



Why choose our adopted VTU units?

Slightly larger than a pack of cigarettes, our Vehicle Tracking Units are perhaps the most intelligent Vehicle Tracking and Monitoring system available in the market, today. They use GPS satellites for accurate position, heading and speed reports with the best qualities and most affordable prices.

It is true there are cheaper devices, but it is all about performance versus cost. Cheap devices stop working after a short time, most of the time, because of poor quality components and bad workmanship. Our VTU devices use:

- Either SIEMENS or WAVECOM/SONY ERICSSON GSM modules, which are the best and most reliable that money can buy, they cost US\$ 70-100 in quantity to dealers versus the China modules that cost only US\$ 25-35.
- The best GPS devices that money can buy: U-BLOX Super Sense Antares 4, 16 channel and U-BLOX 5, 50 channel devices.
- FRAM (ferro-magnetic memory), whereas everyone else on the market use EEPROM (very much like the SD card or USB stick), these devices cannot be used for 24X7X365 read/writes and fail in a few months. On the other hand, FRAM is lifetime memory!

Our VTU devices have "CE" and "E" mark certifications that qualify them for sale and use in Europe, but you cannot find cheap Chinese or Asian devices with such certification.

In addition to these high-spec electronic components, the VTU devices have the most comprehensive command set that allows so many powerful functions to make the cost of running (data cost) one of the lowest, in addition to the flexibility of configuring devices remotely.

VTUlite: Advanced GSM/GPRS & GPS Vehicle Monitor and Tracking Device

- Enables Accurate, Cost Effective, Fleet Control and Management
- Monitor Position, Speed, Emergency Situations & Events Instantly
- Control Devices Onboard Vehicle Remotely, with SMS or GPRS Commands
- Optional Event Recorder FRAM Memory Module for Driving Data Logging

Targeted at the demanding fleet management market where cost and features are of paramount importance, the VTUlite stands up to the test. It uses 16 channel GPS for fast and accurate position, heading and speed reports.

The VTU module can be programmed OTA (Over The Air) by an *authorized* command center, generates warnings, and reports possible deliberate speeding violations and multiple 'out of area' (Geo-Fence) crossings by the vehicle. There is an on board analogue input for connection to the vehicle fuel level gauge for monitoring fuel consumption.

Doors and other points could be monitored by sensors and any change of state is reported immediately. Remote enabling or immobilization of the vehicle or other key devices may be performed by the control center.

Running cost is kept to a minimum by utilizing reliable GPRS messages. The VTUlite has a call in function where events in the vehicle could be monitored or a hands-free call to the driver initiated. Inputs are available to allow an emergency assist trigger, in the case of emergency or possible hijacking. This compact unit is easily mounted or concealed, and consumes less than 1W of power.

VTUlite: Key Features

- Alerts, messages and commands are sent via SMS/GPRS to/from the command center
- No messages are 'Lost', recipients receive messages whenever in range of a GSM network
- Multiple recipient alerts, up to 5 SMS numbers can be programmed to be informed
- Almost 'Instant' notification of monitored events
- 4 Inputs are available for monitoring the status of any devices or switches
- 4 Control outputs are standard and could be used for 'Vehicle Immobilizations' or sirens
- Driver can make a 'Voice Callback' to the command center
- Onboard reporting of fuel consumption and possible fuel theft
- No mechanical or electronic maintenance required
- Very low 'Running' cost
- Almost global coverage (with GSM roaming enabled)
- All messages and commands are secured by GSM encryption Over The Air
- Commands can be activated or cancelled by the command center OTA
- Almost all functions can be remotely programmed and changed OTA

VTUlite: Reports

- Geo-Fence or Geo-Boundary Violations
- Disobedient over speeding after notifying the driver for 20 seconds
- Movement detect reports if vehicle remains stationary for more than a preset time
- Change of state of any inputs
- Loss of satellite view
- Antenna tampering (open or shorted)
- Last known good position GPS fix and time
- Entire system status (Antenna Status, Continuous Send, Send Message, Auto Answer)
- Possible fuel theft

VTUlite: Technical Specifications

Internal GSM Model

New Wavecom GM47 / GS64 module
Dual Band GSM radio device [EGSM 900/1800 Mhz, 800/1900 Mhz USA]
3GPP GSM compliant Phase 2+ standards
Class 4 @ 900 Mhz
Class 1 @ 1800 Mhz
HCS D (2+1) up to 19.2 Kbps
GPRS Class B (4+1) up to 85.6 kbps with p channel support
GSM 07.10 Multiplexing Protocol

High Performance GPS Module

Swiss made, small footprint 16 channel module
L1 Frequency (1530 Mhz), C/A Code, 16 Channel receiver
Position Accuracy (SA off) < 4meters CEP, (SA off) & DGPS < 2meters
Acquisition on Cold Start 41s, Warm Start 38s, Hot Start 2s
Re-acquisition time < 100ms
Operation Limits-Altitude < 18000meters, velocity 515 meters/s

Processor & I/O Board

10 MIPS 16Bit RISC Processor core
20 Mhz external clock
4, 12-24V Level inputs
Four High Current outputs (0.5 Amp MAX, momentary load)
On board 150 Khz 3V3 and 4.2V high efficiency power supplies
10 Bit A to D inputs for monitoring system voltages
Optional Ferromagnetic (FRAM) memory for data logging

Power Requirements

7-30V DC at approximately 1W in stand-by, 1.4W in Voice Call