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AP Controller

User Manual

AC200

V2.0

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1. Introduction

1.1. Overview

AC200 is the new AP controller lunched by PUSR. It can be used to manage and control wireless access points AP and wireless users. It can realize remote centralized monitoring of the working status of APs, remote delivery of configurations or policies, remotely upgrade APs, etc., and control user access. AC can provide more secure, stable and efficient wireless access services, and users can manage and control wireless networks more conveniently.

It has 1*WAN port and 4*LAN ports, for LAN ports, all of which support standard PoE power output. Users can use it to power the AP device and achieve unified management, which greatly simplifies the complexity of home wireless networking.

1.2. Features

- MTKT7621AT MIPS1004Kc (880 MHz) dual-core CPU, adopting high-performance processor can provide more stable network and faster transmission rate.
- Supported standard: IEEE802.3, IEEE802.3u, IEEE802.3ab.
- Equipped with 1*10/100/1000M WAN, 4*10/100/1000M LAN (PoE output), auto MDI/MDIX.
- PoE output standard: IEEE 802.3af, IEEE 802.3at, 48V out, max 57W power supply, 30W for single PoE ports.
- Metal shell can provide heat dissipation and effectively shields electromagnetic interference.
- Support multiple installations: Desktop, DIN rail mounting, wall mounting, 1U Rack Mount: Standard 19-inch cabinet type(only for AC1000).
- Rich hardware interface: 1*USB2.0, 1*USB3.0, 1*console, 1*reload button.
- Manages up to 200 wireless access points, and 100 users as gateway.
- Support router mode and AP mode.
- Support DHCP, PPPoE, static IP in router mode.
- Support WAN/LAN switching, and multi-WAN settings.
- Supports multiple services: HTTP, NAT, QOS, etc.
- Can be centrally managed through the PUSR cloud.
- Can monitor each access point and connection status of network devices.
- Support reset to factory settings via reload button.
- Support OpenWrt system customization.

1.3. Specification

Model	AC200	AC1000
Processor	MTK MT7621AT	
DDR	DDR3 2Gbit	
FLASH	Nor Flash 64Mbit	
POE	RTL8234B	None
EEPROM	BL24C64A	
Power		
Power	Power adapter Input: 100 – 240 V AC, 50/60 Hz Output: 53.5VDC/1.22A	100~240V 50/60Hz AC
Power consumption	≤5W	≤12W
Hardware		
WAN	1*RJ45, 10/100/1000M, auto MDI/MDIX	
LAN	4*RJ45, 10/100/1000M, auto MDI/MDIX 48V PoE out, IEEE 802.3af, IEEE 802.3at standard	4*RJ45, 10/100/1000M, auto MDI/MDIX
Console port	1* Micro USB	1*RJ45
USB	/	1*USB2.0+1*USB3.0
Reload	Reset to factory settings	
Indicators	Power, work, Ethernet port indicator	Power, work, USB, Ethernet port indicator
EMC Protection	IEC 61000-4-2, level2, ESD IEC 61000-4-4, level2, EFT IEC 61000-4-5, level2, surge	
Software		
Work Mode	Router mode, AP mode	
Management	HTTP Web based GUI Local or online Firmware upgrade Configuration Backup / Restore Centrally managed through the PUSR cloud	
AP Management	Manage up to 200 access points Manage up to100 end users Centrally and remotely to manage/configure wireless AP View user's status	
Others	IP binding Port mapping WAN/LAN switching, and multi-WAN settings Multiple services: HTTP, NAT, QOS, etc OpenWrt system customization	

Physical Parameters		
Dimension	110*95*25mm	440*250*44.5mm
Installation	Desktop, wall mounting, DIN rail mounting	Desktop/1U Rack Mount
Operating Temperature	0℃ ~ 45℃	
Storage Temperature	-40℃ ~ 75℃	
Operating Humidity	5 ~ 95 %(non-condensing)	

1.4. Button & Indicator

Table 1. Button & Indicator

Item	Description
Power Indicator	On: Power on, Off: Power off.
Reset Button	Holding for 5s to reset to factory settings
ETH link/data indicator	Link: there is ETH device connected. Data: Transmitting/receiving data.
Internet	Green: accessing to internet successfully.
USB	Green: there is USB device connected.

1.5. Dimension

Unit: mm

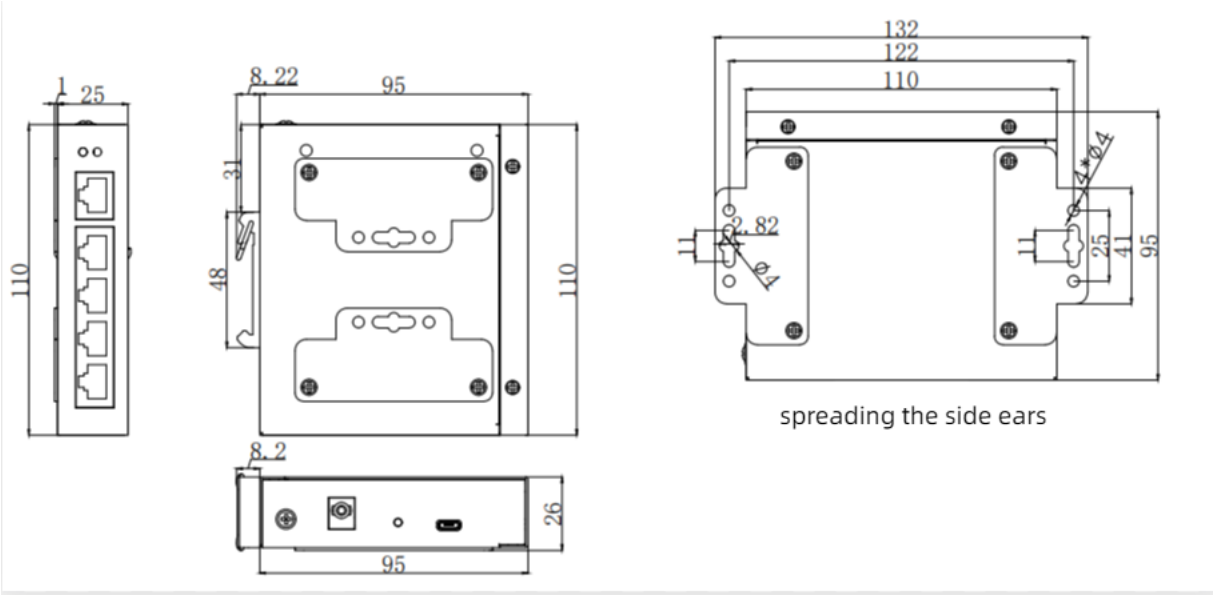

Figure 1. Dimension of AC200

2. Get Started

2.1. Login setting page

Connect PC to the LAN port of the AP controller, and set the IP to static IP, such as 192.168.10.101. The IP should be on the same network segment as the AP controller.

Enter the default IP address of the AC 192.168.10.1 in the browser, and the browser will navigate to login page. The username and password are both admin.

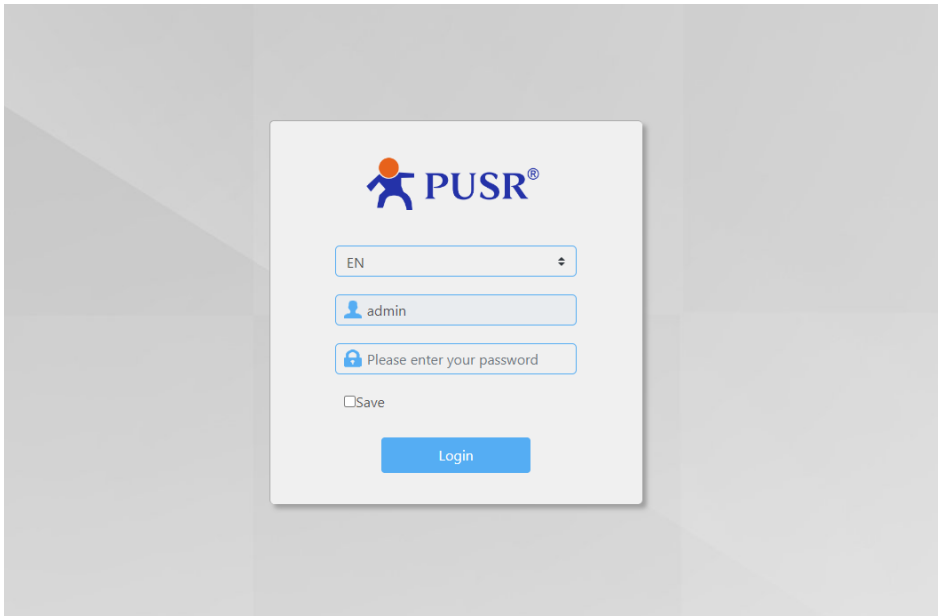

Figure 2. Login page

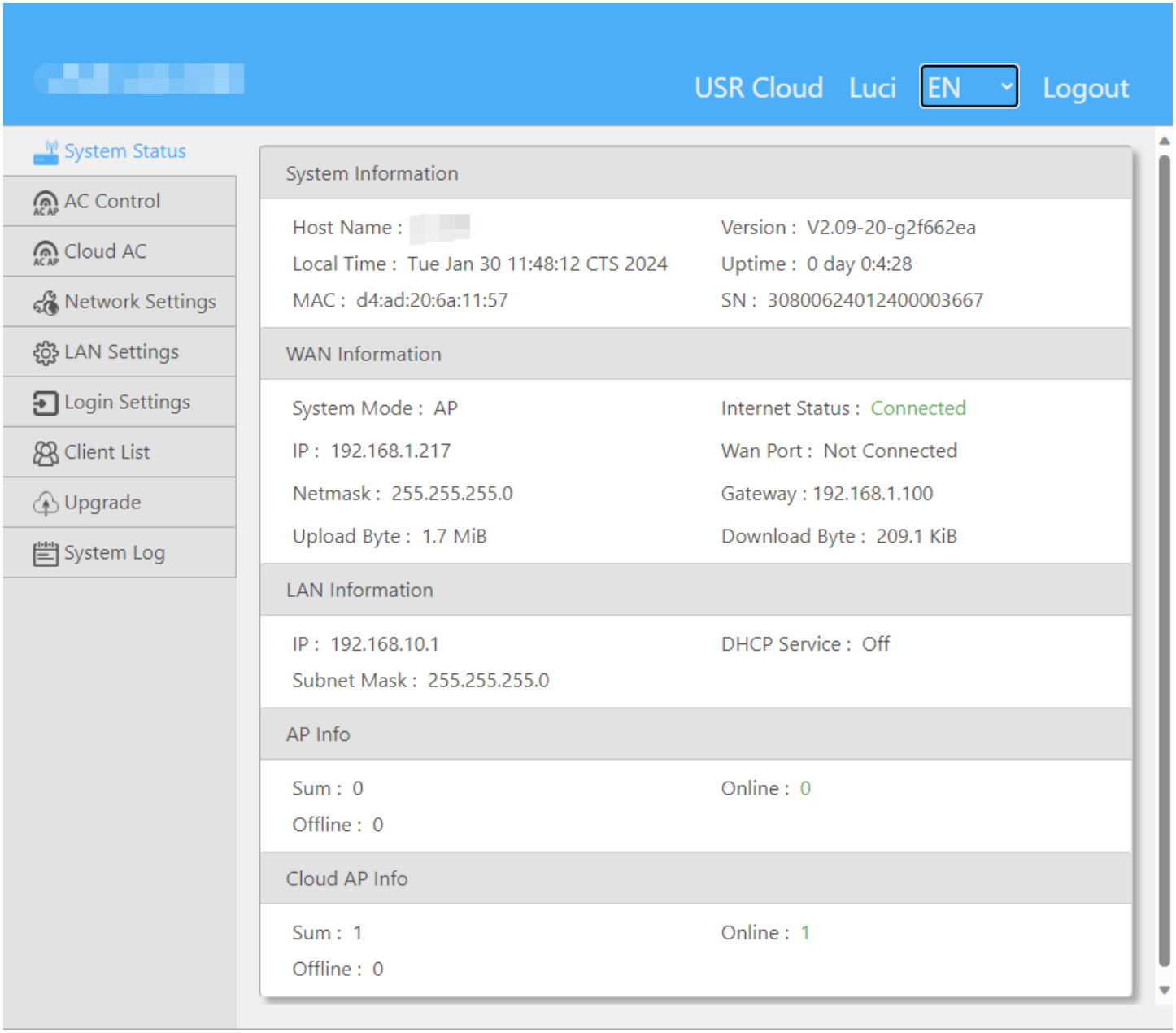

Figure 3. Overview of function

2.2. Briefs introduce of the webpage

The left column is divided into 9 menu pages: System Status、System Status、Cloud AC、Network Settings、Network Settings、Network Settings、Network Settings、Network Settings、System Log.

There are three auxiliary options in the upper right corner: Luci、Language、Logout, as shown in the following figure.

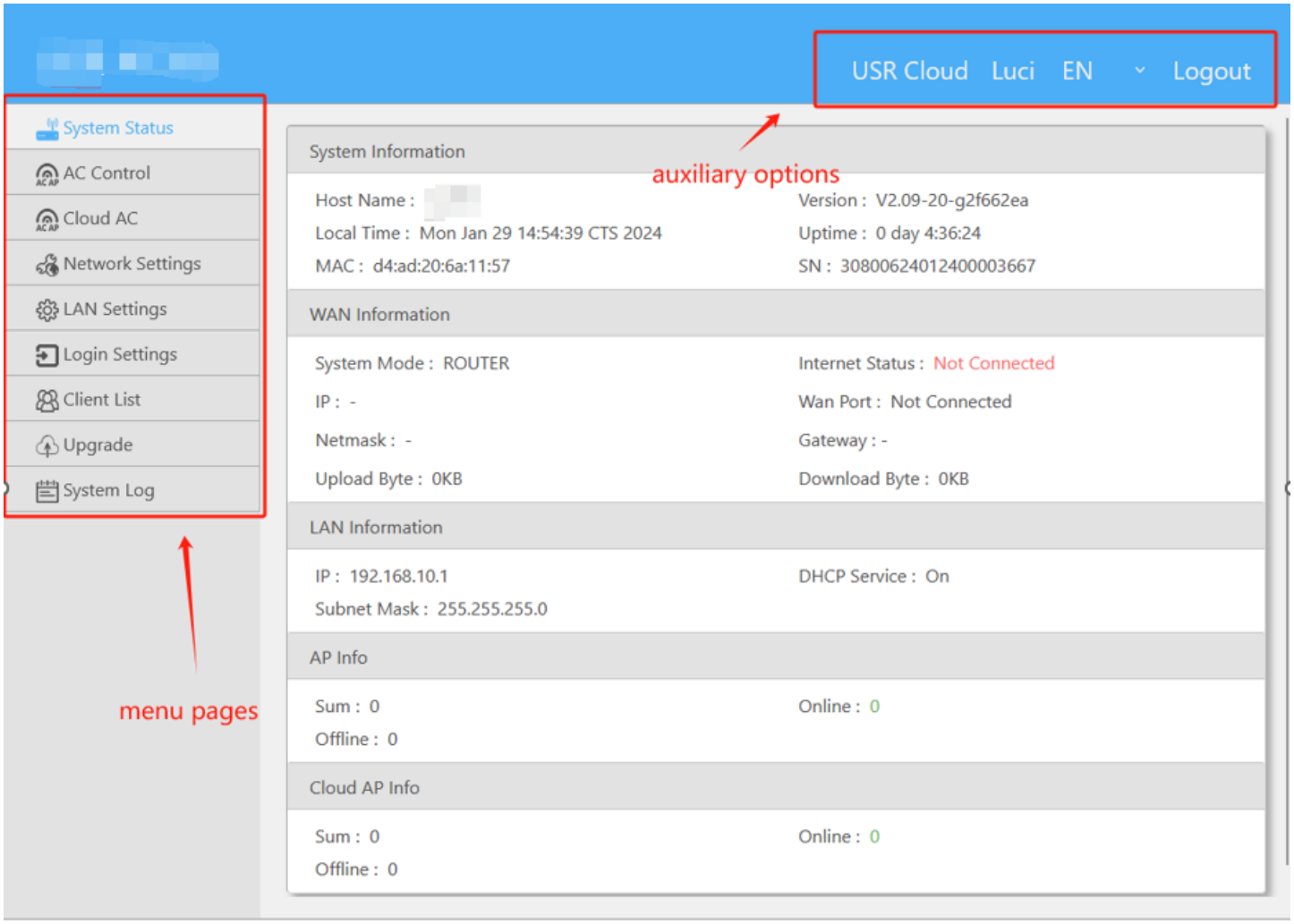

Figure 4. Function menu

3. Configuration and parameter details

3.1. System status

This interface displays the basic information of the router, including 5 major blocks: system information, WAN port information, LAN port information, AP information and cloud AP information (Details will be introduced later). The specific information is shown in the figure below.

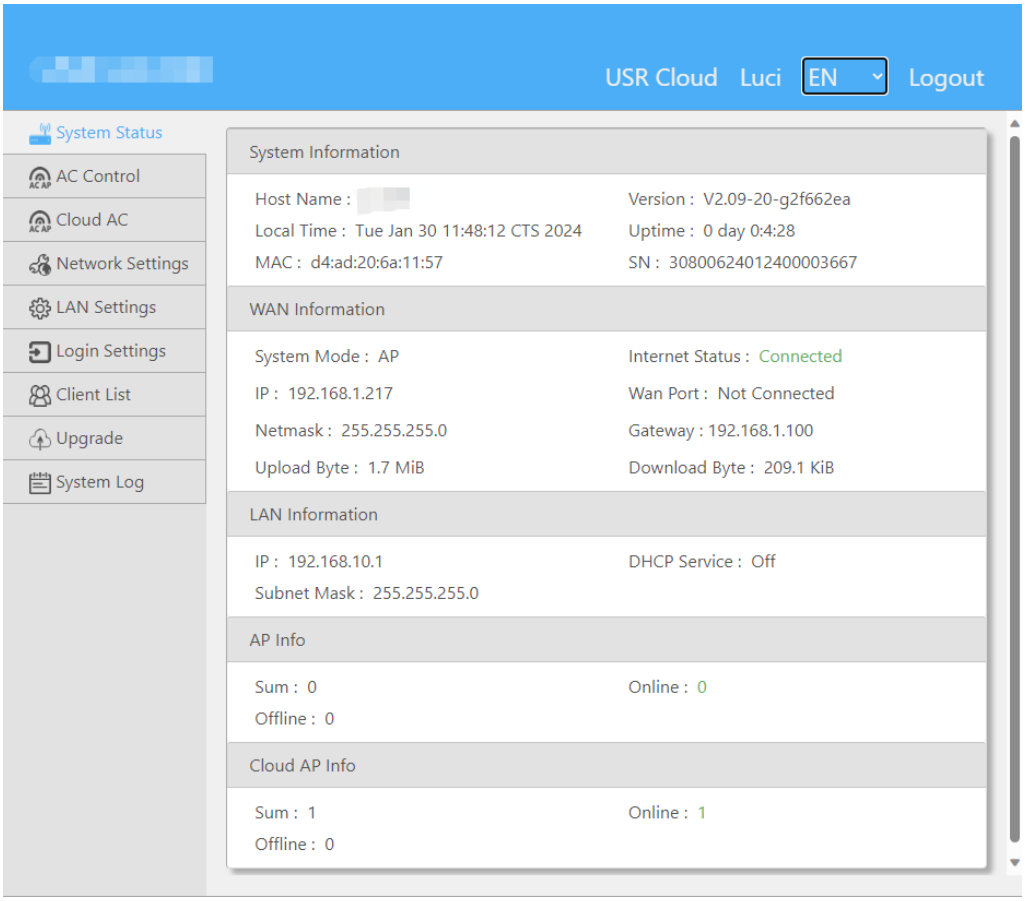

Figure 5. System information（AP）

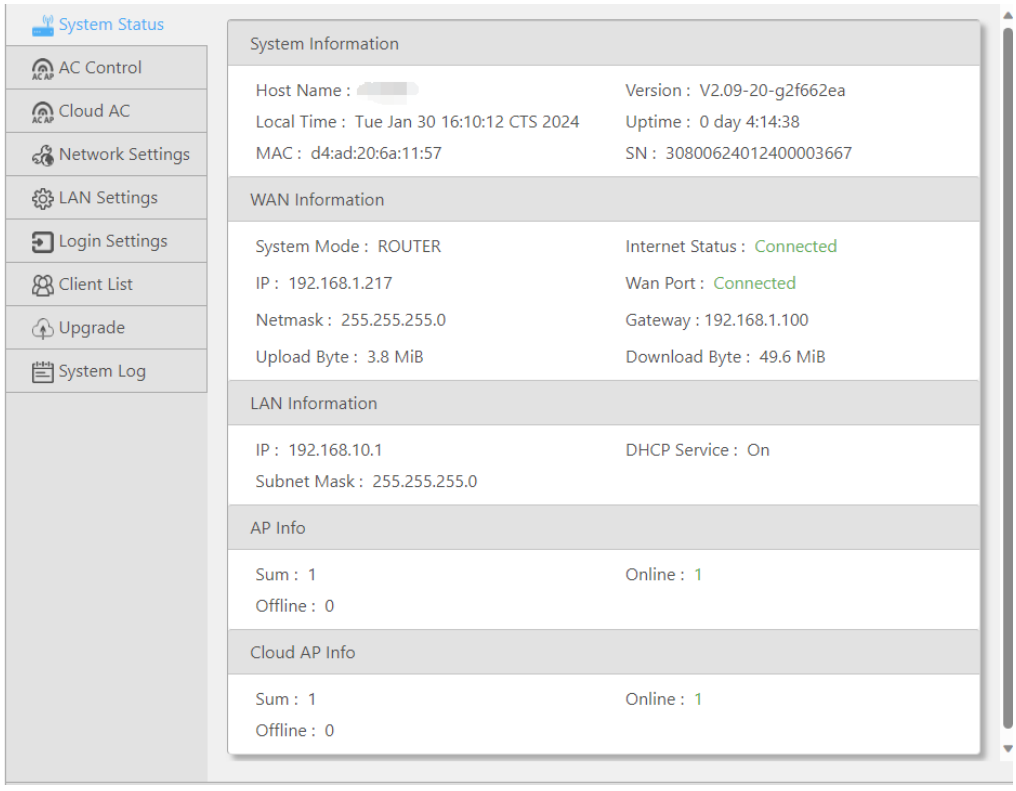

Figure 6. System information（Router）

3.2. AC management

This function is used to manage AP devices connected to the same LAN. The interface contains three sub-menu bars: AP List, AP Settings, and AP Details.

3.2.1. AP list

This interface is used to display the information of AP devices that connected within the LAN. The detailed information is shown in the following figure.

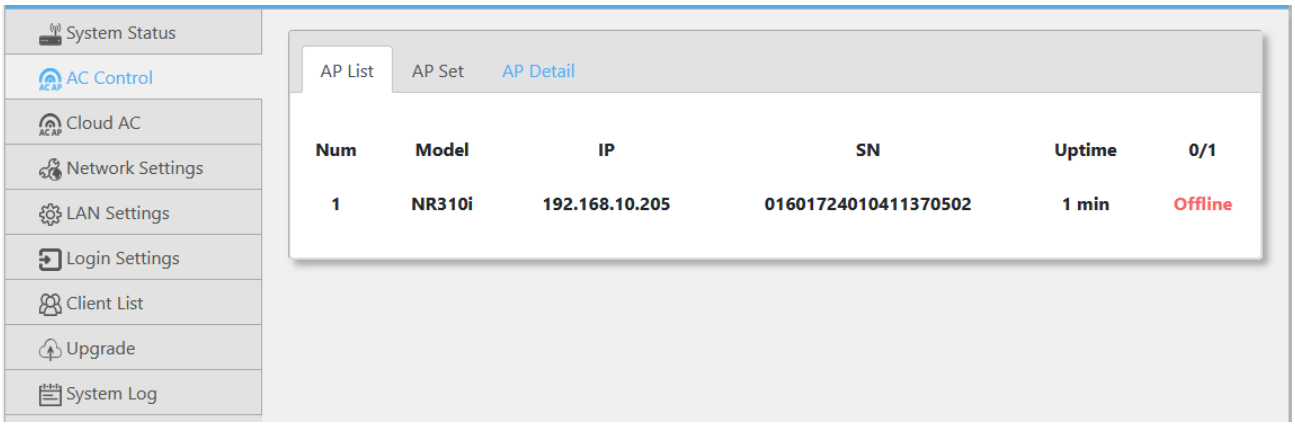

Figure 7. AP list

On this page, users can click on the IP of the connected AP device in the AP list to jump to the setting page, as shown in the figure.

Figure 8. AP list

3.2.2. AP settings

The settings for AP mainly include 7 actions: settings, restart, restore factory settings, upgrade, delete (offline AP), flash LED, export SN and cloud password, as shown in the figure.

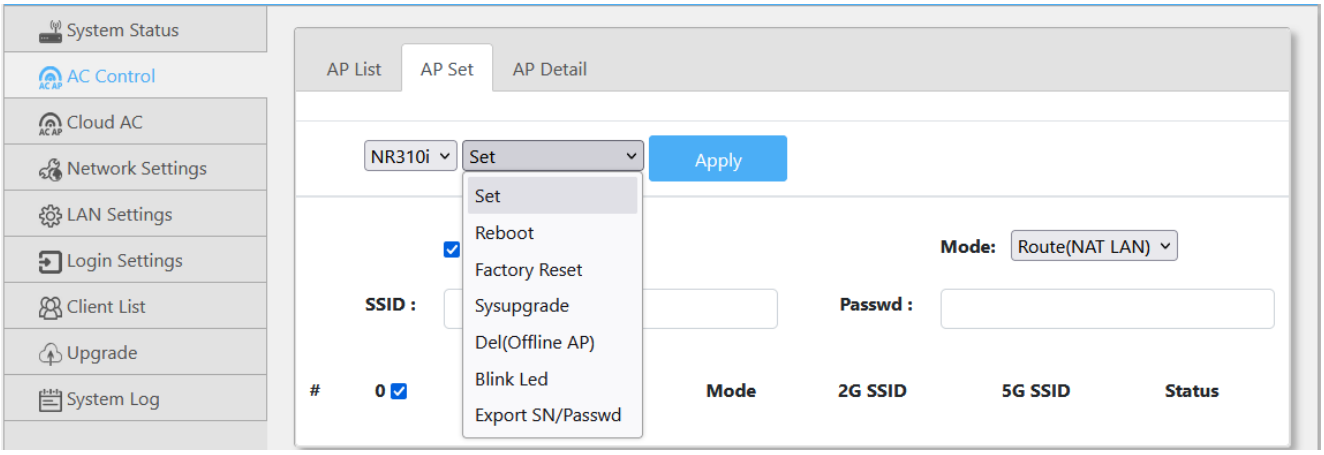

Figure 9. AP settings

The detailed information of actions is listed in the following table.

Items	Description	How to operate
Settings	Set the SSID and password of the WiFi.	Check the target device–>Enter SSID & password→Confirm
Reboot	Reboot the AP device	Check the target device→ Confirm
Reset to factory defaults	Reset the AP to factory defaults	Check the target device→ Confirm
Upgrade	Upgrade the firmware of AP	Check the target device→ select the firmware→Confirm
Delete(Offline AP)	Delete offline AP device	Check the target device→ Confirm
Changing LED status	Change device LED light status	Check the target device→click “Switch”→ Confirm
Exporting SN and password	Export the SN and cloud password of connected devices (for cloud AC management import)	Check the target device→ Confirm(The context of the exported file is shown in the following picture)

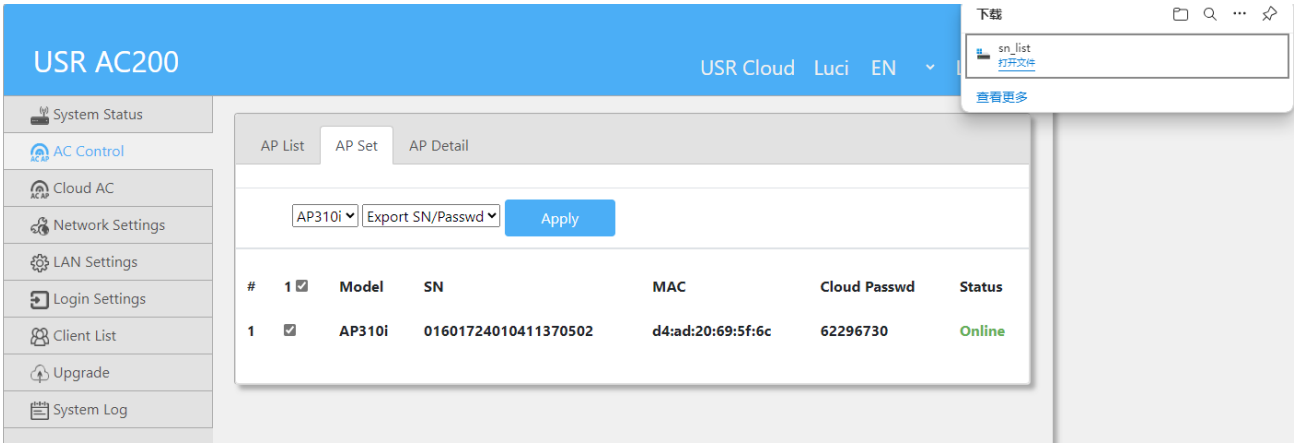

Figure 10. Export SN/Passws

3.2.3. AP information

On this page, users can view the detailed information of the AP device such as model, MAC, version number, etc. You can select the corresponding AP device by selecting the model and SN code. The specific information is shown in the following figure.

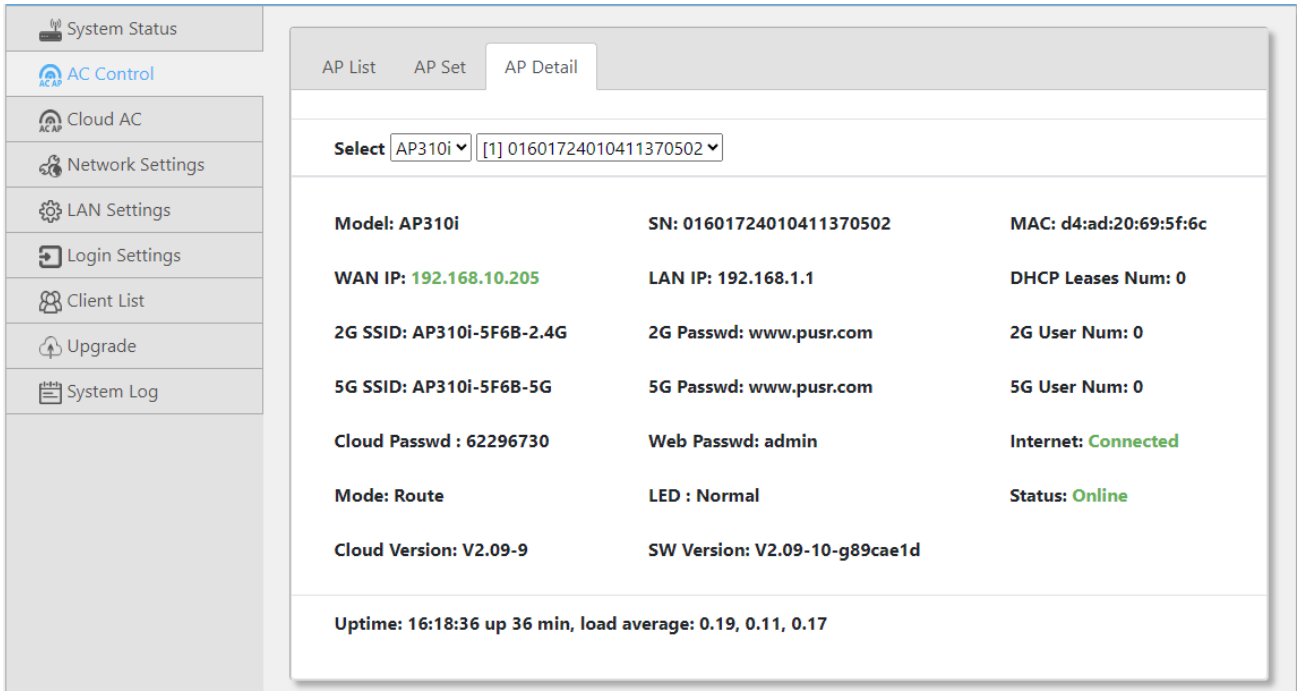

Figure 11. AP detail

3.3. AC management via PUSR cloud

This function is used to manage AP devices connected to PUSR cloud(the AP devices need to be connected to the Internet). You need to import the SN code and cloud password of the corresponding device. It contains four sub-menu bars: AP list, AP settings, AP details, and AP import.

3.3.1. AP import

Import the SN code and cloud password of the AP device on this page to enable the AC to remotely manage the AP through the PUSR cloud. There are two ways to import: manual adding and file import, as shown in the figure below. The content format of the imported file is as shown in the chapter. After successful import, and the AP device has been successfully added on the cloud platform, it will be displayed in the AP list after refreshing the page.

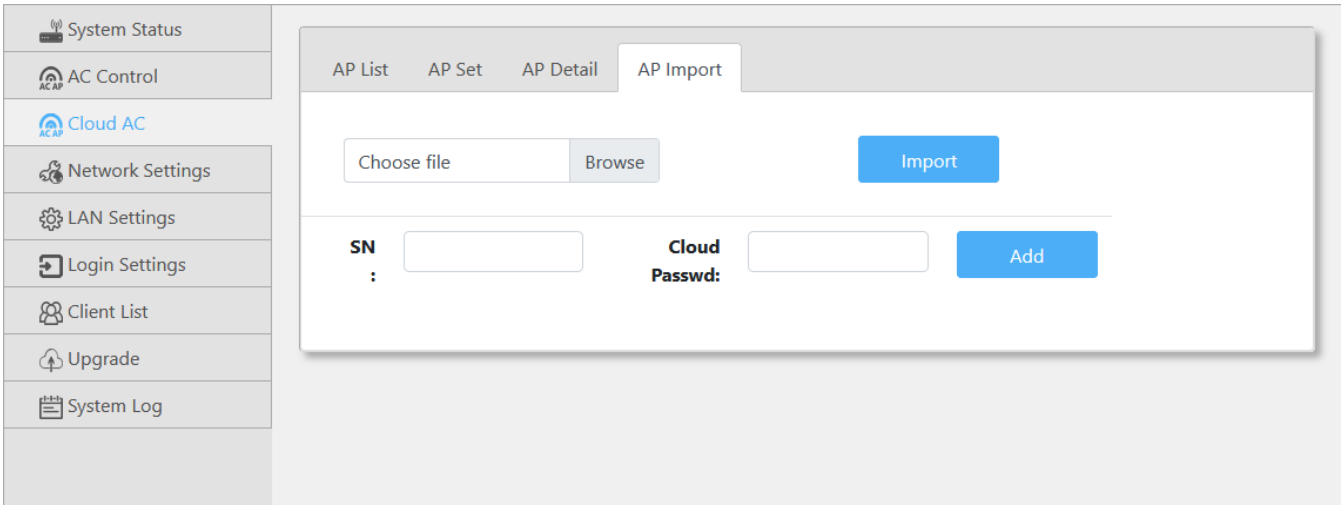

Figure 12. AP import

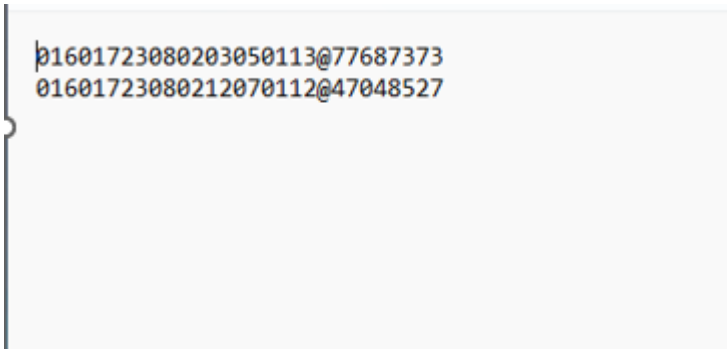

Figure 13. Context of import file

3.3.2. AP list

This page displays the AP devices added on the cloud platform. The detailed information is as shown in the following figure.

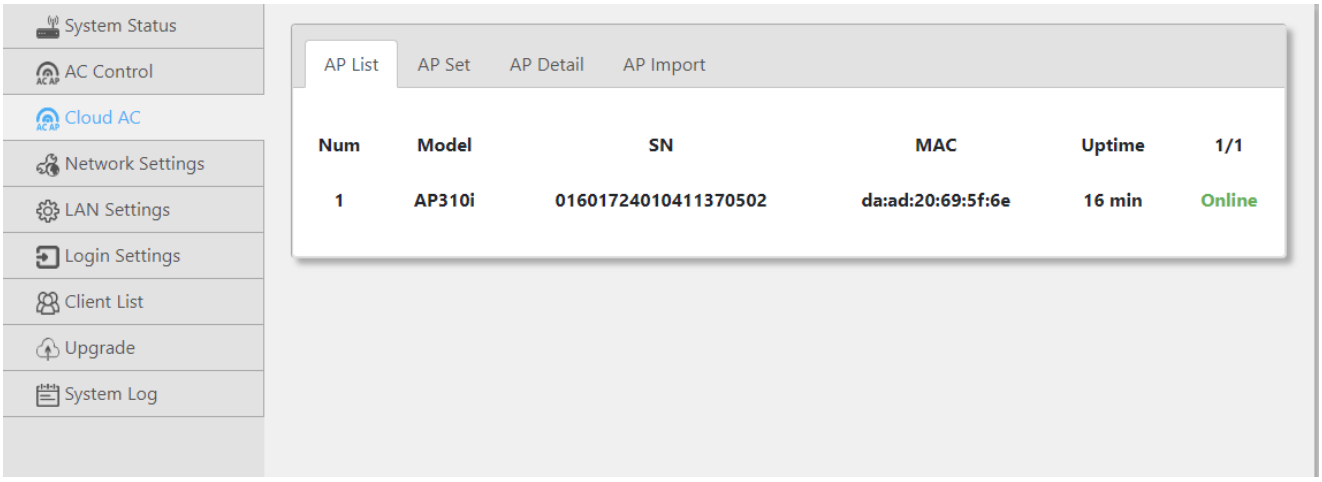

Figure 14. AP list

3.3.3. AP settings

The settings for AP mainly include 7 actions: settings, restart, restore factory settings, upgrade, delete (offline AP), flash LED, export SN and cloud password, as shown in the figure.

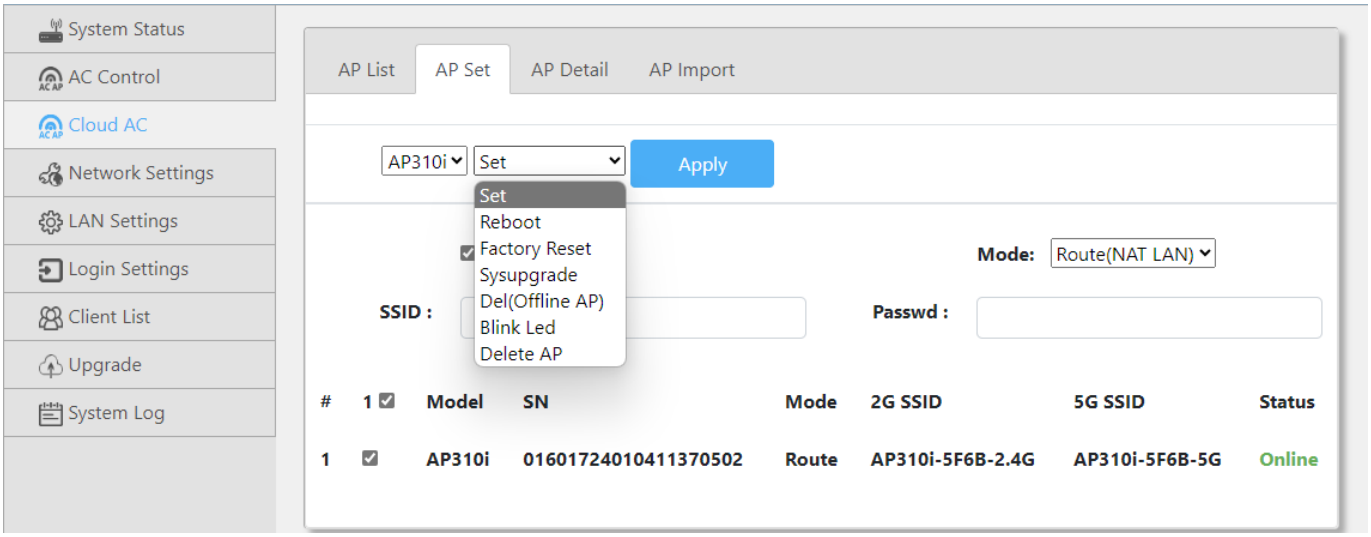

Figure 15. AP settings

The detailed information of actions is listed in the following table.

Table 2.

Items	Description	How to operate
Settings	Set the SSID and password of the WiFi.	Check the target device–>Enter SSID & password→Confirm
Reboot	Reboot the AP device	Check the target device→ Confirm
Reset to factory	Reset the AP to factory defaults	Check the target device→ Confirm

defaults		
Upgrade	Upgrade the firmware of AP	Check the target device→ select the firmware→Confirm
Delete(Offline AP)	Delete offline AP device	Check the target device→ Confirm
Changing LED status	Change device LED light status	Check the target device→click “Switch” → Confirm

3.3.4. AP information

On this page, users can view the detailed information of the AP device such as model, MAC, version, etc. You can select the corresponding AP device by selecting the model and SN. The specific information is shown in the following figure.

放一张 AP 详情的图片

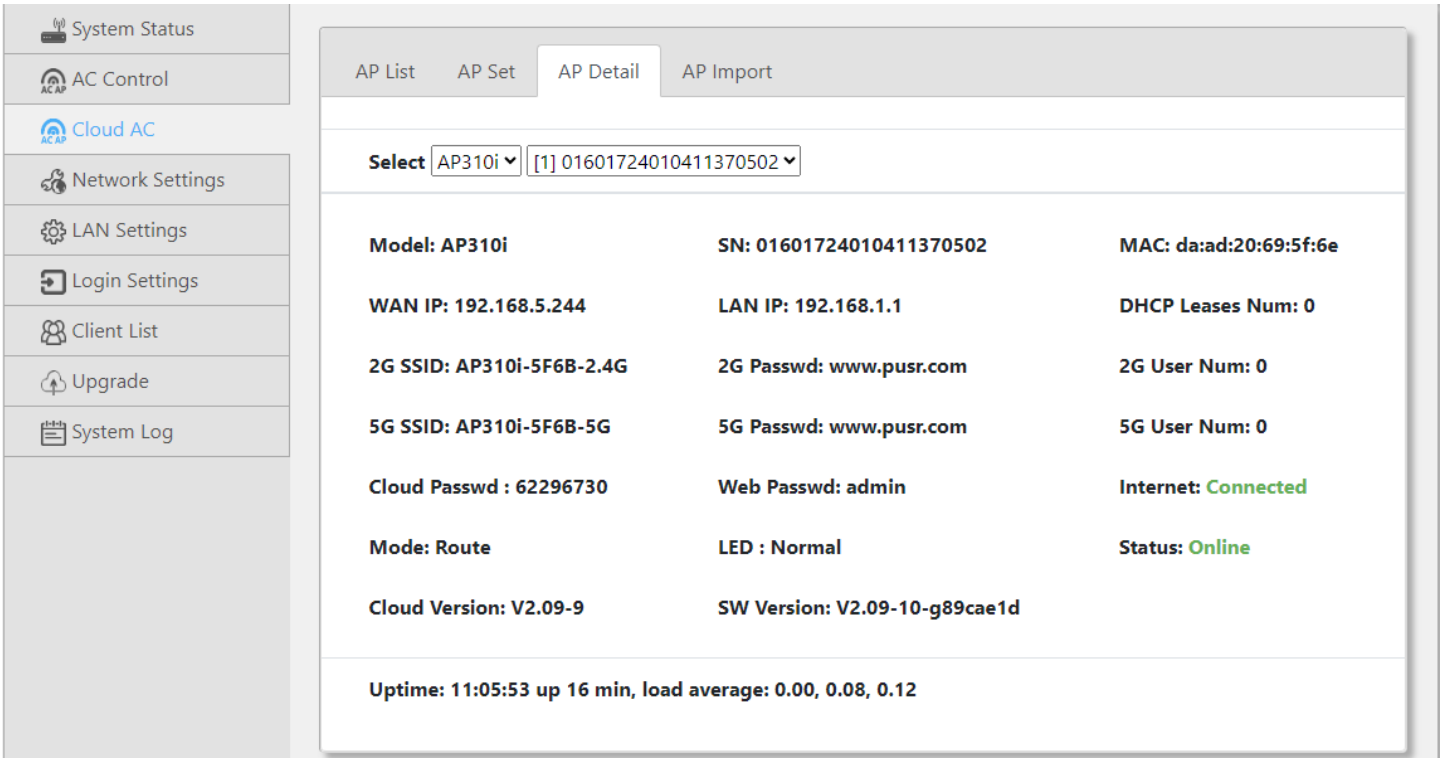

Figure 16. AP detail

3.4. Internet accessing settings

There are 4 parts included in this function block: Mode Selecting, Network Port Settings, WAN Settings, IP Mapping.

3.4.1. Mode selecting

There are 2 modes that can be selected: Router mode and AP mode.

Router mode: In this mode, the WAN port supports DHCP client, static IP, PPPoE. For LAN port, it support DHCP service to assign IP addresses to terminal network devices.

AP mode: In this mode, WAN and LAN are bridged together, and DHCP service is turned off.

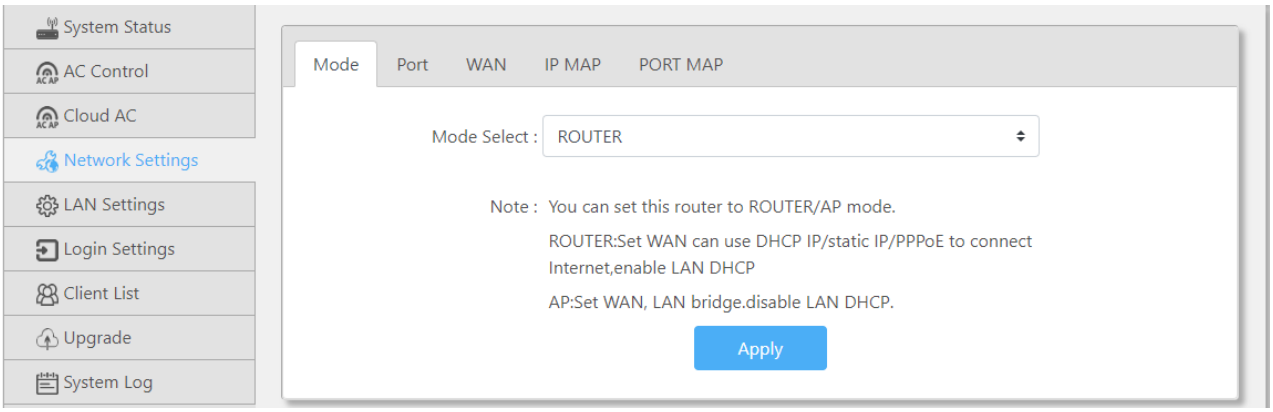

Figure 17. Mode selecting

3.4.2. Ethernet port setting

In this function block, users can implement WAN/LAN switching, and can monitor whether the Ethernet port is connected to a device.

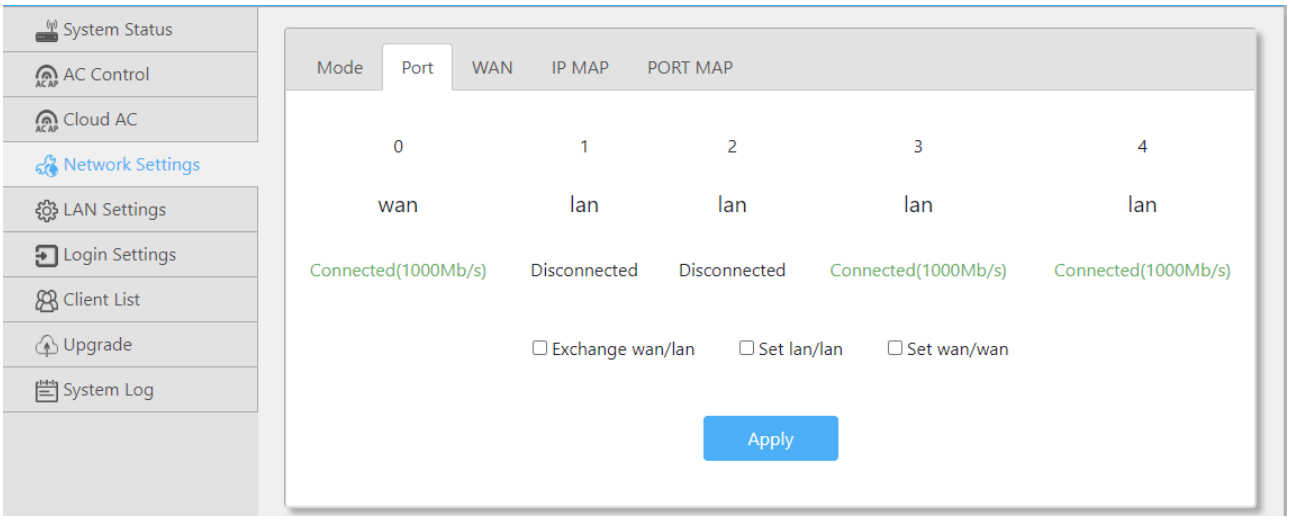

Figure 18. Ethernet port setting

3.4.3. WAN settings

On this page, users can set parameters of WAN port to get access to Internet, including DHCP client, static IP, and PPPoE.

MAC clone: Replace the AC's MAC address with this MAC.

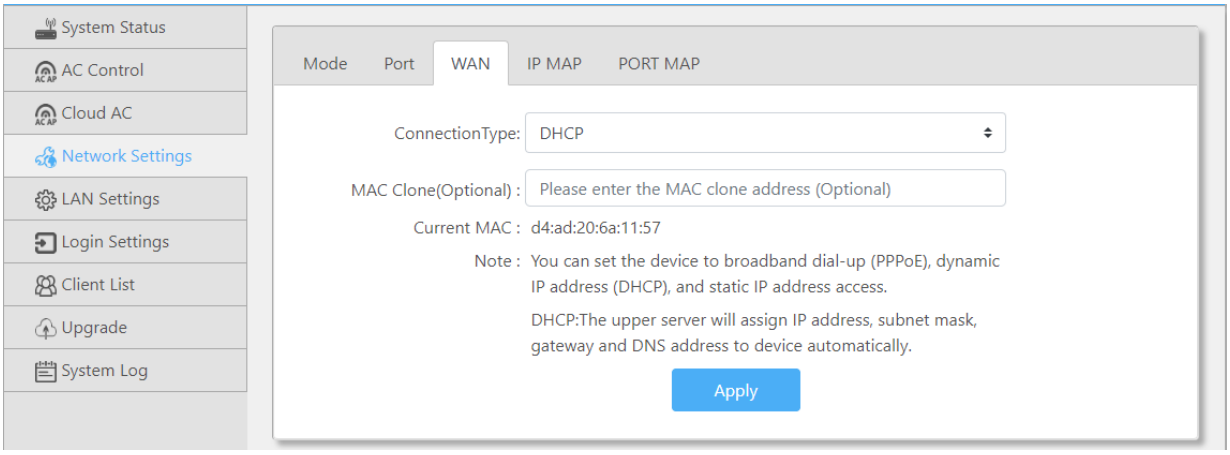

Figure 19. WAN settings

3.4.4. IP mapping

Connect the device to the LAN port, and the IP of the device is mapped to the WAN port. Users can directly access the device using the mapped IP on the WAN port. After specifying the communication host IP, the device can connect to the WAN host through the internal IP.

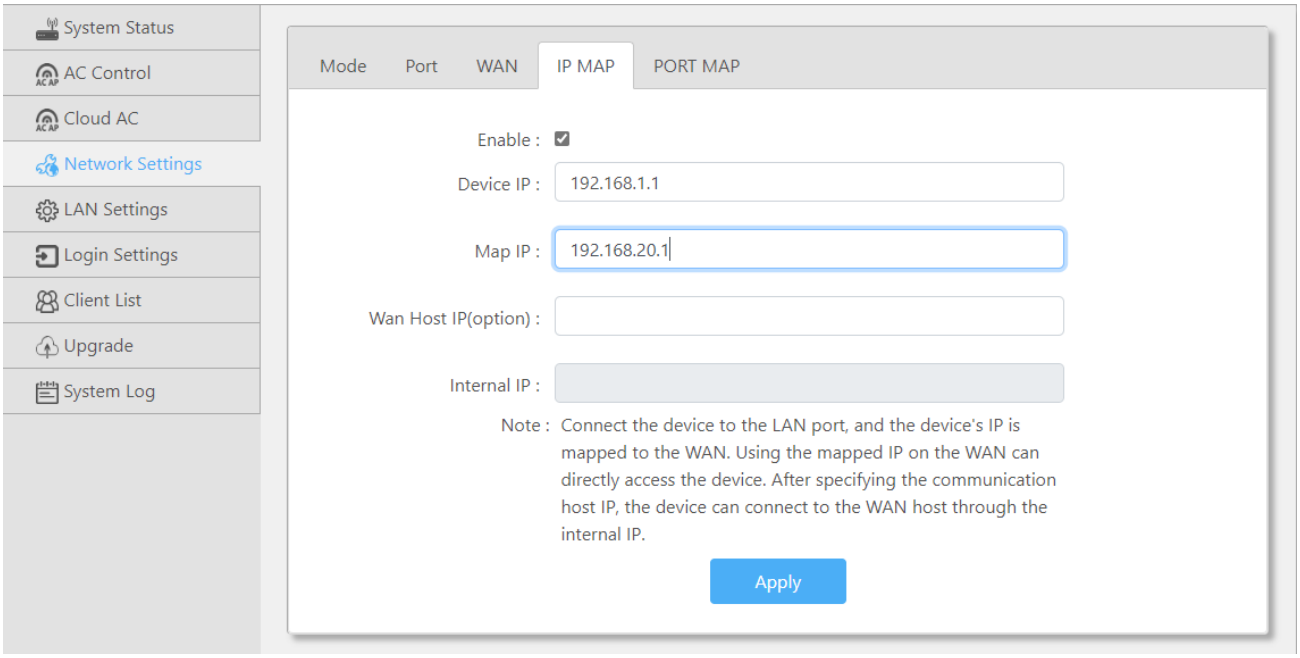

Figure 20. IP mapping

Specific steps:

1> Connect the device to the LAN port of AC200,

2> Parameters of the IP mapping is listed in the following table,

Table 3.

Items	Description

Device IP	The IP of the device connected to the LAN port.
Mapping IP	WAN IP of AC200
Host IP	The IP of the device connected to the WAN port.
Internal IP	Should be in the same segment of the device IP.

3> Set the IP of PC to the same network segment as the mapped WAN port IP and connect to the WAN port of AC200. Hardware connection is like the following:

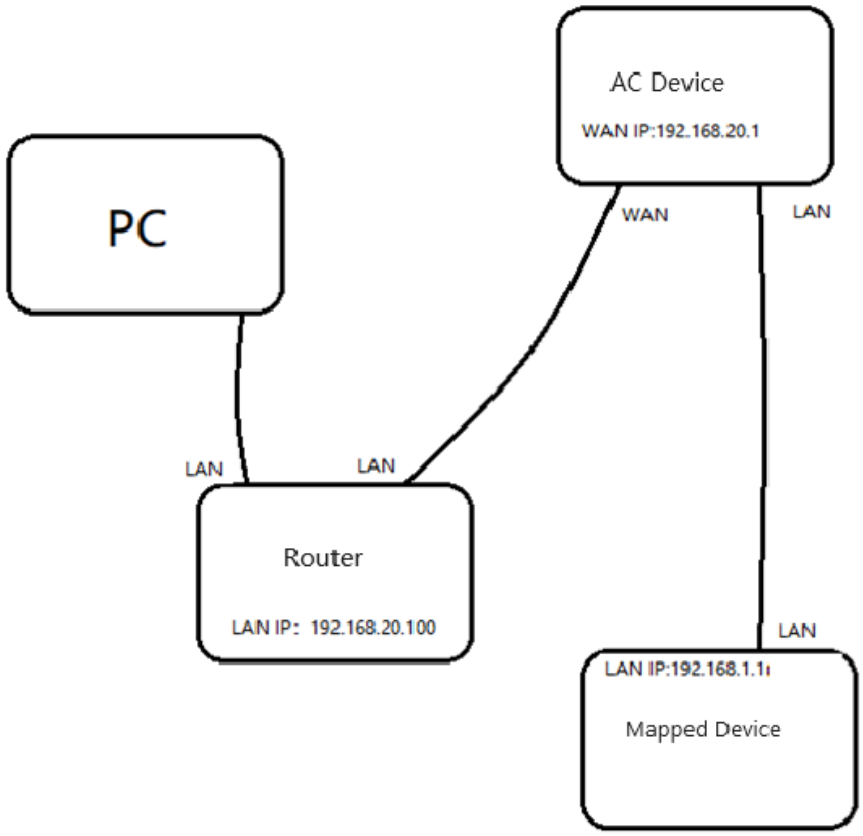

Figure 21. Topology

4> To check whether the mapped IP can be pinged (if the access device is a router, you can try to use the WAN port mapped IP to access the WEB server).

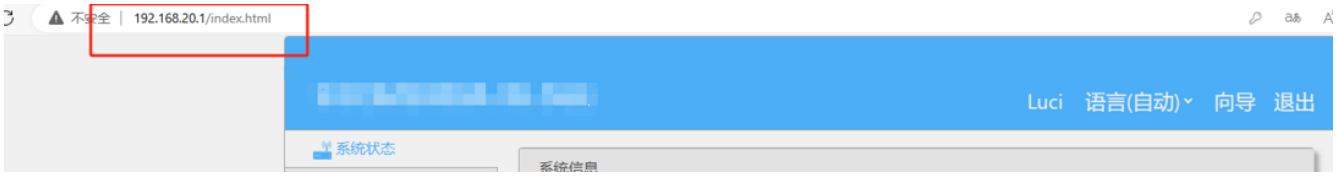

Figure 22. Mapped IP

3.4.5. Port mapping

Like the IP mapping function, IP mapping occupies all ports. The difference here is that this configuration is for specific port or port range mapping functions. Therefore, to enable port mapping, it is necessary to first

disable IP mapping. The port can be a number or a range, such as 23, 1-80, etc. Adding or deleting takes effect immediately. It is possible to access the corresponding LAN devices through the WAN IP and port. The WAN IP, which is also the access IP, can be set as a static IP or automatically obtained from the upper-layer router. 截图错误

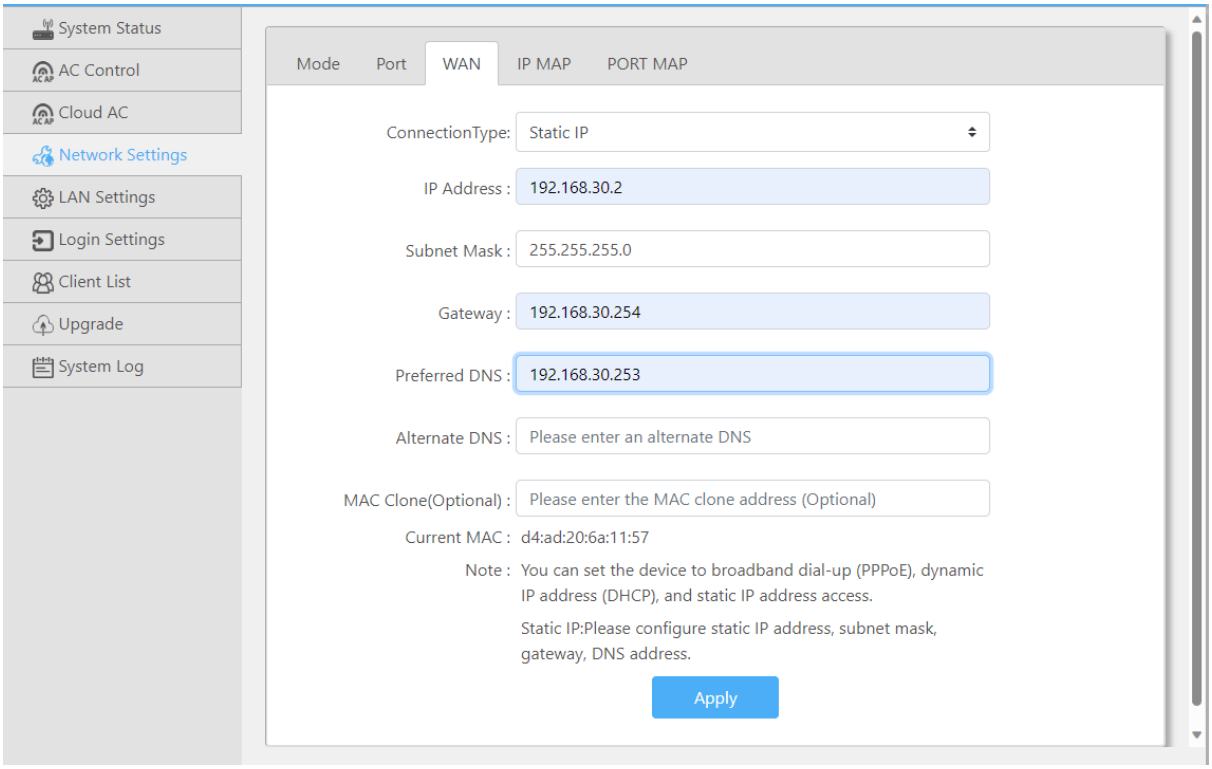

Figure 23. WAN settings

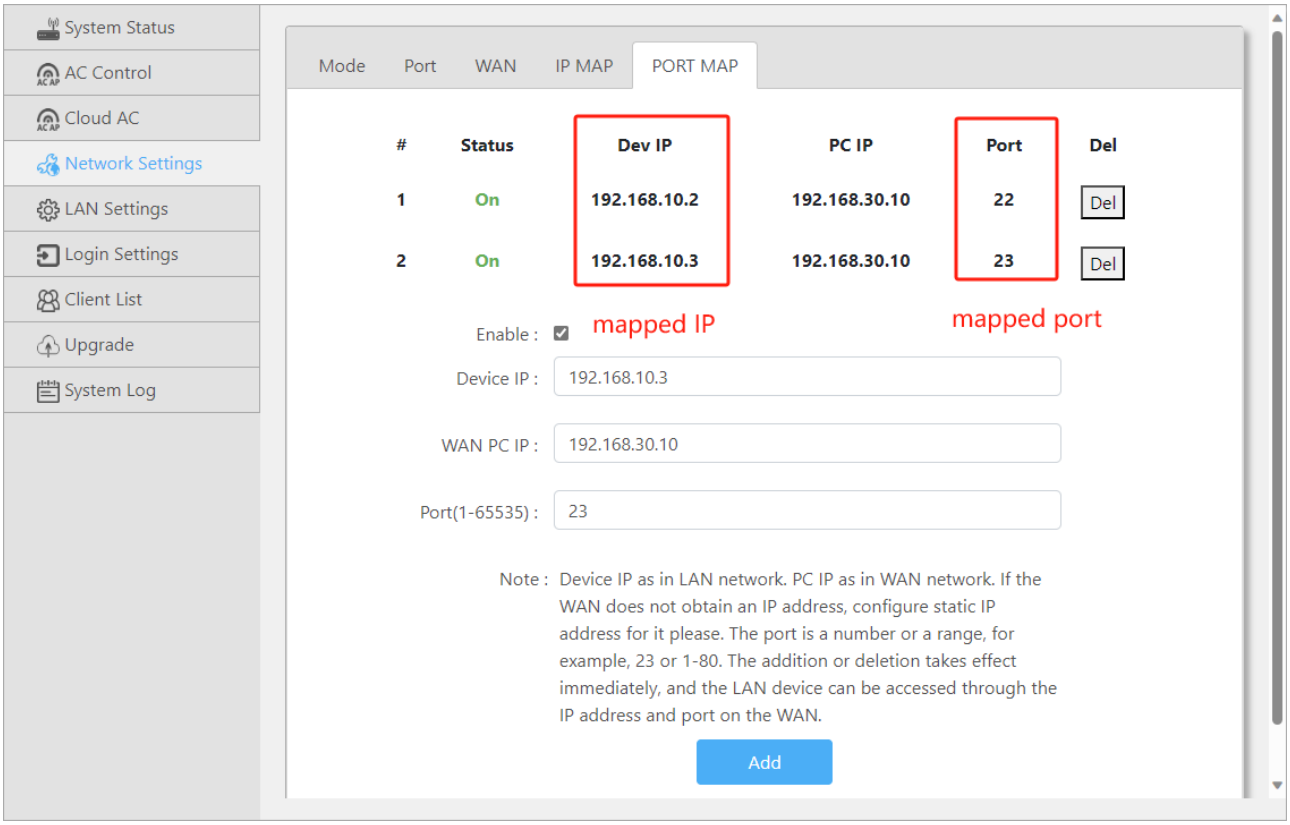

Figure 24. Port mapping

Specific steps:

1> Connect the device to the LAN port of AC200,

2> Parameters of the port mapping is listed in the following table,

Table 4.

Items	Description
Device IP	The IP of the device connected to the LAN port.
PC IP	The IP of PC connected to the WAN port of AC200.
Port	A single port or a range of ports.

3> Set the PC's IP to 192.168.30.10, which is in the same subnet as the AC200 WAN port, and connect the PC to the AC200's WAN port.

4> Map port 22 or 23 to check if it's possible to use SSH or telnet to log into the device by accessing the IP.

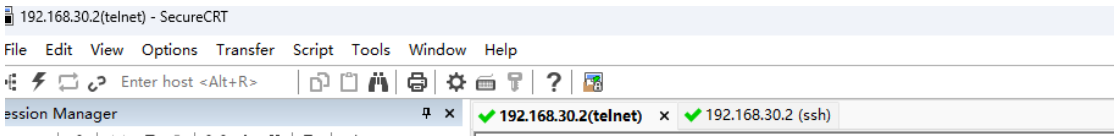

Figure 25. Telnet accessing

3.5. LAN network settings

This function block is used to set the LAN IP address of the AC200, with the setting options as shown in the following diagram, and the configuration instructions as in Table 3.

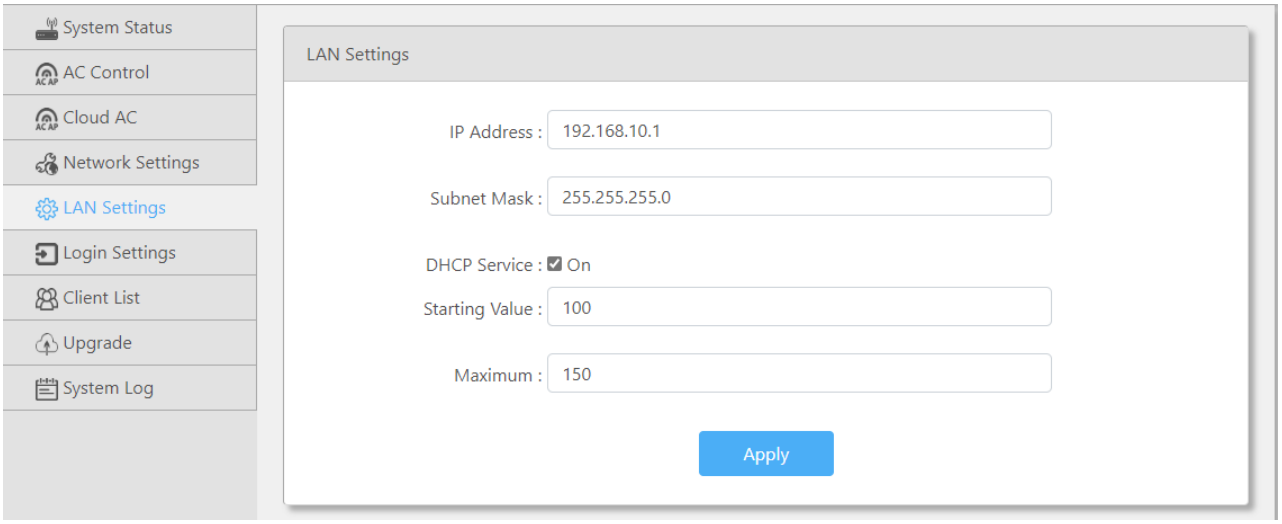

Figure 26. LAN settings

Table 5.

Items	Description
IP address	The LAN IP of the AC200. The default is 192.168.10.1
Subnet Mask	Subnet Mask of AC200's LAN port.
DHCP service	After enabling DHCP, the AC200 can assign IP addresses to terminal devices. The IP addresses start from the "initial value" and can be allocated up to the "maximum number "set.

3.6. Login settings

This function is used to change the login password of a webpage.

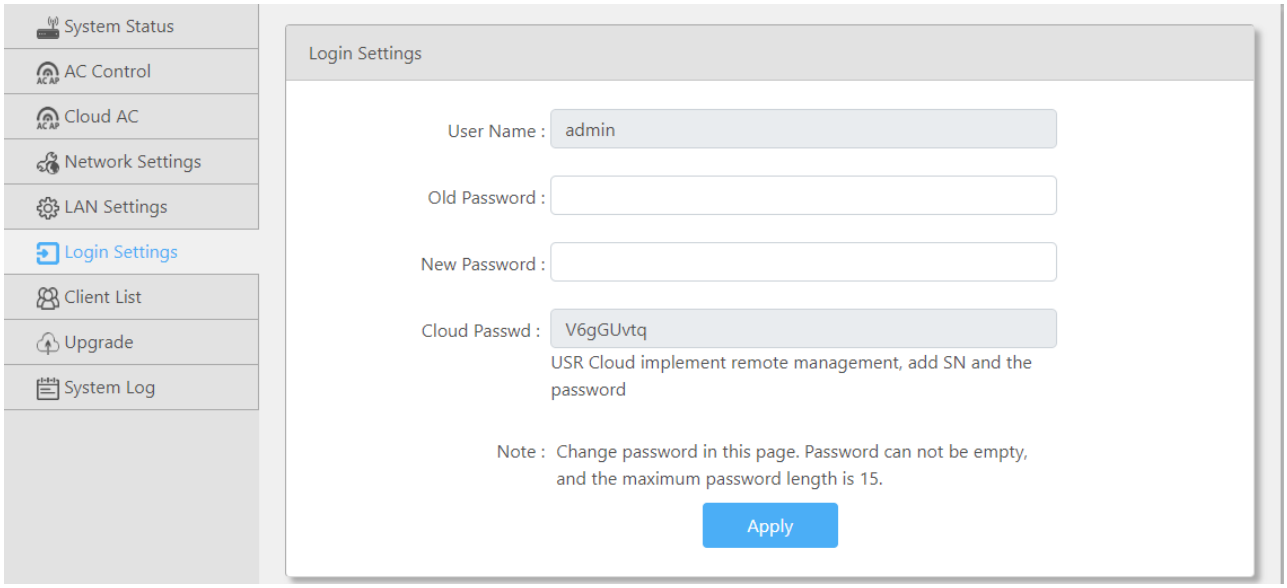

Figure 27. Login settings

3.7. Client list

Client list has two submenus: DHCP List and IP Binding.

DHCP List: Clicking on "refresh" button will display the information of computers that have obtained IP addresses through the router's DHCP service, as shown in the following figure.

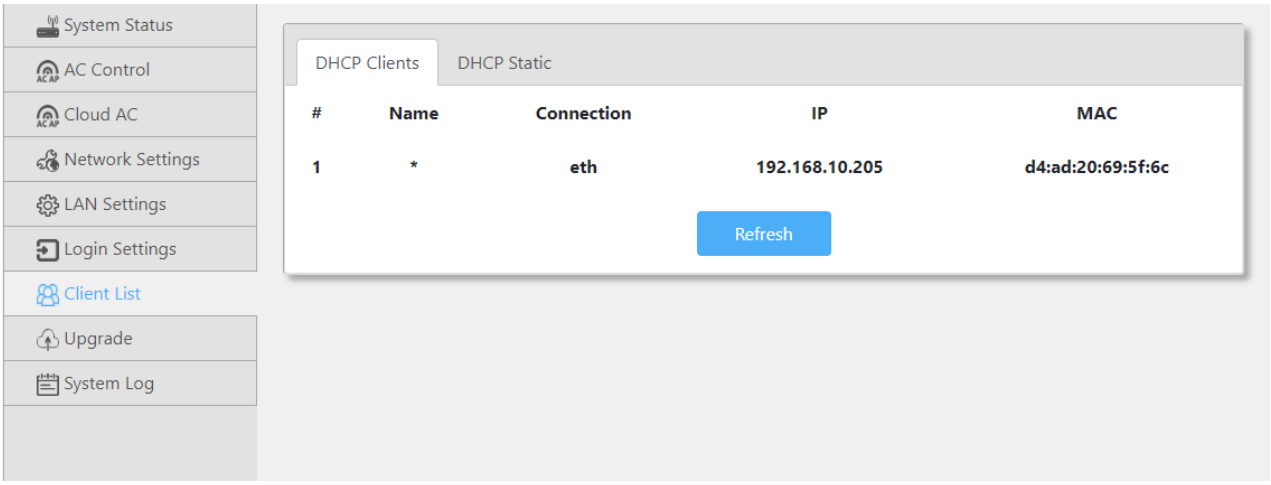

Figure 28. DHCP clients

IP Binding: Enter the IP address and MAC address of the device that needs to be bound, then click on <Add>. Click on <Refresh> to view the devices that have already been bound.

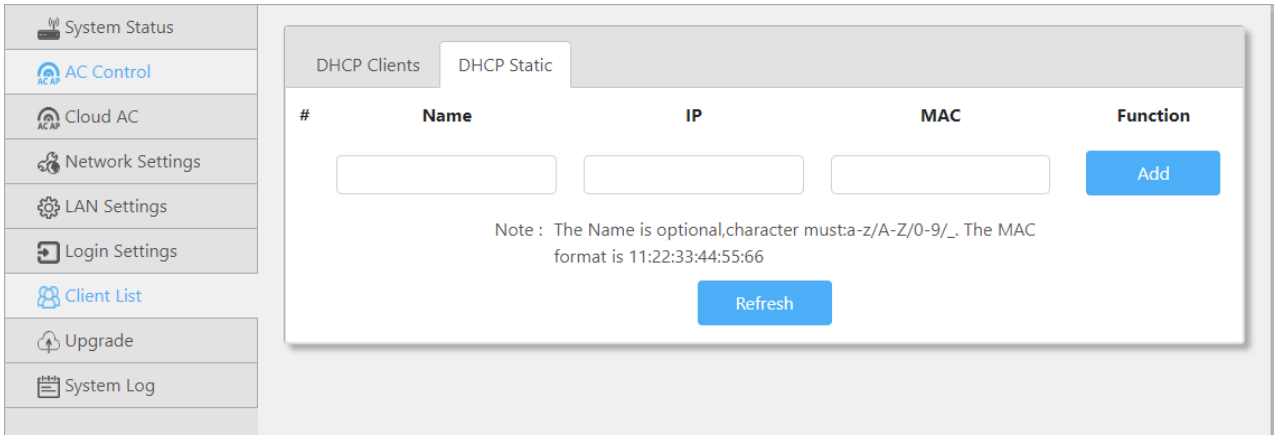

Figure 29. IP binding

3.8. Software upgrading

This functional block includes five submenus: [Firmware Upgrade], [Backup/Restore Configuration], [Date/Time], [Restart], and [Restore Factory Settings].

3.8.1. Firmware upgrading

Select firmware file-> Click upgrade

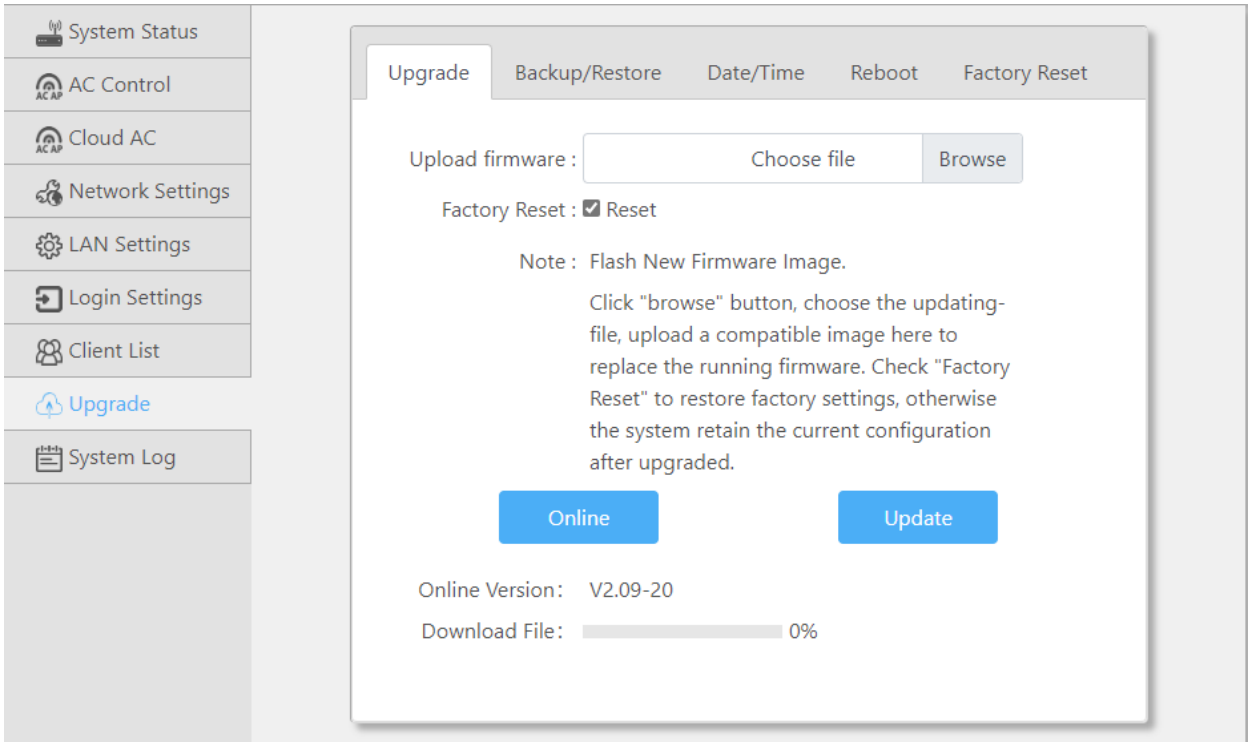

Figure 30. Upgrade firmware

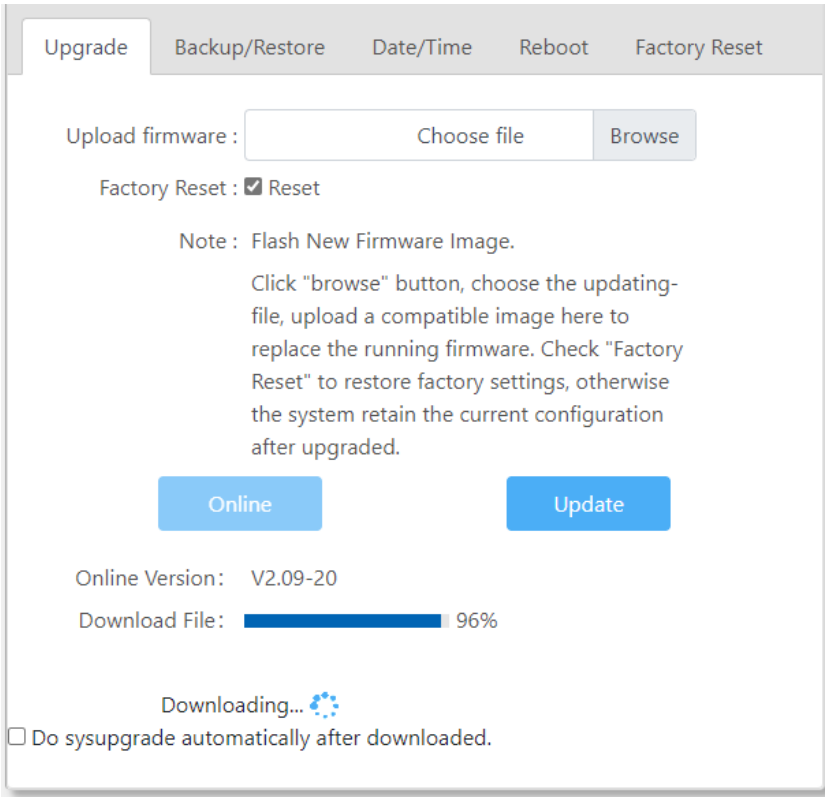

Figure 31. Downloading firmware

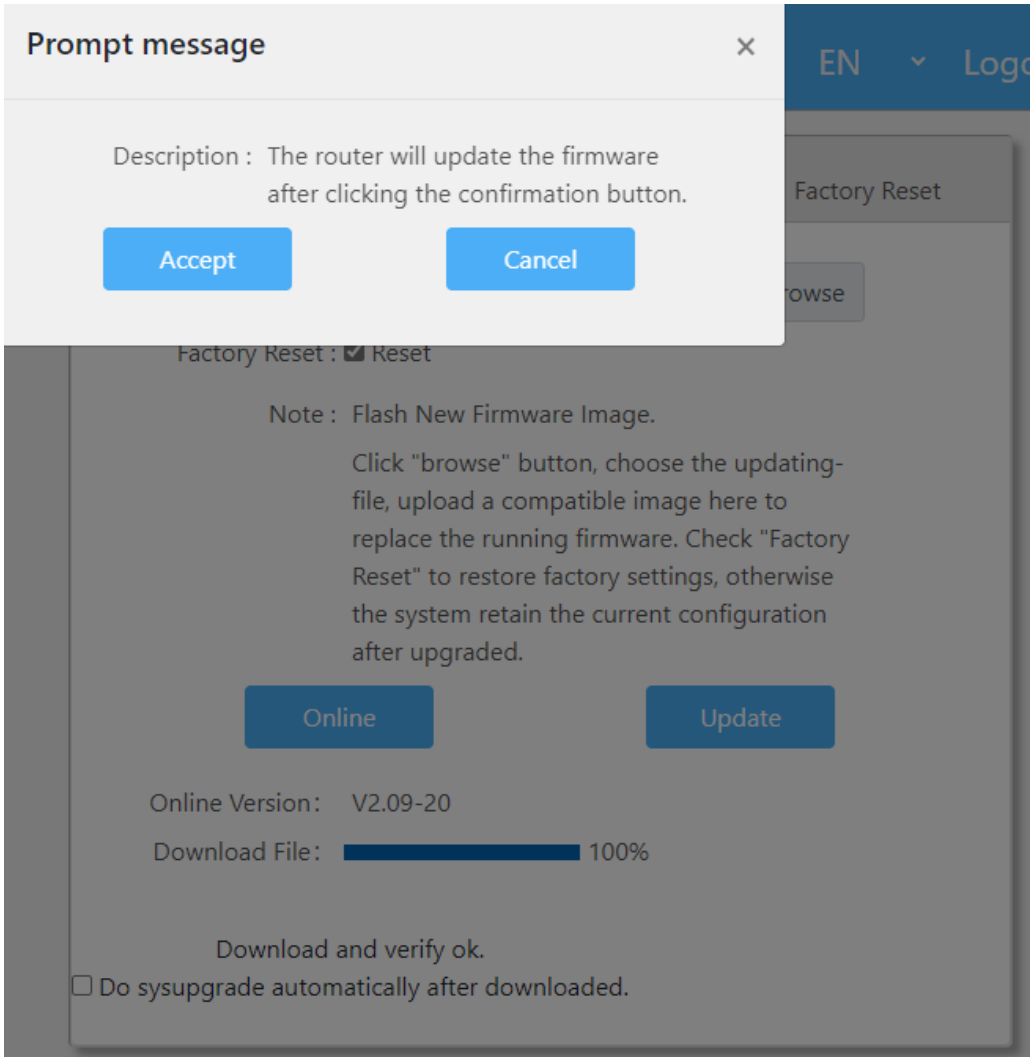

Figure 32. Online upgrading

3.8.2. Backup

This function is used to back up the current parameters of AC200, and it also allows the import of previously saved parameters, making it convenient for users to configure settings.

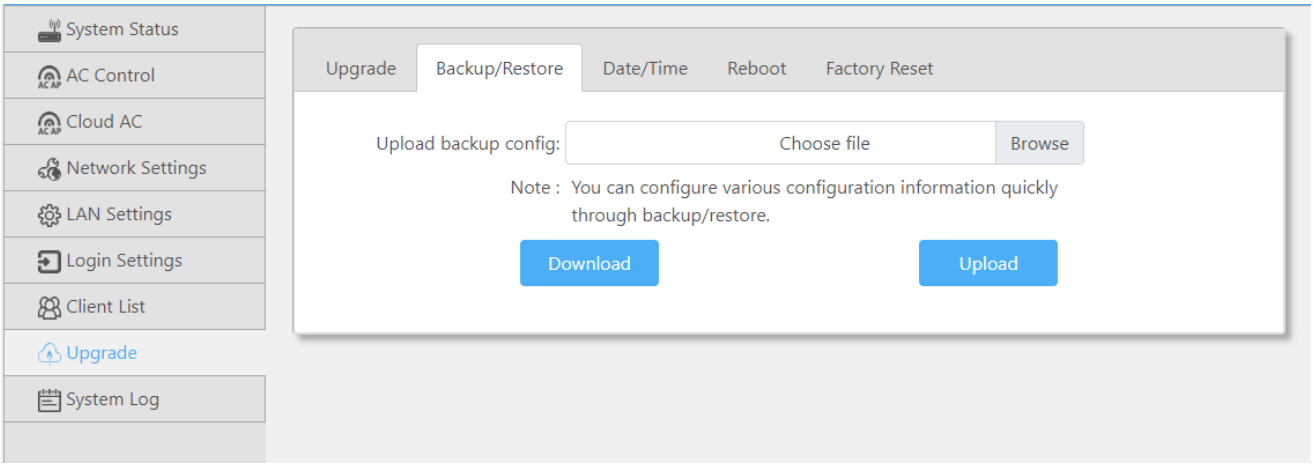

Figure 33. Backup

Table 6.

Items	Description
Backup parameters	Click the <Backup Configuration> button to save the current settings to a file.
Import backup file	Click <Browse> to select the configuration file. Click <Import Configuration>, and in the prompt box, click <OK> to upload the settings to AC200 and restart.

3.8.3. Time & Date

Set the time and date of the AC200.

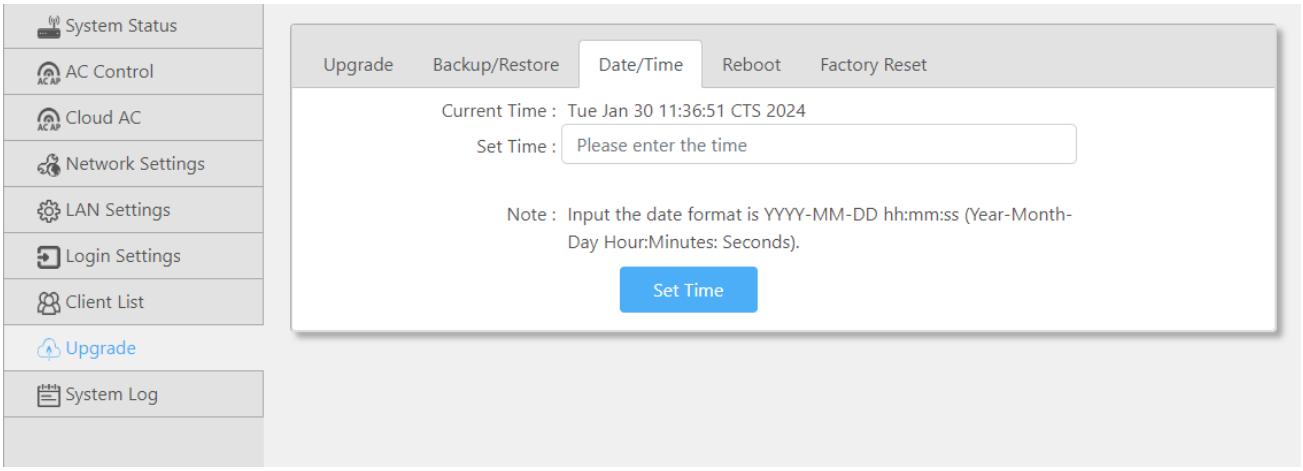

Figure 34. Date&time

3.8.4. Reboot

Reboot the AP controller.

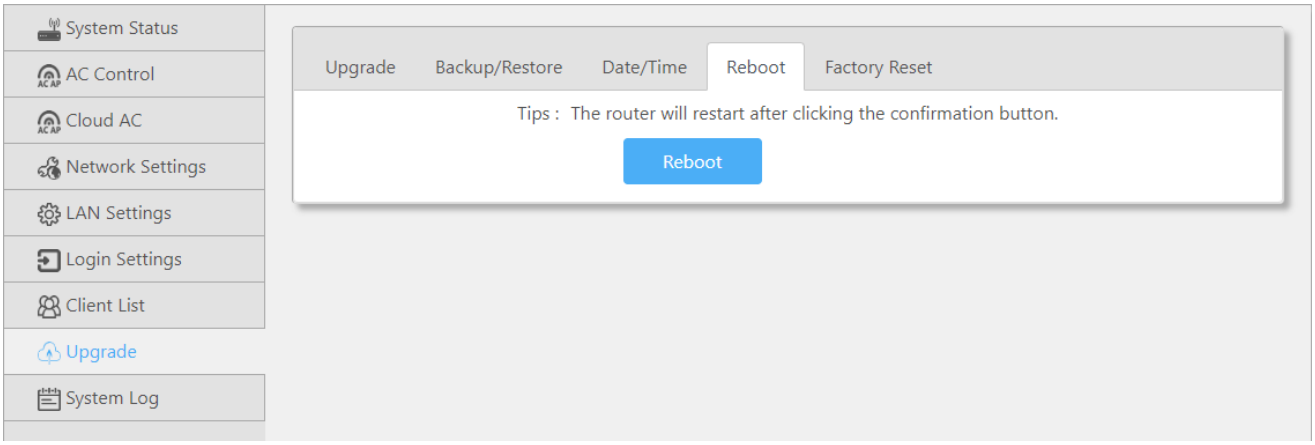

Figure 35. Reboot

3.8.5. Reset to factory setting

Reset to factory settings.

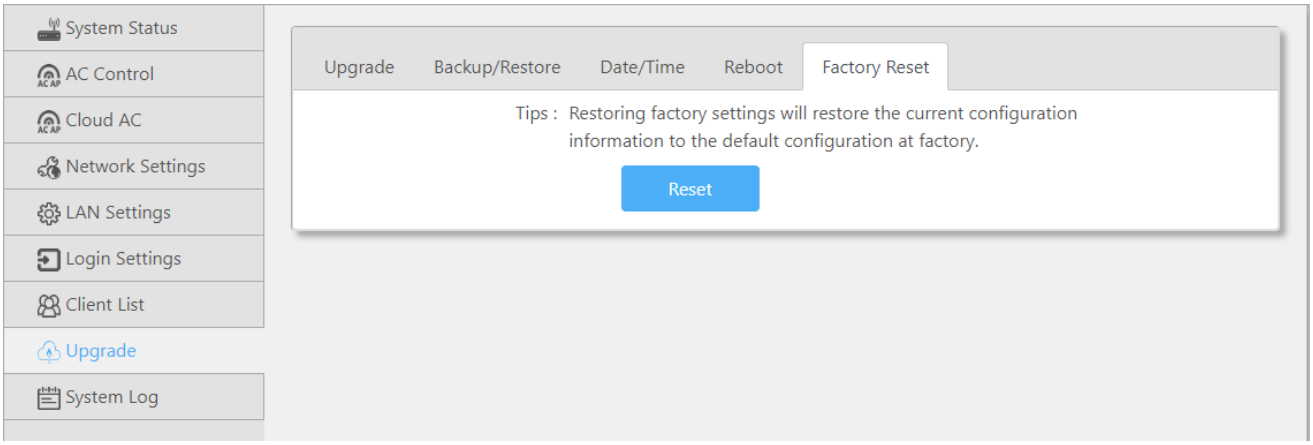

Figure 36. Reset to factory settings

3.9. System log

To check the system log.

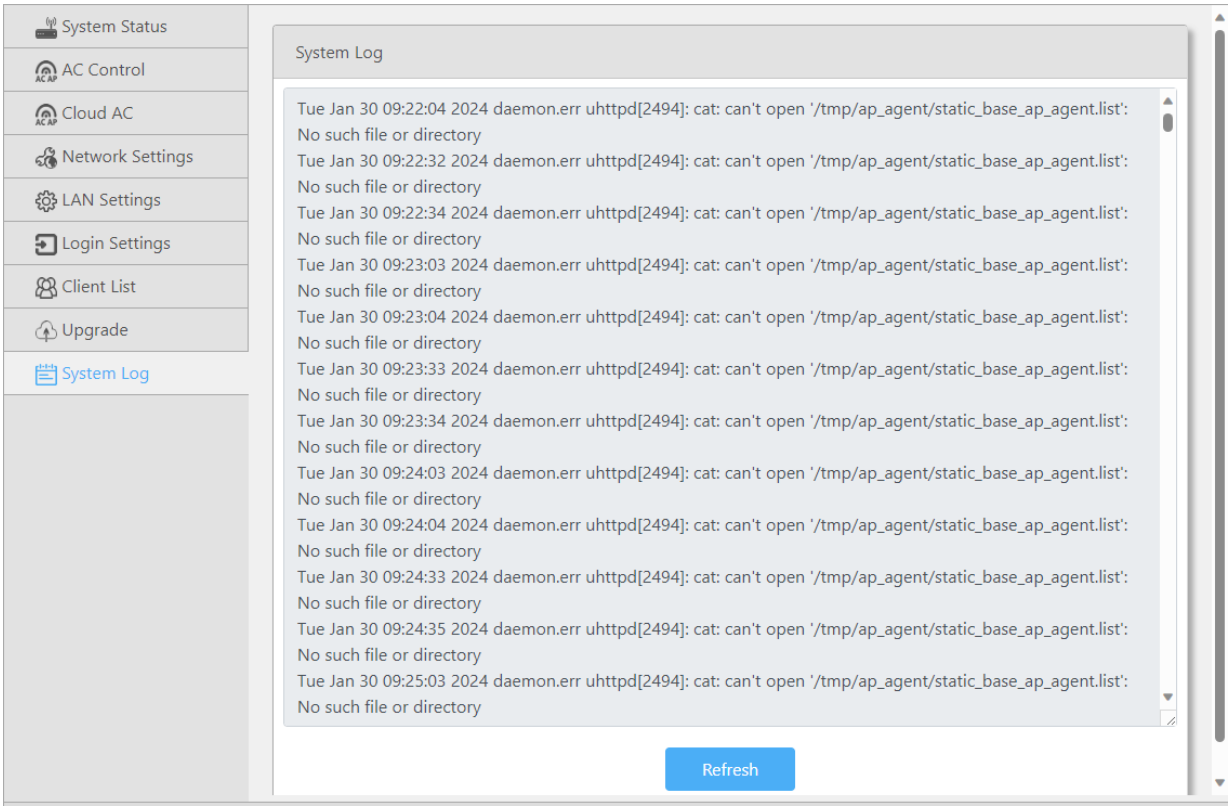

Figure 37. System log

4. Warranty

5. Contact Us

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7. Revision History

Version	Date	Author	Description
V1.0.0	2023-11-17		Established
V1.0.1	2024-01-27	May Liu	Translation

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