Navigating the Challenges of Starlink

Index

⊪I5G STORE

HELPING YOU STAY CONNECTED

Overview

Starlink is great, but sometimes it really stinks and what's worse, there's very little support assistance available. At the very least, their app will alert you of issues and errors with the system. However, other than simply alerting you that there is an issue, there's not much more to said alert. So where does one go when they need assistance? Look to this guide as your first resort. Why? Our team has hands on experience with Starlink equipment and service. We've also had our share of issues, but we've followed user forums and researched different issues along the way. With all this information gathered, we created this guide to assist you through some common, and not so common, issues with detailed troubleshooting steps, as well as some usage tips to help you get the most out of your Starlink system.

With 5Gstore.com, we help you *stay connected!*

Starlink Mobile Application

The Starlink app is available for iOS and Android devices. It is needed for managing your system, as web browser access is no longer available.

After the app is downloaded and installed on your device, open it and click **Start Setup**, then follow the prompts:

- Select your Starlink [model]
- Find a clear view of sky
- Plug in Starlink, and router if applicable
- Connect to Starlink WiFi
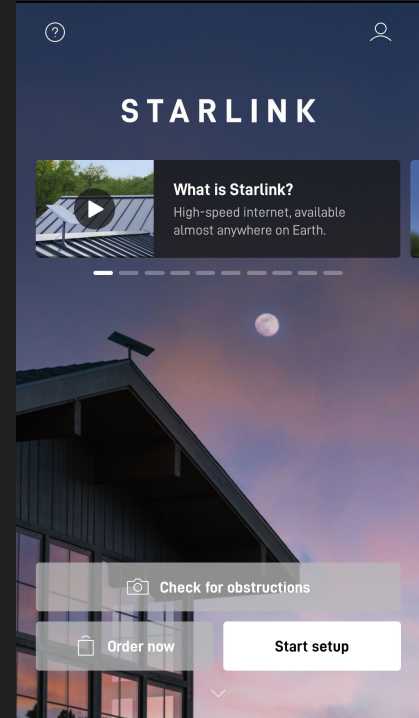
Activate Service For Your Starlink Account
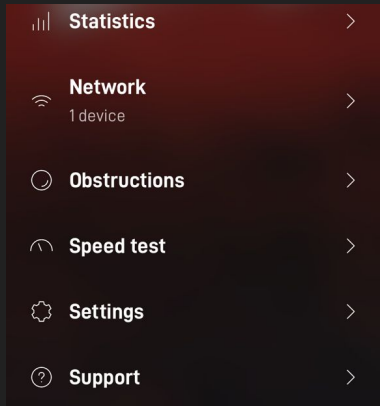
From the Starlink app: Select **Support → Change Account Information → Activate Service**

This will provide the steps needed to activate the account, and will guide you to the activations page of starlink.com/activate – this must be done from the website as it cannot be completed via the app.
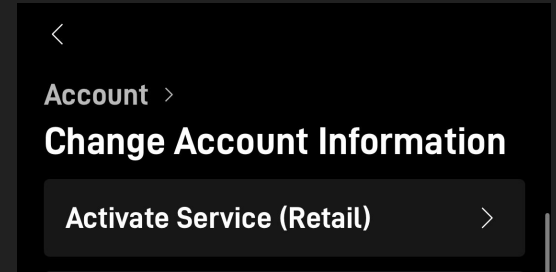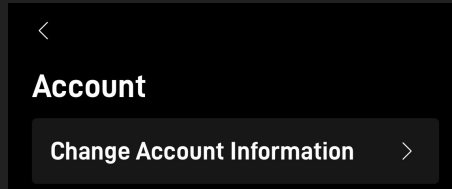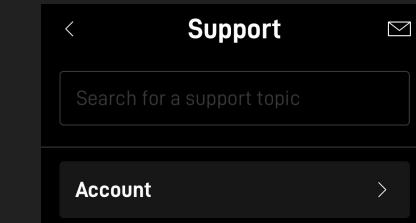
NOTE: If you ordered your Starlink from a 3rd party, you must go through the complete activation process. When purchased direct through Starlink, the system will already be assigned to you and you should not have to enter any kit details. Be aware that if another user is transferring their system to you, they must have the transfer completed before you may activate it on your account.

Troubleshooting

Common Solutions to Common Issues

There are several alerts that may come up where the troubleshooting steps will be the same. Those alerts include:
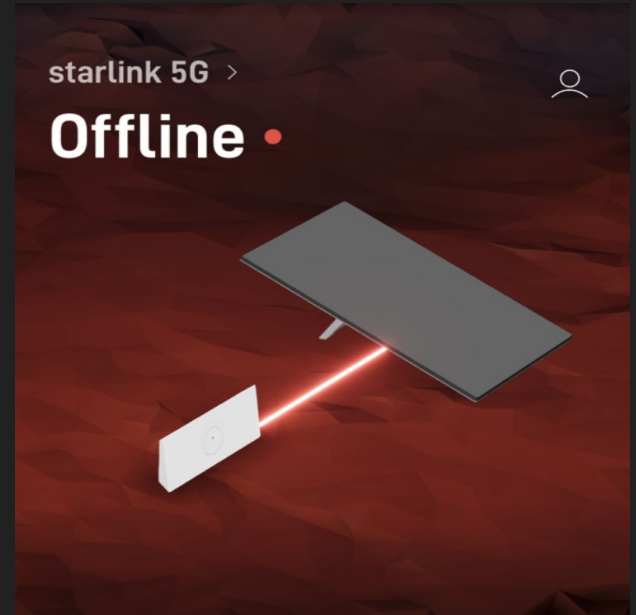
- Offline
- Unplugged/ Rebooting
- Persistent Statuses
  - Searching
  - Booting

Common troubleshooting steps for these alerts include:

1. Reboot the system
2. Check the cables
3. Factory Reset the Starlink Router

We'll cover these troubleshooting steps over the next few slides.

Check Your Connections

An issue at the connection port is the most common cause of the alert messages **Offline** or **Unplugged/ Rebooting**. Per the install guide, the plug should be fully inserted such that the plug face is flush with the surface. To remove cable to inspect it further, pull firmly outward as there is no release tab.

Follow these steps to ensure optimal connectivity for your Starlink system:

1. Start by examining the connections on the Dish. Ensure that the cables are securely attached to their respective ports and that there are no signs of wear or damage.
2. Next, inspect the Power supply connections. Make sure that the power cord is firmly plugged into both the power outlet and the Power supply unit. Check for any loose connections or frayed wires.
3. Finally, focus on the Starlink Router. Verify that all cables are securely connected to their designated ports on the router and that there are no loose connections.
4. Take a moment to visually inspect each connection point, ensuring that they are firmly seated and free from any looseness or play.
5. Once connections have been double checked, rebooting the system may help resolve the issue.

NOTE: The connection may be disrupted for another reason if you see **Offline** or **Unplugged/ Rebooting**. This can also be caused if the dish is rebooting or going through a software update. Wait approximately 10-15 minutes and check the status again. If there is no change, continue through additional troubleshooting in this guide.

5GSTORE

HELPING YOU STAY CONNECTED

Reboot the System

1. **Reboot:**
   - Unplug the power cord of the Starlink router. Wait a full 60 seconds, then plug it back into the router. The complete reboot process can take up to 15 minutes.

2. **Verify Connection and App Status:**
   - Once at least 15 minutes have passed, make sure you can reconnect to the Starlink WiFi network.
   - Open the Starlink app and check the status. If the status indicates anything other than **Online**, proceed with additional troubleshooting.

![5GSTORE logo — HELPING YOU STAY CONNECTED]

Check the Cables

This may seem like a simple step, but those are the best places to start. Let's break down the steps in detail:

1. Power down the system
2. Check the Starlink cable ends
3. Reconnect the Starlink cable so that the cable is fully seated and flush
4. Check the router connection
5. Secure the router connection and power the system ON
6. Monitor the app for errors

If the issue persists, proceed to steps on how to **factory reset** the Starlink router.

Factory Reset the Starlink Router

When all else fails, you can factory reset the Starlink router. Keep in mind that you will need to re-configure the device after this is completed. Here's step by step instructions for performing the reset on a **Gen 3** Router:

1. Factory reset
   - Power cycle the router by unplugging and then plugging back in the power cord **6** times consecutively. You must wait about 5-10 seconds between each cycle for the router to fully power off and on. After the last power cycle, plug the power cord back in.
   NOTE: For the **Starlink Mini**, locate the reset icon on the back. Press down firmly until you hear a click and hold for 3 seconds. The LED will blink quickly and shut off when complete.
2. System boot-up
   - Allow your system to boot up for approximately 15 minutes.
3. Connect to the Starlink network
4. Complete setup in Starlink app
   - Change the default WiFi network name and password to complete the setup.
   - Follow the prompts to ensure proper configuration.
5. Monitor for error messages

⊪5GSTORE
HELPING YOU STAY CONNECTED

Diagnosing & Troubleshooting Status - *Searching*

It's normal to see the **Searching** status upon boot up of your Starlink system. This simply means the system is searching for satellites to connect. However, if this happens randomly while the unit has been booted up, or it continues after 15 minutes of boot up time, it could be due to one of the following reasons:

- Starlink network outages (whether due to coverage or obstructions)
- Potentially defective hardware.

What Can You Do?
- **Reboot the System**
  - *Refer to page 8*
- **Check Your Account Details (see app under Manage Subscription)**
  - *Residential/Standard* service plan customers should confirm their Service Address listed on the account. Using Starlink outside of this address won't allow it to connect.
  - *Starlink Roam* customers should ensure they are in an area with active Starlink coverage.
- **Check Network Statistics**
  - If you're seeing outages due to obstructions, relocate the dish if possible.
  - Look for **network issue** entries in the log and see if the issue resolves on its own.

starlink 5G ›

Searching
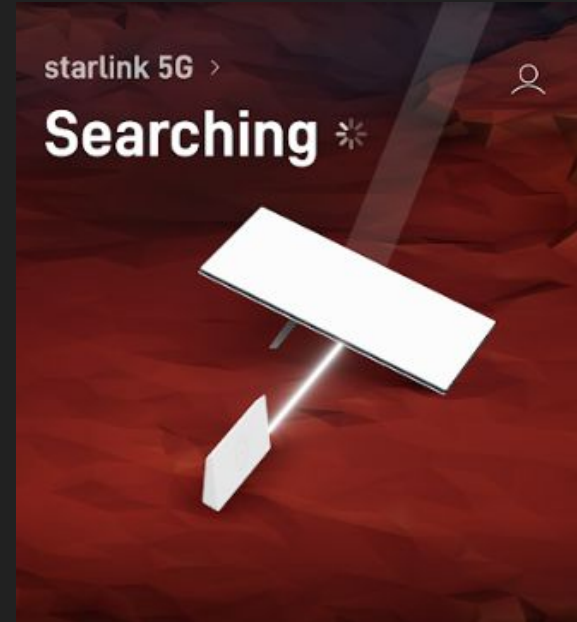
Diagnosing & Troubleshooting Alert - *Unexpected Location*

The **Unexpected Location** alert in the Starlink app indicates that your dish is not positioned at the registered service address associated with your account.

What Can You Do?

1. **Residential/Standard users**: Check Your Account Details (see app under Manage Subscription) and ensure that your dish is physically located at the registered service address.

    Starlink Roam users: Confirm you are in an area with active Starlink service.

2. **Reboot the System**
    - *Refer to page 8*
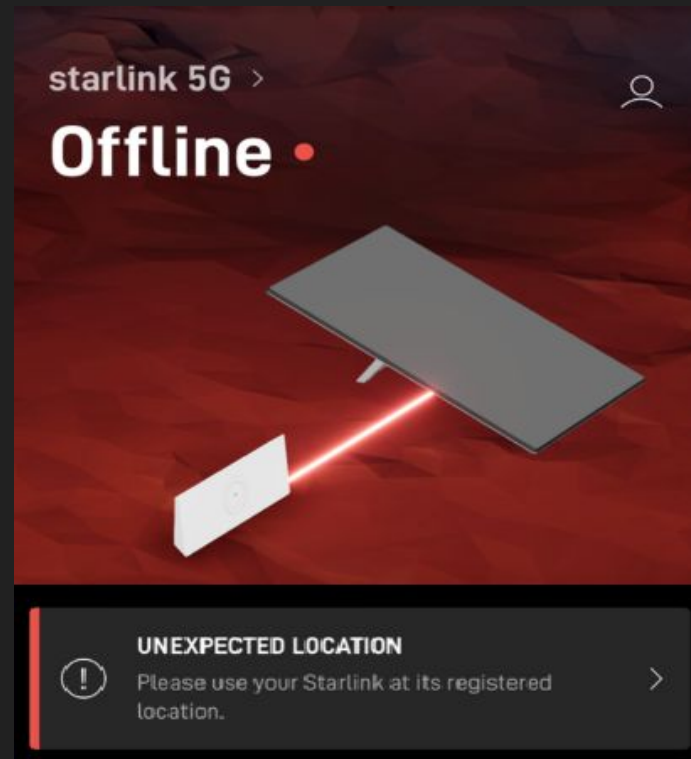
Diagnosing & Troubleshooting Alert - *No Active Account*

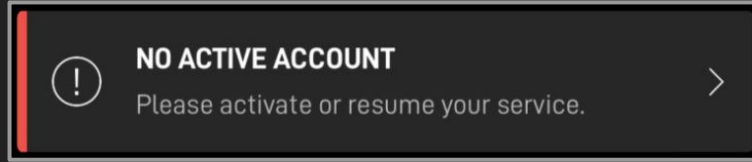If you see the alert message, Starlink is not finding an active subscription tied to your dish. Until this is resolved, you will never get online. Note that the Starlink app will still allow for the basic features if it does not detect Starlink. You should also have access to the Starlink website. However, if you cannot get online via an alternative connection on your mobile device, you will need to travel somewhere you can get a connection to set things up. When you are done, you can then move back to the Starlink system and it should work.

What Can You Do?

1. **Check Your Account Details (see app under Manage Subscription)**
   - Ensure this is active
2. **Reboot the System**
   - *Refer to page 8*

Diagnosing & Troubleshooting Alert - *Restricted*

This may be due to the following:

- You are in a country where Starlink is not available
- Your account has been restricted due to non payment
- You have done something on the Internet that is not allowed per Starlinks terms and conditions.

What Can You Do?

- Check your account settings - you may have closed, or paused, the service, in which case it will need to be reactivated.
- Make sure your payment is up to date
- Submit a support ticket if nothing else can be determined as the cause.
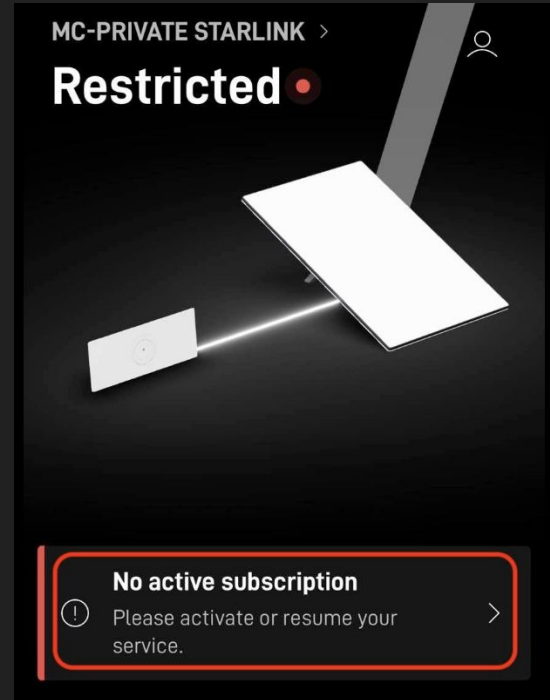
Diagnosing & Troubleshooting Status - *Disconnected*

The **Disconnected** status in the Starlink app means your phone can't connect to your Starlink system, indicating a communication issue with the router.

What Can You Do?
- Reconnect to your Starlink WiFi network
- Try accessing the Starlink app remotely via your cellular connection
- If all else fails, consider a router factory reset (refer to page 10).
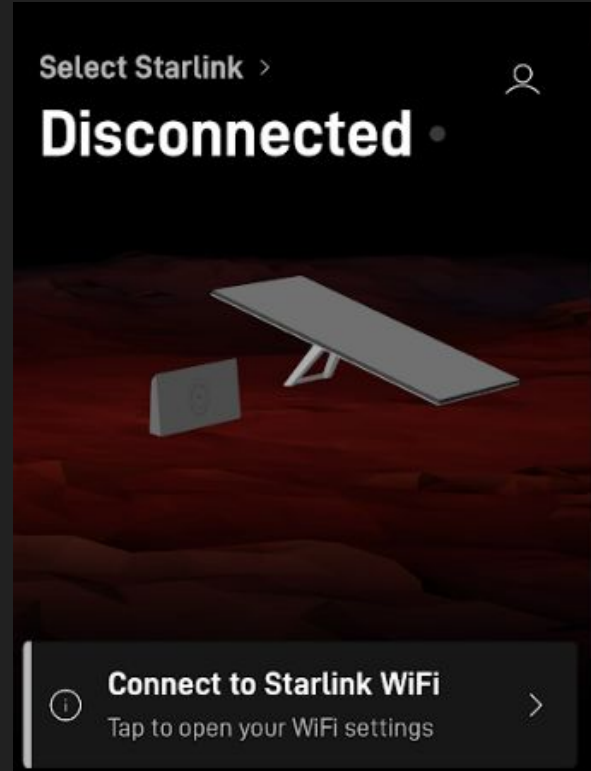
Diagnosing & Troubleshooting Status - *Network Issue*

Outages with Starlink are normal. **Network Statistics** show this downtime from the Starlink system (i.e. Internet outages).

What Can You Do?

- In most cases, you'll simply wait for the connection to restore on its own.
- Reach out to Starlink support if issues persist more than a few seconds to minutes at a time as it could be due to a nationwide issue.

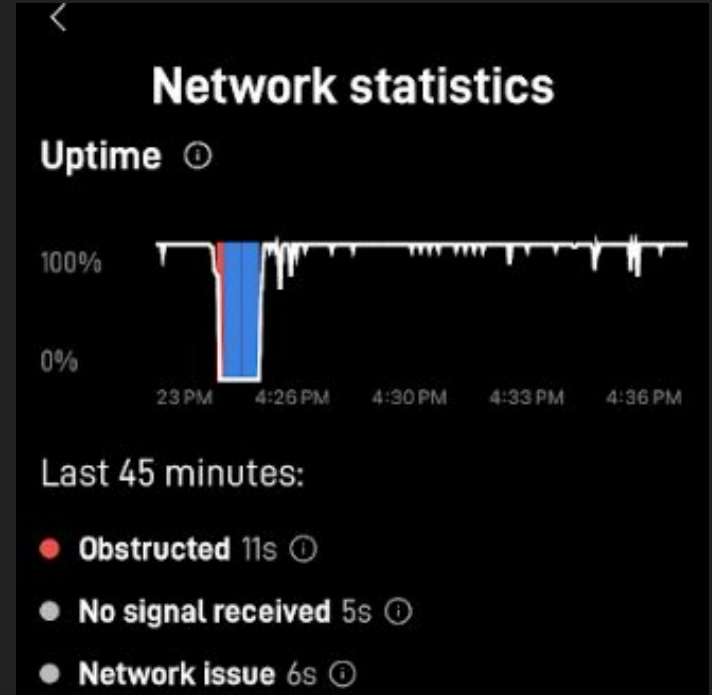# Usage Tips

Firmware Upgrade

The firmware update process is automated on the Starlink system. This is to ensure that the system is always up to date and able to receive any necessary enhancements to maintain proper functionality.

This automated update feature is strategically scheduled to occur during off-peak hours, typically during the night, when user activity is minimal, thereby minimizing any potential disruption to connectivity.

By harnessing this proactive approach, it not only facilitates the deployment of critical updates, such as security patches, but also contributes to the overall reliability and efficiency of the Starlink network.

Furthermore, the automatic update functionality underscores Starlink's commitment to providing a user-friendly experience, sparing subscribers the inconvenience of having to manually initiate and oversee the update process. This hands-off approach aligns with contemporary best practices in network management and serves to enhance the overall user experience by ensuring that subscribers consistently benefit from the latest advancements and optimizations in Starlink's technology ecosystem.

For Starlink's live firmware listing: https://starlinktrack.com/firmware/

Understanding Starlink Obstructions

Starlink obstructions refer to anything that interferes with the satellite dish's ability to establish and maintain a clear line of sight to the satellites in orbit. Since Starlink relies on a constellation of satellites in low Earth orbit to provide internet connectivity, obstructions can disrupt the signal and affect the quality of the connection.

Obstructions can take various forms, including:

1. **Physical Obstacles**: Buildings, trees, mountains, or other structures between the satellite dish and the sky can obstruct the signal. These obstacles block or interfere with the line of sight to the satellites, leading to signal degradation or loss.
2. **Atmospheric Conditions**: Adverse weather conditions such as heavy rain, snow, fog, or atmospheric disturbances can attenuate the satellite signal, causing temporary disruptions in connectivity.
3. **Electromagnetic Interference**: Nearby electronic devices, power lines, or radio frequency interference from other sources can introduce electromagnetic interference that interferes with the satellite signal.
4. **Geographical Features**: Natural geographical features such as valleys, hills, or terrain variations can obstruct the satellite signal if they block the line of sight between the dish and the satellites.

Addressing obstructions is important for ensuring reliable and consistent connectivity with Starlink. Users may need to adjust the placement of their satellite dish, trim vegetation, or take other measures to minimize obstructions and optimize signal strength. Additionally, Starlink's adaptive technology and constellation design aim to mitigate the impact of obstructions by dynamically adjusting the network to maintain connectivity as effectively as possible.

Interpreting Starlink Obstruction Data

This image illustrates the perspective of the Starlink satellite dish itself, showing how items in the surrounding environment may obstruct its line of sight to the satellites in orbit. This view helps users understand the challenges their dish may encounter when attempting to establish a clear connection with the Starlink satellite constellation. The Red is a tree to the Eastern sky that is creating a blocking of signal at times. The Blue Is the Open sky and clear of obstructions.

OBSTRUCTIONS ⓘ

N

E

W

S

● Clear view   ● Obstructions   ● No data

5GSTORE

HELPING YOU STAY CONNECTED
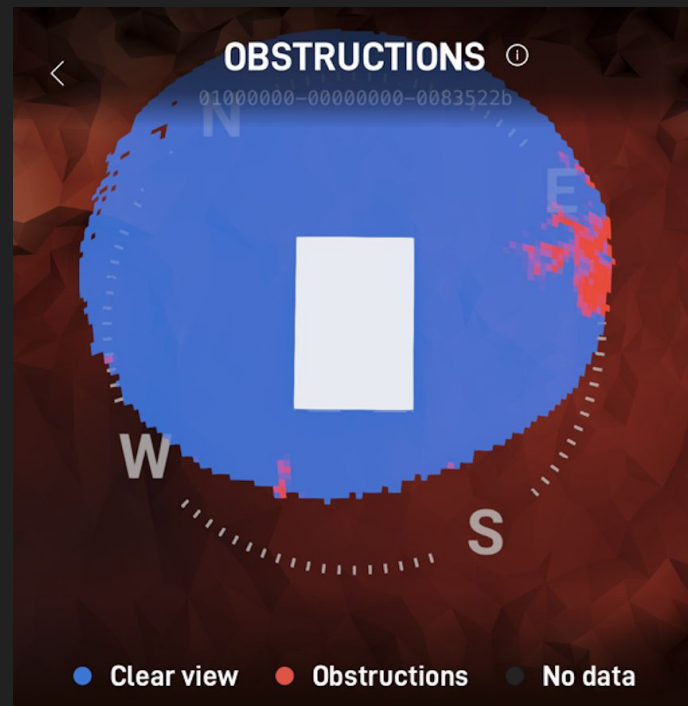
Starlink Obstruction Example

In contrast with the Starlink app data, this image captures the real-world view of the obstructing object as seen from a camera positioned at the location of the Starlink dish. It provides a visual representation of the physical barriers that are hindering the dish's ability to establish an unobstructed connection with the satellites. This real camera image helps users identify and assess the nature and extent of the obstructions present in their environment, enabling them to make informed decisions about optimizing the placement of their Starlink dish for improved connectivity.

WiFi Settings - Splitting 2.4GHz and 5GHz

Splitting your Wi-Fi networks into separate 2.4GHz and 5GHz bands is often recommended due to several advantages it offers in terms of network optimization and device performance.

1. **Bandwidth Allocation**: By splitting the networks, you can allocate specific devices to each band based on their bandwidth requirements and capabilities. The 5GHz band typically offers higher bandwidth and less interference compared to the 2.4GHz band. Devices that require high-speed connections, such as streaming devices or gaming consoles, can benefit from connecting to the 5GHz band, while devices with lower bandwidth demands, such as IoT devices or older devices, can use the 2.4GHz band.
2. **Reduced Interference**: The 2.4GHz band is more susceptible to interference from neighboring Wi-Fi networks, Bluetooth devices, and household appliances like microwaves and cordless phones. By separating the bands, you can reduce the likelihood of interference affecting the performance of your devices, especially in densely populated areas where multiple Wifi networks overlap.
3. **Optimized Performance**: Devices connected to the 5GHz band generally experience lower latency and faster data transfer rates compared to the 2.4GHz band. This can result in smoother streaming, faster downloads/uploads, and improved overall performance, particularly for bandwidth-intensive tasks like online gaming or HD video streaming.
4. **Enhanced Coverage**: While the 2.4GHz band offers better range and penetration through walls and obstacles, the 5GHz band provides faster speeds but with slightly reduced coverage. By splitting the networks, you can ensure that devices closer to the router or access point can connect to the faster 5GHz band for optimal performance, while devices located farther away can still access the network via the 2.4GHz band for better coverage.
5. **Device Compatibility**: Not all devices support both 2.4GHz and 5GHz bands. Splitting the networks allows you to accommodate devices that are only compatible with one band or the other, ensuring that all your devices can connect to the network without compatibility issues.

Overall, splitting your Wi-Fi networks into separate 2.4GHz and 5GHz bands provides greater flexibility, improved performance, and better network management, making it a recommended practice for optimizing your wireless network setup.

How to Enable Split WiFi Networks

Follow these steps for setting up the WiFi on your Starlink system:

1. Open the Starlink App
2. Go to **Settings**
3. Choose Router, then pick Starlink as your Wifi SSID.
4. Select **Split 2.4/ 5GHz Networks**
5. Enter Name for the 2.4 and 5 GHz Wifi Network.
6. Enter Password (shared for both 2.4 and 5GHz Networks)
7. Click **Save**

Bypass Mode

Bypass mode is for users who want to utilize a third party router rather than the Starlink router. Note that enabling this will totally disable the WiFi connectivity on the Starlink. In order to disable bypass mode, you will need to factory reset the Starlink (refer to page 10 for instructions).

Depending on the Starlink kit you have, it may or may not include a cable option that allows you to connect the power supply to an external RJ45 port (such as the High Performance and Flat High Performance Starlink with Gen 2 router.

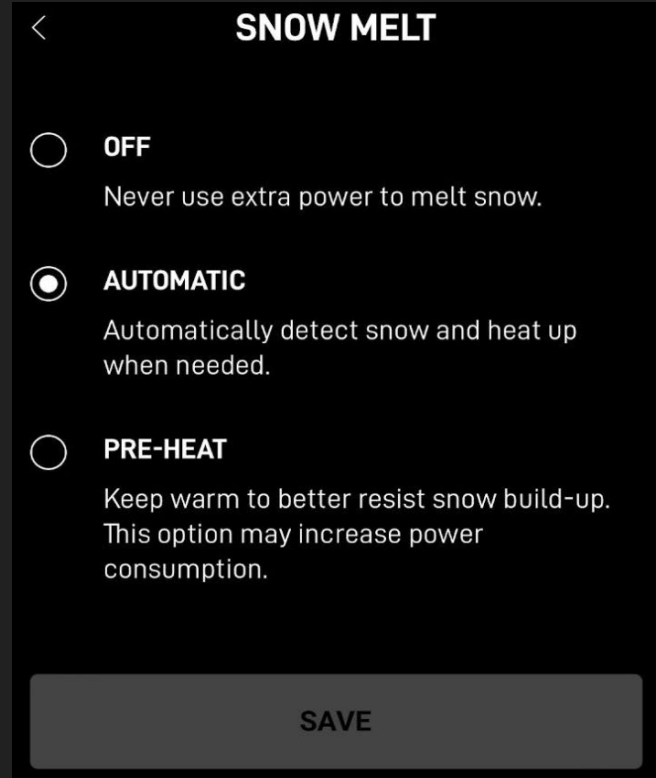With regards to the Starlink Mini, Starlink recommends you use the official Starlink Mini Ethernet cable, which is available in the Starlink shop. Using this official cable maintains the Mini's IP67 weather-proofing when using the Ethernet port.
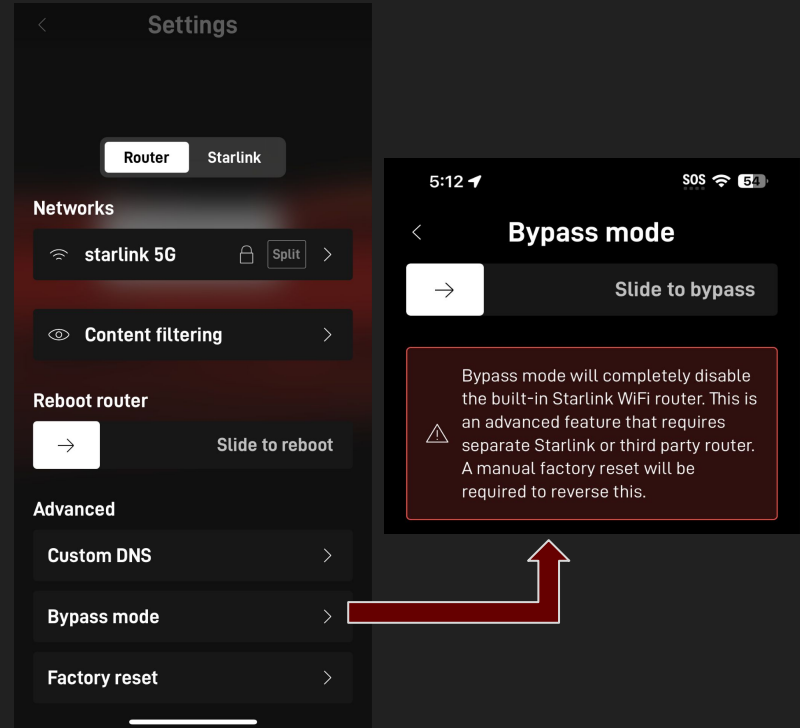
Snow Melt Feature

The Starlink Dish features an automated heating system designed to detect and melt snow and ice. This can ensure reliable performance in areas prone to heavy snowfall. However, manual clearing may still be necessary in extreme conditions.

1. Open the Starlink App
2. Go to **Settings**
3. Click the Starlink button
4. Locate the Snow Melt feature
5. Choose the option suitable for your dish style
6. Click **Save**

SNOW MELT

○ **OFF**
Never use extra power to melt snow.

◉ **AUTOMATIC**
Automatically detect snow and heat up when needed.

○ **PRE-HEAT**
Keep warm to better resist snow build-up. This option may increase power consumption.

SAVE

FAQ

Q: My Starlink just reset its Wifi username and password, What could have happened?

A: Power fluctuations can factory reset the router.

*TIP: Get an APC/UPC, which is a backup battery system. This will maintain consistent power if you live in an area that has power outages or unstable power.

Q: My Starlink is working with iPads and iPhones, both are connected with the new Starlink Wifi, but they are displaying a "Privacy Warning." What might cause this and how can I fix it?

A: This is a security setting on your devices. Not the Starlink connection.

*TIP:
The "Privacy Warning" you're seeing on your iPhone's Wi-Fi settings indicates that the Private Wi-Fi Address feature is disabled. This feature helps to mask your device's Media Access Control (MAC) address, which is a unique identifier for your device. When it's not enabled, your MAC address is visible to the network, which could potentially be a privacy concern.

*Solution:
To resolve the "Privacy Warning" issue, open the **Settings** on your iOS device. Next, tap on **WiFi**. Lastly, tap the blue info icon next to the Wi-Fi network you're connected to.

![5GSTORE logo]
5GSTORE
HELPING YOU STAY CONNECTED
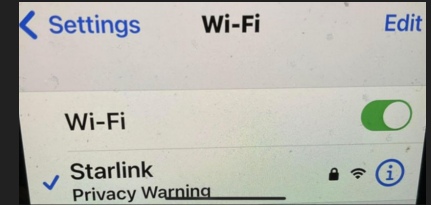
Support Options

Nothing Helps! What Do I Do Next?

You can explore the extensive support documentation available on the Starlink website next. This resource may contain valuable information and troubleshooting guides tailored to your specific problem. It's important to note that the support ticket system and the support section of the website are the primary means of contacting Starlink. Unfortunately, they do not provide a phone number or email for direct communication.

If you've exhausted all possible troubleshooting steps without success, it's likely that you're dealing with defective hardware. The culprit could be the Starlink cable, the router, or even the dish itself.

If your Starlink system is still under warranty, your best course of action is to underline create a support ticket with Starlink. Reach out to their customer support team to request replacement hardware. They will guide you through the process and provide assistance in resolving the issue.

However, if your system is no longer covered by the warranty, don't worry. You still have options. You can order a replacement cable, router, or even a new dish directly from the Starlink shop. Simply visit their website or contact customer support for further assistance in purchasing the necessary replacement hardware.

5GStore Bonding Benefits

Bonding services offered by 5Gstore.com can significantly enhance your internet experience, particularly when dealing with obstructions and occasional dropped connections during short Starlink outages. Here are the key benefits:

1. **Improved Reliability**: Bonding services combine multiple internet connections from different sources, such as Starlink, cellular networks, or other ISPs. By aggregating these connections, bonding ensures a more reliable and consistent internet experience. Even if one connection experiences issues, the others can pick up the slack, minimizing downtime and disruptions.
2. **Increased Bandwidth**: Bonding allows you to harness the combined bandwidth of multiple connections. This means you can enjoy faster download and upload speeds, which is especially beneficial for tasks like streaming high-definition content, online gaming, or video conferencing. With bonding, you're less likely to experience slowdowns, even during peak usage times.
3. **Redundancy and Failover**: In addition to improving speed and reliability, bonding provides redundancy and failover protection. If one connection fails or experiences interference due to obstructions, the bonding service automatically reroutes traffic through the remaining connections. This ensures uninterrupted internet access, even in challenging environments or during temporary outages.
4. **Optimized Performance**: Bonding services often employ advanced algorithms to intelligently distribute traffic across available connections based on factors like latency, packet loss, and signal strength. This optimization ensures that each connection is utilized efficiently, maximizing overall performance and minimizing latency for a smoother online experience.
5. **Flexibility and Scalability**: Bonding solutions from 5Gstore.com are designed to be flexible and scalable, allowing you to adapt to changing needs and environments. Whether you're operating in a remote location with limited connectivity options or simply seeking to boost performance in a crowded urban area, bonding services can be tailored to suit your specific requirements.
6. **Professional Support and Setup**: When you choose a bonding service from 5Gstore.com, you gain access to professional support and expertise. Their team can assist you with setup, configuration, and troubleshooting, ensuring that your bonding solution is optimized for your unique circumstances and delivers the best possible performance.

Overall, bonding services from 5Gstore.com offer a comprehensive solution for improving internet connectivity, mitigating obstructions, and minimizing the impact of short Starlink outages. Whether you're a remote worker, a small business owner, or a casual internet user, bonding can enhance your online experience and provide peace of mind knowing that you're always connected. For assistance, reach out to 5Gstore.com Advanced Support.