

CR-300B™

Cost-Effective Fleet and Security Management Solution

The Cellocator CR300B is Cellocator's entry-level unit for fleet management and vehicle security applications, available in 2G / 3G (EU, NA) variants.

The CR300B is equipped with a rechargeable backup battery (1000mAh) and GSM jamming detection algorithms for improved compliance with vehicle security applications.

In addition, it is compatible with a variety of accessories which enable a wide range of applications such as fuel monitoring, temperature monitoring, identification and more.





Use Cases

Fuel Solution

Online monitoring of fuel consumption – using the CR-300B device and fuel solution accessories (fuel probe sensor, fuel level sensor and fuel cap protector) – including the level, the volume, time and location of refueling and draining, helps reduce fuel usage and prevent fuel theft.



Cold Chain

Assures the required temperature is maintained during shipments of perishable goods or pharmaceuticals, using the 1-wire temperature sensor which connects to the CR-300B device. Fleet owners/managers can receive real-time updates of any breaches of pre-defined thresholds and take action to guarantee compliance with cold chain shipment requirements.



Driver Identification

The driver ID of CR-300B in conjunction with the driver ID accessories (Dallas Keys, Keypad and Proximity Reader among others) can be used for vehicle immobilizations and driver-recognition in security and fleet services applications.



Stolen Vehicle Recovery (SVR)

Provides advanced security with jamming detection and reaction to ensure stolen vehicle recovery (SVR). The CR-300B unit recognizes jamming attempts and reacts according to the selected method of reaction, for example disabling the engine or activating an output e.g. tuning lights on/off with horn.



Motorcycles & Scooters Protection

The CR-300 device is an ideal solution to protect motorcycles or scooters, thanks to its movement detection capabilities, compact size and easy installation. The device provides security and location alerts and can be configured to full hibernation mode to enable low battery consumption to prevent battery drainage. In this mode the device will start operating according to a predefined time or event (for example if its internal accelerometer is activated). The device IP rating can be upgraded from IP40 to IP65 using the CR protector.

Highlights

- 2G/3G (NA, EU) variants.
- SIM holder - two alternatives: Regular SIM or SIM-On-Chip ready layout.
- Backup battery with extended capacity of 1000mAh.
- I/Os:
 - Ignition
 - 2 digital inputs
 - 2 programmable I/Os (digital/analog/frequency counter)
 - Serial (TTL level)
 - 1-wire input – Dallas port (Driver-ID/Trailer ID and for 1 temperature external sensor)
- Built-in motion sensor for movement & towing detection.
- Advanced capabilities including:
 - Crash detection
 - Jamming detection
 - Up to 100 Geo-Fences
 - Cell-ID 2G/3G
 - In cabin speed alert (activation of one output if speed limit is exceeded)
 - Up to 100 Roaming list
 - Usage / frequency counters
 - Curve smoothing
 - Gradual immobilizing as one of the outputs
 - Basic Satellite activation
- PointerCeptTM ready – a solution combining Hybrid RF variants in addition to cellular communication.
- Cellolocator+TM maintenance server support.

1. For more information please contact our sales department.

Cello-300B Specifications

Communication		
Variant	3G	2G
GSM Modes	UMTS/HSPA/GSM/GPRS/EDGS: 5.76 Mbps [UL]/7.2 Mbps [DL]	GPRS class 10
Bands	850/1900MHz (NA); 900/2100MHz (EU)	850, 900, 1800, 1900MHz
Power Output	0.25W	2W, 1W
SIM	Internal, replaceable; SIM on chip support	
Antenna	Internal, penta band GSM antenna	
Packet Data	TCP/IP, UDP/IP	
SMS	PDU	
GPS		
Variant	3G	2G
Technology	Chipset: SiRFstarV GNSS	Chipset: SiRFstarIV GPS
Sensitivity (tracking)	-166dBm	-163dBm
Acquisition (normal)	Cold<35Sec, Hot<1Sec	
Antenna	On board, internal patch antenna	
Inputs & Outputs		
Inputs	1 internally pulled down input dedicated for ignition switch 2 internally pulled up inputs with assignable functionality and configurable polarity	
Outputs	2 general purpose open drain outputs (250mA max) with assignable functionality Can be utilized also as inputs (configurable)	
Accelerometer	3D, 16g range, 12 bit representation, 1mg resolution	
Interfaces		
COM Port	Selectable baud rate (9600 or 115000bps) TTL levels (external 3.3V TTL-USB adaptor) 8 bit; 1 Stop Bit; No Parity Configuration update Firmware upgrade	
1-Wire TM (Dallas port)	DS1990A, DS1971 compliant for driver management Extended bus current source with 7mA driving capability DS18B20 compliant for temperature sensors	
Connectors	10pin Molex, Automotive	



Power		
Variant	3G	2G
Input Voltage	9-32VDC	
Average Current Consumption	Normal: 46mA Economic: 25mA Hibernation: 2.4mA	Normal: 29mA Economic: 14mA Hibernation: 2mA
Internal Battery	Li-Ion Polymer, 3.7V, 1000mAh, rechargeable Embedded NTC for temperature controlled charging Operating Temperature: -20°C (65% charge) to +60°C Charging Temperature: 0°C to +45°C Battery Monitoring: Temperature (NTC) & Voltage Autonomy: 142 messages from a fully charged battery in a TX Rate of 1/5 Minutes @ room temperature Protections: over current, overcharge and over discharge	

Vehicle Environment Immunity

Immunity	Compliant with ISO 7637 test level #4 (in accordance with e-mark directive)
Environment	
Temp, operating	-30°C to +70°C full performance
Temp, storage	-40°C to +85°C
Humidity	95% non-condensing
Protection	IP40 (IP 66 with protector)
Vibration, Impact	ISO 16750
Mounting	Tie-wraps and/or two sided adhesive

Certifications

FCC	Part 15 Subpart B, part 22/24 compliant
CE	CE number – CE 1177,0889 CE EMC & R&TTE according to 89/336/EEC or 1999/5/EC CE Safety EN60950-1:2006+A11:2009 Automotive Directive 2004/104/EC (E-Mark)
IC	Industrial Canada
EN12830 compliance With 1-wire temperature sensor	Suitability: T Climatic environment: <ul style="list-style-type: none"> w/o CR Protector – B with CR Protector – D Accuracy class: <ul style="list-style-type: none"> (-10)°C to (+85)°C - 1 <(-10)°C, > (+85)°C - 2 Range: -55°C to +125°C

Dimensions & Weight

Dimensions	91x69x23mm
Weight	~100gr

Add-On Accessories

1-wire Temperature Sensor	Connects to the 1-wire port of the CR-300B Operating temperature range: -55°C to +125°C with ±0.5°C accuracy from -10°C to +85°C
Concrete Mixer Sensor	Full monitoring solution of the concrete supply cycle and its various supply cycle stages
Fuel Probe Sensor	Measures the fuel volume in fuel containers and vehicles' tanks
Fuel Level Sensor	Measures the fuel level in the vehicle tank
CR Protector	Silicone/ rubber cover to improve the protection of the device (upgrades the IP rating from IP40 to IP65)

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