

# **M528 GPS Intelligent Terminal**

(GPS+GPRS+GSM)

## **Product specifications**

Edition 1.0

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## **Notes:**

Please mount the device steadily on the flat place before using;

Please make sure the voltage value is right before connecting with battery, and placing the wires to where shouldn't be trodden;

Please power off when plugging or taking out of any module or connector;

Please keep the device dry and don't let any liquid fall into the device in case any damage caused in the device or circuit;

If any problem caused as follows, please turn to professional technician:

When power wire, keyboard, or socket are damaged;

When liquid infiltrating into the device;

When the device work unusually or cannot resume to normal even operated according to the instruction;

When the device cannot as usual after falling, throwing or breaking;

When there is obvious damage in the device.

## 1. Products Introduction

M528 GPRS/GSM Model GPS intelligent terminal (Mobile user terminals) Built-industrial level GPRS/GSM communication module and the newest SiRF-Star III High-sensitivity GPS receiver module positioning, adopt GPRS and SMS Dual-mode communication, terminal run stable and reliable, Function-wide, multi-interface, the terminal can be applied to concrete, rental, logistics, public transport, bus and other fields, but also according to different industries, tailored to different users.



## 2. Characteristics

1. Small size, and easy to install;
2. Accurate GPS positioning dynamic positioning deviation is less than 5 m;
3. In support of GSM voice, SMS functions, and UDP / TCP protocol communications in state of GPRS;
4. Support GPS data uploading at interval and rollcall function;
5. Support mute function;
6. Support authorized tapping function;
7. Support protection from high or low level voltage function;
8. Support high, low-level signal detection function;
9. Support the data re-sent from signal dead zone function;
10. Support remotely locking vehicle function;
11. Support emergency alarm function;
12. Support the power-off alarm function;
13. Support the high-voltage under-voltage alarm and alarm functions;
14. Support over speed alarm function;
15. Support parking alarm function;
16. Support illegal door-open, illegal engine-start alarm function;
18. Support mileage statistics;
19. Support Geo-fence alarm;
20. Support fatigue driving alarm;
21. Support SMS for alarm notice;
22. Internal flash memory 16MB : When the M528 is disconnected to the system (for example, the GPRS signal is weak), the position data will be storing in the flash, and then it will upload again after it reconnect to the system (the GPRS signal is ok).

## 3. Specifications

<b>3.1、 Hardware Datasheet</b>	
work voltage	8VDC~36VDC
work current	50mA~160mA
GSM module	inside contain frequency GSM 900/1800 inside contain frequency GSM 850/900/1800/1900Mhz (can be customized)

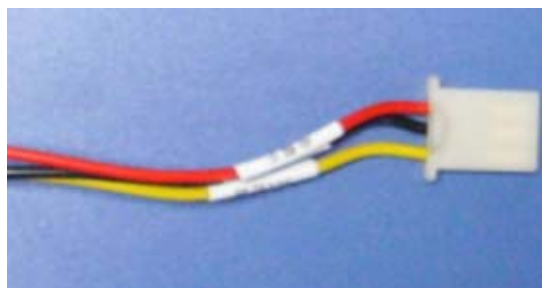
Communication protocol	UDP/TCP(can be customized)
GPS module	GPS SiRF-Star III CMOS chip group
GPS sensitivity	-159dBm
GPS frequency	L1, 1575.42 MHz
C/A coding	1.023 MHz chip rate
Channels	20 channels examine track
Position accuracy	10 meter, 2D RMS
Speed accuracy	0.1 meter/second
Time accuracy	GPS time synchronization
Default data	WGS-84
Recover	Average 0.1 second
Hot start	Average 1 second
Warm boot	Average 38 second
Cold boot	Average 42 second
Height limit	18,000 meter (60,000 feet) max
Speed limit	515 kilometer/second (1000 knots)max
Acceleration limit	Less than 4g
<b>3.2、 Others</b>	
Work temperature	-20° ~ 70° C
Storage temperature	-30° ~ 85° C
Humidity	5% ~ 95% noncondensing
Terminal size	101 mm × 50mm × 24mm

Inside battery	Continuous working no less than 4 hours
LED light	Red: device state; yellow: GSM module state; green: GPS module state

## 4. Interface Description



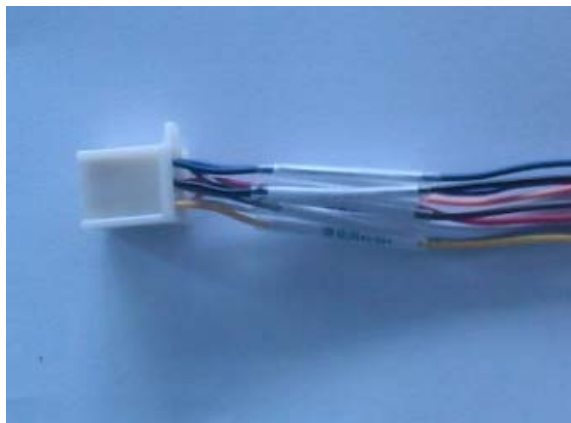
### 4.1 Power Interface



Description

pin	color	function explain/connection method
1	red	Power positive input, the working voltage 9VDC ~ 34VDC, connect the positive of car battery;
2	dark	Power negative input, then the negative pole of vehicle battery;
3	yellow	ACC check line, connect the ACC line;

## 4.2 Extended interface



### Description

pin	color	function explain/connection method
1	orange	LV1 (low-level signal detection port 1), input low voltage to detect, voltage should be less than 0.3 VDC, connecting with effective low-level signal wire
2	red	SOS alarm input, low-level triggered alarm, directly connect with the wire of SOS button
3	brown	SOS alarm indicator signal, drive LED, when alarm is triggered, the LED will be on.
4	white	HV1( high-level signal detection port 1, it is described as illegal door-open, illegal engine-start signal detection), input positive voltage to detect, which should be 5DC~input power supply, connecting with effective high-level signal wire.
5	blank	No description
6	purple	GND of SOS alarm wire
7	yellow	Relay positive input, connect with the yellow wire in relay
8	black	Relay negative input, connect with the white wire in relay
9	blue	HV2( high-level signal detection port 2) input positive voltage to detect, which should be 5DC~input power supply, connecting with effective high-level signal wire.



## **5. Installation**

### **5.1 Warm reminder for Installation**

In order to realize the full functions of this product, please read this manual carefully before starting to use the product.

1. This product can only be maintained and repaired by qualified professional service personnel. If you detach this product for maintenance or repair, your warranty will be invalidated.
2. When connecting the other devices, read carefully their instruction manuals, so as to carry out correct installation; do not connect incompatible device.
3. Please use genuine original parts and qualified batteries and peripheral equipments, so as to avoid damage to this product.
4. As this product is a high-tech product, please read carefully this manual before starting to use the product, so as to avoid inappropriate operation.
5. Drivers should not operate this product while driving a vehicle, thereby, affecting safe driving.
6. This product can work properly only when GSM communication is in good condition.
7. Please reduce electromagnetic wave interference to the product; and use it properly.
8. GPS communication is liable to be affected by environmental shielding; may fail to carry out positioning during certain circumstances. It will resume the positioning function as soon as it leaves the shielding environment. This is normal. Please do not worry when encountering such problem.
9. Each signal sent out from the system will be confirmed for successful transmission in the base station of the mobile operator. However, if system stoppage occurs or if the mobile telephone is preset to a switch off state by the customer, it cannot ensure successful transmission.
10. For safety reason, do not tell the other people your device SIM number, without taking precautions. Otherwise, your privacy may be compromised along with other safety problem.

### **5.2 Wiring diagram**

### **5.3 Parameter settings**

1.Reboot

R,\* Password \*

2. settings

command: SS,\*APN\*,\*USERNAME\*,\*PASSWORD\*,\*IP\*,\*port\*,\*terminal ID\*,\*+Service  
SMS number\* ,\*Password\*

## Notes:

a.If no username and password,please fill it with this:

SS, \*APN\*,\*\*,\*\*, \*IP\*, \*port\*, \*terminal ID\*, \*+Service SMS number\* ,\*Password\*

b.terminal ID length must be 11 digitals, and set different terminal ID at the latter 9 digitals

c.please add country code in the front of service SMS number, such as:Chinese code is 86. SMS number is 13612345678, You can set the SMS number like this, \*+8613612345678\*

d.default password is 123456

3.change password

C,\*password\*,\*new password\*

## 6. Standard Accessories

Power Wires, GPS Antenna, GPRS Antenna, Magic Tape, Warranty Card, Warranty card receipt, Certification



## 7. Optional accessories

### 8.1、 9 pin Extending Wires



## 8.2、 Taping Earphone and Mic



## 8.3、 Relay for oil or circuit immobilization

