GTEN
AMERICA

ADVANCED Cellular Modem Gateway 2023 Quick Reference Band Locking Guide

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

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.

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)
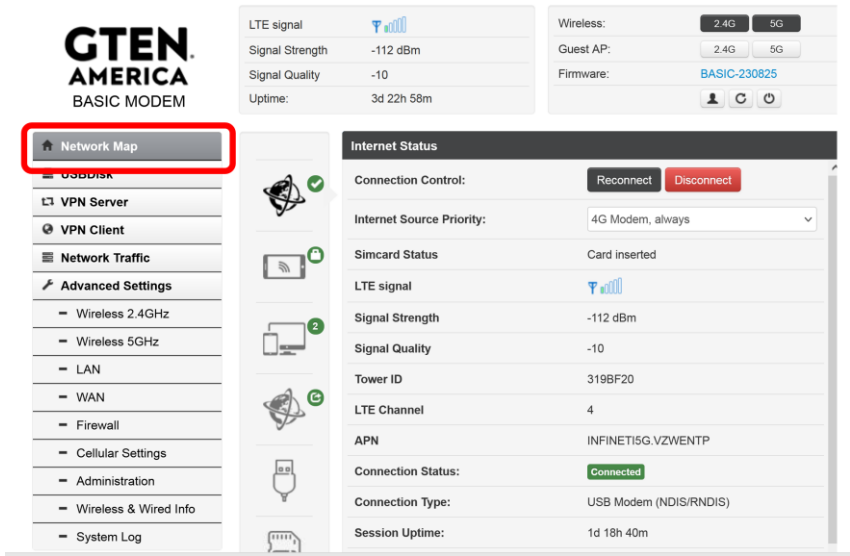
Manage Cellular Settings

This section describes how to manage the modem settings.
(See example) Link> http://192.168.2.1/Advanced_Modem_others.asp
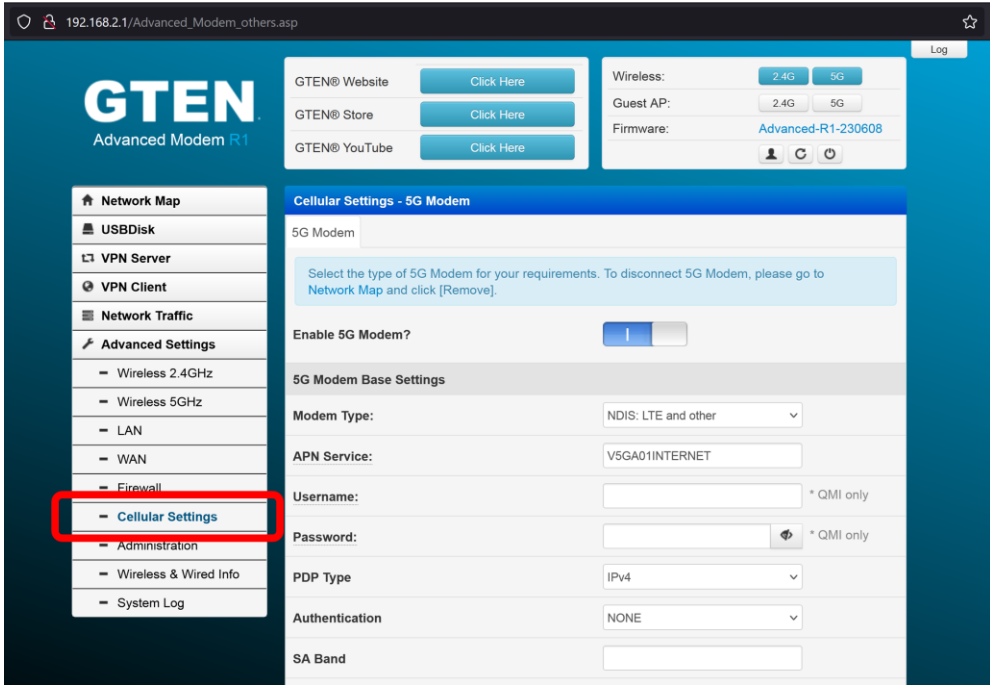
Once you are on this page you can customize the connection channels the modem uses, this is very important in improving the overall connection of your device, by default the carrier send the modem a signal and choose the channels it wants you to be on based on numerous factors, however their choice might not always be ideal for you as such this modem gives you the freedom to break away from this control and allows you the power to set your own connection channels to enhance your signal and avoid congestion.

This section is focused on Channels only, do not modify or change your APN settings there is a different guide available for this by visiting this link> https://infiniteic.com/apnforv5/

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

4:5:41:71

NSA/SA/5G band
This section is where you configure the Mobile Broadband 5G channels you want to choose:
(Only available for 5G Modems)

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.
SA option should always be set to 0 as SA is not in use in North America as of September 2023.

LTE band
This section is where you configure the Mobile Broadband 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. If your modem has a NR5G option you should set the modem to LTE unless you intend to use NR5G networks and then you leave the setting as **AUTO**
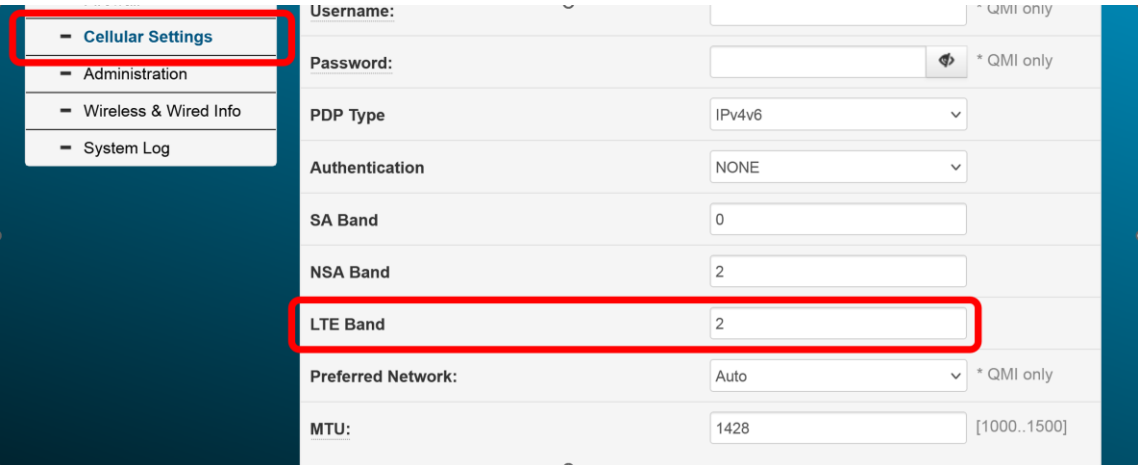
When you are all set. Click the [Apply] button to save your changes.

Examples of channel locking

One Channel at a time option

This is an example of single channel locking: This type of channel lock uses one channel at a time and will not search for any other channel. This type of channel locking will cause slower speeds but in certain areas may be the best for stability.

Pro Tip: If you have an **SA or NSA Band option should always be set to 0 as SA is not in use in North America as of September 2023.**

More than one Channel at a time

This is an example of using several channels when channel locking: This type of channel lock uses more than one channel at a time and will not search for any other channel besides what is inputted. This type of channel locking will increase speeds by taking advantage of Carrier Aggregation[1] however this setting may not be the best option for every location, especially if one the secondary channels has a weaker signal.
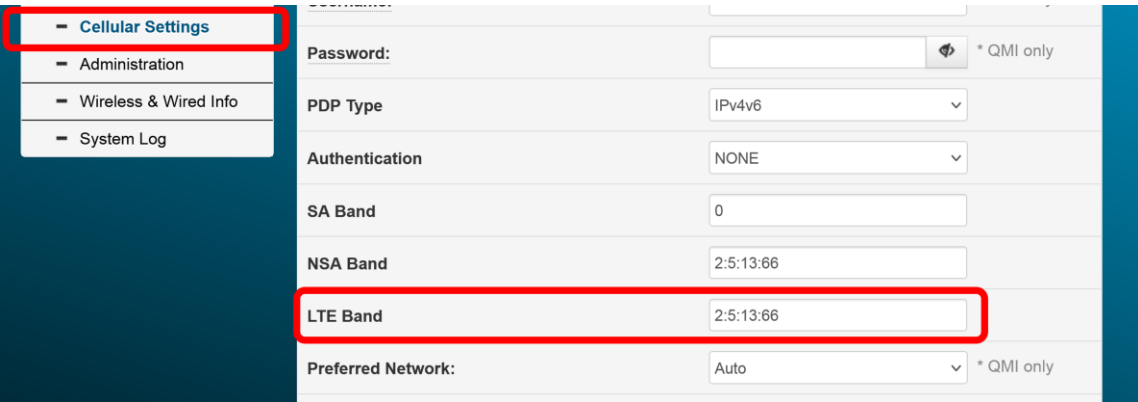
Pro Tip: When setting the channels you make sure to go in number channel order and always use a : between each channel number and do not use spaces.

Pro Tip 2: Channels available: **1:2:4:5:7:12:13:14:17:25:26:30:41:48:66:71 (5G Modems also use channel 77)**

1. In wireless communication, carrier aggregation is a technique used to increase the data rate per user, whereby multiple channels (called bands) are assigned to the same modem at the same time. The maximum possible data rate per user is increased the more channels are assigned to a user.

What carriers use what channels?

The information regarding carriers' connection channels is available online by searching on google for the latest information, as of this publication here is the latest information:

CH. 2	All carriers use this channel, which is not available in all areas.
CH. 4	All carriers use this channel, not available in some very remote areas.
CH. 5	AT&T primarily uses this channel, which is not available in all areas. Verizon/US Cellular are also known to use this channel in higher populated areas.
CH. 12	T-Mobile channel, however, is used by AT&T and US Cellular for roaming.
CH. 13	Verizon channel. Slower but most stable channel on the Verizon network.
CH. 14	Primarily used by AT&T, intended for Emergency communications and during times of grave emergencies AT&T may restrict traffic on this channel, also seems to be used by US Cellular in certain markets.
CH. 17	AT&T channel. Slower but most stable channel on the AT&T network.
CH. 30	AT&T channel. Limited reception and limited availability, highly used in Alaska.
CH. 41	T-Mobile high speed channel, Limited reception and limited availability are mainly used for 5G networks now.
CH. 48	Verizon primarily uses this channel, Limited reception, and limited availability.
CH. 66	All carriers use this channel, which is not available in some very remote areas. This channel is the new standard primary channel for LTE Internet traffic in the U.S.
CH. 71	T-Mobile channel, used for 5G networks but works on LTE as well, great for longer distances.
CH. 77	Verizon primarily uses this channel, Limited reception, and limited availability. Designed for only 5G connectivity, Also being used by AT&T and US Cellular in certain merkets.

How do I know what channel(s) my modem is connected to?

The information regarding your connection channels is available on the very first page of the Modems web interface:
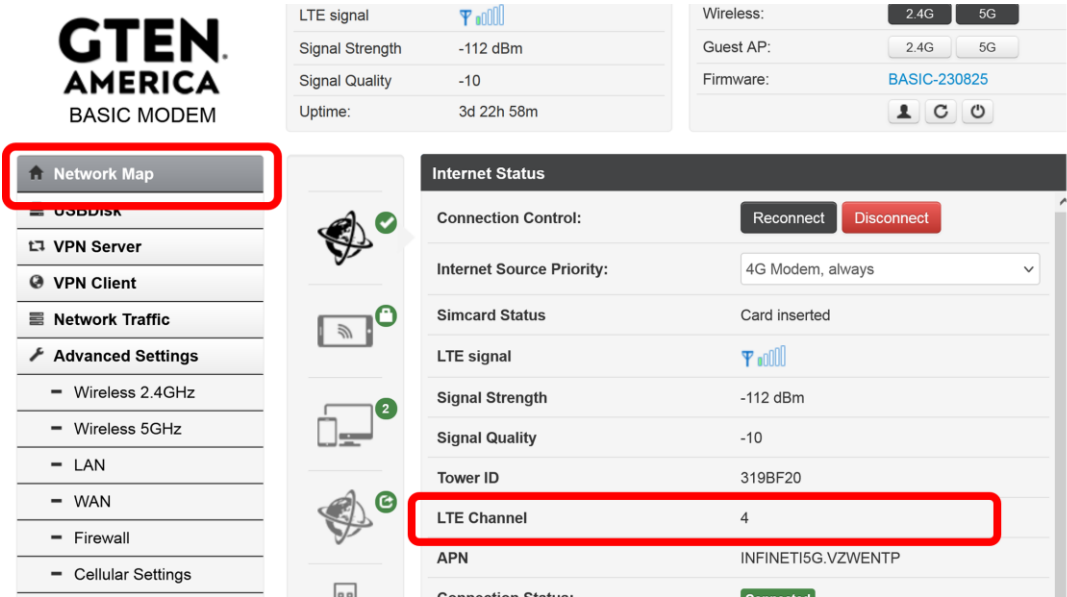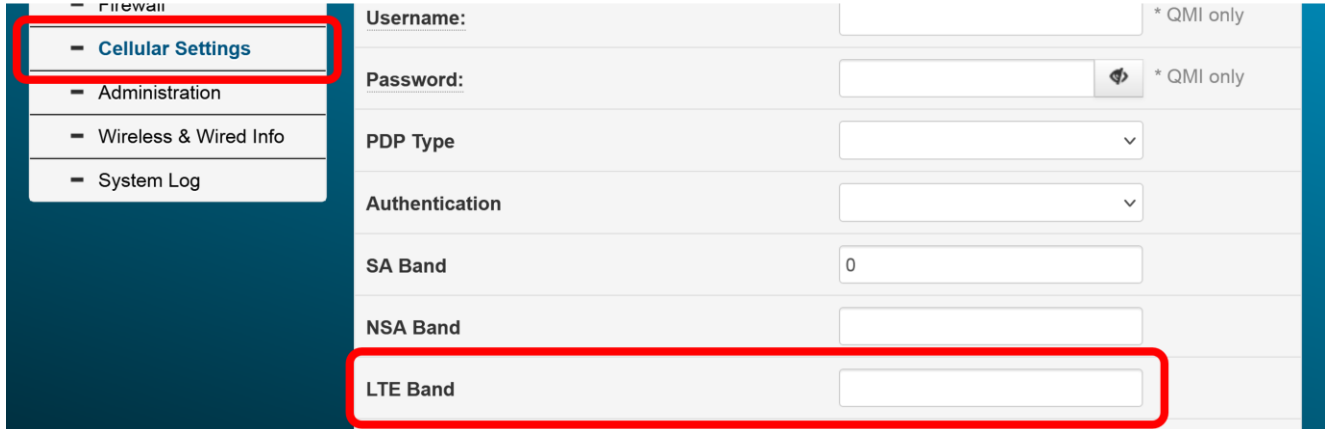

If you are using more than one channel, the additional channel information can be found by using the picture example below:
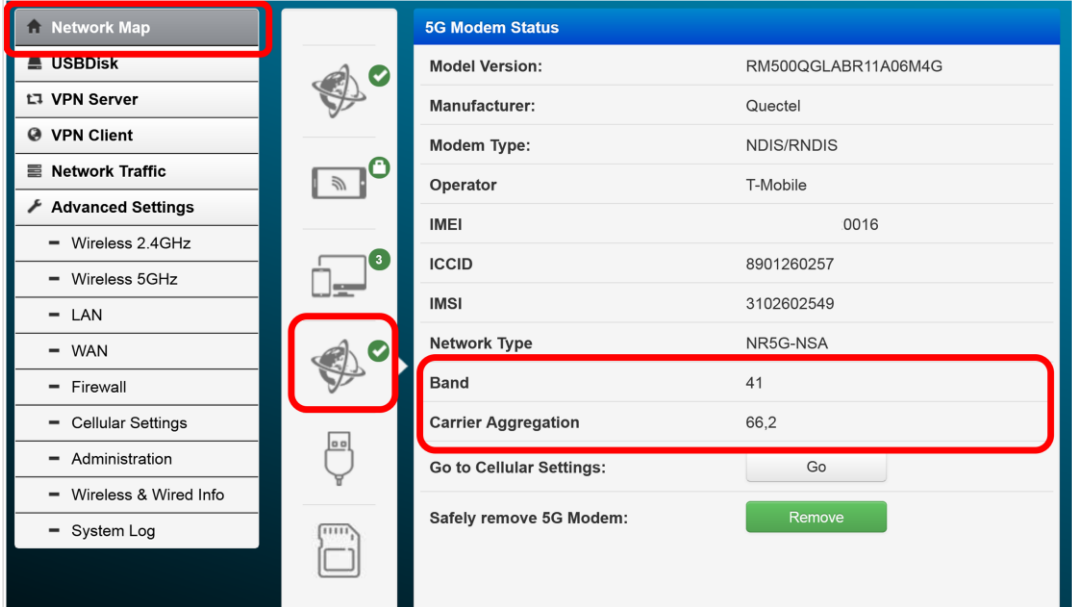
Returning my modem to connect to all channels?

If you want to turn your modem back to see all channels just leave the BAND/Channel box blank and then hit apply and the modem will return to search all channels again.
(See example)

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

Using Console for band and signal info?

For you advanced users, the console is a great tool to provide detailed connection information.
For console users, you can send command **atcmd at+qcainfo** to get advanced details regarding your signal and connection channels, (see example below)