Mobile Broadband modem U602

User Manual

Web Interface

Franklin Technology

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1. BEFORE USING U602

About This User's Manual

This user manual contains all the necessary information regarding the device installation and how to use the modem for your internet navigation. Please make sure that you are familiar with the device operation by carefully reading this user manual before using the U602 3G/4G USB modem.

Documents Included on your Modem Memory

• Broadband Usage Conditions, Terms & Conditions

• User Manual

Product Overview

Welcome and thank you for choosing U602 USB Modem for your wireless internet connection.

The U602 is a high-speed wireless device that enables your computer to connect to 3G high-speed wireless network. The U602 provides simple yet powerful user interface that is easy to install and use.

Product Package Contents

The following items are included in the product package. If any of the items listed below are missing, please contact the local retail store where you purchased the product.

• U602 Modem Device

• Quick Start Guide

• USB Extension Cable
• Carrying Pouch

Introduction to U602 USB Modem

The U602 is designed for the USB port on your computer, which is available in most PC models. The U602 allows you to access the Internet. With U602, you are always connected whether you are away from home, on the road, or wherever wired Internet access is not readily available.

Product Specifications

• Power management: The U602 utilizes power management and system overhead reduction functions provided by the USB interface for maximum power savings.
• Antenna design: It's efficient and innovative design optimizes data transfer rate and sensitivity to network signals.
• Extension USB cable connector: This extension cable may be used to increase RF performance, and to resolve clearance issues if there is any.
• USB Modem that supports Type A USB Port interface.
• Supports WiMAX and EVDO dual bands.
• Utilizes MTK MT7111 and Qualcomm MSM6085 chipset
• Supports high-speed network technologies
• Support Hostless Web UI.

Product handling

• Do not place any adhesive labels on the USB connector. It may leave a sticky residue that can cause problems inside the PC USB port.
• The U602 USB device should easily slide into the USB port. Do not force

the U602 into the USB port as it may cause damage to the modem and/or the port.

• Keep the U602 in a dry and clean place. (Storage temperature: -22°F to 149°F [- 30°C to 65°C]). Keep your device away from liquids, dust and excessive heat.

Configuration

To use the U602 on your computer, you need to install the Remote NDIS driver included in the modem memory and configure the U602 USB device. See the next section for more information on driver installation and USB device configuration.

The following section is for Windows XP users. The Windows Vista or higher users should ignore the following section.

2. INSTALLATION AND SETUP FOR REMOTE NDIS DRIVER

This section will guide you through the installation and setup process for U602 Remote NDIS driver.

Before getting started, you should become familiar with the documentation that came with your USB Modem.

Installing driver

Warnings

• Make sure to complete the unplugging/ejection process before removing the U602.

• If you remove the device improperly, the modem may be damaged.

Notes

• If you have inserted the device properly, Windows will inform you of the new hardware. Wait until Windows completes the "Found New Hardware" task.

• It is normal to hear a short beep sound each time you insert or remove the U602.

• It is an audible notification that your PC recognizes the new hardware.

Getting Started (Windows)

To install the U602 Remote NDIS driver:

① Turn on your computer then close all applications.

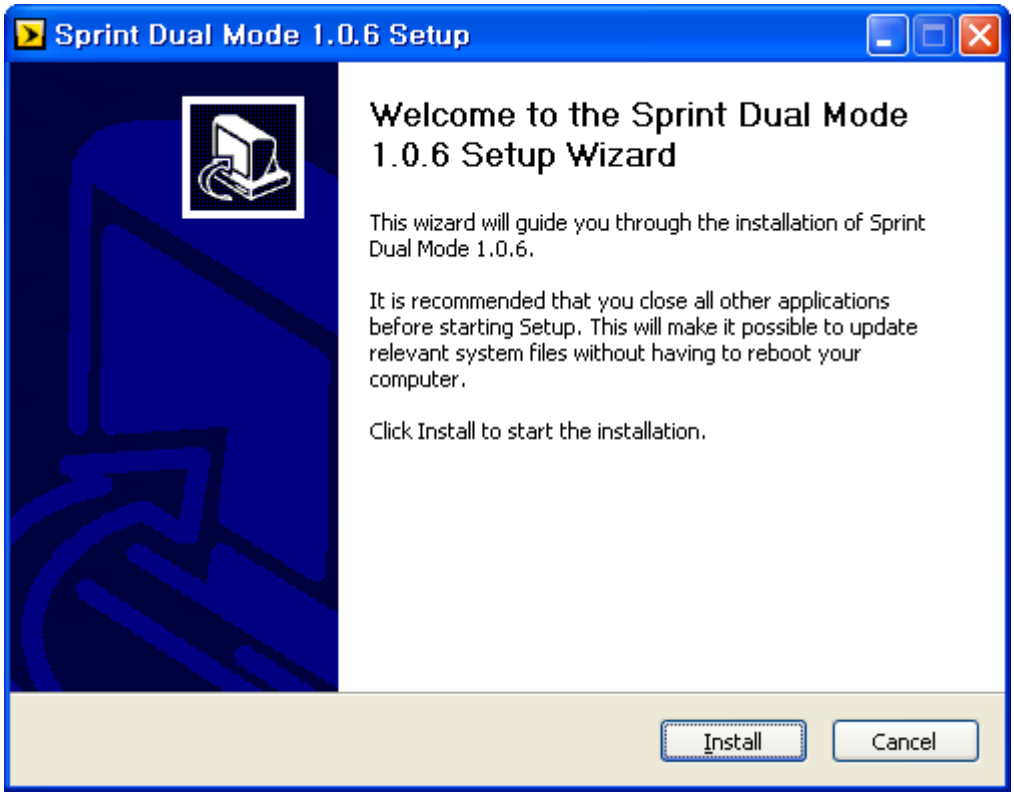
② Insert the U602 modem into your USB port.

③ Your computer will recognize U602 modem and install the Remote NDIS driver automatically. If the program does not launch automatically, go to my computer and select the 'FranklinCD' drive and double click 'dm-install.exe' program.

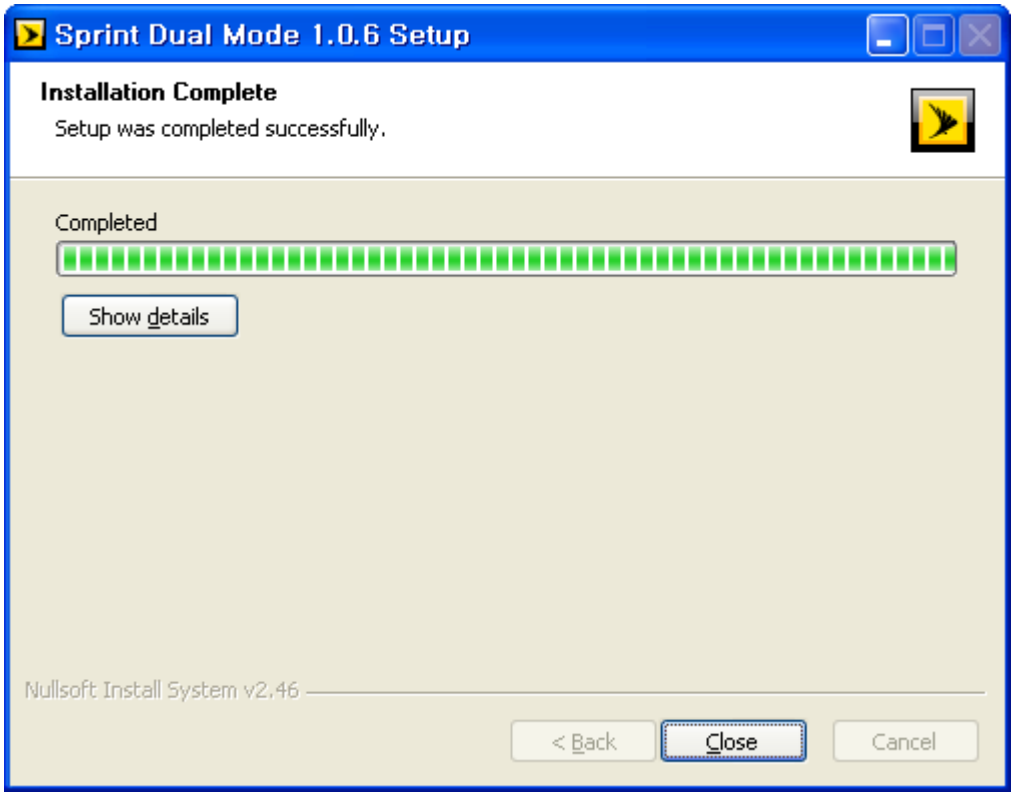
④ Follow the steps in the next section. Windows Vista or higher

Setup Remote NDIS – for Windows

STEP 1: The "Welcome to the Sprint Dual Mode 1.0.6 Setup Wizard" screen appears. Click the [Install] button to continue with the installation process.



STEP 2: Installation of U602 Remote NDIS is now complete. Click the [Close] button to leave the U602 Remote NDIS setup program.


Sprint Dual Mode 1.0.6 Setup
Installation Complete
Setup was completed successfully.
Completed
Show details
Nullsoft Install System v2.46
< Back
Close
Cancel

3. STARTING WEB UI

U602 Web UI is a web-based connection manager application for U602 USB modem. It allows you to manage and monitor the Internet connection between your computer and the wireless network. It has user friendly interface and is equipped with many useful features that will enhance your internet navigation experience.

Getting Started

Open the Web browser on your desktop and type **http://franklinusb** or **http://192.168.14.1** into the address window and press the Enter key.

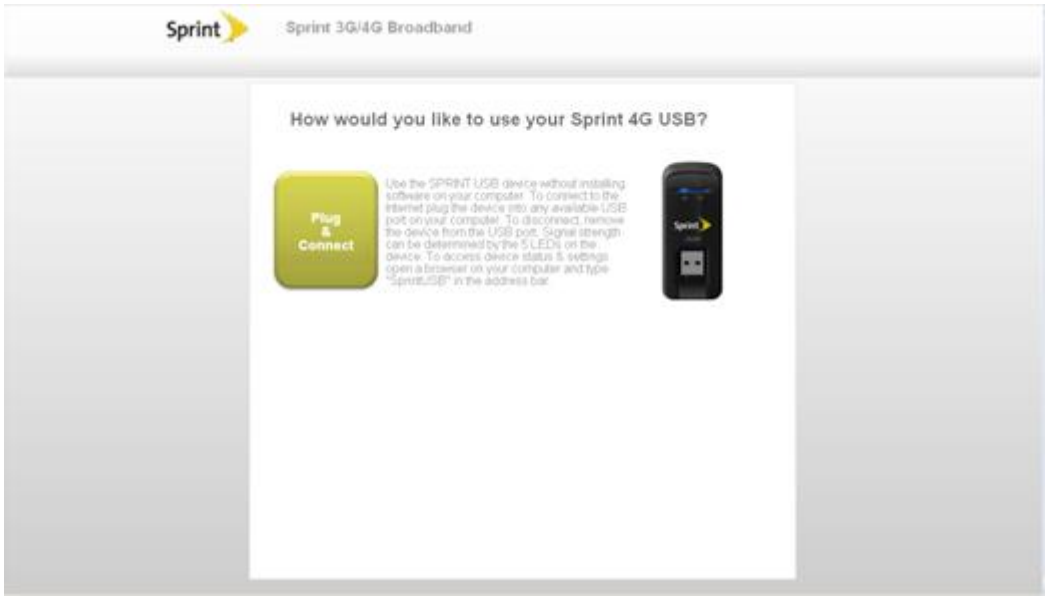
About Terms Of Service

When the U602 device is used for the first time, the TOS acceptance terms will be shown in the web browser. If "I Agree" is clicked, after a few seconds, browser displays the Plug & Connect page.

About Plug & Connect

In the Plug & Connect page, users can decide whether to use Sprint

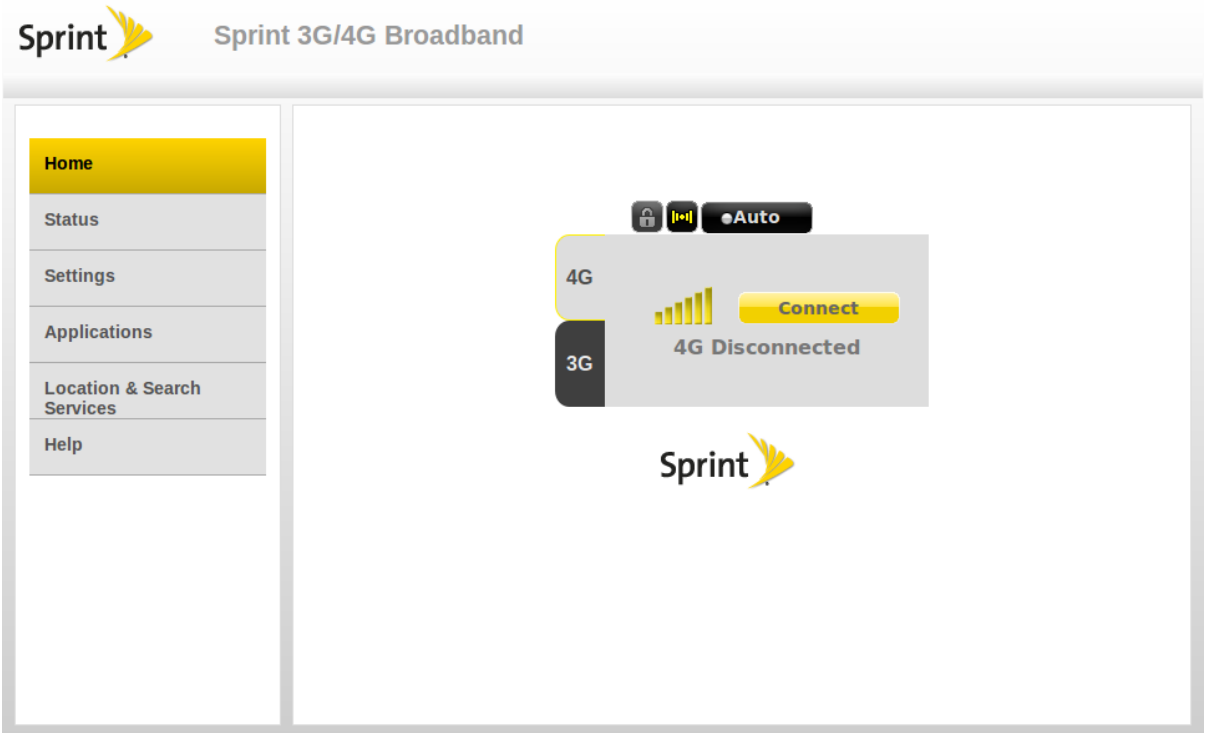
3G/4G USB or not.



About the Wireless Networks View

Web browser will open main page for the Sprint 3G/4G Broadband Networks as shown below. This page is where you manage your Broadband connections. The main page displays all the available network connections.

At a glance you can see the signal strength and current connection state. More detailed status and settings menu are displayed on left side bar.



Connecting to the Internet

Once your device is properly configured, connecting to the Internet is as simple as clicking the "Connect" button.

Once connected, the "Connect" button will change to "Disconnect".

Simply click this "Disconnect" button to end your current connection. To connect to any other network shown, select it, and then click the "Connect" button.

The Network State and Timer

Information regarding your current network connection can be seen in the Network Connection Box along the center of main page. For more information on this Network Connection Box, see the section "The Home Menu" in the "Using U602 WEB UI" section.

Dormancy

The data session can go to dormant mode if you are not sending or

receiving any data for an extended period of time. As soon as you resume sending or receiving data, the data session will return to an active state automatically.

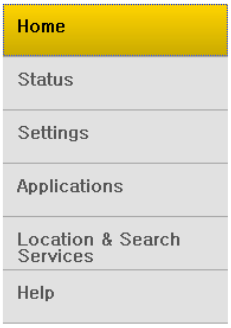
4. Using WEB UI

The Home Menu

Clicking on the Home Menu always show the main page.

The Menu Bar

The menu bar is at the left side of all pages in the browser interface. This helps that you configure your device, view network status and find location.



The Icon Bar

The icon bar is located upper the Network Connection Box. This helps that you easily change device datalink on/off, GPS on/off, Auto connection mode.

Roaming Indicator

This icon appears f the currently-selected network is a roaming network.

Automatic Mode Indicator

Click the Automatic Mode Indicator to turn on automatic mode. In this mode, the HCM will automatically establish a connection based on Settings->Connection Option.

GPS Indicator

This icon indicates whether GPS/NMEA functions are enabled on your device.

: GPS disabled.

: GPS enabled.

: GPS enabled and NMEA enabled.

Datalink Indicator

: Datalink enabled.

: Datalink disabled.

The Network Connection Box

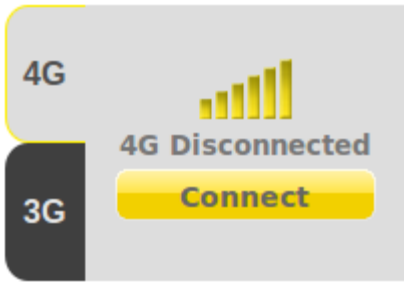
Information regarding your current network connection can be seen in the Network Connection Box is displayed on the center of main page.
This Box consists of 4G and 3G tabs and each tab has following items.

- **Signal strength bar**: Displays current signal strength.
  Support 0 ~ 6 level of signal strength.
- **Connection button**: Connect to network or radio on/off
- **Status**: Displays current status of device.
- **Connection time** (Optional): Displays time after connected.

Following table shows device status and connection button.

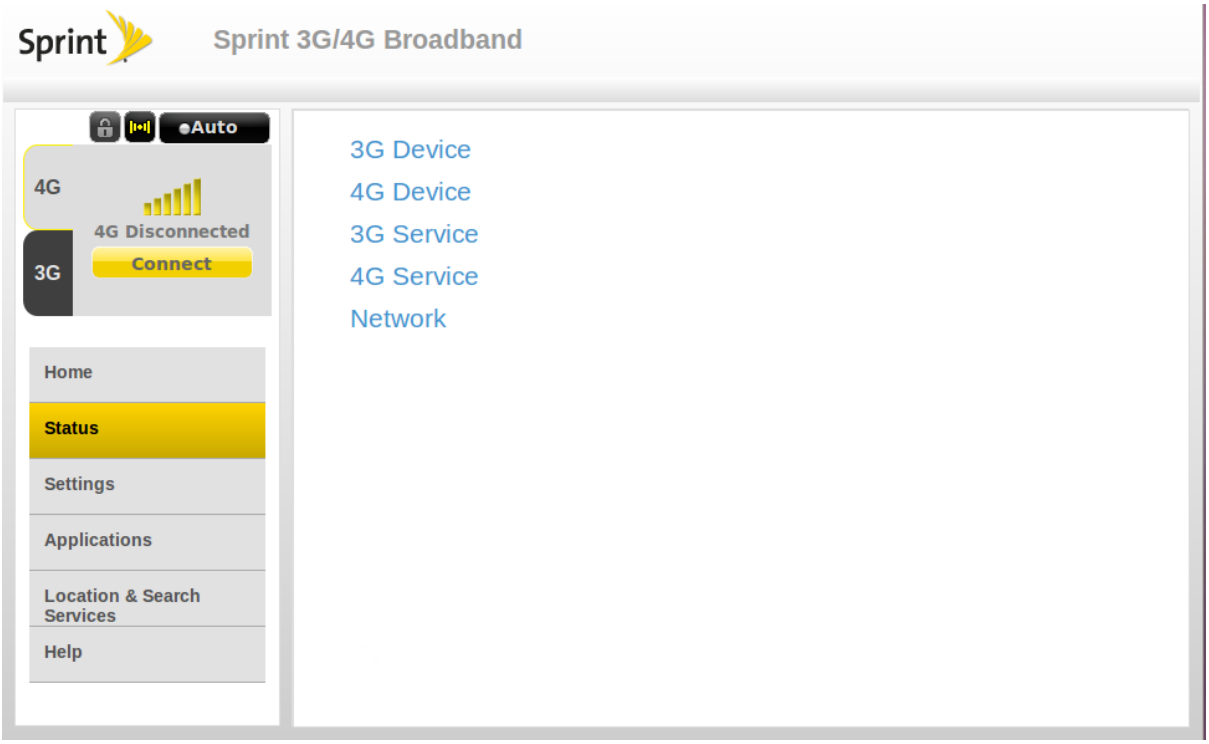
Status	Connection	Description

	Button	
"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"	"Radio On"	Radio power is off and ready to turn on.
"Connecting"	"Cancel"	Device is in connecting and available to cancel the connection.
"Connected"	"Disconnect"	Device is connected and available to disconnect the connection.



The Status Menu

The Status Menu allows you to view status information for the 3G/4G Device, Service and Network.

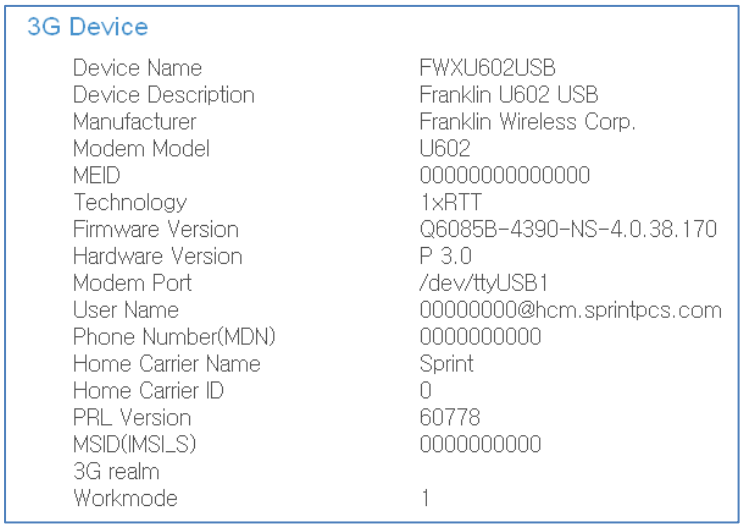


The Status Menu is divided into five sections:

- **3G Device**
- **4G Device**
- **3G Service**
- **4G Service**
- **Network**

3G Device

By selecting the "3G Device" link, 3G Device status are displayed as below.



- **Device Name –** name of the device.
- **Device Description –** description of the device.
- **Manufacturer –** manufacturer of the device.
- **Modem Model –** model name of the device.
- **MEID –** unique number the network uses to identify your device.
- **Technology –** type of network you are connected to.
- **Firmware Version –** current internal software version.
- **Hardware Version –** current internal hardware version.
- **Modem Port –** name of port modem is connected to.
- **User Name –** assigned user name on your device.
- **Phone Number (MDN) –** public ID for your specific wireless service.
- **Home Carrier Name –** name of the network operator.
- **Home Carrier ID –** ID of the network operator.
- **PRL Version –** use to verify that your PRL is the most current.
- **MSID –** internal ID Sprint uses to identify your account.
- **3G Realm –** name of domain.
- **Work mode –** type of current work mode.

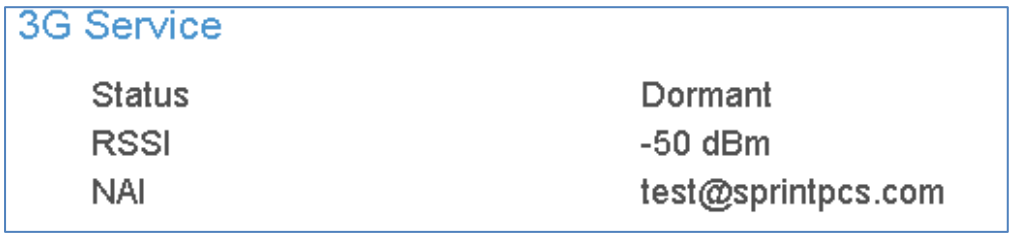
4G Device

By selecting the "4G Device" link, 4G Device status are displayed as below.

- **Mac ID –** current media access control address.
- **Base Band Chip –** chip name of the device.
- **RF chip Version –** current internal RF chip version.
- **Firmware Version –** current internal software version.
- **4G Realm –** name of domain.

3G Service

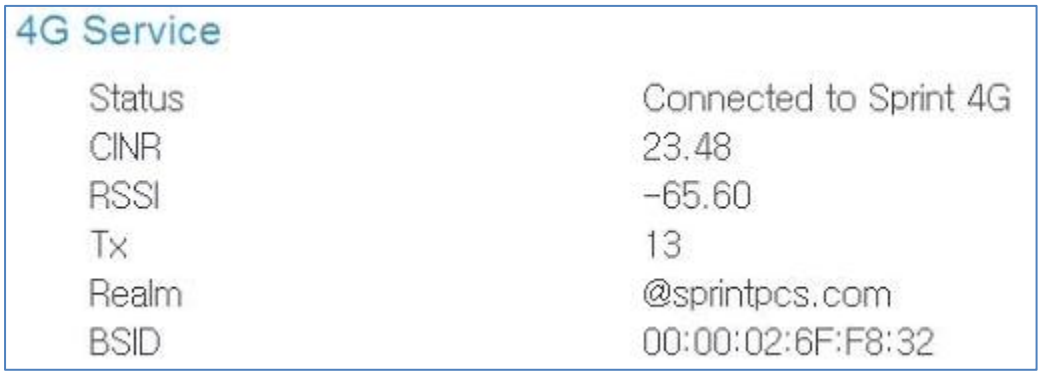
By selecting the "3G Service" link, 3G Service parameters are displayed.



- **Status –** current network status.
- **RSSI –** measurement in dBm of current signal strength.
- **NAI –** address of your device on the Sprint network.

4G Service

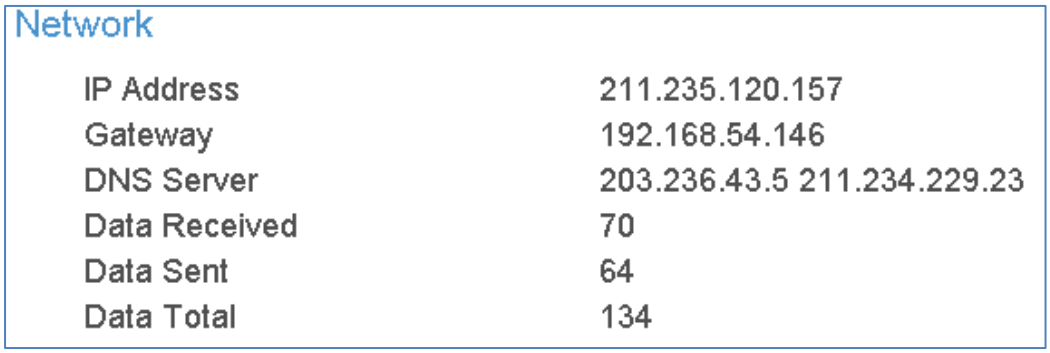
By selecting the "4G Service" link, 4G Service parameters are displayed.



- **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.
- **Realm –** name of domain.
- **BSID –** the number of biometrics secured identification devices available or connected.

Network

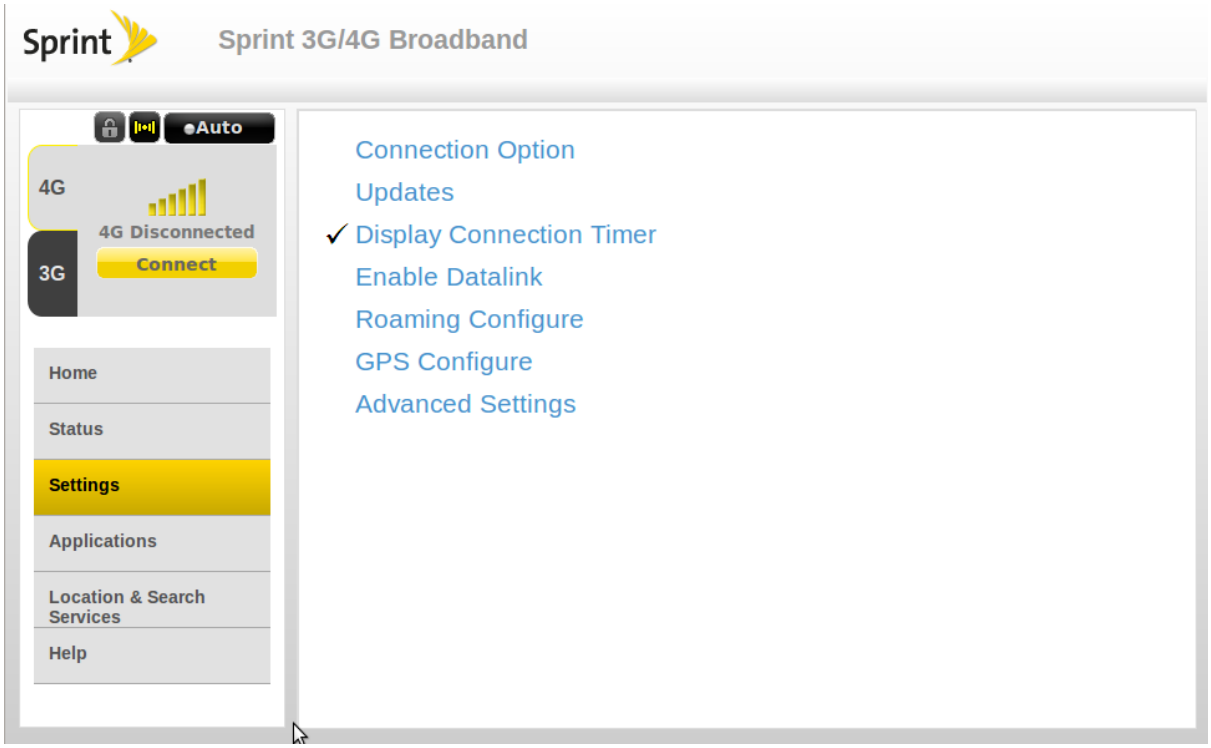
By selecting the "Network" link, Network parameters are displayed.



- **IP Address –** the current internet protocol address of the device.
- **Gateway –** the current network point entrance address.
- **DNS Server –** the current domain name system address.
- **Data Received –** the number of bytes received.
- **Data Sent –** the number of bytes sent.
- **Data Total –** the total data received and sent.

The Settings Menu

The Settings Menu allows you to set 3G/4G configuration, Network option and GPS settings.

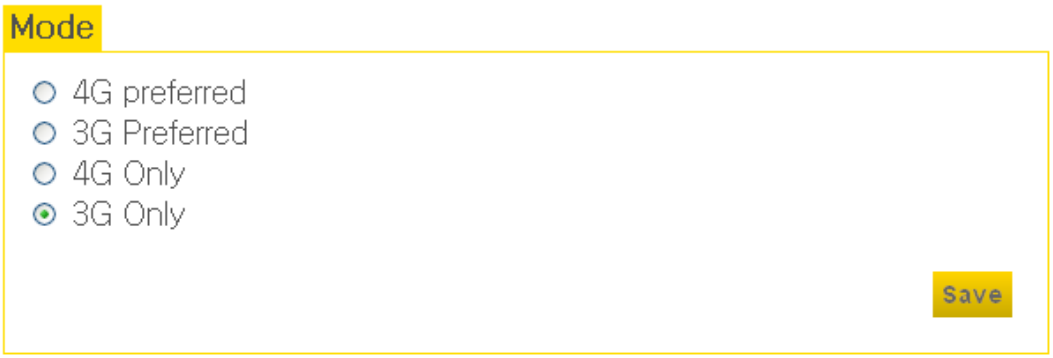


The Settings Menu is divided into eight sections:

- **Connection Option**
- **Updates**
- **Display Connection Timer**
- **Enable Datalink**
- **Roaming Configure**
- **GPS Configure**
- **Advanced Settings**

Connection Option

By selecting the "Connection Option" link, Connection section expands.

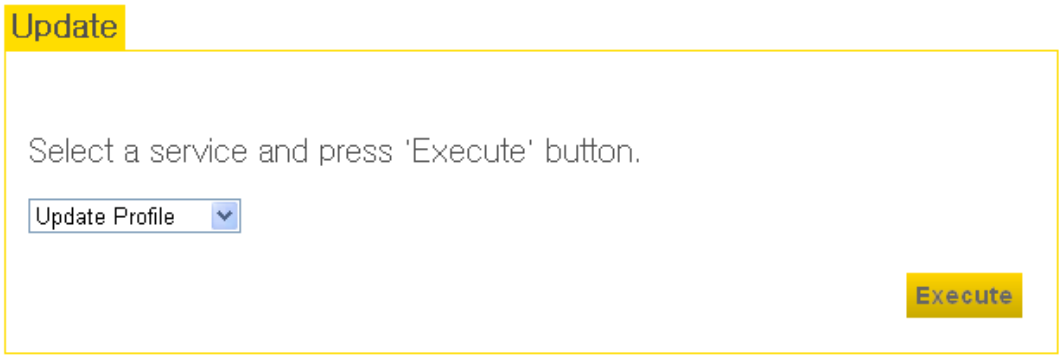


The Connection section displays the following:

- **Mode –** select **4G preferred**, **3G preferred**, **4G Only** or **3G Only**.

Updates

By selecting the "Updates" link, Updates section expands.



The Updates section displays the following:

- **Update –** allows you to update your network profile, your PRL and Firmware.

Display Connection Timer

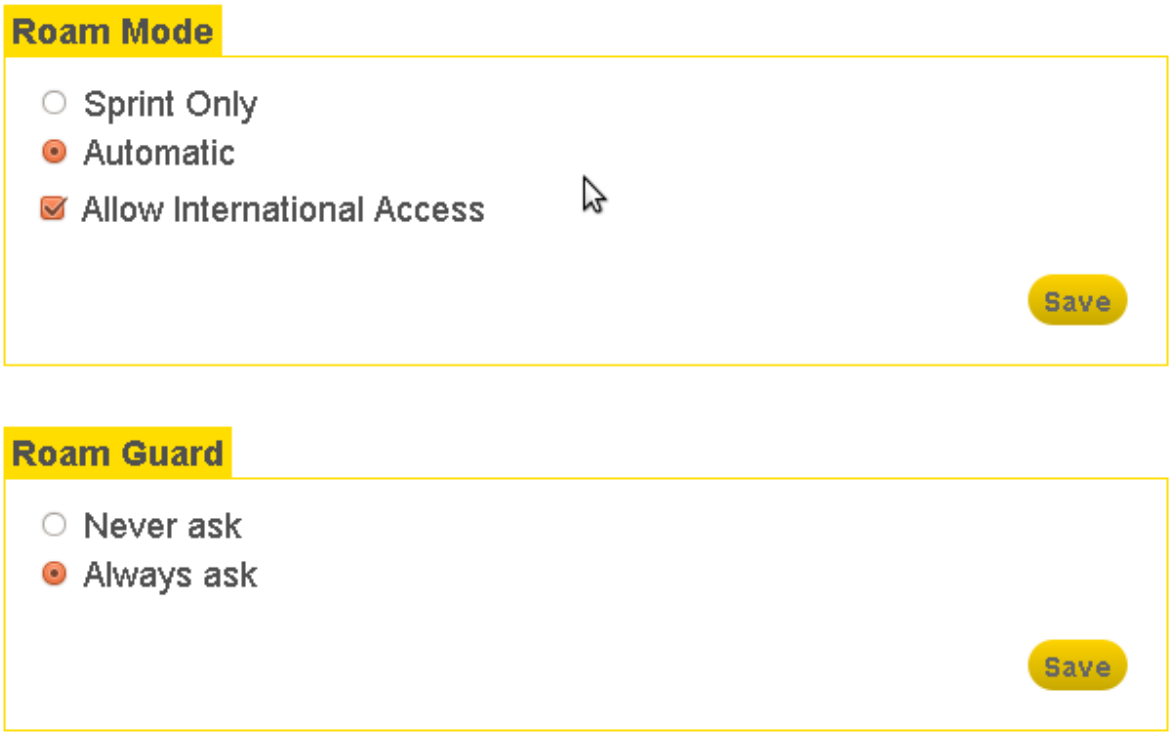
By clicking the "Display Connection Timer" link, Connection Time is displayed on the network connection box.

Enable Datalink

By clicking the "Enable Datalink" link, you can configure the Data Link settings and use the Data Link service of Sprint. The Data Link Setup option is generally applicable to corporate enterprise users configuring connection options for multiple users.

Roaming Configure

By selecting the "Roaming Configure" link, Roaming section expands.

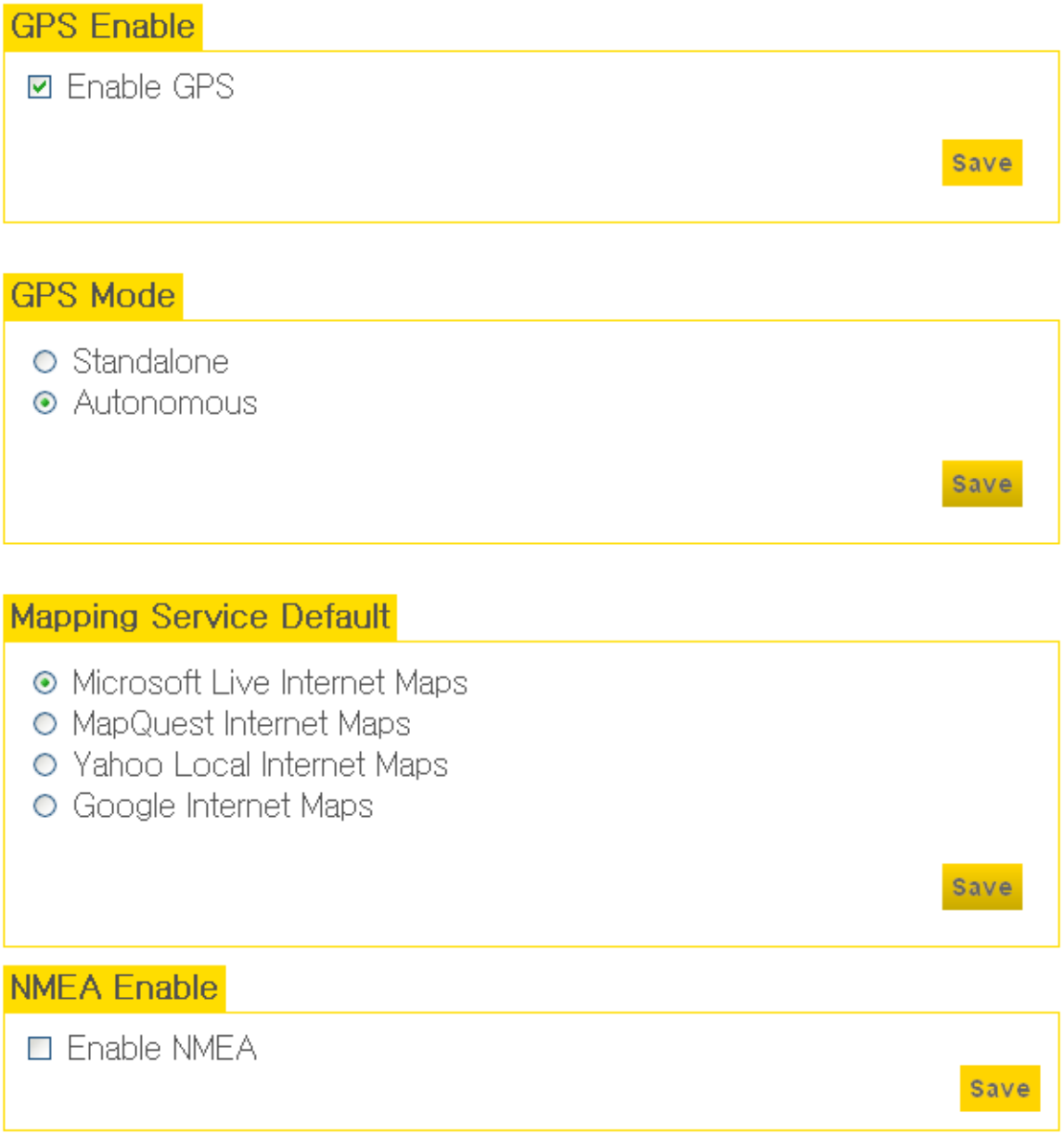


The Roaming section displays the following:

- **Roam Mode –** select **Sprint Only** or **Automatic**.
- **Allow International Access –** check to allow international roaming
- **Roam Guard –** select **Never ask** or **Always ask**.

GPS Configure

By selecting the "GPS Configure" link, GPS section expands.

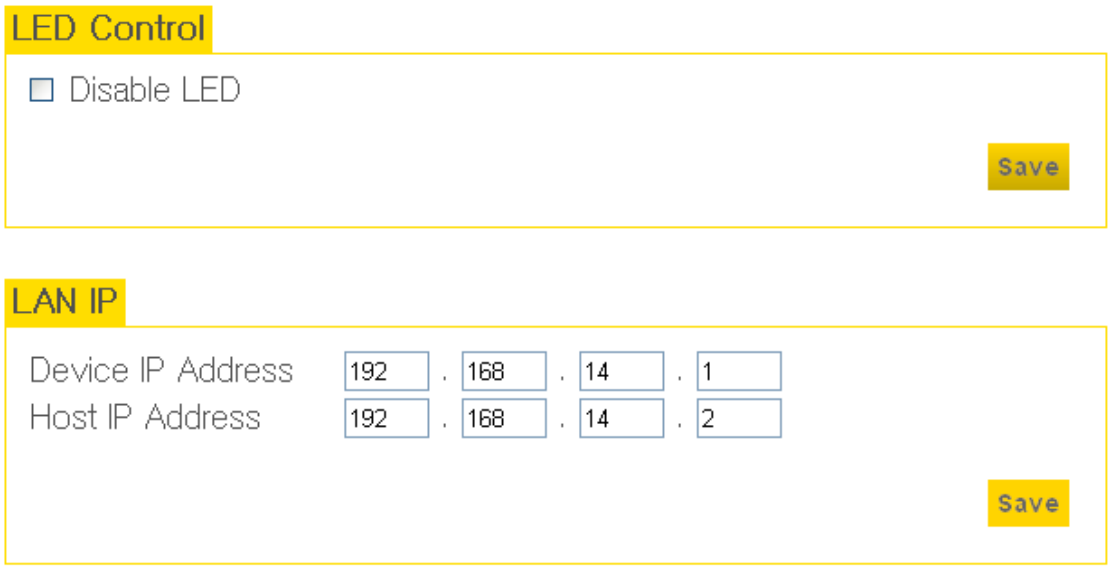


The GPS section displays the following:

- **GPS Enable -** check the **Enable GPS** to turn on GPS.
- **GPS Mode –** select **Standalone** or **Autonomous**.
- **Mapping Service Default –** select **Microsoft Live**, **MapQuest**, **Yahoo** or **Google Internet Maps**.
- **NMEA Enable –** check the **Enable NMEA** to receive NMEA location data through a USB connection.

Advanced Settings

By selecting the "Advanced Settings" link, Advanced Settings section expands.



The Advanced Settings displays the following:

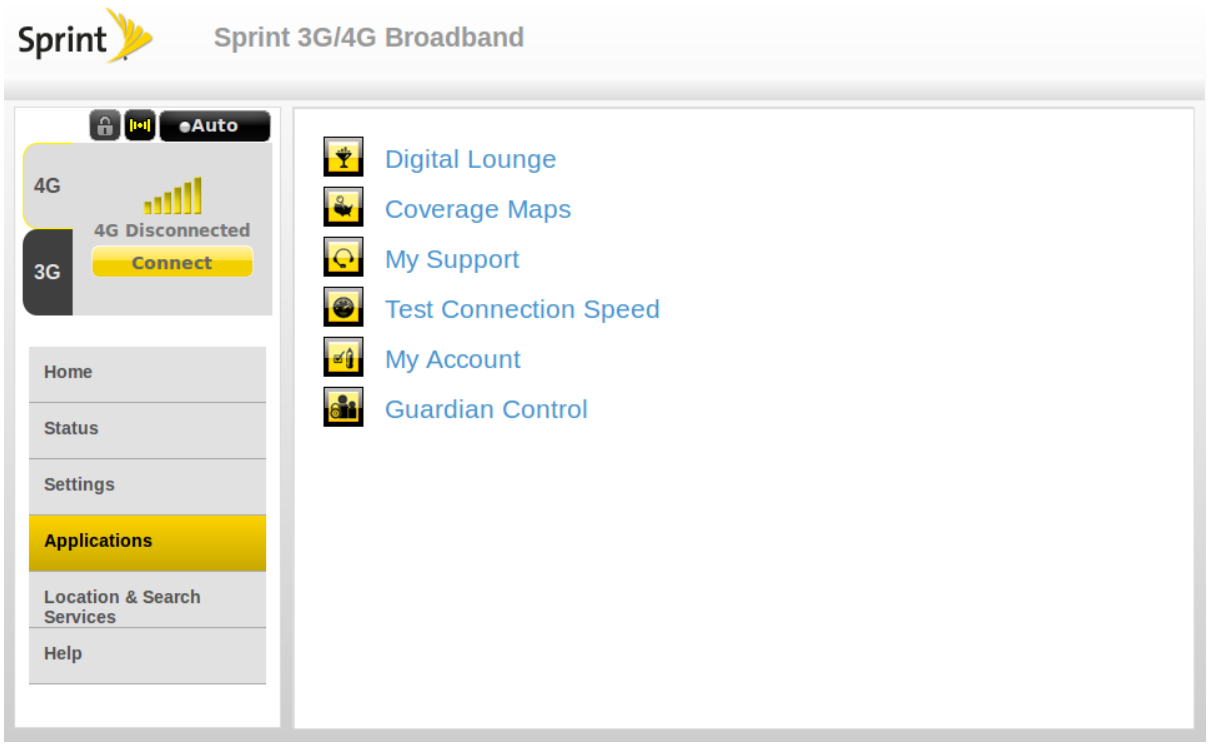
- **LED Control –** check the **Disable LED** to turn LED off.
- **Device IP Address –** the Internet protocol address of the device.
- **Host IP Address –** the Internet protocol address of the host.

The Applications Menu

The Applications Menu contains the following applications:

- **Digital Lounge –** takes you to the Sprint Digital Lounge.
- **Coverage Maps –** opens your web browser to a Web site containing Sprint Mobile Broadband Network coverage information.
- **My Support –** opens your web browser to Sprint's web-based technical support services.
- **Test Connection Speed –** tests and displays your mobile broadband connection speed.
- **My Account –** gives you access to your Sprint account and allows you to check usage data.

● **Guardian Control –** directs you to a website where you can download an Internet Parental control solution that helps parents protect their children and monitor their Internet usage.



The Location & Search Services Menu

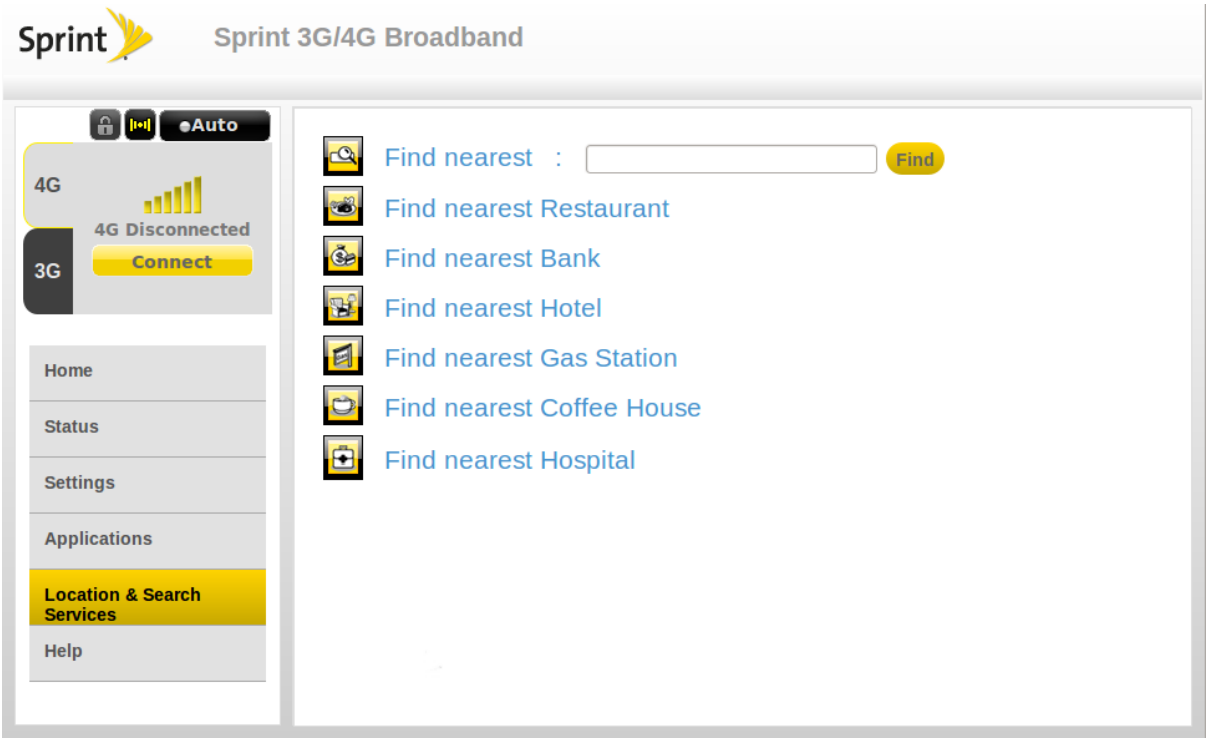
If your device is enabled GPS, you can use the Location & Search Services Menu to search for the nearest restaurants, bank and other amenities.

To perform a search,

1. Specify the type of location to search for by doing one of following:
    - Select one of the pre-defined searches (see below).
    - Type what you are looking for in the box at the top of the menu.
2. Click **Find** button.

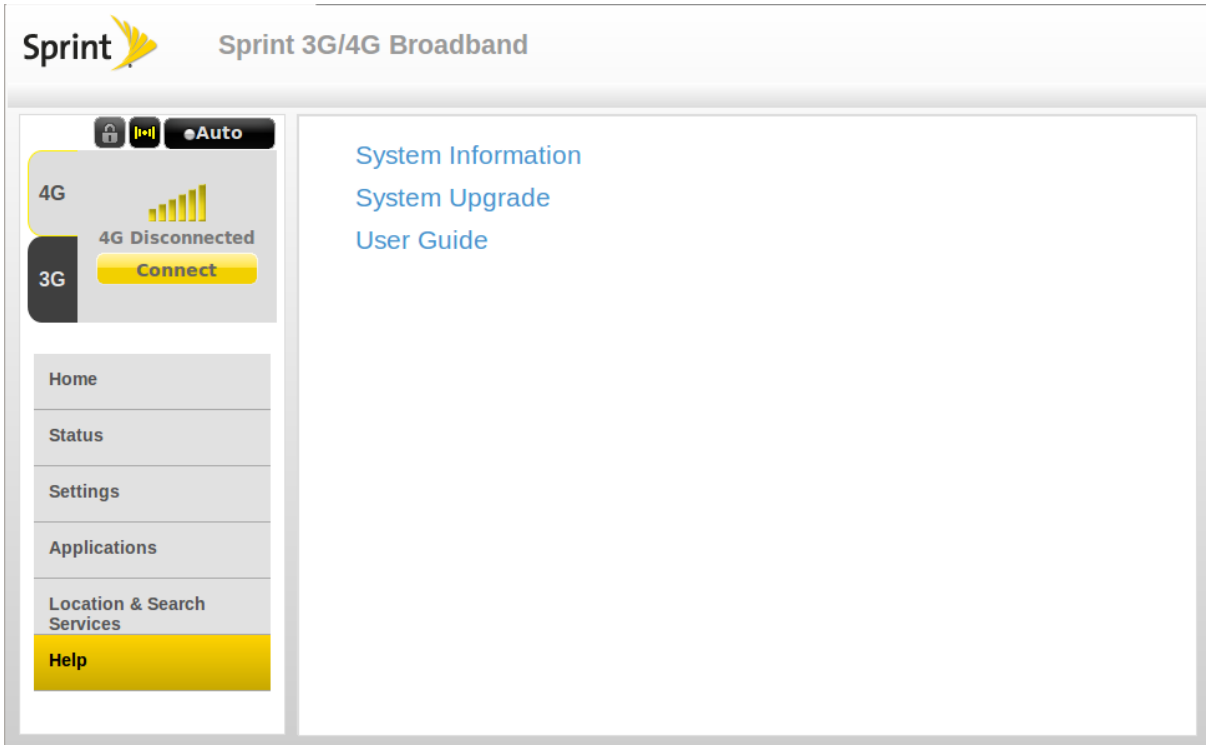
The following search items are pre-defined by Sprint:

- Restaurant
- Bank
- Hotel
- Gas Station
- Coffee House
- Hospital



The Help Menu

The Help Menu allows you to view system hardware and software information and user manual.



The Help Menu is divided into two sections:

- **System information**
- **System upgrade**
- **User Guide**

System information

By selecting the "System information" link, System information section expands.

System Name : SPRINT 3G/4G Connection Manager
System Date : Thu Jul 28 19:54:21 2011
CM Version : U602 ver0.3(build 509)

The System information displays the following:

- **System Name –** the current system name.

- **System Date –** the current system time.
- **CM Version –** the current Web UI version.

System upgrade

The System upgrade section allows you to update system.

- **Click "Browse…" button.**
- **Select system image file(*.tar)**
- **Click "Start Upgrade" button.**

User Guide

By clicking the "User Guide", user guide is downloaded in the host system.

5. U602 Information

Recommended System Requirements

To successfully use the U602 USB device in your PC, the following system specifications are required.

Item☐	Required Specification
Operating system	Windows® 2000/XP/Vista/7 Mac OS X 10.4/10.5/10.6
USB Port	Type A USB port
Processor/Memory	Minimum required system to support the above OS

Remove the Modem from your Computer

✓ Remove the U602 from your laptop. When removing the modem, always grip the sides of the modem and pull carefully.

Using the USB Extension cable

✓ The U602 modem package includes an extension USB cable. Although the USB cable is not required for use with your U602 modem, it offers increased performance for your modem under certain operating conditions. Connect the USB cable to USB ports of your computer.

Trouble Shooting

The following is a partial listing of errors and possible solutions.

- ✓ Ensure that your USB modem has been activated.
- ✓ Ensure that the USB modem is fully plugged into the USB slot.
- ✓ Ensure that the LED light is on; otherwise connect and then reconnect the USB modem.

CARE AND MAINTENANCE

Your device is a product of superior design and craftsmanship and should be treated with care. The suggestions below will help you protect your warranty coverage.

(a) Keep the device dry. Precipitation, humidity and all types of liquids or moisture can contain minerals that will corrode electronic circuits.
(b) Do not use or store the device in dusty, dirty areas. Its moving parts and electronic components can be damaged.
(c) Do not store the device in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
(d) Do not store the device in cold areas. When the device returns to its normal temperature, moisture can form inside the device and damage electronic circuit boards.
(e) Do not attempt to disassemble the device.
(f) Do not drop, knock, or shake the device. Rough handling can break internal circuit boards and fine mechanics.
(g) Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the device.
(h) Do not paint the device. Paint can clog the moving parts and prevent proper operation.
(i) Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications, or attachments could damage the device and may violate regulations governing radio devices.

All of the above suggestions apply equally to your device, battery, charger, or any enhancement. If any device is not working properly, take it to the nearest authorized service facility for service.

WARRANTY

Manufacture's Limited One-Year Warranty:

Franklin Wireless (the company) warrants to the original retail purchaser of this device, that should product or any part thereof, during normal consumer usage conditions, be defective in material or workmanship that results in product failure within the first twelve (12) month period from the date of purchase, such defects will be repaired or replaced (with new or refurbished) product at the Company's discretion, without charge for parts and labor directly related to the defect(s). This warranty extends to consumers who purchase the product in the United States or Canada and it's not transferable or assignable. This warranty does not apply to:

(a) Product subject to abnormal use or conditions, accident, mishandling, neglect, unauthorized alteration, misuse, improper installation or repair or improper storage;
(b) Products whose mechanical serial number or electronic serial number has been removed, altered, or defaced;
(c) Damage from exposure to moisture, humidity, excessive temperature or extreme environment conditions;
(d) Damage resulting from connection to, or use of any accessory or other product not approved or authorized by the company;
(e) Defects in appearance, cosmetic, decorative or structural items such as framing and non-operative parts;
(f) Product damaged from external causes such as fire, flooding, dirt, sand, weather conditions, battery leakage, blown fuse, theft or improper usage of any electrical source.

The Company disclaims liability for removal or reinstallation of the product, for geographic coverage, for inadequate signal reception by the antenna or for communications range or operation of the cellular system as a whole.

When sending your wireless device to Franklin Wireless' authorized distributions for repair or service, please note that any personal data or software stored on the device may be inadvertently erased or altered. Therefore, we strongly recommend you make a back up copy of all data and software contained on your device before submitting it for repair or service. This includes all contact lists, downloads (i.e. third-party software applications, games and graphics) and any other data added to your device. Franklin Wireless is not responsible for and does not guarantee restoration of any third-party software, personal information or memory data contained in, stored on, or integrated with any wireless device, whether under warranty or not, returned to Franklin Wireless' authorized distributors for repair or service. To obtain repairs or replacement within the terms of this Warranty, the product should be delivered with proof of Warranty coverage (e.g. dated bill of sale), the consumer's return address, daytime phone number and/or fax number and complete description of the problem, transportation prepaid, to the Company at the address shown below or to the place of purchase for repair or replacement processing. In addition, for reference to an authorized Warranty station in your area, please call (800)959-3558 in the United States.

The extent of the company's liability under this warranty is limited to the repair or replacement provided above and, in no event, shall the company's liability exceed the purchase price paid by purchaser for the product.

Any implied warranties, including any implied warranty of merchant ability or fitness for a particular purpose, shall be limited to the duration of this written warranty. Any action for breach of any warranty must be brought within a period of 18 months from date of original purchase, but in no case shall the company be liable for a special consequential or incidental damages for breach of this or any other warranty, express or implied, whatsoever. The company shall not be liable for the delay in pending service under this warranty or loss of use during the time the produce is being repaired or replaced.

No person or representative is authorized to assume for the Company any liability other than expressed herein in connection with the sale of this product.

Some states or provinces do not allow limitations on how long an implied warranty lasts on the exclusion or limitation of incidental or consequential damage so the above limitation or exclusions may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights, which vary from state to state or province to province.

Franklin's Authorized Service Center Address:

5440 Morehouse Dr.STE 1000

San Diego, CA 92121

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 1.30 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: XHG-U602.~~ 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 cauls e 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 c are 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.