GTEN.
AMERICA

ADVANCED Cellular Modem Gateway 2023 User Manual

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

GTEN® Advanced Modem

Table of Contents – Modem Features

GTEN® Modem

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

GTEN® Modem

Troubleshooting the modem.

This manual covers the following devices:

All GTEN Model 5,6 and 6R2 devices including the GTEN Model 5 Lite and the GTEN Advanced Modem series.

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**® 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**® 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**® 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**® *Advanced* Modem
- 4 x 5G SMA Paddle antennas
- CAT 6 3' Ethernet cable
- 12 Volt 2/3 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)

Port 1

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

0000
0000
0000
0008

Port 2
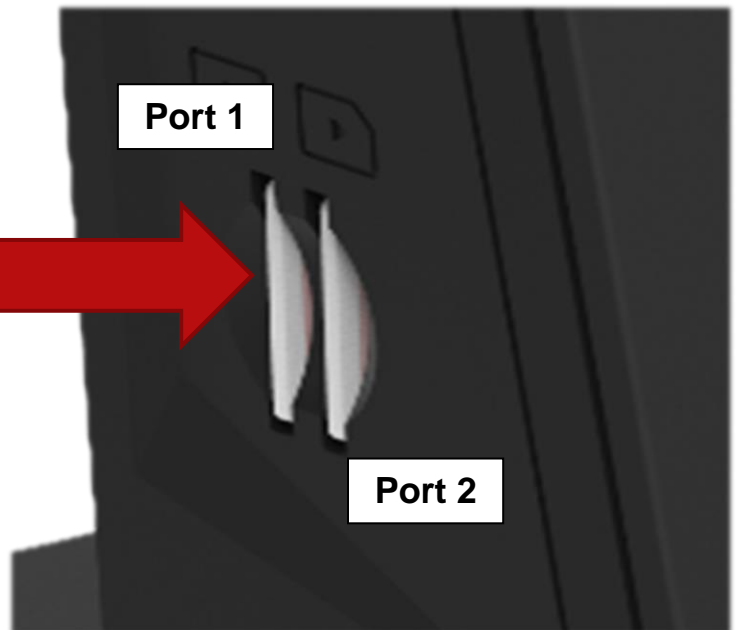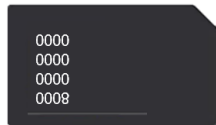
To install the SIM card in the modem:

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 LED's

The modem displays status LED bars on the front panel. (From left to right)
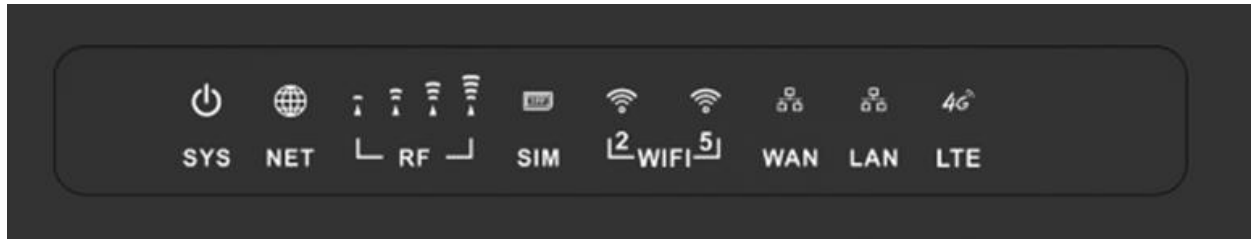
1. **SYS** light indicates POWER status when solid lit modem has power.
2. **NET** light indicates INTERNET connection when solid lit modem has connection to the internet.
3. **RF** lights indicate SIGNAL strength, the more RF lights lit the better the signal reception from the mobility tower.
4. **SIM** 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.

Back Panel with Connectors, Buttons, and Ports

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

From left to right, the back panel of the modem provides the following components:
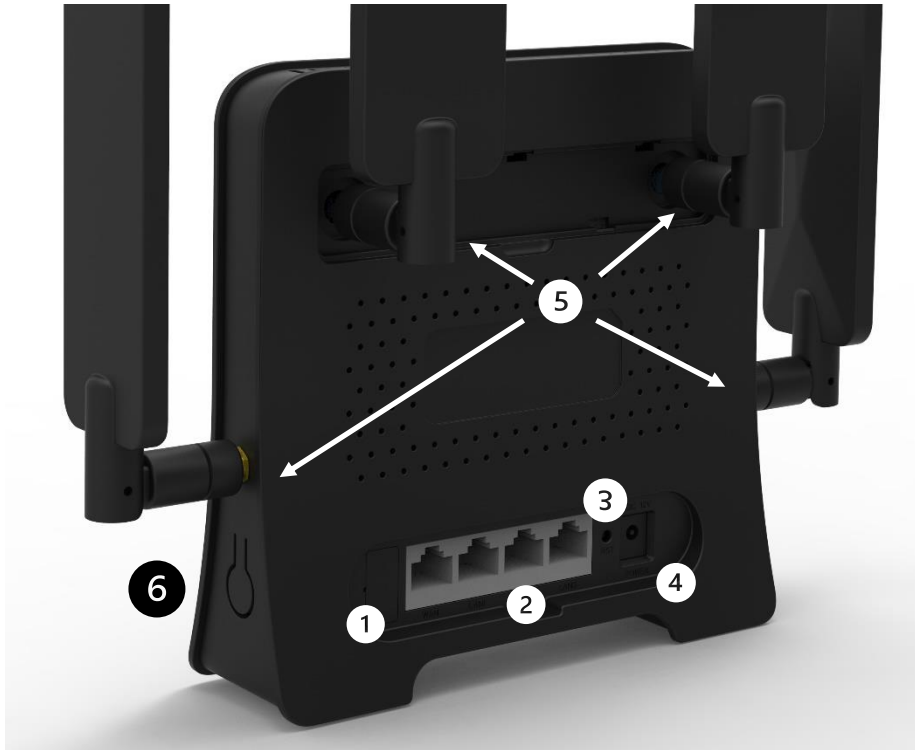
1. USB 3.1 port for data sharing. (Not included in the LTE Modem)
2. WAN/LAN Gigabit Ethernet port. One RJ-45 Gigabit Ethernet port to connect a WAN router and 3 Gigabit Ethernet ports for wired devices including WiFi extenders and routers, Ethernet switch or hub, or single computer.
3. Soft Reset button (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. Back external antenna ports designed to enhance 5G/LTE connections.
6. 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 up to 4 SMA antennas, 4 for 5G and MAX LTE Modem model and 2 for LTE Modem models.

Install the antennas on the back ports

Modem Labels

In addition to the default URL and password to access the modem's web pages, the modem label on the back or 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 examples:

GTEN® GTEN MAX LTE Modem Router Combo
MADE IN CHINA
2.4G SSID: GTEN_XXXXXX   WIFI KEY:
5G SSID: GTEN_5G_XXXXXX   1234567890
Username: GTEN   Password: GTEN   Web IP:192.168.2.1
Model No.:GTEN MAX LTE MODEM   AC Power:12V/2A
SN:1234567890123   IMEI:1234567890123
RoHS

Positioning the Modem

Before setting up the router, it is recommended to take the following into considerations for optimal signal strength:

- Near a window where the signal is mostly uninterrupted.
- On a flat surface.
- Keep a minimum distance of 35 centimeters between the router and your body.
- In an open space with as few blocking objects or obstructions as possible. For instance, make sure the number of walls and ceilings between the router and your wireless devices are.
- Elevated surface.
- Keep the router away from 802.11g or 20MHz only Wi-Fi devices, 2.4GHz computer peripherals, Bluetooth devices, cordless phones, heavy-duty motors, fluorescent lights, and some industrial equipment that may generate signal interferences with your router.
- Do not place heavy objects on the device, for instance, sitting on the device.
- Avoid positioning it:

- next to a wall that may obstruct the signal.
- near heavy-duty appliances.
- close to metal fixtures, enclosures, cabinets, or thick concrete.
- in a basement.
- on the floor or lower surface.

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 port(s).

The external antenna plugs into the two (four for 5G model) antenna connectors on the back 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 Wi-Fi 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.

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 Wi-Fi Router to the LAN Port of the Modem

You can add a router or Wi-Fi router to the Ethernet local area network (LAN) of the modem.
To connect a router or Wi-Fi 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 Wi-Fi 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**
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

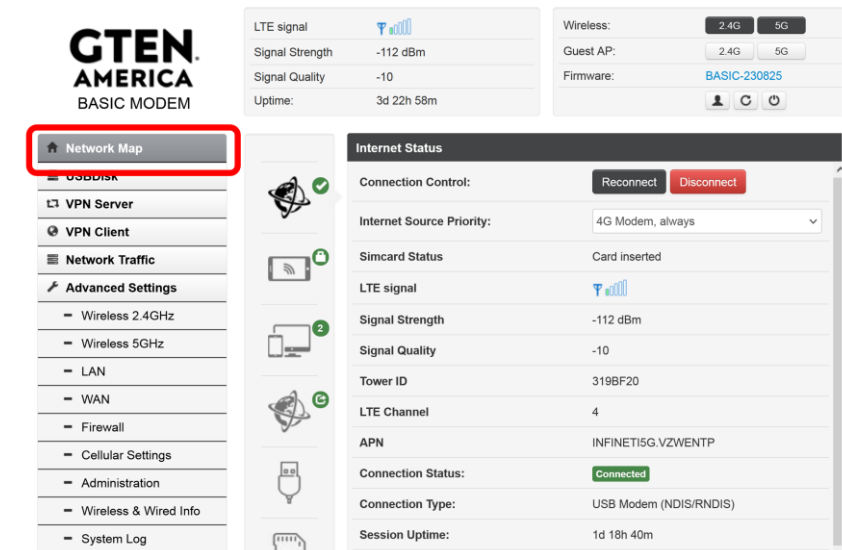This site is asking you to sign in.

Username

| admin |

Password

| ••••• |

| Sign in | Cancel |

      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)

GTEN. AMERICA BASIC MODEM	LTE signal	⊤ ▪▫▫▫	Wireless:	2.4G / 5G
	Signal Strength	-112 dBm	Guest AP:	2.4G / 5G
	Signal Quality	-10	Firmware:	BASIC-230825
	Uptime:	3d 22h 58m		👤 C ⏻

⌂ Network Map		**Internet Status**	
≡ USBDisk		Connection Control:	Reconnect / Disconnect
⇄ VPN Server		Internet Source Priority:	4G Modem, always ⌄
⊕ VPN Client		Simcard Status	Card inserted
≡ Network Traffic		LTE signal	⊤ ▪▫▫▫
🔧 Advanced Settings		Signal Strength	-112 dBm
— Wireless 2.4GHz		Signal Quality	-10
— Wireless 5GHz		Tower ID	319BF20
— LAN		LTE Channel	4
— WAN		APN	INFINETI5G.VZWENTP
— Firewall		Connection Status:	Connected
— Cellular Settings		Connection Type:	USB Modem (NDIS/RNDIS)
— Administration		Session Uptime:	1d 18h 40m
— Wireless & Wired Info			
— System Log			

Menu Options: The Main page (Network Map)

Top of the page:

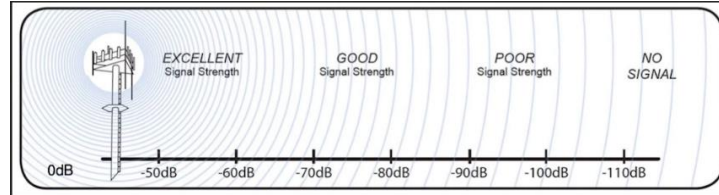|	
GTEN® Website	Click on this option to take you to the GTEN America website for the latest information on new products and current product updates.
GTEN® Store	Click on this option to take you to the GTEN America STORE website to purchase additional parts and outdoor antennas.
GTEN® YouTube	Click on 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.
Internet Source Priority:	You can choose the type of internet connection you want to use like WIRED WAN or SIM card connections Wired WAN First then SIMs ▼
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 cellular radio reception (RSRP) score. It is important to try and keep this number under -100 for the best signal.
Signal Quality:	This is the cellular 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:	41 – This is the modems PRIMARY (PCC) connection channel.
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.
Connection Status:	Connected – This means the modem has a valid connection to the internet and is actively passing broadband data. Any other status means the modem is not connected to the internet.
Connection Type:	How the modem makes a connection to the internet.
DHCP Lease Expires After:	Indicates how long the current tower connection will last.
Internet Network (WAN) – Information from the common carrier.	
IPv4 Address WAN:	The IP address provided by the carrier assigned to your device.
DNS:	The primary Dynamic Name servers used by the common carrier.
Secondary DNS:	The secondary Dynamic Name servers used by the common carrier.
MAC Address:	This is your modem's unique MAC address. (Gateway address)

Quick Icon Menus Options
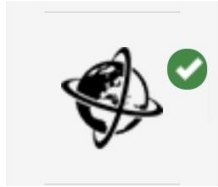
This is the link for the Primary front page also called the Network Map page.

This is the link to setup your modems Wi-Fi settings without advanced options.
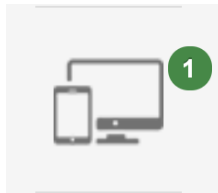
This is the link to view all the devices connected to your modem.
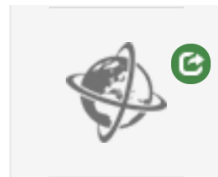
This is the link to the modem's advanced connection information and statistics. Options included:

Model Version:	Internal Radio Module and software
Manufacturer:	Radio manufacturer
Modem Type:	NDIS/RNDIS
Operator	Carrier
IMEI	356405431XXXXXX
ICCID	8914800000XXXXXXXXXX
IMSI	311480776XXXXXX
Network type	FDD LTE
Band	2
Carrier Aggregation	**2,4,5**
Go to Cellular Settings:	**Click here to set APN and Band locking**

This is the link to setup your modems USB sharing settings.

Menu Options: USBDisk

The first time you plug in a USB data stick in the USB port you will need to set the sharing settings to read the files on the USB. We recommend using the **Limitless access rights and then on page two choose** Skip ASUS DDNS setting**.** These are the best settings for file sharing.

Then using your file explorer, you can visit ftp://192.168.2.1 from any device connected to the modem: (see example below)
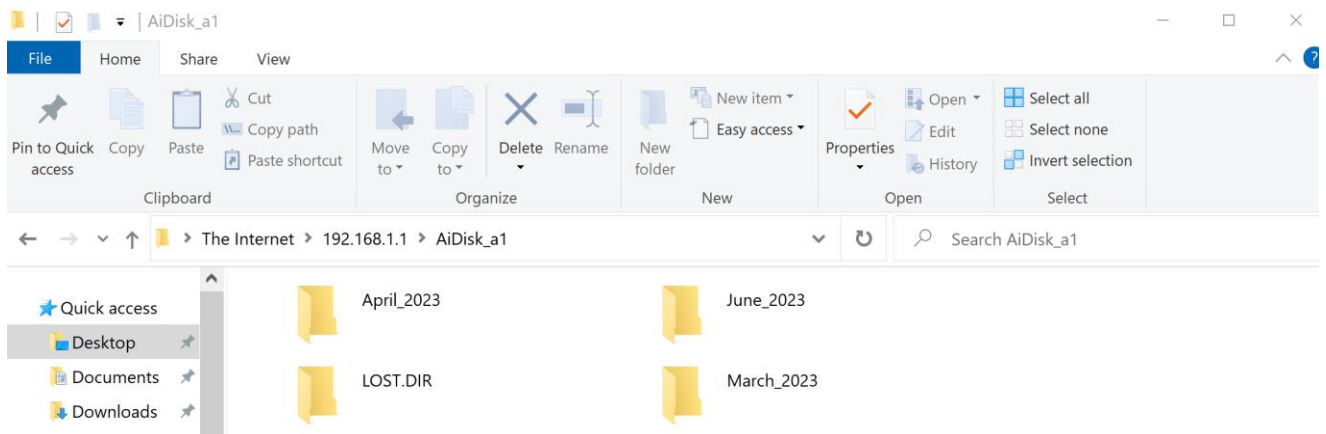
Menu Options: VPN Client (See example)
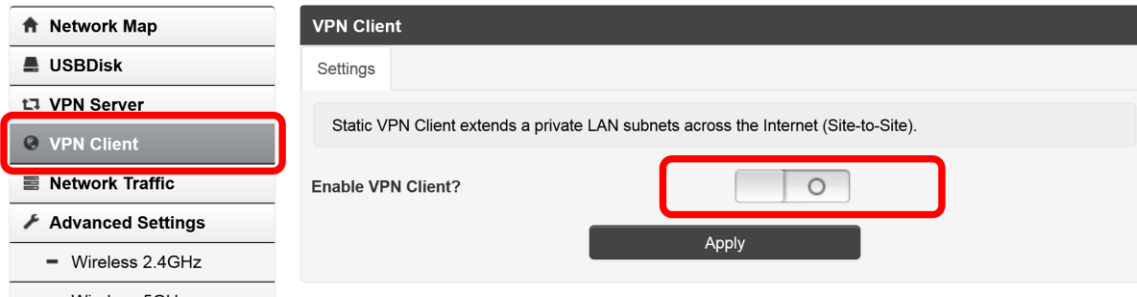
When this option is enabled, The VPN Client extends a private network across the Internet (Site-to-Site).

VPN Client Settings

VPN Client Protocol:

Remote VPN Server (IP or DNS host):

Login:

Password:

Authentication Algorithm:

Encryption Cipher Algorithm:

MTU: 1450 [1000..1460]

MRU: 1450 [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 [Apply] button to save your changes.

Menu Options: Network Traffic

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

-

Menu Options: Advanced Settings
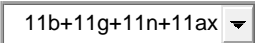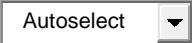
Sub menu options under Advanced settings to be discussed:

1. Wireless 2.4GHz
2. Wireless 5GHz
3. LAN
4. WAN
5. Firewall
6. Cellular Settings
7. Administration
8. Wireless and Wired Information
9. System Log

Manage the Wireless 2.4 Settings

Most important Wi-Fi settings listed below: Additional features are available for this device, you can search the web for more information regarding: Guest AP, Bridge, Wireless MAC Filter, RADIUS Settings, Professional

Wireless-General (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:

> GTEN_XXXXXX

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:

> 11b+11g+11n+11ax ▼

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

Channel Bandwidth:

> 20/40 MHz ▼

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

Radio Channel:

> Autoselect ▼

This section is where you can modify your Wi-Fi channel bandwidth method. By default, the Auto select 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 [**Apply**] button to save your changes.

Manage the Wireless 5 Settings

Wireless-General (5GHz)

- Wireless 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 [**Apply**] 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

This section describes how to manage the Basic LAN settings. Additional features are available for this device, you can search the web for more information regarding:

LAN IP, DHCP Server, Route, IPTV, Ethernet Switch, Wake-on-LAN

LAN IP

IP Address:

This section is where you can modify your modem's IP address. By default, the address is **192.168.2.1**

| 192.168.2.1 | 192.168.10.254

Subnet Mask:

This section is where you can modify your modem's Mask address. By default, the address is **255.255.255.0**

| 255.255.255.0 | 255.255.255.0

DHCP Server

Enable DHCP Server

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**

Enable IPV6

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**

IP Pool Starting Address:

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.

| 192.168.2.2 |

IP Pool Ending Address: Set to the end of the range

| 192.168.2.254 |

DHCP Lease Time (sec):

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.

604800 (default)
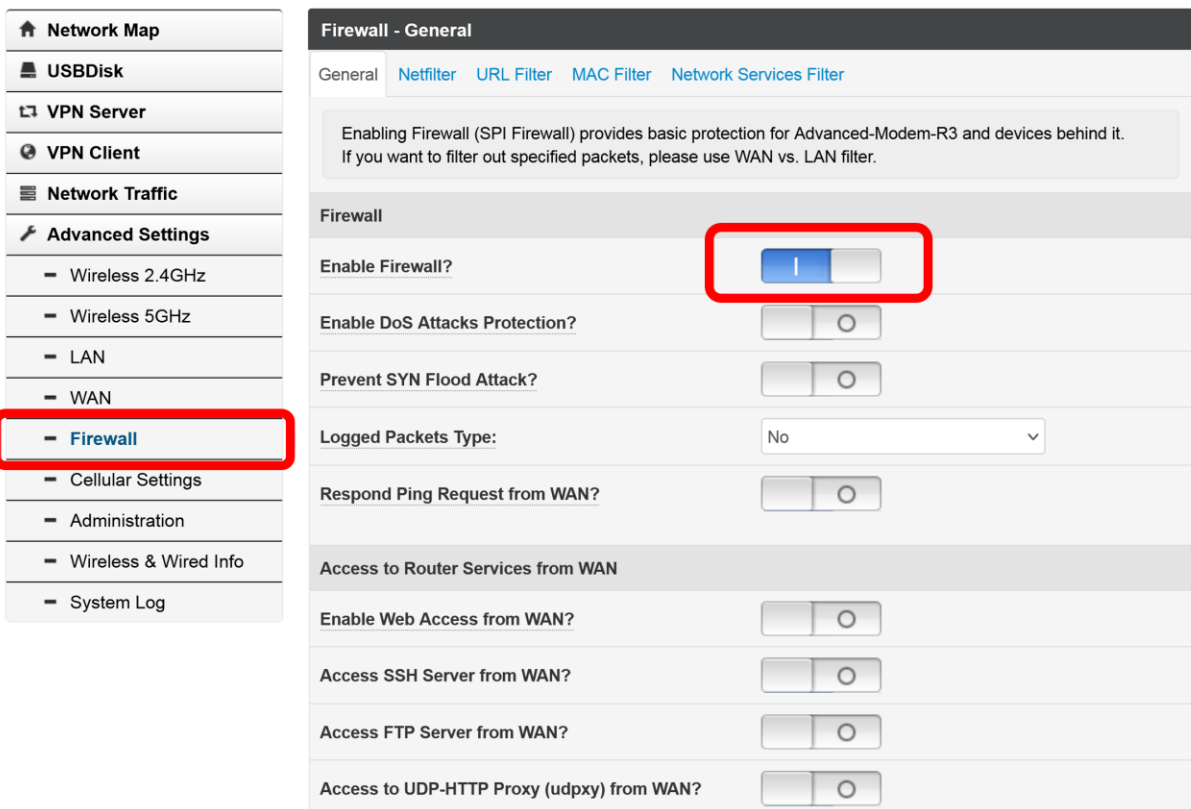
When you are all set. Click the [Apply] button to save your changes.

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

This section describes how to manage the firewall settings.
Additional features are available for this device, you can search the web for more information regarding: Netfilter, URL Filter, MAC Filter, Network Services Filter

Manage the Firewall Settings (See example)

Some available options from this section are:

Enable DoS Attacks Protection?
Prevent SYN Flood Attack?
Logged Packets Type:
Respond Ping Request from WAN?
Enable Web Access from WAN?
Access SSH Server from WAN?
Access FTP Server from WAN?
Access to UDP-HTTP Proxy (udpxy) from WAN?

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

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

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.

[Disabled ▼]

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 [Apply] button to save your changes.

Firewall - Manage the URL/IP Filtering Settings (See example)

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 [Apply] button to save your changes.

Manage Cellular Settings

This section describes how to manage the 5G modem settings.
Manage the Cellular settings (See example)

4G/5G Modem Setting – 4G/5G Modem

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

Enable Modem:
This feature is **ENABLED** by default.

Modem Base Settings

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

(Only available for LTE MAX and 5G Models)

SIM1

APN Service
This section is where you configure the APN:

INFINETI5G

Username and Password
This section is where you configure the APN's username and password:

PDP Type
This section is where you configure the PDP:

IPv4

Authentication
This section is where you configure the PDP:

None or other option if required by ISP.

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

(Only available for 5G Models)

4:5:41:71

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.

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

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

2:4:5:13

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 of 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**

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 [Apply] button to save your changes.

Manage Administration Menu

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 [Apply] button to save your changes.

Manage Services (Telnet/SSH Access)

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**"

| 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**"

| 80 |

Restricting Web Access from LAN:
This section is where you SET the modem Web admin access permission section is set to "**NO**"

| 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**"

| No ▼ |

When you are all set. Click the [**Apply**] 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.

Manage FW (Firmware Upgrades)

Firmware Version:	
New Firmware Deta File:	Choose File No file chosen
	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:

GTEN® Website	Click Here	Wireless:	2.4G 5G
GTEN® Store	Click Here	Firmware:	Model 7 5G_20220803
GTEN® YouTube	Click Here	System Time:	Sat, Aug 06 09:29:45
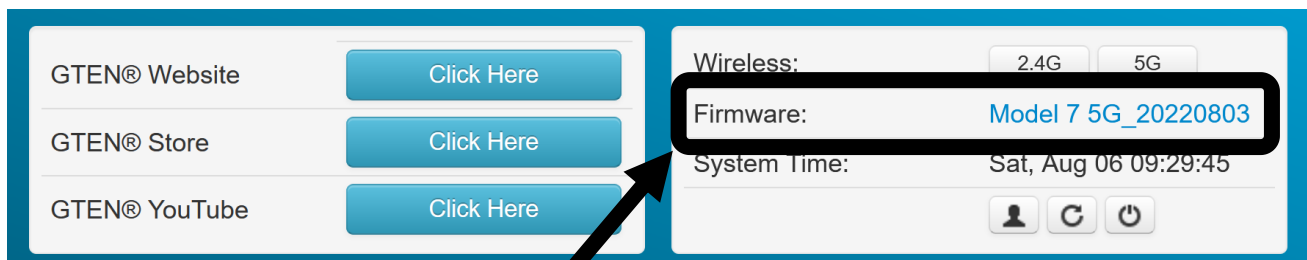
Settings - Perform Reboots/Hard Factory Resets

Administration-Reset

| System | Services | Statistics | FW Upgrade | Reset | Console |

This function allows you to save current router settings to a file or load settings from a file.

Router Settings (NVRAM)

Factory Default: [Reset]

System Reboot

Reboot [Reboot]

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

Administration-Console

| System | Services | Statistics | FW Upgrade | Reset | Console |

Warning! Console emulator may be used only for commands which return result immediately. Commands such as [top], [ping], [traceroute], etc. will block the WebUI.

AT| [Refresh] [✖]

```
AT

OK
```

Pro Tip: AT commands are instructions used to control a modem. AT is the abbreviation of "AT"tention. 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.

atcmd AT	This confirms the module is connected, Response will be OK
atcmd ATI	This confirms the modules hardware and software information.
atcmd AT+CGDCONT?	This confirms the modems APN is set correctly.
atcmd AT+CFUN=0	This tells the modem to disconnect for the mobility network.
atcmd AT+CFUN=1,1	This tells the modem to connect to the mobility network.

For a comprehensive AT command list visit the GTEN files website: (Listed below)

https://gtenamerica.com/files/Quectel_5G_AT_V1.2.pdf (For GTEN 5G Modem Only)

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.

Connected Devices

This section shows what devices are connected to your modem.

View the General System Log

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.

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, may 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.

Internet Status

Connection Control: Reconnect   Disconnect

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

GTEN® Advanced Modem

Available options to be discussed:

Technical and Environmental Specifications

Specifications

• Dimensions: (see below) **(Modem design and dimensions may slightly vary)**

• Weight: 1.2 lbs.

Radio Module Communication Information:
Radio Manufacturer: **QUECTEL**
Module Name: **EG18-NA(R3),RM505Q-AE(R1) RM502Q-AE (R2)**
Bands available for LTE: **B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B43, B66 and B71.**
Band available for UMTS DC-HSPA 2:4:5
Carrier Aggregation supported: YES
Data sheet for this device can be found > https://gtenamerica.com/maxsheet.pdf

Technical and Environmental Specifications

(Extended)

Modem WIRED connectivity Interface(s):
4 Gigabit Ethernet RJ-45 ports, 1 Ethernet Port set WAN fail over.

Modem WIRELESS connectivity Interface(s):
AC 5, N, G, B 802.11 Standard
Security: WEP, WPA, WPA2/3
Encryption: TKIP, AES

Modem antenna connectivity Interface(s):
External LTE antenna x4 on the back of modem case.
Internal Wi-Fi antennas on the motherboard.

Modem mobility connectivity Interface(s):
Standard SIM card slot x2.

Modem operating temperature range:
0~40℃

Modem power connectivity Interface(s):
120V AC Power Adapter USA Standard providing 12V DC, 2/3A 2.1mm Barrel size.

positive
polarity
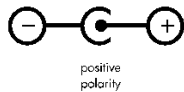
Modem software Interface(s):
Linux kernel

Modem Key Features:
- Built-in Gigabit WAN connection for flexible home and office connectivity
- Provides fallback support for loss of cellular 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

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® Modems 2023

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

FCC Declaration of Conformance

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. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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 or more 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.

Operations in the 5.850-5.895GHz band are restricted to indoor usage only.

FCC RF Radiation Exposure Statement (SAR)

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

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 35 centimeters between the radiator and your body.

Safety Warnings

Adapter

Do not use any other power adapter except the one that accompanies this unit or a power adapter identified in the list below.

Use of another adapter could result in damage to the unit.

The following power adapter is qualified for use with this **GTEN**® Modem: (specified the adapter specifications, brand, make, type and other restrictions)

Caution

Ensure to connect the power cord of power adapter to a socket-outlet with grounding connection.

Safety and Compliance

Read before Use

We recommend you read the following sections thoroughly before use. **GTEN**® America Inc. is not liable for malfunctions or damages resulting from misuse of the modem.

Safety Precaution

Please observe the following safety precautions.

Use the chargers, cables or accessories approved by the device manufacturer.

Do NOT disassemble or modify the device. Doing so voids the warranty.

Prevent wetness from penetrating internal parts. Using the device in wet or damp environment (for instance, charging it in a wet environment like bathtub or bathroom) may result in malfunctions.

Do NOT use this device near source of heat or fire, such as oven, microwave, stove, or heater. Keep your device away from cooking appliances.

Do NOT place the device in places with heated atmosphere (dryer, sauna, hot water).

Do NOT use the device and disconnect all cables at places with fire or explosion risks.

Avoid strong physical impact (heavy objects or excessive force).

Keep your device away from liquid or conductive materials.

Do NOT charge the device when either the device, the adapter, or the cable is wet. It may cause short-circuit.

Power off the device when near medical equipment or high-precision control systems to avoid potential interference.

Charge with specified voltage only.

Place the device on a flat, stable surface for optimal use.

Keep the device and adapter away from children and pets.

The device must be disposed of in accordance with the locally applicable. environmental regulations.

Keep the device away from magnetic items such as magnetic strip cards or items that generate strong electronic or magnetic fields, such as a microwave.

Do NOT store the device in an overheated environment.

Do NOT use the device when it is overheated.

Disconnect all the the cable connections when the device is not in use.

Place the device in places with good signal strength.

Make sure the adapter you use with the device meets the approved standards and specifications.

Disposal and Recycling

Do not dispose of the router in a household garbage bin.

Products with this label must be taken to specific collection points at the end of their life.

You can learn more about how to recycle your mobile device by visiting the CTIA website at www.ctia.org/news/how-to-recycle-your-mobile-device

Maintenance & Care

- Avoid extreme temperature or direct sunlight.
- Clean handset with soft, dry cloth. Do NOT use alcohol solvent (color may fade)
- Warranty does not cover malfunctions caused by misuse.
- Stop all the applications and shut down the device before cleaning it.
- Keep the device and its accessories dry at all times.
- If anomaly occurs, contact your ISP support immediately.
- When storing the device, do NOT store it in a container with dampness or under extended heat.
- Avoid dropping the device or strong physical impact at all times.

Legal Notices

Copyright Statements

Copyright ©2023 GTEN® America Inc. All rights reserved.

No part of this document may be duplicated, reproduced, shared, or used in any form, regardless written or electronically, without the prior written consent of **GTEN® America Inc.** and its affiliates.

The product described in this document contains software developed by **GTEN® America Inc.** and licensed third parties. Unless instructed or licensed otherwise by **GTEN® America Inc.** or other affiliated entities, you must NOT (1) modify, amend, translate, reverse-engineer or derive this product; (2) reproduce the software or any part of this; (3) rent, lease, transfer or re-license the software or any part of this, or transfer the rights of the software; (4) remove any statement or labeling information of the product and the software in this product; (5) tamper, change or replace the software, or any attempt to impact the integrity of the software. If any of the violation above occurs, your license in using the software will be terminated.

Trademark Statements

GTEN® is a trademark of **GTEN® America Inc.**, the product names in this site, and the other trademarks, logos, and service marks (collectively the "Trademarks") used in this site are the property of **GTEN® America Inc.** or their respective owners. Nothing contained in this site should be construed as granting by implication, estoppel, or otherwise, a license or right of use of **GTEN® America Inc.** or any other Trademark displayed in the site without the prior written permission of **GTEN® America Inc.** or its respective owner.

The Wi-Fi Logo is a certification mark of the Wi-Fi Alliance.

Changes

The functions of the product and associated peripherals or accessories are described in this document are based on the current hardware, software and/or local network conditions at the time of writing, and thus may vary due to conditions set by local network service providers or carriers. Therefore, all information described herein is subject to change without prior notice.