

SecuTrack



SecuTrack is a combined GSM/GPS unit intended to be used in vehicles where no power is available.

SecuTrack has a built-in battery with a lifetime of 2 years or more. The battery lifetime is based on sending one single SMS every day with position and status of the battery.

SecuTrack can also be connected to an external power source. If an external power source is used then it can operate as a full feature tracking system without sleep mode.

SecuTrack has a built-in motion detection which will activate the complete unit if the vehicle starts to move. A SMS is sent with the position.

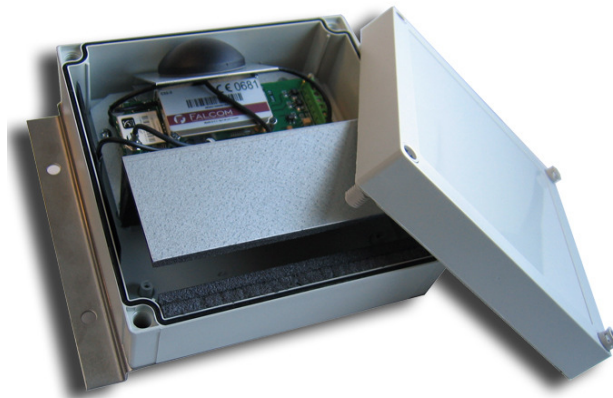
SecuTrack has 2 additional Digital input and two relays outputs.

SecuTrack is shake and temperature tested according to the European Railroad standards.

The whole unit including GPS antenna and GSM antenna is built into an IP65 standard watertight and dust proof plastic box.

Size of the SecuTrack is 18x18x7.5 cm.

Weight is 2 Kg including a 17 AH battery pack.



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Technical description

Type	SecuTrack 2.0
GSM-modem	Falcom C55 900/1800 dual band GSM / GPRS
GPS	Falcom JP7T / SiRF Star II , 12ch
Interfaces	2 zone inputs for external detectors Arm / disarm switch Integrated movement detector 2 remote controlled semiconductor relays
GSM-antenna	Build in dualband 900/1800 antenna (GSM 1900 on request)
GPS-antenna	Build in 3Volt active with LNA (Mastercom 154)
Connectors	Screw connectors for inputs and outputs
GSM connection	SIM-card , all operators
Indication	2 indication LEDs
Data transfer	SMS / GSM-data
Supply voltage	8...12VDC
Current	140uA / sleep mode 80 ma during tracking 480 mA during GSM-transmission
Build in battery	10.5 Volt industrial battery 17 Ah. Lifetime of battery expected 2 years with one daily position report with battery status. The battery is not charged by the SecuTrack but must be replaced.
Temperature area	-20...+70°C
Delivery package	SecuTrack device, case IP65 GSM and GPS antennas installation and user manual
Options	External outdoor antenna for GPS Different size battery on request.

Different modes of operation.

The following is the factory setting mode of the SecuTrack device.

When the unit is connected to a 8...10,5 V battery the GSM-part will register into GSM-network and send "ARMED" message.

After the first fix to GPS-satellites the unit will send an IN-message with location .

You can now send new commands to the unit and change the mode or other parameters.

Without new parameters the unit will switch off both GSM and GPS after 2 minutes. The power consumption goes down to 140uA.

Every night at 1:00 the unit will wake up both GSM and GPS and send location and battery status. If there is no new SMS-commands the unit will after 2 min go to sleep again for 24 hours. If you miss the 2 min window you can send a command with an SMS to the device, the device will receive it the next time it wakes up and then change the parameter. It is possible to program the SecuTrack to check more often if there is any SMS waiting to be processed. This will reduce the battery lifetime.

Continuous mode with external power.

If the SecuTrack is connected to an external supply voltage with a range of 13,5...24,0 V the SecuTrack unit will automatically switch on both GSM and GPS and keep them both in full operation as long as the 13,5V power supply is present.

When the GSM and GPS are active it is possible to send tracking commands and get an immediate answer from the device. Also all other commands and inquiries are possible all the time.

If the external power supply is switched off and the supply voltage goes under 12 V, the unit will automatically switch to the battery operation mode after a few minutes.

The continuous mode is typically used for applications where an immediate tracking info is needed because the asset is moving. During the night-time or stoking period the device is used as an alarm system to indicate a possible theft.

It is possible to use the integrated movement detector and two logic inputs to send alarms. If the detector is activated an alarm is immediately send with the position taken from the GPS. In the continuous tracking mode the alarm and location will also be transmitted immediately.

Movement detector mode

If the jumper J6 is installed it is possible to use the integrated motion detector to switch the device between continuous tracking mode and interval tracking mode. In this mode the switching between these modes is not depending on the power supply voltage.

When the SecuTrack unit is installed in a car it can detect movements and switch then on the tracking. The device will stay fully active as long as the car is moving. When the car has been stopped over 30 minutes the processor switches the GSM and GPS units off and return to the sleep mode.

If an alarm will occur during the sleep mode, the unit will immediately switch on the GSM and GPS modules. Before sending the alarm message the device will check if there is an incoming SMS and act accordingly. This allows the user to send a disarm command from one of the user phone numbers in the SIM-card thus preventing an alarm.

Outputs

There are two small relays on the printed circuit board. These can be used to control external devices. Maximum load for these relays is 24VDC/0.1A.

SCHEMATIC DIAGRAM

