SP4824 User Manual V1.4

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Content

Preface

Thank you for choosing the company's AT200H GPS tracking products, please carefully read the instructions before operating.

Please check the items in package with packing list, contact with the distributor when you found something leave out.

⚠ Disclaimer：

➢ Read this user manual carefully please. When you start use this product, then you are deemed to have read this user's manual.

➢ This Product used as assistant tool for Security only, can't prevent all kinds of deliberately theft or malicious damage vehicles. For the safety of your assets, you still need keep necessary vigilance and security awareness after you installed this product. We do not bear responsibility to any loss except product itself. Thanks!

1.Product Introduction

	Color	Describe
① 4PIN	Red	Power(0-55V)
	Black	GND
	Orange	ACC
	Yellow	OUT1(IMMOBILIZE)
② 6PIN	Blue+white	OUT2
	Green+white	OUT3
	Brown	DEF2(-)
	Grey	SOS
	Pink	DEF3(-)
	Purple	ADC(0-12V)
③ 1PIN	Orange	1WIRE(3PIN connector(Get 5V and GND from RS232))
④ 2PIN	Red	MIC+
	Black	MIC-
⑤ 2PIN	Red	SPK-N
	Black	SPK-P
⑥ 4PIN(RS232)	Black	GND
	Blue	RS232-RX
	Green	RS232-TX
	Red	5V-OUT

Note:
- ✓ This product function based on GPRS network; need a SIM card which have GPRS data transmit and SMS functions.
- ✓ SIM card is not include in the packing list, please prepare SIM card before you use this device.
- ✓ Self-define cable can be cut if you do not use it.

✓ This product work voltage is (9-90V/DC), lower or higher will make device work improper.

2.Technical Parameters

Name	Parameters
4G	**EC200A-AU** **LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66** **LTE-TDD: B40** **WCDMA: B1/B2/B4/B5/B8** **GSM/EDGE: B2/B3/B5/B8**
GPS module	(Zhongke Microelectronics) AT6558R
Color	Black
Working Voltage	9-90V/DC
AVG Working Current	100mA@12V
Back-up Battery	180mAH
Tracker size	137mm×93mm×40mm
Working temperature	-20°C - +85°C
Moisture	5% - 95%
Locate Sensitivity	<10m
Locate time	Hot start(average): ≤1s Cold start(average): <30s
GPS Tracking Sensitivity	-162dbm
Acquisition sensitivity	-148dBm
GPS Frequently	L1,1575.42MHz
LED Indicator	Use Green/blue/red three color LED indicator to show the status of GSM/GPS/power.
Blind area data record	4800

3. Define of LED indicator

	LED Color	Status	Status describe
Power status	Red	Light static	Power Normal
		Blinking	Device fault
		LED OFF	Power off/in sleep
GSM status	Yellow	Blinking	Initializing/Finding SIM card
		Light static	Read SIM card/online
		LED OFF	GSM in sleep/GSM fault
GPS status	Blue	Blinking	Finding GPS(not locate)
		Light static	GPS Located
		LED OFF	GPS in sleep/GSM fault

4. Device Install Position

To install this device you need have some necessary knowledge about Car Electronics. So please make sure you have right person to make the first installation.

In the installation process, do not power on device. The following is some problem may facing in the installation process, please note:

There have two kind of way to install the device: Hidden install and Open type install. When install in special-purpose vehicle you can select hidden install, and when install in temporary vehicle you can select Open type install.

I. To avoid be broken, the install position of the device should be hidden. The suggest positions are:

① Covert within the dalle below the front windshield glass;

② Covert around the front instruments panel (the cover of the instruments should not be metal)

③ Place Under the dalle below the rear windshield glass of the car.

II. Avoid the positions round emitters, such as reverse sensor, burglar alarm and other vehicle-mounted communication devices.

III. Use the ribbon or sponge powerful double-sided adhesive to fasten the device.

IV. If you choose build-in GSM Antenna and GPS Antenna, please make sure the GPS receiving surface (the side with LED indicator) face to sky and no metal shelter above when install.

Note:

✧ If there have metal thermal-protective coating or warm up coating on the windshield glass, the GPS signal will be damped. That may cause the device work abnormal, please change install position.

✧ If you want to install the device by Open type, you can paste the Velcro tape on the dalle below the front windshield glass, and then fasten the device on it.

5. Commands list

To make the device work on GPRS mode together the control center software system, we have to set some parameters to make the device know where and how to connect the server.

Note:

A. All commands are case sensitive, please check carefully before send the command!
B. Serial command format：*269#C
C. SMS command format：AS1234*269#C#
D. **All command via GPRS(0x3A) the format is same as serial command**

Name	Serial Command	reply	
Enable log	AT%TEST=STOP		Baud rate: 9600
Set IP	*269#1,120.24.225.253,5577,0	59.188.20.77;5577,0;OK	Reply content is "IP" "Port", connection type: **0 UDP** **1 TCP**
Set ID	*269#2,12007845	12007845;OK	Current "ID"
Set APN	*269#3,CMNET,,,	CMNET,,;OK	APN setting
Set back to factory	*269#F	Reset OK;	
Check IP,ID,APN	*269#C	*U:122.114.126.6,6666,1*A:cmnet,,*N:34231801,M6,N1,60,3600,0,0,R1,Q25,G1,8,Z+0,AT200(EC200-AU_V1.0	CSQ: GSM signal strength; Ms:6 online
Check parameters	*269#R	sp:50,3s dr:0,0 idl:0 mv:500,sleep:0 acc:0 sos:0 df:0,0,0,0,0 power:0	Sp: over speed; dr:fatigue driving; idl: idle; Mv: ACC OFF moving alarm; Sleep: 1 sleep mode on; Acc: 1=ACC ON; SOS: 1= SOS ON; Lock: ACC off lock position; Msg: blind area data; Sleep: sleep mode type
Check version	*269#V	Version:AT200-V1.0@May 18 2019 11:48:33	

Set authorized number	*269#5,X,X,X,X,	X,X,X,X, set ok	Need country code.
Query authorized number	*269#P	8512345678912,,,,;OK	To check the authorized numbers.
Set timezone	*269#I,Ex/Wx,	E:means east; W:means west; X is 0-12.	Example: Set GMT-6: *269#I,W6,
Set ACC on/off upload interval	*269#7,x,y,	x=ACC ON upload interval， y=ACC OFF upload interval；	
Upload by distance	*269#d,x	Unit is meter.	if you enable upload by distance, then distance and time base will work both, which condition matched, then upload position once.
Set mileage	*269#m,x	X is mileage value, Unit is KM.	
Cut-engine	*269#O1,x,	X=1, cut-fuel/ immobilize; X=0, recover fuel	X=1, ENGINE OFF, OK X=0, ENGINE ON, OK Cut/recover fuel by time duration(5times)
Set mileage ratio	*269#L,1,X,	X range: 100-200	AS1234*269#L,1,110,#
Check mileage ratio	*269#L,0		MileageRate:110;OK
Set over speed	*269#OS,x,y,	X=over speed value; Y=duration trigger time, unit is seconds.	
Set Move alarm(ACC OFF)	*269#mv,x	x=move distance, unit is meter(ACC OFF, x>100m)	
Set idle alarm	*269#i,x,y	x is idle speed, y is duration, unit is minute;	IDLE:8,5;OK

Enable position ACK	*269#*M,x	X=1, Open ACK; X=0, close ACK.	IF enable ACK, need platform reply each position data(80/8E/82/A3) with 0x21.
Open/close Sleep mode	*269#I,SX	X=0, close sleep mode; X=1, open sleep mode	Close 3G and GPS module both. When enable this function, device will enter sleep mode after ACC off for 5 minutes. and wake up by: ACC on/SOS/DEF alarm trigger.
motion state(Detect moving with out ACC wire)	*269#0,x1,x2,x3,x4	X1: speed value trigger for ACC ON; X2: duration for trigger ACC ON, unit seconds; X3: speed value trigger for ACC OFF; X4: duration time trigger for ACC OFF, unit seconds.	For example: AS1234*269#0,8,5,1,10# Note: 0 is number.
Set harsh accelerate	*269#a1,X,	Default: Accelerate:14km/h/s	
Set harsh brake	*269#a2,X,	Default: Decelerate:20km/h/s	
Set harsh turning (angle)	*269#a4,x,y,z	X=speed, km/h; Y=degree; Z=duration time.	For example:. angle:X=50 km/h,Y=90 deg,Z=1 s;OK
Query harsh acc/brake parameters	*269#a		
Query IMEI	*269#T	IMEI:862107047034673	
Unlock position with ACC OFF	*269#*K,x	X=0, lock position; X=1, unlock position.	

Enable pick call by AUTO	*269#A,x	X=0, disable pick up call; X=1, enable pick up call.	
RS232 sensor switch	*269#*6,x	X=1, RFID; X=2, camera; X=4, fuel sensor; X=10, SEN003**(default)**	SEN003 baud rate 9600
SEN003 sensor configure commands(current HW only can set by SMS) **default every 4s query once.**			
Set group1 data reporting interval	**AS1234*269#>STT,YYYY<#**	Unit : Seconds Range : 0 - 65535 Sec (Approx. 18 hours, Ex: 300sec= 012C) 0=disable.	**Example:** **AS1234*269#>STT,012C<#**
Query group1 reporting interval	***269#>STT?<**		
Set group1 data reporting interval	***269#>STE,YYYY<**	Unit : Seconds Range : 0 - 65535 Sec (Approx. 18 hours, Ex: 300sec= 012C) 0=disable.	
Query group1 reporting interval	***269#>STE?<**		
Set group1 data reporting interval	***269#>STI,YYYY<**	Unit : Seconds Range : 0 - 65535 Sec (Approx. 18 hours, Ex: 300sec= 012C) 0=disable.	
Query group1 reporting interval	***269#>STI?<**		
Set group1 data reporting interval	***269#>STS,YYYY<**	Unit : Seconds Range : 0 - 65535 Sec (Approx. 18 hours, Ex: 300sec= 012C) 0=disable.	
Query group1 reporting interval	***269#>STS?<**		
Ibutton control immobilize	***269#IO,x**	x=1 enable ibutton control oil; 0=disable, default disable	

ibutton white list	***269#ikey,x,x,x,x,x**	max support 5 white ID Note: ① Temp or ibutton can't work together, only allow one to use in a time; ② Ibutton and temp sensor switch by AUTO, but default is detect Temp sensor first then ibutton; ③ If need ibutton work as priority, PLS connect iButton before power on; ④ If connect ibutton before power on, need wait around 2min to make ibutton be detect.	For example: 1 ibutton id: **269#ikey,0114405847aa* 2 ibutton id: **269#ikey,0114405847aa,0114405847dc* Report with sub-command 0x1A 29 29 a3 00 3f 28 8c c2 05 22 04 26 15 10 02 02 23 50 15 11 35 43 37 00 00 00 00 fb 00 04 c7 80 00 19 00 00 00 15 00 00 00 00 00 00 17 10 02 00 86 2e 02 00 00 0d 02 00 00 **1a 07 00 00 00 01 09 52 22** bd 0d
query ibutton white list	***269#ikey**		
Clear ibutton white list	***269#ikey,clear**		
OUT3 control with enter fence/overspeed in fence	***269#O3,x,y**	X=0, disable output; X=1, enable output on with no condition; X=2, enable output when enter fence(keep output 3s, then OFF); X=3, enable output during over-speed in fence(2s ON, 1s OFF) till over-speed end or exit fence or disable output; X=4, y=discontinuity output duration(unit seconds) //when enter fence, in y(s) keep **1s on 1s off by turns**, if after 10s still in fence, active output, till exit from fence.	Wait for confirm require to update

		For example:***269#O3,4,10** Means when enter fence, in 10(s) keep **1s on 1s off by turns**, if after 10s still in fence, active output, till exit from fence or send command to disable.	
Send txt MSG from device to platform	***269#WB,content**		For example: *269#WB,hello world Device will report to platform with 0x84 with "hello world"
Set SOS number	***269#SOS,+861234567891**		When trigger SOS, send SOS alert and call the SOS number.
Clear buffer CMD(Clear history data only)	*269#dba	reply:Del ba;OK	Wait for confirm require to update
Set rectangle Geo-fence (max 5)	*269#REGION:ABCDEFG For example: *269#REGION:010224442211347526022444 65113475850402	A: Region Number(support one region each time); B: Region small latitude (Four byte:02234777=22+ 34.777/60=22.57961) C: Region small longitude (Four byte 11352253 =113 +52.253/60=113.87088) D: Region large latitude (Four byte: 02236346=22 +36.346/60=22.605767） E: Region large longitude (Four byte 11353561=113 +53.561/60=113.89268） F: Region ID(HEX, range: 0x01-0xff) G: Region alarm type (0x00 Enter region alarm; 0x01 Exit region alarm; 0x02 Enter and Exit region alarm)	Wait for update

Query rectangle Geo-fence	*269#REGION	reply： REGION:0102244422113475260224446511347585020 2;010224442211347526022444651134 75850402;OK	Wait for update
Clear rectangle Geo-fence	*269#REGION:CLEAR		
Set circular fence(max 35)	*269#CIR:ABCDE	A=circular fence ID(6-40), 1 byte; B=latitude, 4 bytes; C=longitude, 4 byte; D=radius,2 bytes, max 9999m; E=alarm type(00 enter fence, 01 exit fence,02 enter & exit fence)	
Clear circular fence	*269#CIR:CLEAR		
Switch audio channel by serial	AT%TEST=SMS[][audio,123456, 1]	EC200T=1 EC200A=2	
Switch audio channel by SMS	audio,123456,1	0:disable; 1:external audio; 2:internal audio.	
SMS command	**"*AS1234*"+"Serial command"+"#"** **For example: AS1234***269#C**#**		

6.Serial Port configuration

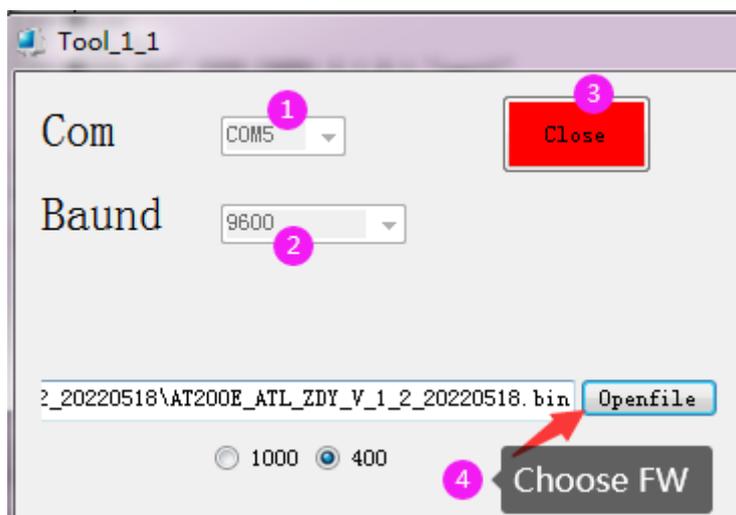Default Baud rate:**9600**;
Tool: SSCOM;
Via: USB port.
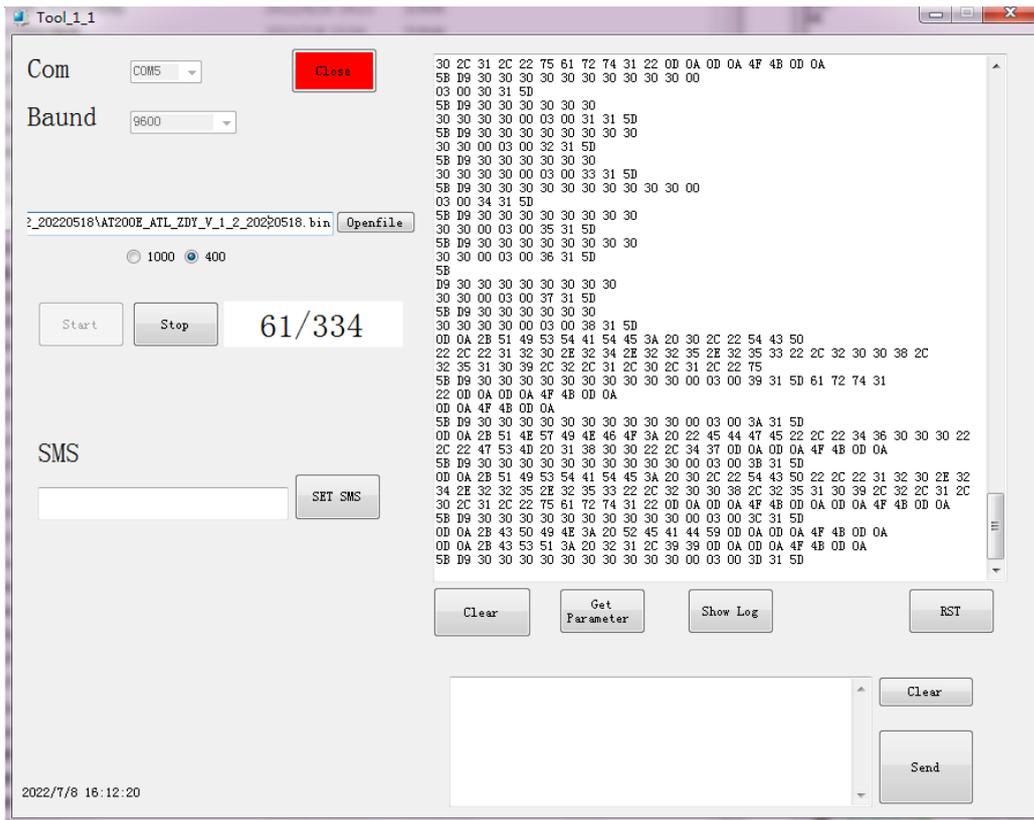Enable log: **AT%TEST=STOP**
SERIAL CABLE:

7.Upgrade steps(by serial)

1. Power on the AT200E/H, connect USB;
2. Make sure current baud rate (can check with sscom first):
    ① If RS232 has any sensor enabled like RFID, then baud rate is 9600;
    ② If no sensor enabled, baud rate is 115200

3. Choose correct FW:

4. After that click "start" button to upgrade:

5. Make sure FW upgrade success: