

nbn<sup>®</sup>

# Fixed Wireless connectivity guide



Help to optimise your Fixed Wireless service's performance with this troubleshooting tool



This downloadable guide is designed to help you troubleshoot connection issues with your Fixed Wireless service.

Created to be saved and used when problems occur, this handy reference guide includes some of the common issues that you may experience, and the steps you can take to improve your nbn<sup>®</sup> Fixed Wireless connection.

Start 

This is general advice only. For any urgent issues please contact your internet provider or IT support.

nbn<sup>®</sup> would like to acknowledge the Traditional Custodians of the land, sea and skies and pay our respects to the Elders, both past, present and future.

# Are you experiencing or have you experienced any of the following when trying to use your Fixed Wireless connection?

Select an issue from the checklist below.



I can't connect



I can't access some websites



My speed is slow



My connection drops out



My connection buffers



# I can't connect

## Common causes

- An outage or network issue.
- A weather event or other external factors (e.g. damage to equipment by animals).
- Your [nbn® connection box](#) (NTD) or other equipment is experiencing a fault or installation issue.
- Missing equipment – make sure you have all necessary **nbn** supplied equipment including: Power cable, [nbn connection box](#), router, Fixed Wireless Antenna
- Equipment provided by your phone and internet provider or yourself including: router, router cables
- If you are missing any of the above equipment, contact your provider.
- Most **nbn** Fixed Wireless providers can be contacted by phone, email, social media or the providers app (if you have a backup connection).
- No power/loss of power.
- Outstanding provider account payment.
- If this is a new connection, your service may not yet be activated; or if you have recently changed plans or provider the update may still be processing in the system.

## Try these troubleshooting tips

### 1 Check your **nbn** connection box indicator light

- Check the [indicator lights](#) on your [nbn® connection box](#) (also called the **nbn** network termination device or NTD).
- Check the **Outdoor Unit** [Indicator light](#). It should show a steady or blinking green light.
- Check the **'STATUS' LED** [Indicator light](#). It should be blinking green.
- Watch the indicators for approximately 60 seconds to ensure they are not changing/resetting.
- If the above lights are not blinking green like they are supposed to, contact your phone and internet provider.

### 2 Perform a full power cycle routine

- This will force it to forget its current settings which can remedy some basic problems.
- It is important to turn the devices off and on again, in the following order.
  - Turn off ALL devices.
  - Wait 2-3 minutes.
  - Turn on the devices in the following order.

#### 1. The **nbn** connection box.

Wait until the indicator lights turn back on. The power and status indicator lights should be green.

#### 2. Your router.

Wait until all the lights have come back on.

#### 3. Your device – e.g. computer, tablet or phone.

Test again – are you able to access the internet now?

**Reminder:** In the event of a power loss at your premises, restoring the power with an alternative power option will usually allow you to reconnect to the **nbn** Fixed Wireless service. However, if one of the **nbn** Fixed Wireless towers is also experiencing a power loss, there may be further delays in reconnecting your service. Have a discussion with your current internet provider about your existing landline services. If you have an existing landline phone line it is important to consider keeping it in service for emergency communications, especially if you don't have good mobile phone coverage at your home or business.

### 3 Check for any network outages

When troubleshooting your **nbn** Fixed Wireless connection, your first step should be to “power cycle” your [nbn connection box](#). You can perform a power cycle by turning the connection box off and on again.

Check for any **nbn** Fixed Wireless or internet provider network outages.

Network outages can either be on your internet providers network, or on the **nbn** network. You should check both.

To check for a network outage, see our [Network Outage Page](#) or contact your internet provider. In some instances there may be a slight delay in **nbn** identifying who is impacted by outages. It is a good idea to save your internet providers phone number so you are able to contact them in the event of an outage.

If you have an alternate connection, such as mobile service, most providers have outage pages on their websites.

Most **nbn** Fixed Wireless providers can be contacted by phone, email, provider app or social media (if you have a backup connection).

### 4 Plug directly into the nbn connection box

\*If your provider requires you to use a username and password before you connect to the internet, log in using those details before following the below process. If you are unsure of how to do this, or are struggling to get access contact your service provider directly.

If your device has an Ethernet port, plug directly into the [nbn connection box](#) using an Ethernet cable, rather than using the wireless router. To do this, you can unplug the wireless router from the [nbn connection box](#) and use that cable to plug in to your device.

Repeat a full power cycle routine. If this fixes your problem, the router may be causing your problems.

If your router was provided by your internet provider, you will need to contact them, otherwise you will need to contact the manufacturer of the device directly for support.

If this is a new connection, your router may not be compatible, speak to your provider.

If you do have another router you can use, try connecting it and repeating the steps above.

If your device does not have an ethernet port - move to the next step.

## 5 Check cables

Network cables may become faulty over time.

If you have another network cable, try plugging in a new network cable or Ethernet cable from the router to the [nbn connection box](#).

Check that the cable is plugged into UNI-D 1 of the [nbn connection box](#) unless instructed otherwise by your internet provider.

Check the cable from the router to your computer or device.

Check all the cables are installed correctly, by making a nice solid “click” sound.

Check the connection between your outdoor antenna and the [nbn connection box](#).

If you have a [non-standard fixed wireless installation](#), check if there is damage to your ground mount pole or cable trenching.

If you have a [solar mount solution](#), check your power supply, point to point Wi-Fi link and solar panel battery status.

If you find the power cable to your [nbn connection box](#) is damaged, you should report it to your internet provider immediately. Never use damaged power cables.

## 6 Check the weather and other external factors

- What's the weather like? If you are experiencing severe weather at your location or nbn network incidents, this can have an impact your nbn Fixed Wireless connection.
- Without climbing on the roof, see if you can see any antenna damage from wind, fallen branches, birds or rodents.
- If you can see damage or have experienced an extreme weather event, you will need to contact your internet provider. Please DO NOT attempt to repair the equipment yourself.
- External factors such as local vegetation, tree density, or even major building setups, can prevent a sufficiently strong signal being achieved.
- If there have been changes since your **nbn** Fixed Wireless service was installed and you believe something may now be obstructing the line of site to your [nbn Fixed Wireless tower](#), contact your internet provider.
- Certain weather events, particularly in the summer seasons can cause a degradation in cell performance. **nbn** is continuing to monitor these events, and using mitigation techniques to reduce the impact of the interference.
- Contact your internet provider if you believe your service has been affected.

## 7 Check your devices

Can you access the internet with another device, phone, tablet or laptop using the same connection?

If you can, you may need to update the Wi-Fi device drivers or the Wi-Fi adapter may need to be uninstalled and reinstalled, on your device that cannot access the internet. You may need to contact your local computer specialist for help with device driver updates.

## 8 New connections, plan changes and billing

New connections may take some time to activate after they are installed. If you have a new plan – or have made changes to your existing service and the activation is taking longer than expected, please contact your internet provider.

If you are missing a power cord, contact your internet provider to organise a new one.

## Tips

To check for a network outage, see our [Network Outage Page](#), phone your internet provider. In some instances there may be a slight delay in **nbn** identifying who is impacted by outages.

It is a good idea to save your internet providers phone number so you are able to contact them in the event of an outage.

Most **nbn** Fixed Wireless providers can be contacted by phone, email or social media (if you have a backup connection).

If you are having power issues you may want to investigate an alternate power source such as a UPS or generator.

To protect **nbn**'s and your own equipment you could consider using a surge protection device.

If you have completed the above steps and you are still experiencing issues, please speak with your internet provider.

We recommend that you have the following information ready before contacting your internet provider.

- Check your latest bill/statement to find out who your internet provider is.
- Internet provider account number.
- The address that is experiencing the issue (including property name, street number, street name, suburb or town).
- [nbn connection box](#) ID number.
- [Find out how to locate the ID number.](#)
- [The nbn connection box light status.](#) Watch the indicators for approximately 60 seconds to ensure they are not changing/resetting. Note down each colour and state (steady or blinking) for each LED Indicator.
- If you believe you may have damage to your antenna it may help to take a photo of the area to share with your internet provider.

Some questions you can ask your internet provider.

- Ensure you receive a support ticket or fault number and make a note of this number and the date.





# I can't access some websites/platforms

## Common causes

- An incorrect web address or URL or scripting was added to a link.
- The website isn't working, the page is loading old details or the website is congested.
- High traffic on a particular website or platform.
- Your current web browser is not compatible after it was updated.
- Your internet provider or your security software is blocking sites.
- A network outage or similar issue.
- An issue with the platform you are trying to access.

## Try these troubleshooting tips

### 1 Check your nbn® connection box indicator light

- Check the [indicator lights](#) on your [nbn® connection box](#) (also called the **nbn** network termination device or NTD).
- Check the **Outdoor Unit** [Indicator light](#). It should show a steady or blinking green light.
- Check the **'STATUS' LED** [Indicator light](#). It should be blinking green.
- Watch the indicators for approximately 60 seconds to ensure they are not changing/resetting.
- If the above lights are not blinking green like they are supposed to, contact your phone and internet provider.

### 2 Try a different web browser

On your device try a different web browser that you haven't used before (e.g. Google Chrome, Firefox or Microsoft Edge).

Sometimes browsers are congested with spare files called "cookies", or older copies of a webpage, located in your cache. Clearing cookies or your cache can help with this.

Sometimes a particular browser doesn't meet the website's security protocols.

Try a different computer, smartphone or tablet device.

Check to see if you can access the website with another device - phone, tablet or laptop.

### 3 Perform a full power cycle routine

When troubleshooting your **nbn** Fixed Wireless connection, your first step should be to “power cycle” your [nbn connection box](#). You can perform a power cycle by turning the [nbn connection box](#) off and on again.

This will force it to forget its current settings which can remedy some basic problems.

It is important to turn the devices off and on again, in the following order.

Wait 2-3 minutes.

Turn on the devices in the following order:

1. [nbn connection box](#).

Wait until the [Indicator lights](#) turn back on.

2. Your router. Wait until all the lights have come back on.

3. Your device – e.g. computer, tablet or phone.

Test again – are you able to access the internet now?

**Reminder: In the event of a power loss at your premises, restoring the power with an alternative power option will usually allow you to reconnect to the nbn Fixed Wireless service. However, if one of the nbn Fixed Wireless towers is also experiencing a power loss, there may be further delays in reconnecting your service. Have a discussion with your current internet provider about your existing landline services. If you have an existing landline phone line it is important to consider keeping it in service for emergency communications, especially if you don't have good mobile phone coverage at your home or business.**

### 4 Plug directly into the nbn connection box.

\*If your internet provider requires you to use a username and password before you connect to the internet, log in using those details before following the below process. If you are unsure of how to do this, or are struggling to get access contact your internet provider directly.

If your device has an Ethernet port, plug directly into the [nbn connection box](#), using an Ethernet cable, rather than using the wireless router. To do this, you can unplug the wireless router from the [nbn connection box](#) and use that cable to plug in to your device. Repeat a full power cycle routine. If this fixes your problem, the router may be causing your problems.

If your router was provided by your internet provider, you will need to contact them, otherwise you will need to contact the manufacturer of the device directly for support.

If this is a new connection, your router may not be compatible, speak to your internet provider.

If you do have another router you can use, try connecting it and repeating the steps above.

If your device does not have an Ethernet port - move to the next step.

## 5 Check that your computer doesn't have any issues

- Try rebooting your computer in "Safe Mode with Networking".
- Check for spyware, viruses, and malware. These are easily downloaded and installed, without your knowledge, while you're on the internet.
- Scan your computer for malware.
- There are various free and subscription-based utilities available that can help detect, eradicate and prevent these programs from being downloaded and installed.
- If you can now load the website, then you may have something wrong with your antivirus software (If your antivirus software has a web shield, try disabling to see if there is an improvement).

## 6 Check your devices

Can you access the internet with another device, phone, tablet or laptop using the same connection?

If you can, you may need to update the Wi-Fi device drivers or the Wi-Fi adapter may need to be uninstalled and reinstalled, on your device that cannot access the internet. You may need to contact your local computer specialist for help with device driver updates.

## Tips

To check for a network outage, see our [Network Outage Page](#), or phone your internet provider. In some instances there may be a slight delay in **nbn** identifying who is impacted by outages. It is a good idea to save your internet providers phone number so you are able to contact them in the event of an outage.

Most internet providers can be contacted by phone, email or social media (if you have a backup connection).

If you are able to, try accessing the website or platform with another technology, such as your mobile connection.

Do you know anyone else who uses the website or platform? Ask them if they are also experiencing issues.

## If you have completed the above steps and you are still experiencing issues, please speak with your internet provider.

We recommend that you have the following information ready before contacting your internet provider.

- Check your latest bill/statement to find out who your internet provider is.
- Internet provider account number.
- The address that is experiencing the issue (including property name, street number, street name, suburb or town).
- The [nbn connection box](#) ID number.
- [Find out how to locate the ID number.](#)
- [nbn connection box light status.](#) Watch the indicators for approximately 60 seconds to ensure they are not changing/resetting. Note down each colour and state (steady or blinking) for each LED Indicator.
- Any troubleshooting that you have already conducted.
- Is there a particular time of day that the issue occurs?
- Are you experiencing any other issues, such as slow speeds or dropouts?
- How many people are using the internet at the same time?
- Are you using a Virtual Private Network (VPN)?
- The platform or website you are accessing that is experiencing issues.

Some questions you can ask your internet provider.

- Ensure you receive a support ticket or fault number and make a note of this number and the date.
- Has your internet provider contacted **nbn** about this issue?
- Are others experiencing the same issue?



# My speed is slow

## Common causes

- [nbn connection box](#) or other equipment faults or installation issues.
- Set-up of some applications or software such as Virtual Private Network (VPN).
- The devices you are using to connect to the internet.
- Multiple devices being used simultaneously (particularly for video streaming during busy times in the evening).
- Applications being service reduced due to fair use policy management.
- External factors.
- Severe weather.
- Viruses/Malware.
- Device being used not connected to the correct Wi-Fi network.

## Try these troubleshooting tips

### 1 Perform a full power cycle routine

When troubleshooting your **nbn**® Fixed Wireless connection, your first step should be to “power cycle” your [nbn connection box](#). You can perform a power cycle by turning the [nbn connection box](#) off and on again.

This will force it to forget its current settings which can remedy some basic problems.

It is important to turn the devices off and on again, in the following order.

1. Turn off ALL devices.
2. Wait 2-3 minutes.
3. Turn on the devices in the following order.
  - a. The [nbn connection box](#).
  - b. Wait until the [Indicator lights](#) turn back on.
  - c. Your router. Wait until all the lights have come back on.
  - d. Then your device – e.g. computer, tablet or phone.
  - e. Test again – are you able to access the internet now?

**Reminder: In the event of a power loss at your premises, restoring the power with an alternative power option will usually allow you to reconnect to the nbn Fixed Wireless service. However, if one of the nbn Fixed Wireless towers is also experiencing a power loss, there may be further delays in reconnecting your service. Have a discussion with your current internet provider about your existing landline services. If you have an existing landline phone line it is important to consider keeping it in service for emergency communications, especially if you don't have good mobile phone coverage at your home or business.**

## 2 Plug directly into the nbn connection box.

\*If your internet provider requires you to enter a username and password before you connect to the internet, log in using those details before following the below process. If you are unsure of how to do this, or are struggling to get access contact your internet provider directly.

If your device has an Ethernet port, plug directly into the [nbn connection box](#) using an Ethernet cable, rather than using the wireless router. To do this, you can unplug the wireless router from the [nbn connection box](#) and use that cable to plug in to your device. Repeat a full power cycle routine. If this fixes your problem, the router may be causing your problems.

If your router was provided by your internet provider, you will need to contact them, otherwise you will need to contact the manufacturer of the device directly for support.

If this is a new connection, your router may not be compatible, speak to your internet provider.

If you do have another router you can use, try connecting it and repeating the steps above.

If your device does not have an Ethernet port - move to the next step.

## 3 Are you using a Virtual Private Network (VPN)?

This could slow your speed. You can test this by turning off your VPN and conducting another speed test.

## 4 Do a speed test

If you are also experiencing slow speeds with dropouts, you can perform an easy online test, as below.

1. If your device has an Ethernet port, connect your device to your [nbn connection box](#) using an Ethernet cable.
2. You can check your speed through your internet providers dashboard or by using an online speed test tool such as [www.speedtest.net](http://www.speedtest.net).
3. When you complete the speed test, make a note of your download and upload speed results. The easiest way to do this is taking a screenshot of the results and saving to a folder with the date and time of the speed test recorded.
4. Repeat step 1 - 3 at different times of the day (for example: morning, afternoon and evening). If you notice that your speed is affected more at a particular time of the day make a note for your internet provider.
5. If you notice a poor result at any time of the day contact your internet provider for assistance.

If you are using more than one device, it is helpful to do a speed test on all of your devices (for example: Laptop, Tablet and Mobile Phone). If possible, ensure they are connected to the nbn connection box, using an Ethernet cable.

\*Keep in mind running a speed test does use data.

## 5 Check your devices

Can you access the internet with another device, phone, tablet or laptop using the same connection?

If you can, you may need to update the Wi-Fi device drivers or the Wi-Fi adapter may need to be uninstalled and reinstalled, on your device that cannot access the internet. You may need to contact your local computer specialist for help with device driver updates.

## 6 Check that your computer or device doesn't have any issues

Try rebooting your computer in "Safe Mode with Networking".

If you can now load the website, then you may have something wrong with your antivirus software (try disabling the web shield in your antivirus software to see if there is an improvement).

Check for spyware, viruses, and malware. These are easily downloaded and installed, without your knowledge, while you're on the internet. Scan your computer for malware.

There are various free and subscription-based utilities available that can help detect, eradicate and prevent these programs from being downloaded and installed.

## 7 Fair use policy enforcement

**nbn** will enforce the existing Fixed Wireless Fair Use Policy to apply service reductions on heavy users to reduce the impact on others and to uplift the overall customer experience.

## 8 Check the weather and other external factors.

- What's the weather like? If you are experiencing severe weather at your location or nbn network incidents, this can have an impact your nbn Fixed Wireless connection.
- Without climbing on the roof, see if you can see any antenna damage from wind, fallen branches, birds or rodents.
- If you can see damage or have experienced an extreme weather event, you will need to contact your internet provider. Please DO NOT attempt to repair the equipment yourself.
- External factors such as local vegetation, tree density, or even major building setups, can prevent a sufficiently strong signal being achieved.
- If there have been changes since your **nbn** Fixed Wireless service was installed and you believe something may now be obstructing the line of site to your [nbn Fixed Wireless tower](#), contact your internet provider.
- Certain weather events, particularly in the summer seasons can cause a degradation in cell performance. **nbn** is continuing to monitor these events, and taking proactive steps to mitigate and reduce the impact of the interference.
- Contact your internet provider if you believe your service has been affected.

## Tips

Most internet providers can be contacted by phone, email or social media (if you have a backup connection).

At **nbn**, we have a range of wholesale speeds designed to suit different households' needs, whether you have multiple people streaming content at once, or you simply like using the internet to email friends or send photos.

It's important to learn about the actual speeds you can expect to experience once you make the switch to an **nbn** powered plan, particularly during peak usage times. To discover more about the specific speed tiers available in your location, speak to your preferred internet provider or visit their website for further information.

Please note, not all speed tiers are available everywhere. The availability of speed tiers depends on the type of technology you are connected to and the speed tiers your internet provider offers.

## If you have completed the above steps and you are still experiencing issues, please speak with your internet provider.

We recommend that you have the following information ready before contacting your internet provider.

- Check your latest bill/statement to find out who your internet provider is.
- Internet provider account number.
- The address that is experiencing the issue (including property name, street number, street name, suburb or town).
- The [nbn connection box](#) ID number.
- [Find out how to locate the ID number.](#)
- [The nbn connection box light status.](#) Watch the indicators for approximately 60 seconds to ensure they are not changing/resetting. Note down each colour and state (steady or blinking) for each LED Indicator.
- Any troubleshooting that you have already conducted.
- Is there a particular time of day that the issue occurs? Include previous speed test results from various times throughout the day.
- Does this issue occur during or after certain weather events?
- Are you experiencing any other issues, such as dropouts?
- How many people are using the internet at the same time?
- Are you using a Virtual Private Network (VPN)?

Some questions you can ask your internet provider.

- Ensure you receive a support ticket or fault number and make a note of this number and the date.





# My connection drops out

## Common causes

- An outage or network issue.
- A weather event or other external factors (e.g. damage to equipment by animals).
- Your **nbn**<sup>®</sup> connection box, or other equipment is experiencing a fault or installation issue.

## Try these troubleshooting tips

### Check your **nbn**<sup>®</sup> connection box indicator lights

- Check the [Indicator lights](#) on your [nbn connection box](#).
- Check the **Outdoor Unit** [Indicator light](#). It should show a steady or blinking green light.
- Check the 'STATUS' LED [Indicator light](#). It should be blinking green.
- Watch the indicators for approximately 60 seconds to ensure they are not changing/resetting.
- If the above lights are not blinking green like they are supposed to, contact your internet provider.

### 1 Perform a full power cycle routine

When troubleshooting your **nbn** Fixed Wireless connection, your first step should be to “power cycle” your [nbn connection box](#) (also called the **nbn** network termination device or NTD). You can perform a power cycle by turning the connection box off and on again.

This will force it to forget its current settings which can remedy some basic problems.

It is important to turn the devices off and on again, in the following order.

1. Turn off ALL devices.
2. Wait 2-3 minutes.
3. Turn on the devices in the following order.
  - a. The [nbn connection box](#).
  - b. Wait until the [Indicator lights](#) turn back on.
  - c. Your router. Wait until all the lights have come back on.
  - d. Then your device – e.g. computer, tablet or phone.
  - e. Test again – are you able to access the internet now?

**Reminder:** In the event of a power loss at your premises, restoring the power with an alternative power option will usually allow you to reconnect to the **nbn** Fixed Wireless service. However, if one of the **nbn** Fixed Wireless towers is also experiencing a power loss, there may be further delays in reconnecting your service. Have a discussion with your current internet provider about your existing landline services. If you have an existing landline phone line it is important to consider keeping it in service for emergency communications, especially if you don't have good mobile phone coverage at your home or business.

## 2 Plug directly into the nbn connection box

\*If your internet provider requires you to use a username and password before you connect to the internet, log in using those details before following the below process. If you are unsure of how to do this, or are struggling to get access contact your internet provider directly.

If your device has an Ethernet port, plug directly into the [nbn connection box](#) using an Ethernet cable, rather than using the wireless router. To do this, you can unplug the wireless router from the [nbn connection box](#) and use that cable to plug in to your device. Repeat a full power cycle routine. If this fixes your problem, the router may be causing your problems.

If your router was provided by your internet provider, you will need to contact them, otherwise you will need to contact the manufacturer of the device directly for support.

If this is a new connection, your router may not be compatible, speak to your internet provider.

If you do have another router you can use, try connecting it and repeating the steps above.

If your device does not have an Ethernet port - move to the next step.

## 3 Connect your Wi-Fi device or relocate your device closer to the access point.

Keep your Wi-Fi/router:

- In a raised, central location.
- Clear of thick walls or furniture.
- Away from other electronics (e.g. microwaves).
- Consider whether your router has adequate Wi-Fi coverage for the size of your dwelling. For more information, [check out our in home optimisation tips](#).

## 4 Optimise your Wi-Fi.

You may want to re-assess your Wi-Fi setup and check your router's firmware is currently up-to-date and still able to perform updates. Consider upgrading or replacing older devices.

You may need a Wi-Fi extender or mesh device to improve the coverage at your location - especially if the problem is solved when you are closer to your Wi-Fi router.

You can further help optimise your connectivity by reading our [inhome optimisation tips](#).

## 5 Check your devices

Can you access the internet with another device, phone, tablet or laptop using the same connection?

If you can, you may need to update the Wi-Fi device drivers or the Wi-Fi adapter may need to be uninstalled and reinstalled, on your device that cannot access the internet. You may need to contact your local computer specialist for help with device driver updates.

## 6 Check cables.

Network cables may become faulty over time.

If you have another network cable, try plugging in a new network cable or Ethernet cable from the router to the [nbn connection box](#).

Check that the cable is plugged into UNI-D 1 outlet in the [nbn connection box](#) unless instructed otherwise by your internet provider.

Check the cable from the router to your computer or device.

Check all the cables are installed correctly, by making a nice solid “click” sound.

Check the connection between your outdoor antenna and the [nbn connection box](#).

If you have a [non-standard Fixed Wireless installation](#), check if there is damage to your ground mount pole or cable trenching.

If you have a [solar mount solution](#), check your power supply, point to point Wi-Fi link and solar panel battery status.

If you find the power cable to your [nbn® connection box](#) is damaged, you should report it to your internet provider immediately. Never use damaged power cables.

## 7 Check the weather and other external factors.

- What’s the weather like? If you are experiencing severe weather at your location or nbn network incidents, this can have an impact your nbn Fixed Wireless connection.
- Without climbing on the roof, see if you can see any antenna damage from wind, fallen branches, birds or rodents.
- If you can see damage or have experienced an extreme weather event, you will need to contact your internet provider. Please DO NOT attempt to repair the equipment yourself.
- External factors such as local vegetation, tree density, or even major building setups, can prevent a sufficiently strong signal being achieved.
- If there have been changes since your **nbn** Fixed Wireless service was installed and you believe something may now be obstructing the line of site to your [nbn Fixed Wireless tower](#), contact your internet provider.
- Certain weather events, particularly in the summer seasons can cause a degradation in cell performance. **nbn** is continuing to monitor these events, and taking proactive steps to mitigate and reduce the impact of the interference.

## Tips

Most **nbn** Fixed Wireless providers can be contacted by phone, email or social media (if you have a backup connection).

Connect to the right Wi-Fi band. There are typically two Wi-Fi bands on most routers, each with their own pros and cons. For more information about Wi-Fi bands, check our [inhome optimisation tips](#).

Consider using an app that tracks your internet quality over time on your device - for example: Ping Plotter or Sam Knows. You can use these apps to get information about when dropouts are occurring to pass on to your internet provider.

## If you have completed the above steps and you are still experiencing issues, please speak with your internet provider.

We recommend that you have the following information ready before contacting your internet provider.

- Internet provider account number.
- Check your latest bill/statement to find out who your internet provider is.
- The address that is experiencing the issue (including property name, street number, street name, suburb or town).
- The [nbn connection box](#) ID number.
- [Find out how to locate the ID number.](#)
- [The nbn connection box light status.](#) Watch the indicators for approximately 60 seconds to ensure they are not changing/resetting. Note down each colour and state (steady or blinking) for each LED Indicator.
- Any troubleshooting that you have already conducted.
- Is there a particular time of day that the issue occurs? Take a record of the number of dropouts and when they occur (time and day).
- Are you experiencing any other issues, such as slow speeds?
- How many people are using the internet at the same time?
- Are you using a Virtual Private Network (VPN)?
- Do you have any new electronic equipment or appliances running in your home that may interfere with your Wi-Fi signal?
- Does this issue occur during or after certain weather events?
- If you believe you may have damage to your antenna it may help to take a photo of the area to share with your internet provider.

Some questions you can ask your internet provider.

- Ensure you receive a support ticket or fault number and make a note of this number and the date.
- Has your internet provider contacted **nbn** about this issue?
- Are others experiencing the same issue?



# My connection buffers

## Common causes

- A network outage or similar issue.
- The devices you are using to connect to the internet.
- Too many users sharing the one connection.
- Your streaming service provider is experiencing issues.
- A weather event or other external factors (e.g. damage to equipment by animals).
- Set-up of some applications or software such as Virtual Private Network (VPN).
- Your [nbn® connection box](#) (also called the **nbn** network termination device or NTD), or other equipment is experiencing a fault or installation issue.

## Try these troubleshooting tips

### 1 Your streaming service.

Check the streaming services website or social media to see if they have reported any current streaming or technical issues.

Check the streaming service's website or social media for any current streaming or technical issues.

Try streaming from a different device on an alternative network. This will determine if the issue is specific to your internet provider.

Try a different streaming service.

Turn off video autoplay settings for websites with embedded streaming content.

### 2 Do a speed test

If you are also experiencing slow speeds with dropouts, you can perform an easy online test, as below.

1. If your device has an Ethernet port, connect your device to your [nbn connection box](#) using an Ethernet cable.
2. You can check your speed through your internet providers dashboard or by using an online speed test tool such as [www.speedtest.net](http://www.speedtest.net).
3. When you complete the speed test, make a note of your download and upload speed results. The easiest way to do this is taking a screenshot of the results and saving to a folder with the date and time of the speed test recorded.
4. Repeat step 1 – 3 at different times of the day (for example: morning, afternoon and evening.) If you notice that your speed is affected more at a particular time of the day make a note for your internet provider.
5. If you notice a poor result at any time of the day contact your internet provider for assistance.

If you are using more than one device, it is helpful to do a speed test on all of your devices (for example: Laptop, Tablet and Mobile Phone). If possible, ensure they are connected to the [nbn® connection box](#), using an Ethernet cable.

\*Keep in mind running a speed test does use data.

### 3 Connect your Wi-Fi device or relocate your device closer to the access point.

Keep your Wi-Fi/router:

- In a raised, central location.
- Clear of thick walls or furniture.
- Away from other electronics (e.g. microwaves).

Consider whether your router has adequate Wi-Fi coverage for the size of your dwelling. For more information, [check out our in home optimisation tips](#).

### 4 Perform a full power cycle routine

When troubleshooting your **nbn** Fixed Wireless connection, your first step should be to “power cycle” your [nbn connection box](#). You can perform a power cycle by turning the connection box off and on again.

This will force it to forget its current settings which can remedy some basic problems.

It is important to turn the devices off and on again, in the following order.

1. Turn off ALL devices.
2. Wait 2-3 minutes.
3. Turn on the devices in the following order.
  - a. The [nbn connection box](#).
  - b. Wait until the [Indicator lights](#) turn back on. The power and status indicator lights should be green.
  - c. Your router. Wait until all the lights have come back on.
  - d. Then your device - e.g. Smart TV, computer, tablet or phone.
  - e. Test again - are you able to access the internet now?

### 5 Fair use policy enforcement

**nbn** will enforce the existing Fixed Wireless Fair Use Policy to apply service reductions on heavy users to reduce the impact on others and to uplift the overall customer experience.

### 6 Check your devices

[Can you access the internet with another device, phone, tablet or laptop using the same connection?](#)

If you can, you may need to update the Wi-Fi device drivers or the Wi-Fi adapter may need to be uninstalled and reinstalled, on your device that cannot access the internet. You may need to contact your local computer specialist for help with device driver updates.

## 7 Check the weather and other external factors.

What's the weather like? If you are experiencing severe weather at your location or **nbn** network incidents, this can have an impact your **nbn** Fixed Wireless connection.

- Without climbing on the roof, see if you can see any antenna damage from wind, fallen branches, birds or rodents.
- If you can see damage or have experienced an extreme weather event, you will need to contact your internet provider. Please DO NOT attempt to repair the equipment yourself.
- External factors such as local vegetation, tree density, or even major building setups, can prevent a sufficiently strong signal being achieved.
- If there have been changes since your **nbn** Fixed Wireless service was installed and you believe something may now be obstructing the line of site to your [nbn Fixed Wireless tower](#), contact your internet provider.
- Certain weather events, particularly in the summer seasons can cause a degradation in cell performance. **nbn** is continuing to monitor these events, and taking proactive steps to mitigate and reduce the impact of the interference.

## Tips

If you are experiencing low video quality on video streaming services, like Netflix and YouTube, you may want to change your settings from low definition to standard definition (SD) or high definition (HD) (1080p).

\*Note that changing these settings will increase your data usage when using these apps.

Most **nbn** Fixed Wireless providers can be contacted by phone, email or social media (if you have a backup connection).

Make sure your streaming apps are up to date.

## If you have completed the above steps and you are still experiencing issues, please speak with your internet provider.

We recommend that you have the following information ready before contacting your internet provider.

- Check your latest bill/statement to find out who your internet provider is.
- Internet provider account number.
- The address that is experiencing the issue (including property name, street number, street name, suburb or town).
- The [nbn connection box](#) ID number.
- [Find out how to locate the ID number.](#)
- [The nbn connection box light status.](#) Watch the indicators for approximately 60 seconds to ensure they are not changing/resetting. Note down each colour and state (steady or blinking) for each LED Indicator.
- Backup connections. Some internet providers will provide a 4G backup connection in the case of an **nbn** dropout. Check with your internet provider if believe you may have been connected to a backup network.
- Any troubleshooting that you have already conducted.
- Is there a particular time of day that the issue occurs?
- Are you experiencing any other issues, such as slow speeds or dropouts?
- How many people are using the internet at the same time?
- Are you using a Virtual Private Network (VPN)?
- Does this issue occur during or after certain weather events?
- The details of the platforms/websites that are buffering.

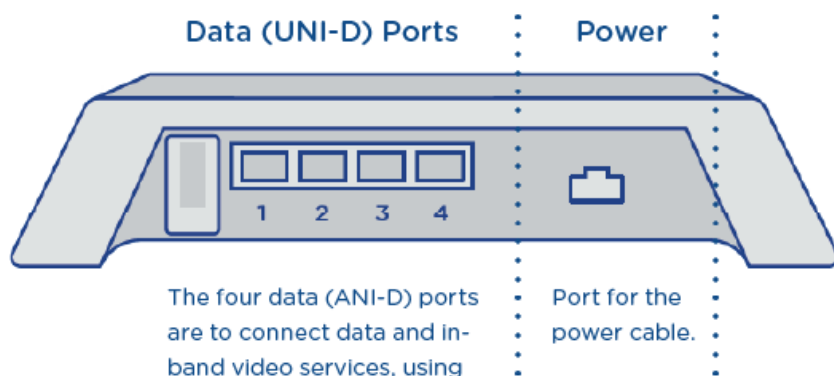
Some questions you can ask your internet provider.

- Ensure you receive a support ticket or fault number and make a note of this number and the date.
- Has your internet provider contacted **nbn** about this issue?
- Are others experiencing the same issue?



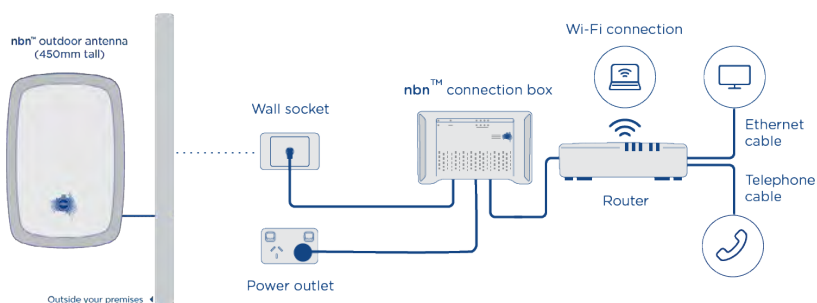
## Information on the **nbn**<sup>®</sup> connection box.

**nbn** Fixed Wireless connections require an [nbn connection box](#) to be installed at the point where the cable from the **nbn** outdoor antenna enters the premises. The [nbn connection box](#) is wall-mounted and has four Ethernet ports that can deliver internet data. It requires power to operate and can only be installed by an **nbn** approved technician.



The [nbn connection box](#) is wall-mounted and has four Ethernet ports that can deliver internet data. It requires power to operate and can only be installed by an **nbn** approved technician.

**Note:** Your [nbn connection box](#) ID number is located on top of the box next to the **nbn** logo.



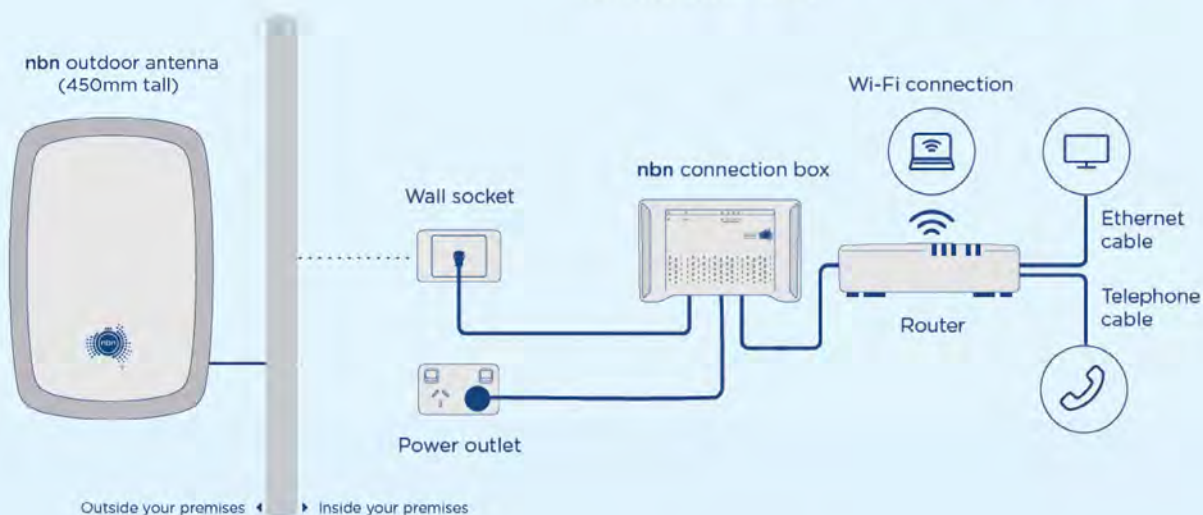
End users can connect their devices directly to the [nbn connection box](#) via an Ethernet cable. If they prefer to connect via Wi-Fi, they'll need to connect their own router, or one supplied by their Retail Service Provider, to the **nbn** connection box.

\*If you move house, please ensure **nbn** equipment remains at your property

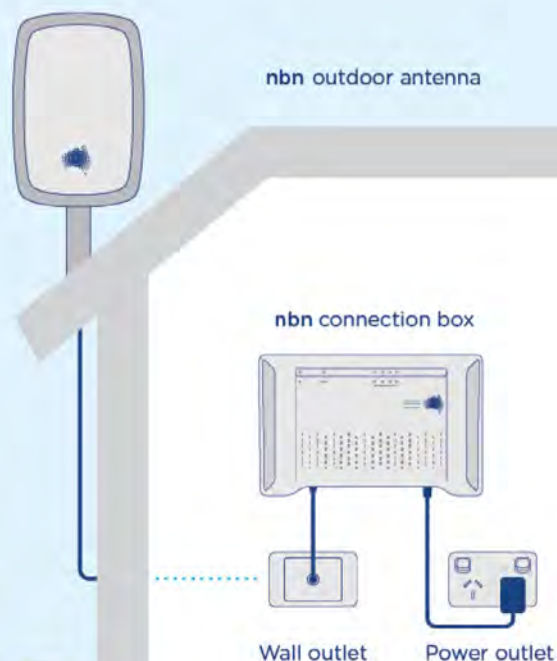
## nbn® Fixed Wireless connection box and a typical outdoor antenna set-up

The **nbn**® Wireless Network Termination Device (WNTD) is made up of an outdoor unit (the **nbn** outdoor antenna) and an outdoor unit (the **nbn** connection box).

End users can connect their devices directly to the **nbn** connection box via Ethernet cable. If they prefer to connect via Wi-Fi, they'll need to connect their own router, or one supplied by their phone and internet provider, to the **nbn** connection box.



The **nbn** outdoor antenna is attached to the outside of a premises, in a location that provides direct line of sight to an **nbn** Fixed Wireless tower. A cable is then used to connect the outdoor antenna to the **nbn** connection box inside.

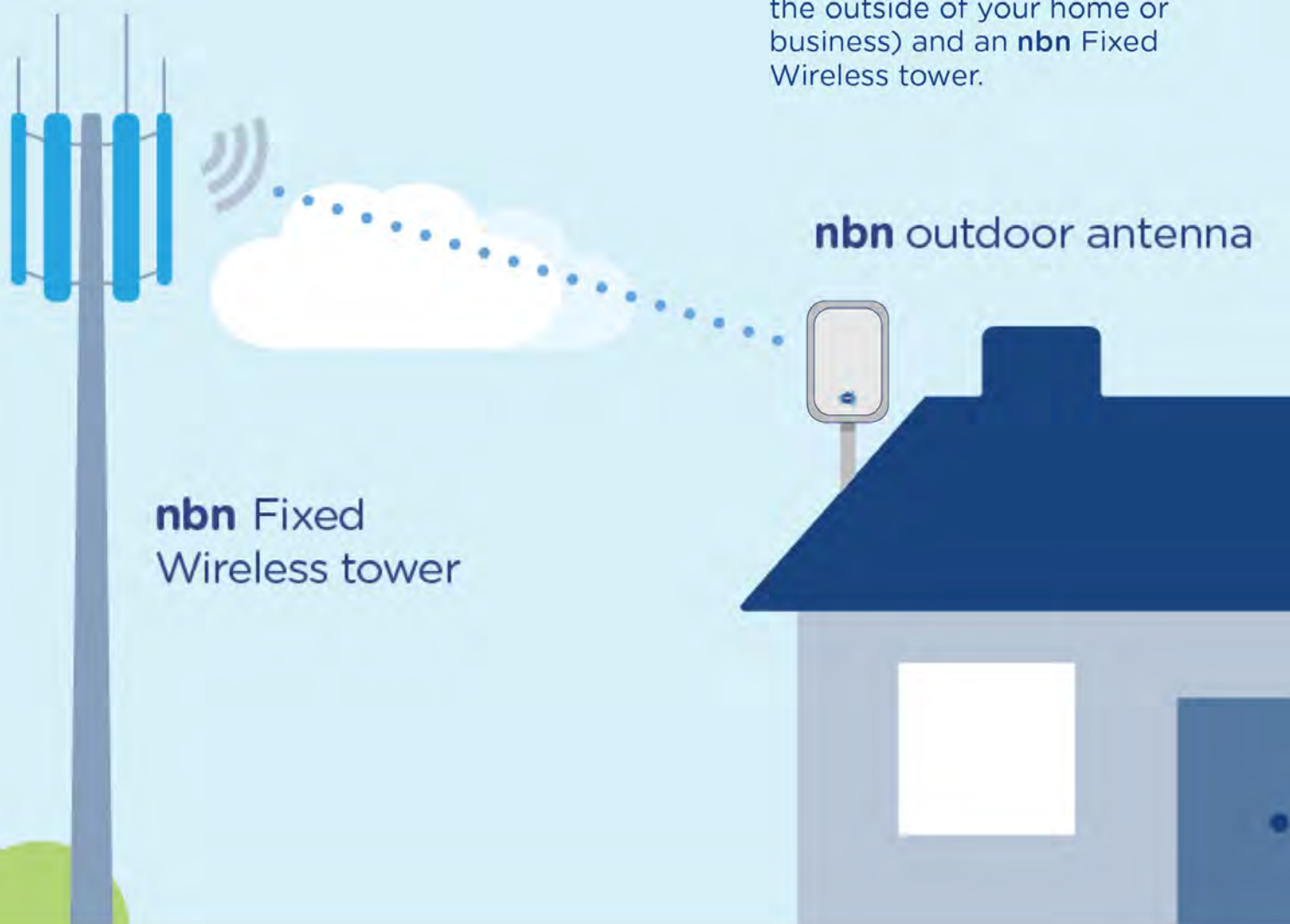


\*If any of the above equipment is missing, please contact your **nbn**® Fixed Wireless™ [internet provider](#).

## **nbn**® Fixed Wireless Tower and Antenna set up

### How does **nbn**® Fixed Wireless technology work?

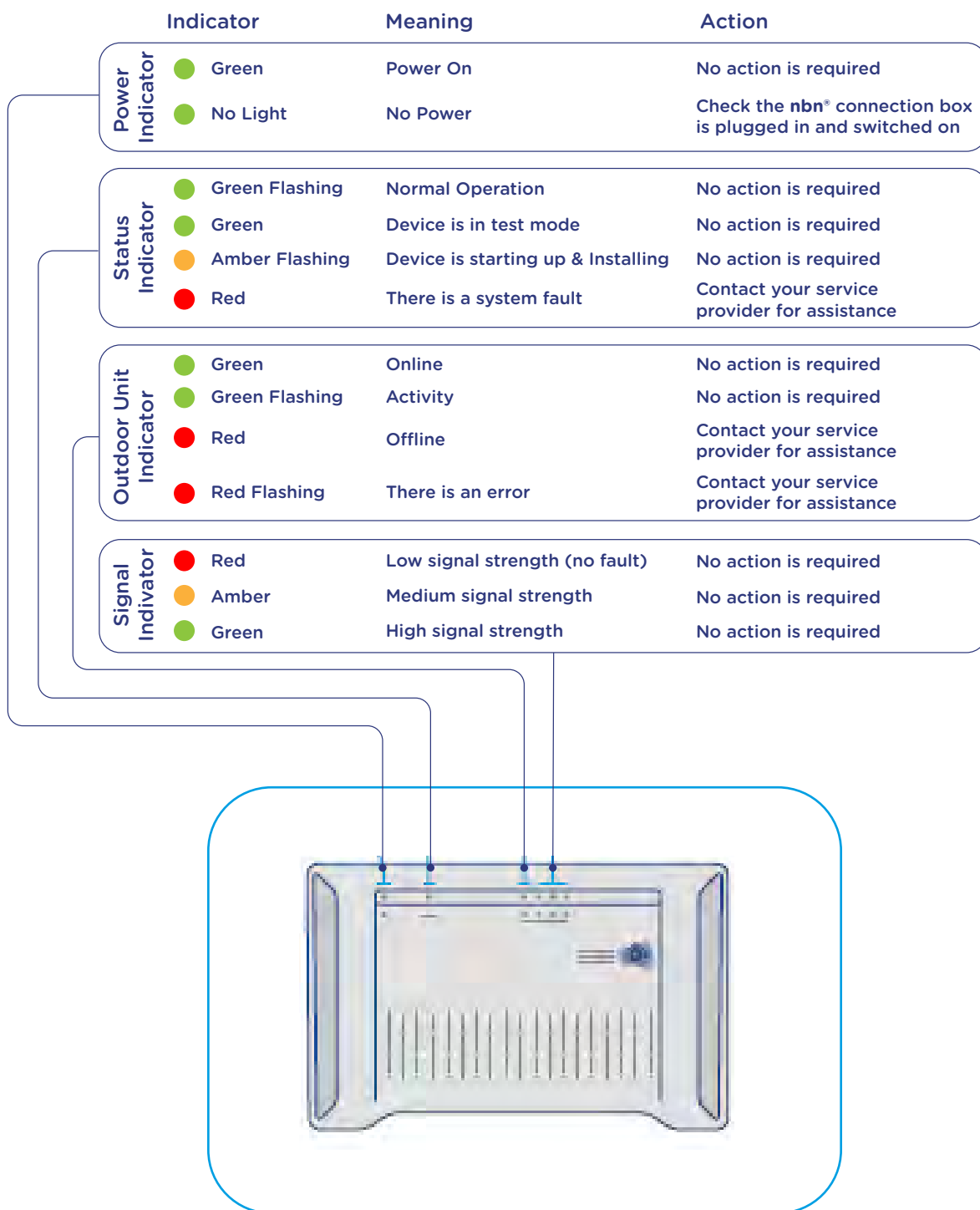
**nbn** Fixed Wireless technology is not a mobile service. It uses cellular technology to transmit LTE or 4G signals between a small antenna (fixed to the outside of your home or business) and an **nbn** Fixed Wireless tower.



External factors such as local vegetation, tree density, or even major building set-ups, can prevent a sufficiently strong signal from being achieved.

If there have been changes since your **nbn** Fixed Wireless service was installed and you believe something may now be obstructing the line of sight to your **nbn** Fixed Wireless tower, contact your internet provider.

## nbn® connection box indicator lights



## **nbn**® Fixed wireless installation types

Types of Fixed Wireless installations include:



### **Standard Installation**

Standard installation of **nbn** Fixed Wireless includes an antenna that has been fitted by an **nbn** approved installer to the roof.

If you believe there is a fault with your **nbn** installed equipment please contact your provider.



### **Non-standard installation**

Non-standard installation of **nbn** Fixed Wireless includes an antenna that has been set-up at a site other than your roof if there is not a suitable signal identified at your property by an **nbn** installer.

In some cases, a ground mounted pole may also be necessary.

If you believe there is a fault with your **nbn** installed equipment please contact your provider.



### **Solar Mount Solution**

A typical third-party Solar Mount Solution comprises of solar panels, an outdoor Wi-Fi point to point link, and a fixed concrete base with a mounted pole where the **nbn** outdoor antenna would be installed by an **nbn** approved installer after construction.

If you have a Solar Mount Solution and you believe there is a fault:

- Contact the company who built the solar structure to check if the Solar Mount Solution components (battery, Solar panels, cooling fans installed inside the outdoor enclosure, point to point Wi-Fi Link) are operating as designed.
- Contact your provider if there is a fault with your internet service or **nbn** equipment.

If you have a third-party Solar Mount Solution, please ensure you maintain and service the solar structure including the Wi-Fi point to point connection to the main premises.