



Everything you need to know about Wi-Fi

This is our comprehensive guide to the three most popular Wi-Fi network options. The table below describes three options, the details of which are included in the descriptions below:

	Wi-Fi Access	Automatic handover	Dual band over single SSID	Single SSID network support	PoE support	Surface mountable	Firmware Updates	Cloud support
A	✓							
B	✓	✓	✓	✓	✓	✓		
C	✓	✓	✓	✓	✓	✓	✓	✓

Wi-Fi Access:

Wi-Fi access quite simply means the ability to connect to the internet using a wireless connection.

Automatic client handover:

This system allows wireless devices to automatically be connected to the Wi-Fi access point broadcasting with strongest signal as you move throughout the premises, without the need for the user to physically scan for and connect to the Wi-Fi network.

Dual band over single SSID:

Modern day Wi-Fi operates on two bands or frequencies, 2.4 GHz and 5 GHz – the latter being the faster. Not all wireless clients/devices support 5GHz meaning you'll need two SSIDs running on your router if you're using standard Wi-Fi equipment - usually differentiated by "2.4GHz" or "5GHz" on the end of the SSID (popular on Virgin Hubs).

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Single SSID network support:

A SSID or Service Set Identifier, is quite simply the name of your Wi-Fi network (e.g. MYWIFI). It is important that your Wireless Access Points can all be configured with the same SSID thus forming one network throughout your premises. Standard Wi-Fi equipment doesn't support this.

PoE support:

Power over Ethernet means that your device can be powered via the attached data cable using a device called a PoE injector. This creates complete flexibility when deciding the placement of your Wi-Fi access point as you don't need to install it near a power outlet.

Surface mountable:

Device can be physically mounted to wall or ceiling for a discrete and aesthetically pleasing installation.

Automatic Firmware updates:

Most, if not all internet connected devices, have software built into them known as firmware. It's the firmware that controls the device and allows it to perform specific functions such as control Wi-Fi. The hardware vendor will release periodic firmware updates keeping the hardware secure, free from bugs and feature rich. It's important that your hardware updates itself automatically or the manual firmware updates fall to the end user.

Cloud support:

A term which has got everyone asking, "What on earth is *The Cloud*?". The Cloud quite simply means a service which is supplied over the internet. If you're backing up your computer data into "The Cloud", you're backing it up online/over the internet. Cloud support for your W-Fi hardware means it too can be connected to an internet based service where it can be controlled, configured, troubleshot and updated.

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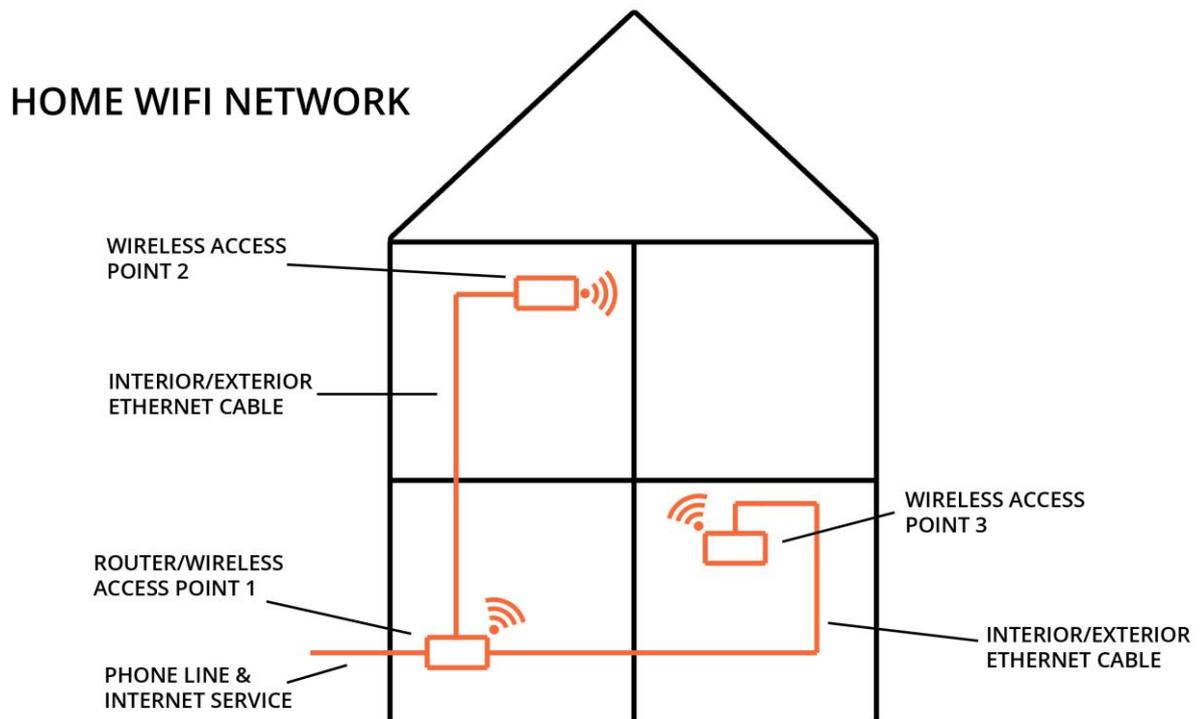


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How it works

Contrary to popular belief, Wi-Fi networks rely heavily on wires! Whilst that might sound ridiculous, we have included a network diagram below to illustrate how it works.



The above diagram simply illustrates the broadband service being supplied to the premises either via the phone line (ADSL) or via a cable (fibre optic) service. The broadband router is configured to bring the internet connection into the property to which all other devices must connect in order to use the internet. In the case of our robust wireless network, our additional wireless access points are cabled back to the router so that when wireless devices (iPhones, iPads, laptops etc.) connect to the wireless access points, internet data is passed back to the router and out to the internet.

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Costs:

Option A:

Utilises basic Wi-Fi hardware which is generally available on the high street (brands such as Netgear, DLink, Buffalo etc.) Hardware costs vary from £30 per access point to £80 per access point. We'd describe this as a cheap and cheerful solution which provides basic wireless access.

Option B:

Utilises the Ubiquity product line (not available on the high street) and the costs are approx. £150 per access point. We'd describe this as a good, mid-priced option which provides good, reliable wireless access throughout your premises and lends well to more advanced requirements such as multi-room audio wireless control (SONOS etc.)

Option C:

Utilises the Ruckus R300 product line (not available on the high street) and costs are approx. £280 per access point. We'd describe this as good as it gets! If you're looking for guaranteed wireless robustness, reliability and performance, this is the only way to go - you can honestly set it and forget it!

The above costs do not include installation/setup costs. PC Man Ltd. will carry out a site survey at a fixed rate of £75 (the cost for which is deducted from your final project cost should you proceed). The purpose of the survey is to ascertain how many wireless access points are required to drive your entire space and also to determine where necessary data cables, if any, should be installed. All required data cables are laid as discreetly as possible utilising external elevations, internal voids and ceiling spaces. We always aim to provide an installation which is aesthetically pleasing! Following our site survey, we'll provide a system design which is yours to keep, as well as a fixed price for the entire project.

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