

TETIS

User Guide

Version 2.1



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Contents

2. Package Contents 6 3. Product Description 7 Sensors 8 Audible signals 9 Technical specifications 9 Industry approvals and certifications 11 4. Configuration 12 Downloading the Software 12 Installing the Software 12 Installing the Update 16 Installing the cable driver 18
3. Product Description 7 Sensors 8 Audible signals 9 Technical specifications 9 Industry approvals and certifications 11 4. Configuration 12 Downloading the Software 12 Installing the Software 12 Installing the Update 16 Installing the cable driver 18
Sensors 8 Audible signals 9 Technical specifications 9 Industry approvals and certifications 11 4. Configuration 12 Downloading the Software 12 Installing the Software 12 Installing the Update 16 Installing the cable driver 18
Audible signals 9 Technical specifications 9 Industry approvals and certifications 11 4. Configuration 12 Downloading the Software 12 Installing the Software 12 Installing the Update 16 Installing the cable driver 18
Technical specifications 9 Industry approvals and certifications 11 4. Configuration 12 Downloading the Software 12 Installing the Software 12 Installing the Update 16 Installing the cable driver 18
Industry approvals and certifications 11 4. Configuration 12 Downloading the Software 12 Installing the Software 12 Installing the Update 16 Installing the cable driver 18
4. Configuration 12 Downloading the Software 12 Installing the Software 12 Installing the Update 16 Installing the cable driver 18
Downloading the Software12Installing the Software12Installing the Update16Installing the cable driver18
Installing the Software12Installing the Update16Installing the cable driver18
Installing the Update16 Installing the cable driver 18
Installing the cable driver 18
Inserting the SIM card 19
Attaching the battery 21
Connecting the unit to the computer 22
Configuring the unit 23
Network settings 29
Transmission Rates settings 31
Hardware settings 33
Saving the configuration 35
Configuring a new unit with the saved configuration 35
5. Testing 36
TCP test 36
GPS test 37
Unit Status 38
6. Installation 39
7. Monitoring 40
Home 41





Resources	42
Units	42
Groups	46
Users	48
Perimeters	52
Plans	55
Monitor	61
Мар	64
Reports	69
Scheduled reports	71
Profile	74
Help	76
Appendix A – Unit Communication in Starcom Systems	77
Appendix B – Contacts	79



1. Introduction

Tetis is a sophisticated real-time container tracking device designed for security and management purposes. It allows full control of various events and situations by automatic remote monitoring, provides system stability and continuity of operations.

Utilizing its built in sensors and GPS / GPRS facilities for communication the system can detect when the container has reached the customer and inform the recipient of every movement of the container. Any damage, blow or breaking into the container can be reported by email and SMS.

The device is easily installed on the container door frame and performs the monitoring of the container state and location. The system provides alerts on various events, such as door opening, breaking in through the side wall, door forcing, container tilt, fall, impact, etc.





2. Package Contents



- 1. Tetis unit
- 2. Battery
- 3. AC charger
- 4. Tetis programming cable with USB connectors

WARNING: Use only the charger provided by Starcom Systems to charge the Tetis battery. Using any other charger could damage your device or battery.



3. Product Description



 Central Arm – central part of Tetis with the Install and Door buttons which connects the two side compartments. This part contains the magnets for fast attachment to the container door frame and two holes, in case an attachment with screws is required (optional). When Tetis is installed in the container, this part is located inside the container.



- 2. Battery, CPU, GSM and GPS Compartment (System Core) wide side compartment which contains the CPU, GSM and GPS modules, the SIM card slot and the light sensor. The battery is connected to this compartment. When Tetis is installed in the container, this part is located inside the container.
- **3. Antennas Compartment** thin side compartment, which contains the GSM and GPS antennas. The Operation button is located in this compartment. When Tetis is installed in the container, this part is located outside the container.
- Light sensor sensor which detects light change inside the container (e.g. breaking into the container).
- Door button button which responds when the container door is open/closed.
- 6. Operation button button which serves for testing the Tetis operation after installation. After pressing and holding this button for 2 seconds, the unit will sound a short audible signal (beep).
- Mini USB output used for connecting the unit to the computer with RS232 cable.
- **8. Install button** button which is triggered when the unit is installed/uninstalled (attached/removed from the container door frame).
- **9. Magnets** 4 industrial strength magnets used for fast attachment of the unit to the container door frame.

Sensors

Tetis incorporates several sensors to monitor and report various event types.

- Light sensor detects a change of light inside the container (e.g. breaking into the container).
- Acceleration sensor detects impacts to the container.
- **Temperature sensor** detects temperature around the unit (can be configured for high and low temperature alerts from -127°C to +127°C).



Audible signals

The unit uses audible signals (beeps) to announce its activity. When you insert the battery 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 unit will sound four (4) audible signals (beeps) when its battery is getting empty.

Supply	Voltage	3.7 V
Temperature	Operational	-20°C to 60°C
	Storage	-40°C to 85°C
Operating Humidity		Up to 90%
Measurements		195 x 96 x 40 mm
Cellular Modem	GSM	Quad Band (850, 900, 1800,
		1900)
		Built in antenna
Network	Data	GPRS and SMS
Messages	SMS	Encrypted Protocol
	GPRS	TCP/IP over PPP

Technical specifications



GPS	Receiver and Antenna	Internal
	Protocol	NMEA (Binary format)
	Positioning accuracy	Position: 10 m CEP (50%)
		Velocity: 0.2 m/s (50%)
	Navigation Update Rate	1 second (default)
	Navigation method	All-In-View solution
		2-Satelite solution
	Time to First Fix (TTFF)	Hot Start: 2 sec
		Warm Start: 10 sec
		Cold Start: 50 sec
CPU Capacity	Static RAM	128 kb
	Nonvolatile Memory	34 kb
	Flash Memory	2048 kb
Inputs	Pushbutton	3
	Light Sensor	1
Battery Pack	Туре	Li-Ion
	Capacity	5200 mAh
Power	Sleep/Idle	0.05 mAh
Consumption	GPS only	75 mAh
	GPRS only	100 mAh
	GPS and GPRS	165 mAh
Com Port	RS232	115,200 bps (default)



Industry approvals and certifications



For available certificates, see: http://wiki.starcomsystems.com/wiki/index.php/Marketing#Certifications.



4. Configuration

Downloading the Software

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

Installing the Software

Locate the folder where you saved the installer setup file. Double-click the **InstallSetup.exe**. The Open File dialog box appears.

11	Name:	C:\Users\user\Downloads\InstallSetup.exe
	Publisher:	Unknown Publisher
	Type:	Application
	From:	C:\Users\user\Downloads\InstallSetup.exe
		Run Cancel
Al <u>w</u> a	ays ask before	e opening this file

Click **Run**. A Windows Security dialog box appears. Click **Yes**. The Welcome to the Starcom Installer Application Setup Wizard window appears.





Click **Next**. The Select Destination Location window appears.

Setup - Starcom Installer Application	
Select Destination Location Where should Starcom Installer Application be installed?	
Setup will install Starcom Installer Application into the foll	lowing folder.
To continue, click Next. If you would like to select a different folde	er, dick Browse.
C:\Program Files\StarcomSystems\InstallerApplication	Browse
At least 1.2 MB of free disk space is required.	
	5*h
Back N	and a contract



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

tup - Starcom Installer Application		1
elect Components		
Which components should be installed?		6
Select the components you want to install; de install. Click Next when you are ready to cont	ar the components you do not inue.	t want to
Full Installation		-
Installer Application		3.4 ME
MapX Support		12.0 ME
Current selection requires at least 16.5 MB of	f disk space.	
	< Back Nevt >	C-1
	S DIGLE INFALZ	L d l

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

Setup - Starcom Installer Application			<u>_ ×</u>
Select Start Menu Folder Where should Setup place the program's sh	nortcuts?		
Setup will create the program's sh	nortcuts in the follo	wing Start Menu	folder.
To continue, click Next. If you would like to Starcom Systems	select a different	folder, click Brow	se.
Don't create a Start Menu folder			
	< <u>B</u> ack	Next >	Cancel



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.

🖥 Se	etup - Starcom Installer Application	Ľ×
R	Ready to Install Setup is now ready to begin installing Starcom Installer Application on your computer.	B
	Click Install to continue with the installation, or click Back if you want to review or change any settings.	
	Destination location: C:\Program Files\StarcomSystems\InstallerApplication	
	Setup type: Full Installation	
	Selected components: Installer Application MapX Support	
	Start Menu folder: Starcom Systems	
	I P	
	< Back [Install] Cancel	

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

Setup - Starcom Installer Application	_ []
Installing	
Please wait while Setup installs Starcom Installer Application on your computer.	Ċ
Extracting files	
C:\Program Files\MapX\WINMGR.DLL	
	Cancel
	carreer



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 Open File dialog box appears.



Click **Run**. The Starcom Installer Update window appears.

Starcom Install	er Update	×
	Hello! This will update the Starcom software that you own complete the upgrade, please enter the drive where your software to (eg: C:\ or D:\). Enjoy!	In order to e you installed
	Destination folder C:\Program Files\StarcomSystems\InstallerApplication Installation progress	Browse
	Install	Cancel

Verify that the Destination folder points to the location where the Starcom Installer software is installed and click **Install**. A Windows Security dialog box appears. Click **Yes**. The Confirm file replace dialog box appears.

The foll	owing file alread	y exists
Nould vou like	to replace the ex	cistina file
823,29 modifie	16 bytes d on 21-Jan-13	8:26 AM
vith this one ?		
823,29 modifie	6 bytes d on 21-Jan-13	8:26 AM
Yes	Yes to <u>A</u> ll	Rename
	Mate All	Canaal

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



Starcom Insta	ller Update		X
	Extracting eInstall.exe		
	Destination folder	lication 💌	Browse
	Installation progress		
		Install	Cancel
		Install	Cancer

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

Installing the cable driver

The Tetis cable driver can be downloaded from the following link:

http://wiki.starcomsystems.com/wiki/index.php/Tetis

fTritonThe zip file contains a User Manual which explains the driver installation process. Follow the instructions in the Manual to install the cable driver.



Inserting the SIM card

Remove the back panel of the wide compartment by unscrewing the back panel screws (4 screws total), as shown in the following image.



Gently push and pull back the plastic SIM card holder to release and open the SIM card slot. Raise it to an upright position.





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



Lower the SIM card holder back to the horizontal position. Gently press and push the SIM card holder forward to snap it back into place. Close the cover and fasten the screws.





Attaching the battery

NOTE: Before installation, please verify that the battery is fully charged. Charge the battery for at least 12 hours prior to first use. After that, charge the battery for at least 3 hours before each use.

Hold the battery so that the contacts on the Tetis wide side compartment are facing the contacts on the battery.



Gently slide the battery into the wide side compartment.





Push the battery all the way, until it lines up with the compartment.



Connecting the unit to the computer

Connect the Tetis USB cable to the USB output on the unit and to the USB port on your computer.

NOTE: Make sure that you connect the cable to the Mini USB output on the unit and NOT to the output on the battery, which is intended for the AC charger.





NOTE: Tetis unit enters sleep mode to save the battery power whenever possible. This means that during the testing process you must keep the unit awake in order to check its functionality.

After you insert the SIM card and the battery, the unit will spend about 5 minutes to attempt connection to the cellular network and to GPS. During this time it will be awake, which will allow you to connect it to the computer and start the configuration.

After the unit performs the connection attempt, it will enter sleep mode. You can wake the unit by pressing on the Install and Door buttons several times.

To keep the unit awake during the testing process, you can do one of the following:

- Put the unit into testing mode using the Terminal and \tf1 command (see below);
- Change the unit transmission rate to 30 seconds;
- Keep the Install button pressed.

Configuring the unit

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

Installer	—
Please set company name	
ОКС	ancel

Enter your company name and click **OK**. The Installer window appears.



Tetis User Guide

ABC Company - Installer (v2012.05.09)	- • •
Section and the section of the sect	
Wizard Wizard Michael Parameters A Firmware Update Communications Configuration Map setup	
	1.

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

Communications	<u> </u>
🍐 Advanced	

Click the **Advanced** button ^{Advanced}. The Communications Window will appear.

Tetis User Guide



vailable Networks:	Network alias:	Addresses Prefixes: Units Lis	st:	
	Helios.1		<u> </u>	
	RX color: Click here to change!			
	TX color:			
	TY Timesuk			
	60 🗲 Second	s 📃	v	
	Modify source prefix:	(Use on units rar	e unit or one nge per line)	
	🧭 Manual TX	1		

Click the **Add** button **the Network Selection window appears**.

📢 Network Selection	
Supported networks: LCU500 Helios Route TCPIP MotG18 MotC18 SMPP GSM MotTP TC35	nection to Helios units
ок	

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 unit connection to the Installer applies globally to all unit types).



🚱 Communication Window				
Configuration Messages				
Networks Helios 1				
Available Networks:	Network alias:	Addresses Prefixes:	Units List:	
Helios 1 (Helios)	Helios 1	*	<u>^</u>	
	RX color: Click here to change!			
	TX color: Click here to change!			
	^{TX Timeout:} 60 全 Seconds	Z	*	
	Modify source prefix:	C Update	(Use one unit or one units range per line)	
	3 Manual TX			
Add T Remove				
Save Reload Restart				

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

🚱 Communication Window	
Configuration Messages	
Networks Helios.1 Route.1 Route.2	
C Activate	
COM5 I15200 Com Port Baud Rate	
Auto Check	
JCP Test	
Save Reload Restart	

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



In order to verify the COM port being used by Tetis in your computer, go to **My Computer > Manage > Device Manager > Ports**.

📲 Device Manage	
<u>File Action View</u>	Help
-	
🕞 🚔 user-PC	
🕀 🍃 Batteries	
🗄 📜 Compute	r 89
🗄 👝 Disk drive	s
🕀 🏪 Display a	dapters
🗄 🕼 Human In	iterface Devices
🗄 🥁 IDE ATA/	ATAPI controllers
🗄 🔚 Imaging o	levices
🗄 🖾 Keyboard	s
🕀 🖞 Mice and	other pointing devices
🛨 🗾 Monitors	
network	adapters
🖃 🐺 Ports (CC	DM & LPT)
Prolifi	c USB-to-Serial Bridge (COM5)
E Processo	rs
🕀 📳 SM Driver	and the second se
🗄 🛒 Sound, vi	deo and game controllers

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

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

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



Customize		×
ctions		543
Categories:	Actions:	
Prefrences	Communications	
leip	📰 Unit Status	1222
(All Actions)	LCU500 Programming	
	C @ Triton Parameters	
	(Heilos Farameters	
	📅 Firmware Update	-
Description		
Fo add actions to y Categories or Actio	our application simply drag and drop from either ns onto an existing ActionBar.	

Press on **Tetis Parameters** and use the settings to configure the unit.

🔗 Triton Parameters	
Load 📴 Save	
Margin Select All The add from unit Send Single unit Unit Number: Address:	Multiple units
310501	
🛣 Network 🧭 Transmission Rates 🗱 Hardware	
SMS Destination	
GPRS APN GPRS Username GPRS Password	
First server Port	
Secondary Server Port	
)	



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

Network settings

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

🙆 Triton Parameters					- 🗆 ×
	🔄 🖾 Load	Bave Save			
Ma Select <u>A</u> ll	Read from unit	<u>S</u> end	Single unit	Multiple units	
Unit Number: Address	s:				
🕌 Network 🧭 Transmissi	on Rates 🛛 🎲 Hardware 🗎				
SMS Destination					
GPRS APN	GPRS Username	GPRS Password			
First server	Port				
E :					
Secondary Server	Port				

SMS Destination

The unit 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 unit 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 Tetis unit to transmit messages and alerts. The APN settings are provided by your cellular operator with the SIM card you are using in the Tetis unit.



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 units transmit to (by default, it is Starcom Systems server 1).

Secondary server – auxiliary routing server, which the units 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 unit will transmit its status.

🚯 Triton Parameters		
🕒 Load 🛛 😫 Save		
¹ 2 Select <u>A</u> ll 2 Read from unit	Single unit	Multiple units
Unit Number: Address:		
🖹 Network 🥝 Transmission Rates 🎲 Hardware		
Intervals		
Transmision		
GPS Peek		
Logging		
C. J		
Send messages from the memory by:		
(Regular GPRS will always be used)		
F SMS		
Roaming GPRS		

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

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

Logging – interval of data logging, during which the unit 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.).

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 unit 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 unit location. For more information, see *Chapter 7 – Monitoring*.



GPS Peek can be *slower* than Transmission when the unit 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 unit 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. To calculate the battery life based on transmission rates, please use the following file:

http://wiki.starcomsystems.com/wiki/images/English/Tetis battery life expe ctancy.xlsx

Please note that these are the regular scheduled Tracking transmissions and they do not include the additional random transmissions and alerts, like Light On/Off, Location Update, etc., which also use the battery.

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

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

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



Hardware settings

🚯 Triton Parameters	_ 🗆 🗙
🕒 Load 🛛 🖓 Save	
Ma Select All Single unit Single unit Multiple units	
Unit Number: Address:	
🛣 Network 🐼 Transmission Rates 🎡 Hardware	
厂 Use 57600 baud rate*	
Light sensor alerts	
厂 Use location updates	
Location by Cellular	
厂 Use debugging beeps	
Transmit after first start-up or restart	
🔽 Use A-GPS	
Veak Impact Strong Impact	
Temperature High	
Force (g) Duration (mSec) Force (g) Duration (mSec)	
I I Quarter scale	
j Humiaiy Low j Humiaiy High	

This tab allows you to configure various hardware settings.

Use 57600 baud rate – if this option is activated, the device will use 57,600 bps to communicate. Do not use.

Light sensor alerts – light sensor enabling option. Once activated, the unit will transmit Light On / Light Off alerts based on the light sensor readings.

Use location updates – GPS enabling option. Once activated, the unit'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.

Use debugging beeps – factory testing setting. Do not use.

Transmit after first start-up or restart – if this option is activated, a "Power On" message will be transmitted whenever the unit 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.

Temperature Low / Temperature High – temperature sensor parameters used to define the values for low and high temperature alerts.

Humidity Low / Humidity High – humidity sensor parameters for Tetis R. Do not use.

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 unit 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 unit with different values and choose the best option. The lower the setting, the more often the unit will respond to a weaker impact.

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

to send the changes you made to the unit.

Saving the configuration

If you are planning to configure other units with the same parameters, you can save these settings as a *.mem file. Click the **Save** button in the Tetis 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 unit with the saved configuration

To configure a new unit with the saved parameters, click the **Load** button in the Tetis Parameters window, browse to the location where you saved the configuration file, select the file and press **Open**. Click the **Select All** button Select <u>All</u> to select all the parameters and press the **Send**

button <u>Send</u> to send the changes to the unit.



5. Testing

It is important to test the unit connection to the network, the correct GPS location, the unit status and inputs response before installing the unit in the container. In order 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 unit 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.

×
nnected)!

If at the end of the TCP Test you do not receive a successful message, check your APN settings (Tetis 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.
Tetis User Guide



🕢 Helios.1	
\tf1Testing Mode On	
Ntdm	
Modem mode.	
Ntr	
INIT	
AT+MIPCALL=0	
FREOR	
AT+CGPRS?	
+CGPRS: 1	
OK.	
or .	
UN AT MIDCAIL -1 US-A	
OK	
+MIPCALL: 31.154.153.213	
TCP: Registered	
TCP: Opening socket	
AT+MIPCLOSE=1	
ERROR	
T+MIPOPEN=1,1034,"routing11starcomsystems.com",6600,0	

GPS test

NOTE: If you're testing the unit 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 unit 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.

🚷 Helios.1	_ 🗆 ×
\$GPVTG,000.0,T,,M,000.0,N,000.0,K,A*0D	
\$GPGGA_101732.117,3205.0332,N,03448.3701,E,1,10,0.9,86.7,M,17.9,M,,0000×61	В
\$GPGSA A,3,11,03,32,19,14,22,01,20,23,31,,,1.9,0.9,1.6*3B	
\$GPGSU, 3, 1, 10, 11, 74, 271, 41, 01, 57, 322, 43, 32, 56, 319, 43, 31, 36, 116, 41*75	
\$GPGSU,3,2,10,20,34,294,39,19,33,201,40,14,25,041,38,23,22,224,39*75	
\$GPGSV,3,3,10,22,13,077,37,03,12,188,33*7F	
\$GPRMC,101732.117,A,3205.0332,N,03448.3701,E,000.0,000.0,240113,,,A*62	
\$GPVTG,000.0,T,,M,000.0,N,000.0,K,A×0D	
\$GPGGA,101733.117,3205.0335,N,03448.3700,E,1,10,0.9,86.1,M,17.9,M,,0000*60	A
\$GPGSA,A,3,11,03,32,19,14,22,01,20,23,31,,,1.9,0.9,1.6*3B	5.73
\$GPRMC,101733.117,A,3205.0335,N,03448.3700,E,000.0,000.0,240113,,,A*65	
\$GPVTG,000.0,T,,M,000.0,N,000.0,K,A×0D	
\$GPGGA,101734.117,3205.0330,N,03448.3697,E,1,10,0.9,86.5,M,17.9,M,,0000*63	3
\$GPG\$A,A,3,11,03,32,19,14,22,01,20,23,31,,,1.9,0.9,1.6*3B	
SGPRMC,101734_117,A,3205.0330,N,03448_3697,E,000.0,000.0,240113,,,A*68	
\$GPUTG,000.0,T,,M,000.0,N,000.0,K,A*0D	-
\$GPGGA,101735.117,3205.0328,N,03448.3694,E,1,10,0.9,87.7,M,17.9,M,,0000*6	В
5GPGSA, A, 3, 11, 03, 32, 19, 14, 22, 01, 20, 23, 31, , , 1.9, 0.9, 1.6*3B	
5GPGSU, 3, 1, 10, 11, 24, 221, 42, 01, 52, 322, 43, 32, 56, 319, 43, 31, 36, 116, 41*26	
5GPGS0,3,2,10,20,34,294,40,19,33,201,40,14,25,041,38,23,22,224,39*7B	
5GPGS0,3,3,10,22,13,077,37,03,12,188,34*78	
SGPRMC,101735,117,A,3205.0328,N,03448.3694,E,000.0,000.0,240113,,,A*63	
5GPUIG,000.0,1,,M,000.0,N,000.0,K,A*0D	
5GPGGA,101736.117	



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 unit number in the **Unit Number** field, select **Request status** and press **Send**. The unit information will appear.



Click on the **Inputs** tab, press on the Install, Door and Operation buttons, cover and uncover the light sensor, press Request status and check the response in the Unit Status window. Use the **Location** tab to check the unit's GPS data. Use the **Various** tab to see the unit information.

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



6. Installation

Attach the battery to the unit. Attach the Central Arm that contains magnets onto the *left side* of the container door frame with the Antennas Compartment extending outside the container, as shown in the following image.



Use the two holes on the Central Arm to secure the unit to the container door frame with screws (optional).

The Install button will be pressed against the container door frame, while the Door button will be pressed by the closing door.



7. Monitoring

After the unit is installed in the container, 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 <u>http://www.starcomsystems.com/online</u>. 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 units, including their location.
- **Resources** allows to manage the unit and customer information.
- **Plans** allows to create and manage events and alerts.
- **Monitor** monitors the events and alerts from the unit.
- **Map** displays the actual location of the unit on the map.
- **Reports** generates reports of the unit activity.
- **Profile** allows to configure your user properties.
- **Help** contains tutorials and knowledge base.



Home

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

Recently accessed un	its <u>(Live Status)</u>						
eceived	Vehicle	Location	Key / S	peed (Kph)	F	Reason	
9/01/2013 18:49:27	Bakers Choice	Carlton		Off / 0	L	ocked / Trac	king
8/01/2013 07:06:06	BLPC	St Georg	<u>e</u>	Off / 0	L	ocked / Traci	king
							<u>(Fu</u>
	a	_					
QUICK IISL							
Latest Upda	tes						
Latest Upda	ites to see what your We	're on 👥 Follo	w	y Foll	ow @starcomsys	; in	Follow 155
Latest Upda Cluke II 378 people like this. Sign Up friends like. is section will inform you, the service NEW 03/09/2012: Units: New the units list.	tes to see what your We e administrator, about the w field - "Active" which is	I're on Tollo a latest updates appler set by default. No dat	w j to the service. a will be collected for in	Folle	ow @starcomsys y will appear as dim	nmed in	Follow 155
Latest Upda Cluke II 378 people like this. Sign Up friends like. s section will inform you, the service • N티에 03/09/2012: Units: New the units list. • N티에 12/08/2012: New Lang	tes to see what your we e administrator, about the w field - "Active" which is guage - <u>Norwegian</u> (Norsk	I're on Tollo a latest updates appled set by default. No dat	w j to the service. a will be collected for in	Foll	ow @starcomsys y will appear as dim	in nmed in	Follow (155
Latest Upda Guike II 378 people like this. Sign Up friends like. s section will inform you, the service • N트에 03/09/2012: Units: New the units list. • N트에 12/08/2012: New Lang • N트에 07/08/2012: Monitor	tes to see what your we administrator, about the w field - "Active" which is guage - <u>Norwegian</u> (Norsk <u>Settings</u> : Added an optio	're on Tollo e latest updates applied set by default. No dat). n to show notifications	w I to the service, a will be collected for in only for specific time r	Follenactive units, the	ow @starcomsys y will appear as dim days of the week.	in nmed in f	Follow 155

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

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

Live Status				
Received	Vehicle ^	Location	Key / Speed (Kph)	Reason
19/01/2013 18:49:27	Bakers Choice	Carlton_	Off / 0	Locked / Tracking
13/01/2013 07:06:06	BLPC	St George	Off / 0	Locked / Tracking

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

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

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



Resources

The Resources section shows all your units.

	Home	Resources	Plans	Monitor	Мар	Reports	Profile	Help	
Resources	Details								
Units	© Go to: <1>	Grou	p: [All units]	Se	arch:	D			
Groups	Number ^	Name		Vehicle Me	odel	Vehicle Color	Cellular N	umber	Last Message
Perimeters	310490	310490	Triton						08/08/2012 11:02:21
Routes	310492	310492	Triton						15/08/2012 15:25:02
	310520	310520	Triton						08/08/2012 10:54:34

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

Units – lists the units.

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

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

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

Units

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

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

Name – displays the icon and the name of the unit. 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 unit.

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



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

Unit Information					_
Active		Users +			
*Number			-		
Name					
Cellular Number					
Unit Type	Holize				
Events	neilos				
Workplans		Groups +			
Tourning					
Medal	N/A				
Files					
Color					
	040 088 440 446 648 408				
Icon	arta esta 1999 🔺 💌 🕨				
	齐 🖬 🖗 🔒 🛤 🧥				
	- 🐑				
Client	Simulation Kit				
No Activity Alert	336				
Installation					
Plate number					
Registration					
number Manufacturing					
date Consist sizes					
Special signs					
o	ellular Notification	A			
					_
Notify Address 1:		Available reasons		Notify for	
Notify Address 2:		No reason recorded		*	
Notify Address 3:		Theft	Add 🚺		
Notify Address 4:		Ignition Off	Remove		
Message	TIME : UNIT : REASON - LOC	Main Power Low			
Language	English	Door Opened		*	
Units	kph 💌				
Allow comman	ds from any cellular number				
Allow status re	equests from any cellular number				
	Captions	÷.			
					_
🐱 Delete	Cancel 💟 Save	Save and add another			
				4	łЗ



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

Use this section to enter the unit **Number** and **Name**. In the **Cellular Number** field, enter the number of the SIM card installed in the unit. In the **Unit Type** list, select Tetis.

No Activity Alert (Hours) – used to receive an alert when the unit 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 unit 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 unit 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.

Use the **Cellular Notification** section to configure the cellular notifications for different events.

Notify Address 1-4 – enter the cellular numbers you want to receive notifications to when the events occur.

Message – modify the notification message format. The following parameters are available: |TIME| |NUMBER| |VEHICLE| |REASON| |KEY| |DOOR| |HOOD| |SPEED| |MILEAGE| |XY| |BATTERY|.

Language – select the language in which you want to receive the message.

Units (kph/mph) – select the measurement you want to receive the speed data in.



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

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

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

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



Groups

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

	Home	Resources	Plans	Monitor	Мар	Reports	Profile	Help
Systems								
Resources	Details							
Units	Go to: <1 >		Search:	[D			New
Groups	2			Constanting of the second	Charing			
Users	Name	U	nics	Users	Shanng			
Perimeters	New Group		1	0	Perimeters, Ev	ents		

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

Group			
Name:	New Group		
Units	+		
Users	*		
03013			
	Sharing		6
Share Pe Share Re Share Ev Share Di Share Di	rimeters outes ents ivers		
3 Delete	Canc	el 🛃 Apply	

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 unit you want to make the unit available for in the Search field. The name of the unit will appear in the dropdown list. Click on it to add it to the Units list. To remove the unit, click on the minus sign (-) on the left of the unit 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 unit 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.

	Home	Resources	Plans	Monitor	Map Ri	eports Profile	Help	
Resources	Deta i s							
nits	Go to: <1 >		Sear	ch:	D			New
oups	Username	Full	Name	Company	Phone	E-Mail	Last Login	Created By
ers	2 testuser	Test		Test		test@test.com	N/A	

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

Tetis User Guide



		- 7	1	
*Username:		Account is lo	cked	
*Password:		Client:	Simulation Kit	•
Full Name:				
Company:		Template:	Starcom	•
	6 			
Address:		Report Access.	*	
City:		U Watchlock us	ser	
ZIP Code:		Google Maps	access	
Country:		Allow status	requests	
12		Allow outgoir	ng commands	
Phone:		Allow stoppin	ng vehicle	
*E-Mail:		Allow logic st	ate changing	
		Allow clearing	g fleet	
Language:	English	Cellular Com	mands	
Time Zone:	GMT +5	Cellular Notifi	ication	
Date Format:	15/01/2015	Mobile Applic	ation	
Time Format:	06:09:00 PM		after 5 bad login attempts	
Logout time out (Hours):	1	Force passwo	ord changing once a month	
Distance Units:	km 💌	Allow editing	cellular number	
Speed Units:	kph 💌	Allow changing	ng tracking interval	
Map Tooltip	VEHICLE (SPEED)	Control Center:	N/A	+
rormat:			L'YR	_
Login Message:		Add Users		
Account expiration:	N/A	Add Units		
Expiration message:		Marketing se	ection	
All units				
	ates in reports			
Sector and the sector of the s	Construction Construction of Construction of			

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

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



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

Flash Maps – enables the user to see flash maps.

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 unit status requests.

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

Cellular Notification – enables the user to receive cellular notifications.

Mobile Application – enables the user to use Starcom Mobile application. **Olympia Tracking**, Starcom Mobile application, allows to receive cellular notifications to your mobile phone. To install, use the following link: <u>http://starcomsystems.com/m/</u> (compatible with Android / Apple IOS).

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 unit.

Allow changing tracking interval – enables the user to change the time of the unit tracking interval.

Tetis User Guide



Users	Permissions
Copy from another user	
= 🗹 Resources	
🗹 Units - Edit	
Units - Captions - Edit	
Groups	
Groups - Edit	
Drivers	
Drivers - Edit	
☑ Users	
🗹 Users - Edit	
2 Perimeters	
Perimeters - Edit	
🕈 🗹 Plans	
🕀 🗹 Monitor	
🜵 🗹 Help	
🗹 Map	
☑ Live Status	
Profile	
1 I Reports	

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.



Perimeters

You can create new and modify the existing perimeters.

	Home	Resources	Plans	Monitor	Мар	Reports	Profile	Help				
Resources	Details											
Units	Go to: <1 →		5	earch:		2					New	
Groups												
Users	Name		Addr	855					 Created	Ву		
Perimeters	a New Perimeter		Dublin	, Tara Street	(-6.2550,53.3	464)						
											Import	Export

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 **Options > Tools > 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, click **Edit raw values**. The raw parameters appear.

	Perimeters
Namai	New Derimeter
name:	New Permeter
Longitude:	-6.255
Latitude:	53.3464
Distance:	0
Last Updated:	03/02/2013 17:01:26
Мар	
X Delete	🔀 Cancel 📿 Apply



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 **Perimeters** 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 **Perimeters** 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.

	Home	Resources	Plans	Monitor	Мар	Reports	Profile	Help
Plans	Basic							
Basic	D This screen	will assist you to	set up your sys	tem usage plan.				
Advanced	What do yo	u plan to do with	the system?					
Events	Genera Receiv Receiv Receiv Receiv Receiv Genera	te reports about sp e alarms about sp e alarms when en e alarms if the en e alarms about hig e alarms when a v te reports about	ignition workin eed violations tering/leaving a gine is on and t gh speed in a s vehicle's door o back doors op	g hours and mile a designated are the vehicle isn't i pecific location pens in a specific ening (where ins	age a moving c location stalled)			
	Next							

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

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

Advanced – allows to set up advanced plans for LCU500 units. Do not use.

Events – allows to create events for your units.

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

	Home	Resources	Plans	Monitor	Мар	Reports	Profile	Help
Plans	Events		Types					
asic	Go to: <1 →		Search:		Σ			New
vents	Name ^					Created By		Events
	Analog Inputs					System		Analog
	Door opening i	n a specific loc	ation			System		Input, Perimeter
	Excess Idling					System		Input, Speed, Wait
	High speed in a	a specific locati	<u>on</u>			System		Speed, Perimeter
	Input					System		Input
	Location					System		Perimeter
	Mileage					System		Mileage
	Speed Violation	1				System		Speed

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.

Event Type _A					
Name:	New Event Type				
Day of the week:	 Changeable Monday Tuesday Wednesday Thursday Friday Saturday Sunday 				
Time Range:	Changeable				

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 units. The event types that can be used for Tetis are: **Perimeter**, **Roaming** and **GPRS**.

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.

	Home	Resources	Plans	Monitor	Мар	Reports	Profile	Help	
Plans	Events		Types						
Basic	Go to: < 1 >		Search:		D				New
Advanced			-	-	10				
Events	Name ~		Created B	Y	l	Inits			Events
	New Event				8	327905 Helios Ubx			Location

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



	Event						
ame:	New Event					 	
Units [All units] [New Group] 300926 310468 Triton 310490 Triton 310492 Triton 310520 Triton	* 	Add D Remove	Available for	Cellular N Add	umber	E-Mail	
Events Add Event				 		 	

Enter the cellular number and 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.

ype.	Mileage	-
lame:		
ime Range:	00 :00 to 23 :59	(h:m)
 Monday Tuesday Wednesday Thursday Friday Saturday Sunday 		
condition:	Exact value	•
1ileage:	1000	
Add Event		
Add Event		



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 unit 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**.

	Event _a .	5			
ame: Units	Entering Perime	eter	Available for	Monitor	
[All units] [New Group] 310468 Triton 310490 Triton 310492 Triton 310520 Triton 310603 Rainbow T 310674 Rainbow 310681 Rainbow	Fest	Add S Remove	300926	Cellular Number +123456789 Add	E-Mail test@test.com Add

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

Enter the cellular number and 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.



Remove Event	
ype:	Location
ame:	Entering Perimeter
īme Range:	00 :00 to 23 :59 (h:m)
✓ Monday ✓ Tuesday ✓ Wednesday	
 Thursday Friday Saturday Sunday 	
 ✓ Thursday ✓ Friday ✓ Saturday ✓ Sunday ✓ Sunday 	New Perimeter

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 unit enters a specific location, is created.



Monitor

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

	Home	Resources	Plans	Monitor	Мар	Reports	Profile	Help
Resources	Details	e P						
Monitor	² Go to: < <u>1</u> 2 <u>3</u>	45678910>		Vehicle: [All units]	Event: [[All events]	• •
Settings	Time ^		Vehicle		Event			Address
	27/03/2013 1	4:04:38	🛒 Basir	ni 965	New Alert (Loc	ation Update)		(113.2106,22.9299)
	27/03/2013 14	4:04:38	💓 Basir	ni 965	Alert (Location	Update)		(113.2106,22.9299)
	27/03/2013 1	4:04:34	🗃 Basir	ni 735	New Alert (Loc	ation Update)		(113.2105,22.9300)
	27/03/2013 14	4:04:34	🗃 Basir	ni 735	Alert (Location	Update)		(113.2105,22.9300)
	27/03/2013 1	4:04:27	🗃 Basir	ni 833	New Alert (Loc	ation Update)		(113.2104,22.9301)
	27/03/2013 14	4:04:27	🕤 Basir	ni 833	Alert (Location	Update)		(113.2104,22.9301)

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





SIARC	OM Systems	Home	Resources	Plans	Monitor	Мар	Reports	Profile	Help
Details									
lame	New Alert				Day	of the week:] Monday			
Units (All units) 310490 Triton 310492 Triton 310520 Triton	Triton	Add D Remove	Available for		I I I I I I I I I I I I I I I I I I I	Tuesday Wednesday Thursday Friday Saturday Sunday Range:	0 : 0 to	9 23 : 59 (h	ı:m)
Available reasons Event Deinstalled Installed Main Power Low Door Opened Door Closed Strong Impact Button Off Button On	× •	Add 👂 Remove	Notify for		X				
Notify for Ilular Number	<u>E-Mail</u>								
Add	Add		l						
Delete	Cancel	Annly							

Select **Tetis** in the **Unit Type** list.

In the **Units** list, select the units you want to include in the event and click **Add**. The units 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.

• Installed/Deinstalled – event which comes up when the unit is installed/uninstalled in the container (Install button is pressed/unpressed).

- Main Power Low alerts you of the battery getting low.
- Door Opened/Door Closed alert created when the container door is being opened/closed (Door button is pressed/unpressed).



• Weak Impact/Strong Impact – events which show two types of impact on a container.

• Button Off/Button On – alert that appears when the Operation button located on the Antennas Compartment of the unit is pressed. This can serve as a simple test to indicate whether the unit is working.

• Location Update – event which will update you on the unit location status.

• Power On – alert that is sent when the unit turns on.

• Light On/Light Off – event which alerts upon a change of light inside the container. The Tetis light sensor readings are indicated by numerical values (when the unit is located in a well-lighted place the light sensor value will be higher than in a dark place). Those values appear on the Map page and in the reports.

• Temperature High/Temperature Low – alert sent when the unit's temperature sensor detects when the temperature gets lower or higher than the defined low and high temperature values.

• 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 cellular number and 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 units, they will appear on the Monitor page. You will also receive a notification by SMS. The email notifications are accumulated and sent once every half an hour to avoid spamming.



Мар

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



You can select a unit, or a group of units in the dropdown list on the left.

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

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





The following unit information is displayed:

- Code the unit name
- Location the address of the last GPS position of the unit
- Received the date and time of last transmission from the unit
- **Reason** the reason for the transmission
- State the unit logic state (for Helios units)
- Version the unit firmware version
- Location the GPS location of the unit, including:
 - Valid the date and time of the last location transmission from the unit
 - Speed the last recorded speed of the unit



- Mileage the last recorded mileage of the unit
- Location the GPS coordinates of the last position of the unit
- **Heading** the unit moving direction
- Altitude the last altitude of the unit
- **IO** unit input information

Commands

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

Tracking	<u> </u>
Interval:	
6 hour	<u>-</u>
Queued	commands

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.



Tetis User Guide



On the right there are Map Options. Clicking on the Options menu will reveal the following 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.

• Tools

- Edit perimeter allows you to edit an existing perimeter.
- **Create new perimeter** allows to create a new perimeter.
- Distance measurement allows to measure the distance between two points on the map.



• Map types

You can select the following map types: OpenStreetMap, Google RoadMap, Google Satellite, Google Hybrid, Bing Road, Bing Aerial, Bing Hybrid, Yandex, Native.

- Show
 - **Traffic** shows the current traffic conditions (where applicable).
 - **Perimeters** displays your perimeters on the map.
 - **Labels** displays the unit name next to the unit icon on the map.
 - **All units** displays all your units on the map at once.



Reports

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

	Home	Resources	Plans	Monit	or	Мар	Reports	Profile	He
Reports	Choose Repo	rt							
Instant	2 Report:	Work H	lours					-	
Schedule	Report	WORT	iouis						
	Vehicle:	300926	300926					<u> </u>	
	Date Range	14/03/2	2013	07:00	to	14/03/2013	20:00		
	Date Nange.	Date		Time		Date	Time		
				Generate					

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

Instant – allows to generate reports on demand for a single unit or a group of units 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.

NOTE: The reports can be generated for the last 30 days only.

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 unit or group of units 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 unit on one day and for a specific time period.





Î

Vehicle History		
	Vahicla History	
Coatepec Xico Teocelo		Zempoala Traffic Map Satellite
De la companya de la		La Antigua
Totula Huajusco de	(23) (25) Paso de Ovejas	Teal Cruz
Pice is Coscomatepec		Altamirano Dos Bocas Doblado Jamapa
Sumdero De	Pasteri Macho	(190)
brhuatlancillo Orizatian Maltrata Metrotoza Maltrata Metrotoza Tilapan Tuxpanguillo	150 Yanga Cüittahuac (1500)	1500) Tie
Jitzingo (123) Zongolica		Negras (1450) 30 yr
N. S. C.	Cosolápa Acatlán de	(ee)
Soogle 10 km	Pérez Figueroa Map data 60	2013 Google, INEGI - <u>Terms of Use</u> Report a map error

						Switch to regular map
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 Velazguez (-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 Velazguez (-96.1456,19.2119)	

Tetis User Guide

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

The pointers on the map correspond with the numbers in the address column of the detailed list of transmissions received from the unit. These numbers indicate the points of movement of the unit. 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 unit on the map.

Export

To export a report, click **Export** . The report is exported as a *.csv file, which can be viewed in Excel, to your default downloads folder.

. The report appears in your default To print a report, click **Print** browser window where you can select the printer to print out the report.

Scheduled reports

To save the report, click **Save**

in a zip file in your default downloads folder.

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

71
, 1



. The report is saved as an *.htm file







Print

Save



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

Report		
Report:	Work Hours	CSV only
Vehicle:	Batgerel 54-17UBP	
Repeat:	Daily	
Generate At:	20:00	
Send to:	1	
Next scheduled:	N/A N/A	
Delete	Cancel 🚺 Apply	

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 unit or group of units for the report.

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

From the **Generate At** dropdown list, select the time at which you want to generate the report.

The **Send to** field is populated with the default email address for the unit. 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.

Reports	Details			
Instant	Go to: <1 >	Search:	3	New
Schedule	Ø Generate [▲]	Report	E-Mail	Last Issued
	Daily at 20:00	Work Hours: 827905 Helios Ubx	test@test.com; test2@test.com	N/A N/A


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 units. You can view and modify these details as required.

SIVK	Systems	Home	Resources	Plans	Monitor	Мар	Reports	Profile	
	Profile								
Username:	demo								
Password:									
Full Name:									
Company:									
Address:									
City:									
ZIP Code:	-								
Country:									
Phone:									
E-Mail:	test@test.com								
Language:	English	•							
Time Zone:	GMT +5								
Date Format:	15/09/2009	•							
Fime Format:	15:09:00								
Distance Units:	miles								
Speed Units:	mph	-							
Default map type:	Flash Maps								
Map Tooltip Format:	VEHICLE (SPEED)		?						
Show all my ur	nits on the map								
	ites in reports								

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 unit.

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.

Phone:		Mary Taultin Format	
E-Mail:		Map Tooltip Format	^
Language:	English	REASON Reason	
Time Zone:	GMT +2	SPEED Speed STATE Idle TIME_RECEIVED Time_Received	
Date Format:	15/09/2009	TIME_VALID Time Valid ALTITUDE Altitude	
Time Format:	15:09:00	MILEAGE Current mileage HEADING Heading DOOR Door Closed/Opened	
Distance Units:	km 💌	KEY Key Off/On EMERGENCY Emergency Off/On	
Speed Units:	kph 💌	HOOD Hood Closed/Opened MOTION Motion Off/On SIREN! Siren Off/On	
Default map type:	Google Maps	OIL Oil Pressure Off/On WATER Water Temp Off/On	
Map Tooltip Format:	VEHICLE (SPEED) LOCATION	SHOCK Shock Off/On ANALOG1 Analog 1 ANALOG2 Analog 2 VOLTAGE Main power	5

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





Help

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

	Home	Resources	Plans	Monitor	Мар	Reports	Profile	Help			
Help		Contents									
Help 8	Collular Not	ification									
Tutorials	Cellular NO	Incacion									
Wiring	How do I set up a unit for cellular notification?										
	How do I send commands to the unit from my cellular phone?										
	Reports										
	How	can I get reports	on a regular	basis delivered to	my e-mail?						
	How	can I remove a re	eport from th	e scheduled repo	rts list, so I w	on't get it by em	nail any more?				
	Unit Config	uration									
	How	do I configure an	alog devices?								

Click on the appropriate tab to access the necessary information.



Appendix A – Unit Communication in Starcom Systems

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



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

When the unit'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 unit will attempt to connect to the network and transmit via GPRS. This process is illustrated in the following figure.



The unit 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 – Contacts

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

Support

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

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