

# **D-Link<sup>®</sup>**

## **TECH SUPPORT**

**What can I do if I am having problems  
staying connected to my Wi-Fi?**

## What can I do if I am having problems staying connected to my Wi-Fi network?

Try these basic troubleshooting steps:

- Refresh wireless profile on your computers and other devices (delete old profile and reconnect to your network).
- Change your access point or wireless router to a different Wi-Fi channel.
- If your access point or wireless router is a dual band device, it supports both 2.4GHz and 5 GHz frequencies. Try setting your 5GHz Wi-Fi with a different name and make sure your devices connect to this particular network.
- Change the location of your wireless products. Subtle changes (1 - 2 metres) can make a big difference.
- Do not put the access point or wireless router in a cabinet or enclosure.
- 2.4GHz cordless phones, X-10, and Bluetooth devices will interfere with your wireless network. Change the location of the base for your phone, or switch to a cordless phone which does not operate on 2.4GHz or 5GHz frequency.
- A wireless signal will degrade (or die completely) when going through brick (wall), metal (file cabinet), steel, lead, mirrors, water (fish tank), large appliances, glass, etc.
- Newer Wi-Fi technology (802.11n, 802.11ac – Wireless N, Wireless AC) may improve reception and connection stability. If your devices support it – make sure it is enabled.
- If your wireless connection is only dropping during large file transfers or when a large number of wireless clients are connecting, change the preamble on all wireless devices to “short”.

Wi-Fi connection lets you access your network from anywhere you want. However, keep in mind, that range is limited by the number of walls, ceilings, or other objects that the wireless signals must pass through. Typical ranges vary depending on the types of materials and background RF noise in your home or business. The key to maximizing range is to follow these basic principles:

1. Keep the number of walls and ceilings to a minimum - Each wall or ceiling can rob your Wi-Fi of 10-30m of range. Position your Wi-Fi Access Points, Wireless Routers, and computers so that the number of walls or ceilings is minimized. The wireless signal will degrade (or die completely) when going through brick (fireplace), metal (file cabinet), steel, lead, mirrors, water (fish tank), large appliances, glass, etc.

2. Be aware of the direct line between Wi-Fi Access Points, Wireless Routers, and Computers - A wall that is 50cm thick, at a 45 degree angle, appears to be almost 1m thick. At a 2-degree angle it looks over 15m thick! Try to make sure that the Access Point and Adapters are positioned so that the signal will travel straight through a wall or ceiling for better reception.

Newer Wi-Fi technology (802.11n, 802.11ac – WirelessN, WirelessAC) is capable of creating data links using RF signals reflected off objects. Using Wi-Fi devices utilizing these features may improve reception and connection stability.

Dual Band devices can broadcast Wi-Fi signal on both 2.4GHz and 5GHz frequencies. Providing your device also supports 5GHz you can try connecting on this frequency. For easy identification of the frequency please set your wireless Access Point or router with different names for each of the Wi-Fi

networks. 2.4GHz band can be sometimes quite congested and interfered by other networks and devices. 5GHz band has more room for more networks and generally less congested. However being a higher frequency it is prone to more signal loss when passing through obstacles.

3. Building Materials make a difference - A solid metal door or aluminium studs may have a negative effect on range. Try to position Access Points, Wireless Routers, and Computers so that the signal passes through drywall or open doorways and not other materials.

4. Make sure that the antenna is positioned for best reception by using the software signal strength tools included with your product.

5. Keep your product away (at least 1-2 metres) from electrical devices that generate RF noise, like microwaves, monitors, phone base stations, electric motors, UPS units, etc.

6. If you are using 2.4GHz or 5GHz cordless phones, Bluetooth, cordless keyboard/mouse, RF audio/video transmitters/receivers or X-10 (wireless products such as ceiling fans, lights, and home security systems), your wireless connection will degrade dramatically or drop completely. Try changing the location of the access point.

Possibly a neighbor has a 2.4 GHz device (phone, networking product, etc) that is interfering with your network.

To improve the situation with wireless signal you can apply more powerful antennas on your wireless devices. Please note that having a powerful antenna on one end of wireless connection only may not make a difference - you need to have similar antennas on both ends of the wireless link (e.g. on your workstation as well). The effective range will be limited by the weakest antenna used.

Using extension cables for antenna will reduce the signal strength (about 0.3 dB per metre of the cable).