



## Data Sheet

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MADE IN TAIWAN

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## 1. Introduction

The MT-800 is a portable compact tracking device for personal safety and asset monitoring. It combines high sensitivity GPS and quad band GSM/GPRS to perform the powerful security application.

The MT-800 can, based on quad band GSM/GPRS network and GPS satellite positioning system, track far-way objects conveniently by Short Message or internet. It can be used for child protection, anti-kidnapping, vehicle tracking, pets go out tracking, panic assistant for the aged, and much more.

## 2. Features

- ❖ Available Quad band GSM/GPRS 850/900/1800/1900 MHz
- ❖ **SiRF Star III GPS chipset**
- ❖ GPS 20 channels all-in-view tracking.
- ❖ GPS high sensitivity -159 dBm.
- ❖ Real time dynamic reporting based on time interval.
- ❖ Data logger capability built in with 4Mega bytes flash memory to record time stamp, speed, position and event status.
- ❖ 3D G-sensor to report motion sensing, accident from  $\pm 4G$ .
- ❖ Remote command control by SMS or GPRS network.
- ❖ Emergency call and notification, plus SMS sending location.
- ❖ Geo-fence capability with out of fencing notification.
- ❖ Over speed notification capability.
- ❖ Low battery notification capability.
- ❖ Power management for low power consumption.
- ❖ Surrounding audio monitoring capability.
- ❖ Mini USB for charging and data exchanging.
- ❖ Personal service center program support.

### 3. Applications

- ❖ Personal safety
- ❖ Security – safety of security guard, locate asset
- ❖ Asset unauthorized movement detection
- ❖ Child care – locate missing kids, track whereabouts of children
- ❖ Disables’ safety – seniors’ safety
- ❖ Vehicle tracking
- ❖ Outdoor recreation – travel, hiking, bike riding
- ❖ Animal tracking – track pets’ location

### 4. Electrical Specifications

#### 4.1 General Specification

| Parameter             | specification                |
|-----------------------|------------------------------|
| Operating Voltage     | 3.4 V                        |
| Operating Temperature | -20 °C ~ +55 °C              |
| Storage Temperature   | -40 °C ~ +85 °C              |
| Power Consumption     | Full power 150 mA            |
|                       | Idle mode 46 mA              |
|                       | Sleep mode 6 mA              |
| Battery               | Li-ion, 920 mAh              |
| Battery Voltage       | Min:3.4V, Typ:3.7V, Max:4.2V |
| SIM card type         | 1.8V, 3V                     |
| LED Status Indicator  | Power/ GPRS/GPS              |
| Dimension             | 65 x 46 x 11 mm              |
| Weight                | 40 g                         |

## 4.2 GSM/GPRS Specification

| Parameter                                      | specification  |
|--|--|
| Frequency                                      | Qua dband<br>850MHz/900MHz/1800MHz/1900MHz   |
| Output power                                   | Class 4(2W) for EGSM 850 and 900<br>Class 1(1W) for GSM 1800 and 1900  |
| Protocol support                               | TCP/UDP/PPP  |
| GPRS Multi-slot                                | Class 10 / 8   |
| GPRS Mobile station                            | Class B  |
| Coding scheme                                  | CS1,CS2,CS3,CS4  |
| Downlink/ Uplink max.<br>Operating temperature | 85.6Kbps/42.8 kbps<br>-20 °C ~ +55 °C  |
| Storage temperature                            | -40 °C ~ +85 °C  |
| Current consumption                            | Sleep mode: 2.5 mA<br>Idle mode: 23 mA<br>GPRS (1Tx,1Rx power level 10):<br>125 mA for 850/900 MHz,<br>83 mA for 1800/1900 MHz |

## 4.3 GPS Specification

| Parameter               | specification          |
|-------------------------|------------------------|
| Chipset                 | SiRF star III          |
| Frequency               | L1, 1575.42MHz         |
| Channels                | 20 channel all in view |
| Acquisition sensitivity | -142dBm                |
| Tracking sensitivity    | -159dBm                |
| TTFF hot start          | < 1 sec                |
| warm start              | < 35 sec               |
| cold start              | < 45 sec               |
| Signal Reacquisition    | <1s                    |
| Update Rate             | 1Hz (standard)         |
| Acquisition current     | 22.7 mA                |
| Tracking current        | 21.6 mA                |
| Standby current         | 1.5 mA                 |

|                       |                 |
|-----------------------|-----------------|
| Operating temperature | -40°C ~ +85°C   |
| Datum                 | WGS-84(Default) |
| Protocol              | NMEA-0183 V3.01 |
| Dynamics              | 4G (39.2m/sec2) |

## 5. USB Interface

### 5.1 Battery Charging

#### 1. Charging by a computer USB port:

Connect the supplied USB cable between the computer USB port and the mini USB connector of the MT-800 device.

#### 2. Charging by a cigarette lighter power adapter:

- a. Plug the USB connector of the supplied USB cable to the USB connector of the cigarette lighter power adapter.
- b. Connect the mini USB plug of the USB cable to the mini USB port of the MT-800 device.

#### 3. Charging by AC adapter:

Connect the supplied AC adapter to the mini USB port of the MT-800 device.

### 5.2 Parameters Setting

Connect the supplied USB cable between the computer USB port and the mini USB connector of the MT-800 device.

The USB interface is also a command and data interface which allows users to download the firmware and set configurations.

## 6. Button Indication

### 6.1 Power Key

Press and hold the **PWR** key for 3 seconds to activate the device, all LEDs will light up for 10 seconds processing the initialization, after that the device will perform the general function.

During normal state, if press and hold the **PWR** key for 3 seconds, this will reduce to turn off the power.

## 6.2 Panic Key

Press and hold the **Panic** key for 3 seconds to activate the device to perform the emergency notification and followed the pre-defined setting.

## 7. LED Indication

### 7.1 Power On/Off status

Press the Power key to enable or disable the device. The all LEDs will light up for 5 seconds, then go to the normal state.

| LED mode            | Operation status |
|---------------------|------------------|
| All LEDs On for 5 s | Power on         |
| All LEDs Off        | Power off        |

### 7.2 GPS Status

For the GPS status indicator through **green** LED, detailed information is shown in the following table

| LED mode            | Operation status    |
|---------------------|---------------------|
| 2 sec On /2 sec Off | Searching satellite |
| 1 sec On /1 sec Off | Tracking satellite  |

### 7.3 GSM/GPRS Status

For the GPRS/GSM status indicator through **blue** LED, detailed the information is shown in the following table.

| LED mode                       | Operation status  |
|--------------------------------|---|
| Off                            | GSM/GPRS is not running   |
| 64 ms On / 3000 ms Off         | Logged to network (monitoring control channels and user interactions). No call in progress. |
| 64 ms On / 300 ms Off Flashing | Indicates GPRS data transfer:   |
| 64 ms On / 800 ms Off          | GPRS does not find the network  |

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