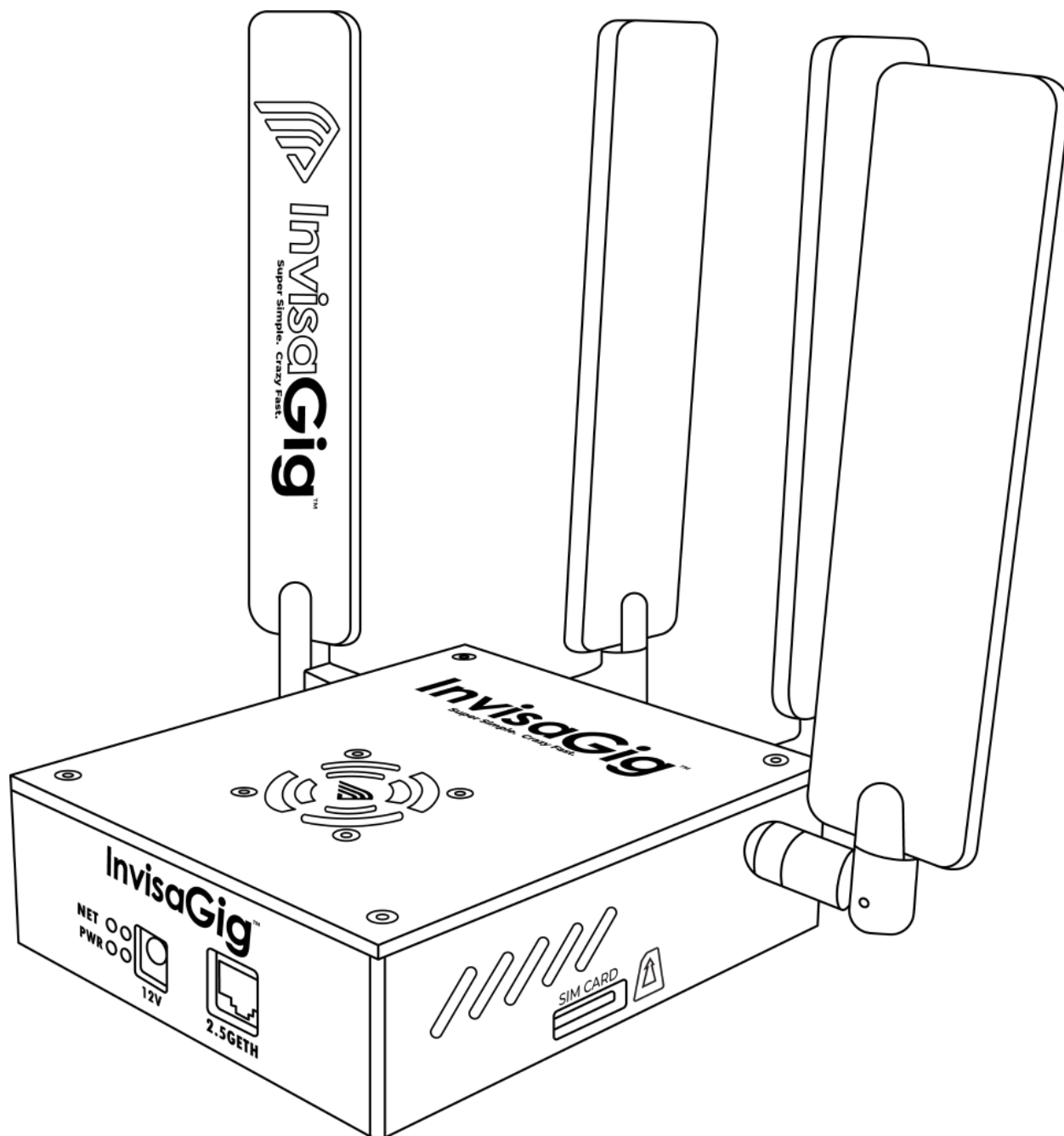


InvisaGig™

Super Simple. Crazy Fast.

User Manual



Contents

Hardware Overview.....	4
Package Contents.....	4
Specifications.....	4
Assembly.....	4
Software Overview.....	5
First Time Configuration Interface Access.....	5
Installing InvisaGig Certificates (OPTIONAL).....	6
Configuration Interface.....	7
Accessing the Configuration Interface.....	7
Option Selection and Input.....	7
Access Interruptions During Network Changes.....	7
Landing Menu.....	8
Login.....	8
Internet Status.....	9
Local IP Information.....	9
Firmware & Device Identifiers.....	9
Carrier & APN Info.....	9
Network Mode & Connected Cells.....	10
Band Locks.....	10
Modem Temperature.....	10
Live Signal.....	10
Primary Carrier Cell.....	11
Signal Power.....	11
Signal Quality.....	11
Signal/Noise Ratio.....	11
Carrier Aggregation Cells.....	11
Main Menu.....	12
Change Password.....	12
Modem Info.....	12
Live Signal.....	12

Network Mode (LTE/LTE+5G/5G).....	12
Band Locks.....	13
Tower Locks.....	14
Local Tower Search.....	17
Carrier Profile Selection & APN.....	18
InvisaGig Update Check.....	19
Factory Defaults.....	19
Local IP & Multiple Modem Setup.....	20
Text Messages.....	20
Reboot.....	21



Hardware Overview

Package Contents

- InvisaGig Unit
- Ethernet Cable
- SIM Card Adapter Set
- Power Supply
- 4x Detachable Antennas

Specifications

Operating Temperature: Min. -30c, Typ. 25c, Max. 75c

Operating Environment: Main Unit is designed for indoor operation. Proper clearance should be given all around the unit for proper airflow

Supported Ethernet Transfer Rates: 10/100/1000/2500Mbps

Supported LTE Bands:

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/B46/B48/B66/B71

Supported 5G NR Bands:

n1/n2/n3/n5/n7/n8/n12/n13/n14/n18/n20/n25/n26/n28/n29/n30/n38/n40/n41/n48/n66/n70/n71/n75/n76/n77/n78/n79

Assembly

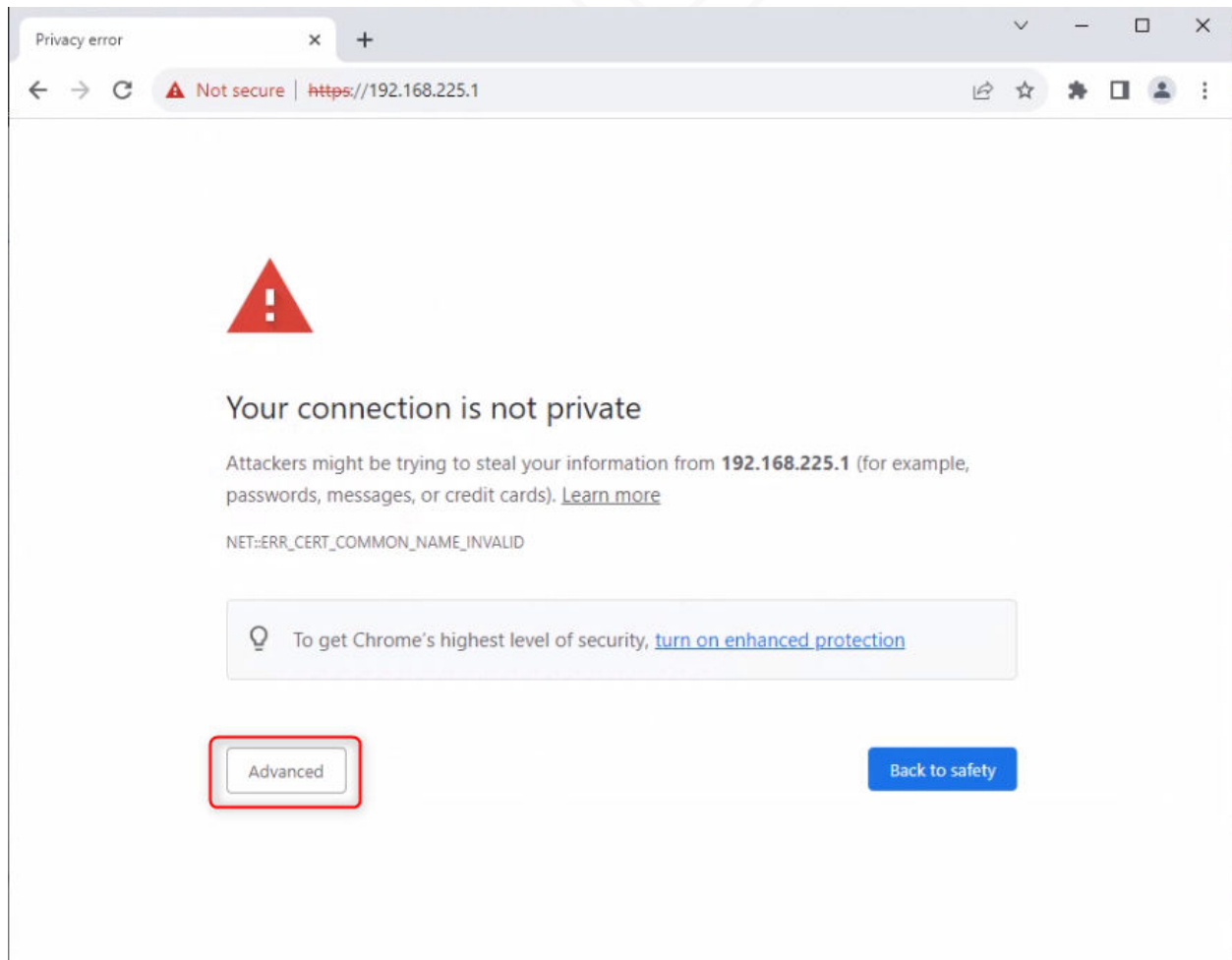
Once all package contents have been checked, the unit can be assembled. In the case of external antennas, begin by attaching all 4 antennas to the unit by screwing them onto the 4 threaded, SMA connectors of the InvisaGig main unit, clockwise until tight. Take care not to cross thread or overtighten the antennas; they should be hand-tightened only, do NOT use any tools as this may damage the unit and/or antennas.

Once the antennas are connected, insert your SIM card into the unit. Be sure that the SIM card is oriented correctly when inserted with the metal contacts in the downward position. At this point you can connect the Ethernet cable between the Ethernet port of the InvisaGig unit and your PC or router's WAN/Internet port. Finally, once the antennas are connected, SIM is inserted, and Ethernet is connected, you can plug in the DC barrel connector from the power supply into the power port of the unit to power it on. The unit will take a minute or two to power up.

Software Overview

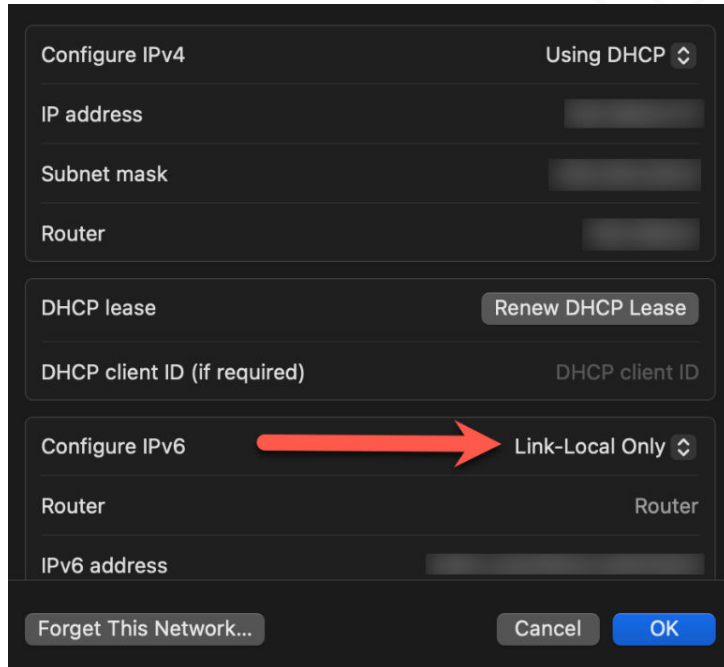
First Time Configuration Interface Access

Once the InvisaGig unit is connected to your device via Ethernet, navigate to <https://192.168.225.1> and click through to accept the security warning in your browser. In Chrome this is done by clicking 'Advanced' then 'Proceed to 192.168.225.1':



MacOS Note

It has been observed that some versions of MacOS can have issues accessing the InvisaGig when IPv6 is enabled, and the unit is connected directly to the Mac. To avoid this issue, navigate to “System Settings... > Network” then select your Ethernet or USB-to-Ethernet adapter from the list of network connections on the left. Click on “Details... > TCP/IP” then select “Link-Local Only” from the “Configure IPv6” dropdown menu:



Installing InvisaGig Certificates (OPTIONAL)

If you do not want to click past browser security warnings when accessing the configuration page from a new device, you can download the InvisaGig root and/or configuration page certificates to your device for installation directly from the device over HTTP:

<http://192.168.225.1/rootcert>

<http://192.168.225.1/cert>

We also provide Windows and MacOS native scripts to install the certs and set convenient local hosts file entries for the configuration page if you prefer to access units via hostname instead of IP address (i.e. 'https://config.invisagig.com'). A .zip archive containing these scripts, a copy of the certificates that they install, and a README with instructions on use can be downloaded directly from the device over HTTP:

<http://192.168.225.1/scripts>

NOTICE: Neither manual nor scripted installation of any certificate is required to access the InvisaGig's configuration page via IP address. We simply provide them to those who wish to remove the browser security warnings. Please note that use of any custom LAN IP would likely still produce insecure connection warnings by your browser as we cannot anticipate all custom IPs which may be assigned to the unit.

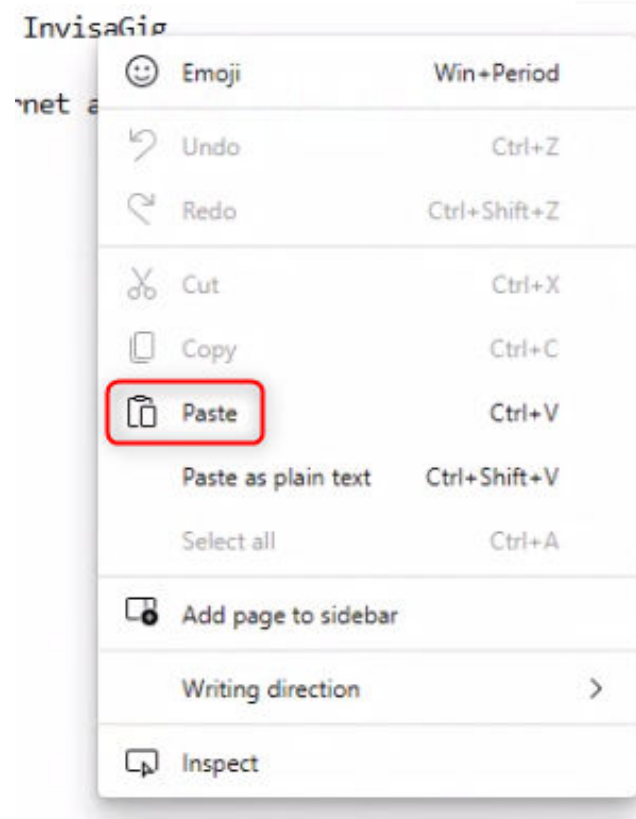
Configuration Interface

Accessing the Configuration Interface

By default, the configuration interface can be accessed at <https://192.168.225.1> .

Option Selection and Input

The menu is driven by text input provided by the user. To select an option, input its corresponding menu number and press [Enter]. For options which require extended input, you can simply copy and paste text as you can in most other computer applications. Paste is accomplished by right-clicking in the browser window displaying the menu interface, right-clicking the mouse, and selecting 'Paste':



Access Interruptions During Network Changes

Be aware that when executing certain configuration menu options, the browser may temporarily lose connection to the Configuration Interface as it commits network changes internal to the device. For less impactful changes, the interface page may show a “Reconnecting...” message like the one below:



In many cases the connection will then restore itself and you will be returned to the Landing Menu. During more impactful changes (i.e., Cell Locks, reboots, etc.) the automatic reconnection attempts may

time out and drop you to a “Press [Enter] to Reconnect” message like the one below:



In such case, press [Enter] to reconnect as instructed. If the device is still processing networking changes you may have to wait 30-60 seconds before retrying access. If no reconnection status messages are displayed simply use the refresh function on your browser to manually reload the page. Upon reconnection you will be returned to the Landing Menu.

Landing Menu

This is the initial menu observed when accessing the configuration page:

```
1) Login
2) Modem Info
3) Live Signal
Please enter your choice: █
```

Login

Selecting this option will prompt for a password and log you into the Main Menu. The default password delivered by default is “**ChangeME2\$**”. This should be changed with the “Change Password” option in the Main Menu.

```
Enter the password:
*****█
```


Modem Info

Modem info displays all relevant information about the current state of the modem, cellular carrier, and current configuration:

```
INTERNET STATUS: Modem can reach the Internet and resolve hostnames.
PUBLIC IPv4: 172.58.123.96
PUBLIC IPv6: 2607:fb90:8d25:5e90:7190:486a:7763:1bf7

LOCAL IP: 192.168.225.1
IPPT MAC: c0:3f:d5:6a:97:38
TTL VALUE: 65

FIRMWARE VERSION: RM520NGLAAR01A07M4G_01.201.01.201
IMEI:
FSN:
CARRIER PROFILE: T-Mobile - Wi-Fi Calling, MANUAL

CARRIER: T-Mobile
pSIM CCID:
PHONE NUMBER:
APN: fast.t-mobile.com, IPV4V6

NETWORK MODE: LTE:NR5G, NSA and SA Enabled
CONNECTED CELLS:
NR5G-SA - "NOCONN", "NR5G-SA", "FDD", 310, 260, , 71, 2, -84, -15, 8, 0, -

ENABLED BANDS:
LTE - 1:2:3:4:5:7:8:12:13:14:17:18:19:20:25:26:28:29:30:32:34:38:39:40:41:42:43:46:48:66:71
5G NSA - 1:2:3:5:7:8:12:13:14:18:20:25:26:28:29:30:38:40:41:48:66:70:71:75:76:77:78:79
5G SA - 1:2:3:5:7:8:12:13:14:18:20:25:26:28:29:30:38:40:41:48:66:70:71:75:76:77:78:79

MODEM TEMPERATURE: 45c

Press [Enter] key to continue...
```

Internet Status

Displays the level of current Internet connectivity. **Green** color indicates no issues, **Yellow** indicates possible issues with DNS resolution, and **Red** indicates no connectivity.

Local IP Information

Shows the local IP of the device along with the MAC address of the IP Passthrough interface (if IPPT is enabled).

Firmware & Device Identifiers

Current base revision of the modem firmware release along with its IMEI and FSN.

Carrier & APN Info

Shows carrier related information for the currently inserted SIM card along with current APN settings.

Network Mode & Connected Cells

Currently selected network RF technology of the modem, along with the 5G technology enabled if relevant (NSA = Non-Standalone, SA = Standalone). Also indicates the current primary carrier cell (PCC).

Band Locks

Displays the currently selected list of bands enabled for modem attach. If 5G NSA or SA are disabled, the band list for these will show "DISABLED", respectively.

Modem Temperature

Current temperature in degrees centigrade of the modem as measured internally.

Live Signal

Selecting the optimal installation location for your InvisaGig unit is the key to achieving the best performance. The unit should be placed in a location and orientation where it will receive the best signal exposure from the carrier's nearest cell site. The Live Signal function allows for near instant feedback of signal information while reorienting the unit and selecting its permanent installation location.

Under Live Signal view, the connected cell, associated signal information, and modem temperature is displayed in near real-time, refreshing all information once per second. For signal information values are shown which represent each internal antenna of the InvisaGig unit. Pressing [x] or [q] will end the live view and display the last measured value until you press [Enter] to return to the Main Menu.

Press [x] or [q] to exit live view.

PRIMARY CARRIER CELL

"TDD NR5G", "310260", "NR5G BAND 41", 520110

SIGNAL POWER

-90, -96, -86, -91, NR5G

SIGNAL QUALITY

-10, -10, -3, -3, NR5G

SIGNAL/NOISE RATIO

12, 12, 12, 12, NR5G

CARRIER AGGREGATION CELLS

"PCC", 520110, 12, "NR5G BAND 41", 567
"SCC", 396970, 3, "NR5G BAND 25", 1, 264, 0, -, -
(PCC=PRIMARY, SCC=SECONDARY)

MODEM TEMPERATURE

47c

Primary Carrier Cell

This is the primary carrier channel that the modem is connected to.

Signal Power

This shows the Reference Signal Received Power (RSRP) for all four connected antennas in dBm.

Reference ranges:

Excellent = > -80, **Good = -80 to -90**, **Marginal = -90 to -100**, **Weak = < -100**

Signal Quality

This shows the Reference Signal Received Quality (RSRQ) for all four connected antennas in dB.

Reference ranges:

Excellent = > -10, **Good = -10 to -15**, **Okay = -15 to -20**, **Bad = < -20**

Signal/Noise Ratio

This shows the Signal to Noise Ratio (SINR) for all four connected antennas in dB. Reference ranges:

Excellent = > -20, **Good = 13 to 20**, **Okay = 0 to 13**, **Bad = < 0**

Carrier Aggregation Cells

This shows the Primary (PCC) and Secondary (SCC) cells being used for Carrier Aggregation (CA).

Main Menu

This is the main menu which is accessed after Login on the Landing Menu.

```
1) Change Password
2) Modem Info
3) Live Signal
4) Network Mode (LTE/LTE+5G/5G)
5) Band Locks
6) Tower Locks
7) Local Tower Search
8) Carrier Profile Selection & APN
9) InvisaGig Update Check
10) Factory Defaults
11) Local IP & Multiple Modem Setup
12) Text Messages
13) Reboot
Please enter your choice: █
```

Change Password

Selecting this option will allow you to change the password used to access the Main Menu. You will be prompted to first enter the existing password and, if correct, then for the new password twice to confirm it. Upon update of the password you will be dropped back to the Landing Menu where you would then need to enter the updated password to access the Main Menu again.

```
Enter the current password:
*****
Enter the new password:
*****
Enter the new password again:
*****
Password updated successfully.
Press [Enter] to return.█
```

Modem Info

This is the same 'Modem Info' accessed via the Landing Menu. See 'Modem Info' description from the previous 'Landing Menu' section for details.

Live Signal

This is the same Live Signal information which can be found in the Landing Menu. Refer to the 'Live Signal' description under the Landing Menu section of this document for more info.

Network Mode (LTE/LTE+5G/5G)

The RF technology type used by the modem can be changed using this option. The selection options are: LTE Only, LTE & 5G, or 5G Only. When selecting LTE & 5G, an additional prompt is shown asking which 5G technology should be enabled (NSA = Non-Standalone, SA = Standalone).

```
!!!--WARNING--WARNING--WARNING--WARNING--WARNING--WARNING--WARNING--WARNING--WARNING--!!!  
Network mode changes may disconnect you temporarily due to modem detach/re-attach activity.
```

```
Do you still wish to proceed (y/n) ? █
```

- 1) LTE Only
 - 2) LTE & 5G
 - 3) 5G Only
 - 4) Return to Main Menu
- Choose a mode:

```
█
```

- 1) Enable SA & NSA
 - 2) Disable SA
 - 3) Disable NSA
 - 4) Return to Main Menu
- Choose SA/NSA enablement:

```
█
```

```
Network mode set to LTE & 5G.  
NR SA & NSA enabled.  
Press [Enter] key to continue... █
```

Band Locks

Band locking can be used to limit the bands used by the modem when connecting to carrier cells. This can be useful to limit cell attachment on specific bands in situations where these bands are known to have issues such as instability or congestion. By default, all listed bands supported by the modem are enabled. To “lock” bands, one can shorten the list of available bands by removing undesirable ones from the list, leaving only the ones which are still desired. User input should be formatted as a colon (':') separated list of band values (ex. 2:4:12:71 ... etc). The modem will then connect to the band(s) in the remaining list based on signal strength. If no input or invalid input is provided for the list of bands to lock, no changes will be made.

Be aware that if bands are removed from the list of available bands, they can no longer be used for either primary carrier channels (PCC) or secondary carrier channels (SCC) which means that they will not be included in any available carrier aggregation band combinations. Also, be aware that 5G NSA is still using LTE for its PCC so any bands removed from the LTE list will have a direct effect on 5G NSA connectivity. Finally, Band Locking should not be confused with Tower Locking which is the process of forcing the modem to only attach to a specific cell (tower). Tower Locks are covered in the next section.

- 1) LTE
 - 2) 5G NSA
 - 3) 5G SA
 - 4) Reset All to Defaults
 - 5) Return to Main Menu
- Choose which bands to lock, or perform a reset to defaults:

Enter colon (':') separated list of SA 5G bands to lock:
The default bands are:
1:2:3:5:7:8:12:13:14:18:20:25:26:28:29:30:38:40:41:48:66:70:71:75:76:77:78:79
Bands enabled currently:
1:2:3:5:7:8:12:13:14:18:20:25:26:28:29:30:38:40:41:48:66:70:75:76:77:78:79
1:2:3:5:7:8:12:13:14:18:20:26:28:29:30:38:40:41:48:66:70:75:76:77:78:79

SA 5G locked to: 1:2:3:5:7:8:12:13:14:18:20:26:28:29:30:38:40:41:48:66:70:75:76:77:78:79.
Press [Enter] key to continue...

Tower Locks

Tower locking, a.k.a. Cell locking, allows the modem to be locked to a specific LTE or 5G NR cell (or list of cells under LTE Only network mode). **Tower locking is not recommended in most cases due to the connectivity issues it may introduce if the locked cell goes offline due to malfunction, maintenance, etc.** This is because, when the modem is instructed to lock to a specific cell, it will, by default, not “fall back” to other cells if the locked one loses connectivity. However, InvisaGig has added some failsafe functionality to ensure cell locks are removed if the modem loses connectivity for more than one minute.

Cell locking is really only beneficial when the unit is located an equal distance between two carrier cell sites which broadcast the same bands with roughly the same signal strength but have different amounts of congestion. If the user wishes to ensure the modem does not connect to the congested site, then a cell lock can be put in place to keep it from roaming between the two sites. Outside of this scenario, it is recommended to either allow default modem logic to select the cell, or if the undesired cell site is broadcasting on different bands, use Band Locking to mitigate the issue instead.

To lock an LTE tower (or for 5G NSA since the primary carrier is still LTE), you will require its EARFCN ('E-UTRA Absolute Radio Frequency Channel Number') and PCI ('Physical Cell ID') identifiers. To lock a 5G SA tower, you will need its PCI, NR-EARFCN ('New Radio – EARFCN'), SCS ('Subcarrier Spacing')*, and BAND (New Radio Band #). These required values can be obtained in a number of different ways: through the unit using Cell Scan option in the main menu of the InvisaGig device, a community repository source (i.e. CellMapper, etc.) or additional third party spectrum scanning tools (such as an iPhone in Field Test Mode, an Android app like LTE Discovery, or other dedicated spectrum analyzer hardware). The only method used in the context of this document is the Cell Scan option of the InvisaGig device.

IMPORTANT: The Tower Lock function has strict requirements that are mutually exclusive depending on the Network Mode of the modem. If you wish to lock a cell under LTE or 5G NSA, you must select a

Network Mode which includes LTE, and 5G SA mode must be disabled. Conversely, if you wish to lock a cell under 5G SA, you must select a network mode which includes NR5G, and 5G NSA must be disabled. If you attempt to lock a cell without setting the appropriate Network Mode options first, you will receive a message indicating the conflict and be prompted to return to the Main Menu to select the proper Network Mode setting before retrying.

***NOTE:** SCS, or 'Subcarrier Spacing', is a new parameter used for 5G NR; it is measured in bandwidth values of 15, 30, 60, 120, 240, or 480 KHz. When referring to Cell Scan output to obtain a cell's SCS, be aware that it is reported as a single digit value ranging between '1' (30KHz) and '5' (480KHz) which corresponds to the bandwidth. The Tower Lock function will accept either the actual KHz value or its equivalent, single-digit, representative value (that Cell Scan output provides). If the single digit format is used, the Cell Lock function will automatically convert it to the corresponding KHz value in the background. The converted, actual KHz value will then be reported in the Tower Lock logs and Modem Info outputs.

```
!!!--WARNING--WARNING--WARNING--WARNING--WARNING--WARNING--WARNING--WARNING--WARNING--WARNING--!!!  
Tower locking will disconnect you from the Internet in order to lock or unlock towers.  
If the modem cannot connect to the Internet after locking a tower, the tower lock will be removed.  
Towers may not be highly available and may lose connectivity in case of maintenance, outage, etc.  
You may lock up to 20 LTE cells at a time. 5G SA towers can be locked only one at a time.  
If any towers are already locked, they will be replaced with the values you are now entering.
```

Do you still wish to proceed (y/n) ? █

- 1) LTE & 5G NSA
- 2) 5G SA
- 3) Remove All Tower Locks
- 4) View Tower Lock Log
- 5) Return to Main Menu

Choose which tower type to lock, or remove existing locks:
█

Enter comma (',') separated parameters of 5G tower to lock.
([PCI],[NR-EARFCN],[SCS],[BAND]):

█,1,41

Cell will now be locked when you press [Enter].

This may disrupt your connection temporarily.

Press [Enter] key to continue... █

INTERNET STATUS: Modem can reach the Internet and resolve hostnames.

PUBLIC IPv4: 172.58.123.90

PUBLIC IPv6: 2607:fb91:1098:364:f15d:1eeb:7693:e9a1

LOCAL IP: 192.168.225.1

IPPT MAC: c0:3f:d5:6a:97:38

TTL VALUE: 65

FIRMWARE VERSION: RM520NGLAAR01A07M4G_01.201.01.201

IMEI: [REDACTED]

Modem Info now shows Locked Cell

FSN: [REDACTED]

CARRIER PROFILE: T-Mobile - Wi-Fi Calling, MANUAL

CARRIER: T-Mobile

pSIM CCID: [REDACTED]

PHONE NUMBER: [REDACTED]

APN: fast.t-mobile.com, IPV4V6

NETWORK MODE: LTE:NR5G, NSA Disabled

CONNECTED CELLS:

NR5G-SA - "NOCONN", "NR5G-SA", "TD", 310, 260, [REDACTED], 41, 12, -91, -11, 17, 1, -

LOCKED 5G SA CELL:
<PCI>, <NR-EARFCN>, <SCS><BAND>
[REDACTED], 30, 41
LOCK STATUS: ACTIVE

ENABLED BANDS:

5G SA - 1:2:3:5:7:8:12:13:14:18:20:26:28:29:30:38:40:41:48:66:70:75:76:77:78:79

MODEM TEMPERATURE: 52c

Press [Enter] key to continue...

- 1) LTE & 5G NSA
- 2) 5G SA
- 3) Remove All Tower Locks
- 4) View Tower Lock Log
- 5) Return to Main Menu

Choose which tower type to lock, or remove existing locks:

4



This log shows the most recent tower lock activity:

```
Thu Jul 20 21:59:38 UTC 2023 - LTE cell lock inactive.
Thu Jul 20 21:59:39 UTC 2023 - NR cell lock inactive.
Thu Jul 20 21:59:39 UTC 2023 - New lock command received.
Thu Jul 20 21:59:39 UTC 2023 - Issue lock command [REDACTED] 41'...
Thu Jul 20 21:59:42 UTC 2023 - Lock command success.
Thu Jul 20 21:59:42 UTC 2023 - Will check Internet connectivity on next run.
Thu Jul 20 22:00:41 UTC 2023 - LTE cell lock inactive.
Thu Jul 20 22:00:41 UTC 2023 - NR cell lock active: ' [REDACTED] 41'.
Thu Jul 20 22:00:49 UTC 2023 - LTE cell lock inactive
Thu Jul 20 22:00:49 UTC 2023 - NR cell lock active: ' [REDACTED] 41'.
Thu Jul 20 22:01:51 UTC 2023 - LTE cell lock inactive
Thu Jul 20 22:01:51 UTC 2023 - NR cell lock active: ' [REDACTED] 41'.
Thu Jul 20 22:02:52 UTC 2023 - LTE cell lock inactive
Thu Jul 20 22:02:53 UTC 2023 - NR cell lock active: ' [REDACTED] 41'.
Thu Jul 20 22:03:32 UTC 2023 - LTE cell lock inactive
Thu Jul 20 22:03:32 UTC 2023 - NR cell lock active: ' [REDACTED] 41'.
Press [Enter] key to continue...|
```

Local Tower Search

To use the Tower Locking function, you must obtain local cell tower parameters such as EARFCN, PCI, etc. Local Tower Search (a.k.a. Cell Scanning) allows us to search for available cells and provides parameter output for the discovered cells which can be used to lock desired cells which belong to your carrier. Cell scanning with a carrier SIM already installed will yield results reflecting mostly the carrier's own cells and/or roaming partner cells. Cell scanning without a SIM inserted may yield additional cells for other available carriers, but you would need to insert the appropriate carrier provisioned SIM to be able to attach to them. The top line of output in a cell scan is a key that indicates which parameters each comma separated value corresponds to.

Note: 5G NR cell scanning is still under active improvement by modem vendors. InvisaGig recommends performing at least two to three consecutive scans to ensure all available cells are listed. It has been observed that sometimes, in at least the first 5G NR scan performed, the actively connected cell details are not included in the result; thus, the recommendation to scan multiple times to ensure completeness of cell information.

```
1) LTE
2) 5G NR
3) Return to Main Menu
choose a mode:
|
```

```
!!!--WARNING--WARNING--WARNING--WARNING--WARNING--WARNING--WARNING--WARNING--WARNING--!!!
Local tower search will disconnect you from the Internet for a period of time while running.
For best results across all carriers, it is recommended to remove the SIM while running.
```

```
Do you still wish to proceed (y/n) ? |
```

5G NR tower scan started. Please wait, this may take some time...
Scan completed. Results:

```
<MCC>,<MNC>,<NR-EARFCN>,<PCI>,<RSRP>,<RSRQ>,<srslvr>,<scs>,<cellID>,<TAC>,<bandwidth>,<band>,<?>,<?>,-  
313,340, ,769,-101,-11,19,0, ,70,44,0,-  
310,260, ,425,-101,-11,-9, ,25,42,2,-  
311,480, ,383,-101,-11,-9,0,-,52,5,15,2,-  
311,480, ,371,-101,-11,-9,1,-,162,77,142,0,-  
Press [Enter] key to continue...|
```

Refer to the 'Modem Info' info description under the 'Landing Menu' section of this document to reference signal strength/quality values shown in the Tower Search output.

Carrier Profile Selection & APN

Modern cellular modems employ carrier optimized profiles which are used for connection to a specific carrier. These profiles also take care of selecting the appropriate APN. By default, the modem will automatically choose the preferred profile using Auto selection based on the physical SIM card's identifier (ICCID). In some cases, a carrier profile may contain restrictions on which towers or bands it will allow the modem to connect to.

In many cases it may be desirable to select a specific profile manually. The Carrier Profile Selection function of the menu allows you to do this. As the InvisaGig platform has only been tested with cellular carriers in the United States, currently the only manual selections reflect US carrier profiles and one generic profile. When moving from automatically selected profiles to manual selection, a reboot is first needed to disable automatic selection. Upon reboot you may then make a manual selection from the list which will reboot the unit one additional time to finalize the updated selection.

Manual APN entry is possible by selecting the Generic profile option which will then prompt for APN and IP type:

- 1) Allow Modem to Auto Select Carrier Profile
- 2) Manually Select Carrier Profile
- 3) Return to Main Menu

Choose a mode:
|

Auto selection is currently enabled and needs to be disabled for manual selection.
Disable auto selection and reboot now? (y/n) ? |

AutoSelect disabled. Now rebooting...
|

!!!--WARNING--WARNING--WARNING--WARNING--WARNING--WARNING--WARNING--WARNING--!!!
Proceeding will enable your selected profile and perform an immediate reboot.
Do you want to proceed (y/n)? |

```
1) Generic w/ Manual APN
2) T-Mobile - Standard
3) T-Mobile - Wi-Fi Calling
4) T-Mobile - Home Internet w/Wi-Fi Calling
5) Verizon
6) Visible
7) AT&T - VoLTE
8) AT&T - FirstNet
9) Return to Main Menu
Choose a carrier profile:
█

Set T-Mobile Wi-Fi Calling profile w/ 'fast.t-mobile.com' APN.
Now rebooting...
█
```

InvisaGig Update Check

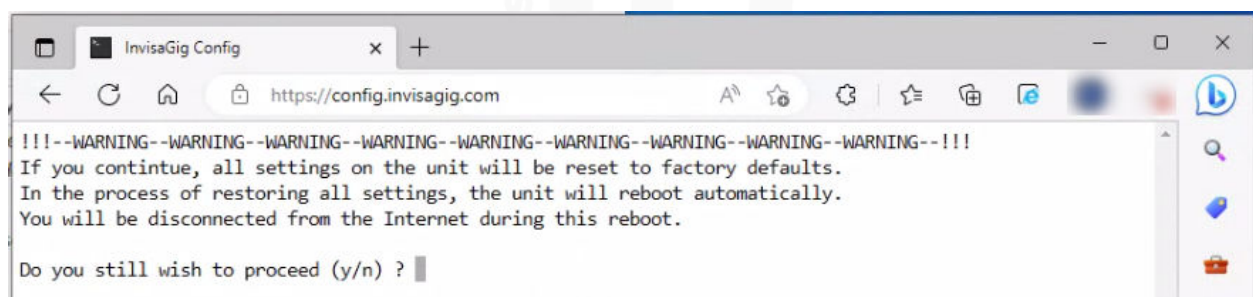
Periodically, feature enhancements and bug fixes will be published as updates to the InvisaGig configuration interface. To check for and install updates, use this option.

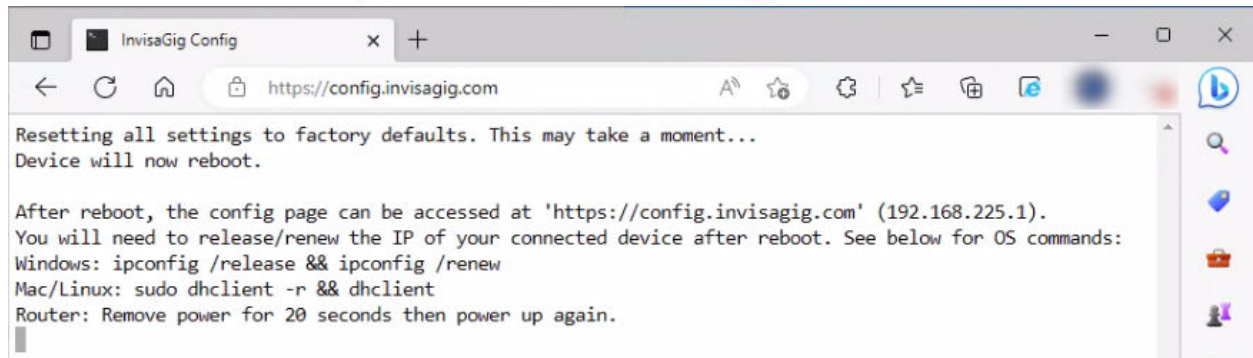
```
Do you wish to check for updates (y/n)? y
INFO: Initializing update process.
INFO: Checking for available update...
INFO: New version 1.0.6 found, do you want to update? (y/n)? █
```

Factory Defaults

In case you would like to start fresh, you can reset all configuration values back to factory defaults by selecting this option.

NOTE: In the event of a factory reset, it is good practice to remove the SIM card and then factory reset the unit. In some cases, after the factory reset is finished (give it approximately 5 minutes), it may be good practice to power down the unit for a few minutes, then power back up and allow the unit upwards of 5 minutes to both power up and fully boot before logging in to the unit and starting the process of setting up your freshly reset InvisaGig unit.





Local IP & Multiple Modem Setup

Allows selection of the installation scenario. The unit may operate as a single unit or as a member of a larger set of units configured together in a failover or load-balanced scenario using appropriate third-party equipment. Preconfigured IP options are offered, or you can specify an IP address of your choosing. The IP Passthrough (IPPT) MAC address can also be specified if desired. Any changes made under this menu item will result in an automatic reboot of the unit as a final step due to the required IP changes.

```
!!!--WARNING--WARNING--WARNING--WARNING--WARNING--WARNING--WARNING--WARNING--WARNING--!!!  
Proceeding will result in an automatic reboot of the device once all selections have been made.
```

```
Do you still wish to proceed (y/n) ?
```

```
Select your scenario:
```

- 1) Single Unit
 - 2) Multi Unit
 - 3) Return to Main Menu
- ```
2
```

```
Will the carrier plan used w/ this unit provide a static IPv4 address?
```

```
Or do you otherwise wish to input a specific MAC address for IP Passthrough (y/n)? n
```

```
Which number unit should this unit be configured as?
```

- 1) 1st Unit
  - 2) 2nd Unit
  - 3) 3rd Unit
  - 4) 4th Unit
  - 5) 5th Unit
  - 6) 6th Unit
  - 7) Set my own IP
  - 8) Return to Main Menu
- ```
2
```

```
Configuring as a member of a multi unit installation...
The unit will now reboot in order to complete network reconfiguration.
After the unit has restarted, the config page can be accessed at 'https://192.168.145.1'.
█
```

NOTE: When setting your own IP address, please make note of it, as this will now be the URL address to login to your InvisaGig user interface.

Text Messages

Depending on the plan provisioned, the unit may receive text messages. This menu option can be used to view the text messages or delete them.

- 1) Check Messages
- 2) Delete Messages
- 3) Return to Main Menu

Choose a mode:

█

Phone Number: ██████████, Date: 07/20/23, Time: 16:03:58 UTC-7

Just testing!

Press [Enter] key to continue... █

Are you sure you wish to delete *ALL* stored text messages (y/n) ? y
Messages deleted.

Press [Enter] key to continue... █

Reboot

Selecting this option will allow you to perform a restart.

A reboot will disconnect you from the Internet.

Do you wish to proceed (y/n) ? █