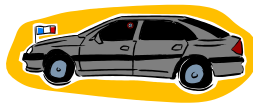




Multifunctional Vehicle Tracking Unit

- RS 3000s -

GSM/GPRS



Product Specification

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Overview

RS3000 is an intelligent GPS vehicle tracking unit to support complete vehicle security and fleet management.

RS3000 built-in alarm system monitors various vehicle sensors, and provides the customer with a vast variety of real-time activities and information about the vehicle, including speed, engine, ACC, doors opening, signal lamps, brake, vehicle photo data, A/D input to support kind of sensors, like the sensors to measure fuel level, weight, temperature and any other pulse signal detection.

Additionally, standard interface and a two way communication GSM/GPRS modem, based on existing wireless infrastructure, makes RS3000 possible to deploy the system with rich functionality with kinds of value-added service, like transparent data transmission to other standard RS232 device.

The unit and its components are hidden and undetectable when installed.



RS3000 are of four models, RS3000B, RS3000B1, RS3000C and RS3000C1, and applied in different conditions to meet customer's need.

Rating and Operating Conditions

Parameter	Min	Max	Units
Supply Voltage (12v)	11V	36V	V
Supply Voltage (24v)	20V	36V	
Power consumption	12 (sleep)	≤300	mA
Operational Temp.	-20	70	°C
Storage Temp.	-40	85	°C
Operating Humidity	10	95	%

General Specification

Measurement	102x68x42mm	550 grams
Cellular Modem	Siemens or Huawei GSM dual band or quad band	
Cellular Antenna	Dipole External	
Network	Data	GSM, GPRS and SMS
	Voice	Headset Kit Available
Messages	SMS	Encrypted Protocol
	GPRS	TCP/IP over PPP
GPS	M89 from Holux or REB-3XXX from Royaltek, L1,1575.42MHZ	
I/O	Inputs	Emergency Button, 2xLow Voltage Analog, 2xHigh Voltage Analog, ACC Status, Engine Status, Door Status, Brake Status, Remote controller signal, 2x A/D voltage input(10bit digital, 5V, 12V, 24V, 30V optional)
	Outputs	Oil and electricity control, sound/light alarm, Remote controller signal
Alarm System	Hijack alarm, Anti-theft alarm, Power discarding, GPS antenna shourt circuit, GPS antenna open circuit, GPS receiver failure, illegal ignition, illegal door-opening, Voltage Analog Input, Low battery voltage alarm, emergency brake, etc.	
Backup Battery		internal, 12v, 300mAh
	Backup Time	40minutes~90minutes
Serial Port	RS232	For connecting external intelligent devices such as vehicle computers, PDA and terminals with serial communication modules
	Baud Rate	38400bps at most, adjustable

Key Features

Alarm System and Alarm Notification

- ☑ **Complete Security System:** Complete operational security system with seven different logic states to detect break-ins and report to the center.
- ☑ **Customizable Voltage Alarm:** 2xLow Level, 2xHigh Level for triggering customizable alarm.
- ☑ **Trigger-before-transmit:** Option to start the alarm before sending a transmission, to avoid false alarms from owner.
- ☑ **Backup Battery:** Backup battery is included on board to detect and keep transmitting information in case of main power failure.
- ☑ **Flexible define to alarms and alarm trigger mode:** customer can configure which alarm and the alarm trigger mode, like how does an analog input change and how long, when to trigger alarm.
- ☑ **Arm from Lock Pulse:** Option for arming from the doors' locking pulse, in case of existing alarm system.
- ☑ **Gradual Stop:** Option to gradually stop the vehicle by using an external relay over the fuel pump. The parameters to set the gradual delay and pulses speed are all programmable.
- ☑ **Auto Unlock/Lock:** Support for locking/unlocking the doors.
- ☑ **Siren Disabling:** Option to avoid the use of the siren when the alarm is triggered.
- ☑ **Emergency Button:** Support for emergency button to invoke an immediate high-priority transmission to the center.
- ☑ **SMS notification to User Mobile phone:** Four user mobile phone number can be preset for RS3000(enhanced security models, like RS3000B1/RS3000C1). The RS3000 report independently alarm status to the phone by SMS, also the user phone can enquiry the vehicle status by some simple SMS commands.
- ☑ **Forbid to alarm:** Any alarm can be forbidden separately. Then RS3000 wont initiate the alarm even the corresponding status occurs.

Location&vehicle statues

- ☑ **GPS Receiver:** Built-in GPS receiver allow real-time tracking and onboard location-based analysis.
- ☑ **GPS Indications:** GPS indications sent to the center includes the time of the last valid location, and current operating mode of the GPS.
- ☑ **Last Location Saving:** Saving of the vehicle's last position, if going out of GPS coverage.
- ☑ **Miles by GPS:** Advanced algorithm to calculate the vehicle's mileage based on the GPS, without any external connections to the vehicle's odometer.
- ☑ **Privacy:** Configurable to start privacy function by center or user(handset), then RS3000 will report invalid location(GPS data as invalid, speed at '0', east longitude as

9999.9999,north latitude as 9999.9999),so the center cannt trace the vehicle provisionally(resume valid report as soon as important alarm occurs) .

☑ **vehicle status:** kinds of analog signal input to detect engine, ACC, door open, brake. Customized voltage level input detection to other device statues, 2 voltage A/D input to kinds of impulse sensors to measure temperature, axle load, fuel level.... And realtime upload to server.

Over-The-Air commands

☑ **Status Requests:** Ability to request for the latest status of the vehicle, and receives the entire information about all the inputs, outputs, and location information.

☑ **Tracking:** Option to remotely engage periodic transmissions from the unit in the intervals of 3 seconds up to 4 hours.

☑ **TCP/UDP Tracking:** Option to track the vehicle with a very high frequency of transmissions only when the vehicle is on the TCP/IP network (GPRS/EDGE), to reduce SMS costs.

☑ **Parameters Programming:** Complete programming of each and every one of the unit's parameters over the air.

☑ **Remote Arm/Disarm:** Option to arm or disarm the vehicle from the center.

☑ **Output State Changing:** Option to remotely activate different outputs, such as locking/locking the doors, starting the siren, activating the immobilizer.

☑ **Voice Call Request:** Request the unit to call a specific number for a voice call to communicate with the driver and/or hear the activity inside the vehicle.

☑ **Text Messaging:** Send a text message directly to the vehicle's MDT or Palm Pilot.

☑ **SMS to assigned phone No.** request the device to send a SMS to a phone No, the message content and phone No are assigned in the command flexibly

Fleet Management

☑ **Speed restrictions:** Programmable alerts whenever the vehicle goes above/below a pre-defined speed, to detect over hastiness, and unauthorized stops.

☑ **Perimeter Alerts:** Alert when the vehicle enters or leaves a designated area at a specified time.

☑ **Emergency Brake:** Alert when the vehicle's speed drop (per second) is bigger than a specified value.

☑ **Inputs Monitoring:** Ability to send an alert if an input is changes within a specified time.

☑ **Internal Logging:** Whenever a transmission was failed to be sent, RS3000 can save the entire message to its memory for later transmission. Up to 4K locations with statuses can be saved this way. These data can be read from center or by computer via RS232.

☑ **Driver Identification:** By using handset or LCD monitor, Remote Controls, or Keypad Codes, the unit sends the code of the current vehicle driver to the center.

☑ **Driver logon data:** RS3000 can save the driver's logon and logout information to its Flash.

☑ **Driver Fatigue:** RS3000 will report to the center and alarm the driver with siren or LCD when driver has driven continuously over designated time

- ☑ **Driving Record:** Save the locations and vehicle status so that the center upload it later for analysis. Also you can set conditions to start record, like TCP disconnected, speed being not '0'.
- ☑ **Mileage Transmissions:** Periodic mileage transmissions to the center.

Communication

- ☑ **GSM/GPRS:** Support for GSM networks, while using both the SMS channel and the GPRS channels
- ☑ **OTA Settings Modification:** Over-the-air option to change the communication settings, including APN/Username/Password/SMS Center/SMS Destination and target IPs.
- ☑ **Backup IP and SMS Center:** Backup IP and SMS Center support in case of main computer has gone offline.
- ☑ **TCP Connectivity:** Support for the GPRS TCP/IP networks by either staying online at all times, or coming online when a transmission is initiated.
- ☑ **Compressed Mode:** Configurable many locations can be saved to be sent in one message, thus reducing the communication costs.
- ☑ **Active TX Parameters:** Ability to change the number and interval of messages due to emergency events.
- ☑ **Voice Calls:** handset and Hands-free kit to support voice call from and to the vehicle.
- ☑ **SMS on GPRS:** RS3000 can transmit SMS message on GPRS to save communication fee.
- ☑ **GPRS Economic Mode:** Working in economic mode,RS3000 auto-report through UDP and TCP using a bigger interval to decrease GPRS network flow, if the GPS speed is '0' or the engine is 'off' over the appointed time. As soon as the speed is bigger than '0' or the engine is truned on, RS3000 will resume auto-report by normal interval.
- ☑ **TCP transparent transmission on comport:** support complete transparent transmission between the center server and comport connected device(RS232).

Models&Fuctions list

Model	RS3000B	RS3000B1	RS300C	RS3000C1
Messages Report	GPRS/SMS	GPRS/SMS	GPRS/SMS	GPRS/SMS
4xSMS Center	√	√	√	√
2xGPRS Center	√	√	√	√
SMS on GPRS	√	√	√	√
Real-time positioning	√	√	√	√
GPRS Economic Mode	√	√	√	√
Hand-free Call	√	√	√	√
Audio Monitoring	√	√	√	√
Perimeter Alarm	√	√	√	√
Emergency Alarm	√	√	√	√
Emergency Brake	√	√	√	√
Auto Mileage Transmission	√	√	√	√
Oil and Electricity Control	√	√	√	√
Remote Gradual Stop	√	√	√	√
Privacy Function	√	√	√	√
Enhanced Security Functions	×	√	×	√
SMS to preset Phone No.	√	√	√	√
Driver longon data	√	√	√	×
Driving records data	√	√	√	×
Accident Doubt data	√	√	√	×
Driver's Fatigue	√	√	√	√
Remote Controller Inter.	×	√	×	√
Remote Parameters Programming	√	√	√	√
Online Upgrade(GPRS)	√	√	√	√
MCU temperature detection	√	√	√	√
External Camera Support	×	×	√	√
External Navigator Support	√	√	√	√
Auto Door-lock by Brake\Speed	×	√	×	√
4xCustomized Alarm Input	√	√	√	√
4xUser Mobile Phone	×	√	×	√
2xRS232	√	√	√	√
2x A/D input(voltage)	√	√	√	√
Data Transparent Transmission	√	√	√	√
Application	private cars, business cars, logistics vehicles, passenger vehicles, and special vehicles			