

# What is Superfast Broadband?



**SUPERFAST  
BRITAIN**

**Superfast broadband is the next generation of broadband.**

**It is considered to be internet access with connection speeds of greater than 24 megabits per second (mbps), and ideally around 30mbps, but some services can achieve speeds of up to 100mbps and emerging technologies will push these speeds higher.**

**A range of technologies can be used to deliver superfast services, including:**

- Fibre based solutions
- Fibre to the cabinet (the technology being used most extensively in this area) which is a mixture of fibre connections to the local cabinet then using the copper network to feed into premises
- Fibre to the premise, which is a fibre optic cable to the home and other solutions such as wireless are also possible

## **Benefits**

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- School children are often required to do their homework online and undertake independent research as part of their studies - faster broadband makes this much easier
- Working from home is much easier
- You can use multiple devices at the same time with no service interruptions
- Stay in touch with family and friends using video calls, email and social networks
- It's faster to download or stream music, games, tv programmes and films
- Shop & pay bills securely online
- Use online data storage to back up & save photos, videos and other precious memories
- Businesses can access global marketplaces
- Business access to research, advertising, selling and communication

## **How do I get it?**

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Contact your current Internet Service Provider (or other ISPs) to find out what superfast (or other fast broadband packages) are on offer. If fibre broadband is available, you will need to check your current broadband contract. Typically, customers sign up for contract periods (normally 12 / 18 months) and you may need to complete this agreement before switching broadband providers. If you are still within your contract, most broadband providers will allow you to upgrade to a fibre package.

## **How much will it cost?**

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Prices may not be much more than you are currently paying for standard broadband.

## What can I do to improve my broadband speed?

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Use your main telephone socket: try to connect your router directly (using a microfilter if needed) to your home's main phone socket instead of an extension socket. This will reduce the chances of your home wiring interfering with your broadband speed. You'll probably find the main socket in your front room or hall, near where the phone line enters your house.

### Avoid Electrical Interference

TVs, lighting and power cables produce electrical interference that can affect your broadband speed.

The worst offenders are:

- Halogen desk lamps
- Electrical dimmer switches
- Stereo or computer speakers
- Fairy lights
- Televisions and monitors
- AC power cords
- Low quality 900MHz cordless telephones

You can reduce this interference by not leaving your router on the floor. Try a desk or table. Make sure that all wires are firmly connected and secure. Check that any electrical devices that can cause interference are as far away as possible from the router and its wiring.

### Get the Most of your Wireless

Your wireless signal will be weaker once it has travelled through walls and objects. Although it's not always possible, a direct line of sight between your equipment and your wireless router will give you the best connection.

Things like thick walls or thick ceilings, large metallic surfaces such as radiators, mirrors and refrigerators, can all impact on your wireless connection.

If it isn't possible for you to have a clear line of sight, then the next best thing is to position things to minimise the number of walls or objects between your wireless router and your computers or devices.

Although a wireless connection gives you more flexibility to position your devices around your home, wireless can occasionally suffer from interference, which can affect your browsing experience. Generally a wired connection will give you much faster and more stable speeds than a wireless connection.

Wireless is like radio in that interference happens when devices that use the same frequency clash with each other on the airwaves. Wireless broadband is the main user of the 2.4GHz spectrum (or band), but so do other devices like security cameras and computer accessories like wireless keyboards and speakers.

Microwave ovens also use the 2.4GHz band which is why they can cause problems if your wireless router or computer is very near to one, or if the microwave is faulty. There's also a chance that you might suffer interference from your neighbours' wireless routers.

Like radio, wireless routers broadcast their wireless signal on different channels. To minimise interference, some wireless routers have a built-in Smart Wireless feature which scans the airwaves and then chooses the channel with the least congestion. With other wireless routers, you may need to change the channel manually to find the best one for your home.

## **Understand your Wireless Technology**

Wireless technology has developed quickly so you may find that some older wireless devices may not work as fast as newer ones.

There are four different wireless standards: 'b', 'g', 'n' and 'ac'. 'b' is the oldest and slowest, while 'n' and 'ac' are the newest and fastest.

It's important to understand that even if you have a wireless router with the latest 'n' or 'ac' technology, it doesn't mean that devices with 'b' wireless will work any faster. Your devices also need to support the newer technologies.

Another thing to understand is that wireless technology is inherently slower than connecting via wires. It's also dependent on the speed of the connection coming into your house, as well as other factors like how far away your devices are from the router, how many devices you've got connected at any one time, and interference from other wireless or electrical devices.

## **Check other Broadband Use in your Home**

It's worth remembering that your broadband speed is shared with everyone else who is using your router.

Is your broadband speed slower than you expect? If so, check the number of devices (such as smartphones, computers, smart TVs, tablets and games consoles) that are connecting to your router as multiple users can affect your broadband speed.

For example, if you have four people in your house all using the internet on different devices, the speed that is delivered to your router will be shared between those devices (roughly a quarter of the available speed each).

Everyone's speed will be significantly slower than if just one device was using the internet.

## **Check your Computer**

If your computer is generally slow when completing non-internet tasks, then it will also be slow connecting to the internet.

## **Avoid Heavy Traffic**

The speed you'll get from broadband isn't fixed. It depends partly on how many people are using the internet; similar to rush hour traffic, you may see some slow down during busy periods. The peak period is 4pm to 12 midnight.

Some websites may also slow down during busy periods for example popular events may cause issues on related web pages.

If you can, try to identify the internet activities that don't have to be carried out at peak times and do them at different times of day. You'll then be able to share your connection better between your home users and the rest of the online community. For example, if someone uses peer-to-peer software, find out how to turn it off at times when other people at home want to use the internet.