



# MT-100

## Data Sheet

### Motorcycle Tracking Device

The MT-100 is a water resistant GPS tracker designed for applications requiring low current drain such as motorcycles and boats. Its built-in GPS receiver has superior sensitivity and fast time to first fix. Its quad band GPRS/GSM subsystem supports 850/900/1800/1900 MHz allowing the MT-100's location to be monitored in real time or periodically tracked by a backend server and mobile devices. Its built-in 3-axis accelerometer allows motion detection and extends battery life through sophisticated power management algorithms. Further reduction in current drain is achieved by configuring alternative recharge schemes for the internal battery. System integration is straightforward as complete documentation is provided for the full featured @Track protocol. The @Track protocol supports a wide variety of reports including emergency, geo-fence boundary crossings, low battery and scheduled GPS position.

### Highlights

- Wide Operating Voltage Range 8V to 32V DC
- Multiple I/Os
- Zero Power Consumption When Ignition off
- Water Resistant, IPX6 Compliant
- Built-in Relay With Latch Circuit

### Advantages

- Wide operating voltage 8V to 32V DC
- Internal u-blox chipset
- Low power consumption, long standby time with internal battery
- Quad band GSM/GPRS 850/900/1800/1900 MHz
- Embedded full featured @Track protocol
- Multiple I/O interfaces for monitoring and control
- Internal 3-axis accelerometer for power saving and motion detection
- Power consumption can be fully configured
- Three working power modes
- Water resistant, IPX6 compliant
- CE/FCC certified

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## Motorcycle Tracking Device



### GSM Specification

Frequency	Quad band: 850/900/1800/1900 MHz Compliant to GSM phase 2/2+ -Class 4 (2W @ 850/900 MHz) -Class 1 (1W @ 1800/1900 MHz)
GPRS	GPRS multi-slot class 10 GPRS mobile station class B
RMS Phase Error	5 deg
Max Out RF Power	GSM850/GSM900: 33.0 ± 2 dBm DCS/PCS: 30.0 ± 2 dBm
Dynamic Input Range	-15 ~ -108 dBm
Receiver Sensitivity	Class II RBER 2% (-107 dBm)
Stability Of Frequency	< 2.5 ppm
Max Frequency Error	± 0.1 ppm

### GPS Specification

GPS Chipset	56-channel u-blox All-In-One GPS receiver
Sensitivity	Autonomous: -147 dBm Hot start: -156 dBm Reacquisition: -160 dBm Tracking: -162 dBm
Position Accuracy (CEP)	Autonomous: < 2.5m SBAS: < 2.0m
TTF (Open Sky)	Cold start: 27s average Warm start: 27s average Hot start: 1s average

### Interfaces

Digital Inputs	Two digital inputs One positive trigger for ignition detection One negative trigger input for normal use
Analog Inputs	One analog input (0.3 - 32V)
Digital Outputs	One digital output high side 750 mA max
Relay Outputs	One relay output with internal latch circuit Drive current max 20A @ DC12V
GSM/GPS Antenna	Internal only
Indicator LED	GSM, GPS and power
Mini USB Port	Mini USB port for upgrading and debugging

### General Specification

Dimensions	86mm*62mm*26mm
Weight	148g
Backup Battery	Li-Polymer 1300 mAh
Operating Voltage	8V to 32V DC
Standby Time	Without reporting: 330 hours 5 minutes reporting: 200 hours 10 minutes reporting: 230 hours
Operating Temperature	-30°C ~ +80°C (without battery) -40°C ~ +85°C for storage (without battery)
Power Management	Three working modes including zero current drain from vehicle when ignition is off

### Air Interface Protocol

Transmit Protocol	TCP, UDP, SMS
Scheduled Timing Report	Report position and status at preset intervals
Geo-fence	Geo-fence alarm and parking alarm, support up to 5 internal geo-fence regions
Low Power Alarm	Alarm when backup battery is low
Power On Report	Report when the device is powered on
Tow Alarm	Alarm trigger based on internal 3-axis accelerometer
Special Alarm	Special alarm based on the digital/analog inputs
Remote Control	Digital outputs can be controlled using the air interface protocol



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