

A10

Vehicle positioning terminal

PRODUCT SPECIFICATION

Data sheet



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1. Product presentation

A10 is our completely independent research and development of a new generation of vehicle positioning terminal, carrying an on-board satellite positioning platform that can realize positioning and 4G network communication, the vehicle mobile target positioning tracking, monitoring scheduling, trajectory analysis, alarm processing, security, information release, operation management, statistical analysis in the integration of application service system, can meet the industry for mobile target monitoring positioning management demand.

This system applies to cold chain logistics, airport vehicles, inspection vehicles, rental, bus, long passenger, dangerous goods transportation, shipping, and other industrial applications.

2. Technical parameter

2.1 Terminal technical parameters

Working voltage	DC9V~36V
Working current	<60mA(DC12V)
Applicable altitude	Below 5,000 m
Standby battery	3.6V/350mA
Outline dimension	64mmX48mmX24mm
Working temperature	-40°C~+85°C
Communication frequency band	LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/B38/B39/B40/B41 GSM: 900/1800MHz
Constellation frequency band	GPS、BDS、QZSS、SBAS L1
Positioning accuracy	2.5m
Rate accuracy	0.1m/s
Tracking sensitivity	-162dBm
Acquisition sensitivity	-147dBm
Cold boot	≤30s
Warm boot	≤1s

3. Function

3.1 Query function

1. Location query

After receiving the location query instruction, the terminal returns the current position information of the vehicle. Location information mainly includes: time, longitude, latitude, speed, orientation, positioning sign, vehicle and terminal status, etc.

2. the parameter status query

After receiving the parameter state query instruction, the terminal returns the current state information of the vehicle. Status information mainly includes: location information, vehicle status, terminal status, setting parameters, mileage, etc.

3. Version query

After receiving the version query instruction, the terminal returns the current version information of the vehicle. Version query includes: terminal model, main chip type, software version, and software release time.

3.2 Settings

1. Timed time return setting

Set the specified vehicle to send the location information to the center by UDP according to the setting timing.

2. Time interval setting for timing to pass back location information

Including the time interval of transmitting location information at ignition and the time interval for transmitting position information during stalling.

The time interval of transmitting location information during ignition, the terminal factory defaults to 30 seconds.

The time interval of location information, the terminal default 60 seconds.

* When the time interval of the shutdown is 0 seconds, the terminal is regardless of the ignition or shutdown.

* If the time interval of flameout return location information is > 0 seconds, the terminal will return the time interval of return location information during ignition and flameout respectively.

Note: The minimum time interval of location information during ignition is 3 seconds.

3. Overspeed alarm door and valve setting

After setting the overspeed alarm valve, the driving speed of the vehicle is greater than the valve for more than 10 seconds.

Terminal factory default is off (i. e. set value to 0)

The set door valve value should be greater than 10 km/h to be valid.

4. Parking timeout alarm door and valve setting

After setting the timeout alarm valve, when the vehicle's driving speed is 0, the timeout alarm is generated.

When the overtime alarm valve is set, set the valve for more than 1 minute.

Terminal factory default is off (i. e. set value to 0)

5. Electronic fence setting

The terminal supports up to 50 electronic fences, and the fence is a rectangle, and a prompt message will be sent to the terminal entering and leaving the fence.

To the designated vehicle line node, limiting the vehicle to travel within the allowable range of the line. Currently, only one line node is supported

6. IP and port setting

The Center can change the terminal IP number and port number at any time. The new IP and port number of the terminal setting will take effect immediately after the change.

7. After the IP port is modified, reply the answer information to the original IP port, and recreate the connection request to the new IP port. Every time the TCP connection initiates, the previous connection is discarded (not closed) to the monitoring center, the connection of the monitoring center still exists. Therefore, the GPRS server in the monitoring center should also check whether there is a repeated connection. If so, the previous connection of the vehicle machine will be cleared, otherwise the GPRS server will be overwhelmed by opening too many connections

8. TCP heartbeat interval setting

Set the specified vehicle to regularly issue the position information according to the set time. The position information is sent by the TCP mode, and the instruction is mainly used as the TCP heartbeat command

The host defaults to 3 minutes. This parameter is free from power loss

After the TCP connection is established, the mobile company router is maintained for a period of time. If the TCP transmission interval is too long, the connection will no longer be retained, and the on-board machine can only restart the connection to the center

9. Set up the host output control mode

Set up the host output control mode

There are two ways: oil circuit control mode and overspeed control prompt mode, and the terminal default oil circuit mode

When set to "CARON", the overspeed prompt can be activated, and the output control when the car overspeed alarm

Signal tips. The single-line green line is connected with the alarm horn or buzzer

When set to "CAROFF", the oil circuit mode can be activated, that is, when the center issues the broken oil circuit instruction, the combination order

Line black line, let the host control the output signal to cut off the car oil road.

10. Setting up of the short message debugging mode

In order to facilitate the debugging of the on-board machine, test the working state of the on-board machine, and add the short message debugging instruction. No password is required to read the parameters by SMS, but

the correct password must be entered to change the vehicle machine parameters.

3.3 Control

1. Remote restart

After the center issues the remote restart command, the terminal will automatically power off and restart. This instruction is mainly used to make the terminal power off and restart when the communication is normal and other work is not normal. To ensure that the terminal can work properly. After the restart, the mileage statistics will be reset

2. Remote control of the oil circuit

It is mainly divided into broken oil roads and restored oil roads.

After the center issues the broken oil circuit instruction, the terminal will directly cut off the vehicle oil circuit, and make it stall.

After the center issues the instruction to restore the oil circuit, the terminal restores the vehicle oil circuit.

3. Initialize the driving mileage

Set the mileage of the specified vehicle

Mileage: 3 bytes, HEX, in meters, range: 0x000000~0xFFFFF as 0x000000

4. Send and receive dispatch information and expansion instructions

Issue dispatch text information or extension instructions to the specified on-board equipment

The information is distributed in the form of ASCALL code or BG2312 code, and the longest short message content does not exceed 240 bytes

5. Support for remote software upgrade

The manufacturer must cooperate with the operation

3.4 Alarm

1. Overspeed alarm

After setting the overspeed alarm valve, when the driving speed of the vehicle is greater than 10 km/h and the valve lasts for more than 10 seconds, the overspeed alarm is generated, and the overspeed alarm mark is included in the location information.

Alarm method: When the first alarm occurs, upload a message immediately. Later, it is uploaded according to the timing of the return time interval.

Cancel the alarm method: issue the cancel the alarm command and the vehicle driving speed is less than the overspeed alarm valve. Issue the cancel alarm command and close the overspeed alarm.

2. Parking overtime alarm

After setting the timeout alarm valve, when the driving speed of the vehicle is 0, the timeout alarm is generated. The timeout alarm flag bit is included in the location information.

Alarm method: When the first alarm occurs, upload a message immediately. Later, it is uploaded according to the timing of the return time interval.

Cancel alarm method: issue the cancel alarm command and the driving speed of the vehicle is greater than 0.

Issue the cancel alarm command and close the parking timeout alarm.

3. Positioning antenna open circuit alarm

The positioning antenna status flag is included in the location information. Upload according to the timing of the return time interval.

4. Terminal main power supply power outage alarm

The power alarm status flag is included in the location information. Upload according to the timing of the return time interval.

5. Custom alarm (high and low sensor alarm)

This type of terminal supports 1 low and 1 high sensors

The sensor alarm status flag is included in the location information. Upload according to the timing of the return time interval.

6. Robbery / call for help

The robbery / help alarm sign position is included in the location information. When the alarm button is pressed for more than 0.5 seconds, if there is no robbery / help alarm state. Cancel the alarm if the alarm is in alarm condition. The push-button light will always turn on during the alarm. The cancellation time is extinguished.

Alarm method: When the first alarm occurs, upload a message immediately. Later, it is uploaded according to the timing of the return time interval.

Cancel the alarm method: the center issues the cancel the alarm command.

7. Enter and exit the fence to alarm

After setting up the electronic fence. In and out of the fence terminal will send a prompt message.

Alarm mode: trigger type, immediately produce a prompt information when out or in.

3.5 Other

1. Mileage statistics

The cumulative sum of vehicle position movement in km

Statistical conditions: car ignition and effective satellite positioning.

2. Blind spot fill pass

When the vehicle is in the blind spot of the GPRS signal, the terminal will automatically save the position data (in the state when the vehicle is ignited) according to the timing return time. When the vehicle receives the GPRS signal, the terminal will automatically upload the data stored in the blind spot to the center. Up to 1,500 pieces of data are stored.

5 To query the terminal parameters remotely by SMS or platform

Send SMS instructions or GPRS instructions to query the terminal parameter configuration; including various parameters of the terminal, such as TCP / UDP, native number, return time, APN, fault record, etc.

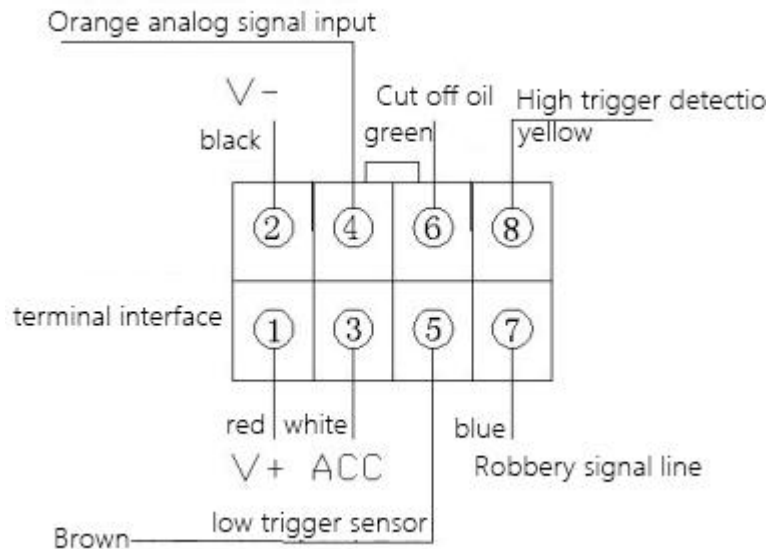
set up

<SPTF*P:TFGPS*T:111.222.333.444,5555*U:666.777.888.999,6666*A:CMNET*N:13818181818>

query:<CKTF>

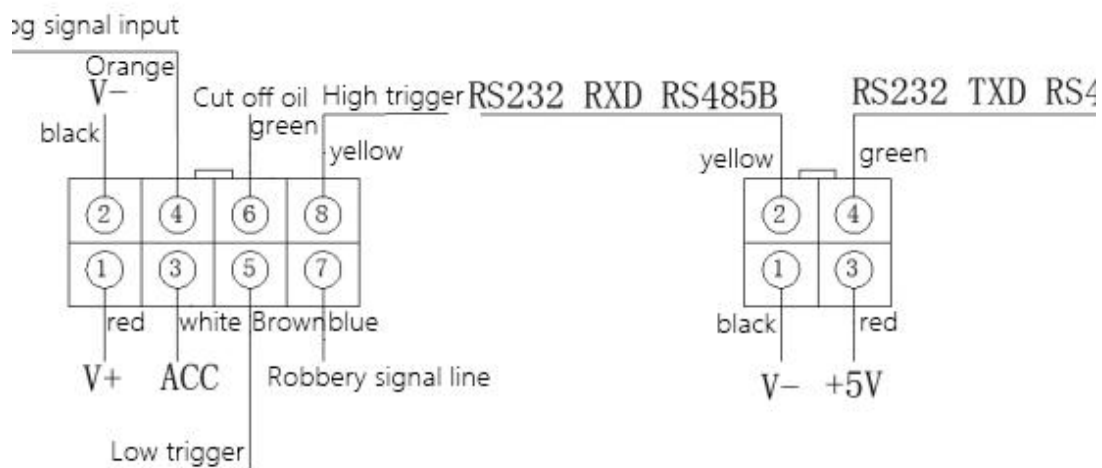
4. Install

4.1 Basic type terminal wiring diagram



Power interface

4.2 Enhanced terminal wiring diagram



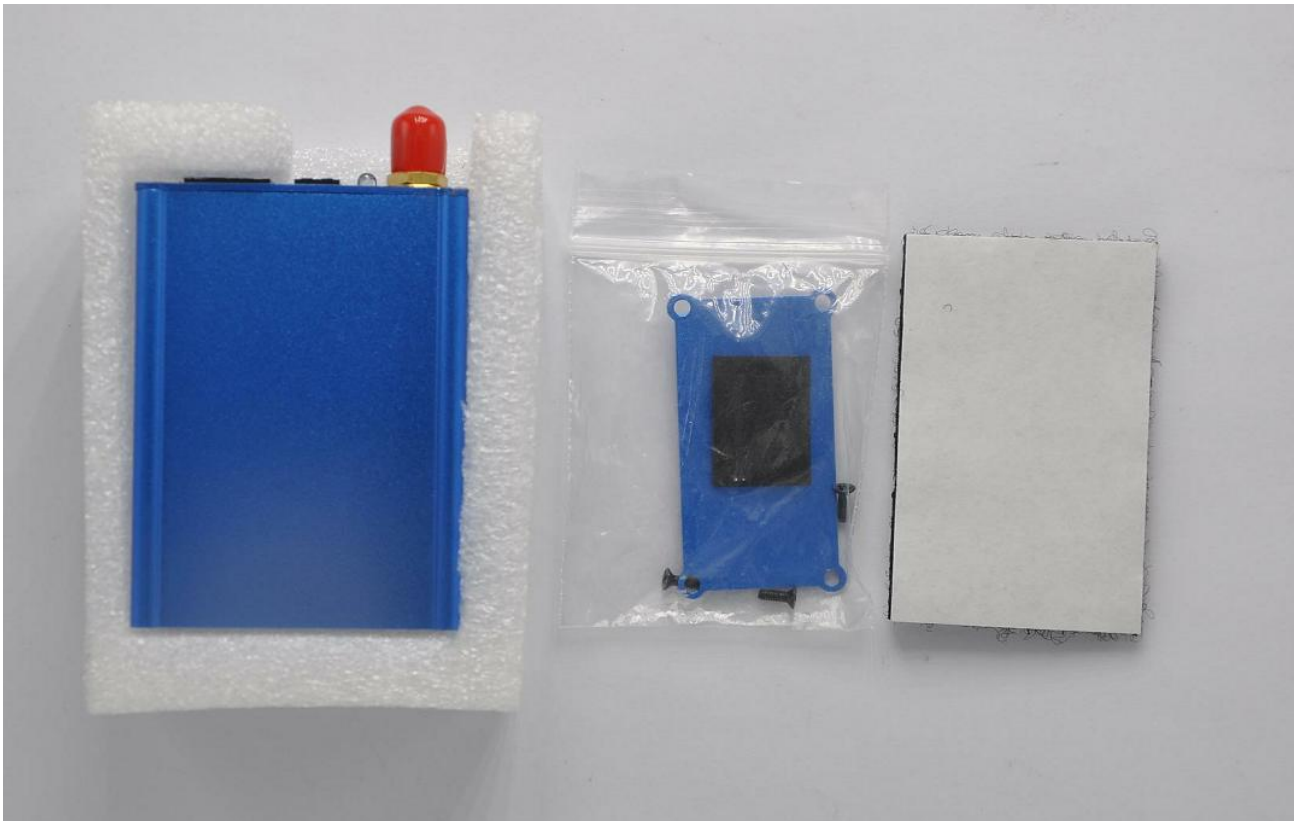
Power interface transmission port

The enhanced terminal transmission port is the RS232 interface and can be connected to one of the following peripherals:

Temperature detector, oil rod detector, LED advertising screen, camera, scheduling screen, positive and reverse version detection, etc.

5. Packing list

SN.	Name	Quantity	Unit
1	Vehicle positioning terminal	1	PCS
2	Instructions	1	PCS
3	8 Pin power cord	1	PCS
4	Communication antenna	1	PCS
5	Positioning antenna	1	PCS
6	Certificate	1	PCS



Vehicle positioning terminal



8 Pin power cord



Communication antenna



Positioning antenna

6. Troubleshooting

Problem	Resolve
The SIM card cannot make phone calls	Check whether the SIM card balance is insufficient
No SMS returns when the mobile phone queries the terminal parameters	SMS delay, occasionally because the GSM network is busy, cause SMS jam delay, is a normal phenomenon, please wait or try again
The terminal is not online	Whether the SIM card is GPRS
The terminal has no GSM signal	Check that the GSM antenna is connected
The terminal is not positioned	Check whether the positioning antenna or installation method is correct. See 7.1

7. Safety precautions

7.1 When installing the external positioning antenna, ensure that the front of the antenna (black surface) is horizontal toward the sky, and there is no metal shielding above the antenna, and the antenna is firmly installed.

7.2 When this product is installed, we must ensure that the host shell and the car body are closely combined, so as to protect

Effect of the vibration detection and alarm.

7.3 When using the equipment, please pay attention to waterproof. Please place it in a place where water is not easy to enter and the heat dissipation is good. Do not plug the connecting lines of each part under live conditions. To avoid causing damage to the equipment.

7.4 When replacing the SIM card, please close it off completely first.

7.5 For terminal SIM card, please enable CMNET (China Mobile) or UNINET (China Unicom) and SMS function in GPRS function.

7.6 In case of abnormal phenomenon, please do not repair it by yourself, please contact the manufacturer in time

8. After-sales service

This product enjoys one-year warranty service since installation (except for faults caused by human factors). During the warranty period, please contact the after-sales service department in time.

The damage caused by unauthorized disassembly or force majeure is not covered by the warranty.

After the expiration of the warranty period, the cost of maintenance materials shall be charged for the product damage and fault maintenance caused by the use.

Free for customers to provide product purchase, use, installation and other technical consulting services.

Name of user			
Postal address			
Contact number			
Name of seller			
Purchase date		Model	
Purchase location		S.N.	
Local sales unit		Local sales telephone	
Warranty date	Warranty content		

In order to provide better service, please keep properly (warranty card).