G25 High Precision Vehicle GPS Tracker

Based on 4G/GSM communication technology & GPS high-precision satellite positioning technology

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Recycled Paper

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Updated Version Instruction

Edition	Revision Date	Version Described
V1.0	2023/03/07	Document built

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1.Introduction

1.1 Product Introduction

Product: G25 4G/GSM high precision vehicle GPS tracker

This product is based on 2G/4G network and GPS satellite, it realizes positioning and monitoring of any remote target through SMS, application and Internet. Adopt the most advanced GPS and AGPS dual positioning technology. Built-in satellite receiving antenna, positioning accuracy can reach dynamic less than 10 meters, which can meet the requirements of vehicle positioning and tracking. Through technological innovation， this product has the characteristics of high accuracy, high sensitivity, low power consumption, and small size. Its extremely high tracking sensitivity has greatly expanded the coverage of its positioning.

1.2 G25 Type And Features

1) G25 Features

Figure 1 GT25 high precision GPS tracker

- ◆ 2G/4G Universal;
- ◆ Ultra-wide voltage input range: DC 9V～100V;
- ◆ GPS continuous positioning, GPRS regular reporting;
- ◆ Built-in vibration sensor to realize vehicle intelligent anti-theft;
- ◆ ACC ignition signal detection and vehicle status display;
- ◆ Remote control vehicle by Relay;
- ◆ 150 MAH lithium battery to realize illegal thread cutting alarm.

1.3 Specifications

Product Features
1. Accurate positioning, with an accuracy of 10 meters 2. GPS Accurate positioning. 3. More Functions: ACC detection, Low power alarm, Wire-Cut alarm, Remote oil control, Overspeed alarm, Vibration alarm, Geo-Fence, ETC.
Application Area
Leased Vehicles, Credit Vehicles, Passenger Vehicles, Taxi, Freight Vehicles, Car, Motorcycle, Etc.
Device Parameters

Item	Function	Yes	No	Description
Electrical Characteristics	Power Supply	●		Car Battery
	Work Voltage Range	●		9V~100V
	Work Current	●		12V/30mA - 80mA
	Sleep Current	●		12V/5mA - 15mA
	Battery Capacity	●		3.7V/180mAH lithium Battery
Environmental Characteristics	Work Temperature Range	●		-30℃~+80℃
	Storage Temperature Range	●		-40℃~+85℃
	Operating Humidity Range	●		5%-95%
Communication Characteristics	Communication Module Brand	●		ASR 1603
	Network System	●		2G/4G
	Communication Bands	●		LTE FDD: B1/B2/B3/B4/B5/B7/B8/B28 /B66 LTE TDD: B34/B38/B39/B40/B41 GSM: 850/900/1800/1900MHZ
	SIM CARD	●		MICRO SIM CARD
	Communication Antenna	●		Built-in design
Position Characteristics	Positioning Type	●		GPS/AGPS/LBS
	Cold Start Time:	●		Cold Start: <30S (Open Sky)
	Warm Start Time:	●		Warm Start: <10S (Open Sky)
	Hot Start Time:	●		Hot Start: <2S (Open Sky)
	GPS Sensitivity	●		-165dBm

	Acquisition Sensitivity	●		-148dBm
	Position Accuracy	●		10 M

1.4 Indicator Definition

A

GPS LED Indicator (Blue LED)	
Flashing	Searching GPS signal
Continuously bright	GPS fixed
Continuously dark	No GPS fix or initializing
Continuously bright to dark	Come in sleeping

B

Communication LED Indicator (Green LED)	
Flashing	Searching communication signal
Continuously bright	Communication signal ok
Continuously dark	No communication signal or initializing
Continuously bright to dark	Come in sleeping

C

Power Status Indicator (Red LED)	
Flashing	No external power
Continuously bright	External power ok
Continuously dark	No battery and no external power
Continuously bright to dark	Come in sleeping

1.5 Equipment wiring requirements

The device power supply is DC 9V-100V. The red line is positive pole while the black line is negative pole.

The negative pole of power supply connects with ground or the metals. Please do not connect with other ground lines.

When finishing the power supply wire connection, please make the plug of power supply to the device.

2)G25 wire connection method:

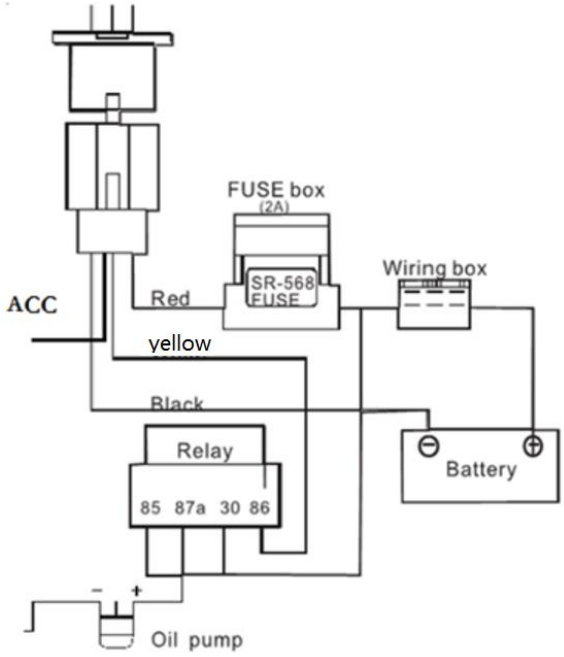

Figure 2 G25 wiring diagram

2.SMS Command Description

All the commands are SMS command; no case-sensitive; space between parameters.

1)APN Setting		
SMS Command	Parameter	Sample
APN Setting	APN,internet# APN,APN,APNNAME,APNPASSWORD#	1: APN,internet# 2: APN,java.claro.com.br,claro,claro#
Command Description	1)Please get APN from the sim card mobile operator in the tracker; 2)It is needed to set APN to make the tracker send data to server; 3)APN check:APN#	
Command Feedback	Successful Setting: APN,java.claro.com.br,claro,claro#=Success!	

2)Server Setting		
SMS Command	Parameter	Sample
Server Setting	IP,ip,port# IP,domain,port#	1: IP,45.112.205.99,7018# 2: IP,GPS2.DYEGOO.NET,6200#
Command Description	Server setting is done in factory, normally after APN setting, the tracker will be online.	
Command Feedback	Successful Setting: IP,45.112.205.99,7018#=Success!	

3)Heartbeat Packet Upload Time Setting		
SMS Command	Parameter	Sample
Heartbeat Packet Upload Time Setting	HBT,180#	HBT,180#
Command Description	1) Scope:90~600 seconds; 2) Default 180 Seconds.	

Command Feedback	Successful Setting: HBT,180#=Success!

4)Upload Time Setting		
SMS Command	Parameter	Sample
Upload Time Setting	FREQ,30,180#	FREQ,30,180#
Command Description	1)30 mean moving upload time interval 30 Seconds; 2)180 mean static upload time interval 180seconds.	
Command Feedback	Successful Setting: FREQ,30,180#=Success!	

5)Relay Action Command		
SMS Command	Parameter	Sample
Oil Cut	RELAY,1#	RELAY,1#
Resume oil	RELAY,0#	RELAY,0#
Relay Status Check	RELAY#	RELAY#
Command Description	1)After oil-cut command, relay action to cut oil pump power; 2)Relay action need: GPS fixed now and speed<20km/h; 3)Resume oil pump power supply: RELAY,0#	
Command Feedback	Successful Setting: 1) RELAY,1#=Success! 2) RELAY,0#=Success! 3) RELAY,0#	

6)Overspeed Alarm		
SMS Command	Parameter	Sample
Enable Overspeed Alarm	SPEED,80#	SPEED,80#
Overspeed Setting Check	SPEED#	SPEED#
Command Description	1)Default: the alarm disabled; 2)80 mean when speed>80km/h, the tracker will send alarm message to admin numbers; 3) Suggest value: >30.	
Command Feedback	Successful Setting:1) SPEED,80#=Success! 2) SPEED,80#	

7)Time Zone		
SMS Command	Parameter	Sample
Set Device Time Zone	GMT,E,8# GMT,W,8.5#	GMT,E,8# GMT,W,8.5#
Time Zone Check	GMT#	GMT#
Command Description	1)8 mean 8 time zone; 2)8.5mean 8.5 time zone;	
Command Feedback	Successful Setting: 1) Set GMT OK! OK 2) GMT,E,8# OK	

8)Defensive State		
SMS Command	Parameter	Sample
Enable Arm	111#	111#
Disable Arm	000#	000#
Command	1)ACC off needed to come in defensive status, if ACC on, the tracker	

Description	will return message: set up fail! pls turn off ACC; 2)After the tracker come in defensive state, all alarms enabled.
Command Feedback	Successful Setting:1) 111#=Success! 2) 000#=Success!

9)Parameters Check		
SMS Command	Parameter	Sample
Parameters Check	PARAM#	PARAM#
Command Description	The tracker will return software version, IMEI numbers, APN, Time zone, ETC.	
Command Feedback	Parameters report.	

22)Mileage Check		
SMS Command	Parameter	Sample
Mileage Check	MLG#	MLG#
Command Description	The tracker will return mileage information.	
Command Feedback	Mileage information.	

23)Restart		
SMS Command	Parameter	Sample
Tracker Restart	RESET#	RESET#
Command Description	The tracker will restart.	
Command Feedback	RESET#=Success!	

24)Factory Reset		
SMS Command	Parameter	Sample
Factory Reset	FACTORY#	FACTORY#
Command Description	All setting return to factory status.	
Command Feedback	Successful Setting: FACTORY#=Success!	

3.Platform & APP

3.1 Platform:

Website: http://www.dyegoo.net
Login as IMEI
IMEI is in the label on the tracker, it is 15bits numbers.
Enter IMEI
Password:123456

3.2 APP:

Please search DYEGOO in Google store or Apple store.
Login as IMEI
IMEI is in the label on the tracker, it is 15bits numbers.
Enter IMEI
Password:123456

In production, IP, port had been set in, normally the tracker will be auto online after APN setting.
If the tracker offline, please get APN from sim card in the tracker mobile operator, then set it by SMS command.
If you lost IP, port, please send below SMS command to set them back:
IP,GPS2.DYEGOO.NET,6200#

4.Installation

4.1 Preparation before installation

4.1.1 Please open the packing box to check whether the type of device is correct and whether the accessories are included.
4.1.2 This product is a high-tech electronic device, installation should be undertaken by a professional.
4.1.3 Please follow the following procedures to install your tracker, during installation, there should be no power to the device.
4.1.4 Installing sim card:
The device need to insert a sim card which support 4G or GSM 2G network. The sim card should be enabled for GPRS.

1) Testing sim card: to test sim card, please install it into a normal 4G or GSM 2G network mobile phone and ensure it can send and receive SMS, and GPRS enabled.
2) Installing sim card: please remove the upper cover of device, insert sim card as shown then replace cover, lock the shell with 4 bolts.

Figure 6 sim card picture

4.2 Installation

The GPS tracker must be installed under professional personnel.
Note:
1) Please install the device in the hidden place as followings:
Under Front windshield;
In the front instrument panel;
Under back windshield;
2) Avoid being placed with signal radiators like reverse sensor ;
3) The device has antennas inside. Please ensure the receiving side of the device is face up and without metal cover.
Note: The metal cover will lessen the receiving of GPS signals.

4.3 Installation place

There are two kinds of installation: covert and non covert.
4.3.1 If you need the covert installation, please refer installation to an auto electrical contractor.
Note:
1) To prevent theft of the tracker, please install it as covertly as possible.

2) Avoid placing the tracker close to higher power electrical devices, such as reversing radar, anti-theft device or other vehicle communication equipment.
3) The tracker should be fixed into position with cable ties or wide double-side tape.
4) During installation, please make sure the receiving side face is up, with no metal object above the device to interfere with GPS reception. The following places are suggested for installation:

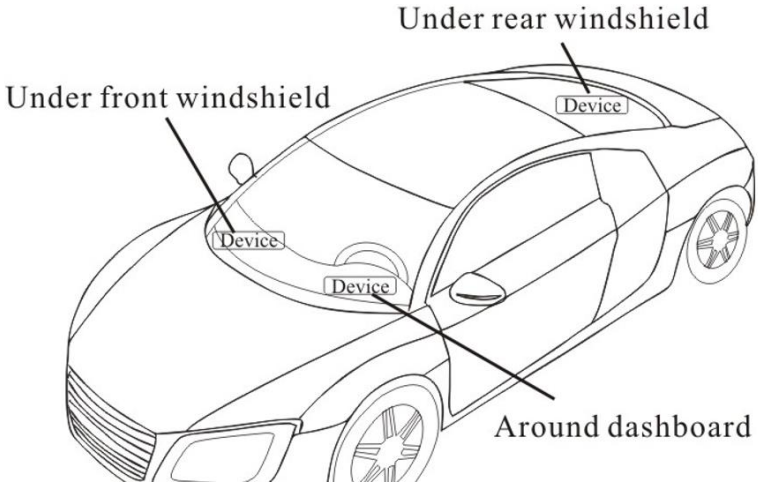

Figure 7 installation place suggested

Under the dash board below the front windshield;
- In the parcel shelf in the rear;
- In the front bumper(non-material face), please ensure the device cannot get wet;
- Under the wiper version (non-metal), please ensure the device cannot get wet.

Notice: If the windshield is pasted with metal thermal-protective coating, it may affect the performance of the device. In this case, please change the installation place after consulting the professional.

4.3.2 Non Covert Installation,
Firstly fix the device on the dash board below windshield.
- In the parcel shelf in the rear;
- In the front bumper(non-material face), please ensure the device cannot get wet;
- Under the wiper version (non-metal), please ensure the device cannot get wet.

Notice: If the windshield is pasted with metal thermal-protective coating, it may affect the performance of the device. In this case, please change the installation place after consulting the professional.

5.Trouble shooting

5.1 The device is not online or offline on the web platform.

5.1.1 The first, please check the three LED working state. If possible. You can call the device's number to check.

● If not connected, the device is out of signal. If the signals cannot reach your location, please drive to the open sky.

- If reminding the device sim card is out of deposit, please make deposit by the telecom operator.
- If you can connect to the device when calling, the sim card has deposited and please check with your operator for GPRS function. You also can check by searching the internet on your mobile phone.

- If reminding the device is power off, please turn back the device and proceed as followings:

a)Check if the red LED is in flashing. If the LED is dark, please check the power connecting. If fuse is broken, please return the device to the seller.

b)If the green GSM LED is not in constant flashing, please check the installation of SIM card.

c)If the blue GPS LED is not constant light, it mean GPS signal can not be received well, please check installed position.GPS signal only can be received out of the room and face to sky.

5.1.2 Please check the offline area in order to judge if the network problem of operators.

5.2 When GPS unfixed, please drive in the open sky and ensure there is no metal thins on the device.

6.Appendix（Test Report）

Device Position: Device placed under the front windshield of the car with the antenna facing up.

6.1 Shade Road Test

The test section is dense with trees, which can verify the sensitivity of equipment accuracy to occlusion. The route trajectory is as follows：

Figure 8 trajectory of tree-lined road

6.2 Normal Road Test

The test section is open, the lane line is clearly visible, and the route trajectory is as follows：

Figure 9 trajectory of normal road

6.3 Viaduct Road Test

The vehicle is driving under the viaduct road, the trajectory is very smooth.

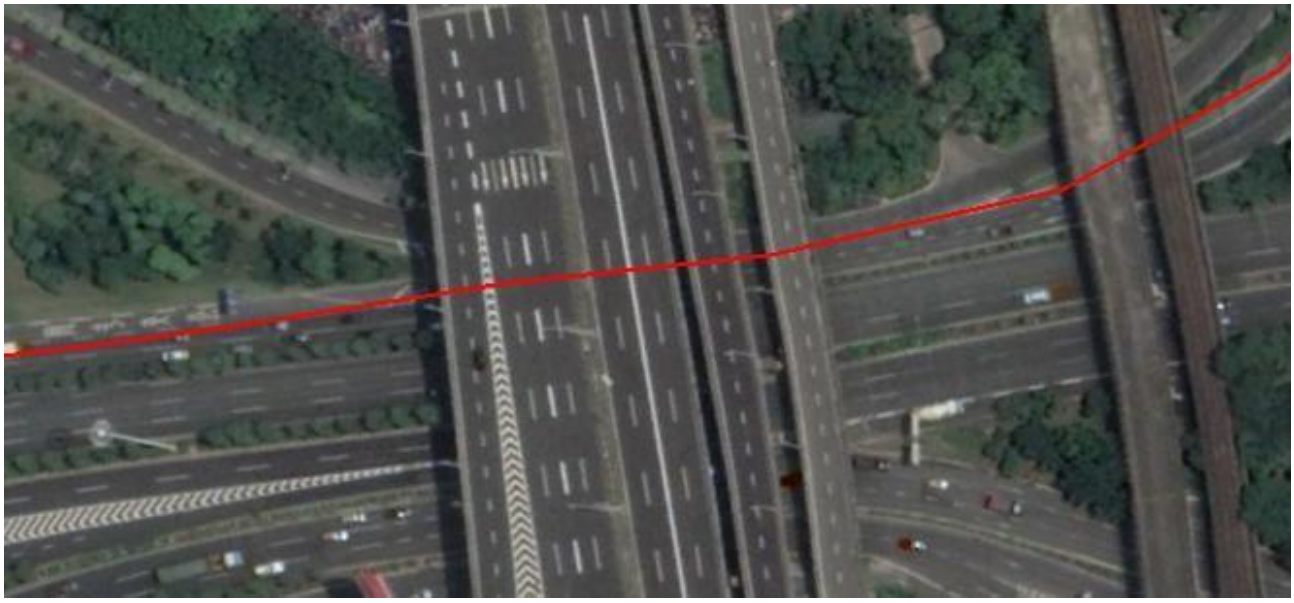

Figure 10 trajectory of viaduct road

6.4 Urban Canyon Road Test

Tall buildings stand on both sides of the road, which can verify the impact of urban canyon on equipment accuracy.

Figure 11 trajectory of urban canyon road