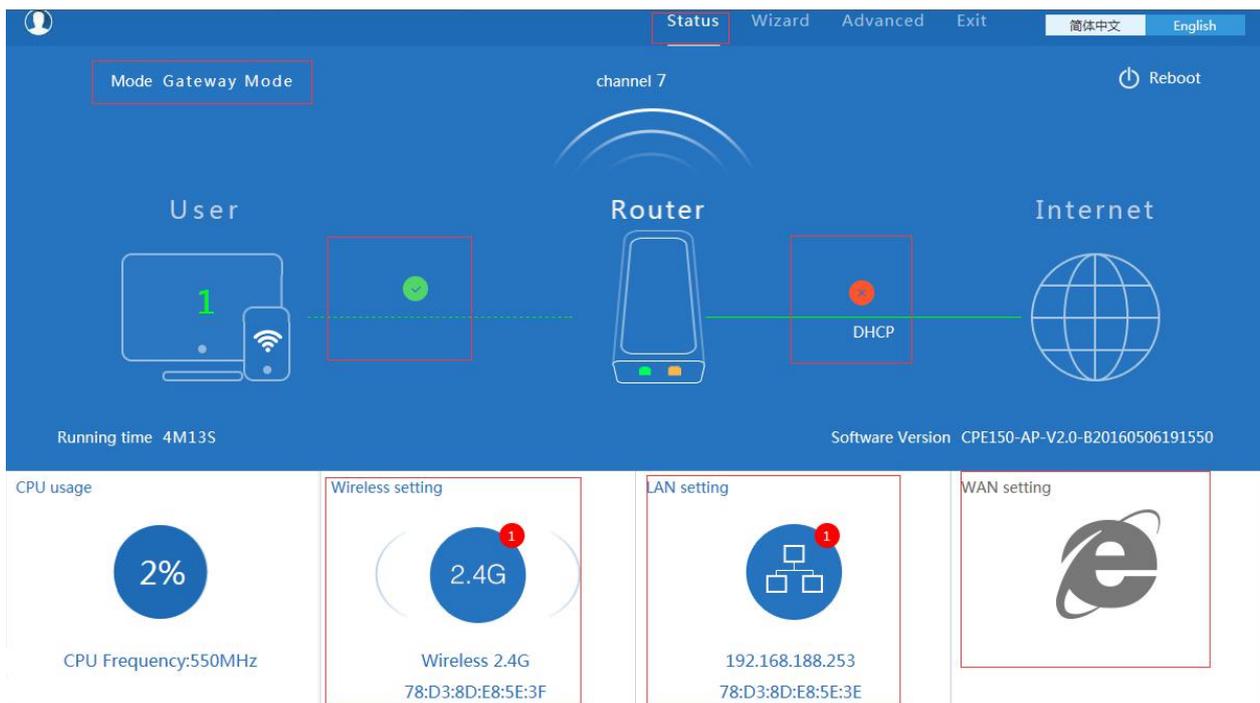
When click Next, then will complete the Gateway mode setting and show following picture:

P16   Complete the setting in Gateway Mode

When return to Status, the page showed as follow:

P17 Status in Gateway Mode

2. WiFi Repeater mode

Click WiFi Repeater operation mode in Wizard, then following page will pop up, and choose the right SSID to bridge, then next to finish it.

P18 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.
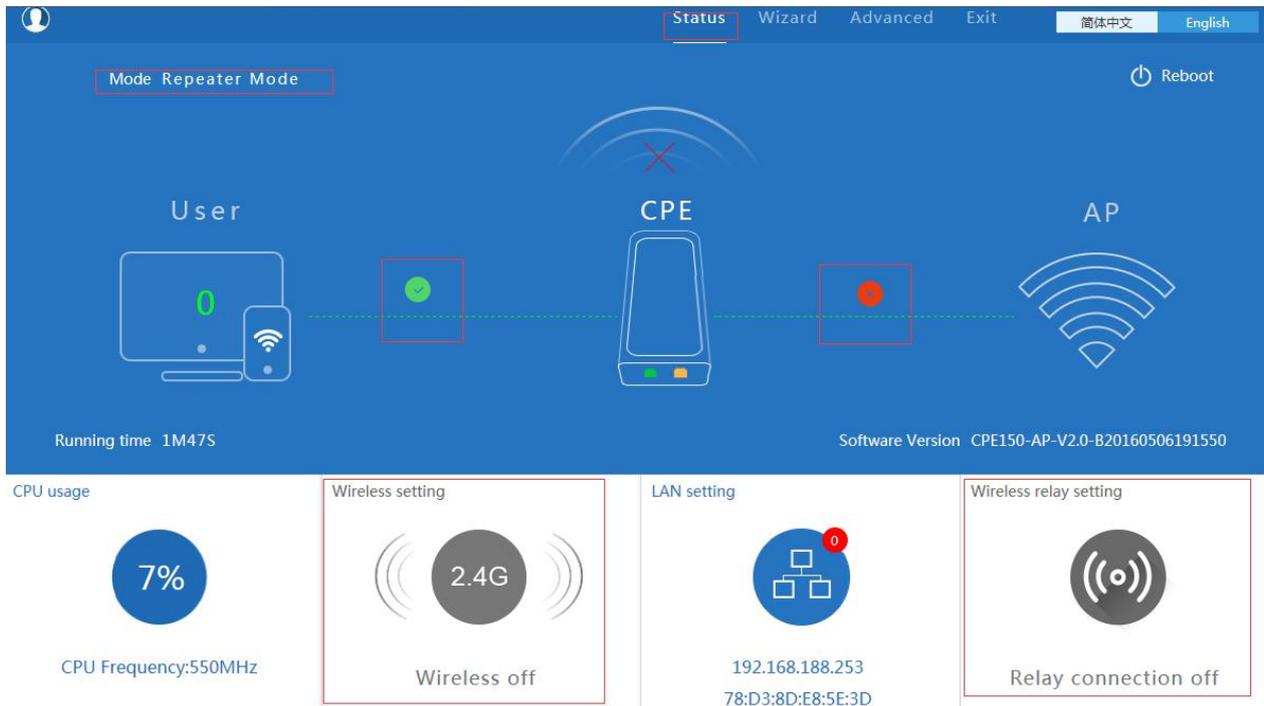
P19 Status in Repeater Mode

Pls note, in WiFi Repeater operation mode, the wireless is disable in default, will not broadcast the wireless SSID.

If need to enable SSID, pls do based on following picture:

Pls note, when click wireless relay setting, will back to P18 wifi repeater setting directly.

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

the stepes showed in picture:

P21 WISP Mode

Configure the right WAN setting in WISP operation mode, then next to restart the outdoor CPE.

P22 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:
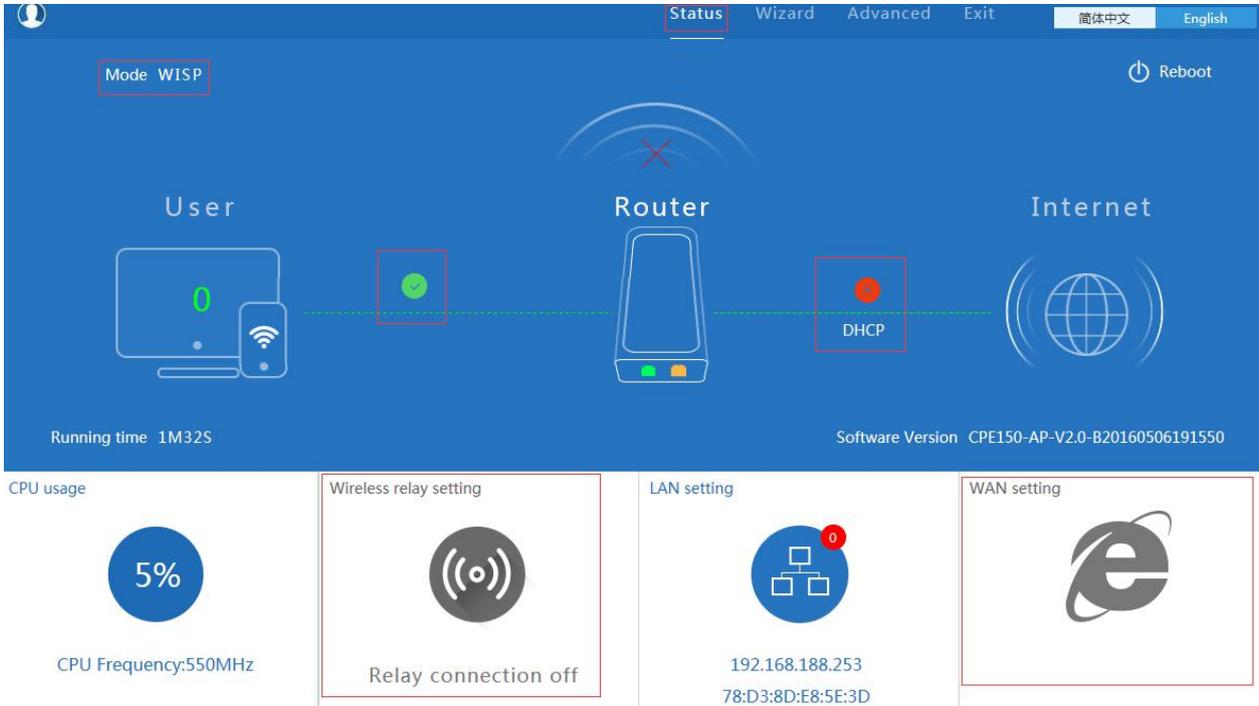
P23 Status in WISP mode

Remark: When click WAN Setting, will pop up following picture:

P24 WAN setting in WISP 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:

P25 Wireless setting in AP Mode

In this part, there is Wireless Analyzer, to analysis the Wireless AP/ Router's channel to avoid wifi interface.

Picture show as P26.

P26 WiFi Channel analysis
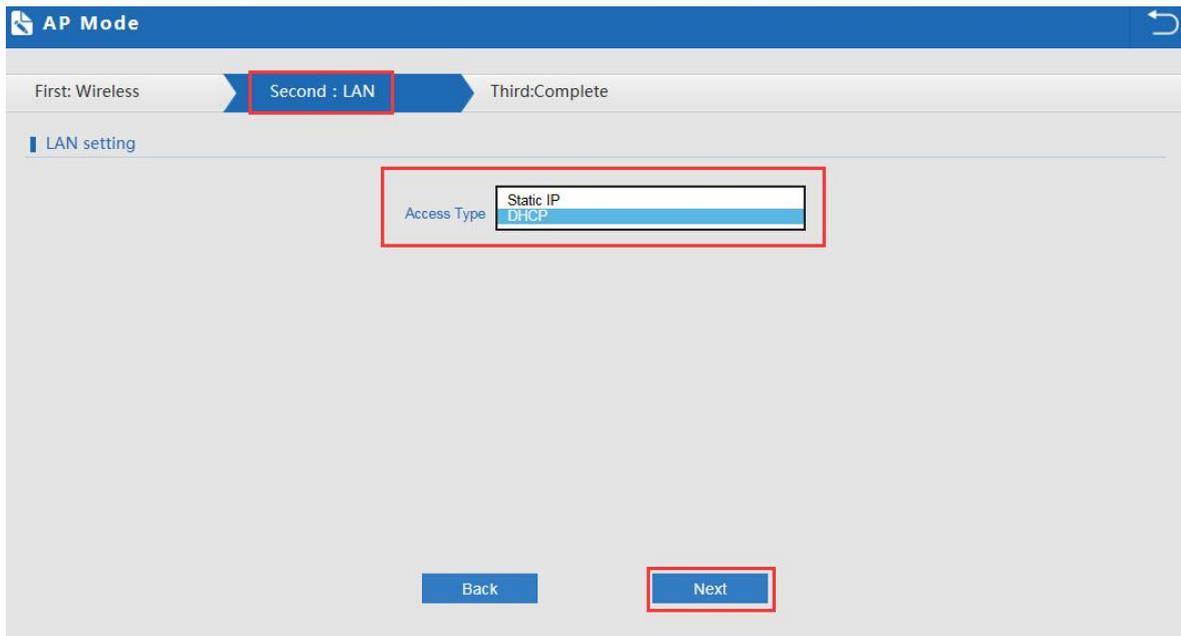
P27 LAN Setting in AP Mode
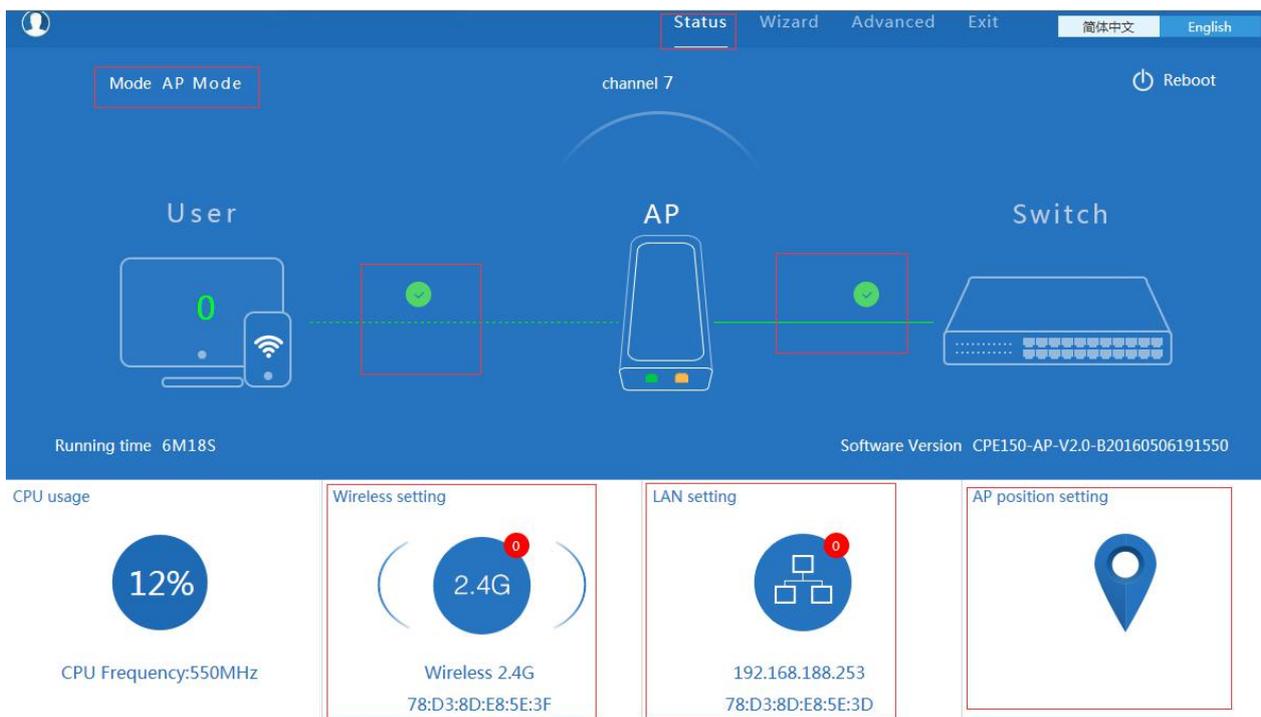
P28 Status in AP Mode

5. WDS operation mode

In WDS setting, it work in pairs, and two CPE work in WDS operation mode:

A.   Connect with WDS1 device and enter into the GUI page, Click Wizard and Choose SUPER WDS mode, input the SSID, Band Width, Channel as you like, then next to finish. For example, the SSID is Wireless 2.4G-test-02.
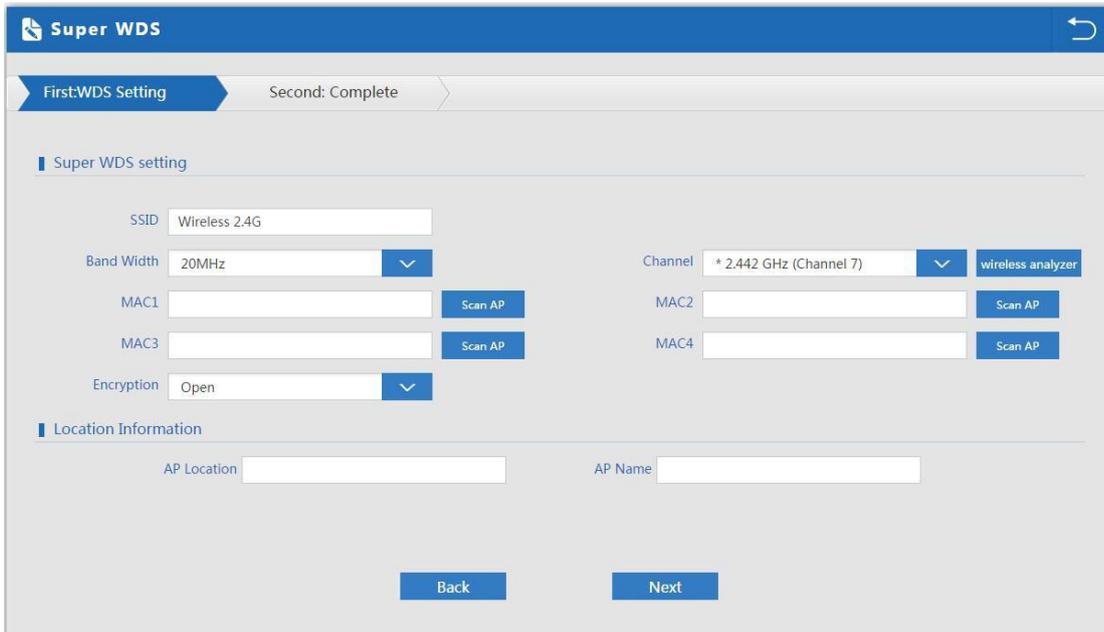
B. Enter into WDS 2 device's GUI page, click Wizard, then choose super WDS function.
In this page, click scan AP to choose WDS 1's SSID.
In this page, can set WDS 2 device's SSID as Wireless 2.4G-Test-01.
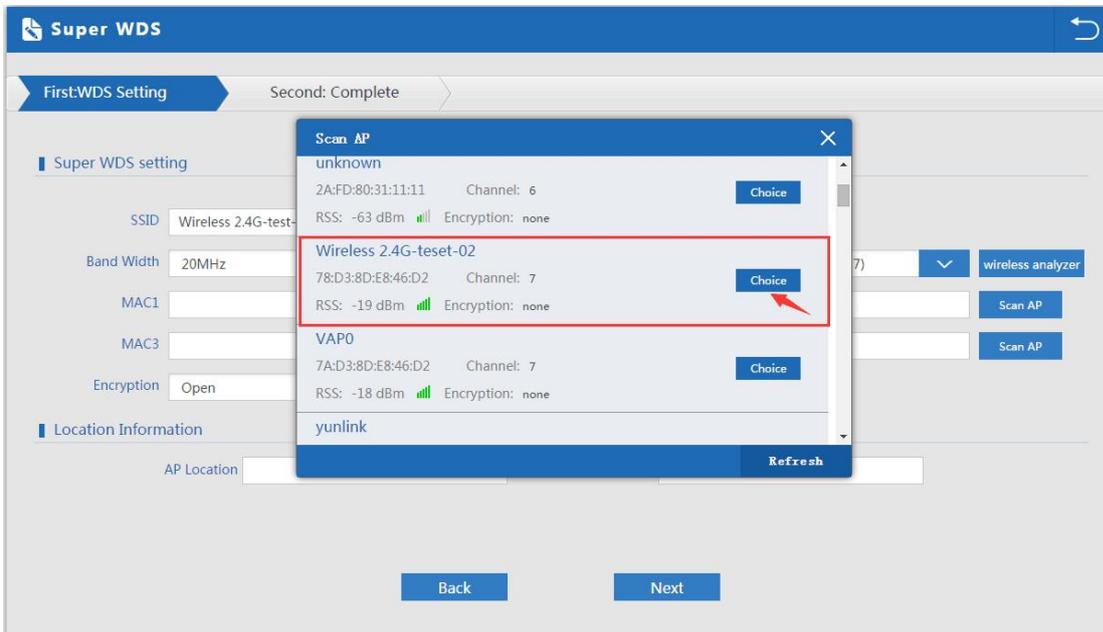
C. Click next to finish, then WDS2 work with WDS1.
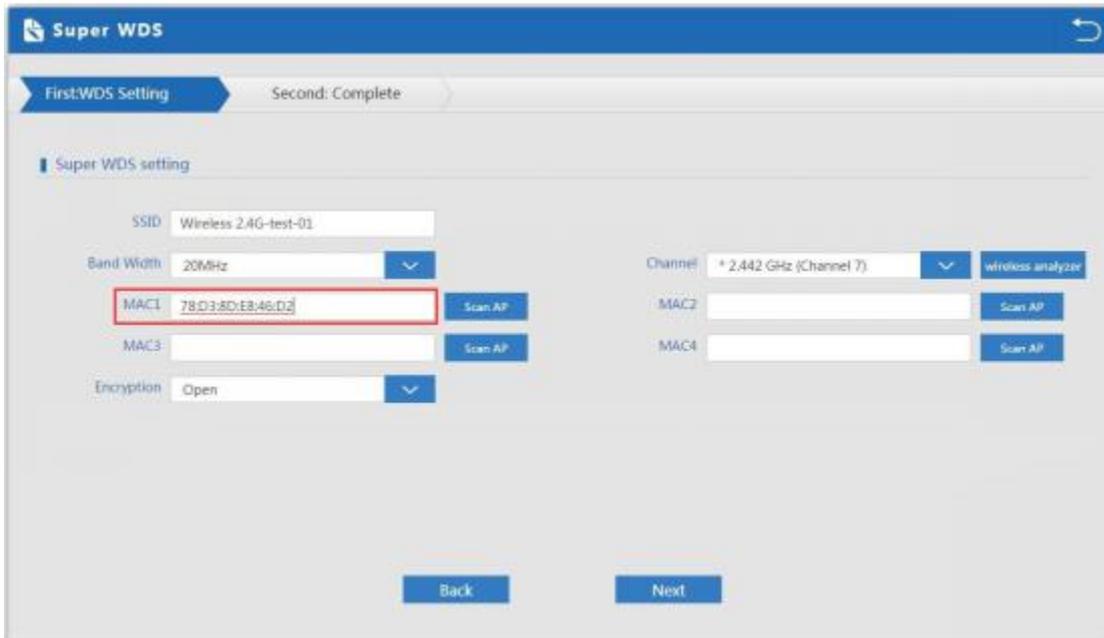
D. Back to WDS 1, Wizard---Super WDS---Scan AP---Choose WDS 2 device's SSID, then WDS1 work with WDS2.

E. If WDS 3 device should work with WDS1, scan WDS1, then make WDS3 to work with WDS1. And in WDS1, can scan WDS3's SSID also if need.

F.   Effect 1
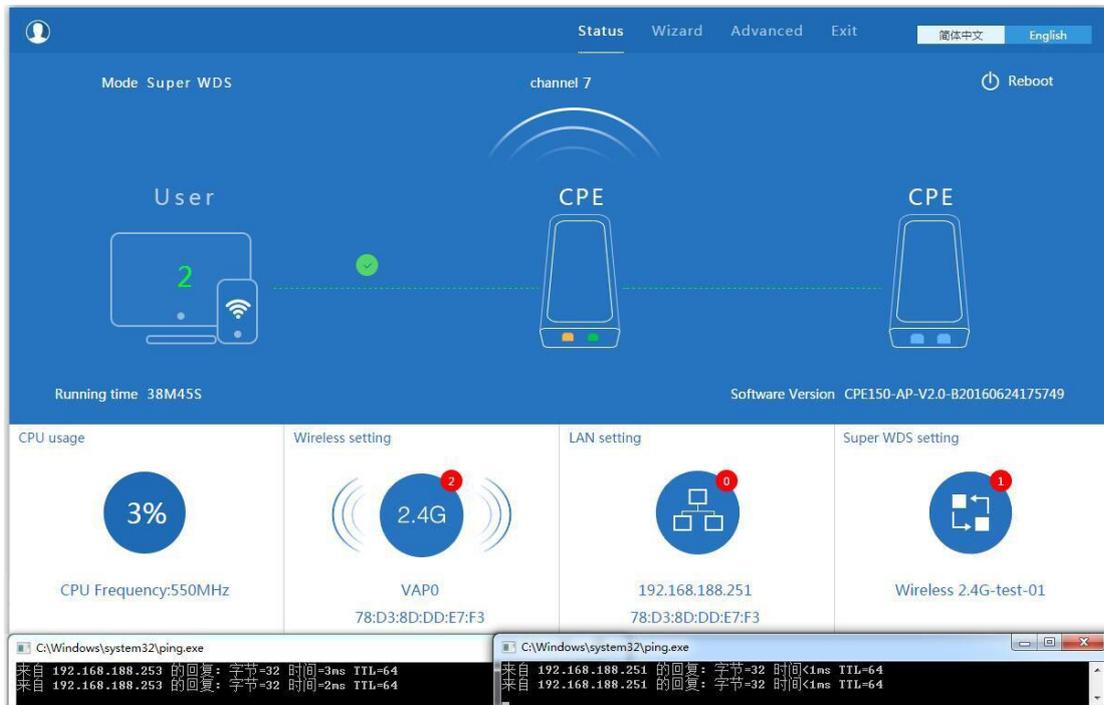
G. Effect 2
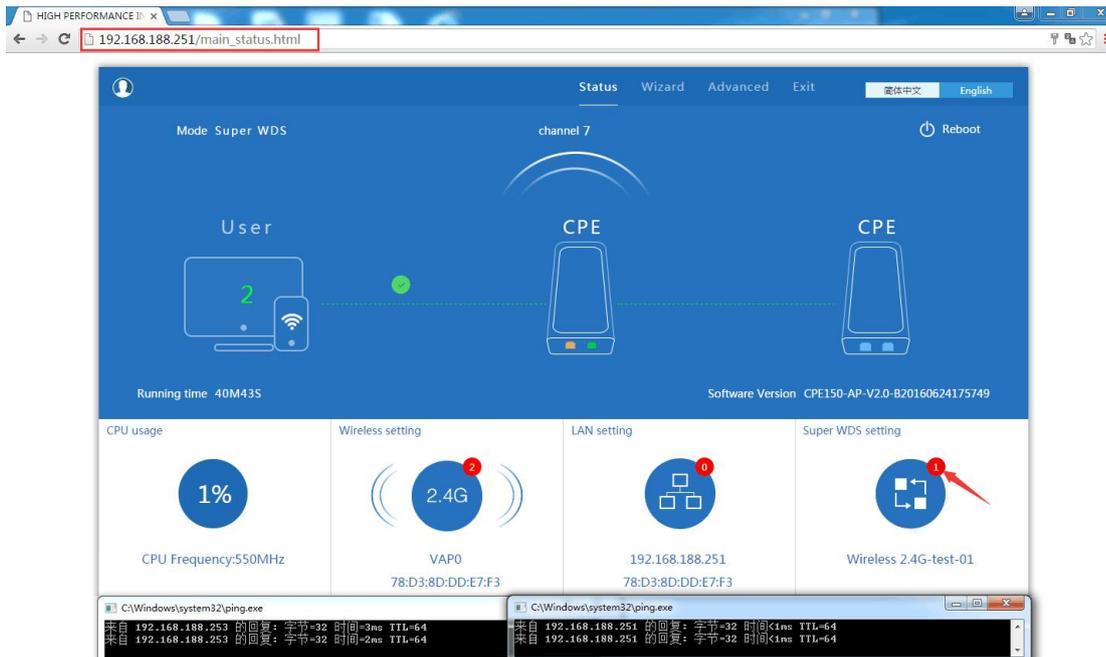
H. Effect 3
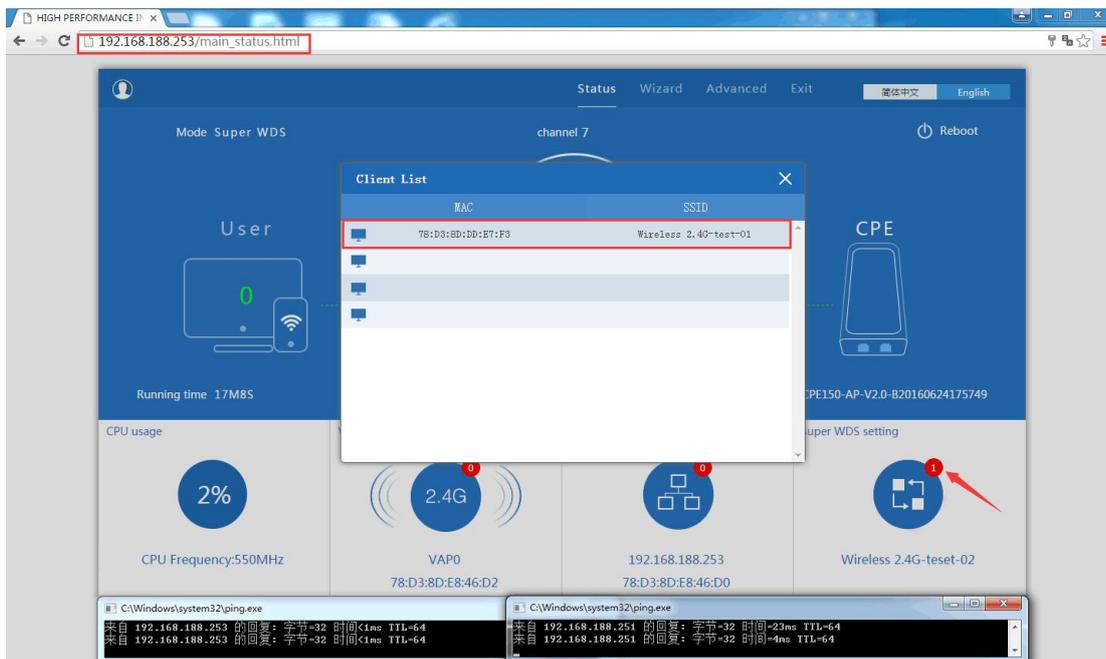
3) Advanced Setting:

In advanced setting, user can check the ceiling AP's firmware version, working status,

2.4G wireless, LAN Status,

upgrade firmware, Reset...

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

Let's shown Device Status, Wireless, Network and Management.
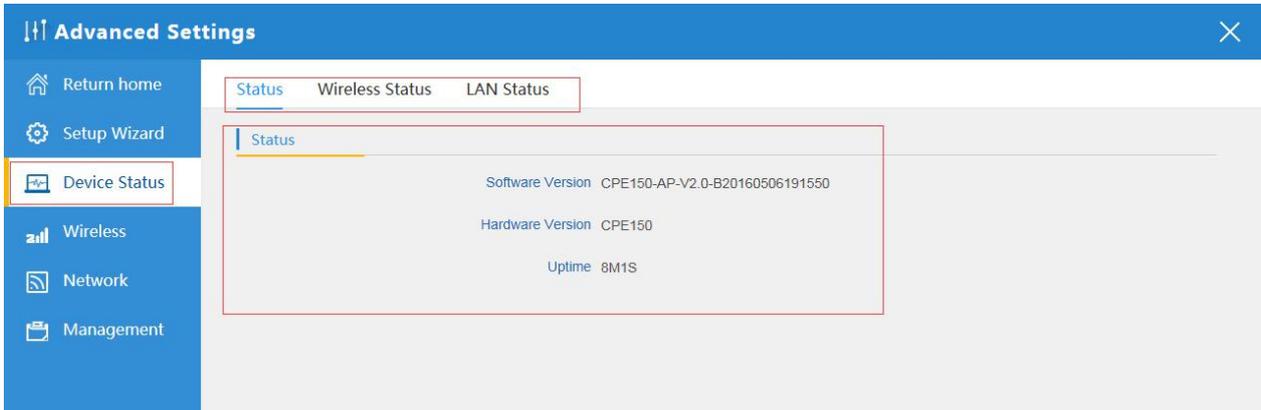
P29 Device Status

Device Status: In this page, mainly to check the ceiling AP's status in firmware version, Wireless status, LAN status:
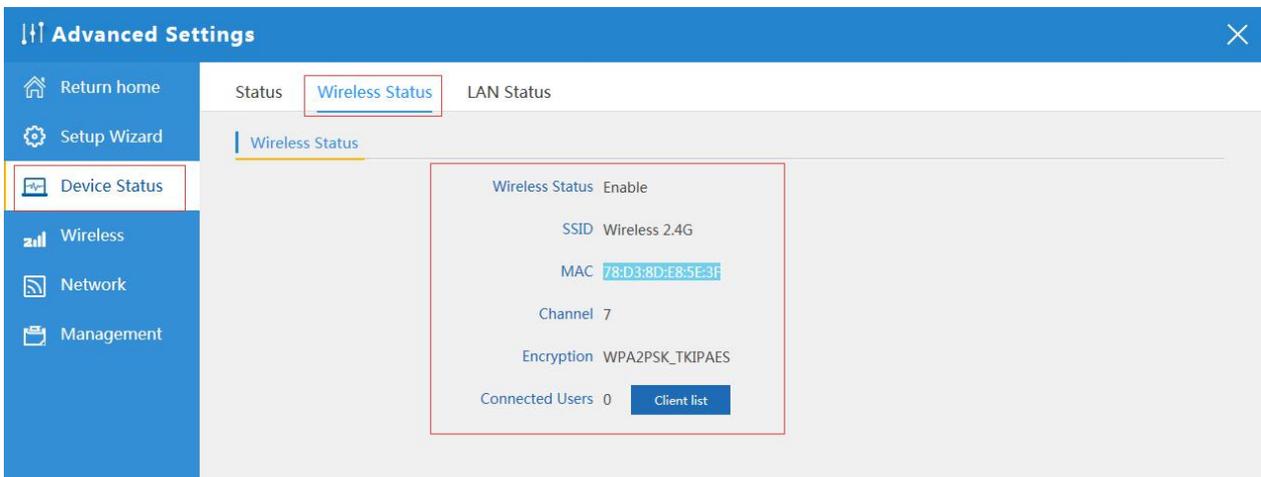
P30 2.4G Wireless Status
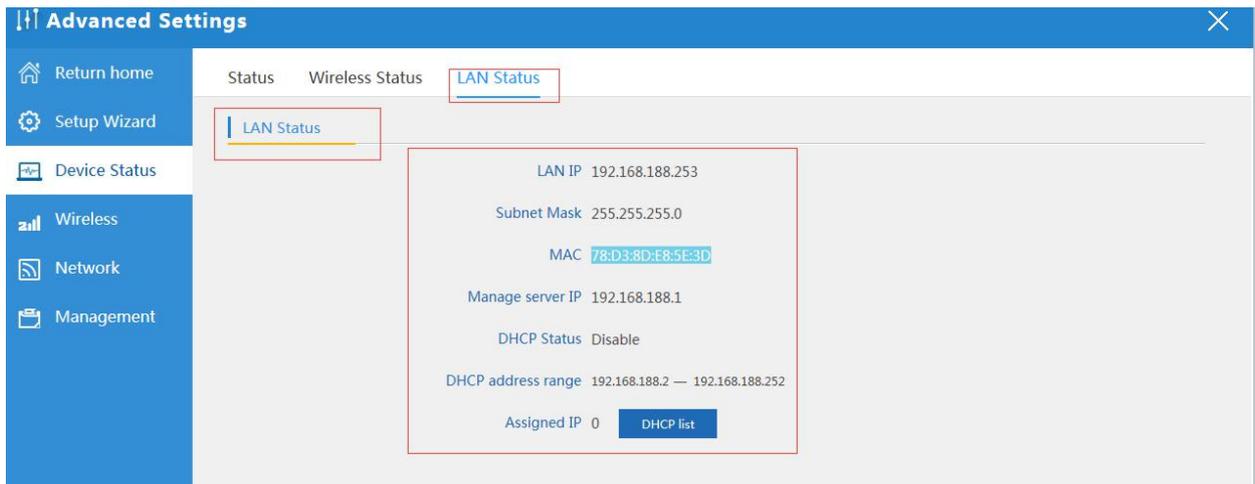
P31 LAN Status

2.4G Wireless Setting:

In this part, will show the Wireless Basic Setting, Virtual AP, Access control and Advanced Setting:
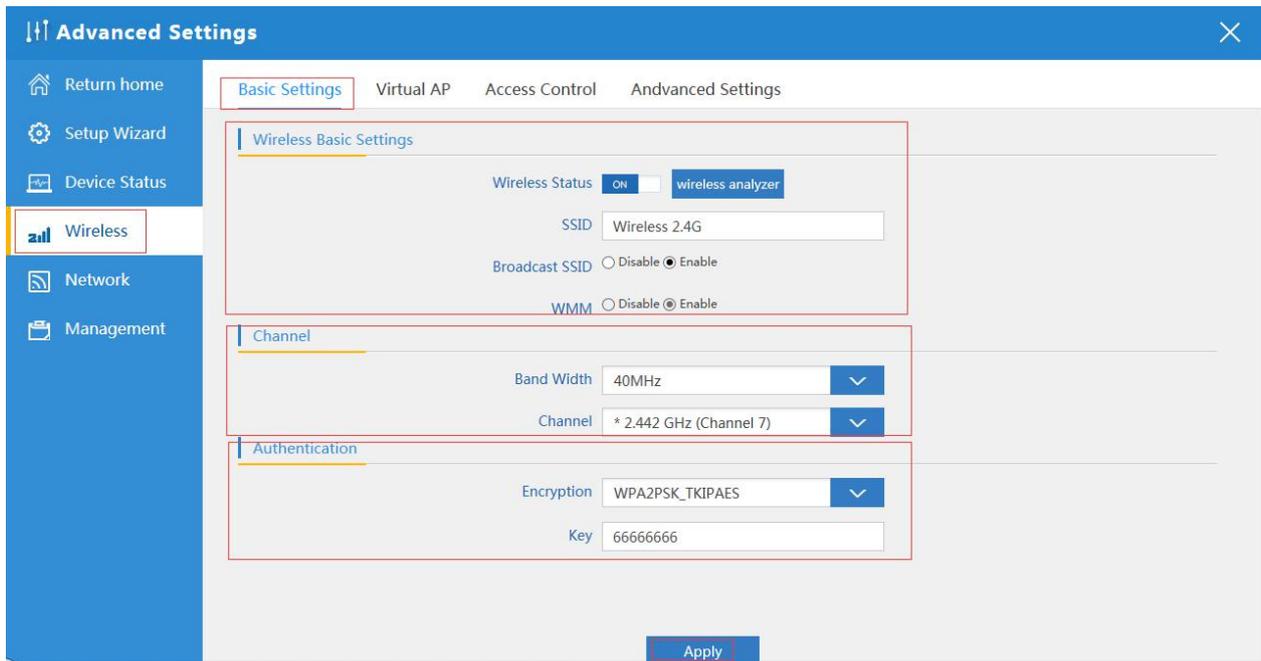
P32 Basic Setting in 2.4G Wireless

Virtural AP:

There are 3 virtural AP in this outdoor CPE, if need virtural SSID, then users can configure it showed in following picture:
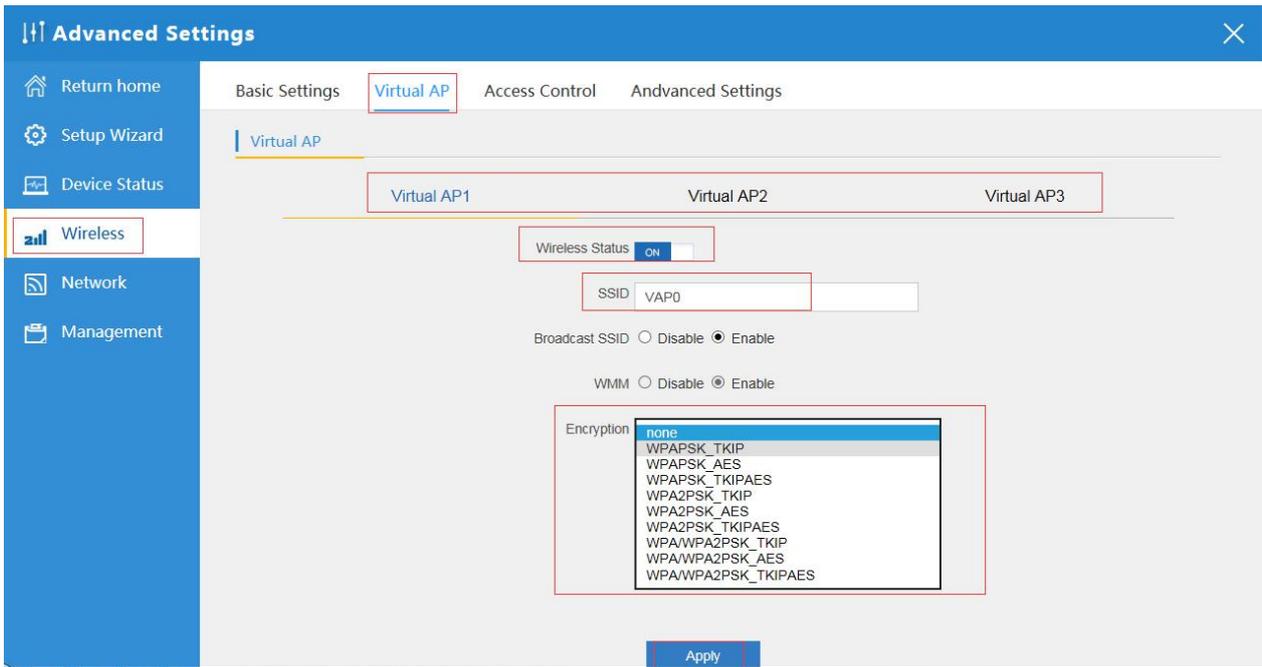
P33 Virtual AP

Access Control: Mainly show MAC allow or deny:
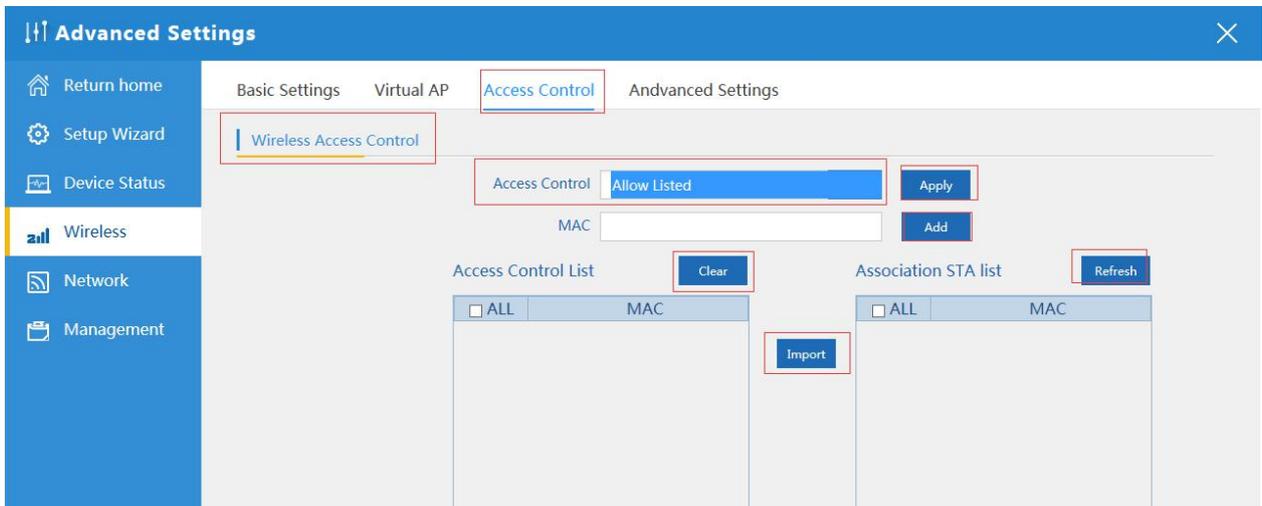
P34 MAC Access Control

Advanced Settings:

In this page, will show the regional, RF Power, Max user access...
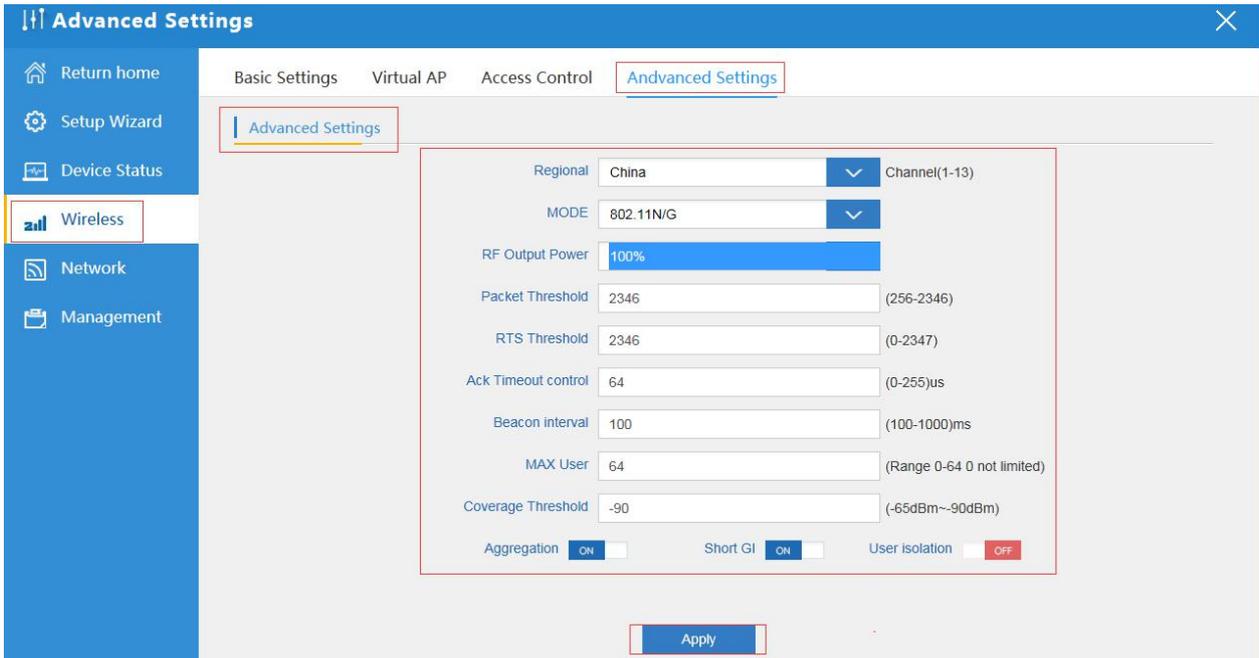
P35 Advanced Setting

Network setting:

In this page, mainly to show the LAN setting and VLAN as follow:
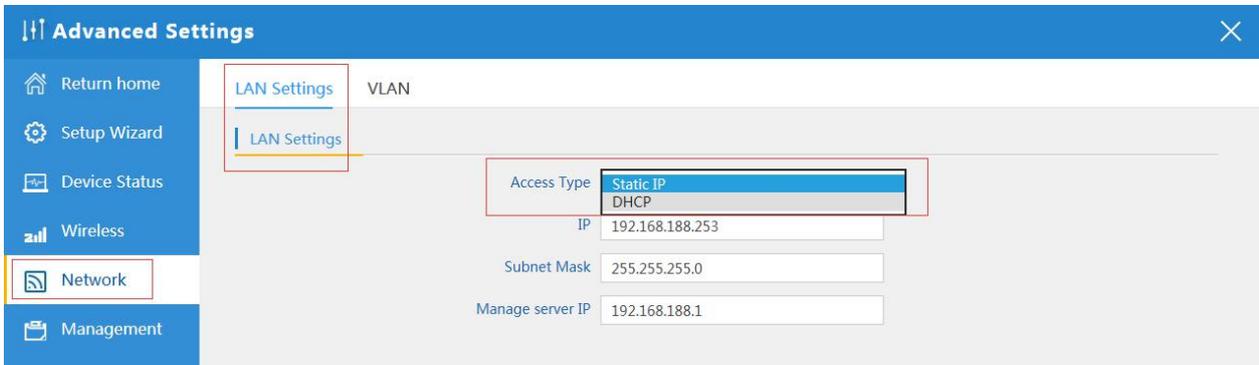
P36 Network Setting
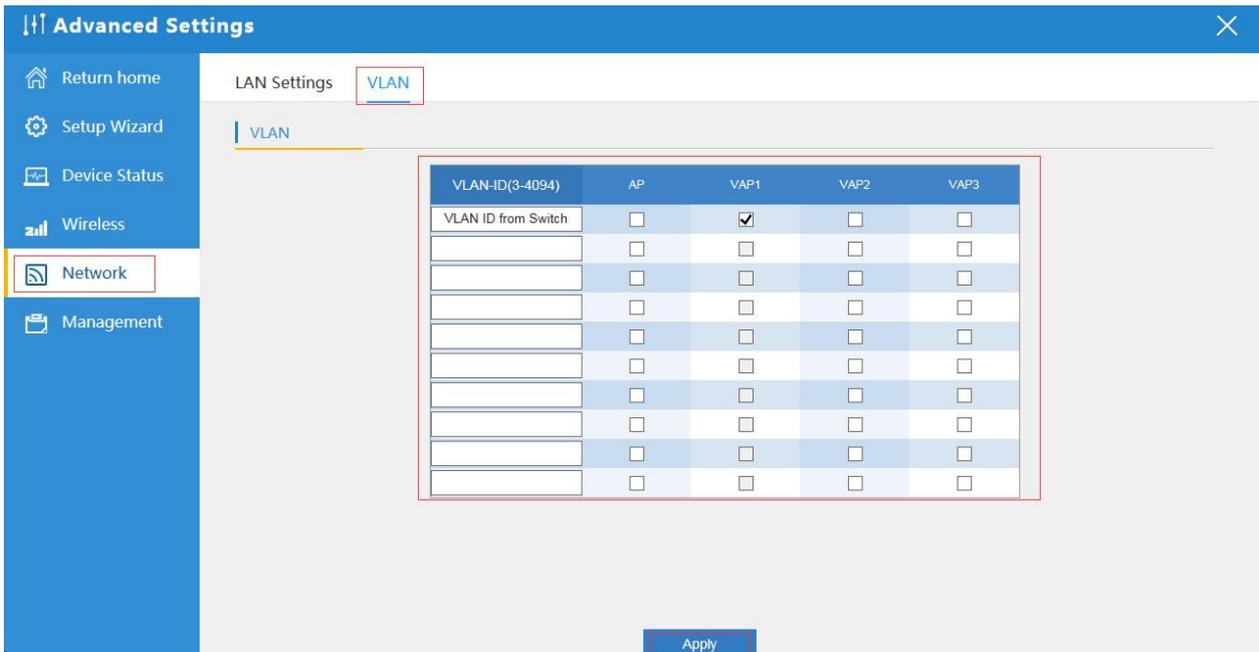
P37 Tag VLAN Setting

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:

P38 System Time

GIGAMEDIA
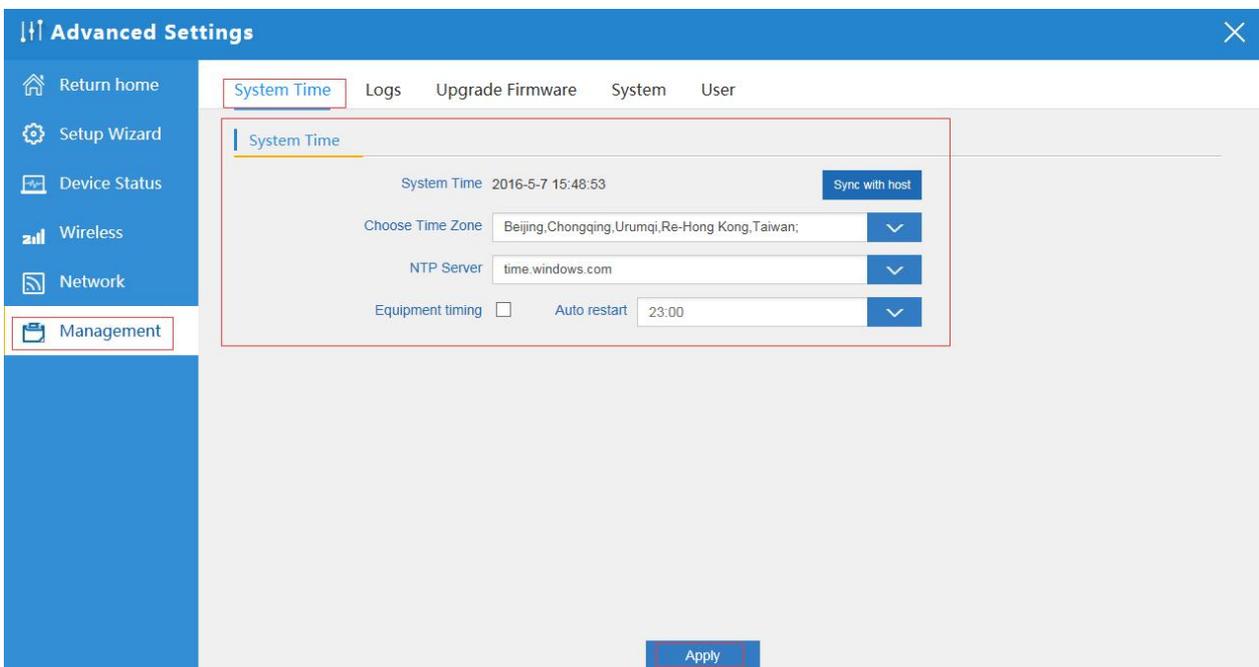
Return home	System Time	Logs	Upgrade Firmware	System	User

System Logs

☐ Remote Log Server

IP [_____] [Apply]

```
Oct 30 10:37:08 CPE150 kern.warn kernel: [   14.440000] band steering initialized for direct
attach hardware
Oct 30 10:37:08 CPE150 kern.warn kernel: [   14.450000] ieee80211_bsteering_attach: Band
steering initialized
Oct 30 10:37:08 CPE150 kern.warn kernel: [   14.460000] ath_attach_dfs[12691] dfsdomain 1
Oct 30 10:37:08 CPE150 kern.warn kernel: [   14.470000] SPECTRAL : module already attached
Oct 30 10:37:08 CPE150 kern.info kernel: [   14.470000] osif_wrap_attach:296 osif wrap
attached
Oct 30 10:37:08 CPE150 kern.info kernel: [   14.480000] osif_wrap_devt_init:916 osif wrap dev
table init done
Oct 30 10:37:08 CPE150 kern.warn kernel: [   14.490000] ath_tx_paprd_init sc 871e0000 PAPRD
disabled in HAL
Oct 30 10:37:08 CPE150 kern.info kernel: [   14.500000] wifi0: Atheros ???: mem=0xb8100000,
irq=47
Oct 30 10:37:08 CPE150 kern.info kernel: [   14.500000] ath_pci: SmartAntenna-DRT-0.1
(Atheros/multi-bss)
Oct 30 10:37:08 CPE150 kern.info kernel: [   14.610000] bonding: Ethernet Channel Bonding
Driver: v3.7.1 (April 27, 2011)
Oct 30 10:37:08 CPE150 kern.info kernel: [   15.330000] xt_time: kernel timezone is -0000
Oct 30 10:37:08 CPE150 kern.warn kernel: [   16.070000] nf_conntrack_rtsp v0.6.21 loading
Oct 30 10:37:08 CPE150 kern.warn kernel: [   16.140000] nf_nat_rtsp v0.6.21 loading
```

[Refresh] [Clear]

P39 LOG info

|↑| Advanced Settings   ✕

Return home	System Time	Logs	Upgrade Firmware	System	User

Upgrade Firmware

Software Version CPE150-AP-V2.0-B20160506191550

Choose File [_____] [浏览...] [Upgrade]

Note ⬤ do not power off the device during the upload because it may crash the system!

P40 Firmware Upgrade

|↑| Advanced Settings   ✕

Return home	System Time	Logs	Upgrade Firmware	System	User

Save/Reload Settings

Backup   [Backup]

Restore   [_____] [浏览...] [Restore]

Deset Default [Reset Default]

Reboot   [Reboot]

P41 System info
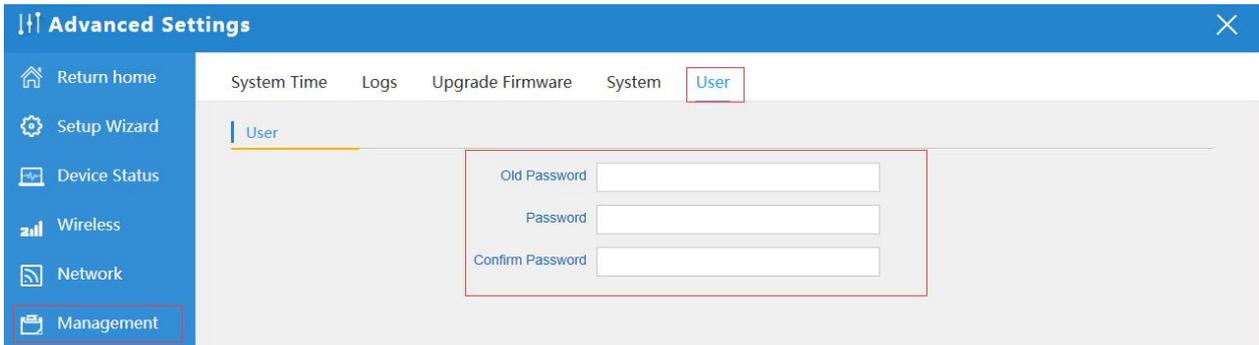
P42 User Info

4th Share Internet and Obtain IP address automatically

Set computer's TPC/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.
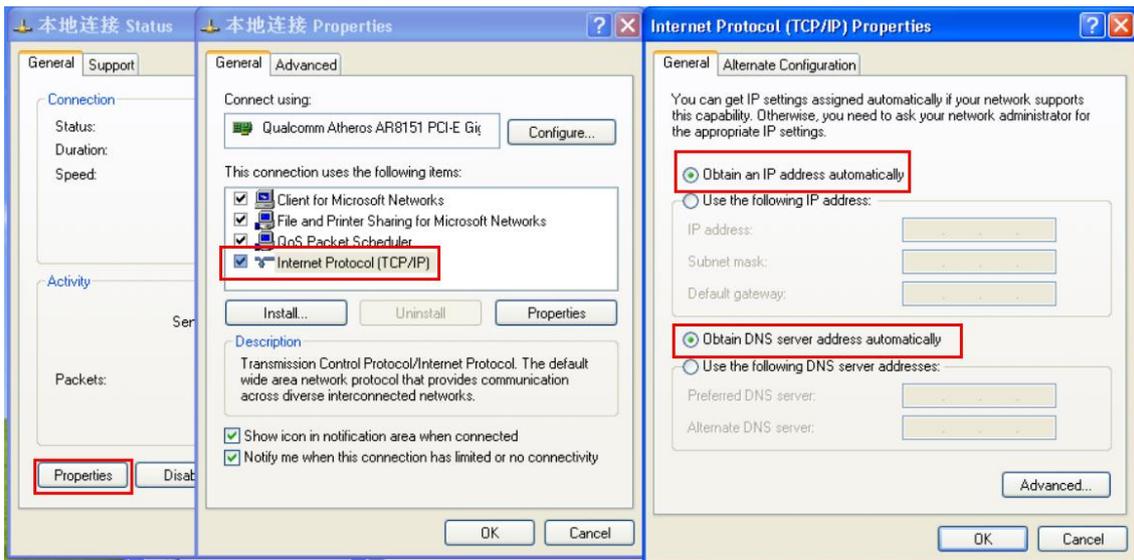
Trouble Shooting:

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 avaliable wireless networking again； Make sure the Wireless AP's wireless standard （11b/g/n, 2.4G）is correct； 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； 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
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.