

GTEN®

Model 7 5G Modem User Manual



Thank you for purchasing this **GTEN®** product.

You can visit www.gtenamerica.com/support to obtain more information about your product, get help, access the latest downloads and manuals.

We recommend that you use only official **GTEN®** support resources.

Model 7 5G Modem

Table of Contents – Modem Features

	Page No.
Introduction	
Introduction and Hardware Overview	5
Package Contents	6
Install the Micro SIM Card	6
Front Panel with Status LEDs	7
Back Panel with Connectors, Buttons, and a Ports	8
Install the included antennas	8
Modem Label	9
Positioning the Modem	10
Optional External Antenna	10
Get Started	
Internet Connection Over Mobile Broadband	12
Connect a Computer, Switch, Hub, Router, or Wi-Fi Router to the Modem	12
Connect a Computer to the LAN Port of the Modem	13
Connect a Router or Wi-Fi Router to the LAN Port of the Modem	13
Access the Modem's Web Pages for the First Time	13
The Main page (Network Map)	14
Network Traffic page	17
Advanced Settings	
Manage the Wireless 2.4Ghz Settings	19
Manage the Wireless 5Ghz Settings	20
Manage the LAN Settings	21
Manage the Firewall Settings	22
1. Manage MAC-Filtering	23
2. Manage Port Forwarding	23
3. Manage DMZ/DDNS	24
4. Manage IP Filtering	24
5. Manage Port Filtering	24
6. Manage VPN Client Pass-Through	25
Manage 5G Modem Settings (APN/Band locking)	27
Manage Modem Web Interface Administration	28
1. Manage Services (Telnet/SSH Access)	29
2. Manage FW (Firmware Upgrades)	30
3. Perform Reboots/Hard Factory Resets	30
4. Advanced user AT Command Console	31
View the General System Log	31
Connected Devices	31

Model 7 5G Modem

Quick reference – What page to go to for my concern?

Manage the Mobile Broadband Connection	Page No.
Manage Mobile Broadband Auto Connect Options	15
Manually Connect to or Disconnect from the Mobile Broadband Network	15
Manage APN Profiles for Mobile Broadband Connections	27
View the current APN	15 or 27
Add a Custom APN	27
Change an APN	27
Secure Your Network	Page No.
Change the Modem Password	28
Manage Port Forwarding for Incoming Traffic	23
Enable Port Forwarding and Add a Service or Application	23
Remove a Service or Application for Port Forwarding	23
Disable Port Forwarding	23
Manage IP/Port Filtering for Outgoing Traffic	24
View Telnet/SSH Services	29
Disable Port Filtering	24
Manage the Modem and Monitor Usage and the Network	Page No.
Upgrade the Firmware of the Modem	30
Return the Modem to Its Factory Default Settings	30
Use the back panel reset button	10
Use the Modem's Web Pages to return to Factory Defaults	30
View Monthly Data and Session Data Usage	17
View Service Provider, Type of Service, and Signal Strength	15
View Other Details About Your Modem	15
View Information About the Mobile Broadband Connection	15
How do I access the modem's web pages?	13
Default Settings and Specifications	Page No
Technical and Environmental Specifications	36
Supported Mobile Broadband Bands	36
Warranty Information	37

Model 7 5G Modem

Troubleshooting the modem.

General Troubleshooting

	Page No.
What do I do when I can't connect a device to the modem?	32
What do I do when I can't access the Internet?	32
What do I do when the NET icon display is not lit?	32
Why does the Signal Strength LED show only a few bars?	33
Why is the download or upload speed slow?	33
Can I connect multiple LAN devices to the modem?	33
What do I do if I forget my admin login password?	33
How do I disconnect from the mobile broadband network?	34
How do I find my computer's IP address?	34
Why can I not log into the Modem Web interface?	34
Troubleshoot the Mobile Broadband Internet Connection?	35
Can a Public Static Internet "IP" Address be used?	35

Introduction and Hardware Overview

This section provides a basic introduction and hardware overview:

- Device Introduction
- Package Contents
- Installing the Standard SIM Card
- Front Panel with Status LEDs
- Back Panel with Connectors, Buttons, and a Ports
- Modem Label
- Positioning the Modem
- Optional External Antenna

Device Introduction

The GTEN® Model 7 5G Modem model, in this manual referred to as the modem, can provide broadband data services to areas where wired Internet is not readily available or is difficult, costly, or time-consuming to install. The modem uses existing 5G mobile networks with automatic fallback to 4G/LTE mobile networks to provide broadband data services.

The GTEN® Model 7 5G Modem mobile network connection can provide high-speed Internet access for multiple users and devices in homes and offices.

Alternatively, you can connect the GTEN® Model 7 5G Modem to an existing DSL, cable, or fiber optics gateway that supplies WAN ports so that the modem can provide a backup Internet connection for your home or office to achieve continuous connectivity.

Professional installation and configuration are not required. When a SIM card is installed and activated, by default, the modem automatically searches for and connects to your network provider's mobile broadband network.

For information about installing the modem, see the quick start guide, which is included in your new modem box kit.

In the unlikely situation that the modem does not automatically connect to your network provider's mobile broadband network, you might need to add an access profile name (APN) profile.

For information about adding an APN profile, see [View APN Profiles](#) or [Add a Custom APN Profile](#).

Package Contents

Your package contains the following items:

- GTEN® Model 7 5G Modem
- 2 x 5G SMA Paddle antennas
- 4 x Wi-Fi SMA Screw on antennas
- Ethernet cable
- 12 Volt 2 Amp power adapter
- Quick setup card



Install the SIM Card

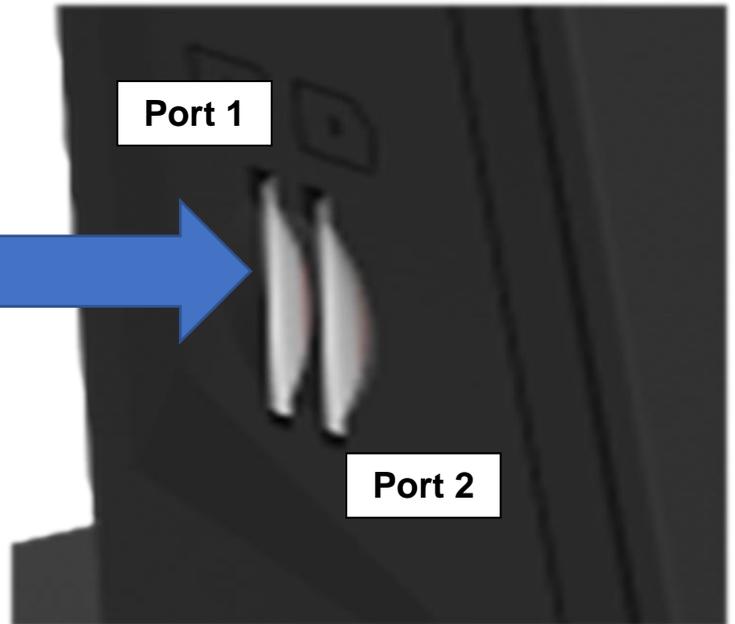
A standard SIM card might be preinstalled in the modem, or you might need to obtain a SIM card and install it yourself. To obtain a SIM card, contact your mobile broadband Internet service provider.

Overview of installing the SIM card:

To install a SIM in **port 1** the gold side faces towards front of the modem and the SIM notch faces downward. (see example)



To install a SIM in **port 2** the number side faces towards front of the modem and the SIM notch faces upward. (see example)



To install the SIM card in the modem:

1. Ensure that power to the modem is off.
2. Place the modem horizontally with the front display panel facing you.
3. Insert the SIM card in the desired SIM slot (SLOT 1 is always recommended)
4. The SIM should lock into place by using your finger to push the SIM into the slot.
5. Turn on power to the modem by connecting the power adapter.

Front Panel with Status LEDs

The modem displays status LED bars on the front panel. (From left to right)



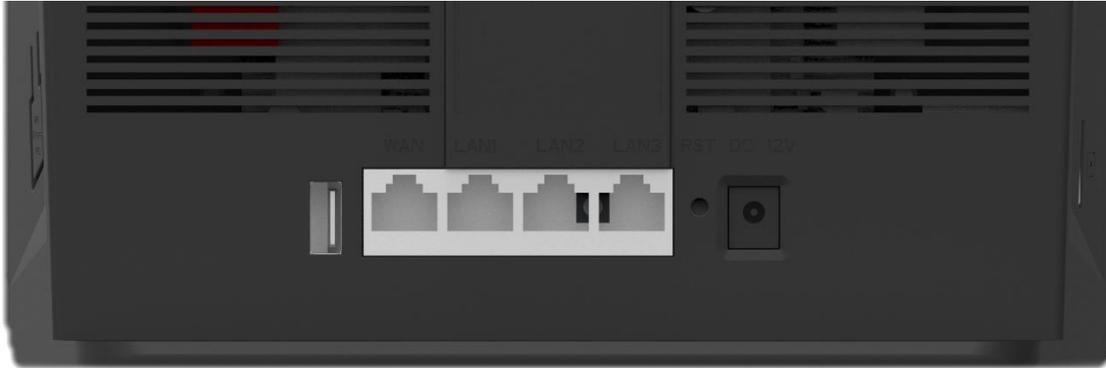
1. **SYS** light indicates POWER status when solid lit modem has power.
2. **NET** light indicates INTERNET connection when solid lit modem has connection to the internet.
3. **RF** lights indicate SIGNAL strength, the more RF lights lit the better the signal reception from the mobility tower.
4. **SIM** light indicates SIM CARD is being read by the modem when solid lit.
5. **WIFI 2 and 5** lights indicate an active broadcasting wireless network for you're at home devices, when lit SOLID this means the network is ready for connection, when blinking this means WIFI data is transmitting data to its connected devices.
6. **WAN** light indicates that the WAN Fail over is active when solid lit.
7. **LAN** light indicates that the Ethernet cables are active and transferring data over Ethernet cables.
8. **LTE** light indicates that the communication with the local tower, when lit the modem is successfully obtained signal from the tower.
9. **5G** light indicates that the communication with the local tower, when lit the modem is successfully obtained signal from the tower. When both 4G and 5G are lit the modem is using 5G NSA technology to provide enhanced services.

Back Panel with Connectors, Buttons, and Ports

The following figure shows the ports, connectors, and buttons on the back panel of the modem.

Modem components on the back panel

From left to right, the back panel of the modem provides the following components:



1. USB 3.1 port for data sharing.
2. WAN/LAN Gigabit Ethernet port. One RJ-45 Gigabit Ethernet port to connect a WAN router and 3 Gigabit Ethernet ports for wired devices including WiFi extenders and routers, Ethernet switch or hub, or single computer.
3. Soft Reset button (Hold for 15 seconds to clear information) A recessed Reset button to return the modem to factory default settings.
4. Power supply port for power adapter connection.
5. Side external antenna ports designed to enhance 5G connections.
6. Top external antenna ports designed to extend Wi-Fi range.
7. Wi-Fi On/Off button. (Side of modem) An On/Off button to control the Wi-Fi transmitter.

Install the included antennas

The modem kit comes with 6 antennas, 4 for Wi-Fi and 2 for 5G connections.

Install the Wi-Fi
antennas on the
top ports



Install the 5G
antennas on the
side ports



Modem Label

In addition to the default URL and password to access the modem's web pages, the modem label on the bottom panel shows the following information:

- Serial number (SN)
- Stock keeping unit (SKU) number
- MAC address
- IMEI (International Mobile Station Equipment Identity) (On separate sticker)

Modem label example:



Positioning the Modem

Use the Signal Strength LED bars on the front panel to position the modem for best signal strength in relation to the mobile broadband network. Also, for best results, place your modem according to the following guidelines:

- Place your modem close to a window but avoiding direct sunlight. A window location gives the best conditions for receiving a strong 5G signal.
- Make sure that the modem is within reach of an AC power outlet and near Ethernet cables for wired computers.
- Place the modem away from electrical devices such as the following:
 - Ceiling fans
 - Home security systems
 - Microwaves
 - Computers
 - Base of a cordless phone
 - 2.4 GHz cordless phone
 - 5 GHz cordless phone
- Place the modem away from large metal surfaces, large glass surfaces, insulated walls, and items such as the following:
 - Solid metal doors
 - Aluminum studs
 - Fish tanks
 - Mirrors
 - Brick walls or surfaces
 - Concrete walls or surfaces

Optional External Antenna

You can purchase an external multiple input, multiple output (MIMO) antenna for the modem to extend the mobile broadband signal range indoors or in fringe network areas. The modem uses SMA ports for its external antenna ports.

The external antenna plugs into the two antenna connectors on the sides of the modem to boost speeds and extend coverage in buildings or vehicles, or in remote sites where network coverage is sparse. You could, for example, attach the external antenna on the outside window.

Visit gtenmaerica.com for our Outdoor external 5G/LTE antenna designed for your modem.

Get Started

This section describes how to connect to the modem. To get started, you do not need to configure the mobile broadband connection unless your modem did not come with a SIM installed.

The chapter contains the following sections:

- Internet Connection Over Mobile Broadband
- Connect a Computer, Switch, Hub, Router, or Wi-Fi Router to the Modem
- Access the Modem's Web Pages for the First Time

Internet Connection Over Mobile Broadband

By default, when the modem powers up with a SIM card installed, it automatically searches for and connects to your network provider's mobile broadband network.

This process might take several minutes. The SIM card that is installed determines the mobile broadband network to which the modem connects.

Even though the modem might connect to the mobile broadband network of the same service provider each time that you start the modem, the type of mobile broadband service to which the modem connects might differ.

Pro Tip: If the modem does not automatically connect to the mobile broadband network after 5 minutes, the **SYS** Power LED remains solid, and you might need to contact your mobile service provider to get the access point name (APN) profile information and activate a custom APN profile in the modem. If your mobile service provider informs you that your APN profile is correct but the modem still does not connect to the mobile broadband network.

Connect a Computer, Switch, Hub, Router, or WiFi Router to the Modem

By default, the modem functions in Router mode with the DHCP server enabled and IP pass-through (IPPT) disabled. This means that you can connect multiple devices to the modem, for example, through an Ethernet switch or hub, and that each device can receive an IP address from the modem.

If you want to connect a computer only to the modem, the modem can function in Router mode.

Connect a Computer to the LAN Port of the Modem

You can add a single computer to the Ethernet local area network (LAN) of the modem.

To connect a computer to the Ethernet LAN of the modem:

1. Attach one end of the Ethernet cable that came in the product package to an Ethernet port on your computer.
2. Attach the other end of the cable to the Gigabit Ethernet LAN port on the back panel of the modem.

Connect a Router or WiFi Router to the LAN Port of the Modem

You can add a router or WiFi router to the Ethernet local area network (LAN) of the modem.

To connect a router or WiFi router to the Ethernet LAN of the modem:

1. Attach one end of the Ethernet cable that came in the product package to an Ethernet port on your router or WiFi router.
2. Attach the other end of the cable to the Gigabit Ethernet LAN port on the back panel of the modem.

Access the Modem's Internal Web Pages for the First Time (Does not require internet)

The modem comes configured and ready to use. You can use the modem's web pages to monitor data usage and change basic settings.

You can log in to the modem's web pages over an Ethernet cable. The modem's web pages run on any device with a web browser such as Google Chrome, Mozilla Firefox, and Microsoft EDGE.

To access the modem's web pages:

1. Launch a web browser from a device that is connected to the modem.

The device can be a computer that is directly connected to the modem or a client from a router that is connected to the modem.

2. In the URL address field of your browser, enter 192.168.2.1 or <http://lede>
3. To access the full Dashboard page and other pages, you must enter your username

and password which are both set by default to **GTEN** or **admin**
 See the modem label for the default password.

While the password that you enter is unique to your modem and is secure, we recommend that you change it to a password that you want to use.

- a. If you do not want to enter your password each time that you access the modem’s web pages, select the Remember me check box on your browser.
- b. Click the Sign In button or hit <enter>. (See example)

192.168.2.1

This site is asking you to sign in.

Username

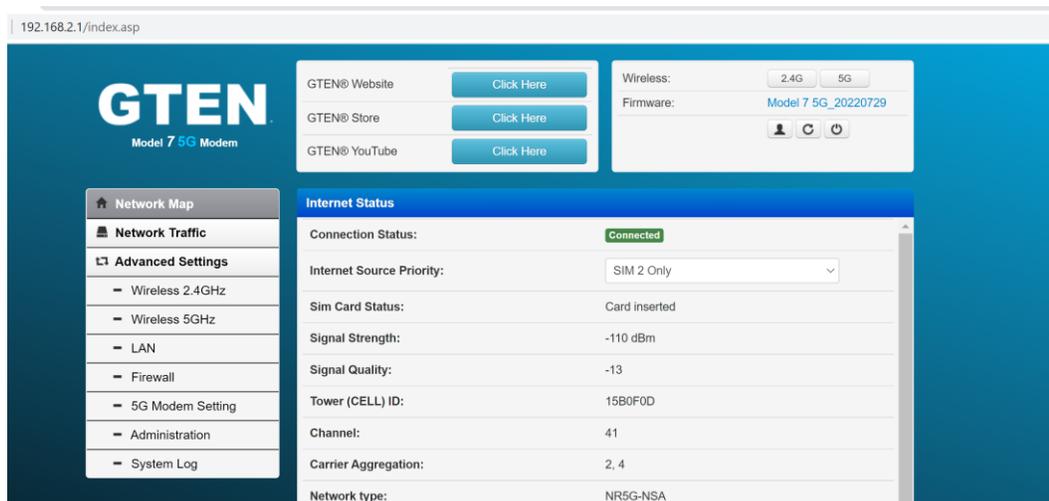
Password

When the full GTEN “Network Map” page displays. You are now ready to monitor the modem and manage the settings.

If you cannot log in to the modem or your browser does not display the Dashboard page, check the following:

- Make sure that the computer, router, or WiFi router is connected to the LAN Gigabit Ethernet port of the modem or you have established a Wi-Fi connection.
- Make sure that your browser does not cache the previous page by closing and reopening the browser.
- If your computer is set to a static or fixed IP address (this type of setting is uncommon), change the setting to obtain an IP address automatically from the modem.

What you should see when first logged in: (The Main Page)



The Main page (Network Map)

<http://192.168.2.1/index.asp>

Top of the page:

GTEN® Website	Click on this option to take you to the GTEN America website for the latest information on new products and current product updates.
GTEN® Store	Click on this option to take you to the GTEN America STORE website to purchase additional parts and outdoor antennas.
GTEN® YouTube	Click on this option to take you to the GTEN America YOUTUBE page for how to videos.
Wireless:	Click on either option to take you directly to the Wi-Fi settings for your router.
Firmware:	Provides you with the current firmware version. Click on the current Firmware number to take you directly to the FIRMWARE upgrade settings for your router.

On this page you will find all the modem connection information. Below is an explanation of what each response means:

Internet Status

Connection Control: [Reconnect](#) [Disconnect](#)

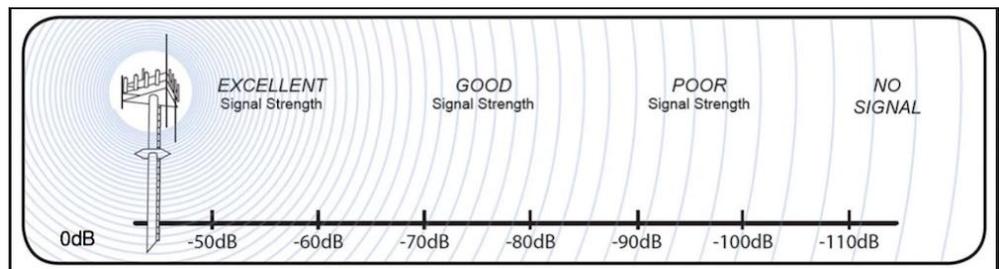
The connection control is used to reconnect to the neighborhood tower, use only when experiencing connection issues. You will first need to release the previous connection by clicking on Disconnect and then click on Reconnect to reestablish Internet connection.

Connection Status: **Connected** – This means the modem has a valid connection to the internet and is actively passing broadband data.

Internet Source Priority: You can choose the type of internet connection you want to use like WIRED WAN or SIM card connections

Sim Card Status: Not Card inserted – This means the modem is NOT reading the SIM card correctly. Also, can be an indication that the APN is not set correctly.
Card inserted – This means the modem is reading the SIM card correctly.

Signal Strength: This is the 5G radio reception (RSRP) score. It is important to try and keep this number under -100 for the best signal.



Signal Quality: This is the 5G radio signal quality (RSRQ) score. It is important to try and keep this number under -10 for the best wireless experience. This score can be affected by nearby devices.

Tower (CELL) ID: This is the neighborhood tower public identification number.

Channel: – This is the modems PRIMARY (PCC) connection channel.

Carrier Aggregation: – This is the modems CA channels (SCC) connection channel(s). What is Carrier Aggregation? Carrier aggregation is used in 5G and LTE in order to increase the bandwidth by combining several channels into one channel, which thereby increase the bitrate and data speeds.

Network type: This is the modems mobile broadband connection method:
5G-SA – Means 5G is the connection method without LTE.
5G-NSA – Means 5G is the primary connection method with LTE channels helping.
LTE – Means 4G LTE is the primary connection method.
UTMS/HSPA+ – Means 3G is the primary connection method.

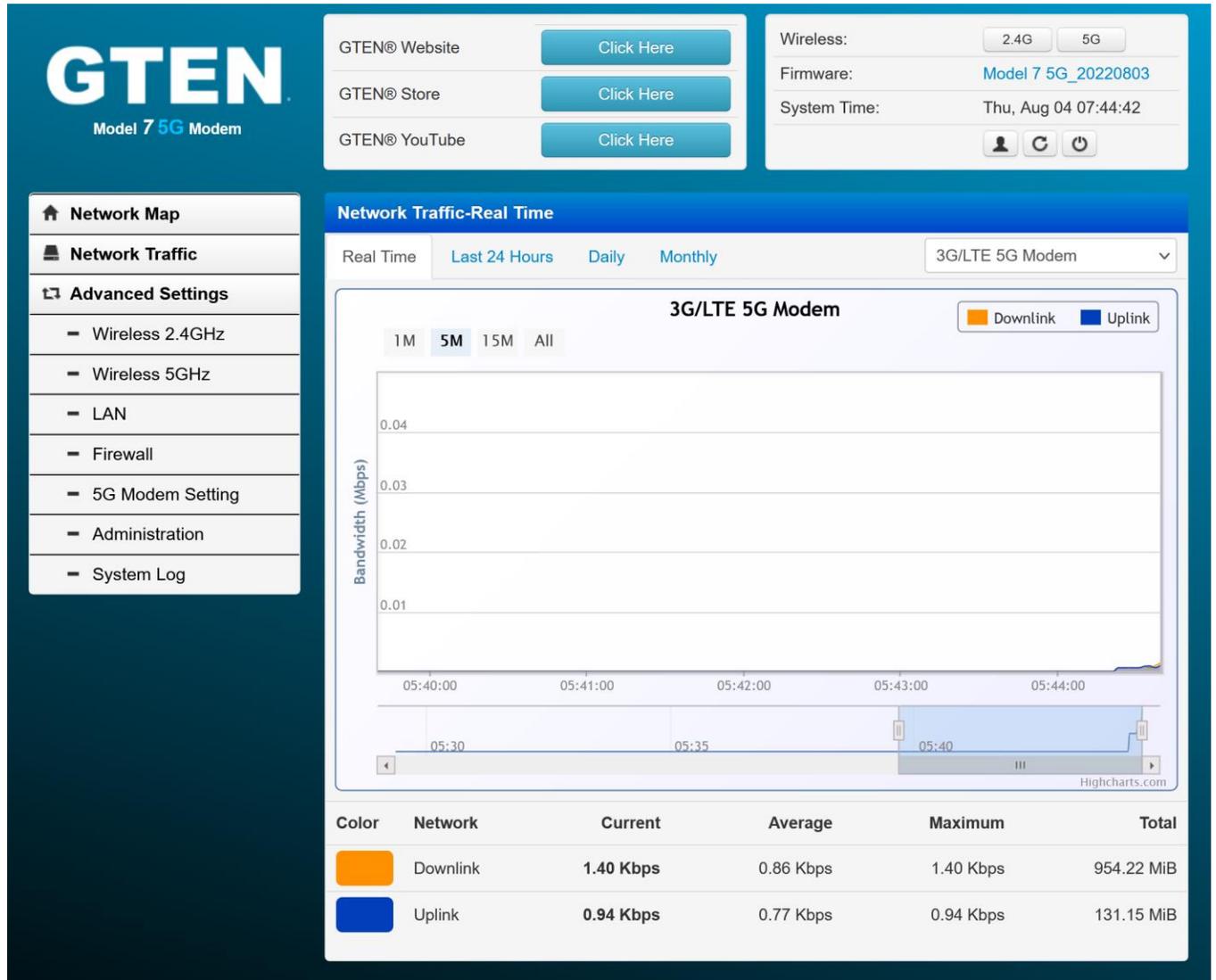
Current APN: Access point name is used by the Internet provider to connect your SIM card to the appropriate service provider. This APN is provided to you by the operator and normally is preprogrammed into your device.

Session Uptime:	This timer indicates how long the modem has been on and passing data.
ISP:	This is current common carriers network you are connected to.
IMEI:	This is modems identification number for the common carrier.
ICCID:	This is the modems physical SIM card number.
Module Manufacturer :	This is the communication radio card manufacturer.
Cellular Module:	This is the communication radio card model and firmware number.
Internet Network (WAN) – Information from the common carrier.	
IPv4 Address WAN:	The IP address provided by the carrier assigned to your device.
Gateway WAN:	The IP address of the carrier’s master device.
DNS:	The primary Dynamic Name servers used by the common carrier.
Secondary DNS:	The secondary Dynamic Name servers used by the common carrier.
Local Network (LAN) – Information about your local network.	
Local IP:	This is your modems WEB access address. (Gateway address)
Local Netmask:	This is your modems NETMASK access address. (Gateway address)
MAC Address:	This is your modems unique MAC address. (Gateway address)

Network Traffic

http://192.168.2.1/Main_TrafficMonitor_realtime.asp

This section describes how to review and manage the data usage and provides a usage amount based on daily or monthly consumption:



Tracking options:

- **Real Time** – Means the current data rates and activity that is actively passing information.
- **Last 24 Hours** – Means the last 24 hours of usage.

- Daily – Provides a day-by-day usage report.
- Monthly – Provides a month-by-month usage report.
- Drop down selector allows you to choose the connection type you want review usage for, by default this is set to **5G/LTE router**.

To see your current data speeds, see the bottom of this page: (example below)

Network	Current	Average	Maximum
Downlink – means download speeds	109.00 Mbps	54.83 Mbps	144.40 Mbps
Uplink – means upload speeds	10.00 Mbps	7.35 Mbps	13.67 Mbps

Advanced Settings

Available options to be discussed:

1. Wireless 2.4GHz
2. Wireless 5GHz
3. LAN
4. Firewall
5. 5G Modem Setting
6. Administration
7. System Log
8. Connected Devices

Manage the Wireless 2.4 Settings

http://192.168.2.1/Advanced_Wireless2g_Content.asp

This section describes how to manage the Wi-Fi 2 settings:

Wireless-General (2.4GHz)

- Wireless 2.4GHz



Enable Radio

Wi-Fi 2 is turned on by default, to disable Wi-Fi 2 click on this option to shut off broadcasting on Wi-Fi 2

SSID:

This section is where you can modify your Wi-Fi name for your Wi-Fi 2 SSID broadcast.



Hide SSID:

Wi-Fi 2 is visible on by default, to hide Wi-Fi 2 SSID click on this option to shut off SSID visibility on Wi-Fi 2

Wireless Mode:

This section is where you can modify your Wi-Fi connection method. By default all options are chosen.

Channel Bandwidth:

This section is where you can modify your Wi-Fi channel bandwidth method. By default, 20/40 Mhz option is chosen.

Radio Channel:

This section is where you can modify your Wi-Fi channel bandwidth method. By default, the 20/40 Mhz option is chosen.

WP2/WPA3-Personal ▼

Authentication Method:

This section is where you can modify your Wi-Fi authentication method. By default the WPA2/WPA3 option is chosen as it is the most common connection method.

AES ▼

Encryption:

This section is where you can modify your Wi-Fi encryption method. By default, the AES option is chosen as it is the most common connection method.

Click the eye icon to display the password.

Wifi Key:

This section is where you can modify your Wi-Fi KEY (password). By default, the Wi-Fi KEY (password). is set to **1234567890**

When you are all set. Click the  button to save your changes.

Manage the Wireless 5 Settings

http://192.168.2.1/Advanced_Wireless_Content.asp

Wireless-General (5GHz)

- 

To set Wi-Fi 5 settings follow the same instructions above in the Wi-Fi 2 Section.

When you are all set. Click the  button to save your changes.

Pro Tip: When choosing the correct wireless connection method be sure that your device can work with the appropriate wireless technology. For example, old devices and many small wireless devices require the 2.4Ghz network and new items like tablets, laptops and Televisions require the 5Ghz network. Be sure to check with your device instructions for the appropriate connection method.

Manage the Modem LAN Settings

http://192.168.2.1/Advanced_LAN_Content.asp

This section describes how to manage the LAN settings.

Manage the LAN Settings (See example)

LAN IP	
<p><u>IP Address:</u></p> <p>This section is where you can modify your modems IP address. By default, the address is 192.168.2.1</p>	<input type="text" value="192.168.2.1"/> 192.168.10.254
<p><u>Subnet Mask:</u></p> <p>This section is where you can modify your modems Mask address. By default, the address is 255.255.255.0</p>	<input type="text" value="255.255.255.0"/> 255.255.255.0
DHCP Server	
<p><u>Enable DHCP Server</u></p> <p>This section is where you can allow your modem to Dynamically produce local IP addresses to your connected devices. By default, this option is ENABLED</p>	<input checked="" type="checkbox"/>
<p><u>Enable IPV6</u></p> <p>This section is where you can allow your modem to Dynamically produce local IPv6 addresses to your connected devices. By default, this option is ENABLED</p>	<input checked="" type="checkbox"/>
<p><u>IP Pool Starting Address:</u></p> <p>This section sets the beginning range of your DHCP pool. By default, this option is set to 192.168.2.2 to allow for the maximum amount of DHCP devices.</p>	<input type="text" value="192.168.2.2"/>
<p><u>IP Pool Ending Address:</u> Set to the end of the range</p>	<input type="text" value="192.168.2.254"/>
<p><u>DHCP Lease Time (sec):</u></p>	604800 (default)

This section sets the lease time of each device on your DHCP pool. By default, this option is set to **604800** to allow for the maximum amount of time for the connected DHCP devices.

When you are all set. Click the  button to save your changes.

Pro tip: Once your settings are saved, you may lose connection to your devices or the WEB interface, if this happens you may need to restart the modem also any device that is connected to the modem is disconnected when the modem restarts.

Manage the Firewall Settings

http://192.168.2.1/Advanced_BasicFirewall_Content.asp

This section describes how to manage the firewall settings.

Manage the Firewall Settings (See example)

Firewall

Respond Ping Request from WAN

This feature is disabled by default and is used to constantly communicate with the public server. 

Access to Router Services from WAN

Access SSH Server from WAN 

This feature is disabled by default and is used to allow inbound communications to the modems SSH service.

Access FTP Server from WAN 

This feature is disabled by default and is used to allow inbound communications to the modems USB disk when attached.

When you are all set. Click the  button to save your changes.

Firewall - Manage the MAC-Filter Settings (See example)

http://192.168.2.1/Advanced_MACFilter_Content.asp

MAC filter allows you to block packets from devices with specified MAC Address in your LAN and wireless LAN.

MAC Filter Mode:

This feature is disabled by default and is used to Restrict or allow communications through the modems LAN connection when set.

MAC Filter List:

MAC Address:

This section allows you to choose the MAC address connected to your modem device.

When you are all set. Click the button to save your changes.

Firewall - Manage the Port Forwarding Settings (See example)

http://192.168.2.1/Advanced_VirtualServer_Content.asp

Port forwarding allows remote computers to connect to a specific computer or service within a private local area network (LAN). For a faster connection, some P2P applications (such as BitTorrent), may also require that you set the port forwarding setting. Please refer to the P2P applications user manual for details.

Port Forwarding

Enable Port Forwarding

This feature is disabled by default.

Port Forwarding List

Start Port	End Port	Local IP
<input type="text"/>	<input type="text"/>	<input type="text"/>

When you are all set. Click the button to save your changes.

Firewall - Manage the DMZ Settings (See example)

http://192.168.2.1/Advanced_Exposed_Content.asp

Virtual DMZ allows you to expose one computer to the Internet, so that all the inbounds packets will be redirected to the computer you set. It is useful while you run some applications that use uncontained incoming ports. Please use it carefully.

DMZ Settings

This feature is disabled by default.

IP Address of Exposed Station:

When you are all set. Click the button to save your changes.

Firewall - Manage the IP Filtering Settings (See example)

http://192.168.2.1/Advanced_IPFiltering.asp

IP Filtering

This feature is disabled by default.

IP Address

When in use, a list of restricted IP address will appear here.

When you are all set. Click the button to save your changes.

Firewall - Manage the Port Filtering Settings (See example)

http://192.168.2.1/Advanced_PortFiltering.asp

Port Filtering

This feature is disabled by default.

Port Forwarding List

<input type="text"/>	<input type="text"/>
----------------------	----------------------

No data in table.

When you are all set. Click the button to save your changes.

Firewall - Manage VPN Client Pass-Through (See example)

VPN Client

Static VPN Client extends a private LAN subnets across the Internet (Site-to-Site).

Enable VPN Client?

This feature is disabled by default.

VPN Client Settings**VPN Client Protocol:****Remote VPN Server (IP or DNS host):****Login:****Password:****Authentication Algorithm:****Encryption Cipher Algorithm:****MTU:** [1000..1460]**MRU:** [1000..1460]**Additional pppd Options:****Settings Depending on Remote VPN Server Role****Restrict Access from VPN Server Site:****Obtaining DNS from VPN Server:****Route All Traffic through the VPN interface?****Route to Remote LAN Subnet behind VPN Server****Remote LAN Subnet/Mask:** / When you are all set. Click the button to save your changes.

Manage 5G Modem Settings

http://192.168.2.1/Advanced_Modem_others.asp

This section describes how to manage the 5G modem settings.

Manage the 5G modem settings (See example)

5G Modem Setting - 5G Modem

Select the type of 5G Modem for your requirements. To disconnect 5G Modem, please go to [Network Map](#) and click [Remove].

Enable 5G Modem:

This feature is **ENABLED** by default.



5G Modem Base Settings

SIM Card

This section is where you choose SIM card that you want to configure the APN and Band settings for:

SIM1 ▼

APN Service

This section is where you configure the APN:

INFINETI5G

PDP Type

This section is where you configure the PDP:

IPv4 ▼

5G band

This section is where you configure the Mobile Broadband 5G channels you want to choose:

4:5:41:71

Available 5G Bands:

1:2:3:4:5:7:8:12:20:25:28:38:40:41:48:66:71:77:78:79

Pro Tip: When setting the channels you make sure to go in number channel order and always use a : between each channel number and do not use spaces.

LTE band

This section is where you configure the Mobile Broadband 5G channels you want to choose:

2:4:5:13

Available LTE Bands:

1:2:3:4:5:7:8:12:20:25:28:38:40:41:48:66:71

Pro Tip: When setting the channels you make sure to go in number channel order and always use a : between each channel number and do not use spaces.

Preferred Network:

This section is where you choose the type Mobile Broadband connection.

Auto ▼

Set to **Auto** by default.

MTU:

This section is where you SET the MTU by default the number is set to **1428**

[1000..1500]

WAN DNS Settings**DNS Server 1:**

This section is where you SET the WAN DNS by default the section is blank.

DNS Server 2:

This section is where you SET the WAN DNS by default the section is blank.

When you are all set. Click the  button to save your changes.

Manage Modem Web Interface

http://192.168.2.1/Advanced_System_Content.asp

This section describes how to manage the modem Web interface settings.

Manage the modem web interface settings (See example)

Base administration control.

System Identification**Administrator Login:**

This section is where you SET the modem admin username by default the section is blank and is set to **“admin”**

New Password:

This section is where you SET the modem admin password by default the section is blank and is set to **“admin”**

Retype New Password:

When you are all set. Click the  button to save your changes.

Modem Web Interface - Manage Services (Telnet/SSH Access)

http://192.168.2.1/Advanced_Services_Content.asp

Control of various system services.

HTTP Web Server

Web Server Protocol:

This section is where you SET the modems Web admin access server type the section is set to “HTTP”

Pro tip: Using “HTTPS” may help prevent unwanted attacks to your modems device.

Port of Web Access from LAN:

This section is where you SET the modems Web admin access port # the section is set to “80”

Restricting Web Access from LAN:

This section is where you SET the modem Web admin access permission section is set to “NO”

Terminal Services

Enable Telnet Server

This section is where you SET the modems telnet access the section is set to “ENABLED”

Enable SSH Server

This section is where you SET the modems SSH access the section is set to “NO”

When you are all set. Click the  button to save your changes.

Pro FYI: What is telnet/SSH used for?

Telnet or SSH is a network protocol used to virtually access a computer and to provide a two-way, collaborative and text-based communication channel between two machines. It follows a user command Transmission Control Protocol/Internet Protocol (TCP/IP) networking protocol for creating remote sessions. Many ISPs use this communication form to repair your modems connection remotely.

Modem Web Interface - Manage FW (Firmware Upgrades)

http://192.168.2.1/Advanced_FirmwareUpgrade_Content.asp

Firmware Version:	<input type="text"/>
New Firmware Deta File:	<input type="button" value="Choose File"/> No file chosen
<input type="button" value="Upload"/>	

Note:

1. For a configuration parameter existing both in the old and new firmware, its setting will be kept during the upgrade process.

Occasional updates are important to add new features and keep the modem's performance at its best. In many cases, your modem will install updates automatically. However, if your equipment isn't performing properly, it's worth checking to make sure the firmware is up to date.

Visit <https://gtenamerica.com> for the latest updates for your device.

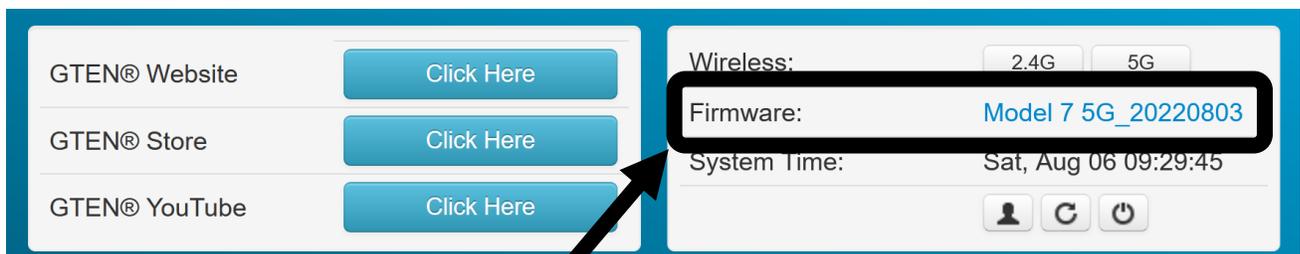
** You should only use a computer to update your firmware.

To perform a firmware update, follow these steps:

1. Download the latest firmware to your computer.
2. Once fully downloaded then click on Choose File
3. Then select the *.bin file you just downloaded
4. Then hit upload.
5. The modem will reboot on its own and firmware will have updated.
6. Then perform a factory reset on the modem.
7. After reboot from factory reset, you can reprogram your APN

Your firmware file name now should be updated!

See below for an example:



Modem Web Interface - Perform Reboots/Hard Factory Resets

http://192.168.2.1/Advanced_SettingBackup_Content.asp

This section is where you reset your modem to factory default settings using the Factory Default reset button. **Remember to only do this when instructed to do.**

Modem Web Interface - Advanced user AT Command Console

http://192.168.2.1/Advanced_Console_Content.asp

Pro Tip: AT commands are instructions used to control a modem. AT is the abbreviation of “AT”ention. Every command line starts with "AT" or "at". That's why modem commands are called AT commands. After each AT command hit <enter> on your keyboard for a response.

Listed below are some basic and friendly AT commands you can use that can.

AT	This confirms the module is connected, Response will be OK
ATI	This confirms the modules hardware and software information.
AT+CGDCONT?	This confirms the modems APN is set correctly.
AT+CFUN=0	This tells the modem to disconnect for the mobility network.
AT+CFUN=1,1	This tells the modem to connect to the mobility network.
AT+QSCAN=3,1	Provides information about all towers/carriers available in a 5-mile area.

For a comprehensive AT command list visit the GTEN files website: (Listed below)
https://gtenamerica.com/files/Quectel_5G_AT_V1.2.pdf

Pro Tip: Using improper AT commands can destroy your modem and VOID its warranty, please use with caution and contact your ISP if you feel that you may have performed an error. Refer to FACTORY RESET upon advice from your ISP if required.

View the General System Log

http://192.168.2.1/Main_LogStatus_Content.asp

The General System logs display the status of the modem in chronological order, that are used by the *modem* technician to determine if may be an issue with your broadband connection or your device. You can SAVE the log for troubleshooting purposes upon request of your ISP.

Connected Devices

This section shows what devices are connected your modem.

General Troubleshooting

This section describes how to possibly resolve modem issues that may arise.

Pro Tip: Most modem issues are resolved by just unplugging the device from the power cord for 30 seconds and plugging the modem back in.

Pro Tip 2: Do not factory reset the device unless instructed by a trained representative or you will lose broadband connection and will have to program the modem from the beginning.

What do I do when I can't connect a device to the modem?

Some suggestions listed below:

1. Restart your equipment and try both Wi-Fi SSID's as sometimes some devices work with only one type of Wi-Fi technology. Remember your modem has 3 connection types.
2. Try connecting with an Ethernet cable instead.
3. Try using a different device to confirm the Internet is working.
4. Run your computer's internet troubleshooter if not able to connect.
5. Reposition your router/gateway to enhance your Wi-Fi range.
6. Contact the device manufacturer for further information and support.
7. **GTEN support cannot help with third party device connection information.**

What do I do when I can't access the Internet?

Some suggestions listed below:

Restart your device by removing the power cord and waiting 30 seconds and plug it back in.

After the restart if your modem **NET and 4G and or 5G** LED lights are lit, you are connected to the tower, you can now try your devices again. If you are still having trouble visit your modems WEB interface page to confirm connection and check if your APN is correct.

If all are correct, your SIM may be blocked or suspended, please contact your ISP for help.

What do I do when the NET icon display is not lit?

Some suggestions listed below:

Restart your device by removing the power cord and waiting 30 seconds and plug it back in.

After the restart if your modem **NET and 4G and or 5G** LED lights are **NOT** lit, visit your modems WEB interface page to confirm connection and check if your APN is correct. If not visit the APN settings page and update your APN and reboot.

Why does the Signal Strength LED show only a few bars?

Some suggestions listed below:

This is most likely related to poor signal.

You could do something about some of the internal interference such as electronics, metal objects, or for that matter anything that sends magnetic or electronic signals and interferes with the cell waves. Therefore, get rid of any internal clutter as much as possible.

See to it that there aren't too many things standing between your modem and the cell tower – get a clear line of view, place modem on the second floor or third floor if you want to improve signal. The reason is that the higher you go, there will be fewer obstructions in your vicinity (other houses, buildings, etc). In this manner, you can regain lost signal in your house, or office building.

You may also want to try an external antenna setup to improve the quality of your service.

Why is the download or upload speed slow?

Some suggestions listed below:

Slow speeds are most often caused by interference from other surrounding sources and transmitting devices in the vicinity. Solid metal objects or concrete walls also block LTE/5G radio waves, making for an even weaker signal which will result in slower speeds. Fixing this might be as simple as repositioning your router and changing the connection channel.

Another culprit of slower speeds might be your ISP plan, many plans come with usage restrictions or slow speeds during congested periods, check with your ISP for the latest plan details regarding your SIM and service.

Can I connect multiple LAN devices to the modem?

Some suggestions listed below:

Your modem supports up to 64 devices over 5Ghz Wi-Fi, 32 devices over 2.4Ghz Wi-Fi, and 3 devices over Ethernet. If you need to connect more than 3 Ethernet devices, you can also connect a Ethernet switch up to your modem to add an additional 200+ wired devices or wireless extenders.

What do I do if I forget my admin login password?

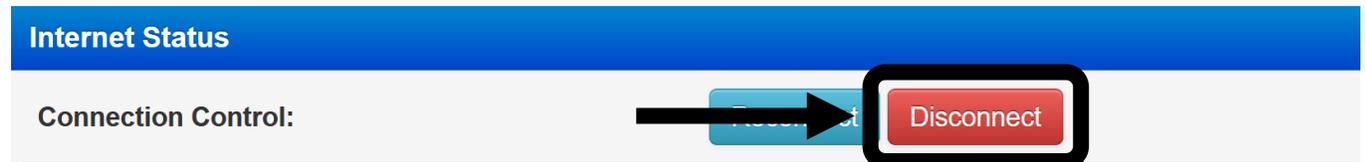
Some suggestions listed below:

The simplest ways to reset your admin password is by using a paper clip and hold down the RST button in the back of the device for 30 seconds. See Back Panel with Connectors, Buttons, and a Ports on Page 8 for the location of this reset button.

How do I disconnect from the mobile broadband network?

Some suggestions listed below:

The simplest way to disconnect from the mobile broadband network is removing the power cord from the device, however if you want to keep the device on but kill the 5G/LTE connection then on the “Network Map” just hit the disconnect button.



How do I find my computer’s WAN IP address?

Some suggestions listed below:

You can find this information on the “Network Map” main page under Internet Network (WAN)

Internet Network (WAN)	
IPv4 Address WAN:	172.47.116.203
Gateway WAN:	172.47.116.204
DNS:	10.177.0.34
Secondary DNS:	

Why can I not log into the Modem Web interface?

Some suggestions listed below:

This usually can be solved by **restarting the router**. Also make sure you are connected to the correct wireless network; it is best to use an Ethernet when connecting to the modems Web Interface.

Pro Tip: While many Laptops and Tablets do not offer Ethernet ports this is easily fixed by obtaining an inexpensive USB or USB3 Ethernet adapter for your device. They small device will save you a lot of headaches in the future and offer faster connection speeds vs Wi-Fi.

Troubleshoot the Mobile Broadband Internet Connection?

Some suggestions listed below:

The very first recommendation is to power your device off (removing the power cord), wait 30 seconds and turn it on again. This usually fixes all connection issues. You may also:

1. Check that your SIM card is correctly inserted into your device.
2. Change your modem's location which can improve your signal.
3. Log into the modem's Web Interface to ensure the device is connected. (See below)

Connection Status: **Connected** – This means the modem has a valid connection to the internet and is actively passing broadband data. If anything else is displayed you are NOT connected.

4. On the modems “Network Map” page try disconnecting and then reconnecting the connection by using the connection buttons.
5. Ensure your APN is correctly spelled.
6. Make sure your modems mobile broadband channels are set for the right carrier.

Pro Tip: If you have tried everything and nothing works, contact your Internet service provider immediately, do not **FACTORY RESET** the device as this will wipe out all of your modems programming.

Can a Public Static Internet “IP” Address be used?

Some suggestions listed below:

YES, this is obtained from your service provider.

Pro FYI: Static IP means the IP address never changes if you stay with the same provider or same server. Dynamic means the IP address can change from time-to-time. Public means the IP address can be visited from any computer in the world. Private means the IP address can only be used by those on the same network.

Default Settings and Specifications

Available options to be discussed:

Technical and Environmental Specifications
Warranty

Technical and Environmental Specifications

Specifications

- Dimensions: (see below)



- Weight: 1195g or 2.634524 lbs.

Radio Module Communication Information:

Radio Manufacturer: **QUECTEL**

Module Name: **RM502Q-AE**

Module Firmware: **RM502QAEAR11A02M4G**

FCC ID No: **XMR2020RM502QAE**

Band available for nr5G 1:2:3:5:7:8:12:20:25:28:38:40:41:48:66:71:77:78:79

Band available for LTE 1:2:3:5:7:8:12:20:25:28:38:40:41:48:66:77:78:79

Band available for UMTS DC-HSPA 2:4:5

Carrier Aggregation supported: YES

nr5G Technology supported: DSS-LGA, NSA, SA

Modem WIRED connectivity Interface(s):

4 Gigabit Ethernet RJ-45 ports, 1 Ethernet Port set WAN fail over.

Modem WIRELESS connectivity Interface(s):

AX, AC, N, G, B 802.11 Standard

Security: WEP, WPA, WPA2/3
Encryption: TKIP, AES

Modem antenna connectivity Interface(s):

Internal 5G/LTE antenna x2 on motherboard.
External 5G/LTE antenna x2 on the sides of modem case.
Internal Wi-Fi 2.4 antenna x2 on motherboard.
External Wi-Fi 5 antenna x4 on the top of the case.

Modem mobility connectivity Interface(s):

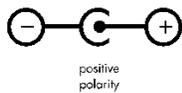
Standard SIM card slot x2.

Modem operating temperature range:

0~40°C

Modem power connectivity Interface(s):

120V AC Power Adapter USA Standard providing 12V DC, 2A 2.1mm Barrel size



Modem software Interface(s):

Linux Busy box kernel

Modem Key Features:

- Built-in Gigabit WAN connection for flexible home and office connectivity
- Provides LTE fallback support for loss of 5G services.
- Data usage tracking on WEB interface.
- Remote management capable.
- Direct IP pass-through for secure enterprise VPN configuration.
- Portable, light, and compact design for you to take anywhere, easy setup.
- Factory unlocked device can be used with any carrier.

Support

Thank you for purchasing this **GTEN**® product. You can visit www.gtenamerica.com/support to obtain more information about your product, get help, access the latest downloads and manuals. We recommend that you use only official **GTEN**® support resources.

Compliance

For regulatory compliance information, visit <https://gtenamerica.com/gten-america-modem-history/>

See the regulatory compliance document before connecting the power supply.

Trademarks

© GTEN America N.A., Inc., **GTEN**, and the **GTEN**® Logo are trademarks of GTEN America N.A., Inc., Any non-GTEN trademarks are used for reference purposes only.

Warranty

INFINITE GTEN MODEMS PRODUCT LIMITED WARRANTY TERMS AND CONDITIONS

This GTEN®-branded product, as supplied and distributed by Infinite Internet and delivered new, in the original carton to the original consumer purchaser, is warranted by GTEN® against manufacturing defects in materials and workmanship for a limited warranty period of:

- 1) 90 days from the date of purchase.

For additional warranty information visit <https://infiniteic.com/gtenwarranty/>

GTEN® Model 7 **5G** Modem

GTEN AMERICA N.A. INC.
148 Vista Royale Blvd
Vero Beach, FL, 32962
USA