Sprint Tri-Mode Plug-in-Connect

USB

Web Browser Interface

User Guide

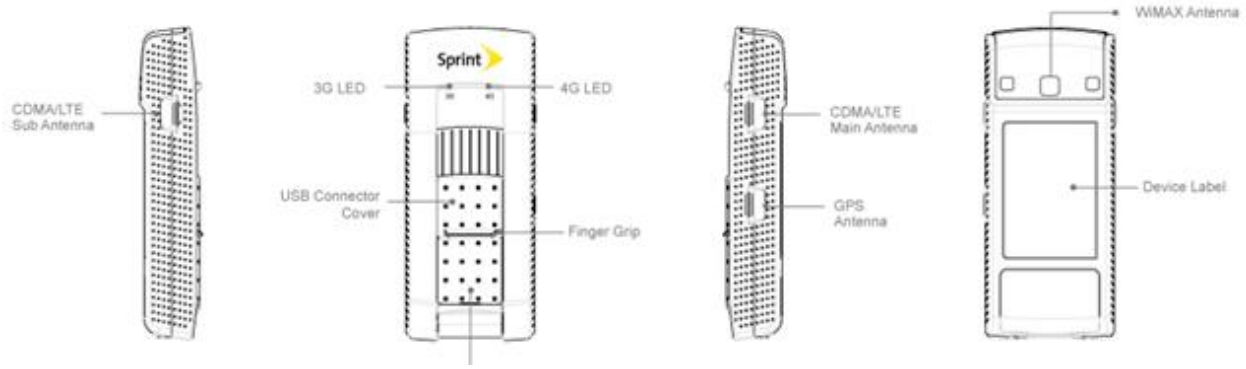
Table of Contents

Get Started

The following topics give you all the information you need to set up your device and Sprint service the first time.

Your Device at a Glance

Your device at a glance.



Set Up Your Device

The following section is for Windows XP users only. Windows XP SP3 minimum required.

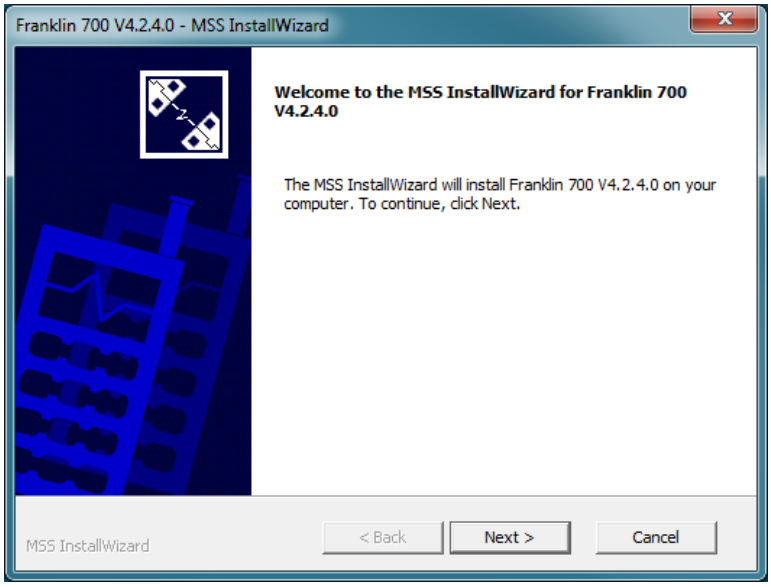
Mac, Linux, Windows Vista, and Windows 7 users can skip to the 'Activate Your Device' section.

To use the Sprint Tri-Mode Plug-in-Connect USB on your computer, you will need to install the Remote NDIS driver included in the modem memory and configure the device. See the next section for more information on driver installation and device configuration.

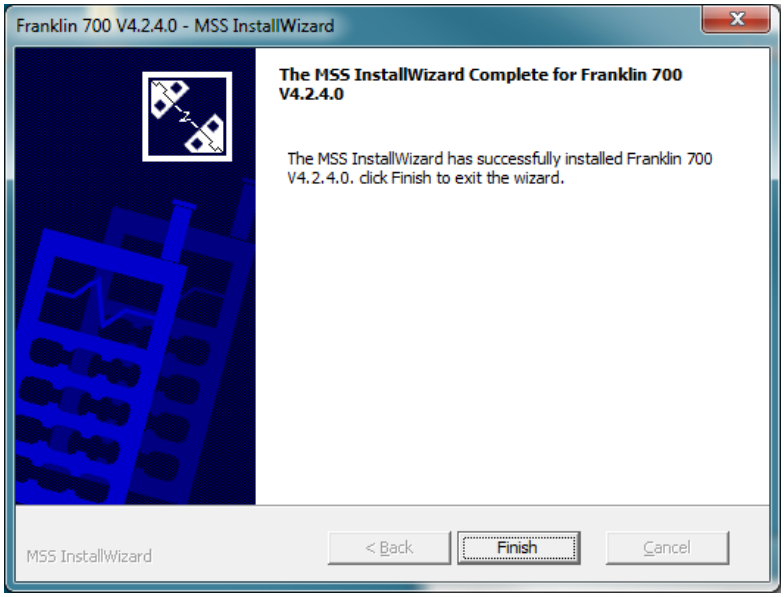
Note: If you have inserted the device properly, Windows will inform you that it has found new hardware. Wait until Windows completes the "Found New Hardware" task. It is normal to hear a short beep each time you insert or remove the device. It is an audible notification that your computer recognizes the new hardware.

Important: Make sure to complete the ejection process before removing the device. If you remove the device improperly, the modem may be damaged.

1. Turn on your computer and close all applications.
2. Insert the device into your USB port.
3. Your computer will recognize the device and install the Remote NDIS driver automatically. If the program does not launch automatically, go to “My Computer,” select ‘Franklin Zero CD’ drive and double click the ‘Franklin-Installer.exe’ program.
4. The “Welcome to the the MSS InstallWizard for Franklin 700 V4.2.4.0” screen will then appear. Click **Install** to continue the installation process.



5. Installation of Remote NDIS driver is now complete. Click **Finish** to leave the setup program.



Activate Your Device

There are several ways to activate your device.

- When you receive your device, it may or may not be activated and ready to use. If you purchased your device at a Sprint Store, it is probably activated and ready to use.
- If you received your device in the mail and it is for a new Sprint account or a new line of service, it is designed to activate automatically.
    - When you plug the device into your computer for the first time, you should see a **Hands Free Activation** message on the top-left of the browser. This message may be followed by a **PRL Update** message and a **Firmware Update** message. Follow the instructions to continue.
- If you received your device in the mail and you are activating a new device for an existing number on your account (you're swapping devices), you can activate via your device's browser interface.
    - To activate on your device's browser interface:
        - Plug your new device into your computer. (Make sure the old one is not in the computer.) Your device will automatically attempt Hands-Free Activation.
        - Click **Activate** to override auto-activation and start the manual activation wizard.
- To confirm activation, navigate to any Web page. If your device is still not activated or you do not have access to the Internet, contact Sprint Customer Service at **1-888-211-4727** for assistance.

Tip: Do not remove your device from your computer while the device is being activated. Removing the device from the computer cancels the activation process.

Note: If you are having any difficulty with activation, contact Sprint Customer Service by calling **1-888-211-4727** from any phone.

Sprint Account Information and Help

Learn about account passwords, managing your account, and finding help.

Sprint Account Passwords

Manage Your Account

Sprint Support Services

Sprint Account Passwords

As a Sprint customer, you enjoy unlimited access to your personal account information and your data services account. To ensure that no one else has access to your information, you will need to create passwords to protect your privacy.

Account User Name and Password

If you are the account owner, you will create an account user name and password when you sign on to sprint.com. (Click **Sign in/Sign up** and then click **Sign up now!** to get started.) If you are not the account owner (if someone else receives the bill for your Sprint service), you can get a sub-account password at sprint.com.

Data Services Password

With your Sprint device, you may elect to set up an optional data services password to control access and authorize Premium Service purchases.

For more information, or to change your passwords, sign on to sprint.com or call Sprint Customer Service at **1-888-211-4727**.

Manage Your Account

Manage your Sprint account from your computer or any phone.

Online: sprint.com

- Access your account information.
- Check your data usage.
- View and pay your bill.
- Enroll in Sprint online billing and automatic payment.
- Purchase accessories.
- Shop for the latest Sprint phones and devices.
- View available Sprint service plans and options.

From Any Phone

- Sprint Customer Service: **1-888-211-4727**.
- Business Customer Service: **1-888-788-4727**.

Your Device's Browser Interface

The following topics provide information on your device's browser interface.

The Browser Interface

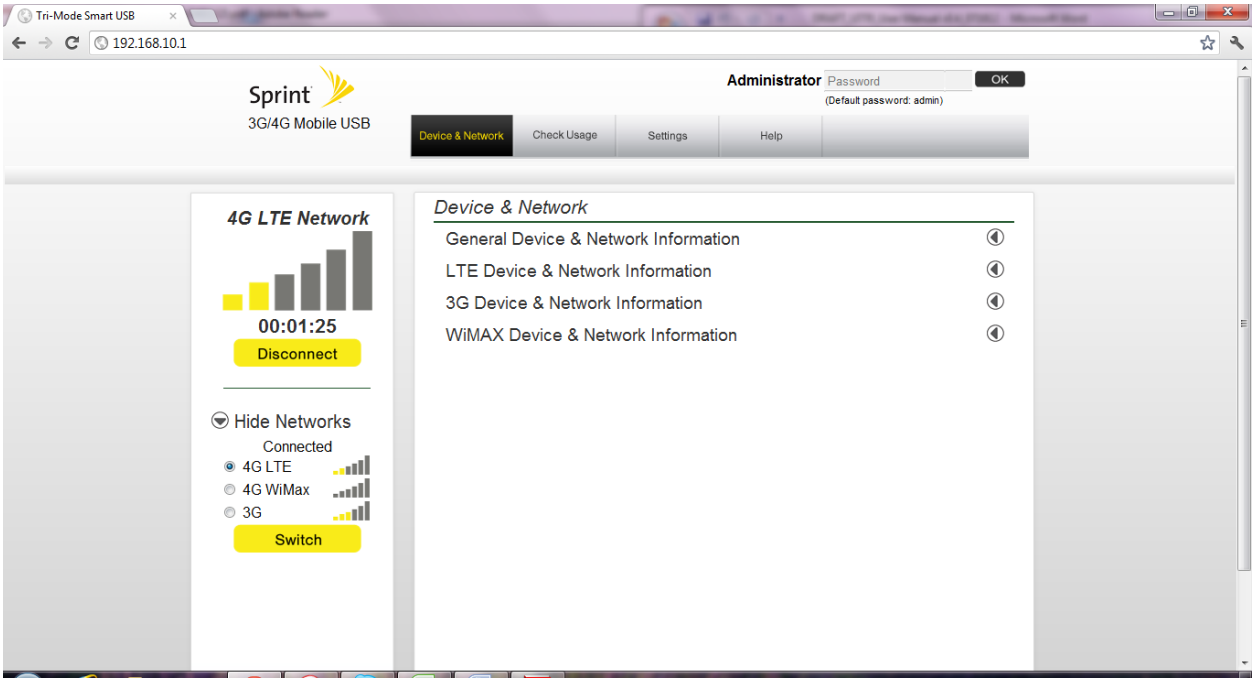
The Web browser interface is a Web-based connection manager for your device. It allows you to manage and monitor the Internet connection between your computer and the wireless network. It has a user-friendly interface and is equipped with many useful features that will enhance your Internet navigation experience.

Opening the Browser Interface

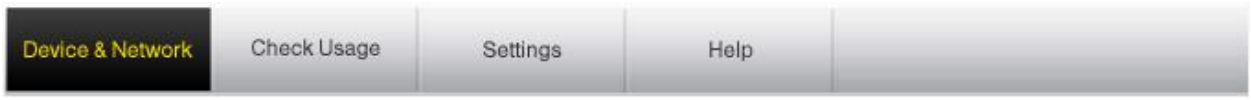
To use the Web browser interface, open the Web browser on your desktop and type http://sprintmodem into the address window and press **Enter** or **Return**.

The Landing Page

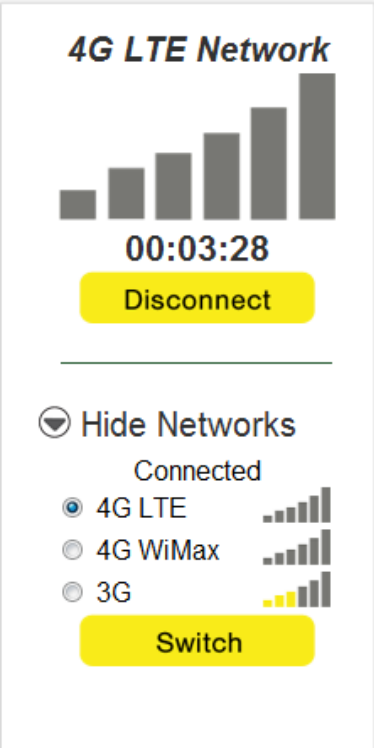
The Web browser will open the Device and Network page for the Sprint Tri-Mode Plug-in-Connect USB as shown below. From this page, you can see and manage available network connections, see your current connection state, and see signal strength at a glance. Detailed menus for status and settings are displayed across the top of the menu.



The main menu appears down across the top of the browser interface and allows for ease of Web browser interface navigation.



Information regarding your current network connection can be seen in the Network Connection Box displayed down the left side of the main page. This box displays both 3G and 4G tabs, and each tab has the following items:



- **Signal strength bar**: Displays your current signal strength. Supports 0- 6 levels of signal strength.
- **Connection time**: Displays the time after your device is connected.
- **Connection button**: Connects you to a network and lets you switch between a 3G and a 4G connection.

The following table provides device status and connection button descriptions.

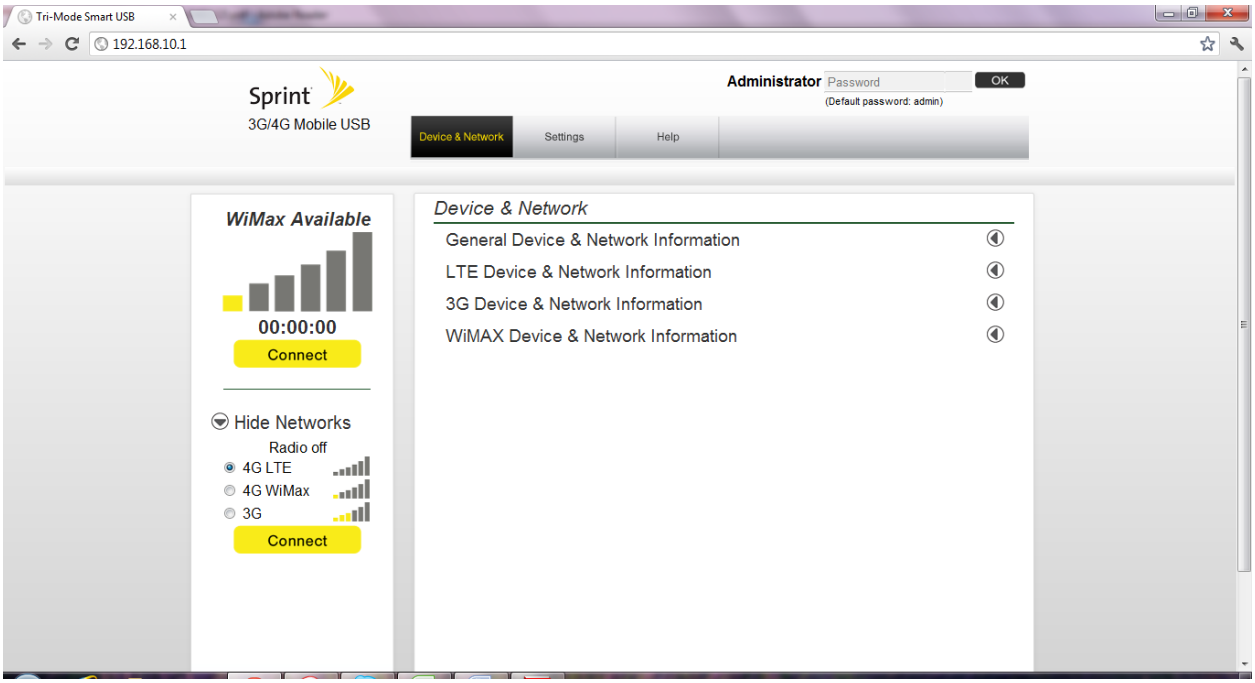
Status	Connection Button	Description
"No Signal"	**No Signal**	Radio power is on but device is in low signal. All actions are disabled.
"Disconnected"	**Connect**	Radio power is on and device is disconnected. Ready to connect.
"Radio off"	**Switch to 3G** **Switch to 4G**	Radio power is off and ready to switch to other network.
"Connecting"	**Cancel**	Device is in connecting and available to cancel the connection.
"Connected"	**Disconnect**	Device is connected and available to disconnect the connection.
"Not Activated"	**Not Activated**	Device activation is required.

Connecting to the Network

Once your device is properly configured, connecting to the Internet is as simple as plugging in your device. By default, it connects automatically to the Internet. If you wish to change this option, please refer to the instructions in the **Settings** section.

The Device & Network Menu

The Device & Network menu allows you to view information about your device and network status.



General Device and Network Information

General device and network information is reflected.

General Device		General Network	
Device Name	FWXU770USB	IP Address	21.23.230.235
Device Description	Franklin U770 USB	Gateway	21.23.230.1
Manufacturer	Franklin Wireless Corp.	DNS Server	68.28.82.91,68.28.68.132
Modem Model	U770	Data Received	390060
Hardware Version	P3	Data Sent	314057
CM Version	U770S30.02.A1317	Data Total	704117
IMEI	990000953501253		

General Device

- **Device Name** – name of the device
- **Device Description** – description of the device
- **Manufacturer** – manufacturer of the device

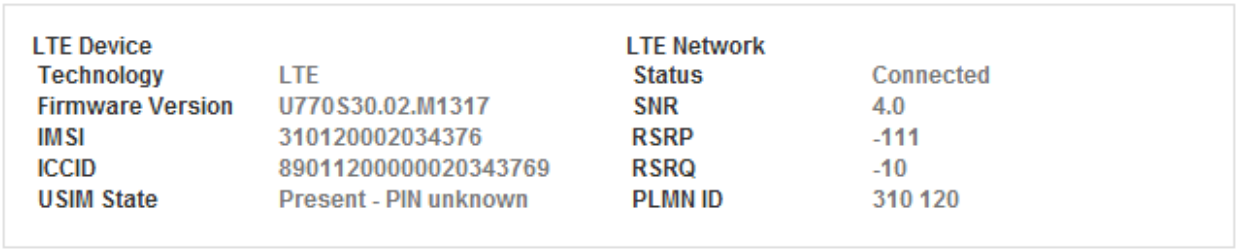
- **Modem Model** – model name of the device
- **Hardware Version** – current internal hardware version
- **CM Version** – current CM version
- **IMEI** – the International Mobile Equipment Identity number of the device

General Network

- **IP Address** – the current Internet Protocol address of the device
- **Gateway** – the current network point entrance address
- **DNS Server** – the current Domain Name Server system address
- **Data Received** – the number of bytes received
- **Data Sent** – the number of bytes sent
- **Data Total** – the total data received and sent. Data totals are estimates and should not be used for billing purposes.

LTE Device and Network Information

LTE device and network information is reflected.



LTE Device		LTE Network	
Technology	LTE	Status	Connected
Firmware Version	U770S30.02.M1317	SNR	4.0
IMSI	310120002034376	RSRP	-111
ICCID	89011200000020343769	RSRQ	-10
USIM State	Present - PIN unknown	PLMN ID	310 120

LTE Device

- **Technology** – Long Term Evolution (LTE)
- **Firmware Version** – the current firmware version on the device
- **IMSI** – the International Mobile Subscriber Identity (IMSI) number
- **ICCID** – the Integrated Circuit Card ID (ICCID) number
- **USIM State** – the current state of the Universal Subscriber Identity Module (USIM)

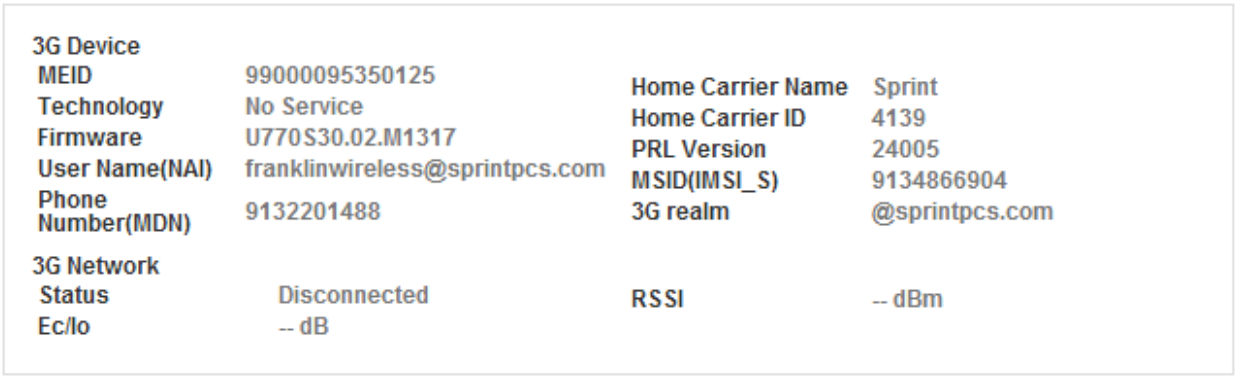
LTE Network

- **Status** – current network status

- **SNR** – the current Signal-to-Noise Ration (SNR)
- **RSRP** – the current Reference Signal Received Power (RSRP)
- **RSRQ** – the current Reference Signal Received Quality (RSRQ)
- **PLMN ID** – the current state of Public Land Mobile Network ID

3G Device and Network Information

3G device and network information is reflected.



3G Device

- **MEID** – unique number the network uses to identify your device
- **Technology** – type of network you are connected to
- **Firmware** – current internal software version
- **User Name (NAI)** – assigned user name on your device
- **Phone Number (MDN)** – the public ID for your specific wireless service (Mobile Data Number)
- **Home Carrier Name** – name of the network operator
- **Home Carrier ID** – ID of the network operator
- **PRL Version** – used to verify that your Preferred Roaming List is the most current
- **MSID (IMSI_S)** – internal ID Sprint uses to identify your account
- **3G Realm** – name of the domain

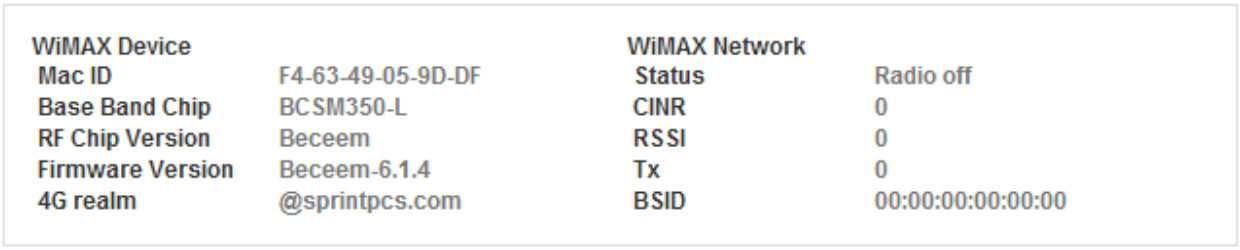
3G Network

- **Status** – current network status

- **RSSI** – measurement in dBm of current signal strength
- **Ec/Io** – measurement in dB of current Ec/Io

WiMAX Device and Network information

WiMAX device and network information is reflected.



WiMAX Device		WiMAX Network	
Mac ID	F4-63-49-05-9D-DF	Status	Radio off
Base Band Chip	BCSM350-L	CINR	0
RF Chip Version	Beceem	RSSI	0
Firmware Version	Beceem-6.1.4	Tx	0
4G realm	@sprintpcs.com	BSID	00:00:00:00:00:00

WiMAX Device

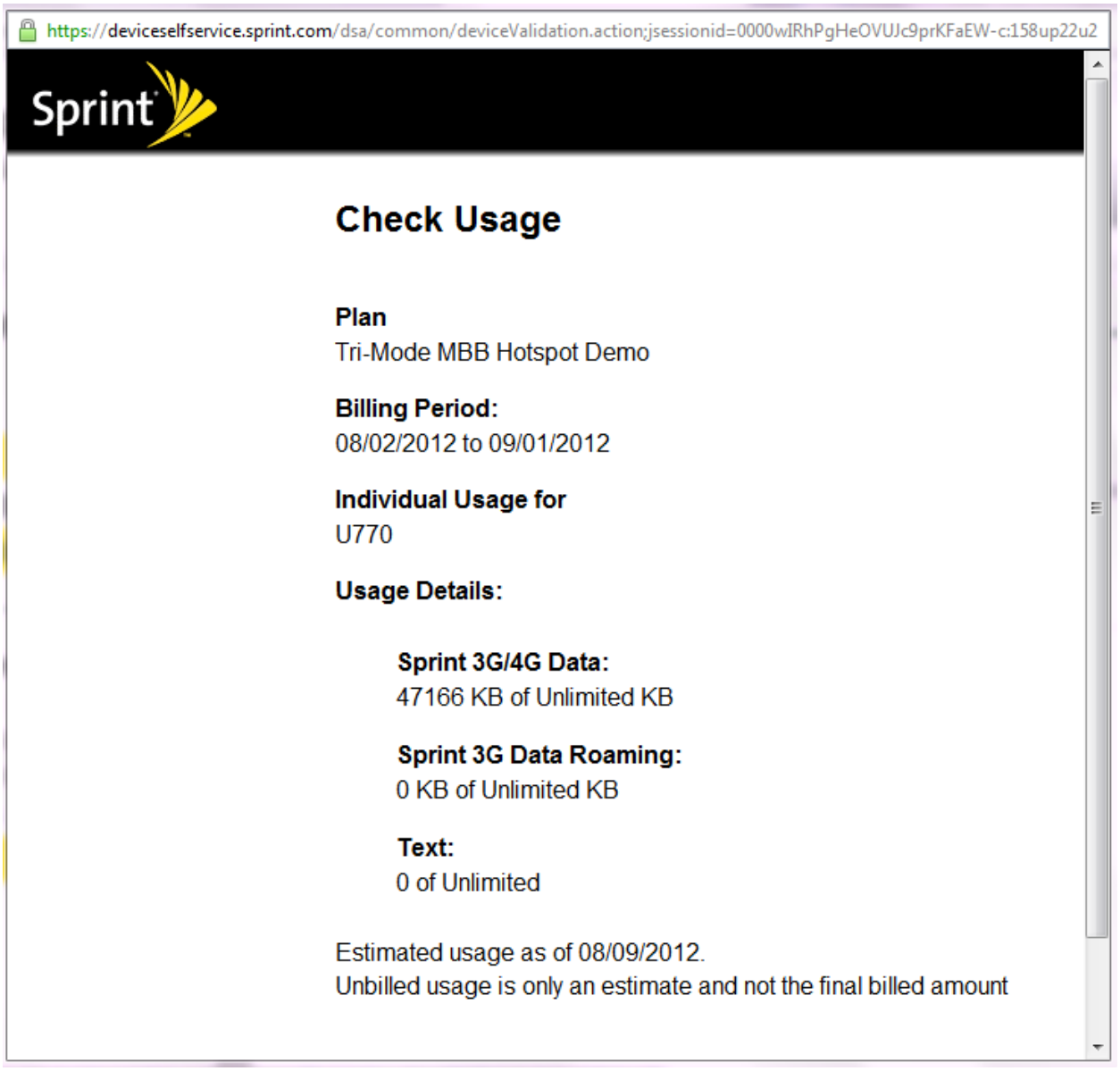
- **Mac ID** – current Media Access Control address
- **Base Band Chip** – chip name of the device
- **RF Chip Version** – the current internal RF chip version
- **Firmware Version** – current internal software version
- **4G Realm** – name of the 4G domain

WiMAX Network

- **Status** – current network status
- **CINR** – Carrier to Interface and Noise Ratio measurement in dBm
- **RSSI** – measurement in dBm of current signal strength
- **Tx** – measurement of power transmitted in dBm
- **BSID** – the number of biometrics secured identification devices available or connected

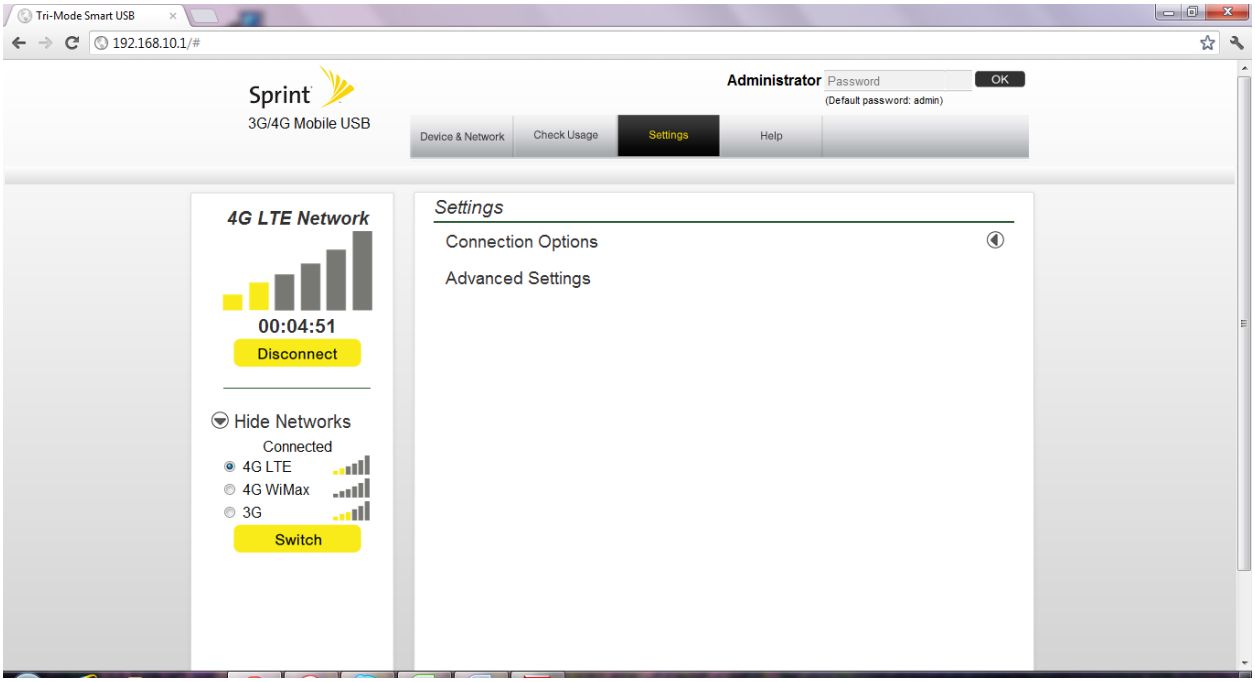
The Check Usage Menu

The Check Usage menu allows you to review your usage history online. Please ensure that you have an Internet connection. Selecting the Check Usage menu displays your LTE, 3G, and WiMAX data usage to date in a separate, pop-up window.



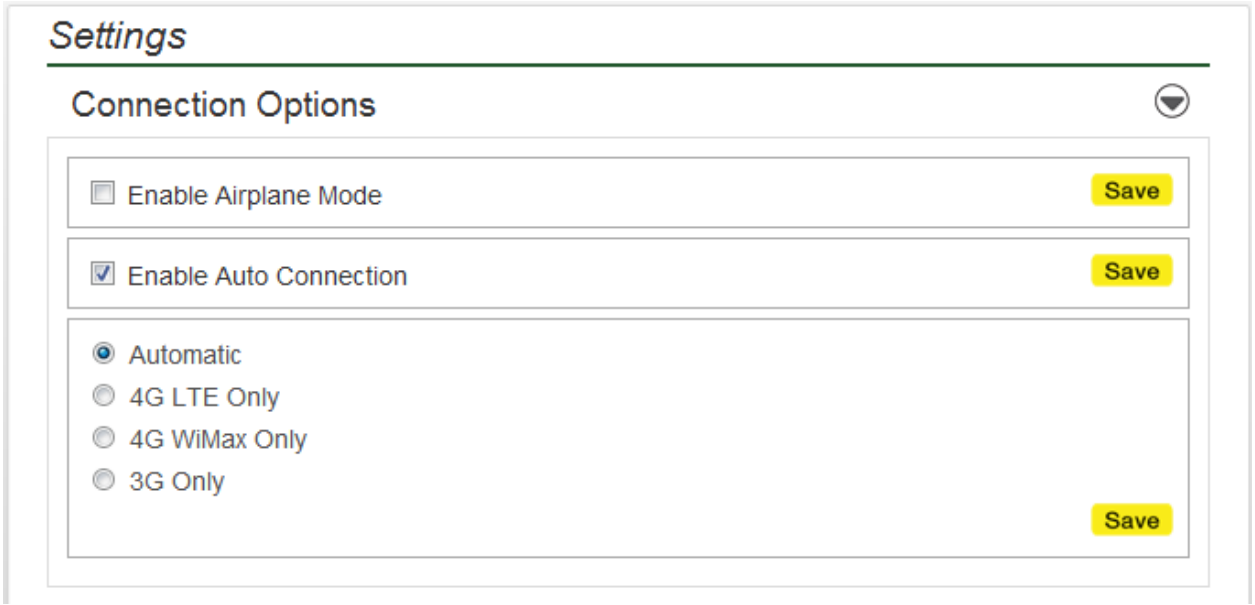
The Settings Menu

The Settings menu allows you to set your Connection Options and your Advanced Settings.



Connection Options

When you open the Connection Options menu, the following choices are available:



Enable Auto Connection

1. Select or clear the **Enable Auto Connection** check box.
2. Click **Save.**

Note: If you click **Connect**, **Enable Auto Connection** will be cleared automatically regardless of whether **Enable Auto Connection** was selected before rebooting the device.

Enable Airplane Mode

1. Select or clear the **Enable Airplane Mode** check box. Enabling Airplane Mode will disable your device while travelling. To re-enable your device, unplug and replug.
2. Click **Save.**

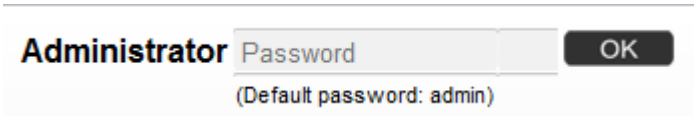
Change Your Connection Options

1. Select a connection option (**Automatic**, **4G LTE Only**, **4G WiMax Only**, or **3G Only**)
2. Click **Save**.

Note: If the device is not activated, the options will be unavailable (grayed out).

Advanced Settings

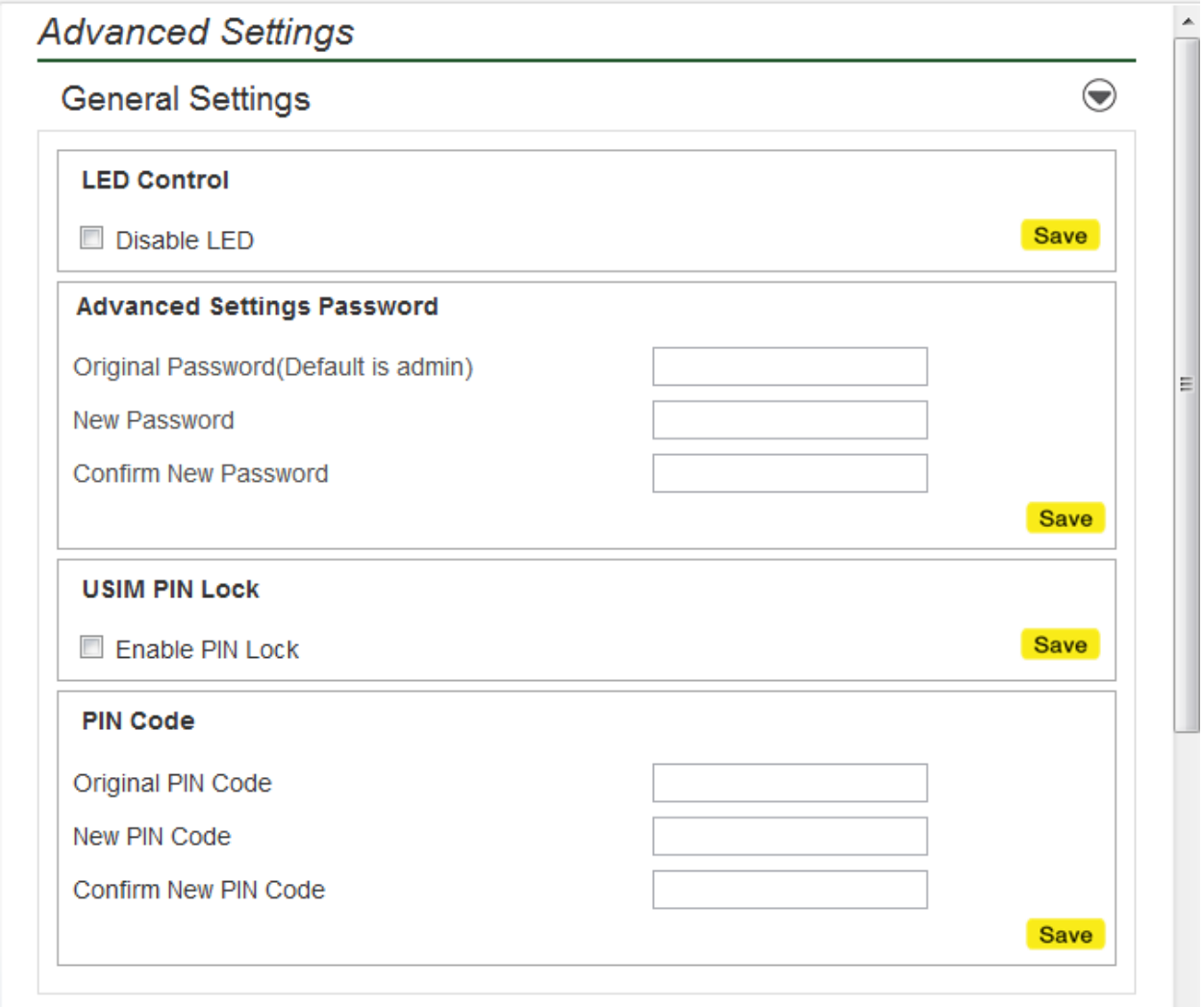
To access the Advanced Settings menus, you are required to log in as an administrator.



The default password is “admin”. You will be able to change your password in the Advanced Settings menu. The Advanced Settings menu allows you to set general settings, roaming configuration, manual configuration, and to update your device. It also allows you to access the engineering and equipment settings with additional security information.

General Settings

Click **General Settings** to access LED, password, and PIN settings.



LED Control

LED Control allows you to turn the LED on or off.

To turn the LED on or off:

1. Select or clear the **Disable LED** check box.
2. Click **Save.**

Note: Refer to Appendix 1 for details about your device's LED lights.

Advanced Settings Password

The Advanced Settings Password allows you to change the password.

To change your password:

1. Enter the original password in the **Original Password** field (the default password is ‘admin’).
2. Enter your new password in the **New Password** field.
3. Re-enter your new password in the **Confirm New Password** field.
4. Click **Save**.

USIM PIN Lock

The USIM PIN Lock allows you to turn the USIM PIN Lock on or off.

To turn the USIM PIN Lock on or off:

1. Select or clear the **Enable PIN Lock** check box.
2. Click **Save.**

PIN Code

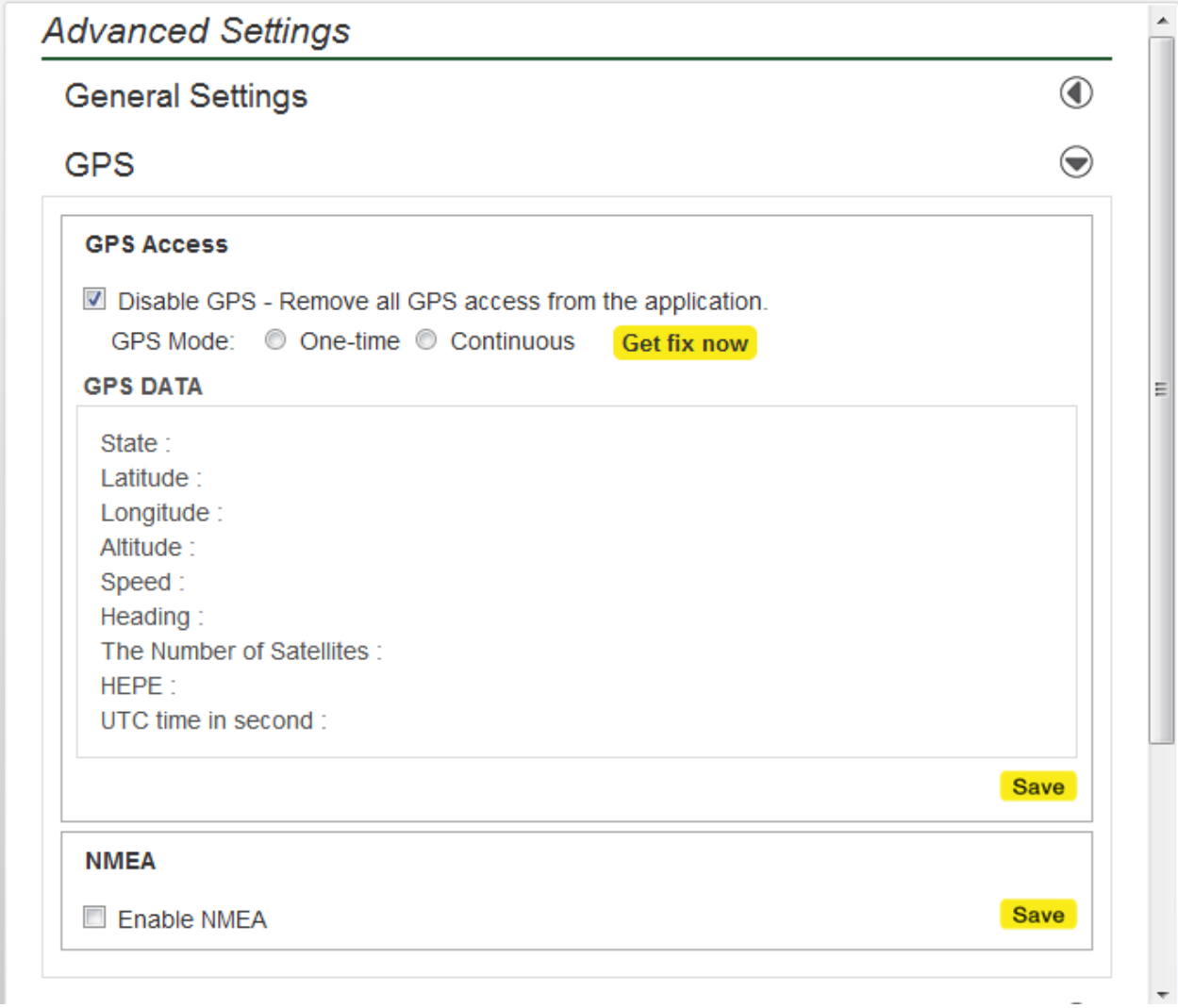
The PIN Code allows you to change your PIN Code.

To change your PIN Code:

1. Enter the original code in the **Original PIN Code** field.
2. Enter your new code in the **New PIN Code** field.
3. Re-enter your new code in the **Confirm New PIN Code** field.
4. Click **Save**.

GPS

Selecting the GPS Settings tab lets you set your GPS access options, review your GPS data, and control your NMEA settings.



GPS Access

GPS Access allows you to enable or disable GPS access. Disabling removes all GPS access from the application. This feature is available when in 3G mode only.

To set the GPS mode:

1. Select **One Time** or **Continuous**.
2. Click **Get fix now**.

GPS Data

GPS Data reflects the current data for your GPS connection. This feature is available when in 3G mode only.

- State

- Latitude
- Longitude
- Altitude
- Speed
- Heading
- Number of Satellites
- HEPE
- UTC time in seconds

NMEA (National Marine Electronics Association)

NMEA allows you to enable or disable the NMEA. This feature is available when in 3G mode only.

To enable or disable the NMEA:

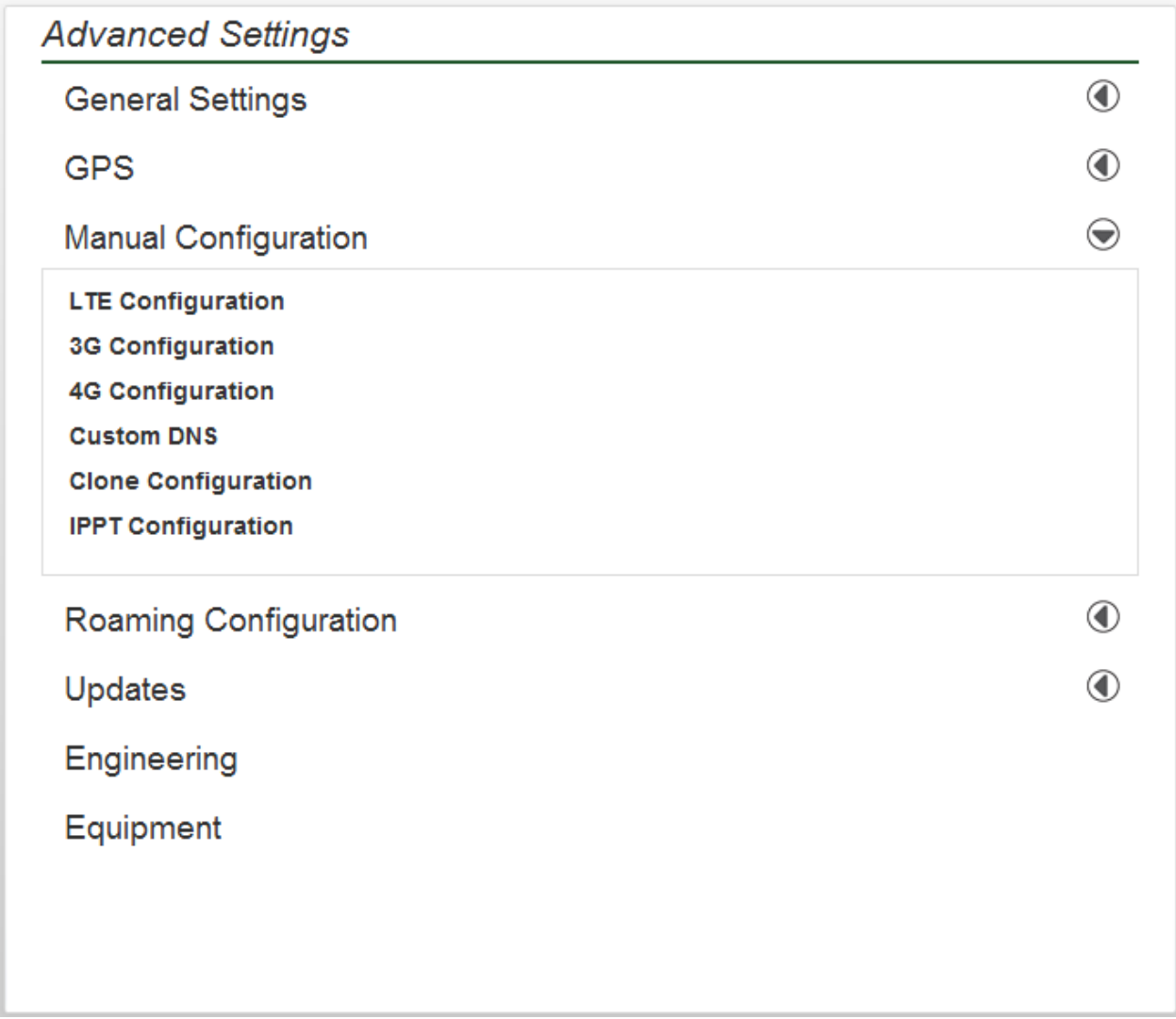
1. Select or clear the **Enable NMEA** check box.
2. Click **Save.**

Important: If NMEA driver is not installed on your computer, NMEA will fail and the Driver CD will be detected. If you want to enable NMEA, please install the driver from Driver CD first. If the NMEA driver has already been installed, NMEA will be enabled in a short time. NMEA is not supported on Mac or Linux platforms.

Note: If you select the **Enable NMEA** check box, **Disable GPS** will be cleared even if it was selected.

Manual Configuration

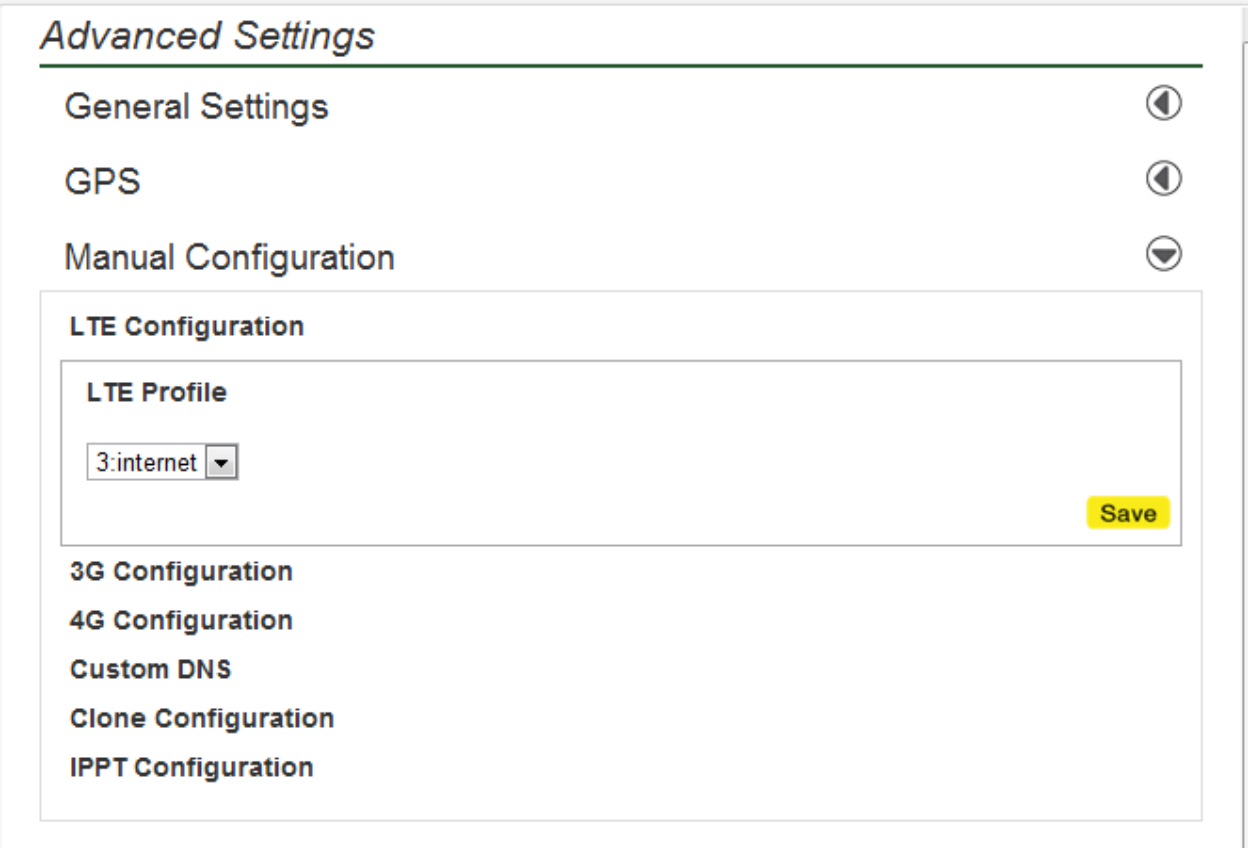
Selecting the Manual Configuration lets you set LTE, 3G, and 4G configuration, along with controlling customer DNS settings, clone configuration, and IPPT configuration.



Manual Configuration consists of six submenus (**LTE Configuration, 3G Configuration**, **4G Configuration, Custom DNS**, **Clone Configuration,** and **IPPT Configuration**).

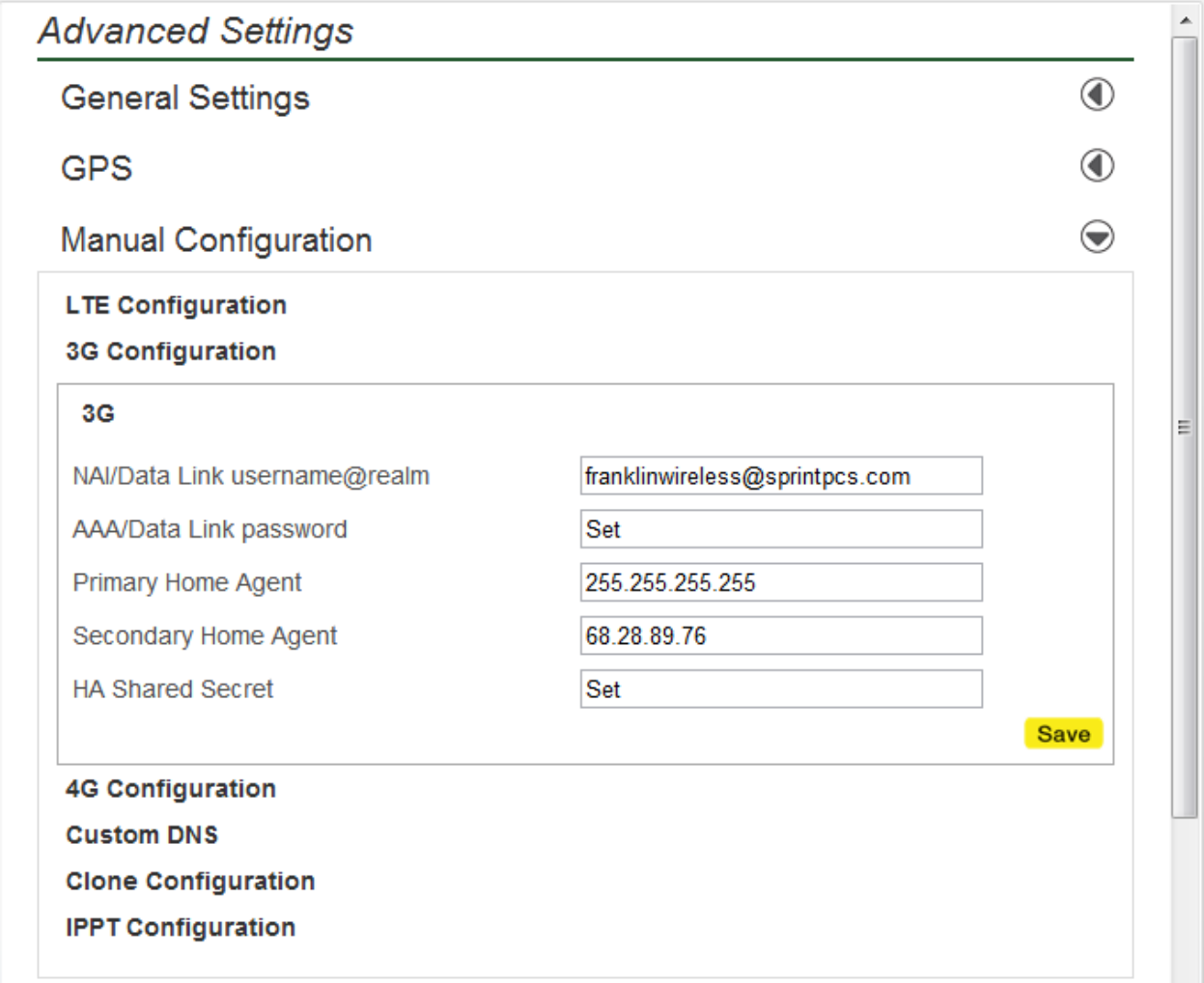
LTE Configuration

The **LTE Configuration** box allows you to modify your LTE device configuration.



3G Configuration

The **3G Configuration** box allows you to modify the 3G device configuration.

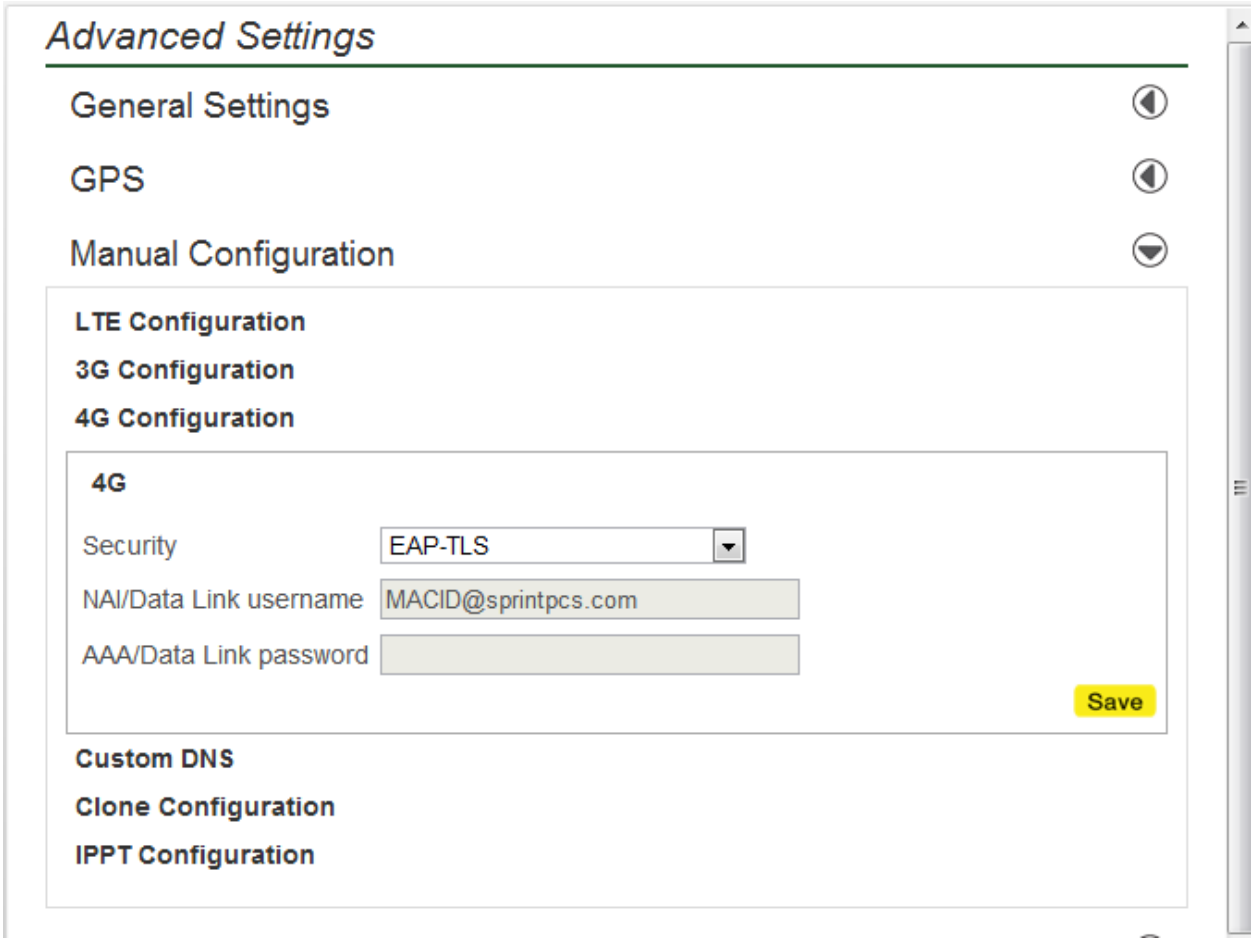


To modify the 3G configuration:

1. Enter your NAI/Data Link username and domain as “username@realm” format.
2. Enter your AAA/Data Link password.
3. Enter your Primary Home Agent IP address.
4. Enter your Secondary Home Agent IP address.
5. Enter your HA Shared Secret.
6. Click **Save**

4G Configuration

The **4G Configuration** box allows you to modify the 4G device configuration.

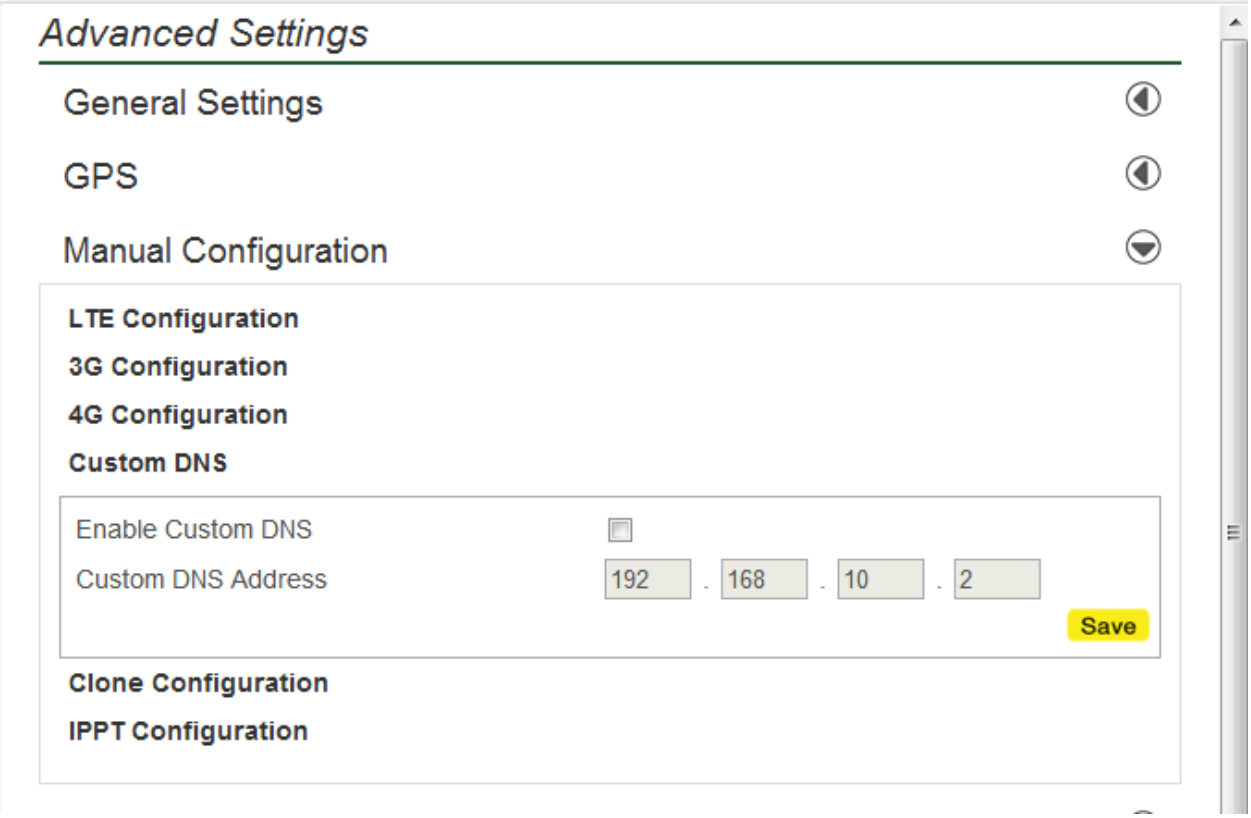


To modify the 4G Configuration:

1. Enter the applicable Security option.
2. Enter your NAI/Data Link username.
3. Enter your AAA/Data Link password.
4. Click **Save**.

Custom DNS

Custom DNS allows you to use a customized DNS rather than the one assigned by your network.

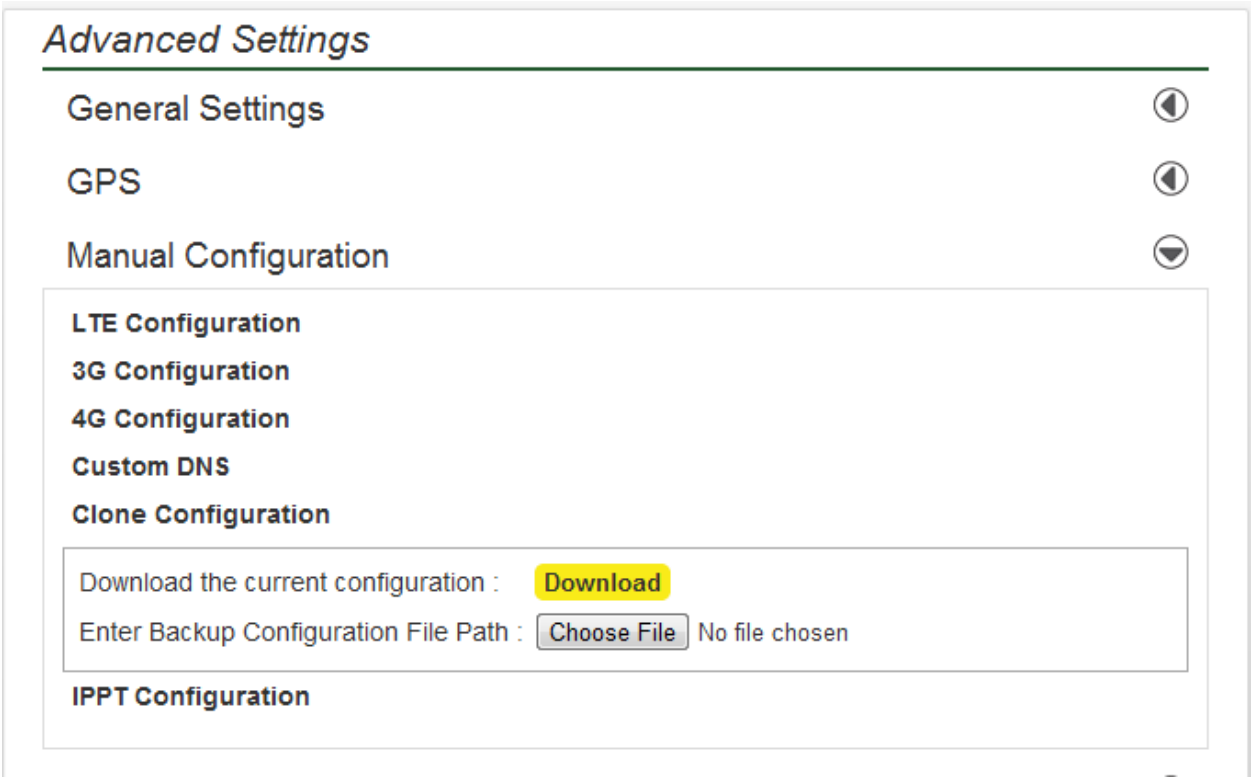


To set the custom DNS:

1. Select **Enable Custom DNS**.
2. Enter your Custom DNS IP address.
3. Click **Save**.

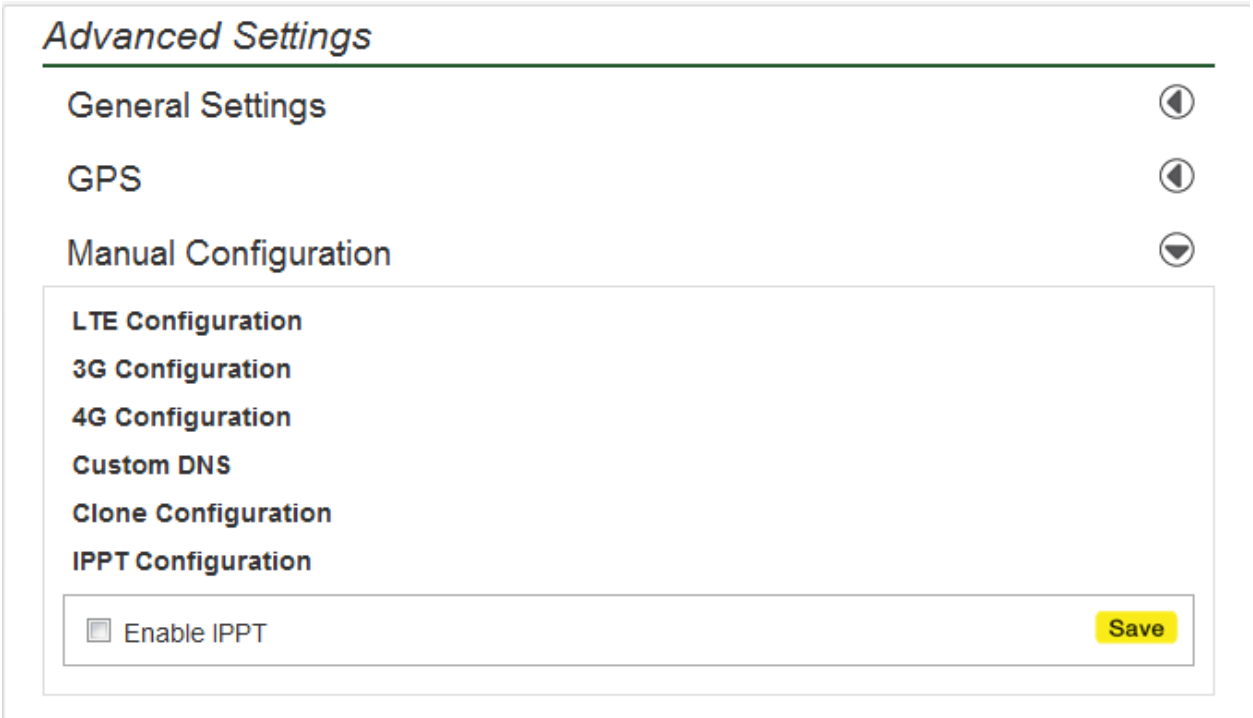
Clone Configuration

Clone Configuration allows you to download the current system configuration or restore a previously downloaded system configuration.



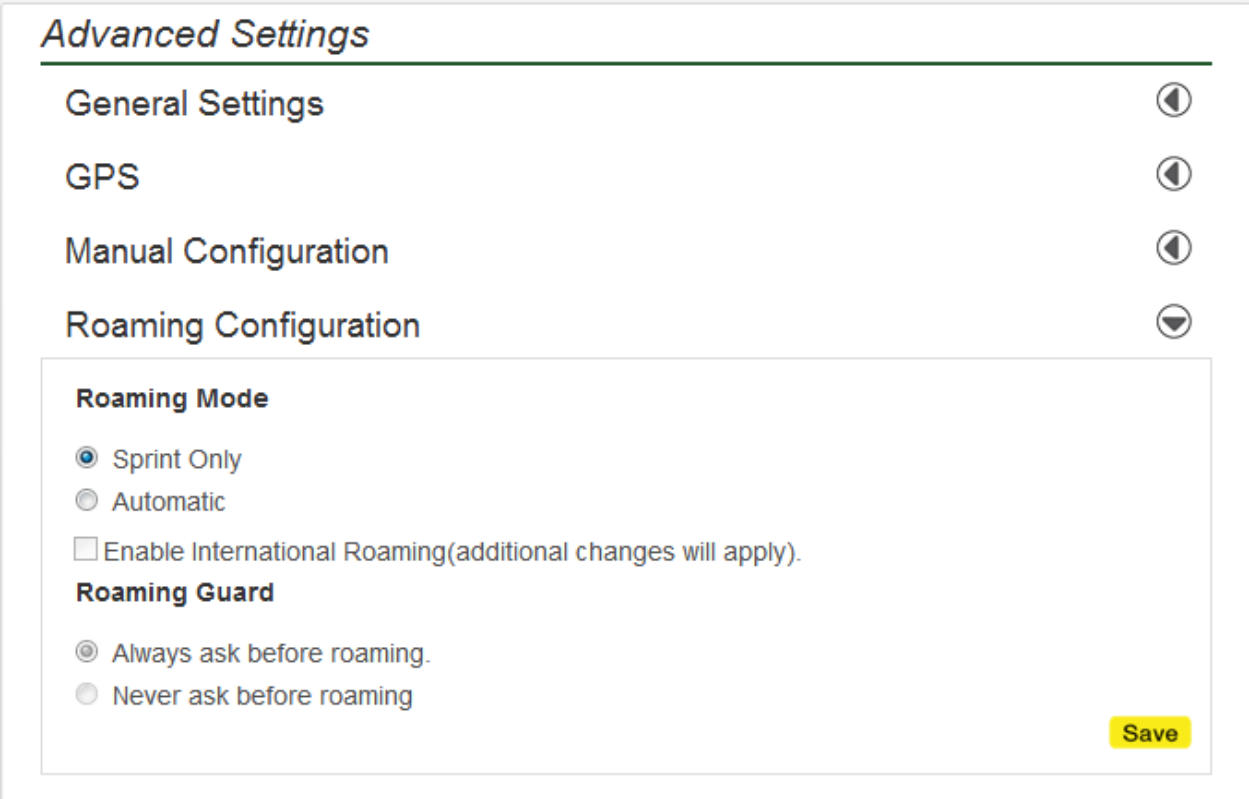
IPPT Configuration

Checking the box allows you to either enable or disable IP PassThrough. Check or uncheck, and click **Save**.



Roaming Configuration

Roaming Configuration allows you to set Roaming preferences (**Sprint Only**, **Automatic**, **International Roaming**, and roaming notifications).



- Select a roaming mode.
- Select or clear the **Enable International Roaming** check box as needed.
- Select Roaming Guard.
- Click **Save**.

Important: After clicking **Save**, the device will reboot. DO NOT remove the device from your computer before the device finishes rebooting. If you remove the device improperly, the modem may be damaged.

Note: If you select **Sprint Only**, the device will search only for the Sprint network and no roaming networks will be used. (International Roaming and Roaming Guard options will be disabled and grayed out). If you select **Automatic**, the device will use any available network.

Download current system configuration

To download the current system configuration:

1. Click **Download**.
2. Click **Save** after the file download dialog box is shown.
3. Select your folder.

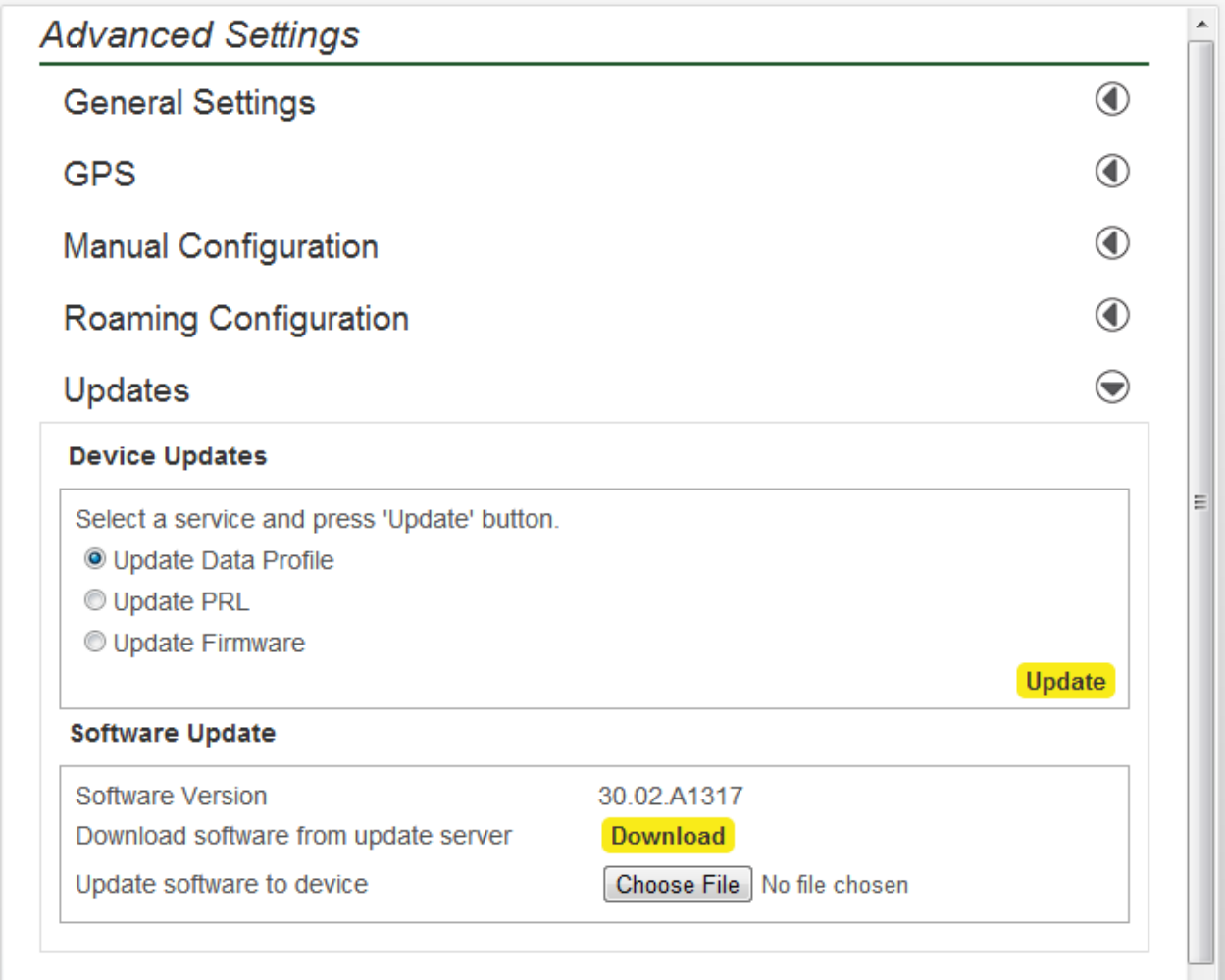
Enter Backup Configuration File Path

To restore a previously downloaded configuration:

1. Click **Choose File**.
2. Select the previously downloaded file as a backup configuration.

Updates

The Updates menu lets you update your device's Data Profile, PRL (Preferred Roaming List), and Firmware, as well as check and update your device software version.



Device Updates

The Device Updates tab allows you to update your network profile, your PRL, and firmware.

To update:

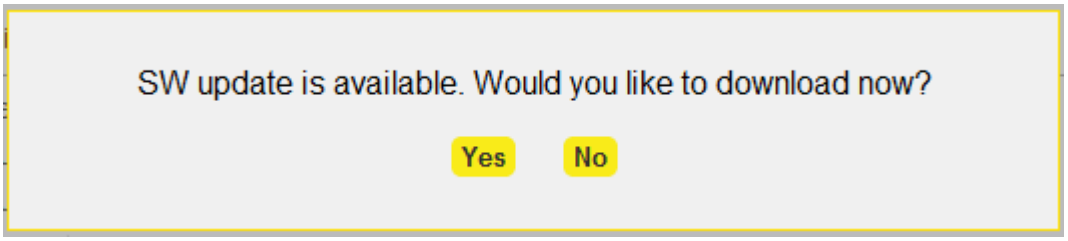
1. Select the button for anything you wish to update.
2. Click **Update**.

Important: After clicking **Update**, the device will start the update. At the end of the update, the device will reboot. DO NOT remove the device from your computer before the device finishes rebooting. If you remove the device improperly, the modem may be damaged.

Check System Upgrade

The Check System Upgrade tab reflects your current software version and allows you to upgrade the Web browser interface as needed. To get the latest Web browser interface:

1. Click **Check Now**.
2. If a newer version is available, you will see the following dialog:



3. Click **Yes** and select a folder to save the Web browser update.

Software Update

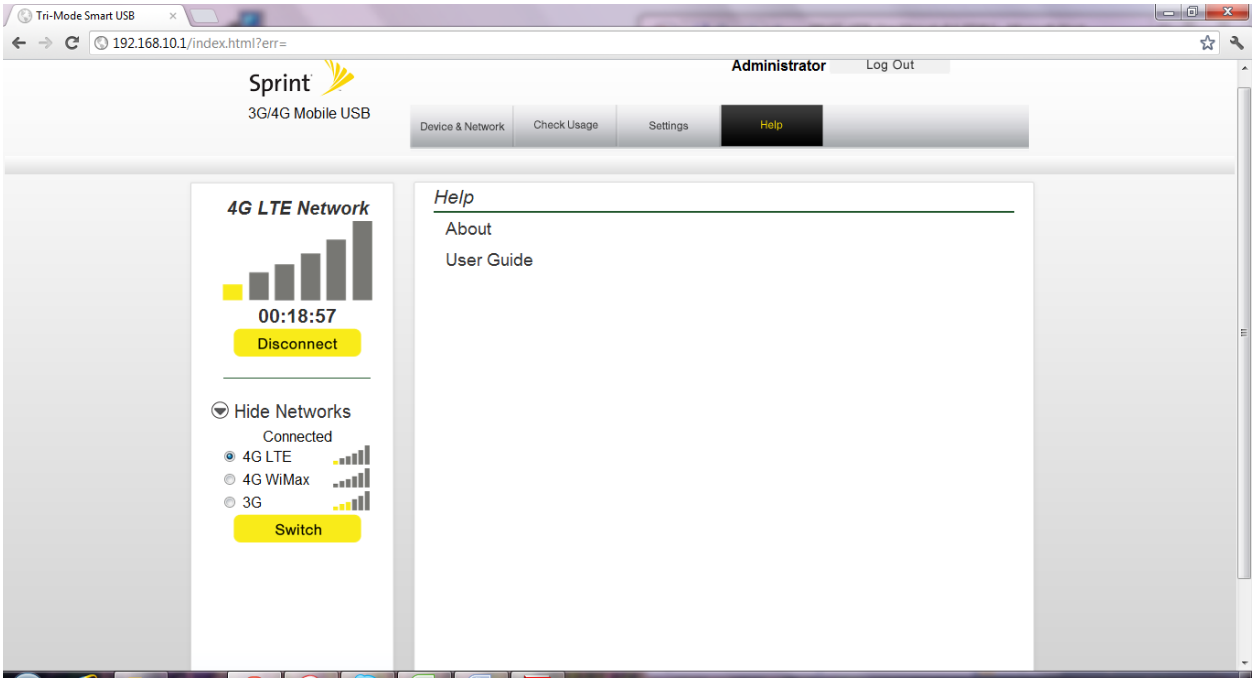
To update:

1. Click **Choose file** for the Web browser update.
2. Click **Browse** and select system update file.
3. Click **Start Upgrade**.

Important: The system upgrade takes a few minutes. DO NOT unplug the device before the browser refreshes the page automatically or if the refresh dialog is still open.

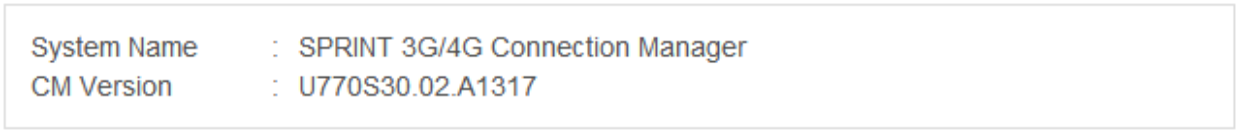
The Help Menu

The Help menu allows you to view system information and the online user guide.



About

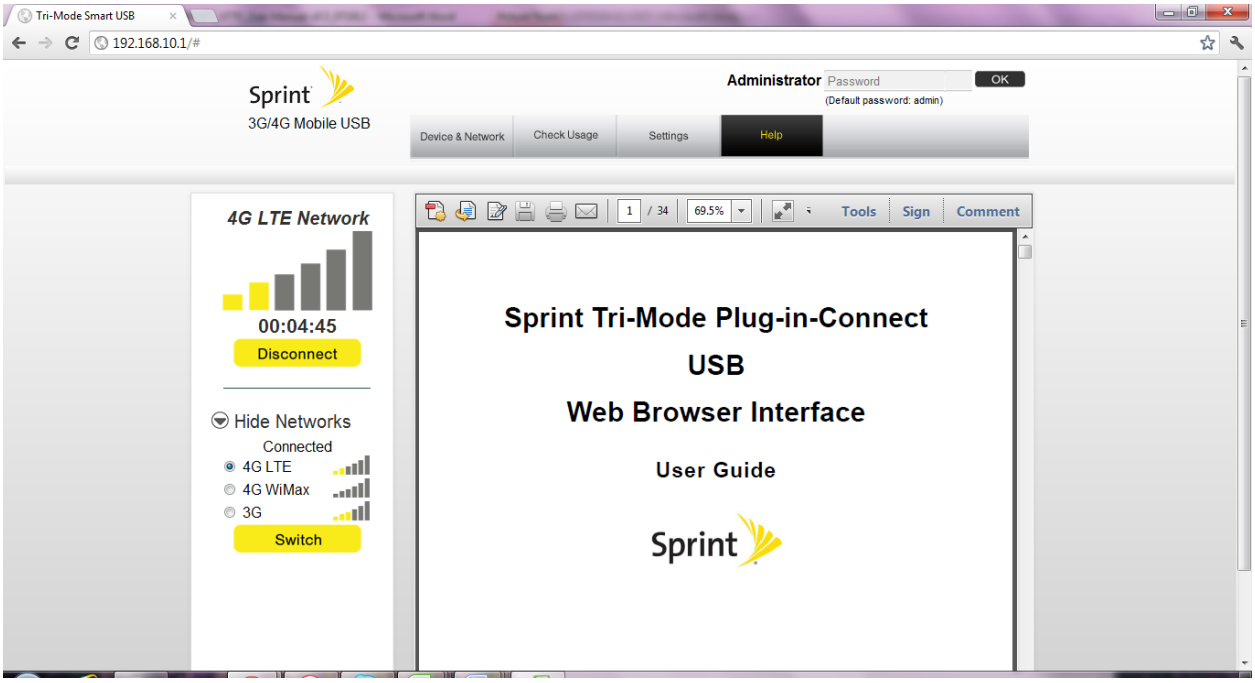
When you open **About**, it displays your device's system name and CM version.



- **System Name** – the current system name
- **CM Version** – the current Web browser interface version

User Guide

When you open **User Guide**, it downloads the user guide on the host system.


Tri-Mode Smart USB
192.168.10.1/#
Sprint
3G/4G Mobile USB
Administrator
Password
OK
(Default password: admin)
Device & Network
Check Usage
Settings
Help
4G LTE Network
00:04:45
Disconnect
Hide Networks
Connected
4G LTE
4G WiMax
3G
Switch
1 / 34
69.5%
Tools
Sign
Comment
Sprint Tri-Mode Plug-in-Connect
USB
Web Browser Interface
User Guide
Sprint

Regulatory Information

SAR INFORMATION

THIS MODEL MODEM MEETS THE GOVERNMENT'S REQUIREMENTS FOR EXPOSURE TO RADIO WAVES.

Your wireless modem is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radiofrequency (RF) energy set by the Federal Communications Commission of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health. The exposure standard for wireless mobile modem employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg. * Tests for SAR are conducted with the modem transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the modem while operating can be well below the maximum value. This is because the modem is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output. Before a modem model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the FCC for each model. The highest SAR value for this model modem when tested for use near the body, as described in this user guide, is 1.39 W/Kg. While there may be differences between the SAR levels of various modems and at various positions, they all meet the government requirement for safe exposure. The FCC has granted an Equipment Authorization for this model modem with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model modem is on file with the FCC and can be found under the Display Grant section of http://www.fcc.gov/oet/fccid after searching on FCC ID: RB2-U770. Additional information on Specific Absorption Rates (SAR) can be found on the Cellular Telecommunications Industry Association (CTIA) web-site at http://www.wow-com.com. * In the United States and Canada, the SAR limit for mobile modems used by the public is 1.6 watts/kg (W/kg) averaged over one gram of tissue. The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements.

SAFETY INFORMATION

SAFETY INFORMATION FOR FIXED WIRELESS TERMINALS POTENTIALLY EXPLOSIVE ATMOSPHERES
Turn your modem OFF when in any area with a potentially explosive atmosphere and obey all signs and instructions. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death.

INTERFERENCE TO MEDICAL DIVICES
Certain electronic equipment may be shielded against RF signal from your wireless modem (pacemakers, Hearing Aids, and so on). Turn your modem OFF in health care facilities when any regulations posted in these areas instruct you to do so. RF signals may affect improperly installed or inadequately shielded electronic system in motor vehicles.

EXPOSURE TO RF ENERGY
Use only the supplied or an approved replacement antenna. Do not touch the antenna unnecessarily when the modem is in use. Do not move the antenna close to, or couching any exposed part of the body when making a call.

NEAR BODY OPERATION
This device was tested for typical near body operations with the back of the modem kept 0.5 cm from the body. To maintain compliance with FCC RF exposure requirements, it must have a minimum distance including the antenna of 0.5 cm from the body during normal operation

U.S.A.

U.S. FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT INFORMATION TO THE USER

NOTE: 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 of a circuit different from that to which the receiver is connected. Consult the dealer or an experienced radio/TV technician for assistance.

Changes or modification not expressly approved by the party responsible for Compliance could void the user's authority to operate the equipment. Connecting of peripherals requires the use of grounded shielded signal cables.

FCC Compliance Information

This device complies with Part 15 of 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.

Appendix 1: LED Operation

Your device has LED lights that indicate the following details.

LED Colors / LED Status	3G LED Color (Left)	4G LED Color (Right)
	Yellow Green	Blue
3G Mode	3G Enabled	4G Disabled Shutdown Mode
3G in service and Stand by Ready to Connect	ON	OFF
Power ON Boot and Reset	OFF	OFF
3G out of service or is still acquiring service	Flash every 1sec	OFF
3G CDMA No service	Flash every 1sec	OFF
3G Data Connected Active	Flash every 0.5sec	OFF
3G Data Connected Dormant	Flash every 3sec	OFF
4G Mode(WiMAX)	3G Disabled Low Power Mode	4G Enabled
4G(WiMAX) in service and no activity Ready to connect 4G	OFF	On
4G(WiMAX) out of service or is still acquiring service	OFF	Flash every 1sec
4G(WiMAX) Data Connected Active	OFF	Flash every 0.5sec
4G(WiMAX) Data Connected No Data activity, Idle Mode	OFF	OFF
4G(WiMAX) Data Shout Down Mode For Power Saving	OFF	OFF
4G Mode(LTE)	3G Disabled Low Power Mode	4G Enabled
4G(LTE) in service and no activity Ready to connect 4G	OFF	On
4G(LTE) out of service or is still acquiring service (every 1 sec)	OFF	Flash every 1sec
4G(LTE) Data Connected Active	OFF	Flash every 0.5sec
4G(LTE) Data Connected No Data activity, Idle Mode	OFF	OFF

4G(LTE) Data Shout Down Mode **For Power Saving**	OFF	OFF
Others		
Firmware Web UI update	**Flash every 0.5sec** 	**Flash every 0.5sec**