

# Optimising your home network



## What equipment do you need?

### Getting your connection to where it needs to be

To enhance your internet connection or extend its reach at home, there are several types of equipment available to help.

For example, if your router is located in the kitchen at one end of the house and your office or study is at the other, the connection might be weak where you need it most. Also, when multiple family members are online simultaneously for work or study, it's essential to ensure a strong and reliable connection in each room.

### Modems



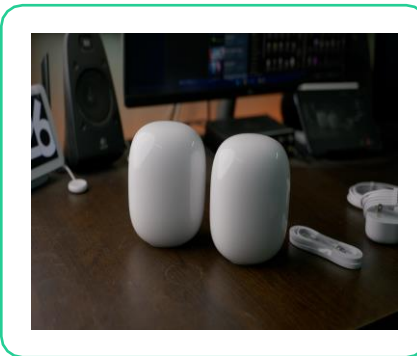
A **modem** is a device that connects your home to the internet by converting signals from your internet service provider into a format your devices can use.

It's the gateway that brings the internet into your home. Some modems come with a built-in Wi-Fi router, allowing you to access both

wired and wireless connections with a single device.

However, other modems only provide internet access, meaning you'll need a separate router to create a Wi-Fi network.

### Routers



**Routers** allow devices to connect to your internet service, either directly using an ethernet cable if you only have one device, or wirelessly using Wi-Fi if you have more than one device connecting to the internet.

#### What to look for in a good router:

- Mesh capability, if required
- Wi-fi 6
- Available router bandwidth

Some Retail Service Providers (RSPs) can supply a router tailored to your connection. While this may come with an additional cost, it can be beneficial for warranty coverage and easier customer support.

### Extenders and mesh systems

To get your signal even further a **Wi-Fi extender** or **mesh system** may be useful.

#### Wi-Fi Extender



A Wi-Fi extender is a device that boosts the range of your existing Wi-Fi signal, helping to eliminate weak spots in your home. It works by receiving your router's signal and retransmitting it to areas with poor coverage.

#### Pros:

- Expands Wi-Fi coverage to hard-to-reach areas.
- Easy to set up
- Generally, more cost effective.

#### Cons:

- Can reduce internet speed, as the extender splits bandwidth between the router and your devices.
- May not fully eliminate dead spots if positioned poorly.

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## Wi-Fi Mesh System



A Wi-Fi mesh system uses multiple devices (called nodes) placed around your home to create a single, seamless network.

It ensures strong and consistent coverage in every area by automatically routing your devices to the best signal as you move around.

### Pros:

- Provides seamless, reliable coverage across larger areas.
- Automatically optimises your connection as you move around.
- Handles multiple devices more efficiently than extenders.

### Cons:

- More expensive than Wi-Fi extenders.
- Can be overkill for smaller homes or spaces with fewer connectivity issues.

## Video Conferencing Equipment

Having the right video conferencing equipment is important and can save a lot of stress.

### Cameras

Most laptops have inbuilt cameras, however if you have a desktop computer or a device that doesn't have one, or you want one that is better quality, you can purchase these separately.

For example, a 'point to view' camera may be the best option, as they can be taken from their stands and moved around, and even used to take photos. Having a cordless device that uses Bluetooth could also be useful for this.

### The top three things to look for when purchasing a camera for video conferencing:

1. **Resolution:** Look for at least 1080p (Full HD) for clear, sharp video quality.
2. **Field of View:** A wide-angle lens (around 70-90 degrees) allows more of your background to be visible.
3. **Low-Light Performance:** Choose a camera with good low-light sensitivity, so your video remains clear even in dim lighting.

## Audio, headsets and microphones



Most devices have an inbuilt microphone, however having a headset can provide a clearer quality call and greater privacy.

### What makes a good headset?

Bluetooth and cordless headsets are great as they allow you to move around and interact while listening and speaking.

Noise cancelling is a great feature to have as well. If you are working in a shared space the ability to block outside noise and distractions for both you and whoever you are conversing with online.

A good fit is essential, particularly for children, as this allows for comfort, especially if you will be worn for a length of time.

For more tips, visit our website [www.regionaltechhub.org.au](http://www.regionaltechhub.org.au)

Need some help? Get in touch with us:

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