G4N30GPS REV2

Top-Class technology
Highly featured, Compact design

KEY FEATURES

- Dual-SIM mode GSM operation
- 16400 Geofencing areas
- 2000 Personnel ID tags
- Engine Regime over CANbus
- 3D acceleration sensor
- Integrated bi-stable relay
- Integrated Bluetooth 3.0+EDR
- GPS & GSM jamming detection
- Compressed TCP/IP data
- Advanced command system CLI
- Easy software integration
- LIN, Kline & RS232 interfacing
- ISM short range communication
- Integrated high-quality antenna

Easy Installation & Maintenance:

- Diagnose & setup over cable K-Line, RS232 and wireless over Bluetooth or GSM
- 3 bi-colored LED status for GSM, GPS and RS232 or another input source
- Small size & Integrated high-gain GPS, GSM, Bluetooth, ISM antennas

Flexible configuration of complex features (examples):

- Advanced acquisition engine providing over 25 record types
- Flexible I/O configuration (Ignition, Relay, State/Event counters & generators)
- Event data logger, including mileage counters, work time counter
- Advanced personnel identification (2000 IButton tags & 6 activity groups)
- Immobilization controlled by the acceleration sensor and internal relay
- Geofencing and event management for over 16400 polygons
- External peripheral interfacing over RS232, K-Line, Bluetooth (OBD , PDA)
- Over 35 types of hardware alarms triggered by the system and peripherals
- Encrypted XTEA data transfer over GPRS, LIN, RS232
- Dual-SIM management with fail-over and traffic balance algorithms
- 128 predefined GSM networks list to provide an automatic APN setup
- Work & Private mode triggered from multiple sources including IButton tags
- Advanced Power management with multiple wake-up triggers
- Real Time Clock and Sync management for Unix Epoch Time reporting

System & events reported information (examples):

- Navigation info, trip distance, engine working hours
- System status, input power, battery voltage, up-time, GSM status
- Specific information reported for driver behavior analysis
- I/O status, configuration, event counters and event generators
- Private mode record includes counters for distance, trip, accumulated total time
- Personnel ID record for start & stop work time, total distance, group
- Down-time record for tracking and counting power-down events
- Traffic accounting for Dual-SIM counting GPRS sessions and data transferred
- Alarm record for storing alerts and critical events generated by filters

Available options:

- Advanced Active-RFID engine for tracking containers and assets
- Wireless remote control for securing and monitoring vehicles
- Embedded SIM including prepay GSM global communication services
- External high-gain active antennas for GPS, GSM, ISM

Technical Parameters:

- Optimized RTOS for telematics
- 3G or GPRS Quad-band class B
- SkyTraq or UBlox A-GPS receivers
- +57K records memory storage
- 4 configurable pull-down I/O
- 2 Input Analogical / Digital
- 868/915MHz ISM RF interface
- Bluetooth 3.0+EDR data & audio
- 3D accelometer sensor
- 3-level watchdog
- Firmware upgrade over GPRS
- Humidity & corrosion protection
- Small size 80x40x15 mm
- Automotive grade components
- Temperature range -30...+85C

Communication Interfaces:

- IButton (1-Wire) Interface
- CANbus & LINbus Interface
- RS232 & K-Line Interface
- Bluetooth SPP serial bus profile

Power Supply:

- +8...40/60 Vdc input range
- 0.5 mAh in deep sleep mode
- 1 pin for external battery

External Hardware Options:

- OBDII vehicle interface
- Bluetooth Hands Free Car Systems
- PDA - WinCE/Android
- PNA GARMIN interface
- External backup battery
- Fuel flow & level metering sensors
- Tachograph Interface
- A-RFID tags for ID and Temperature

Tel: +33-9-72-12-58-60, +40-364-71-11-60 **E-mail:** info@gps4net.com **Web:** www.gps4net.com

PLATFORM3 Concepts:

The versatility of the platform is concentrated in a preemptive Real Time Operating System (RTOS) specially developed and optimized for telematics, in use since 2009. This proprietary RTOS has proved to be reliable and today is integrated within every product manufactured by GPS4NET.

PLATFORM3 is managing parallel subsystems handling the hardware management such as I/O Management or Bootloader, and as well the logical higher level entities such as Ignition control, Panic button, Motion detection, Transmission Engine.

For maximum reliability of the RTOS the Time Management Engine time-stamps the events in Epoch Time Format and monitors the discontinued functionality of the device reporting the power-down interval in seconds.

The Record Storage Engine is controlling the insertion of up to 8 simultaneous records / second, adding a sequence counter to each records type. The storage of the records is persistent even after the data is transferred on the server side. With help from the Time Management Engine responsible with the creation of the Down-Time Record, the server is able to reconstruct the map of the flash memory and to track down each RTOS event and device working history.

PLATFORM3 is the industry leading over-the-air device management & maintenance system, offering out-of-the-box, hands-free configuration and automatic post-installation upgrades, thus providing the ability to remotely monitor unit health status across customer's fleets to quickly identify issues before they become expensive problems.

AVL platform integration:

Integration of the new hardware in existing AVL software platforms is always raising time-to-market and financial problems. For this reasons GPS4NET have created G4NReceiver, a middleware enterprise server application handling the TCP/IP communication with GPS units and SQL Database connection management.

G4NReceiver is UNIX compatible and designed to manage thousands of parallel TCP connections. The communication with the DataBase is managed internally with XML descriptive files where complex queries are configurable in a few minutes.

To complete the job, G4NReceiver is providing a full set of functions for real-time alarm processing, SMS processing, OTA auto-diagnose and a Web API for interfacing RDT or other 3-rd party applications. The combination between RDT and G4NReceiver is a state-of-the-art solution providing in the same time: GPRS communication management, wireless diagnose and offline setup of devices.

Special Features :

- G4N30GPS device is offering a cost effective communication by integrating an embedded SIM provided by global GSM operators. The Dual-SIM role provides a backup communication channel for mission critical applications where the coverage of a singular GSM operator is not sufficient.

- CANbus engine provides ready made decoding profiles for J1939 & FMS networks implemented by most of the vehicle producers. This profiles are programmable over GPRS, being designed to offer a balance between the relevance of the information and the resources used (memory usage, GPRS traffic costs, server load).

The CAN acquisition engine have a built-in diagnostic and analyzer module which indicates visually (1 LED) or OTA the presence of certain CAN messages, helping the customization of profiles and easy installation.

- The embedded Personnel Authentication Engine is designed to manage 2000 iButton (Dallas) ID tags shared by 6 task groups with assigned actions for acquisition, transmission, alarm triggering, ignition control, or event generators. By providing such features, the engine is suitable for various business application from rent-a-car, personnel time tracking to vehicle utility control and maintenance.

- The current market trend has increase the demand for technical solutions for Insurance Telematics, eCall and Anti-Theft applications. These applications have together similar technical demands such as an integrated 3D acceleration sensor, immobilizer relay, emergency calling in alarming conditions.

- The Alarm Engine provides over 35 real time event based alarms. Each alarm source is independently configured and dependent of the GSM Network status, thus providing a flexible monitoring of the sub-systems events or peripheral's status.

- The Geofencing engine supports the highest number of Point-of-Interest on the market, being capable to handle over 16400 rectangular areas.

The engine provides an advanced grouping feature thus allowing the classification of multiple POI by Input/Output state, the possibility to define short length corridors or to set an alarm perimeter.

- Non-engine based ignition is detect based on multiple triggers such as the voltage and the movement, thus allowing a 2-wire installation. An ideal solution for older vehicles and machinery with no engine information and covert installation for asset tracking & recovery.