# Satellite Autonomous Laser Perimeter Surveillance Alert System GPS Track 6



EN ISO 9001 : 2000, 14001 : 2004

## **Track your Container Globally**

**Global Star Satellite** 







Satellite Surveillance Alert System over Secured & Encrypted Global Internet Satellite Autonomous Laser Perimeter Surveillance Alert System GPS Track 6 has revolutionized the way borders are protected today. These sophisticated and simple solutions will safe guard your Farms, Palaces, Borders and Beaches from intruders in day or night conditions. The system is based on a full autonomous technology based on a Laser beam and all weather proof reliable Satellite Transmitters.



## Laser 1600 Perimeter Surveillance Alert System:

The Laser 1600 Perimeter Surveillance Alert System enables the detection of intruders crossing the path of a single powerful laser beam in ranges of 500meters, 1000meters and 1600meters. One the beam is triggered; it will send a signal via RS232 output to a GPS transmitter that will send a signal message of the intrusion alert to Globalstar Satellite Conciliation. The signal is then further transmitted to Ground Relay Station in Canada where the information is stored on to a server in the Central Bank of Canada for security purposes. The information then becomes available via the World Wide Web for the operator only as all the information is encrypted and coded, thus only authorized personal with the source code can view and monitor the Track 6 *Devices*. Once a day a single is transmitted to operator to confirm that they are active and functioning.



The Laser Beam is consisting of a covert electro-optical beam with Auto Range Selection capabilities from 500 meters, 1000 meters and 1600 meters. Because of its long range capabilities, the *Laser* 1600 is the most affordable device over long distances and with minimum installation or maintenance required.

Distances of hundreds of kilometers can be monitored with the use of these long range devices. It can be deployed over land or water and can tolerate adverse weather conditions. It operates "hands-off" and can be remotely controlled. It can be battery or solar powered for quick temporary installations or can operate on AC or DC power for permanent installations. Units can be stacked for multiple beam protection. Alarm conditions can be modified to accommodate various installation requirements. *Units* can be set up for tamper alarm. *Units* can alarm or communicate via TTL signal levels, relay contact closure, hard line RS-232/RS-485 or RF radio link.

## Satellite GPS Track 6 Laser Beam



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The utilization of laser technology in the modern surveillance field has become widely spread throughout the world. The Laser 1600 beam is considered to have a uniform (top hat) intensity function across the beam. The laser system has an exit diameter of D a wavelength of  $\lambda$  and a power output of P watts.



## Laser Beam Properties and Specifications:

- Operating Temperature -40°C to +85°C Beacon: 4.70" diameter x 5.90" tall 3 lbs
  - Detector: 4.70" diameter x 5.90" tall 3 lbs
  - With Standard Laser Bulb Range: 900 yards or 820 meters
  - With Upgraded Brighter Laser Bulb will provide a range of 1600 meters.
    - Note: System in this offer is
  - Covert Operation: Beam is not detectable by eye or night vision equipment.
  - Continuous Operation: No adjustments required. Operates in day, night, clear, and fog conditions.
  - Monitor, System test, and Status functions. Range up to 1600 meters with clear line of sight using dipole antenna and up to 40 miles using high gain antennas.
  - Power Requirements:
    - Beacon (Laser Transmitter): 3 45V DC or 3 -32V AC at 350ma.
    - Receptor: 12V DC at 250ma.
  - Environmental: Can be operated in the desert or marine environment in high waves and high winds.





## Satellite GPS Track 6 Kuwait



Wide View Map Actual Map from our Secured and Encrypted Website View 001







Wide View Terrain Layer

Actual Map from our Secured and Encrypted Website View 002

Closer Terrain View

Actual Map from our Secured and Encrypted Website View 004



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# Satellite GPS Track 6 Kuwait



Closer Map View

Actual Map from our Secured and Encrypted Website



Closer Terrain View



Actual Map from our Secured and Encrypted Website View 006



Actual Map from our Secured and Encrypted Website View 007

Actual Map from our Secured and Encrypted Website View 008



# Satellite GPS Track 6 Kuwait

## Intruder Activation Alarm Sequence:

When an intruder enters the restricted area, an alarm signal is generated and an alarm message will appear in the Web Based Mapping System with the operator via the World Wide Web. It could also be sent by SMS and email to designated personnel as well. Maps are both road routes and terrain layers as the samples in this presentation.

Additionally, each perimeter sensor unit with Tracker 6 automatically is placed and depicted on the Web Based Map once transmitter starts with exact latitude and longitude positions which allow for accurate perimeter mapping even when relocated with technicians reporting in with coordinates. This reduces human error. Another words, the system package automatically locates itself on the master security map in the main control room.

The system is compatible with Windows XP as it uses a computer system based on Internet Explorer.

# Satellite GPS Track 6 Kuwait

There are 8 pieces of field equipment required for the system to function are:



- 1. Satellite transmitter with sensor interface to relay alarm signals to country's security center.
- 2. Infrared or laser perimeter detection sensor that once tripped sends an alarm signal to the satellite transmitter which forwards alarm signal to security signal on mapping platform.
- 3. 12 Volt DC Power Source or Solar Cell to provide electricity in the field to power the transmitter and detection sensor.
- 4. Concrete Base
- 5. 6 meters high 4" diameter galvanized steel pole for mounting all devices on.
- 6. Clear view of the sky.
- 7. Power Only Cable.
- 8. Conxall Connector.

The Kuwait Security Center will have several PCs with internet facility to enable the operator or user to log on to the encrypted and secured website via the source code. The software will then be down loaded automatically (Standard Marketing Software) and mapping of the region will come to view. Automatic notification of system function will be viewed once a day as a heart beat to indicate of the system is working or not. Once the alarm is triggered a signal is sent to the satellite transmitter which will forward that signal to the Global Star constellation. This is a web based system is self contained and DOES NOT REQUIRE ADDI-TIONAL EQUIPMENT INTO SECURITY CENTER except a PC and Internet connection. This is one of the most secured Web Based Platform systems on the planet.

Satellite Autonomous Laser Perimeter Surveillance Alert System GPS Track 6 is a very advanced technology that will provide a heartbeat signal once or more a day at a designated time telling Security Center that system is online. It can also send a signal when power fails in the Sensor/Tracker power or solar configuration and that a field engineer needs to be dispatched to fix the power source or solar power system.

Satellite Autonomous Laser Perimeter Surveillance Alert System is 30% of the cost of the optional Duplex Field Transmitter Unit and Integration System that can perform in the same manner as our affordable solution. The Duplex System utilizes both Western GPS satellites and the Russian GPS constellation. In addition, most governments will require a field unit that has modular memory cards, duplex features and a mapping array, which quite frankly would costs millions of USD dollars.



- Servers are located in the same facility that the Bank of Canada has their check clearing system in. Location: Ottawa, Canada. All visitors must be escorted into the machine rooms according to Royal Canadian Mounted Police (RCMP) requirements.
- There are triple redundant fiber optic connections to the Internet, two back-up power generators, and an iris scan is required to verify identity all employees entering server center.
- Guardian uses 128-bit SSL for all transactions including customer logins.
- Data between the device and our servers is encrypted using a Guardian proprietary algorithm.
- Satellite constellation Globalstar uses128-bit encryption between their ground stations and our servers.
- Globalstar is U.S. owned with Top Secret Clearance with current U.S. Military and Government Agency customers
- Message and Mapping Servers are directly connected.
- The secure server rooms have:
- gas fire suppression system
- redundant air conditioning and humidity control systems
- priority list for gas supply in case of extended power outage (same level as hospitals)
- The network security is managed by security specialists who have undergone extensive background checks in accordance with RCMP.
- We currently backup data every two hours and have cold failovers

## Key Benefits and Applications:

- Monitoring and scheduled Reporting Facility
- Status Report for Oil and Gas wells and pipelines
- Status Report Gas pipeline integrity and compliance
- Status Report Above and Underground storage tanks
- Global satellite coverage all the Middle East Region
- Mission critical data transmission with no boundaries
- Status Report Water resource and flood plain monitoring
- Near real-time optimization of dams, reservoirs and rivers
- Geo Fencing mapping features and flexible notification features
- 24/7 situational awareness of remote water levels and water quality
- Provides not only GPS location but time, status of any attached sensors.
- On board business rules engine for easy customized set up and performance
- Integrated Planning and Management with near real-time flood forecasting and warning
- Integrated encrypted data messaging with Maptracks, the best web-based mapping application.

- Mapping
- Reliable
- Compact size
- Cost-effective
- Self Management
- Easy to install or carry
- Secure data encryption
- GPS accurate to 3 meters
- Environmental compliance
- Environmental compliance
- Water quality remote testing
- Low-cost set-up and operation
- Marking and tagging locations
- Actionable mapping in real-time
- Power .Management Capabilities
- Transmits on movement and events
- Weatherized NEMA 4X compliant
- Decision support and scenario analyses
- Enhance control, security and cost savings





Why Choose Guardian Solutions?

- Choose Guardian Solutions because they work, they are proven, because they solve a business need, and because they provide good business value. In addition, they are usually unique.
- Manufacturers Devices which are small size is an advantage, weather resistant, and minimal electrical power consumption
- Must "work anywhere" with global satellite communications, with a preference for encrypted and compressed data transmission
- Often, the intelligent transmitting device will be connected to, or integrated with, a sensor or other special function measuring or alerting device,
- Every solution features a unique combination of message processing; conditional alerting; location, track and mapping display; reporting capabilities and/or related geospatial services;
- Most implementations are fully automated, so as to routinely deliver to person or persons, time critical information required for better decisions, situational response, better asset allocation, loss prevention, automated business reporting, peace of mind and management.
- Easy to install and thus save implementation costs
- Keep your internal resources focus on other projects rather than diverting them to this implementation
- Implement a Best of Breed solution, including high reliability
- Easy to install or carry
- Low Life cycle cost







## **Tracker 6: The Complete Solution**

- External Power input from 9 to 28V DC.
- Analog, digital sensor inputs
- Scheduled transmissions
- Guardian tracker 6 can be set to recurring schedules empowering you to it.
- GPS business rules engine
- Tracker 6 enables you to modify not only but also the conditions under which revolutionary business rules engine.
- Rugged enclosures event-based transmission
- Sensor inputs and GPS parameters can be monitored to send a transmission only when a preset threshold is crossed. These events can be used as alarms or for use with the business rules engine.

## Map Viewing Features

- Legend.
- Print functions.
- In, out and zoom all.
- Zoom to a queried object.
- Up, down and diagonal pan.
- Search/Query by attributes.
- Maximized, full-screen capability.
- Flexible track selection and display.
- Data export in standard database formatting.
- Symbol status change for active tracking device.
- Custom data available on request REPORTING.

- Zoom to a fixed scale (in map preferences settings).
- Automatic updating of map display and device status.
- User selectable play back of tracks GIS BASEMAP DATA.
- Digital Chart of the World. Cadastral, DEM and Hydrography.
- Separate printable report window with associated map graphics.
- Country/State/Provincial Boundaries, Highways, Cities Topography.
- On / off layer control for individual layers (base map and device tracks).
- Thematic mapping: Tracks can be thematically colored according to user preferences.
- Labeling: user can add edit symbol colors and size TRACK AND TRIP MANAGEMENT.
- Info tool provides information about a node or line segment on a track, or current information about a device, by clicking a mouse on the appropriate icon.
- Track (trip) definitions can be set by user (i.e. any location reading within a user-specified time difference from the last reading is considered to be part of a single track or "trip").



#### Satellite GPS TRACK 6: A Worldwide Network of Partners Meeting your Application Needs

#### Marine Applications: Boat and Buoy Tracking



Guardian marine partners are installing Tracer in yachts and high-end power boats to protect against theft, vandalism and provide peace of mind by relaying GPS positions when cruising. Currently being used in the Atlantic Ocean, Pacific Ocean and the Mediterranean Sea, Tracers have reduced insurance costs for owners. Guardian partners have developed specialized applications which use Tracers to track Buoys. One innovative application developed by partner Spirit Wireless is an oil spill tracker that helps contain environmental damage.

#### **Emergency Response and Security**

Parks Canada and SAR (Search and Rescue) organizations have jointly developed and Track 6 as part of their emergency response systems. In applications ranging from asset tracking in hurricane relief, to forest fire operations, Tracer messages can be sent to multiple control centers enabling situational awareness and security response.







### **KEY BENEFITS**

#### Lowest Cost Total Solution.

Guardian Track 6 is the most affordable satellite based platform to own and operate. We offer a variety of costeffective air time and data plans to suit your needs.

#### Easy to Setup and Deploy

Just take it out of the box, configure it to your needs, install it where you want, and login through the web to see where it is.

#### **A Complete Solution**

The Track 6 is offered with custom service packages that include airtime, message access and real-time web mapping.

#### **Connect to Almost Anything**

Connect to analog and digital sensors, dataloggers and pushbuttons.

#### Adaptable to Your Unique Requirements

The Guardian GPS Business Rules Engine allows you to build advanced capabilities into Track 6 without doing custom software development.

#### Anywhere Anytime Web Access

View, manage, display and route all field transmissions using the Guardian web portal. View information in report form or in a mapping window. Route information to e-mail or cell phone or send it directly to your own network using XML routing.

### **Innovative New GPS Tracking and Remote Monitoring Solutions**

Guardian's Partners are meeting your tracking needs with innovative new solutions enable by the Track 6. Track 6's datalogging and speed alarm features are used to ensure commercial vehicle adherence to road regulations and providing immediate reporting on alarm events. Track 6 can also be used to measure and store engine run time information for billing purposes and carbon emission reporting. If you have a custom tracking or remote monitoring need, we'll put you touch with our partner that is best suited to meeting it.

### **TRACK 6: Operation, Benefits and Specifications**

Track 6 includes everything you need for tracking people and assets: hardware, setup to our message server, airtime plans and intuitive mapping. Track 6 uses a high performance GPS receiver integrated with a low-earth satellite network transmitter to send position, speed, heading information to you and your colleagues to keep track of your personnel and assets.



### **KEY SPECIFICATIONS**

#### Communication

Globalstar Simplex Transmitter, integrated GPS receiver and transmitter patch antennas.

#### GPS

High performance GPS receiver: 12 channel, -156 dBm sensitivity.

#### Data Storage

16 MBit on-board flash memory for datalogger, configuration and user parameters.

#### Environmental

Operating temperature range: - $30^{\circ}$ C to + $60^{\circ}$ C, NEMA 4X certified Minibase Enclosure. Portable enclosure waterproof to a depth of 30 m. Portable enclosure is designed to float transmitter side up.

#### Dimensions

Track 6 Minibase enclosure measures  $165 \times 115 \times 45$  mm. The Tracer Portable measures  $174 \times 116 \times 46$  mm. **Note:** Do not cover above the device with Steel or Aluminum material



## SATELLITE GPS TRACK6 GEO FENCING CAPABILITIES



### Prohibited Area Alarm Will Sound if Area is Penetrated

### **Prohibited Area**



#### SECURITY AND GREATER PEACE OF MIND

**Geo-Fencing** is a technique designed to provide added value to businesses using NEO-TRAC<sup>TM</sup> on It allows you to set a defined geographical area within which a specific people vehicle/asset is 'permitted' or 'not permitted' to be. Geo-Fences are not necessarily permanent and can be altered with your authorization via your own website "WEB TOOL" in seconds. Such as a safe travel zone Area that is easily created on you website with the click of a button.



### Scenario Example 1:

- Number of signal transmission per year = 450 (450)
- Assuming signal transmission at 1 hour intervals during 2 hrs of vehicle

continuous movements per day. (2 signal per day).

- **43** days operations.
- Mandatory **364** Self Test Heart Beat signal Transmission per year.

### Scenario Example 2:

- Number of signal transmission per year = **750** (**748**)
- Assuming signal transmission at 1 hour intervals during 4 hrs of vehicle continuous movements per day. (4 signal per day).
- 96 days operations.
- Mandatory **364** Self Test Heart Beat signal Transmission per year.

#### Scenario Example 3:

- Number of signal transmission per year = 1500 (1500)
- Assuming signal transmission at 1 hour intervals during 8 hrs of vehicle continuous movements per day. (8 signal per day).
- 142 days operations.
- Mandatory **364** Self Test Heart Beat signal Transmission per year.

### Scenario Example 4:

- Number of signal transmission per year = 4000 (3996)
- Assuming signal transmission at **30** minutes intervals during **8** hrs of vehicle continuous movements per day. (**16** signal per day).
- 227 days operations.
- Mandatory **364** Self Test Heart Beat Signal Transmission per year.

## Global Star Satellite GPS Tracking System Signal Transmission Scenarios



### Scenario Example 5:

- Number of signal transmission per year = 6000 (5996)
- Assuming signal transmission at **30** minutes intervals during **8** hrs of vehicle continuous movements per day. (**16** signal per day).
- 352 days operations.
- Mandatory **364** Self Test Heart Beat signal Transmission per year.

### Scenario Example 6:

- Number of signal transmission per year = 12,000 (11,980)
- Assuming signal transmission at 15 minutes intervals during 8 hrs of vehicle continuous movements per day. (32 signal per day).
- 363 days operations.
- Mandatory **364** Self Test Heart Beat Signal Transmission per year.

### Scenario Example 7:

- Number of signal transmission per year = 15,000 (14,956)
- Assuming signal transmission at **30** minutes intervals during **8** hrs of vehicle continuous movements per day. (**16** signal per day).
- 304 days operations.
- Mandatory **364** Self Test Heart Beat signal Transmission per year.

### Scenario Example 8:

- Number of signal transmission per year = 20,000 (19,948)
- Assuming signal transmission at 10 minutes intervals during 12 hrs of vehicle continuous movements per day. (72 signal per day).
- 272 days operations.
- Mandatory **364** Self Test Heart Beat signal Transmission per year.







Automated following on private and Secured website, dedicate for the owner

#### PRICING

Quantity	7: 10~ 99 ;	Price: 4,875	SR/Dhs		
Quantity	. 100~4999. z: 500~999:	Price: 4,493	SR/Dhs		
Global Signal Data Plans/Signal Per year					
450	: 1,382 SR/Dhs	- Overage Fee (per	200 signal, per	device: 240	SR/Dhs)
750	: 1,652 SR/Dhs	- Overage Fee (per	200 signal, per	device: 210	SR/Dhs)
1,500	: 2,234 SR/Dhs	- Overage Fee (per	200 signal, per	device: 180	SR/Dhs)
4,000	: 3,887 SR/Dhs	- Overage Fee (per	200 signal, per	device: 180	SR/Dhs)
6,000	: 5,298 SR/Dhs	- Overage Fee (per	200 signal, per	device: 156	SR/Dhs)
9,000	: 7,465 SR/Dhs	- Overage Fee (per	200 signal, per	device: 156	SR/Dhs)
12,000	: 9,617 SR/Dhs	- Overage Fee (per	200 signal, per	device: 150	SR/Dhs)
15,000	: 11,779 SR/Dh	s - Overage Fee (per	200 signal, per	device: 138	SR/Dhs)
20,000	: 15,378 SR/Dh	s - Overage Fee (per	200 signal, per	device: 132	SR/Dhs)
25,000	: 18,977 SR/Dh	s - Overage Fee (per	200 signal, per	device: 126	SR/Dhs)
30,000	: 22,578 SR/Dh	s - Overage Fee (per	200 signal, per	device: 120	SR/Dhs)
Installation not included					

Pricing Includes Power Only Cable and Push button cable

Call for bulk signal to share one or multiple tracker, required number of trackers & Required estimated number of signal.



## **GPS Tracking Orange Areas**





