

Vehicle Event Logger and Tracking Units



Compact Security

The Cellocator™ Security Product Line consists of innovative end-units, approved by insurance companies, for Security, Safety, and SVR (Stolen Vehicle Recovery) services. Field proven Security features combined with enhanced Fleet Management capabilities for unsurpassed dual Fleet Management and Security applications, solutions, and services.



370-50

CELLOCATOR™ COMPACT SECURITY

Over 500 programmable parameters including various immobilization methods approved by insurance companies; incorporating car alarm features, Advanced Driver Behavior Analysis, tow detection, Geo Fence, driver identification, accident detection, connection to MDT (Mobile Data Terminal), and interface with comfort car remote control.

Compact Security is the only device in the marketplace that combines comprehensive security features with impressive fleet management features.

CELLOCATOR™ 370-50

Incorporates the features of the Compact Security with enhanced security capabilities: RFID ready, keyboard support, 433MHz remote controller support, odometer pulse counter, 11 digital inputs+ 1 analog input and 10 outputs including two onboard 8A and one 15A relays.

Compact Security is the only device in the marketplace that combines comprehensive security features with impressive fleet management features.

CELLOCATOR™ COMPACT SECURITY & 370-50 SHARED FEATURES

The Cellocator™ Security is a small end-unit optimized for simple covert installation to avoid detection and tampering. Utilizing GSM/GPRS communication, together with advanced SIRFIII GPS technology, it ensures accurate tracking, locating, and reliable communications. The Cellocator™ Security units can be used as part of Pointer's end-to-end solution, or any custom solution by OEMs, service providers and The feature-rich Cellocator™ Security Product Line integrators. enables service providers to offer unique and enhanced combined security and fleet management services, featuring:

- Flexible car alarm operational logic
- Multiple owner identification options
- Real time reporting in case of Alert
- Integrable with an existent remote controller (Vehicle's Comfort System)
- Integrated SIRFIII GPS technology
- Online event reporting
- Full event data logging
- Data terminal compatible
- Hands-free compatible
- Dallas button
- Distress button
- Forbidden and preferred GSM operators
- Communication channel redundancy: GPRS+SMS or CSD+SMS
- OTA configurable
- OTA upgradeable
- Gradual motor arrest (automatic or by remote command)
- Multiple discrete I/O
- Adaptation to different kinds of sensors
- Tow detection
- NMEA data output (Security)
- Built in Geo-Fence support
- Accident detection
- Unique driver behavior analysis
- Advanced Communication Cost Management

370-50 only

- Odometer pulse input
- Remote controller/keyboard
- RFID ready

The Cellocator™ Security Product Line offers a cost-effective all-in-one vehicle security and communication solution, suitable for combined integrated Security and Fleet Management services and applications.

FEATURES

Vehicle Security

Covert Installation: The unit's small size fits in small spaces to prevent detection and tampering.

Motor Immobilizing: The Security products incorporate several methods to send a remote command to stop the vehicle, including special safety approaches such as gradual deceleration of the vehicle until it reaches full stop, and/or, as approved by many insurance companies; enabling the immobilization command only after the vehicle stops and the switch is OFF for a pre-defined programmable period.

Tow Detection: The unit detects and notifies that the vehicle is moving while ignition is OFF.

Multiple Input Options: Input options are fully configurable to various priority levels, and can be activated OTA (Over-The-Air) from the central control.

Two analog inputs continuously monitor the main and backup battery. One additional analog input is available to monitor fuel levels, temperature, pressure and more.

Multiple Output Options: Output functions are fully programmable and can be activated OTA.

The 370-50 monitors up to eleven and the Compact Security up to six discrete digital inputs to monitor various sensors such as:

- Distress Button
- Door or Hood Sensors
- Ignition Switch Sensor
- 3 inputs dedicated for Arm/Disarm Detection (integrable with an existent Comfort System) (for Security)
- Shock Sensors

370-50 only

- Odometer Pulses Counter
- Tilt Sensors
- Oil Pressure Sensor
- Collision Impact Sensor
- Volume Sensors
- Motion Sensors

The Cellocator 370-50 unit has ten outputs:

- 5 open collector outputs (up to 500 mA)
- 1 PWM open collector output (optimized for gradual motor arrest)
- 1Amp output (optimized for siren connection)
- Two 8 Amp outputs (optimized for blinkers control)
- 15 Amp output (optimized for stop lights control)

The Security has five discrete open-collector outputs of up to 500mA each, controlling:

- Vehicle Immobilizer, Gradual Motor Arrest, Sirens, Lights, Blinkers and more

Driver Identification Options (for 370-50):

- 433 MHz remote controller
- Seamless integration with the vehicle's comfort system
- Wired keyboard
- Dallas button
- RFID

Communication

Three Communication Methods: The units incorporate a GSM/GPRS modem, allowing communication over TCP/IP or UDP/IP, and CSD; all with auto-switching to SMS, which can also be configured to be the primary mode of communication. In addition; Advanced Communication Management, including forbidden and preferred GSM providers, contributes to reduce communication costs in normal and roaming scenarios.

Communication Cost Reduction: Advanced Communication Cost Management for regular and roaming scenarios, including preferred and forbidden GSM providers, and different transmission rates as a function of time, speed and distance.

GPS Sensor: A 20-channel SIRFIII GPS sensor provides the best reception sensitivity ensuring fast and accurate vehicle locating capabilities.

OTA (Over-The-Air) Programming: All 500+ parameters are fully configurable from remote.

OTA (Over-The-Air) Firmware Upgrade: Full remote firmware upgrade for efficient, fast, and low cost customer support.

Mobile Data Terminal (MDT) and Hands Free Compatible: The Cellocator™ Fleet products support Navigation and two way text messaging from and to the control center. The hands free allows full cell phone functionality, including silent listen-in for special security demands.

NMEA Data Output: Standard GPS-NMEA data output for navigation systems without internal GPS.

Fleet Management

Advanced Driver Behavior Analysis: The unit is capable of detecting sudden speed and course change events; configurable separately in four speed ranges.

Driver Identification: Dallas keys are an optional security identification device and driver activity logging in the control center database.

Real-time Tracking: For continuous tracking of the vehicle, the system transmits constant location and status information to the control center at predefined time intervals, distance intervals, and according to different speeds.

Real-time Alerts: In the event that any of the vehicle's security inputs are activated, the unit immediately transmits a real-time alert to the control center. Each alert transmission includes information about detailed location, transmission reason, I/O status and power voltage indication (main and back-up).

Status Request: At any time, the operator can request an immediate status and location report from the unit.

Online Event Reporting: When GPRS coverage is available, the unit can continuously transmit vehicle status events at user-defined intervals. Each transmission includes: transmission reason (event type), vehicle ID, driver ID, time stamp, detailed location information, speed, heading, direction (for Fleet and CAN), accumulated mileage, I/O status, battery voltage and more.

Event Types: Event types include: ignition on/off, over-speed start/end, idle speed, elapsed time, elapsed driving distance, distress button activation, navigation start/stop, input sensor activation (such as door opened) and more. All event types can be remotely (OTA) or locally configured.





Idle Transmission: When the vehicle is idle for extended time periods, the system can be configured to transmit a status message at predefined time intervals for a keep-alive indication.

Log Memory: Non-volatile memory of up to 2,256 complete time stamped events. Useful in case of loss of communication, or for few daily transmissions. Upon resuming of communication; this data will be transmitted immediately.

Geo-Fence/ Waypoints Support: 16 onboard programmable GeoFence and Waypoints. In case the vehicle violates a designated perimeter or enters a predefined prohibited zone, or if it deviates from a fixed route within a preset timeframe, an immediate alert is triggered. These features offer substantial reduction of communication costs, by allowing a lower resolution of transmissions. Options are OTA configurable.

Low Current Consumption: The unit's exceptionally low current consumption extends battery life and significantly extends its operation life span.

Navigation: The unit provides GPS location and regulated power output, which can be connected to an in-car navigation device or a PDA. Such devices can also be used for exchanging text messages with central control.

External Device Option: External devices such as a terminal, vehicle computer, built-in intelligent alarm system and more; can be connected to the unit via its serial data interface (standard RS232, 9600 BPS).

Protocol Transparency: Allows any data received on RS-232 from auxiliary controllers to be transmitted to the control room "as-is".

BENEFITS

The Cellocator™ Security Product Line is an exceptionally low cost, feature-rich, flexible, easily integrated and fully configurable product family line that provides the following benefits:

- **Enhanced Vehicle Security:** Feature rich and highly customizable car alarm and security capabilities with real time tracking, insurance approved remote immobilization modes, temperature monitoring (370-50), door opening alerts, GeoFence, distress button, voice communication and more.
- **Cost Savings:** The low cost and compact size of the Cellocator™ Security Product Line reduces downtime, insurance premiums, communication costs and theft, and improves fuel utilization, safe, and timely delivery. In addition, and Advanced Communication Cost Management reduces communication costs in normal and roaming operating environments.
- **Optimized Resource Utilization:** Benefit from unique and seamless interface between Fleet Management and Security features for efficient monitoring of vehicles, cargo, manpower, maintenance and fuel.
- **Customer Satisfaction and Competitive Edge:** The Cellocator™ Security Product Line ensures better customer service. It enables you to accurately predict arrival times, offer faster pickups and deliveries by dispatching the closet vehicle to the customer, improve route management, resolve tardiness and arrival time disputes.

CELLOCATOR™ 370-50 SPECIFICATIONS

Outputs	6 Open Collector Outputs: Of up to 500 mA Single 1A output Two of 8A outputs
Inputs	One 15A output 11 Variable Inputs: 1 for ignition, 1 pulse input for odometer connection and the rest for general purpose 2 Analog Inputs: Dedicated for battery measurement 1 General Purpose Analog Input: (Instead of one of the general purpose inputs) 0-2.5V, 10mV resolution
Communication Methods	TCP/IP or UDP/IP over GPRS; CSD (v.32 or v.110); SMS
Frequency Bands	European 900/1800, American 850/1900 or Quad-Band
GPS Technology	SiRFIIIxTrac 20 receiving channels
Other Interfaces	RS232 (9600bps), 1-Wire (Dallas), 433 MHz radio, RFID, Wired keyboard interface, Hands-free interface
Operating Voltage	9-32V
Power Consumption	1.3 Watt in full operation, 0.3W in standby
Dimensions	115mm x 110mm x 47mm
Weight	484 grams
Temperature Range	- 20°C to +55°C

CELLOCATOR™ COMPACT SECURITY SPECIFICATIONS

Outputs	5 Open Collector Outputs: Of up to 500 mA
Inputs	6 Variable Inputs: for Car Alarm and Owner Identification 2 Analog Inputs: Dedicated for battery measurement
Communication Methods	TCP/IP or UDP/IP over GPRS; CSD (v.32 or v.110); SMS European 900/1800, American 850/1900 or Quad-Band
Frequency Bands	European 900/1800, American 850/1900 or Quad-Band
GPS Technology	SiRFIIIxTrac 20 receiving channels
Other Interfaces	RS232 (9600bps), Hands-free support, 1-Wire (Dallas), MDT (Mobile Data Terminal) support
Operating Voltage	9-32V
Power Consumption	1 Watt in full operation, 230mWatt in hibernation
Battery	Internal Rechargeable 7.4V, Li-Ion, 700mAh
Dimensions	77.6mm x 106mm x 28.1mm
Weight	315g
Temperature Range	-20°C to +55°C



ABOUT POINTER TELOCATION LTD.

Pointer Telocation Ltd.: **A Leading Security & Fleet Management Solution Provider in the following areas:**

- Fleet Management
- Vehicle Security
- Asset Tracking
- Roadside Assistance
- Stolen Vehicle Recovery
- Location-Based Services
- Telematics Automatic Vehicle Location (AVL)

Pointer has developed a variety of Cellocator™ device product lines for in-vehicle OEM integration. These devices can be used by service providers and integrators to provide sophisticated, cost-effective and reliable solutions for fleet management, vehicle security, asset tracking and the service industry. Pointer's experts specialize in developing and manufacturing the hardware and software for on-line wireless vehicle security, communication and control systems, as well as Machine to Machine (M2M) wireless data communications systems.

To address the current and future requirements of the automotive industry, Pointer is continually upgrading and expanding its OEM product lines, in consultation and collaboration with our customers.

Our growing customer base includes vehicle security companies and fleet management service providers, operating in Eastern and Western Europe, Asia and North and South America. Over 250,000 vehicles worldwide are outfitted with Cellocator™ products.

Pointer's products and production processes adhere to the strictest quality standards. Pointer is ISO 9002 certified and has received the British Vehicle Certification Authority (VCA) 95/54/EC approval according to European Commission EMC directives for automotive equipment.

Pointer is proud to have provided their Cellocator™ products, as the official supplier of vehicle security and location equipment, to the security and emergency forces at the Athens 2004 Olympic games.



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