ROVER

Vehicle Tracking Unit

Product Features

- Unit size: 95(L) * 77(W) * 30(H)mm
- Weight: 220 g
- Aluminum case
- Case Environmental Characteristics:
  - Operational Temperature: - 25 ~ + 70 °C (board temperature)
  - Storage temperature -40°C to +80°C
- 4 digital outputs (200mA max)
- 6 digital inputs ( 5 negative inputs, 1 positive input )
- 1 analog input ( 0 to +3.3 volt )
- 1 RJ11 port for voice I/O
- 1 RJ45 MULTI port for serial RS232 (low speed 9600 Baud) and Direct GPS output RS232 (9600 Baud - depending on GPS module).
- Electrical Characteristics: Input Voltage: + 6~37 Volt DC regulated / 2A-MAX (GSM Transmit)
- Power Consumption:
  - 12 Volt - 100~320 mA (GPS On Line, GSM/GPRS On Line)
  - 12 Volt - 60 mA (GPS on line, GSM standby)
  - 12 Volt - <20 mA (GPS in Power Down Mode, GSM Standby)
- Backup Power:  1100 mAh Li-ION battery
- Memory Backup: EE prom
- Unleaded version modules (RoHS compliant)
Firmware Features

- SMS mode/ SMS+GPRS mode
- Upload/download settings, locations, and update firmware via GPRS
- Open platform for two way communication between control center and MDT
- Special protocol for GPRS with hand shaking. Minimize communication cost and data package lost.
- MCU dead lock protection
- Main power lost detection or input power below or above set value.
- Multiple location memory requests.
- Battery back-up in case main battery is CUT-OFF.
- Auto GEO-Fencing (Geo fencing input activated when drivers remove vehicle keys )
- Un-lock Doors: Allow owner to un-lock vehicle door from his mobile phone using simple SMS commands.
- SOS panic button: In demand alarm SMS emergency data and activates the vehicle external hazard warning system.
- Disable vehicle: Immobilize remotely using mobile phone or WEB browser in response to an alarm.
- Alarm Alert: Integrated with vehicle alarm system to trigger current status of the vehicle in case of tampering.

Technical specification

GPS Specifications:

**SiRF STAR III chipset**

**General**
1). Frequency: 1575.42 MHz.
2). C/A code: 1.023 MHz chip rate.
3). Channels 20

**Accuracy (Open Sky)**
1). Position: 10 meters, 2D RMS.
2). 7 meters 2D RMS, WAAS corrected.
3). Time 1 microsecond synchronized to GPS time.

**Datum**
1). Default: WGS-84.
2). Other Support different datum by request.

**Acquisition Rate (Open sky, stationary requirements)**
1). Reacquisition: 0.1 sec., average.
2). Hot start: 1 sec., average.
3). Warm start: 38 sec., average.
4). Cold start: 42 sec., average.
   (Note: Unit will go into diagnostic mode 1 minute after power up.)

**Dynamic Conditions**
1). Altitude: 18,000 meters (<60,000 feet) Max
2). Velocity: 736 m/s (<1,000 knots) Max
3). Acceleration: 4 G, Max
4). Jerk: 20 meters/second, Max

**Sensitivity**
Minimum signal tracked: -159dBm

**GSM Modem Specifications:**

**Frequency bands**
Tri-band: EGSM 900, DCS 1800, PCS 1900 or
Quad-band: EGSM 850, 900, 1800, 1900 (option)
Compliant to GSM Phase 2/2+
GSM class Small MS
Transmit power Class 4 (2W) at EGSM900
Class 1 (1W) at DCS1800 and PCS 1900
GPRS connectivity
GPRS multi-slot class 10
GPRS mobile station class B
GPRS data downlink transfer: max. 85.6 kbps
GPRS data uplink transfer: max. 42.8 kbps
Coding scheme: CS-1, CS-2, CS-3 and CS-4
Supports the protocols PAP (Password Authentication Protocol) usually used for PPP connections.
Integrated TCP/IP protocol.
Support Packet Switched Broadcast Control Channel (PBCCH)
CSD transmission rates: 2.4, 4.8, 9.6, 14.4 kbps, non-transparent
Unstructured Supplementary Services Data (USSD) support
SMS, MT, MO, CB, Text and PDU mode
SMS storage: SIM card
Support transmission of SMS alternatively over CSD or GPRS.
SIM interface Supported SIM card: 1.8V, 3V
Optional Accessories

- Speaker & Microphone
- Temperature Sensor
- I-Button & Reader
- I-Button Key Ring Mount
- Relay Box
- Combo-4N GPS&GSM Antenna
- GMAR-900 GPS&GSM Marine Antenna
- Bluetooth Dongle