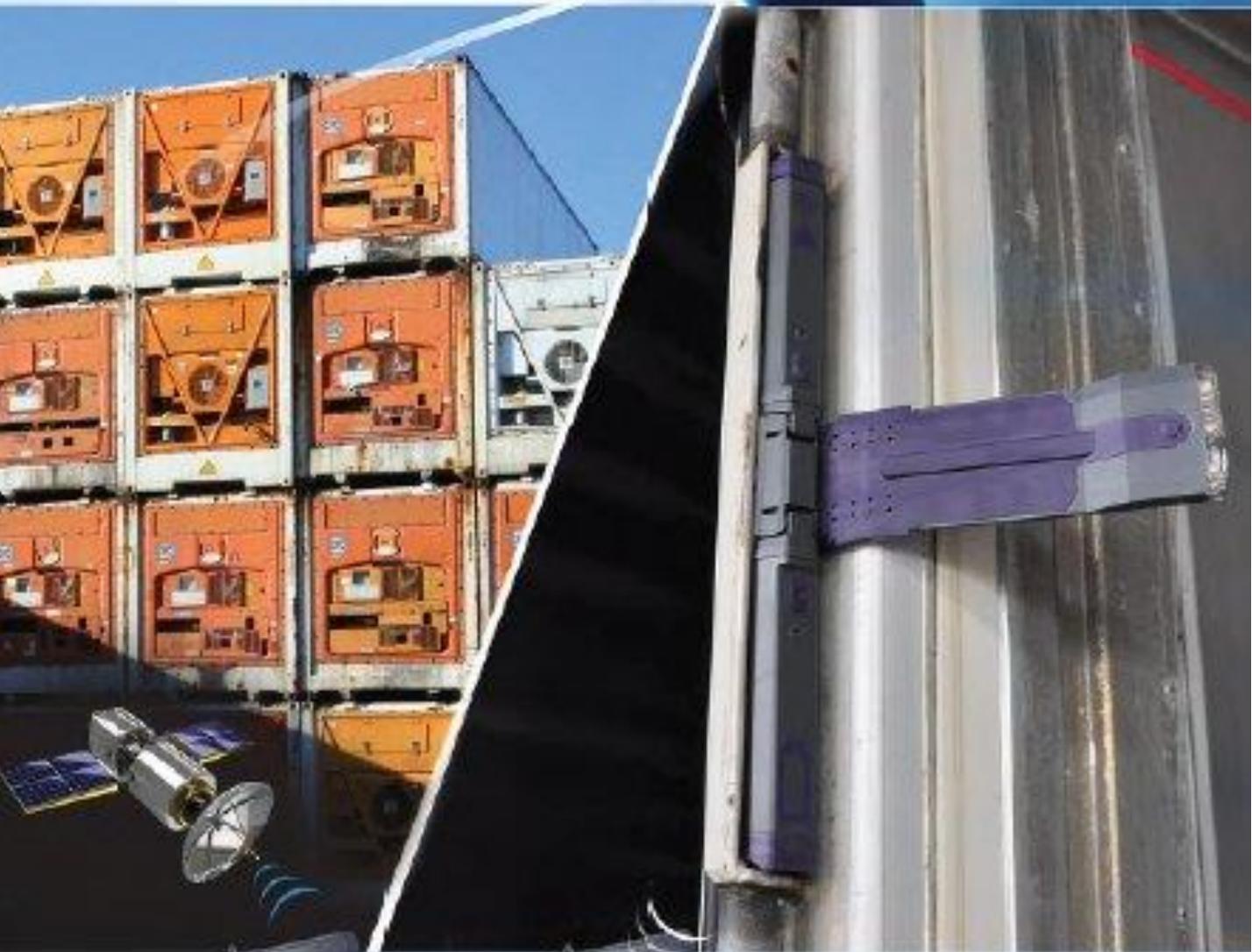


TETIS

> Monitoring Solutions for
Dry and Refrigerated
Containers



Tetis

In Greek mythology, ruler of the seas



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TETIS S

The most sophisticated unit for tracking containers in real time for security and management.

The French comedian Pierre Dac once said, “To see into the distance, you simply need to get closer.” That applies to your containers as well. As they travel far away across the world, it’s important that you’ll be able “to get closer” to them at will.



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By using **Tetis** products:

- ★ **You're in control** of a wide range of situations. The system can connect wirelessly to external sensors, and several sensors can operate simultaneously, giving you the ability to protect your container remotely.
 - For example: you can know exactly when a container has reached the customer's area; and you can be aware of every movement of the container. You'll be notified if there's damage or a blow to the container, and you'll be alerted if the container is broken into bypassing the door.
- ★ **You have an edge in terms of the service** provided to your customers - in the event of an unexpected change of plans you can organize the appropriate response.
 - For example: since you know exactly when the container left port, you can get prepared administratively in real time.
- ★ **You enjoy the user - friendliness of the system** with only a few simple operations you can define the reports, alerts and their destinations.
 - For example: you could specify a monthly report to be e-mailed from each port on the container route, and an immediate SMS to be sent to your personal cell phone if the container starts traveling at an excessive speed over land.
- ★ **You are confident** that in any unexpected situation, the system will function automatically.
 - For example: if the container's door opens in an authorized area, you are automatically alerted on your cell phone.



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★ **You have the advantage of high quality**

in a system that complies with the automotive industry's demanding standards.

★ **You enjoy the convenience of the system**

due to facilities based in over 50 countries around the world, incorporating the maps of over 70 countries, and can operate in over 25 languages, enabling both you and your customers to pinpoint your merchandise precisely on its way to delivery.

You can pinpoint the container's location even when it is aboard a ship on the high seas and even where there is no GSM network signal.

Moreover, if ever your container falls overboard (never, we hope), you can be alerted immediately. For a refrigerated container, you can receive an alert when power is connected or disconnected, and when the temperature rises or falls.

You can also log the history of temperature readings throughout the voyage.

★ **You receive continuous performance**

with less need for maintenance, thanks to the ability to monitor the container for a lengthy period without a battery recharge.



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Key Features

Management

- ★ **Programmable Events:** Events can be defined to both transmit and act on complex events. For example, you'll be alerted if the container is broken into - even if the break-in bypasses the door.
- ★ **Speed restrictions:** Programmable alerts whenever the container goes above/below a pre-defined speed, to detect over hastiness, and unauthorized stops.
- ★ **Perimeter based alerts:** Geo-fencing alerts when a container is entering/leaving/not entering/not leaving a specified designated area at a specified time.
- ★ **Values Monitoring:** Monitoring of analog inputs to alert when temperatures exceed the limit.
- ★ **Mileage Transmissions:** Periodic mileage transmissions for the container's needed maintenance.
- ★ **Automated Tracking:** Automatic support for container tracking at specified time, without sending additional commands.

Alarm System

- ★ **Security System:** Complete operational security system with different logic states to detect break-ins and report to the center.
- ★ **Times Programming:** Complete control over the alarm system timing (the intervals at which the unit stays in each of the alarm system logic modes).
- ★ **Towing Detection:** GPS-based detection of movement while the system is armed produces a towing alert to the centre.

Container Protection

- ★ **Accident and falling:** Built-in accelerometer serves as both accident and a harsh braking detector.

Communication

- ★ **GSM Quarter Band:** Support for GSM networks, while using both the SMS channel and the GPRS/EDGE channels. Supported bands are 850/900/1800/1900.
- ★ **TCP Connectivity:** Support for the GPRS/1x TCP/IP networks by either staying online at all times, or coming online when a transmission is initiated.
- ★ **DNS Support:** Connection to a server by its host name
- ★ **Backup Server:** Backup host name support in case of main server has gone offline.



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Encryption: Protocol encryption to provide maximum security between the vehicle and the centre.

External Protocol Support: Support for external devices for 3rd party protocols, such as text terminal or RFID readers

Compact Protocol: Less than 70 bytes per message enables very small bandwidth usage and saves communication costs.

Zigbee Connection: 2.4GHz Zigbee Radio protocol to support connecting to sensor over RF, and transmitting of packets to central stations without the use of the cellular network.

Over-The-Air commands

Firmware Upgrade: Over the air firmware upgrade to apply new features to already-installed units.

Status Requests: Ability to request for the latest status of the vehicle, and receives the entire information about all the inputs, outputs, and location information.

Tracking: Option to remotely engage periodic transmissions from the unit in the intervals of 10 seconds up to 5 days.

Tracking Interval By Channel: Different transmissions intervals can be set to each communication channel used- SMS/GPRS/EDGE/Roaming..

Miscellaneous

Internal Logging: Whenever a transmission fails to be sent, the entire message is saved to the memory for later transmission. 50,000 complete messages including statuses can be recorded this way.

Low Power Mode: Option to switch to a low power mode (up to 14mA) whenever the alarm system is armed.

Fully Certified: Fully certified and complies with the highest standards of the automotive industry.

Location

GPS Receiver: Built in GPS receiver connected to the unit, allowing real-time tracking and on-board location-based analysis.

Last Location Saving: Saving of the vehicle's last position, in case of going out of GPS coverage.



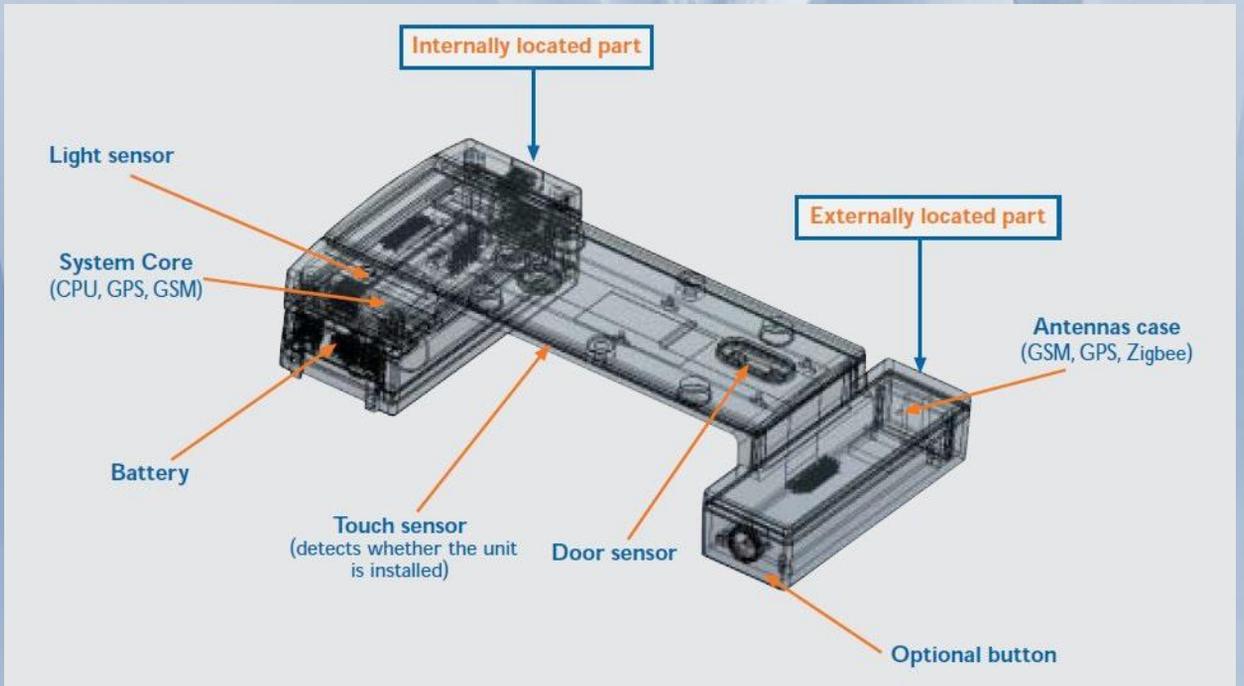
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Supply	Voltage	Reefers: 8v-28v Dry-van: 3.7v
Temperature	Operational Storage	-40°C to 60°C -40°C to 85°C
Operating Humidity		50%-80%
Measurement		Reefers: 107 x 61 x 21 or 24.5 mm, 150g Dry-van: 195 x 96 x 40 mm
Cellular Modem	GSM	Quad Band (850, 900, 1800, 1900). Built in antenna
Network	Data	GPRS and SMS
Messages	SMS GPRS	Encrypted Protocol TCP/IP over PPP
GPS	Receiver and Antenna Protocol Positioning accuracy Navigation Update Rate Navigation method Time to First Fix (TTFF)	Internal NMEA (Binary format) Position: 10m CEP(50%) Velocity: 0.2m/s (50%) 1 second (Default) All-In-View solution 2-Satelite solution Hot Start: 12 sec' Warm Start: 35 sec' Cold Start: 50 sec'
CPU Capacity	Static RAM Non volatile memory Flash Memory	128 Kb 34 Kb 2048 Kb
Inputs/Outputs (Reefers)	Digital Inputs Light Sensor	3 1
Inputs (Dry-van)	Push-button Light sensor	3 1
Battery Pack (Dry-van)	Type Capacity	Li-Ion 5000 mAh
Com Port	RS232	Reefers: 9,600 bps Dry-van: 115,200 bps (default)



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TETIS R

The most sophisticated unit for tracking containers in real time for security and management.

The French comedian Pierre Dac once said, “To see into the distance, you simply need to get closer.” That applies to your containers as well. As they travel far away across the world, it’s important that you’ll be able “to get closer” to them at will.



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The Monitoring Solution for ensuring Safe Delivery of Containers from Origin to Destination

Tetis R is a sophisticated tracking system, designed for the purpose of monitoring and tracking dry and reefer containers, from the moment the container is sealed and until the container is opened when reaching its final destination. Information about the location, condition and temperature of containers is presented in Real-Time, based on the settings and scheduling defined by the user and sent as an email or text message. Tetis R has also been especially designed for refrigerated cargo and integrates multiple sensors, including a highly sensitive temperature sensor which measures accuracy up to $\pm 0.2^{\circ}\text{C}$. The system gathers accurate records of temperature, humidity and light at any desired time interval (e.g. once a day, every half hour or every 10 min), which is stored and transmitted in parallel to the real-time data provided. By being able to monitor and manage the storage environment of containers and reefers, risk of damage and loss of freight can be significantly reduced. Additionally, in a situation where an unexpected or significant event occurs, or one that deviates from a predefined setting, the system triggers an alert, so that all persons directly involved or interested in the shipment are informed of the event by receiving a notification in real-time. One can choose to receive alerts either by text message, by email or both. This feature enables all interested parties to address and problem-solve any issues that could affect the supply chain process. Records of historical sensor conditions and alerts to special events can help to explain any incidents experienced during its journey from the moment the container was sealed, while allowing you to view its route on a map - All from the comfort of a computer or mobile device.

Information available:

Position of the container is provided by the GPS function; shown as a landmark on the map, an address or coordinate.

Door open/closed.

Battery charge level.

Lighting level in the container; may indicate that the container door has been left open or imply that there has been an attempt to break-in.

Temperature; mostly significant for temperature sensitive shipments.

Humidity; mostly significant for humidity sensitive shipments.

Impact; in order to warn about possible events of force or impact brought upon the container, including during loading and unloading.



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Key Features of the system:

- ✦ A standalone unit operated by rechargeable batteries.
- ✦ Fast and easy installation by attaching the unit to the container door frame with a magnet.
- ✦ A flexible system that can be fully configured to meet customer requirements, with regards to information, times and significant events in real time:
 - Examples of real time alerts include: door open/closed, temperature high/low, humidity high/low, light on/off, battery charge level, location status and any combination of these.
 - The system can also be configured to automatically transmit an audit trail, which gives a complete history of all the stored events including deviations beyond configured ranges, or choose specific information details at specific locations/time frames, in addition to receiving alert notifications in real time. The audit trail feature allows for tracking the entire journey on a map and includes a detailed report of all the recordings. Data cross-referencing has been made possible, so that one can easily switch between the data presented on the map and report if needed.
- ✦ Geo-fencing function raises notifications when a container has entered or left a location.
- ✦ The built-in accelerometer keeps you informed about changes in movement or events of impact.
- ✦ When the unit is out of coverage, all location and sensor information is saved to the memory and later transmitted once the unit is back in cellular coverage
- ✦ A convenient option for forwarding information to authorized persons only.
- ✦ A web based system requiring a simple and easy installation process.
- ✦ A global system developed for multi-lingual users.



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The Tetis R system serves and provides real time data to all parties interested in the delivery of a shipment, such as: logistics personnel, supply chain managers, sales, security, insurance, finance, suppliers, customers, shipping companies and customs. It allows all those involved, to coordinate their efforts to ensure that shipment obligations are being met, or in times of need, to take action immediately and in an orderly manner. The features and functions made available by the Tetis R provide access to information that is reliable, accurate and delivered in real time, allowing them to keep track and monitor a wide array of parameters and situations. Ultimately, its performance gives full control over dry containers and reefers worldwide.

Applications

Tetis R's unique capabilities allows you to react quickly and confidently to unforeseen situations; preventing delays, or damage to shipments, which may lead to a loss of merchandise and ultimately a loss of money. Here are just a few examples of its many unique applications:

High Risk/Value Cargo

These are goods that demand a higher standard of security:

- ★ High value items such as computer equipment, metals and electronic equipment.
- ★ Items that have a high chance of being stolen owing to their physical attributes; being small, lightweight and easy to transport such as perfumes, cigarettes and smartphones.
- ★ Security related cargo such as firearms or confidential equipment.

Temperature Sensitive and Special Handling cargo

These are goods that require monitoring and maintaining in special environmental conditions.

- ★ Perishable Cargo such as chilled fruits and vegetables or frozen meat and fish, all require a reefer with the utmost in system reliability in order to avoid spoilage.
- ★ Healthcare and Chemical Supplies such as medical syringes or hazardous substances all require special handing to ensure safe delivery.



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Time Sensitive cargo

These are shipments where the date of delivery is of particular importance and can include exhibition equipment, goods for a limited time (sales) or season related items.

Prohibited items

These are shipments that are considered unsafe or are items that are banned from entering the country, examples include drug and human trafficking. Tetis R can also be useful for preventing "customs avoidance" schemes.

Security

Tetis R can serve as your electronic seal, monitoring and ensuring that your container and cargo arrive safely to its destination.

Tetis R lends itself uniquely to all these applications, as it allows you to observe and reach your goods from a distance. It enables you to have a true understanding of what is happening with your cargo – as and when it happens, and to overcome issues in real time if needed, so that the most reliable and efficient delivery from origin to destination, is made possible.

Benefits

Maximum Control of a wide range of possible events and situations with its built in sensors, system stability and continuity and its unique ability to remotely protect your cargo 24/7.

You can Manage and prepare for those unpredictable supply chain disruptions. By being able to prevent any further delays or damage, you can inhibit any possible loss of merchandise, and ultimately loss of money.

You Gain a Competitive Edge in customer service; with real time technology and information at your fingertips at all times, Triton R increases operational efficiency and keeps your customers satisfied.

You can Rely on the built-in sensors to operate simultaneously to collect data regarding various aspects of your cargo's position and condition, allowing you to stay well informed about your containers' status in real time.



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You can be Sure that you will be alerted

to all significant events or unusual situations in real time. The system is automatically activated, allowing you react swiftly and confidently to overcome any challenges or obstacles during the container's journey.

You Maintain Stability

due to the state of the art OTA ability to remotely upgrade the unit with new features and also change settings within the existing firmware of the unit.

You Enjoy the User-Friendliness

of the system, due to its all-in-one solution base and its fast and easy installation. In only a few simple steps, you can also define the alerts, reports and destinations you need through the On-line system.

The monitoring device is available in three different models to perfectly meet different usage requirements:

Tetis R; for dry and refrigerated containers

Tetis; for dry containers only

Tetis Hybrid

Hybrid monitoring solution For dry & refrigerated containers Tetis Hybrid unit tracks the status of dry and reefer containers from the moment they are sealed until they are opened at their final destination. Combining satellite and cellular connectivity, Tetis Hybrid is always on the lookout, always monitoring, even in remote areas or far away at sea. Real-time tracking information is presented according to user preferences and can be sent as email and/or text message, keeping you up to speed with your containers conveniently at every moment.



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Main Specifications

Supply	Voltage	3.7V
Temperature	Operational Storage	-20°C to +60°C -40°C to +85°C
Operating Humidity		Up to 90%
Measurement		40 x 25 x 4 cm (15.7 x 9.8 x 1.6 inch)
Cellular Communication	GSM/GPRS - default Optional Modems Antenna type Data channels Protocol	Quad Band (850, 900, 1800, 1900) UMTS/HSPA+, CDMA/1xRTT/EV-DO, LTE Built-in (concealed) SMS & TCP/IP Propriety – encrypted
Location	Type Time to First Fix (TTFF) Positioning Accuracy Antenna type	GPS, GLONASS (optional) 2 sec (hot start) 10m CEP (50%) Velocity: 0.2m/s (50%) Built in (concealed)
CPU Capacity	Static RAM Non-volatile memory Flash Memory	128 Kb 34 Kb 2048 Kb
Sensors Temperature	Range Accuracy	-45°C to +125°C ± 0.2°C
Relative Humidity	Range Accuracy	0% to 100% ± 1.8 %
Accelerometer	Scale Accuracy	± 8g ± 2.5%
Light	Resolution Sensitivity	0.025 LUX 0 - 104,448 LUX (Sunlight)
Inputs	Push-button Door Switch	1 1
Battery Pack	Type Capacity	Li-Ion 5200 mAh
Power Consumption	Sleep/Idle GPS only GPRS only GPS and GPRS	0.05mAh 75 mAh 100mAh 165 mAh
Access Port	TYPE	TTL

Industry Approvals



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Key Features

Management

- ✦ Programmable Events: Events can be defined to both transmit and act on complex events. For example, you'll be alerted if the container is broken into - even if the break-in bypasses the door.
- ✦ Perimeter based alerts: Geo-fencing alerts when a container is entering/leaving a specified designated area at a specified time.
- ✦ Values Monitoring: Monitoring of analog inputs to alert when temperatures, humidity or light exceed limits.
- ✦ Mileage Transmissions: Periodic mileage transmissions for the container's needed maintenance.
- ✦ Automated Tracking: Automatic support for container tracking at specified time, without sending additional commands.

Container Protection

- ✦ Accident and falling: Built-in accelerometer serves as both accident and a harsh braking detector.
- ✦ Door monitoring: Detects and alerts about opening/closing of the container's door.

Communication

- ✦ Cellular Connectivity: Support for GSM networks (GPRS or optional 3G), while using both the SMS channel and the data channel. Supported bands are 850/900/1800/1900 MHz. Optional support for CDMA and HSDPA networks.
- ✦ TCP Connectivity: Support for the GPRS/1x TCP/ IP networks by either staying online at all times, or coming online when a transmission is initiated.
- ✦ DNS Support: Connection to a server by its host name.
- ✦ Backup Server: Backup host name support in case of main server has gone offline.
- ✦ Encryption: Protocol encryption to provide maximum security between the container and the center.
- ✦ Compact Protocol: Less than 70 bytes per message enables very small bandwidth usage and saves communication costs.



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Over-The-Air commands

- ✦ Firmware Upgrade: Over the air firmware upgrade to apply new features to already-installed units.
- ✦ Tracking: Option to remotely set periodic transmissions from the unit in intervals between 10 seconds to 5 days.

Miscellaneous

- ✦ Internal Logging: Whenever a transmission fails to be sent, the entire message is saved to the memory for later transmission. 50,000 complete messages including statuses can be recorded this way.
- ✦ Fully Certified: Fully certified and complies with the highest standards of the industry.

Location

- ✦ GPS Receiver: Built in GPS receiver connected to the unit, allowing real-time tracking and on-board location-based analysis.
- ✦ Last Location Saving: Saving of the container's last position, in case of going out of GPS coverage.



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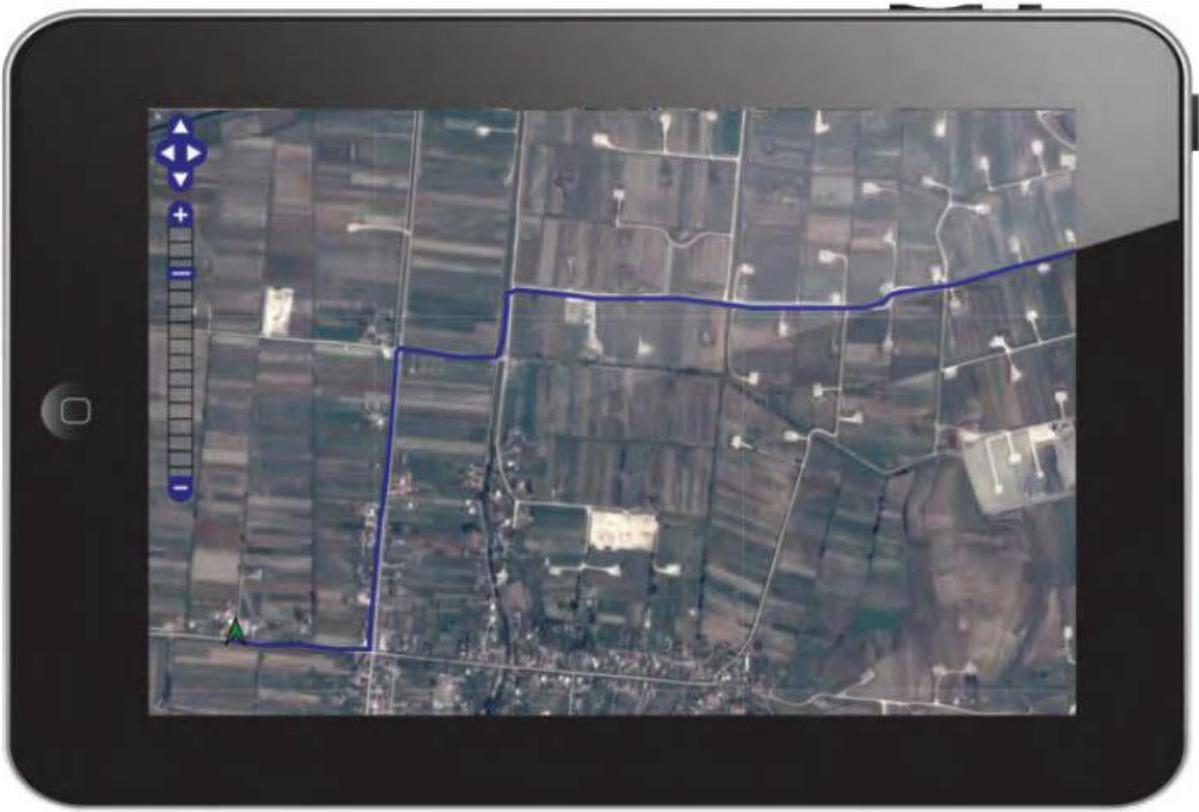
Starcom GPS Global Solutions

Established in 2013 as a global distributor of GPS/GSM/Iridium and Hybrid Tracking, Monitoring and Reporting Systems. We supply, sell, maintain, rent, lease and monitor both hardware and software systems that included a very large range of tracking systems using GPS/GSM/Iridium and Hybrid technologies. These systems are designed to protect the complete range of possible asset protection and monitoring scenarios that include security, logistics management, control of fleets of vehicles, train cars, high value and exclusive vehicles, all designs and sizes of land and sea containers, valuables of every size and description as well as people, pets and livestock. We also specially prepare systems based on the needs of our clients. We do develop bespoke (custom made or designed) systems which combine GPS/GSM Iridium and Hybrid tracking, monitoring and alerting systems with motion detection, light detection, contact detection and allows people to be informed immediately to any modern platform of any changes within any confined space or area anywhere on the worldwide.



Eye in the Sky

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