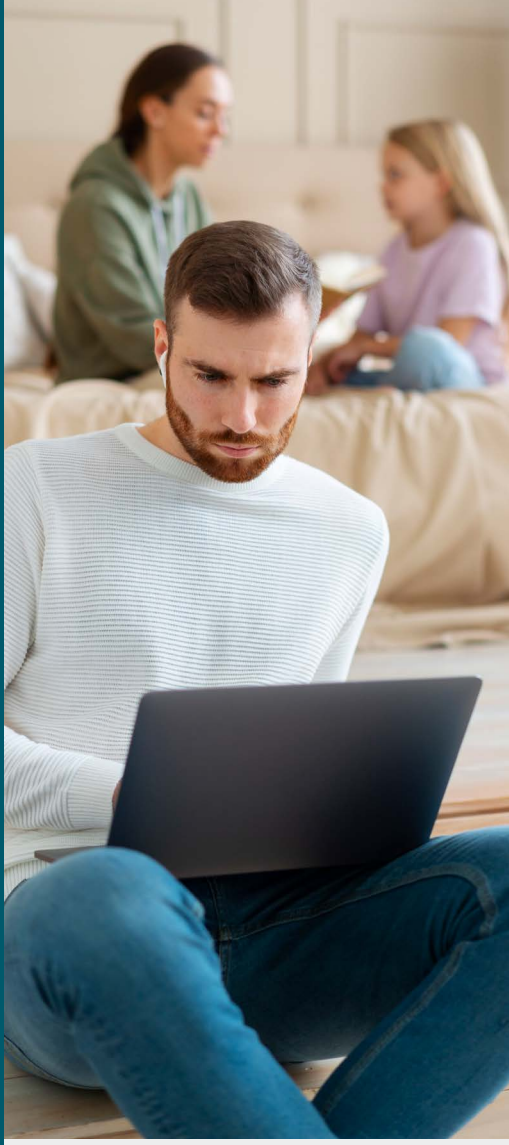
An Coimisiún um
**Rialáil Cumarsáide**
Commission for
**Communications Regulation**



# All About Broadband

Independent information and advice about broadband services

ComReg.ie

# Who is ComReg?

## ComReg is the Commission for Communications Regulation.

- We are an independent public body with powers under the law
- We protect consumers and provide independent advice and information

At ComReg, we regulate:

- The electronic communications sector which includes phone and broadband
- Postal services like An Post

For further information visit **comreg.ie**

# Types of broadband technology

Multiple types of technology provide broadband to homes and businesses in Ireland. The broadband connection you can get will depend on where you live, the available technology, and what providers are operating in your area.

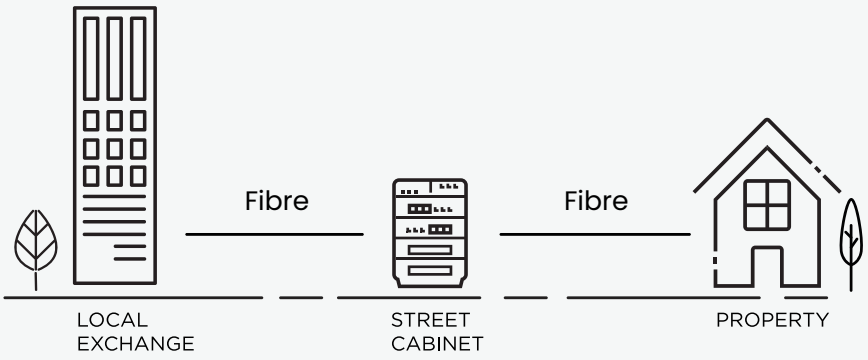
## What are the different types of broadband technology?

The main types of broadband connections available in Ireland include:

- Fibre
- Part-Fibre
- Cable
- Copper
- Fixed Wireless
- Satellite
- Mobile

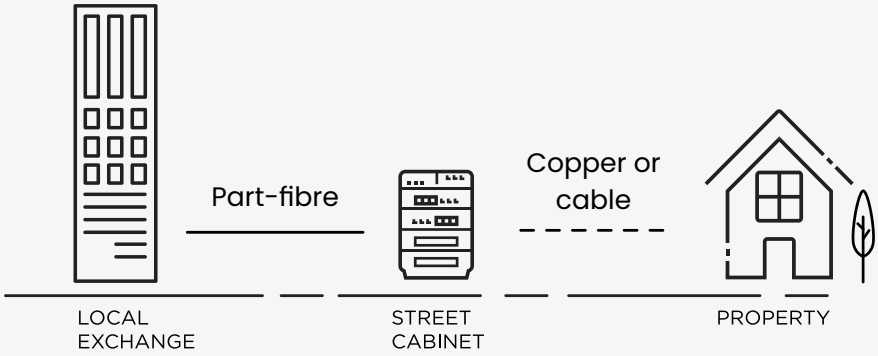
## What is Fibre broadband?

Fibre broadband is the latest broadband technology. Fibre broadband is sometimes called Fibre to the Premises (FTTP), Fibre to the Home (FTTH) or Full-Fibre. This is where all the lines that bring internet to your home or premises are fibre-optic cables. Now, a full-fibre connection can typically deliver speeds of up to 2 Gigabit per second (Gbps) which is 2,000 Megabit per second (Mbps).



# What is Part-Fibre broadband?

Part-Fibre or Fibre to the Cabinet (FTTC) broadband uses fibre lines up to the local street cabinet and then copper (your traditional telephone line) or cable (your traditional TV line) from there to your home. Part-Fibre generally delivers speeds of up to 1 Gigabit per second (Gbps) however these speeds depend on the distance between your premises and the street cabinet.




# What is Cable broadband?

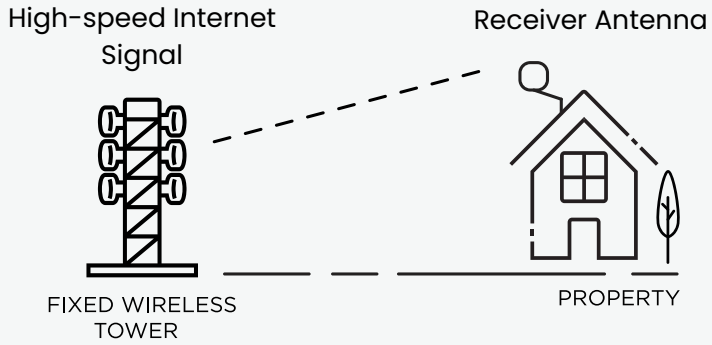
Cable broadband is broadband provided over a cable TV network. Cable broadband can provide speeds of up to 1 Gigabit per second (Gbps) which is 1,000 Megabits per second (Mbps). Cable broadband networks are usually part-fibre – meaning that they use fibre lines to your local street cabinet, then cable (your traditional TV line) into your home.

# What is Copper broadband?

Copper broadband refers to connections that use copper lines (your traditional telephone line) that connect from the telephone exchange all the way to your home. The copper line technology was originally designed to deliver telephone voice services at a fixed location. Copper is slower than Fibre, Part-Fibre or Cable broadband. Copper networks are gradually being replaced by newer technologies.

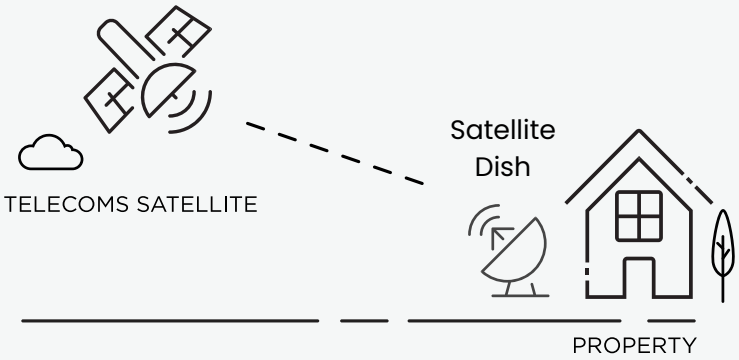
## What is Fixed Wireless broadband?

Fixed Wireless or Fixed Wireless Access (FWA) is a type of broadband that uses radio signals to connect a home or premises via a receiver to a local fixed base station, meaning there is no connection through a cable, other than potentially from a mounted antenna into the premises.



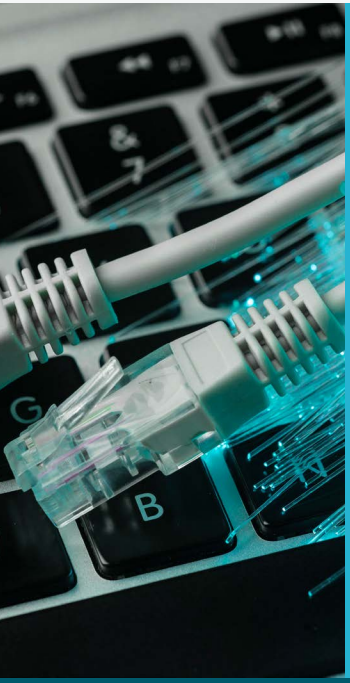

## What is Satellite broadband?

Like satellite TV, Satellite broadband sends a signal from a telecoms satellite to a satellite dish installed on your property. It then gets hooked up to a Wi-Fi router for broadband connectivity. This means that you do not have to rely on a connection through a cable to get broadband regardless of where you are in the country.



## What is Mobile broadband?

Mobile broadband provides an internet connection using a mobile phone or Wi-Fi router which contains a SIM card that connects to the same 4G or 5G signals as a normal mobile phone. As with fixed-line broadband, several different devices may connect to mobile broadband at once. Building materials and home insulation may adversely affect indoor mobile coverage. Visit comreg.ie/coveragemap to check the mobile coverage in your area, and compare the signal strength of the different providers.



# Broadband speeds explained

Something that is often quoted when purchasing broadband, or when it is advertised, is broadband speed. This is usually measured in megabits per second (Mbps) or gigabits per second (Gbps). One gigabit per second (1Gbps) is the same as one thousand megabits per second (1000Mbps). The more megabits, the faster and better quality your broadband connection, all other factors being the same.

## These are the different speeds that you may see mentioned.

**Upload speed:**

This is how fast you can upload data to the internet. This would affect things like sending emails, uploading videos or pictures to social media, or video calling.

**Download speed:**

This is how fast you can receive data from the internet. The higher the speed the quicker web pages and images will download, and the higher quality video stream will be possible.

## What speed details are internet service providers required to include in my contract?

Your provider is required to include the following in your contract:

- The minimum, normally available, maximum, and advertised download and upload speed of fixed networks
- The estimated maximum and advertised download and upload speeds of mobile networks

You can check your internet speed by using one of the online tools.

## What broadband is available in my area?

If you are unsure as to what type of broadband connections are available in your area and what speeds they are capable of, our free Broadband Checker tool can help. All you need to do is simply input your address or Eircode. Scan the QR code on your mobile device to access our Broadband Checker tool, or visit: comreg.ie/broadbandchecker

To find the best broadband deal that suits your needs, we have an independent price comparison tool to help you choose: comreg.ie/compare

# Get the most out of your broadband

Several factors cause broadband service issues such as adverse weather conditions, line repairs, and maintenance, there are also several possible causes within our homes too.

## Get the most out of your broadband at home

If you are experiencing slow internet speeds, you could consider the following:

### Are you connected to your router via a network cable or via Wi-Fi?

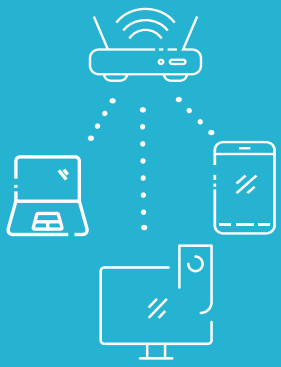
A wired ethernet connection will always be more reliable and will generally be faster.

### How far are you from your router?

The further you get from the router, or the more obstructions such as walls in between your device and the router, the weaker your Wi-Fi signal is. For that reason, it's better to place the router in a central location where you are more likely to cover the far corners of your home.

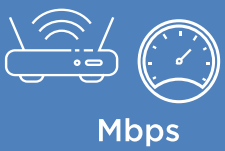
## How many devices are currently connected?

The more devices that are connected, the more chance that too many of them are active at the same time using internet bandwidth. This could result in slower speeds as your line struggles to keep up with the demand. This particularly applies in the case of uploading or downloading video which is particularly demanding in terms of network use.



## What speed are you currently getting?

If there is an issue with your broadband, you should connect to your router using a wired ethernet connection and check to see what speed you are achieving and how it compares to the details of the package you are paying for.




## Slower speeds may occur at certain times of the day.

Your speed may be noticeably slower when internet usage is at its highest during the day.

# What can I do to speed up my broadband and improve my connection?

### Try a wired connection

The most stable connections will likely be achieved with a wired connection. This would mean connecting a computer or laptop (for example) directly to a router via an ethernet cable.

### Reposition your router or install a Wi-Fi booster

Your router's position will greatly influence where in your house will have the best internet connection. If it is in an upstairs room, for example, its signal may not reach a room in the opposite corner of the house. Consider moving it to a more central location.

Wi-Fi boosters improve the range at which your Wi-Fi signal will reach. This means that no matter where you are in your house, you should experience a strong and stable connection.

### Restart your device often and keep software and apps up to date

Running old and outdated software may result in a slow device. Be sure to download and install the latest updates to keep devices running as fast as possible. The same is true for the latest version of apps.

### Consider changing Wi-Fi channels

When initially setting up, many routers will automatically select a Wi-Fi channel on which to operate. It is possible that this channel could be already occupied by a different nearby Wi-Fi network, in which case a different channel may lead to better broadband speeds, and it could be worth experimenting to find what works best in your home.

### Upgrade older devices

While an older device may still retain much of its functionality, it may feel sluggish to use, usually because older hardware can struggle to run more recently released software. Consider upgrading your device if you feel it no longer meets your demands.

### Take stock of all your connected devices

Having multiple devices connected to your internet may result in slow speeds due to the demands being put on the connection. We often may have more devices connected to the internet than we realise. This could include laptops, phones, tablets, TVs, smart doorbells, security systems, smart home devices, smart appliances, and more.

## How to find the right broadband plan for you

An important factor in getting the most out of your broadband is knowing and buying the right broadband package for you. This will depend on many factors including:

- What type of broadband connections are available in your area, visit: comreg.ie/broadbandchecker
- What providers you can purchase from, visit: comreg.ie/compare
- What data allowance best suits your needs
- What you are prepared to spend on the plan

Those who don't work from home and only use their broadband occasionally don't necessarily need the same package as those who have multiple people at the same location, with many connected devices.

If you're thinking about moving your service to another provider, see our switching information on comreg.ie

## What information can I get about my broadband plan?

For those currently in contract, you are entitled to receive **Best Tariff Information** once per year and **Best Tariff Advice** at the end of your contract. This should provide you with information on your past broadband usage as well as a recommendation on what plans best suit your needs. So you're better informed to choose the service that meets your specific needs.

When purchasing a broadband service or entering a new contract, consider the following important questions:

- How many devices will be connected to the internet at one time streaming video?
- What will be the main internet activity?
- How often will you be actively using your broadband on a day-to-day or week-to-week basis?

## Here are some common data internet activity uses and examples of estimated required broadband speed based on these uses:

**Web browsing**

**Minimum broadband speed needed**

1 - 2 Mbps (download)

**HD video streaming**


**Minimum broadband speed needed**

5 - 10 Mbps (download)

**Real-time online gaming**

**Minimum broadband speed needed**

0.25 - 1 Mbps (download)
0.5 - 1Mbps (upload)

**Voice over IP**


**Minimum broadband speed needed**

0.25 Mbps (download & upload)

**Ultra HD video streaming**


**Minimum broadband speed needed**

25 - 35 Mbps (download)

**Video calling**

**Minimum broadband speed needed**

1 Mbps (download & upload)

Mbps is Megabits per second. Precise estimates would depend on a range of factors, and these estimates are for illustrative purposes only.

Those who actively game online or video stream will probably need the fastest and most reliable broadband connections. For those who simply browse the web or stream the occasional movie or series, a basic broadband package may meet the entirety of your needs.

Likewise, households with several active internet users and numerous connected devices will not have the same broadband demands as those who live alone.

# Upgrading your broadband & home phone technology

Broadband services are changing, as steps are taken to enhance and upgrade the technologies on the networks over time. These enhancements are not unique to Ireland and are happening all around the world.

## Upgrading Ireland's networks

Copper networks are old and are becoming harder and more expensive to maintain. The gradual roll out of fibre networks should improve user experience.

## What does internet over fibre broadband mean for my broadband and home phone service?

Fibre broadband is a fast and reliable technology for the delivery of internet services. Fibre broadband enables the seamless use of multiple devices connected to the internet at the same time – smartphones, TV services, computers, smart speakers as well as your home phone service.

Landline phone calls will be delivered over a digital technology, called VoIP (Voice over Internet Protocol) or VoBB (Voice over Broadband). Also referred to as 'digital phone' or 'digital voice'.

## Landline phone calls delivered over a digital technology

The Public Switch Telephone Network gives us what we commonly refer to as a landline. This is the fixed home phone connection that many of us have traditionally had at home or work.

VoIP (Voice over Internet Protocol) is a technology that allows us to make calls over an internet connection. This can be done with a computer, a smartphone, or any other mobile device such as a tablet.

As fibre broadband becomes an ever more available technology, and fixed landlines decrease, VoIP services will be in more demand in the coming years. The potential benefits to consumers are lower costs (especially for international calls), higher call quality, no need for a separate dedicated phone line, and little to no additional maintenance.

## Can I keep my home phone service over my fibre broadband internet?

Most or all broadband providers will allow you to keep your phone service over your fibre broadband internet. A home phone service over fibre broadband VoIP (Voice over Internet Protocol), can still use a standard type telephone handset, but it will be plugged into the internet modem instead of into a socket in the wall.

## Will I need new equipment?

If you need a new broadband service installed, your provider may be able to advise you on any new equipment that may be needed.

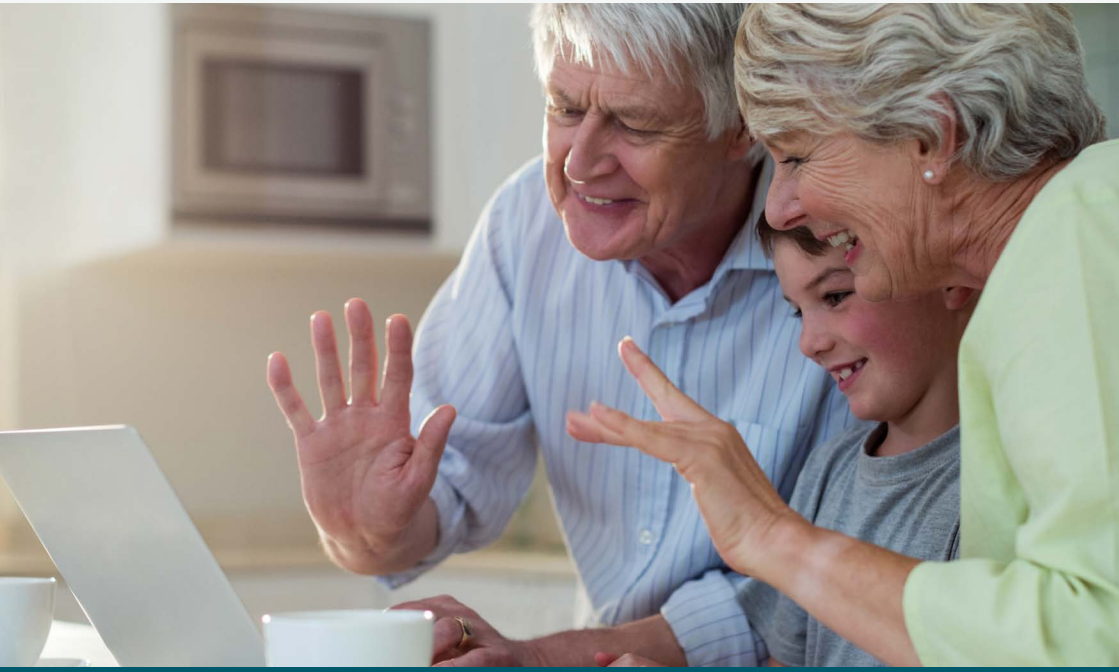
## What other devices do I need to consider?

Certain devices such as care alarms, personal alarms, security alarms and fax machines may be connected to your landline. If you have a device like this, it might need to be replaced or reconfigured to continue working once you move to a VoIP service.

## If there is a power cut

If there is a power cut to the home and the internet stops working, the phone service and wireless devices dependent on the broadband connection will not work either. One option available to you to mitigate against a risk of temporarily losing a telephone or internet access during a power cut, is the use of a mobile phone.

In addition, if the network has not lost power, you can use a battery backup device to power your modem to be able to continue to use your home landline telephone service during a power outage at your home.



# Contact us for advice and support

### Consumer Care Team

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| Phone: | (01) 804 9668<br>Monday to Friday: 8am to 8pm<br>Saturday: 9am to 1pm |
| Email: | consumerline@comreg.ie |
| Text: | COMREG or ASKCOMREG to 51500 to receive a call or text back (standard SMS rates apply) |
| By Post: | Consumer Care Team, ComReg, One Dockland Central, Guild St., D01 E4X0 |
| Web chat and online form: | **comreg.ie** |

### Access officer

| | |
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| Phone: | (01) 804 9639 |
| Email: | access@comreg.ie |
| By Post: | As above addressed to the Access Officer |

## ITRS (Irish Text Relay Service)

The ITRS ensures that those of us who are deaf, hard-of-hearing and, or speech-impaired, may make and receive calls independently. The service provides the translation of text into voice and voice into text. These calls are relayed through an ITRS agent who performs the relay of the text.

The service is accessible from mobile phones, tablets, and PCs. The ITRS service is operated by Eir serving the customers of Three, Eir, Sky, Tesco Mobile, Virgin Media and Vodafone.

Visit itrs.ie for more information.

**Privacy information:** Our Privacy Notice explains what personal information we collect and use about individuals, what we do with it and why. See our Privacy Notice here comreg.ie/privacy

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