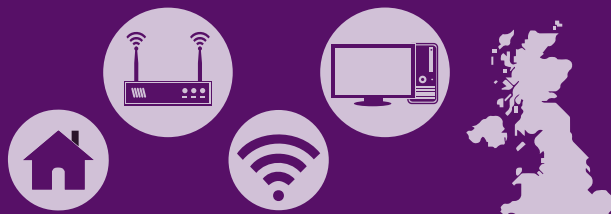


UK HOME BROADBAND PERFORMANCE

A consumer summary of fixed-line broadband performance



This factsheet includes highlights from Ofcom's research into home broadband performance, focusing on three key measures relevant to the consumer experience:

- Download speeds**
- Upload speeds**
- Video streaming**

Types of home broadband

This report looks at the performance of three types of broadband connection:

For more information about the types of broadband available please visit Ofcom's **Broadband Basics guide** at www.ofcom.org.uk

ADSL ADSL is standard broadband delivered over the copper telephone line.

Fibre Fibre technology uses fibre-optic lines. Speeds are faster than ADSL. There are two main types: **Ultrafast full fibre**, which involves fibre optic cables running directly to homes, and **Superfast fibre-to-the-cabinet (FTTC)**, which uses a mixture of fibre-optic cables and copper wires. Most of the fibre broadband in the UK is FTTC or Cable.

Cable Cable technology is used to deliver superfast home broadband over cable TV networks.

The benefits of superfast and ultrafast broadband

Superfast and ultrafast broadband are significantly faster than standard broadband. Superfast broadband offers speeds of 30Mbit/s or more, and ultrafast 300Mbit/s or more.

Using superfast broadband means that you can:

- download things much faster.
- make high quality video calls over Wi-Fi.
- easily access online TV and music streaming services.
- have several people using the broadband connection at the same time in your home.

Reasons why you may not be getting the speed advertised

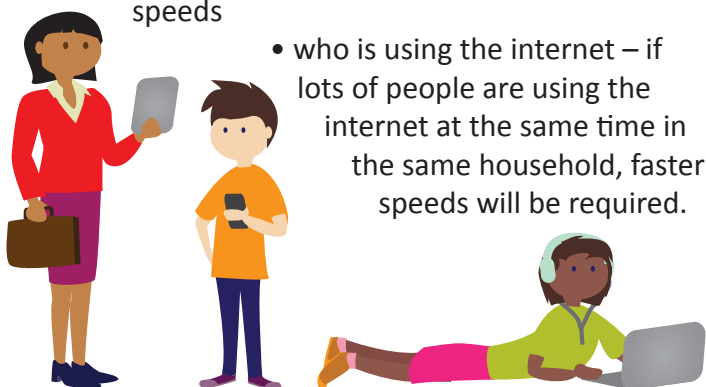
- Your Wi-Fi router may need an upgrade, or may be poorly configured.
- Your router may experience interference due to its location within your home.
- More people use your provider's network during peak hours which may cause slower speeds at these times
- Distance from the cabinet exchange can affect your broadband connection.

Choosing a home broadband service

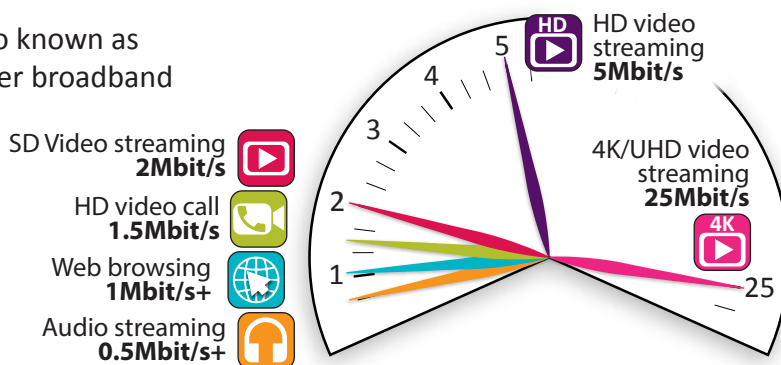
When choosing a broadband package it is worth thinking about what your household use the internet for:

- video streaming – high definition (HD) and 4K, also known as ultra-high definition (UHD); streaming needs faster broadband speeds

- who is using the internet – if lots of people are using the internet at the same time in the same household, faster speeds will be required.



Approximate speeds required for online activities



Broadband providers

There are a number of providers of ADSL and fibre broadband. The providers included in our research for these types of technology are BT, EE, KCOM, Plusnet, Sky and TalkTalk. Virgin Media is the only cable provider for the mainland UK.

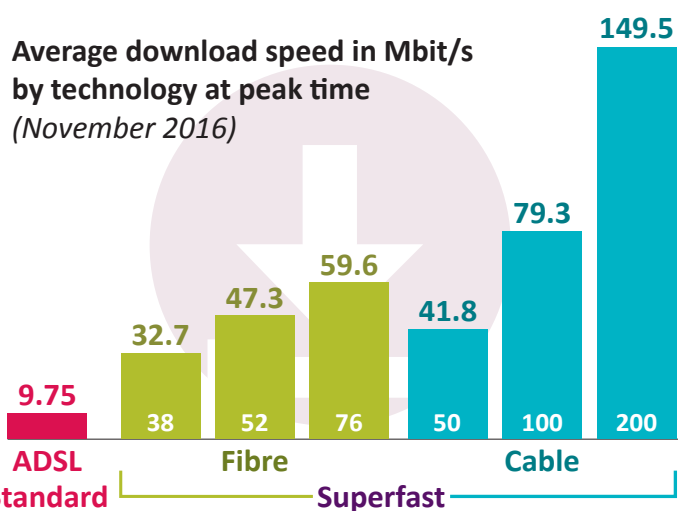
Technology	Typical advertised speeds
Standard	17Mbit/s
Superfast Fibre	38Mbit/s, 52Mbit/s, 76Mbit/s,
Superfast Cable	50Mbit/s, 100Mbit/s, 200Mbit/s

Most of the ADSL and FTTC packages in the UK are provided over the same copper network, so it is unlikely that customers will experience a substantial increase in performance by switching from one ADSL2+ package to another, or from one FTTC package to a similar one.

Download speeds

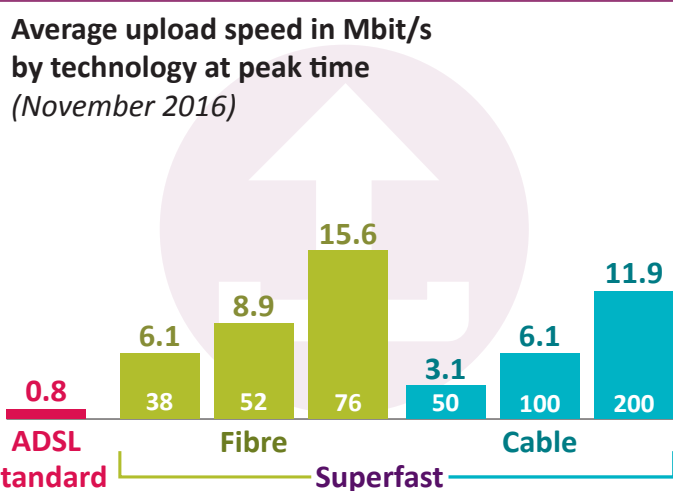
These charts show the average download and upload speeds for different technologies between 8pm and 10pm (peak times), when most people are using the internet at home.

Download speeds determine how long you must wait when downloading content on your computer or device. Faster speeds are particularly important for downloading larger files, such as films or apps.

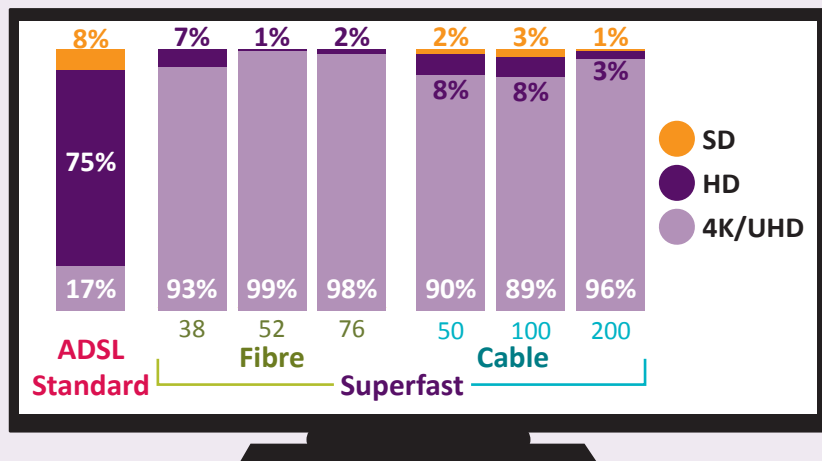


Upload speeds

Upload speeds determine how long it takes for a file to transfer from your device to the internet. Higher speeds are important for sharing photos on social media, attaching documents to email and posting video on YouTube.



Percentage of Netflix videos reliably delivered via SD, HD and 4K/UHD at peak time (November 2016)



There are a number of other metrics that also determine user experience that are included in the report, such as webpage loading time, latency and packet loss.

Video streaming

Video streaming is one of the most common internet activities and viewers expect high quality. Our research looks at the quality of video streaming in Standard Definition (SD), High Definition (HD) and 4K - also known as Ultra High Definition (UHD). The higher the quality of the stream, the faster the speed required.

Ofcom's residential broadband speeds Code of Practice

Under our voluntary Code of Practice on broadband speeds, Internet Service Providers (ISPs) commit to give clear information on broadband speeds to consumers when they consider or buy a home broadband service, and to provide redress when speed performance is poor. If you are not receiving the speeds you expect, you should speak to your provider.

The full Code of Practice is available at www.ofcom.org.uk

Helpful tools from Ofcom

Ofcom accredited comparison sites can help you find out what broadband deals are available



Ofcom's broadband and mobile checker allows you to find out which services are available in particular locations, such as your home or workplace.

The app also enables you to see if your home Wi-Fi is likely to be slowing down your broadband connection.