Cellocator™ Compact Fleet

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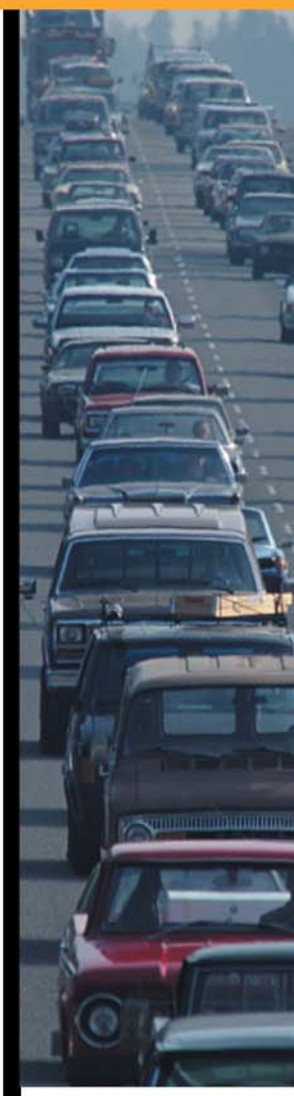

The Cellocator™ Compact Fleet is an innovative integrated fleet management unit with superior location, tracking, event-driven reporting, logging, and security capabilities. Its uniquely compact size makes it ideal for covert installation to avoid detection and tampering. Utilizing GSM/GPRS and IP communication together with GPS technology ensures inexpensive, yet reliable and fluent communications combined with efficient remote vehicle tracking.
The feature-rich Cellocator™ Compact Fleet system offers fleet service providers and their customers optimum solutions in coverage, lowest cost-tracking, easy installation and limitless functionality.
Cellocator™ Compact Fleet offers advanced AVL capabilities together with excellent reporting and logging capabilities, featuring:

- Exceptionally small size
- Communication channel redundancy - GPRS+SMS or CSD+SMS
- Integrated GPS technology
- Online event-driven reporting
- Full event data logging
- Data terminal and hands-free compatible
- Panic button
- OTA configurable
- OTA upgradeable
- Gradual motor arrest by remote command
- Multiple discrete I/O
- Tow detection
- NMEA data output
- Driver identification
- Built in Geofence support
- Accident detection
- **Unique:** Driver behavior analysis

The following are just a few of the benefits Cellocator Fleet offers:

- Reliable communication and vehicle location 24/7
- Low cost
- Compact size
- Multi-featured
- Exceptionally flexible and fully configurable
- Exceptionally low power consumption
- Quick and easy installation
- Fully integrable with software systems and external devices

The Cellocator™ Compact range 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 or commercial applications.

Features

Communication

Triple communication methods — The unit includes an internal GSM/GPRS modem, providing IP over GPRS communication between the unit and the control center. If GPRS coverage is unreliable or absent, communication shifts to SMS or CSD. All communication options are fully configurable, with separate controls for home-network and roaming scenarios.
GPS sensor — A 12-channel GPS sensor is integrated with the antenna for improved reception sensitivity, ensuring efficient and accurate vehicle location. The GPS sensor is connected to the unit via a serial port, ensuring improved covert installation.
OTA (over-the-air) Programming — All the unit's options are fully configurable through communication with the control center. For example, operators or users can remotely select the type of events to be logged, can change transmission intervals, enable or disable sensors and much more.
OTA (over-the-air) Firmware Upgrade — The firmware of the unit can be upgraded over the air if required, as well as over RS232 port.

Data Terminal and Hands Free compatible — The unit is capable of forwarding data from its serial port to the remote application or cellular phone, and vice versa. This allows messaging between the operator and the driver using a PDA or a data terminal such as the MDT.
The unit is also equipped with a hands-free audio interface. An optional hands-free kit is available for voice communication with the driver.
NMEA data output — The Compact CAN unit doubles as a GPS-NMEA source for your navigation system, lowering TCO by making an additional GPS unnecessary.

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Vehicle Security

Covert installation –The small size of the unit allows it to be installed deep inside the vehicle's interior and thus avoid discovery and tampering.

Multiple input options – The system can monitor up to 4 discrete digital input devices, including among others

- Panic button
- Door or hood sensors
- Tilt sensors
- Ignition switch sensor
- Oil pressure or water temperature sensor
- Collision impact sensor

and two analog inputs such as main battery and backup power source status.

The unit can be also supplied with an additional general purpose 8 bits analog input instead of one of the digital inputs.

Input options are fully configurable and can be enabled remotely OTA (over-the-air) from central control. When any of the configured inputs are triggered, the system immediately enters into emergency mode.

Multiple output options – The unit can operate 5 discrete open-collector outputs of up to 500mA each, controlling:

- Vehicle immobilizer
- Gradual motor arrest
- Siren
- Lights
- Blinkers

Output functions are fully programmable and can be remotely activated from central control.

Gradual motor arrest – This unique feature allows the operator to send a remote command to gradually decelerate the vehicle, until it comes to a full stop. Thus, when a stolen vehicle is in motion, a safe, gradual stop is performed, rather than an abrupt stop that could cause an accident.

Tow detection – If the unit detects that the vehicle is moving while ignition is off, it will immediately send a tow detection alert to control center.

Fleet Management

Driver behavior analysis – the unit is capable of detecting sudden speed or course changes, configurable separately in four speed-ranges.

When such an event occurs, the unit can create an event or series of events as frequent as 1 per second.

Driver identification – each driver is equipped with an individual programmable Dallas key, enabling driver identification and full driver activity logging in the control center database. 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 elapsed times or driving distance intervals.

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 detailed location information, 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, accumulated mileage, I/O status, battery voltage, and mores.

Event types –Event types include: ignition on/off, overspeed start/end, idle speed, elapsed time, elapsed driving distance, panic 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 check.

Log Memory – When cellular coverage is unreliable or absent, the unit's non-volatile memory can store up to 2256 complete time-stamped events. This data will be transmitted immediately when coverage is resumed. Logged events are stored for an unlimited duration, even in case of failure of both primary and back-up power sources.

Geo Fence/ Waypoints support – 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 (1m Amp in hibernation mode) extends battery life and significantly expands its operation span.

Navigation – The unit provides GPS location 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, etc. can be connected to the unit via its serial data interface (standard RS232, 9,600 BPS).

Technical Specifications

Outputs	5 open collector outputs up to 500 mA
Inputs	5 variable inputs – 1 for ignition, 3 for general purpose, 2 analog inputs dedicated for batteries measurement 1 optional analog input (instead 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) support.
Operating voltage	9-32V
Power consumption	1 Watt in full operation, 13.7 mWatt in hibernation
Battery	Internal rechargeable, 7.4V, Li-Ion, 700mAh
Dimensions	77.6mm x 106mm x 28.15mm
Weight	0.315kg
Temperature Range	- 20°C to +55°C

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