FAQ for PuppyPi

Q1: What's the IP address, user name and password for VNC remote connection?

A1:

IP address: 192.168.149.

Username: pi

Password: raspberry

Q2: Why does the robot fail to boot up after the switch is turned on?

A2: Please check whether the battery wires are connected before using the robot. (Connect the battery wires in this manner: red to red; black to black) For safety during delivery, the battery wires are disconnected. When you receive the product, you'll need to connect the battery wires.

Q3: Why can the app connect to the WiFi generated by the robot but can't pair with the robot?

Q3: 1. Check whether all necessary permissions are granted to the app.

2. Ensure mobile data is turned off, and location service is turned on.

3. Reconnect to the device Wi-Fi, then return to app. Tap the refresh button yo refresh the device list.

Q4: Why the robot might not perform well in object tracking or line following tasks?

A4:

①The size of the color picking circle should be set appropriately. If it is too large, it may mistakenly select the color of objects other than the target. Conversely, if it is too small, it may not capture the color of the target accurately.

②It is important to ensure that there are no objects with colors similar to the target object around.

③When experiencing the object tracking game, it is recommended to move the object on the ground to allow the robot to track it more effectively.

Q5: Why can't the robot walk straight?

A5: This issue is primarily caused by servo deviation. For detailed instructions on deviation adjustment, please consult the file saved in the QR code below.

Q6: What is shown on the OLED display at the back of the robot?

A6: The OLED display shows the battery voltage. The robot operates within a normal voltage range of 6.6-8.4V. If the voltage is too high, it may damage the servos, and if it's too low, it may affect the proper functioning of the servos.

Q7: How long does it take to fully charge the robot?

A7: It takes approximately 1.5 hours to fully charge the robot. To ensure stable performance, please charge the robot promptly when the voltage drops below 7V.

Q8: How can we enable the robot to connect to the external internet?

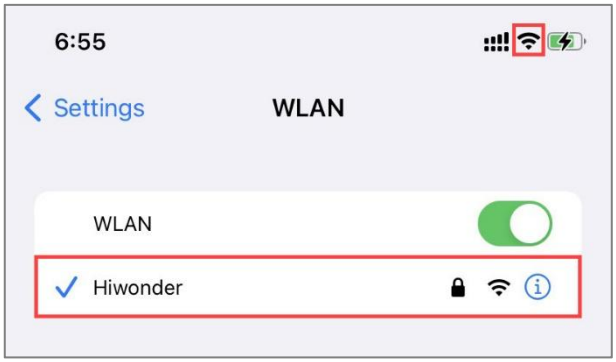
A8: To allow the robot to access the external internet, you will need to configure the robot to STA LAN mode.

Three methods are available:

Method 1: Switch to LAN mode through the app. Detailed instructions are as follows:

1) Open WonderPi, click “+” button to choose “LAN Mode”. Then follow the interface prompts to set up Wi-Fi connection.

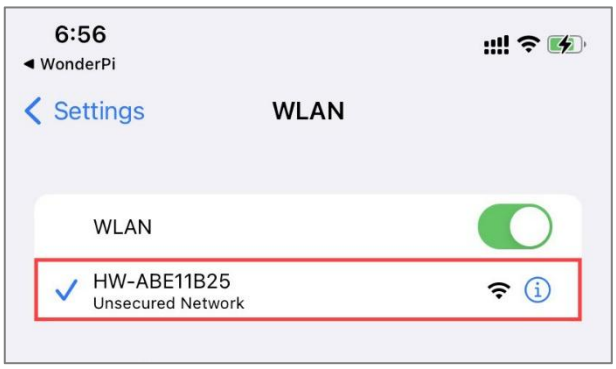
2) Join the WiFi (take “Hiwonder” for example)



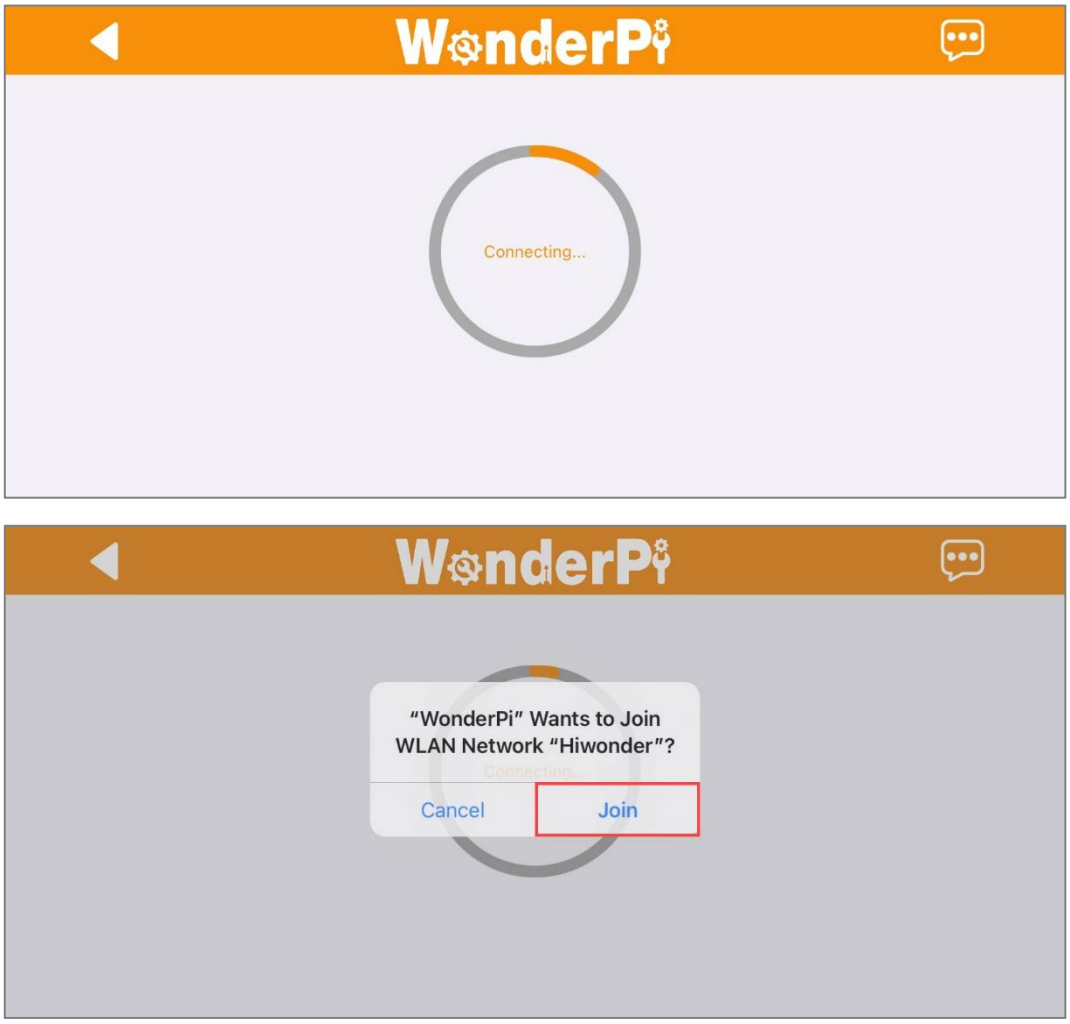
3) After completing the connection, return to the APP, click  button to to choose the “LAN Mode”.

4) Enter password of the connected Wi-Fi (if prompt does not pop up, click "LAN Mode" again), and then click "Next". (Please enter the password correctly otherwise it fails to connect)

5) According to the APP prompt, go to the settings again to connect to the hotspot starting with “HW”.



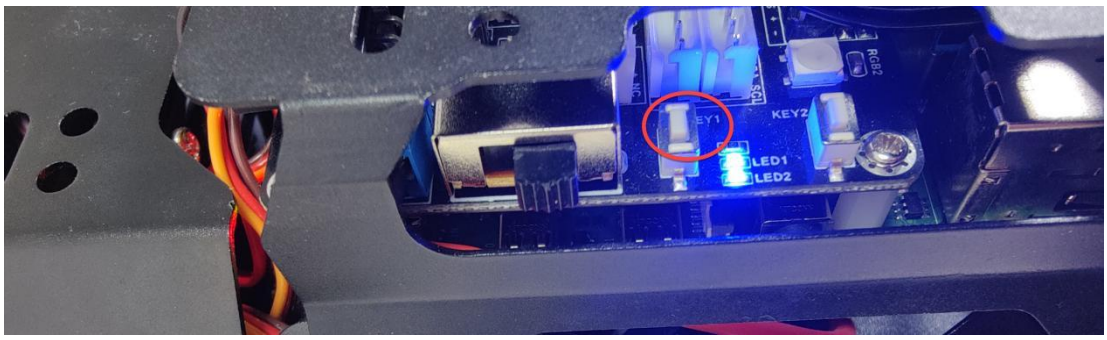
6) After connecting to the hotspot, you will find that the APP is connecting automatically. During the connection process, if you are prompted whether to join, click "Join".



7) After a while, it will back to the APP interface and the LED2 on the expansion board will stop flashing and remain on as LED1, which means that the Raspberry Pi is connected to the Internet successfully.

8) You can long press the robot icon in the APP to check the IP and ID.

9) If you want to switch back to Direct Connection Mode, long press KEY1 on expansion board until LED2 flashes.



Method 2:

1) Start the robot, and access to the robot system desktop using VNC.

2) Click-on  to open the terminal.

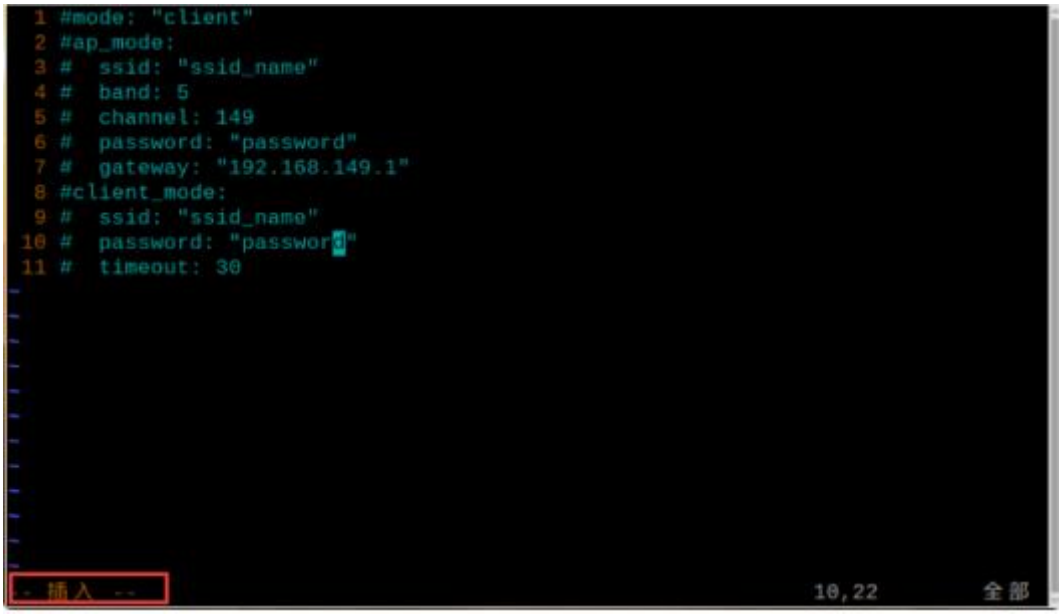
3) Execute the command “cd /boot/Hiwonder” and press Enter.

```
pi@raspberrypi:~ $ cd /boot/Hiwonder
```

4) Run the command “**sudo vim wifi.yaml**” to navigate to the WiFi configuration file.

```
pi@raspberrypi:/boot/Hiwonder $ sudo vim wifi.yaml
```

5) Press “I” key to enable ‘Insert’ mode.



6) Remove the '#' at the beginning of the 1st, 8th, 9th, and 10th lines. Next, insert the WiFi network name within the double quotation marks on the 9th line and the password on the 10th line. Take “Hiwonder” WiFi as example. Keep the other lines of code unchanged. Please ensure that the WiFi can access the Internet.

7) After modification, press “Esc” key to exit Insert mode, then input “:wq” and press Enter to save the change.

8) Execute the command “sudo reboot” to restart the Raspberry Pi. When the LED on the Raspberry Pi board flickers, it indicates that the network connection mode is switched to LAN mode.

9) Copy step 1-7 in **Method 1.** Long press the robot icon to get the IP address and robot ID on the app.

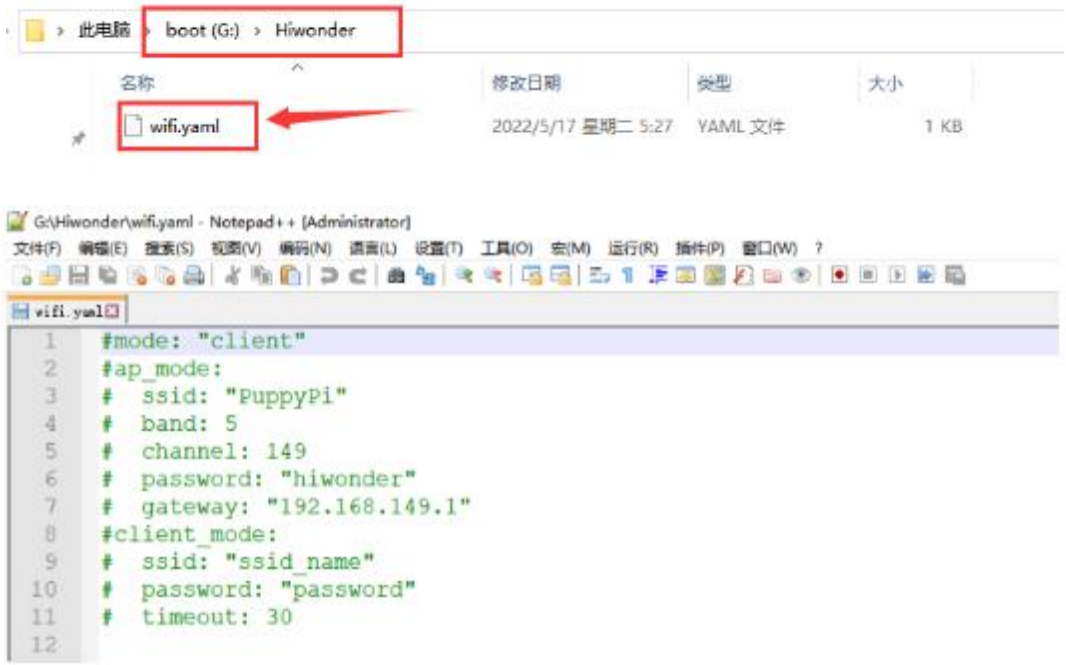
10) Connect the computer to the same WiFi in Step 6.

11) You can proceed to connect the robot to VNC, and once connected, the robot will have internet access.

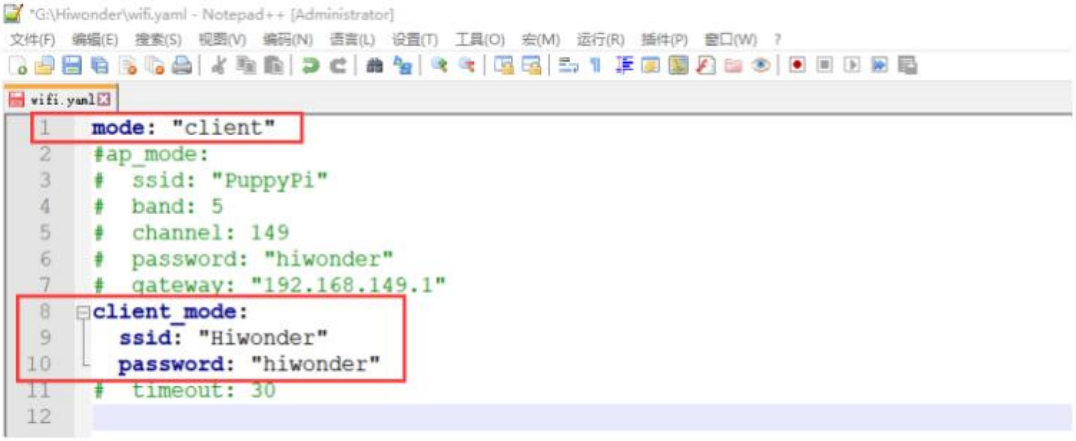
Method 3:

1) Take out the SD card inserted into the Raspberry Pi, which contains the robot's system image. Connect the SD card to the computer using card reader.

2) Locate the file "**wifi.yaml**" which is saved in "**boot/Hiwonder**". Open the file with notepad.



3) Remove the '#' at the beginning of the 1st, 8th, 9th, and 10th lines. Next, insert the WiFi network name within the double quotation marks on the 9th line and the password on the 10th line. Take "Hiwonder" WiFi as example. Keep the other lines of code unchanged. Please ensure that the WiFi can access the Internet.



4) Save and close the file. Reinsert the SD card into the Raspberry Pi.

5) Restart the Raspberry Pi. When the LED on it flickers, it indicates that the robot is currently in LAN mode.

6) Copy step 1-7 in Method 1. Long press the robot icon to get the IP address and robot ID on the app.

7) Connect the computer to the same WiFi in Step 6.

8) You can proceed to connect the robot to VNC, and once connected, the robot will have internet access.

Notes:

1) When you set the robot dog to LAN mode, it will no longer create a Wi-Fi network beginning with "HW." If you wish for the robot dog to generate a "HW" Wi-Fi network once more, you must switch it back to Direct Connect mode.

2) If you initially configured LAN mode using the mobile app in Method 1, you can long-press KEY1 on the expansion board until LED2 changes from a solid light to a flashing one. This will indicate that the robot has successfully switched back to Direct Connect mode.

3) If you established LAN mode by altering the Wi-Fi configuration file, the robot will need the Wi-Fi configuration file to be reverted to its original content in order to successfully switch back to Direct Connect mode.

Q9: Why is there no live camera feed on the app?

A9:

Step 1:

1) Verify that the robot emits a "beep" when it boots up. If it doesn't, it indicates that the robot's app service wasn't successfully enabled.

2) Access the robot system via VNC and execute the command "**cd /etc/systemd/system**" in the terminal. Then, run the command "**sudo systemctl restart start_node.service**" to initiate the service. When you hear a beeping sound, connect the robot to the app.

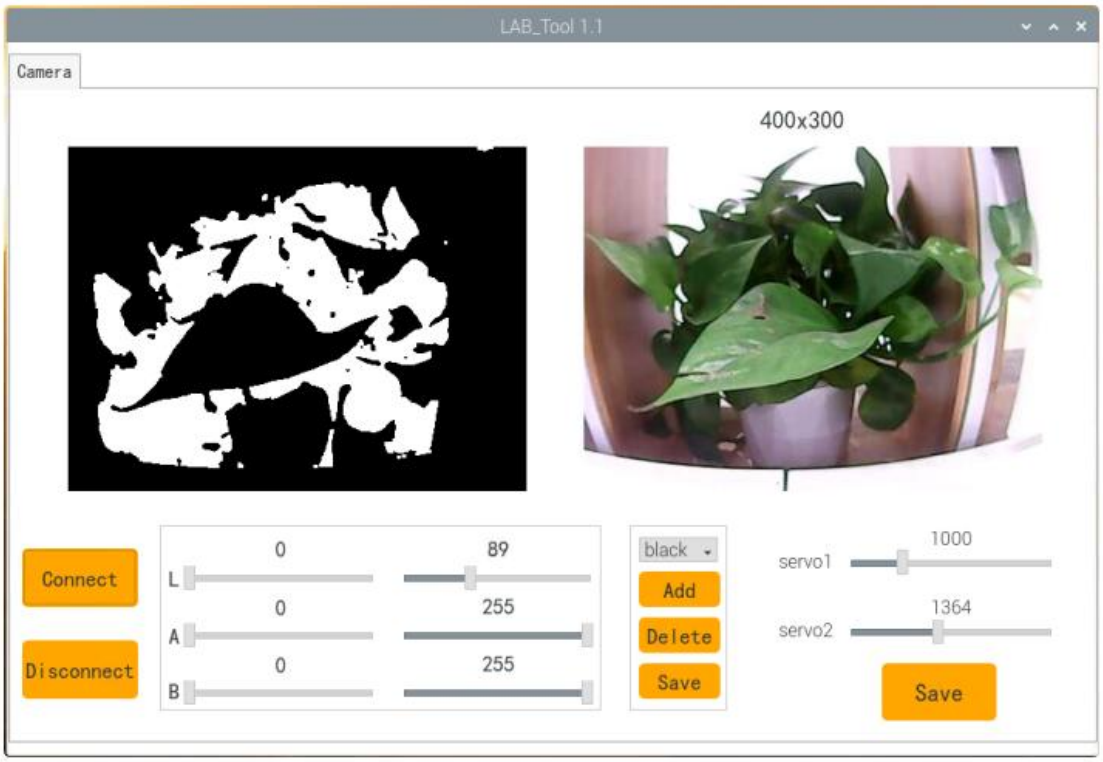
Step 2:

1) Connect the robot to VNC to access the robot system desktop.

2) Double-click 

to open “LAB_TOOL”, and click-on “**Connect**” button.

3) If the live camera feed appears, it represents that you're experiencing issues with the software version or mobile compatibility. Please verify whether the app is running the latest version, or consider testing it on another Android device to ensure normal operation.



4) If there is no live camera feed, conduct step 3 to proceed to fix the problem.

Step 3:

To determine if the robot's camera is functional, follow these steps:

1) Disconnect the USB cable from the robot's camera, which is connected to the Raspberry Pi, and plug it into a USB port on your computer.

Friendly reminders:

A. Ensure that the USB port you connect to supports USB communication.

B. Verify that the connection is secure with no loose contacts.

2) Click on the Windows icon, locate and open the camera application, and check if the image is displayed.

3) If there is live camera feed, it indicates that the Raspberry Pi's USB connection is either loose or not securely plugged in. Simply reinsert the Raspberry Pi camera or try connecting it to a different USB port on Raspberry Pi.

4) If there is live camera feed, it indicates an issue with the camera. Check the camera's USB cable and the wires on the camera's base to ensure they are securely connected. Also, examine the ports to ensure nothing has come loose and try reinserting the camera to see if the issue persists.

5) If the live camera feed doesn’t occur after you operating the previous step, please contact us at support@hiwonder.com