

Vehicle Terminal Equipment

GAT24 4G Assets Tracker

User Manual



GAT24 is a 4G full Netcom vehicle positioning terminal carefully built for the Internet of Vehicles. Light sensor, ultra-low power and IP67 waterproof. With strong magnetic, voice Monitoring, hidden installation, low power consumption, long standby time, Type-C interface power cord.

Note: Please read the manual carefully before using

Feature/Configuration/Definition/Parameters

1. Main Feature

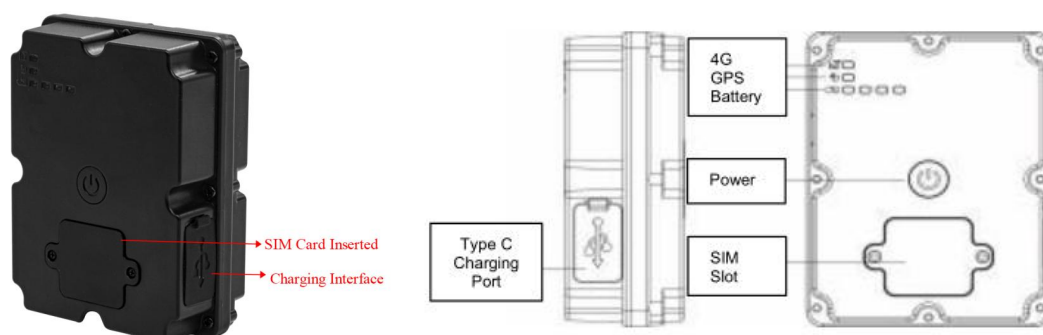
- *Real-Time Tracking
- *Trajectory Playback
- *Geo Fence Setup
- *Voice Monitoring
- *Strong Magnetic Adsorption
- *Type-C interface power cord
- *Light Sensor Alarm
- *Collision Alarm
- *Demolition Alarm
- *IP67 Waterproof
- *Ultra-Low Power
- *3 Working Modes to Switch Freely

2.The Product Configuration List

Number	Name	Quantity	Unit	Remark
1	GAT24 Host	1	Unit	
2	User Manual; Warranty Card; Certificate Of Approval	1	Unit	3-In-1
3	Package Box	1	Unit	
4	Power Cable	1	Unit	

Note: The Above Is a List Of Standard Configurations For The Entire Set Of Products,
And Accessories Outside The Above Range Are Subject To Additional Fees.

3.Out Look Of Product



4. Definition Of Product Indicator

Indicator	Working Status (Red)	Always on after power on and online
	GNSS Positioning Status (Orange)	Always on after positioning, flashing prompt when not positioning
	Battery Power Status (Green)	The power display uses 4 lights to indicate the power. From left to right, the power is from low to high. All 4 lights indicate full power.

GAT24 defaults to all lights off in sleep mode.

In device turn on status, short press 1S power light to display status light for 3 minutes. Long press power light for 5S to turn off the device, short press for 1S to turn on device again. And will light up once according to short press light logic after power off and restart. Lighting status is high power consumption, and low power consumption is entered only when lights are off

GSM (Red):

Quick Flash: GSM initialization

Slow Flash: GSM receiving signal is normal

Long Lighting: GPRS online

Light Off: GSM signal not received/SIM card not inserted/no press button to turn on

GPS (Orange):

Quick Flash: GPS signal search in progress

Long Lighting: GPS has been located

Light Off: GPS sleep/not working/no press button to turn on

Battery Indicator (Green):

Charging: The light flashes when charging, and the light flashes according to the number of grids charged, and stays on when fully charged

5.Parameter List Of The Device

No	Item	Specifications	Remark
1	Charging Voltage/Current	DC5V/2A	
2	Working Voltage	3.70V	
3	Working Current	Online sleep mode: 800uA Normal mode (timed reporting): 24mA	
4	Size	L95*W72*H35MM	
5	Weight	280g	
6	Located Way	GPS,GLONASS,GALILEO,BEIDOU,QZSS,SBAS,AGPS	
7	Location Accuracy	2 Meters CEP	Test Data
8	Communication Network	GPRS	
9	Communication Way	4G LTE Cat1 LTE:B2/B4/ B5/B7/B38 /B41/B66	
10	Working Temperature	-20℃~ +75℃	
11	Working humidity	5%~95%RH	
12	Standby Battery	7500mAh	
Positioning is performed once every 30 seconds of continuous exercise (10 days), positioning is performed once every 10 minutes of scheduled wake-up (125 days)			

6.Function List Of The Device

Functions	Function Details	Description
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Location Data Report	Real-Time Tracking	Upload The Longitude And Latitude Information According To The Time Interval Setted.
Vehicle Status Detection	Light Sensor Alarm	When the device detects a change in the light source, it will activate an alarm.
	Geo-Fence Alarm	Platform Can Be Set Up Electronic Fence Alarm.
	IP67 Waterproof	It can completely prevent dust from entering and can be immersed in water 1 meter deep for half an hour.
	Voice Monitoring	One-Way Monitoring Of The Device's Environment By Making Phone Calls.
	Strong Magnetic Adsorption	Strong Magnetic Adsorption, Easy Installation, No Wiring Required.
	Vibration Alarm	Send Alarm When Device Senses Vibration.
3 Working Modes To Switch Freely	Standby Mode	Turn off GNSS and keep the platform connected with heartbeat packets.
	Tracking Mode	Motion wake-up, if there is no vibration for 5 minutes, the GNSS will go into sleep, but the platform connection will always be maintained. The light detection function is only effective in this mode.
	Timing Mode	After setting the time interval to send data to the platform, GNSS goes to sleep. During this period, the device does not wake up and the platform connection is always maintained.
Low Power Consumption	Intelligent Power Saving	The innovation of the communication module affects its low power consumption.

Installation/SMS Command/Tracking Platform

7.Installation Process Of Product

7.1Device installation

7.1.1 Check Device

Check whether the appearance of the device is good and whether the related accessories are complete

7.1.2 Install the SIM card

Open the bottom cover of the device and insert the SIM card into the card holder. Do not use excessive force to damage the card holder. Do not insert or remove the SIM card while the device is power on. Make sure the SIM card has Internet access.

7.1.3 Select installation location

(1)Waterproof: Should choose a position that does not easily enter the water to ensure the drying of the terminal; Pay attention to keep away from the outlet of the air conditioner to prevent condensation water from accumulating inside the terminal and seriously affecting the service life of the product when the temperature difference changes.

(2)Shockproof: The terminal cannot be suspended and installed in a long-term vibration.

(3)Anti-interference: The terminal should be far away from the electronic equipment such as audio and intercom in the car to prevent conduction interference and radiation interference.

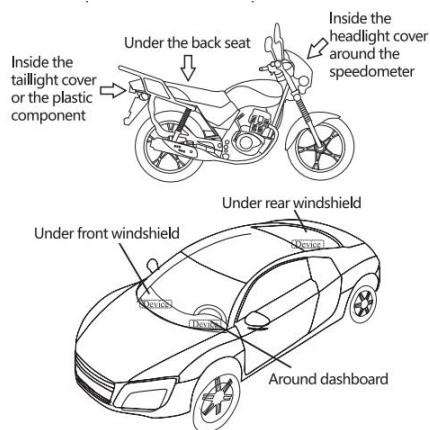
(4)Connect GPS Antenna

A.Please notice that the GPS Antenna signal receiving side should up to sky and no metal block. Bottom keep flat, tilt should not be more than45°

B.Wires should be concealed;

C.Please make sure the GPS antenna is connected to the right connector and fixed tightening to avoid vibrated.

D.You need to choose somewhere that it won't be found,below are suggested position.



8.SMS Command for Online Tracking Setup

Use your mobile phone to send commands to the device SIM Card number by SMS to configure device.

(1) IP online		
Text command	Parameter	Example
SMS or serial port configuration IP online	<code><SPGWI*P:GWIGPS*T:IP,Port*A:APN></code> <code><SPGWI*P:GWIGPS*Q:Domain:Port*T:0.0.0.0,0*A:APN></code>	<code><SPGWI*P:GWIGPS*Q:d.galagps.com:808*T:0.0.0.0,0*A:CMNET></code>
Command Description	Send instructions to set IP, Domain & APN T: For setting your IP format Q: For setting your Domain name (d.galagps.com) Port: Port information(808) A: APN name(CMNET) PS: Because setting IP would be priority, then when you set domain name, need to add *T:0.0.0.0,0 to delete previous IP information. Due to server maybe changed always, to set domain name would be good for future updating server.	
Command Feedback	Successful Setting: OK!	

(2)Terminal parameters

Text command	Parameter	Example
SMS query terminal parameters	<CKGWI>	<CKGWI>
Command Description	In the returned parameters, T represents TCP, Q represents the domain name, A represents the APN, N represents the local number, C represents the default transmission interval, H represents the heartbeat transmission interval, 1H represents the power saving mode switch, 3U represents the log upload switch, GP represents the online flag, CGREG represents the network registration status, CSQ represents the signal strength, B1 represents the alarm wake-up mode time, B2 represents the timer wake-up mode time, and 5C represents the light sensor switch.	
Command Feedback	Successful Setting: OK!	

(3)Reset Device

Text command	Parameter	Example
Reset	<SPGWI*P:GWIINI>	<SPGWI*P:GWIINI>
Command Description	Indicates factory reset. After the terminal receives the command, all parameters (IP/Port/IMEI etc.) will be restored to the factory default values. PS: Pls don't send this command, if send, need to preset all the parameter again.	
Command Feedback	Successful Setting: OK!	

(4)Query version via SMS or serial port

Text command	Parameter	Example
POWER	<CKVER>	<CKVER>
Command Description	Send a command to query the program version, and the terminal will return the current version information.	

Command Feedback	Successful Setting: OK!
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(5)Operating Mode 1- Standby		
Text command	Parameter	Example
Standby Mode	<SPGWI*P:GWIGPS*C:Seconds>	<SPGWI*P:GWIGPS*C:0>
Command Description	1. When the command *C (default return interval) is set to 0, the terminal is in roll call mode. Heartbeat return 540S. 2. After the roll call mode is launched and the positioning process is enabled to send a piece of location data, only heartbeat data will be sent thereafter. 3. The platform setting standby mode command defaults to *C:0, *H:540. In this mode, only the platform sends 8201 location query, and the device replies 0201 location information can have the position feedback.	
Command Feedback	Successful Setting: OK!	

(6)Operating Mode 2 - Tracking		
Text command	Parameter	Example
Tracking Mode	<SPGWI*P:GWIGPS*C:seconds>	<SPGWI*P:GWIGPS*C:60>

Command Description	1. When the command *C (default return interval) can set to 5-60s, the terminal is in tracking mode. Heartbeat return 540S. 2. Will not turn on WIFI in tracking mode and always turn on GPS. 3. The terminal does not vibrate for 5 minutes and enters sleep state. Turn off the GPS. If the GPS is not positioned before entering sleep, it will search for WiFi, send location data and then go to sleep. After that, only heartbeat data will be sent. 4. Send the command <code><SPGWI*P:GWIGPS*1H:0></code>, and the terminal will never turn off the GPS. 5. Vibration wake-up is only related to tracking mode. 6. After entering the stationary position, the positioning process is triggered, and the position data is immediately sent out when the position is reached and the system goes to sleep.
Command Feedback	Successful Setting: OK!

(7)Operating Mode 3 - Normal

Text command	Parameter	Example
Normal Mode	<code><SPGWI*P:GWIGPS*C:Seconds></code>	<code><SPGWI*P:GWIGPS*C:180></code>
Command Description	1. When the command *C (default return interval) is set to 61S-3600S, the terminal is in normal mode. Heartbeat return 540S. After modifying the mode, the positioning process will be entered immediately, and the location data will be sent out after one minute. 2. In the motion state, the positioning process is enabled before the default return time reaches one minute. After the positioning is successful, the position data will be sent when the return time is reached. 3. After sending the location data, it goes into sleep. The positioning process is carried out one minute before positioning. After positioning, the position data will be sent out after the return time is reached. The device will not wake up during this period. (The default is this mode, the return time is 180S)	

Command Feedback	Successful Setting: OK!
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(8)Voice Listening Way 1 - Auto-answer		
Text command	Parameter	Example
1.Turn on automatic voice listening	<SPGWI*P:GWIGPS*60:1>	<SPGWI*P:GWIGPS*60:1>
2.SOS number Parameter	<SOS,A,number1,number2,number3#>	<SOS,A,17875175711,1064899010494#>
Command Description	1. Must turn on auto-answering before setting up a hub number. 2. Up to five SOS numbers can be set. The command SOS# can query the set SOS numbers. 3. Only the configured SOS number can be used to dial the device number for monitoring	
Command Feedback	Successful Setting: OK!	

(9) Voice Listening Way 2 - Sending Text commands		
Text command	Parameter	Example
Send text messages and let the device make calls to the mobile phone to monitor	<SPGWI*P:GWIGPS*call:phone number>	<SPGWI*P:GWIGPS*call:17875175711>
Command Description	1. Dial the device number through the set SOS number (see command 9) to monitor 2. By sending a text message command <SPGWI*P:GWIGPS*call:17875175711> , the device can make a call to the mobile phone for monitoring. This command is not restricted by the SOS number.	
Command Feedback	Successful Setting: OK!	

(10) Over Speed Alarm		
Text command	Parameter	Example
Over Speed Alarm	<SPGWI*P:GWIGPS*CS:60>	<SPGWI*P:GWIGPS*CS:60>
Command Description	Set the speed alarm *CS value. For example, if it is set to 60KM, driving over 60KM for 5 seconds will trigger an alarm. Overspeed alarm is closed by default, speed value*CS:0	
Command Feedback	Successful Setting: OK!	

(11) Vibration Alarm		
Text command	Parameter	Example
Over Speed Alarm	<SPGWI*P:GWIGPS*3D:108000>	<SPGWI*P:GWIGPS*3D:108000>
Command Description	Send via SMS or serial port to start vibration alarm. The vibration threshold is 800. In tracking mode, the device will send a vibration alarm only when the vibration value exceeds 800. The alarm bit is 00C5 (bit6). After sending an alarm, the alarm bit is cleared and can be triggered again after 1 minute.	
Command Feedback	Successful Setting: OK!	

(12)Light sensitive anti-tamper		
Text command	Parameter	Example
Light sensitive anti-tamper	Turn on: <SPGWI*P:GWIGPS*5C:1>	Turn on: <SPGWI*P:GWIGPS*5C:1>

	Turn off: <SPGWI*P:GWIGPS*5C:0>	Turn off: <SPGWI*P:GWIGPS*5C:0>
Command Description	From no light to light, the light sensor alarm is triggered, and an alarm data will be uploaded. It will take one minute to trigger the next alarm. It means that the device has been removed. (Protocol: Light sensor status bit 00C5 bit14: 0 light is seen 1 no light is seen Alarm bit 0089: bit12 0 alarm 1 normal.)	
Command Feedback	Successful Setting: OK!	

(13)SOS Alarm		
Text command	Parameter	Example
SOS Alarm	Turn on: <SPGWI*P:GWIGPS*2S:1> Turn off: <SPGWI*P:GWIGPS*2S:0>	Turn on: <SPGWI*P:GWIGPS*2S:1> Turn off: <SPGWI*P:GWIGPS*2S:0>
Command Description	SOS switch: *2S: 1, 1 on/0 off, closed by default, turn on the SOS switch and press the button twice to trigger the SOS alarm. Protocol: The alarm bit is in the alarm flag bit0	
Command Feedback	Successful Setting: OK!	

9.Online Tracking System

You can review or real-time monitoring the vehicles via www.galagps.com Or search "GPS51" in Google Play or Apple Store to download App and login with the account and password given by dealers.



Problem Analysis/Attention/After-Sales

10. Analysis Of Common Problems

Problem	Reason	Solution
Center Cannot Monitor	Sim Card No Money	Recharge Money
	Sim Card Connect Good Or Not	Please Install Sim Card Again
	Online Parameter Setting Error	Reset Parameters With Correct Format According To User Manual
	Vehicles Are In Underground Parking Lots, Tunnels, Weak Signals	Leave Off The District With Weak Signal
Wrong Light Alarm	Installation Location Is In Light Area	Install The Device In Area Without Light
Cannot Locate	Vehicle In Underground Car Parks Or Tunnels	Leave That Area
	GPS Antenna Side Is Not Up To Sky	Make The Gps Antenna Side Up To Sky

11. Attention

1. Stay away from water
2. Please keep the car battery fully charged
3. Device working current is 7500mA/3.7V, Tracker will damage if the current is over this range.
4. Working temperature is -20 to 75 centigrade, Please cut off power if the temperature is over this range.
5. When vehicle is in underground parks, tunnels or garage, maybe GPS signal will not very good. Communication network blind area will be caused and cannot monitor

vehicle. When the car is out of that area, it will working good automatically.

6. Please not repair by yourself when the device not working properly after-sale service.

12. After-sale Service

12.1 This product enjoys one year of warranty service from the date of installation. During the warranty period, due to non-human factors or equipment damage caused by product quality, please contact the agent in time or call the dealers after-sales service department to deal with it.

12.2 The damage caused by the customer's private revocation or force majeure (such as floods, vehicle accidents) will not be repaired.

12.3 After the warranty period expires, due to product damage or malfunction caused by the use, the maintenance material cost fee will be charged.

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

FCC WARNING

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC 's RF Exposure guidelines, This equipment should be installed and operated with minimum 20cm distance between the radiator and your body: Use only the supplied antenna.