

Outdoor CPE

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.

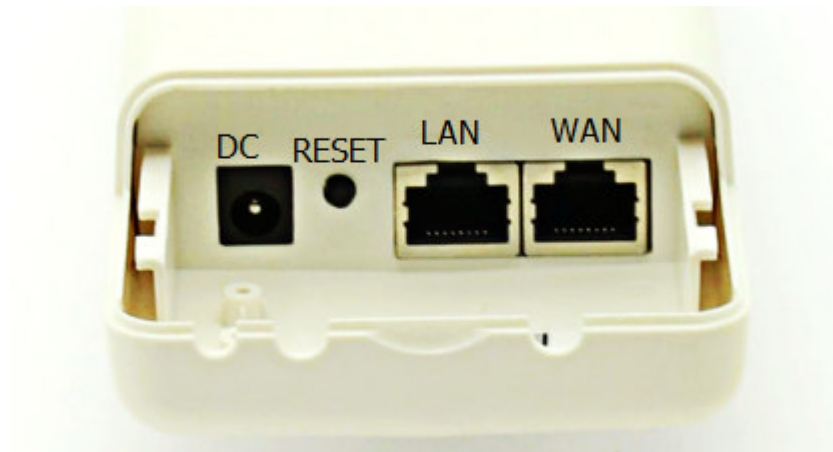
Pls check the Package before use it:

- Outdoor CPE * 1
- POE Adapter*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

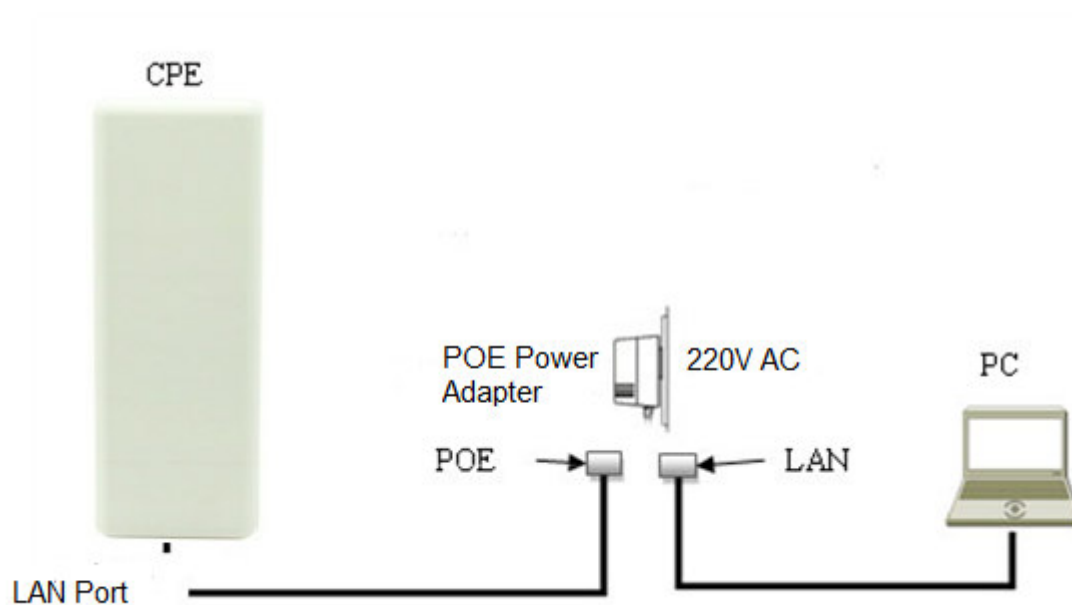
Reset: Press it for 10-15 seconds, the CPE will restore to factory default.

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 (CPE's LAN port and WAN port support the 12V/24V PoE.)
- Pls refer to P2 for PoE Power and CPE configure



P2 diagram of PoE Power and CPE configure



Attention

Pls make sure our CPE working with included Power adapter or PoE adapter, and under right connection way, or the device will be damaged.

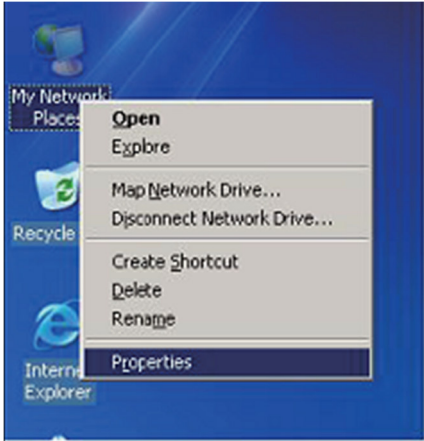
2nd :CPE Start and Log in

- 1) Power the CPE as P2 show
- 2) Set an fixed IP adress 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

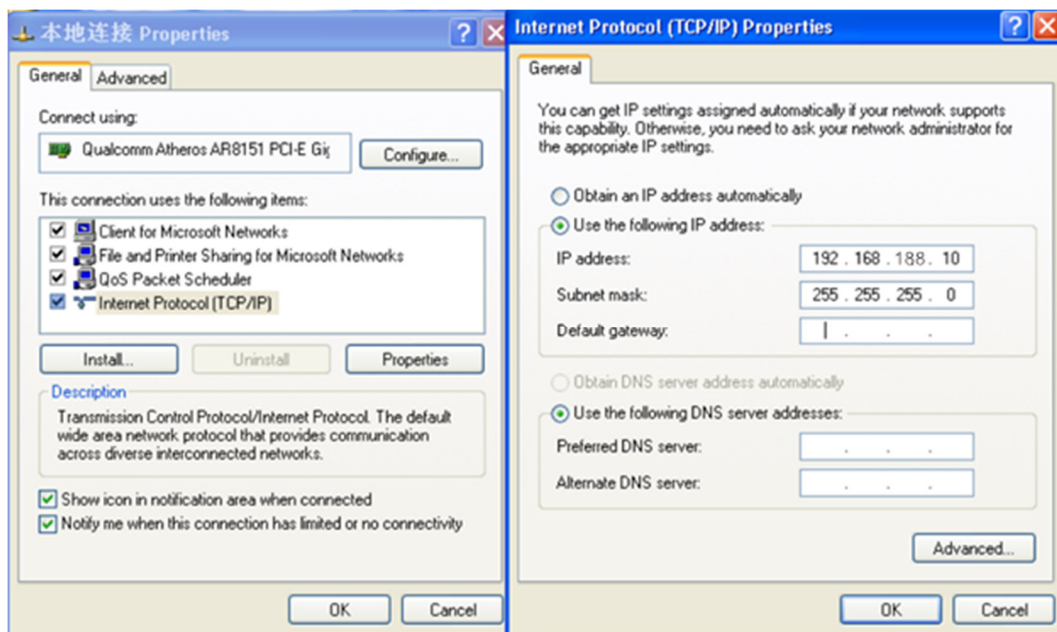
Subnet mask is **255.255.255.0**, Default gateway leave it blank, then click **OK**.

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

:

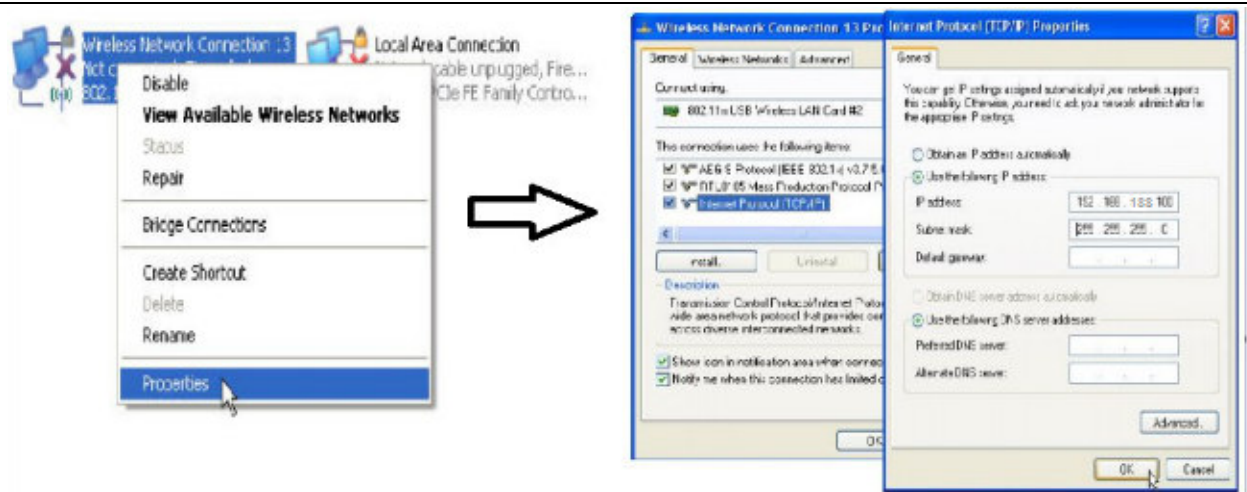


P3 Configure the computer's IP address by wired



P4 configure the computer's IP by wired

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

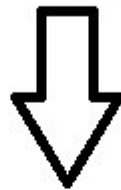
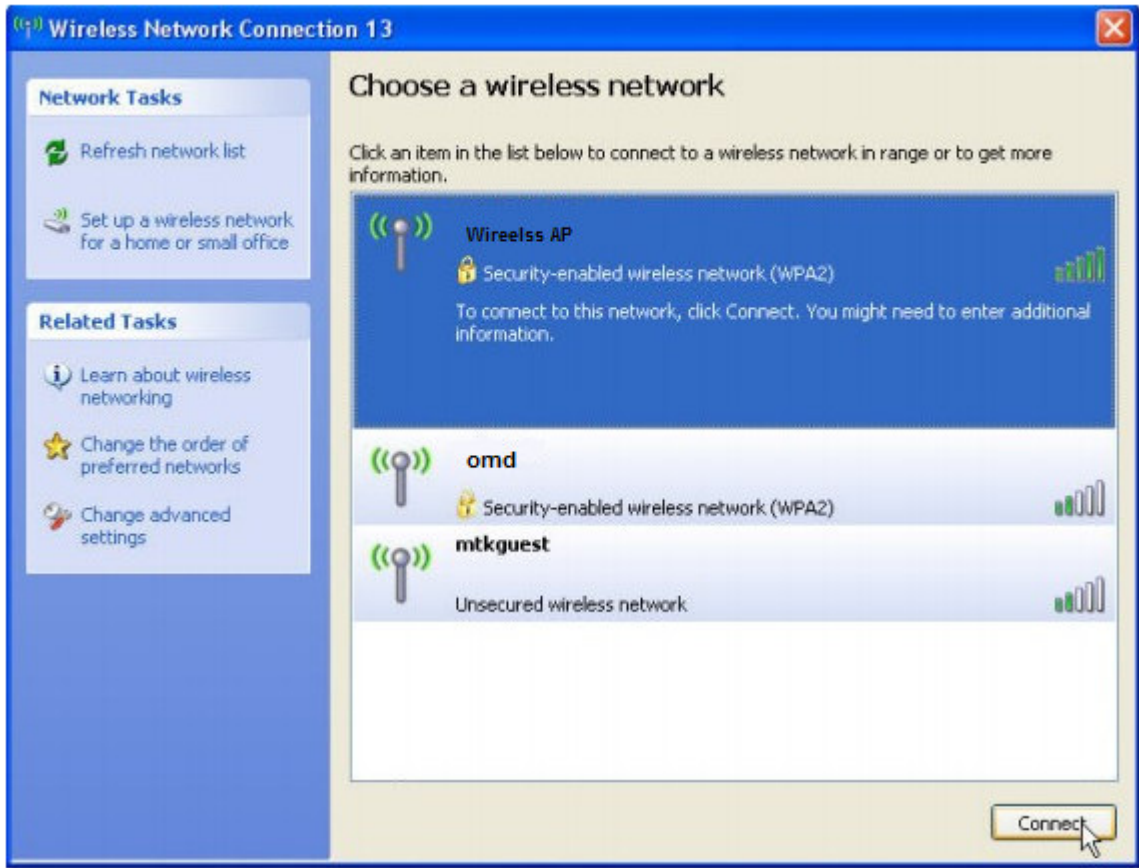


P5 Configure the computer's IP Address by wireless

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

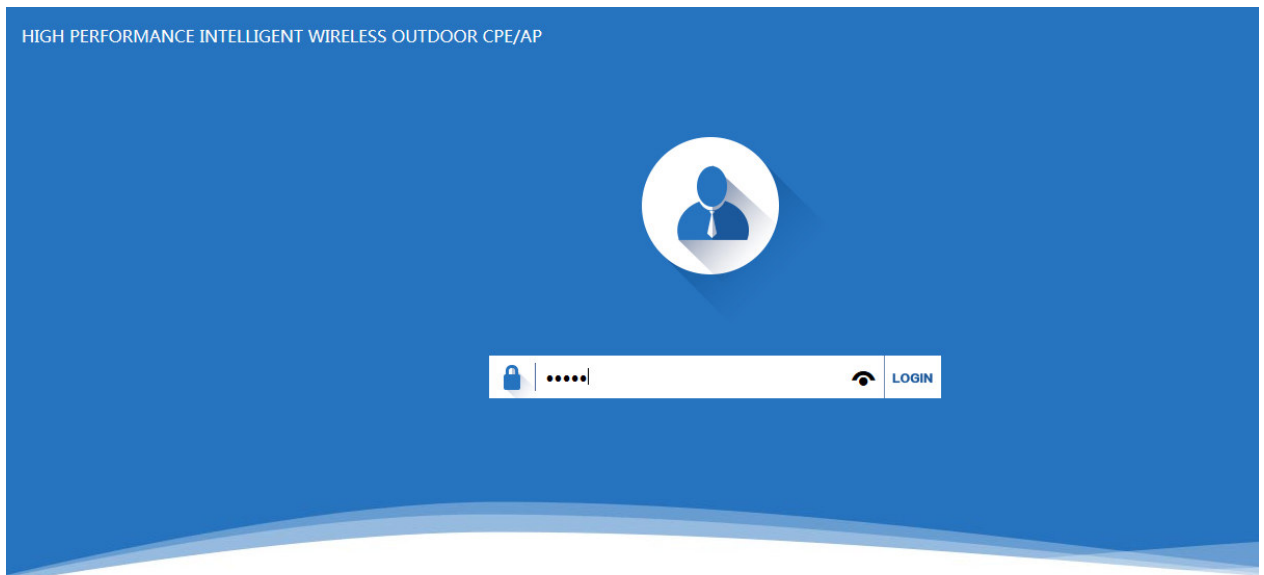


Indicator

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.



Version CPE150-AP-V2.0-B20160409135409

P8 Log in

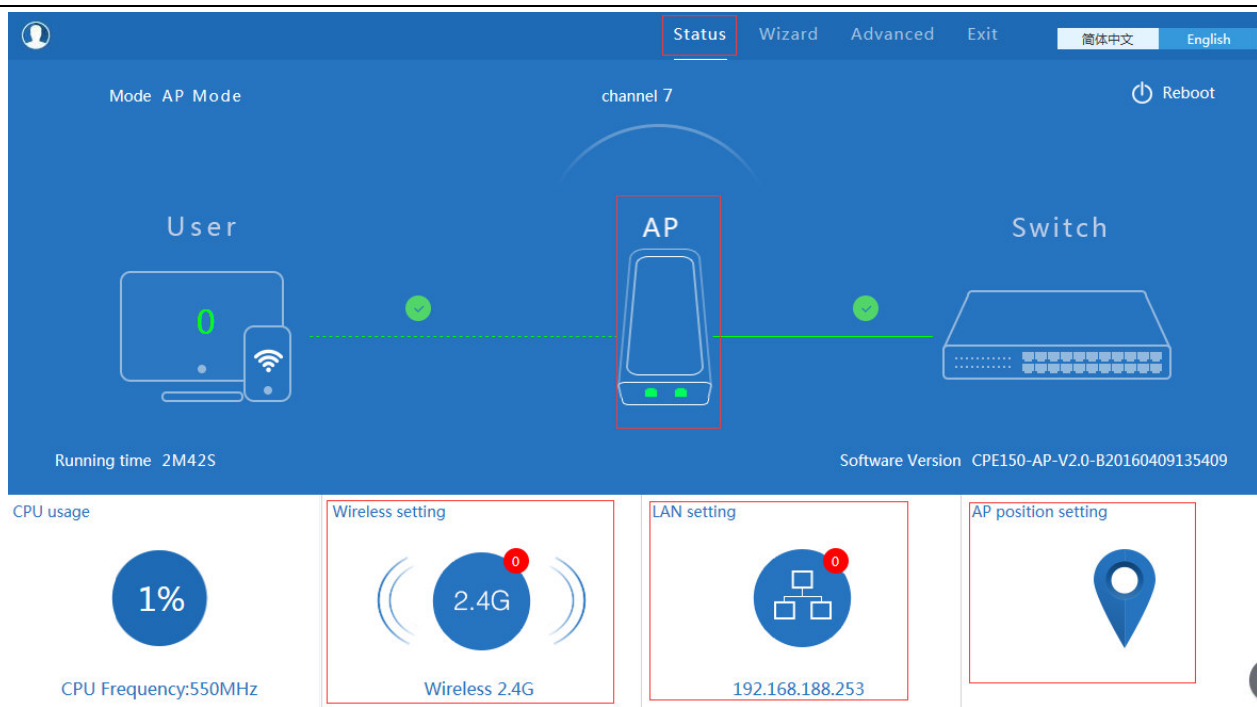
3rd : WEB GUI interface Setting:

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.

Quickly Guider for Outdoor CPE

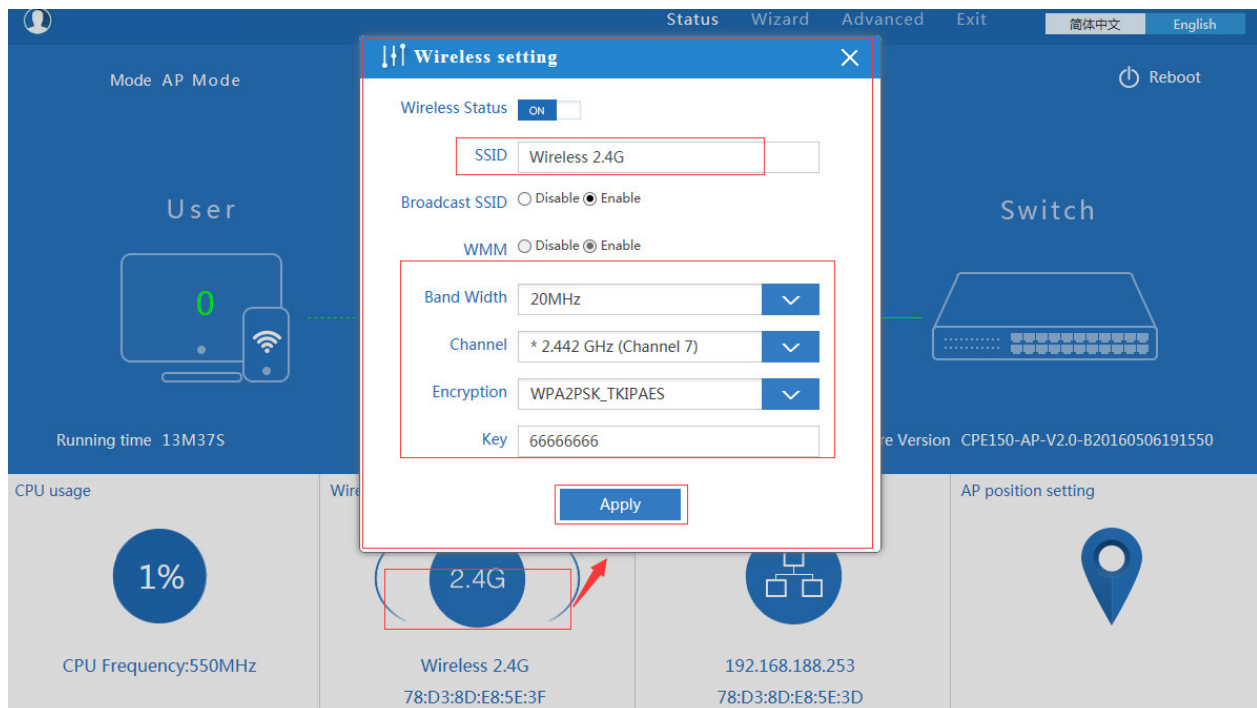


P9 Status

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

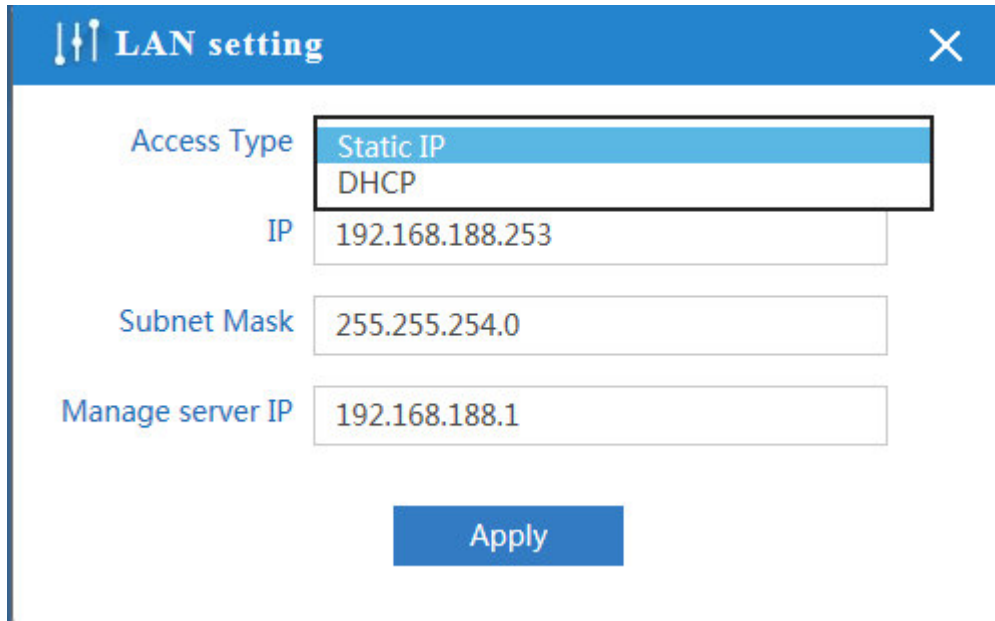
Then in 2.4G Wireless Setting, GUI configuration page showed as below:

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

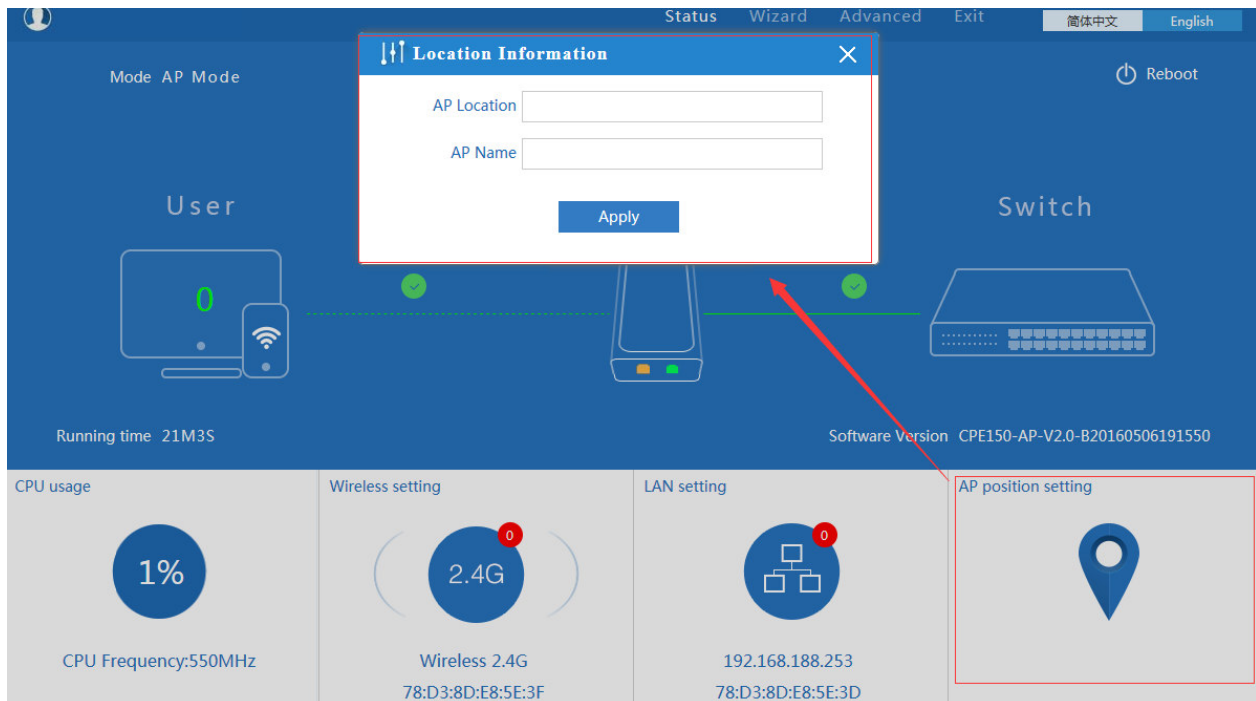


P10 Wireless Setting

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



P11 LAN Setting

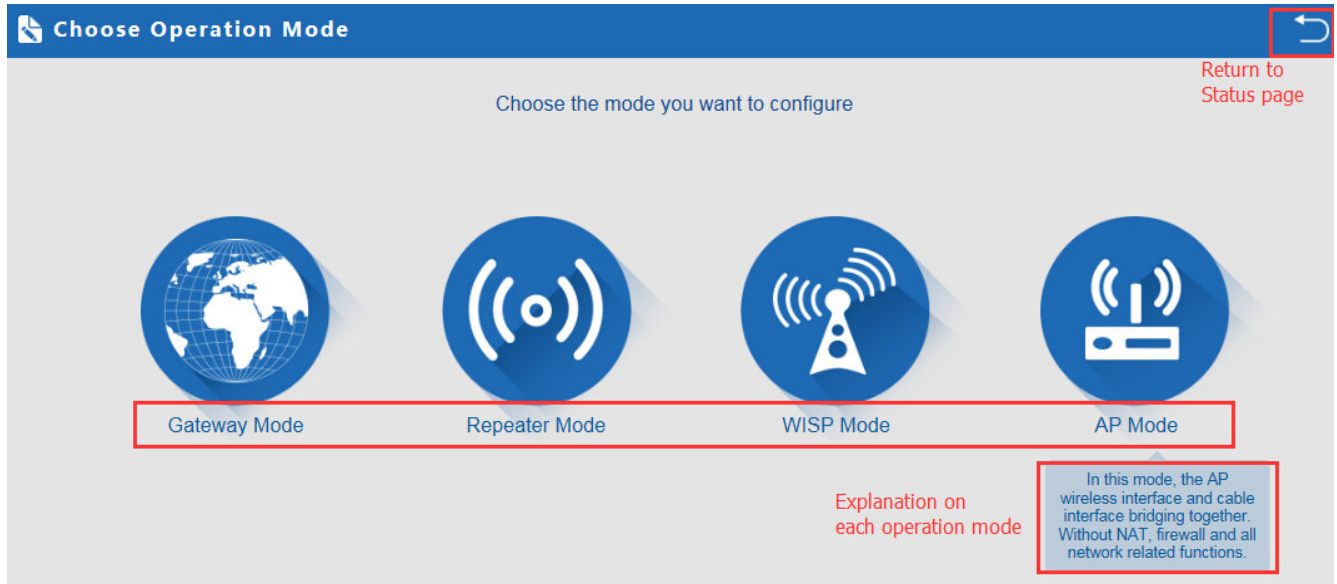


P12 AP Position setting

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.

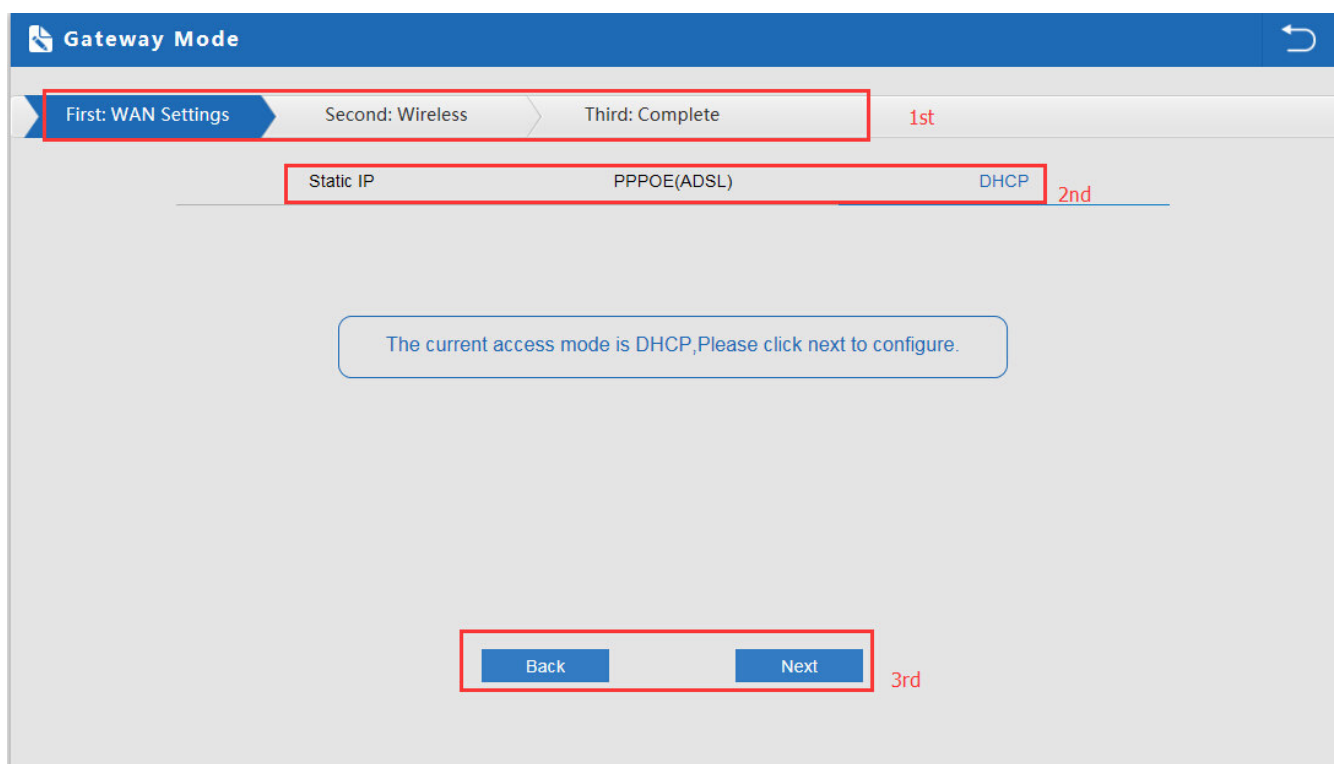


P13 Operation mode

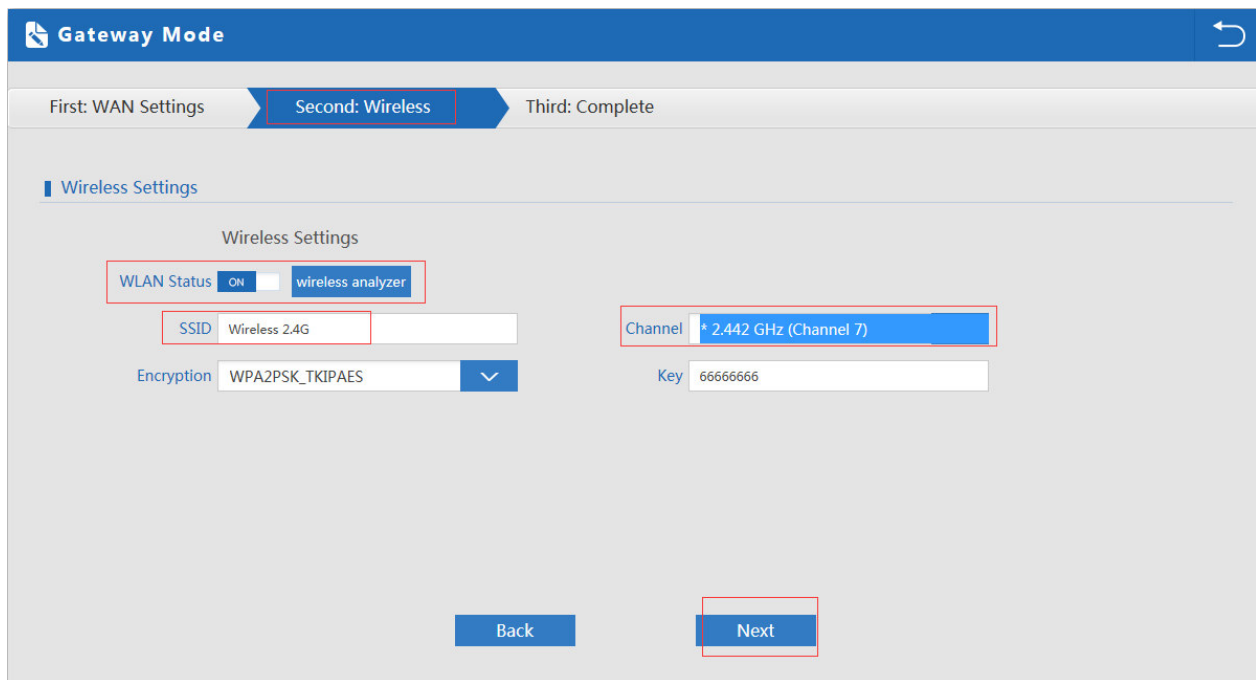
1. Gateway Mode:

Click Gateway mode, will pop up following pictures:

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

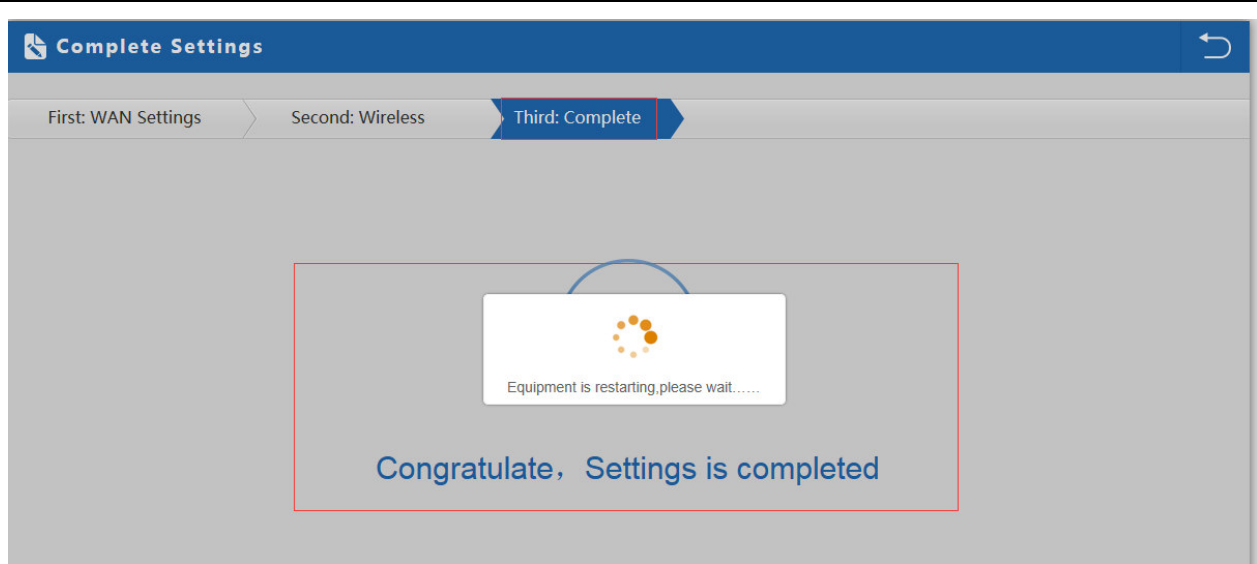


P14. WAN setting in Gateway Mode



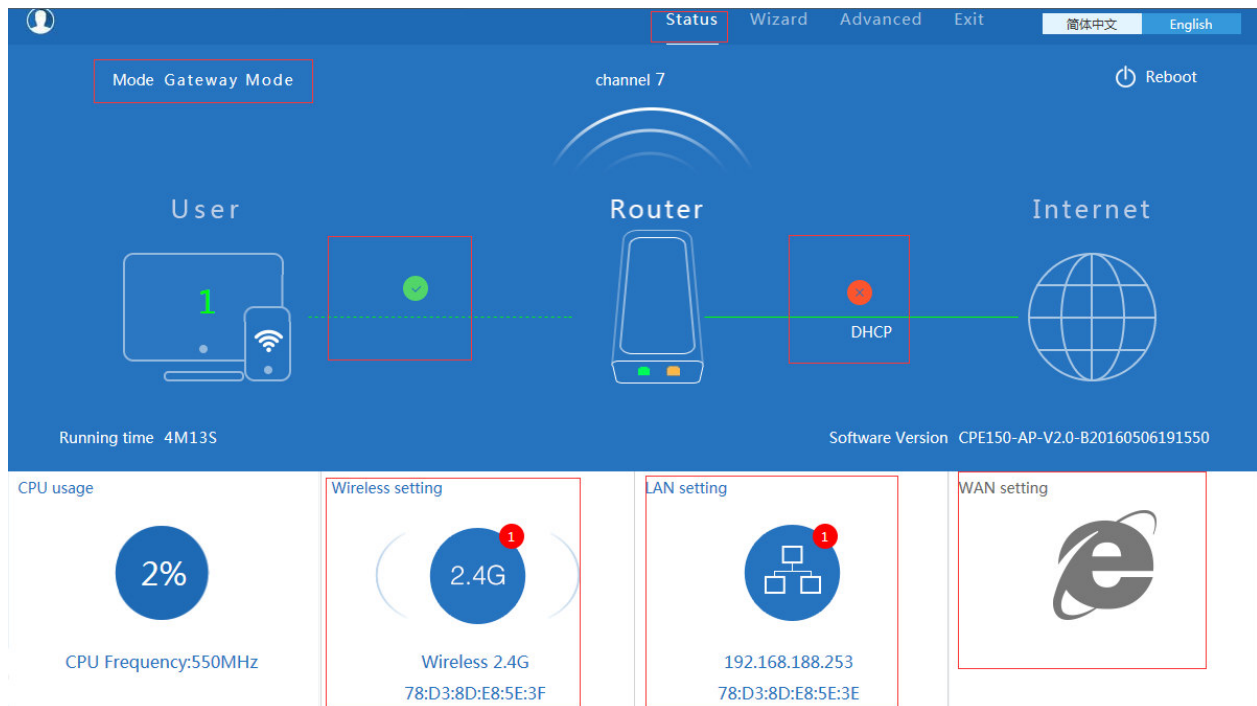
P15 Wireless Setting in Gateway Mode

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.

Repeater Mode

First: Repeater
Second: Complete

| **Wireless Repeater**

Repeater SSID Scan AP

Authentication none ▼

Band Width 20MHz ▼

WDS Passthrough

Back
Next

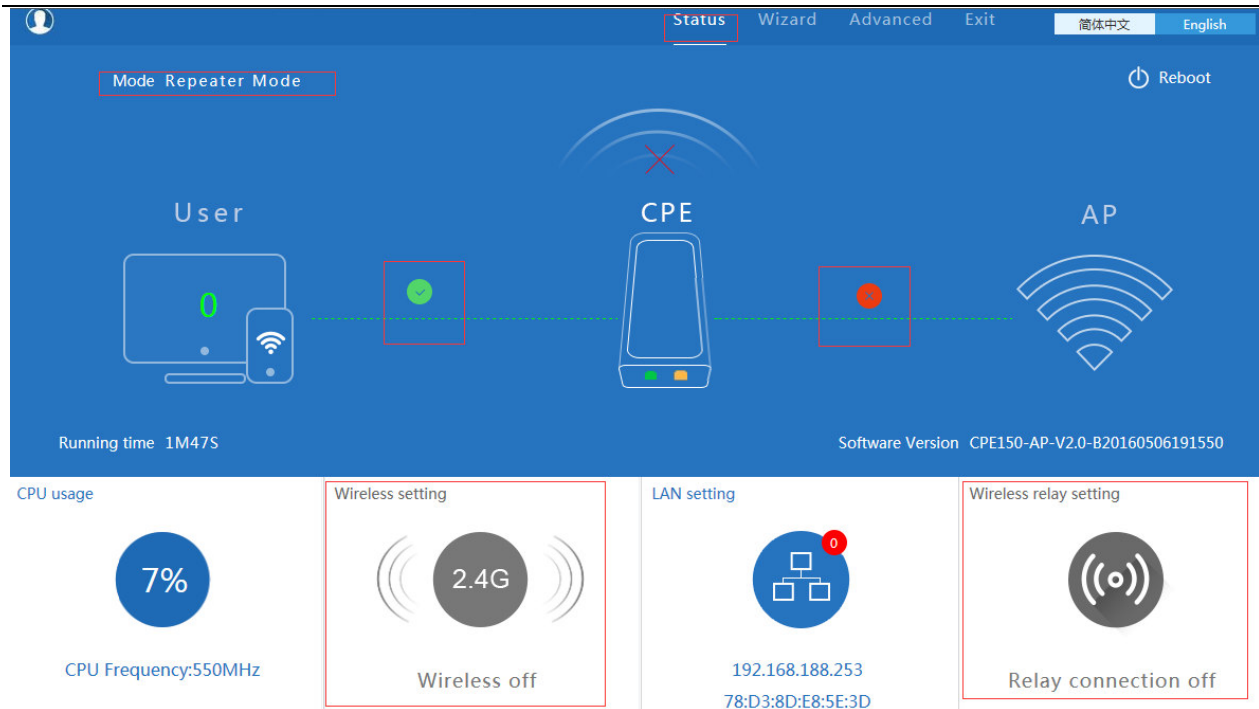
Scan AP ✕

Wireless 2.4G	78:D3:8D:D7:23:FB Channel: 7	Choice
RSS: -75 dBm	Encryption: WPA2PSK_TKIPAES	
Wireless 2.4G	78:D3:8D:D7:23:E9 Channel: 7	Choice
RSS: -80 dBm	Encryption: WPA2PSK_TKIPAES	
Wireless 2.4G	78:D3:8D:D7:25:42 Channel: 7	Choice
RSS: -80 dBm	Encryption: WPA2PSK_TKIPAES	
TEST-002		
Refresh		

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.

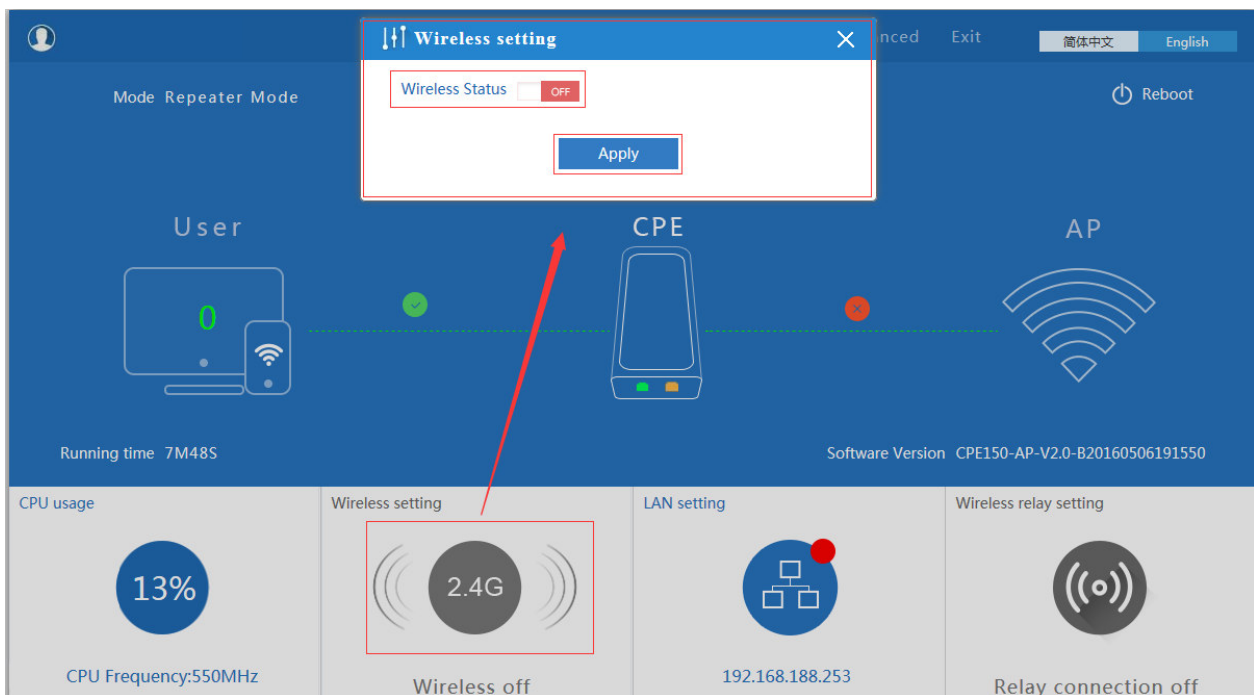
Quickly Guider for Outdoor CPE



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:



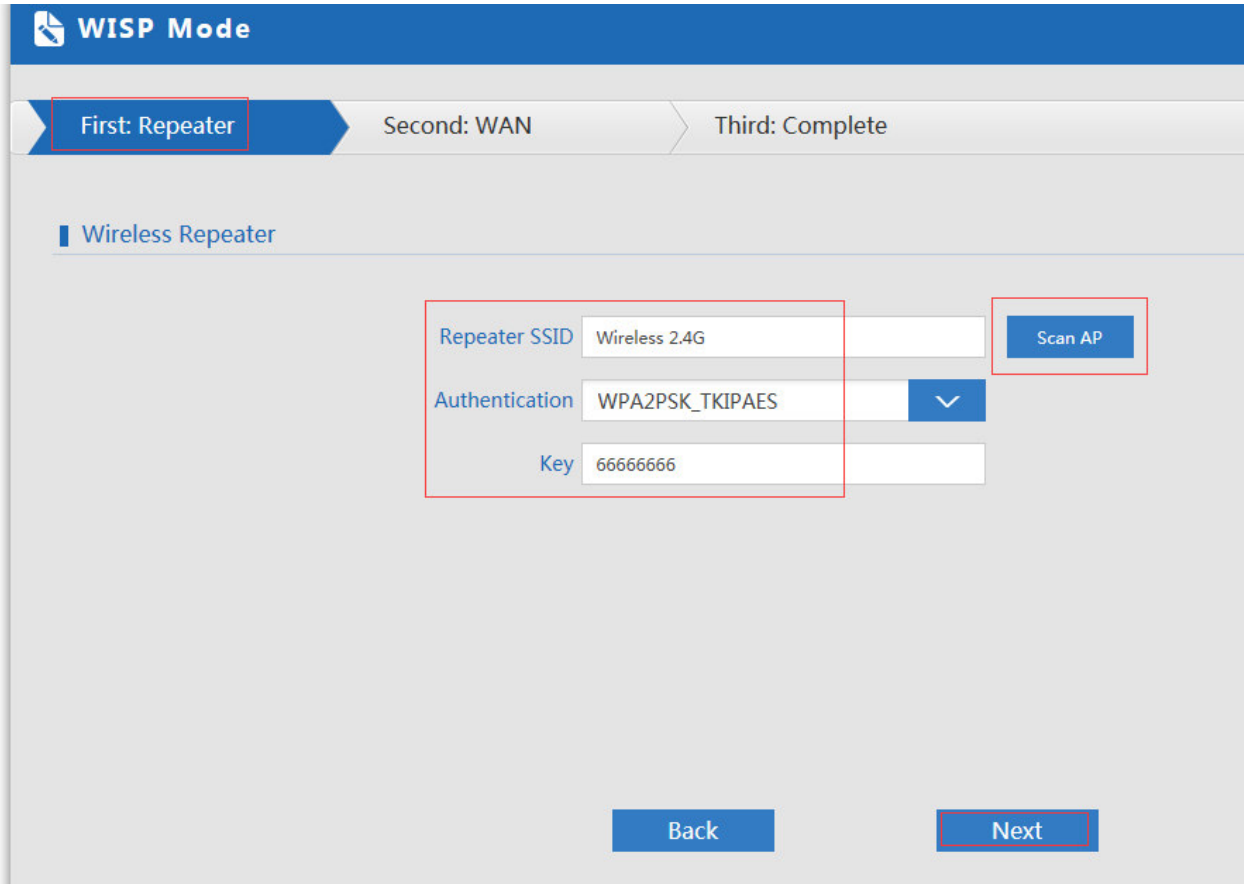
P20 Wireless on/off

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

3. WISP Operation mode:

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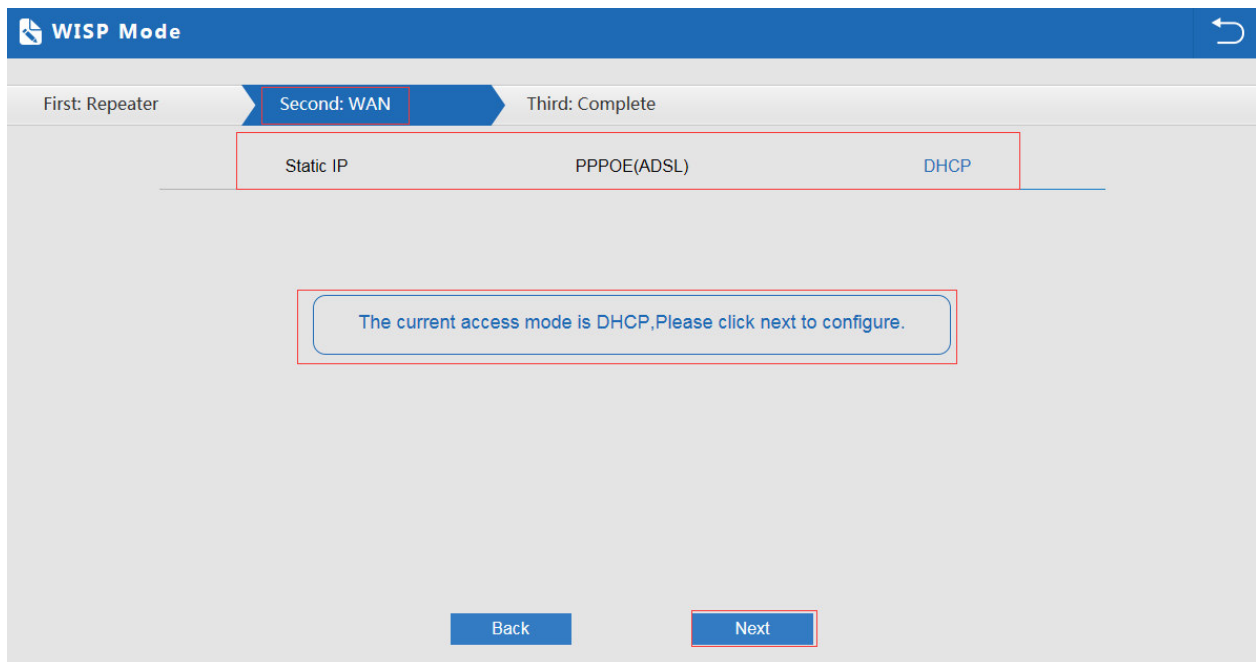
Click WISP operation mode in Wizard, then will pop up the configure page, pls set the WISP operation mode based on the steps showed in picture:



The screenshot shows the 'WISP Mode' configuration interface. At the top, there is a blue header with the 'WISP Mode' title and a home icon. Below the header is a progress bar with three steps: 'First: Repeater' (highlighted with a blue arrow), 'Second: WAN', and 'Third: Complete'. The main content area is titled 'Wireless Repeater'. It contains three input fields: 'Repeater SSID' with the value 'Wireless 2.4G', 'Authentication' with the value 'WPA2PSK_TKIPAES', and 'Key' with the value '66666666'. A 'Scan AP' button is located to the right of the SSID field. At the bottom, there are 'Back' and 'Next' buttons.

P21 WISP Mode

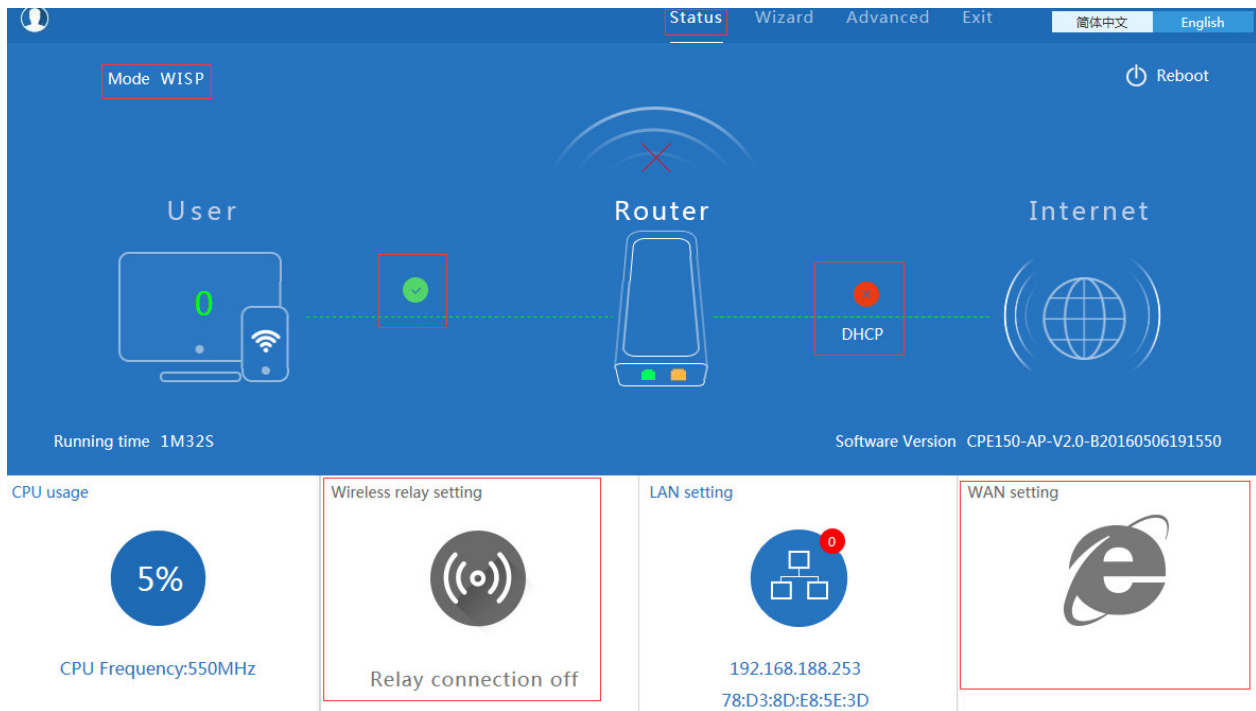
Configure the right WAN setting in WISP operation mode, then next to restart the outdoor CPE.



The screenshot shows the 'WISP Mode' configuration interface at the 'Second: WAN' step. The progress bar at the top shows 'First: Repeater', 'Second: WAN' (highlighted with a blue arrow), and 'Third: Complete'. Below the progress bar, there are three radio button options: 'Static IP', 'PPPOE(ADSL)', and 'DHCP'. The 'DHCP' option is selected. A message box below the options states: 'The current access mode is DHCP, Please click next to configure.' At the bottom, there are 'Back' and 'Next' buttons.

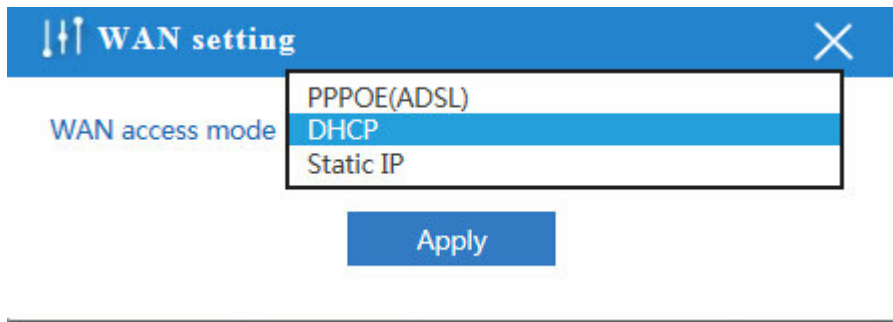
P22 WAN setting in WISP mode

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:

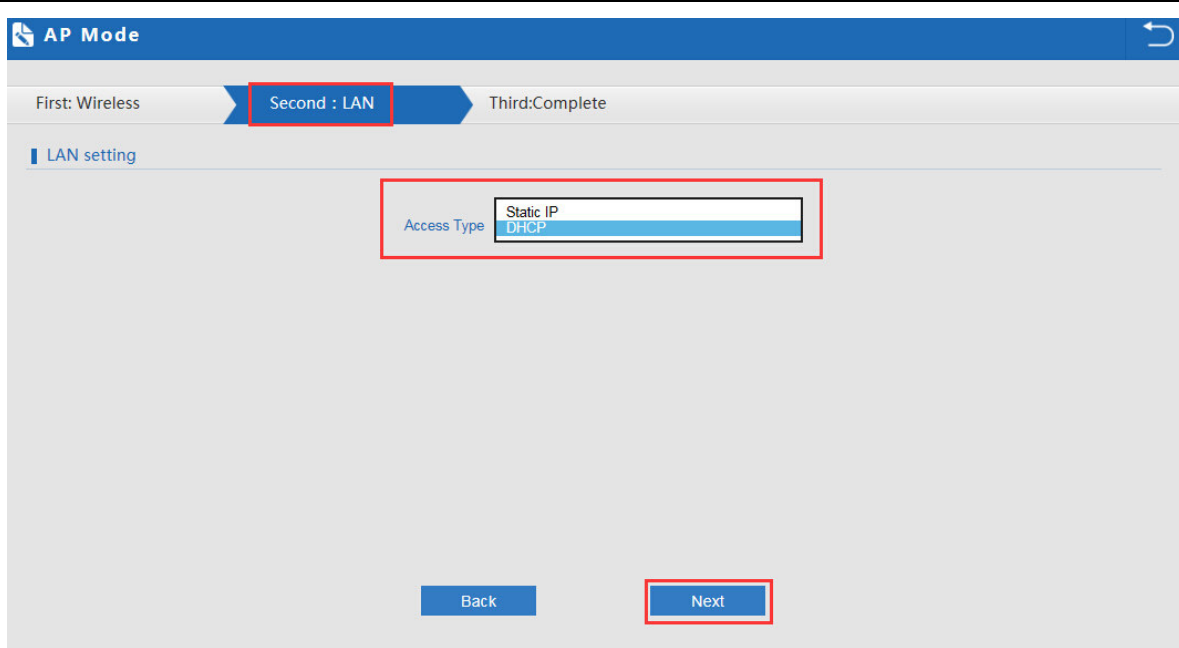


P24 WAN setting in WISP mode

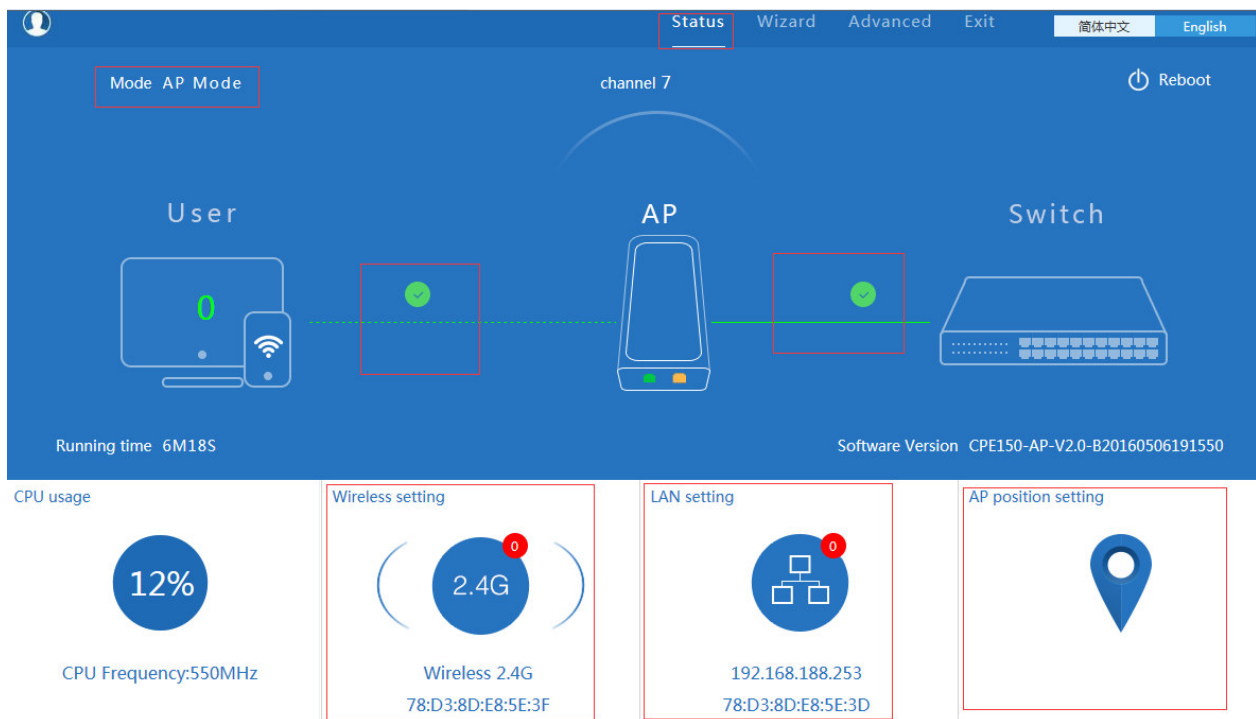
4. AP Operation mode:

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:



P27 LAN Setting in AP Mode



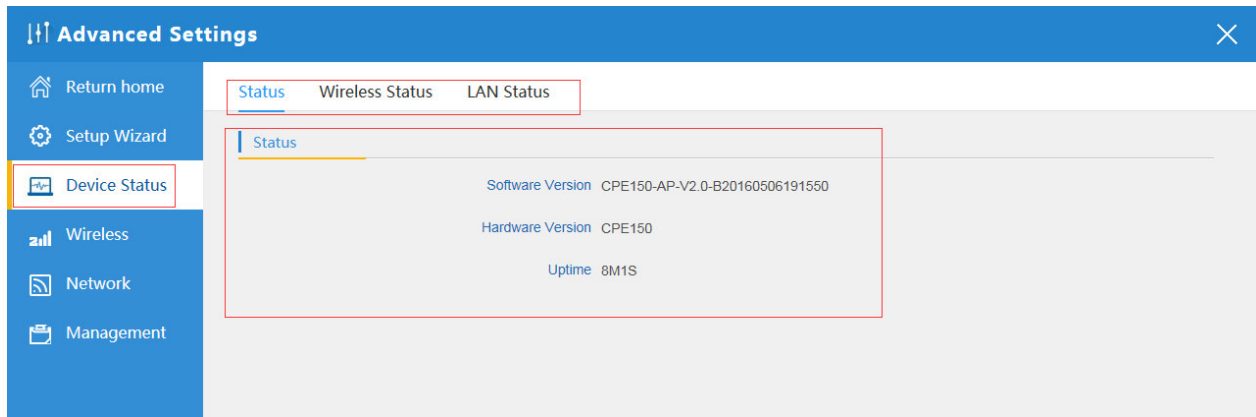
P28 Status in AP Mode

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...

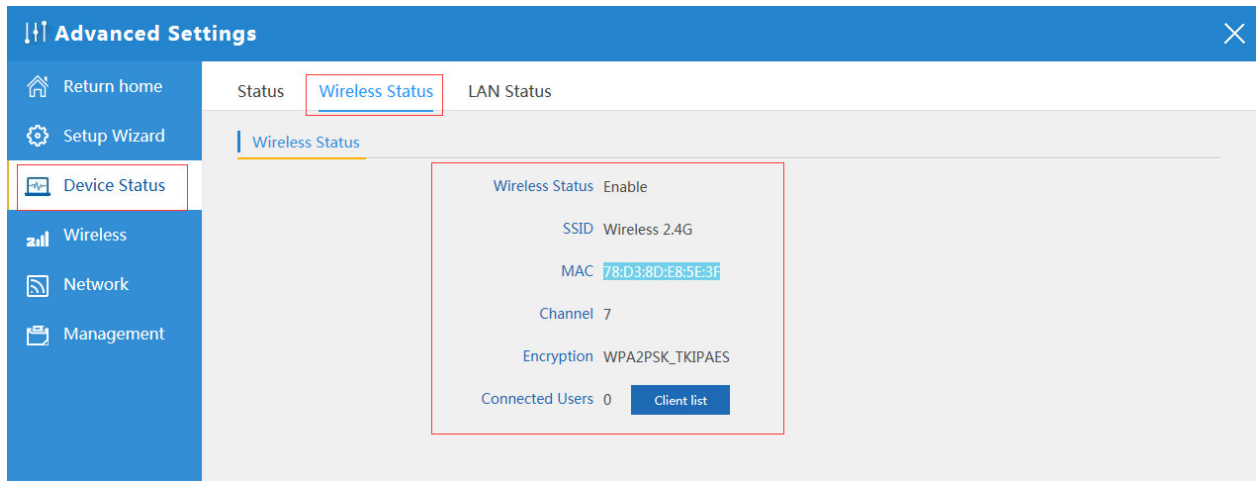
Let's Click Advanced Setting in status page, will show return home, Setup Wizard which we showed before.

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

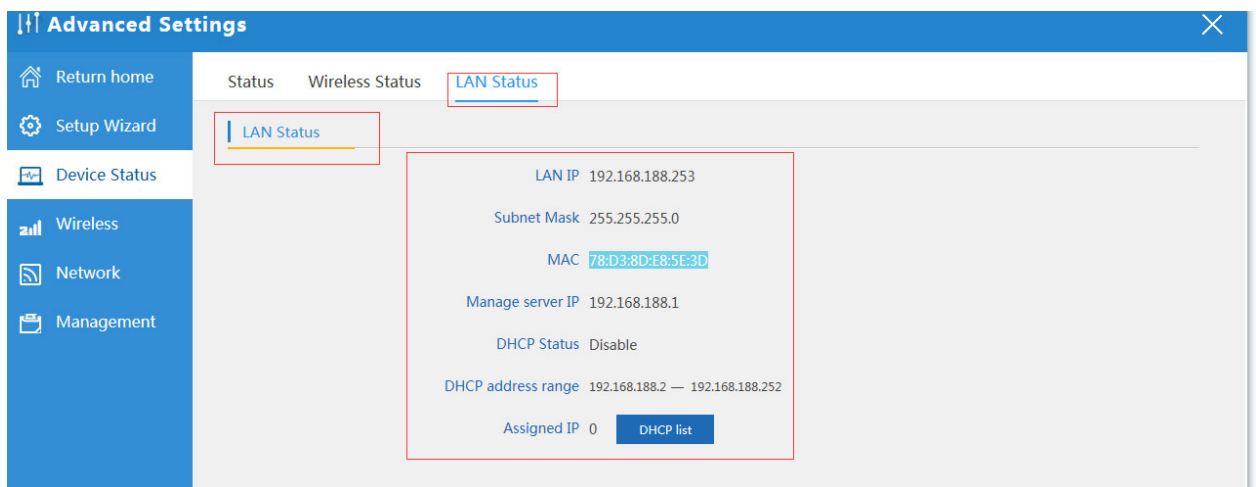


P29 Device Status

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



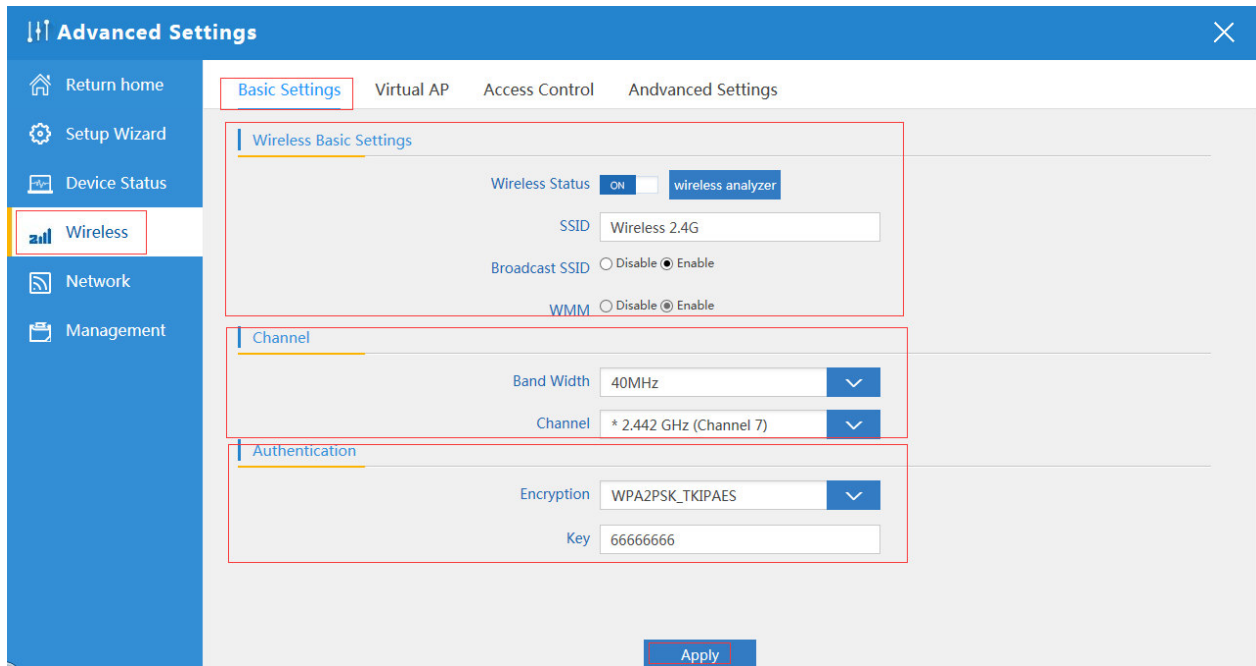
P30 2.4G Wireless Status



P31 LAN Status

2.4G Wireless Setting:

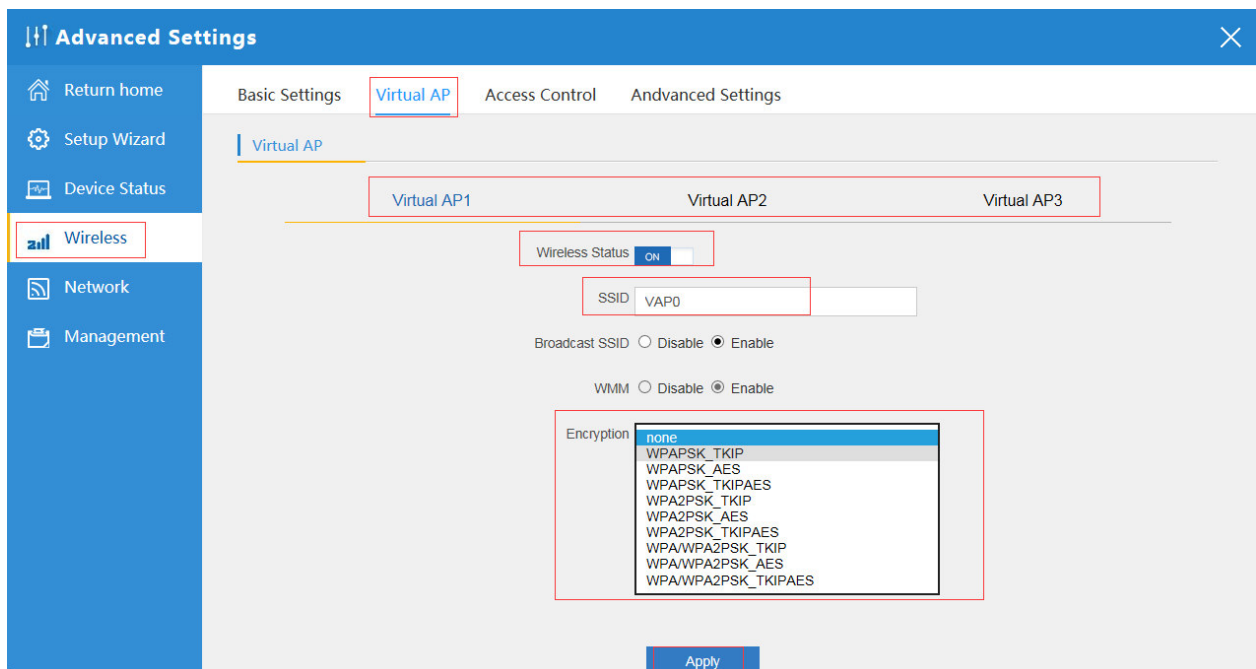
In this part, will show the Wireless Basic Setting, Virtual AP, Access control and Advanced Setting:



P32 Basic Setting in 2.4G Wireless

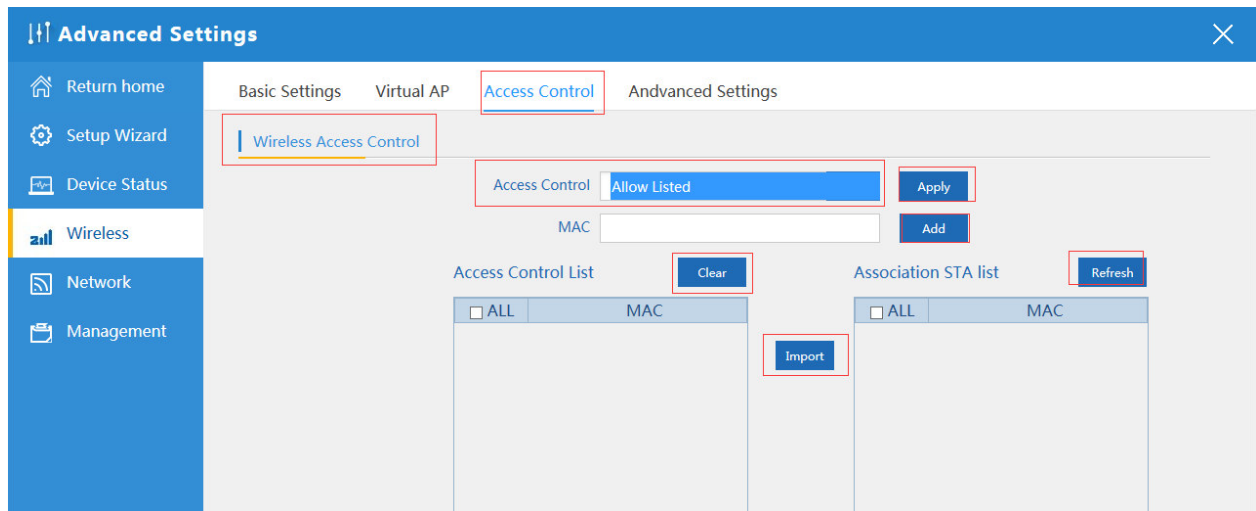
Virtual AP:

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



P33 Virtual AP

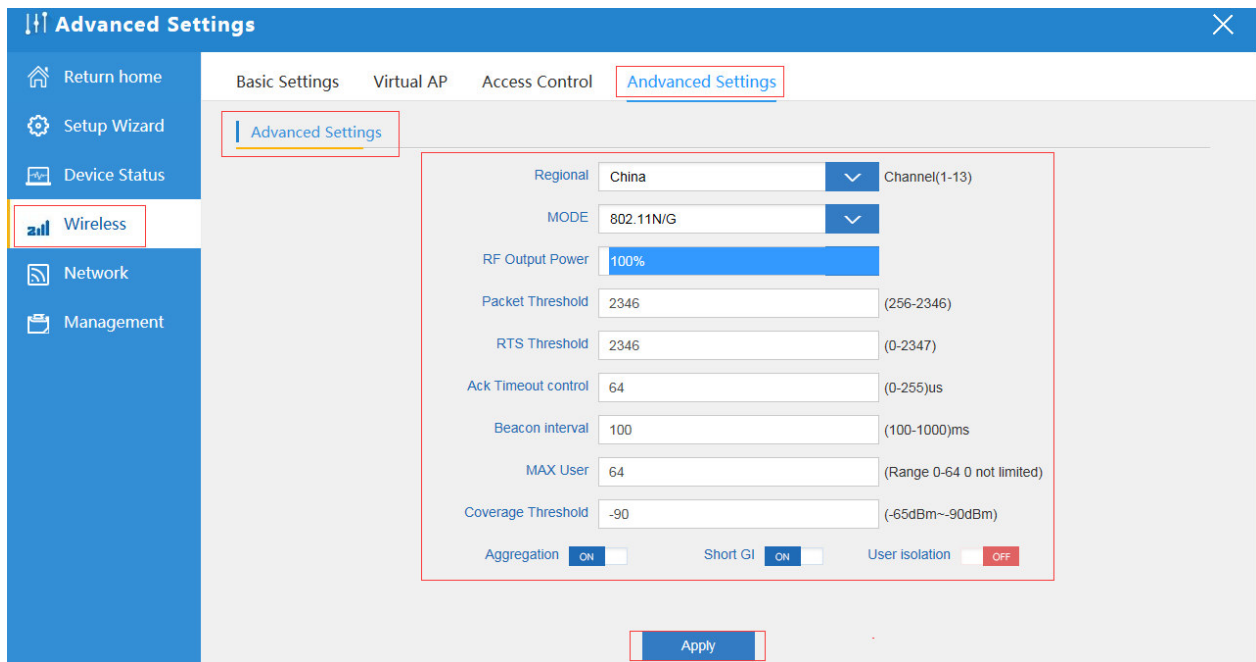
Access Control: Mainly show MAC allow or deny:



P34 MAC Access Control

Advanced Settings:

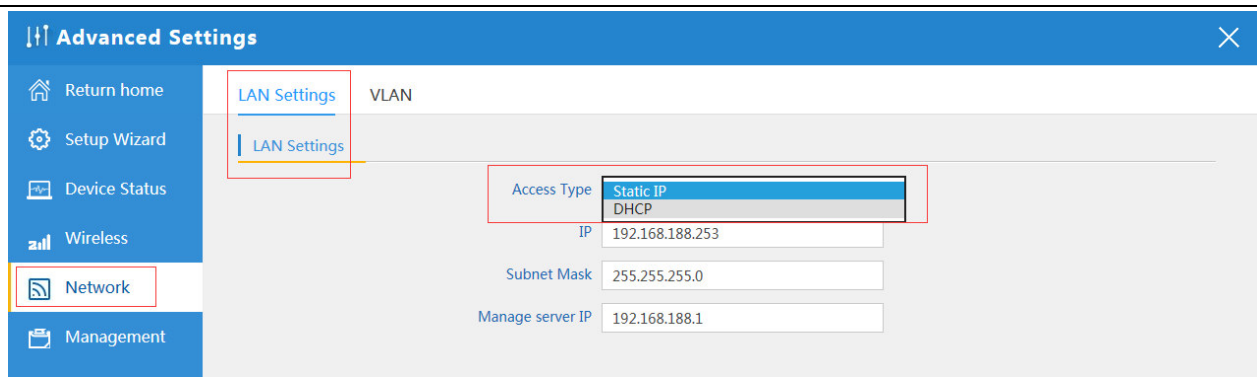
In this page, will show the regional, RF Power, Max user access...



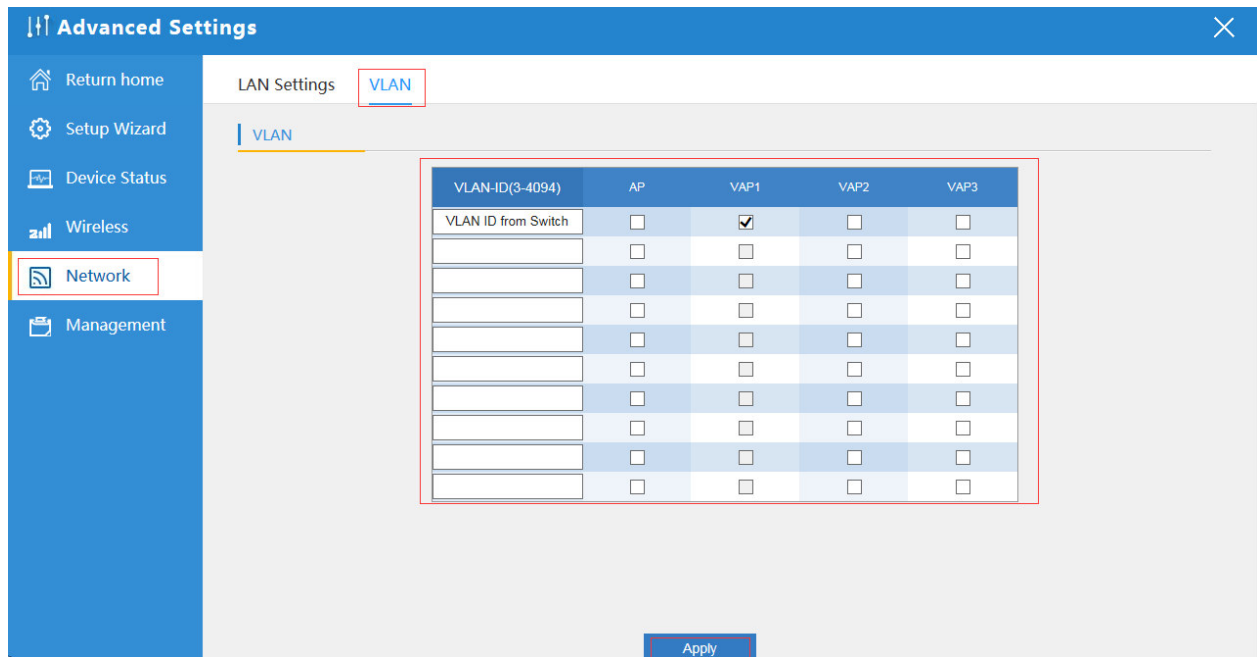
P35 Advanced Setting

Network setting:

In this page, mainly to show the LAN setting and VLAN as follow:



P36 Network Setting

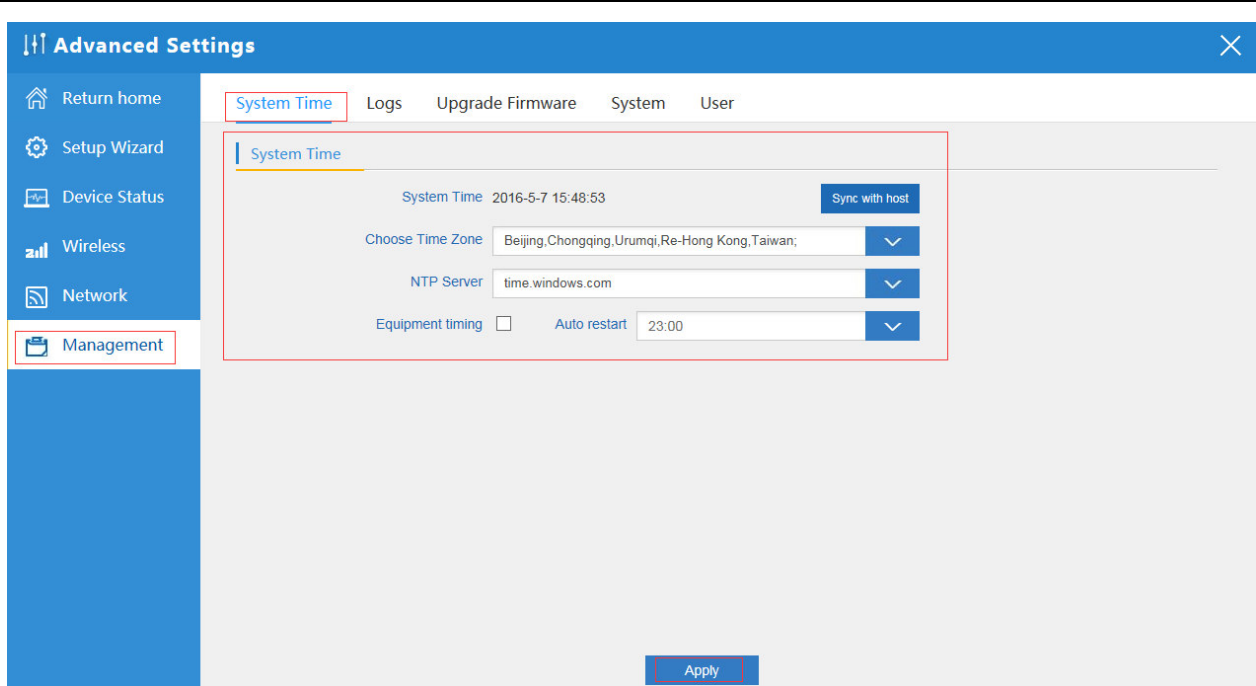


P37 Tag VLAN Setting

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:



Advanced Settings

System Time | Logs | Upgrade Firmware | System | User

System Time

System Time 2016-5-7 15:48:53 Sync with host

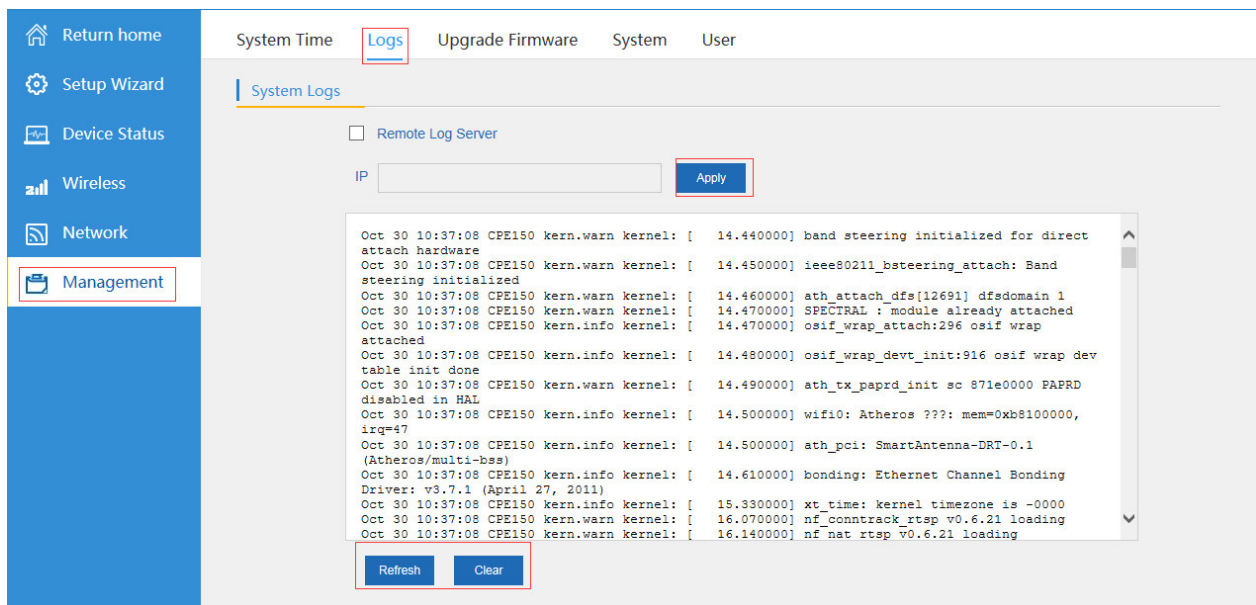
Choose Time Zone Beijing,Chongqing,Urumqi,Re-Hong Kong,Taiwan; ▼

NTP Server time.windows.com ▼

Equipment timing Auto restart 23:00 ▼

Apply

P38 System Time



Advanced Settings

System Time | **Logs** | Upgrade Firmware | System | User

System Logs

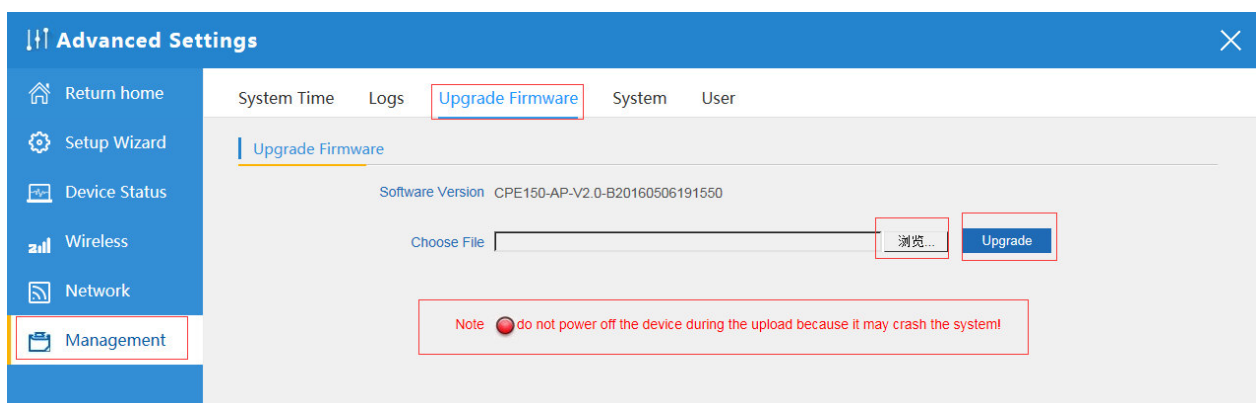
Remote Log Server

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_dev_t_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

System Time | Logs | **Upgrade Firmware** | System | User

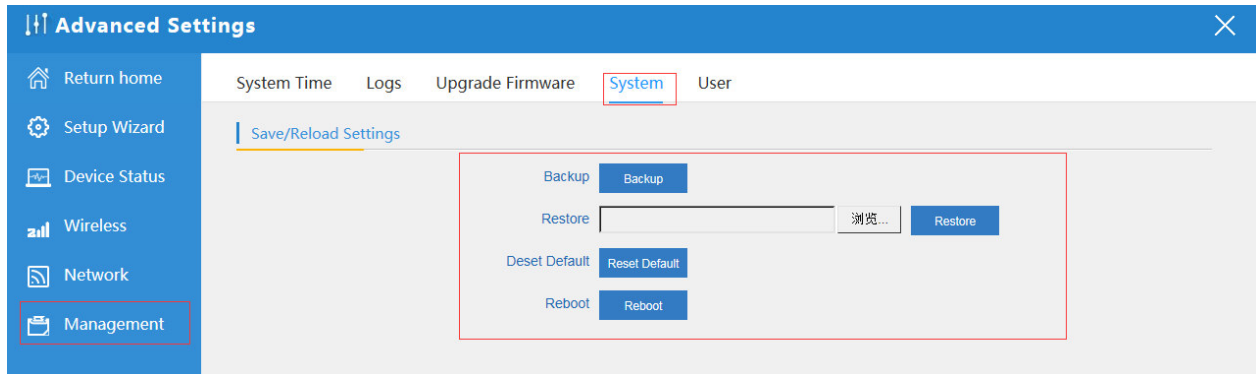
Upgrade Firmware

Software Version CPE150-AP-V2.0-B20160506191650

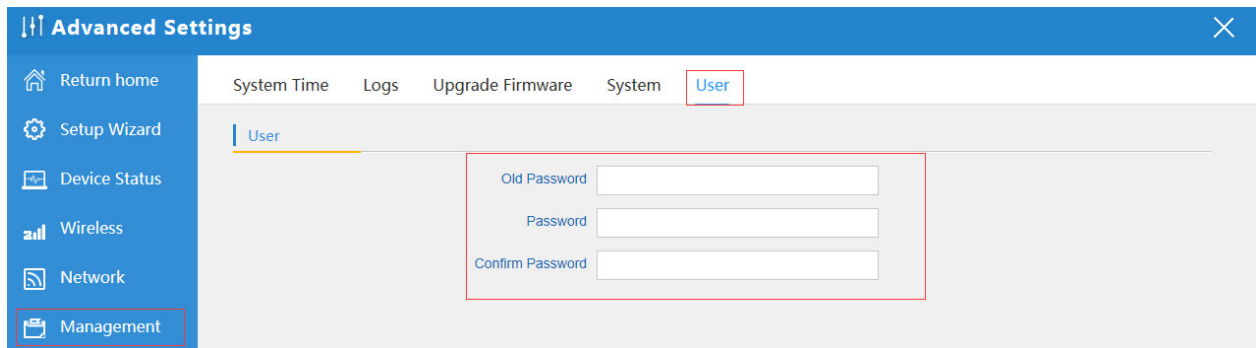
Choose File 浏览... Upgrade

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

P40 Firmware Upgrade



P41 System info

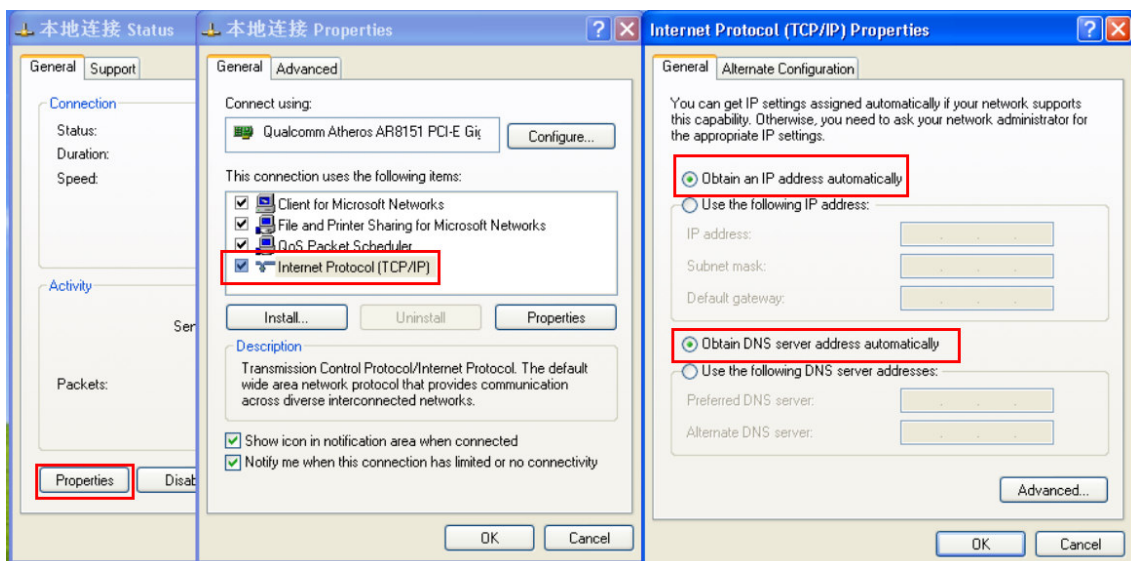


P42 User Info

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 available 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 setting. If it is dynamin, 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.