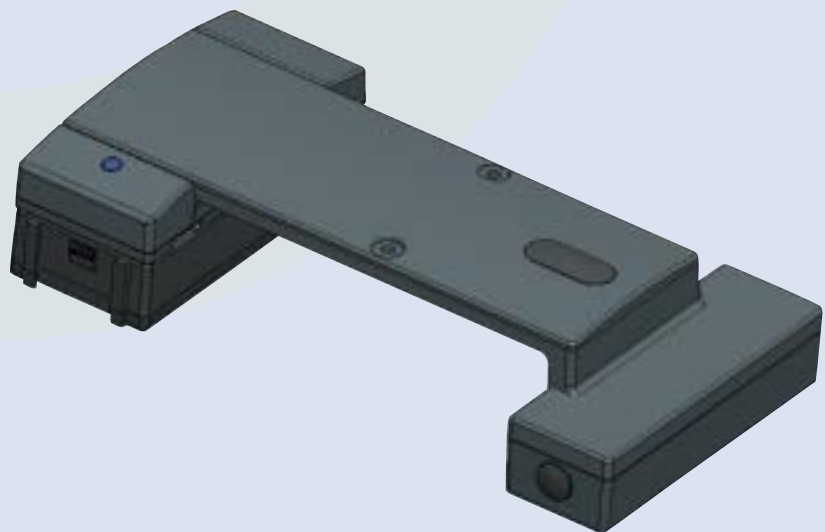


# TRITON\*

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.



That's why we at Starcom Systems developed **TRITON** - the smartest system for real-time tracking of containers for protection and management. It gives you full control on all possible events and situations with its automatic remote operation, system stability, and continuity.

\* **TRITON** - The ruler of the seas in Greek mythology

## By using **TRITON** 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.

## 🎯 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.



## ◉ Main Specifications

<b>Supply</b>	Voltage	Reefers: 8v-28v Dry-van: 3.7v
<b>Temperature</b>	Operational Storage	-40°C to 60°C -40°C to 85°C
<b>Operating Humidity</b>		50%-80%
<b>Measurement</b>		Reefers: 107 x 61 x 21 or 24.5 mm, 150g Dry-van: 195 x 96 x 40 mm
<b>Cellular Modem</b>	GSM	Quad Band (850, 900, 1800, 1900). Built in antenna
<b>Network</b>	Data	GPRS and SMS
<b>Messages</b>	SMS GPRS	Encrypted Protocol TCP/IP over PPP
<b>GPS</b>	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'
<b>CPU Capacity</b>	Static RAM Nonvolatile memory Flash Memory	128 Kb 34 Kb 2048 Kb
<b>Inputs/Outputs (Reefers)</b>	Digital Inputs Light Sensor	3 1
<b>Inputs (Dry-van)</b>	Push-button Light sensor	3 1
<b>Battery Pack (Dry-van)</b>	Type Capacity	Li-Ion 5000 mAh
<b>Com Port</b>	RS232	Reefers: 9,600 bps Dry-van: 115,200 bps (default)

### Industry Approvals



# 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 center.

## 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.
- ◉ **Encryption:** Protocol encryption to provide maximum security between the vehicle and the center.
- ◉ **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.

