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GP-AG Client Series

Wireless Connection Manual

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GPSENKE NETWORK ICT

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I .Overview

When the GP-AG Wireless Client series is used as a wireless receiver, it can operate in either **“Bridge Mode”** or **“Client Mode”**. (The GP-AG1000 defaults to Client Mode initially.) Both modes support roaming functionality, but they differ as follows:

Bridge Mode:

The Bridge mode is simple to configure and offers high exchange efficiency. It can extend the wireless signal within a small range after bridging.

Client Mode:

The Client Mode is slightly more complex to configure but provides better compatibility with various APs and greater flexibility.

II .Wireless Bridge Mode

2.1 Login

Login method: WEB configuration (Note: the computer IP must be in the same subnet as the device IP).

- IP: 172.16.10.10
- Username: gpthink
- Password: gpthink@123

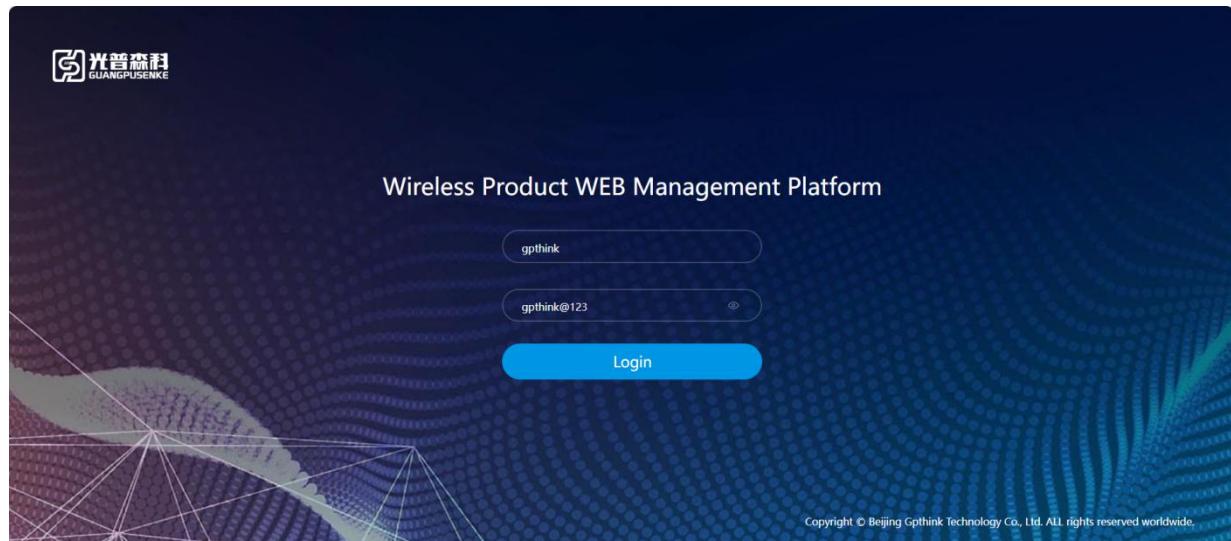


Fig1: Login Web Page

2.2 Change the Mode

Since the default mode is “Client Mode”, follow these steps to change it to Bridge Mode:

- Navigate to “Wireless Configuration”.
- Select “Bridge Mode”.
- Save the selection.

The device will automatically reboot to complete the mode switch. (Need refresh the web interface and log in again)

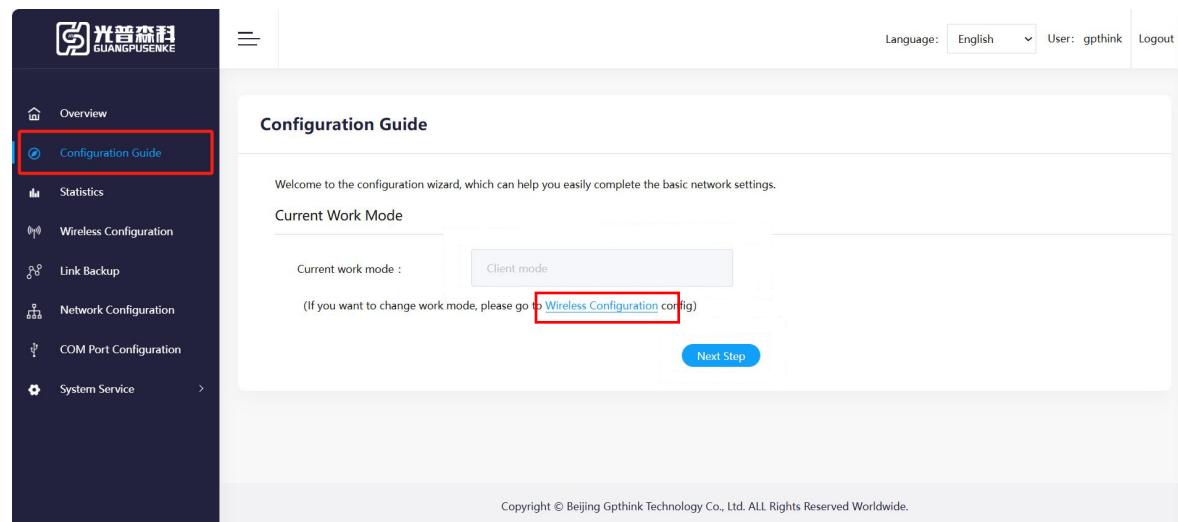


Fig2: Mode Change

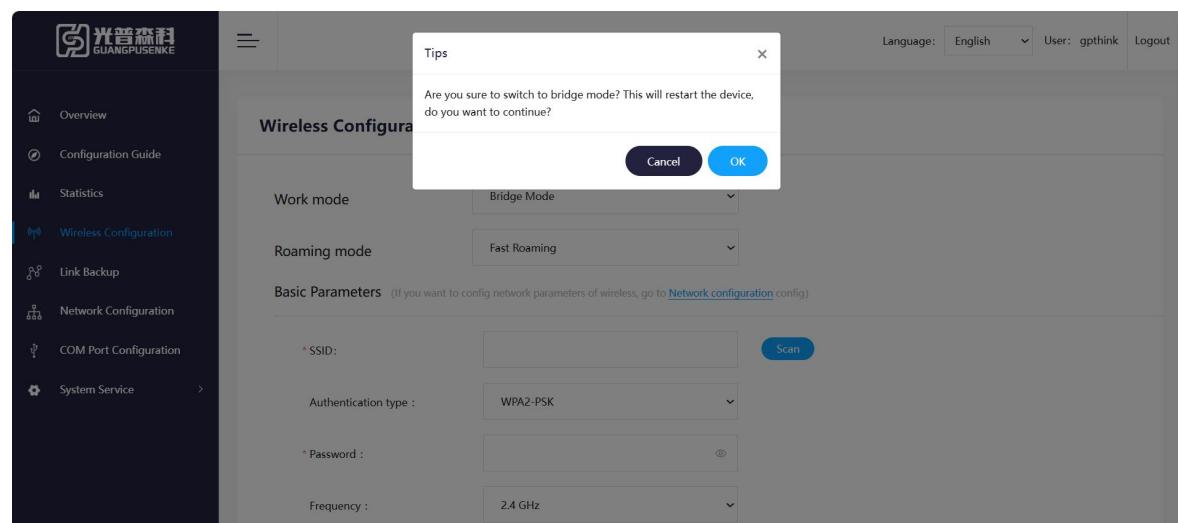


Fig3: Setup Bridge Mode

2.3 IP Address Deploy

After the device successfully restarts, log in again and follow these steps to configure the device IP according to your plan:

- Go to “Network Configuration”.
- Select “Static Address”.
- Save the changes.

(Configure the device IP according to the plan.)

Note: If changed the IP address, please re-login with the new IP address.

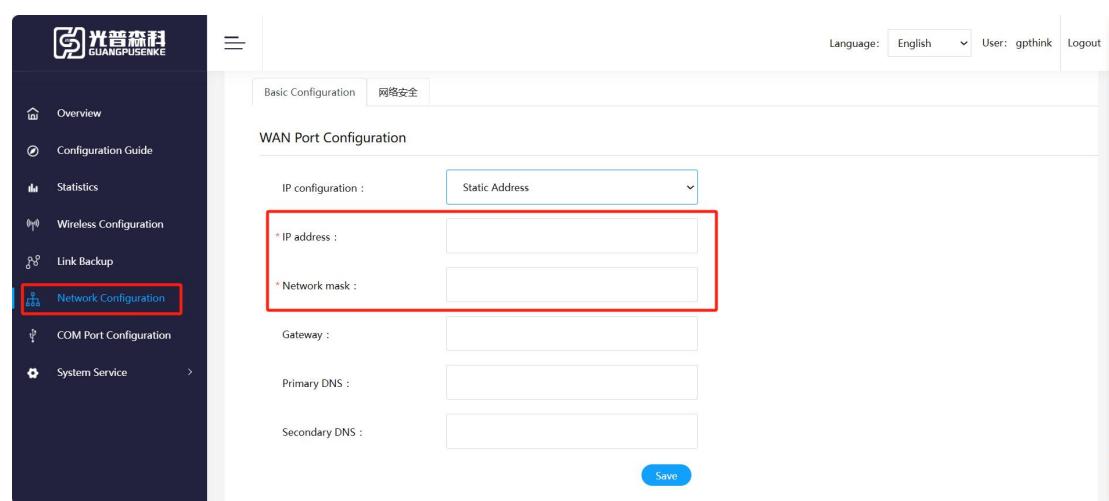


Fig4: IP Address Deploy

2.4 Wireless Deploy

On the Wireless Configuration page, follow steps to set up wireless connection:

- ① Go to Wireless Configuration.
- ② Select **Fast Roaming** (Single Link Mode).
- ③ **Scan** for Wireless Signals.
- ④ Access the WIFI Scan Interface and choose to scan either **2.4G or 5.8G**.
- ⑤ Select the desired WIFI network and confirm.
- ⑥ Enter the **WIFI password**.
- ⑦ Turn on the **Enable Automatic Roaming** Switch and select the channels to scan based on the local channel allocation.
- ⑧ Confirm and save the settings.

Wireless Configuration

Work mode: Bridge Mode

Roaming mode: Fast Roaming

Client Mode: AP Mode

* SSID:

Authentication type: WPA2-PSK

* Password:

Wireless Configuration

Wireless Parameters

Scanning result: Scan 2.4G Scan 5G

No.	SSID	Encryption Mode	Channel	Signal Strength	Connect
1	gpthink5.8	WPA2 PSK	44	-68	<input checked="" type="checkbox"/>
2	DIRECT-1F-HP	WPA2 PSK	44	-76	<input type="checkbox"/>
3	dl2024	WPA/WPA2 PSK	149	-85	<input type="checkbox"/>
4	WIFI5.8	WPA2 PSK	36	-82	<input type="checkbox"/>
5	undefined	WPA2 PSK	36	-81	<input type="checkbox"/>

* Password: GPSENKE123456

Frequency: 2.4 GHz

Tx power: Auto

Multicast broadcast to unicast: Disable

Fast Roaming Parameters

Enable auto roaming:

2G scanning channels: Enable Disable

(In order to ensure roaming sensitivity, once the device scans the qualified channel, it will immediately trigger the roaming action. Therefore, please check the channel with high hit rate first according to the situation of on-site wireless network.)

Channel scan cycle (ms): 30

Keep-alive interval (ms): 200

Maximum times of keep-alive: 5

Save

Fig5: Wireless Deploy 8 Steps

2.5 Bridge Wireless Status

After completed the configuration, check the signal strength and connection rate on the “Overviews”. If they are normal, the configuration is successful.

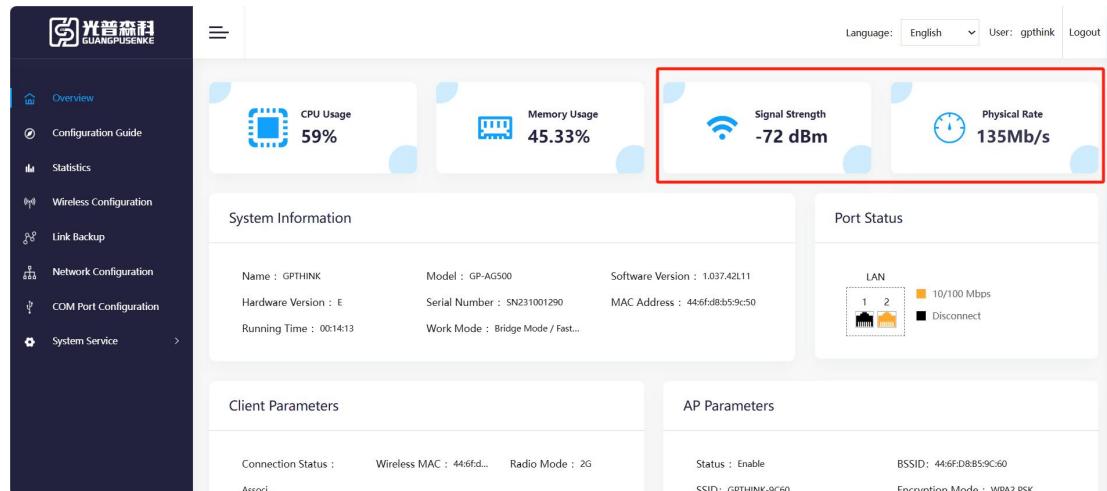


Fig6: Check Network Status

III.Client Mode

3.1 Login

Login method: WEB configuration (Note: the computer IP must be in the same subnet as the device IP).

- IP: 172.16.10.10
- Username: gpthink
- Password: gpthink@123

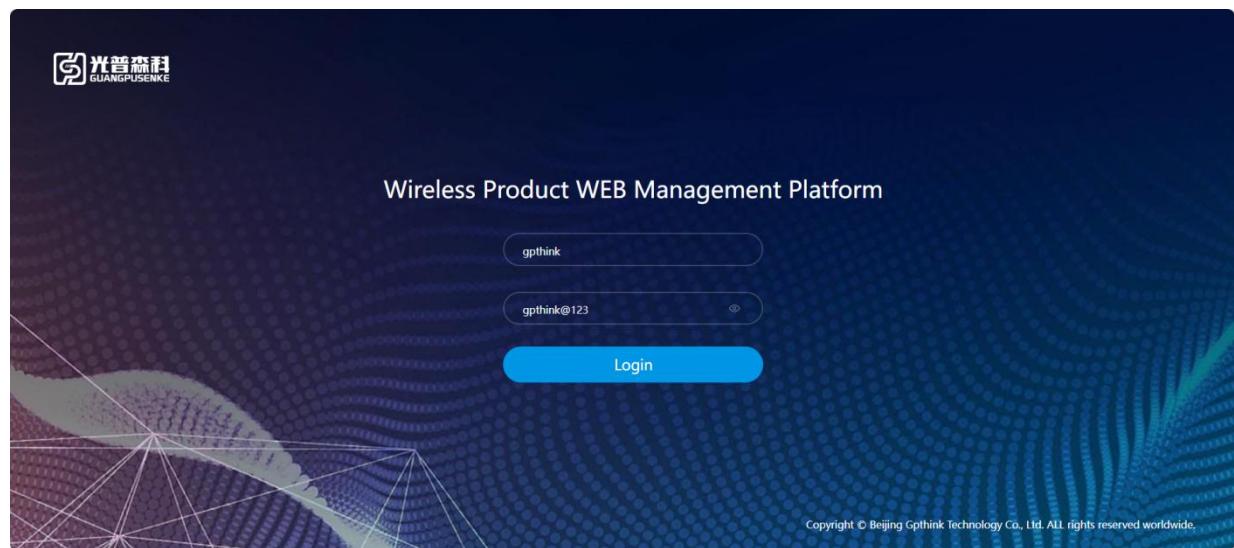


Fig7: Login Web Page

3.2 Network Deploy

After log in the web, go to “**Network Configuration**” page, change the IP configuration to “**Static Address**”. Full in the IP address for wireless mode deploy.

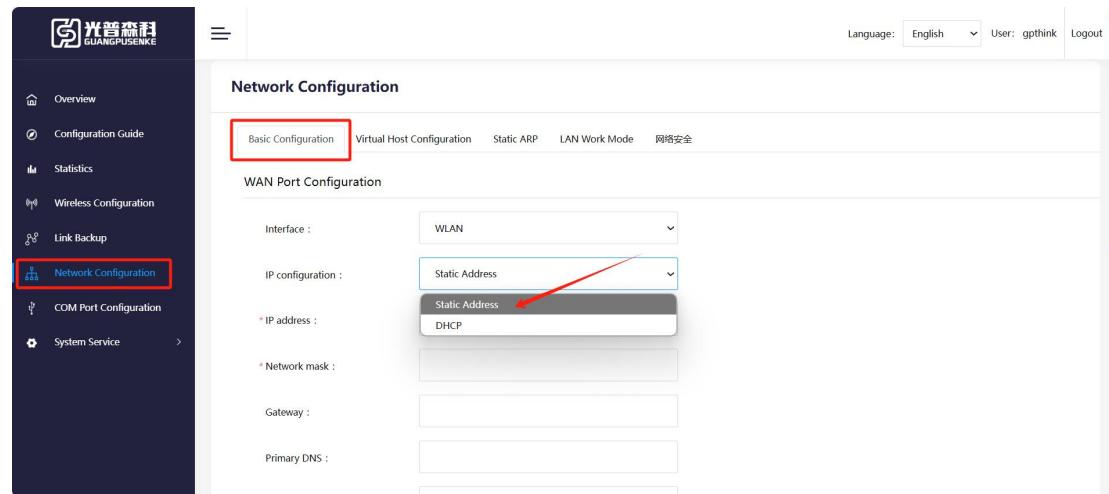
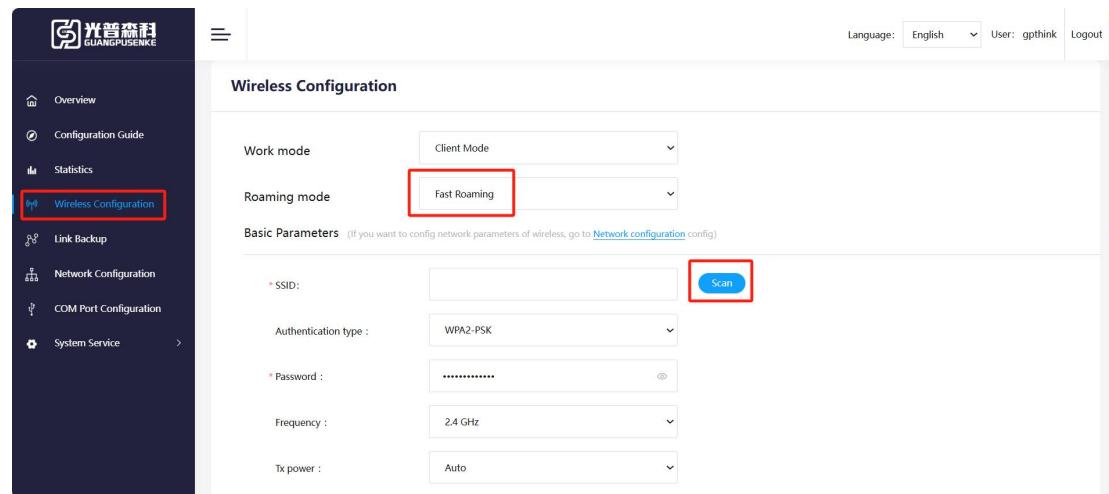


Fig8: Wireless Mode Network Configuration

3.3 Wireless Configuration

On the Wireless Configuration page, follow steps to set up wireless connection:

- ① Go to Wireless Configuration.
- ② Select **Fast Roaming** (Single Link Mode).
- ③ Scan for Wireless Signals.
- ④ Access the WIFI Scan Interface and choose to scan either **2.4G or 5.8G**.
- ⑤ Select the desired WIFI network and confirm.
- ⑥ Enter the **WIFI password**.
- ⑦ Turn on the **Enable Automatic Roaming** Switch and select the channels to scan based on the local channel allocation.
- ⑧ Confirm and save the settings.



The image shows two screenshots of the GPSENKE web interface for wireless configuration.

Top Screenshot: A list of wireless networks. The table columns are: ID, SSID, Authentication type, Channel, Signal strength, and Action. A red arrow points to the 'gpthink2.4' row, which is selected. Below the table are buttons for 'Prev Step' and 'OK' (which is highlighted with a red box).

ID	SSID	Authentication type	Channel	Signal strength	Action
4	6023	WPA/WPA2 PSK	6	-89	<input type="checkbox"/>
5	borui703	WPA/WPA2 PSK	11	-95	<input type="checkbox"/>
6	ChinaUnicom-LV/URP9	WPA/WPA2 PSK	11	-83	<input type="checkbox"/>
7	gpthink2.4	WPA2 PSK	11	-77	<input checked="" type="checkbox"/>
8	ChinaNet-5gMK	WPA/WPA2 PSK	8	-88	<input type="checkbox"/>
9	WiFi2.4	WPA2 PSK	1	-91	<input type="checkbox"/>
10	dl2021	WPA2 PSK	6	-91	<input type="checkbox"/>

Bottom Screenshot: A configuration form for the selected network 'gpthink2.4'. The fields are: SSID (gpthink2.4), Authentication type (WPA2-PSK), Password (GPSENKE123456), Frequency (2.4 GHz), Tx power (Auto), and Multicast broadcast to unicast (Disable). Below this is a 'Fast Roaming Parameters' section with a dropdown for 'Enable auto roaming' (set to 'Enable') and a '2G scanning channels' dropdown (set to 'Enable', highlighted with a red box). A red arrow points to this dropdown. At the bottom of the form is a note: '(In order to ensure roaming sensitivity, once the device scans the qualified channel, it will immediately trigger the roaming action. Therefore, please check the channel with high hit rate first according to the situation of on-site wireless network.)'

Fig9: Wireless Configuration(Wireless)

3.4 Wired Configuration(Wired Supplement)

If you need to configure the “proxy mode” for connect under same network segment: Change the LAN port working mode to Wired “**Proxy Mode**” Under Same Network.

The image shows a screenshot of the GPSENKE web interface for network configuration, specifically the 'LAN Work Mode' tab.

The 'Network Configuration' section has tabs for Basic Configuration, Virtual Host Configuration, Static ARP, LAN Work Mode (which is selected and highlighted with a red box), and 网络安全. Below these tabs are two dropdowns for 'LAN1 work mode' and 'LAN2 work mode', both set to 'Proxy' (which is highlighted with a red box). A red arrow points to the 'Proxy' option in the LAN1 dropdown. At the bottom of the configuration section is a 'Save' button.

Fig10: Client Mode: Proxy Mode setup

Note:

In **Proxy Mode**, the wired-side management IP for devices connected via the proxy port is fixed at **169.254.8.5** and cannot be changed. To access the device, the computer must add a new network segment in the **169.254.8.X/24** range, then log in using the device's **IP 169.254.8.5**.

In **NAT Mode**, the management IP for the NAT port is set to **172.16.10.10** by default and can be modified. However, the NAT port requires cross-subnet communication. In NAT mode, devices on the wireless side and AP side must be in the same subnet, while devices connected to the NAT port must set their gateway to the NAT port's IP.

Three Client Mode explanation:

NAT Mode	In NAT mode, the wireless-side IP is assigned as the WAN port IP. Both the wireless-side IP and AP-side clients are in the same subnet. On the wired side, AG's devices and the AG's wired-side IP reside within the same subnet, with the AG's wired-side IP acting as the gateway for wired-side devices. This is a Layer 3 communication mode. Configuration requirements include setting the AG's wireless-side IP, wired-side IP, and the gateway IP for the wired-side devices.
Proxy Mode	In Proxy mode, the AG's wired-side devices and the AP-side clients are in the same subnet. AP-side clients can manage the AG via the AG's wireless-side IP, while wired-side clients manage the AG through the fixed IP address 169.254.8.5. This operates in a Layer 2 communication mode. The only configuration needed in this mode is the AG's wireless-side IP.
Clone Mode	In Clone mode, the AG replicates the MAC address and IP address of the device connected to the Lan1 port. No IP configuration is required for the AG in this mode.

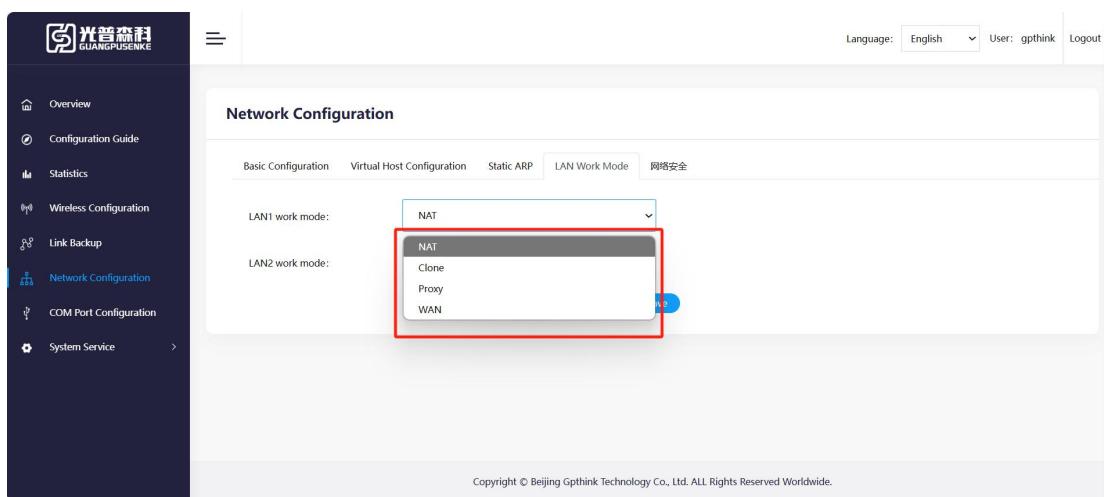


Fig11: Three Client Mode

3.5 Check Network Status

After completed the configuration, check the signal strength and connection rate on the “Overviews”. If they are normal, the configuration is successful.

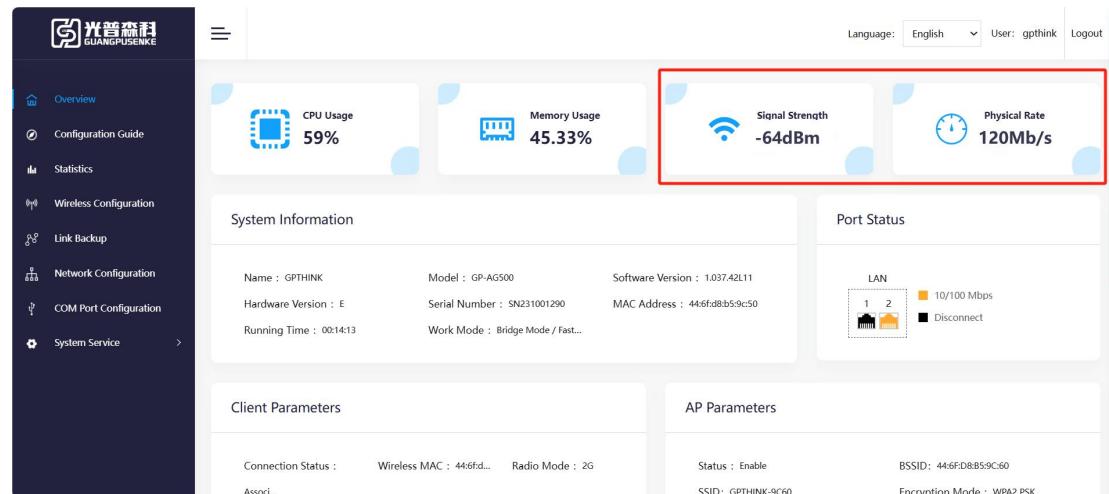


Fig12: Check Status