Vantron | Embedded in your success, Embedded in your better life
World-leading provider of embedded/IoT products and solutions

HAP101
Quick Start Guide

1. Quick Access to the Device

By default, the Ethernet port is configured as **LAN** and the 2.4 GHz Wi-Fi operates in **AP mode**.

On power-up, the device can be accessed through either Ethernet or Wi-Fi. Follow the steps below to access the device through web portal login.

1. Connect the host PC:

    - Via Ethernet

      Connect the host PC directly to the HAP101's Ethernet port using a standard Ethernet cable.
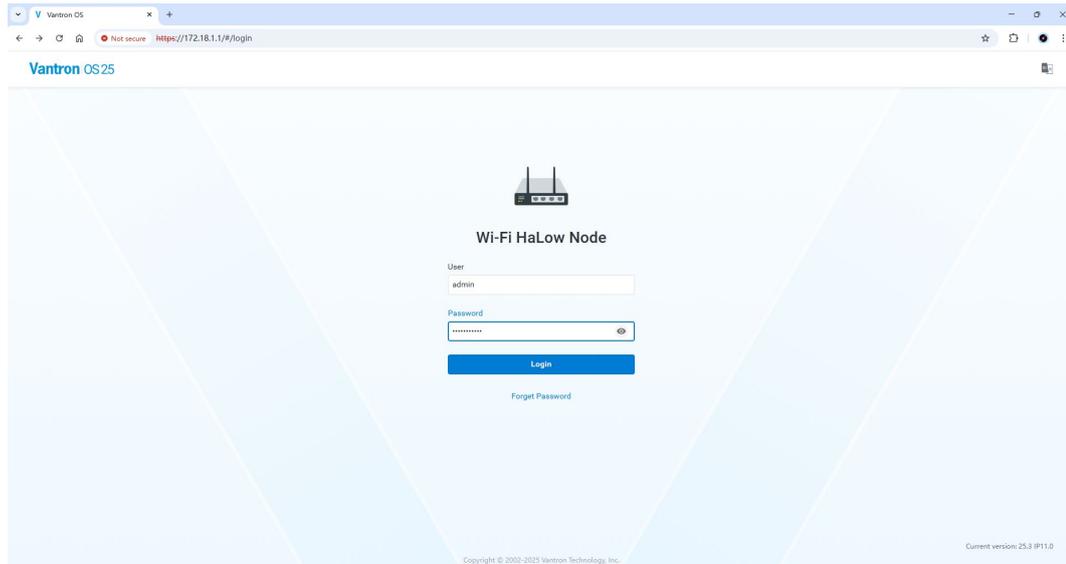
    - Via Wi-Fi

      Connect the host computer to the 2.4GHz Wi-Fi of HAP101 using the default SSID and password provided on the device label.

    ```
    HaLow MAC: XX:XX:XX:XX:XX:XX
    WLAN MAC: XX:XX:XX:XX:XX:XX:XX
    ETH MAC: XX:XX:XX:XX:XX:XX
    WLAN SSID: XXXXXX
    WLAN Password: XXXXXXXX
    Login IP: 172.18.XX.XX
    User name/Password: admin/XXXXXX
    ```

2. Enter the default login IP in the browser of the host PC: **172.18.1.1** for device login.

3. Log in to the management portal using the username and password on the device label.

    ```
    HaLow MAC: XX:XX:XX:XX:XX:XX
    WLAN MAC: XX:XX:XX:XX:XX:XX:XX
    ETH MAC: XX:XX:XX:XX:XX:XX
    WLAN SSID: XXXXXX
    WLAN Password: XXXXXXXX
    Login IP: 172.18.XX.XX
    User name/Password: admin/XXXXXX
    ```

Vantron | Embedded in your success, Embedded in your better life
World-leading provider of embedded/IoT products and solutions

HAP101
Quick Start Guide

4. Upon first login, the system will automatically launch a setup wizard that will guide you through configuring essential settings, including:

- 2.4 GHz Wi-Fi AP (SSID, encryption, and password)

- User password (you can click **Next** and choose "set up later" to change the password on the **System** page after login)

- Time zone

5. Modify the settings as needed and wait about 20 seconds for new configurations to take effect.
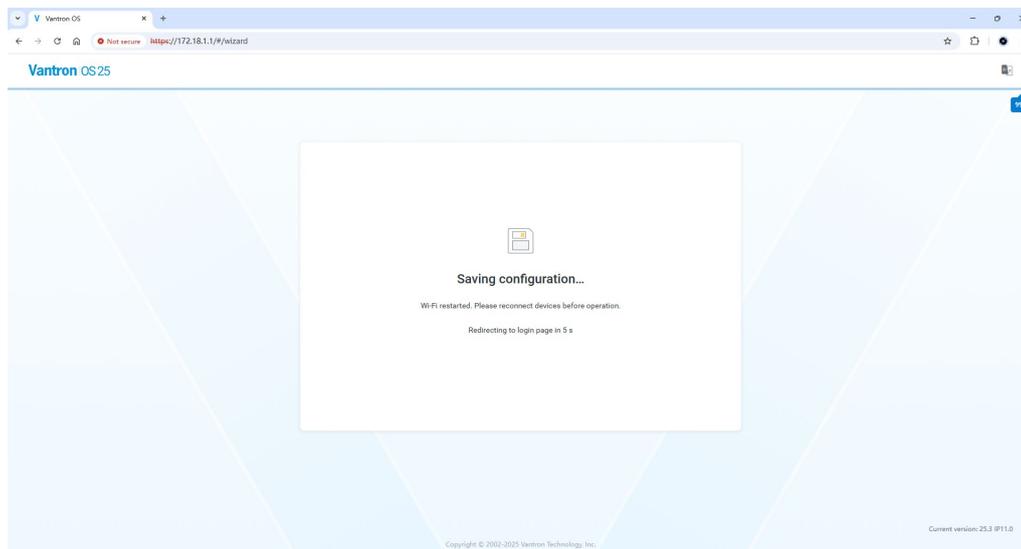
6. After the wizard finishes, the HAP101 will restart its Wi-Fi radio. If you have previously connected the host PC to the device via 2.4GHz Wi-Fi, you will need to reconnect the host PC to the device's network.

7. On the reloaded login page, enter the new password (if you changed it during the setup) to access the web portal.

Vantron | Embedded in your success, Embedded in your better life
World-leading provider of embedded/IoT products and solutions

HAP101
Quick Start Guide

2. Description of HaLow LED

2.1 Standard RSSI Logic

After a link is established, the device's signal quality follows this logic: Steady on > Fast Blink > Slow Blink > Off.

- Excellent: Steady On (Solid green)

- Good: 8Hz blink

- Fair: 2Hz blink

- Poor: 0.5Hz blink

- Unusable: Off

2.2 LED Behavior by Operating Mode

- AP< > STA Mode

1) AP (access point) side:

No connection: Off

Single connection: Follows the standard RSSI logic.

Multiple connections: The device with the weakest signal follows the standard logic.

2) STA (station) side:

Not connected: Off

Connected: Follows standard logic.
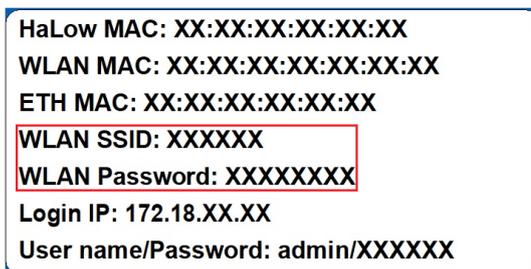
- Mesh mode:

No connection: Off

Multiple connections: The device with the weakest signal follows the standard logic.

Vantron | Embedded in your success, Embedded in your better life
World-leading provider of embedded/IoT products and solutions

HAP101
Quick Start Guide

3. Mobile Web Tool

The Mobile Web tool is a quick-configuration utility for HAP101, designed for phones, tablets, and other mobile devices. It provides network diagnostics, mesh-node RSSI-threshold settings, and other essential functions.

3.1 Login

1. Make sure HAP101's 2.4 GHz Wi-Fi operates in AP mode.

2. Connect your phone, tablet or other mobile device to the 2.4GHz Wi-Fi using the provided SSID and password.
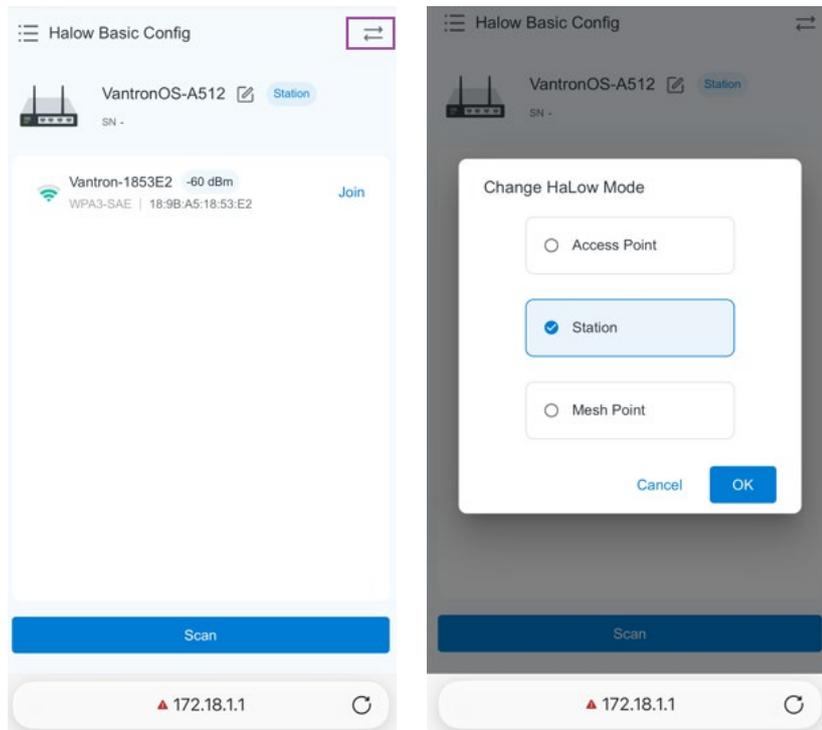
> **HaLow MAC: XX:XX:XX:XX:XX:XX**
> **WLAN MAC: XX:XX:XX:XX:XX:XX:XX**
> **ETH MAC: XX:XX:XX:XX:XX:XX**
> **WLAN SSID: XXXXXX**
> **WLAN Password: XXXXXXXX**
> **Login IP: 172.18.XX.XX**
> **User name/Password: admin/XXXXXX**

3. Open a browser, enter the HAP101's IP address, and the Mobile Web tool will load.

Vantron | Embedded in your success, Embedded in your better life
World-leading provider of embedded/IoT products and solutions

HAP101
Quick Start Guide

4. Log in to the management portal using the username and password on the device label.

> **HaLow MAC: XX:XX:XX:XX:XX:XX**
> **WLAN MAC: XX:XX:XX:XX:XX:XX:XX**
> **ETH MAC: XX:XX:XX:XX:XX:XX**
> **WLAN SSID: XXXXXX**
> **WLAN Password: XXXXXXXX**
> **Login IP: 172.18.XX.XX**
> **User name/Password: admin/XXXXXX**

5. Once logged in, you can click the Swap icon in the top-right corner to change the device's HaLow operation mode.
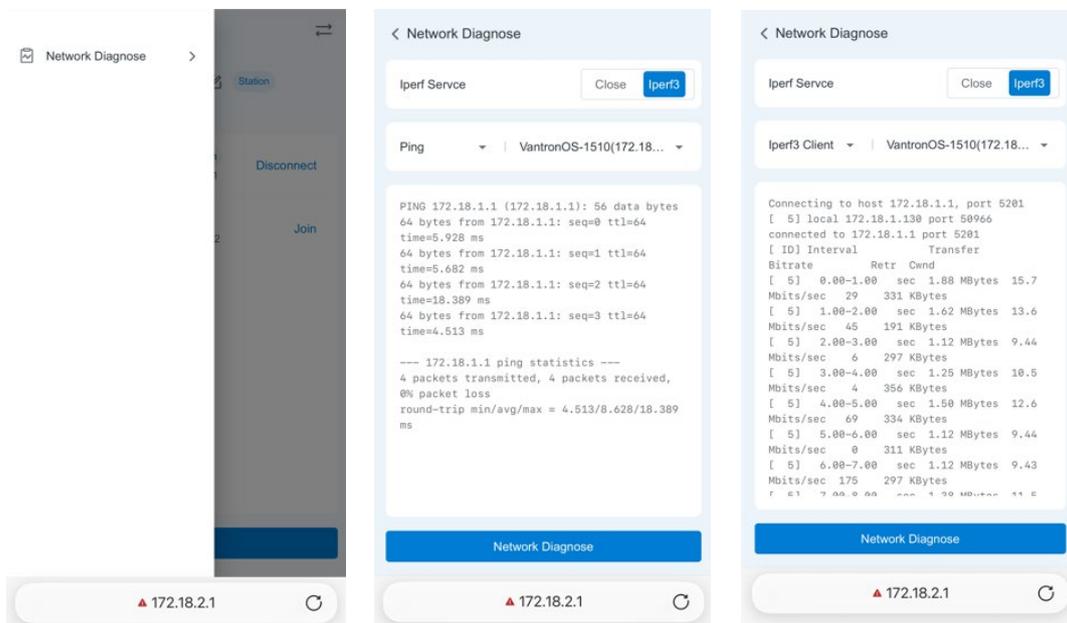
Vantron | Embedded in your success, Embedded in your better life
World-leading provider of embedded/IoT products and solutions

HAP101
Quick Start Guide

3.2   STA-Mode Features

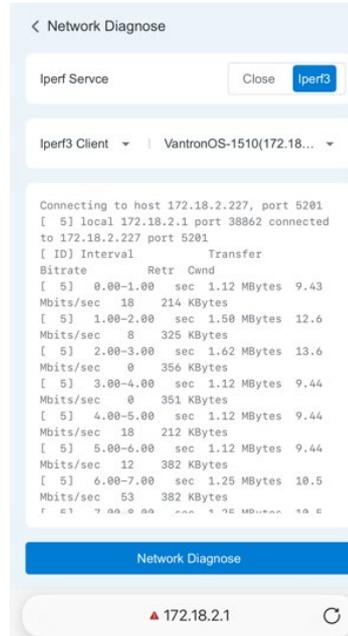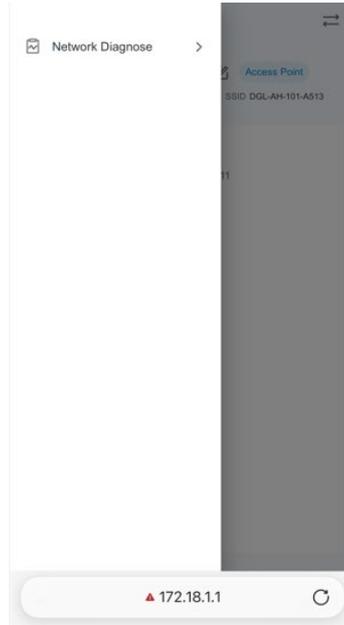- Scan for nearby HaLow APs and establish a direct connection, streamlining the pairing process.
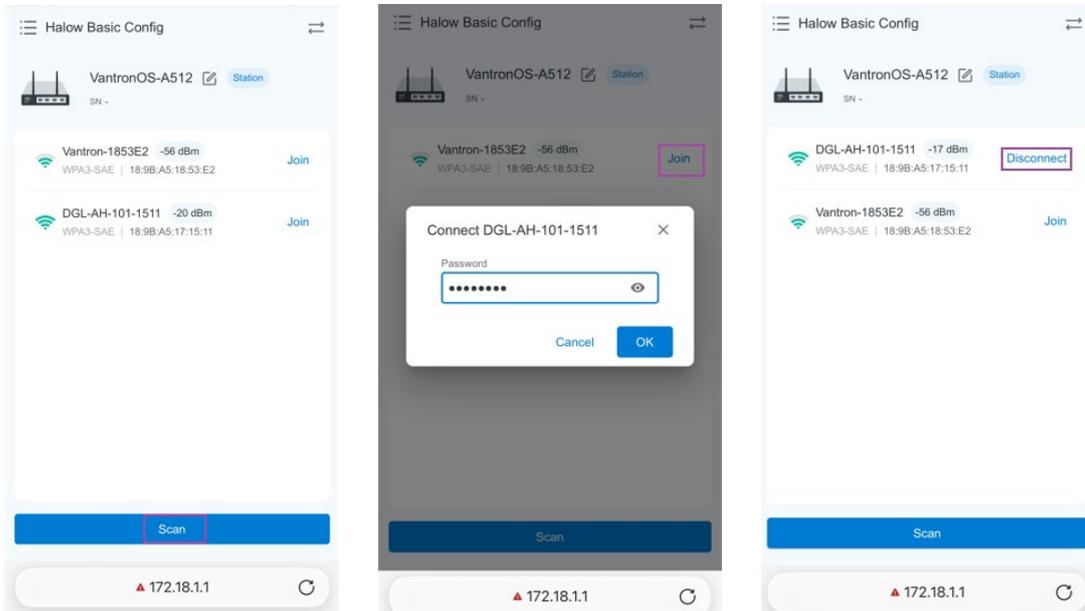
- Use Ping for quick HaLow connectivity diagnostics; round-trip time and packet loss will be displayed. Use iperf3 for HaLow throughput testing. **To avoid IP conflicts, make sure the two HaLow units have different LAN IP addresses before testing.**

Vantron | Embedded in your success, Embedded in your better life
World-leading provider of embedded/IoT products and solutions

HAP101
Quick Start Guide

3.3 AP-Mode Features

- Display the stations connected to the current HaLow AP with details, including SS RSSI, MAC address, and IP address.

- Use Ping for quick HaLow connectivity diagnostics; round-trip time and packet loss will be displayed. Use iperf3 for HaLow throughput testing. **To avoid IP conflicts, make sure the two HaLow units have different LAN IP addresses before testing.**
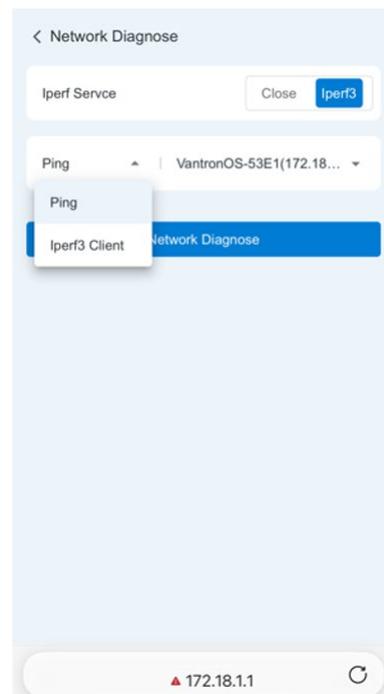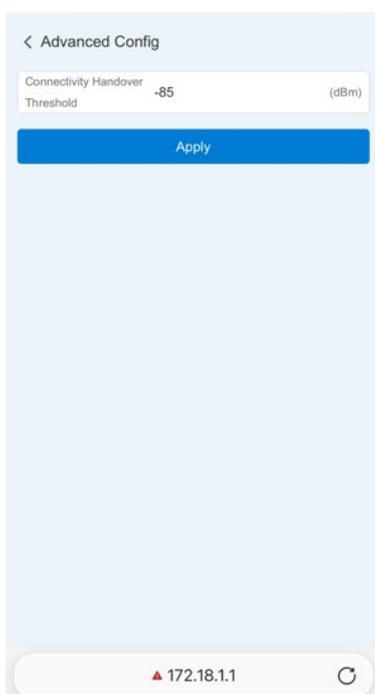
Vantron | Embedded in your success, Embedded in your better life
World-leading provider of embedded/IoT products and solutions

HAP101
Quick Start Guide

3.4 Mesh-Mode Features

- View neighboring nodes' (within same subnet) information in the mesh topology, including SS RSSI, MAC address, and IP address.

- Configure the RSSI threshold of the current mesh device to prioritize connections to the nearest node, optimizing the multi-hop performance.

- Use Ping for quick HaLow connectivity diagnostics; round-trip time and packet loss will be displayed. Use iperf3 for HaLow throughput testing. **To avoid IP conflicts, make sure the local HAP101 uses a different LAN IP address from the Mesh Portal before testing.**

Vantron | Embedded in your success, Embedded in your better life
World-leading provider of embedded/IoT products and solutions
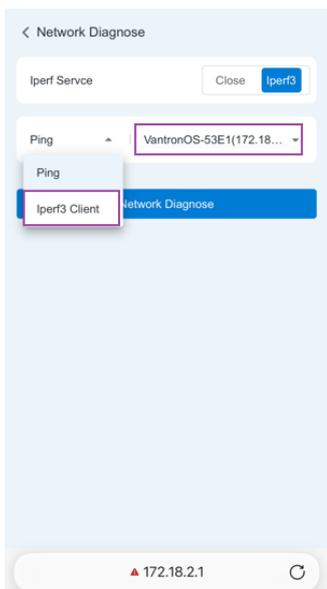
HAP101
Quick Start Guide

3.5 IPerf3 Testing

VantronOS 25 integrates the iperf3 testing tool for HaLow throughput testing. To avoid IP conflicts, ensure the two units use **different LAN IP** addresses before testing.

1. Connect the local HAP101 unit to a peer HaLow unit over HaLow.

2. Enable the Iperf3 service on the peer HaLow unit (enabled by default on all Vantron HaLow devices).

3. Log in to the local HAP101 unit via 2.4GHz Wi-Fi using the Mobile Web tool.

4. Tap **Network Diagnose** and select the peer device to run the throughput testing.

5. Check the real-time throughput data, RTT (Round-Trip Time), and packet loss metrics displayed on thelocal HAP101 to confirm successful connectivity and performance.

Vantron | Embedded in your success, Embedded in your better life
World-leading provider of embedded/IoT products and solutions

HAP101
Quick Start Guide

4.   Troubleshooting

1) **Q:** After logging in with the default username/password for the first time, the page stays blank.

   A: Clear your web browser's cache and reload the page.

   Note: When upgrading from VantronOS2 to VantronOS25, the cache must be cleared. Otherwise, the browser will keep redirecting to the legacy UI.

2) **Q:** After connecting to HAP101's 2.4GHz Wi-Fi, the default IP 172.18.1.1 is unreachable.

   A: This is likely because HAP101's Ethernet port is connected to an upstream router and operates in **LAN** mode. In this mode, the upstream router's DHCP assigns a new IP to HAP101's LAN interface. The HAP101's default IP (172.18.1.1) is no longer valid for device login.

   Solution:

   a. Log in to the upstream router's console to determine the IP address of HAP101. Use this new IP address to access the HAP101's web interface. Or,

   b. Switch the LAN port to WAN, and use the default IP address for device login.

3) **Q:** Two HAP101 units (AP and STA) are paired via 2.4 GHz Wi-Fi or HaLow. The AP unit has Internet access via the upstream domain, but clients connected to the STA unit (via 2.4 GHz Wi-Fi or Ethernet) cannot reach the Internet.

   A: This is caused by an IP conflict as both units are shipped with the same default LAN IP address (172.18.1.1). Changing the LAN IP of the STA-mode HAP101 to a different subnet—e.g., 172.18.2.1—will eliminate the conflict.

   Note: Remember to re-connect to the STA-mode HAP101and log in using the new IP address after the change.