



Cellocator Division
Pointer Telocation Ltd.

CELLOCATOR™ FLEET PRODUCT LINE

VEHICLE EVENT LOGGER
AND TRACKING UNITS

The Cellocator™ Fleet Product Line provides innovative integrated fleet management units, which have superior location, tracking, event driven reporting, logging, and security capabilities.



CELLOCATOR™ COMPACT FLEET

Over 500 programmable parameters with connectivity to MDTs for a diversity of enhanced Fleet Management services and solutions.

CELLOCATOR™ COMPACT CAN

Compact CAN provides a built-in CAN BUS interface, that enables accessibility to the CAN data of a vehicle for security and fleet management. Compact CAN is a Compact Fleet Product plus full FMS and J1939 support for advanced professional vehicle maintenance and driver working hours management.

CELLOCATOR™ COMPACT OLYMPIC

Cellocator Compact Olympic is a Public Safety Device. The security tracking choice for 2004 Athens Olympic Games. Compact Fleet with interface to auxiliary packet data communicators such as GPRS, TETRA, ASTRO, CDMA 1X, iDEN and CDPD.

Throughout this brochure, features that apply only to some of these products are marked:
for Fleet, for CAN or for Olympic.



POINTER

CELLOCATOR™ FLEET PRODUCT LINE

The Cellocator™ Fleet Product Line provides three unique compact sized devices ideal for simple covert installation to avoid detection and tampering. Utilizing GSM/GPRS communication, together with advanced SIRFIII GPS technology, it ensures cost effective, and reliable communications and remote vehicle tracking. The Cellocator™ Compact units can be used as part of Pointer's end-to-end solution, or any custom solution by OEMs, service providers and integrators.

Cellocator™ Fleet Product Line offers advanced AVL capabilities together with excellent reporting and logging capabilities, featuring:

- Exceptionally small size
- Communication channel redundancy:
GPRS TCP/IP or UDP/IP +SMS CSD+SMS
- SIRFIII GPS technology
- Online event driven reporting
- Full event data logging
- Data Terminal and hands-free
- Distress button
- Analog and digital I/Os
- Forbidden and preferred GSM operators
- Advanced Communication Cost Management
- OTA configurable
- OTA upgradeable
- Tow detection
- NMEA data output
- Driver identification
- Unique driver behavior analysis
- Built in Geo-Fence support
- Accident detection
- Immobilization methods approved by insurance companies.
- FMS/J1939 CAN BUS interface (for CAN)

The Cellocator™ Fleet Product Line of integrated tracking, reporting and logging features combine to offer a cost-effective all-in-one fleet management communication and security solution, suitable for all private and commercial applications.

FEATURES

Communication

Three Communication Methods: The units include 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, various programming parameters help to reduce communication costs in roaming.

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.

CAN BUS Interface (for CAN): An industry-standard CANbus interface (with fault-tolerant and high-speed bus support) Compatible with any ISO11898 based CAN BUS, including any vehicle with J1939 or FMS. Enables listen-in to any parameter based on programmable triggers and filters for speed, fuel level, temperature, and more.

External Modem Support (for Olympic): The unit utilizes a communication port, adapted to an external terminal modem connection. The unit is adaptable to terminal modems working on any packet data communication platform, such as: GPRS, TETRA, ASTRO, CDMA 1X, iDEN, CDPD.

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

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 and faster customer support and enhancement of service offerings.

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.



Vehicle Security

Covert Installation: The unit's small size allows effective covert installation in various places in the vehicle.

Multiple Input Options: The Cellocator™ Fleet products have discrete digital inputs to supervise external sensors such as:

- Distress Button
- Door or Hood Sensors
- Tilt Sensors
- Ignition Switch Sensor
- Collision Impact Sensor

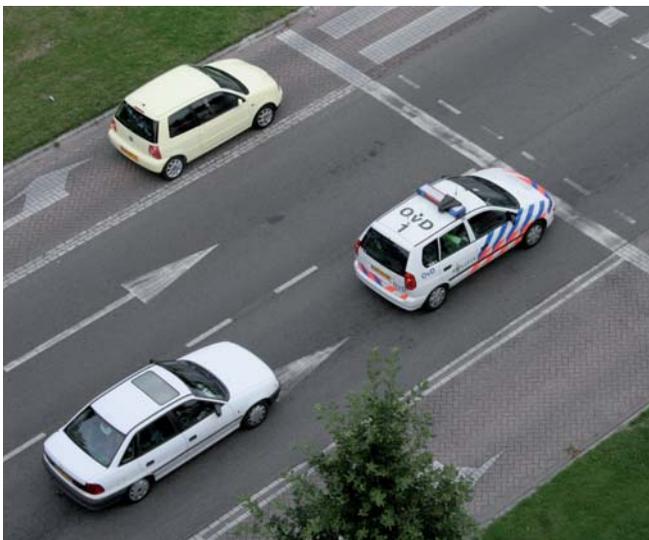
Two dedicated analog inputs for main and backup battery with indications for low and no power.

One general purpose analog input to monitor analog sensors such as temperature, pressure, and fuel level. All Input options are fully OTA controlled and configurable to five priority levels, including emergency.

Multiple Output Options: Five 500mA discrete open-collector outputs; fully OTA controlled and configurable to control devices such as vehicle immobilizer, sirens, light and more.

Gradual Motor Arrest (For Security): This unique feature allows the operator to send a remote command to gradually decelerate the vehicle, until it reaches full stop. Thus, when a stolen vehicle is in motion, this feature allows a safe, gradual stop, rather than an abrupt stop that could cause an accident.

Tow Detection: The unit will transmit a "Tow Detection" alert if it detects that the vehicle is moving while ignition is OFF.



Fleet Management

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

CAN Bus Events (for CAN): The CAN bus integration provides an operator with a wide range of available service data from the vehicle, such as: fuel usage, distance to the next service, RPM, pedals status and much more.

Driver Identification: Dallas keys for driver identification and full driver activity logging in the control center database. For Fleet and Olympic, the unit can be configured to activate a reminder signal for drivers who forget to identify themselves.

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 center "as-is".

BENEFITS

The Celloclator™ Fleet Product Line is an exceptionally low cost, feature-rich, flexible, easily integrated and fully configurable family of devices that provides the following benefits:

- **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.
- **Optimized Resource Utilization:** Efficient usage of vehicles, manpower and fuel is enabled by vehicle and employee tracking and monitoring. The Celloclator™ Fleet Product Line provides reliable communication and vehicle location 24x7. It can help eliminate employee downtime and wastage and ensure timely maintenance procedures.
- **Cargo and Vehicle Security:** The Celloclator™ Fleet Product Line provides the latest safety technologies, including distress buttons, trunk safety devices, accident and other types of SMS/email alerts, fool-proof alarm security unlike alarm systems, vehicle immobilization and more.
- **Customer Satisfaction and Competitive Edge:** The Celloclator™ Fleet Product Line ensures better customer service. It enables you to accurately predict arrival times, offer faster pickups and deliveries by dispatching the closest vehicle to the customer, improve route management, resolve tardiness and arrival time disputes and to reduce overall levels of stress and confusion.



CELLOCATOR™ COMPACT FLEET SPECIFICATIONS

Outputs	5 Open Collector Outputs: Each up to 500 mA
Inputs	5 Variable Inputs: 1 for ignition, 4 for general purposes 2 Analog Inputs: Dedicated for battery measurement 1 Optional 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	SiRFIII 20 receiving channels
Other Interfaces	RS232 (9600bps), Hands-free support, 1-Wire (Dallas), MDT (Mobile Data Terminal)
Operating Voltage	9-32V
Power Consumption	1 Watt in full operation, 13.7mWatt in hibernation
Battery	Internal Rechargeable 7.4V, Li-Ion, 700mAh
Dimensions	77.6mm x 106mm x 28.1mm
Weight	0.315kg
Temperature Range	-20°C to +55°C

CELLOCATOR™ COMPACT CAN SPECIFICATIONS

Outputs	5 Open Collector Outputs: Each up to 500 mA
Inputs	5 Variable Inputs: 1 for ignition, 4 for general purposes 2 Analog Inputs: Dedicated for battery measurement 1 Optional 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	SiRFIII, 20 receiving channels
CAN Bus Interface	Implements ISO-11898 standard physical layers Suitable for 12V and 24V systems Operates at speeds of up to 1 Mb/s compatible with J1939 and FMS
Operating Voltage	9-32V
Power Consumption	1 Watt in full operation, 13.7mWatt in hibernation
Battery	Internal Rechargeable 7.4V, Li-Ion, 700mAh
Dimensions	77.6mm x 106mm x 28.1mm
Weight	0.315kg
Temperature Range	-20°C to +55°C

CELLOCATOR™ COMPACT OLYMPIC SPECIFICATIONS

Outputs	2 Open Collector Outputs: Of up to 500mA and 1 regulated 5V power output for PDA charging
Inputs	5 Variable Inputs: 1 for ignition, 4 for general purposes 2 Analog Inputs: Dedicated for battery measurement
Communication Methods	UDP/IP over any packet data communication network using an external terminal modem, such as: GPRS, TETRA, ASTRO, CDMA 1X, iDEN or CDPD
GPS Technology	SiRFIII 20 receiving channels
Other Interfaces	RS232 (9600bps), 1-Wire (Dallas), MDT (Mobile Data Terminal) support
Operating Voltage	9-32V
Power Consumption	0.98 Watt in full operation, 0.327 Watt in hibernation
Battery	External 6V rechargeable battery
Dimensions	77.6mm x 106mm x 28.1mm
Weight	0.315kg
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.



Cellocator Division
Pointer Telocation Ltd.

HOW TO PURCHASE

For more information about prices and technical knowledge, please contact:

Pointer Telocation Ltd.
14 Hamelacha Street
Rosh Haayin 48091, Israel
Tel: +972-3-5723111
Fax: +972-3-5719698
e-mail: info@pointer.com
www.pointer.com



POINTER