

4G Built-in Antenna GPS Tracker

Product Manual

Product model: J16-SA- 8 lines

Version No.: V1.0



Legal statement:

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Special statement:

This product is only used for anti-theft of vehicles, and it is prohibited to use it for illegal purposes, otherwise all legal liabilities arising therefrom shall be borne by the user.



1. Product Features

- 4G built-in antenna, high integration design
- 9 - 90V wide voltage, real-time location tracking, track playback
- Simultaneously supports the Tianqin protocol, GT06 protocol, and 808 protocol, enabling command-switching transmission
- Vibration alarm, Over-speed alarm, Entry and exit electronic fence alarm
- Vehicle engine start and turning off detection
- Easy installation, no need to press the power button, it will work immediately after power on
- Built-in backup battery, prompt alarm will be triggered when being illegal removal
- The device can be connected to a relay to realize remote oil and power cutoff function
- Can expand microphone and SOS one click distress call
- GPS+BeiDou+LBS triple positioning
- Supports anti-blocking and anti-interference features
- Supports remote OTA

2. Product Appearance and Accessories



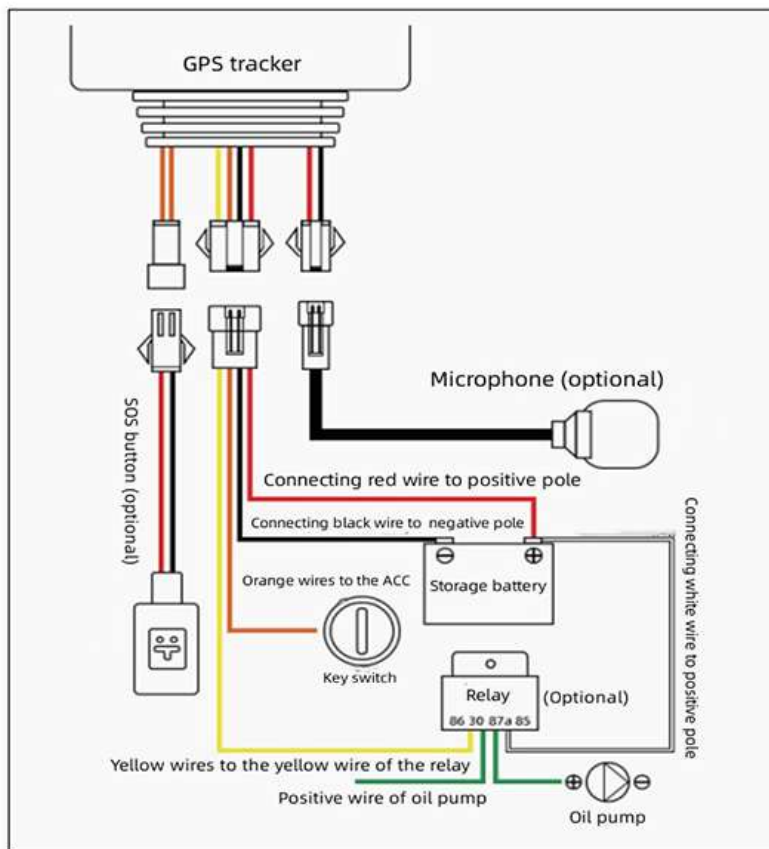
Device



power cable

3. Production Wiring Diagram

Wiring diagram



4. Product Parameters

Specification	Parameters
Size	80*39*17mm
Weight	49.1g (battery included)
Built-in battery	150mAH (3.7V)
Operating temperature	-20°C to +60°C
Storage temperature	-20°C to +70°C
Sensor	Precision Vibration Sensor

Frequency band	LTE- FDD:B1/B2/B3/B4/B5/B7/B8/B28/B66 GSM/GPRS/EDGE 850/900/1800/1900MHZ
Communication module brand/chip model	SIMCOM-A7670SA
Positioning module brand/chip model	AT6558R
Root Mean Squares Error (RMSE)	S degrees
Maximum output power	EGSM900:33dBm±2dB/5dBm±5dB DCS1800:30dBm±2dB/0dBm±5dB EGSM900 (8-PSK) : 27dBm±3dB/5dBm±5dB DCS1800 (8-PSK) : 26dBm±3dB/0dBm±5dB LTE-FDD B1/B2/B3/B4/B5/B7/B8/B28/B66 : 23dBm±2dB/<-39dBm
Dynamic output range	-15~-108dbm
Receive sensitivity	-107dbm
Maximum frequency deviation	±0.1ppm
Sensitivity	Cold start : -145 dbm Hot Start : -156 dbm warm start : -145 dbm navigation : -160 dbm track : -162 dbm
First position time	Cold start: 32 seconds on average
GSM antenna	built-in

GPS antenna	built-in
LED indicator	power, indicating status
Transfer Protocol	TCP
Power detection	Upload alarm information when the main power is disconnected
Data upload	Update GPS data in real time and support customization
Geo fence	TBD
Driving behavior detection	When the vehicle speed exceeds the set speed, the device will upload the over-speed alarm
GPS data	Real-time location updates
Vibration alarm	Vehicle vibration report in armed state

5. Basic Product Function

Use	Function	Description
GPS tracking and locating	4G network	Supporting 4G network, 1 second efficient transmission, faster and more accurate
	Timing tracking	Reporting positioning information such as latitude and longitude according to the set interval
	Over-speed alarm	The tracker will send an alarm to your mobile phone when driving speed is too fast
	Vibration alarm	Built-in vibration sensor, when the vehicle vibrate continuously, the device will immediately send an alarm information
	Geo fence	when the driving range of the car exceeds the specified area, an alarm message will be sent to the platform
	Historical track	The platform can play back of history driving route, including speed, direction and stay time, etc.

	Displacement alarm	When the vehicle is being illegal operation or being theft, users can remotely cut off the oil and electricity through the computer or mobile APP
	Fleet management	One account can monitor multiple devices, or one device can be monitored by multiple accounts

6. Analysis and Troubleshoot of Common Problems

If the yellow light and blue light of this product are always on and do not flash, it means that the device is normal online positioning. In case of flashing, please follow the following steps to analyze and troubleshoot.

Trouble	Analysis	Solution
Blue light flashing slowly	Whether to use the device in areas with poor GPS signals, such as near high-rise buildings or underground parking lots	Drive the vehicle to the position with good signal and reinstall the device
	Whether the front windshield of the vehicle is pasted with metal heat insulation film, which affects the signal reception	If there is a film, use the device in another vehicle to test whether the blue light is always on. If there is no problem in testing on other vehicles without film, it is caused by the film of the vehicle
	Whether there are shields or signal jammers on or around the vehicle	If there is a shield or signal jammer, remove the shield or signal jammer and try to reinstall the device

Blue light flashing quickly	Chip failure	Return to factory for maintenance
Yellow light flashing quickly	Whether the SIM card is installed properly	Make sure the SIM card is installed correctly
	Whether the metal surface of SIM card has dirt or poor connect	Wipe the metal chip surface with a clean cloth or repeatedly insert and remove the card several times
Yellow light flashing slowly	Whether the vehicle is in a place without network, such as an underground parking lot	Please drive the vehicle to a place with good network signal and try to reinstall the device
	Whether the server platform is normal	Ask background management whether the platform server is working normally
	Whether the SIM card status is normal	Check whether the card status is normal through the SIM card query platform
	Whether there are shields or signal jammers on or around the vehicle	If there is a shield or signal jammer, remove the shield or signal jammer and try to reinstall the device

7. Product Precautions

1. Please pay attention to waterproof of electronic products.
2. Please insert the SIM card before installation to ensure that the SIM card has no password, otherwise the device will not work properly.
3. The USB port on the terminal device is dedicated for factory testing, and it is not a device charging port. Do not use it for charging or other purposes.
4. There must be no substance absorbing electromagnetic wave (such as metal, explosion-proof insulating film) above the installation position.
5. Do not touch the device with liquid or operate it with wet hands.
6. Do not put the device into fire.

7. The device may not work when the temperature is lower than - 20 °C or higher than +60 °C.
8. When the vehicle is in the underground parking lot, tunnel or garage, the positioning signal will be affected. And there may be blind areas of communication network signals, which may cause the device to be unable to monitor; When the vehicle drives out of the above area, the device will automatically resume normal operation.
9. In case of abnormal conditions, please do not repair by yourself. The manufacturer shall not be liable for any damage caused by connecting non original accessories or unplugging the connections between components.
10. This product is an auxiliary product for safe driving, and any loss caused by failure or information loss has nothing to do with our company.
11. Because of the complex electromagnetic environment in the vehicle, this product may have electromagnetic interference with the electrical equipment in some vehicles.
12. Do not install or operate this product when the vehicle is running.
13. Do not connect the device to uninterruptible power supply without authorization, or it may cause vehicle or product failure. Please consult with a professional about installation.
14. Do not shock or throw the product violently, so as to avoid damaging the product, which may lead to malfunction or failure to use.
15. The temperature range for normal use of this product is - 20 °C to 65 °C. Exceeding this temperature range may lead to product failure, on fire or explosion.