

4G GPS Vehicle Tracker

User Manual

PL651



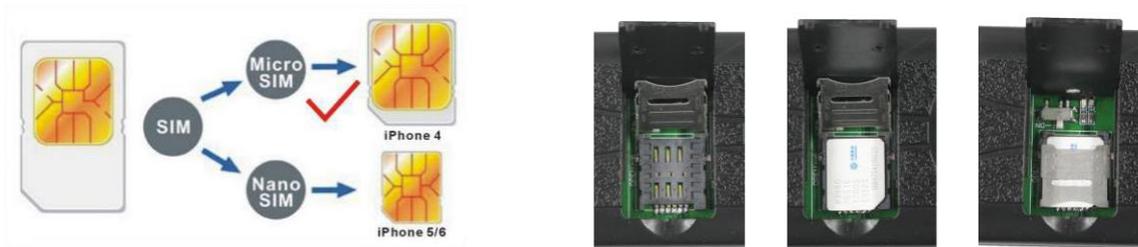
Read before using the product:

1. Power ON / OFF

Open SIM card room cover, slide the switch to the direction of ON, the tracker will power on, after the tracker is powered on, the LED will flash, if the Green LED flash once every 4 seconds, it means the tracker work well, please refer the following 3 for detail LED flash indicator. Slide the switch to the direction of OFF, the tracker will power off.

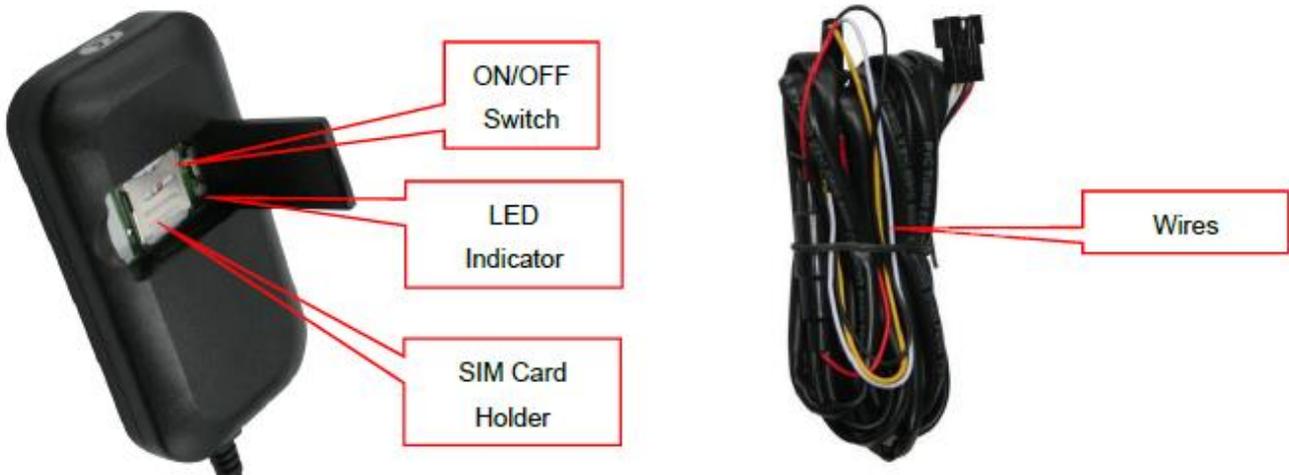
2. Install SIM card (Micro SIM Card)

Open the SIM card room cover, the SIM card holder can be seen, press SIM card to the SIM card holder, pay attention to the SIM card direction, if the SIM card is not installed properly, the tracker can not find the mobile phone network signal.



Note:

- 1> This tracker use 2G GSM / 3G WCDMA / 4G LTE network (Please confirm the frequency band is list in the end of this manual), and it upload tracking only through internet.
- 2> Enable the SIM card data service (some SIM card need send SMS or USSD command to enable GPRS function), order a data package (20-30M/month) can save data charge (Normally most of the tracker every month data cost is lower than 30MB).
- 3> Most the SIM card need set APN and username & password to visit internet, please refer the SIM card



manual or call the SIM card supplier to get detail. Send SMS to tracker can set the APN and username & password, the detail please refer the following **Tracker Setting Command 8** .

4> Before installing or uninstalling the SIM card, please power off the tracker.

3. LED flash indicator

GREEN LED Flash once	: 2/3/4G & GPS working well
GREEN LED Flash twice	: 2/3/4G working well and no GPS signal
GREEN LED Flash three times	: 2/3/4G & GPS working well but battery low
GREEN LED Flash four times	: 2/3/4G working well, battery low and no GPS signal
GREEN LED ON continuously	: 2/3/4G searching network
GREEN LED OFF	: Power off
RED LED Flash once	: uploading tracking is ok
RED LED Flash twice	: can not upload tracking

4. Power supply (How to Install)

The tracker uses the 7-40V DC power supply, too high voltage or AC voltage may damage the tracker or even cause accidents, it is necessary connecting to car battery all the time, after the backup battery is full, the built in recharging circuit will stop recharging, and if the tracker is not move, the tracker will go to sleep, then the tracker will cost few power to protect the car battery, this will not make the car battery can not start car engine.

RED/BROWN -----12V/24V car battery

BLACK ----- GND (Car Body)

YELLOW (Optional) ----Turn off Engine Negative Output (Connect to Relay)

WHITE/GREY ----- ON Signal (Engine Running) Positive Input



Note: ON signal is used to indicator the engine is running (Positive means engine is running), if ON signal is positive then the tracker will begin to upload location to server, if the ON signal is open the tracker will stop to upload location to server. If the WHITE wire is not connected to ON signal, the uploading will be controlled by shock sensor, if the car begin to move the tracker will begin to upload location to server, after the car stop moving 2 minutes the tracker will stop to upload location to server.



For car security the tracker need be installed in hidden place, normally the back of the seat or arm rest box or under the back window or room on the panel etc. please note that the install location of the tracker must can receive the GSM & GPS signal, the GPS antenna side need face to sky, before recovery the cover panel please try to locate the tracker (login the platform to check the current location) after installation, and confirm the locating is ok, if the location is not right and lost points very often, please try to change a place to install.

5. Power Down Alarm:

When the tracker power supply is off or the voltage is too low, the GREEN LED of the tracker will flash 3 times, and then the tracker will send power down alarm SMS to the authorized number. This means the tracker power is removed or the tracker is removed, please confirm.

Power Down Alarm

Battery:88%

6. Back to Factory Setting

Send the SMS command to the tracker can reset the tracker setting to the factory mode (just like new tracker). The SMS command is FACTROY*12345678. FACTROY is command, 123456 is tracker password.

7. ANTENNA

The Antenna of GPS is built in the tracker, and the Antenna of 2G/3G/4G is build-in, please leave the tracker away from big metal, that will reduce the 2G/3G/4G and GPS signal.

8. Using Condition

The working temperature is -20°C to 60°C, over this range the specification maybe can not reach the standard level. the storage temperature can reach to -40°C to 80°C.

Simply Using Step

1. First to buy a 2G GSM / 3G WCDMA / 4G LTE mobile phone SIM card and enable data service, order a data package 20-30M (Normally most of the tracker every month data cost is lower than 30MB), install in the tracker, please refer **Before Using 2**. Some SIM card need send SMS to active internet data service, please call the SIM card supplier to confirm.

2. Connect the tracker power wire to the car battery and slide the switch to ON position, the Green LED will be on continuously, the tracker is powered on, put the tracker outdoor for easy get GPS & mobile phone network signal.

3. Check LED flash, refer **Before Using 3** for detail, If Green LED flash once means mobile phone and GPS signal are well. And Red LED flash once means the location has been uploaded to the server.

4. This tracker can auto configure APN & GPRS user name & password, if the auto configuration is not right, the tracker can not visit internet, so the tracker location can not update on the app & website, and the red LED will flash twice, then you need send SMS to tracker to change the APN & GPRS manually, please send SMS "CHECK*12345678" to tracker to check the APN auto configuration, call the tracker SIM card supplier to confirm the APN & GPRS is right. Send "APN*12345678*apnname" and "USERNAME*12345678*username*password" to tracker can change the APN & GPRS setting, please refer the following **Tracker Setting Command 8** for detail.

5. Visit & login the tracking platform www.999gps.net, click  can select different language,

check current location, playback history tracking etc can be operated, platform user name and password is the last 7 digital numbers of the tracker's ID (for example ID is : 803201712345678, the user name is : 2345678, password is :2345678 or 123456, user can change the password, send SMS "ID*12345678" to tracker can check tracker ID).

6. iPhone Android App also use the same user name and password with website login, visit www.9992gps.net with mobile phone, click the app icon on the login page, or scan the QR code on login page, the iPhone & Android app can be download & installed, please refer the platform operation guide.

7. Fleet user can be created for easy fleet management, call your distributor to create a fleet.

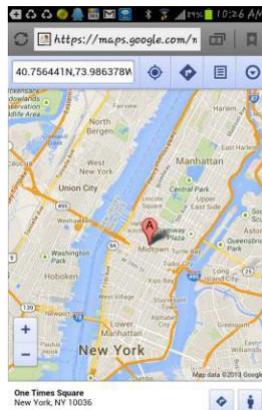
Locate Operation

1. Sending SMS to trigger report location by Google map link

Send SMS "URL*12345678" to the tracker, "URL" is a command, "12345678" is password. If the operation is success, the tracker will send back the location information with Google map link to the sender. User click the link, the location in google map will display, the SMS example is as follow:

<https://maps.google.com/maps?q=22.67680,114.15188>

Battery:88%



2. Arm / Disarm (Shock Alarm) by sending SMS

Send SMS "ARM*12345678" to tracker, "ARM" is a command, "12345678" is password, the tracker will send back the information "Set Shock Alarm ON" to indicate the operation is success and go to arm state, if the password is not right, the operation is fault, the tracker will send back information "Wrong Password".

After go to shock alarm state, the system will check shock sensor, if the shock sensor is trigger (**only continuously shock can trigger the shock alarm to avoid trigger by mistake**), the tracker will send alarm and location information by SMS to the authorized phone number, and send the alarm information to the website server, also the tracker will call the authorized number A first, if no answered then B and C, if 3 authorized all no answered, then stop calling, If the tracker is triggered continually, every authorized phone will

receive max 3 alarm SMS per hour.

The shock alarm SMS is as follow:

Shock Alarm

<https://maps.google.com/maps?q=+40.756441,-73.986378>

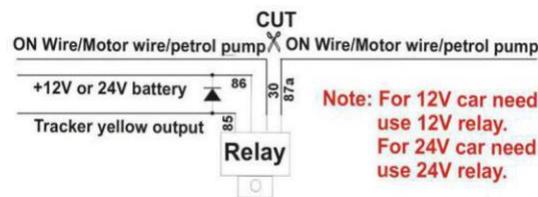
Send SMS "DISARM*12345678" to tracker, "DISARM" is a command, "12345678" is password, the tracker will send back the information "Set Shock Alarm OFF" to indicate the operation is success and disable the shock alarm, if the password is not right, the operation is fault, the tracker will send back information "Wrong Password".

Shock alarm notice by sending SMS & calling can be enabled ON or OFF, please refer Tracker Setting Command 3 &4.

3. Remote Turn Off Car Engine (Cut Oil Power)

Send SMS "FREEZE*12345678" to tracker, "FREEZE" is a command, "12345678" is password, the car engine will be turned off immediately. The tracker will send back information "Turn Off Car Engine Success", if the password is not right, the operation is fault, the tracker will send back information "Wrong Password".

The engine cut command need add a rely to execute, the tracker have a output engine cut wire, when the tracker turn off the engine, the engine cut wire will output a negative signal continuously, use the the relay to control engine power supply or petrol pump power supply can turn off the car engine. The output current of the engine cut wire is smaller than 500mA, and a diode is necessary to add to protect the tracker driving wire, the diagram is as follow:



Attention: Turning off engine is very dangerous when car is driving, this will make the car difficult to control and maybe cause a accident, so we recommend make the relay cut the start motor wire, this will make you can not remote turn off car engine, but you can not start car engine after you turn off the engine.

4. Cancel Turn Off Car Engine Command

Send SMS "RELEASE*12345678" to tracker, "RELEASE" is a command, "12345678" is password, the output of the tracker engine cut wire will change to open, then user can start engine later. The tracker will send back information to indicate the turn off engine command has been disabled, if the password is not right, the operation is fault, the tracker will send back information "Wrong Password".

Tracker Setting Command

1. Add / Delete / Check authorized number:

The authorized phone number is used to send alarm information by SMS, or use mobile phone to locate the tracker without platform, if the authorized phone number is not set, then the alarm information can not send to user by SMS (alarm, battery low, SOS, etc). The Add command please see "Basic Locate Operation & Setting".

Add authorized phone number

Send SMS "ADDPHONE*12345678*A*number"(Not including the quotation marks "", Number means the telephone number you want preset, the following is same) to tracker is OK, "ADDPHONE" is a command; "12345678" is password; "A" is authorized number location, every tracker have 3 authorized phone number locations, A and B, and C, so you can set 3 phone numbers, if the add operation is success, the tracker will send back the information "Add Preset Phone OK", if the password is not right, the operation is fault, the tracker will send back information "Wrong Password".

Delete authorized phone number by SMS

Send SMS "DELETEPHONE*12345678*A" to the tracker, "DELETEPHONE" is a command; "12345678" is password; "A" is authorized phone number location, there are 3 locations "A" and "B" and "C"; if the delete operation is success, the tracker will send back the information "Delete Preset Phone OK", if the password is not right, the operation is fault, the tracker will send back information "Wrong Password".

Check authorized phone number by SMS

Send SMS "CHECKPHONE*12345678" to tracker, "CHECKPHONE" is a command; "12345678" is password; if the operation is success, the tracker will send back the information "Preset Phone A:13987654321; B:13876543210; C:13765432100", the phone number is just an example. if the password is not right, the operation is fault, the tracker will send back information or "Wrong Password".

2. Change / Check Tracker Password

The tracker password is used to protect the tracker only can be operated by owner, every SMS command need follow tracker password, the default tracker password is 123456, for higher security please change the tracker password.

Change tracker password

Send SMS "CHANGEPASSWORD*12345678*8888888" to tracker, "CHANGEPASSWORD" is a command; "12345678" is old password; "88888888" is new password; if the operation is success, the tracker will send the information "New Password: 88888888" to every preset phone number, if the password is not right, the operation is fault, the tracker will send back information "Wrong Password".

Note: Only The authorized phone can change the password.

Check tracker password

Send SMS "CHECKPASSWORD" to the tracker, "CHECKPASSWORD" is a command, if the operation is success, the tracker will send back the information "Password:88888888"; "88888888" is an example.

Note: Only The authorized phone can check the password.

3. Alarm Notice by Calling ON/OFF:

Send SMS "CALLON*12345678" to tracker, in which, "CALLON" is the fixed command and "12345678" is the password. Having successfully been made, there will be a reply sms to indicate the alarm will be noticed by making a call. Send SMS "CALLOFF*12345678" to tracker, in which, "CALLOFF" is the fixed command and "12345678" is the password. Having successfully been made, there will be a reply sms to indicate the alarm will not be noticed by making a call. If the alarm notice is set to CALLOFF, then the tracker only sending sms or sending information to platform when the alarm is triggered.

4. Alarm Notice by SMS ON/OFF:

Send SMS "SMSON*12345678" to tracker, in which, "SMSON" is the fixed command and "12345678" is the password. Having successfully been made, there will be a reply sms to indicate the alarm will be noticed by sending a sms. Send SMS "SMSOFF*12345678" to tracker, in which, "SMSOFF" is the fixed command and "12345678" is the password. Having successfully been made, there will be a reply sms to indicate the alarm will not be noticed by sending a sms. If the alarm notice is set to SMSOFF, then the tracker only making a call or sending information to platform when the alarm is triggered.

5. Set GPRS Mode: KEEPONLINE / SHOCKCONTROL

Send SMS "KEEPONLINE*12345678" (Keep online all the time even the tracker stop moving) or "SHOCKCONTROLGPRS*12345678" (Turn off GPRS after the tracker stop moving 10 minutes) to the tracker, "KEEPONLINE" or "SHOCKCONTROLGPRS" is a command, "12345678" is the tracker password, if the operation is success, the tracker will send back the information "GPRS: Keep Online" or "GPRS: Shock Control", if the password is not right, the operation is fault, the tracker will send back information "Wrong Password". the default setting is Shock Control, when the tracker begin to move, the tracker begin upload the tracking, the tracker status on the platform will change to online immediately. if the tracker stop moving, the tracker will stop upload the tracking and turn off GPS & GPRS to go to sleep mode , a few minutes later the tracker status on the platform also will change to offline.

If the tracker is always online, the tracker will send tracker status to platform all the time, but this will cost more data charge and car battery power, and if the car will park long time or the car battery is old, this maybe cause the car battery power low and can not start car engine, this working mode is not recommended .

6. Check Tracker ID:

The tracker ID is print on the label of the tracker, if the label is missing, send SMS "ID*12345678" to tracker, in which, "ID" is the fixed command and "12345678" is the password. Having successfully been made, there will be a SMS "ID: 801201512345678", in which, "801201512345678" is the ID and every tracker corresponds to the only number. This number is used to differ the tracking uploaded to the website from others.

the last 7 digital number of the tracker ID is the user name and password of the tracker on the platform, for example the tracker ID is : 801201512345678, and then the user name on the platform of this tracker is : 2345678, and the platform password for this user name also is :2345678 or 123456,user can login the platform www.9992gps.net to change the password.

7. Set the upload time interval

The GPS location information upload time interval can be set from 30 to 999 seconds. Send SMS "INTERVAL*12345678*xxx" to tracker, "INTERVAL" is a command, "12345678" is password, "xxx" is the interval time, which can be set from 30 to 999 seconds. The tracker will send back information "Set Interval xxx OK", if the password is not right, the operation is fault, the tracker will send back information "Wrong Password". 30 seconds is the default interval time. Longer upload interval time can save battery and GPRS data cost, but this will make the total mileage to more error.

8. Set APN & GPRS user name & password

This tracker use GPRS to upload the information to internet server, most SIM card need active GPRS service first by SMS, the tracker can configure APN automatically after power on according different SIM card, if the APN & GPRS user name password are not right, the tracker can not upload location to platform (Red LED will flash twice, and the location can not update on the platform), then you need sending SMS to tracker to change them manually, please confirm the auto configuration of APN & GPRS user name password is right, call your tracker SIM card mobile phone company to get the APN & GPRS setting, sending SMS "CHECK*12345678" to the tracker can check the current APN & GPRS auto setting. if the APN & GPRS are not right, please set by the following description.

Send SMS "APN*12345678*apnname" to the tracker, in which, "APN" is the fixed command, "12345678" is the password and "apnname" is the APN name of a mobile phone company. Having successfully been made, there will be a SMS "APN: apnname".

Send SMS "USERNAME*12345678*username*password" to the tracker, "USERNAME" is a command, "12345678" is the password of the tracker; "username" is the mobile company internet visiting user name, "password" is the mobile company internet visiting password, if the operation is success, the tracker will send back the information "Username:username, Password:password", if the password is not right, the operation is fault, the tracker will send back information "Wrong Password".

9. Set Platform Server IP

Send SMS "IP*12345678*58.64.155.133,8011" or "WEB*12345678*d3.igps.info,8011"to the tracker, in which, "IP" or "WEB" is the fixed command, "12345678" is the password and "58.64.155.133,8011" is the IP of the server. "d3.igps.info,8011" is the domain name and port of the of the server, Having successfully been set, there will be a SMS "IP: 58.64.155.133,8011". However, the IP address may be changed with the upgrade of

our server, so please see to the notices on our website.

Notice: The tracker IP address has been set to default : 58.64.155.133,8011 in factory, it is not necessary to set again, unless our IP address has been changed or user need upload the location to other server, If our server IP is changed, we will notice on the website.

10. Check Tracker Current Setting

Send SMS "CHECK*12345678" to tracker, "CHECK" is the fixed command, "12345678" is password. The tracker will send back information including software version, ID S/N number, IP address, authorized phone number, GPS and GSM signal etc. if the password is not right, the operation is fault, the tracker will send back information "Wrong Password". The following is an example :

```
V Mar 08 2019,CC888,804201900581688,d3.igps.info,58.64.155.133,8011,30,A:13987654321,
B:13876543210,GPS OK,GsensorValue:4,ShockControlGPS,WCDMA-
65dBm,ShockControlGPRS,CMNET, User, Password,46000,e1d/24a0,93%
```

```
V Mar 08 2019,                ;Software version date
CC888,                        ;TCP/IP Protocol name
804201912345678,              ;ID number
d3.igps.info                  ;Server Domain Name
58.64.155.133,8011,          ;Server IP & Port
30,                            ;Uploading time interval is 30 seconds
13987654321,                  ;Authorized number (A/B/C)
GPS OK ,                      ;GPS status
GsensorValue:4                ;GsensorValue form(0-255) defalut:4
ShockControlGPS,              ;GPS module shock control
WCDMA                          ;Current network is WCDMA
-65dBm,                       ;mobile phone network signal strength
ShockControlGPRS,             ;Uploading is controlled by shock sensor
CMNET,                        ;APN name
User,                          ;GPRS user name
Password,                      ;GPRS password
46000,                         ;Sim Card MCC+MNC
e1d/24a0,                      ;Current Cell ID
Battery:88%                    ;Battery
```

Note: This command usually be used to check the tracker current status & configuration, if the tracker can not work well, this command can check what the problem is.

11. Re-power On & Reset Tracker

Send SMS "RESET*12345678" to tracker, "RESET" is a command, "12345678" is password. The tracker will send back information "Reset Tracker and cancel all alarm setting", if the password is not right, the operation is fault, the tracker will send back information "Wrong Password".

The tracker will power off and then power on automatically, this will take a few minutes, and then cancel all the alarm setting in the tracker, including shock alarm, turn off car engine etc.

12. Back to factory configuration

Send SMS "FACTORY*12345678" to tracker, "FACTORY" is the fixed command, "12345678" is password. The tracker will send back information "Set factory setting OK", if the password is not right, the operation is fault, the tracker will send back information "Wrong Password".

After this, The tracker will cancel all the alarm setting in the tracker, including shock alarm, move alarm, geo-fence alarm, over speed alarm, delete all the authorized phone number, delete the APN and GPRS user name and password, change the tracker password to 123456, reset the IP address, reset the system working mode and the interval time, and so on.

1> If forgot the password, you can not reset by the SMS command.

2> After back to default set, if the IP/APN/GPRS name & password are changed manually, you need set these again by sending SMS.

Notes & Trouble Shooting:

1. Please confirm that the SIM card data service is enabled, the APN and username & password for internet visiting is set correctly, otherwise the tracker RED led will flash twice, and the location can not updated .
2. This tracker use 2G/3G/4G network, and it upload tracking only through internet, it can not work in CDMA or CDMA2000 network.

3. The antenna of GPS is built in, please note that the install location of the tracker need receive the GPS signal, normally the back of the seat or in the door post or in the roof post or under the back window or under the panel etc. please leave away the tracker from big metal, make the top of the GPS antenna face to heaven, and keep away from the magnetic components.
4. The tracker built in rechargeable backup Li battery, recharge one time can use about half an hours, normally the tracker connect to the car battery all the time, this can keep the tracker has power supply continuously, and the charging circuit will stop after the battery is full.
5. The GPS need 10-200 seconds to locate the position, when the GSM signal is weak or the network is very busy, the SMS maybe delay to send by the GSM network, this is normal.
6. The tracking data on our server will keep 6-12 months, the old data will be deleted.
7. The tracker auto power off: please confirm the tracker power supply is well connected to car battery and the power fuse is well.
8. After power on the tracker, the tracker GREEN LED keep on, and it has not any repose, and no ring, please confirm the SIM card has been installed properly, the SIM card PIN code is disable, and the SIM card has enough charge, and the mobile phone can work well in that place. If the tracker work well the Green LED will flash once or third times every 4 seconds (First power on, recharging the battery will delay the first locating 5-30 minutes).
9. If the tracker can not upload location to website, please confirm the SIM card has GPRS function, and confirm the APN or GPRS username & password is right (Send SMS "CHECK*12345678" to check auto configure, and call the mobile phone hot line to confirm the right APN & GPRS). if the tracker do not move, the tracker will not upload tracking, try to move the tracker in the open air (Indoor room can not receive GPS signal) .
10. If the tracker can not send back information by SMS, please confirm the SIM card has enough money, and has ID caller display function and SMS service function, and please read the SMS information of the tracker sending back, and check the instruction & password is right or not.
11. When call the tracker, it has ringing, but it will not hang up the calling, please check the tracker has set the authorized phone number, use the authorized phone number or delete the authorized phone number or make the tracker back to factory setting.
12. After go out the under ground park, the GSM and GPS module will take a few minutes to receive signal and re-locate, some tracking maybe lost, this is normal.

Specification:

Communicate Network	2G GSM / 3G WCDAM / 4G LTE	Working Voltage	7-40V DC
2G GSM Band	900M / 1800 MHz	3G WCDMA Band	B1/B8
4G TD/FDD LTE Band	B1/B3/B5/B8/B38/B39/B40/B41	2/3/4G & GPS Antenna	Internal & Internal
Locate precision	5-10 Meters	GPS Hot Start Time	1 second average
GPS Cold Start Time	36 seconds average	Tracking Current	<100mA /12V
Standby Current	< 10 mA /12V	Recharging Current	<100mA 5V
Battery	300mAh (Polymer)	Working Temperature	-20 °C to +55 °C
Absolute Working Temperature	-40 °C to +80 °C	Storage Temperature	-40 °C to +80 °C

Packing list:

The main unit	1 pcs	
The user manual card	1 pcs	
4P Wires	1 pcs	Power Input 7-40V

Warranty

This system has been tested before sold. We strongly recommend you to get this system installed by professional. There is a one-year warranty except the following condition:

1. Installed, fixed, or changed by personally or unprofessional.
2. Warranty will eliminate if the ownership of the tracker has been changed.
3. Parts damaged by man-made.
4. Battery, adapter, wires, etc.