

Connecting to the NBN network

This article will explain how the different NBN technologies may be connected to your home.

Different NBN technologies are available in different areas.

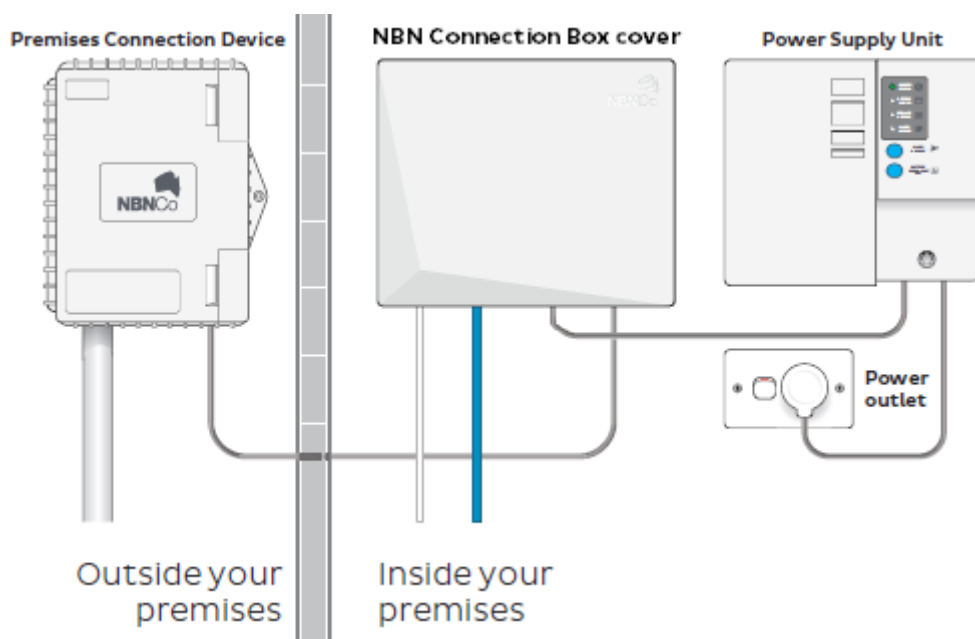
- Fibre to the Premises (FTTP)
- Fibre to the Building/Node (FTTB & FTTN)
- NBN Wireless
- NBN HFC
- NBN Satellite

Fibre to the Premises (FTTP)

How the service connects to your premises.



Fibre optic cable will lead all the way to your premises, terminating at your NBN Utility Box on an outside wall.



The NBN Utility Box (Premises Connection Device) on your outside wall will connect to the NBN Connection Box and the Power Supply Unit installed indoors.

An NBN installer is required to attend your premises, if you don't yet have the equipment shown above. On the date of installation you will have a 4 hour block of time allocated to you. Someone over the age of 18 will need to be present during the length of the appointment.

Here's some recommendations for choosing where your NBN equipment will be installed:

- Within 1.5 metres of an electrical outlet
- In an office or study, or near any existing phone sockets
- A cool, dry, and ventilated area with no sinks or water outlets
- Away from busy areas where it may be knocked or damaged
- A place where the equipment can be easily reached
- A place where you're not planning any major renovations

Hardware

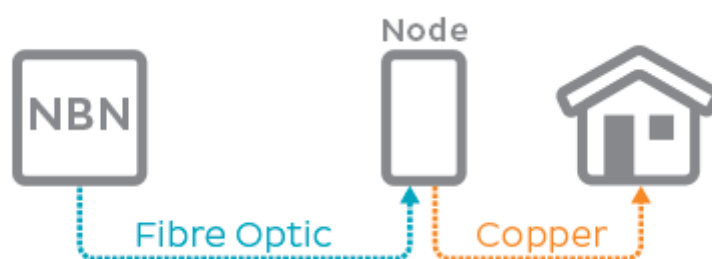
For FTTP connections we recommend a router to allow you to connect multiple computers and devices via WiFi. This will give you the best flexibility when it comes to your home network. You'll need a router with an Ethernet WAN port.

Fibre to the Building and Fibre to the Node (FTTB & FTTN)

How the service connects to your premises.



Fibre to the Building



Fibre to the Node

With Fibre to the Building, fibre optic cable will lead to the building's Main Distribution Frame (MDF), typically in the basement or in a locked telecommunications cabinet. From there, the MDF will connect to the wall socket in your unit via the building's internal copper cabling.

Fibre to the Node connections are similar, but the connection point is a node in your street or a street nearby. Copper cabling will connect from the node to a wall socket inside your premises.

What you'll need

- An active NBN FTTN or FTTB broadband service.
- A VDSL2-ready modem. If your modem does not support VDSL2-type connections, it won't work with your NBN FTTN or FTTB service.

Furthermore, if an incompatible modem is connected to the NBN FTTN/FTTB network, it will **trigger an automatic lock** of your service to prevent network issues and you'll have to contact your ISP to get it unlocked. Check with your ISP before you purchase a Modem-router.

Note for WiFi: Older devices may simply be "modems" and not "modem routers", which means it doesn't have the ability to wirelessly broadcast your internet as a WiFi signal in your home. These days the vast majority of modems on the market are actually modem routers by default, and we just call them modems because that's the norm. If your modem doesn't have a WiFi feature, you'll need to connect computers via Ethernet cables, or purchase a WiFi router separately and connect it to your modem so it can take care of the wireless.

- The power supply cable that came with your modem. If you need a replacement for any reason, take care to note the Rated Input on the router's barcode sticker (e.g. 12V/2A) and buy a matching cable.
- An RJ11 phone cable (at least one is typically included with a modem).
- **Optional to connect additional computer(s) to your router via Ethernet:** An Ethernet cable (at least one is typically included with a modem, usually a Cat 5e). There are different kinds of Ethernet cables. If you're purchasing one from a store, we recommend Cat 6 or Cat 5e. A Cat 5 cable is not recommended because it may not support the speed capability of your NBN service.

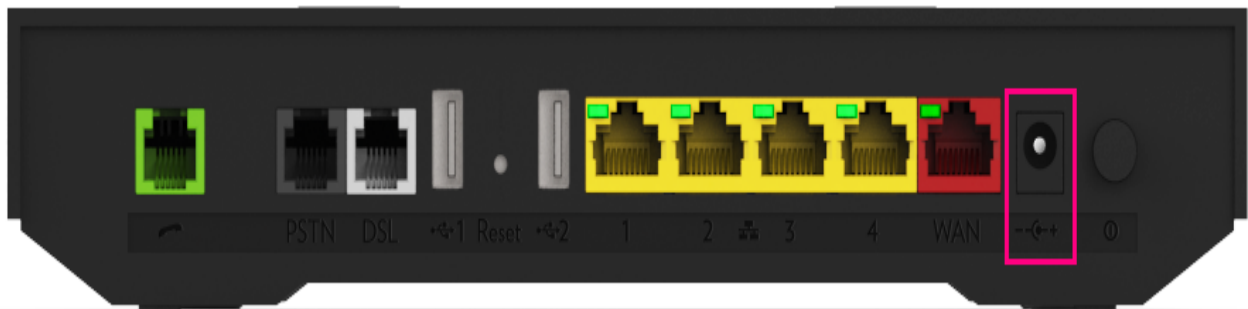
Plugging in and connecting computers

1. Find the network wall socket in your home. They're most commonly found in the main living room space or bedrooms, but sometimes they're in the kitchen area. It should look something like the photo below.

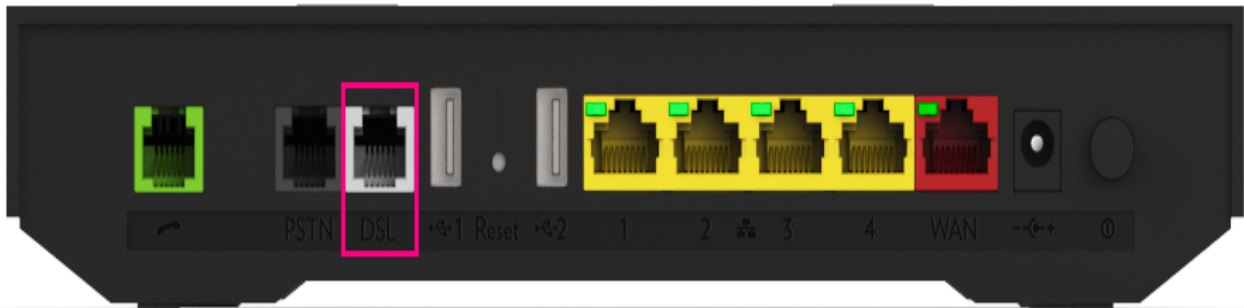
Note: If your home has the older 600-series wall sockets (typically the plug is a yellow square with 3 prongs), you'll need to purchase an adapter that allows you to plug in a modern RJ11 phone cable. These adapters can be bought at all good electronics and computer stores.



2. You'll also need an available electric outlet to give your modem power. If you need to use a double-adapter, power board or extension cord this should be okay, but if your modem ever seems to have power issues the first thing you should try is plugging the power supply cable directly into the electrical outlet on the wall.
3. Take your modem's power supply cable and use it to connect your modem's **power port** (example below) to an **electrical outlet**. You may turn the modem on now or wait until you've finished plugging in the other cables.



4. Take your RJ11 phone cable (these are typically white/grey and thinner than Ethernet cables) and plug it into the modem's **DSL port** (example below). This port will typically be labelled with "ADSL" or "DSL". If you're uncertain, check the manufacturer's website for support information.



5. Plug the other end of the RJ11 phone cable directly into the telephony wall socket. You should not use a line filter.

6. If you have a computer nearby that you'd like to connect via Ethernet, take your Ethernet cable (this is typically yellow, blue or grey but other colours are possible) and plug one end into any one of the modem's **Ethernet ports** - most modems have 4 of them (example below).

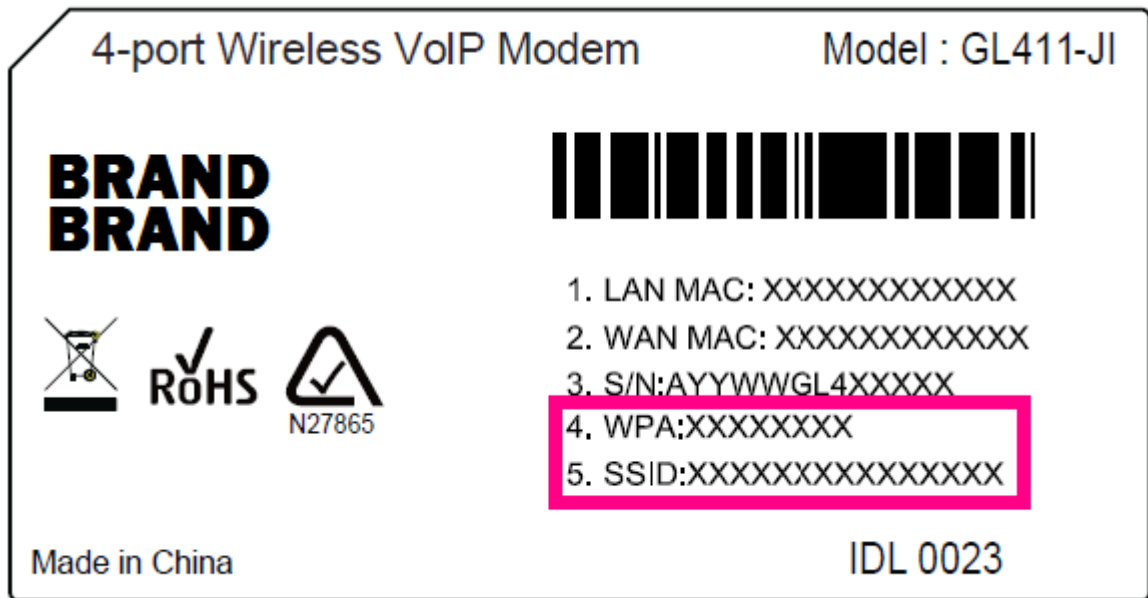
Ethernet ports are most commonly labelled "LAN" or a symbol showing objects linking together. If you're uncertain, check the manufacturer's website for support information.



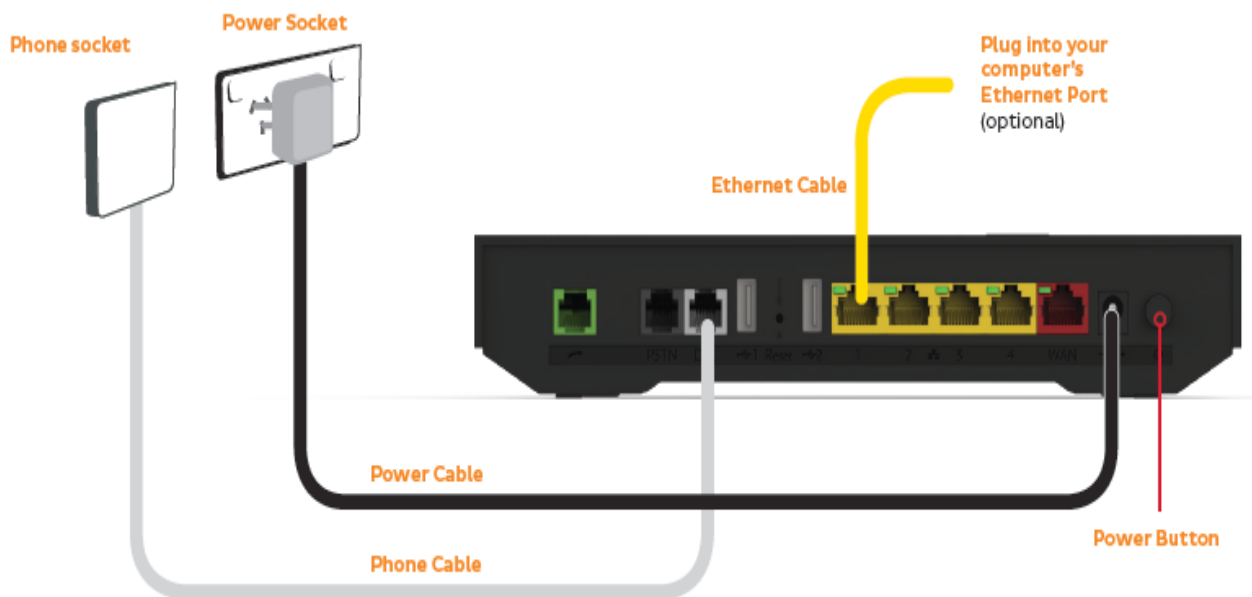
7. Other devices can be connected via WiFi. Modern modems are typically programmed to begin broadcasting WiFi as soon as they're turned on and have finished booting up. Even if the modem isn't connected to the internet, the WiFi can be used as a local connection between the modem and a computer/WiFi device to access the modem settings.

If your modem broadcasts WiFi by default, it will have a default WiFi network name (may be labelled "SSID") and default WiFi password (may be labelled "WPA", "WPA-PSK", etc.) which you can use to identify and connect to the WiFi. These details may be printed on a separate card included with the modem, but they will also be printed on the barcode sticker on the back or underside of the modem (example below).

If you're not sure how to connect your device using the default WiFi network name and password, see [Connecting to a WiFi Network](#).



Your setup should look something like the example below. The next step is to configure the modem settings by following the instructions below.



Entering the settings

1. To access the modem settings, you'll need a computer, laptop, tablet or smartphone that's connected to your modem via Ethernet cable (recommended) or WiFi.
2. Open your web browser and go to your modem's [default gateway](#). Some of the most common addresses are **http://192.168.1.1**, **http://192.168.0.1** and **http://192.168.1.254**.

If these addresses don't work for you, the easiest way to find the modem's default gateway address is to check the manufacturer's website for support information. Alternatively, if you have a desktop PC or Mac you can follow the advice in [this article](#) to find the gateway address.

3. You'll see a login page. If there's a username field, the default username will almost always be **admin** (it may even already be filled in). The default password is typically **admin** or **password**.

If you can't log in with these settings, please check the manufacturer's website for your modem's default login settings. If the modem is secondhand or you've used it previously, it may already have custom login details set. If you need to, you can factory reset the modem to return it to the default settings.

4. **Important:** From here, it gets a little tricky to offer general advice for all modems. The layout of modem settings pages can vary greatly for each different modem. If you get stuck or it's not clear where you should enter your broadband settings, you need to check the manufacturer's website for support information.
5. Ideally, your modem will have a **Setup Wizard** or **Quick Setup** that will run automatically the first time you log in to the settings, or there'll be a fairly obvious button to launch it. Some modems may include a Setup CD that will run this Setup Wizard for you and then send the settings to your modem.
6. The Setup Wizard should run you through entering the required broadband settings, step by step.

Any Mode/Modulation/Interface setting should be set to **VDSL** or **VDSL2**. The most important setting is the WAN Type/Connection Type/Encapsulation, which should be set to **IPoE** or **Dynamic IP**.

Note: Internode services require a PPPoE configuration. When using this connection type, you'll also need your broadband username and password which can be found on the email we sent you when your service activated. If you have forgotten these details, please call Internode Support on 13 66 33 for assistance.

7. Most Setup Wizards will run you through the WiFi settings as well as your broadband settings. This will give you the opportunity to change the default WiFi network name (SSID) and WiFi password (WPA/WPA2-PSK) to something you'd prefer.

You should write down your custom WiFi details for easy reference in the future, but you should **not** set your WiFi to have no password as this is a security risk.

Note: If you're accessing the modem settings over WiFi and you've changed the WiFi

settings, your device will disconnect once the new settings have saved. You'll need to reconnect using the new WiFi details. If your device appears to remain connected to the WiFi but you can't get online, you may need to go into the device's WiFi settings and select "Forget this network" before reconnecting.

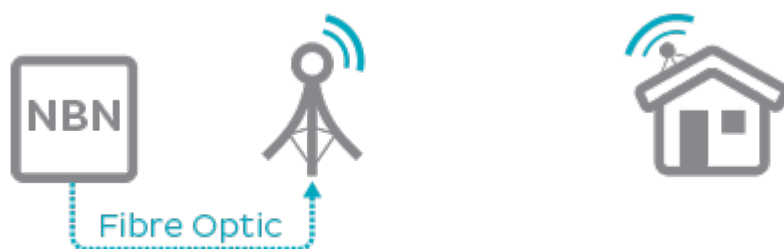
8. After completing the Setup Wizard and saving your settings, give the modem some time. Some modems reboot automatically after every new configuration, while others simply need a few minutes to apply the settings and get online.
9. Take a look at the lights on your modem. Most should now be green, blue, purple or another "positive" colour. Many modems have lights that flash to indicate connection activity, so you shouldn't be concerned if any lights are flashing unless the manufacturer's support information specifically advises that flashing lights indicate a problem.

If any status lights appear red, orange or another "negative" colour, please call us on 13 22 58 for assistance.

10. Hop on one of your computers or WiFi devices and try to visit a website. If it works, your broadband is up and running!

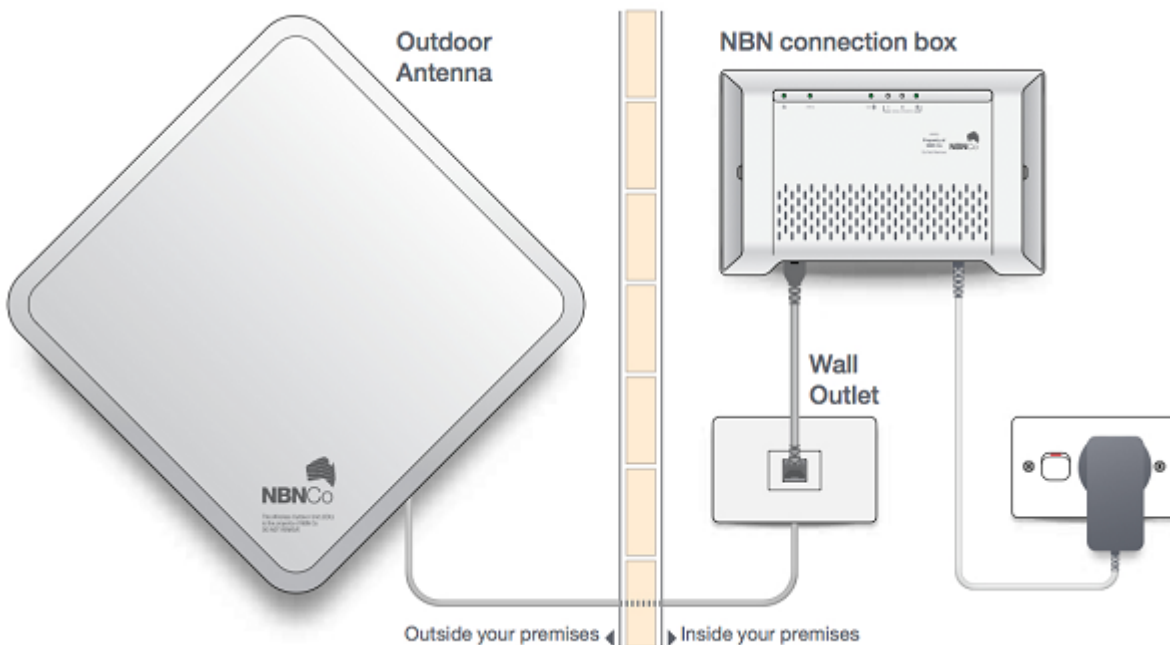
NBN Wireless

How the service connects to your premises



A fixed antenna on your roof receives a wireless signal from your local NBN Wireless tower.

Inside your premises



The NBN Outdoor antenna on your roof will connect to a designated wall outlet for your indoor NBN Connection Box to plug in to.

Installation

An NBN installer is required to attend your premises, there is considerable work involved in getting the antenna on the roof and ensure it aligns correctly. During the length of the appointment for installation, someone over the age of 18 will need to be present.

Here's some recommendations for choosing where your NBN equipment will be installed:

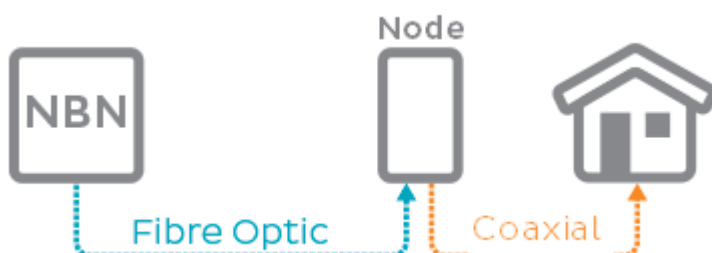
- Within 1.5 metres of an electrical outlet
- In an office or study, or near any existing phone sockets
- A cool, dry, and ventilated area with no sinks or water outlets
- Away from busy areas where it may be knocked or damaged
- A place where the equipment can be easily reached
- A place where you're not planning any major renovations

Hardware

For Fixed Wireless connections we recommend a router to allow you to connect multiple computers and devices via WiFi. This will give you the best flexibility when it comes to your home network. You'll need a router with an Ethernet WAN port.

NBN HFC

How the service connects to your premises



Fibre cable will lead to a node in your street or a street nearby. Coaxial cabling (Hybrid Fibre

Coaxial, that is - hence "HFC") will connect from the node to a Premises Connection Device on the outside wall of your premises. This will lead in to a wall socket inside your premises.

Inside your premises



Internal coaxial wiring will run from your Premises Connection Device to a wall socket inside your premises. You'll be able to use the same wall socket that you previously used for a Cable broadband or Pay TV service. If you have a Pay TV service which uses cable, the wall socket will be fitted with a Cable splitter which will give one port for your NBN Connection Box and one port for your Pay TV service. You can connect your iiNet Cable Gateway to your NBN Connection Box to set up your home WiFi network.

Installation

An NBN installer is required to attend your premises if you have not already had NBN equipment installed at your address. During the installation, someone over the age of 18 must be present.

Here's some recommendations for choosing where your NBN Cable socket will be installed:

- Within 1.5 metres of an electrical outlet
- In an office or study, near any existing wall sockets
- A cool, dry, and ventilated area with no sinks or water outlets
- Away from busy areas where it may be knocked or damaged
- A place where the equipment can be easily reached
- A place where you're not planning any major renovations

Hardware

For HFC connections, we only support the Cable Gateway supplied by us, such as the Huawei HG659 Home Router for NBN HFC.

NBN Satellite

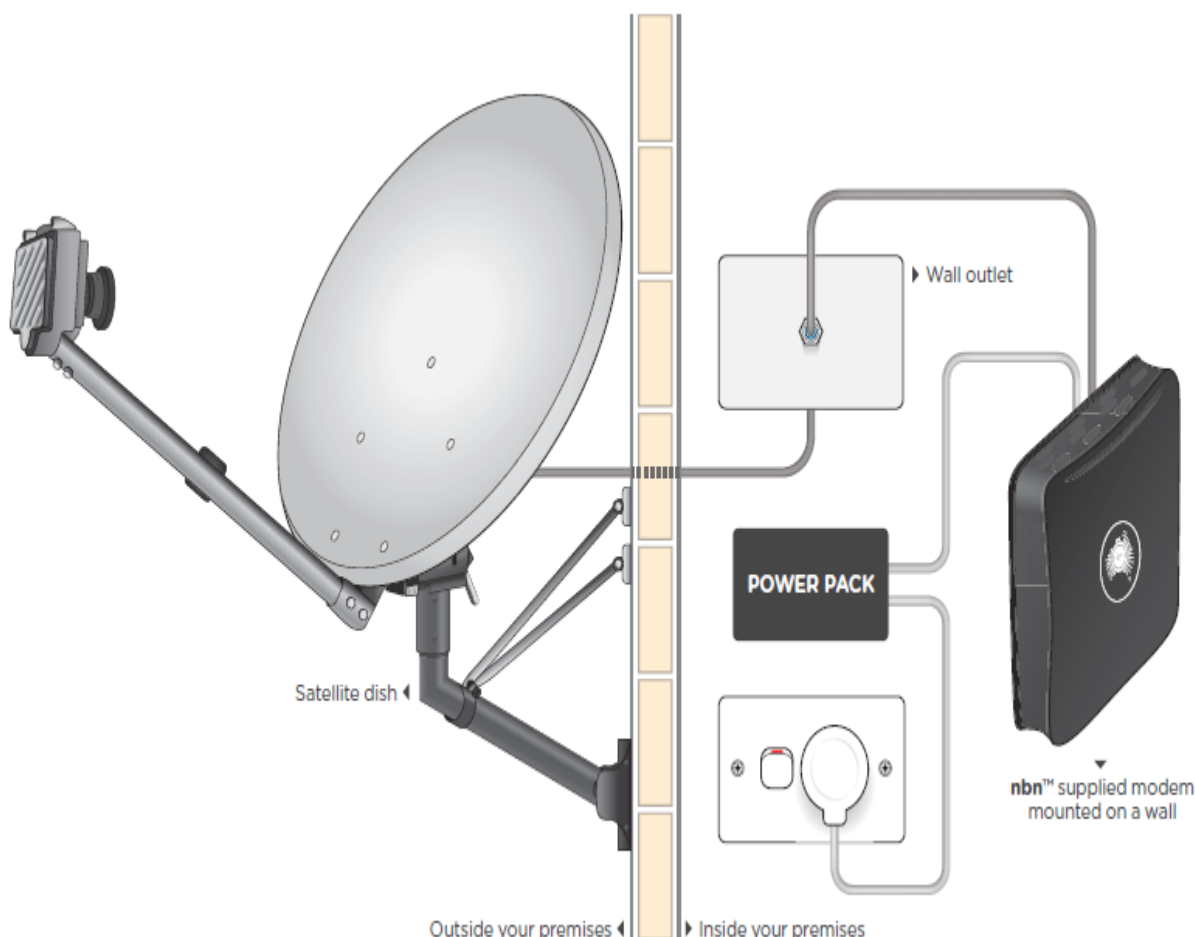
NBN LTSS (Long Term Satellite Service) is powered by the Sky Muster™ satellite.

How the service connects to your premises



A geostationary satellite in orbit above Australia transmits a signal between a fixed satellite dish at your premises and the NBN Satellite base station.

Inside your premises



Internal wiring will run from the satellite dish mounted on your roof or gutter to a wall socket inside your premises. Your NBN Satellite Connection Box will be connected to this wall socket. You can connect one computer to your Connection Box via Ethernet cable, or you may wish to connect a WiFi router in order to connect multiple devices via Ethernet and WiFi.

Installation

An NBN installer is required to attend your premises if you have not already had NBN LTSS Satellite equipment installed at your address. During the installation, someone over the age of 18 must be present.

The installer will survey your property to determine a suitable location to install your satellite dish. In the event that a non-standard installation is required (e.g. a free-standing mount with cabling leading back to your premises) then the installer will be able to supply a quote for any additional costs that may apply.

Hardware

For Satellite connections we recommend a router to allow you to connect multiple computers and devices via WiFi. This will give you the best flexibility when it comes to your home network. You'll need a router with an Ethernet WAN port.