GPS Hardware

GSM / GPS In-Vehicle / Personal Tracker



SD-10 (In-Vehicle)

SD-10 is a smart and reliable GPS/GSM/GPRS in-vehicle tracking device which is developed and designed for real-time tracking and monitoring of vehicle. SD-10 is suitable for many purposes such as vehicle security, asset and/or fleet management.

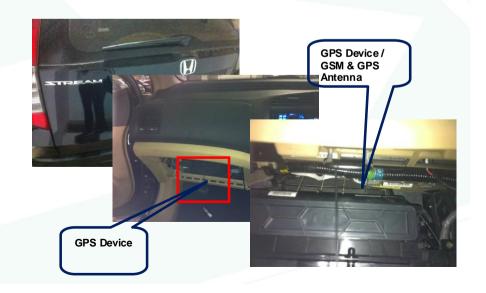
With the sensitivity GPS module onboard, SD-10 is able to easily get a fixed position even in urban canyon condition (results may vary).

Key Features

- Tracking by time interval, distance interval or smart mode.
- Position logging capacity of up to 100,000 waypoints
- Powerlow / lost alert
- Emergency alert
- Self-defined events reporting
- Geofence management
- Mileage report
- Power management
- Speeding alert
- GSM / GPRS communication simultaneously
- Device configurable over the air
- Firmware upgrading over the air



- Dimension: 60 (w) x 27 (h) x 77(d)
- Weight: 100g
- GPS: Built-in 20 channels or above high sensitivity GPS receiver
- GSM: Supports 850/900/1800/1900 MHz frequency communication types: SMS, GPRS UDP/TCP
- Power source: DC 8-35V
- Backup battery: 950mA, 3.7V
- Power Consumption
 - < 80mA @ DC 12V (GPS / GSM on)
 - < 40mA @ DC 12V in standby mode (GPS off, GSM in listening mode)
 - < 1mA @ DC 12V (GPS off, GSM off, Vibration I/O sensors on
- Serial port: 1 mini USB for data exchanging or backup battery charging
- Input port: 4 digital input ports with 2 positive triggering, 2 negative triggering
- Output port: 4 digital output ports with 4 negative triggering
- Memory: Built-in 4MB flash memory
- Operation temperature: -20°C to +80°C (w/o battery equipped)



S-Track (In-Vehicle)

S-Track is an in-vehicle tracking device with high sensitivity GPS module which has built encrypted AES256 capability to allow transmission of real-time position via GSM with added security.

- Dimension: 91mm x 65mm x 38mm
- Weight: 200g
- DC Power Input: 8V 28V
- Power Consumption:
 - GPS / GPRS active transmission: 60mA (average) @ 12V
 - GPS active / GPRS idle: <40mA @ 12V
 - GPS / GPRS idle: <15mA @ 12V
- Operating Temperature" -20°C to +60°C
- Backup battery (Optional):
 - Rechargeable Li-ion, 1000mAh
 - For short time power backup in case of power failure
- IO Pins
 - 2 active high inputs (6V 28V), 4 active low (<0.7V)
 - 3 active low outputs (open drain, 500mA max sink), 1 active high for driving LED directly
 - 2 analog ADC input 0V 18V
 - 3 LED's 1 GPS, 1 PWR / SW, 1 GPRS
- UART: 1 external UART interface for debug / user application
- GPS Module: High sensitivity GPS module (LEA-5S)
- High Sensitivity Modiule (LEA-5S):
 - 50-channel u-blox 5 engine with over 1 million effective correlators
 - High immunity to jamming
- Electrical:
 - Power Consumption typ. 48 mA @ 3.0 V; Sleep mode: type 65mA
 - Antenna Power External or Internal VCC_RF
 - Antenna Supervision: Integrated short-circuit detection and antenna shutdown, open circuit detection
 - External Antenna
 - Wheel Tick and forward/Reverse Signal: 6V 32V

- Environmental Data:
 - Operating temperature range: -40 to 85°C
 - Operational Limits:
 - o Altitude 18,000 m
 - o Velocity 515 m/s
 - o One of the limits may be exceeded but not both
- Protocol:
 - NMEA 0183 Version 2.3
 - U-blox UBX Binary Protocol
- Simens Module: **Siemens (Cinterion) MC55i** Quad-band GSM/GPRS module
- Frequency Bands:
 - MC55i Quad-band: EGSM 850, EGSM 900, GSM 1800, GSM 1900
 - Compliant to GSM Phase 2/2+
- Transmit Power:
 - Class 4 (2W) at EGSM 900 and GSM 850
 - Class 1 (1W) at GSM 1800 and GSM 1900
- Operating temperature:
 - Temperature Range
 - Normal Operation: -20°C to +70°C
 - Restricted Operation: -40°C to +70°Cz
 - Switch off: < -40°C and >+70°C
 - Storage: -40°C to +85°C
- GPRS Connectivity:
 - GPRS multi-slot class 10
 - GPRS mobile station class B
- GPRS Data
 - Downlink transfer: max. 85.6 kbps
 - Uplink transfer: max. 42.8 kbps
 - Protocol: UDP/TCP, HTTP
 - Configuration/Control message via UDP packet or SMS
 - Current firmware allows on SMS protocol
- SMS:
 - MT, MO, Text
 - Configuration/Control message via UDP packet or SMS

- SIM interface: 1.8V and 3V
- Audio Interface: Audio 2.5mm jack (option)
- AT91SAM7S series:
 - ATMEL ARM 32-bit processor
 - Up to 50 MHz
- Code Memory:
 - Code Flash scalable for user applications
 - o 256 or 512kB
 - o Single-Cycle Access at Up to 30 MHz
 - Code RAM scalable for user applications
 - o 256 or 512kB
 - o Single-Cycle Access at Up to 30 MHz
- Data Logging 1:
 - For configuration data, parameter tables, System Alerts and debugs
 - For Navigation Data and Event Logging
 - Default is 16Mbit or 2 MB of Data Logging Memory
- Data Logging 2:
 - Use external MicroSD Card
 - For Navigation Data and Event Logging
- Diagnostics:
 - Onsite diagnostics via commands through UART interface
 - OTA diagnostics via GPRS Data / UDP
- AES:
 - 256Bits
 - Both data and command set via GPRS
 - Message keys encrypted further by base key





CT-24LE (Personal Tracker)

CT-24LE is an upgraded unit of the previous CT-24. The high GPS and GSM sensitivities make it being able to function under the dashboard in a vehicle without any external antenna. The new upgrade includes:-

- Obtain battery status report by sending SMS command
- Enable / Disable up to seven sets of GSM cell
- Embedded Vibration Sensor and Microphone
- Configuration of report by distance

With the sensitivity GPS module onboard, SD-10 is able to easily get a fixed position even in urban canyon condition (results may vary).

Key Features

- Compact size
- High GPS and GSM sensitivity
- Send position via GPRS or SMS
- Built-in vibration sensor and microphone
- Battery status report via SMS
- GSM Cell ID information report
- Configuration can be done via an application software or SMS
- Long battery operation time of more than 150 hours



- Chipset: SIRF III
- Datum: WGS-84
- Sensitivity: -159db
- Reacquisition: <0.1s
- Hot: 1s typical
- Warm: 38s typical
- Cold: 42s typical
- Frequency: GSM 850 / 900 / 1800 / 1900 MHz
- Antenna: Internal GSM antenna and active GPS patch antenna
- External Power Supply: 5.0 ~ 8.0V DC with charging current of 500mA
- Battery Power Supply: 3.7V DC
- Battery Capacity: 1800mA Li-ion battery (standard)
- Battery Operation: > 150 hours (1800mA battery with an hourly report in passive mode)
- Dimension:
 - 64.66 x 43.19 x 22.81mm (with a 1100mA battery)
 - 64.66 x 43.19 x 27.70mm (with a 1800mA battery)
- Weight:
 - 85g (with a 1100mA battery)
 - 92g (with a 1800mA battery)
- Vibration Sensor: Embedded Vibration Sensor
- Environment
 - Operation Temperature: -5° ~ 55°
 - Storage Temperature: -5° ~ 55°

CT-58 (Portable Tracker)

CT-58 is a mini GPS tracker and is able to apply to many tracking purposes such as vehicle, container or asset tracking. CT-58 is also equipped with high sensitive vibration sensor which could reflect the real position of the surrounding immediately as being activated. CT-58 will be the best helper for you to detect your assets and personnel.

Key Features

- The build-in vibration sensor will detect movement of the CT-58.
- When the movement occurs, the CT058 will send out reports.
- The external panic button (option) can be contacted to CT-58.
- When the panic button is pressed, CT-58 will send out SOS report.
- Improved GPS and GSM receptions.
- Compact and robust enclosure.

Applications

- Fleet management
- Vehicle security and recovery
- Asset tracking
- Covert tracking

- Frequency: GSM 850 / 900 / 1800 / 1900 MHz GPS; 1575.42 MHz
- GPS Receiver: Acquisition Time Reacquisition < 2 sec Cold < 60 sec TTFF (Time To First Fix) Warm < 35 sec TTFF Hot < 10 sec TTFF
- GPS Receiver: TTFF Accuracy Position 10 metres RMS without SA Velocity 0.1 m/s without SA
- Battery Power: 3.V DC Li-Polyma Battery, 1500 mAh
- External Power: 6V DC
- Battery Life: 70 75 hours (1 hour per data) after fully charged (estimated)
- Operating Temperature: -10°C to +65°C
- Storage Temperature: -20°C to +70°C
- Relative Humidity: 5% to 95%, non-condensing
- Size: 8.4 (L) x 6.4 (W) x 2.3 (H)





M7 (Portable Tracker)

M7 is a portable GPS Tracking device, with compact in size, easy mounting or hiding by magnetic installation to the metal part of a vehicle. With the superior GPS, GSM/GPRS modules on board, ultra low standby power consumption, IP 67 rated water proof feature in outdoor environment; M7 provides the best choice to your GPS vehicle tracking application, with its reliability, convenience and flexibility.

Key Features

- Data transmission via SMS / GPRS / UDP / TCP
- Detached alert
- Motion report
- Roaming preference setting
- Low battery level alert
- Power management setting
- Tracking by voice call
- Installation in seconds

Applications

- Fleet management
- Vehicle security and recovery
- Asset tracking
- Covert tracking



- Size: 102mm (L) x 47mm (W) x 46mm (H)
- Weight: 300g (net)
- Communication module: Quad-band GSM 850 / 900 / 1800 / 1900 MHz
- GPS Receiver: 66 Channels -1165dBm high sensitivity GPS receiver
- Memory: 4MB
- Back-up Battery: Built-in 5200mAh Li-ion rechargeable battery
- Unit Charging: 5V DC, 900mA
- Tampering Switch: built-in
- GPS Antenna: Built-in
- GSM Antenna: Built-in
- Tri-axial Acceleration Sensor: Built-in
- Enclosure: ABS Plastic IP 67 rated
- LED Indicator: One LED with 3 colours for status indicating
- Mounting: Magnetic
- Radio Beacon: 433 MHz, Optional



Streetdirectory (SD) is a technology firm that focuses on developing location-based software and solutions. Established in 2008 and managed by the same team of personnel who operates <u>www.streetdirectory.com</u>, the company has acquired specialized skills in the area of Digital Map Imaging, Spatial Analysis and Wireless Navigation.

To meet the demands of different industries, SD manages a portfolio of 4 distinct service lines each leveraging on SD's core mapping capabilities. These range from online location based services to customized PC based GIS systems. Each service line has achieved a high level of customer traction and is complementary in nature. The firm also offers advertising opportunities at its widely popular portal Streetdirectory.com [™] in which we showcase our latest developments.

Having established a strong product offering in Singapore, SD actively replicates its marketing mix in the Asia Pacific region, adjusting itself where necessary. These markets offer significant growth potential and operations in these countries will be necessary in order to service our MNC customers based in Singapore.

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