inseego



SKYUS 100 Series
Skyus 110x / 140x

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2	Added details to DC cable pinout.	LS

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Introduction

Device Description and Label Technical Specifications

Device Description and Label

The compact Skyus 100 Series is a cellular gateway (cloud-enabled cellular modem and router) designed to support numerous Industrial IoT use cases in both fixed and mobile environments.



Fast and Future-Proof

With LTE connectivity, the Skyus 100 Series provides features that are purpose-built for IoT. In addition, cloud connectivity to IoT Connect enables remote device/fleet/deployment management. FOTA and remote configuration via IoT Connect ensure that the device is always up to date with the latest firmware and routing settings to meet your business needs.

Reliability

The rugged Skyus 100 Series is designed to simply connect and stay connected. The MiFi® Powered™ platform with MiFi OS2 offers industry leading networking, routing, and security features to ensure safe and reliable business continuity. The standard battery backup delivers instant connectivity protection during power outages/loss to alert you when power is lost and to retain data received during the outage. In addition, advanced security of encryption and authentication protocols offers peace of mind, and the extended operating temperature range makes the Skyus 100 Series the reliable choice.

Easy Deployment, Easy Integration, Easy Usage

Securely connect, collect and transmit valuable field data quickly and easily, just install and deploy – no complicated configurations or programming are necessary. Designed with multiple interfaces, multiple power sources, internal Wi-Fi/Bluetooth antennas, external cellular antennas, an intuitive web UI, factory pre-configured settings, edge processing capabilities, and connection management, the Skyus 100 Series is built with "Power it up, ready to connect" in mind.

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Cloud Management

With built-in Remote Services Client, the Skyus 100 Series connects securely to the IoT Connect cloud platform. The platform enables any number of devices to be simply managed and monitored around the globe in a cost-efficient and scalable manner. The Remote Services Client features remote management, monitoring, and alerting from a central location to configure, monitor, manage, and even update devices and assets all over the air minimizing costly on-site visits.

System Requirements

The Skyus 100 Series Cellular Router allows you to set up a network and provides both wired and wireless connectivity.

NOTE: This device is recommended for professional installation. Requirements include:

- A computer or computing device supporting Wi-Fi 802.11 b/g/n, ethernet, or USB 2.0
- Internet browser software, such as Microsoft Internet Explorer 8.0 or higher, Firefox, Safari, Opera, or Chrome

Labeling

Device Labels are located on the bottom of the device and displays the following information:

- ı Model
- Device SKU
- ı IMEI
- SSID (Factory preset unique to each device)
- Wi-Fi Key (Factory preset unique to each device)
- Regulatory ID

Technical Specifications

Case	
Dimensions:	[L x W x H] 118 x 98 x 33 mm (4.65 x 3.85 x 1.31 in)
Weight:	240 g (with battery)
Mounting Options:	Integrated mounting tabs

Technology / Bands

	Skyus 110x	Skyus 140x		
Models	SKYUS 110 SKYUS 110B (with Bluetooth)	SKYUS 140 SKYUS 140B (with Bluetooth)		
Frequency	4G LTE: 750/1900 MHz WiFi: 2.4 GHz BT: 2.4 GHz	4G LTE: 750/1700/1900 MHz WiFi: 2.4 GHz BT: 2.4 GHz		
Bands (Carrier and Location Dependent)	LTE: B4, B13	LTE: B2, B4, B13		
Wi-Fi	Max. 12 Clients 100 m Radius	Max. 12 Clients 100 m Radius		
Bluetooth	BT 5.0, BLE LR, Mesh Max. 20 Clients Up to 500 m Radius	BT 5.0, BLE LR, Mesh Max. 20 Clients Up to 500 m Radius		
Data Speed	Cat-1 LTE: 10 Mbps Downlink, 5 Mbps Uplink WiFi: Up to 150 Mbps BT: Up to 2 Mbps	Cat-4 LTE: 150 Mbps Downlink, 50 Mbps Uplink WiFi: Up to 150 Mbps BT: Up to 2 Mbps		
Routing	DHCP server, DNS, static or dynamic IP	address, port filtering, port forwarding		
Security	NAT, SPI Firewall, VPN pass-through, IPSec VPN, MAC access control			
Wireless Network	Wi-Fi 802.11 b/g/n, 12 clients, pre-configurable security: WPA/WPA2/WEP			
Certifications	FCC, IC, Wi-Fi Alliance, Safety, Verizon, AT&T, T-Mobile FCC, IC, Wi-Fi Alliance, Safety, Verizon, AT&T, T-Mobile			

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Power	
Input Power Range (4 Pin):	9 - 32 VDC @ 1.5 A (Molex Connector); 12V or 24V vehicle ready
Current Consumption (4 Pin):	With Battery: 9 V @ 1.3 A (Max); 9 V @ 650 mA (Min) Without Battery: 9 V @ 1.1 A (Max); 9 V @ 400 mA (Min)
Input Power Range (USB):	5 +/- 0.25 VDC @ 2 A
Current Consumption (USB):	With Battery: 5 V @ 1.8 A (Max); 5 V @ 1.2 A (Min) Without Battery:
	5 V @ 1.1 A (Max); 5 V @ 650 mA (Min)
Input Power Range (PoE):	47 VDC @ 0.35 A (Molex Connector)
Current Consumption (PoE):	With Battery: 47 V @ 310 mA (Max); 47 V @ 134 mA (Min) Without Battery:
	47 V @ 260 A (Max); 47 V @ 100 mA (Min)
Rechargeable Battery:	Rechargeable 3.7 V 4400 mAh 16.7 Wh Li-ion battery
Environment	
Operating Temperature:	-30° C to 70° C (external power)
- F	-20° C to 60° C (battery)
Storage Temperature:	-40° C to 85° C (external power)
	-40° C to 60° C (battery)
Relative Humidity:	0 to 95%, non-condensing
Antennas	
External Cellular Antenna:	2x SMA Connector for Primary (Cell 1) and Diversity (Cell 2)
Internal Wi-Fi Antenna:	2.4 GHz
Internal Bluetooth Antenna:	2.4 GHz (for Bluetooth enabled models only)
Internal GPS Antenna:	1575 MHz
Interfaces, I/O, and LED	
1x Ethernet Port (RJ45 Connector)	1x Micro USB On-The-Go Serial over USB
1x Micro-SIM (4FF) Card Slot (Inside Ba	
	ut (Ignition Sense), 1 Digital Input/Output)
LED Indicators: Power, Wi-Fi/Bluetootl	

Device Management	
Production Environment:	Local Web UI or IoT Connect (Optional)
Bulk Provisioning:	Over-the-air (when IoT Connect is purchased) or local
Firmware Upgrade:	FOTA (Firmware-over-the-air) or local

Additional Fea	atures
FOTA	Optional Connection to Inseego's Secure Cloud Platform IoT Connect
On-board conf	iguration: GPS, Accelerometer, GPIO, 1-Wire, Reporting/Alerting, SSIDs, Passwords, Routing
3-Axis Digital A	ccelerometer and Accelerometer + Gyro for In-Vehicle Alerting
I/O Control	

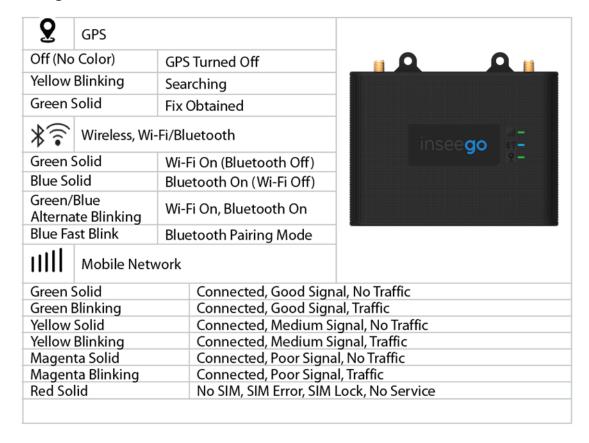
Physical Features

LEDs Connectors Reset Button

LEDs

The Skyus 100 Series router has LEDs that verify status, signal, and connectivity.

The following table describes each LED:



Connectors

The Skyus 100 Series router has the following connectors:

I/O	4 Pin IO Connector (Power/IO)						
-	RJ45 Ethernet Port						
● ✓•	USB Micro-B Port						
பு	Power Button			I/O	*	•	
Green Solid		Normal Operation			1111111		
Green Blinking		Charging Battery (Off)		T			
Blue Solid		Good Battery					
Yellow Solid		Mid-Level Battery					
Red Solid		Low Battery					
Red Blinking		System Error					
White Blinking		Startup/Software Update In Process					



For Pin Out descriptions, see the Power Cable section.

Reset Button

The Reset Button is located inside a corner of the battery compartment. The button is a small hole about 1.5mm in diameter, with the word "RESET" below it. The location is shown in the following image:



NOTE: If a reset is required, use a small pointed object, such as a paperclip, to push the Reset Button.

The Reset Button has two features:

- 1. Press the button for <1 second to initiate a standard reset.
- 2. Press and hold the button for >3 seconds to initiate a reset that will restore the device to factory default settings.

Installation

SIM Installation Battery Precautions and Guidelines Mounting Methods

SIM Installation

To insert the SIM card:

- 1. Open the battery door on the bottom of the device to expose the battery tray.
- 2. If installed, remove the battery to reveal the Micro-SIM (4FF) card holder.



3. Insert the SIM card into the SIM holder. You should hear a "click" when the SIM card is in place.



4. Replace the battery and the battery door to complete the process.

Battery

To install or remove the battery:

- 1. Remove the battery door on the bottom of the device.
- Install or remove the battery as shown in the following photo.NOTE: The battery will only fit into the device in the correct orientation.



3. Replace the battery door.

Installation Precautions and Guidelines

As you determine the mounting location and prepare to install the device, be sure to heed the following precautions and guidelines:

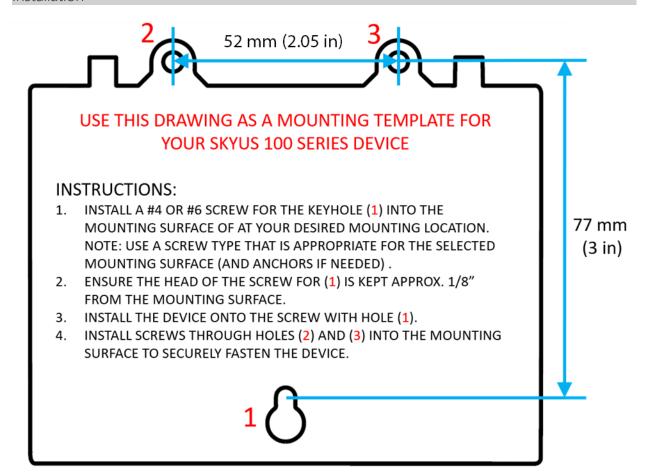
- Locate the router in an area free from liquids, dust, and extreme temperatures. If it is possible for the device to experience contact with fluids, extreme mechanical shock, or extreme thermal conditions (outside of the thermal specs listed in this User Guide), you run the risk of damaging the device and/or the battery. If the battery is subject to these conditions, the battery may fail and cause significant damage to the device and the surrounding area.
- Store the router back in its box when not in use.
- Do not block any ventilation openings by applying adhesives or labels to the router as this might cause the device to overheat or it might interfere with antenna performance.
- Clean only with a clean, dry cloth.
- Protect the cord from being crushed or pinched.
- Take care to locate and route cords and wires to minimize the risk of damaged caused by users or other objects that are located near the device.
- Avoid dropping or shaking the router to reduce the risk of damaging the device or disrupting operation.

Mounting Methods

WARNING! While performing these steps, do not apply excessive force to the mounting brackets as this may cause the tabs to fail. Installation is recommended to be completed by a professional.



Installation



Mounting Equipment

- Two (2) #4 or #6 screws
- Double-sided tape (3M VHB or similar)

Mounting Instructions - Screws

CAUTION! If using rigid mounting hardware, apply pressure only to the ends of the device. Limit the mounting pressure only to the amount needed to secure the device.

- 1. Identify the optimal installation location. Make sure you consider the physical space requirements of the device, any needed connectors, cables, and antennas. In addition, make sure you consider mounting location to optimize cellular coverage.
- 2. Identify the optimal mounting equipment. Depending on installation location, you may want to select wood screws, metal self-tapping screws, drywall anchors, concrete anchors, or others.
- 3. Locate and install a screw for Hole 1. Make sure the screw head remains 1/8" (3mm) away from the wall.
- 4. Install the device onto the screw using Hole 1 and slide the device all the way the slot of Hole 1
- 5. Install a screw into the mounting surface through Hole 2. Tighten screw to 5 in-lbs. to ensure a snug fit. Take caution to ensure the device will be installed level.
- 6. Install the final screw into the mounting surface through Hole 3. Tighten screw to 5 in-lbs. to ensure a snug fit.

Double-Sided Tape

CAUTION! If securing the device using double-sided tape or a method not described in this manual, note the following precautions:

- Using adhesive tape may cause damage to the device or battery door when removed from its install location.
- Ensure the device and the installation surface is free of debris and is cleaned and allowed to dry using a rubbing alcohol solution prior to application.

Using the Device

Powering the Device Positioning Your Device Connecting to the Device

Powering the Device

When a power source is connected, the Skyus 100 Series powers up automatically. When loaded with an active SIM, it may take up to two minutes for the device to power up and register on the cellular network.

Turning on the Device

To power on the device using an external power source:

- 1. Connect the device to a power source.
- 2. The LEDs will all blink white, signaling the device is starting up. When LEDs stabilize with green/yellow/blue/red colors, the device is ready for use. The power button should be green showing the device has sufficient external power.

To power on the device without an external power source (using the battery):

1. Press and hold the power button on the front of the device until the LEDs start blinking.



2. The LEDs will all blink white, signaling the device is starting up. When LEDs stabilize with green/yellow/blue/red colors, the device is ready for use. The power button should show blue/yellow/red to indicate battery level status.

Positioning Your Device

The size and mounting options allow this device to be installed in the location that suits your needs because the reception and coverage range depends on where you place your router. The placement of furniture, the thickness of walls, and the number of walls a signal must travel through can limit cellular, Wi-Fi, and BLUETOOTH range.

For best results, place your router:

- away from interference such as microwaves, ceiling fans, security systems, or cordless phones
- away from large containers of glass or concrete (fish tanks, mirrors, brick or concrete walls)
- away from large metal surfaces (cook tops, metal doors, aluminum studs, appliances)
- close to a window but out of the way of direct sunlight (great for 4G LTE reception)
- ı close to an AC outlet and near Ethernet computer cables
- in an elevated location
- in line-of-sight to wireless devices
- near the computers or other devices that communicate with the router
- on an upper floor (if applicable)

NOTE: When using multiple points of access, use different radio frequency channels for adjacent access points. We recommend leaving 5 spaces between channels (e.g. 1 and 6, or 3 and 8).

Connecting to the Skyus 100 Series Router

Users can connect to the Skyus 100 Series router using either the USB cable or a Wi-Fi connection.

Connecting using USB

To connect using USB (connecting to a host):

- 1. Using the USB A to USB Micro-B cable, connect the Micro-B side to the device and the A side to the host system.
- 2. When plugged in to a USB 2.0 port, the device should automatically turn on and be ready for use in Windows-based (8 or later) or Linux-based (kernel 2.6.32 or later; Ubuntu 14.04 or later) environments.

NOTE: If the device is not connected through a powered USB port, the device can still operate via USB while using the 4 Pin power cord to power the device.

To connect using USB (connecting to a device):

- 1. Using the appropriate USB cable (Micro-B on the Skyus 100 series device side), connect to the external device.
- 2. With USB OTG, the Skyus 100 series can power the external device using USB 2.0 (5 VDC @ 1A), but the Skyus 100 device must be plugged into power using the 4 Pin connector.
- 3. This situation is useful when connecting an external USB modem (e.g. Skyus DS, Skyus DS2, or Skyus SC) for failover and/or load balancing.

Connecting using Ethernet

To connect using Ethernet

- 1. Connect an ethernet cable from the device to the host system.
- 2. Connect the device to a power source.
 - a. If the host system offers PoE or PoE+, the device can be powered by the host system and pass traffic via ethernet.
 - b. If PoE or PoE+ is not available from the host system, the device needs to be powered using the 4 Pin power port.
- 3. When powered and plugged in, the device should automatically turn on and establish a connection.

Connecting using Wi-Fi

To connect using Wi-Fi:

- 1. Ensure the Skyus 100 Series router is powered on.
- 2. Connect to the router using the SSID and Password information provided on the label.
- 3. It is strongly recommended to change the SSID and Password from the default for security reasons after initial use. Make sure to save the updated information in a secure location.

Connecting using Bluetooth

NOTE: This feature is currently being developed and will only be available for Bluetooth enabled models (Skyus 110B and Skyus 140B).

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Using the Web User Interface

Logging In

Home

Connected Devices

Remote Management

GPS

Setting

Messages

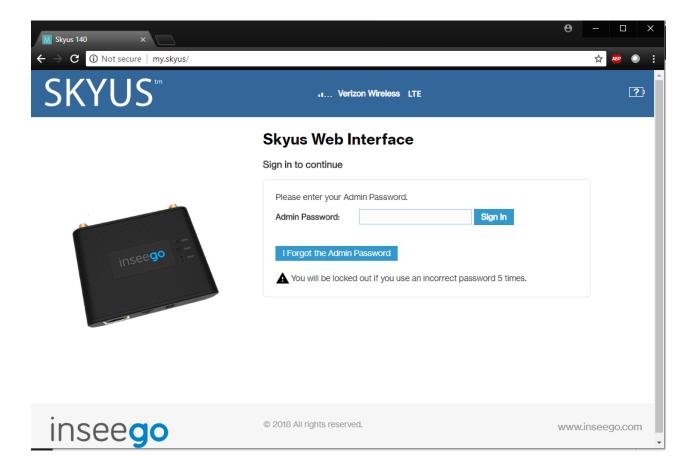
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Logging In

To log in to the Skyus 100 Series web user interface:

- 1. Open your Internet browser and navigate to one of the following URLs to reach the device login page:
 - 192.168.1.1
 - http://my.skyus/



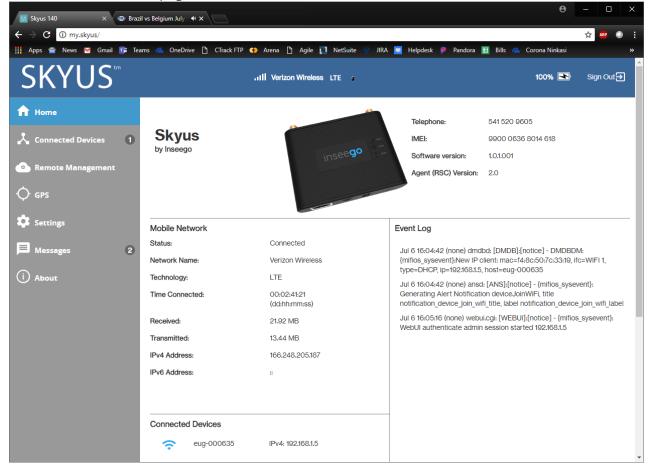
2. From the sign in page, enter your device admin password. By default, the admin password is the password listed on the label on the bottom of the device.

Home

Accessing the Home Page

After logging in, you will automatically be taken to the Home page.

From any other page, click on the Home icon from the menu tree on the left of the screen to return to the Home page.



On the left side of the page, you can see the Navigation Pane, which displays the following sections:

- Home
- Connected Devices
- Remote Management
- GPS
- Settings
- Messages
- About

On the top of the page, you can see the following information:

.... Verizon Wireless LTE

• Signal Strength: Shows the relative signal strength

Network: Displays the cellular carrier (e.g. Verizon, AT&T)

• Technology: Displays the cellular technology being used (e.g. LTE, 3G)

DL/UL Icons: Displays the current activity to/from the device

From the Home page, you can see the following information:

• Device Information

o Telephone: Phone number (PTN) of active SIM

o IMEI: Device unique identification number

o Software Version: Radio module SW version

o Agent (RSC) Version: Remote Services Client version (IoT Connect agent)

Mobile Network Information

o Status: Displays connection status (Connected, Disconnected)

o Network Name: Displays cellular carrier network (e.g. Verizon, AT&T)

o Technology: Displays cellular technology (e.g. LTE, 3G)

o Time Connected: Displays cumulative uptime

o Received: Displays cumulative Rx data for the current 24 hr period

o Sent: Displays cumulative Tx data for the current 24 hr period

o IPv4 Address: Displays IPv4 address

o IPv6 Address: Displays IPv6 address

Connected Devices

 Displays all connected devices, what connection is active (USB, ethernet, Wi-Fi, or Bluetooth)

Event Log

o Displays all recent events and actions of the device

Connected Devices

From the left menu, click on Connected Devices to view the Connected Devices page. In the Connected Devices list, you can perform the following actions:

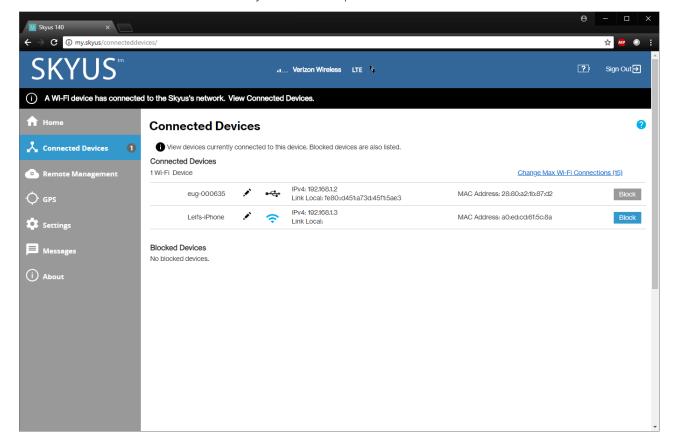
• Edit Icon: Edit device names

• Connection Icon: Displays the connection technology (e.g. USB, ethernet, Wi-Fi,

Bluetooth)

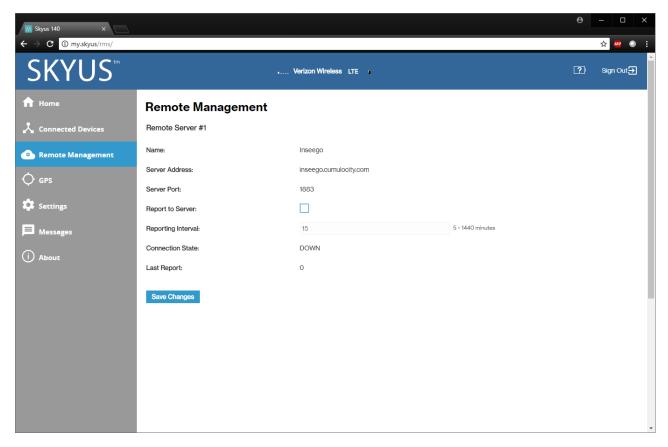
MAC Address: Displays the MAC address of the connected device

• Block Button: Allows you to block specific devices based on MAC address.



Remote Management

The Remote Management page enables the device to communicate to the IoT Connect cloud platform. To access this page, click on the Remote Management section of the menu tree on the left of the screen.



By default, the remote connection to IoT Connect is not active.

To Activate the Remote Services Client

The Skyus 100 Series device connects and communicates with IoT Connect using the built-in Remote Services Client. To activate (turn on) the Remote Services Client (RSC), complete the following steps:

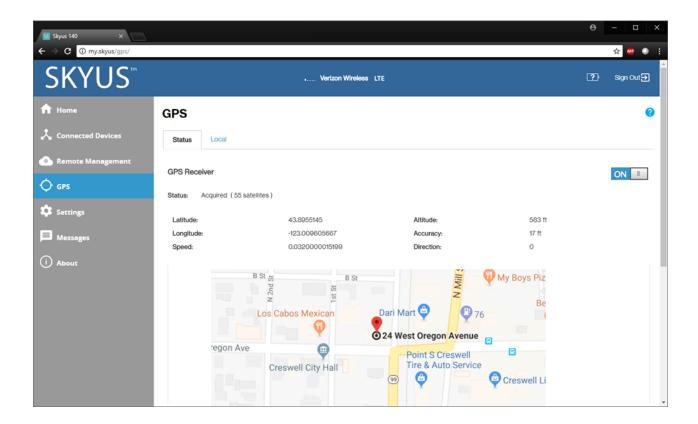
- 1. Check the "Report to Server" check box.
- 2. Enter the desired Reporting Interval.
 - NOTE: It is highly recommended to use 10 minutes as the default. Reducing the Reporting Interval will increase your data usage.
- 3. Click 'Save Changes'. You will see the following message confirming the changes were made:

Remote Management



GPS

To access the GPS page, click GPS from the Menu Tree on the left of the screen.



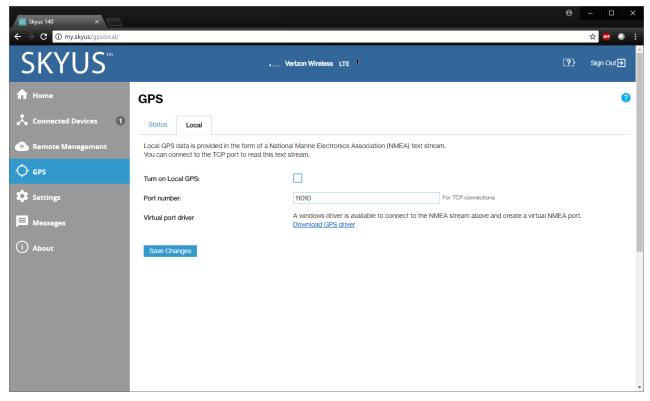
For fixed location SKUs (SKXXXGYYY-R-AC), the GPS will be off by default. For mobile location SKUs (SKXXXGYYY-R-DC), GPS will be enabled by default.

To turn GPS on or off, click on the On/Off toggle switch on th etop of the screen.

NOTE: When turning on the GPS for the first time, it may take up to several minutes to acquire a signal lock.

To enable Local GPS streaming, complete the following steps:

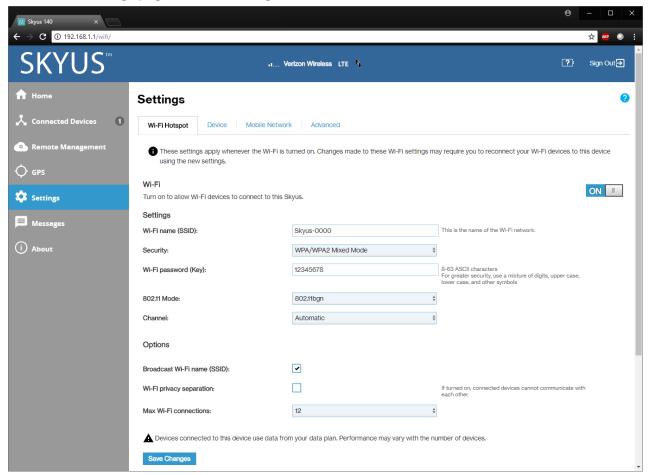
1. Click on the Local tab on the top of the page.



- 2. Click the Turn on Local GPS check box.
- 3. Specify the appropriate Port Number for TCP connections.
- 4. If needed, download the GPS driver to create a virtual NMEA port.
- 5. Click Save Changes.

Settings

To view the Settings page, click on Settings on the Menu Tree on the left of the screen.



From this page, you have access to completely configure and program your device. When you are done configuring your device, you can save your current settings as a template for future use to back up your device if needed.

Settings > Wi-Fi

From the Wi-Fi Hotspot tab on the Settings page, you can configure the Wi-Fi settings of your devices. On this page, you can make the following changes:

On/Off Toggle: Turn the Wi-Fi of the device on or off by clicking the toggle.

• Wi-Fi Name (SSID): Specify the SSID as desired.

Security: Select the Passwords security type.

• Wi-Fi Password (Key): Specify the Password (independent from the admin

password).

• 802.11 Mode: Specify which 802.11 protocol is to be used.

• Channel: Select Auto or specify a Wi-Fi channel to use.

NOTE: Selecting the appropriate channel will help reduce signal loss when near another Wi-Fi device.

• Broadcast Wi-Fi Name (SSID): Turn on or off the ability for the SSID to be seen.

• Wi-Fi Privacy Separation: Check the box to prevent Wi-Fi data transfer between

devices.

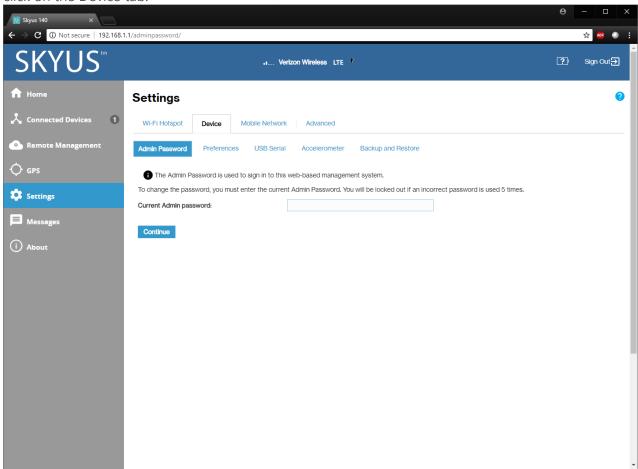
Max Connections:
 Specify the number of connections that can use device

Wi-Fi.

• Save Changes: Make sure to click Save Changes if any setting has changed.

Settings > Device

To access the Device tab, first click on Settings from the Menu Tree on the left of the screen. Next, click on the Device tab.



The Device tab will present you with Device specific settings. The settings included in this section are as follows:

Admin Password: Allows you to change the admin password.

Preferences:
 Allows you to change the units of length, number format, time

format, language, language, and turn off LEDs.

• USB Serial: Allows you to make a serial connection using the device.

Accelerometer: Allows you to turn on and configure the device's accelerometers.

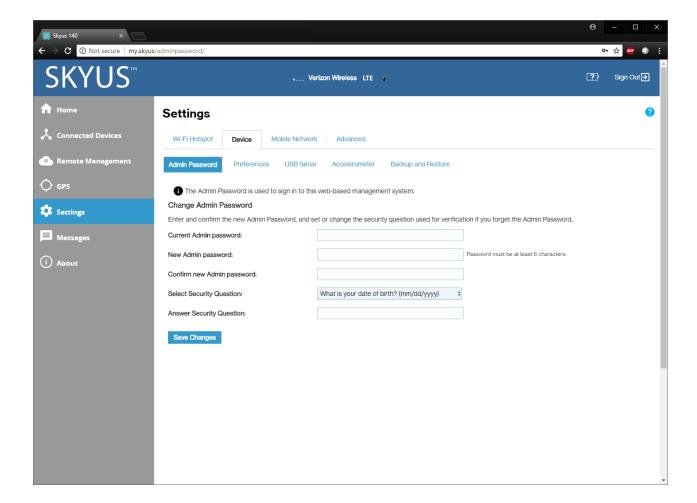
Backup and Restore: Allows you to save or apply a configuration (device settings)

template.

Settings > Device > Admin Password

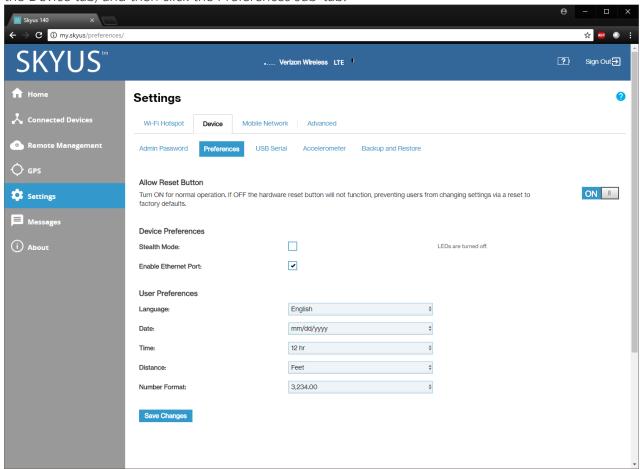
To change your Admin Password, complete the following steps:

- 1. Enter your current password into box and click Continue.
- 2. On the next screen, enter the current password, the new password, and the security question.
- 3. Click Save Changes to complete the password change.



Settings > Device > Preferences

To get to the Preferences page, click Settings on the Menu Tree on the left of the screen. Next, click the Device tab, and then click the Preferences sub-tab.



From this screen, you can make the following changes:

Allow Reset Button Toggle: This toggle enables or disables functionality of the device's

reset button. If turned to off, the device settings cannot be

reset to factory default by using the reset button.

Stealth Mode: Turns off LEDs when the box is checked.

Enable Ethernet Port: Enables the ethernet port when the box is checked.

Language: Currently, only English is available.

Date: Choose your desired date format.

Time: Choose your desired time format.

Distance: Choose your units of measure.

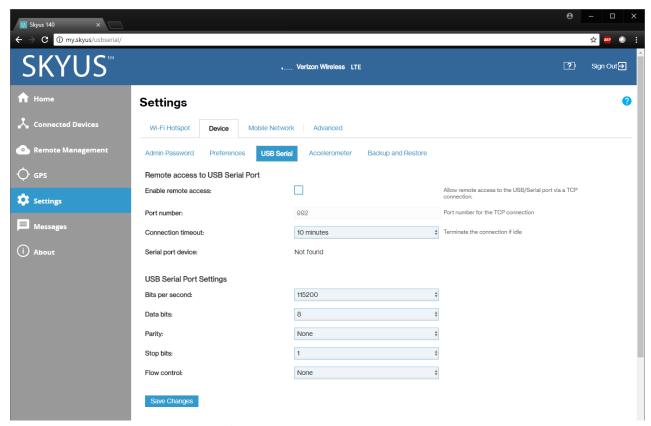
• Number Format: Choose your desired number format.

Click Save Changes to save and changes that have been made.

Settings > Device > USB Serial

To get to the USB Serial page, click Settings on the Menu Tree on the left of the screen. Next, click the Device tab, and then click the Preferences sub-tab.

This page is used to enable a remote connection the USB/serial port using a TCP connection.



From this page, you can make the following changes:

• Remote Access Settings

 Enable Remote Access: Check the box to enable the remote TCP connection to the device's USB/serial port.

Port Number: Specify the desired port to establish the connection Connection Timeout: This timer will automatically disable the connection after the specified amount of time.

Serial Port Device: This will display the connected serial device.

Port Settings

o Bits per Second: Specify the baud rate.

o Data Bits: Specify the size of the data packets.

o Parity: Select odd, even, or none.

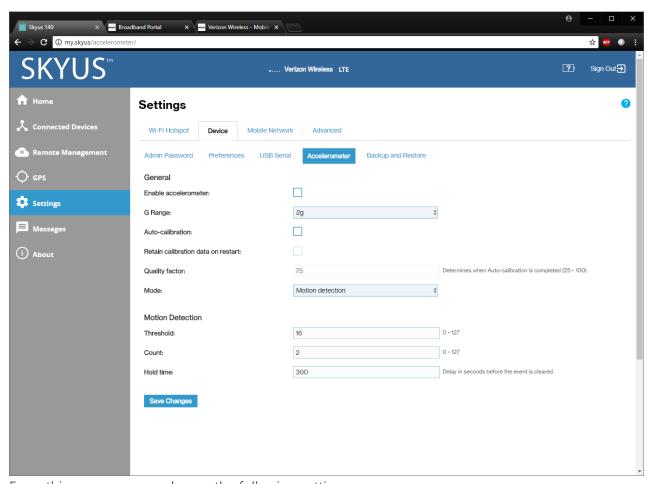
Stop Bits: Select 1 or 2 stop bits to end a packet. Select how the packets will be controlled.

Click Save Changes to save any updates that have been made.

Settings > Device > Accelerometer

To get to the Accelerometer page, click Settings on the Menu Tree on the left of the screen. Next, click the Device tab, and then click the Preferences sub-tab.

Use this page to enable and configure the accelerometer settings. These features are typically used in mobile (automotive) environments.



From this page, you can change the following settings:

General

o Enable Accelerometer: Check the box to turn on the accelerometer.

o G Range: Specify the gravity (G) force range.

o Auto-Calibration: Enables auto-calibration. It is recommended to

always check this box if the accelerometer is going to

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be used.

o Retail Calibration on Restart: Forces the device to automatically re-calibrate on

restart when the box is checked.

o Quality Factor: Specifies the accuracy of calibration needed prior to

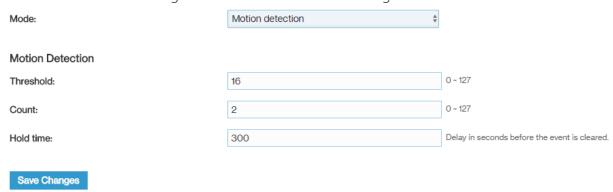
completion of the calibration process. A higher number will enable a more accurate calibration, but it will take longer to complete the calibration

process.

Mode: Choose between Motion Detection and Driver

Behavior.

 Motion Detection: Detects, monitors, and reports only for bulk movements that will show that the device is moving or not. Specify the settings as needed and click Save Changes.



- Driver Behavior: Detects and monitors motion, direction, rates, and accelerations to provide information related to driver behavior. For Driver Behavior, the following fields can be configured. For each of the fields, you can specify the Threshold that will trigger an event (can be used to create alarms through IoT Connect), the Set Time, Clear Time, and Max Time.
 - Braking
 - Acceleration
 - Right Turn
 - Left Turn
 - Vertical
 - Magnitude

Mode:	Driver behavior	*
Mode.	Divor benavior	*

Driver Behavior

Braking

Threshold (milliG)	Set Time (msec)	Clear Time (msec)	Max Time (sec)
0	100	200	10
0	100	200	10
0	100	200	10
0	100	200	10

Acceleration

Threshold (milliG)	Set Time (msec)	Clear Time (msec)	Max Time (sec)
0	100	200	10
0	100	200	10
0	100	200	10
0	100	200	10

Right Turn

Threshold (milliG)	Set Time (msec)	Clear Time (msec)	Max Time (sec)
0	100	200	10
0	100	200	10

Left Turn

Threshold (milliG)	Set Time (msec)	Clear Time (msec)	Max Time (sec)
0	100	200	10
0	100	200	10

Vertical

Threshold (milliG)	Set Time (msec)	Clear Time (msec)	Max Time (sec)
0	100	200	10
0	100	200	10

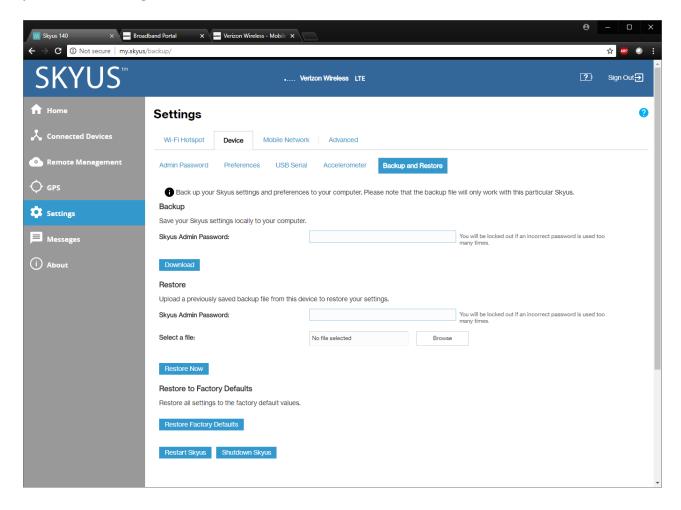
Magnitude

Threshold (milliG)	Set Time (msec)	Clear Time (msec)	Max Time (sec)
0	100	200	10

Save Changes

Settings > Device > Backup and Restore

In this section, you can create a device configuration file that can be used to backup and restore your custom settings.



This page features the following sections:

- Backup:
 - Saves all your current device settings to create a device configuration file.
 - o To create a configuration (backup) file, complete the following steps:
 - 1. Ensure your device is configured as needed.
 - 2. Type your admin password into the Skyus Admin Password field under the Backup heading.

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- 3. Click Download.
- 4. The file will be downloaded to your PC.

Restore:

Allows you to configure your device using a configuration (backup) file.

- o To load a configuration (backup) file, complete the following steps:
 - 1. Type in your admin password into the Skyus Admin Password field under the Restore heading.
 - 2. Click Browse in the Select a File field to locate and select the appropriate file.
 - 3. Click Restore Now to configure your device.
 - 4. Your device will automatically reset and you will need to log back into the user interface.

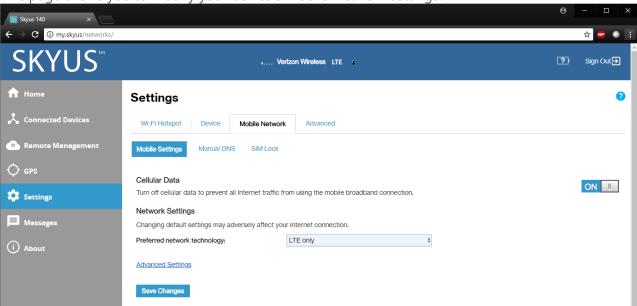
Restore Factory Defaults: Restores your device to factory settings.

• Restart Skyus: Restarts your device.

Shutdown Skyus: Shuts down your device.

Settings > Mobile Network > Mobile Settings

This page allows you to modify your device's Mobile Network settings.



From this page, you can specify the following settings:

- Cellular Data Toggle: Turns on or off cellular data.
- Network Settings
 - Preferred Network Technology:Allows you to select the technology you wish to use.

NOTE: Skyus 100 Verizon models are LTE only.

NOTE: The following are only viewable after clicking the Advanced Settings button.

C

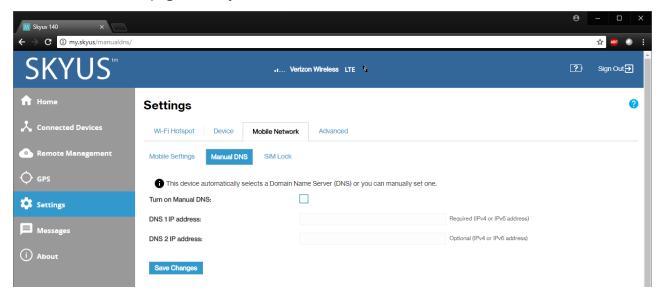
 APN:
 Specify Access Point Name to connect to a cellular network. This will be different depending on if you are using a public or private APN.

APN Reference		
Carrier	APN Type	APN
Verizon	Public Dynamic	vzwinternet
	Public Static – West	we01.vzwstatic
Public Static – Northwest nw01.vzwstatic		nw01.vzwstatic
Public Static – Northeast ne01.vzwstatic		ne01.vzwstatic
	Public Static – South so01.vzwstatic	
	Public Static – Midwest	mw01.vzwstatic
AT&T	Public Dynamic	broadband
	Public Dynamic	i2gold
T-Mobile	Public Dynamic	fast.t-mobile.com

- Authentication:
 Select the appropriate level of authentication if required by your carrier representative.
- User Name and Password:
 Use the User Name and Password from your cellular carrier account.
- o Click Save Changes to save any changes that have been made.

Settings > Mobile Network > Manual DNS

By default, the Skyus 100 series device will automatically select the proper Domain Name Server (DNS). However, this page allows you to select a manual DNS.

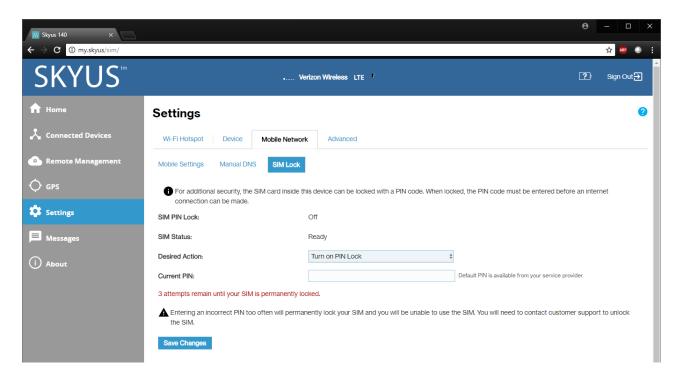


To enable manual DNS, complete the following steps:

- 1. Click the Turn on Manual DNS check box.
- 2. Enter the appropriate required address (IPv4 or IPv6) in the DNS 1 IP Address field.
- 3. Enter the appropriate optional address (IPv4 or IPv6) in the DNS 2 IP Address field.
- 4. Click Save Changes.

Settings > Mobile Network > SIM Lock

This page allows you to specify a PIN that can be required to connect using your device's cellular data.



To lock your SIM, enter the default SIM PIN from your carrier representative and click Save Changes.

NOTE: If you enter a SIM PIN, you will be required to enter this PIN each time you try to re-establish a cellular connection to connect.

Settings > Advanced

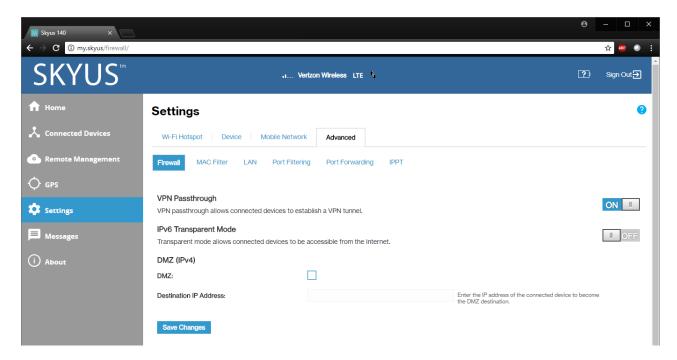
In the Advanced Settings section, you can configure your device's routing and networking settings. The Advanced section has the following sub-sections:

- Firewall
- MAC Filter
- LAN
- Port Filtering
- Port Forwarding
- IPPT

Settings > Advanced > Firewall

To access this section, click Settings in the Menu Tree on the left of the screen. Press the Advanced tab, then press the Firewall sub-tab.

This page allows you to configure basic firewall settings.



From this page, you can make the following changes:

VPN Passthrough Toggle:
 Allows you to establish a VPN tunnel while using the

device.

• IPv6 Transparent Mode Toggle: Allows a connected device to be accessible from the

internet.

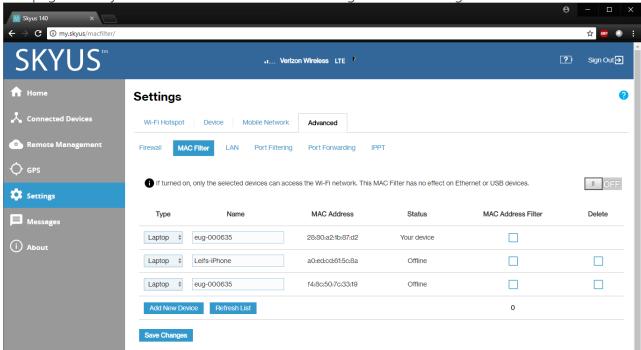
DMZ (IPv4): Allows the device to be remotely accessible via a

remote TCP connection.

Settings > Advanced > MAC Filter

To access this section, click Settings in the Menu Tree on the left of the screen. Press the Advanced tab, then press the MAC Filter sub-tab.

This page allows you to restrict connected devices using MAC addressing.



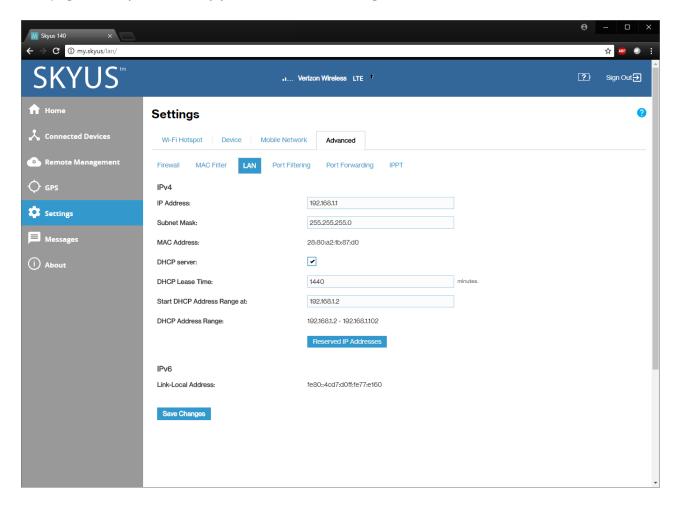
From this screen, you can complete the following actions:

- Click the toggle button to turn on or off MAC Filtering.
- Use the table to edit or enable connected devices.
- Click Add New Device to add a new device to the list.
- Check the MAC Address Filter check box to enable access when MAC Filtering is active.
- To delete a device from the list, check the Delete check box, and then click Refresh List.
- Click Save Changes to save any changes.

Settings > Advanced > LAN

To access this section, click Settings in the Menu Tree on the left of the screen. Press the Advanced tab, then press the LAN sub-tab.

This page allows you to modify your device's LAN settings.

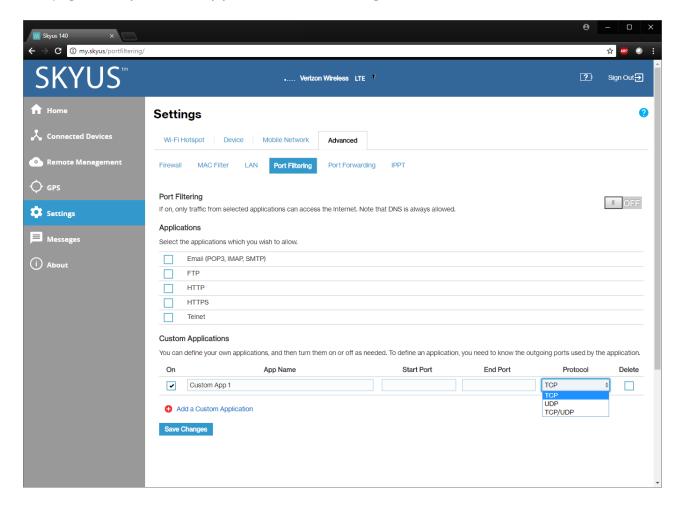


Update any fields as necessary and click Save Changes.

Settings > Advanced > Port Filtering

To access this section, click Settings in the Menu Tree on the left of the screen, then press the Advanced tab, then press the LAN sub-tab.

This page allows you to modify your device's Port settings.

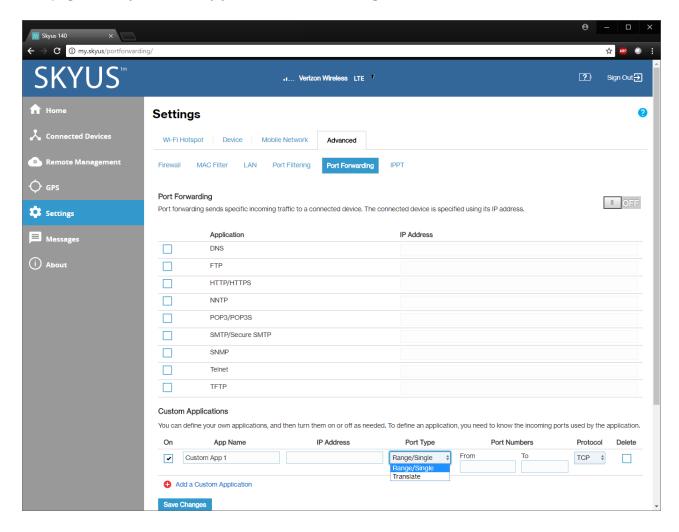


From this page, you can enable port filtering and specify settings using any of the shown Applications. In addition, you can filter based on any custom application that you specify.

Settings > Advanced > Port Forwarding

To access this section, click Settings in the Menu Tree on the left of the screen, then press the Advanced tab, then press the Port Forwarding sub-tab.

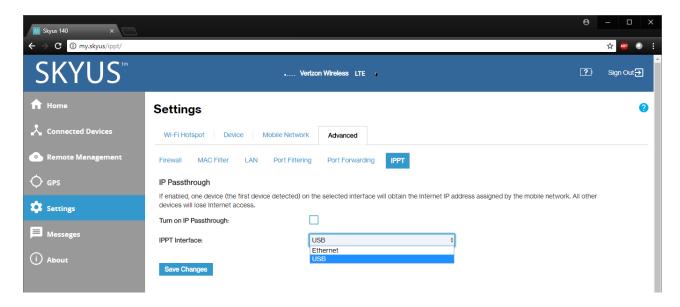
This page allows you to modify your device's Port settings.



Settings > Advanced > IPPT

To access this section, click Settings in the Menu Tree on the left of the screen. Press the Advanced tab, then press the IPPT sub-tab.

This page allows you to enable IP Passthrough on your device.



To enable IP Passthrough (IPPT), complete the following steps:

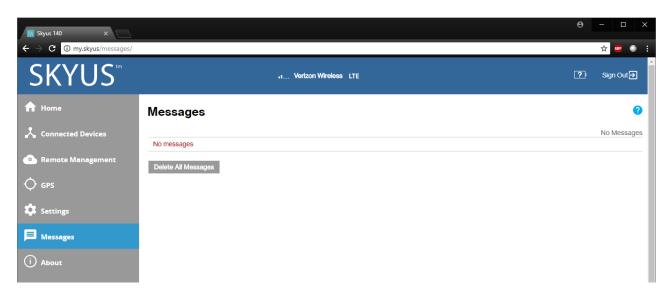
- 1. Click the Turn on IP Passthrough check box.
- 2. Select the appropriate interface type.

NOTE: When IPPT is enabled on a certain interface, all other interfaces will be disabled.

3. Click Save Changes.

Messages

To access Messages, click on Messages in the Menu Tree on the left of the screen.

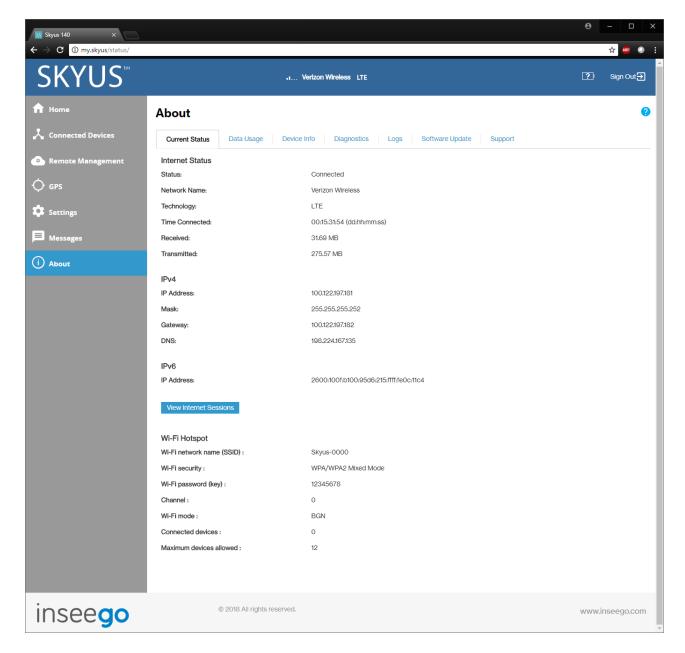


Any text messages sent to your device will be displayed on this screen.

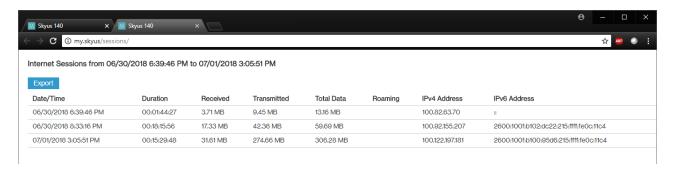
About

To access the About page, click About on the Menu Tree on the left of the screen.

This page allows you to view any and all device information needed. In addition, you are able check if the device needs to be updated and access Support from this page.



From the About > Current Status page, you can view all of the information shown above. To view internet sessions, click the View Internet Sessions button. When this button is clicked, the following page is loaded:

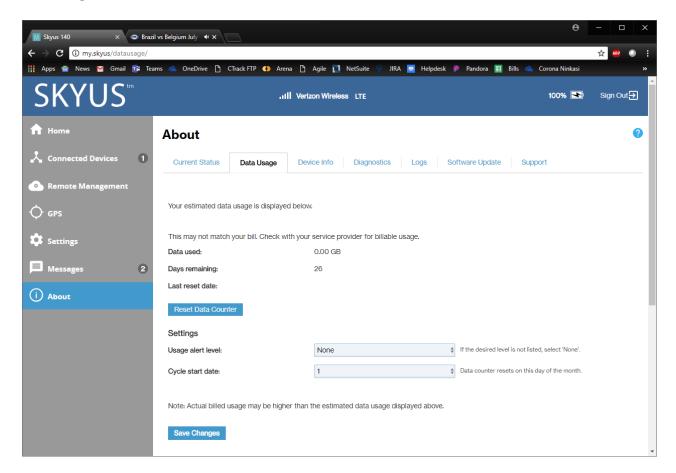


The following pages are also available under the About section:

- Data Usage
- Device Info
- Diagnostics
- Logs
- Software Update
- Support

About > Data Usage

To access the Data Usage page, click About on the Menu Tree on the left of the screen then click the Data Usage tab.



From this page, you can see the following information:

• Data Used: Shows the amount of data used during the current reporting period.

• Days Remaining: Shows the number of days left before the data counter resets.

Last Reset Date: Shows the date when the data has been manually reset.

Reset Data Counter: Button to reset the Data Used field.

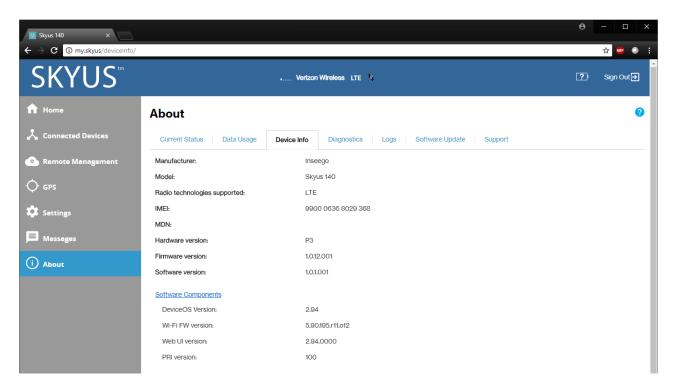
Usage Alert Level: Allows you to specify an alerting threshold for data usage from 20 MB

to 20 GB.

• Cycle Start Date: Allows you to specify the start day of your billing cycle.

About > Device Info

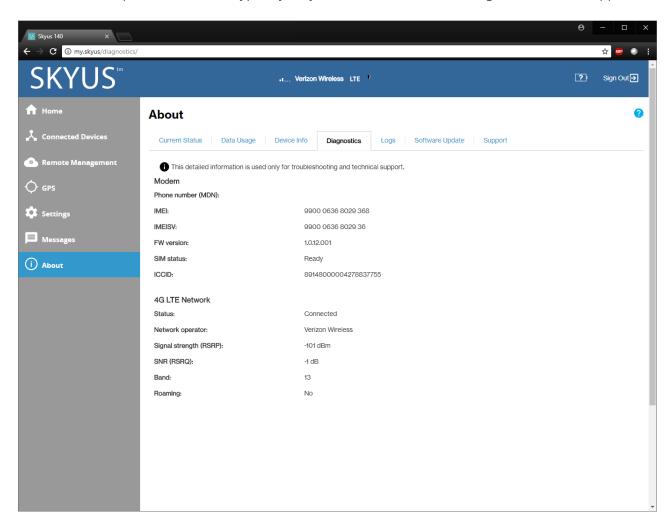
This page presents useful information that will be needed in the event Support is required.



From this page, the information presented above is available.

About > Diagnostics

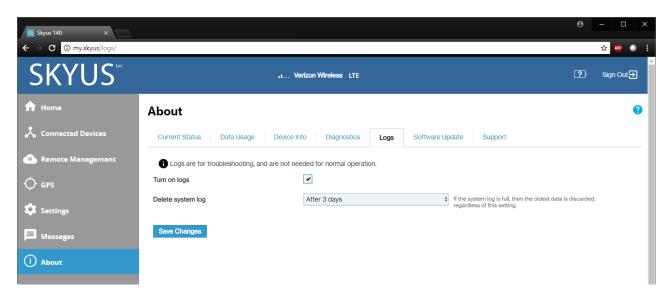
The information presented here is typically only needed for troubleshooting and technical support.



If you need to contact support, please record this information and be ready to share it with your Inseego Support Representative.

About > Logs

If you are experiencing issues with your device, logging the issue is the best way to identify a root cause. If that is ever needed, proceed to the Logs page as shown below.

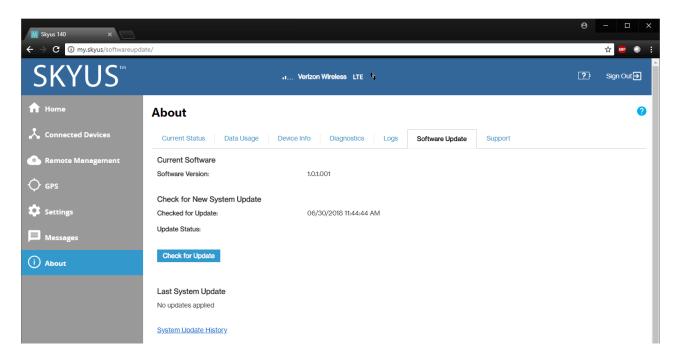


To enable logs, complete the following steps:

- 1. Click the Turn on Logs checkbox.
- 2. Select the length of time needed to capture the event.
- 3. Click Save Changes.

About > Software Update

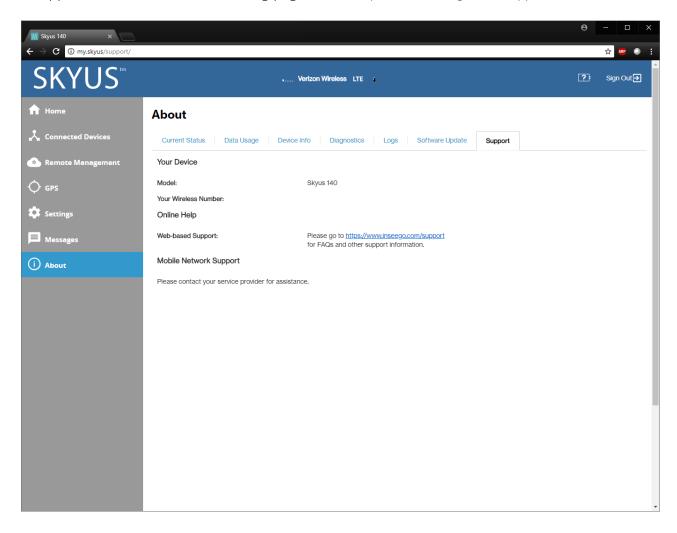
This page is available in the event a software update is needed.



To check for an update, click the Check for Update button. If there is an update available, you will be prompted to update your device. To complete the install process, follow the prompts that are presented.

About > Support

If Support is needed, view the following page to visit https://www.inseego.com/support.



Accessories

Antennas
Backup Battery
Power Cable
USB Cable and AC Adapter
Power over Ethernet Injector
Ethernet Cables

Included Accessories

The following tables show the accessories that come standard with the following SKUs. These items are also available for individual purchase if needed. To order an accessory, contact your Inseego sales representative.

SKU: SK1XXGYYY-R-AC Skyus 100 Gateway, Retail, AC (for Fixed Stationary Installations)		
Accessory		
Whip Antennas	ANT-00007	
Backup Battery	40123117	
120 VAC Power Cable	CBL-00005	

SKU: SK1XXGYYY-R-DC Skyus 100 Gateway, Retail, DC (for Fixed Mobile Installations)	
Accessory	
Whip Antennas	ANT-00007
Backup Battery	40123117
DC Power and IO Cable with Open Leads CBL-00004	

Optional Accessories

The following tables show the accessories that come standard with the following SKUs. These items are also available for individual purchase if needed. For more information or to order an accessory, contact your Inseego sales representative.

Accessory	PN
USB Cable (USB A to USB Micro-B)	CBL-00003
USB Cable 120 VAC Adapter	ACC-00028
USB Cable and 120 VAC Adapter	CBL-00007
PoE (Power over Ethernet, 30 W) Injector	ACC-00029
3 ft Ethernet Cable	FW6829
5 ft Ethernet Cable	FW6605
30 ft Ethernet Cable	FW7920
50 ft Ethernet Cable	FW6678
Serial to USB Adapter	TBD

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Antennas

NOTE: Ensure the device and antennas are located farther than 20 cm from a person. For any questions regarding the safe operation of this device please visit www.inseego.com or contact Inseego Technical Support at allsupport@inseego.com.

Antenna Information

Antenna Type	Whip Antenna
PN	ANT-00007
Connector	SMA-M
Frequency Range (MHz)	746-787, 1710-2155
Peak Gain	LTE B2 – 2.0 dBi
	LTE B4 – 0.5 dBi
	LTE B13 – 1.2 dBi
Direction	Omni
Cable Length	NA
IP Rating	IP52
Color	Black

Backup Battery

The Skyus 100x series features a rechargeable 3.8 V 4400 mAh 16.7 Wh Li-ion backup battery that provides up to 12 hours of critical power for alerting during power loss in stationary environments and usage in vehicle environments when the vehicle is off. The battery will charge when connected to any external power source and it is not designed for primary use. The battery charging circuit is software controlled so it will not charge when the device is outside of -20 - 60° C. If the battery is not needed in your use case or you wish to operate the device outside of this range, please properly store or dispose of the battery according to your local waste management authority.



WARNING! The backup battery will charge when external device temperatures are within $-20 - 50^{\circ}$ C. Outside of this range, the battery charging circuit will be disabled. Li-ion batteries are not safe to use in environments outside of -20 - 60 C. If it is possible that the device will see temperatures outside of this range, please remove the battery from the device and discontinue use with the battery. Failure to comply with these operating ranges may result in extensive damage to the device and/or the device's surrounding area.

Power Cable

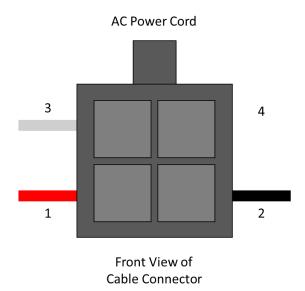
There are two standard power cords available, depending on which SKU is purchased. Both power cords utilize a 4 pin Molex connector.

4 Pin Molex Connector Pinout

Pin #	AC Power Cord	DC Power and IO Cable	Color
1	Power	Power	Red
2	Ground	Ground	Black
3	Power (Tied to Power)	Ignition Sense	White
4	NA (Not Pinned)	GPIO	Green

AC Power Cord

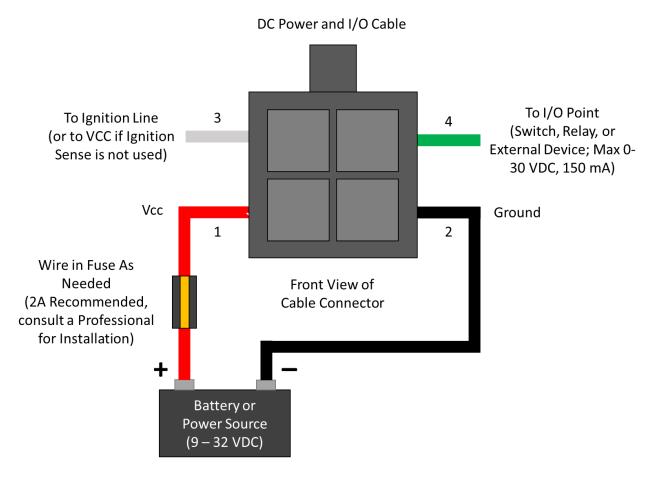
The AC power cable connects the Skyus 100 Series from the 4 pin Molex connector to a 120 VAC outlet.



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DC Power and IO Cable

The DC power cable connects the Skyus 100 Series from the 4 pin Molex connector to open leads.



NOTE: In automotive applications, the backup battery will ensure the device does not cut out due to power loss during engine cranking.

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USB Cable and Adapter

The Skyus 100 Series devices can be powered by USB when connected to a powered host device or when connected using a USB to AC adapter. The following are sold as an optional accessory.

USB Cable (CBL-00003) USB 2.0 A to USB Micro-B, 1.5 m



USB Cable with AC Adapter (CBL-00007)
USB 2.0 A to Micro-B with AC Adapter, 1.5 m



USB AC Adapter (ACC-00028) 120 VAC 1.5 A to 5 VDC 2 A



Compliance and Regulatory

General Disclaimer Warranty Information Regulatory Compliance

General Disclaimer

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- 2.3. Interest Charges. If Buyer fails to pay any invoice when due, INSEEGO may charge Buyer interest in an amount equal to the lesser of one and one-half percent (1½%), or the maximum permissible rate, per month on any past due balance. INSEEGO may withhold delivery of any Products or Services at any time in which Buyer's account is past due or exceeds its approved credit limit. If INSEEGO employs any legal process to recover any amount due and payable from Buyer hereunder, Buyer shall pay all costs of collection and reasonable attorney's fees.

3. Delivery; Acceptance

- 3.1. Delivery; Title and Risk of Loss. All Products will be delivered FOB (for domestic shipments) or EXW (for international shipments), INSEEGO's designated factory. Delivery shall occur, title to the Products (except for title to any Software which shall at all times remain with INSEEGO) shall pass from INSEEGO to Buyer, and Buyer shall assume all risk of loss or damage, upon delivery of the Products to the carrier, unless otherwise agreed by both parties in writing. In no event shall INSEEGO be liable for any delay in delivery (provided that INSEEGO timely delivers the Products to the carrier as provided above), or assume any liability in connection with shipment, nor shall the carrier be deemed an agent of INSEEGO.
- 3.2. Acceptance of Products. Buyer shall inspect all Products promptly upon receipt. The furnishing by INSEEGO of a Product to Buyer shall constitute acceptance of that Product unless INSEEGO receives a written notice of defect or nonconformity within five (5) business days after receipt by Buyer, provided, that such acceptance shall not relieve INSEEGO of its warranty obligations hereunder.

- 4.1. INSEEGO Product Changes and Substitutions. INSEEGO reserves the right to (a) make changes in Products without notice, and without any obligation to incorporate those changes in any Products previously delivered to Buyer and (b) ship to Buyer the most current Product regardless of catalog description, if applicable.
- 4.2. Buyer Changes to Orders or Specifications. Buyer may make changes to any order for standard Products which does not exceed \$5,000 (it being agreed that any series of similar orders for standard Products shall be aggregated and deemed one order for the purpose of determining such amount) by providing written notice to INSEEGO at least thirty (30) days prior to the scheduled shipment date. Any changes to any order for custom or option configured Products, or any order or series of similar orders for standard Products which exceeds \$5,000, including but not limited to any changes to the specifications for the Products, must be approved in advance in writing by INSEEGO. INSEEGO must receive Buyer's change request at least thirty (30) days prior to the scheduled shipment date. In the event of changes to any order or the specifications for the Products, INSEEGO reserves the right to adjust the prices and delivery dates for the Products, and to invoice Buyer for any unearned discounts based upon the actual quantities of Products delivered. In addition, Buyer shall be responsible for all costs associated with such change including, but not limited to, the burdened costs of all raw materials, work in progress and finished goods inventory on-hand or ordered which are impacted by such change.
- 4.3. Cancellation. Any order for standard Products which does not exceed \$5,000 (it being agreed that any series of similar orders for standard Products shall be aggregated and deemed one order for the purpose of determining such amount) may be cancelled by Buyer by providing written notice to INSEEGO at least thirty (30) days prior to the scheduled shipment date. Any order for custom or option configured Products, or any order or series of similar orders for standard Products which exceeds \$5,000, may be cancelled only upon COMPANY's prior written approval, which approval may be granted or withheld in INSEEGO's sole discretion. Any order cancellation will be subject to the following cancellation charges with respect to all cancelled units of Products: (a) the contract price of all Products completed prior to such cancellation; (b) the burdened cost of all raw materials (including long lead time items) in INSEEGO's possession or on order, (c) the burdened cost of all raw materials incorporated into and all labor applied to work in progress, plus profit thereon in accordance with INSEEGO's published margins; and (d) other reasonable cancellation charges including, but not limited to, non-recurring engineering expenses, cancellation costs payable by INSEEGO to its suppliers, and any other costs incurred by INSEEGO relating to such cancellation. INSEEGO will use commercially reasonable efforts to reduce such cancellation costs by reallocating materials to other projects and/or returning surplus material to, or canceling orders with, its suppliers. In no event shall the Buyer be liable for more than the contract price of the cancelled Products.
- 4.4. Returns. Custom or option configured Products, or any order or series of similar orders for standard Products which exceeds \$5,000 in the aggregate, are non-returnable. Any order for standard Products which does not exceed \$5,000 (it being agreed that any series of similar orders for standard Products shall be aggregated and deemed one order for the purpose of determining such amount) may be returned to INSEEGO for credit within thirty (30) days of the initial invoice date (60 days outside of the U.S.) and are subject to a 20% restocking charge. Prior to returning a Product, Buyer must contact INSEEGO's Return Department for shipping instructions and a return material authorization number ("RMA#"). Buyer must ship the Product back in its original condition and in the

original or equivalent packaging, with the RMA# clearly marked on the outside of the box, freight prepaid. INSEEGO shall not be responsible for any damage occurring in transit or obligated to accept Products returned without a RMA#. Buyer bears all risk of loss or damage to the returned Products until delivery at INSEEGO's designated facility. Any return shipment received by INSEEGO without an RMA# and/or whose contents are not received in their original condition, may be reshipped by INSEEGO freight collect to Buyer.

5. Proprietary Rights; Confidentiality

- 5.1. INSEEGO Rights. Unless otherwise specifically agreed in writing by Buyer and INSEEGO, as between Buyer and INSEEGO, INSEEGO retains all right, title and interest in and to the Software, all inventions, ideas, processes, methods, know-how, skills and techniques developed, discovered or conceived by INSEEGO or its employees, including without limitation those developed and/or used in connection with the manufacture of the Products or performing Services hereunder (collectively, the "INSEEGO Rights"). Such rights include, but are not limited to, patent rights, copyrights, trade secret rights, trademark rights, mask work rights and other proprietary rights throughout the world. INSEEGO hereby grants to Buyer a nonexclusive, nontransferable, worldwide, limited license to use the INSEEGO Rights solely to the extent required for Buyer to use the Products or Software sold or licensed hereunder. INSEEGO shall retain all right, title and interest in and to all materials, fixtures or tools designed, developed or manufactured by INSEEGO in connection with the manufacture of the Products.
- 5.2. Buyer Rights. Unless otherwise specifically agreed in writing by Buyer and INSEEGO, as between Buyer and INSEEGO, Buyer retains all right, title and interest in and to all specifications and materials provided by Buyer to INSEEGO, and all inventions, ideas, processes, methods, know-how, skills and techniques developed, discovered or conceived by Buyer or its employees (the "Buyer Rights"). Such rights include, but are not limited to, patent rights, copyrights, trade secret rights, trademark rights, mask work rights and other proprietary rights throughout the world. Buyer hereby grants to INSEEGO a nonexclusive, worldwide, limited license to use and exploit the Buyer Rights solely to the extent required for INSEEGO to perform its obligations and exercise its rights hereunder.
- 5.3. Confidentiality. Each of Buyer and INSEEGO acknowledges that in connection with the purchase and sale of Products or Services, each party may make available to the other party certain confidential and proprietary business and technical information and materials, including the Software (the "Confidential Information"). Confidential Information shall be clearly marked with proprietary legends of the disclosing party at the time of disclosure. If Confidential Information is orally or visually disclosed, it shall be reduced to writing and clearly marked with proprietary legends by disclosing party within 30 days of disclosure. All of the protections and restrictions in these Terms and Conditions as to the use and disclosure of Confidential Information shall apply during such 30-day period. Notwithstanding the foregoing, any information or material which by its nature and under the circumstances surrounding its disclosure is generally considered proprietary and confidential shall be deemed Confidential Information regardless of whether it is properly marked with legends or properly reduced to writing. Each party agrees that it (a) will hold the Confidential Information in strict confidence and use its reasonable efforts to prevent the unauthorized disclosure of the Confidential Information; (b) will not disclose the Confidential Information in any manner whatsoever, except as required by applicable law; (c) will use the

Confidential Information only for the purpose of performing its obligations hereunder or in conjunction with the operation of the Products or Software and for no other purpose; and (d) will provide access to the Confidential Information to only those of its employees or representatives who need to know the Confidential Information for the purpose of performing their duties in connection with the Products or Services. These obligations shall not apply to information that: (i) was independently developed by or for the receiving party without use of the disclosing party's Confidential Information, in whole or in part, as demonstrated by written evidence; (ii) is or becomes generally available to the public without breach of confidentiality obligations by the receiving party; (iii) was in the receiving party's possession or was known by the receiving party without restriction at the time of disclosure by disclosing party, as demonstrated by written evidence; or (iv) is lawfully received by the receiving party on a non-confidential basis from a third party without breach by such third party of any legal, contractual, or fiduciary obligation to the disclosing party.

6. Warranty; Disclaimer of Warranty

- 6.1. Product Warranty. Except as otherwise expressly stated in INSEEGO's quote or in the current operating manual or other written guarantee for any of the Products, INSEEGO warrants that, for the period of time set forth in Section 6.2 below with respect to each Product or component type (the "Warranty Period"), the Products sold hereunder will be free from defects in material and workmanship, and will conform to the applicable specifications, under normal use and service when correctly installed and maintained. INSEEGO shall repair or replace, at INSEEGO's sole option, any defective or nonconforming Product or part thereof which is returned at Buyer's expense to INSEEGO's facility, provided, that Buyer notifies INSEEGO in writing promptly after discovery of the defect or nonconformity and within the Warranty Period. Products may only be returned by Buyer when accompanied by a return material authorization number ("RMA#") issued by INSEEGO's Return Department, with freight prepaid by Buyer. INSEEGO shall not be responsible for any damage occurring in transit or obligated to accept Products returned for warranty repair without a RMA#. Buyer bears all risk of loss or damage to the Products until delivery at INSEEGO's designated facility. INSEEGO shall pay for shipment back to Buyer for Products repaired under warranty. For Products returned for repair that are not covered under warranty, INSEEGO's standard repair charges shall be applicable in addition to all shipping expenses. Unless otherwise stated in INSEEGO's repair quote, any such out-of-warranty repairs are warranted for ninety (90) days from date of shipment of the repaired Product.
- 6.2. Warranty Period. Unless otherwise specified on the quote or in the product description all products are warranted for a period of twelve (12) months from the date of shipment. Extended warranty terms may be available for sale, if sold they will appear as an additional product on your quote/salesorder/invoice. An extended warranty will begin on the day after the expiration of the standard warranty for the product.
- 6.3. Warranty Exclusions. The above warranty does not apply to Products which are (a) repaired, modified or altered by any party other than INSEEGO; (b) used in conjunction with equipment not provided or authorized by INSEEGO; (c) subjected to unusual physical, thermal, or electrical stress, improper installation, misuse, abuse, accident or negligence in use, storage, transportation or handling, alteration, or tampering, or (d) considered a consumable item or an item requiring repair or replacement due to normal wear and tear. On-site warranty repair is not covered under the

forgoing warranty.

6.4. Disclaimer of Warranties; Exclusive Remedy. THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES. EXCEPT AS EXPRESSLY PROVIDED HEREIN, INSEEGO MAKES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, EITHER IN FACT OR BY OPERATION OF LAW, STATUTORY OR OTHERWISE, REGARDING THE PRODUCTS, SOFTWARE OR SERVICES. COMPANY EXPRESSLY DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE FOR THE PRODUCTS, SOFTWARE OR SERVICES. THE OBLIGATIONS OF COMPANY SET FORTH IN THIS SECTION SHALL BE COMPANY'S SOLE LIABILITY, AND BUYER'S SOLE REMEDY, FOR BREACH OF THE FOREGOING WARRANTY. Representations and warranties made by any person including distributors, dealers and representatives of INSEEGO which are inconsistent or in conflict with the terms of this warranty shall not binding on INSEEGO unless reduced to writing and approved by an expressly authorized officer of INSEEGO.

7. Indemnity

- 7.1. INSEEGO Indemnity. INSEEGO shall indemnify and hold harmless Buyer from any final award of damages in any suit or proceeding instituted against Buyer based upon a claim that a Product or the Software sold or licensed hereunder infringes any patent or copyright of a third party. INSEEGO shall defend, at its expense, any such suit or proceeding provided that: (a) Buyer gives INSEEGO prompt notice in writing of any such suit and permits INSEEGO through counsel of its choice, to answer the charge of infringement and defend such suit; and (b) Buyer gives INSEEGO all the needed information, assistance and authority, at INSEEGO's expense to enable INSEEGO to defend such suit. INSEEGO shall not be responsible for payment of any amounts under any settlement made without its prior written consent. The foregoing indemnity shall not apply to the extent such alleged or actual infringement arises as a result of (i) the use or incorporation of such Product or Software in a manner or in combination with any other products, devices or parts not specified in INSEEGO's specifications therefor, or (ii) modifications of such Product or Software made by Buyer or any party (other than COMPANY) which were not approved by INSEEGO, or (iii) INSEEGO's compliance with any of Buyer's designs, specifications or instructions. In the event that a court of competent jurisdiction determines in a final, non-appealable order that the Product or the Software is infringing in a manner for which INSEEGO is obligated to indemnify Buyer pursuant to this Section
- 7.1. INSEEGO shall, at its option, either (1) procure for Buyer the right to continue using such infringing Product or Software; (2) replace the infringing Product or Software with a non- infringing item of like form, fit or function; (3) modify the Product or Software so that it no longer infringes; or (4) remove the Product or Software and refund the purchase price to Buyer. THIS SECTION STATES INSEEGO'S SOLE RESPONSIBILITY AND LIABILITY, AND THE BUYER'S SOLE REMEDY, FOR ANY ACTUAL OR ALLEGED INFRINGEMENT OF ANY PATENT OR COPYRIGHT BY ANY PRODUCT OR SOFTWARE DELIVERED HEREUNDER OR ANY PARTS THEREOF. THIS SECTION IS IN LIEU OF AND REPLACES ANY THER EXPRESS, IMPLIED OR STATUTORY WARRANTY AGAINST INFRINGEMENT. IN NO EVENT SHALL INSEEGO BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY SUCH INFRINGEMENT.
- 7.2. Buyer Indemnity. Buyer shall indemnify and hold harmless INSEEGO from and against any expense or loss resulting from any actual or alleged infringement of any patent or copyright arising

as a result of (a) INSEEGO's compliance with any of Buyer's designs, specifications or instructions, (b) the use or incorporation of such Product or Software in a manner or in combination with any other products, devices or parts not specified in INSEEGO's specifications therefor, or (c) modifications of such Product or Software by Buyer or any party (other than INSEEGO) which were not approved by INSEEGO. Buyer shall defend, at its expense, any suit brought against INSEEGO alleging any such infringement provided that INSEEGO (i) gives Buyer prompt notice of any such suit and permits Buyer, through counsel of its choice, to defend such suit and (ii) gives Buyer all needed information, assistance and authority, at Buyer's expense, necessary for Buyer to defend any such suit.

8. Customer Furnished Material

8.1. In the event that Buyer, with INSEEGO's prior approval, provides products, raw materials, fixtures or tools (collectively, the "Customer Furnished Material" or "CFM") to INSEEGO for incorporation into, or use in the manufacture of, the Products, or in conjunction with the Services, Buyer shall retain title to, and shall continue to bear all risk of loss or damage to, such CFM. CFM IS PROVIDED BY BUYER AT BUYER'S RISK. IN NO EVENT SHALL INSEEGO BE LIABLE FOR ANY LOSS OR DAMAGE TO SUCH CFM RESULTING FROM ANY CAUSE WHILE IN INSEEGO'S POSSESSION. BUYER SHALL BE SOLELY RESPONSIBLE FOR INSURING THE CFM AGAINST ANY SUCH LOSS OR DAMAGE.

8.2. CFM certification and quality are the responsibility of Buyer. All CFM is subject to inspection by INSEEGO upon receipt, and INSEEGO reserves the right to refuse the CFM and/or re-quote the order based upon such inspection. CFM is not guaranteed to yield Buyer's total order quantity. If material shortages occur due to yield, Buyer shall, at its option, either supply additional CFM to complete the order or close the order short. Any CFM not used by INSEEGO will be returned to Buyer, at Buyer's risk and expense.

9. Limitation of Liability.

INSEEGO SHALL NOT BE LIABLE FOR ANY COMMERCIAL LOSSES, LOSS OF REVENUES OR PROFITS, LOSS OF GOOD WILL, INCONVENIENCE, OR EXEMPLARY, SPECIAL, INCIDENTAL, INDIRECT, CONSEQUENTIAL OR PUNITIVE DAMAGES WHATSOEVER, OR CLAIMS OF THIRD PARTIES, REGARDLESS OF THE FORM OF ANY CLAIM, WHETHER IN CONTRACT OR TORT, WHETHER FROM BREACH OF THIS AGREEMENT, OR DEFECTIVE PRODUCTS, OR LOSS OF DATA OR FROM ANY OTHER USE, EVEN IF INSEEGO HAS BEEN ADVISED OR SHOULD BE AWARE OF THE POSSIBILITY OF SUCH DAMAGE. INSEEGO'S LIABILITY FOR LOSS OR DAMAGES SHALL NOT EXCEED THE PURCHASE PRICE PAID FOR THE PARTICULAR PRODUCT.

10. General

10.1. Exceptions to Performance. Buyer shall indemnify and hold harmless INSEEGO from and against any expense or loss resulting from any actual or alleged infringement of any patent or copyright arising as a result of (a) INSEEGO's compliance with any of Buyer's designs, specifications or instructions, (b) the use or incorporation of such Product or Software in a manner or in combination with any other products, devices or parts not specified in INSEEGO's specifications therefor, or (c)

modifications of such Product or Software by Buyer or any party (other than INSEEGO) which were not approved by INSEEGO. Buyer shall defend, at its expense, any suit brought against INSEEGO alleging any such infringement provided that INSEEGO (i) gives Buyer prompt notice of any such suit and permits Buyer, through counsel of its choice, to defend such suit and (ii) gives Buyer all needed information, assistance and authority, at Buyer's expense, necessary for Buyer to defend any such suit.

- 10.2. Export. Buyer acknowledges and agrees that the Ultimate Destination of the Products and Software is in the United States of America, unless otherwise indicated in the INSEEGO quote and/or order acknowledgment. Buyer shall not, nor shall Buyer authorize or permit its employees, distributors, customers, and/or agents to, export or re-export any of the Products or Software (including any information relating thereto) to any foreign national, nation, firm, or country, including foreign nationals employed by or associated with Buyer, without first complying with all U.S. laws, regulations or ordinances including the International Traffic in Arms Regulation (ITAR) and the Export Administration Regulation (EAR), including the requirement for obtaining an export license, if applicable. Buyer agrees to defend, indemnify, and hold harmless INSEEGO from and against any claim, loss, liability, expense, or damage (including liens or legal fees) incurred by INSEEGO with respect to any of Buyer's export or re-export activities contrary to this provision.
- 10.3. Severability. If any provision of these Terms and Conditions is held to be invalid by a court of competent jurisdiction, then the remaining provisions shall remain, nevertheless, in full force and effect. The parties agree to renegotiate in good faith any term held invalid and to be bound by the mutually agreed substitute provision in order to give the most approximate effect intended by the parties.
- 10.4. No Waiver. No waiver of any provision of these Terms and Conditions shall be valid or binding on any party unless agreed to in writing by the party to be charged. The failure of either party to enforce at any time any of the provisions of these Terms and Conditions, or the failure to require at any time performance by the other party of any of the provisions of these Terms and Conditions, shall in no way be construed to be a present or future waiver of such provisions, nor in any way affect the validity of either party to enforce each and every such provision thereafter.
- 10.5. Remedies. INSEEGO shall have the right to terminate any order, or to delay the shipment thereof, by reason of (a) Buyer's bankruptcy or insolvency, or the pendency of any proceedings against Buyer under any statute for the relief of debtors; (b) Buyer's breach of these Terms and Conditions; (c) INSEEGO's learning that the ultimate destination of the Products is other than that set forth in the INSEEGO quote; or (d) failure of Buyer to meet any other reasonable requirements established by INSEEGO or to provide timely responses to requests from INSEEGO (including acts or omissions of Buyer which may delay production).
- 10.6. Wireless Service. INSEEGO shall not be responsible for any changes or inaccuracies made in the published rate plans or promotions of any wireless service provider. Wireless service coverage may vary due to Buyer's equipment, radio transmission limitations, terrain, human involvement, acts of nature and other reasons. Due to wireless coverage limitations the transmission of voice and data information may not be accessible at all times. All claims to the performance and availability of product and service are subject to the performance of the service provider or the manufacturer of

the product.

10.7. Governing Law; Jurisdiction and Venue. These Terms and Conditions shall be construed under and according to the laws of the State of California without regard to its conflict of law provisions. The parties agree that jurisdiction and venue for any actions relating to these Terms and Conditions will be in the state or federal courts located in Lane County, State of Oregon. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in Lane County, State of Oregon, for the adjudication of any dispute hereunder or in connection herewith and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, or that such suit, action or proceeding is improper.

10.8. Attorney's Fees. In the event of any action, suit or proceeding relating to the subject matter hereof, the prevailing party shall be entitled, in addition to any other rights and remedies it may have, to recover its reasonable attorneys' fees and related costs from the non-prevailing part.

Regulatory Compliance

Regulatory Information

Federal Communications Commission (FCC) Statement

This FCC statement is applicable to the following models:

SKYUS 110	FCC ID: PKRNVWSK110 / Contains FCC ID: XYOLM61
SKYUS 110B	FCC ID: PKRNVWSK110B / Contains FCC ID: XYOLM61
SKYUS 140	FCC ID: PKRNVWSK140 / Contains FCC ID: PKRNVWSM4401
SKYUS 140B	FCC ID: PKRNVWSK140B / Contains FCC ID: PKRNVWSM4401

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential environment. 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:

- Re-orient or re-locate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experience radio/television technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1. This device may not cause harmful interference.
- 2. This device must accept any interference received, including interference that may cause undesired operation of the device.

FCC RF Radiation Exposure Content:

- 1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures.
- 2. This equipment is authorized only for Fixed or Mobile applications and is required to be installed as such.
- 3. This equipment must be installed and operated with a minimum separation of 20 cm (8 in.) between the equipment and users/bystanders at all times.

Cellular External Antenna Considerations:

External Antenna(s) Included: WHIP ANTENNA Part# ANT-00007
To comply with FCC RF Exposure Requirements, the Maximum Cellular Antenna Gain Must Not Exceed:

Model	Cellular Band	Antenna Gain (dBi) including cable loss
SKYUS 110 SKYUS 110B	LTE B4 LTE B13	1.3 dBi 5.0 dBi
SKYUS 140 SKYUS 140B	LTE B2 LTE B4 LTE B13	6.5 dBi 5.3 dBi 5.5 dBi

Safety Hazards Information

Warning: This equipment is to be installed only by qualified personnel.

Do not operate the Skyus 100 Series equipment in an environment that might be susceptible to radio interference resulting in danger, specifically:

Areas where prohibited by the law

Follow any special rules and regulations and obey all signs and notices. Always turn off the host device when instructed to do so, or when you suspect that it might cause interference or danger.

Where explosive atmospheres might be present

Do not operate your device in any area where a potentially explosive atmosphere might exist. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death. Be aware and comply with all signs and instructions.

Users are advised not to operate the device while at a refueling point or service station. Users are reminded to observe restrictions on the use of radio equipment in fuel depots (fuel storage and distribution areas), chemical plants or where blasting operations are in progress.

Areas with a potentially explosive atmosphere are often but not always clearly marked. Potential locations can include gas stations, below deck on boats, chemical transfer or storage facilities, vehicles using liquefied petroleum gas (such as propane or butane), areas where the air contains chemicals or particles, such as grain, dust or metal powders, and any other area where you would normally be advised to turn off your vehicle engine.

Near medical and life support equipment

Do not operate your device in any area where medical equipment, life support equipment, or near any equipment that might be susceptible to any form of radio interference. In such areas, the host communications device must be turned off. The device can transmit signals that could interfere with this equipment.

On an aircraft, either on the ground or airborne

In addition to FAA requirements, many airline regulations state that you must suspend wireless operations before boarding an airplane. Please ensure that the modem is turned off prior to boarding aircraft in order to comply with these regulations. The modem can transmit signals that could interfere with various onboard systems and controls.

While operating a vehicle

The driver or operator of any vehicle should not operate a wireless data device while in control of a vehicle. Doing so will detract from the driver or operator's control and operation of that vehicle. In some countries, operating such communications devices while in control of a vehicle is an offense.

Electrostatic Discharge (ESD)

Electrical and electronic devices are sensitive to electrostatic discharge (ESD). Macintosh native connection software might attempt to reinitialize the device should a substantial electrostatic discharge reset the device. If the software is not operational after an ESD occurrence, then restart your computer.

ROHS COMPLIANCE

As a part of Inseego's corporate policy of environmental protection, Inseego takes every step to ensure that devices are designed and manufactured to comply to the European Union Directive 2015/863 amending 2011/65/EU for the Restriction of Hazardous Substances (RoHS).