

GPS/GSM/GPRS Vehicle Locator

Profile



AVT-2000 V3.1

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GPS Designer international CORP..

www.secugis.net

AVT-2000 GPRS Vehicle Locator

Overview

GPS/GSM(GPRS) device is a versatile and economical platform for mobile positioning applications. It integrates the GPS module, Tri-band/dual-band GSM/GPRS communication engine and computer processing power all onto a single board. It is enclosed in a low profile casing for lower installation cost. GPS/GSM provides reliable REAL TIME vehicle GPS positions any-time anywhere in the world providing the current position and status of device from remote locations onto computer displayed maps.

Benefits such as increased fleet efficiency, improved public and driver safety, better emergency response time, enhanced fleet control, and good public relations are all realized through the proper implementation of GPS/GSM system.

The GPS/GSM system includes a GPS Receiver and GSM/GPRS Module with built in GPS & GSM/GPRS antenna .It takes advantage of MCU to transmit GPS NMEA 0183 data to 24-hrs Control Center by SMS (Short Message Service) and TCP/IP for monitoring through GSM/GPRS system. The Software purpose to receive locator ID, Time, Longitude, Latitude, Speed, Direction, project code and common short code is optional from GPS/GSM device.



Basic Type (AVT-2000)

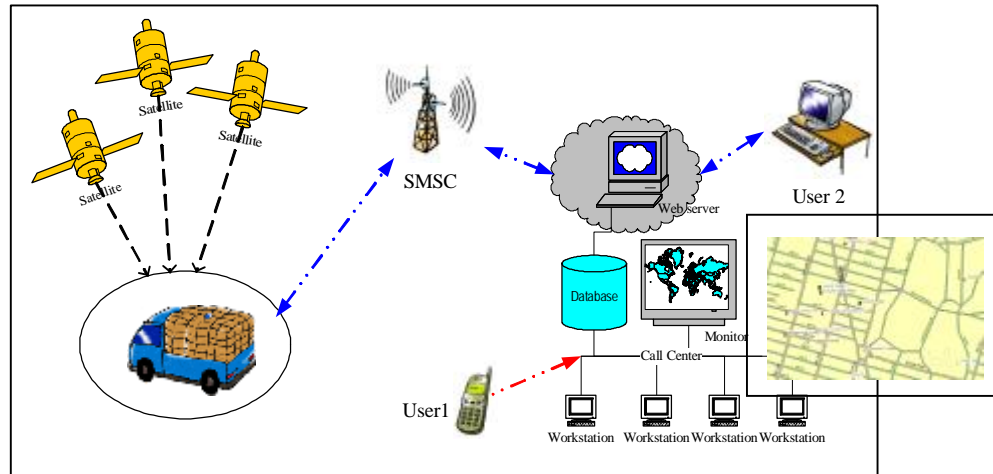


Option 1(mobile phone)

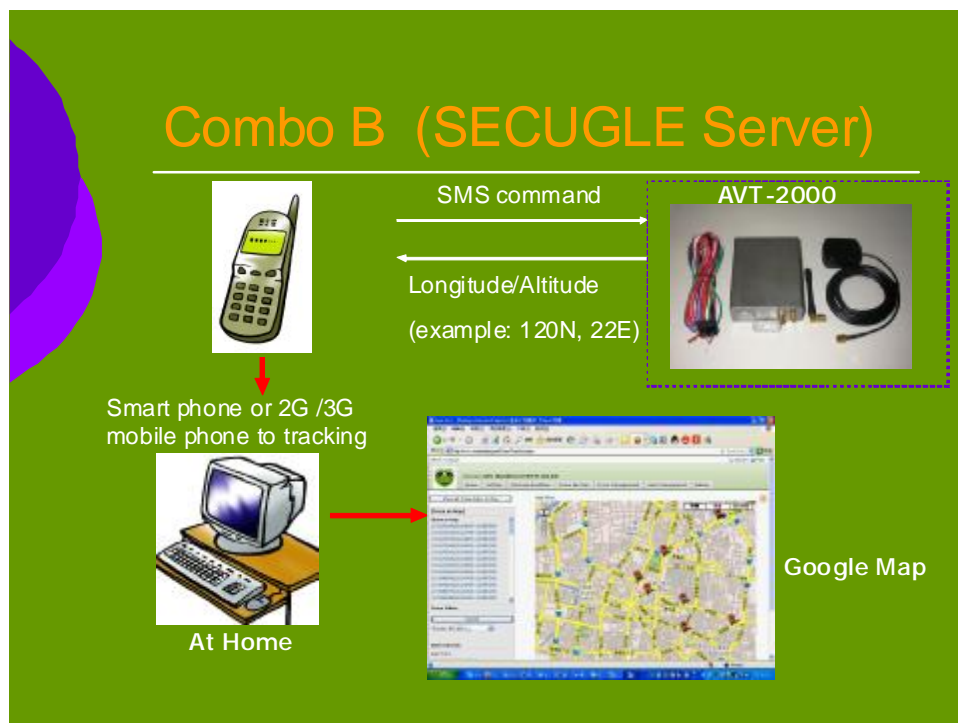


Option 2 (Dispatch logistic)

System example



Call Center For Client Server



Web Server- Integrated Google Map

FEATURE

1. **Real-time tracking:** the client may set the time of the location data uploading according to their specific requirements (5sec—65000sec). AVT-2000 will automatically reply at the specified interval. (Containing time, longitude and longitude, speed, direction, GPS status, etc.), defaulted mode may also be feasible.
2. **Anti-theft devices:**
 10. to connect the anti-theft devices: to close the anti-theft function; to unlock the car door; locking the car door.)
 11. alarm function (shaking alarm, unlawfully unlocking the car door alarm, unlawfully open the keys alarm)
3. **Automatic track and data storage**

When the GPRS could not be connected, the locator will store the GPS historic data according to the time set by the users, and automatically send back the data when the GPRS is connected.
4. **Voice communication function**

The users may make phone calls or answer phone calls through LCD screen or vehicle telephone. The hand free communication may be realized by pressing a smart button or using earphone.
5. **The calling restriction:**
 - a) The management center may download the group number and restrict the dialing and answering the phone calls of the users so as to realize the management to the fees.
 - b) The users may make long distance query about the details of the charges. Including the dialing statistics, receiving statistics, GPRS flow rate statistics.
6. **Alarm functions**
 - a) **Emergency alarm:** when there are emergencies, such as robbery while help is needed, just press the alarm button, the alarm light will flicker, the locator will immediately send back to the center.
 - b) **Over-speed alarm:** the users may set the upper limit of the speed, whenever the speed of the locator surpasses the set speed limit and lasts more than 10sec, the locator will immediately call the center.
 - c) **Power failure alarm:** after the users open the power failure alarm, whenever there is no power in the power line connected to the locator, the internally installed battery will automatically provide power supply. (The internally installed lithium battery may provide a power supply which is enough for 2 hour's power supply, and will recharge automatically.) the locator will report to the center.

- d) **The unlawfully unlocking the car door alarm:** if the user's vehicle is on the state of alarm, whenever there is unlawful open of the car door, the locator will report to the center, and send SMS to the user's cell phone to inform the user.
 - e) **Unlawful unlocking alarm:** when the vehicle is on the alarm state, there is unlawful unlocking of the car door, the locator vehicle will send back report to the center, and at the same time send SMS to the user's cell phone to inform of the alarm.
7. **Cut off the fuel and listen in function:** If the vehicle happens to be stolen, and the car should be stopped, the command to cut off the fuel will be sent out. The monitoring center may set the listen in number; the vehicle locator will automatically dial back the number and realized the long distance listen in function.
 8. **SMS (Text) function :**
The service center may communicate with the locator, through GPRS to send the inform or the task list. By LCD display and the vehicle cell phone, the users may upload the internal information to the center.◦
 9. **electronic enclosure(GEO fencing area)**
Set a point(such as the manufacture, the oil house, etc) on the electronic where the vehicle will get to, after the arrival or the leaving of the vehicle, the vehicle locator will automatically send back the information.(at most 64 enclosures.)
 10. **Extended LCD Interface to display.**
 11. **Extended Audio interface for Hands**
 12. **External Analog Inputs.** (speed, fuel flow, temperature , locks etc)

SPECIFICATION

1. Products

AVT-2000:

- (1) Main unit
- (2) GSM/GPRS Module and GSM/GPRS Antenna
- (3) Power & application Cable
- (4) Protocol
- (5) LCD (optional)
- (6) Handset (optional)
- (7) Hand free (optional)
- (8) Remote control (optional)

2. Specification :

A. GPS Receiver

- a. Channels 12 Channels / L1 1575.42MHz C/A code 1.023 MHz chip rate.
- b. Hot start : <15sec., average
- c. Warm start : <35sec., average
- d. Cold start : <30sec., average
- e. Re acquisition : <2sec., average
- f. Position accuracy : 15m CEP without SA
- g. Velocity accuracy: 0.05 meters / sec.
- h. Time accuracy : 1 microsecond synchronized to GPS time
- i. Altitude: -1000m to 18000 meters (60000 feet) Max.
- j. Velocity: 500 meters / second Max.
- k. Acceleration: -4g.,Max

B. GSM/GPRS Module

- a. Frequency : 900/800/1900.
- b. RF Power:
EGSM900: CLASS4(2W)
GSM1800: CLASS1(1W)
- c. GPRS
 - I GPRS multi-slot class8
 - I GPRS mobile station class B

C. Size: 92 X 72 X 28 mm weight:180g

3. power source: 9V ~ 36V
4. Protecting voltage battery: bottom line: 11V (battery of 12V) & 20V (battery of 24V) top line: 36V When the battery voltage is below the bottom line or above the top line, the spare battery will start working.
5. Maximum input voltage of power source: 100V
6. Power combustion : 50mA~200mA, state of guard:70mA
7. Working temperature: -20°C ~ +70°C

- 8. Relative humidity: 20~95%
- 9. Locating accuracy: <15m

