User Guide
For Cloud Access Point

Release version:V1.0.0

August 2022

Overview

Cloud AP series products provide wireless coverage solutions for small and medium-sized e nterprises and families. They can work independently as independent APs, or they can be c entrally managed through a hardware controller (Gateway with AC function, AC50) or cloud platform to provide services for small and medium-sized enterprises. and home with a flexibl e, feature-rich, and easy-to-configure wireless network.

Applicable product models are as follows:

WI-AP210, WI-AP215, WI-AP216, WI-AP217, WI-AP217-Lite, WI-AP218AX, WI-AP218AX-Lite, WI-AP219AX, WI-AP415, WI-AP310, WI-AP315, WI-AP316, WI-AP317, WI-AP510, WI-AP518 AX

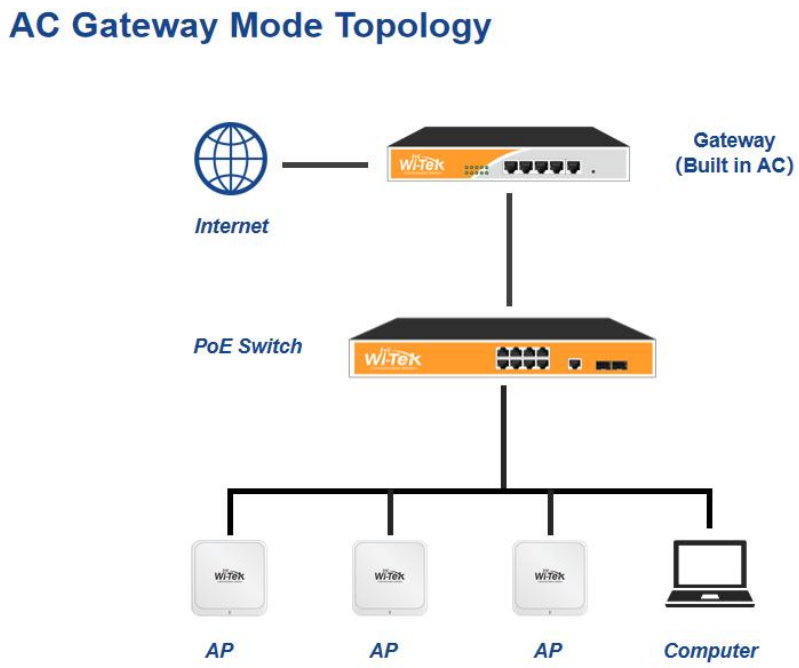
Revision History

Date	Doc Version	Description
August 2022	V1.0	Initial version

1. Quick Start

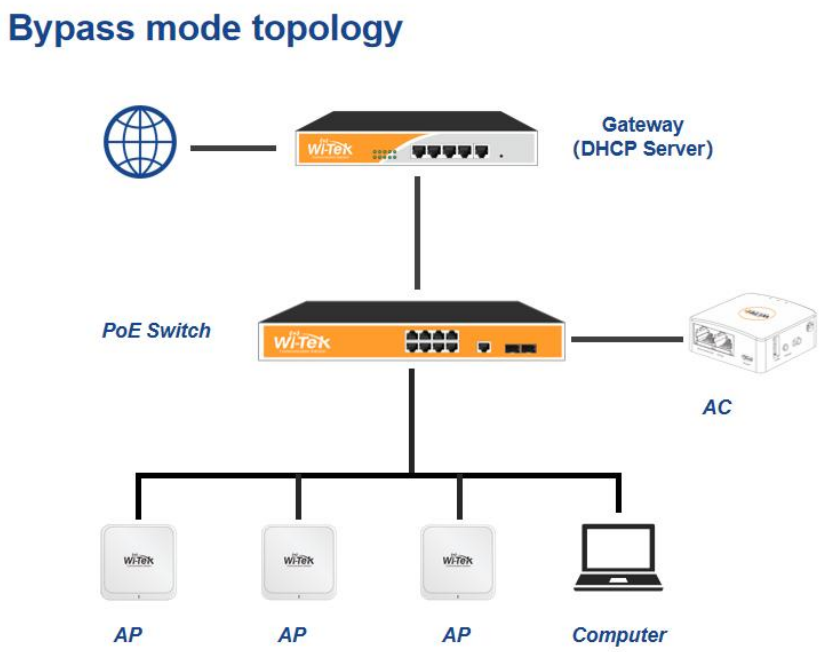
In the Quick Setup module, you can quickly set up the AP to enable Internet access for wireless devices such as your smartphone and tablet.

The AP supports four AP working modes. In the default working mode, thin AP mode, the AP uses an Ethernet cable to connect to the Internet or (the POE gateway is connecting the router to the Internet) in conjunction with the AC, and converts wired signals into wireless signals for wireless coverage. See topology below.



The above methods are used to manage AP access through the AC controller, and management operations such as unified management and command issuance can be performed through the AC.

Connect the router and other network devices (switches, computers, etc.) with a network cable. After checking, use the power adapter or network cable in the product box to connect to the router, and press the power switch to power on the wireless AP.

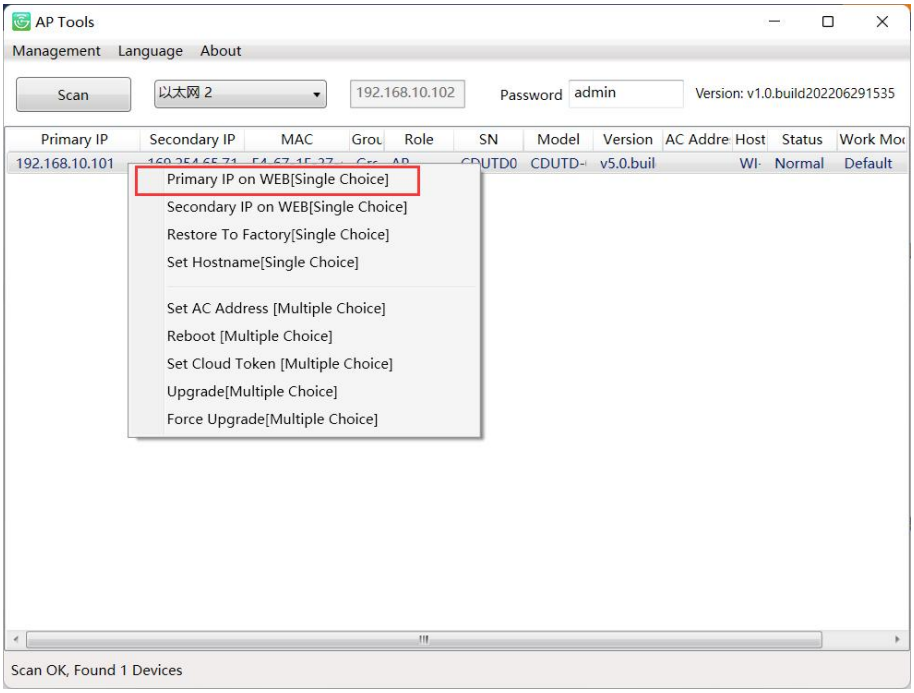


Step 1 Open the Scan Tools on computer.

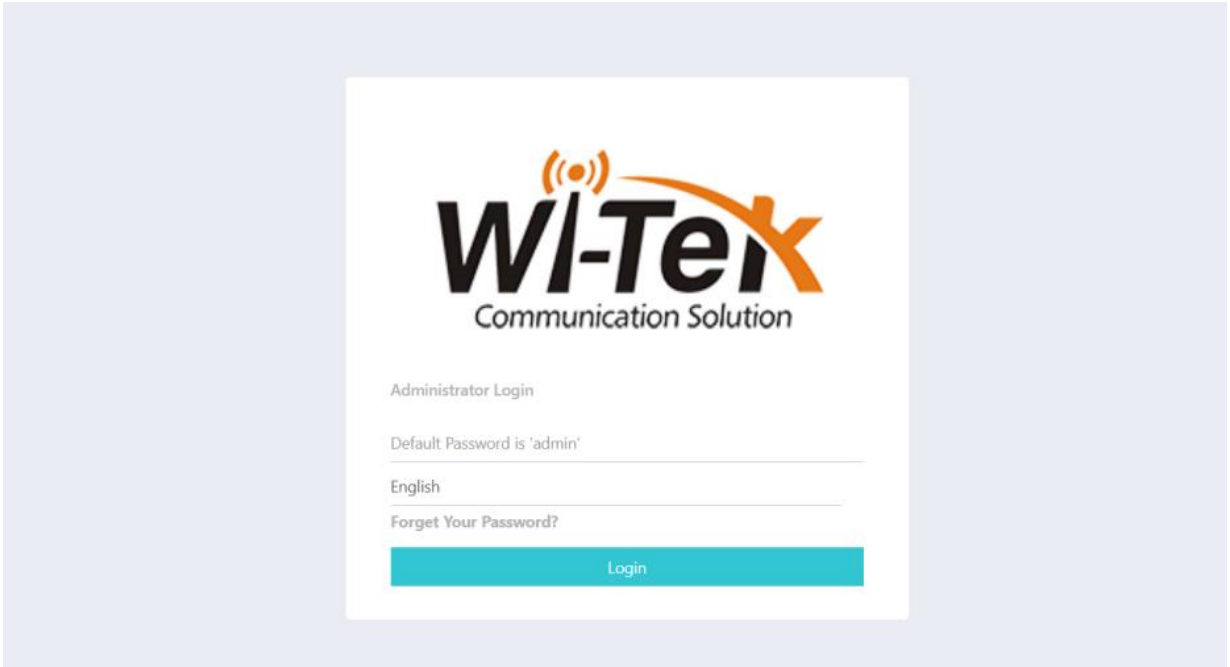
ScanTools_20210927

Note: Download Link http://www.wireless-tek.com/files_down.php?id=90

Step 2 Click the 'Scan' button to query the IP address assigned by the router to the AP, a nd the tool will use the default browser to open the corresponding IP access device. As foll ows:



Step 3 After normal access opens, enter the default password admin for Administrator Login, as shown below:

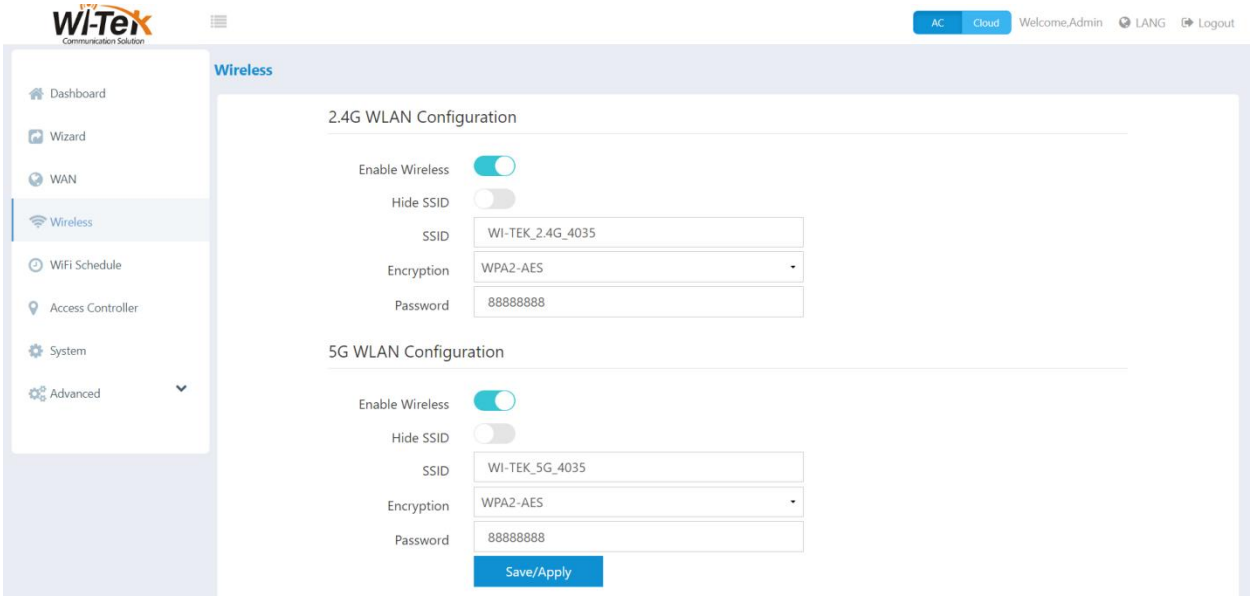


Step 4 Select **Wireless**.

Step 5 Select the SSID you want to configure, for example, 2.4GHz/5GHz.

Step 6 Select any encryption type and enter a password.

Step 7 Click the Save button to submit.


Wi-Tek
Communication Solution
AC
Cloud
Welcome,Admin
LANG
Logout
Dashboard
Wizard
WAN
Wireless
WiFi Schedule
Access Controller
System
Advanced
Wireless
2.4G WLAN Configuration
Enable Wireless
Hide SSID
SSID
WI-TEK_2.4G_4035
Encryption
WPA2-AES
Password
88888888
5G WLAN Configuration
Enable Wireless
Hide SSID
SSID
WI-TEK_5G_4035
Encryption
WPA2-AES
Password
88888888
Save/Apply

-END

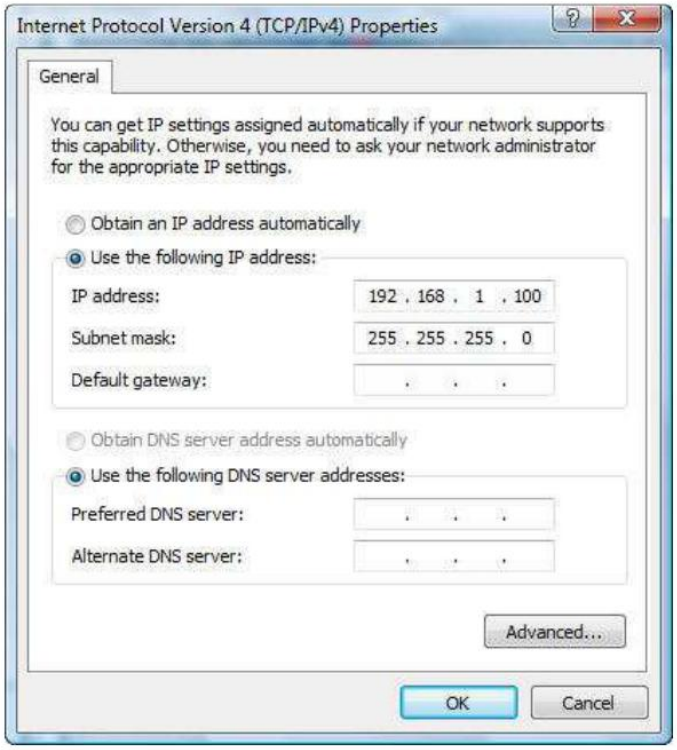
2. Log in to the web interface

2.1. Login

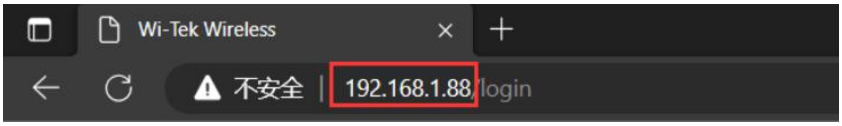
Step 1 Connect your computer to the AP with an ethernet cable.

Step 2 Make sure that the IP address of the management computer is in the same network segment of the AP.

For example, if the IP address of the AP is 192.168.1.88, the management computer can be configured with an IP address of 192.168.1.100.



Step 3 Launch a web browser on your computer and enter the IP address of the AP (default:192.168.1.88) in the address bar.



Step 4 Enter the login username and password (default: admin) and click the Login button.

If the login page does not appear, try the following solutions:

If there is a DHCP server in the LAN where the AP is deployed, the AP will automatically obtain an IP address from the DHCP server. In this case, first check the AP's new IP address in the client list of the DHCP server, and log in to the AP's web page with the new IP address.

If a AC (including a Wi-Tek router that supports AP management) has been deployed in the network, the AP may have been managed by the AC and its IP address has changed. Please log in to the AC's web interface and check the AP's new IP address, then log in again with the new IP address.

If multiple APs are deployed in the network, IP address conflicts may occur, resulting in web interface login errors. Verify that the AP's IP address is not in use before integrating into the network.

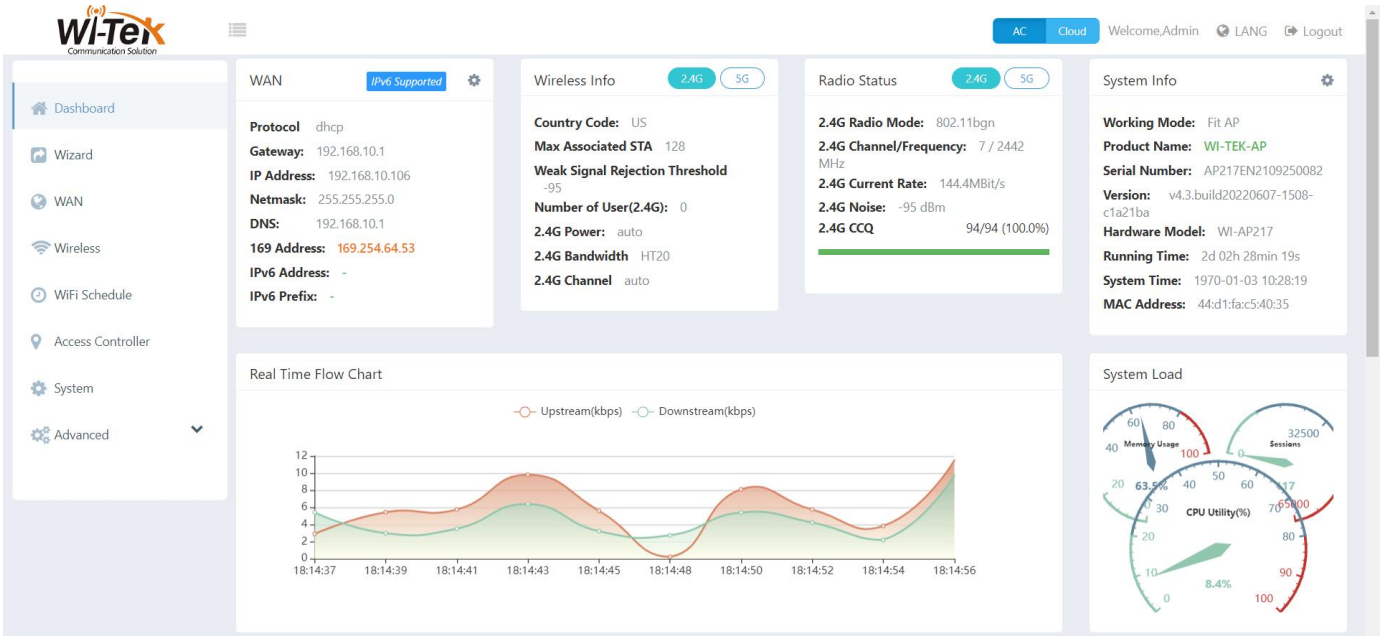
Reset the AP and try to log in with the default IP address. How to reset: After the AP starts, press and hold the reset button for about 10 seconds and release it. After waiting about 8 seconds, the AP will reset to factory settings and reboot.

2.2. log out

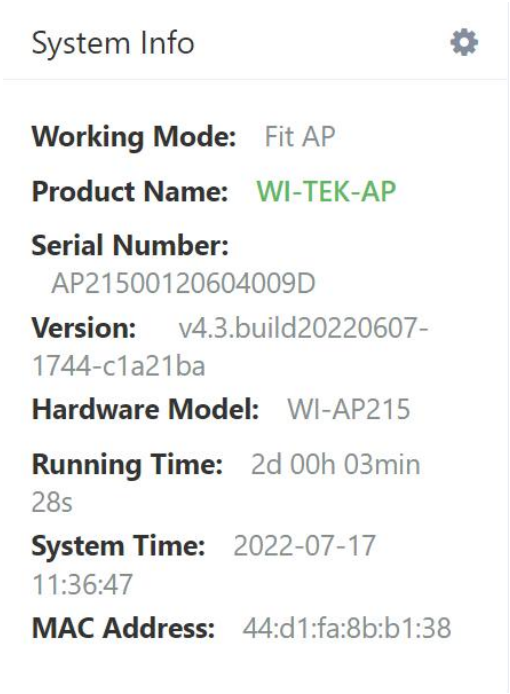
After logging in to the AP's web interface, the system will automatically log out if no operations are performed during the login timeout interval. Additionally, you can click "Sign Out" in the upper right corner to safely exit the web interface.

3. Dashboard

The Dashboard page allows you to check current system info of APs.



3.1. System Info



Parameter	Describe
Working Mode	Display the current working mode of AP.

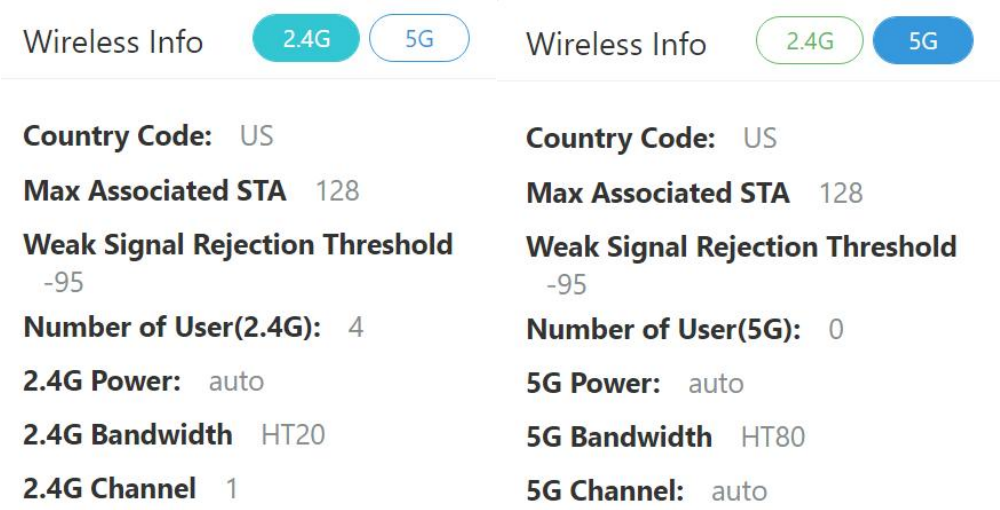
Product Name	Displays the default name of the AP, which can be modified manually.
Serial Number	Display the SN of AP.
Version	Displays the firmware version of the AP.
Hardware Model	Displays the model name of the AP.
Running Time	Displays how long the AP has been working since it starts up.
System Time	Displays the current system time.
MAC Address	Displays the MAC address of the AP.

3.2. WAN Info

Parameter	Describe
Protocol	Display the current working protocol of WAN port.
Gateway	Displays the gateway IP of the AP, which may be dynamically obtained or statically specified.
IP Address	Displays the IP address of the AP, which may be dynamically obtained or statically specified.
Netmask	Displays the Netmask of the AP, which may be dynamically obtained or statically specified.
DNS	Displays the DNS of the AP, which may be dynamically obtained or

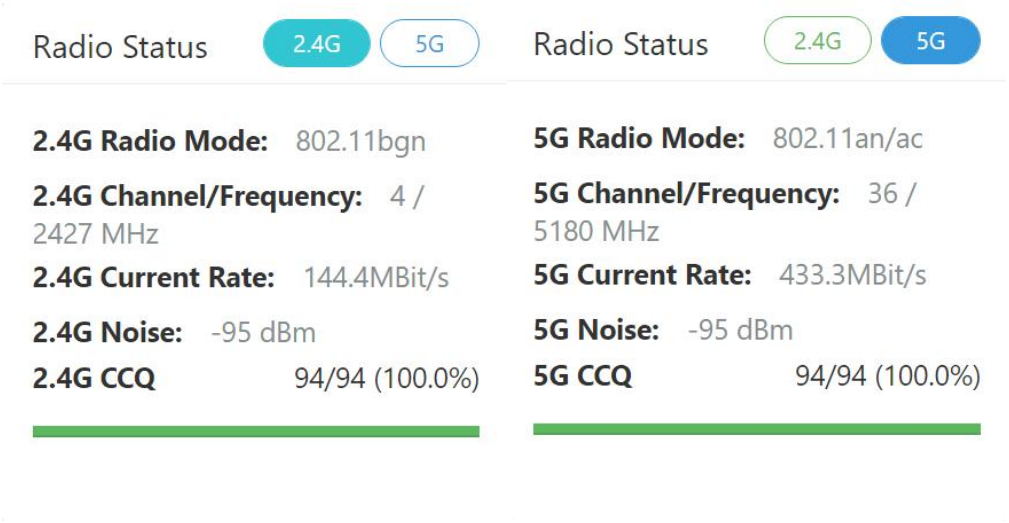
	statically specified.
169 Address	Displays Secondary IP address of the AP.
IPv6 Address	Displays the IPv6 address of the AP.
IPv6 Prefix	Displays the IPV6 prefix of the AP.

3.3. Wireless Info



Parameter	Describe
Country Code	Display the country code of the current AP running.
Weak Signal Rejection Threshold (RSSI)	indicates the minimum signal level required for a client to remain connected.
Number of User	Display the number of users connected to this channel.
Power	Display the transmit power of the current AP operation.
Bandwidth	Displays the bandwidth of the current AP operation.
Channel	Display the wireless channel of current AP operation.

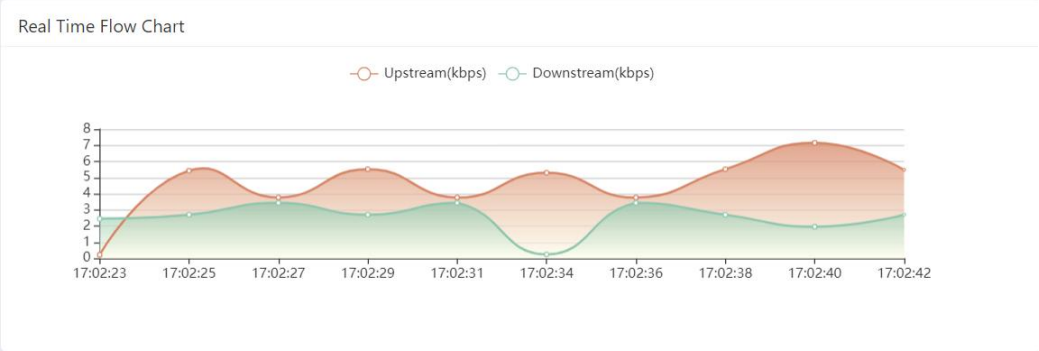
3.4. Radio Status



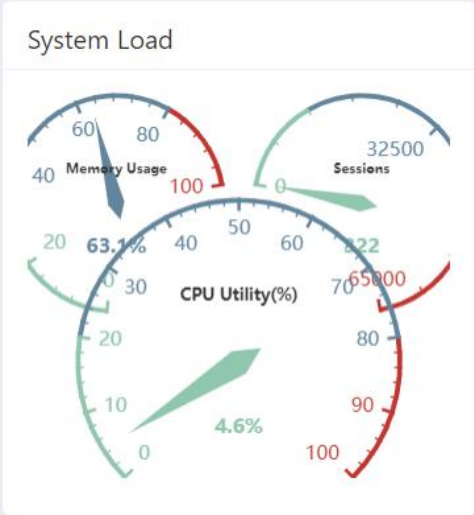
Parameter	Describe
Radio Mode	Displays the wireless protocol of the device. * Single band devices only display 2.4G
Channel / Frequency	Displays the channel of the device.
Current Rate	Display the current rate of devices
Noise	Display amount of background noise in your environment. *If the noise level is too high, it can result performance for your wireless network. *The closer the value to 0, the greater the noise level.
CCQ	displays the wireless Client Connection Quality (CCQ), the value in percent that shows how effective the bandwidth is used regarding the theoretically maximum available bandwidth.

3.5. Real Time Flow Chart&System Load

The real-time traffic(WLAN to LAN) is displayed in a graph and refreshed every 2s to dis play the current working uplink and downlink rates of the AP, in kbps.



The system load is displayed in the form of a meter chart and refreshed every 2s to displa y the memory usage, the number of sessions, and the CPU usage.



3.6. SSID List

AP Wireless Statistics List allows you to check basic information and statistics about SSID based.

SSID	Encryption	Password	SSID Hide	Network	VLAN
WI-TEK_2.4G_4035	WPA2-AES	88888888	NO	2.4G	Default VLAN
WI-TEK_5G_4035	WPA2-AES	88888888	NO	5G	Default VLAN

Parameter	Describe
SSID	Displays the SSID number associated with the client.
Encryption	Display the encryption type of SSID

Password	Display the password of SSID
SSID Hide	Display whether SSID is hidden.
Network	Display the frequency band of SSID.
VALN	Displays the VLAN to which the SSID belongs.

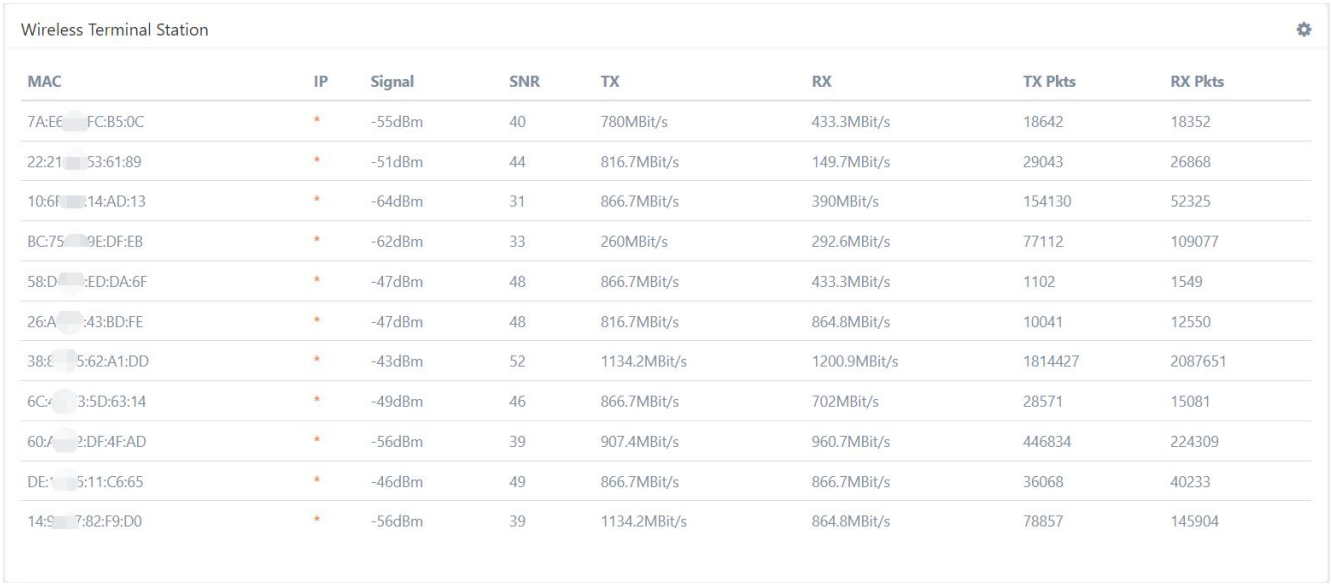
3.7. DHCP Client

This part displays the information such as the IP address assigned to the user by the AP in Fat mode and WISP mode.

Note: The list information needs to be in the Fat AP or WISP working mode to view the information of the client connected to the AP.

3.8. Wireless Terminal Station

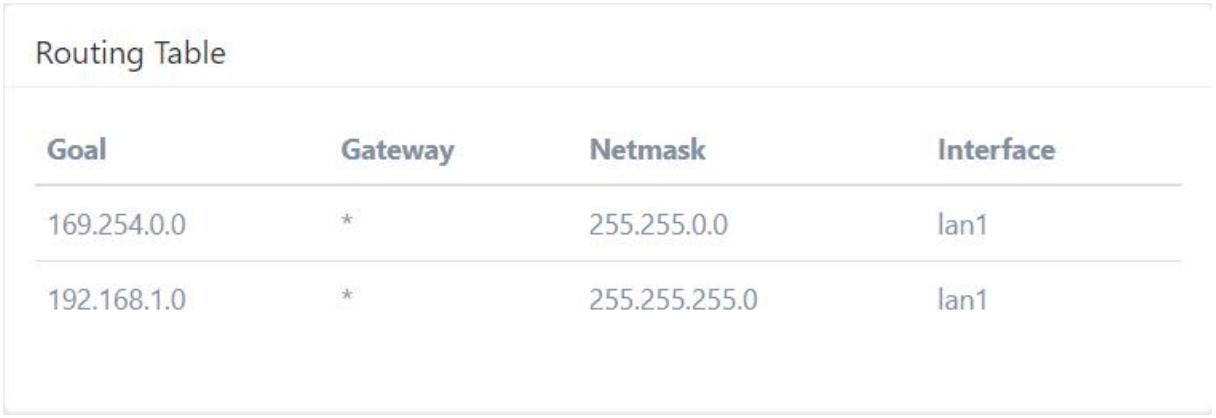
This part will display the basic information of the wireless client after connecting to the AP, including MAC address, signal, SNR, etc



Parameter	Describe
MAC	Displays the MAC address of the wireless client device.
IP	Display the IP address of the wireless client.
Signal	Display the signal value of the wireless client connected to the AP.
SNR	Displays the Signal-Noise Ratio of the device. *In general, you should have a minimum of +25dBm signal-to-noise ratio. Lower values than +25dBm result in poor performance and speeds.
TX/RX	Displays the rate of sending data or receiving data of the device.
TX Pkts / Rx Pkts	TX Pkts: Displays the number of packets received by the wireless client after connecting to the SSID. RX Pkts: Displays the number of packets received by the wireless client after connecting to the SSID.
⚙	Click ⚙ to quickly jump to the wireless configuration page.

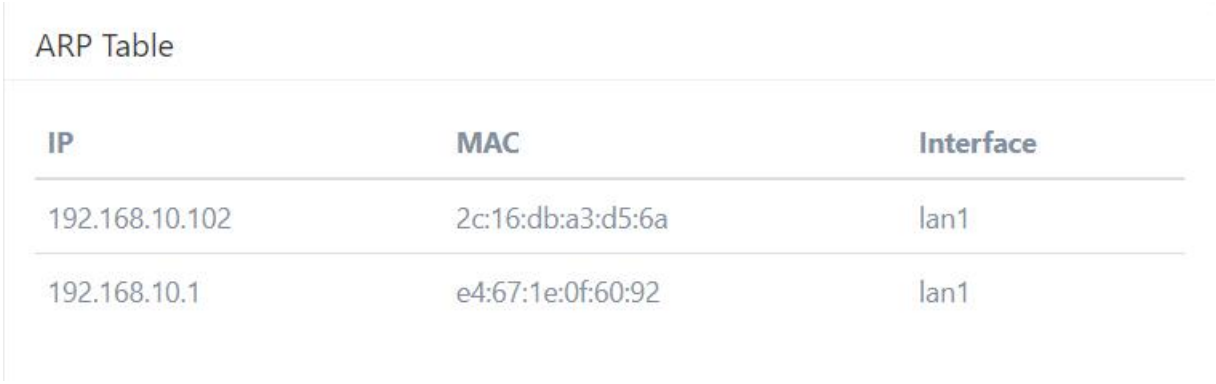
3.9. Routing Table

The Routing table views all of the valid route entries in use. The Goal IP address, Netmask, Gateway,and Interface will be displayed for each entry.



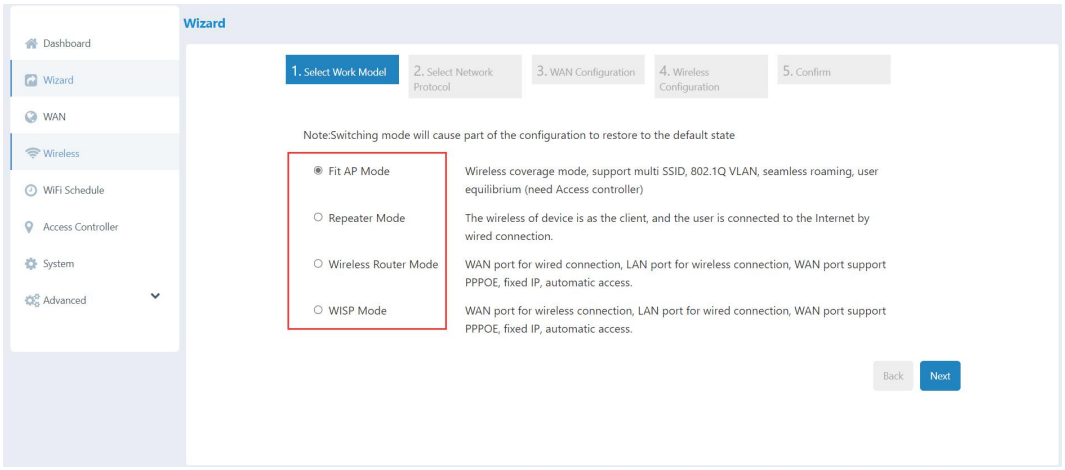
3.10. ARP Table

The ARP Table page allows you to view detailed ARP information on the device side conne cted to the AP.



4. Wizard

The AP supports four working modes: Fit AP mode, Repeater mode, wireless router mode, and WISP mode. The default working mode is the fit mode. Please select the model according to the actual network needs.



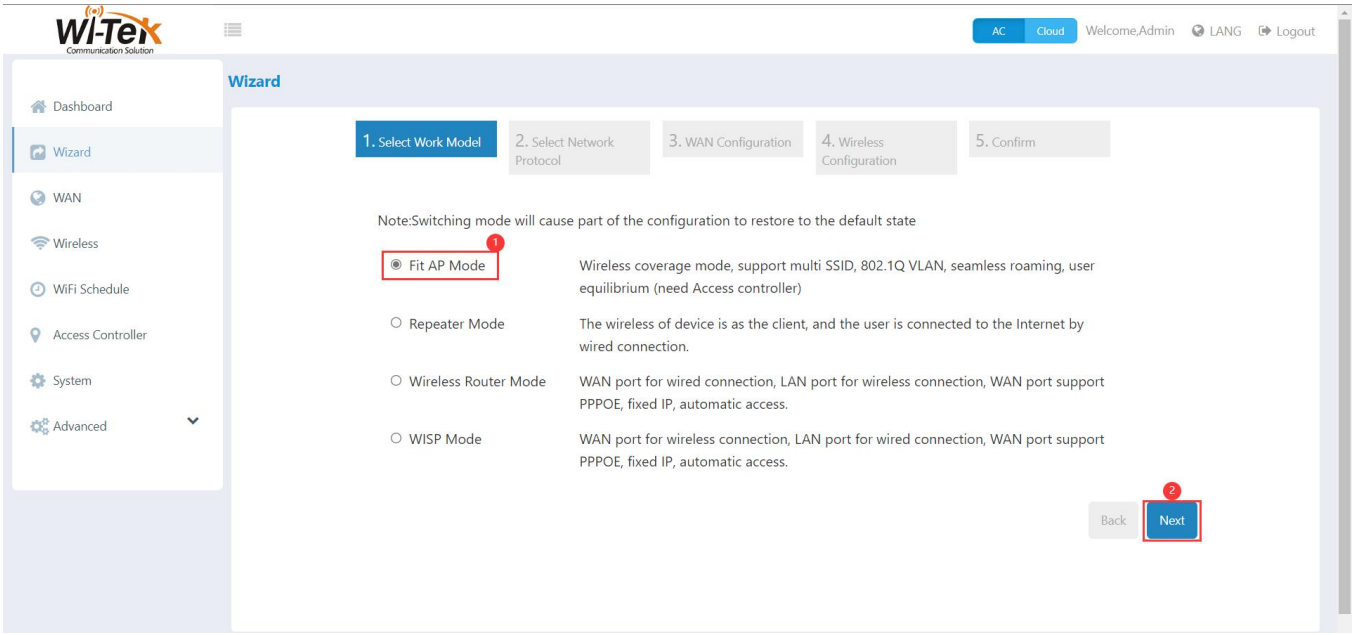
Parameter	Describe
Fit AP Mode	Wireless coverage mode, support multi SSID, 802.1Q VLAN, seamless roaming , user equilibrium (need Access controller).
Repeater Mode	The wireless of device is as the client, and the user is connected to the Internet by wired connection.
Wireless Router Mode	WAN port for wired connection, LAN port for wireless connection, WAN port support PPPOE, fixed IP, automatic access.
WISP Mode	WAN port for wireless connection, LAN port for wired connection, WAN port support PPPOE, fixed IP, automatic access.

Note: Switching mode will cause part of the configuration to restore to the default state.

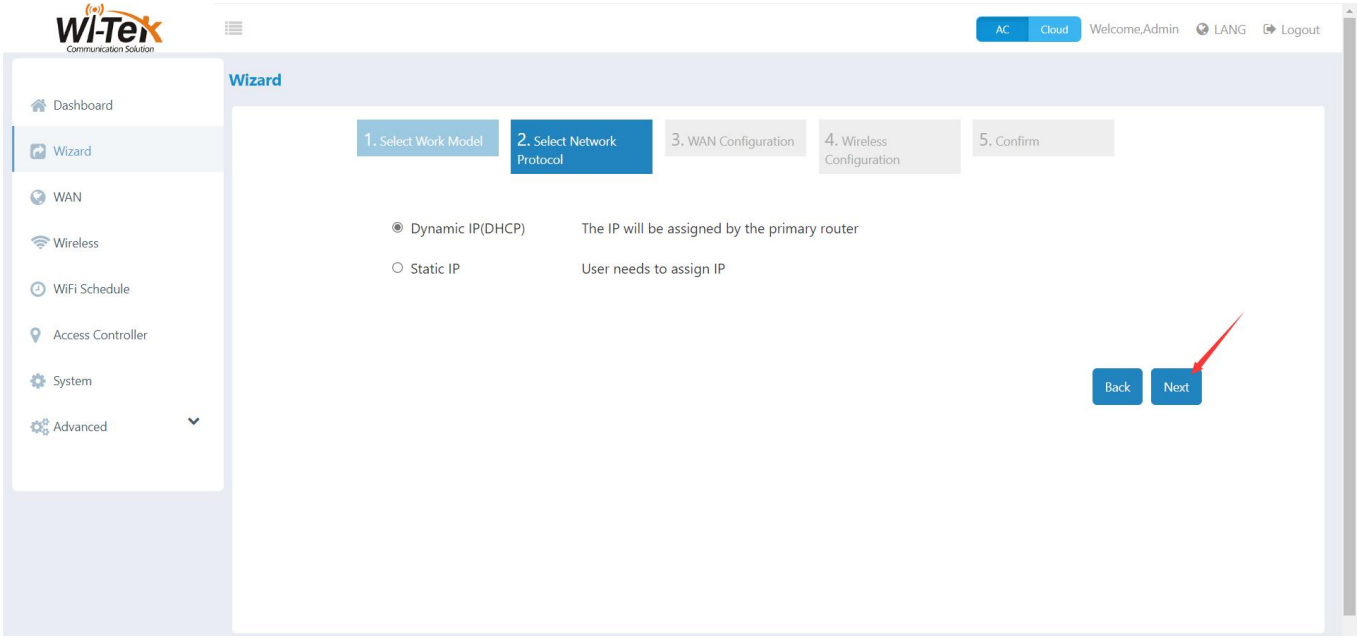
4.1. Fit AP Mode

Wireless coverage mode, support multi SSID, 802.1Q VLAN, seamless roaming, user equilibrium (need Access controller)

Step 1 Go to Wizard and select Fit AP Mode.

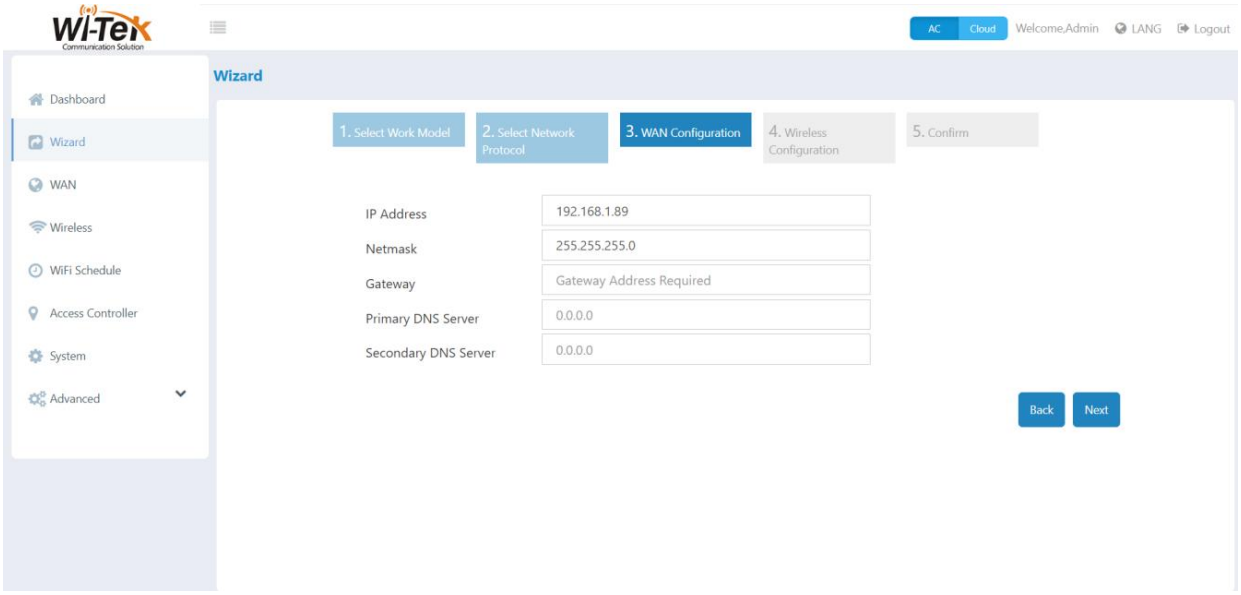


Step 2 Select the type of connection network you want to configure, click the Next button to enter step 3.

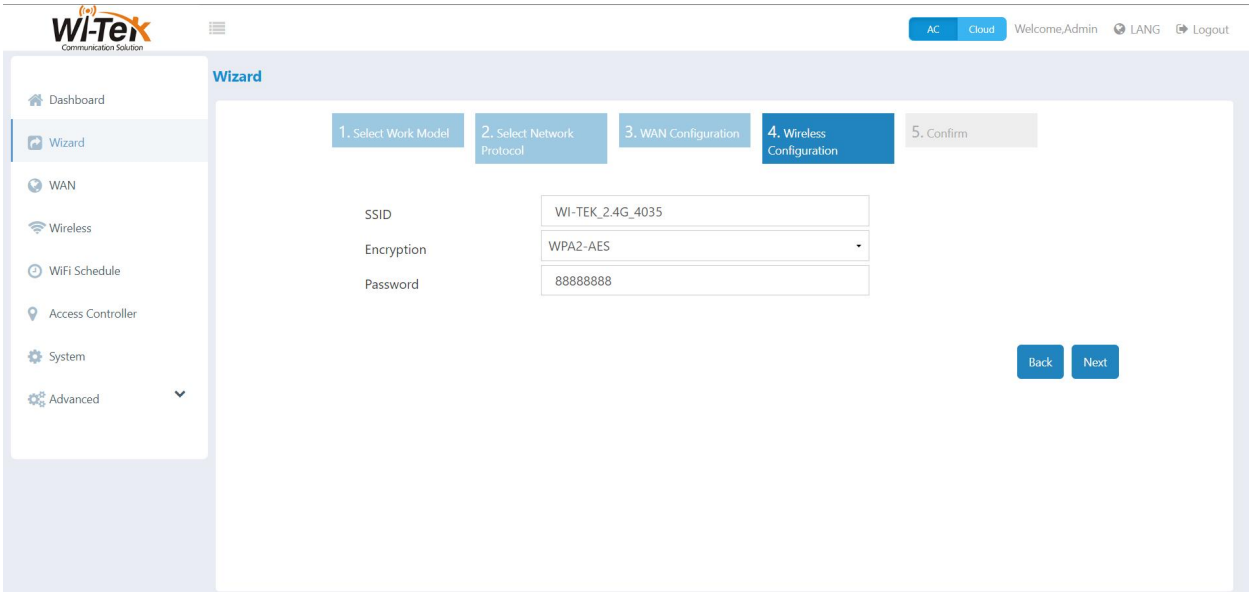


Step 3 If you choose the Dynamic IP method, Customize DNS Server is optional.

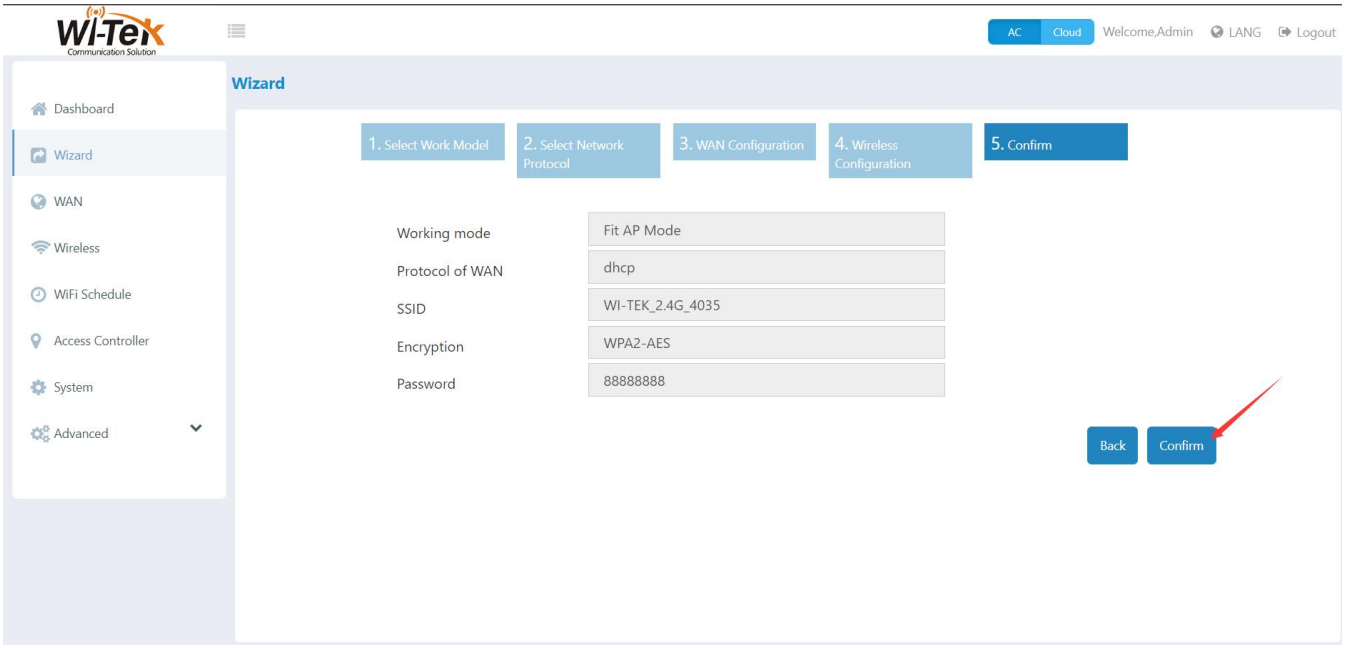
If you choose static IP mode, the configuration Parameters are as follows. IP Address and Netmask are required, and others are optional.



Step 4 Set the Wi-Fi name, choose a security encryption mode, and enter the password.



Step 5 Finally, confirm the configuration information, and click the **Confirm** button after conf irming that it is correct. If the configuration information is incorrect, click **Back** to return to t he previous step to reconfigure.



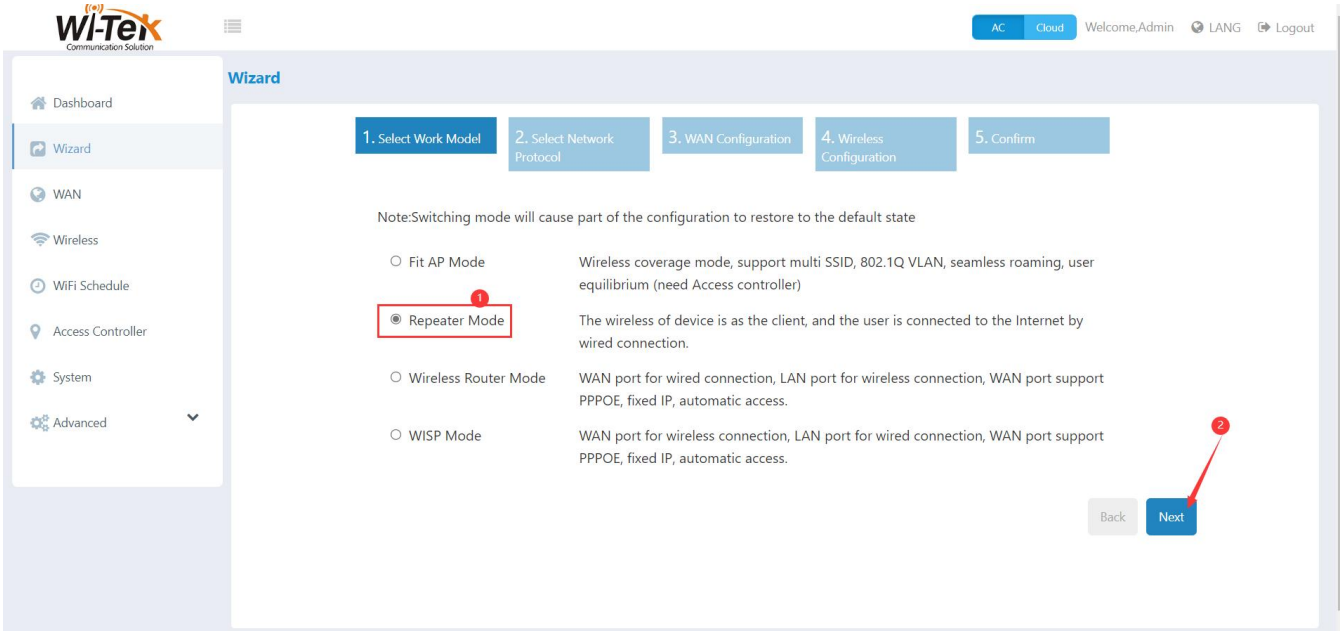
--END

4.2. Repeater Mode

The wireless of device is as the client, and the user is connected to the Internet by wired connection.

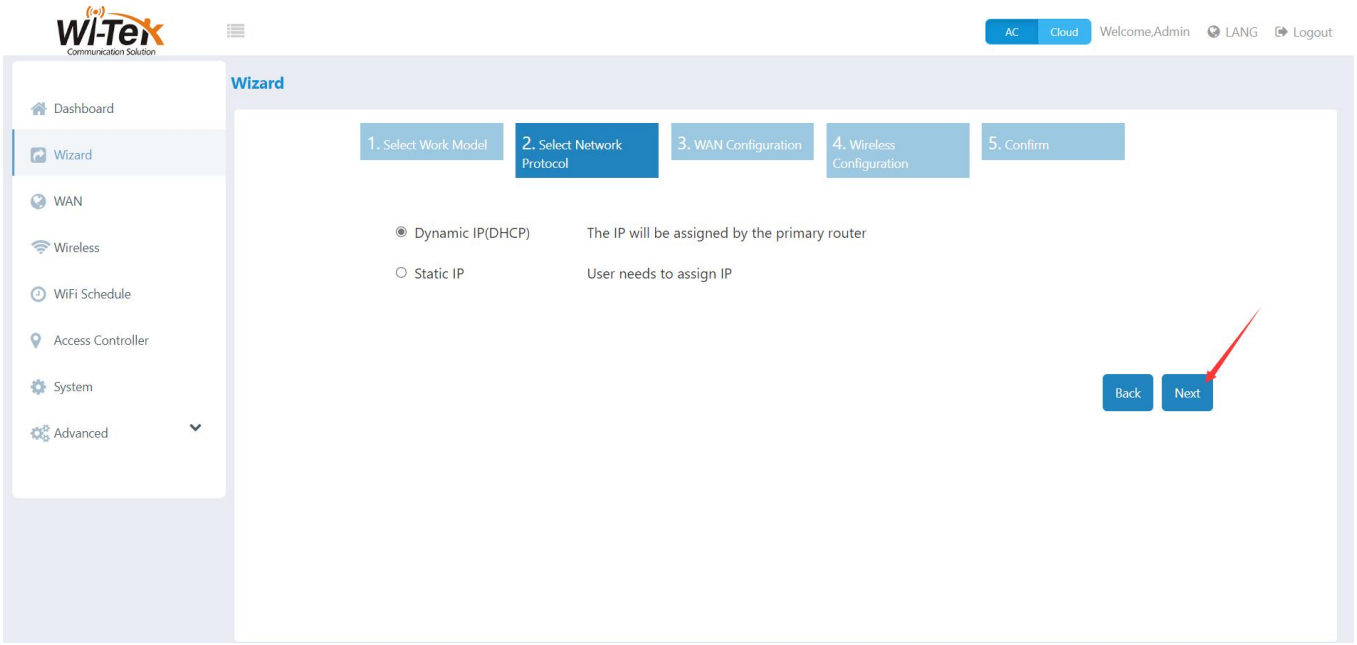
The example is as follows for other working modes to change to Repeater Mode working m ode, and the steps for other working modes are roughly the same.

Step 1 Select **Repeater Mode** working mode.

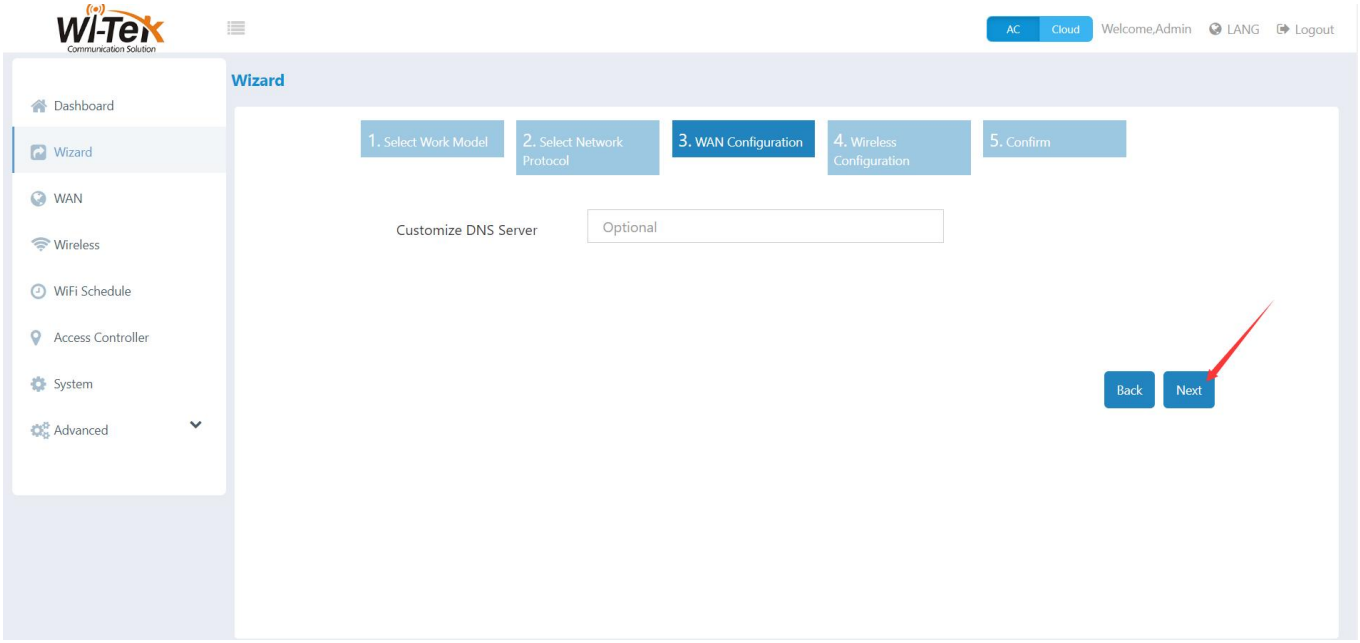


Step 2 Select the type of connection network you want to configure, and click the **Next**

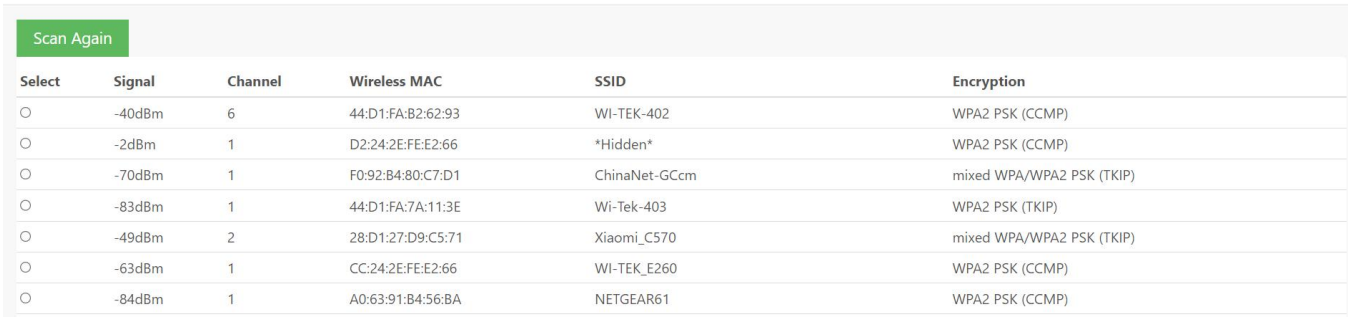
button to enter step 3.



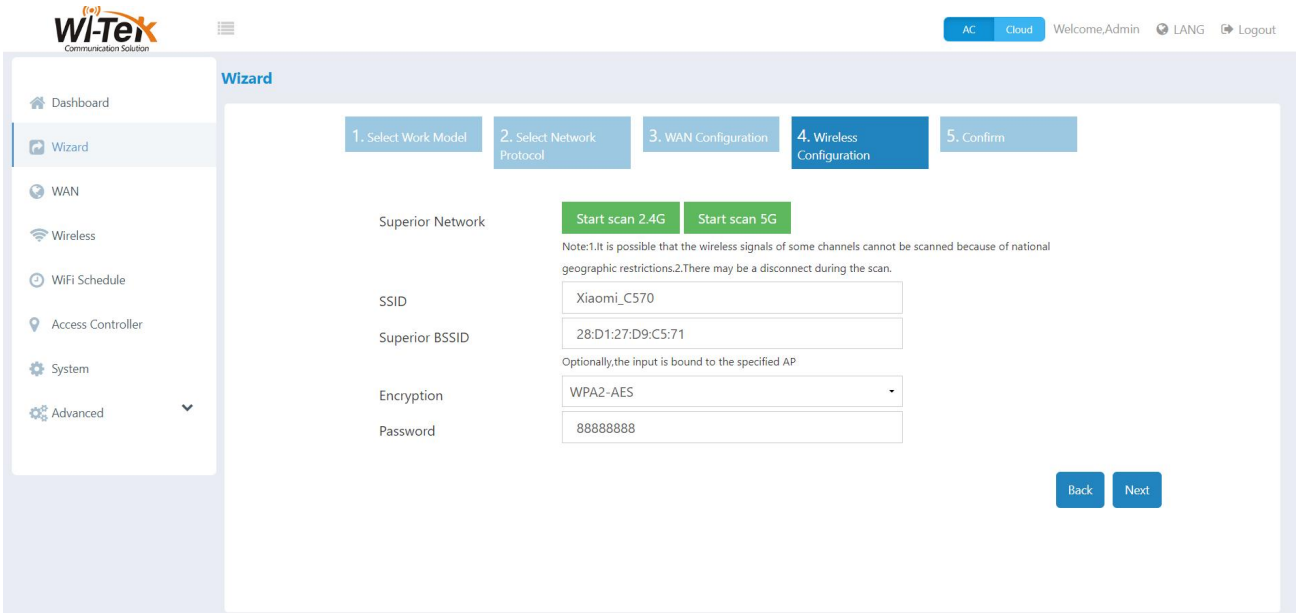
Step 3 Configure Customize DNS Server optional.



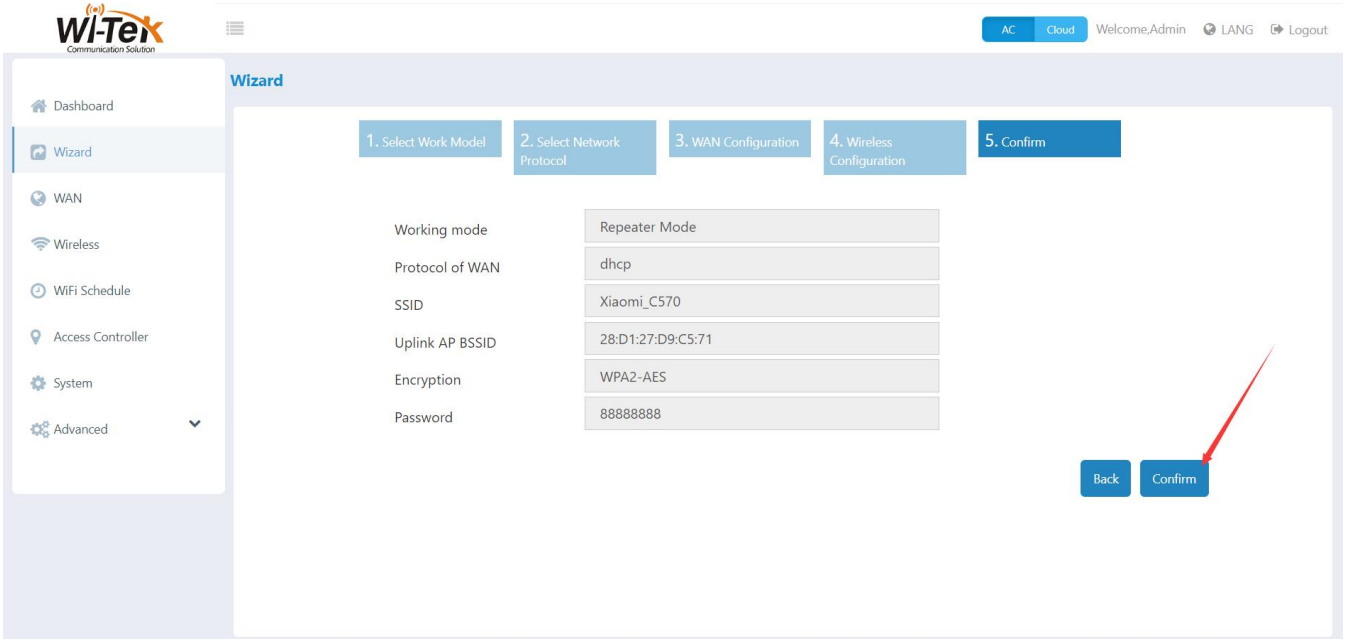
Step 4 Click the **Start scan 2.4G** or **Start scan 5G** button to search for the upper-level wir eless network, and select the upper-level network to connect. If not found Corresponding re sult Wi-Fi can click **Scan Again** to refresh again to query the superior wireless network list.



Step 5 Set the Wi-Fi name, choose a security encryption mode, and enter a password.



Step 6 Finally, confirm the configuration information, and click the **Confirm** button after confirming that it is correct. If the configuration information is incorrect, click **Back** to return to the previous step to reconfigure.



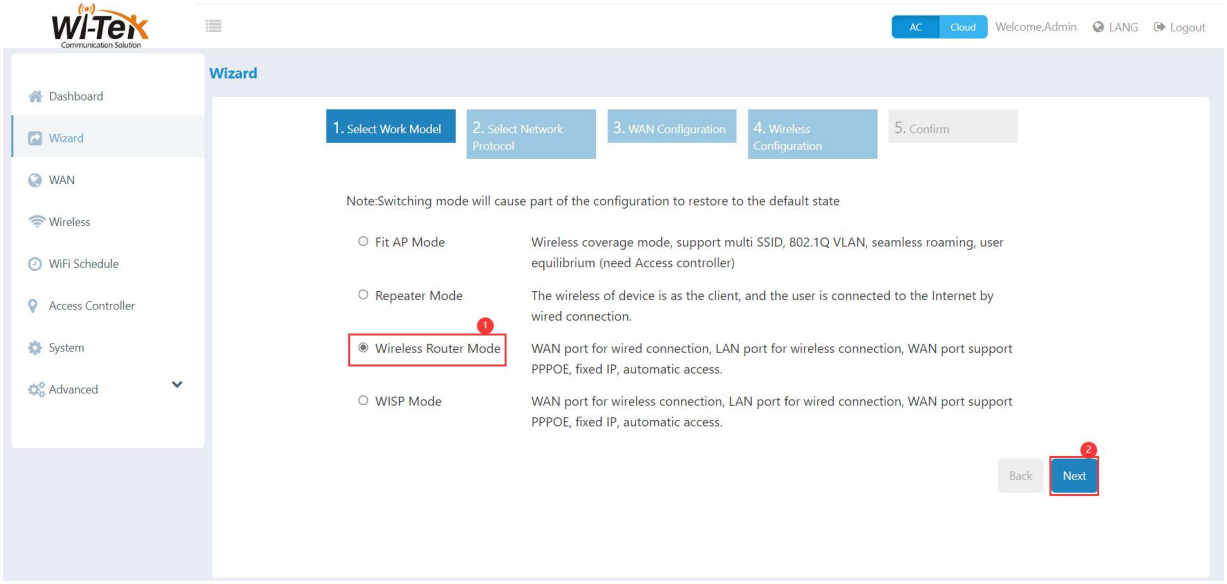
--END

4.3. Wireless Router Mode

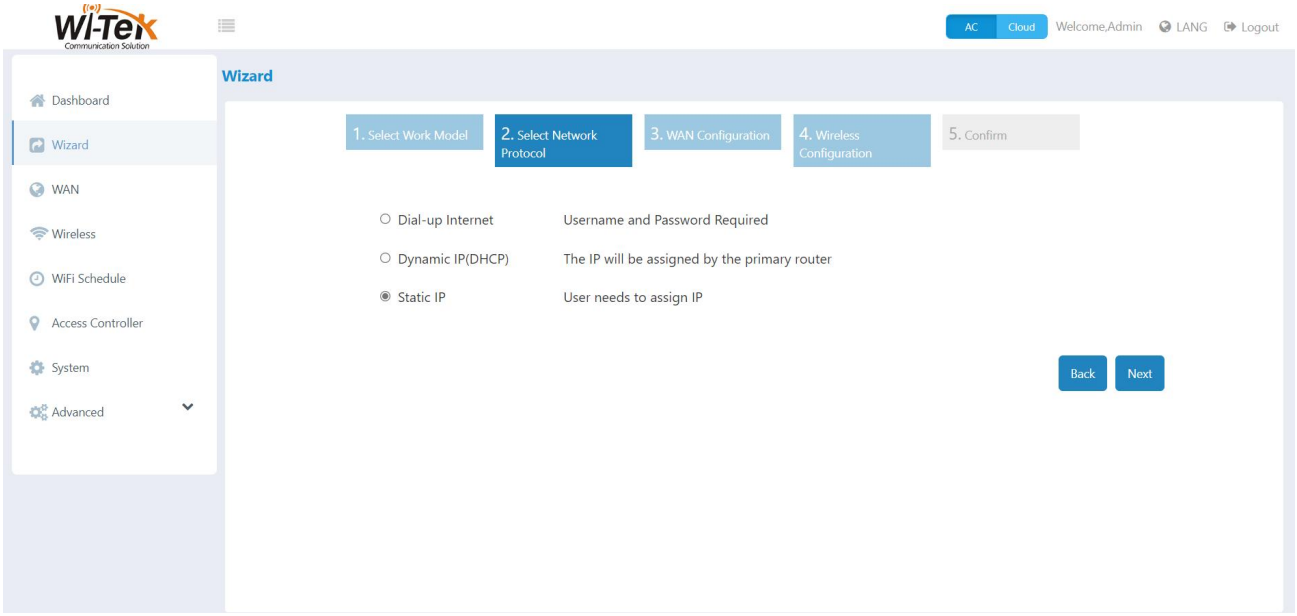
WAN port for wired connection, LAN port for wireless connection, WAN port support PPPoE, fixed IP, automatic access.

The default working mode of the AP is Fit AP Mode. An example of changing other working modes to Wireless Router Mode is as follows.

Step 1 Select the '**Wireless Router Mode**' working mode.



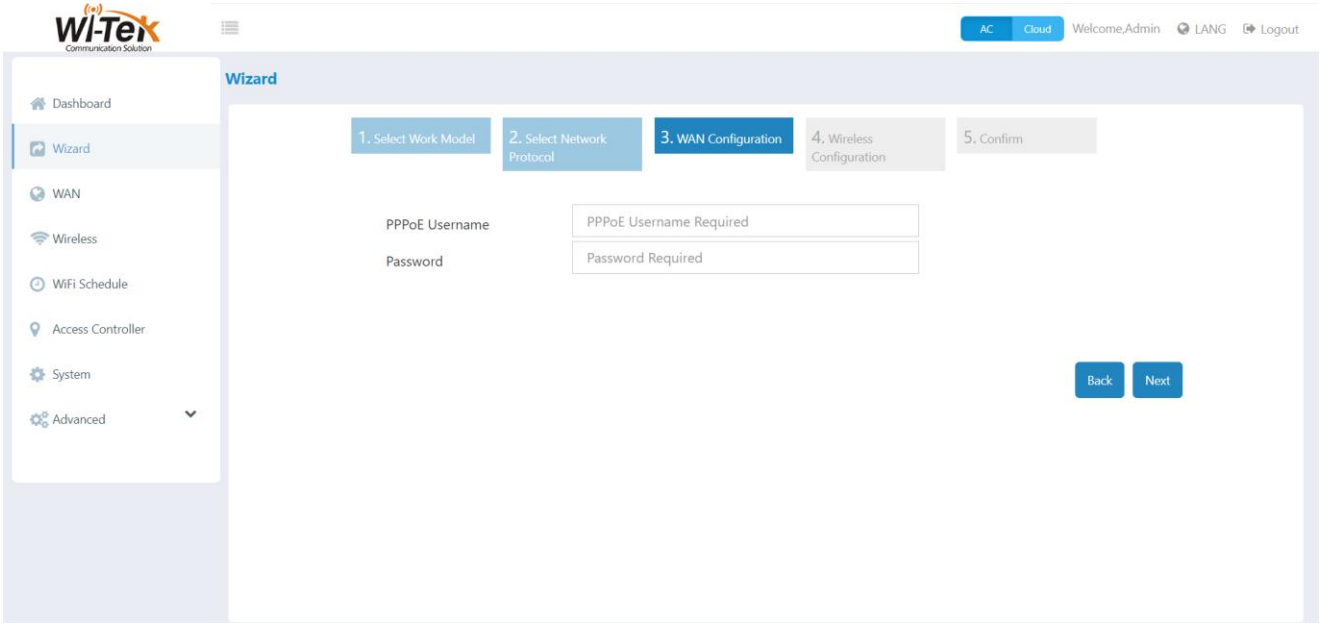
Step 2 Select the type of connection network you want to configure, and click the **Next** button to enter step 3.



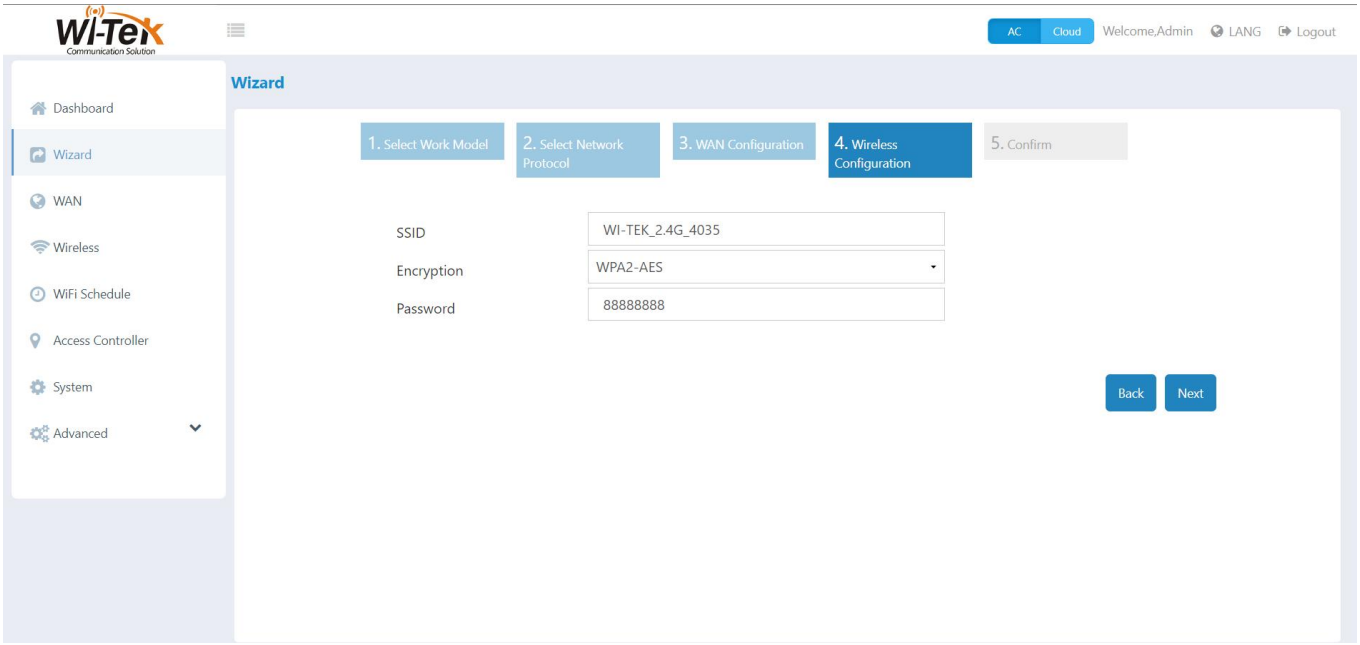
Step 3 If you choose the Dynamic IP method , Customize DNS Server is optional.

If you choose static IP mode, the configuration Parameters are as follows. IP Address and Netmask are required, and others are optional.

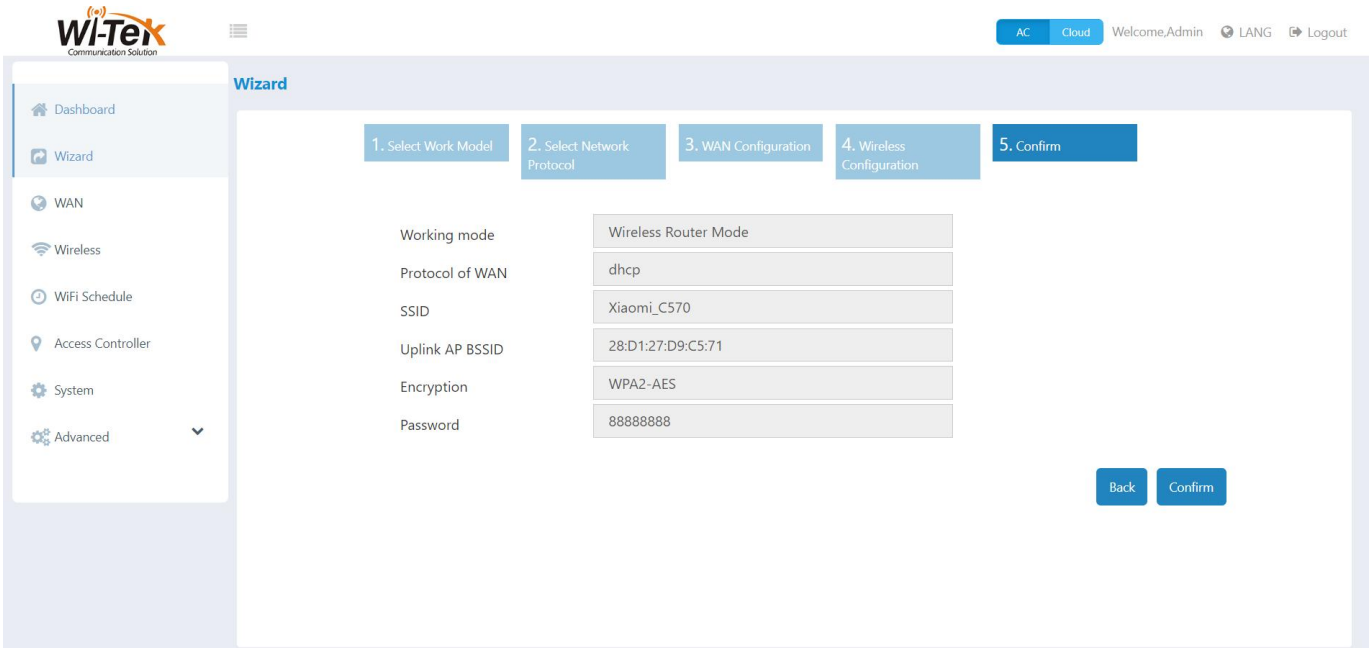
If you choose Dial-up Internet, you need to enter the account password provided by the operator.



Step 4 Set the Wi-Fi name, choose a security encryption mode, and enter the password.



Step 5 Finally, confirm the configuration information, and click the **Confirm** button after confirming that it is correct. If the configuration information is incorrect, click **Back** to return to the previous step to reconfigure.



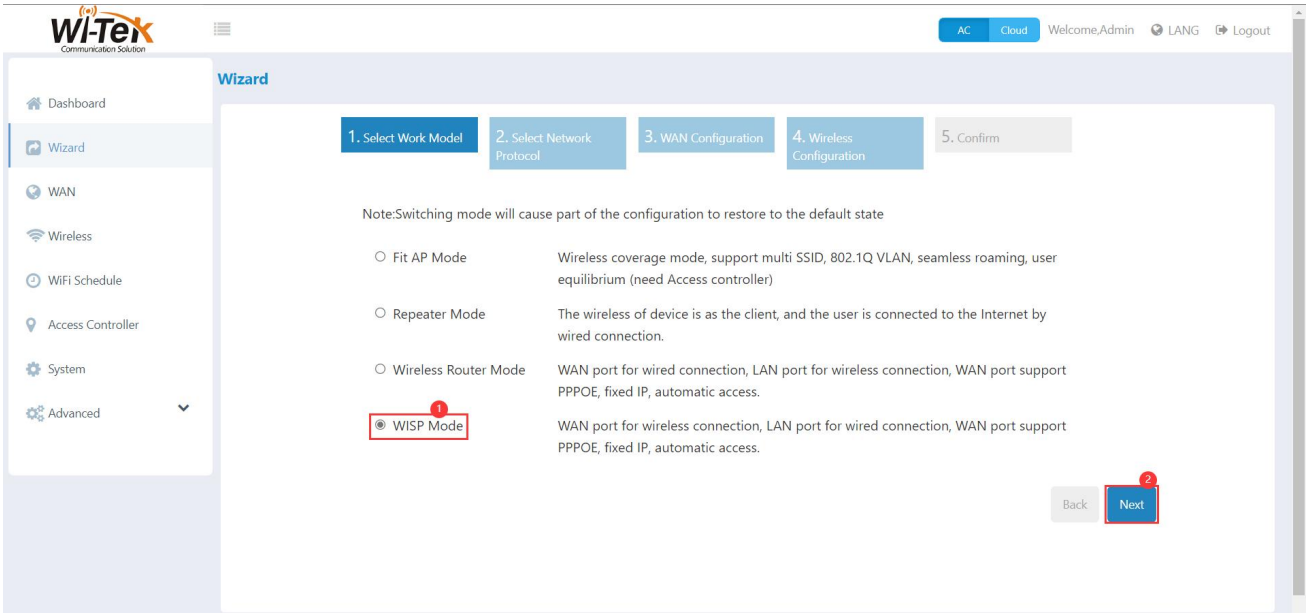
--END

4.4. WISP Mode

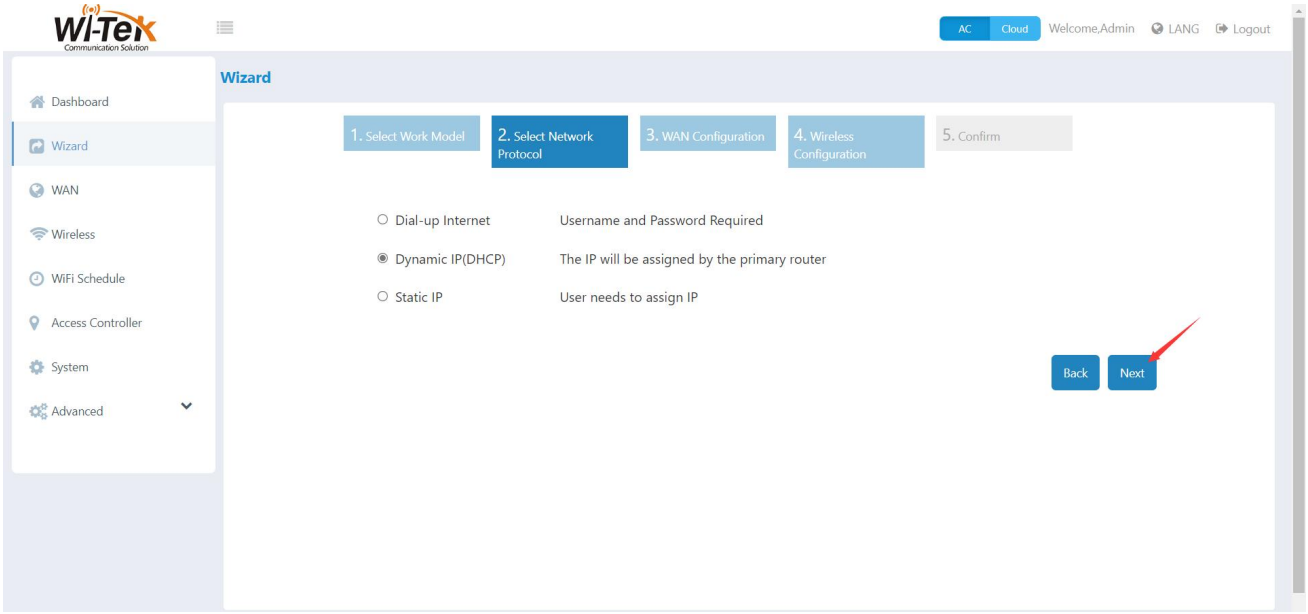
WAN port for wireless connection, LAN port for wired connection, WAN port support PPPoE, fixed IP, automatic access.

Example AP default working mode is Fit AP Mode and changed to WISP Mode working mode.

Step 1 Select '**WISP Mode**' working mode.



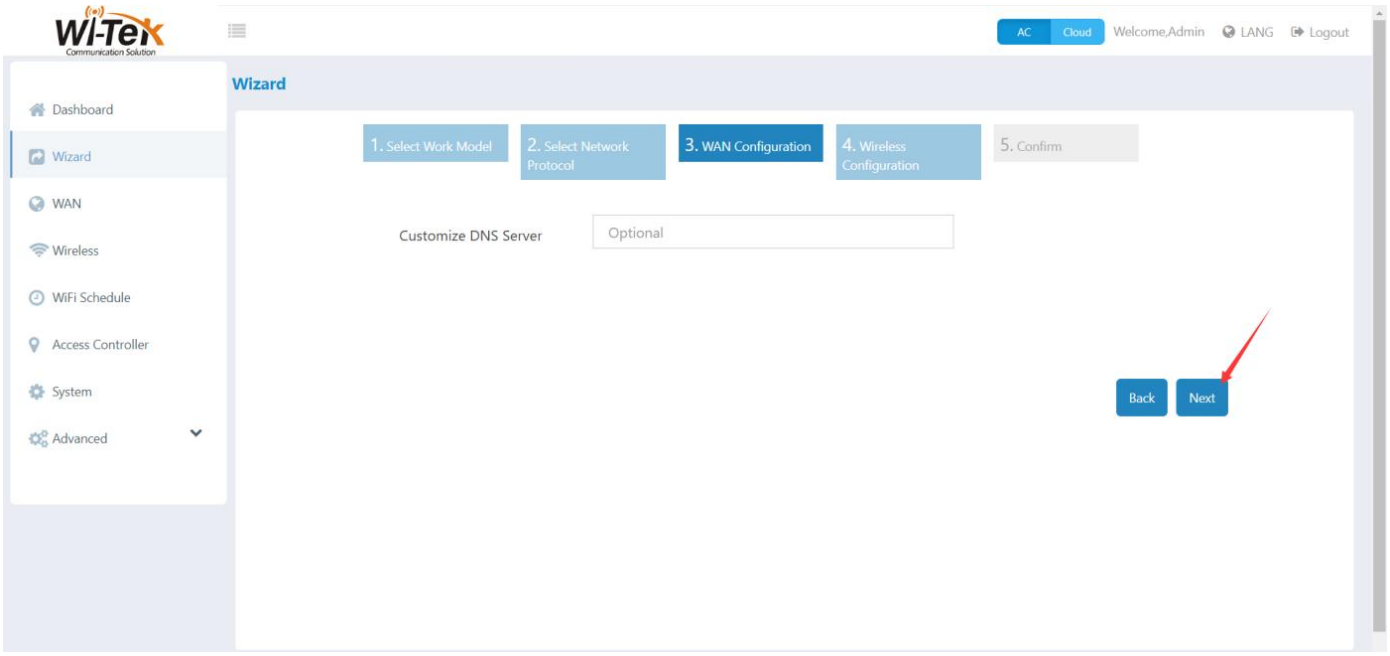
Step 2 Select the type of connection network you want to configure, click the **Next** button to enter step 3.



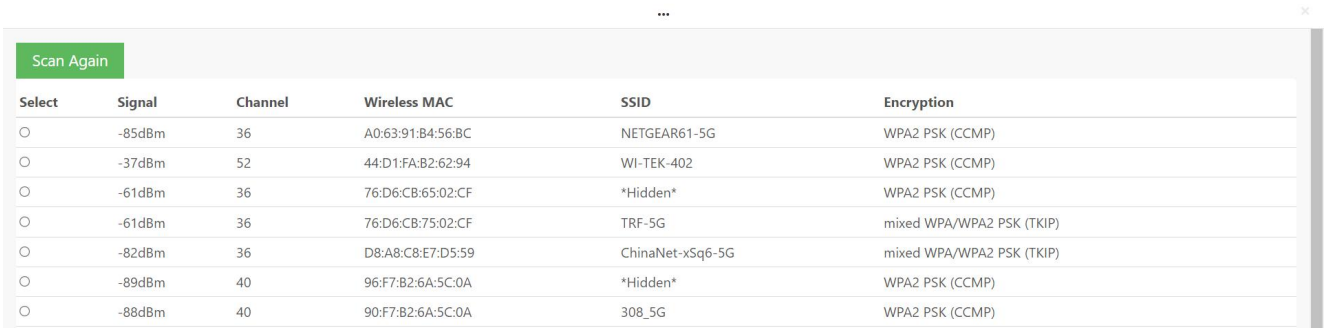
Step 3 If you choose the Dynamic IP method , Customize DNS Server is optional.

If you choose static IP mode, the configuration Parameters are as follows. IP Address and Netmask are required, and others are optional.

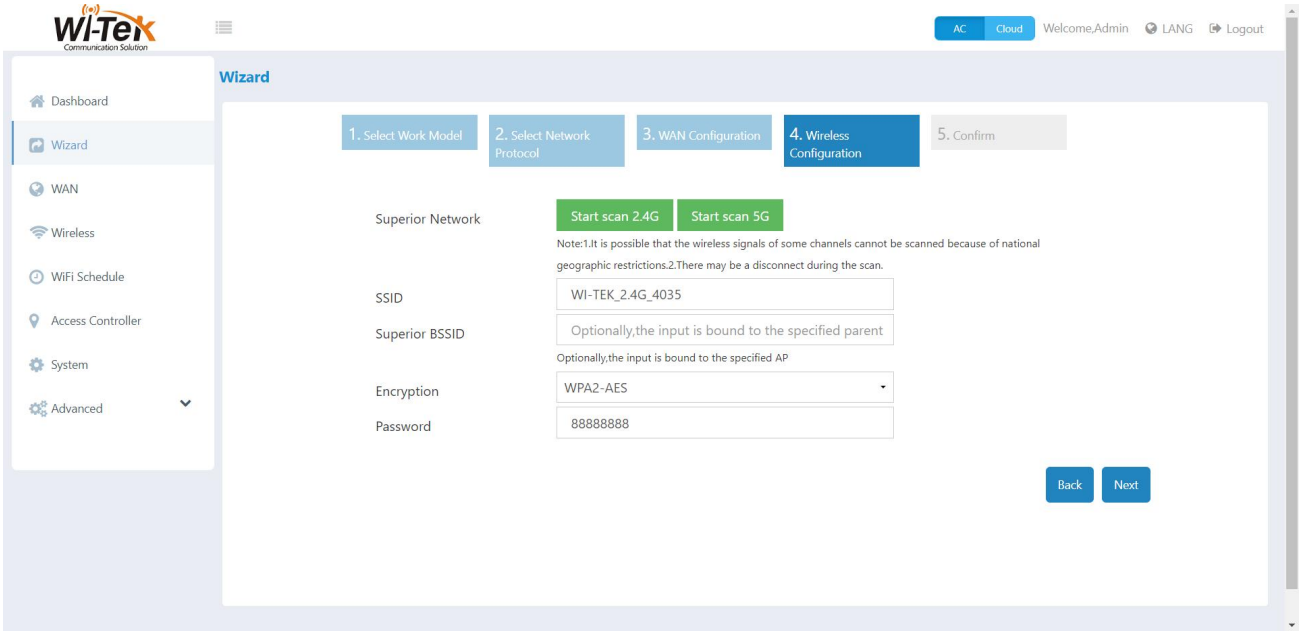
If you choose Dial-up Internet, you need to enter the account password provided by the op erator.



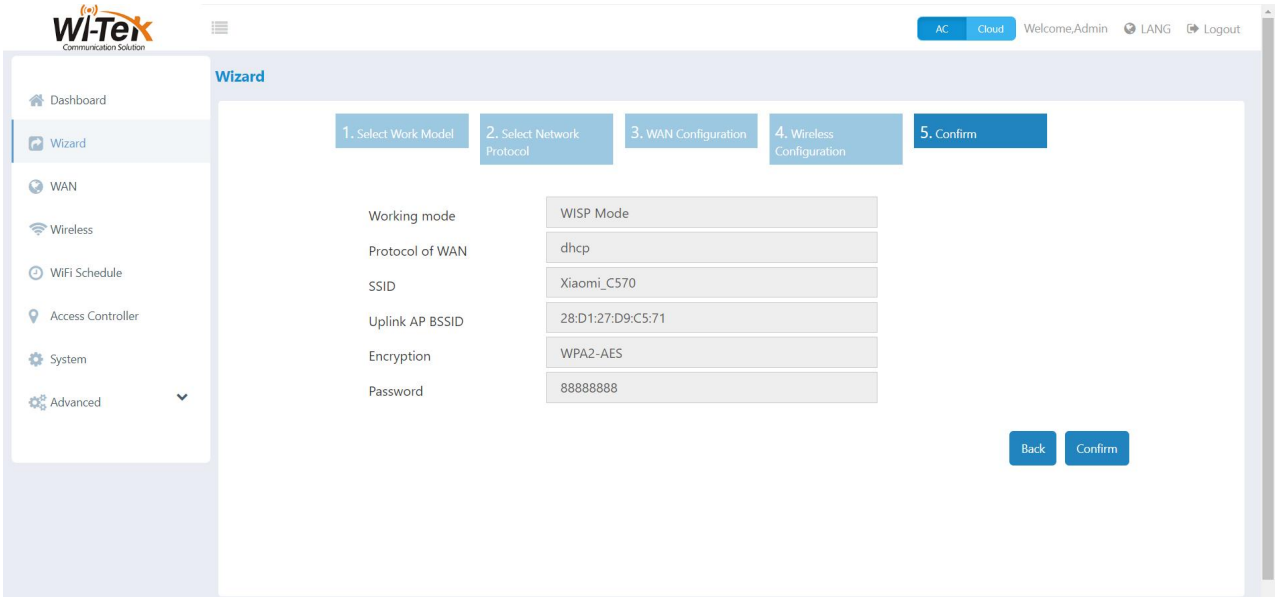
Step 4 Click the **Start scan 2.4G** or **Start scan 5G** button to search for the upper level wir eless network, and select the upper-level network to connect. If not found Corresponding re sult WiFi can click **Scan Again** to refresh again to query the superior wireless network list.



Step 5 Set the Wi-Fi name, choose a security encryption mode, and enter a password.



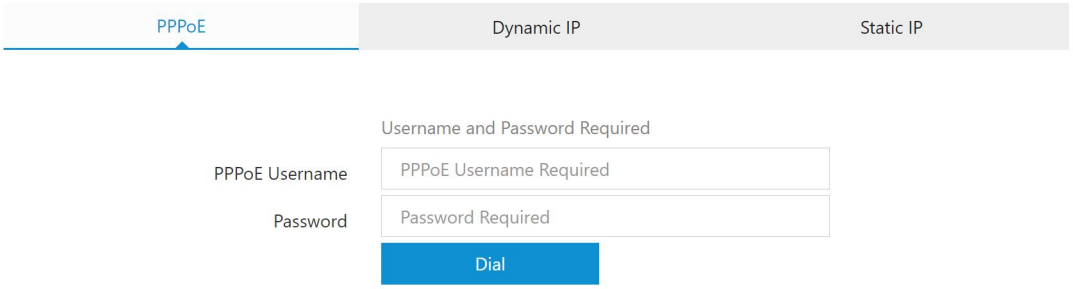
Step 6 Finally, confirm the configuration information, and click the **Confirm** button after confirming that it is correct. If the configuration information is incorrect, click **Back** to return to the previous step to reconfigure.

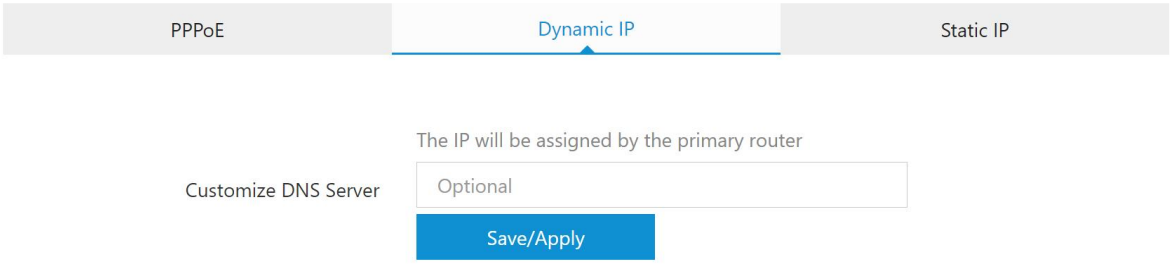


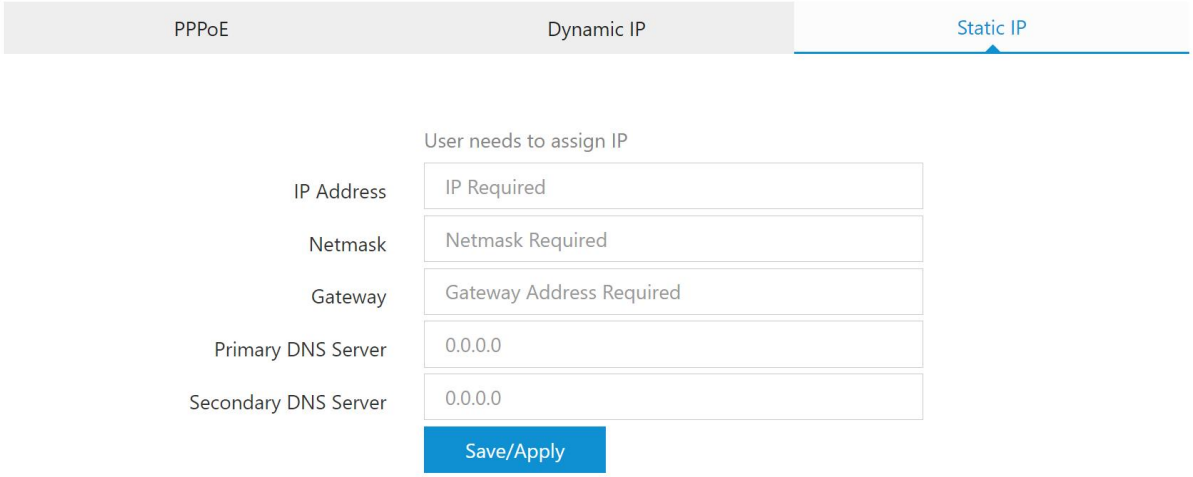
--END

5. WAN

How to set up the AP to access the Internet (there are three ways to access the Internet) Enter the configuration page by clicking 'WAN' in the primary navigation bar.





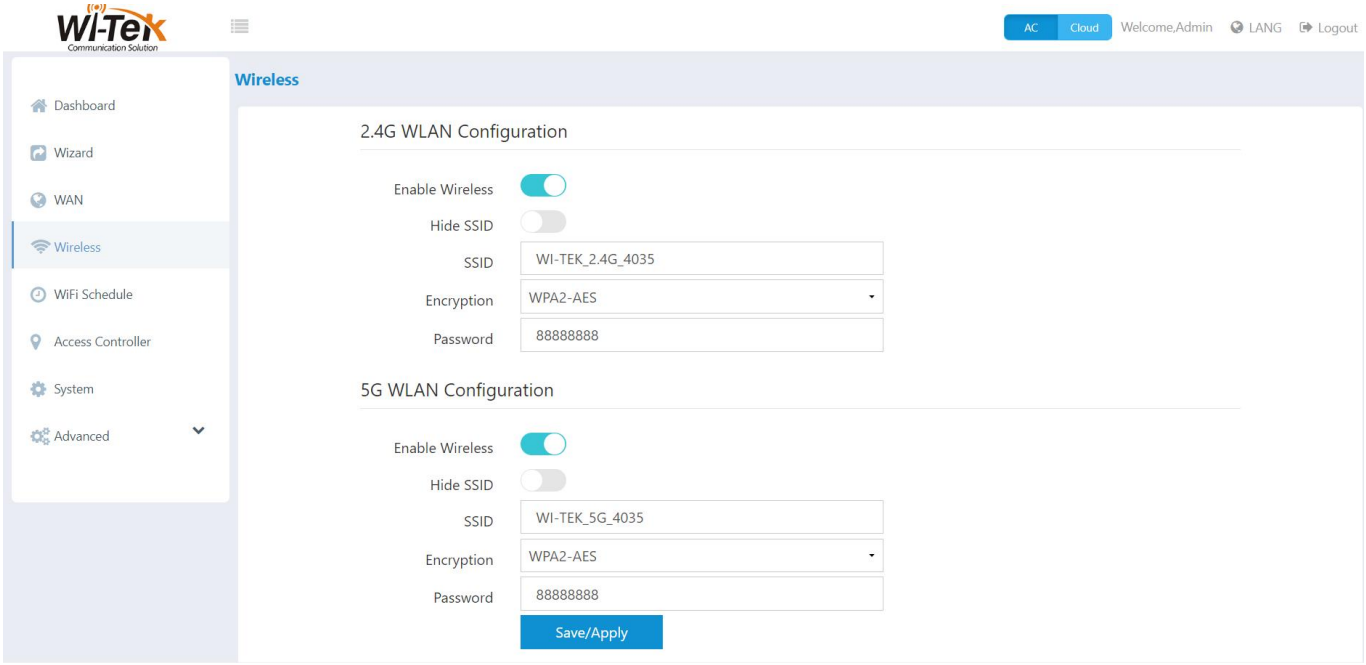


Parameter	Describe
PPPoE	Enter the broadband account and password obtained from the ISP.
Dynamic IP(DHCP)	Connecting the AP to the router (with DHCP server) will automatically obtain the IP address, subnet mask, gateway, and other information.
Static IP	Enter the correct information such as static IP, subnet mask, gateway, DNS, etc. obtained from the upstream network.

6. Wireless

Make wireless settings for the AP.

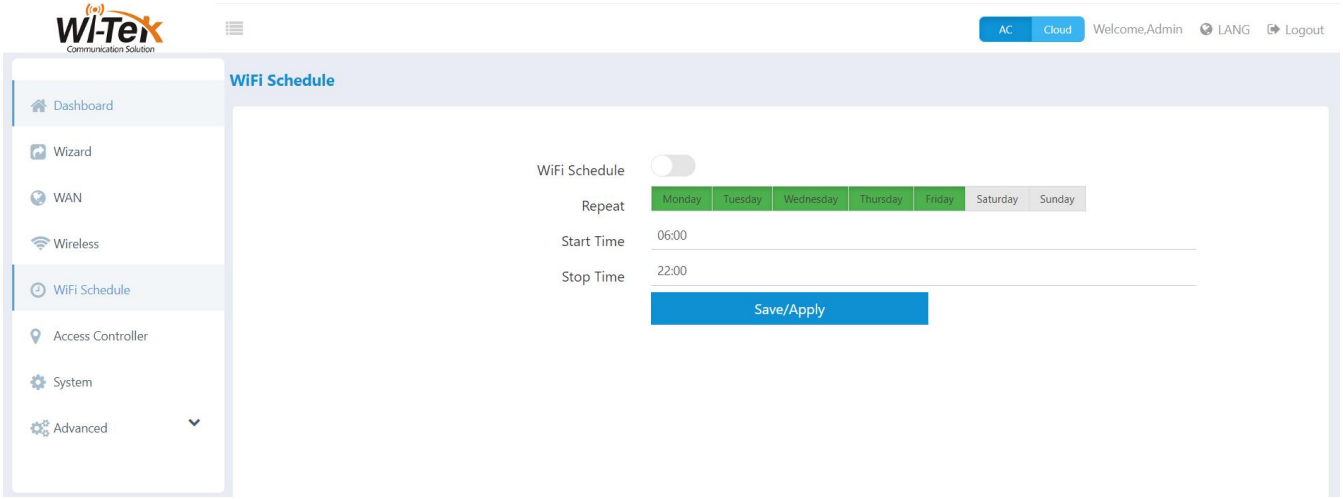
Click "Wireless" in the first-level navigation bar to enter the page to configure AP wireless P arameters .



Parameter	Describe
Enable Wireless	Check this option to disable the wireless. If checked, the wireless radio will disable.
Hide SSID	Check this option to hide the SSID from clients. If checked, the SSID will not appear in the site survey.
SSID	Specify a name for the wireless network.
Encryption	Select the Encryption mode of the wireless network. There are five options: WPA-TKIP, WPA2-AES, WPA1/WPA2-Mixed, WPA-Enterprise and WPA2-Enterprise.The latest WPA2-AES mode is recommended. None: Clients can access the wireless network without authentication.
Password	Specify password for SSID.

7. Wi-Fi Schedule

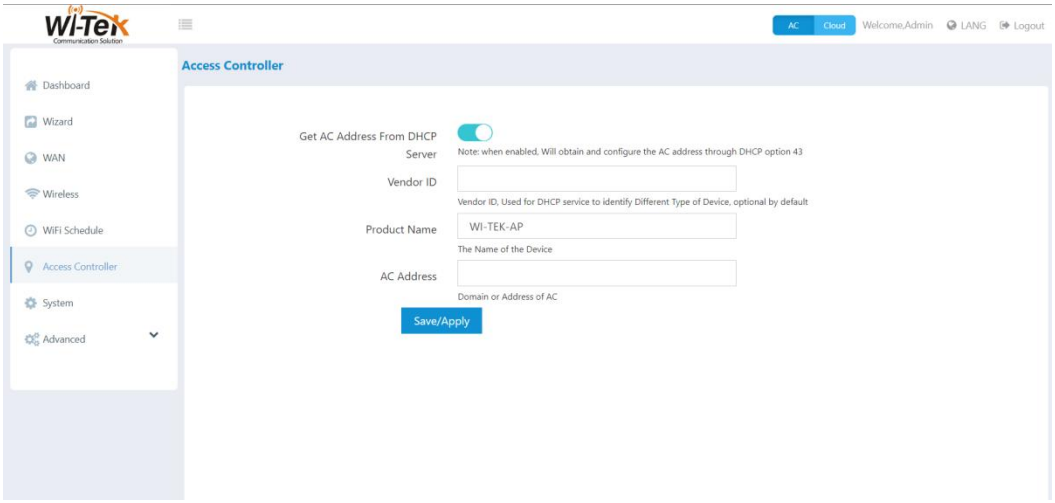
With the Wi-Fi Scheduler feature, the wireless network can automatically turn on or off at th e time you set.



Parameter	Describe
WiFi Schedule	Enable or disable Wi-Fi schedule.
Repeat	Specify rule Repeat.
Start Time	Specify rule start time.
Stop Time	Specify rule stop time.

8. Access Controller

Perform centralized parameter management and configuration on the AC bound to the AP. By clicking the first-level navigation bar 'Access Controller' to enter the page to configure.

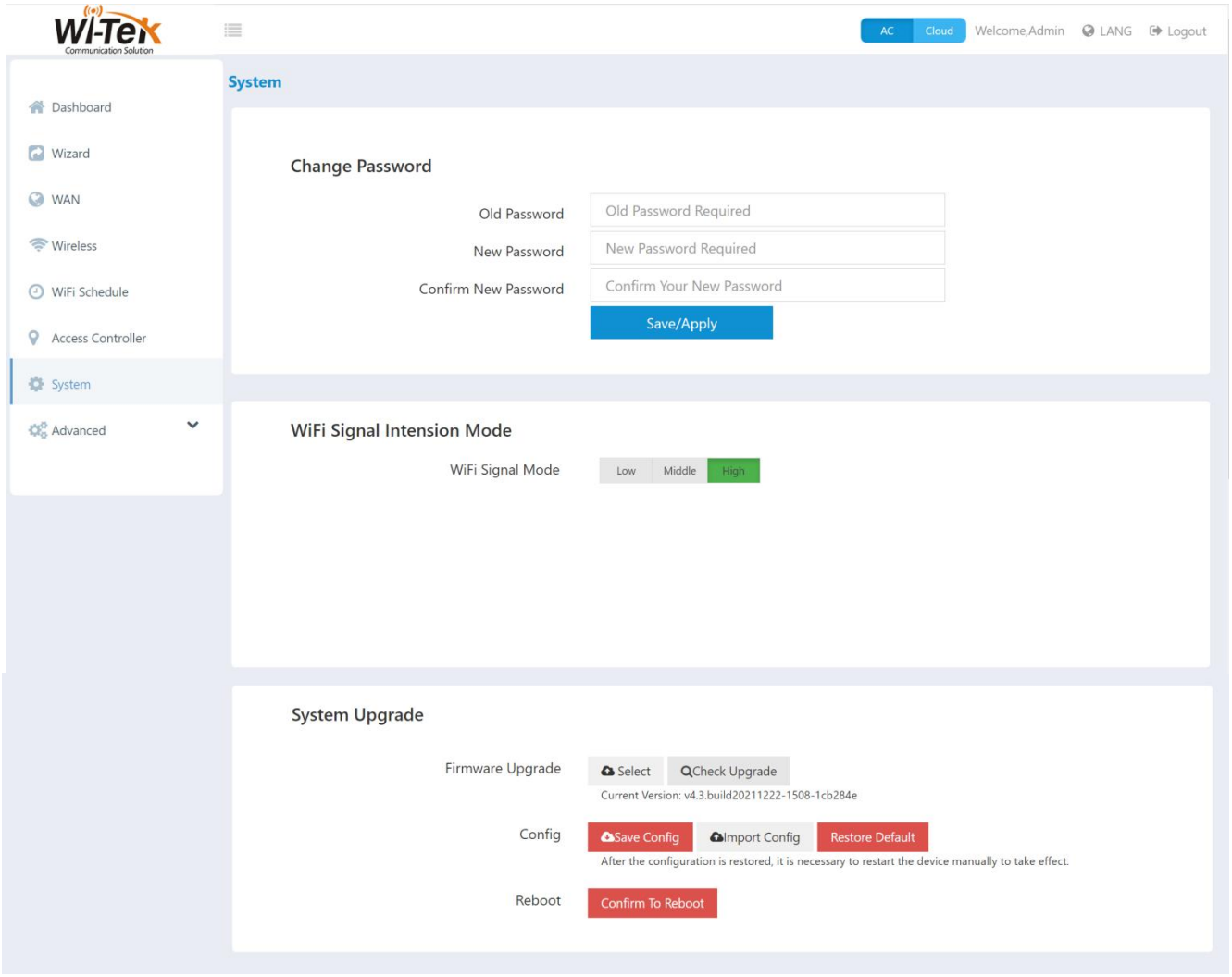


Parameter	Describe
Get AC Address Form DHCP Server	Enable or disable the function of automatically obtaining AC address.
Vendor ID	Enter the unique ID generated by the cloud1.0 account.
Product Name	Enter the host name of the device.
AC Address	Enter the IP address of AC. Note: By default, there is no need to fill in the AC address manually.

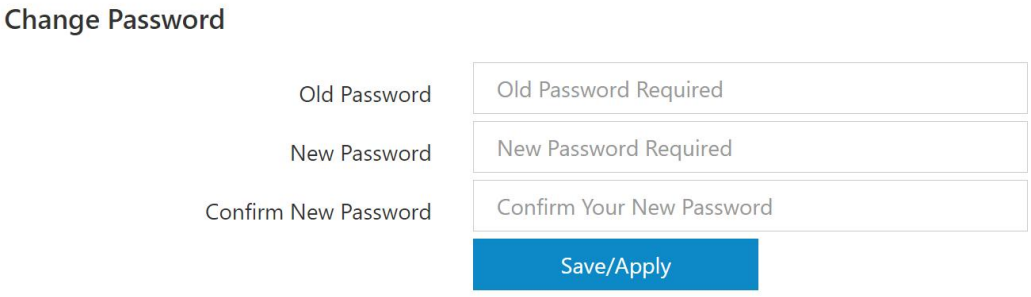
9. System

Manage and configure system parameters for APs.

Enter the page configuration by clicking "System" in the first-level navigation bar.



9.1. Change Password



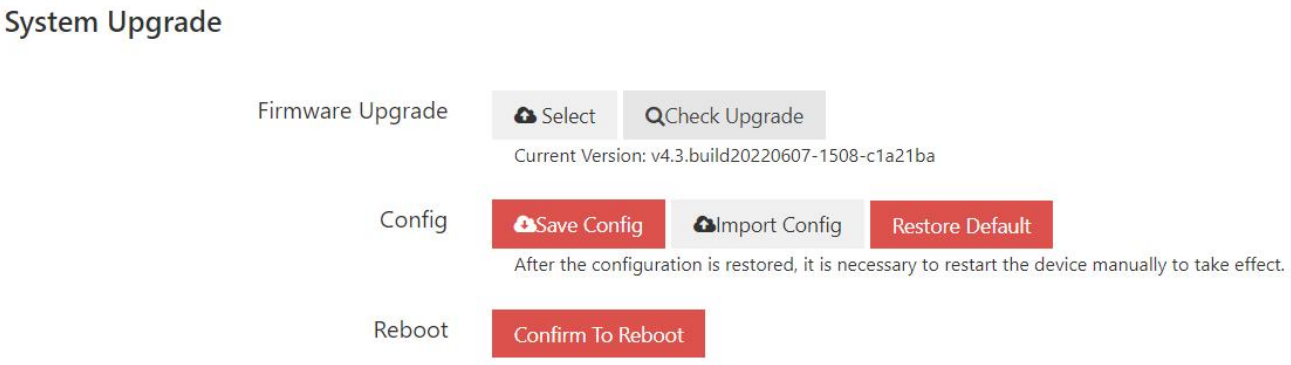
Parameter	Describe
Old Password	Specify to enter the old password.
New Password	Specify to enter a new password.
Confirm New Password	Specify and then confirm the new password.

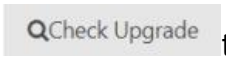
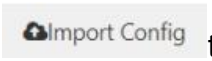
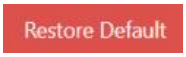
9.2. Wi-Fi Signal Intension Mode

On this page, you can quickly modify the wireless transmission power.

Parameter	Describe
Low	Represents 50% of the transmission power.
Middle	Represents 70% of the transmission power.
High	Represents 100% of the transmission power

9.3. System Upgrade

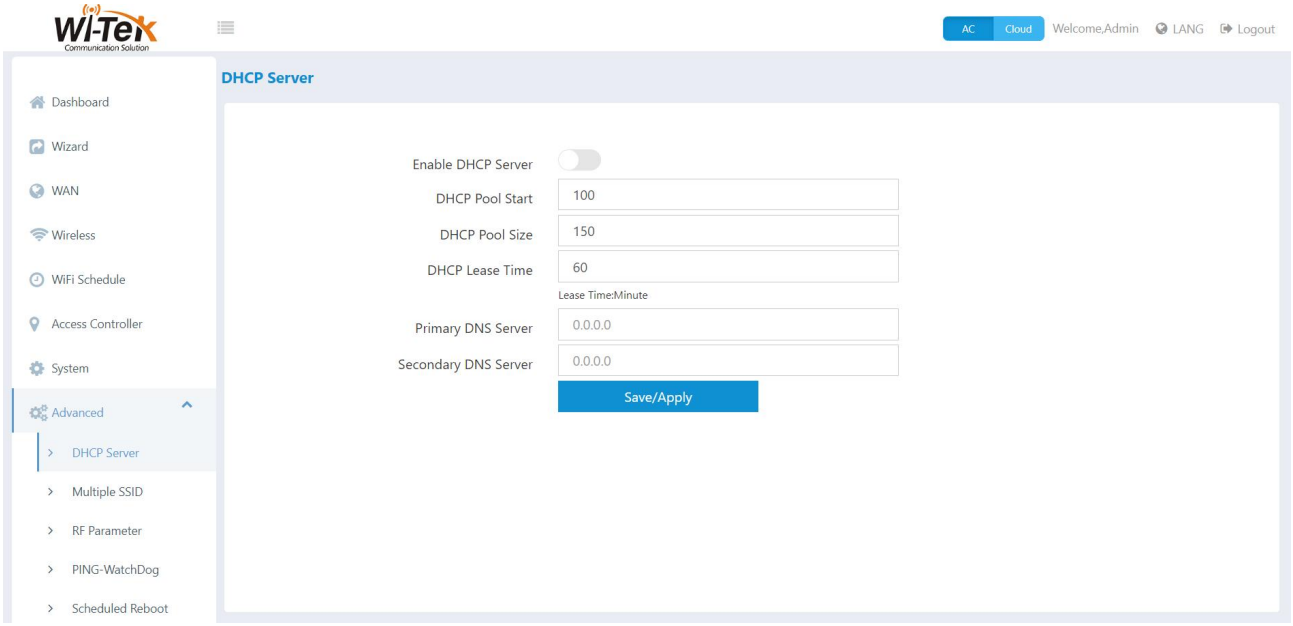


Parameter	Describe
Select	Click  to upload the firmware upgrade version. * During the restoring process, do not power off or reset the router.
Check Upgrade	Click  to check for updates online.
Save Config	Click  to save a copy of the current settings in your local computer.
Import Config	Click  to locate the backup configuration file stored in your computer.
Restore Default	Click  to reset all settings to the default values.
Reboot	Click  to reboot the device.

10. Advanced

10.1. DHCP Server

By default, DHCP server is disabled and acts as DHCP server in wireless router and wisp mode. Enable it can dynamically assign IP parameters to client devices from the IP address pool.

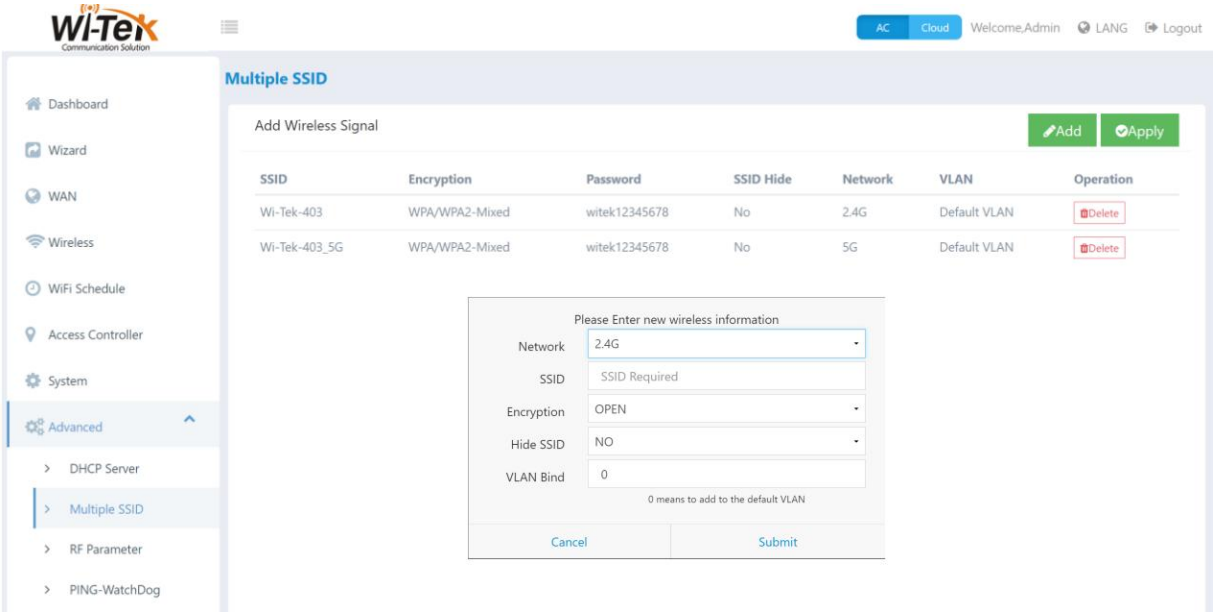


Parameter	Describe
Enable DHCP Sever	Enable or disable the DHCP server.It is disabled by default.
DHCP Pool Start	Specify an IP address for the DHCP Server to start with when assigning IP addresses.
DHCP Pool Size	Specify the range of IP addresses assigned by DHCP server.
DHCP Lease Time	Specify the lease time of the IP address assigned to the user.When time is up, the router will automatically assign the same IP address to the user.The default value is 60.
Primary DNS Server	It is recommended to use the IP address of the LAN port of the AP.
Secondary DNS Server	Input the IP address of another DNS server if your ISP provides DNS servers.

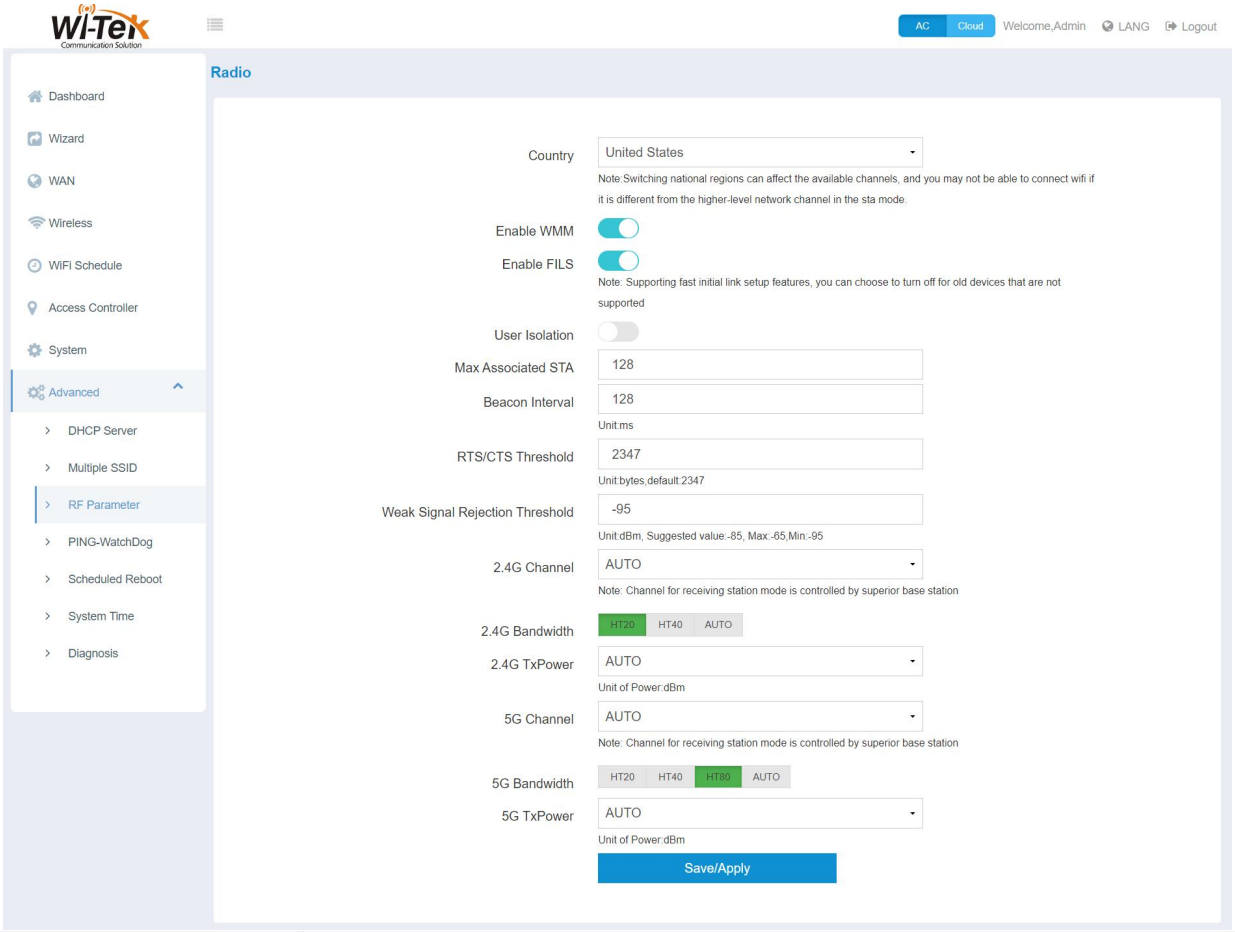
10.2. Multiple SSID

In this part, SSID can be added and deleted. Each RF can create up to 4 SSIDs.
Go to **Advanced** > **Multiple SSID** page.You can click **Add** button to add the SSID in the list.And you can click **Delete** button to delete the SSID in the list.

Note: Create up to 8 SSIDs per radio, Therefore, a single-band AP can create a maximum of 8 SSIDs, and a dual-band AP can create a maximum of 16 SSIDs.



10.3. RF Parameter

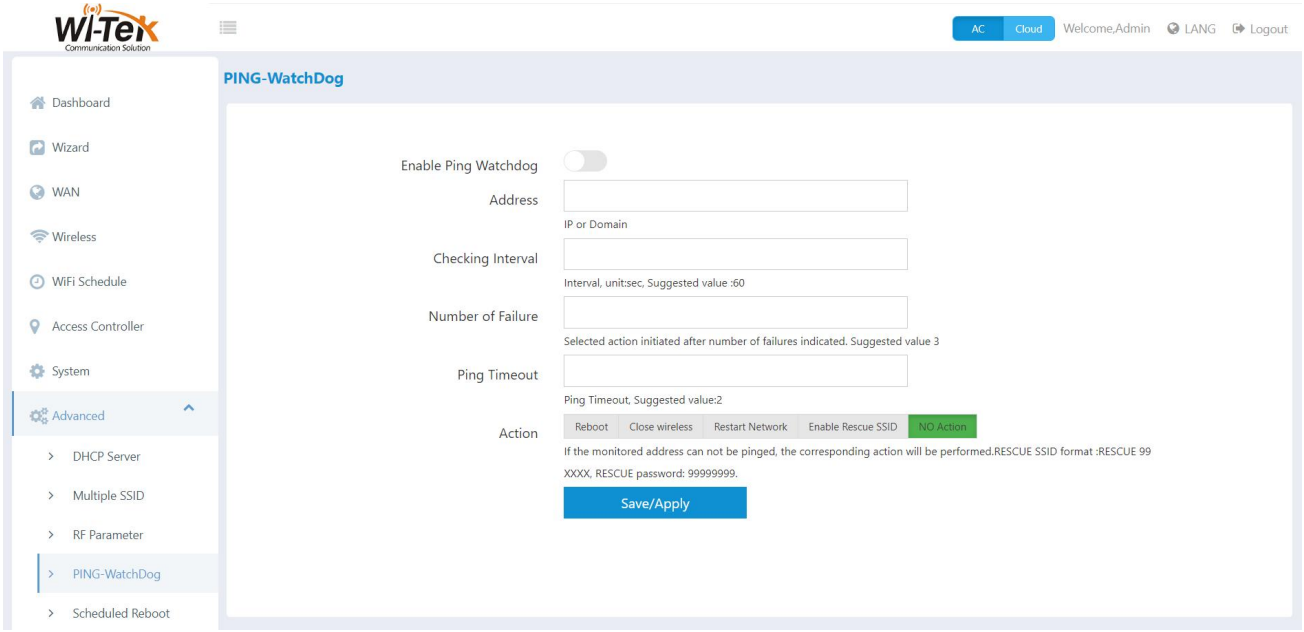


Parameter	Describe
Country	Select the corresponding country from the drop-down menu.
WMM	With WMM enabled, the AP uses the QoS function to guarantee the high priority of the transmission of audio and video packets.
FILS	Supporting fast initial link setup features, you can choose to turn off for old devices that are not supported.
User Isolation	With this function enabled, the device isolates all the connected clients within the same wireless network from each other.
Max Associated STA	Recommended value for the maximum number of wireless clients. Note: If it is set to 30, there are 31 actual wireless clients, then there will be 1 client that cannot connect to the SSID.
Beacon Interval	Beacons are transmitted periodically by the AP to announce the presence of a wireless network for the clients. Beacon Interval determines the time interval of the beacons sent by the AP. The default is 128ms.

RTS/CTS Threshold	RTS/CTS (Request to Send/Clear to Send) is used to improve the data transmission efficiency of the network with hidden nodes, especially when there are lots of large packets to be transmitted. When the size of a data packet is larger than the RTS Threshold, the RTS/CTS mechanism will be activated. With this mechanism activated, before sending a data packet, the client will send an RTS packet to the EAP to request data transmitting. And then the AP will send CTS packet to inform other clients to delay their data transmitting. In this way, packet collisions can be avoided. For a busy network with hidden nodes, a low threshold value will help reduce interference and packet collisions. But for a not-so-busy network, a too low threshold value will cause bandwidth wasting and reduce the data throughput. The recommended and default value is 2347 bytes.
Channel	Select the channel used by the AP. For example, 1/2412MHz means that the channel is 1 and the frequency is 2412MHz. By default, the channel is automatically selected, and we recommend that you keep the default setting.
Bandwidth	Select the channel width of the AP. For AP of different specifications, there is different bandwidth.Its available options include 20MHz, 40MHz, 80MHz, and Auto. Note: The greater the bandwidth, the greater the throughput, and the shorter the transmission distance, the more susceptible to interference.
Tx Power	Specify the transmit power value. If this value is set to be larger than the maximum transmitted power that is allowed, the regulated maximum transmit power will be applied. Note: In most cases, it is unnecessary to use the maximum transmit power.Specifying a larger transmit power than needed may cause interference to the neighborhood.

10.4. Ping Watchdog

Ping Watchdog allows the access point to continuously ping a specific remote host for conn ection status using a user-defined IP address (or an internet gateway). If it is unable to pin g the target IP address under the user-defined constraints, the device will.automatically rebo ot.



Parameter	Describe
Enable Ping Watchdog	Click the button to enable or disable.
Address	Specify the reachable IP address or domain name
Checking Interval	Specify the time interval between two continuous ping packets.
Number of Failure	Specify the number of failed Ping packets.
Ping Timeout	Specify the times of Ping timeout. The recommended value is 2.
Action	After the above conditions are met, the following actions are performed. * Reboot *Close wireless *Restart Network *Enable Rescue SSID

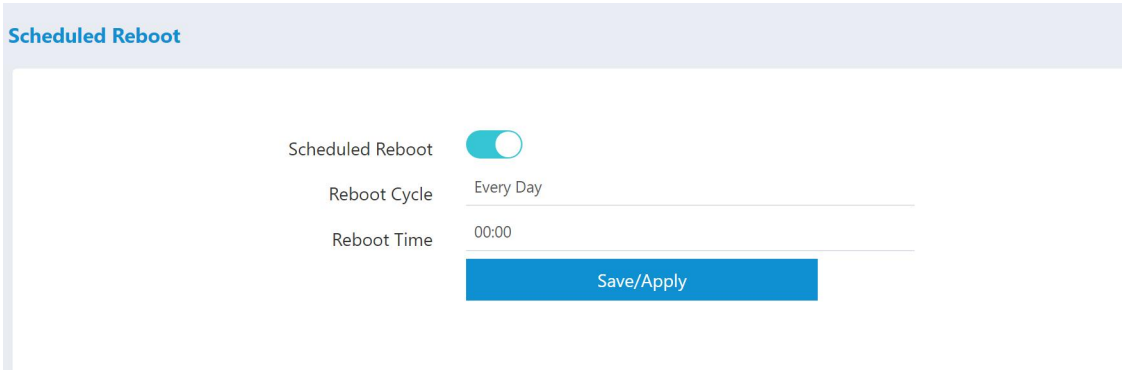
	*NO Action

10.5. Scheduled Reboot

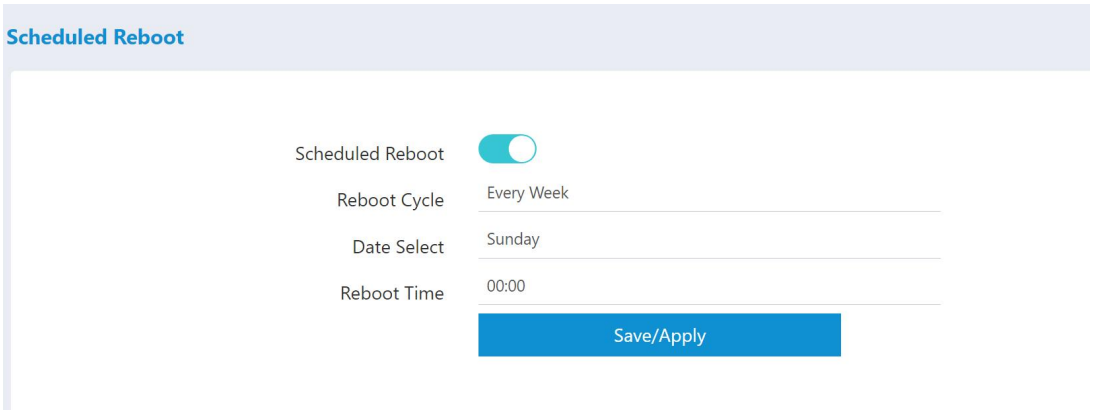
Configure the parameters of the scheduled restart plan for the AP.

Go to Advanced > Scheduled Reboot in the secondary navigation bar to enter the page to configure the parameters for the scheduled restart of the AP.

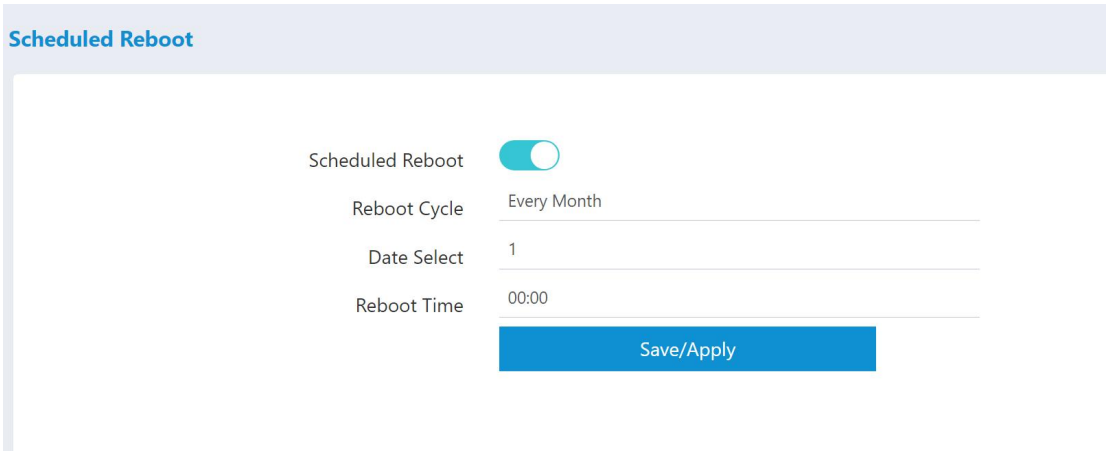
Every Day:



Every Week:



Every Month:

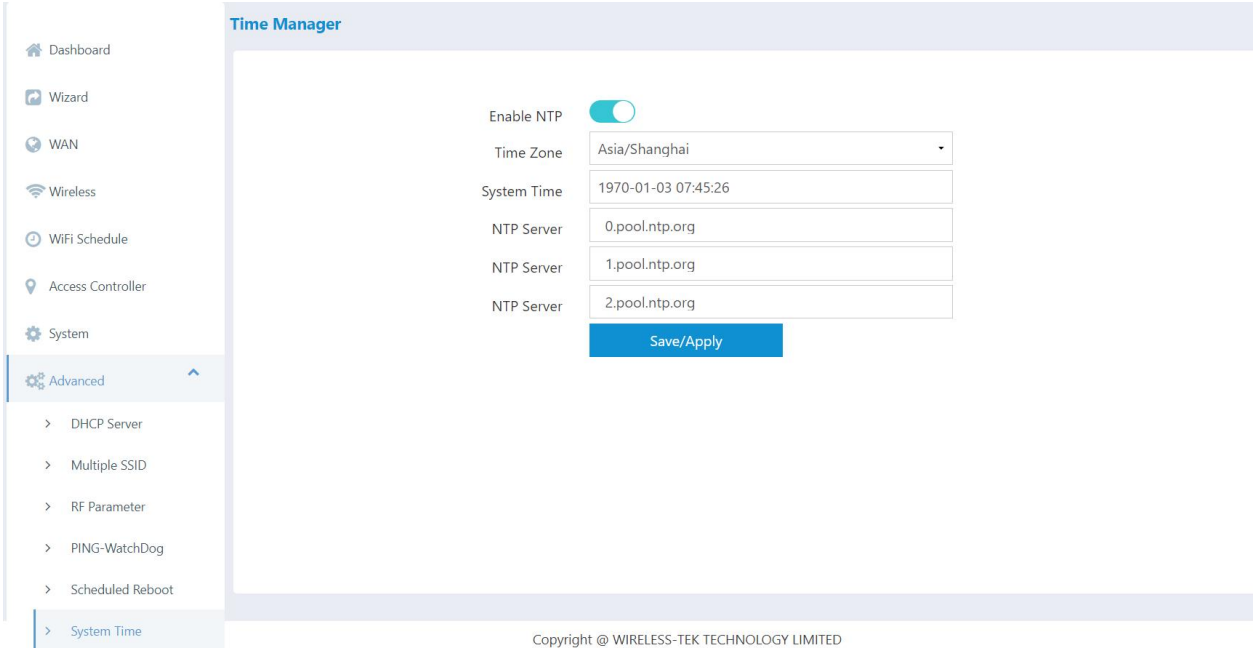


Parameter	Describe
Scheduled Reboot	Click the button to enable or disable.
Reboot Cycle	Specify the reachable IP address or domain name *Every Day/ Every Week/Every Month
Date Select	Specify the date of scheduled reboot.
Reboot Time	Specify the time point for scheduled reboot.

10.6. Time Manager

This page allows you to set the time manually or to configure automatic time synchronizatio n. The AP can automatically update the time from an NTP server via the Internet.

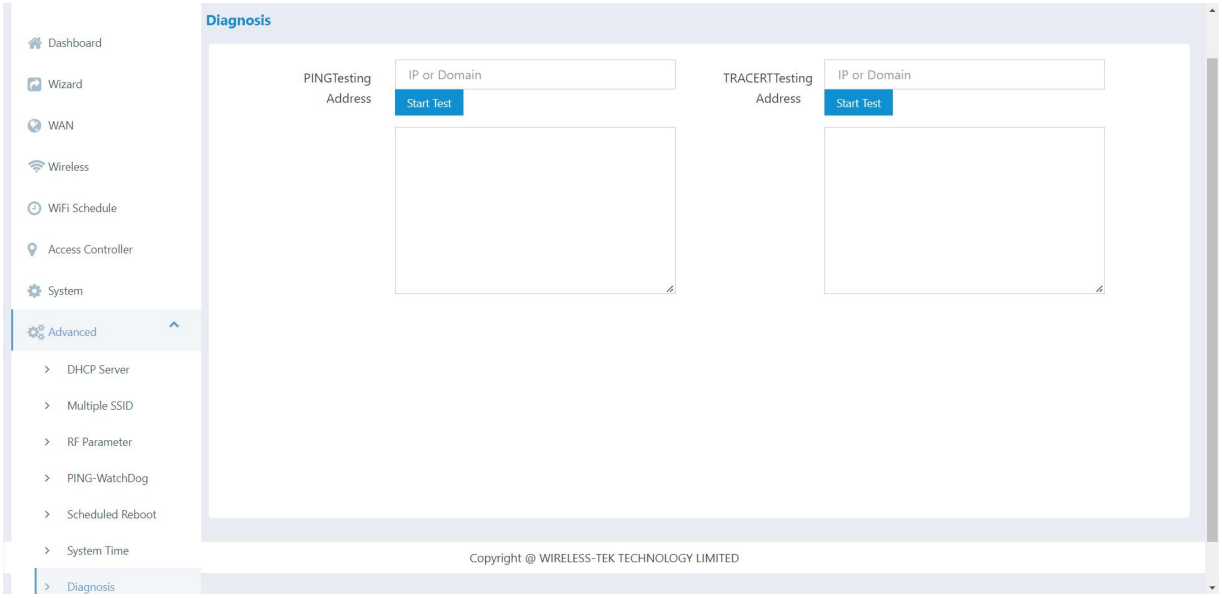
Go to Advanced>System Time page, to configure the system time parameters of the AP.



Parameter	Describe
Enable NTP	Enable or disable NTP function.
Time Zone	Select your local time zone from this pull down list.
System Time	Specify the time interval between two continuous ping packets.
NTP Server	Specify the number of failed Ping packets.

10.7. Diagnosis

Go to Advanced>Diagnosis page, and then you can transact Ping or Traceroute function to check connectivity of your network in the following page.



Parameter	Describe
Ping Testing Address	Specify the IP or domain name of the reachable network. * This diagnostic tool troubleshoots connectivity, reachability, and name resolution to a given host or gateway.
TRACERT Testing Address	Specify the IP or domain name of the reachable network. * This diagnostic tool tests the performance of a connection.