

The Cellocator™ Compact CAN

Vehicle Event Logger and Tracking Unit

The Cellocator™ Compact CAN 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 as well as efficient remote vehicle tracking. The built-in CAN bus interface provides a remote access to the CAN data of the vehicle. The feature-rich Cellocator™ Compact CAN system offers fleet service providers and their customers optimum solutions in coverage, lowest cost tracking, easy installation and limitless functionality.

Cellocator™ Compact CAN 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
- Integrated CAN bus interface
- Online event-driven reporting
- Full event data-logging
- Data terminal and hands-free compatible
- 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
- Panic button
- **Unique:** Driver behavior analysis

The following are just a few of the benefits Cellocator™ Compact CAN 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. In case 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.

CAN bus interface - An industry-standard CAN bus interface (with fault-tolerant and high-speed buses support). Unique programming controls allow to adapt for any vehicle equipped with CAN, J1939 or FMS, and listen-in on any kind of data or sensors. The Compact CAN provides triggers, to alert when events occur (engine overheating, worn brakes, etc).

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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Cellocator
Communication and
Location Specialists

The Cellocator™ Compact CAN



Vehicle Security

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

Multiple input options - The system can monitor up to 4 discrete digital input devices, including:

- Distress 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.

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 the 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.

CAN Bus events - The CAN bus integration provides to the operator wide range of available service data from the vehicle; like fuel used, distance to the next service, RPM, pedals status and much more.

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.

Real-time tracking - for continuous tracking of the vehicle, the system transmits constant location and status information to the control center at predefined elapsed time 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, 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 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 is immediately transmitted once 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
CAN bus interface	Implements ISO-11898 standard physical layers Suitable for 12V and 24V systems Operates at speeds of up to 1 Mb/s J1939 compatible, FMS compatible
Operating voltage	9-32V
Power consumption	8sensors 10 MHz:No Hibernation 68(mA),GPS Off 22.41(mA),Full Hibernation2.9(mA) 25sensors 25 MHz: No Hibernation 78.8(mA),GPS Off 34.1mA),Full Hibernation.3mA)
Dimensions	77.6mm x 106mm x 28.1 5mm
Temperature Range	- 20°C to +55°C □ Weight 0.315kg