



Why upgrade your router?

Increase your wireless speed,
coverage and quality of service

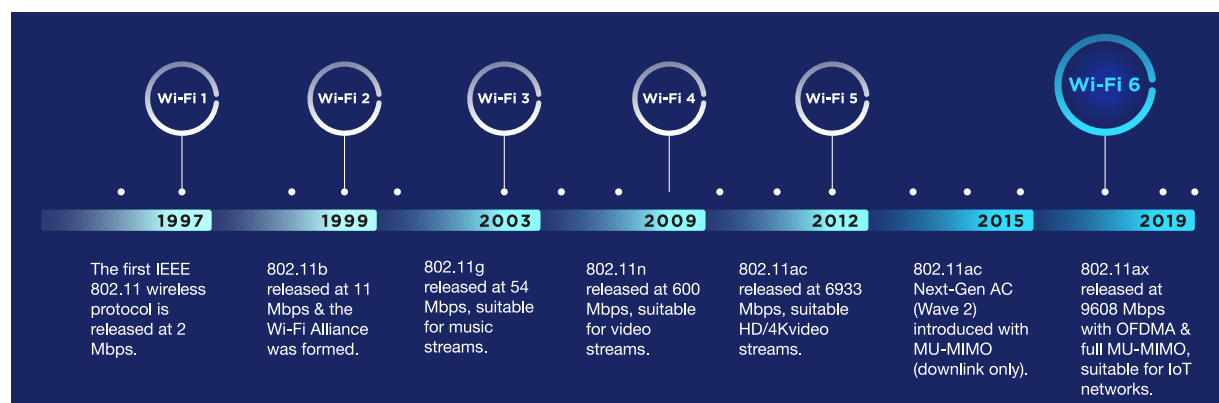


Appreciate your router's job

Better Speeds with Wi-Fi 6

In the tech world, appreciation for the router is sky high, often referred to as the gateway to your smart home or the king of the internet. But outside this bubble, routers are hardly over dinner conversation pieces, when technology upgrades in the TV, games console or mobile phone arenas, people can't wait to show off their new 8k or 5G models, but people are hardly foaming at the mouth to discuss Wi-Fi 6 routers.

Part of this could be down to positioning, routers tend to look like upside down spiders, antennas sticking out, hardly a device we want to have on show, so we position them out of sight, under the stairs, behind a sideboard or in a cupboard, just like an ugly ornament from your mother in law. So we forget about the router, as it works away, yet all the time we are connecting more devices and asking it to do more. Connecting iPads, laptops, streaming TV's and Zoom calls are now more common than ever, so whilst your network begins to struggle, everyone has forgotten that the router your ISP gave you hasn't kept up with any developments in wireless technology.

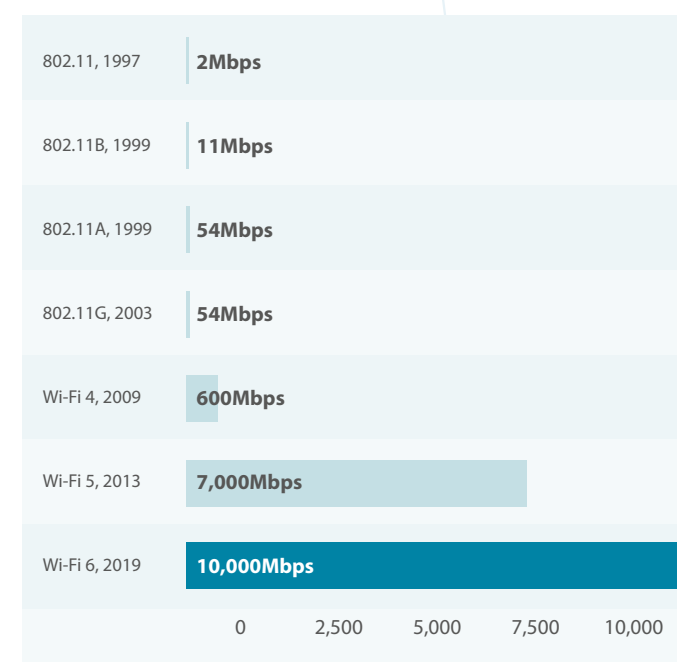


Using the timeline above, think back to the last time you changed your ISP or when they last sent you an upgrade to your modem/router, if indeed you have ever done either of these?

Was it pre 2013? pre 2015? The reason these dates are significant is that Wi-Fi 5 (802.11ac) was first developed in 2013 and MU-MIMO (see Wi-Fi the need for speed for more info) was implemented in 2015. Even if it was after these dates, Wi-Fi 6 is here and its now the new standard, so you can still make big gains in terms of the performance, capacity and security of your network.

Wi-Fi 6 was launched in 2019 and is the new standard in Wi-Fi technology bringing with it a whole host of upgrades and features from previous generations;

Why do you need it? Because smart homes are reaching the limits of their current potential. Prevailing Wi-Fi standards simply aren't built to support "noisy" Wi-Fi environments with countless personal devices and smart home gadgets running simultaneously 24/7. Wi-Fi 6 brings next-generation Wi-Fi technology into your home, giving you the quantum leap in capacity, speed, and range you need to handle all your Wi-Fi demands. Perfect for high-performance, highly device-dense smart homes.



Wi-Fi: The Need for Speed

Wi-Fi's maximum theoretical speed

Look at the graph to see just how much of a jump Wi-Fi 5 was. In 2015, MU-MIMO didn't add a significant jump in speed, but what it did for Wi-Fi was allow the router to broadcast to many devices on the network at the same time on the 5GHz broadcast band, as opposed to one at a time, increasing efficiency.

The same can be said for Wi-Fi 6, the gains in speed aren't as drastic as previous jumps, but it adds MU-MIMO to the 2.4ghz band, allow secondary devices connected to this band to process network traffic much more efficiently.

What is the difference between a router and a modem?

A modem is often described as the digital translator, taking an information signal from your ISP, and translating it into a format your router can use. This is all the modem does, so unlike a router, it doesn't provide wireless connectivity.

It's unlikely that upgrading your modem will have much effect on the speed and performance of your network.

What if my router/modem are combined?

Don't worry, this is not a trap! You can still take advantage of a separate wireless router, by setting your modem/router into bridging mode.

Bridge mode disables the **Network Address Translation (NAT)** feature on a modem/router, allowing a separate router to solely broadcast the wireless signal of your network.

Setting up bridging mode is part of the set up process, when you first install your D-Link router, you will be asked for your ISP login details, so make sure you have those to hand.

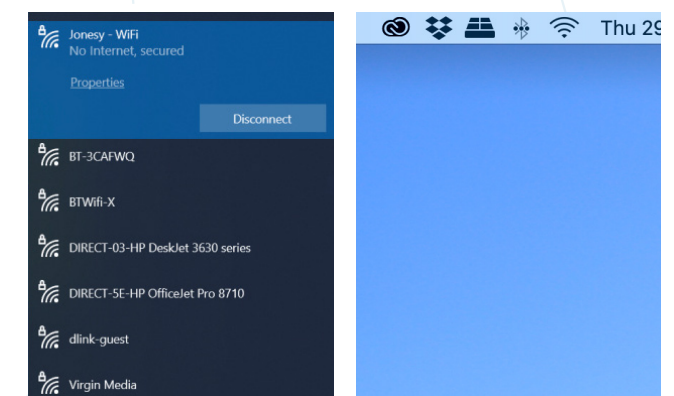
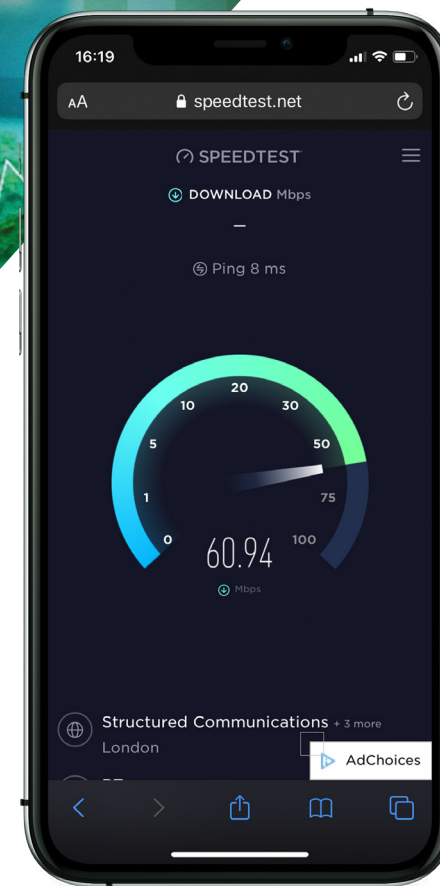


How do I know it's time to replace my router?

Speed issues?

You should be able to get an estimated speed from your ISP.

To find out what you are getting in actuality, you can use an online service, such as speedtest by ookla, on a device connected wirelessly. As you can see in this example, the users router is performing within the range expected, so he probably has a D-Link!



Coverage issues?

It's fairly easy to find out the strength of your wireless signal at various points around your home. You can run multiple speedtests, but the quickest way to find out is using the built-in tool that most operating systems, including Microsoft Windows, have built-in to monitor wireless network connections.

On Windows – click on the network icon located on the taskbar this will show the name of the network you are connected to. Each of the 4 bars represents roughly 25% of the signal strength, so 1 bar would represent a low 25% strength and 4 bars a full 100% signal.

On a Mac, the wireless strength is shown by the Wi-Fi indicator, located in the menu bar, in the upper-right corner of the screen.

On Linux systems, use the following command to display the signal level in the terminal window: `iwconfig wlan0 | grep -i --color signal`. The output in terminal will be displayed as a dB value. The more negative the value, the worse the signal strength. Anything from -50dBm to -70dBm could be considered great to decent signal strength.

Is 4/5G a Gateway option? Seperate network or Failover

4/5G is the perfect solution for areas with limited or no access to fixed internet. It's ideal for hard-to-reach areas where fixed-line ISPs (Internet Service Providers) are unreliable or unavailable. Insert your data enabled SIM card and let your network and all of your devices be powered by mobile data.

4/5G is a potential solution for any worker who requires an added layer of security, or just a separate network. If you work with peoples data, its probably safer to use a separate network rather than share with your kids on TikTok.

Whether you use the 4/5G network yourself or set it up to keep the children separate is up to you. Our mobile products include built-in dual-active firewalls (SPI and NAT) and the latest WPA/WPA2 wireless encryption helps keep your wireless network secure and your traffic safe.

4/5G also can have advantages over fixed line, particularly in rural areas where line speeds are slow, another advantage is its an instant set up – plug in a sim and go.

4G with Mesh

New from D-Link, as part of the Eagle Pro AI range, are the G416 and G415 4G routers. As part of our full mesh solution, you add other compatible EAGLE PRO AI products to expand your network as you wish, allowing you to have 4G as the network gateway.

The G415/6 combine Wi-Fi 6 technology and 4G mobile internet with AI, they offer incredible Wi-Fi coverage and speed that is always optimising and improving.

Combine these with your choice of either the E15 mesh extender or M15-2/3 or M32-2/3 to fully cover you premisis with a strong Mesh Wi-Fi signal

DWR-2101



**5G Wi-Fi 6
Mobile Hotspot**



Working from Home with 4/5G

There's a number of reasons that a home worker could live with the more basic set-up, but its not optimal. Working while the kids are at home, competing for bandwidth with another home worker or a large sized house can all have an affect on your network. Having a separate 4G network could be the solution to your work from home needs.

If you don't need a mesh solution, The DWR-960 is a great solution to provide a seperate network or a Failover as below.

With two high-performance external antennas to ensure a strong, reliable 4G LTE connection, the DWR-960 delivers connectivity to multiple devices at the same time - allowing you to stream, game or work, without having to worry about buffering, dropouts or interference.

4G Failover

D-Link 4G routers are designed with a constant internet connection in mind. You can create failover connectivity if either your fixed line or mobile broadband fails.

The router will instantly switch to the backup mobile internet when you need it most, allowing you to stay connected and enjoy the internet without interruptions so you can maintain your productivity.

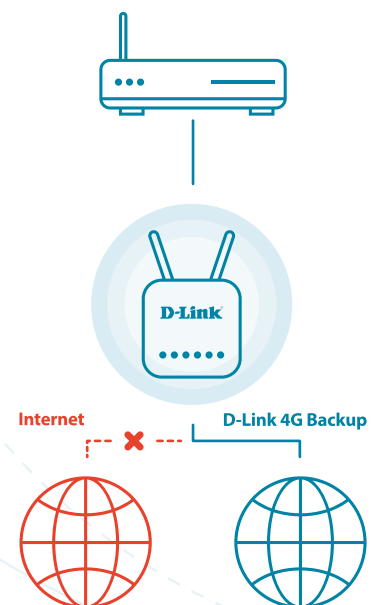
Router or Hotspot?

D-Link 4G routers are designed to remain mostly stationary, enabling you to plug in many devices including wired connections whereas, a 4G Mobile Hotspot is smaller and lighter, designed to be easily transported and to provide internet access on the go.

DWR-960



LTE Cat7 Wi-Fi AC1200 Router



The top 7 reasons to upgrade your router



QoS (Quality of Service)

QoS is an underused tool that can help you prioritise the traffic running through your network. Tell your router which devices you would like it to prioritise, such as your work laptop or VoIP handset, to ensure that your work is given priority over the streaming of Netflix or online gaming.

With optimised QoS rules, you can ensure a reduction in delay, delay variation (jitter), bandwidth, and packet loss.

All D-Link's routers have quality of service built in.



Increase your Wireless Speed

Routers come in a variety of speeds, usually AC750 – AC6000 for Wi-Fi 5 routers or AX1500 – AX11000! For Wi-Fi 6.

A router advertised as AC1200 doesn't have a top speed of 1,200Mbps. This is a combination of band speeds (2.4 and 5 GHz) E.g, an AC1200 router has a 2.4GHz band with a top speed of 300Mbps and a 5GHz band with 867Mbps.

Wi-Fi 6 is capable of up to 1.5 Gbps and can provide up to 38% faster speeds than Wireless AC, for a better way to enjoy browsing, 4K streaming and online gaming*.

App-Based Management

Setup is quick and easy with the free D-Link Wi-Fi or EAGLE PRO app. Follow the on-screen step-by-step instructions to get everything up and running in no time.

Apps simplify the task of setting up and adjusting your Wi-Fi network, monitoring when devices are connected and easily manage router updates.



Better Coverage Area

If you have a larger area to cover, a router with more external antenna's will provide more flexibility, because they can be adjusted to focus broadcast in different directions.

Router placement, i.e. placing the router as close to the centre of the house and ensuring firmware updates are installed are two other good ways you can improve the coverage.



Easily implement a Guest Network

A guest Wi-Fi network allows access to your network, without sharing your Wi-Fi password and restricts access & discoverability on your main network.

Separating your guest network from your home network is more important when you work from home. Letting your friends and family use your Wi-Fi can cause a serious issue if a device spreads a virus to the network you work on.

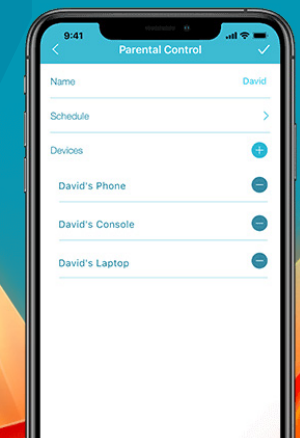


MU-MIMO (multi user, multi input, multi output)

Wi-Fi 6 uses a combination of OFDMA and MU-MIMO technology to increase the maximum devices your network can handle by up to 4x, bring more of the latest tech into your smart home. OFDMA transmits to multiple devices simultaneously to make sure everyone efficiently uses the home Wi-Fi.

Parental Controls

Children stumbling across questionable or harmful material is inevitable. Parental controls allow you to block any unsafe sites, so you know that your children are viewing age appropriate content. You can also set a schedule for your kids to be able to access the internet, so no more out of hours browsing! If that doesn't work, you can block a device from accessing the internet at all.



Mesh - Whole home coverage

Mesh Wi-Fi or Whole Home Wi-Fi systems consist of a main router that connects directly to your modem, and a series of satellite modules, or nodes, placed around your house for full Wi-Fi coverage. They are all part of a single wireless network and share the same SSID and password, unlike traditional Wi-Fi routers.

A Mesh network is perfect for larger/3 storey homes or oddly shaped abodes, position each node throughout your home, to enable better Wi-Fi coverage

Why Mesh?

Full-strength Wi-Fi for your whole home.

Enjoy one seamless network for your entire home. Experience Wi-Fi coverage in every room and get rid of all Wi-Fi blackspots and dropouts.

More Coverage

The M32 Series can cover up to 740 sqm — enough seamless Wi-Fi coverage to eliminate pesky Wi-Fi dead zones in houses of different sizes and designs

Free Yourself with Smart Roaming

Don't let endless disconnecting and reconnecting to different networks cripple your Wi-Fi experience. Smart Roaming keeps you constantly connected to the strongest signal even as you move from room to room.



M15 - 2/3

AX1500 Mesh Wi-Fi 6 System - 2 or 3 nodes



M32 - 2/3

AX3200 Mesh Wi-Fi 6 System - 2 or 3 nodes



E-15



Wi-Fi extenders

If you have a good quality router, but can't reach all the corners of your property, a good idea is a Wi-Fi extender to amplify the signal around the home. A good extender will support multiple operational modes and can operate as an Access Point, bridge, bridge with AP or a repeater, giving you the flexibility needed for your network. The E15 is designed to work flawlessly with EAGLE PRO routers/ mesh or can extend any network with a fast Wi-Fi 6 connection

D-Link®

D-Link (Europe) Ltd. First Floor
Artemis Building, Odyssey Business Park
West End Road, South Ruislip
HA4 6QE United Kingdom
0208 955 9000