

Troubleshooting steps

How to improve the signal strength of my 5GHz wireless connection?

This Article Applies to:

Before getting too far with 5GHz deployment, please pay attention to your geographical location and confirm the local law or regulation for 5GHz Wireless LAN is required.

Symptom:

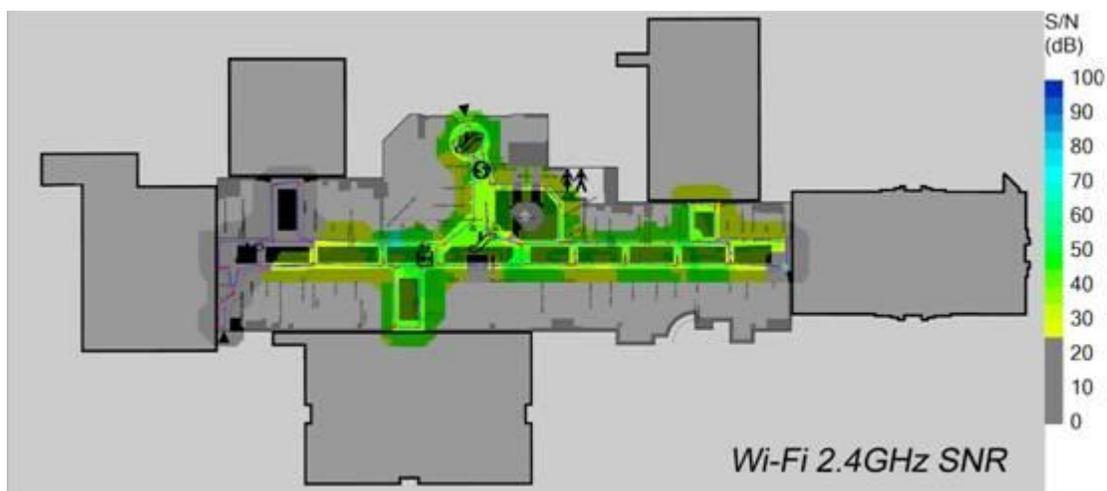
- Weak wireless signal showed on client device;
- Cannot detect the 5GHz wireless radio

Cause:

Generally, the lower the frequency the farther a wireless signal can travel. Therefore, devices on a 5 GHz network will tend to have a shorter range than those using 2.4 GHz. This can be mitigated somewhat with sophisticated antenna technology, but if a given device is relatively far from the wireless access point, you may have better luck connecting via 2.4 GHz.

Also, the higher frequency will be more sensitive to obstacle and more attenuation caused when passing through the walls, ceiling, etc. due to the relatively poor diffraction.

Here we take two pictures as example:





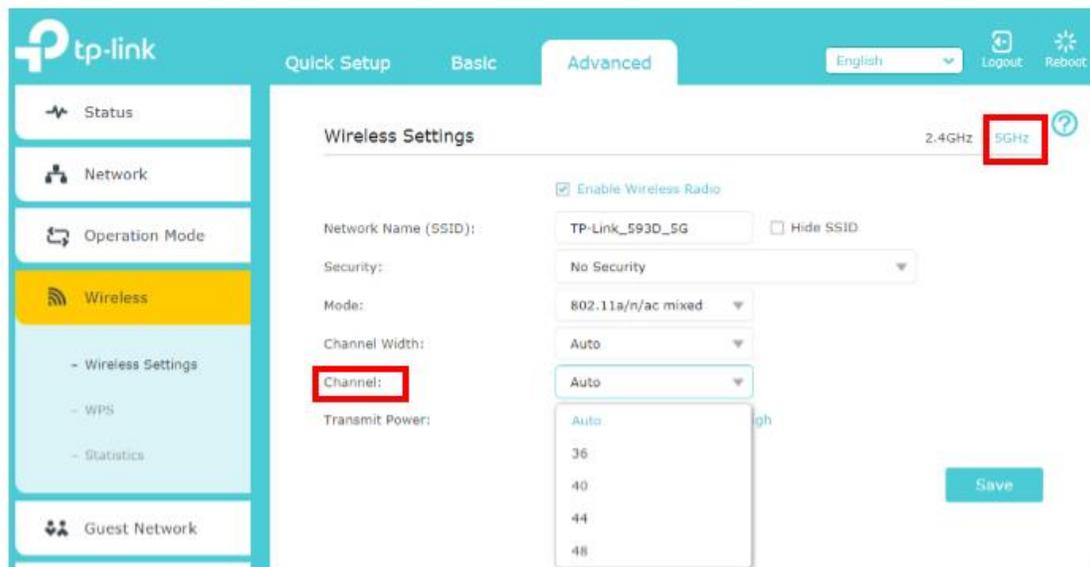
SNR: Signal-to-noise ratio is a measure used in science and engineering that compares the level of a desired Signal to the level of background Noise. It is defined as the ratio of signal power to the noise power. A ratio higher than 1:1 (or 0dB) indicates more signal than noise.

Solution:

Since the intrinsic properties of 5GHz wireless radio, there are no true sense solutions to improve the performance immediately, here we recommend following steps to optimize the wireless connection.

- Please confirm your wireless router/access point or client can support 5GHz wireless radio;
- Deploy your wireless router/access point close enough to your wireless equipment vice versa;
- Avoid the physical barrier because they will absorb the wireless signal dramatically;
- Try to change another channel within the local regulation;

Here we take Archer C7 as an example. Please log into the management page refer to this [link](#) then select Advanced>Wireless> 5GHz, and choose another channel to deploy. You can take the following picture as reference.



- If you really need better wireless coverage, however, the 5GHz frequency cannot meet your demand after following the suggestions above, please try to switch to 2.4GHz.

Troubleshooting: Unstable wireless connection on TP-Link router

This Article Applies to:

Precondition:

1. Please be sure that when the computer is connected to your internet modem, the internet works fine without dropping. If the internet is not stable, please contact your internet service provider to do some troubleshooting. If it's a modem/router, please contact your ISP to ensure the internet line is good.

2. Please check whether the internet is stable or not when the computer is connected to the router with the Ethernet cable. If not, please refer to [Troubleshooting: Unstable connection on the TP-Link router](#)

Symptoms:

Wireless devices intermittently disconnect from the wireless network, while wired devices are still connected and working fine.

For possible solutions, please see the following:

- Keep the router away from microwave ovens and other interference sources (refrigerators, ovens, Bluetooth devices, etc.)
- Reduce the number of wireless clients and optimize the router's position.

Try to adjust the orientation of the antennas for maximum performance. We recommend placing it up high and also placing its antennas at 45 degrees (diagonally) or 0 degrees (straight out parallel to the floor), which will be more effective. Since antennas always transmit weakly at the base, do not place your wireless client device at the bottom of TP-LINK wireless device.

- If your Wi-Fi's signal strength is weak, try moving the router to another location. Minimize obstructions between your router and your computer or other devices. Obstructions such as walls between your router and device can affect Wi-Fi signal quality.
- If your Wi-Fi signal is strong but the connection is still unstable, try connecting to the router's 5G Wi-Fi. There are fewer interference sources on 5G networks. (If your router does not support 5G Wi-Fi, please skip this step.)
- Disable the smart connect on your router. (If your router does not support it, please skip this step.)
- If there are multiple Wi-Fi networks in the area, please change the router's Wi-Fi channel and channel width. This avoids multiple Wi-Fi signals on the same channel, and reduces Wi-Fi interference sources.

You may refer to [Changing Channel and Channel Width on a TP-Link Router \(new logo\)](#). (You may change 2.4G channel width to 20MHZ, 5G channel width to 20MHZ)

- Upgrade your router to the latest version.

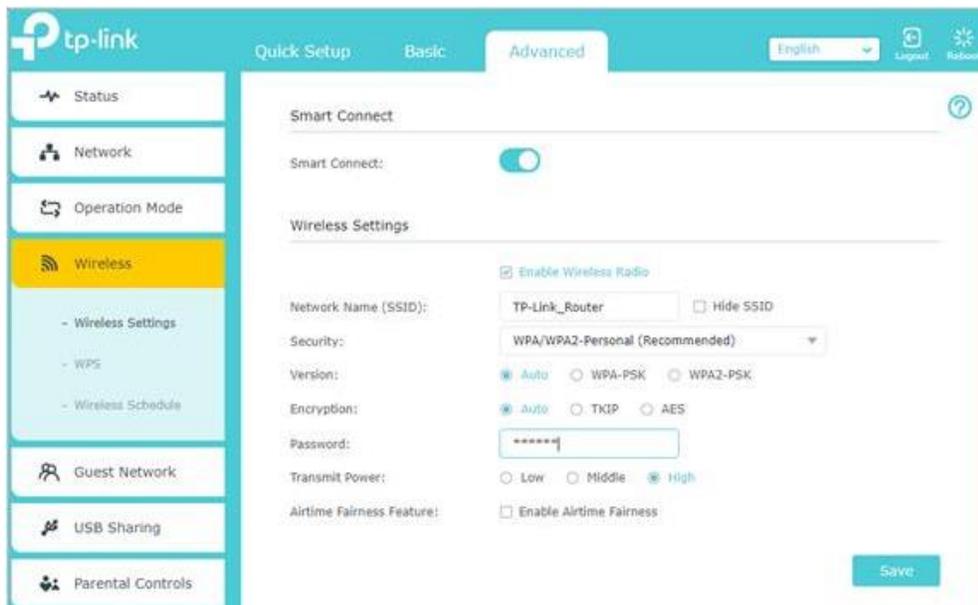
You may refer to [How to Upgrade the Firmware on the TP-Link Wi-Fi Routers?](#)

Tips: How to disable the smart connect on the router?

Login to the webpage following the FAQ:

[How do I log into the web-based Utility \(Management Page\) of TP-Link wireless router?](#)

Go to **Advanced**> **Wireless**> **Wireless Settings** and disable **Smart Connect**.



Related FAQs

- [How to configure basic wireless settings of TP-Link 11AC router \(new logo\)?](#)
- [Troubleshooting: Unstable connection on the TP-Link router](#)
- [What should I do if Internet connection on my TP-Link DSL modem is unstable?](#)
- [What can I do if the internet connection is unstable when connected to the Deco network?](#)
- [Only the wired connection or wireless connection is not working](#)