

T Mobile™

User Guide

**5G21-12W-A
High-Speed
Internet Gateway**



Release 1.0.0

Manufacturer Nokia Solutions & Networks Oy
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Import from Nokia Solutions & Networks Oy

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Safety guidelines

Follow these guidelines when using the T-Mobile High-Speed Internet Gateway and its battery:

Danger 1: Do not attempt to access, manipulate, insert foreign objects into, re-manufacture or change the device battery. Improper battery use may result in fire, explosion, or another hazard.



Danger 2: Do not immerse or expose the device battery to water or other liquids. Do not expose it to fire or other explosion hazards.

Danger 3: Do not attempt to charge the device using anything other than the power supply provided. Use of an unqualified charger may present a risk of fire, explosion, leakage, or other hazards.

Danger 4: Only T-Mobile authorized agents may service the battery.

Warning 1: The T-Mobile High-Speed Internet Gateway contains a battery which needs to be scrapped, recycled or disposed of in accordance with local laws. Contact a T-Mobile service center to promptly dispose of used or ineffective batteries in accordance with local regulations.



Warning 2: If the T-Mobile High-Speed Internet Gateway is dropped—especially on a hard surface—or in the case of suspected damage, contact your nearest T-Mobile service center for inspection.

NOTE

Review the safety and regulatory notice included with the T-Mobile High-Speed Internet Gateway.

Introduction

Thank you for purchasing the **T-Mobile High-Speed Internet Gateway** [model 5G21-12W-A].

This document explains how to operate the T-Mobile High-Speed Internet Gateway at home using visual cues to achieve the best placement and performance.

NOTE

This document is a supplement to the Quick Start Guide and T-Mobile Home Internet mobile app.

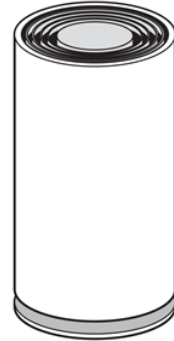
Use the Quick Start Guide to get up and running quickly.

The contents of this guide are subject to change without notice.

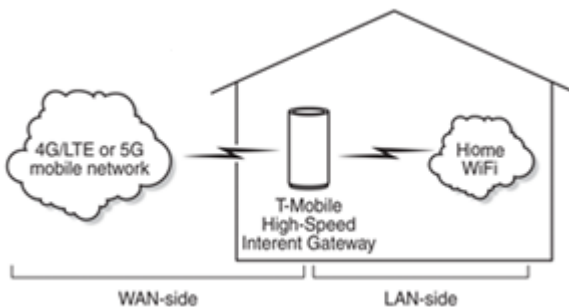
Getting to know your T-Mobile High-Speed Internet Gateway

You will find the following items in the box:

- (1) Gateway
- (1) AC/DC power adapter
- (1) Ethernet cable
- (1) Quick Start Guide
- (1) T-Mobile Terms and Conditions
- (1) Safety and Regulatory Notice



The gateway offers 4G/LTE or 5G (FDD and TDD) WAN mobile network connectivity by way of four wideband OMNI antennas that supports all LTE/5G bands. It functions as the connection point between the WAN outside your home and the LAN inside your home.



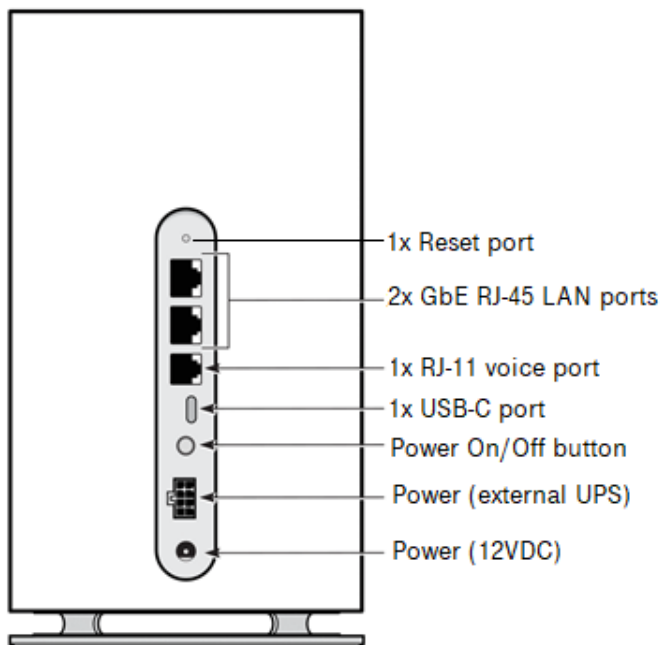
NOTE

Coverage not available in some areas.

5G: Not all devices, signals, or uses are compatible; check your device specifications. See [T-Mobile.com](http://isp.t-mobile.com/support) for 5G coverage, access, and network management details.

Physical interfaces

The gateway's physical interfaces include those shown in the diagram.



NOTE

The USB-C and RJ-11 voice ports currently are not functional.

Setting up the T-Mobile High-Speed Internet Gateway

Recommended setup: use the mobile app

Using the Quick Start Guide and the T-Mobile Home Internet mobile app provides the easiest setup experience. The T-Mobile Home Internet mobile app can be downloaded from either Google Play or the App Store.

Use the following instructions for managed setup only if you are unable to use the mobile app.

Manual setup: identify an ideal location

You will start by identifying the ideal location for your gateway—that location will meet the following criteria:

- Near a window where the signal strength is strongest
- In an open space away from:
 - Walls or obstructions
 - Heavy-duty appliances or electronics such as microwave ovens and baby monitors
 - Metal fixtures, enclosures, cabinets, reinforced concrete, or pipes
- Near a power outlet
- On an upper floor of the home or at least 6 feet off the floor

The following procedure will help determine the best location for your gateway.

NOTE

Once you find a good signal, do not reposition the device. If the position changes, you may need to verify the signal strength again.

1. Without using the provided power adapter, power-on the gateway by pressing its On/Off button.
2. Walk the gateway around your house and identify the window where it gets the best signal, as represented by the greatest number of bars on the LCD.

NOTE

You might need to repeat this cycle several times before finding the ideal location.

An “X” on the LCD indicates the gateway is not connected to the cellular network. For more information about the LCD touch screen display, refer to the section [Understanding the LCD](#).

3. Once you've identified the best location, you're ready to connect the gateway to grounded, sustained power.

Connecting the T-Mobile High-Speed Internet Gateway to sustained power

Place the gateway on a flat surface, such as a tabletop or similar; close to a window and near an electrical outlet.

Minimize the number of obstructions as much as possible.



Connect the gateway's power cable to its Power port. Plug the other end of the power cable into a grounded electrical outlet.

Starting the T-Mobile High-Speed Internet Gateway

After the gateway is connected to a power source, start the device by pressing the On/Off button located on the backside of the unit.

The LCD screen on top of the gateway displays an animated T-Mobile logo that indicates the gateway is starting up.

The start up sequence is complete when the LCD shows:

- CONNECTION
- up to five bars, indicating signal strength
- six small dots, indicating available screens

Take a moment to swipe between these screens to see what information is available; also refer to the section [Understanding the LCD](#).

Connecting devices

Connecting Wi-Fi devices

Connect your wireless devices to your network using the WiFi SSID (network name) and WiFi Key (network password), which are found on the gateway's underside. Here is an example of the label:



The Username and Password credentials are for logging into the gateway's web GUI.

Connecting Ethernet devices

The gateway has two (2) Gigabit Ethernet LAN ports. Use an Ethernet cable to connect devices that don't have Wi-Fi adapters or capabilities.

Viewing connected devices

The Devices LCD screen on top of the gateway shows the number of devices currently connected to the network by way of either Wi-Fi or Ethernet.

To view the connected devices:

1. Observe the LCD Connection screen.
2. Swipe left to display the Devices screen.



NOTE

Zero (0) may be shown before all devices are fully connected

Configuring your network with the web GUI

You can configure the gateway and any connected client devices via web GUI on a PC, laptop, smart phone, or tablet.

NOTE

The web GUI screens are optimized for 1080p resolution. Supported browsers include Chrome, Edge, and Safari.

This section describes:

- How to establish a connection between the device on which you will access the web GUI and the gateway.
- How to log into the web GUI when needed to view and configure network parameters.

Accessing the web GUI

Ensure the Local Area Connection setting on your PC, laptop, smart phone, or tablet is configured to obtain an IP address automatically.

On your device, open a web browser, and enter <http://192.168.12.1>

You should now see the **Overview** screen—which provides network connectivity statistics and information about the gateway.

NOTE

If you are unable to access the web GUI at the above address, please contact customer support.

Overview screen

The **Overview** screen contains two sections: Network Overview and Gateway Information.

Click **Refresh** at any time to update displayed information.

The screenshot displays the T-Mobile Overview screen. On the left is a navigation menu with options: Overview (selected), Status, Statistics, Network, and Wi-Fi Networks. The main content area is titled 'Overview' and includes a 'Refresh' button. It is divided into two main sections: 'Network Overview' and 'Gateway Information'.

Network Overview: This section shows a flow of three status indicators: 'Internet Connected' (with a signal strength icon and a green checkmark), 'Gateway Online' (with a gateway device icon and a green checkmark), and 'Devices 1 Connected' (with a smartphone and tablet icon). Below this, there are two sub-sections: 'Internet Connection' showing 'Primary Signal' as 'Connected' and 'Secondary Signal' as 'Not Connected', both with signal strength bars; and 'Devices' showing 'Mesh Wi-Fi 6 System' (0 Connected), 'Wireless' (1 Devices), and 'Ethernet' (0 Devices).

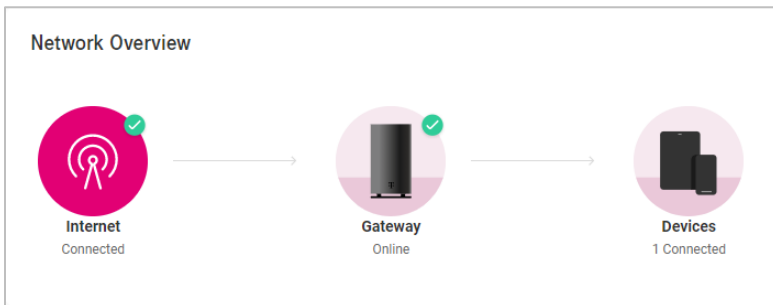
Gateway Information: This section shows a gateway device icon and a table of details:

Name:	High-Speed Internet Gateway
Serial Number:	FSH20230009E
Hardware Version:	3TG00739AAAA
Software Version:	1.2003.00.0018
Running Time:	3h 37m 8s

At the bottom of the screen, there is a 'Log In' button, a language dropdown set to 'English', and footer text: 'Questions? Call T-Mobile Customer Service at 1-844-275-9310' and '© T-Mobile Mobile, Inc. Privacy Policy Terms of Service'.

Network overview

The network overview shows status of the cellular network connection, the gateway, and the number of connected devices.



Internet connection

The cellular signal strength is represented by number of bars, Reference Signals Received Power (RSRP), signal to noise ratio (SNR), Reference Signals Received Quality (RSRQ), and Received Signal Strength Indicator (RSSI).

Devices

The devices currently connected to the gateway—device types include wireless and Ethernet.

Gateway information


Name: by default, *T-Mobile High-Speed Internet Gateway*

Serial number: variable

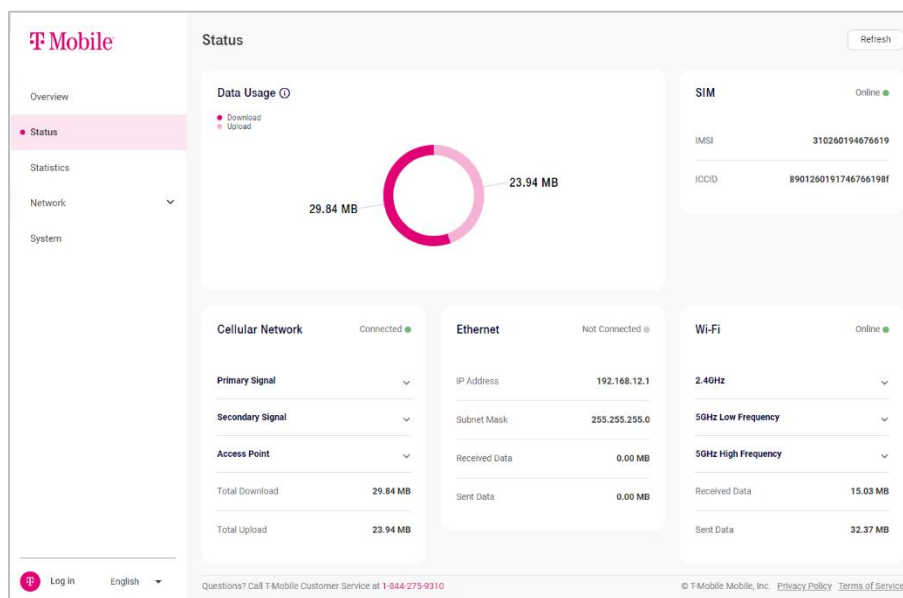
Hardware version: variable

Software version: variable

Running time: how long it has been since the gateway's last reset/power-cycle

Gateway Information	
	
Name:	High-Speed Internet Gateway
Serial Number:	FSH20290009E
Hardware Version:	3TG00739AAAA
Software Version:	1.2003.00.0618
Running Time:	3h 37m 8s

Status screen



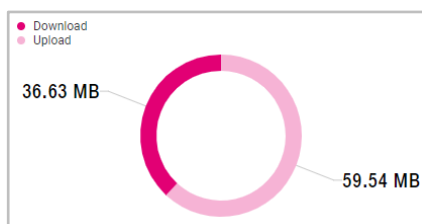
Selecting **Status** from the web GUI's main menu shows you information regarding:

- Data usage
- SIM card
- Cellular network
- Ethernet
- Wi-Fi

Click **Refresh** at any time to update displayed information.

Data usage

Data usage represents the amount of data that has been downloaded to and uploaded from the gateway since its last reset/power-cycle.



SIM information

The SIM status will be either Online or Offline.

Online ■ indicates your SIM card is activated and working well.

Offline ■ indicates your SIM card is either not activated, was installed incorrectly, or may be missing.

SIM	Online ●
IMSI	310260194676619
ICCID	8901260191746766198f

To rule out one or more of these possibilities, refer to the section [Replacing the SIM card](#).

Cellular network information

The cellular network status is related to the SIM status and will be either Connected or Not Connected.

Connected ■ indicates the gateway is connected to the cellular network

Not Connected ■ indicates there's a problem with either the SIM card or the network infrastructure

You may view Primary and Secondary Signal cellular connection information by selecting the associated drop-down arrow.

- Primary Signal details include PCI, Band, and EARFCN.
- Secondary Signal details include PCI, Band, and NR-ARFCN.

You may view Access Point-specific cellular information by selecting the associated drop-down arrow.

- APN (Access Point Name): the gateway's name as presented to the mobile network.
- IPv4: the IPv4 link local address
- IPv6: the IPv6 link local address

You also may view Total Download and Total Upload values in megabytes (MB).

Ethernet connections

The Ethernet connection status indicates whether a device is connected to the gateway via Ethernet cable, and will be either Connected or Not Connected.

Connected ▀ indicates at least one Ethernet-connected device is present

Not Connected ▀ indicates no Ethernet-connected devices are present

NOTE

If your device is connected via Ethernet and the web GUI still shows Ethernet is Not Connected, click the Refresh button.

Ethernet connection information shown includes:

- IP address: the gateway's local address on your LAN
- Subnet mask: the gateway's default subnet mask
- Received Data: the amount of data received via the Ethernet connection
- Sent Data: the amount of data sent via the Ethernet connection

Wi-Fi connections

The Wi-Fi connection status indicates whether the gateway's tri-band wireless network is operational, and it will be either Online or Offline.

Online ▀ the tri-band wireless network is operational

Offline ▀ the tri-band wireless network is not operational.

The gateway's wireless network operates on three different bands or frequencies—2.4GHz, 5GHz Low, and 5GHz High—and each operates on a different default channel.

You may view frequency-specific channel and Transmission Power (%) values by selecting the drop-down arrow associated with each frequency.

You also may view Received Data and Sent Data values in megabytes (MB).

Statistics screen

The screenshot shows the T-Mobile Statistics screen. The left sidebar contains a menu with 'Statistics' selected. The main content area is titled 'Statistics' and has a 'Refresh' button in the top right. Below the title are three tabs: 'LAN' (selected), 'Cellular', and 'WLAN'. A table displays statistics for LAN1 and LAN2. The table has columns for Counter, Status, LAN1, and LAN2. The data rows show Sent Bytes, Received Bytes, Sent Packets, Received Packets, Discarded Sent Packets, Discarded Received Packets, Sent Errors, and Received Errors, all with values of 0. The status for both LAN1 and LAN2 is 'Down'.

Counter	LAN1	LAN2
Status	Down	Down
Sent Bytes	0	0
Received Bytes	0	0
Sent Packets	0	0
Received Packets	0	0
Discarded Sent Packets	0	0
Discarded Received Packets	0	0
Sent Errors	0	0
Received Errors	0	0

Selecting **Statistics** from the GUI's main menu shows you the amount of data that has crossed the gateway's LAN, cellular, and WLAN interfaces.

Click the **Refresh** button at any time to update displayed information.

LAN statistics

By default, you see the following statistics—per LAN port tab—upon accessing the Statistics screen.

- Status: can be either Up or Down
- Sent Bytes
- Received Bytes

- Sent Packets
- Received Packets
- Discarded Sent Packets
- Discarded Received Packets
- Sent Errors
- Received Errors

Cellular statistics

From the **Statistics** screen, select the **Cellular** tab; you see the following statistics.

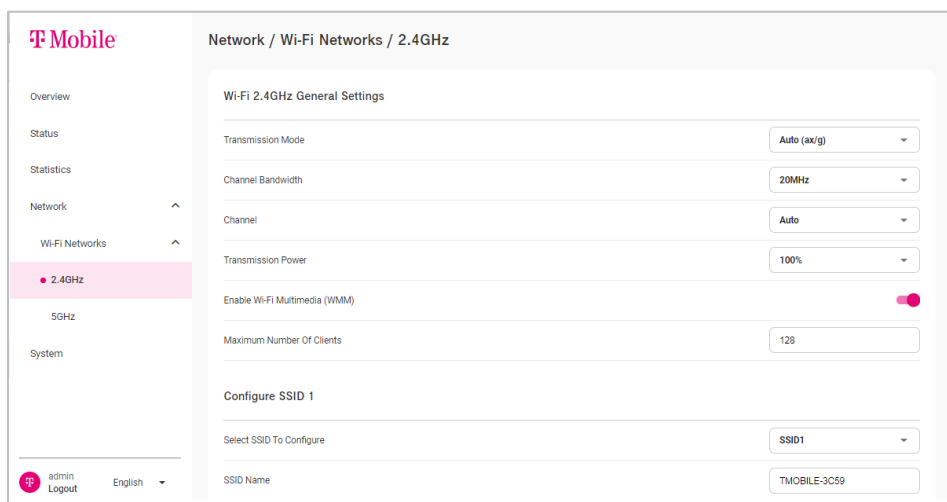
- Sent Bytes
- Received Bytes
- Sent Packets
- Received Packets
- Packets Error
- Packets Drop

WLAN statistics

From the **Statistics** screen, select the **WLAN** tab; you see the following statistics for the 2.4GHz, 5GHz Low, and 5GHz High frequencies.

- SSID
- Sent Bytes
- Received Bytes
- Sent Packets
- Received Packets
- Discarded Sent Packets
- Discarded Received Packets
- Sent Errors

Network screen



Selecting **Network** from the web GUI's main menu gives you a way to manage and configure wireless settings on the 2.4GHz and 5GHz networks.

Your T-Mobile mesh network has three WiFi radios enabled by default and each are associated with a different radio band.

WiFi radio name	WiFi radio band
SSID1	2.4GHz
SSID5	5GHz-Low
SSID9	5GHz-High

If you modify default values for one of these SSIDs, you must modify the same value for the other two SSIDs. Examples are provided in the following sections.

From the **Network** menu, select **Wi-Fi Networks**. The 2.4GHz and 5GHz options become available from the menu.

Select either **2.4GHz** or **5GHz**.

NOTE

The gateway automatically steers client devices to the best band and channel combination for most situations.

Changing Wi-Fi settings should not be necessary, nor is it recommended to resolve common user issues.

Wi-Fi Networks: 2.4GHz

Selecting the 2.4GHz option displays the Wi-Fi 2.4GHz General Settings and Configure SSID sections.

For SSIDs 1–4, you can configure the following **Wi-Fi 2.4GHz General Settings**:

Setting	Options	Default value
Transmission Mode	b, g, b/g, n/g, Auto (ax/g)	Auto (ax/g)
Channel Bandwidth	20MHz, 40MHz, Auto	20MHz
Channel	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, Auto	Auto
Transmission Power	12%, 25%, 50%, 100%	100%
Enable Wi-Fi Multimedia (WMM)	Disabled, Enabled	Enabled
Maximum Number of Clients	0–64	64

You also can configure the following SSID-specific settings for SSIDs 1-4:

Setting	Options	Default value
Select SSID to Configure	SSID1	SSID1
	SSID2	SSID2
	SSID3	SSID3
	SSID4	SSID4
SSID Name	TMOBILE-####	SSID1: TMOBILE-####
	TMOBILE-####-2	SSID2: TMOBILE-####-2
	TMOBILE-####-3	SSID3: TMOBILE-####-3
	TMOBILE-####-4	SSID4: TMOBILE-####-4
Enable SSID	Enabled	SSID1: Enabled
	Disabled	SSID2-4: Disabled
Enable Broadcast	Enabled	SSID1-4: Enabled
	Disabled	
Total Number of Clients	0-64	SSID1-4: 64
Select Encryption Mode	<ul style="list-style-type: none"> ▪ WPA/WPA2/WPA3 Personal ▪ No Encryption 	SSID1-4: WPA/WPA2/WPA3 Personal
WPA Version [see Note]	<ul style="list-style-type: none"> ▪ WPA/WPA2 ▪ WPA2 ▪ WPA2/WPA3 ▪ WPA3 	SSID1: WPA/WPA2 (AES)
		SSID2-4: WPA2 (AES)
WPA Encryption Mode	<ul style="list-style-type: none"> ▪ AES ▪ TKIP+AES 	SSID1-4: AES
WPA Key [see Note]	<ul style="list-style-type: none"> ▪ WiFi Key from device label ▪ Custom value you provide 	SSID1-4: WiFi Key

NOTE

The default WPA Version of WPA/WPA2 (AES) is valid only for the preconfigured SSID1.

The default WPA Version of WPA2 (AES) is valid for SSIDs 2, 3, and 4.

Legacy devices may not support AES encryption, which can look like most of your devices connecting to wireless when other, older ones do not.

For these potential legacy devices, select the TKIP+AES WPA Encryption Mode. This less-secure mode is not recommended unless your device requires it.

NOTE

If you change the WPA Key to a custom value for SSID1, you must also change the WPA Key for the other two default radios. SSID1, SSID5, and SSID9 must have identical values.

Preferably, use the T-Mobile Home Internet app to change the WPA Key for all SSIDs simultaneously.

When you are finished configuring settings, click **Save Changes**.

Wi-Fi Networks: 5GHz

Selecting the 5GHz option displays the Wi-Fi 5GHz General Settings and Configure SSID sections.

For SSIDs 5–8 on the 5GHz-Low band and for SSIDs 9–12 on the 5GHz-High band, you can configure the following **Wi-Fi 5GHz General Settings**:

Setting	Options	Default value
Channel Bandwidth	<ul style="list-style-type: none"> ▪ 20MHz ▪ 40MHz ▪ 80MHz ▪ Auto 	80MHz
5GHz-Low Channels	Auto, 36, 40, 44, 48, 52, 56, 60, 64	Auto
5GHz-High Channels	Auto, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165	Auto
Transmission Power	12%, 25%, 50%, 100%	100%
Enable Wi-Fi Multimedia (WMM)	Disabled Enabled	Enabled
Maximum Number of Clients	0-64	64

You also can configure the following SSID-specific settings for SSIDs 5-8/5GHz-Low and SSIDs 9-12/5GHz-High:

Setting	Options	Default value
Select SSID to Configure	SSID5-SSID12	SSID5-SSID12
SSID Name	TMOBILE-#### through TMOBILE-####-12	TMOBILE-#### as the base with specific SSID number appended with a hyphen; for example: SSID7: TMOBILE-####-7

Setting	Options	Default value
Enable SSID	<ul style="list-style-type: none"> ▪ Enabled ▪ Disabled 	SSID5, 9: Enabled SSID6-8, 10-12: Disabled
Enable Broadcast	<ul style="list-style-type: none"> ▪ Enabled ▪ Disabled 	SSID5-12: Enabled
Total Number of Clients	0-64	SSID5-12: 64
Select Encryption Mode	<ul style="list-style-type: none"> ▪ WPA/WPA2 (TKIP+AES) ▪ WPA/WPA2 (AES) ▪ WPA2 (AES) ▪ WPA2/WPA3 (AES) ▪ WPA3 (AES) ▪ No Encryption 	SSID5/SSID9: WPA/WPA2 (AES) [see NOTE] SSID6-8,10-12: WPA2 (AES)
WPA Key [see Note]	<ul style="list-style-type: none"> ▪ WiFi Key from device label ▪ Custom value you provide 	SSID5-12: WiFi Key

NOTE

The default Encryption Mode of WPA/WPA2 (AES) is valid only for the preconfigured SSIDs 5 and 9.

The default Encryption Mode of WPA2 (AES) is valid for SSIDs 6, 7, 8, 10, 11, and 12.

Legacy devices may not support AES encryption, which can look like most of your devices connecting to wireless when other, older ones do not.

For these potential legacy devices, select the WPA/WPA2 (TKIP+AES) WPA Encryption Mode. This less-secure mode is not recommended unless your device requires it.

NOTE

If you change the WPA Key to a custom value for SSID5 or SSID9, you must also change the WPA Key for SSID1. SSID1, SSID5, and SSID9 must have identical values.

Preferably, use the T-Mobile Home Internet app to change the WPA Key for all SSIDs simultaneously.

When you are finished configuring settings, click **Save Changes**.

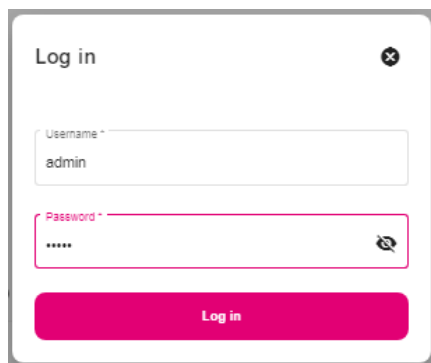
System screen

The screenshot shows the T-Mobile System settings page. On the left is a navigation menu with the following items: Overview, Status, Statistics, Network (with an expand/collapse arrow), Wi-Fi Networks (with an expand/collapse arrow), 2.4GHz, 5GHz, and System (which is currently selected and highlighted in pink). Below the menu, there is a user profile section showing 'admin' and a 'Logout' button, along with a language dropdown set to 'English'. The main content area is titled 'System' and contains four settings cards, each with a corresponding action button: 'Reboot Device' with a 'Reboot' button, 'Factory Reset' with a 'Reset' button, 'Firmware Upgrade' with an 'Upgrade' button, and 'Change Password' with a 'Change Password' button. At the bottom of the page, there is a footer with the text 'Questions? Call T-Mobile Customer Service at 1-844-275-9310' and '© T-Mobile Mobile, Inc. Privacy Policy Terms of Service'.

Selecting **System** from the web GUI's main menu gives you the option to power-cycle or "reboot" the gateway, return it to factory-default settings, upgrade the firmware, or change the web GUI login password.

However, first you must login using admin credentials (username and password), which are located on the gateway's underside.

Provide those values here and then click **Log in**.



The screenshot shows a 'Log in' dialog box with a close button (X) in the top right corner. It contains two input fields: 'Username' with the text 'admin' and 'Password' with masked characters '*****'. A red eye icon is visible to the right of the password field. At the bottom, there is a large red button labeled 'Log in'.

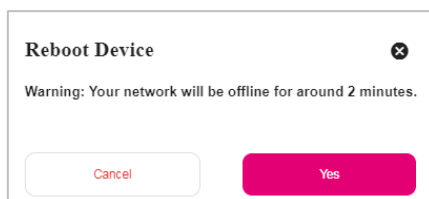
NOTE

If incorrect credentials are entered 5 times in a row the account will lock for 10 minutes. If you choose not to wait, you can unlock the account by either rebooting the gateway or resetting it to factory default.

Rebooting the T-Mobile High-Speed Internet Gateway

Rebooting the gateway cycles power to the device and keeps any changes you've made to the 2.4/5GHz Wi-Fi network settings.

1. From the System screen, click **Reboot**.
You are warned that the network will be offline while rebooting.
2. Click **Yes** to reboot the gateway.



The screenshot shows a 'Reboot Device' dialog box with a close button (X) in the top right corner. It contains a warning message: 'Warning: Your network will be offline for around 2 minutes.' At the bottom, there are two buttons: a white 'Cancel' button and a red 'Yes' button.

The gateway reboots and keeps existing configuration parameters.

Alternative: using the Power button

You also can reboot the gateway using its power button, which is located on the backside of the device and is marked On/Off.

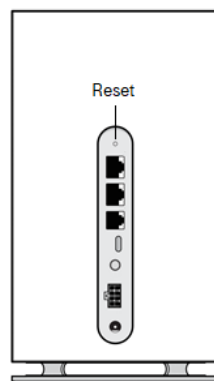
Press the Power button for one second (Off), wait one second, and then press the Power button again (On).

The gateway reboots and keeps existing configuration parameters.

Alternative: using the Reset port

You also can reboot the gateway using a paperclip and the Reset port, which is located on the device's backside.

1. Press-and-hold the paperclip in the Reset port.
LCD shows *Release button to restart* and a counter increments from 1.
2. Before the counter reaches 4, withdraw the paperclip.



On the LCD, you observe the following:

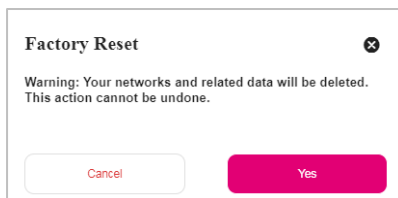
- *Restart in progress*
- T-Mobile animated logos
- The Connection screen



Resetting the T-Mobile High-Speed Internet Gateway

Resetting the gateway to factory default deletes all configuration changes made since setup.

- From the System screen, click **Reset**.
You are warned that network-related data will be deleted.
- Click **Yes** to reset the gateway.



You observe the following:

- Gateway LCD shows *Factory reset in progress* and then an animated T-Mobile logo.
- Web GUI shows *Rebooting: this could take up to 2 minutes*.
- Gateway LCD shows the T-Mobile intro logo and then *T-Mobile-#### ready*.

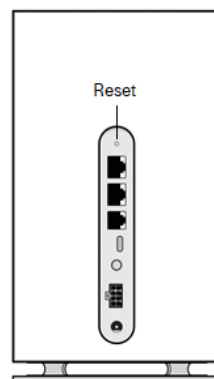
You are prompted to download the T-Mobile Home Internet app.

- On the LCD, swipe left.
You see the Connection screen.
- Refresh the web GUI.
Under Gateway Information, notice that Running Time corresponds to when the gateway became ready.

Alternative: using the Reset port

You also can reset the gateway using a paperclip and the Reset port, which is located on the device's backside.

- Press-and-hold the paperclip in the Reset port.
LCD shows *Release button to restart* and a counter increments from 1.
- After the counter passes 5, LCD shows *Release button to factory reset*.
- Withdraw the paperclip.
LCD shows:



- *Factory reset in progress*
 - T-Mobile animated logos
4. You are prompted to select a language; choose **English** or **Español** and tap the checkmark.
 5. You are prompted to download the T-Mobile Home Internet app.
Swipe-left on the LCD.
You see the Connection screen.
 6. Refresh the web GUI.
Under Gateway Information, notice that Running Time corresponds to when the gateway became ready.



Upgrading the firmware

When available, gateway firmware upgrades will be automatically pushed to your device via Auto Configuration Server (ACS). That said, in case of ACS outage, this feature provides a way to upgrade the firmware manually.

To upgrade the firmware, you must first obtain an official build package that comes in the form of a file with the `.tar` extension; for example: `HB5GGW_R200300B70T0101E0618.tar.gz`

1. Save the build package to a computer that's connected to the gateway via Ethernet or Wi-Fi (hereafter referred to as the *management computer*).
2. Log into the web GUI using `admin` credentials.
3. From the main menu, select **System**.
4. From the System menu, click **Upgrade**.
You are prompted to drag-and-drop or browse for the file.
5. Locate the `.tar` build package and open it.
6. Once the file is loaded, click **Upgrade**.

NOTE

Do not close the web browser or disable gateway power during the upgrade process.

The gateway reboots automatically.

7. From the Firmware Upgrade dialog, click **Yes**.

You see the message *Preparing to Upgrade... Please wait!*

The device and its modem then proceed to upgrade the image, also referred to as "flashing".

You see the message *Rebooting: this could take up to 2 minutes* and a progress bar.

In the background, the web GUI goes offline and all connections drop, indicating the gateway has rebooted.

The progress dialog disappears, indicating firmware upgrade is complete.

If your management computer was previously connected to the gateway via Wi-Fi, you must re-establish that connection and then **Refresh** the web GUI Overview screen.

If the computer was connected via Ethernet, you need only **Refresh** the web GUI.

Changing the web GUI password

NOTE

For security reasons, we recommend changing the default password once you have logged into the web GUI.

Passwords must contain 8–24 characters, including at least two numbers and one special character; for example:

! # + , - / : = @ _

1. Click **Change Password**. The Change Password screen appears.
2. Enter the Current Password, which you can find on the gateway's underside label.
3. Enter the New Password, and then Confirm the New Password.

4. Click **Update Password**.
You will see *Password was updated successfully*.
5. To verify success: from the web GUI's main menu, click **admin Logout**.
6. Click **Log in** and provide the New Password.

Changing the web GUI language

From the web GUI's main menu, click the arrow beside the default value **English**. You may select either **English** or **Español**.

Logging out

From the web GUI's main menu, click **Logout** to log out of the web GUI.

Replacing the SIM card

The gateway comes with a pre-installed SIM card. You can replace the SIM using a Phillips—also referred to as a cross-head or cross-point—screwdriver.

Before replacing the SIM, please read the following safety information.



Danger 1: Hazardous electrical voltages and currents can serious physical harm or death. Always use insulated tools and follow proper safety precautions when connecting or disconnecting power circuits.

Danger 2: Ensure the gateway's power supply is unplugged from the power strip or wall outlet before proceeding.

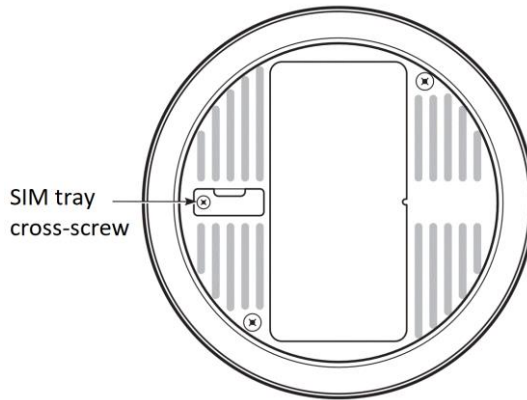


Caution: Keep indoor devices out of direct sunlight. Prolonged exposure to direct sunlight can damage the device.

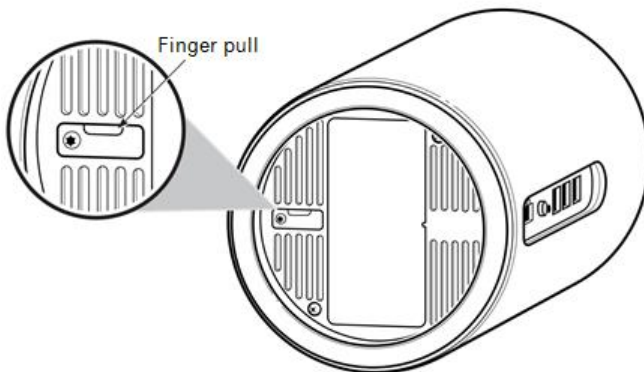
Refer to the section **Technical specifications** for the gateway's operating temperature ranges.

Access the SIM card from the bottom of the gateway.

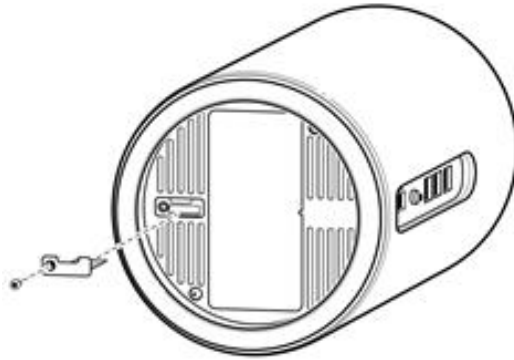
1. Power-off the gateway by pressing the On/Off button.
2. Remove the power cable from the gateway and from the electrical outlet.
3. Remove any Ethernet cables connected to the gateway's LAN ports (LAN1 and LAN 2).
4. Invert/turn over the gateway so you can see the base cover.



5. Using a Phillips screwdriver, remove the SIM tray cross-screw. This loosens the SIM tray.
6. Using the finger pull on the SIM door, remove the SIM tray.



7. With the SIM door and card tray removed, carefully place the new SIM card in the tray.



8. Replace the SIM tray—use the Phillips screwdriver to tighten the cross-screw and secure.

Troubleshooting

No signal

This LCD alert indicates there is no network signal, which could mean local cellular equipment is down for any number of reasons, or the gateway may need to be repositioned.



If the connection does not improve in a reasonable amount of time, you can contact T-Mobile customer service or refer to the section [Manual setup: identify an ideal location](#) and reposition the device.

Prevent overheating

Make sure that obstacles never obstruct airflow vents on the top or bottom of the gateway's enclosure. Allow at least 100mm/4in clearance on all sides of the enclosure. Ensure the gateway is at least 3 feet from baseboard heaters.

If the gateway feels hot to touch, unplug it immediately and let the device cool before plugging it in again.

T-Mobile High-Speed Internet Gateway does not start

If the gateway does not start up, verify the power cord is connected. If the gateway is connected to power and still does not start, contact T-Mobile technical support.

Poor Internet experience

If you feel your overall internet experience is poor, try repositioning the gateway; refer to the section [Manual setup: identify an ideal location](#).

Forget your password?

If you configure a custom network password and then forget it, use the T-Mobile Home Internet mobile app and reset the password to default.

1. In the T-Mobile app, select the **More** tab.
2. Tap **Change your LTE Wi-Fi Gateway administrator password**.
3. Tap **Forgot your LTE Wi-Fi Gateway administrator password?**
4. You are prompted to reset the gateway using the Reset port on the back of the device.

Refer to the section **Resetting the T-Mobile High-Speed Internet Gateway**.

Understanding the LCD

The gateway's LCD is located on top of the device. The LCD serves as a dashboard where you can quickly obtain information of the following types:

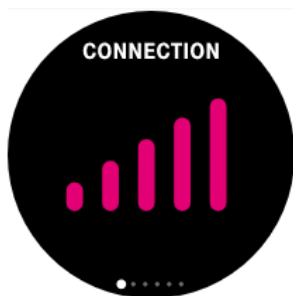
- Connection
- Devices
- Battery
- Settings
- Alerts
- Messages

Swipe-left or swipe-right on the LCD with your finger to move between screens. The position of the illuminated dot on the bottom of the screen indicates where you are in the screen sequence.

The Connection screen is the first displayed after a successful start up sequence.

Connection

Like your phone, the gateway displays up to five bars on its Connection screen, indicating signal strength.



The number of bars you see represents the strength of the gateway's current connection to the cellular network.



An X indicates the gateway is not connected to the cellular network.

Devices

The Devices screen indicates how many devices are currently connected to the gateway. This is true for both wireless and wired devices.

You can use the web GUI to see a breakdown by device type; refer to the section [Overview screen: Devices](#).



Battery

When the gateway's power adapter is plugged into the wall, the Battery screen shows the internal battery's current charge level as a percentage.

NOTE

In the case of total power outage/emergency, the battery provides up to eight hours of power.

During battery operation, neither Wi-Fi nor Ethernet connections are supported.

Settings

The gateway supports both English and Spanish on its LCD.

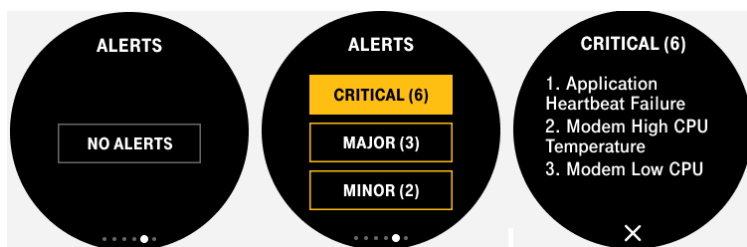
1. From the Settings screen, tap **Languages**.
2. From the Languages screen, tap **English** or **Español**.
3. Tap the checkmark to set the language.



Alerts

The gateway alerts provide you with device-specific information to which you may need to respond.

Tap the alert severity to view specific alerts.



The following table describes LCD Alerts and the actions you may take for each alert.

Alert	Severity	Action
NO ALERT		Do nothing.
WARN (#)	Warning	See Messages and Notifications for the action to clear the notification.
SIMBlock	Warning	Call operator to recover service.

Alert	Severity	Action
ModemChip Down	Warning	Reset or power cycle the device.
Application ProcessExit	Warning	Reset or power cycle the device.
Application HeartBeat Failure	Warning	Do nothing. Recovered by the device automatically.
CPUOverload	Warning	Reset or power cycle the device.
MemoryOverload	Warning	Reset or power cycle the device.
StorageOver load	Warning	Reset, power cycle or factory reset the device.
HighCPU Temperature	Warning	Reset or power cycle the device.
LowCPU Temperature	Warning	Reset or power cycle the device.
ModemCPU Overload	Warning	Reset or power cycle the device.
ModemMemory Overload	Warning	Reset or power cycle the device.
ModemStorage Overload	Warning	Reset, power cycle, or factory reset the device.
ModemHighCPU Temperature	Warning	Reset or power cycle the device.
SIPServer Registration Failure	Warning	Contact the operator to resolve registration for voice call.

Alert	Severity	Action
ModemRFHW Failure	Major	Contact the operator to replace the device.
ModemFlashing Failure	Warning	Do nothing. Automatic recovery.

Messages

These messages come from the T-Mobile network and may provide outage information or other important updates. The number of available messages appear in parenthesis.

Tap < and > to scroll between messages.

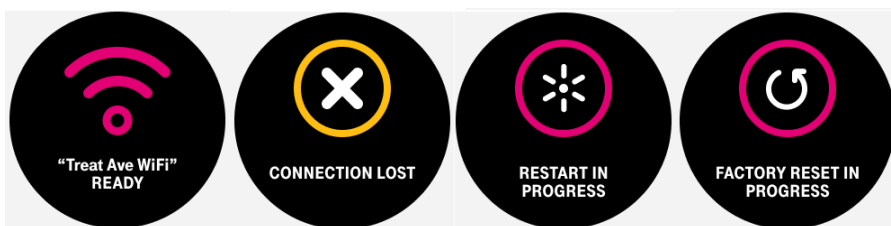
Tap the **trash icon** to delete a message. A second message asks you to confirm deletion; tap **Yes** to confirm.



Notifications

Notifications can appear at any time during gateway operation and cover numerous topics. Some are in response to an action you have taken, such as rebooting the device. Some are related to network connection states.

Notifications are displayed for five seconds; some examples are shown below.



Technical specifications

Dimensions	Height	216 mm	8.5 in
	Width	120 mm	4.7 in
	Weight w/power adapter	1.4 kg	3.09 lbs
Model	5G21-12W-A		
Part Numbers	3TG00739AAAA		
TAC	3510011		
IMEI	3510011XXXXXXX		
Operating environment	-5° to 45° C	23° to 113° F	
SIM card	4FF/nano-sized SIM card		
Power	12 VDC power adapter		
Power Classes	Power Class 2 (26 dBm) at LTE B41 Power Class 3 (32 dBm) at all other bands.		
Power input	AC mains 100 – 240V		
Battery	5000 mAh		
Battery Dimensions	Height	70.2 +/- 0.2 mm	2.7 +/- 0.008 in
	Length	37 +/- 0.15 mm	1.4 +/- 0.006 in
	Width	19 +/- 0.2 mm	0.7 +/- 0.08 in
	Weight	1183 +/- 5 g	2.6 +/- 0.01 lbs
Theoretical power consumption	36 W		
Wi-Fi connectivity	<ul style="list-style-type: none"> • IEEE 802.11ax Tri-Band 4+4+4 (Wi-Fi 6) to extend the 5G Sub-6GHz speeds indoor • Seamless roaming (IEEE 802.11k/v) 		
Security	<ul style="list-style-type: none"> • Adheres to strict Nokia security standards • Only advertises and accepts TLS version 1.2 or higher in HTTP • HTTP/TLS 1.2, ITU-T X.1041 		

Terms and conditions

t-mobile.com/responsibility/legal/terms-and-conditions

Privacy policy

t-mobile.com/privacy-center/our-practices/privacy-policy

Manufacturer information

Manufacturer	Nokia Solutions & Networks Oy
Address	Karakaari 7, 02610 Espoo, Finland
Importer	Nokia Solutions & Networks Oy
Document	3TG-01446-AAAA-TCZZA

Customer support

24/7 Tech Support Line: 1-844-275-9310

From your T-Mobile phone: 611

Federal Communication Commission Interference Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Regulatory Notices

For information and notices related to Regulatory aspects, refer to the collateral documentation enclosed in your product package.

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