WATCHLOCK CUBE

User Guide

Version 1.1

February 2019

Contents

1. Introduction

WatchLock Cube is a versatile, user-friendly, smart reporting padlock that keeps you updated in real time. WatchLock Cube is the latest version of the award-winning WatchLock padlock, which combines advanced GPS and GSM technology with a versatile locking system.

It provides notifications in real time upon any predefined irregular event, acting both as a security measure and a monitoring solution. WatchLock Cube protects your assets and communicates with you no matter where you or your assets are.

WatchLock Cube is equipped with high-end electronic components; its battery capacity is increased fourfold compared to that of WatchLock. The Cube's electronic shell can fit a variety of C10 padlocks from various manufacturers.

2. Package Contents

1. WatchLock Cube with protective rubber cover
2. Keys
3. WatchLock Cube programming cable (optional)

3. Product Description

WatchLock Cube is a combination of an electronic tracking device with GPS locating system, cellular-based communication capabilities, and a padlock.

Together they provide immediate triggered alerts and location information through email, a web-based monitoring system, or a smartphone app.

This manual describes how to configure and monitor the WatchLock Cube device.

Audible signals

The device uses audible signals (beeps) to announce its activity. When you insert the programming cable or the batteries in the device, it will sound one (1) audible signal (beep), to indicate that it was activated.

After this, the device will connect to the cellular network. Once the device performs a successful connection to the cellular network, it will sound two (2) audible signals (beeps).

At the same time, the device will connect to the GPS and get the location. Once the device performs a successful connection to GPS, it will sound three (3) audible signals (beeps).

The device will sound four (4) audible signals (beeps) when its batteries are getting empty.

When the shackle is connected to the tracking device and the lock is being locked / unlocked, the device will sound one (1) short audible signal (beep).

Technical specifications

Location	Type Time to First Fix (TTFF) Positioning Accuracy Velocity Antenna Type	GPS, GLONASS (optional) 12 sec. (hot start) 10 m CEP (50%) 0.2 m/s (50%) Built in (concealed)
Environmental Specifications	Operating Temperature Storage Temperature	-20°C to +60°C -40°C to +85°C
CPU	Static RAM Non-volatile Memory Flash Memory	128 KB 34 KB 2048 KB
Battery	Type Power	4 AA batteries (rechargeable / non-rechargeable) Varies by type of AA batteries used. It is the capacity of a single AA battery used multiplied by 0.8
GSM Communication	Type Networks	GSM: 850/900/1800/1900 SMS, GPRS, HSDPA 850/900 class 4 (2 Watt) 1800/1900 class 1 (1 Watt)
Physical Specifications	Dimensions Weight	7.5 x 7.5 x 8 cm (17 cm with C2 shackle) 910 g (padlock included)
Accelerometer	Type Purpose	3 Axis, 0.1g resolution Identify and report events of impact
Access Port	Type	USB
Power Consumption (mA)	Sleep/Idle GPS only GPRS only GPS and GPRS	0.5 105 80 165

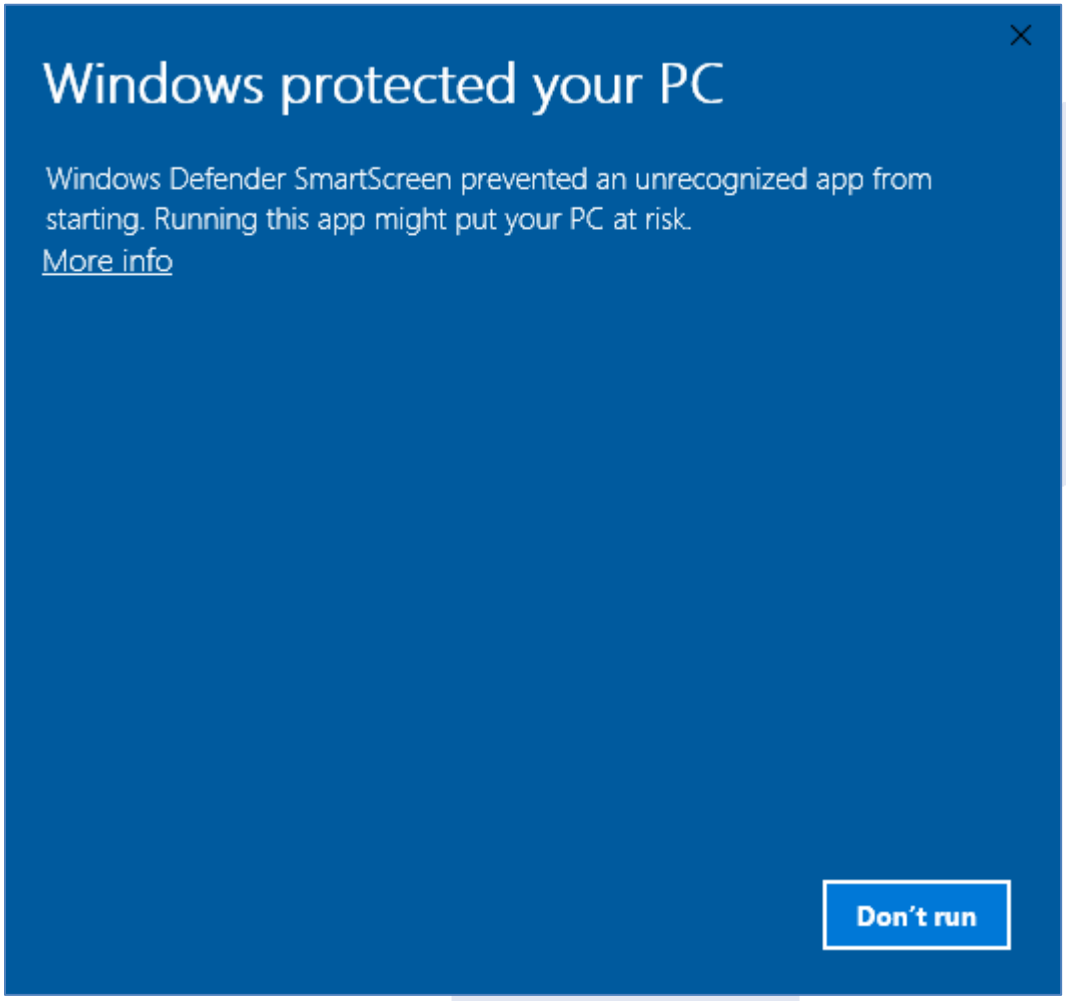
4. Configuration

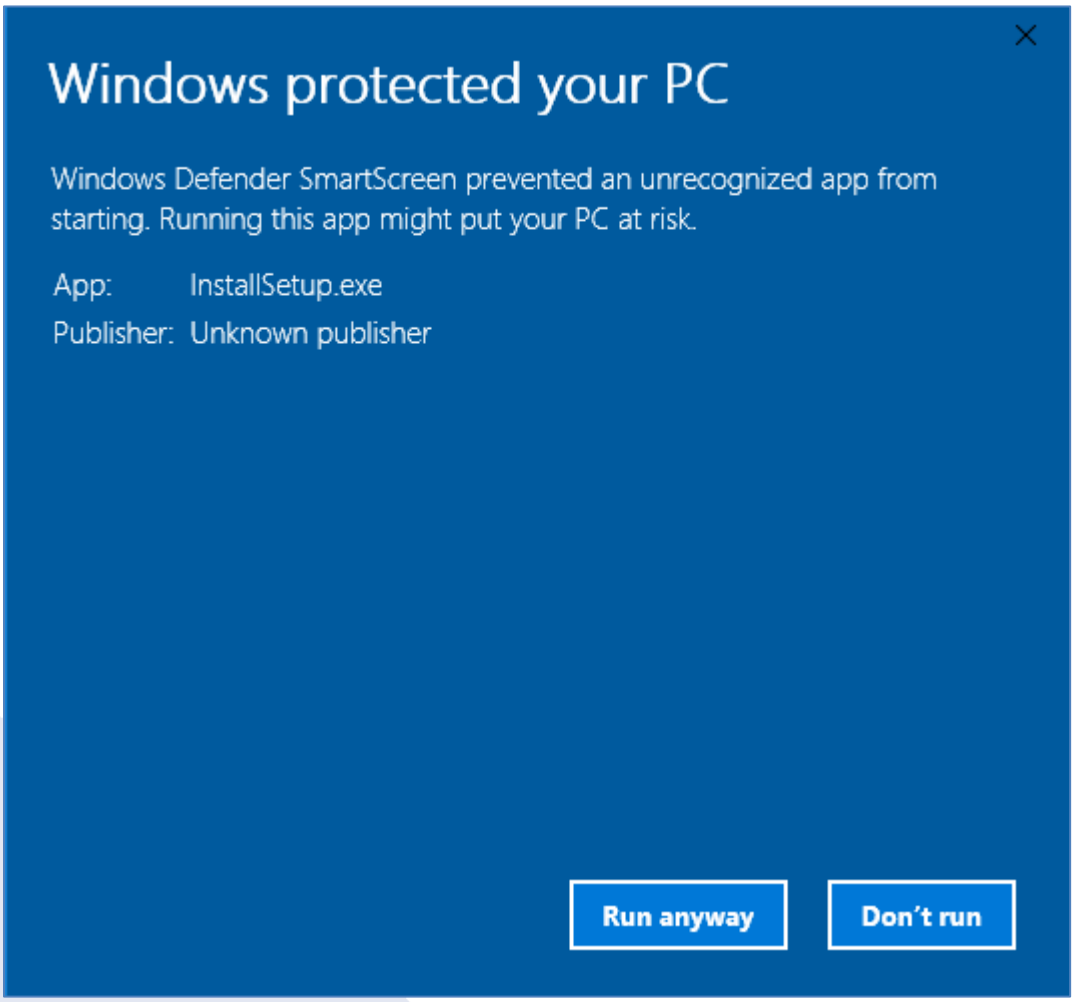
Downloading the software

For the link to download the Installer application setup file, please contact Starcom technical support by **Email**: support@starcomsystems.com, or **Skype**: **starcom.support**.

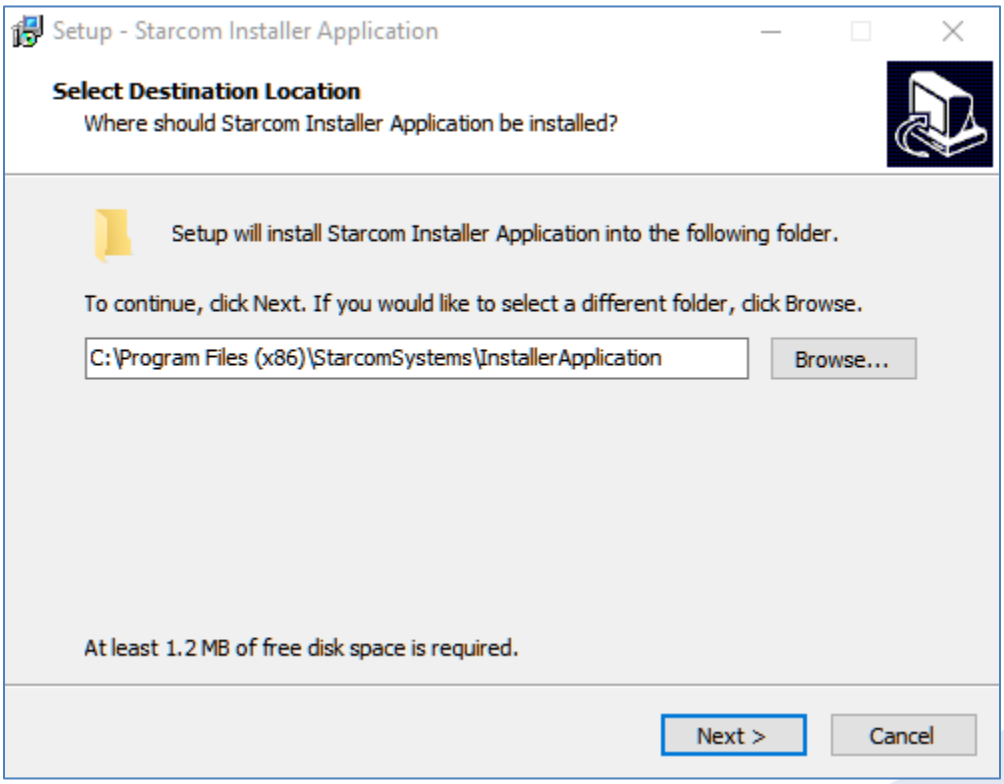
Installing the software

Locate the folder where you saved the installer setup file. Double-click the **InstallSetup.exe**. A Windows Defender window appears. Click **More info**.

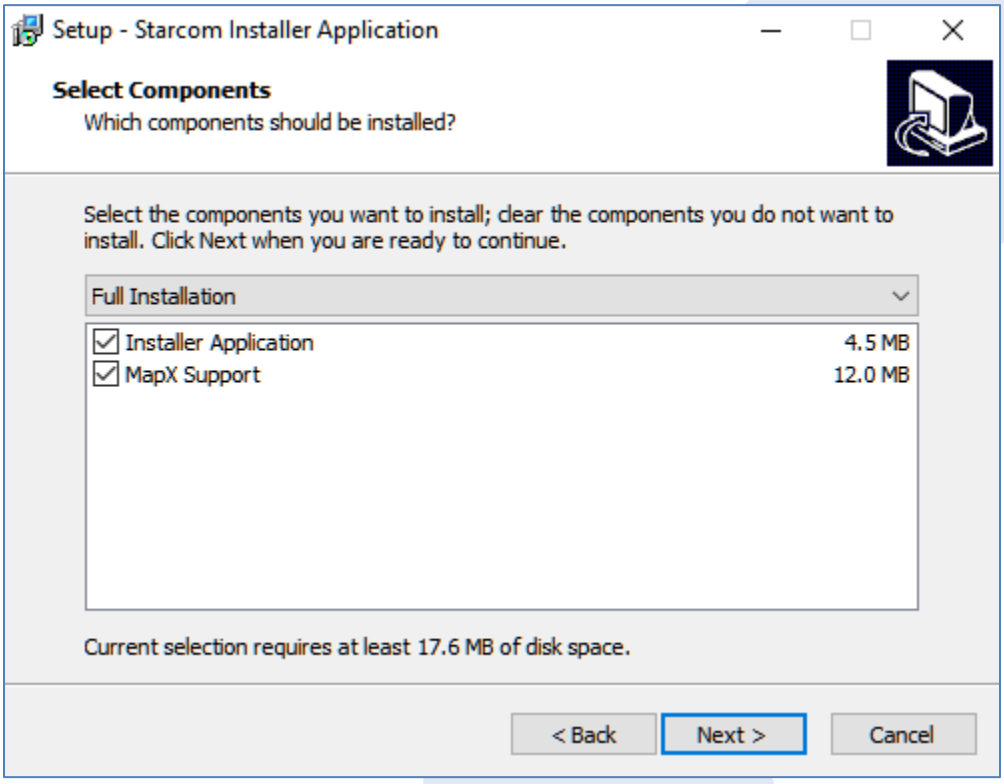




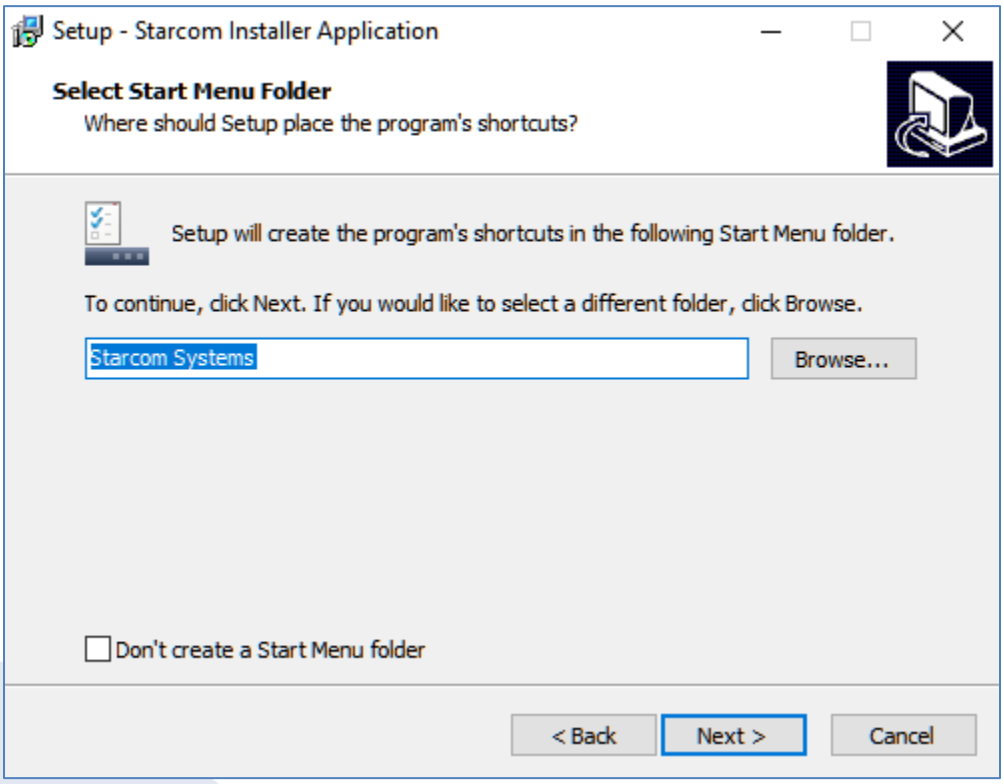
Click **Run anyway**. The Select Destination Location window appears.



Click **Next**. The Select Components window appears.

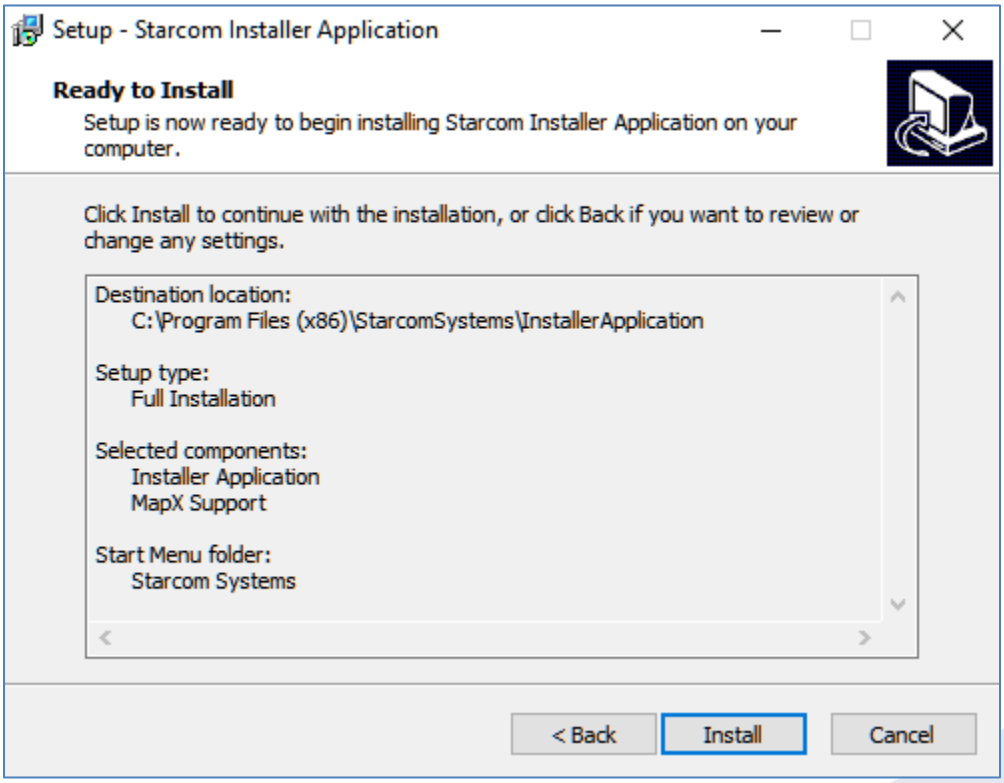


Click **Next**. The Select Start Menu Folder window appears.

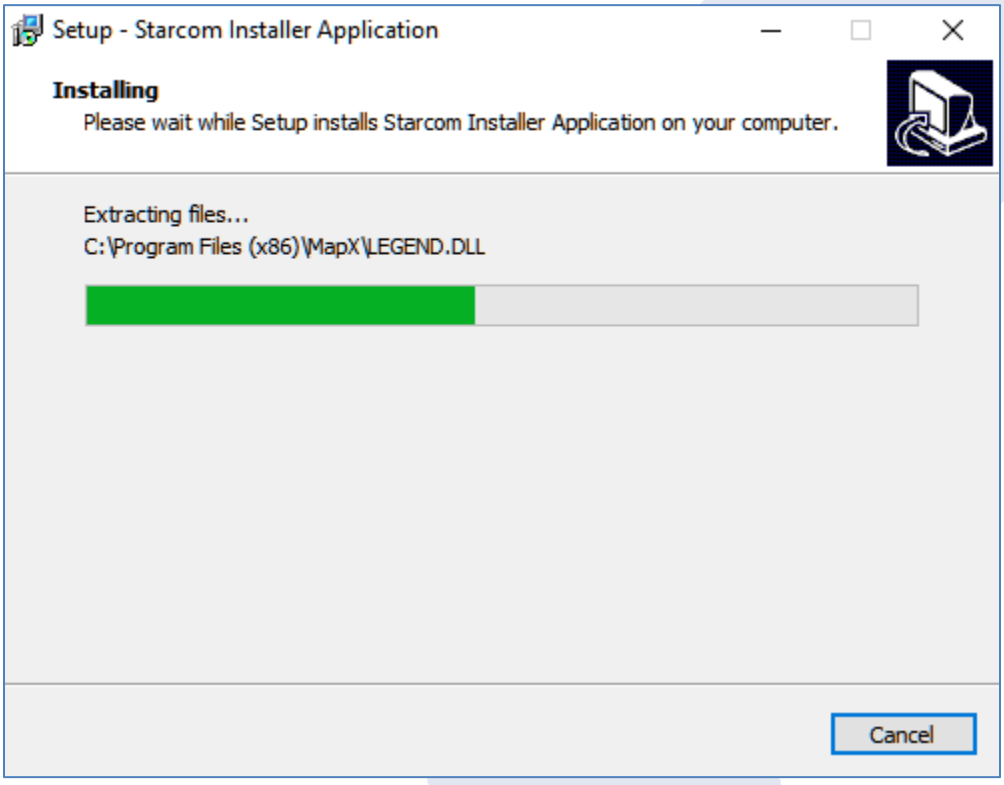


NOTE: Select **Don’t create a Start Menu folder** checkbox, if you do not want to create a start menu folder.

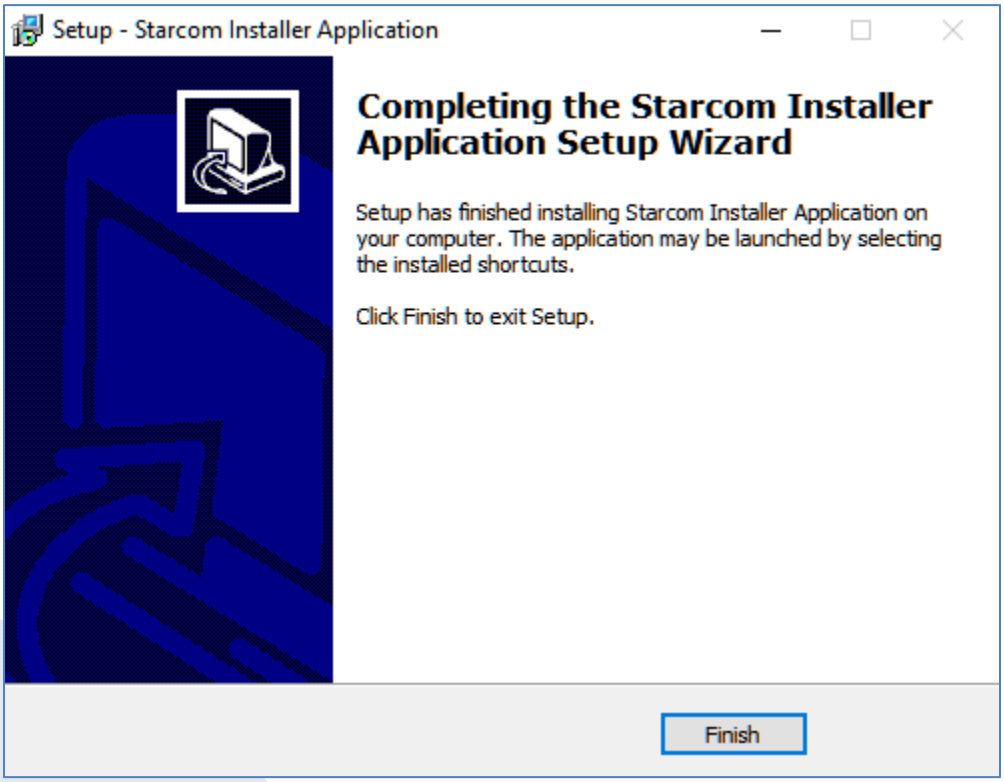
Click **Next**. The Ready to Install window appears.



Click **Install**. The installation starts, and a progress bar appears in the window indicating the progress of the installation.



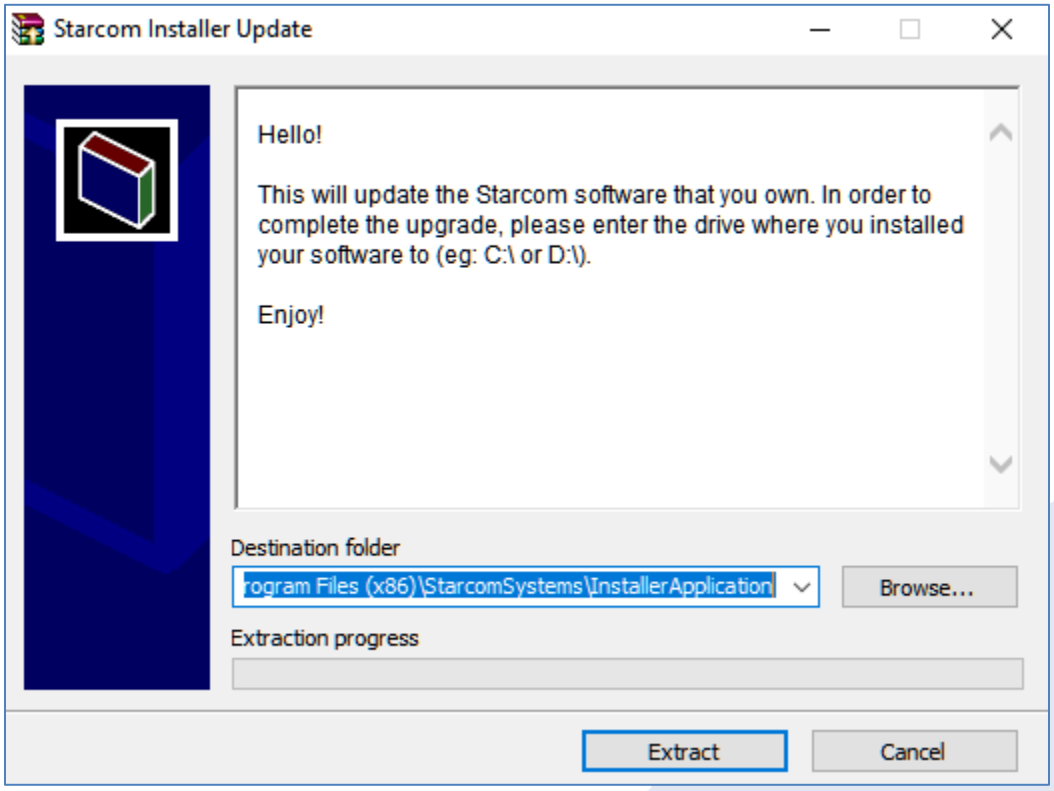
When the installation is complete, the Completing the Starcom Installer Application Setup Wizard window appears.



Click **Finish**.

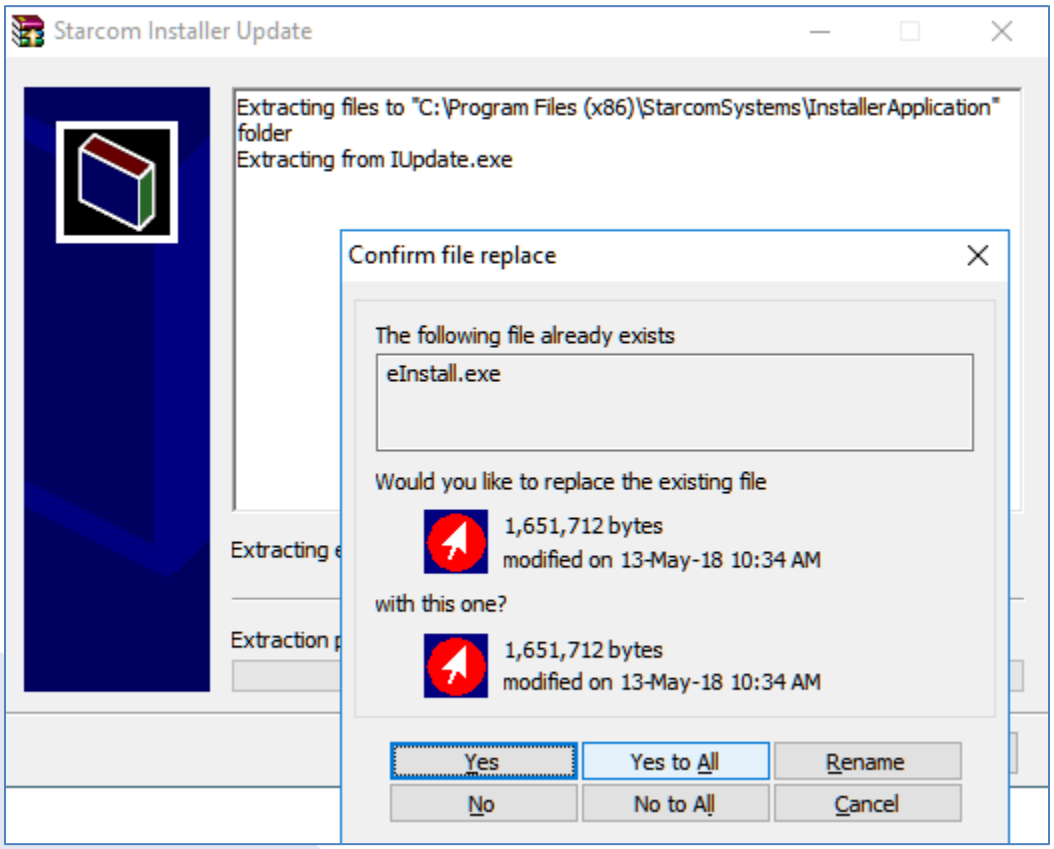
Installing the update

To install the Installer update software, locate the folder where you saved the update file. Double-click **IUpdate.exe**. The Starcom Installer Update window appears.

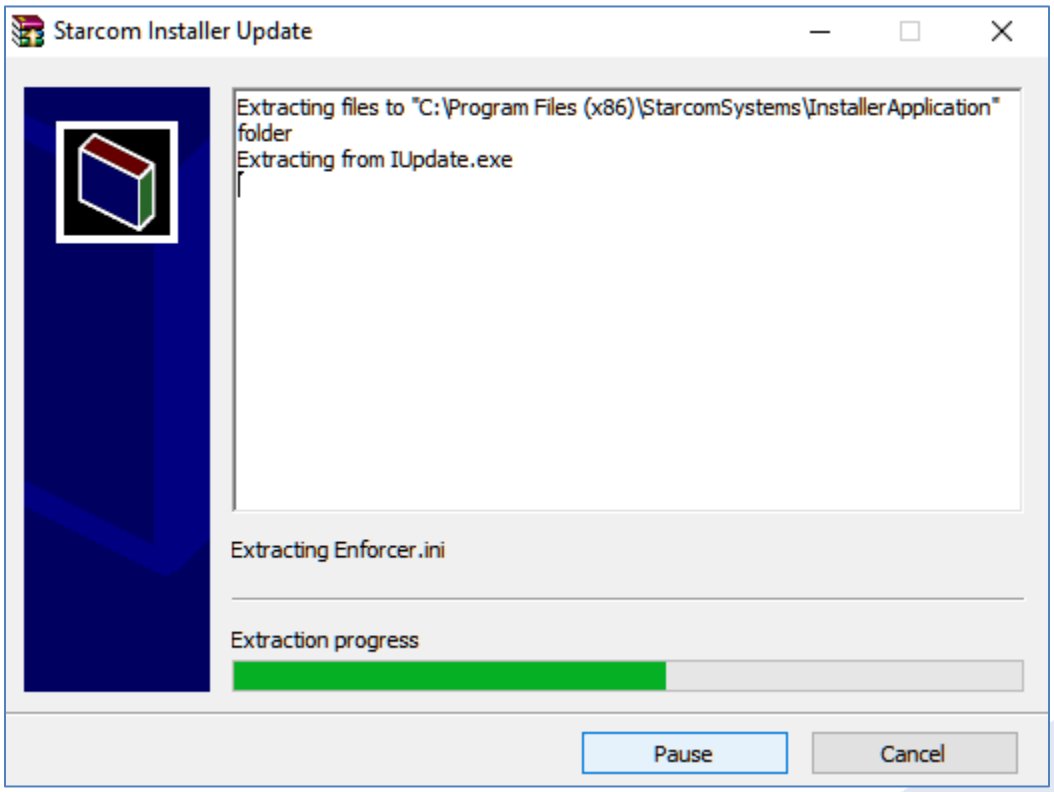


Verify that the Destination folder points to the location where the Starcom Installer software is installed and click **Extract**.

A Confirm file replace dialog box appears. Click **Yes to All**.



The installation starts, and a progress bar appears in the window, indicating the progress of the installation.



The Starcom Installer Update window closes, when the update is complete.

Installing the cable driver

The WatchLock Cube cable driver can be downloaded from the following location:

http://www.ftdichip.com/Drivers/VCP.htm

Download the driver for the proper Windows version.

The driver Installation Guide can be found at the following location:

http://www.ftdichip.com/Support/Documents/InstallGuides.htm

Download the Installation Guide for the proper Windows version. Follow the instructions in the Guide to install the cable driver.

Disassembling the device

Use the key to open the lock and remove the shackle.

Remove the rubber cover from the device.

Pull the plastic cover to remove it from the device.

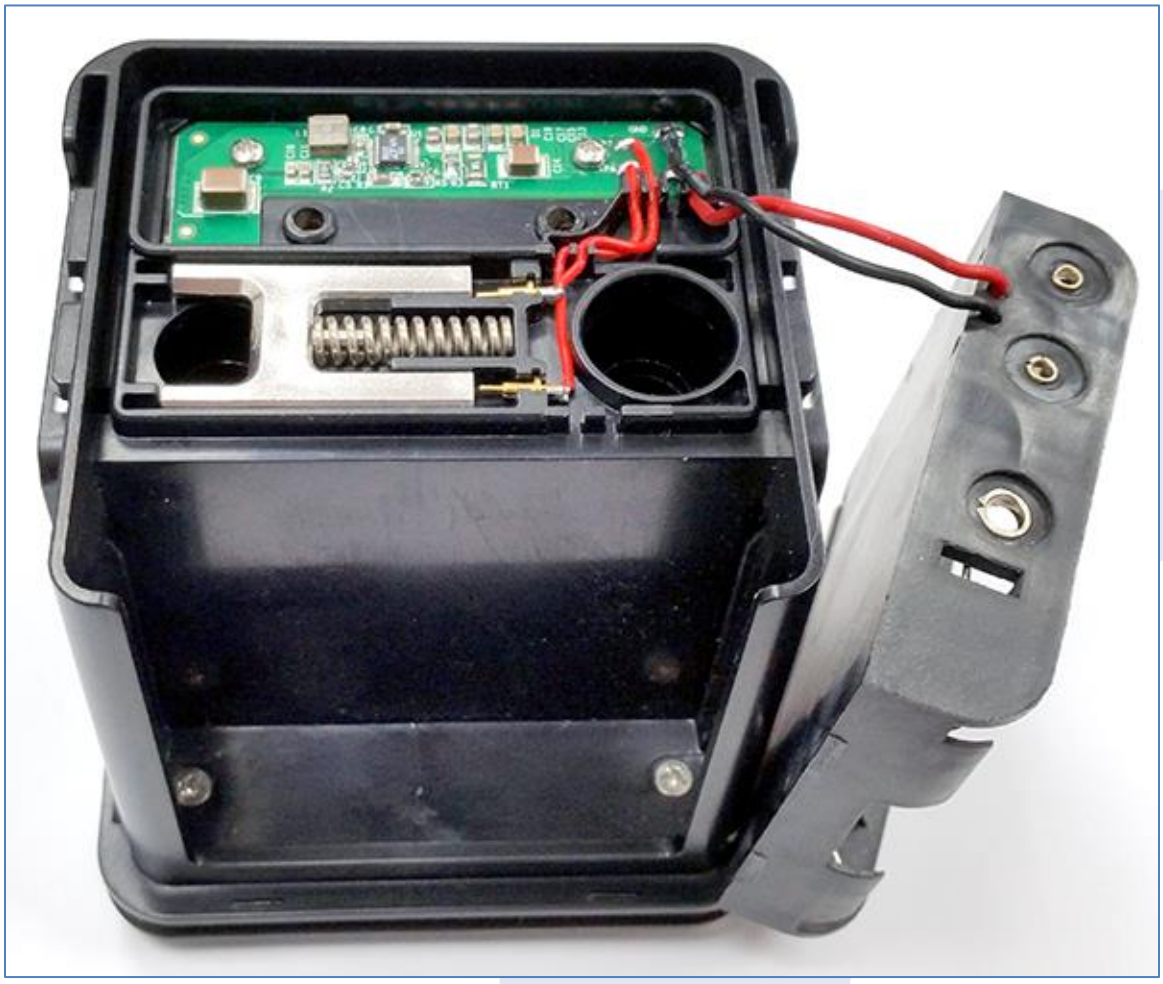
Use a cross-head screwdriver to remove the two screws in the top cover.

Remove the top cover.

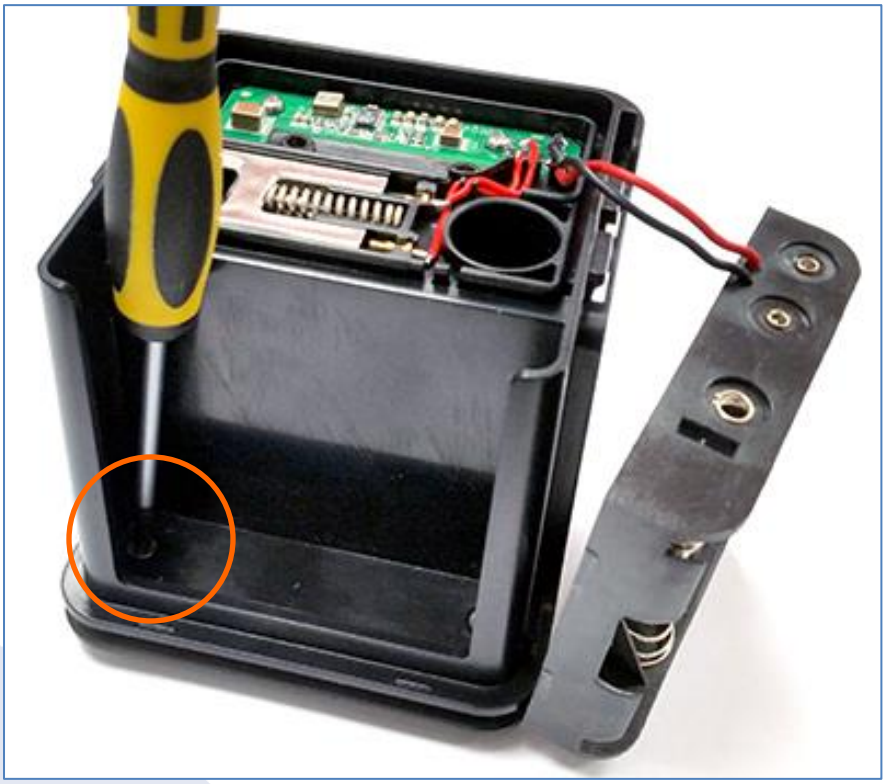
Carefully pull and slide out the battery holder.

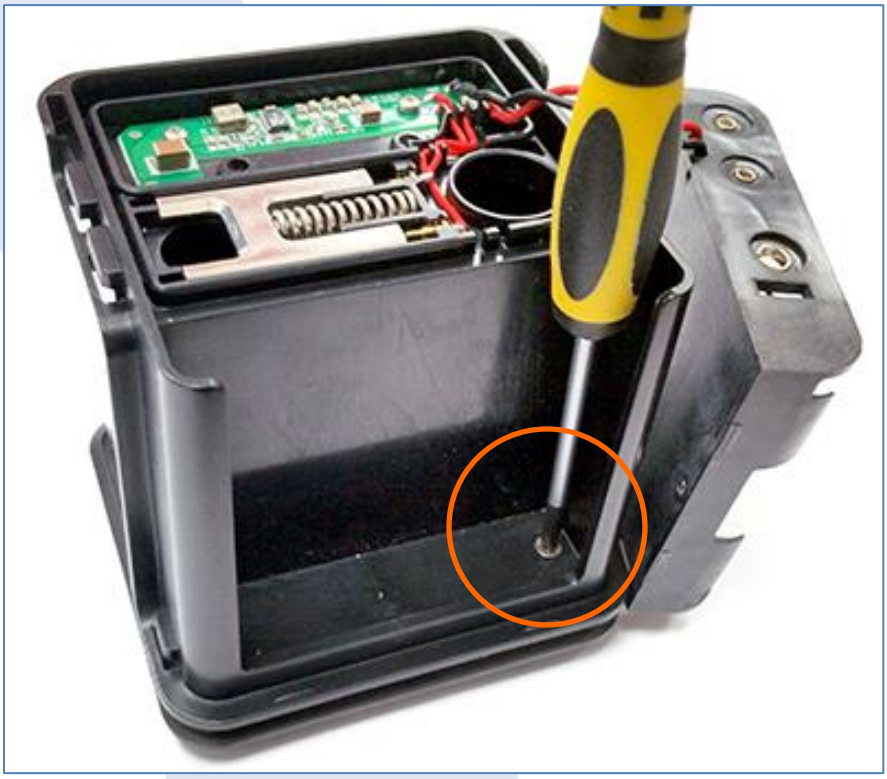
ATTENTION!

Be careful when taking out the battery holder. Do not tear the wires.



Use the cross-head screwdriver to remove the two screws underneath the battery holder.





Pull the top part to disassemble the device and reveal the lower part with the SIM card holder.

Inserting the SIM card

Gently push and pull back the plastic SIM card holder to release and open the SIM card slot.

Insert the SIM card into the SIM card slot with its gold contacts facing you and its cut-off corner facing out the SIM card slot, as shown in the following image.

Put the SIM card holder back into vertical position. Gently press and push the SIM card holder forward to snap it back into place.

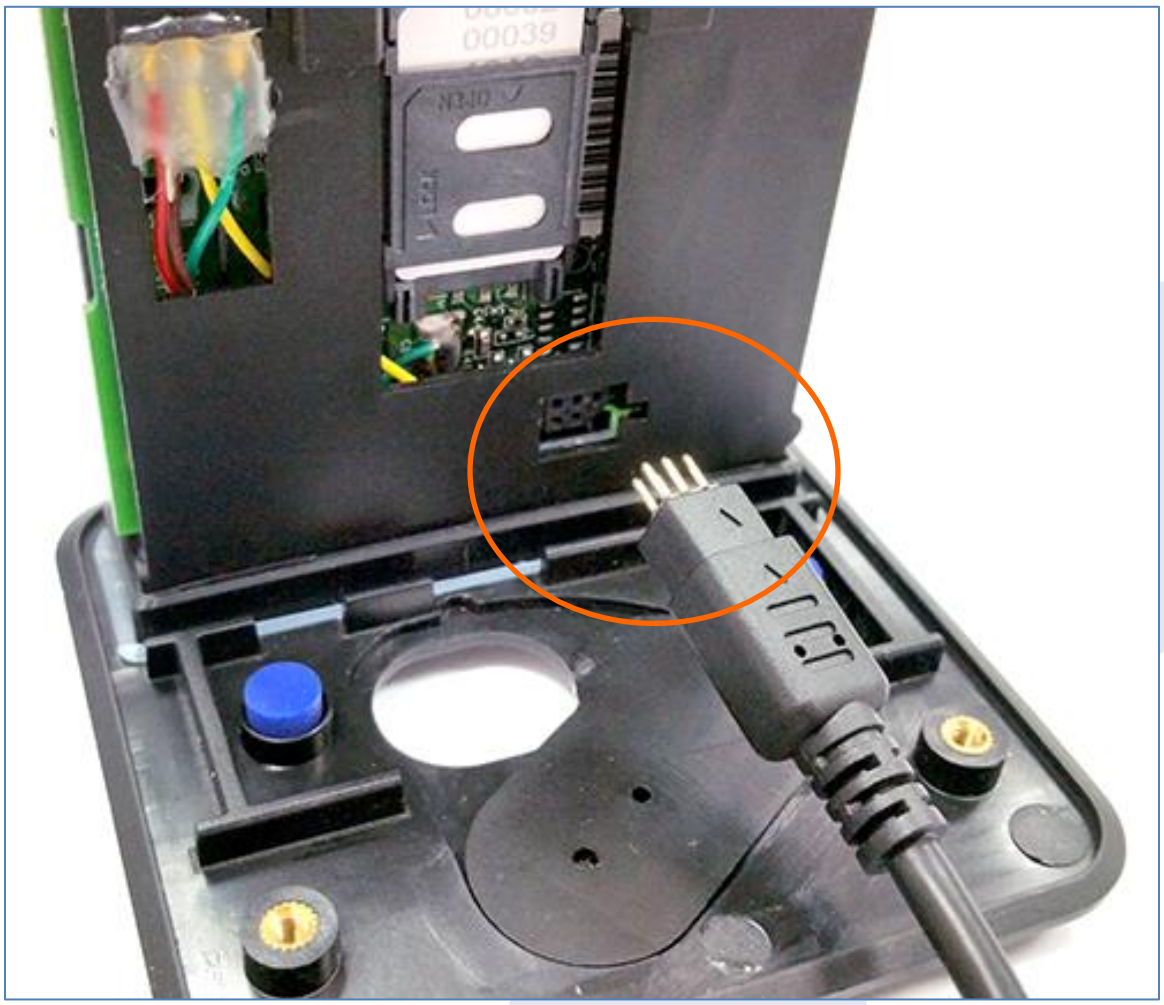
Connecting the device to the computer

Connect the programming cable connector to the USB port on your computer.

Connect the 5-pin connector to the device.

Make sure that the slot on the device connector socket corresponds with the bulge on the cable connector plug.

The three (3) pins on the cable connector plug must point upwards and the two (2) pins downwards.

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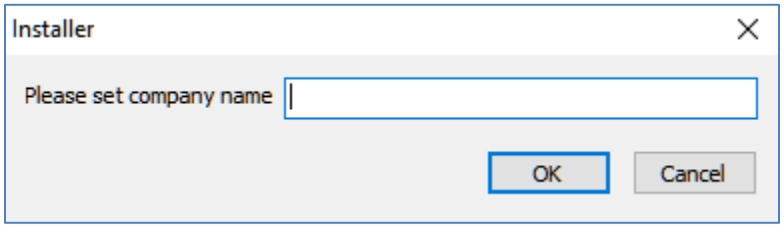
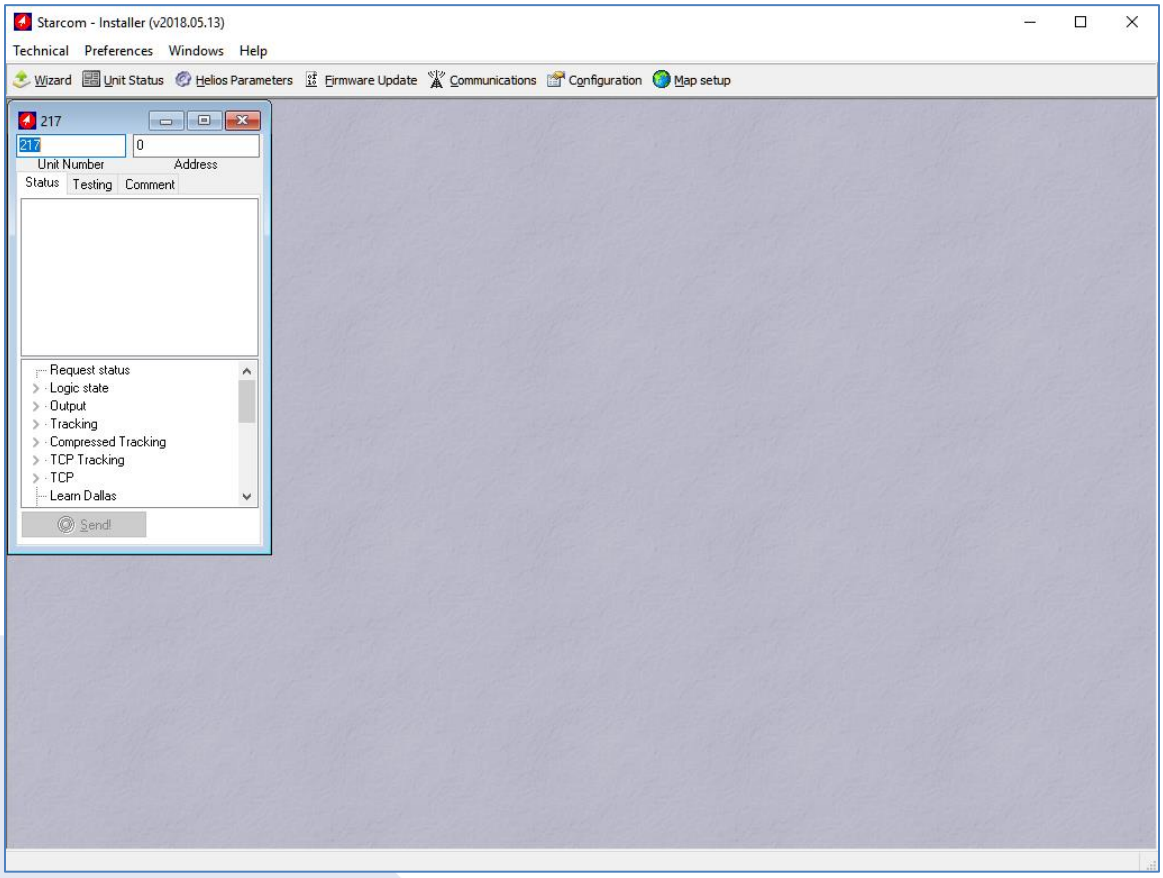
Configuring the device

To open the Installer application, from the **Start** menu select **Starcom Systems > Installer Application**. The Installer company name window appears.



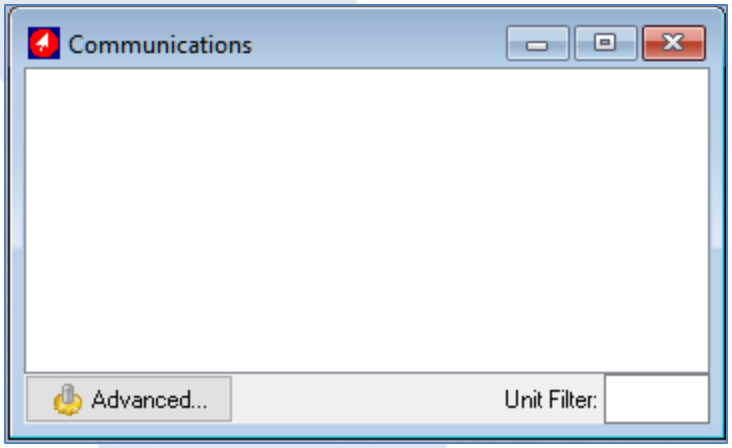
Enter your company name and click **OK**. The Wizard window appears. Unclick the **Always show this wizard on program startup** option and press **Cancel**.

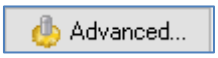
The Installer window appears.



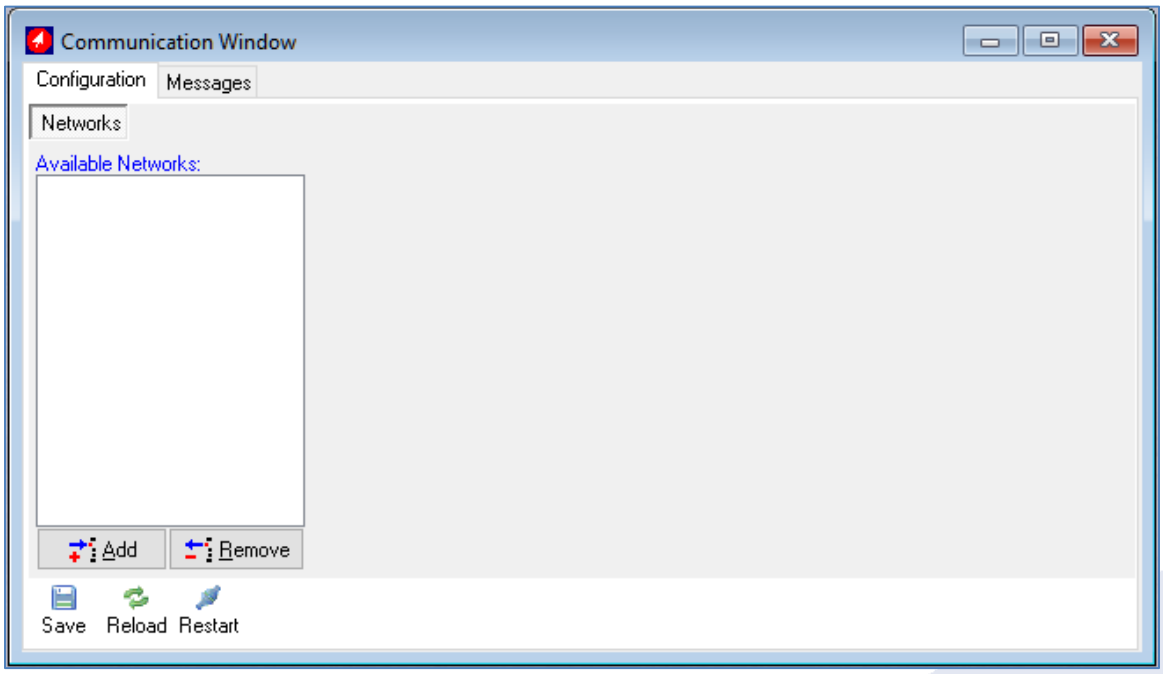
Click **Technical > Communications** or press the **Communications** button 

on the taskbar at the top of the window.



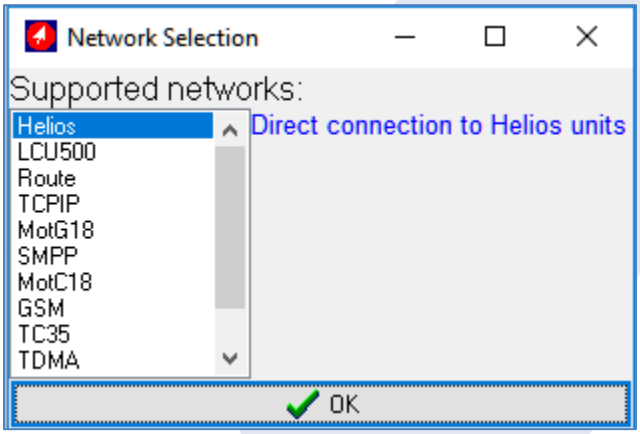
Click the **Advanced** button 

. The Communications Window will appear.



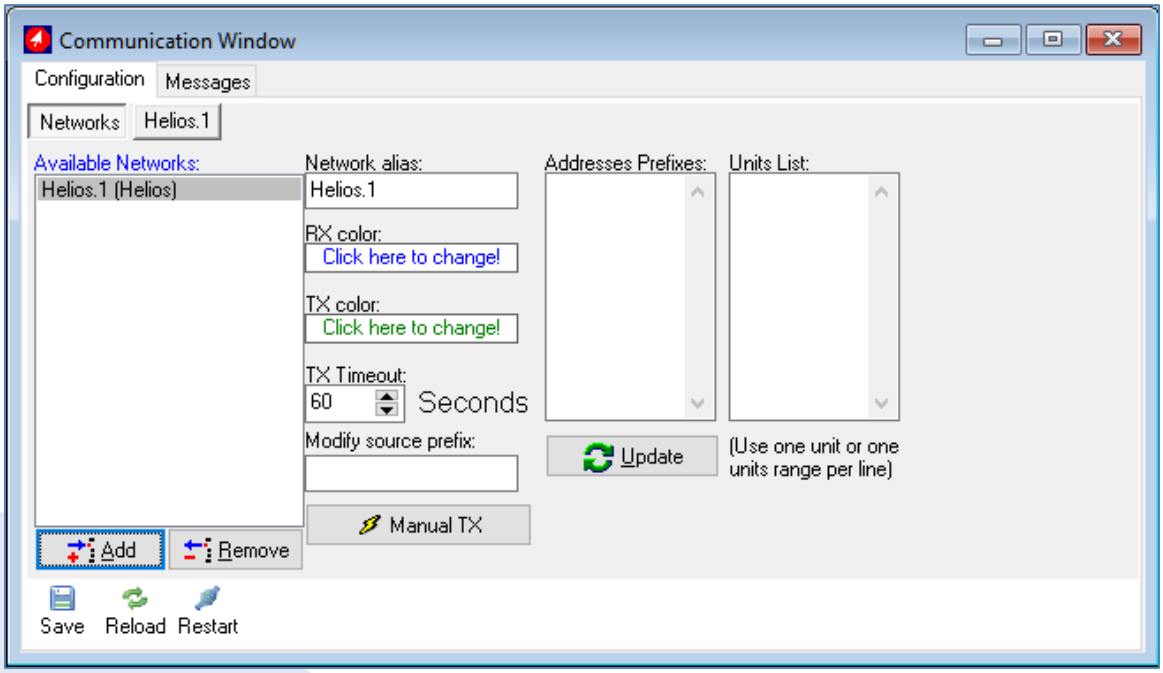
Click the **Add** button 

. The Network Selection window appears.

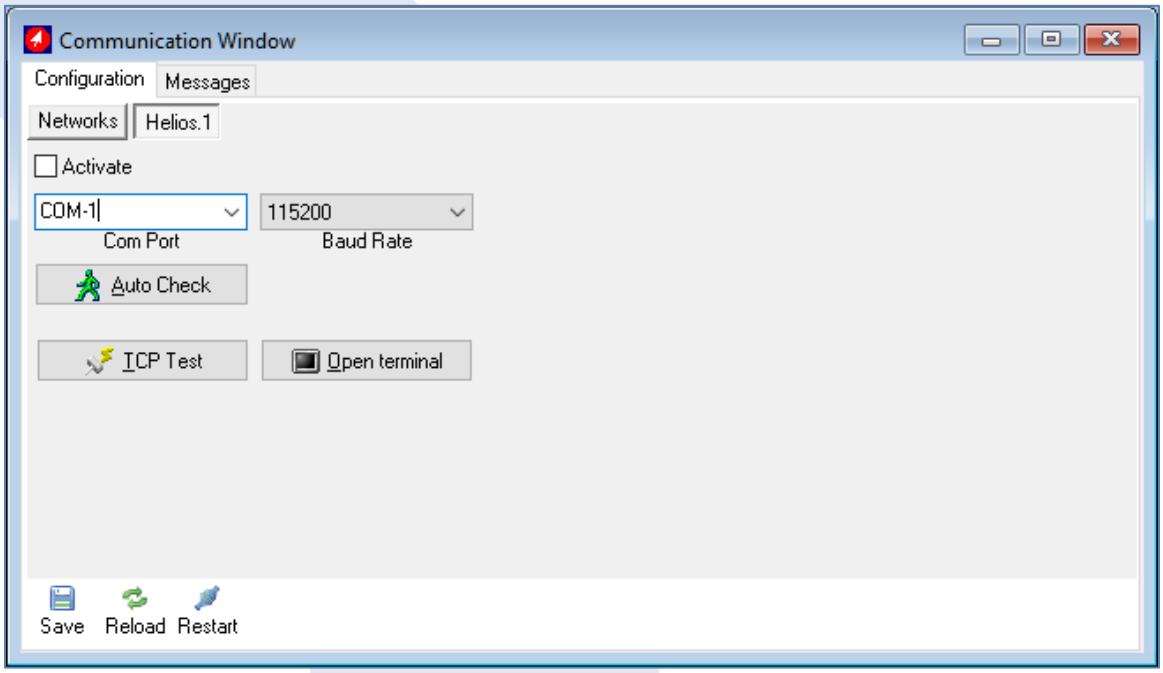


Select **Helios** from the list and press **OK** to add a Helios network.

The Communications Window will now display the new connection in the Available Networks list, which is named **Helios 1**. (The name "Helios" in this case of the device connection to the Installer applies globally to all device types).

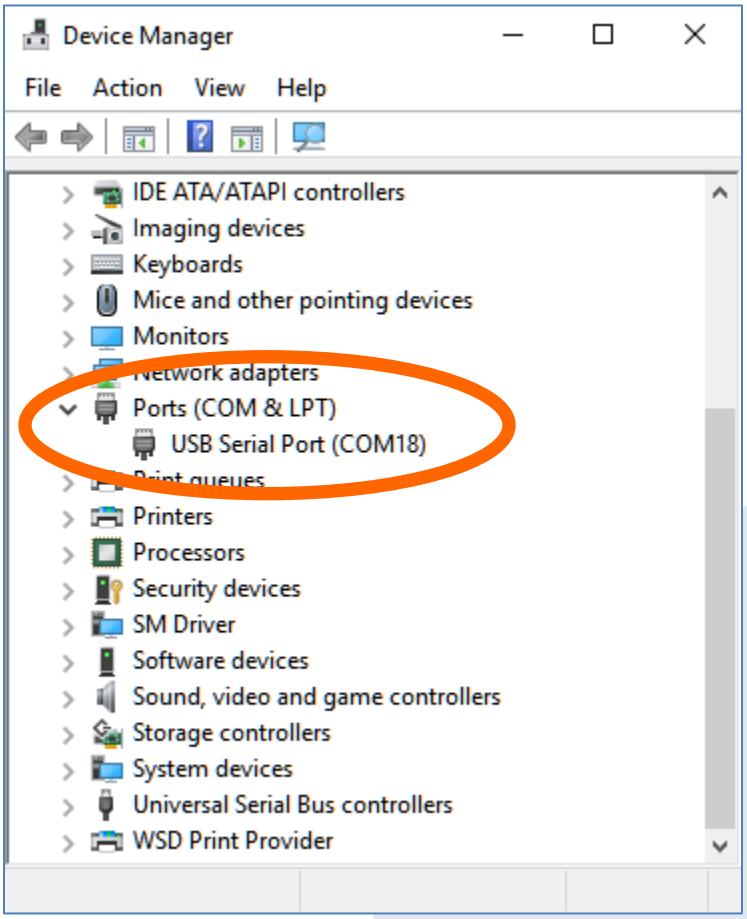


Click on **Helios.1** button to configure and activate the connection.

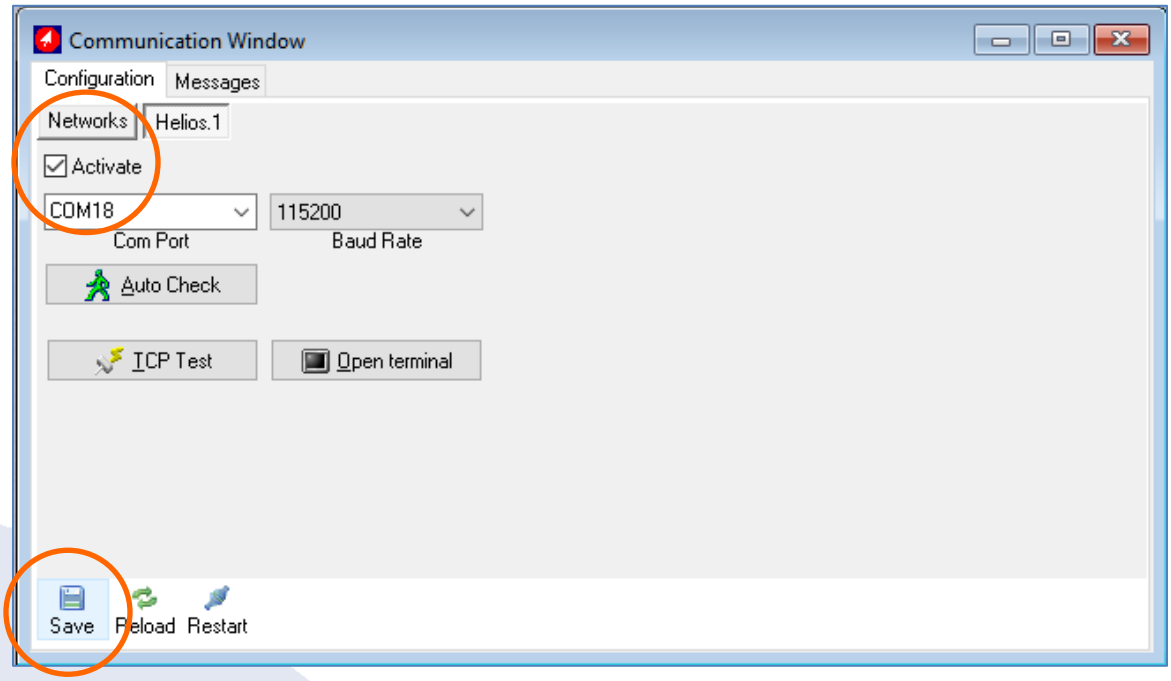


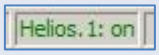
Select the COM port number of the WatchLock Cube cable port in the **Com Port** menu.

To verify the COM port being used by WatchLock Cube in your computer, go to **My Computer > Manage > Device Manager > Ports**.



Set the **Baud Rate** to 115200 (default). Check the **Activate** checkbox and click **Save**.



If WatchLock Cube has connected successfully, a "Helios.1: on" notification will appear in green color at the bottom left corner of the Installer application main screen 

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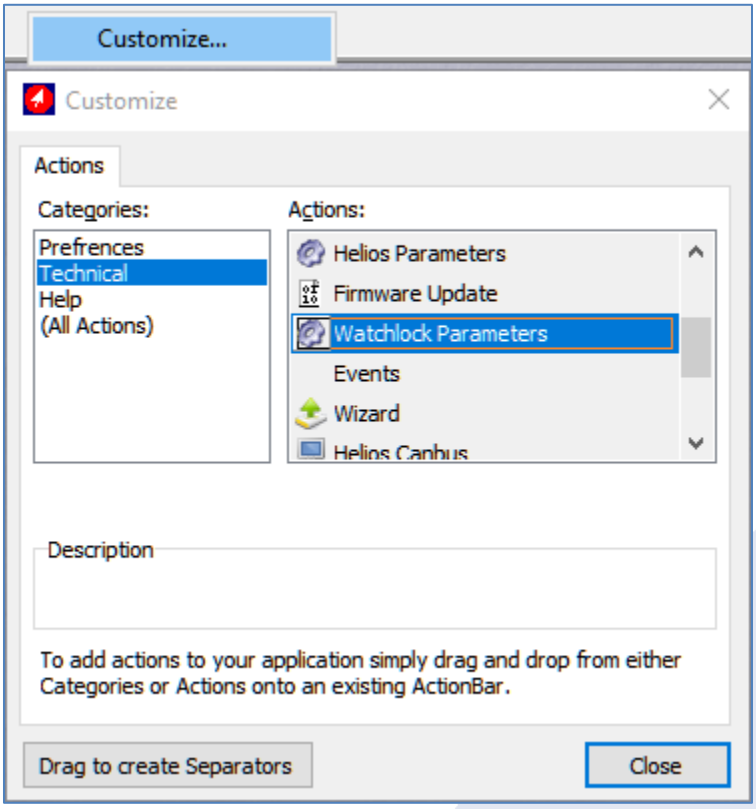
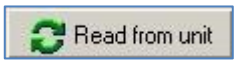
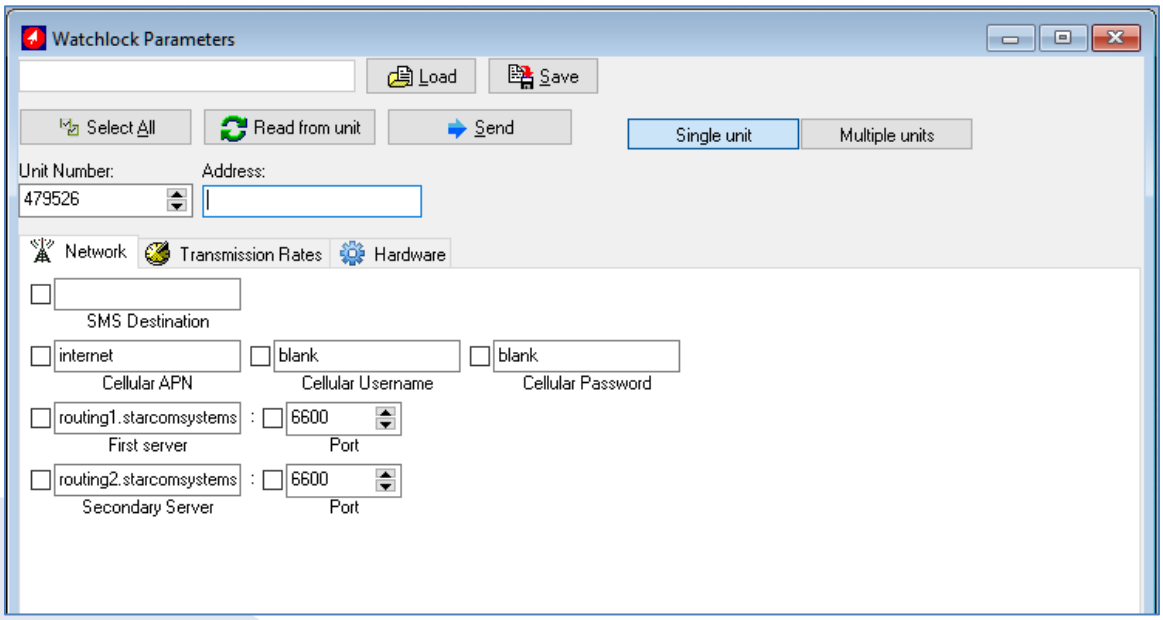
To access the device parameters, press **Technical > Watchlock Parameters**, or right click on the taskbar at the top of the Installer application window and press **Customize**. Select **Watchlock Parameters** and drag/drop it into the taskbar. Press **Close**.



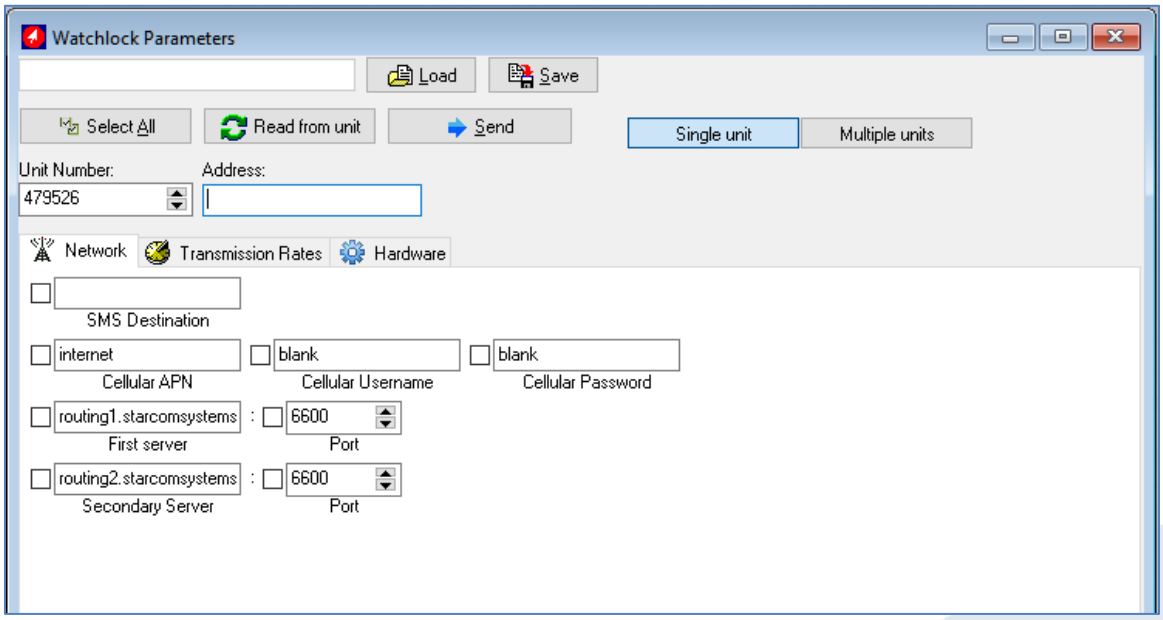
Press on **Watchlock Parameters** and use the settings to configure the device.

Press the **Read from device** button  to read the parameters already configured in the device.



Network settings

This tab allows you to enter all the parameters necessary for the device to connect to the network.



SMS Destination

The device transmits via GPRS by default and via SMS as a backup, when GPRS connection is not available. The number to be entered in the **SMS Destination** field is the SIM card number used in the SMS Terminal device connected to the routing server or the SMPP target number. For more information, see *SMS Notifications guide*.

APN settings

The APN settings are essential in order for the device to transmit messages and alerts. The APN settings are provided by your cellular operator with the SIM card you are using in the device.

GPRS APN (Access Point Name) – the name of the gateway provided by your cellular operator (e.g., internet).

GPRS Username – username provided by your cellular operator (e.g., blank).

GPRS Password – password provided by your cellular operator (e.g., blank).

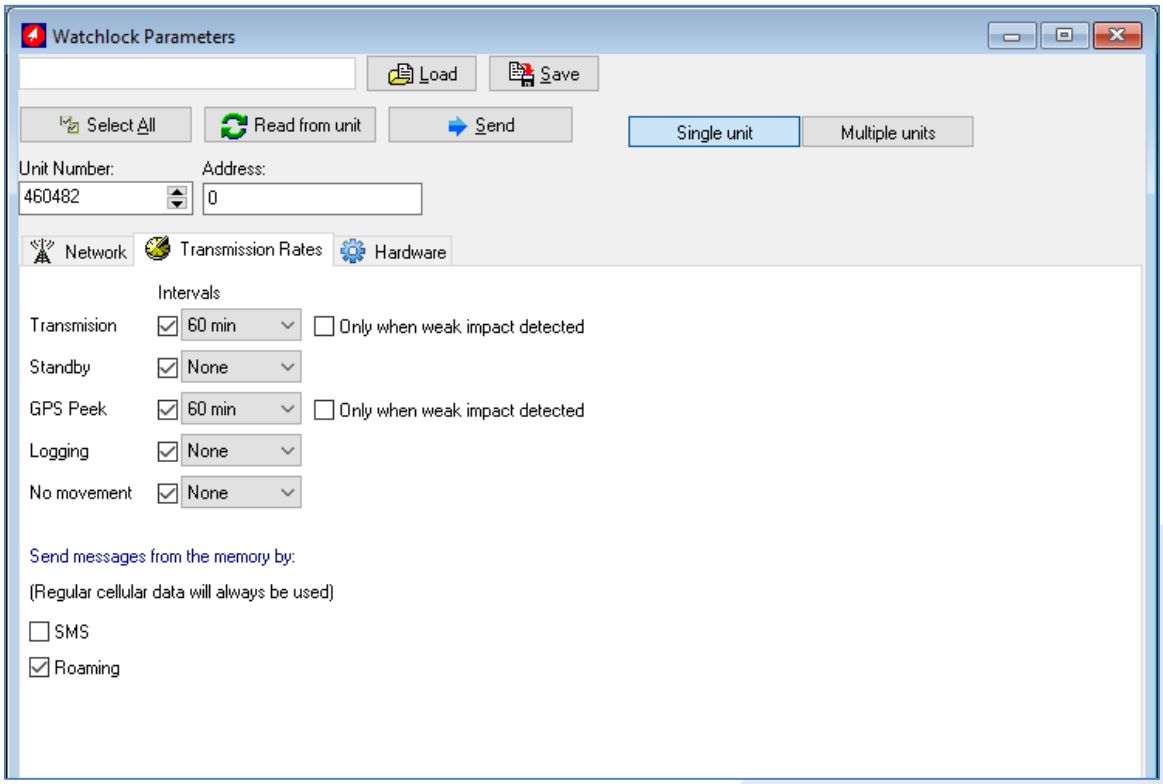
First server – main routing server, which the devices transmit to (by default, it is Starcom Systems server 1).

Secondary server – auxiliary routing server, which the devices transmit to (by default, it is Starcom Systems server 2).

Port – port open for communication on the routing server (default port is 6600).

Transmission Rates settings

This tab allows you to configure the intervals of regular tracking transmissions which define how often the device will transmit its status.



Transmission – interval of regular tracking transmissions which defines how often the device will transmit its status.

GPS Peek – interval of the GPS update which defines how often the device's GPS module will update its location.

Transmission and GPS Peek values are usually left the same. In some instances, these parameters can be configured with different values. For example:

GPS Peek can be *faster* than Transmission when between the regular transmissions the device can enter or exit a specified perimeter. In such case, a Perimeter event created on Starcom Online will be triggered by the change in the device location. For more information, see *Chapter 7 – Monitoring*.

GPS Peek can be *slower* than Transmission when the device is installed in a remote location for long periods of time, when the GPS update is not really required. In such case, Transmission can be set for 1 day, for example, and GPS Peek can be set for 5 days (highest value) to save battery power.

For the testing period, you can set the transmission rates at a higher interval (e.g., 10 minutes). Once the device is tested, you can set the transmission rate at a proper working interval (e.g., 5 hours).

Transmission rates also determine how long the battery will stay charged. Every transmission uses the battery. The faster the transmission rate, the faster the battery will end.

Note that these are the regular scheduled Tracking transmissions and they do not include the additional random transmissions and alerts, like Open/Close, Location Update, etc., which also use the battery.

Logging – interval of data logging, during which the device will wake up only for a few seconds to record its current state but will not transmit (useful for temperature / light logging). The information will be transmitted along with the next transmission (tracking/opening/etc.).

Only when weak impact detected – when enabled, tracking messages will only be sent if during the selected period a weak impact was detected.

NOTE: This will disable the weak impact transmissions.

Standby – if "Only weak impact is detected" is enabled use this setting to set the tracking rate when the device is stationary. This interval must be slower than the Transmission rate (e.g., use 1 day as Standby and 15 minutes for Transmission).

No movement – time without movement before a "No movement" alarm is sent. Recommended to be used together with the "Only when weak impact detected" setting above.

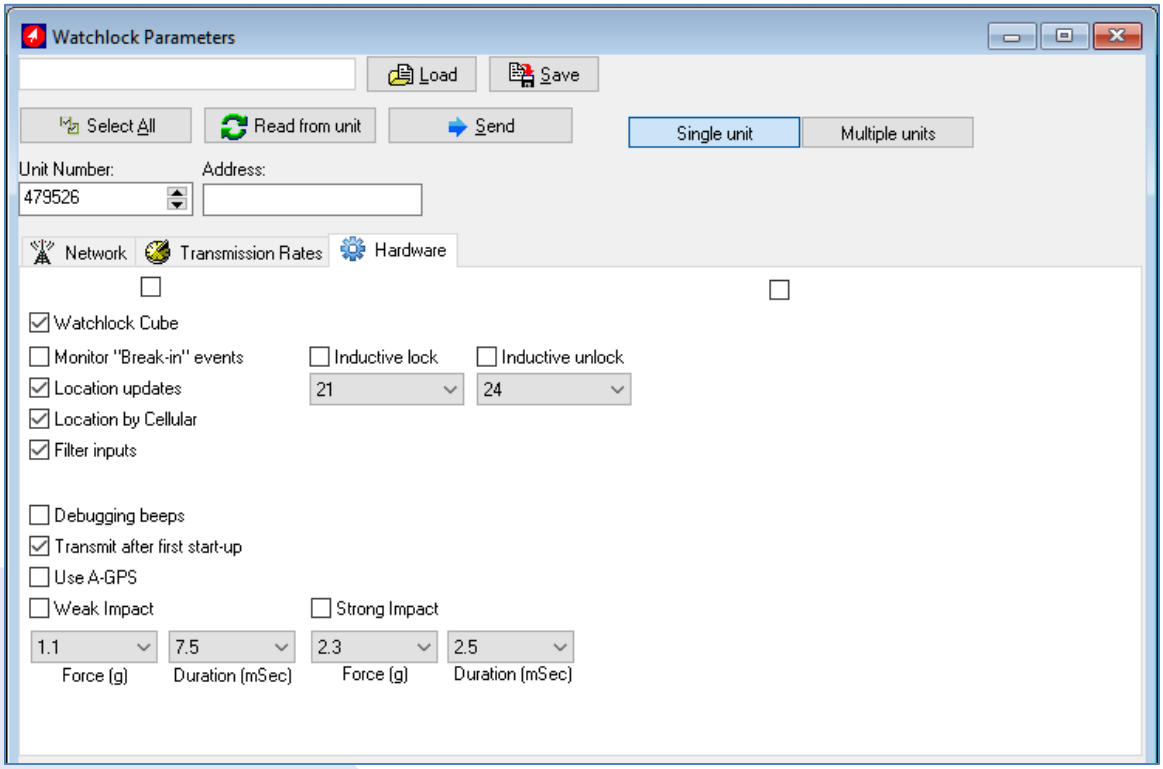
When the device is out of GPRS coverage, the messages will be saved to the device memory. Messages saved in the memory can be sent when the device resumes the connection to home cellular network, or to the roaming network, if the SIM card used in the device has a roaming service enabled by your cellular provider.

SMS – select this option if you want the device to transmit messages saved in the memory via SMS. The device transmits by GPRS by default and by SMS as a backup when GPRS connection is not available. For more information, see *Appendix A – Device Communication in Starcom Systems*.

Roaming GPRS – select this option if you want the device to transmit messages saved in the memory via roaming GPRS. In order for this to work, the SIM card used in the device must have a roaming service enabled by your cellular provider.

Hardware settings

This tab allows you to configure various hardware settings.



Watchlock Cube – activate this option in order for the device to function as WatchLock Cube.

Monitor "Break-in" events – not applicable to WatchLock Cube. Do not use.

Location updates – GPS enabling option. Once activated, the device's GPS module will be turned on upon every transmission, and location update transmissions will be sent.

Location by Cellular – when enabled, location lookup will be done according to cellular antennas if GPS is not available.

Filter inputs – when enabled, the switches status will be changed only after 2 seconds of continuous state.

Debugging beeps – factory testing setting. Do not use.

Transmit after first start-up – if this option is activated, a "Power On" message will be transmitted whenever the device is powered on for the first time or gets restarted.

Use A-GPS – when enabled on supported devices, Assisted GPS data will be downloaded from the GPRS to get better and faster GPS fix.

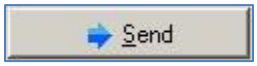
Weak Impact / Strong Impact –accelerometer parameters used to define two types of impact (hit, push, drop. etc.) on the device.

Force (g) – determines the threshold of the force needed to be measured in order to send an alert. Select "Disabled", if you don't wish to use the alert.

Duration (msec) – determines the duration of the force needed to be measured in order to send an alert.

The default values configured in the device are based on the laboratory testing results, they were found to be acceptable in most cases. These values can be tested and changed according to the specifics of your work. To change these values according to specific conditions, you need to test the device with different values and choose the best option. The lower the setting, the more often the device will respond to a weaker impact.

Inductive lock / unlock – not applicable to WatchLock Cube. Do not use.

Once all the necessary parameters are set, press the **Send** button 

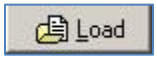
to send the changes you made to the device.

Saving the configuration

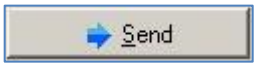
If you are planning to configure other devices with the same parameters, you can save these settings as a *.mem file. Click the **Save** button 

in the Watchlock Parameters window, select the location where you want the configuration file to be saved on your computer, name the file and press **Save**.

Configuring a new device with the saved configuration

To configure a new device with the saved parameters, click the **Load** button 

in the Watchlock Parameters window, browse to the location where you saved the configuration file, select the file and press **Open**. Click the **Select All** button 

to select all the parameters and press the **Send** button 

to send the changes to the device.

5. Testing

It is important to test the device connection to the network, the correct GPS location, the device status and inputs response before installing the device. To do this, you need to perform the following steps.

TCP test

This test verifies that the SIM card is open to the GPRS network, the device can connect to the network and make successful TCP/IP transmissions.

Press the **TCP Test** button 

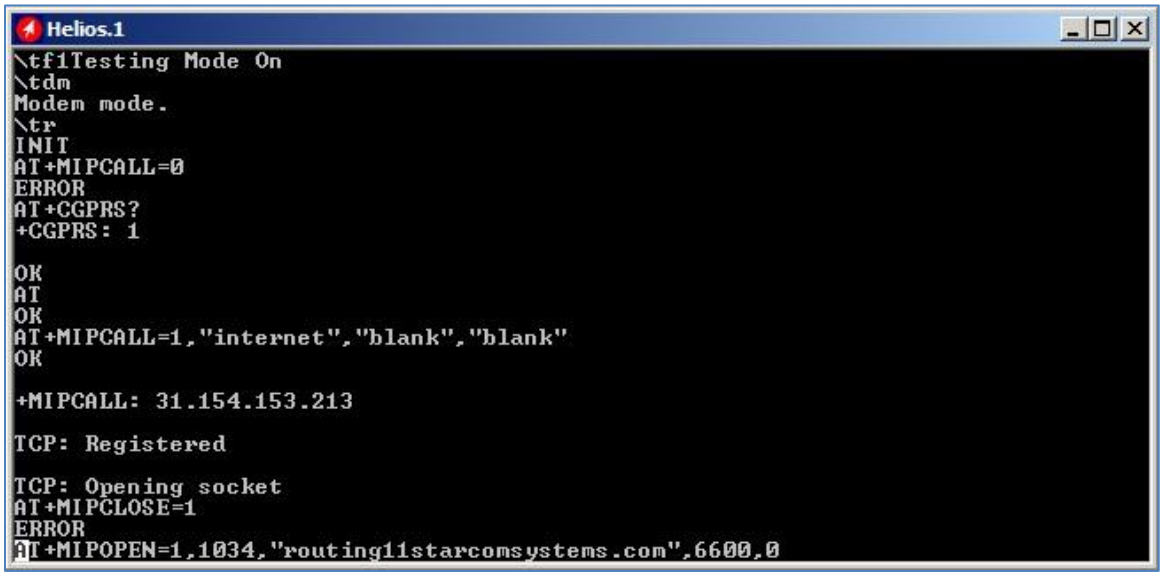
(**Communications > Advanced > Communication Window > Configuration > Helios.1**). Wait a few minutes until you receive a pop-up window with a successful connection message.

If at the end of the TCP Test you do not receive a successful message, check your APN settings (Watchlock Parameters > Network). Contact your cellular provider and make sure the SIM card is open for GPRS. Verify that your SIM card is not protected by a PIN code. If necessary, use a mobile phone to cancel the PIN code.

You can also perform the test manually using the **Terminal** window. Open the Terminal window (**Communications > Advanced > Communication Window > Configuration > Helios.1 > Open Terminal**) and type the following commands:

\tdm and press **Enter** (Modem mode). The modem will be turned on.

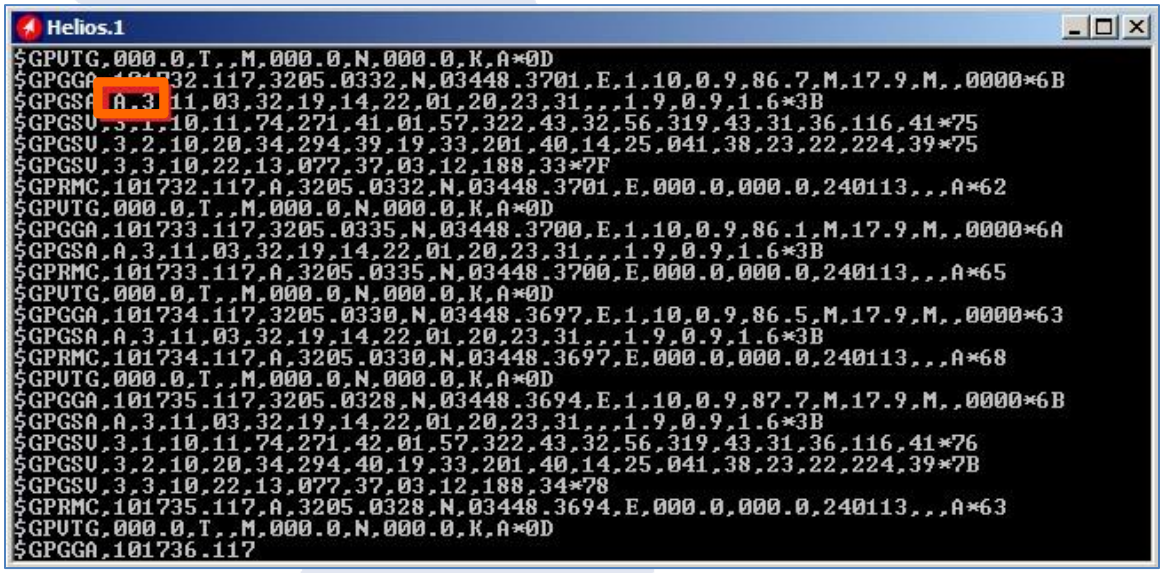
\tr and press **Enter**. This command runs a series of actions to check the parameters such as reception level, visible networks and registered network, SIM card state and information. It also attempts to connect to the routing server. If successful, a "TCP: Send+" message will appear in the Terminal window.



GPS test

NOTE: If you're testing the device inside the building, it will not be able to get a GPS signal in most cases. In order to get a proper GPS location, the device has to be placed outside the building, or outside the window, where it can access the satellites.

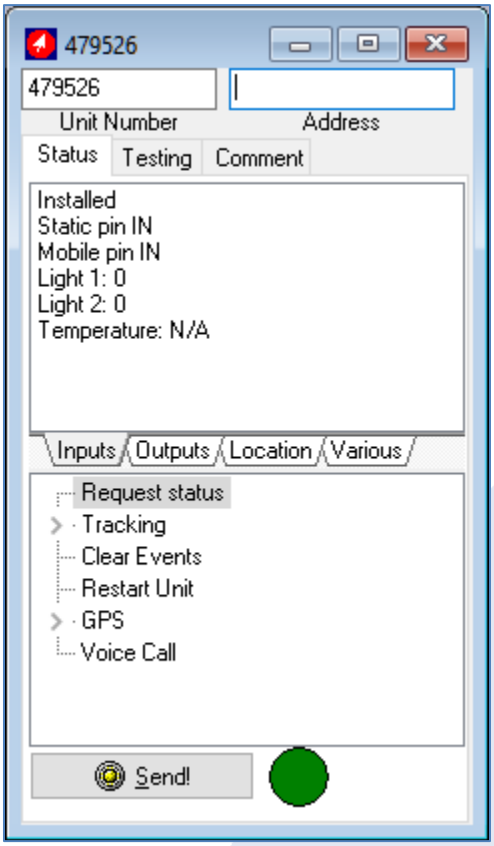
Open the Terminal window (**Communications > Advanced > Communication Window > Configuration > Helios.1 > Open Terminal**) and type **\tdg** (GPS mode). GPS readings will be displayed. When you see "A,3"... reading, it will indicate a GPS fix signal.



If you do not see any response, type **\tg1** to turn the GPS on and repeat the test.

Unit Status

Open the **Unit Status** window. Enter the device number in the **Unit Number** field, select **Request status** and press **Send**. The device information will appear.



Click on the **Inputs** tab, press Request status and check the response in the Device Status window. Use the **Location** tab to check the device's GPS data. Use the **Various** tab to see the device information.

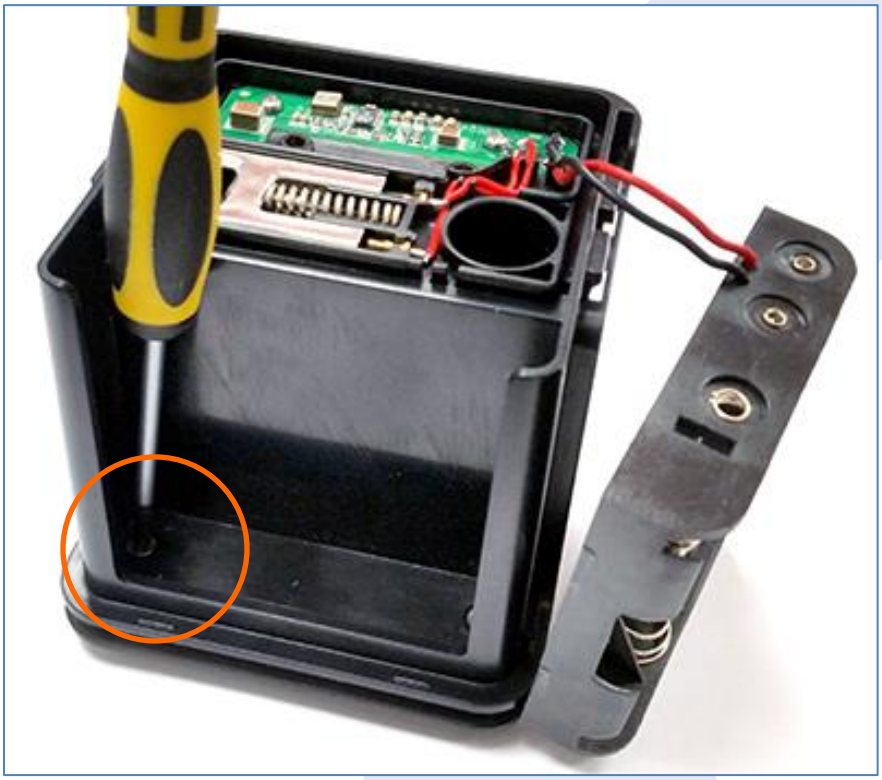
After all the tests have been performed successfully, the unit is ready to be installed.

6. Installation

Assembling the device

Slide the top part onto the lower part of the device.

Use the cross-head screwdriver to screw back the two screws underneath the battery holder.



Carefully slide the battery holder back in its place.

Place the wires back in the track. If necessary, use a small, flat screwdriver to carefully fixate the wires.

Place the top cover back and use the cross-head screwdriver to screw back the two screws.

Inserting the batteries

NOTE: WatchLock Cube uses four (4) standard AA batteries. You can use either rechargeable or non-rechargeable batteries. Before installation, please verify that the batteries are fully charged.

Carefully insert each battery according to the polarity markings on the battery holder, ensuring that the + (plus) and – (minus) terminals are aligned correctly.


GP Ultra
ALKALINE BATTERY
15AU • LR6 • SIZE AA • 1.5V
ZERO MERCURY & CADMIUM

Slide the plastic cover back onto the device.

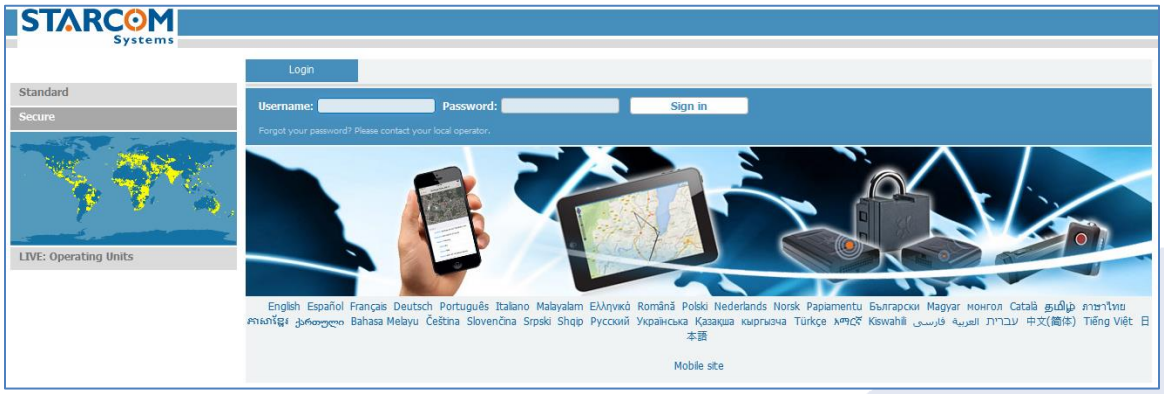
Place the rubber cover over the device, insert the shackle back into the device and use the key to close the lock.

The device is now ready for installation.

7. Monitoring

After the device is installed, you can monitor its status on **Starcom Online**. Starcom Online is a web-based fleet management application with a flexible event generator, which allows to set customizable notifications and alerts.

In your browser, go to http://www.starcomsystems.com/online. Enter your username and password in the **Username** and **Password** fields, and click **Sign in**.

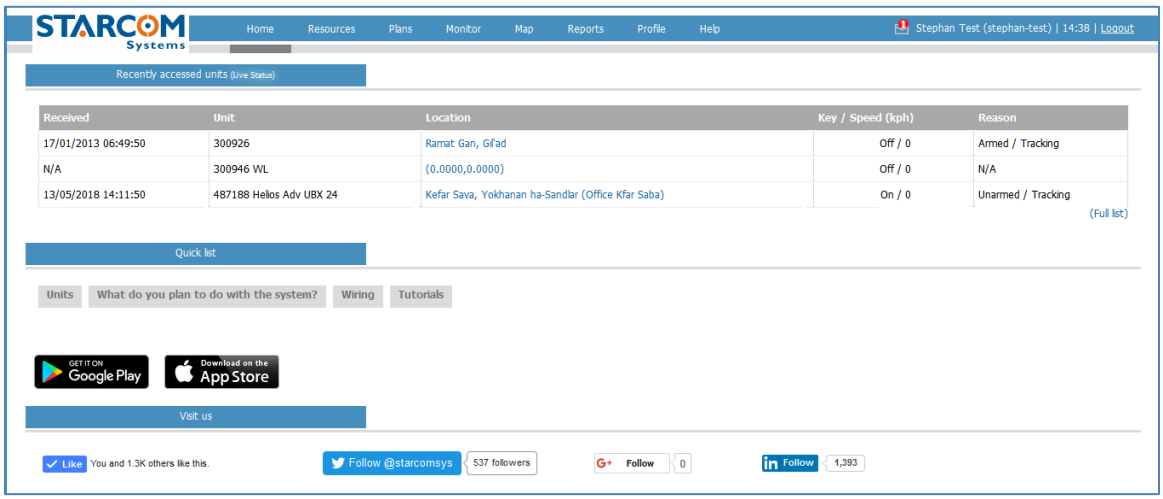


Starcom Online horizontal menu bar features the following categories:

- **Home** – lists the most recently accessed devices, including their location.
- **Resources** – allows to manage the device and customer information.
- **Plans** – allows to create and manage events and alerts.
- **Monitor** – monitors the events and alerts from the device.
- **Map** – displays the actual location of the device on the map.
- **Reports** – generates reports of the device activity.
- **Profile** – allows to configure your user properties.
- **Help** – contains tutorials and knowledge base.

Home

The Home section shows recently accessed devices and latest site updates.



In the Home section, you can find the following additional links:

Live status – displays the current status of all live devices, as shown in the following image.

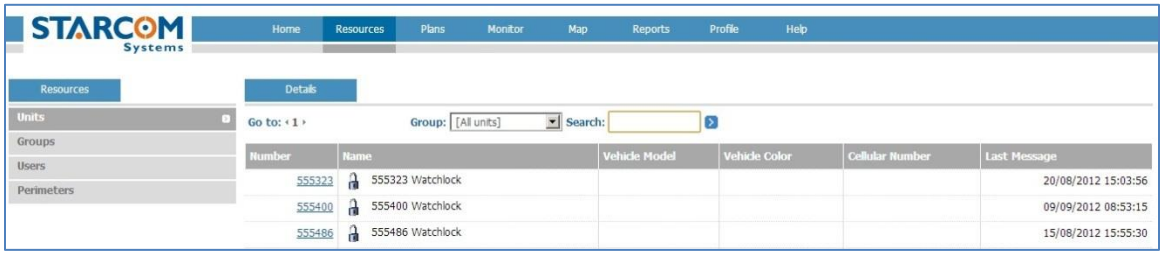
Full list – opens the Resources section that displays a full list of all your devices.

Location – opens the Map section that displays a map showing the current location of the device.

Quick List – links that enable you to access the Resources and Plans sections.

Resources

The Resources section shows all your devices.



On the left side, the Resources section features the following tabs:

Units – lists the devices.

Groups – lists the groups of devices and helps you create new and modify the existing groups.

Users – lists the users and helps you create new and modify the existing users.

Places – lists perimeters and helps you define new and modify the existing perimeters.

Units

The **Units** page features the **Details** area, which arranges the device information in the following columns:

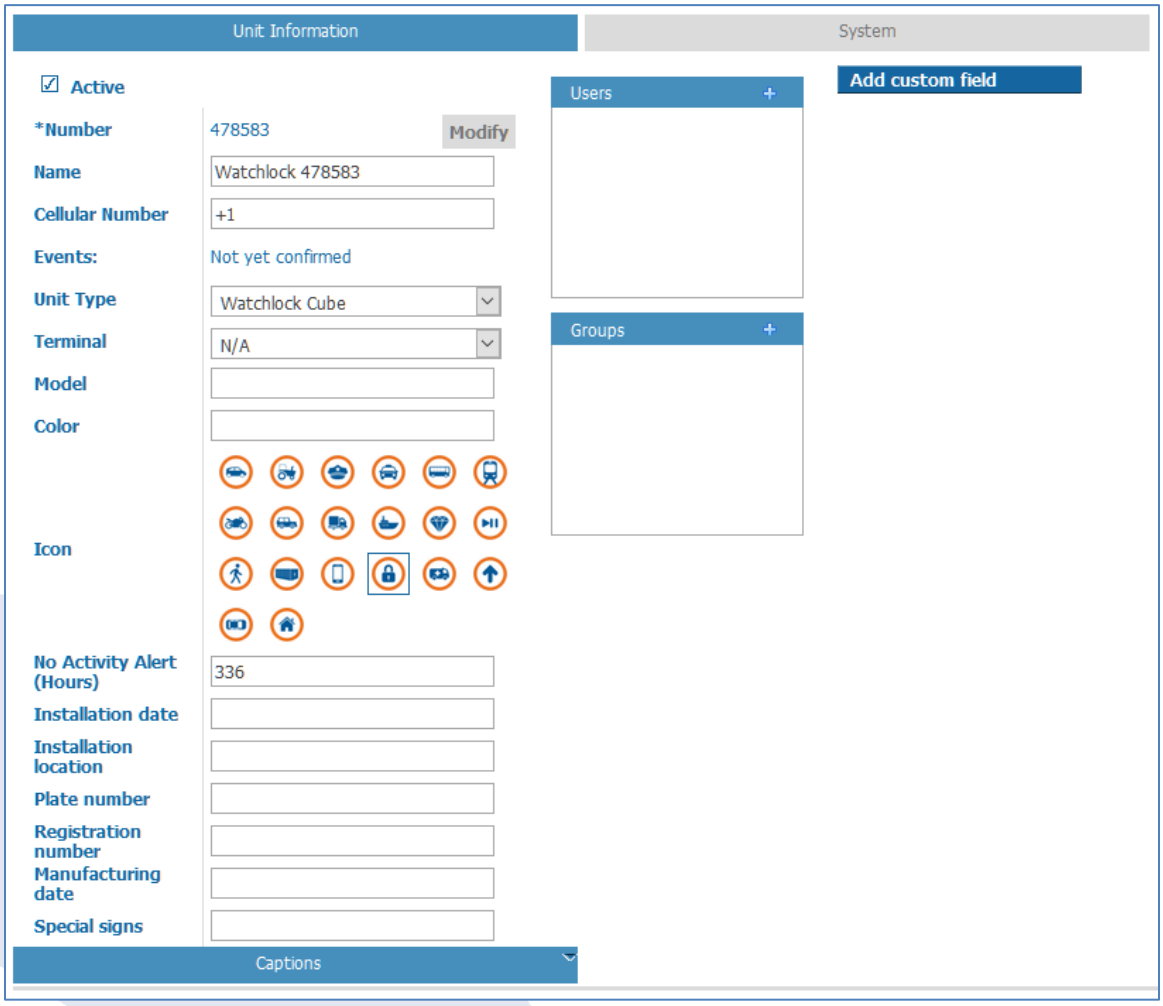
Number – the device serial number. Clicking on the device number link will display the **Unit Information** page, where you can modify the device information.

Name – displays the icon and the name of the device. Clicking on it will reveal a pop-up menu with the quick access links to the Map and the Reports sections.

Cellular Number – displays the phone number of the SIM card installed in the device.

Last Message – displays the time and date of the last message transmitted by the device.

To create a new device, click **New** (not available for evaluation kit users). The Unit Information page opens.



Active – when selected (set by default), makes the device active on Starcom Online. To make the device inactive, deselect this checkbox. No data will be collected for inactive devices; they will appear as dimmed in the devices list.

Use this section to enter the device **Number** and **Name**. In the **Cellular Number** field, enter the country code or the number of the SIM card installed in the device.

In the **Unit Type** list, select Watchlock Cube.

No Activity Alert (Hours) – used to receive an alert when the device has stopped transmitting. The default value is 336 hours (2 weeks).

In the **Users** window, click on the plus (+) sign on the right and start typing the name of the user you want to make the device available for in the Search field. The name of the user will appear in the dropdown list. Click on it to add it to the Users list. To remove the user, click on the minus sign (-) on the left of the user name.

In the **Groups** window, click on the plus (+) sign on the right and start typing the name of the group you want to make the device available for in the Search field. The name of the group will appear in the dropdown list. Click on it to add it to the Groups list. To remove the group, click on the minus sign (-) on the left of the group name.

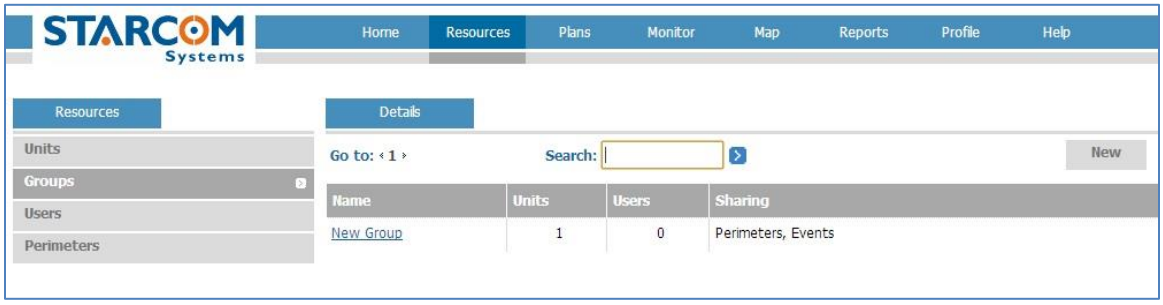
When finished, click **Apply**. The new device is saved.

To modify a device, in the **Units** page, click on the device name link of the device you want to modify. The Unit Information page appears. Modify the device details as required. Click **Apply**. The modified device details are saved.

To delete a device, in the **Units** page, click on the device name link of the device you want to delete. The Unit Information page appears. Click **Delete**. The device is deleted.

Groups

You can create new and modify the existing groups of devices.



To create a new group, click **New**. The Group page opens.

In the **Name** field enter the name of the new group.

In the **Units** window, click on the plus (+) sign on the right and start typing the name of the device you want to make the device available for in the Search field. The name of the device will appear in the dropdown list. Click on it to add it to the Units list. To remove the device, click on the minus sign (-) on the left of the device name.

In the **Users** window, click on the plus (+) sign on the right and start typing the name of the user you want to make the device available for in the Search field. The name of the user will appear in the dropdown list. Click on it to add it to the Users list. To remove the user, click on the minus sign (-) on the left of the user name.

In the **Sharing** section, click the respective checkbox, if you want the group to **Share Perimeters** or **Share Events**.

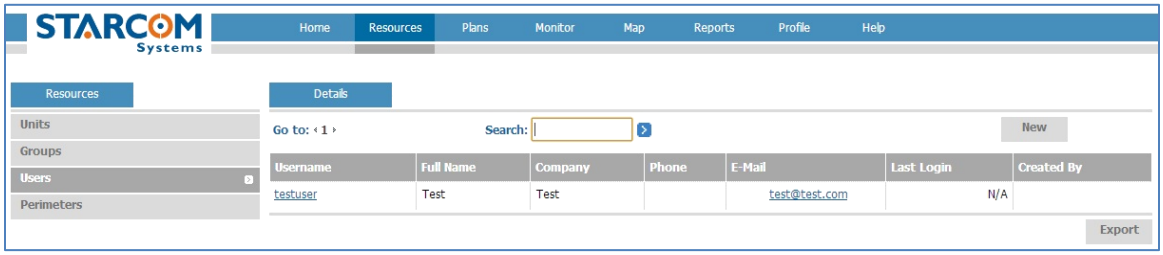
Click **Apply**. The new group is saved.

To modify a group, in the **Groups** page, click on the group name link of the group you want to modify. The Group page appears. Modify the group details as required. Click **Apply**. The modified group details are saved.

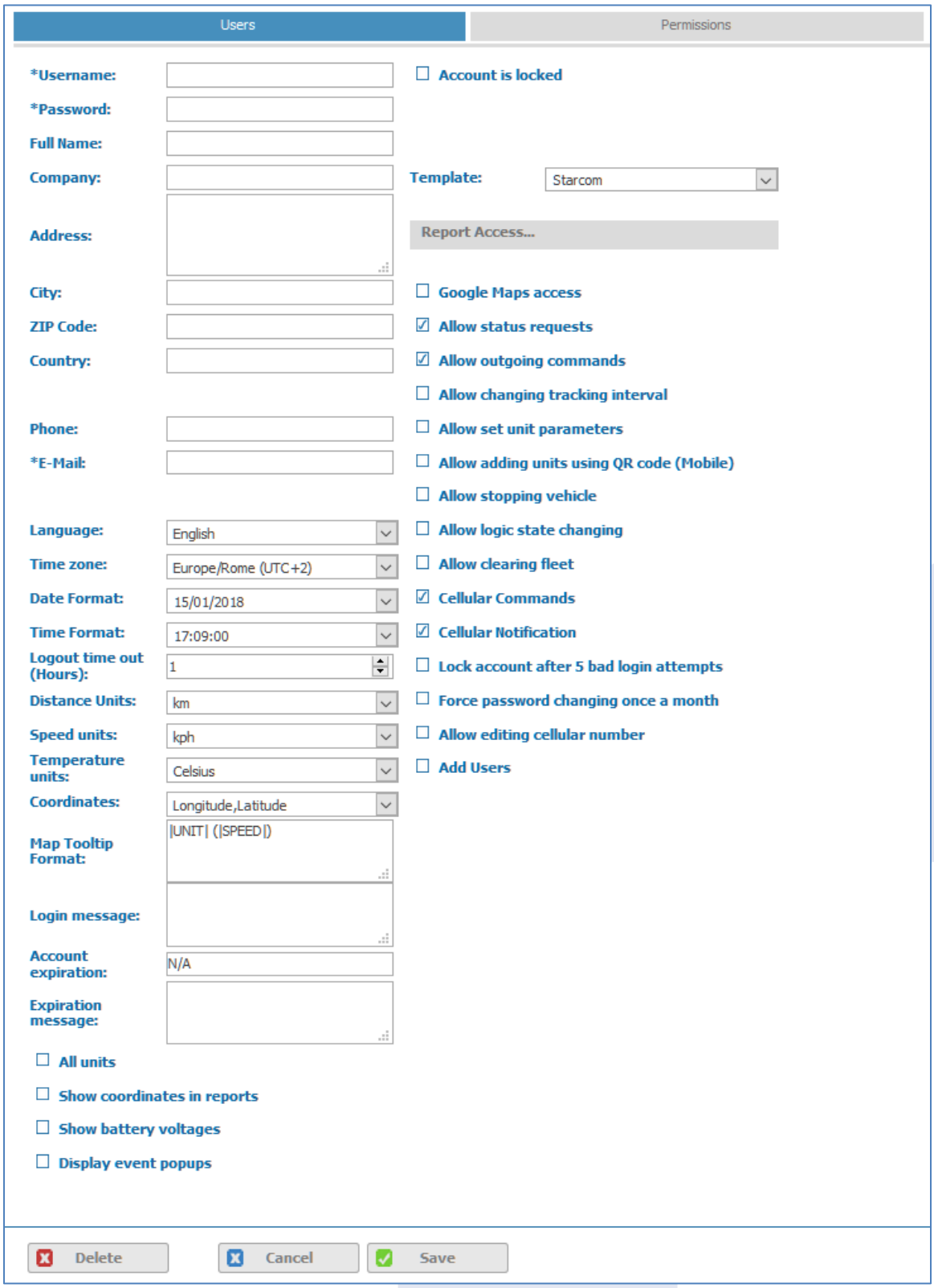
To delete a group, in the **Groups** page, click on the group name link of the group you want to delete. The Group page appears. Click **Delete**. The group is deleted.

Users

You can create new and modify the existing users.



To create a new user, click **New**. The Users page opens. Here you can enter the new user information and define their access permissions.


Users
Permissions
*Username:
*Password:
Full Name:
Company:
Address:
City:
ZIP Code:
Country:
Phone:
*E-Mail:
Language:
English
Time zone:
Europe/Rome (UTC+2)
Date Format:
15/01/2018
Time Format:
17:09:00
Logout time out (Hours):
1
Distance Units:
km
Speed units:
kph
Temperature units:
Celsius
Coordinates:
Longitude,Latitude
Map Tooltip Format:
|UNIT| (|SPEED|)
Login message:
Account expiration:
N/A
Expiration message:
All units
Show coordinates in reports
Show battery voltages
Display event popups
Account is locked
Template:
Starcom
Report Access...
Google Maps access
Allow status requests
Allow outgoing commands
Allow changing tracking interval
Allow set unit parameters
Allow adding units using QR code (Mobile)
Allow stopping vehicle
Allow logic state changing
Allow clearing fleet
Cellular Commands
Cellular Notification
Lock account after 5 bad login attempts
Force password changing once a month
Allow editing cellular number
Add Users
Delete
Cancel
Save

Besides entering the user information, you can select the following options:

All units –all the user's devices will be displayed on the Map page. If this option is disabled, only the selected device will be displayed.

Show coordinates in reports – the user's reports will include the GPS coordinates.

Show battery voltages – displays the battery charge in volts.

Report Access – allows to select which reports will be accessible for the user.

Google Maps access – enables Google Maps access on the Maps page.

Allow status requests – enables the user to make device status requests.

Allow outgoing commands – enables the user to send commands to the devices.

Allow changing tracking interval – enables the user to change the devices' tracking interval.

Allow set unit parameters – enables the user to change the devices' settings.

Allow adding the units using QR code (Mobile) – enables the user to add a new Zeppos device in Olympia Tracking app.

Allow stopping vehicle – enables the user to send a Gradual Stop command to the device.

Allow logic state changing – enables the user to change the devices' Logic State.

Allow clearing fleet – enables the user to send a Clear Events command to the devices.

Cellular Commands – enables the user to send commands to the device from a cellular phone.

Cellular Notification – enables the user to receive cellular notifications.

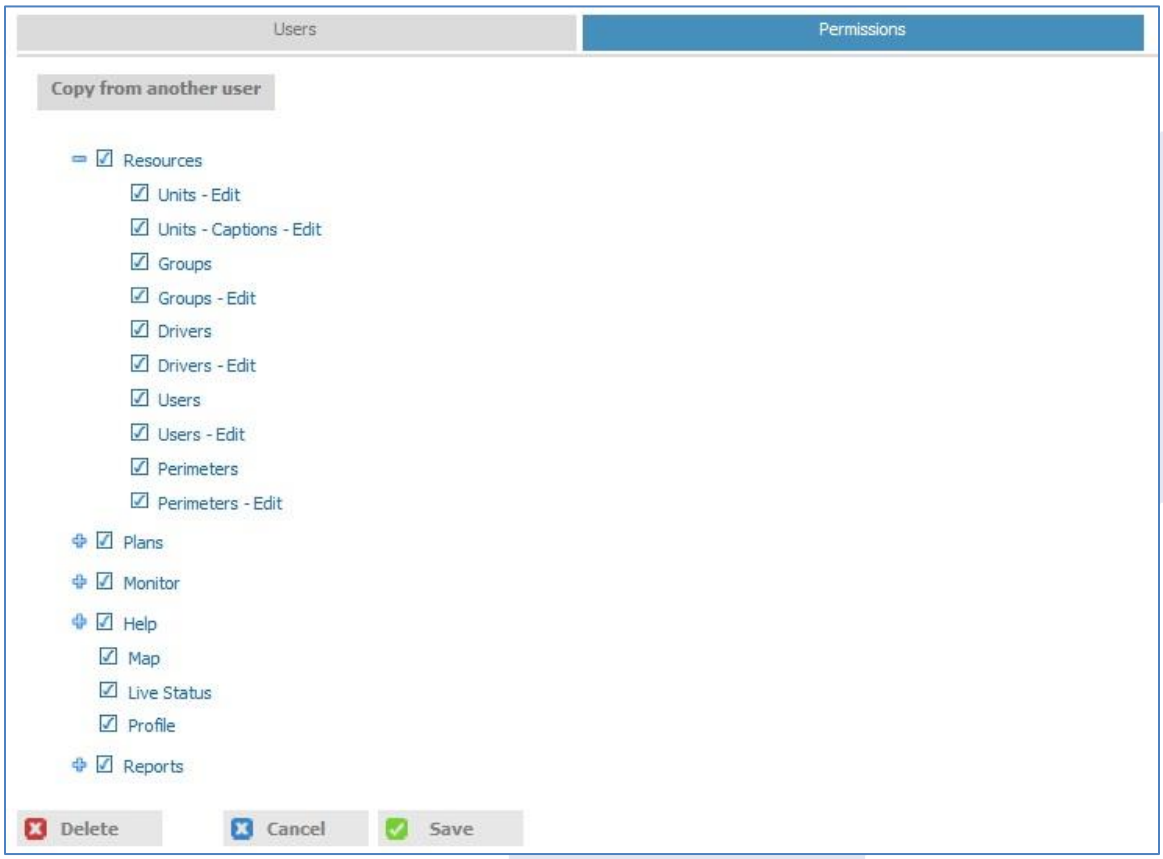
Lock account after 5 bad login attempts – locks access to Starcom Online account after the user has made 5 bad login attempts.

Force password changing once a month – requires the user to change the password once a month.

Allow editing cellular number – enables the user to edit the phone number of the SIM card installed in the device.

Add Users – allows to create new users.

Permissions allow you to define the viewing and editing permissions of the user for all the sections of the site.



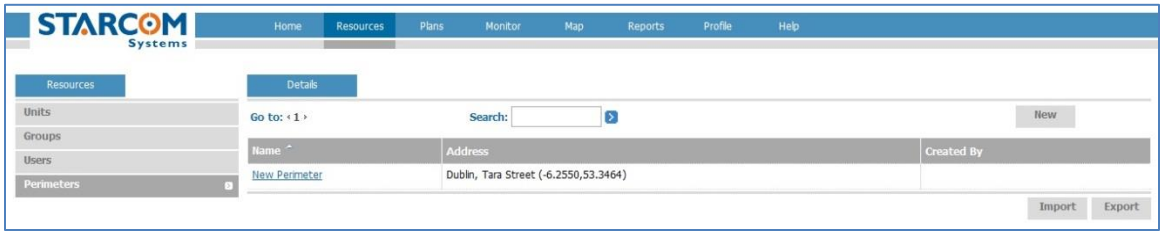
After you configured all the parameters, click **Apply**. The new user is saved.

To modify a user, in the **Users** page click on the user name link of the user you want to modify. The Users page appears. Modify the user details as required. Click **Apply**. The modified user details are saved.

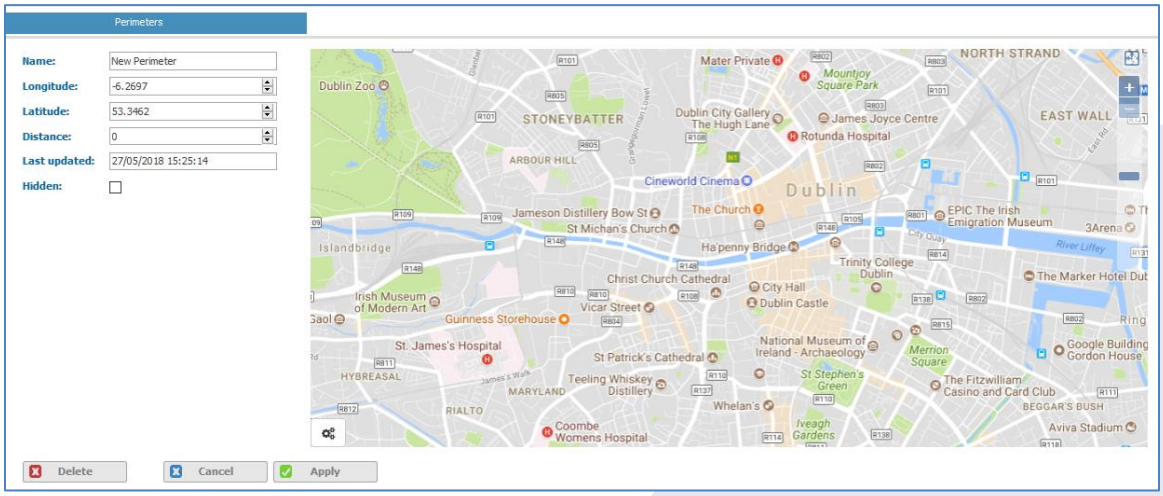
To delete a user, in the **Users** page click on the user name link of the user you want to delete. The Users page appears. Click **Delete**. The user is deleted.

Places

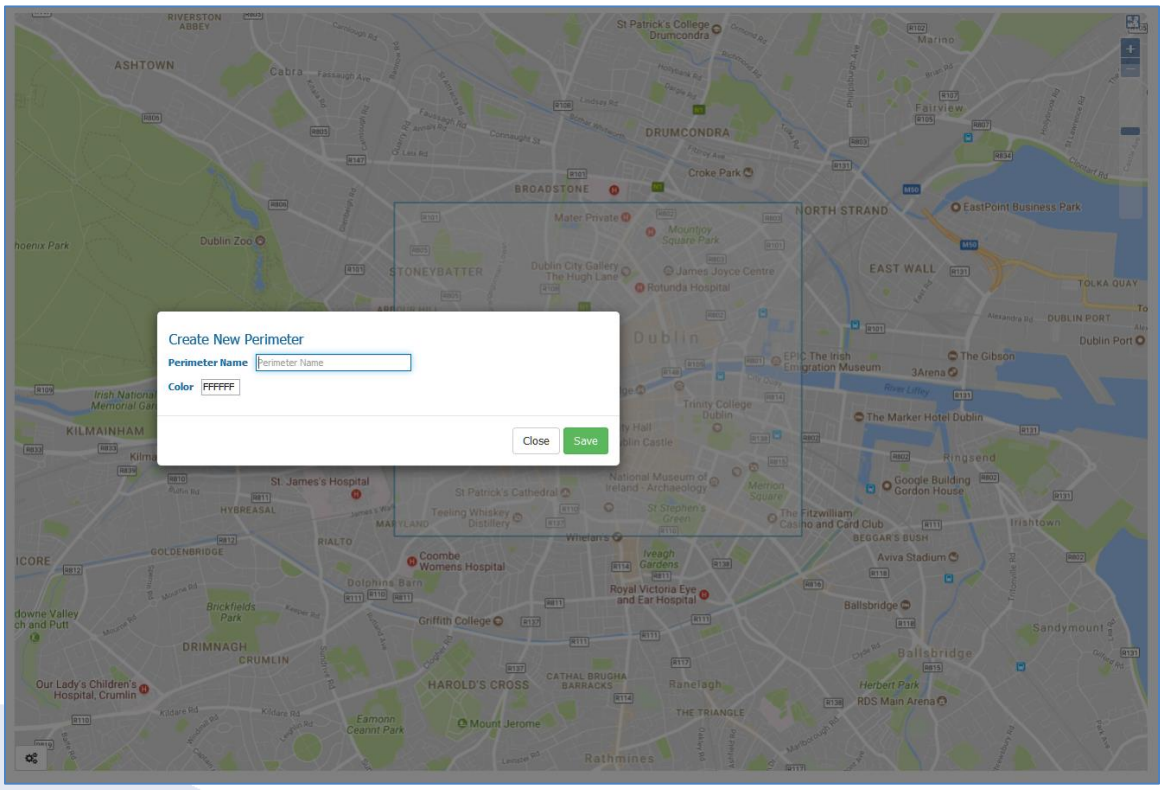
You can create new and modify the existing perimeters.



To create a new perimeter, click **New**. The Perimeters page opens. In the **Name** field, enter a name for the new perimeter.

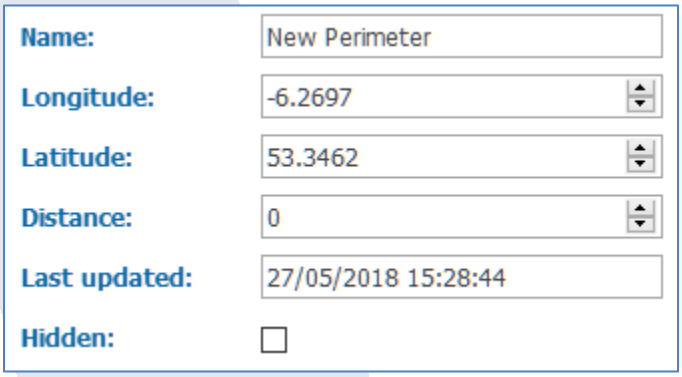


To create a new perimeter, click on the settings icon in the lower right corner of the map, **Options > Create new perimeter** at the top right corner of the map. Click once anywhere on the map to start the perimeter selection (this point would be the top left corner of the perimeter). Move the mouse and click again anywhere on the map to finish the perimeter (this point would be the bottom right corner of the perimeter).



In the **Perimeter Name** field, enter the name of the perimeter. Click **Ok**. The new perimeter is saved and appears on the map.

To view/edit the GPS parameters of the perimeter, use the Longitude, Latitude fields on the left.



Modify the values as required. Click **Apply** to save the changes.

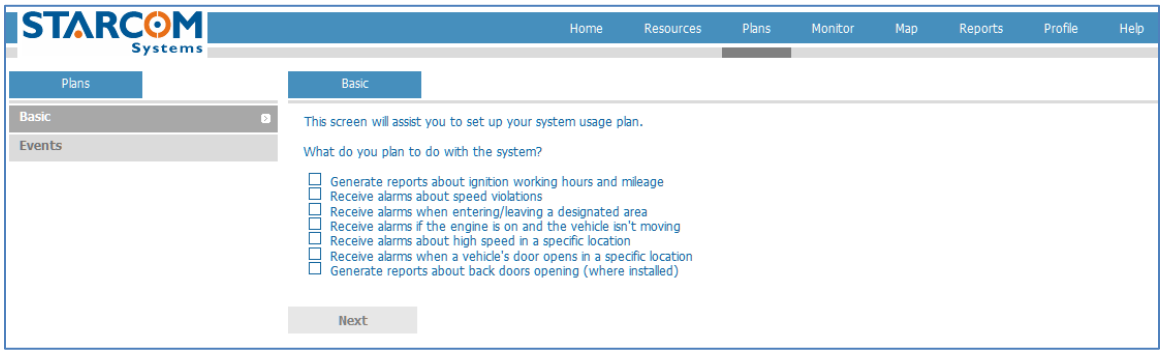
After you made all the changes on the Perimeters page, click **Apply**. The perimeter details are saved, and the new perimeter appears in the list on the Resources section.

To modify a perimeter, in the **Places** page click on the perimeter name link of the perimeter you want to modify. The Perimeters map page appears. Modify the perimeter as required. Click **Apply**. The modified perimeter is saved.

To delete a perimeter, in the **Places** page click on the perimeter name link of the perimeter you want to delete. The Perimeters map page appears. Click **Delete**. The perimeter is deleted.

Plans

The Plans section enables you to create usage plans and to view plans that already exist.

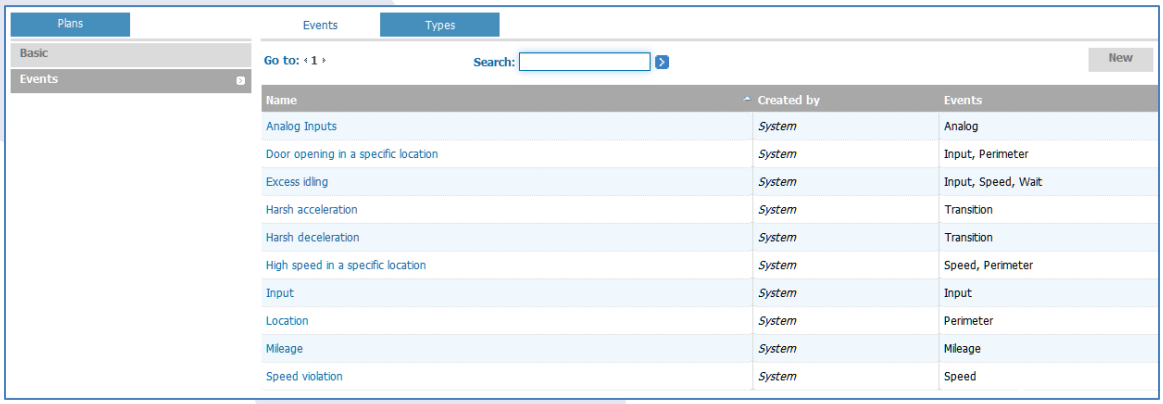


On the left side, the Plans section features the following tabs:

Basic – allows to set up basic plans for LCU500 devices. Do not use.

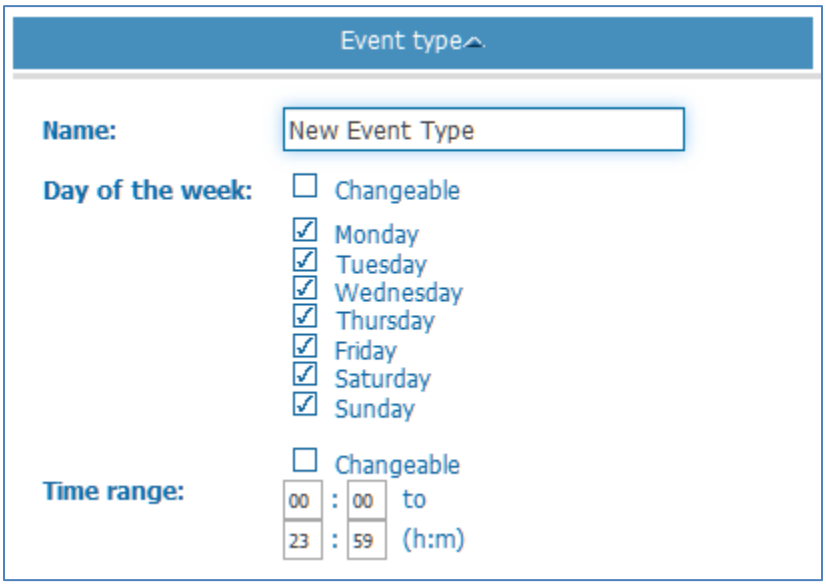
Events – allows to create events for your devices.

To create a new event, you need to create an event Type first. Click **Types**. The Types page opens.

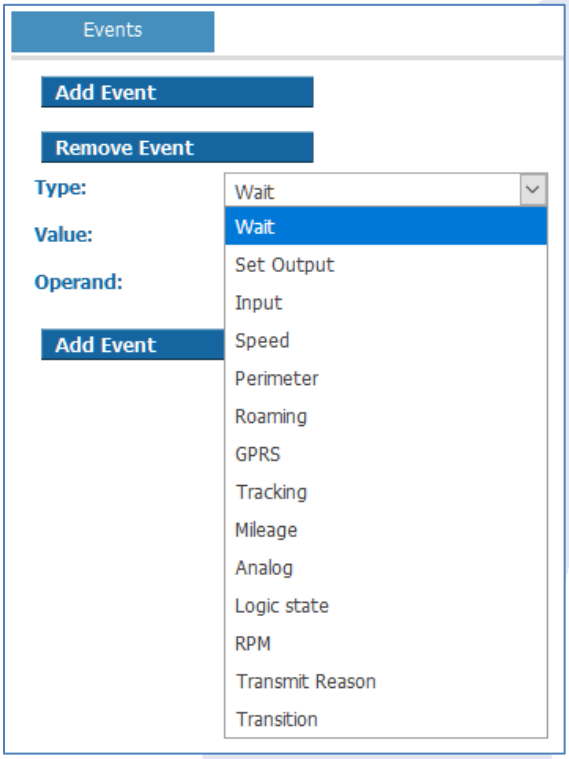


In this section, you can see the types of events already created in the system. You can use one of them or create a new type.

To create a new event type, click **New**. Enter the name of the event type in the **Name** field. Leave **Day of the week** and **Time Range** as "Changeable", later you will be able to change these settings in the event itself.



Click the **Add Event** button and select the event type you want to create from the dropdown list.



Most of the types listed here relate to the Helios devices. The event types that can be used for WatchLock Cube are: **Wait, Perimeter, Roaming, GPRS, Tracking, Logic State** and **Transmit Reason**.

Set the necessary **Value**. You can leave the **Condition** as "Changeable", later you will be able to change it in the event itself. Select the necessary operand in the **Operand** list, as follows:

And – when you create several events, this event and the following one will be performed simultaneously.

And then – when you create several events, the following event will start only after the first one is performed.

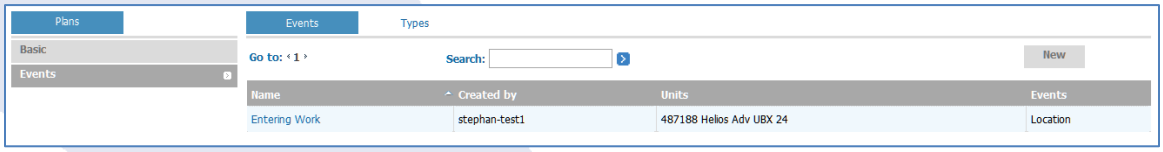
Transmit – the event will be transmitted.

End – ends an event. For example, you can create an output event, which after it performs the necessary actions will simply end.

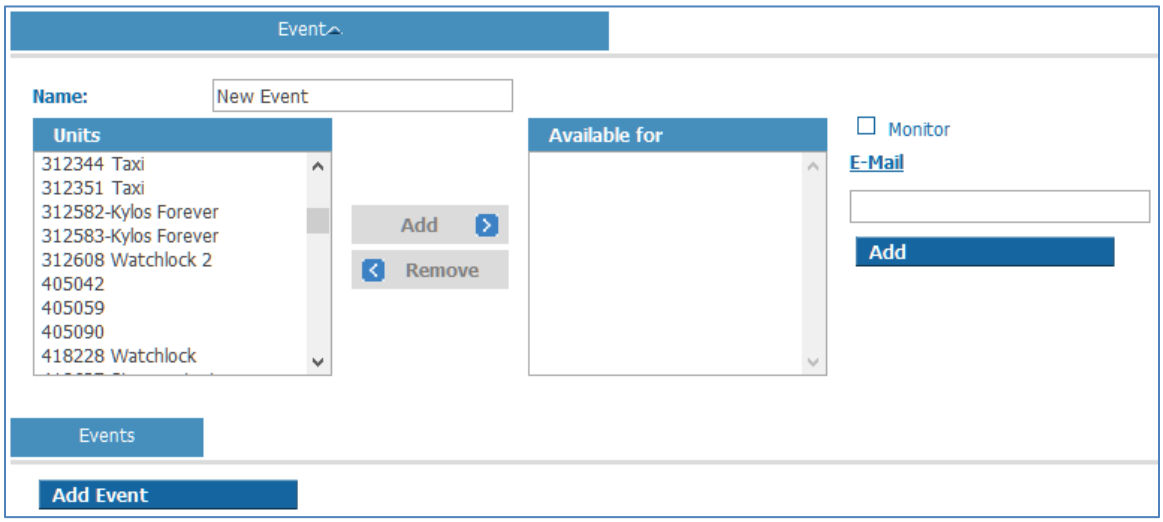
You can create a complex event type, which consists of several events.

When finished, click **Apply**. The new event type is saved.

To create a new event, click **New** in the Events section.

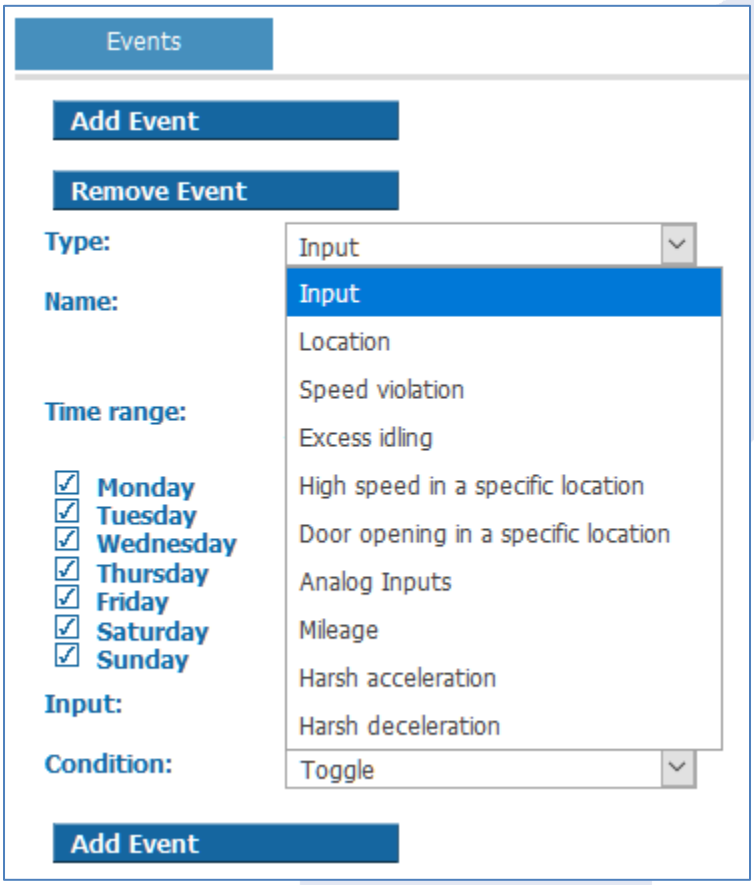


Enter the name of the event in the **Name** field. In the **Units** list, select the devices you want to include in the event and click **Add**. The devices will be moved to the **Available for** list.



Enter the email address to receive the event notification. If you select the Monitor checkbox, the event will be displayed on the Monitor page (see below) in real time.

Click the **Add Event** button and select the type of the event you want to create from the dropdown list.



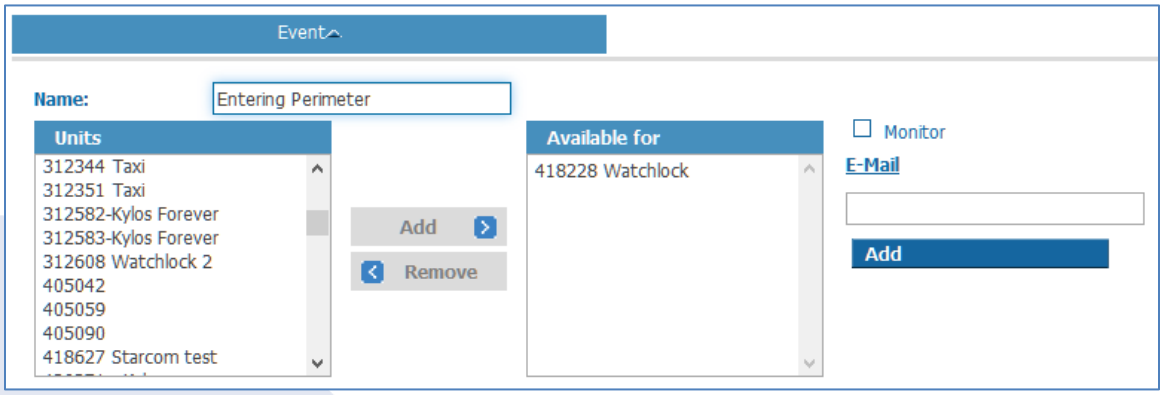
Specify the time and date range and the event condition.

When finished, click **Apply**. The new event is saved.

For example, let's create an event which will send an alert when the device enters a specific location.

For this, we will use a Location event type already created in the system and create a new event based on this type.

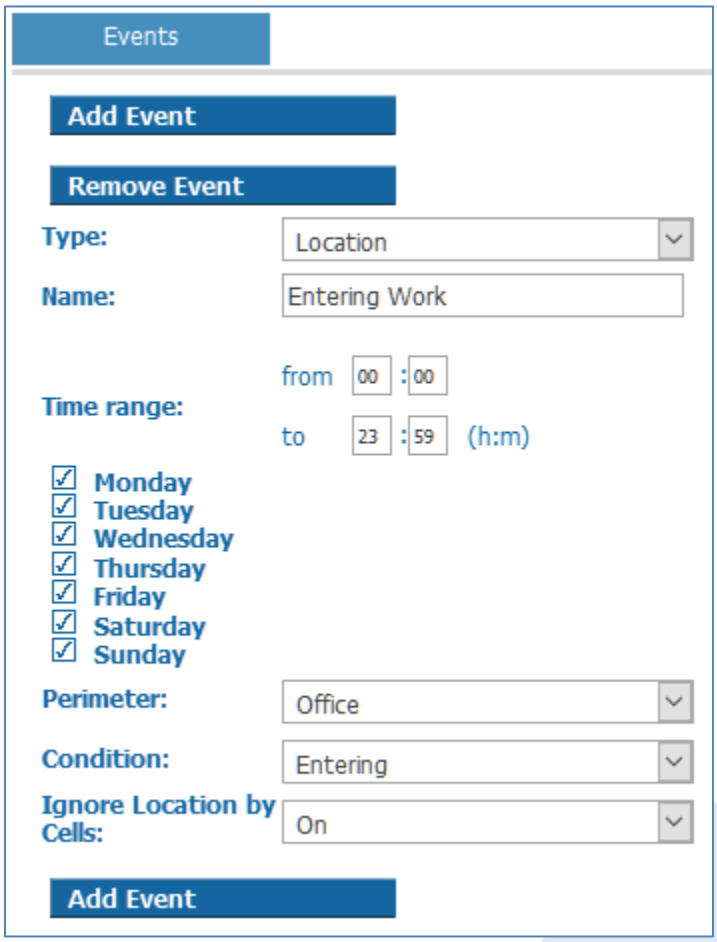
Go to **Events** and click **New**.



Enter the name of the event in the **Name** field. In the **Units** list, select the devices you want to include in the event and click **Add**. The devices will be moved to the **Available for** list.

Enter the email address to receive the event notification. Select the Monitor checkbox, if you want the event will to be displayed on the Monitor page in real time.

Click the **Add Event** button and select the **Location** type in the **Type** list.



Enter the name of the event in the **Name** field. Select the necessary time and date range.

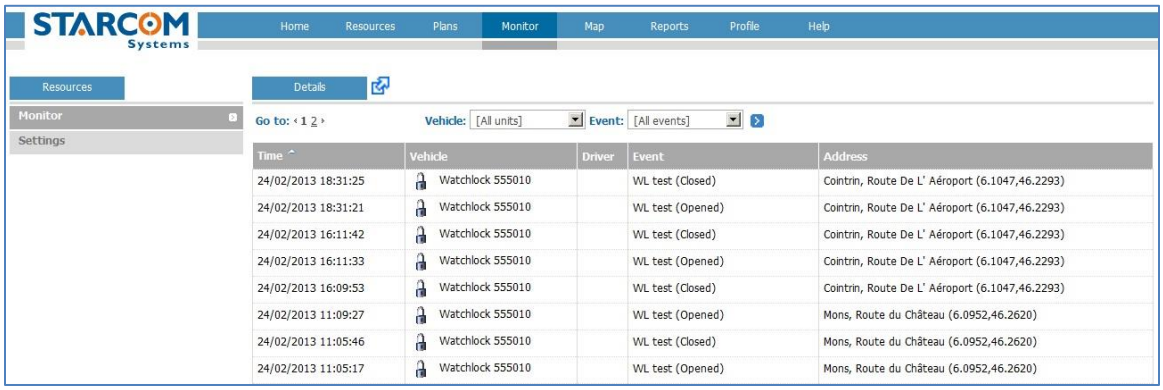
Select the necessary perimeter in the **Perimeter** list.

Select **Entering** in the **Condition** list.

Click **Apply**. The new event, which will send an alert when the device enters a specific location, is created.

Monitor

The Monitor section allows you to select a set of events for a specific device type and to see them displayed in real time.

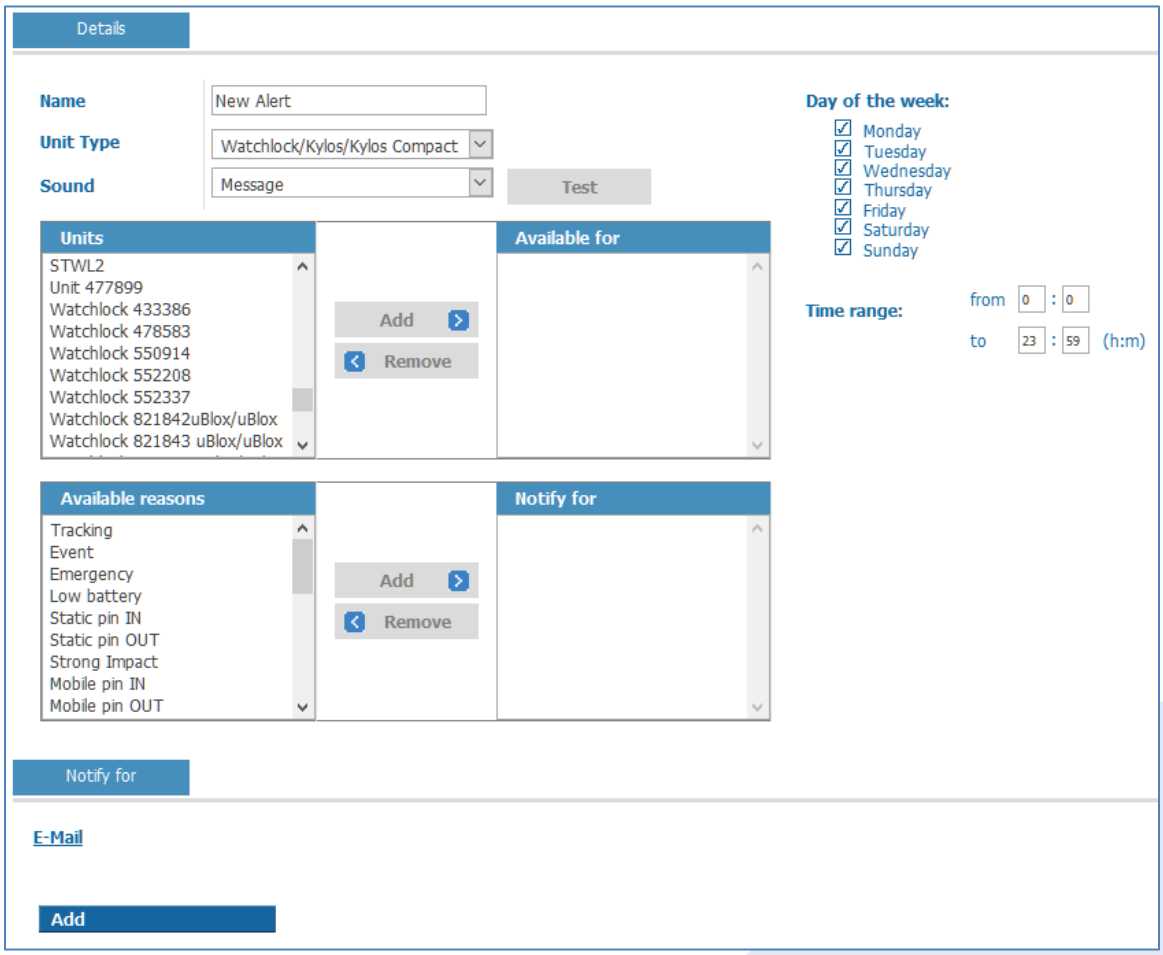


On the left side, the Monitor section features the following tabs:

Monitor – displays the events in real time.

Settings – allows creating new and modifying existing monitoring events.

To create a new perimeter, go to the **Settings** tab and click **New**. The Details page opens. In the **Name** field, enter a name for the new event.



Select **Watchlock/Kylos/Kylos Compact** in the **Unit Type** list.

In the **Units** list, select the devices you want to include in the event and click **Add**. The devices will be moved to the **Available for** list.

In the **Available reasons** list, select the reasons you wish to receive an alert for and click **Add**. The reasons will be moved to the **Notify for** list.

- Tracking – alerts on every regular transmission.
- Event – alerts on every event created in the Plans section.
- Emergency – not applicable to WatchLock Cube.
- Low battery – alerts you of the battery getting low.
- Static Pin IN/OUT – not applicable to WatchLock Cube.
- Mobile Pin IN/OUT – not applicable to WatchLock Cube.

- Weak / Strong Impact – events which show two types of impact on the device. These events are triggered by the accelerometer, which can be configured in Installer > Watchlock Parameters > Hardware.
- Location Update – event which will update you on the device location status.
- Closed / Opened – alerts triggered upon opening and closing of the lock.
- Maintenance – not applicable to WatchLock Cube.
- Break-in – not applicable to WatchLock Cube.
- Power on – alert that is sent when the device turns on.
- Light On/Off – not applicable to WatchLock Cube.
- Temperature Low/High/Normal – not applicable to WatchLock Cube.
- Logging – alerts on every logging transmission.
- No activity – this event can be used to receive alerts when devices have stopped transmitting. The default value is 336 hours (2 weeks).

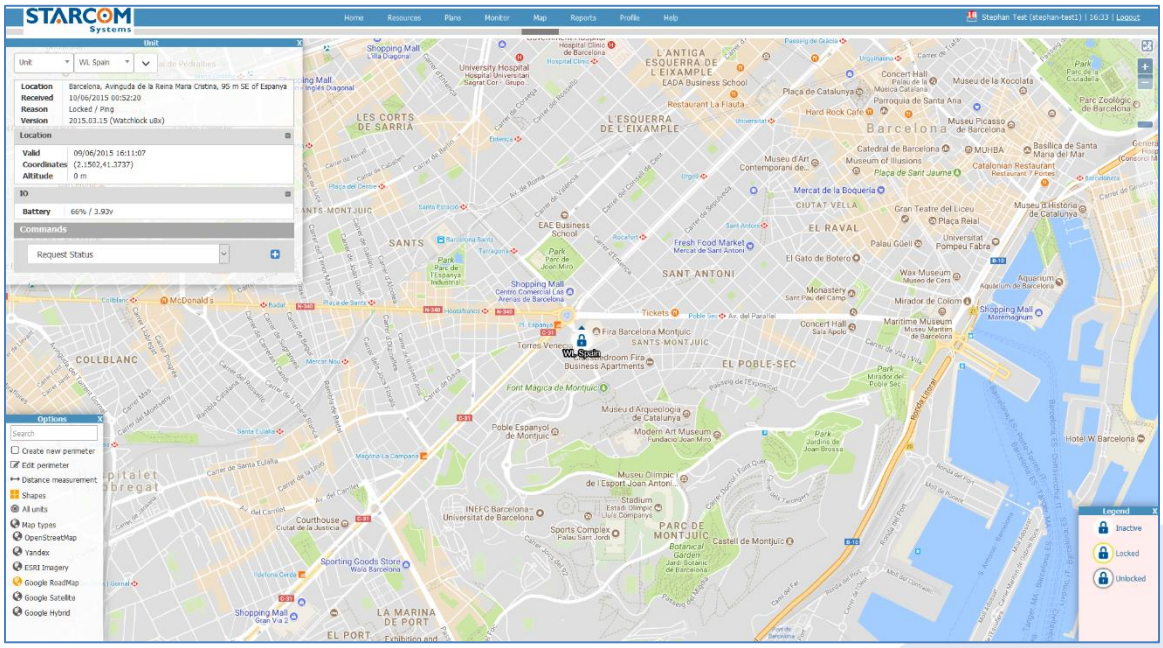
Enter the email for the notification to be sent to in the **Notify for** section.

Press **Apply**. The new monitoring event is saved.

Once the events are generated by the devices, they will appear on the Monitor page. The email notifications are accumulated and sent once every half an hour to avoid spamming.

Map

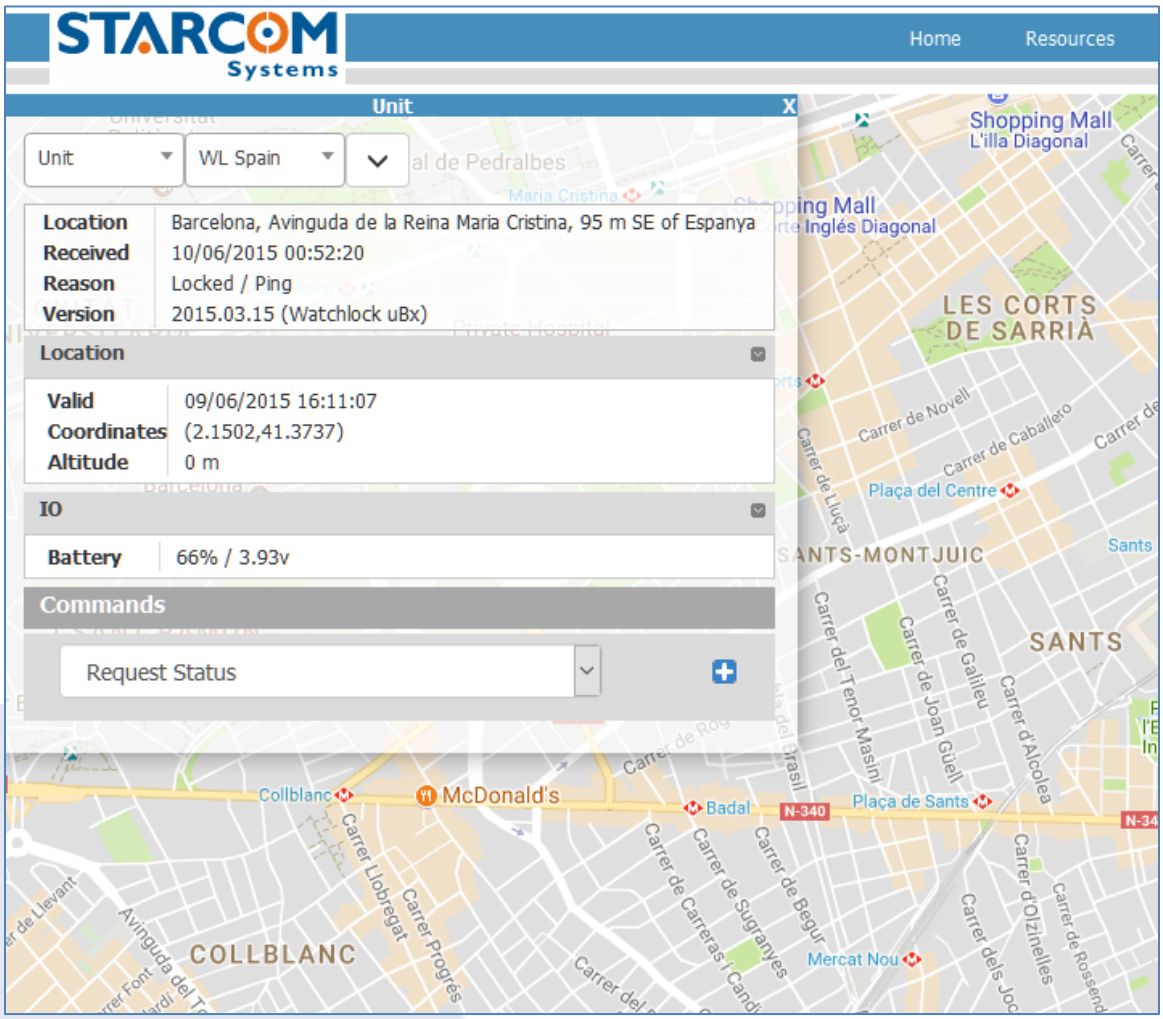
The Map page displays the location of a single device, or a group of devices. It also shows the device information and commands.



You can select a device, or a group of devices in the dropdown list on the left.

In the Search field, you can enter the device number to be displayed.

Once you select the device, its location will be displayed on the map and its information will appear on the left.



The following device information is displayed:

- **Location** – the address of the last GPS position of the device
- **Received** – the date and time of last transmission from the device
- **Reason** – the reason for the transmission
- **Version** – the device firmware version

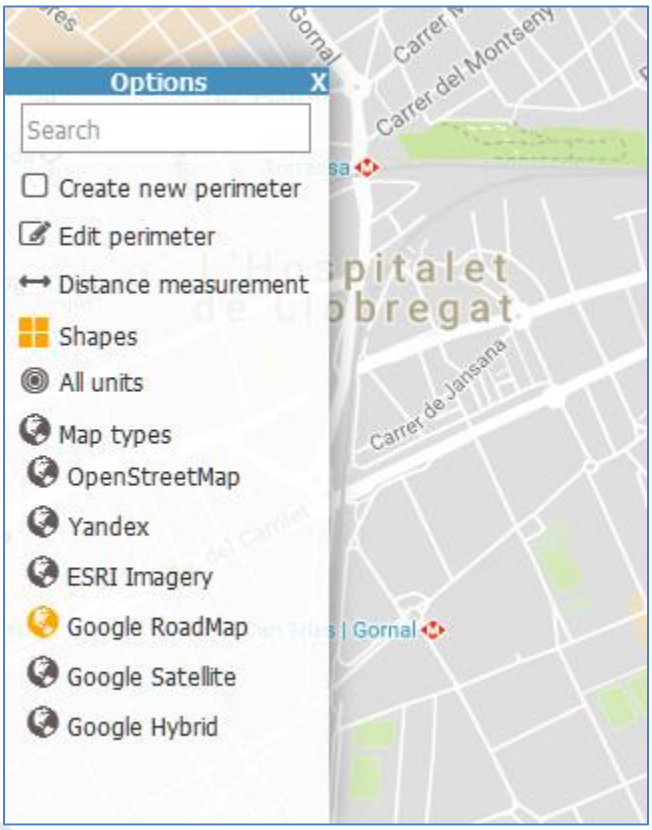
- **Location** – the GPS location of the device, including:
  - **Valid** – the date and time of the last location transmission from the device
  - **Coordinates** – the GPS coordinates of the last position of the device
  - **Altitude** – the last altitude of the device

- **IO** – device input / output information

- **Commands**
  - **Request Status** – requests the current status of the device
  - **Tracking** – overrides the device transmission rate settings and forces the device to transmit according to the specified interval.
  - **Stop Tracking** – stops the tracking command and returns the device to its regular transmission rate
  - The **Queued commands** option allows you to send a command to the device while it is in sleep mode. The next time the device wakes up to transmit, it will receive the command. This can be used to change the device tracking interval, for example.

To enable the queued command, select the command and then press the plus (+) icon on the right.

To remove the queued command, press the x icon on the right.

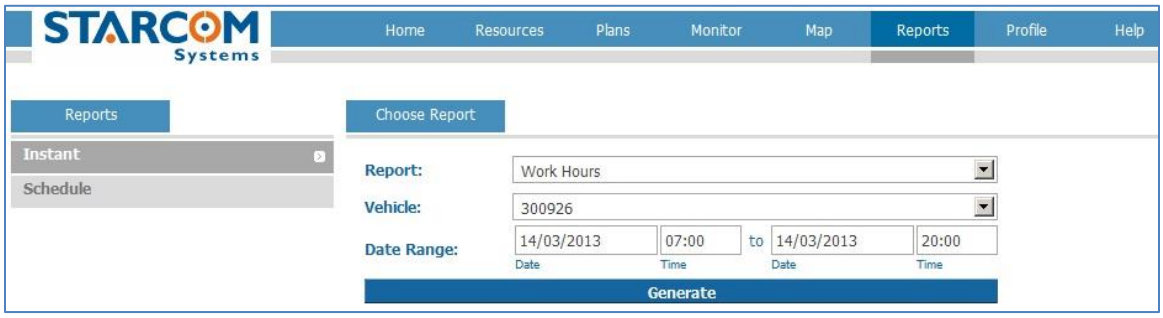


Click on the settings icon in the bottom left corner to reveal the Map Options.

- **Search –** as you type the name of a search criterion in the search field, a list of matching names, from which you can select the required name, appears.
- **Create new perimeter** – allows to create a new perimeter.
- **Edit perimeter** – allows you to edit an existing perimeter.
- **Distance measurement** – allows to measure the distance between two points on the map.
- **Shapes –** displays your perimeters on the map.
- **All units** – displays all your devices on the map at once.
- **Map types –** you can select the following map types: OpenStreetMap, Yandex, ESRI Imagery, Google RoadMap, Google Satellite, Google Hybrid.

Reports

The Reports section allows you to generate different device reports and to schedule automatically generated reports.



On the left side, the Reports section features the following tabs:

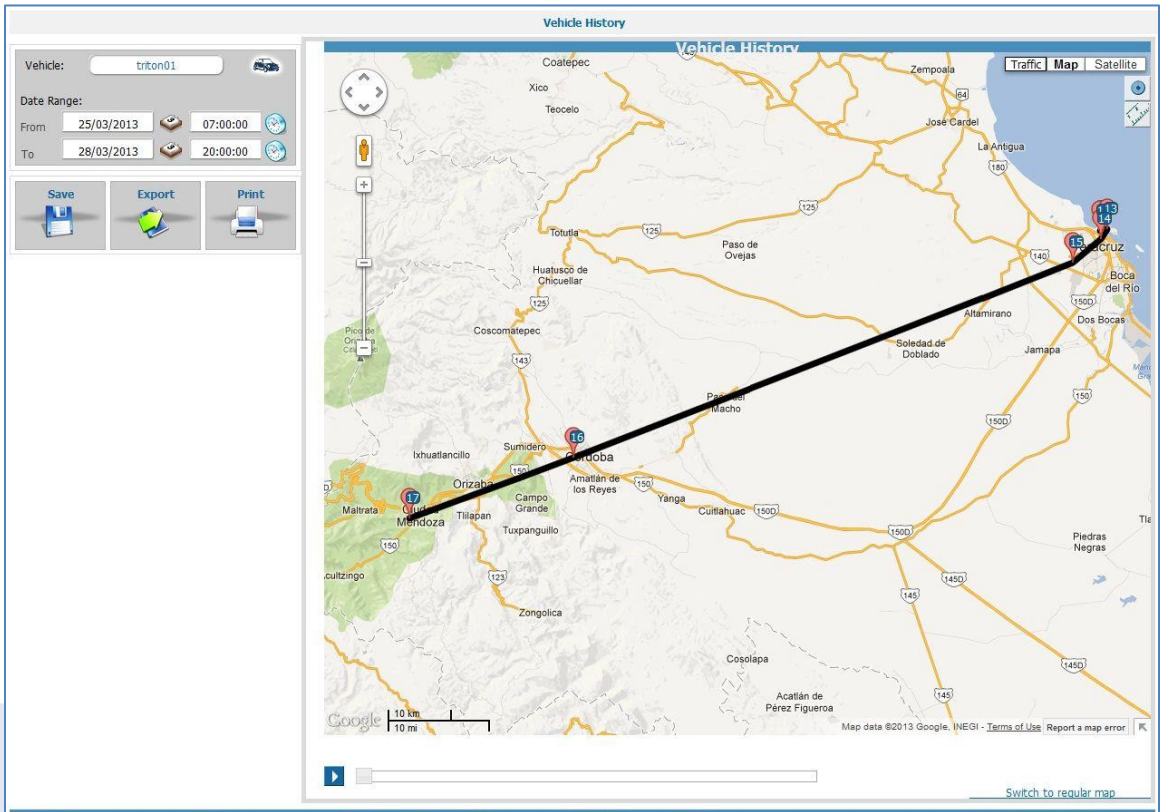
Instant – allows to generate reports on demand for a single device or a group of devices for a specific time period (date and time range).

Schedule – allows to define scheduled reports that generate automatically on a daily, monthly or weekly basis.

You can generate the following types of reports: **Work Hours**, **Work Hours Summary**, **Work Hours Group Summary**, **History**, **History – Technical**, **Violations**, **Live Status**, **Events**, **Perimeter Entry**, **Transmit Reasons**, **Monitored events**, **Stops**.

To generate a report, select the report type in the **Report** dropdown list. Select the device or group of devices in the **Unit** dropdown list. Specify the dates and times in the **Date Range**. Click **Generate**.

The following is an example of a report generated for one device on one day and for a specific time period.



Received	Reason	Installed	Speed (Kph)	Mileage (Km)	Address
25/03/2013 07:39:58	Tracking	On	0	0	(1) Veracruz, Fidel Velazquez (-96.1455,19.2119)
25/03/2013 07:40:30	Ping				Veracruz, Fidel Velazquez (-96.1455,19.2119)
25/03/2013 08:40:00	Tracking	On	0	0	Veracruz, Fidel Velazquez (-96.1455,19.2119)
25/03/2013 08:40:31	Ping				Veracruz, Fidel Velazquez (-96.1455,19.2119)
25/03/2013 09:40:02	Tracking	On	0	0	Veracruz, Fidel Velazquez (-96.1455,19.2118)
25/03/2013 09:40:34	Ping				Veracruz, Fidel Velazquez (-96.1455,19.2118)
25/03/2013 10:40:04	Tracking	On	0	0	Veracruz, Fidel Velazquez (-96.1455,19.2118)
25/03/2013 10:40:35	Ping				Veracruz, Fidel Velazquez (-96.1455,19.2118)
25/03/2013 11:40:06	Tracking	On	0	0	Veracruz, Fidel Velazquez (-96.1456,19.212)
25/03/2013 11:40:37	Ping				Veracruz, Fidel Velazquez (-96.1456,19.212)
25/03/2013 12:40:08	Tracking	On	0	0	Veracruz, Fidel Velazquez (-96.1456,19.212)
25/03/2013 12:40:39	Ping				Veracruz, Fidel Velazquez (-96.1456,19.212)
25/03/2013 13:40:03	Tracking	On	0	0	Veracruz, Fidel Velazquez (-96.1456,19.2117)
25/03/2013 13:40:34	Ping				Veracruz, Fidel Velazquez (-96.1456,19.2117)
25/03/2013 14:40:05	Tracking	On	0	0	Veracruz, Fidel Velazquez (-96.1456,19.2117)
25/03/2013 14:40:36	Ping				Veracruz, Fidel Velazquez (-96.1456,19.2117)
25/03/2013 15:40:11	Tracking	On	0	0	Veracruz, Fidel Velazquez (-96.1455,19.2118)
25/03/2013 15:40:43	Ping				Veracruz, Fidel Velazquez (-96.1455,19.2118)
25/03/2013 16:40:13	Tracking	On	0	0	Veracruz, Fidel Velazquez (-96.1456,19.2118)
25/03/2013 16:40:44	Ping				Veracruz, Fidel Velazquez (-96.1456,19.2118)
25/03/2013 17:40:15	Tracking	On	0	0	Veracruz, Fidel Velazquez (-96.1456,19.2118)
25/03/2013 17:40:47	Ping				Veracruz, Fidel Velazquez (-96.1456,19.2118)
25/03/2013 18:40:14	Tracking	On	0	0	Veracruz, Fidel Velazquez (-96.1455,19.2118)
25/03/2013 18:40:45	Ping				Veracruz, Fidel Velazquez (-96.1455,19.2118)
25/03/2013 19:40:16	Tracking	On	0	0	Veracruz, Fidel Velazquez (-96.1455,19.2118)
25/03/2013 19:40:53	Ping				Veracruz, Fidel Velazquez (-96.1455,19.2118)
25/03/2013 20:40:18	Tracking	On	0	0	Veracruz, Fidel Velazquez (-96.1456,19.2119)
25/03/2013 20:40:49	Ping				Veracruz, Fidel Velazquez (-96.1456,19.2119)
25/03/2013 21:40:20	Tracking	On	0	0	Veracruz, Fidel Velazquez (-96.1456,19.2119)

The report includes a map area and tracking details area. The map area shows a map of the area in which the device is located showing points of movement of the device. The tracking details area lists the tracking data of the device.

The pointers on the map correspond with the numbers in the address column of the detailed list of transmissions received from the device. These numbers indicate the points of movement of the device. The total number of map pointers available per report is 50.

On the bottom of the Map section there is a Play button that enables you to play back the movement of the device on the map.

To save the report, click **Save** 

. The report is saved as a PDF file, or as an HTML file in a zip.

To export a report, click **Export** 

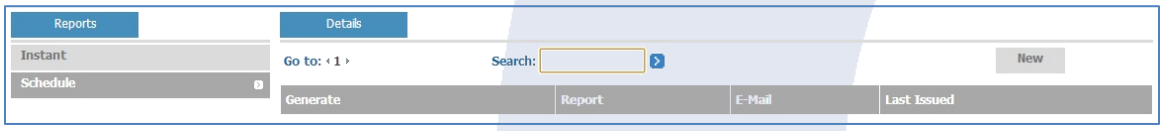
. The report is exported as a CSV file, which can be viewed in Excel.

To print a report, click **Print** 

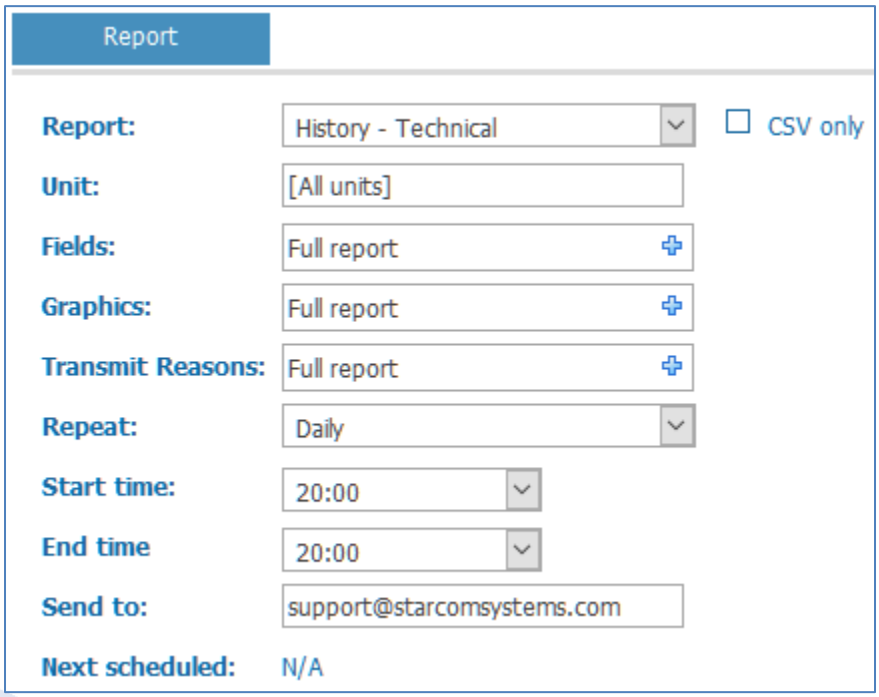
. The report appears in your default browser window where you can select the printer to print out the report.

Scheduled reports

To create a scheduled report, in the **Reports** section, click **Schedule**. The Schedule page appears.



Click **New**. The Report Scheduling page opens.



From the **Report** dropdown list, select the type of report you want to create.

Tick the **CSV only** checkbox, if you do not want a map provided with the report.

From the **Unit** dropdown list, select the device or group of devices for the report.

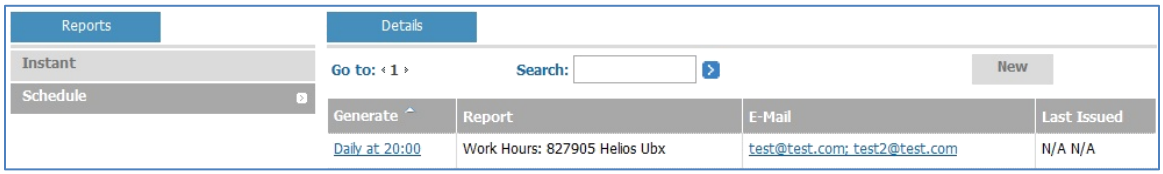
Select the **Fields**, **Graphics** and **Transmit Reasons** you want to see in the report in the respective fields.

From the **Repeat** dropdown list, select if you want the report repeated **Daily**, **Weekly** or **Monthly**.

Use the **Start time** and **End time** dropdown lists to select the time at which you want to generate the report.

The **Send to** field is populated with the default email address for the account. You can change this address or add additional email addresses, separated by a semicolon.

Click **Apply**. The report schedule is saved and added to the list of scheduled reports.

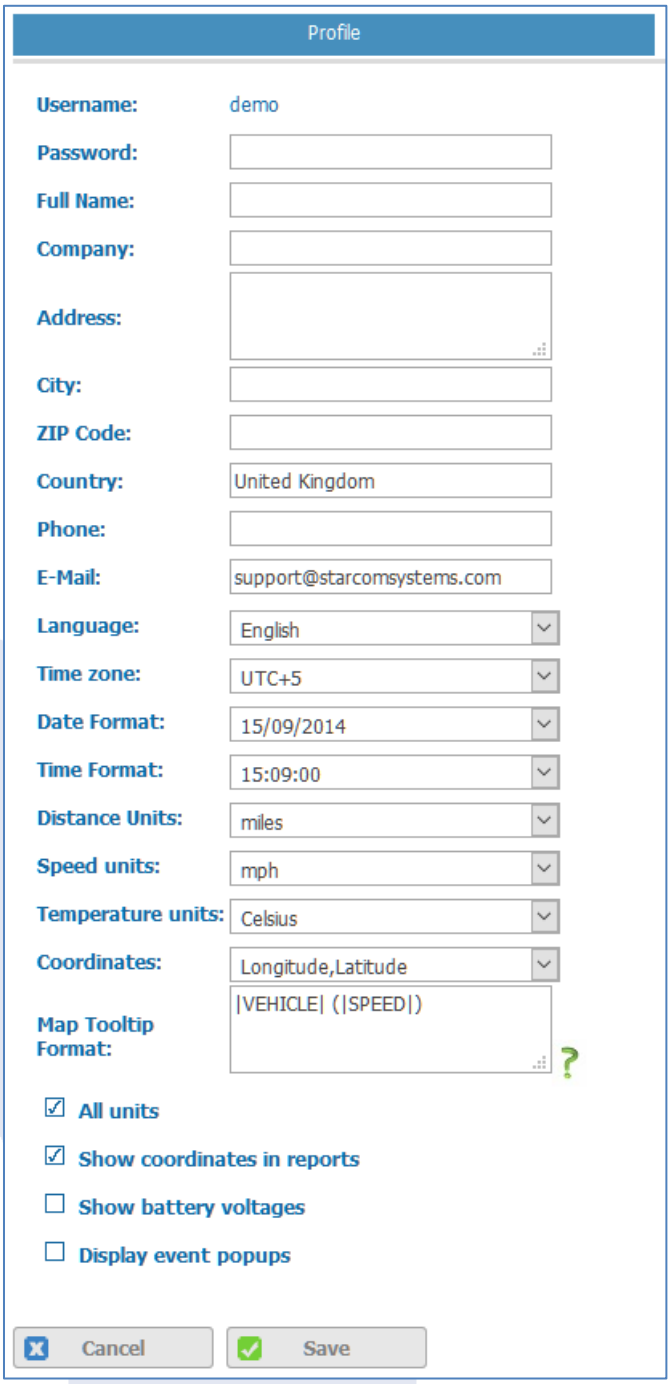


To modify a scheduled report, in **Reports**, click **Schedule**. In the **Details** section, under the Generate column, click the link of the report schedule you want to modify. The Report Scheduling page appears. Modify the report schedule as required. Click **Apply**. The modified schedule details are saved.

To delete a scheduled report, in **Reports**, click **Schedule**. In the **Details** section, under the Generate column, click the link of the report schedule you want to delete. The Report Scheduling page appears. Click **Delete**. The scheduled report is deleted.

Profile

The Profile section shows your profile details that were created when you purchased your devices. You can view and modify these details as required.

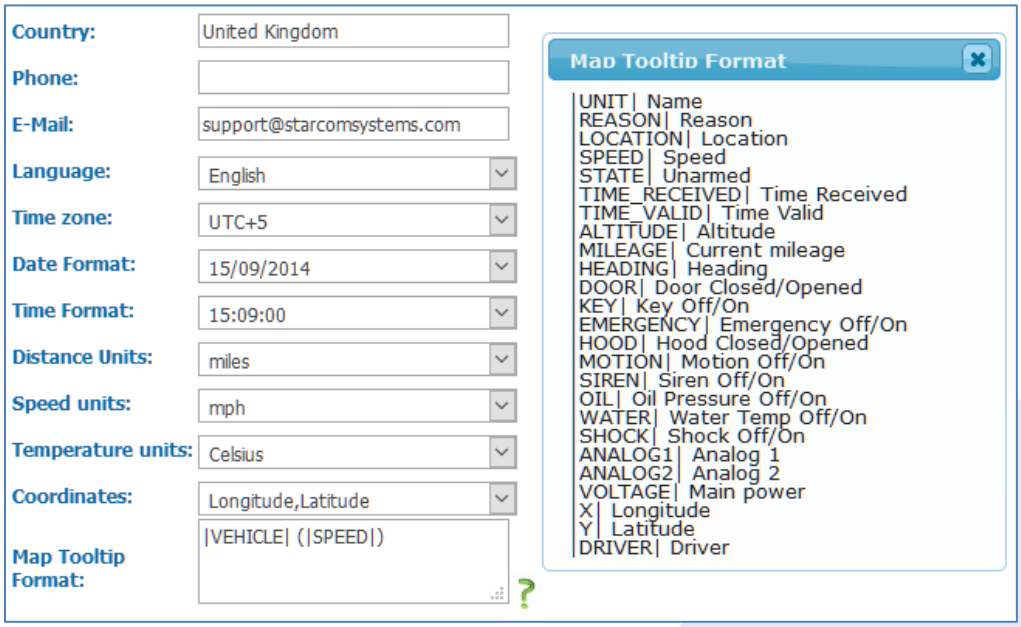


To view or modify your profile, click the **Profile** tab, and modify the information as required. Click **Apply**. The changes are saved.

Using Map Tooltip Format

The Map Tooltip Format field lets you configure the information that will appear in the info window on the Map page when you select a device.

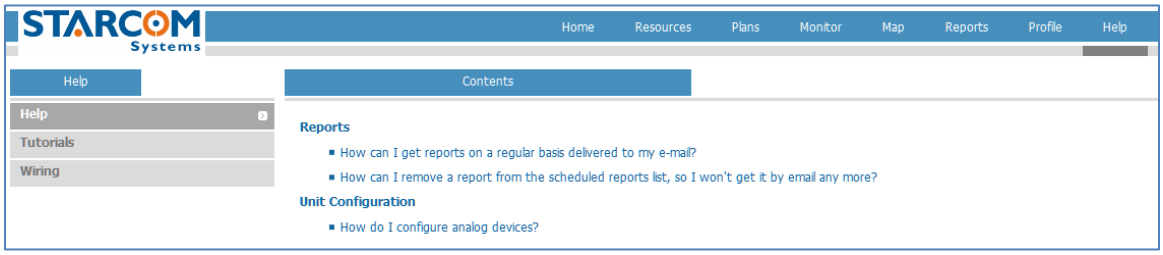
To see all the parameters that can be configured in the Map Tooltip Format field, click on the green question mark located to the right of the field. The Map Tooltip Format legend window will appear.



Once you made all the necessary changes, click **Apply**. Then go to the Map page and check the device info window.

Help

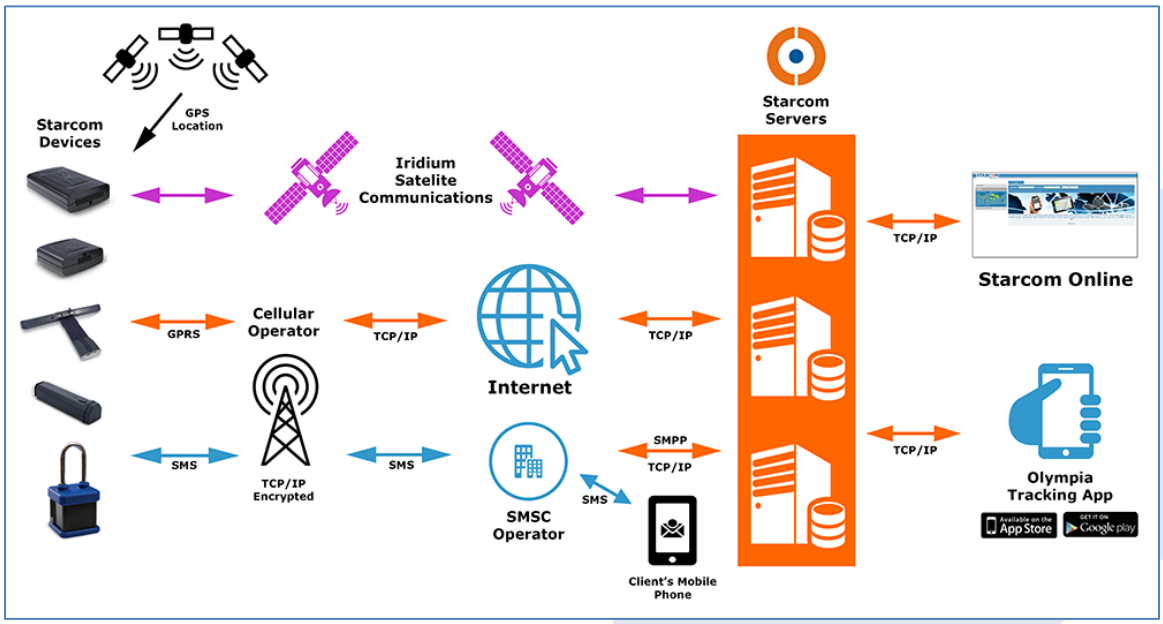
The Help section contains answers to some frequently asked questions and Starcom Online tutorials.



Click on the appropriate tab to access the necessary information.

Appendix A – Device Communication in Starcom Systems

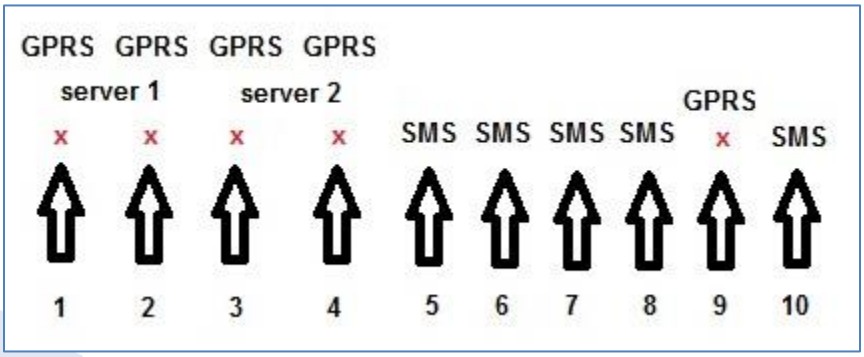
WatchLock Cube is the component of Starcom's advanced tracking and monitoring system. The system uses advanced software algorithms for field tracking of devices and provides customers with a selection of real-time information about the tracked device. The following image illustrates the Starcom Systems communication channels.



The device transmits messages according to the values specified in WatchLock Parameters > Transmission Rates settings (GPRS, SMS).

When the device's modem is turned on, it tries to connect to the network and transmit via GPRS (4 attempts: 2 on the first server and 2 on the second server). If it fails to connect to the network, it will switch to the SMS channel (if it is configured to transmit via SMS) after about 4 minutes, because it makes four attempts to connect via GPRS. It will constantly try to transmit via SMS.

The next attempt to transmit via GPRS will be repeated in 5 minutes. Every 5 minutes, the device will attempt to connect to the network and transmit via GPRS. This process is illustrated in the following figure.



The device saves all the information that could not be sent in its memory. Once it is able to connect to the network again, it will transmit all the stored data.

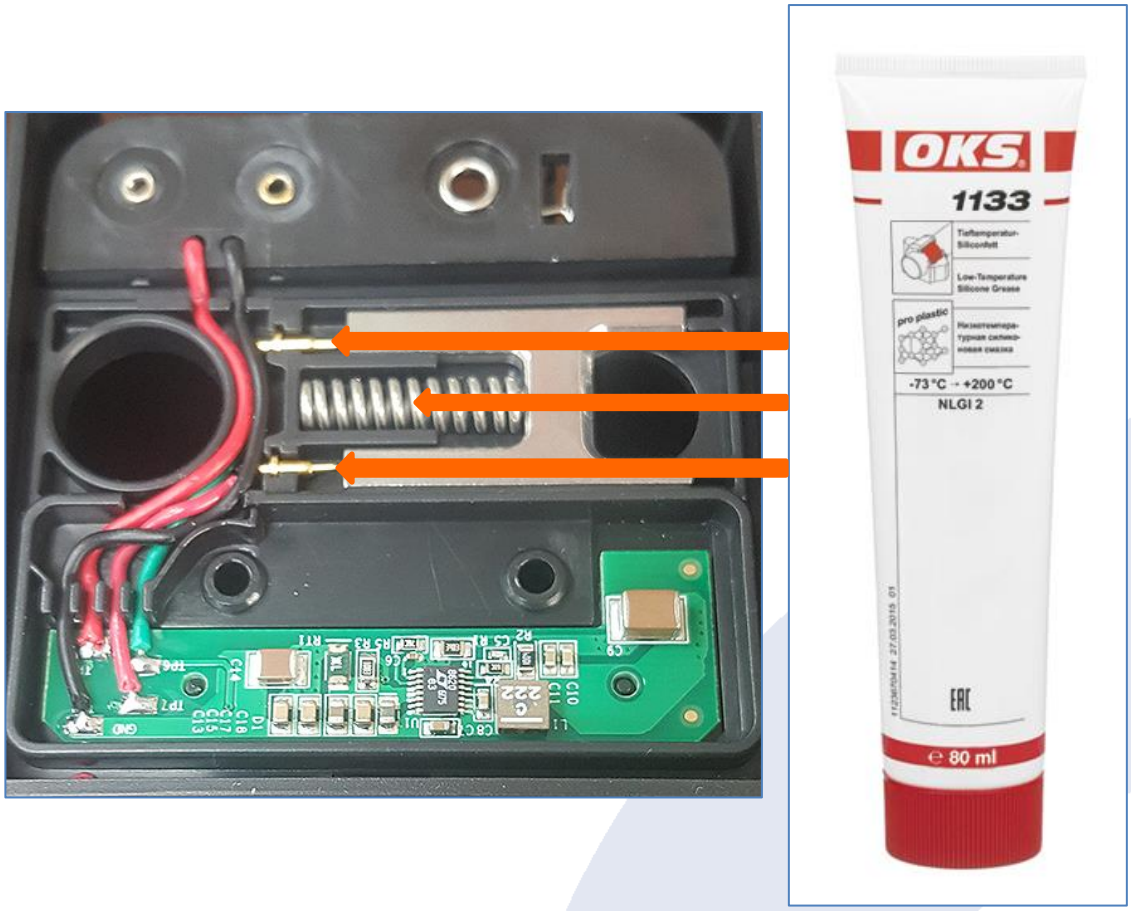
The device sends encrypted data to the routing server. When the routing receives it, it is decoded and encoded at the same time and sent to all the recipients configured in the system.

The message size is 140 bytes (70 bytes data and 70 bytes header).

For more information, see *Routing*, *Control Center* and *SMS Notifications* guides.

Appendix B – Maintenance

Use OKS 1133, Low-Temperature Silicone Grease, to lubricate the pins and the spring.



Appendix C – Contacts

For more information about Starcom Systems Company and products, please visit: http://www.starcomsystems.com.

Technical Support

Comprehensive support information is available online at: http://wiki.starcomsystems.com/wiki/index.php/Support.

Should you have any questions regarding our system, please contact Starcom technical support. For personalized support, use **Email**: support@starcomsystems.com, or **Skype**: **starcom.support**.