How to fix the unstable connection issue between my WAVLINK Wi-Fi range extender and main router?

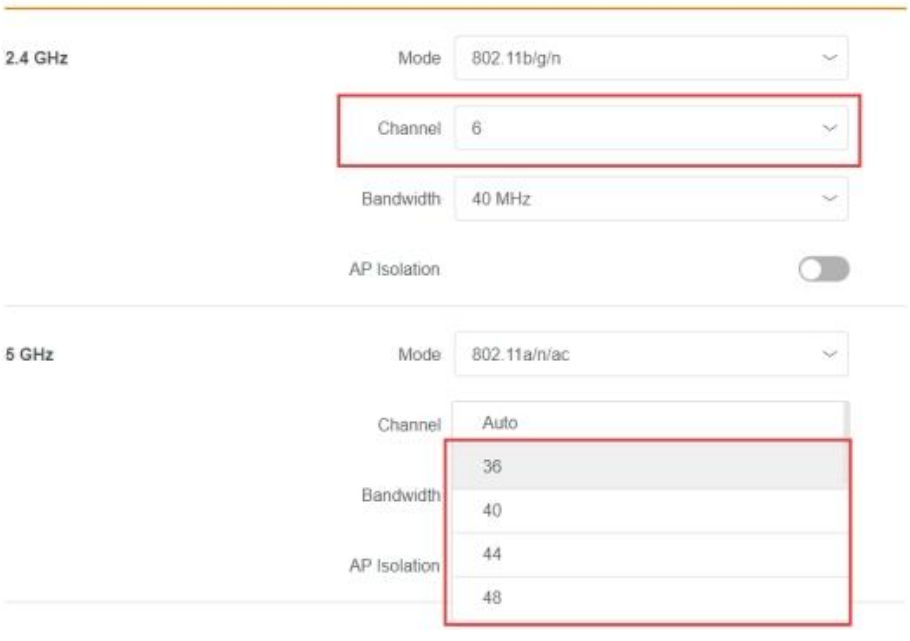
In repeater mode, the WAVLINK Wi-Fi range extender wirelessly connect to an existing wireless network from your primary or main router to extend the Wi-Fi coverage range. However, this wirelessly manner connection may appear unstable symptoms, which are caused by a combination of various factors. Here we mainly discuss how to optimize the settings of the WAVLINK Wi-Fi range extender and the settings of the main router to improve.

For the WAVLINK Wi-Fi range extender

1. There should be a clear line of sight between the WAVLINK Wi-Fi range extender and the main router. Try to avoid physical obstacles such as partition walls, metal, and obstructions. Do not place the device in a corner.
2. It is recommended to place the WAVLINK Wi-Fi extender next to the main router or in the same room. After setting up the WAVLINK Wi-Fi extender, place it in an area where the Wi-Fi signal is weak.
3. Please reboot your WAVLINK Wi-Fi range extender.
4. Please update the firmware of your WAVLINK Wi-Fi range extender.
5. Please hard reset your WAVLINK Wi-Fi range extender.

For the main router

1. Whether your primary router or modem is a dual-band router, if so, check whether it is enabled like "Dual-band in one" or "Smart connect" (Band Steering (also called 'Smart Connect' or 'Whole-Home Wi-Fi') If it’s enabled,
please disable it and change the Wi-Fi signals of the two frequency bands to SSIDs with different names.
2. Is the channel of your primary router selected as "Auto"? If it is auto, it will automatically switch the channel, which will also disconnect the repeater and the main router. It is recommended to fix the Wi-Fi channel of
the main router .
Please try to change the wireless channel of your primary router.(Crowded channel might be another reasons)
For 2.4g,Please choose 1 or 6 or 11.
For 5g,Please choose 36 or 40 or 44.



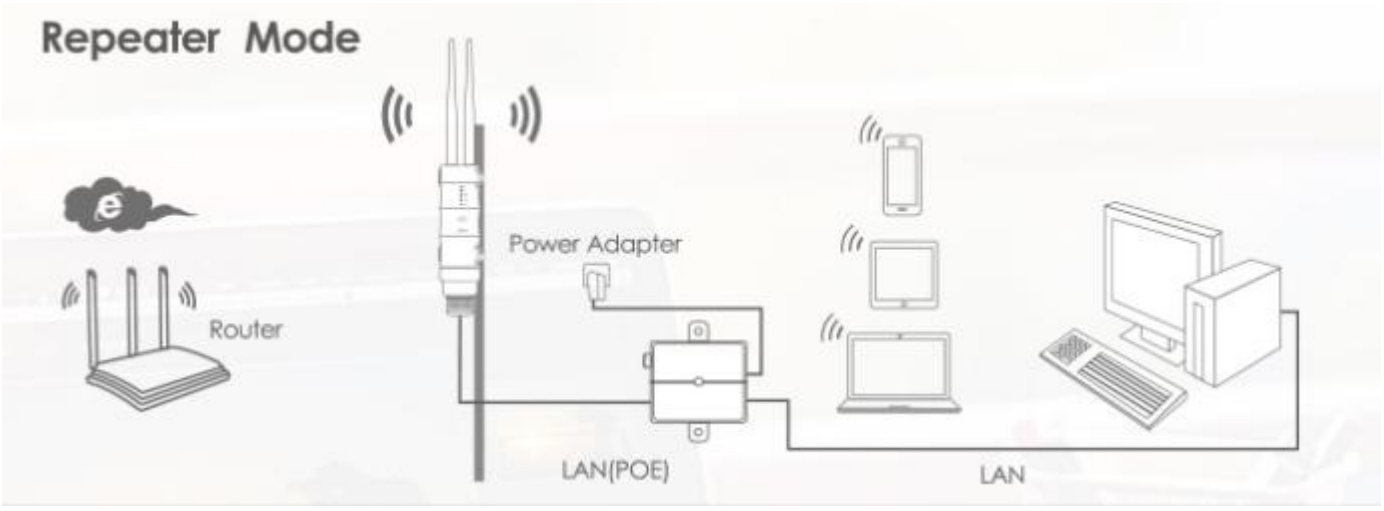
3. If your primary router has the "DHCP server", "Mac filtering" , “Access control list” or "Internet access control" enabled for the WAVLINK repeater, then the extender could not obtain an IP address from your primary router.
Please disable such functions on your primary router.

How to set up WAVLINK Wi-Fi range extender with Repeater mode ?

Most WAVLINK outdoor Wi-Fi range extenders supports work in Repeater mode and AP mode. If the extender has been configured in Repeater mode, the Repeater‘s ’Wi-Fi name will change from "WAVLINK-XXXX" or "WAVLINK-XXXX" by default to the same SSID_ext2.4G or _ext5G as your host Wi-Fi signal.
For example, if your host Wi-Fi signal is "Home", the extender Wi-Fi signal would be "Home_EXT2.4" or "Home_5G"
The Wi-Fi password of the extender must be set to the same as your main router’s Wi-Fi

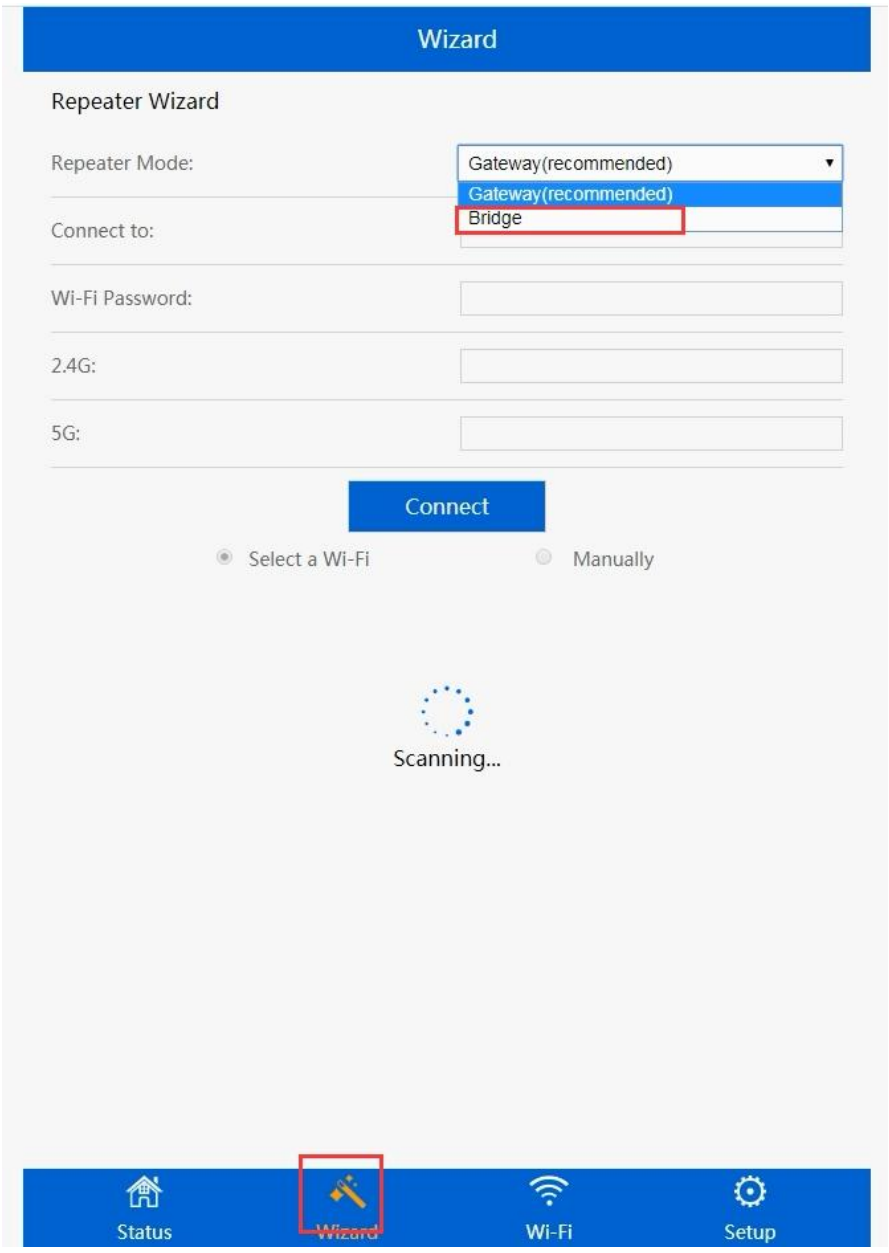
Physical connection

1. Connect the POE IN port of the unit to the POE port of the converter with a Ethernet cable
2. Plug the power adapter to a socket.
3. Power on the unit.



Repeater mode installation steps

1. After resetting the extender, wait a few minutes, please open WLAN on your mobile phone, then find the signal WAVLINK-XXXX and connect it.
2. Open web browser and type “ 192.168.10.1” or “http://waplogin.link” in the browser address box and the login screen will appear.
3. Enter the default login password "admin", choose the right language, click "Login".
4. After logging in, you will see the web page: choose “Bridge” or “Gateway” in Repeater mode wizard. Then select a wireless network that you want to connect.



5. After you selected a wireless network. You will see a default Repeater SSID, select it and change the SSID name to avoid repetition. And the password must be set to the same as the Wi-Fi you connected.

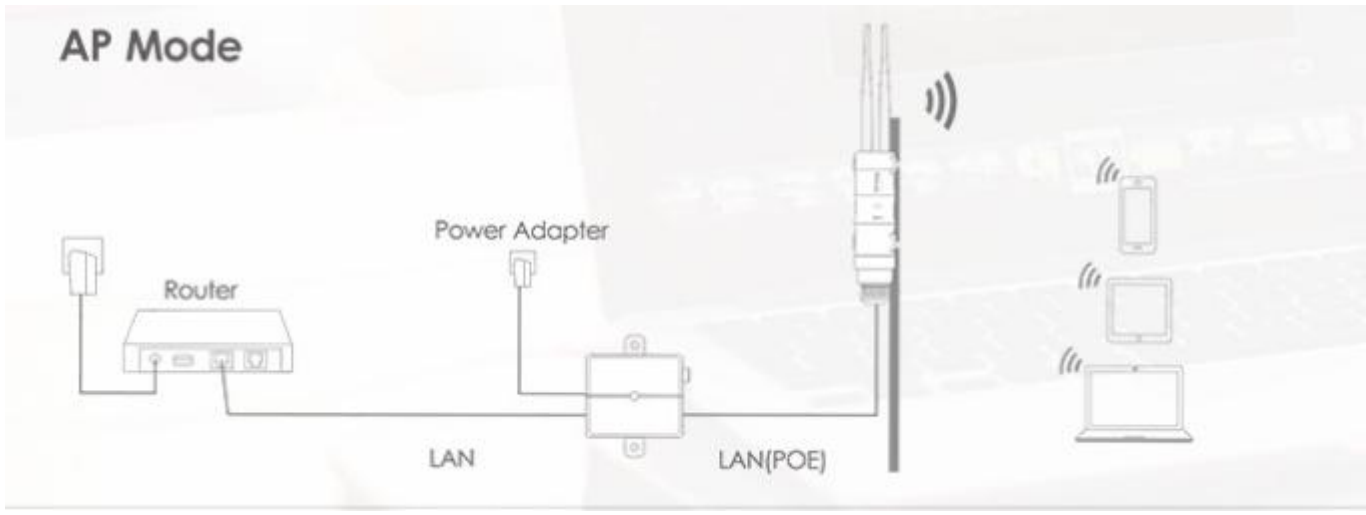
How to configure WAVLINK outdoor Wi-Fi range extender to work in AP mode?

Most WAVLINK outdoor Wi-Fi range extender supports working in AP mode and Repeater mode. In contrast to repeater mode, AP mode requires the WAVLINK outdoor Wi-Fi extender to connect to the main front-end router through an Ethernet cable, ensuring network speed while avoiding physical interference as much as possible.

Here is the instructions to how to set WAVLINK outdoor Wi-Fi range extender to work in AP mode.

Hardware connections:

1. Connect the POE IN port of the unit to the POE port of the converter with a Ethernet cable
2. Connect the LAN/DATA IN port to the LAN port of your router/modem.
3. Plug the power adapter to a socket.
4. Power on the unit.



AP mode installation steps:

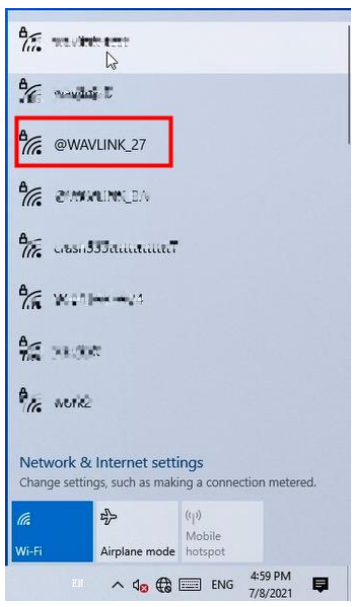
1. Find the WAVLINK Wi-Fi and connect it on your smart phone WLAN.
2. Enter the URL “192.168.10.1” or “http://waplogin.link” in a web browser address bar and search.
3. Enter the default password "admin" on the showing login screen.
4. After logging in, please click the “AP”, then complete the settings such as SSID and Wi-Fi password. Click the “Apply”.
5. Return back to the WLAN and reconnect to the Wi-Fi. Then the internet will work.

How to log into web-based management page of my WAVLINK Wi-Fi range extender?

How to access the web-based management page of your WAVLINK Wi-Fi range extender ? You need to connect your device to the WAVLINK extender Via the WAVLINK extender's Wi-Fi or Ethernet cable, but does not require the extender to access the Internet. This connection can be wired or wireless and can be accessed through any device with a web browser, such as a desktop computer, mobile phone, tablet, iPad, etc.

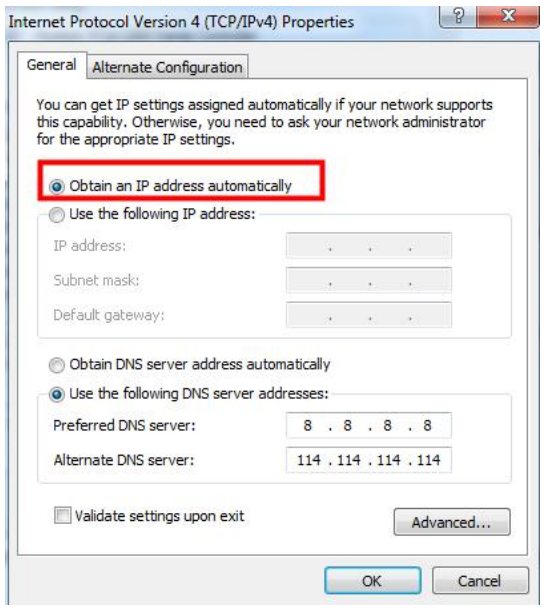
1. Connect to your WAVLINK router via its wireless network (Wi-Fi SSID) or an Ethernet cable

If wireless: Make sure your terminal device is connected to the Wi-Fi SSID of your WAVLINK router. The default Wi-Fi SSID and password are printed on your router label where it is usually attached at the back of the router.



If wired: Connect your device to your WAVLINK extender via Ethernet cable to one of the LAN port on the back of your WAVLINK extender.

Change you computer's IPV4 address to "Obtain an IP address and DNS address automatically"



2. Launch a web browser and enter http://192.168.10.1 or http://waplogin.link .

3. Enter the login password and click “Login” .

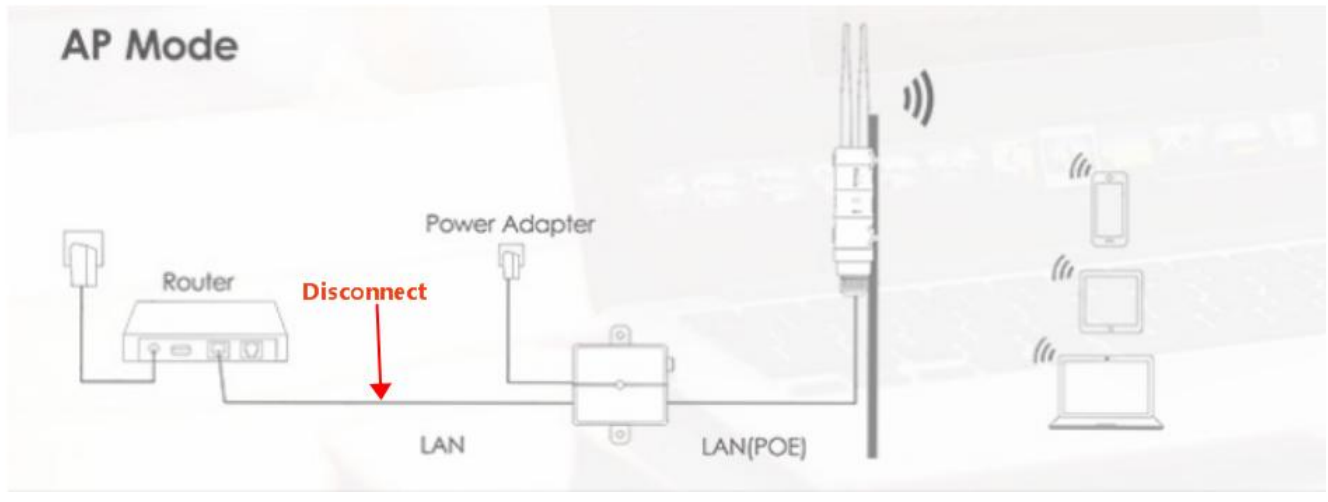
Note: The login password is “admin” by default when you set up your WAVLINK extender for the first time.

If you forget the login password you specified, you’ll need to hard reset your WAVLINK extender to return the original password “admin”.

What should I do if the network speed of my WAVLINK outdoor Wi-Fi range extender is much lower that expected in AP mode ?

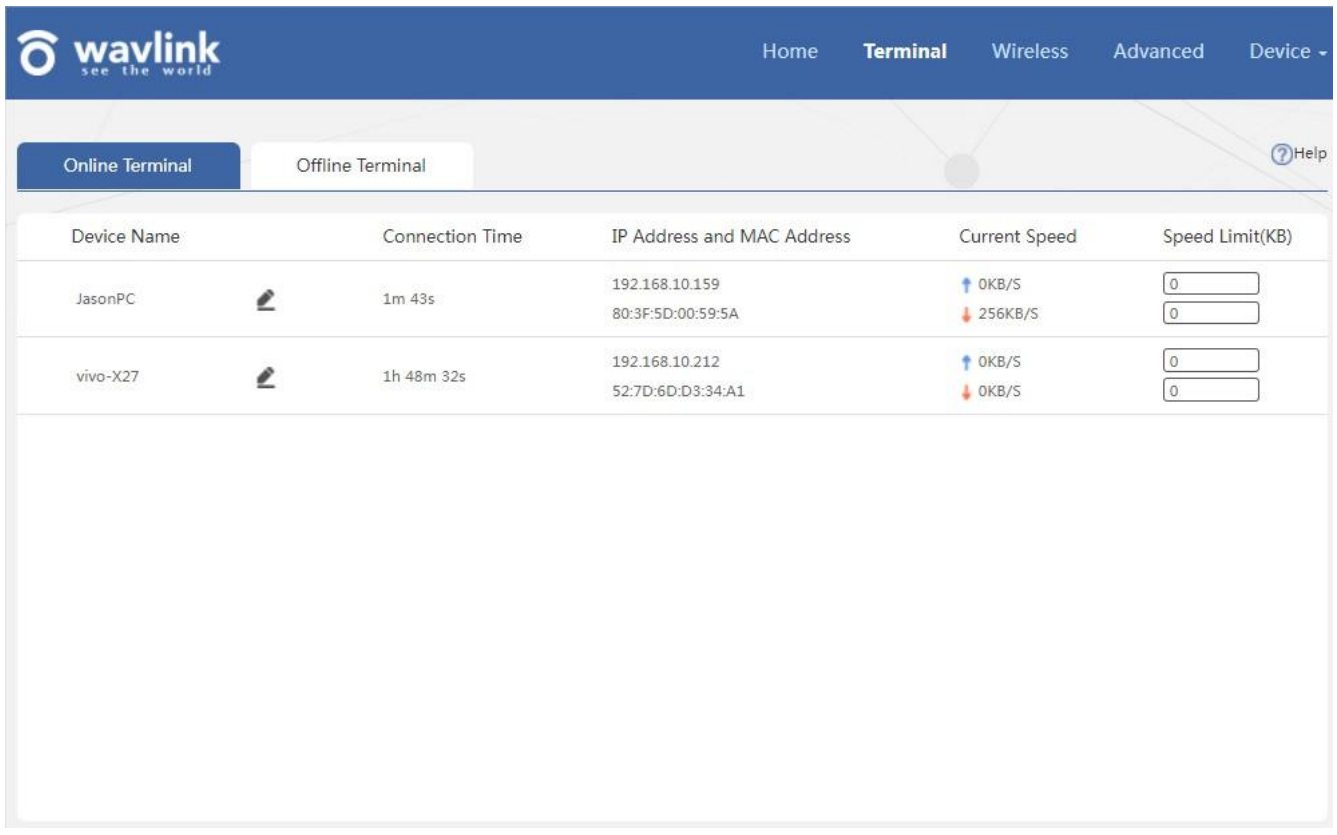
Part 1: Check the primary router

1. Disconnect the connection between the WAVLINK outdoor AP and the main router, and test the network speed by connecting the computer directly to the LAN port of the main router through an Ethernet cable.



2. Check the broadband restriction configurations of the router

Sometimes, in order to reasonably allocate broadband resources, we will carry out bandwidth control or connection number limit in the router, which will lead to limited speed measurement results. Therefore, we can check whether the router is enabled with bandwidth control, connection number limit and other functions, and ensure that the speed measurement is performed after it is turned off.



3. Restart the router to clear the cache.

Some users do not have the habit of restarting the router in daily life. Periodically restarting the router helps clear unnecessary data and cache, enabling the router to be lightly loaded and providing good network experience

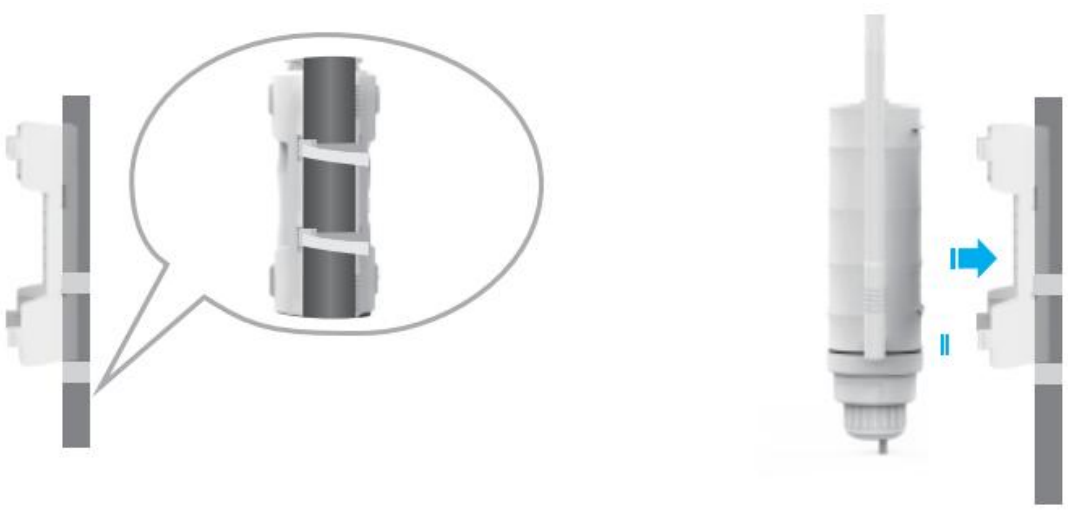
Part 2 : Check the WAVLINK outdoor Wi-Fi range extender

Location:

1. The installation height should not exceed 2 to 3 meters above the receiving height of the wireless terminal.

2. Try not to install the WAVLINK outdoor AP against the wall. You can choose to tie it to a pole, which is to avoid physical obstruction and interference to the greatest extent.

3. As with the second recommendation, try to install WAVLINK outdoor AP in an open area.



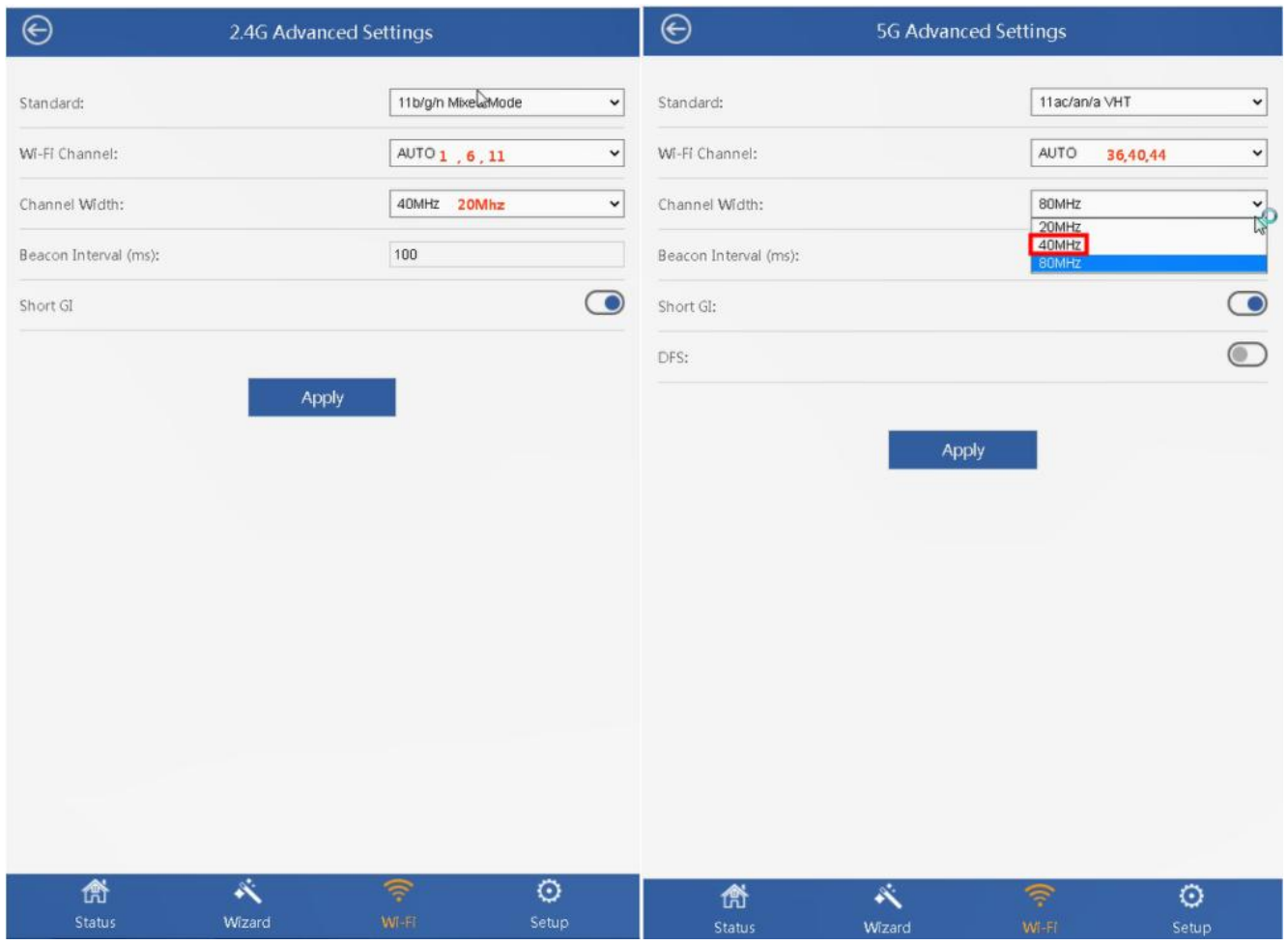
Optimize the Wi-Fi range extender settings:

4. Check the channel interference

You are advised to use **Wi-Fi Analyzer** to perform a channel interference test to check whether the current channel has interference. If so, the channel with the least interference is selected for speed measurement

For example, the current 5G wireless channel set by WAVLINK AP is 40, and the bandwidth is 80MHz. After interference test, it is found that the current 5G frequency band has more interference, then the 5G wireless channel is set to other channels, such as 153, and the bandwidth is 80MHz.

5. Select 80MHz band bandwidth (if the interference is large, 40MHz is recommended for actual use)



6. Update the firmware of the WAVLINK outdoor AP.
7. Reboot the WAVLINK outdoor AP
8. Hard reset the WAVLINK AP by pressing and holding its reset button for 8 seconds.

Part 3 : Check the Ethernet cable

A Category 5 Ethernet cable can deliver up to 200Mbps, but for gigabit broadband we recommend at least a Category 6 Ethernet cable or higher

Part 4: Upgrade your router or WAVLINK outdoor Wi-Fi range extender

If your ISP provide broadband over 100Mbps or reaches 1,000Mbps ， it's best to choose a router or Wi-Fi extender with gigabit network ports.

Part 5: Confirm the maximum wireless rate supported by the connected clients

Both wireless terminals and wireless routers have the maximum wireless rate supported. Most wireless speed measurement is slow because the maximum wireless rate supported by the terminals is relatively low. General mobile phone support wireless rate is lower than computer wireless card, especially 2.4G single frequency terminal.

The wireless protocol rate is generally the highest transmission rate supported by both wireless terminals and wireless routers. For example, if the maximum speed of the wireless 5G band supported by the wireless router is 1300Mbps, and the maximum speed of the wireless 5G band supported by the wireless terminal is 866Mbps, the maximum negotiated wireless rate theory of the two can only reach 866Mbps.

(1) If the wireless negotiation rate is normal, but subject to the wireless rate supported by the wireless terminal itself, the wireless speed measurement cannot reach the wired rate. It is a normal phenomenon, you can replace other high-specification wireless devices to test the network speed

(2) If the wireless protocol rate is low (lower than the normal value), it may be related to problems such as distance, wireless router Settings, environmental wireless interference, and wireless devices themselves. Go to the next step.

Note:

(1) The wireless rate supported by the wireless 5G band is higher than 2.4G. If the terminal supports 5G, it is recommended to use the wireless 5G band for speed measurement.

(2) Considering some protocol overhead of wireless communication, the speed measurement value can generally reach 50-60% of the negotiated rate in the non-interference environment.

What should I do if the WAVLINK Wi-Fi range extender is placed very close to our main router but cannot establish a connection?

The first thing to confirm is whether the WAVLINK Wi-Fi setting process has been operated according to the instructions in the manual, and the configuration steps can be fed back to us with screenshots for troubleshooting.

■ Need to check whether the password input is correct (try to go through the wizard again), the Wi-Fi password of the WAVLINK repeater must be set to the same as your primary router’s.

■ Check whether the router password and SSID have special symbols (comma, semicolon, line feed, carriage return), and try to change the router SSID and password

■ Check whether the upper router has opened the DHCP service, if not, please open the DCHP service.

■ Check whether MAC Filter, wireless access control, or access control list (ACL) is enabled on your primary Router, if these kinds of feature is enabled, it needs to be disabled and then walk through the instructions to set up the Repeater again.