

JT301A User Manual

V1.4



Shenzhen Joint Technology Co.,Ltd
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Copyright and Disclaimer

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All the contents in this document are currently accurate. However, due to the continuous iteration and update of products, we may update the manual from time to time. The manual you are reading reflects the basic functions and technical indicators of the product at the time the product manual was written. We strive to give a complete and clear description as much as possible so that you can easily use our products. There may be inaccurate technical expressions of some content. We will correct and update the manual content in time based on customer suggestions and feedback. This manual is subject to update without notice.

The user needs to install and fix the product, charge the battery according to the specifications, and dispose of the waste parts and batteries of the product in accordance with local policies and regulations. Jointech is not responsible for any loss, injury, environmental pollution, etc. caused by using or quoting this product.

Warranty Policy Statement

The warranty period is 12 months from the date of delivery.

Any defects, malfunctions and damages caused by improper use, unauthorized disassembly and alteration of the product are not applicable to this warranty policy.

The warranty period is limited to repairing defects or replacing defective parts.

Repairing or replacing parts under the terms of this warranty period does not extend the warranty period.

Brief Introduction

JT301 series products are a miniaturized intelligent tracker, which is applied to cargo tracking, environmental inspection, and door status detection in logistics scenarios. Providing tracking monitoring and customized sensors, JT 301 has 4G, GPS, Bluetooth, G-Sensor, barometric pressure, temperature and humidity and other functions. It supports blind zone data supplementation, power management (low power consumption), Bluetooth data interaction, etc. Optional accessories include display screen, vibration sensor, temperature and humidity sensor, etc.

Product Functions

Functions	Descriptions	JT301A	JT301B
LBS Positioning	The current location information of the device can be obtained through the platform base station repository	√	√
GPS Positioning	Supports GPS positioning	×	√
G-sensor	Vibration detection(motion and stationary judgment)	×	√
Illuminance sensor	Illuminance detection and alarm function	√	√
Temperature and humidity detection	Temperature and humidity information and anomaly detection	×	√
Touchable button	Touch the button to wake up the screen	×	×
Display screen	The screen displays prompt information such as on-line, positioning, and battery status	×	×
LED	LED prompt information such as on-line, positioning, power status, etc.	√	√
Battery	Internal battery capacity	1300mAh	4200mAh
Barometric pressure	Barometric pressure detection and anomaly alarm	×	√
Door status	Detection of the opening/closing of the car door	√	×
Wake-up methods	Timed wake-up (RTC)	√	√
	Wake up by vibration	×	√
	Wake up by charging	√	√
	Wake up by SMS	√	√
	Wake up by touching	×	×
	Wake up by Bluetooth	√	√
	Wake up by abnormal temperature and humidity	×	×
	Wake up by abnormal barometric pressure	×	√
	Wake up by opening/closing the car door	√	×
Blind area data report	When the device is in a network blind network, data will be saved, and the device can save at least 1000 pieces of data	√	√
OTA upgrade	The device can be remotely upgraded via FTP or Bluetooth channels	√	√
Remote configuration	Device parameters can be configured via SMS, TCP, and Bluetooth	√	√

Product Specification

Parameters	Description
Dimension (L x W x H)	83mm*56mm*12.5mm (switch sensor not included)
Weight	60g (switch sensor not included))
Shell material	ABS+PC engineering plastic
Door status detection	The pressure bar mechanical pulley detects the door opening/closing status, and the pulley telescopic length of the detection sensor is 20mm.
Data communication	The default data upload network is 4G CAT1, and the default support band are: LTE-FDD: B2/B4/B5/B12/B66
Communication mode	TCP、SMS
SIM card	Micro-SIM card
Bluetooth wireless communication	Bluetooth 4.2 or above, open effective communication distance > 10M
Positioning	LBS
luminous flux	1-65535LX
Battery	Rechargeable lithium battery 3.7V /1300mAh
Charging interface	Micro USB
Charge current	1000mA Full charge in about 2 hours
Protection class	IP50
Operating temperature	-20℃--60℃
Storage temperature	-40℃--60℃
relative humidity	5%—95%

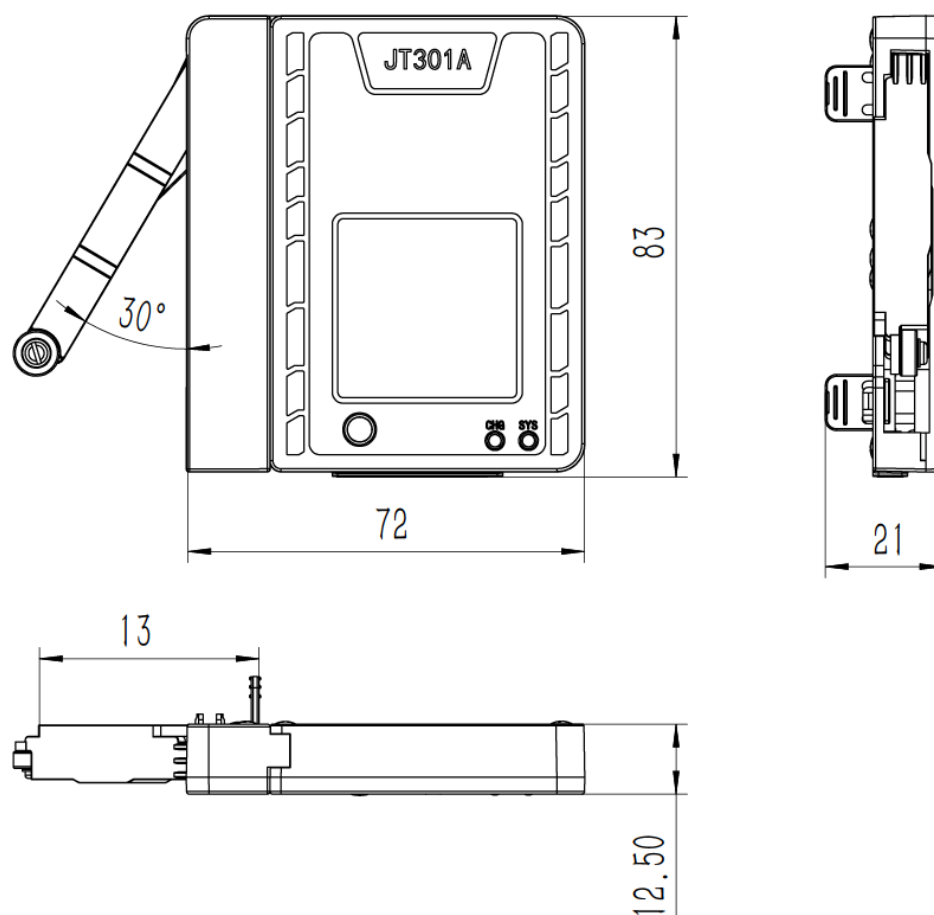
Standard and optional accessories

Name	Picture	Standard accessories	Optional accessories
Lock body (standard configuration)		•	

Door opening/closing detection sensor			•
Micro-USB Cable			•
Charging adapter			•

Appearance

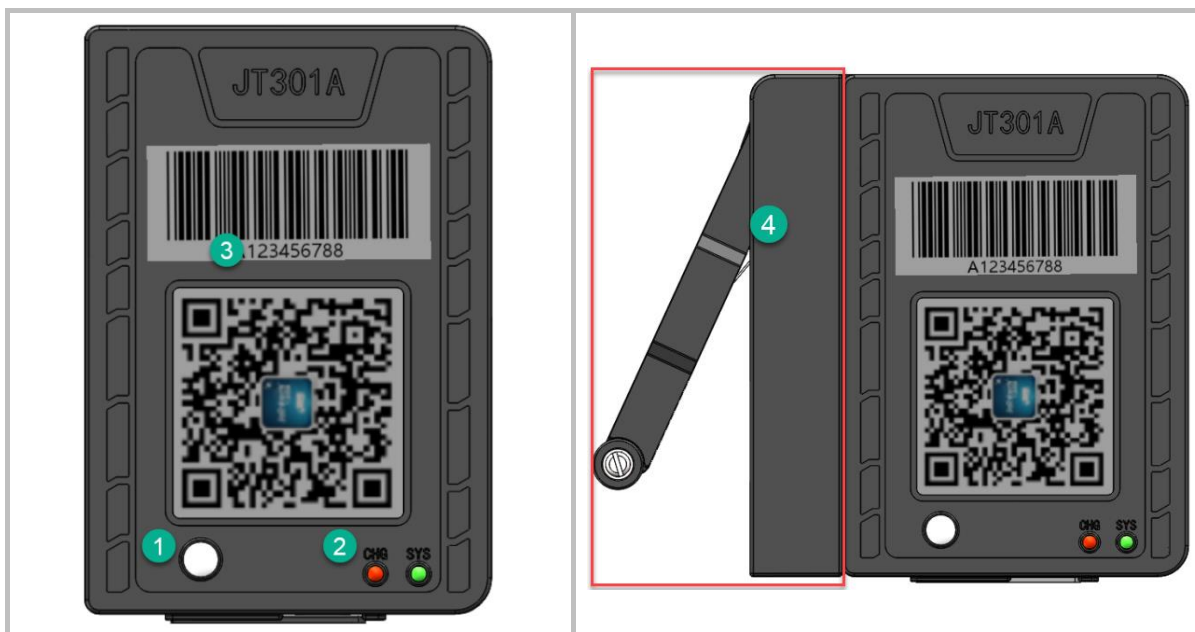
Size



Front view

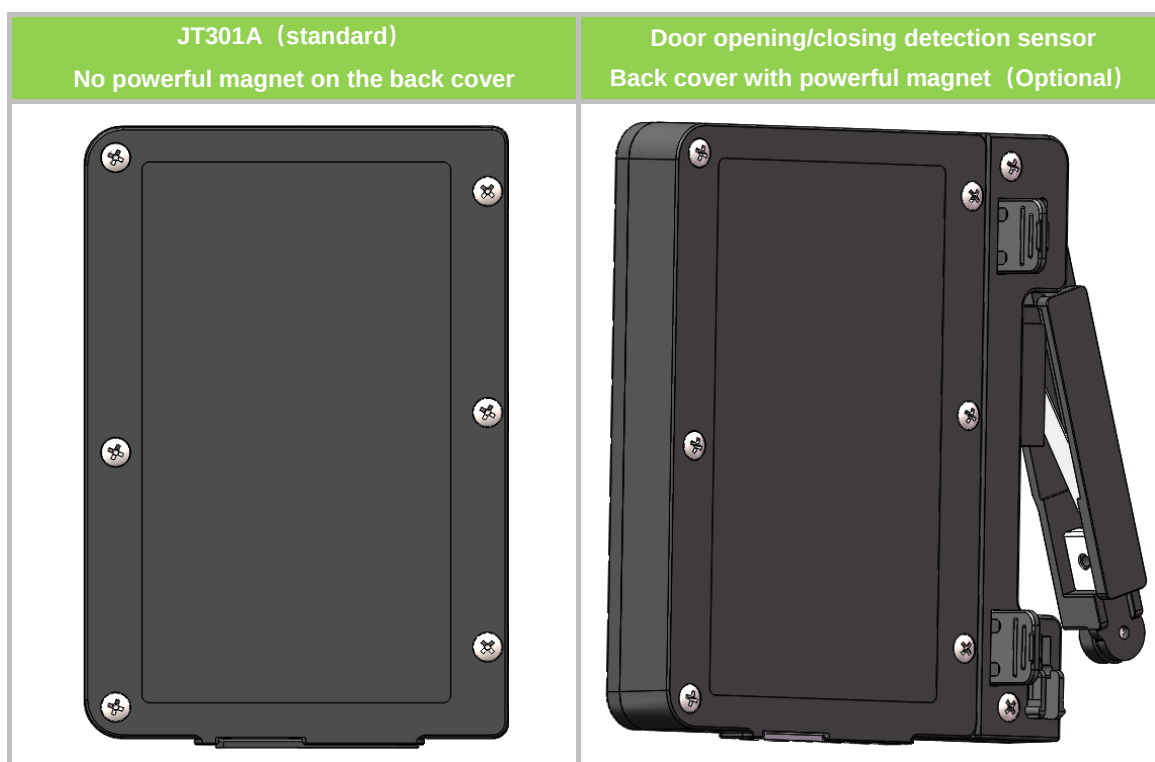
JT301A (Standard)

JT301A+Door opening/closing detection
sensor (Optional)

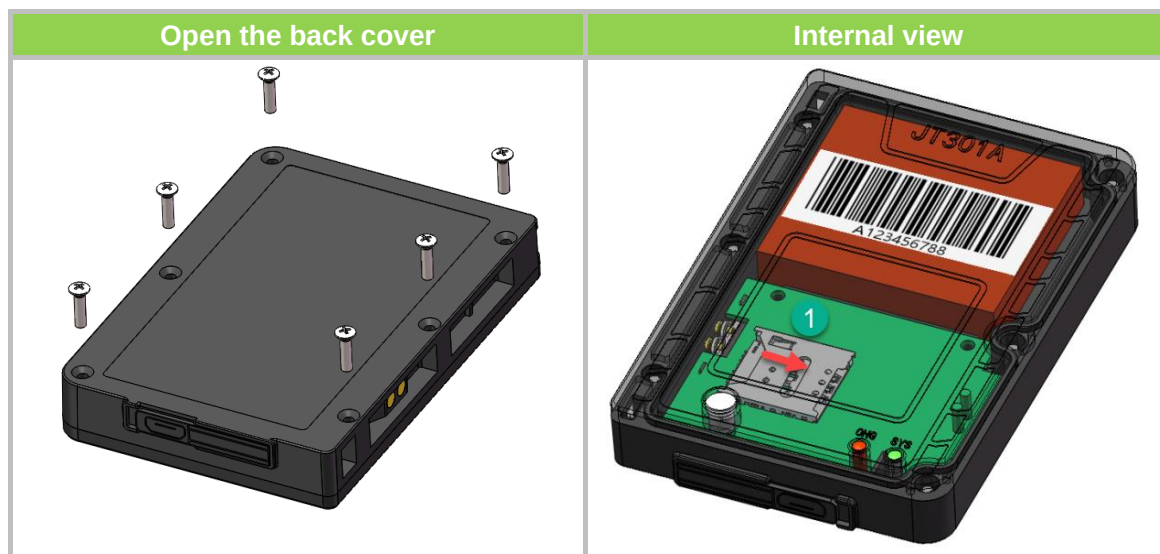


- ① Light Sensor - Used to detect illuminance
- ② Indicator
 - Green light SYS - Used to indicate the working status of the device
 - Red light / Green light CHG - Charge status and battery full status indication
- ③ Device ID: 12-digits device ID. When registering the device to the platform, please fill in this ID number.
- ④ Door opening/closing detection sensor (Optional)

Rear view

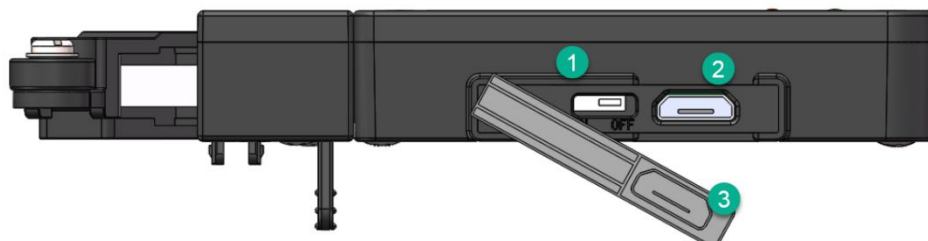


Interior view



- ① Micro SIM card slot: Push the SIM card slot metal bezel in the direction of the arrow to open the metal baffle and insert the Micro SIM card; push the SIM slot metal baffle in the opposite direction of the arrow to lock the SIM card.

Bottom View



- ① Power switch: Use forceps to push this power switch to the left ON gear to turn on the power supply; push to the right OFF gear to turn off the power
- ② External charging interface: The standard charging voltage is DC 5V 1A. Please connect the charging adapter and its matching charging cable provided by Jointech. It is recommended to use a stable and reliable indoor charging power supply to charge the device. It usually takes about 2 hours to charge from a low charge of 5% to a full charge of 100%.
- ③ Rubber plug

First Use

Power On and Off / Charge and Full

Power on and off : Pull the rubber stopper on the bottom of the device and follow the steps in “Bottom View” in this article

Charge and full: After powering on, if the SYS indicator flashes twice every 3 seconds, it means that the current power is less than 30%, at this time it is recommended to charge immediately. The device is charged via the standard charging adapter and matching charging cable. If fully charged, the charging indicator CHG changes from a red light to a green light. In general, the device takes about 2 hours to go from zero to full charge.



Charging adapter and Micro-USB cable

Install the Micro-SIM Card

Please confirm with Jointech's sales personnel the cellular module currently used in the device.



Micro-SIM Card - Length * width (15*12mm)

LED Status

LED Indicators	Status	Description
Green LED Cellular/SYS LED	Flashes once every 1 second (slow flash)	Unable to register or connect to cellular network.
	Flashes once every 3 seconds	Registered and connected to cellular network, sending data.
	Flashes twice every 3 seconds	The battery level is lower than the threshold (such as 30%).

	Off	The device is in sleep mode or powered off.
Red->Green CHG Charging-> full charged	Keep Red LED on	Charging
	Keep Green LED on	Fully charged
	OFF	Not in charging

Wake Up source

Wake-up sources	Description (The device can only wake up if it is powered on and in sleep)	JT301A	JT301B	JT301C	JT301D
RTC Timing wake-up	The device wakes up regularly and uploads a piece of data.	√	√	√	√
Wake up by vibration	1. If the device is configured with RTC mode, it does not support vibration detection- intelligent reporting mode 2. In intelligent reporting mode: (1) If the device detects effective movement through G-sensor: when the device has been dormant for more than the motion mode reporting interval, the device wakes up and enters work; if the device has been dormant for less than the motion mode reporting interval, it will continue to sleep until the motion state reporting interval is reached. (2) If the device is detected as static by G-sensor: The device continues to sleep until the sleep time reaches the static mode reporting interval to wake the device into a working state. Note: It is not that the data is reported immediately upon detection of vibration.	×	√	√	√
Wake up by charging	Charging wakes up the device.	√	√	√	√
Wake up by SMS	The device will wake up when it receives a text message or call.	√	√	√	√
Wake up by touching	When the display button is touched, the display screen will be woken up and displays the contents.	×	×	×	√
Wake up by Bluetooth	The device will wake up after receiving the Bluetooth command.	√	√	√	√
Wake up by abnormal temperature and humidity	The device will wake up after detecting abnormal temperature and humidity.	×	×	√	√
Wake up by	The device will wake up when abnormal barometric	×	√	√	√

abnormal barometric pressure	pressure is detected.				
Wake up by opening/clos ing the car door	The device will wake up when it detects that the door is open or closed.	√	×	×	×

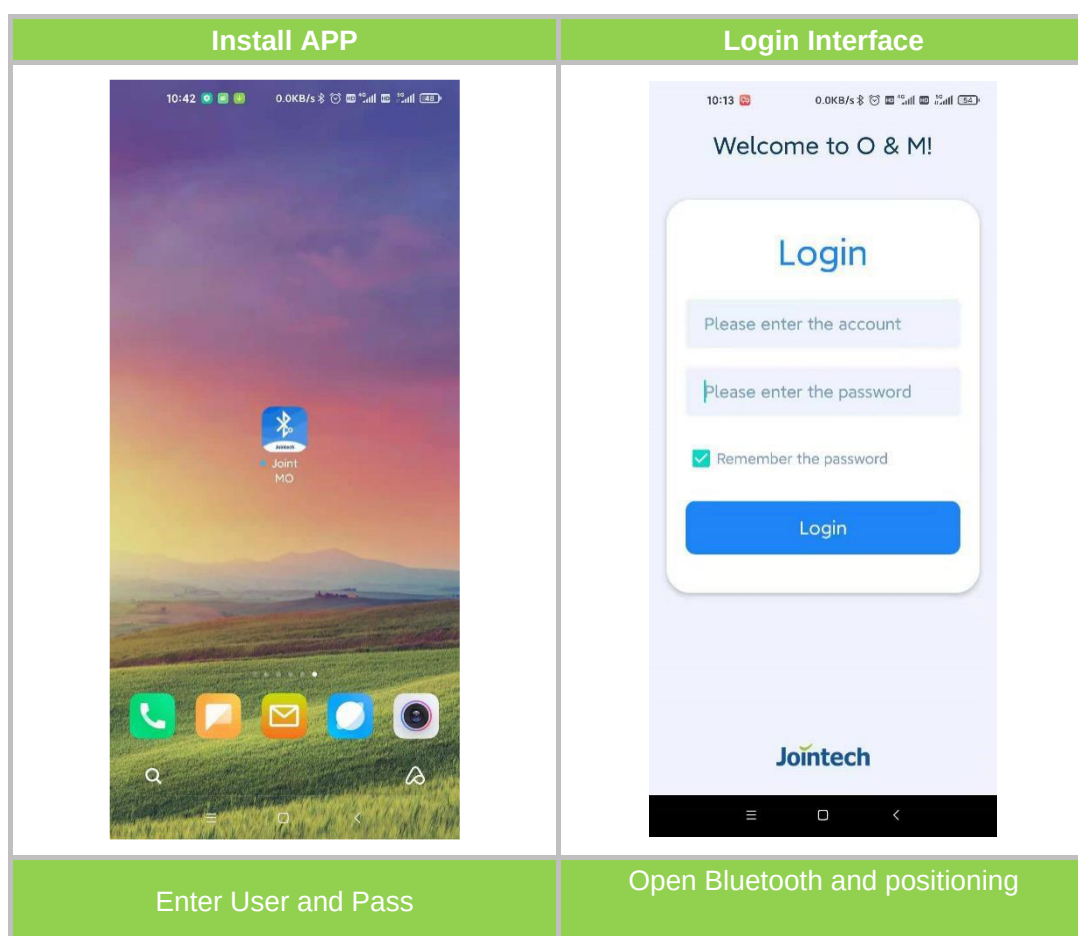
Basic Configuration

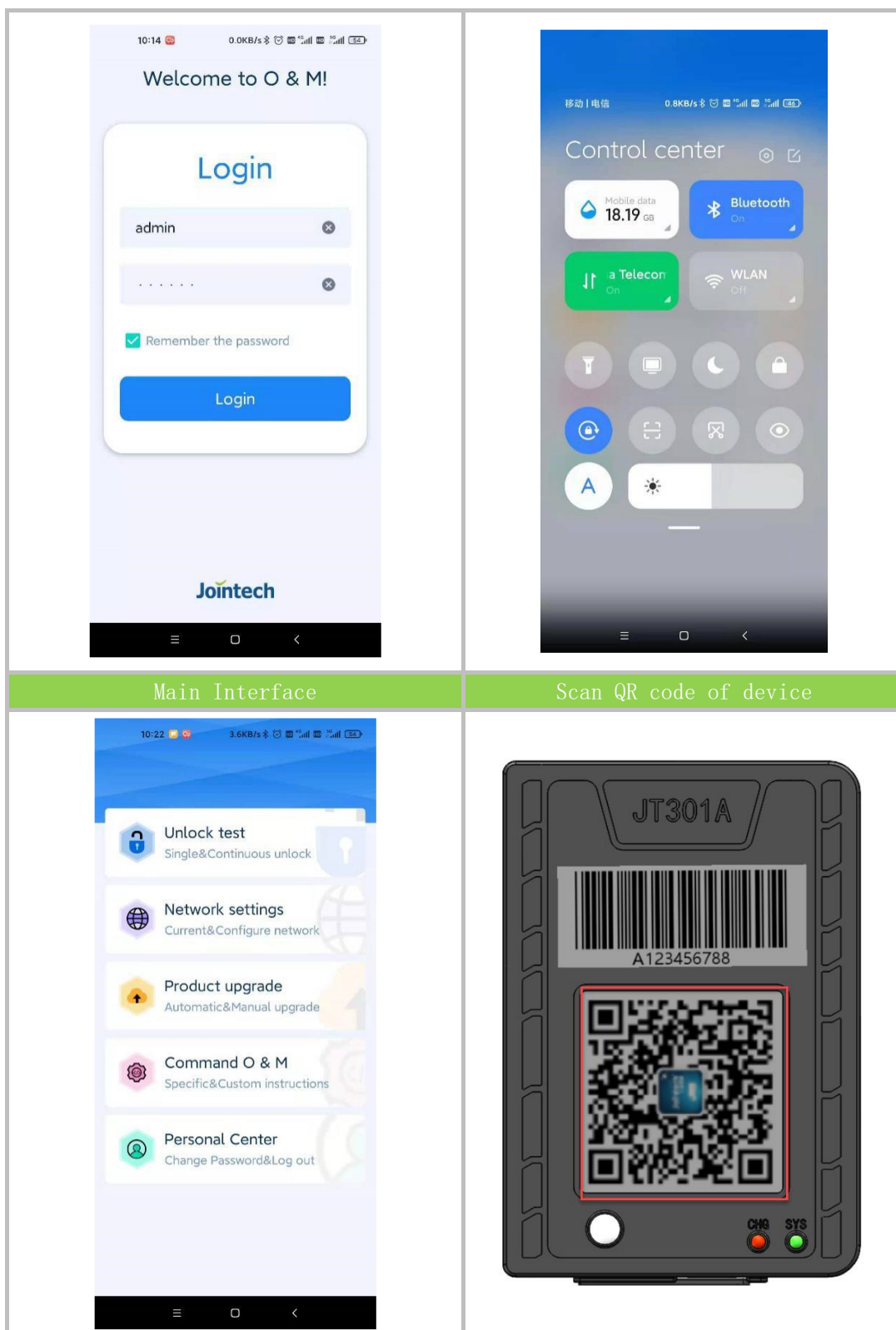
Manage device setting in “Joint MO” APP

Install Joint MO APP on your mobile phone:

Please search “Joint MO” on Google play store or IOS store, and install this app.

Please consult the business staff for your user login account and password.



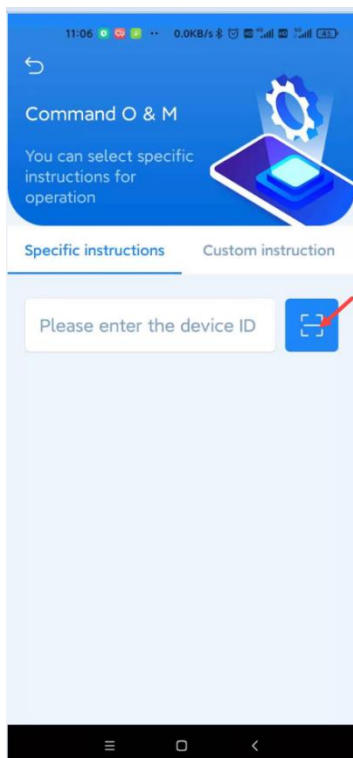


Query the basic information of the device firmware

Use the "Joint MO" to query the basic settings

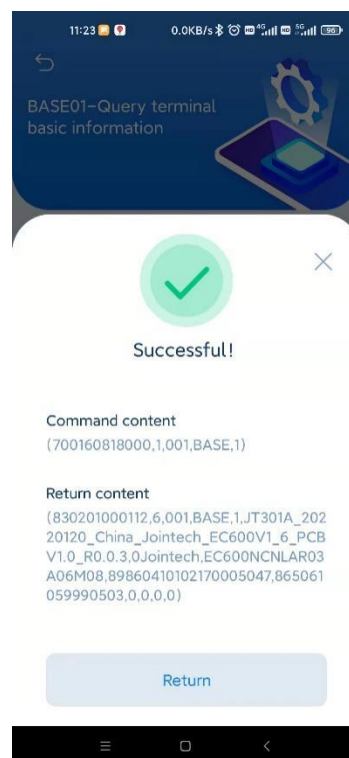
[Command O&M]

Scan the QR code in JT301A

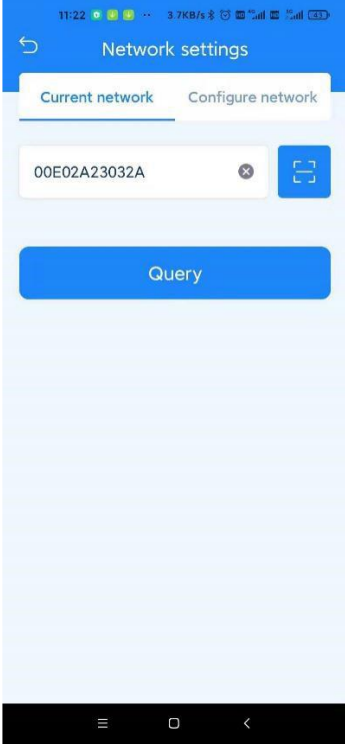
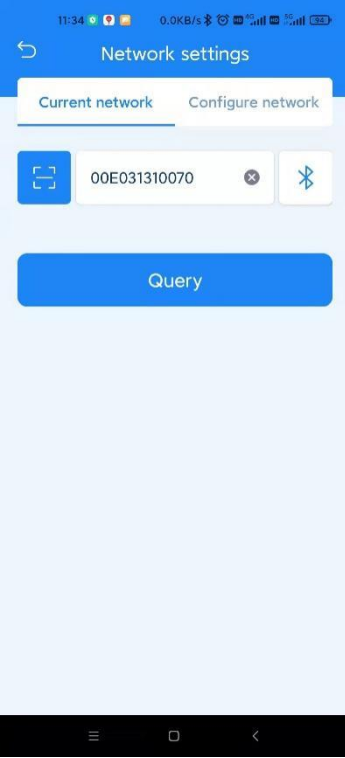


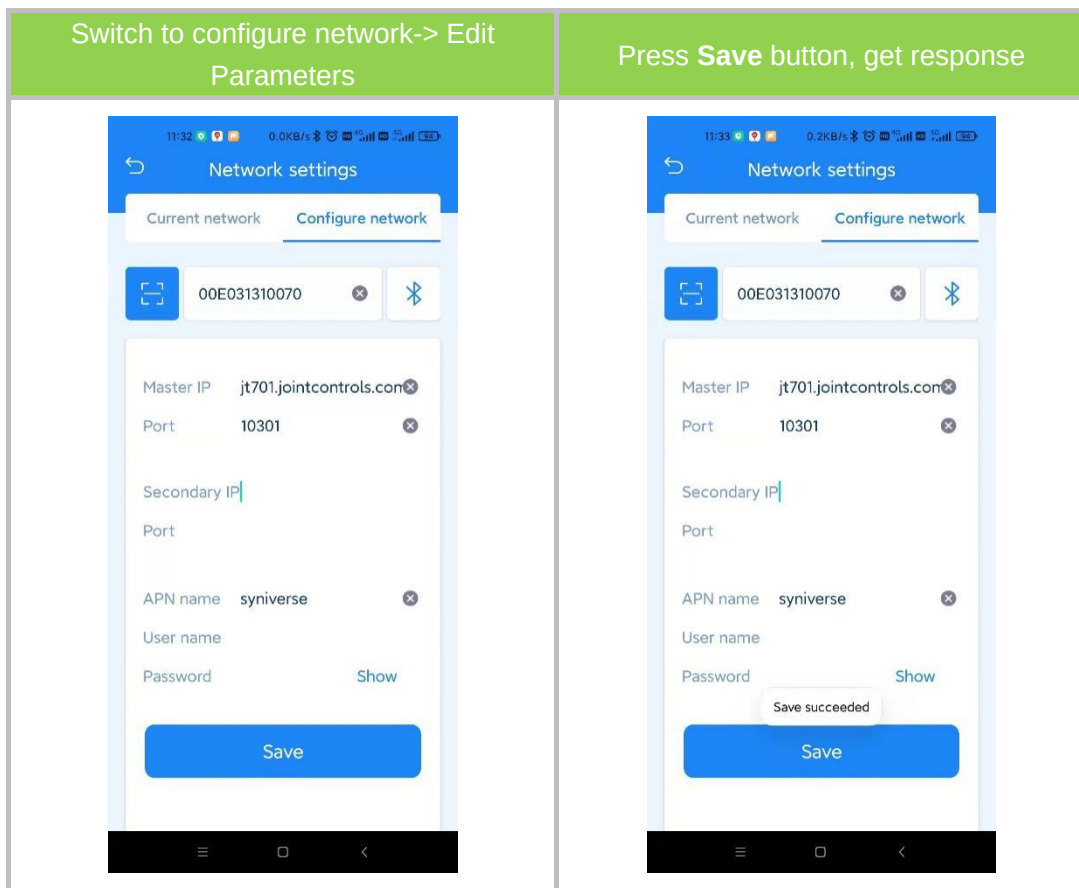
Press BASE01 to query the basic information of the device

Instruction execution status



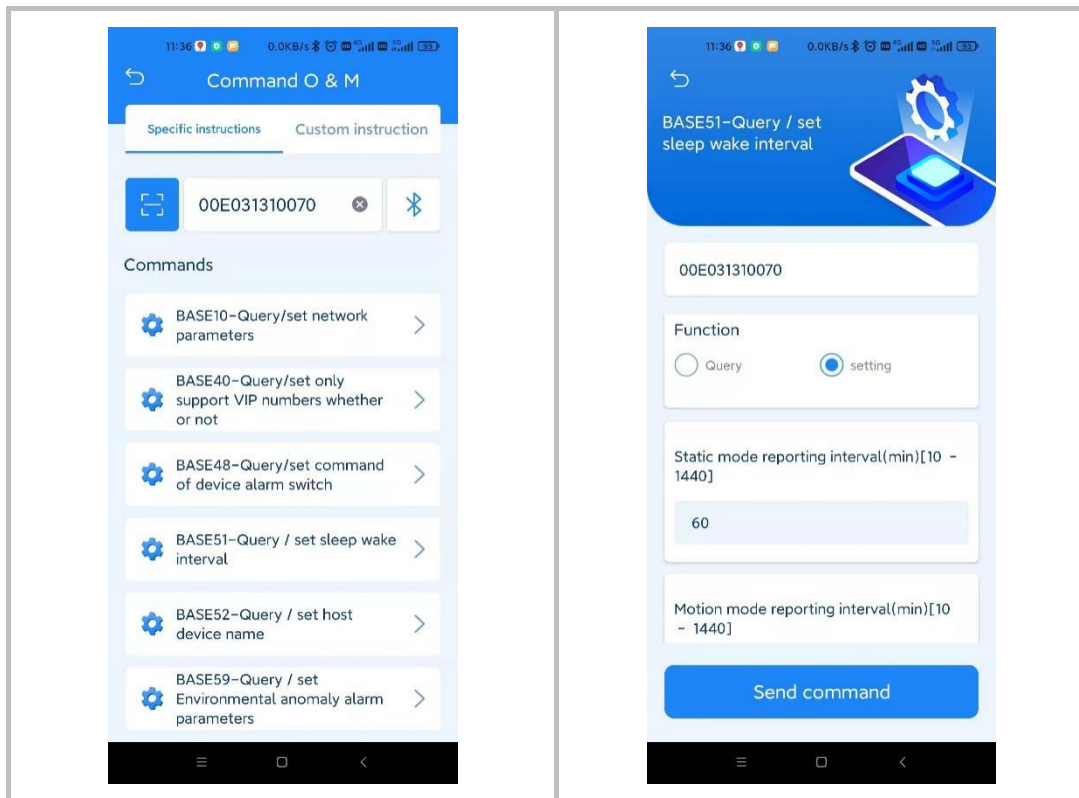
Host IP/domain name, port, APN, APN username and password configuration

Network settings Press Scan button	Scan QR code of JT301A																
																	
Press Query button	Get current network settings																
	 <table border="1"><thead><tr><th>Field</th><th>Value</th></tr></thead><tbody><tr><td>Master IP</td><td>47.112.122.222</td></tr><tr><td>Port</td><td>10301</td></tr><tr><td>Secondary IP</td><td></td></tr><tr><td>Port</td><td></td></tr><tr><td>APN name</td><td>syniverse</td></tr><tr><td>User name</td><td></td></tr><tr><td>Password</td><td>Show</td></tr></tbody></table>	Field	Value	Master IP	47.112.122.222	Port	10301	Secondary IP		Port		APN name	syniverse	User name		Password	Show
Field	Value																
Master IP	47.112.122.222																
Port	10301																
Secondary IP																	
Port																	
APN name	syniverse																
User name																	
Password	Show																



Query/set the device's data intelligent reporting mode - JT301A regular reporting

Press Base51-Query/set interval	Edit parameters, and Send command Note: The JT301A's report interval parameter in motion mode reporting interval is invalid.
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Working Mode Description

Timing mode

The device wakes up regularly according to the configured quiescent sleep interval and reports data to the platform.

Intelligent reporting mode (not supported by JT301A)

1. If the device is configured with RTC mode, it does not support vibration detection- intelligent reporting mode
2. In intelligent reporting mode:

If the device detects effective movement through G-sensor: when the device has been dormant for more than the motion mode reporting interval, the device wakes up and enters work; if the device has been dormant for less than the motion mode reporting interval, it will continue to sleep until the motion mode reporting interval is reached.

If the device is detected as static by G-sensor: The device continues to sleep until the sleep time reaches the static mode report interval to wake the device into a working state.

Note: It is not that the data is reported immediately upon detection of vibration.

Deep sleep mode-low battery

When the device's charge is less than 5%, the battery protection mechanism is triggered, and the device

enters deep sleep. Only charging and Bluetooth connection will wake the device to work, after waking the device during the operation of the device without vibration or other events, the device will work for 3 minutes and then enter sleep mode

Reference Working Hours

4G JT301A	Data Uploading Interval /Working Mode	Working hours
4G JT301A	24 data a day	About 100 days
4G JT301A	12 data a day	About 160 days
In this test, the working time of the device is carried out at room temperature, the SMS wake-up is not turned on, and the test results are for reference only. In actual measurement and use, there will be differences of varying degrees due to different ambient temperatures, satellite positioning, working modes, etc. Please refer to the actual use.		

To use the device in Jointech Cloud platform

Login

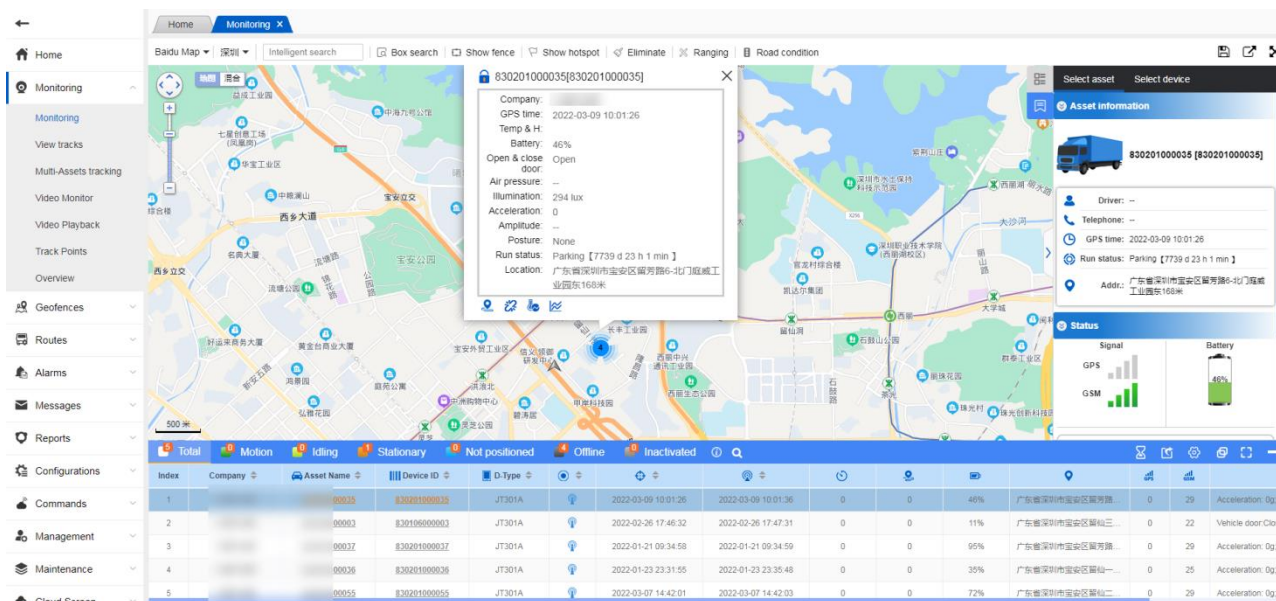
Please contact the sales to get login account in Jointech platform.

Manage your assets in the platform

Login Url:<https://icloud.assetscontrols.com:1443/>

Please refer the software operation manual to register new devices, monitoring, and view tracks etc.

The picture below is the screenshot of monitoring:



Installation





Trouble Shooting

Question 1	The device does not power on and the LED is not lit
Reason:	Battery may be low
Solution:	The power is exhausted, and the JT301 needs to be charged in time;
Question 2: The server cannot be connected to the first use	
Answer:	The device IP, Port, APN setting is not correct; Low power, the device is in deep sleep mode; The SIM card balance is insufficient and has been downed; There is PIN code required for SIM
Solution:	Use the configuration software to check whether the host IP, port, and APN parameters are correct Place the SIM card on another new JT301 device and confirm that there is nothing wrong with the SIM card itself.

FCC Caution:

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

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.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

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 distance between 20cm the radiator your body: Use only the supplied antenna.

Contact us

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