VT300 Series Vehicle Telematics Gateway User Manual-EN 1.1

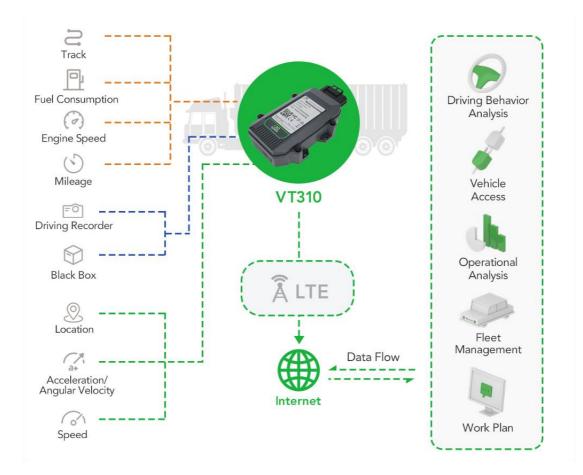


Chapter I Product Introduction and Preparation

1. Introduction

1.1 Overview

The VT300 series vehicle tracking gateway is an asset tracking product that features cost-effectiveness, rich interfaces and strong performance. It is suitable for industries such as logistics and transportation, engineering vehicle monitoring and so on. It offers precise positioning with GNSS, tracking and monitoring the status, history track, geofencing, abnormity alarm and other functions of vehicles and drivers, combined with the vehicle network cloud platform, can realize remote vehicle management, asset tracking, preventive maintenance, helping fleet operators save costs and improve efficiency. The device provides sub-models that support wireless network access of various speeds such as LTE CatM1, Cat1, Cat4, etc.



1.2 Packing List

1.2.1 Standard Packing List

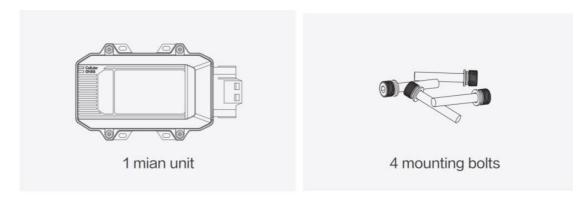


Image 1-2-1

1.2.2 Optional Accessories

Optional accessories are not included in the default equipment package and need to be selected according to the actual situation.

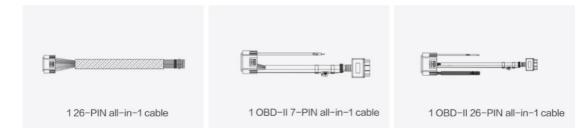


Image 1-2-2

Communication Cable	Order Number	Specifications		
26PIN all-in-one test cable	SCAB000229	The cable has P1 and P2 ends: P1 is 26PIN female, connected to VT310; P2 is open end, which requires a 9- 48V adaptor. Suitable for engineering environments and indoor tests.		
OBD-II7 PIN all-in-one cable	SCAB000231	The cable has P1, P2 and P3 ends: P1 is 26PIN female connected to VT310; P2 is OBD-II male connected to the vehicle; P3 is ignition signal terminal connected to the ignition on/off. Suitable for heavy trucks with OBD-II vehicle diagnostic interfaces, and powers VT310 through interfaces.		
OBD-II 26 PIN all-in-one cable		This cable has P1, P2, P3 and P4 ends: P1 is 26PIN female connected to VT310; P2 is OBD-II male connected to the vehicle; P3 is oper end that includes I/O, RS232-1 and 1-Wire; P4 is ignition signal terminal connected to the ignition on/off.		

Suitable for heavy trucks with OBD-II
vehicle diagnostic interfaces, and
powers VT310 through interfaces.
Recommended for customers who
need DI, DO, AI, 1-Wire devices or
vehicle-mounted controllers.

1.3 Product Appearance

1.3.1 Product Appearance Introduction

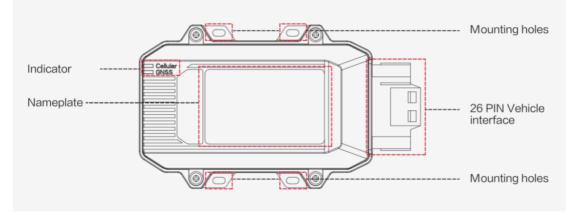
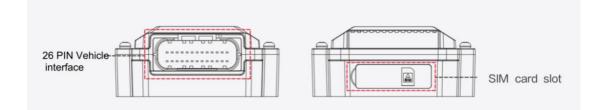
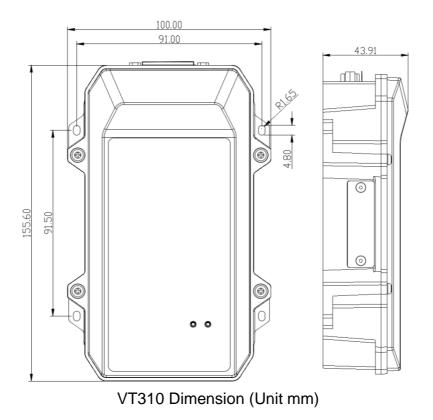


Image 1-3-1



1.3.2 Product Dimensions

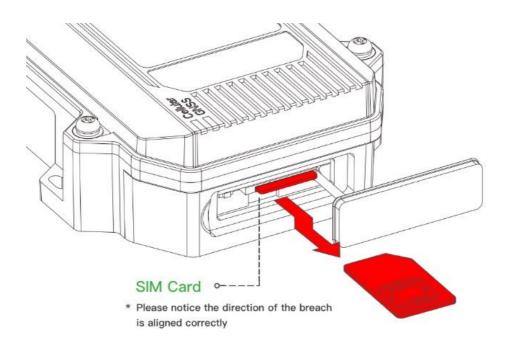


2. SIM and Cable Installation

For general cases, the device can be used after mounted onto the vehicle, with SIM card inserted and cable installed.

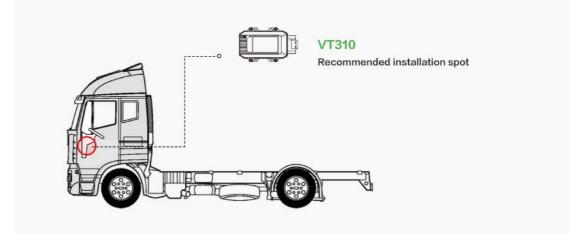
2.1 Install SIM Card

In the case of dial-up Internet access, a SIM card is needed. The VT310 will dial automatically once it is powered and started. Open the waterproof baffle on the downside of the VT310 and insert the SIM card into the slot in the direction shown in the picture.



2.2 Mount the Tracker

Customers can fix the VT310 onto the vehicle with installation bolts. It is recommended that the tracker be installed under the front windshield of the vehicle, where GPS signal is better received and connection to the OBD-II diagnostic interface is easier.



2.3 Introduction and Use of Cables

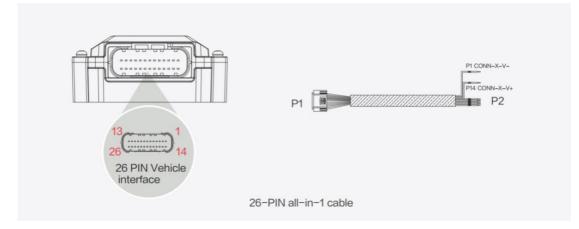
We offer three types of cables for different application scenarios. Wiring methods of them will be shown below respectively.

2.3.1 26PIN All-in-one Test Cable Link

This cable is suitable for indoor testing and the tracker login. A 9-48V adapter or 9-48V AC/DC power supply, a DB9-RS232 serial port female connector and a USB to serial port line are required, as are shown below.

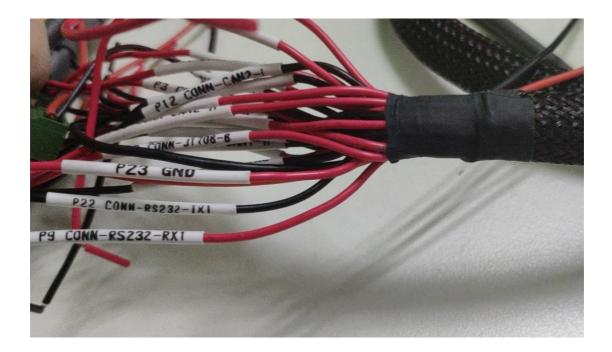


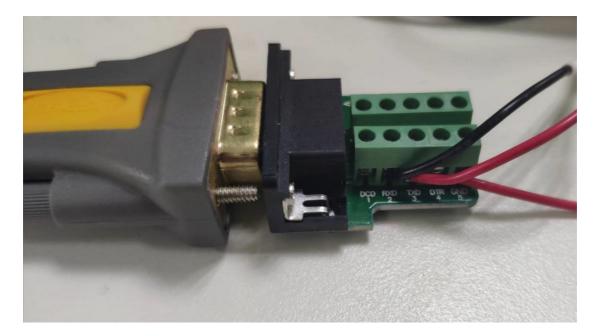
From left to right: Power supply module DB9-RS232 female connector, USB to serial port line



Steps:

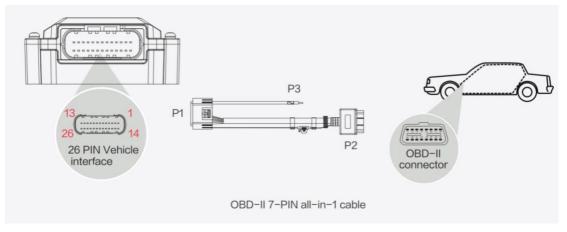
- 1. Insert the 26PIN female head of P1 into the VT310;
- Connect P1 CONN-X-V- and P14 CONN-X-V+ to the negative and positive poles of the power adapter respectively. P15 CONN-X-IGT and V + are both connected to the positive side of the power supply;
- 3. Connect the CONN-RS232-RX1, CONN-RS232-TX1 and GND (any) of the cable to the TXD, RXD and GND holes of the DB9 connector. Then connect the USB to DB9 cable to the computer, as is shown below.





2.3.2 OBD-II 7PIN All-in-one Test Cable

Suitable for heavy trucks with OBD-II diagnostic interfaces. The VT310 is powered by the ODB diagnostic interface, so the vehicle needs to be started to get the VT310 working.



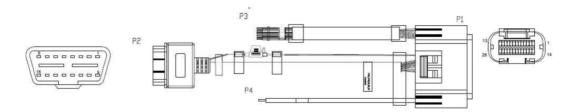
Steps:

- 1. Insert the 26PIN female head of cable P1 into the VT310;
- 2. Connect P2 to the OBD-II diagnostic interface of the vehicle;
- 3. If you need to judge whether the vehicle is ignited, you can connect P3 to the ignition switch of the vehicle.

2.3.3 OBD-II 26PIN All-in-one Test Cable

Suitable for heavy trucks with OBD-II diagnostic interfaces. The VT310 is powered by the diagnostic interface, so the vehicle needs to be started to get the VT310 working.

Compared with the OBD-II 7-pin all-in-one test cable, a 19-pin I/O bare wire end is added. This is recommended for customers with demand for I/O or 1-Wire hardware access.

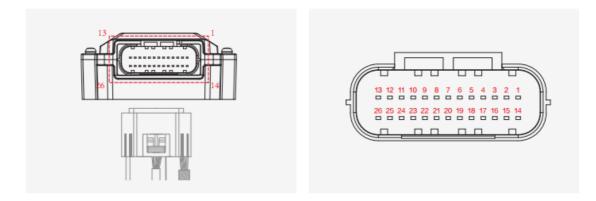


Steps:

- 1. Insert the 26PIN female head of cable P1 into the VT310 interface;
- 2. Connect P2 to the OBD-II diagnostic interface of the vehicle;
- 3. If you need to judge whether the vehicle is ignited, you can connect P3 to the ignition switch of the vehicle;
- 4. For P3 bare wire, you can connect your I/O devices according to your needs, which will be described later.

2.4 Connect to the I/O Interface

The I/O interface is integrated into the 26PIN vehicle interface, providing 3 digital outputs (max. current 300mA), 4 digital inputs, 1 analog input, 1 1-Wire, an RS232 serial port and an ignition signal. Following is an example of how to use the I/O interface.



2.4.1 Definition of 26PIN Interface

PIN	Name	PIN	Name	PIN	Name	PIN	Name
1	V-	8	1-Wire	14	V+	21	GND
2	GND	9	RS232_RX	15	IGT	22	RS232_TX
3	DI2	10	GND	16	DI1	23	GND
4	DI4	11	CAN_1L	17	DI3	24	CAN_1H
5	GND	12	CAN_2L	18	GND	25	CAN_2H
6	DO2	13	J1708_B	19	DO1	26	J1708_A
7	AI			20	DO3		

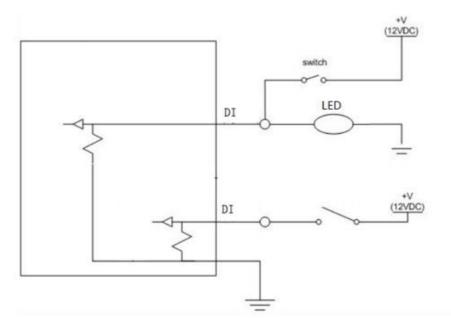
2.4.2 RS232 Serial Port

The RS232 serial port is used for debugging. Connect the RS232_RX, RS232_TX, and GND of the VT310 to TXD, RXD, and GND of the DB-9 serial port welding-free interface. Use RS232 to USB cable to connect with DB-9 serial port surface welding port.

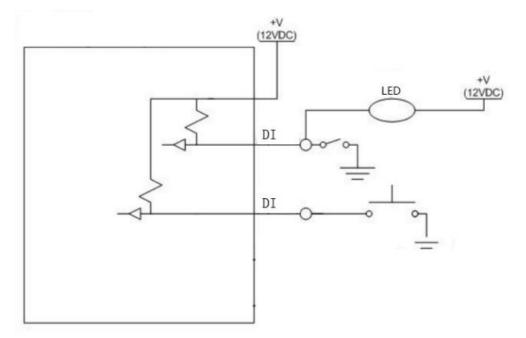
2.4.3 Digital Input (DI)

The DI can detect the switching value, such as whether the button is pressed or bounced, and whether the switch is on or off. The VT310 provides configurable pull-up. The DI has a default $10k\Omega$ resistor pulled down to GND. When the DI is configured to pull up, there is a $20k\Omega$ resistor pull up to the power supply voltage. When using DI, it is necessary to distinguish between pull-up and no pull-up.

When the DI has no pull-up power supply, the external circuit is connected as follows:

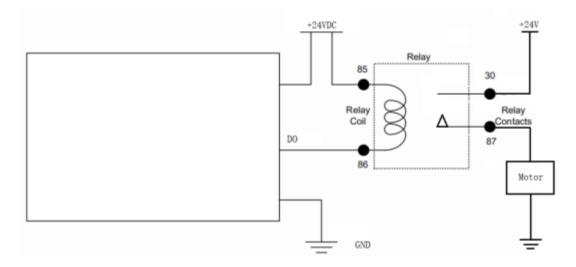


When the DI has a pull-up power supply, the external circuit is connected as follows:



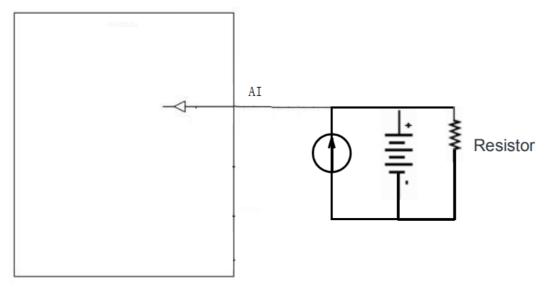
2.4.4. Digital Output (DO)

The DO can output DC voltage. The DO is an open-leakage output that supports a current of 300mA and usually works with relays.



2.4.5. Analog Input (AI)

The AI can detect DC voltage, and customers can directly access the analog quantity of voltage. External circuit is connected as follows:



2.4.6. 1-Wire

The 1-Wire is usually used for small communication equipment, such as digital thermometers and iButton devices. Before use, the customer needs to connect the DQ pin (signal line) of the 1-Wire device to the VT310 PIN8, and connect the VDD and GND pins of the 1-Wire device to the GND of the VT310. The sensor is the less02b type. The following picture shows the water temperature detection wires of the 32 digital temperature sensor probe.



2.4.7 Ignition Sense

IGT(Ignition sense): IGT is used to connect to the Ignition switch of the vehicle. The VT310 can detect whether the connected vehicle is ignited. When using the 20PIN cable for testing, connect the IGT cable and V+ cables to DC power supply.

3. Start the VT300

After the customer completes the installation according to the above steps, the device can be started for debugging. The condition of the device can be told through the status indicator. To avoid consumption of battery power during transportation, the device is under transportation mode in the factory state. The VT310 needs to be activated by external power supply or the vehicle diagnostic interface.

3.1 GNSS Status Light

Indicator Status	Function status
Long annihilation	The device is not started or the GNSS function is disabled.
Flash (frequency: 0.5Hz)	GNSS 授时成功 GNSS delivery successful
Slow flash (frequency: 1Hz)	GNSS function enabled
Solid	Location success 定位成功

3.2 Cellular Status Light

Indicator status	Function status
Long annihilation	The device is disabled or the dialing function is disabled.
Flash (frequency: 0.5Hz)	Dialed successfully
Slow flash (frequency: 1Hz)	Dialing enabled

Chapter II Login and Device Configuration

1. Install the Configuration Tool

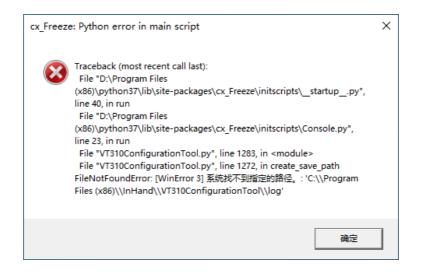
The tool software supports the installation OS environment: Windows 10;

1.1 Download Configuration Tools

Enter the Download Center of InHand's <u>Website</u>, and download the tool from the Vehicle Gateway Part >>InVehicle T310 Tracker. Download the configuration tool installation package in the product documentation. Select the default path to complete the installation, as is shown below.

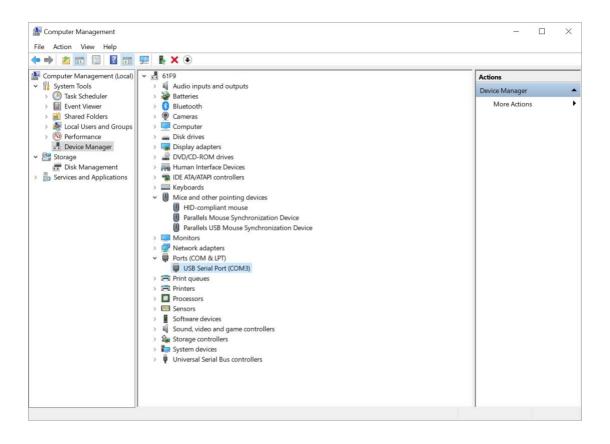


• If the following error occurs after installation, choose "Run as administrator" to open the software, as is shown below.



1.2 Search for the COM Port Number

Power the VT310 with an external adapter through the 26PIN all-in-one test cable. The VT310 is connected to the computer through a USB to serial port cable. If the GNSS or cellular light flickers, the device is started successfully. Enter the device management page of the computer and observe the COM slogan in the "device manager"> "ports (COM and LPT)" of the computer, as is shown below.



1.3 Login to the Device



Click "Connect device", enter the user name and password (default:

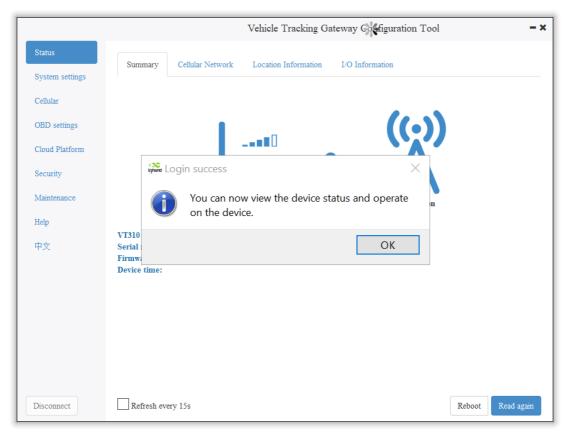
admin/123456), select the recorded serial port, baud rate (default: 115200), and click "connect", as is shown below.

	Vehicle Tracking Gateway Configuration Tool	-
Status	Summary Cellular Network Location Information I/O Information	
System settings Cellular	Connect to VT310	
OBD settings	Username Connect via serial port Connect via bluetooth	
Cloud Platform Security	admin Serial port COM3 Refresh Serial	
Maintenance	Password	
Help 中文	Baud rate 115200 -	
	Property 8 - None - 1 -	
	Cancel Connect	
Connect	Refresh every 15s	Read again

You can also use computer Bluetooth (4.2 or above) to connect the device. Click "Connect device", enter the user name and password (default: admin/123456), select the Bluetooth device with the same name as the device SN (SN can be found on the device nameplate), and click Connect ", as is shown below.

	Vehicle Tracking Gateway Configuration Tool -
Status System setting: Cellular OBD settings	Summary Cellular Network Location Information L/O Information Connect to VT310 Image: Connect to VT310 Image: Connect to VT310 Image: Connect to VT310
Cloud Platform Security Maintenance Help 中文	Username Image: Username Connect via serial port Connect via bluetooth admin Select Device Please select a device Refresh Device List Forget password?
Connect	Cancel Connect Cancel Refresh every 15s Reboot Read again

In the dialog box that pops up, you can view the device status and perform operations on the device. Click OK to preview or modify the configuration, as is shown below.



Login succeeded

2. Inquire Status Information

2.1 Mobile Network Parameters

On this page are mobile network link parameters, which are used mainly to check whether the wireless network link is normal. All parameters read when the SIM is not inserted are default parameters. After the device is connected to the Internet through the SIM card, it can obtain the IP address for data transmission. For configuration of mobile network parameters, please refer to Section 4 Configure the Cellular Network.

Parameter	Description
Signal value	Indicates the signal strength of the connected wireless network. Valid values: 0 to 31.
MCC/NMC	MCC (mobile country code), MNC (mobile network code), read from the SIM card

SIM card status	Normal/Unidentified
IMEI	The International Mobile device identification code (International Mobile Equipment Identity) is the built-in dialing module code of the vehicle gateway.
Registration	Registered/Not registered
LAC	LAC(Location area code), obtain this parameter from the base station after dialing successfully
IMSI	IMSI(International Mobile Subscriber Identity) this parameter is read from the SIM card
CELL ID	This parameter is obtained from the base station after dialing successfully.
ICCID	The ID of the integrated circuit card is the SIM card number and ICCID (integrated circuit card identity). This parameter is read from the SIM card.
IP ADDRESS	After the dialing is successful, the carrier assigns the IP address of the network access.
Cellular status	Connected/Not connected
Authentication method	CHAP/PAP

		Vehicle Tracking C	ateway Configurati	ion Tool –
Status System Settings	Summary Cellular Network	Location Information	I/O Information	
Cellular	Physical Layer Inform	nation:		
OBD Settings	Module status: Normal Signal Level: 19(61%)	IMEI: Registration status	352835102369918	CELL_ID: 71CF520 ICCID: 89860118802389175312
Cloud Platform	MCC/MNC: 460/01 SIM status: Normal	LAC: IMSI:	EA00 460010100114835	CCD. 090011000230917551.
Security	Network Information:	:		
1-Wire				
Maintenance	Ip address: Cellular network status:	10.1.126.130 Connected	Authentication:	CHAP certification
Help				
中文				
Disconnect	Refresh every 15s			Reboot Read again

2.2 Location Information

The location information page shows the latest parameters obtained by the GNSS module. It includes location information and related parameters of the inertial sensor. As is shown below.

			Vehicle Tracking	Gateway Confi	guration Tool	- ×
Status System settings	Summary	Cellular Network	Location Information	I/O Informat	ion	
Cellular	Location	Information:				
OBD settings	Longitude: Altitude:	104.053 397.399		Latitude: Satellites:	30.58 10	8234 °N
Cloud Platform	Speed: HDOP:	0.00000		Course: Status:	0.000 Fix	000 °
Security	Dead Rec	koning:				
Help	Acc X Axis: Gyro X Axis:	-9.028000 mg -910.000000 mdps	Acc Y Axis: Gyro Y Axis:	7.564000 mg 0.000000 mdps	Acc Z Axis: Gyro Z Axis:	-993.080017 mg -280.000000 mdps
中文						
Disconnect	Refresh even	ry 15s				Reboot Read again

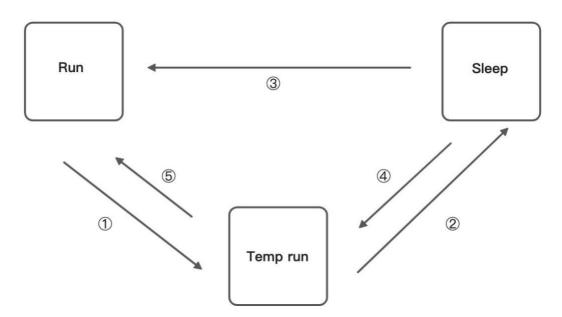
2.3 I/O Information

	Vehicle Tracking Gateway Configuration Tool			
Status	Summary Cellular Network	Location Information	I/O Information	
System settings				
Cellular	I/O Information:			
OBD settings	Ignition Signal:			High
	Digital Input 1:			Low
loud Platform	Digital Input 2: Digital Input 3:			Low Low
ecurity	Digital Input 4:			Low
	Analog Input[mv]:			0
faintenance				
	1-Wire:			
elp				
中文	1-Wire Type:		Unknown	
	1-Wire ROM ID: 1-Wire Data:		Unknown Unknown	
Disconnect	Refresh every 15s			Reboot Read again

3. System Settings

3.1 Sleep Mode

The sleep mode ensures the battery life after flameout, providing continuous guarantee for special environments. The state machine is as follows:



Description of the state machine:

Run, Sleep, and Temp run represent normal running status, sleep status, and temporary running status respectively.

(1) Corresponding to the state machine, the condition from Run to Temp run is that the power supply voltage is less than sleep voltage (6V by default) or IGT OFF (IGT needs to be enabled in the configuration), by default, the device continues to run for 15Stemp (for reporting information) and then enters Sleep.

② Corresponding to the state machine, the condition of entering Sleep from the Temp run is that after the device runs a wake-up runtime cycle in the Temp run or after the device runs Temp Run for 15s from run.
③ Corresponding to the state machine, the condition from Sleep to Run is that the power supply voltage is greater than Sleep voltage or IGT ON (IGT needs to be enabled in configuration).

④ Corresponding to the state machine, the condition of entering the Temp run from Sleep is that after the device runs a wake-up interval in Sleep.

(5) Corresponding to the state machine, the condition from Temp run to Run is that the power supply voltage is greater than sleep voltage or IGT ON (IGT needs to be enabled in configuration).

Parameter	Description
Enable IGT	After IGT is enabled, the device uses the IGT status as the condition for entering or exiting Sleep. The IGT status is not ticked by default.
Wake-up interval	The interval between the device automatically wakes up in Sleep, whose default value is 120 minutes.
Wake-up time	The interval between the time when the device enters the next Sleep, whose default value is 5 minutes.

Configure the sleep mode:

		Vehicle Tracking Gateway Configuration	Tool – ×
Status	Sleep mode Account		
System settings Cellular	Enable IGT		
OBD settings	Wakeup interval	0	Minutes
Cloud Platform	Wakeup runtime	5	Minutes
Security Maintenance			
Help			
中文			
Disconnect			Read again Save configurations

3.2 Account Settings

This function allows the device administrator to modify the device administrator login information. The default administrator account is admin, password 123456. The device administrator can modify the configuration options if necessary. After the modification, the device prompts a restart. Click OK to restart the device and log in with the modified administrator account and password. As is shown below.

			Vehicle Tracking Gateway Confi	guration Tool	-
Status	Sleep mode	Account			
System settings Cellular	Administrator :	account			
OBD settings	Administrator 1	password			
Cloud Platform	Confirm passw	vord			
Security					
Maintenance Help					
中文					
Disconnect				Read again	Save configurations

4. Configure the Cellular Network

Click "Cellular" to enter the configuration page. Generally, customers only need to configure "Network Access Point Name (APN)", "Network dialing user name", "Network dialing password" and "Authentication mode" and click "Save configuration". The device takes effect after restarting. If the customer has special trial scenarios, click "Show Advanced Options" to see hidden configuration items. Configure the network dial number, PIN, and default host APN as needed. As is shown below.

		Vehicle Tracking Gateway Configuration Tool
Status		
System settings	APN	uninet
Cellular	Network dial username	gprs
OBD settings	Network dial password	
Cloud Platform	Authentication mode	Auto
Security	Addionication mode	Auto
Maintenance	Show Advanced Option	
Help	Network dialing number	*99***1#
中文	PIN	
	Default bearer APN	uninet

Parameter	Description
APN	This parameter is required when the APN private network is connected to the mobile network. Most public network service SIM cards do not authenticate APN when dialing.
Network dialing username	The default parameter is "gprs". When the private network is AAA certified, the mobile network operator needs to provide this parameter.
Network dialing password	The default parameter is "gprs". This is required by the carrier during the AAA certification for the private network.
Authentication mode	Automatic/CHAP/PAP. This parameter is required when the private network is AAA certified. Automatic: take turns to use PAP and CHAP authentication to dial (pap authentication is used for the first power-on, if dialing fails, chap authentication is used for dialing again, and pap authentication is used for the next dialing, and so

	on. If the authentication mode is not automatic, but PAP or CHAP, use only PAP or CHAP authentication to dial.
Network dial number	The default parameter is * 99 *** 1#, which is required
	by mobile network operators.
	PIN (Personal Identification Number) refers to the
	Personal Identification password of the SIM card. When
PIN	the SIM card is enabled for PIN verification, does it fill in
	the corresponding PIN of the SIM card. This parameter
	is required for mobile network operators.
Default carrier APN	This parameter is provided by the carrier.

▲ The default host setting is a function for special data transmission required by some carriers, which generally does not need configuration. If configuration is required, please inquire from your carrier.

5. Configuration of Vehicle Diagnostic

Interface

The on-board diagnostic interface is the South interface of the tracker and the configuration option of the protocol.

5.1 Configure ODB Interface

In the configuration tool, select OBD as the diagnostic protocol. The ODB protocol is the CAN2 interface and J1708 interface of the vehicle tracker.

Parameter	Description	Others
J1939/J1979	ODB CAN2 interface protocol, corresponding to physical layer PIN CAN_2L(PIN 12) and CAN_2H(PIN 25)	OBD default configuration

J1939	ODB CAN2 interface protocol, corresponding to physical layer PIN CAN_2L(PIN 12) and CAN_2H(PIN 25)	
J1939	ODB CAN2 interface protocol, corresponding to physical layer PIN CAN_2L(PIN 12) and CAN_2H(PIN 25)	
J1708	J1708 interface protocol, corresponding to physical layer PIN J1708_ B(PIN13) and J1708_A (PIN 26)	
Auto	When set to Auto mode, the vehicle tracker will poll the link and automatically poll and send the protocol data of the above four options for link testing. When receiving data packets of the corresponding protocol, the vehicle tracker will choose this protocol for communication.	When Auto mode is used, the CAN1 and J1708 interfaces are enabled at the same time.
Disable	Disable ODB CAN2 and J1708	

		Vehicle Tracking Gateway Configuration Tool	- >
Status	OBD CAN1		
System settings	OBD CANI		
Cellular	Protocol type	J1939/J1979 👻	
OBD settings		J1939/J1979	
		Auto J1939	
Cloud Platform		J1979	
Security		J1708	
Maintenance		Disable	
Help			
-			
中文			
Disconnect		Read again Save	e configurations

5.2 Configure CAN1 Interface

In the configuration tool, select CAN1 as the diagnostic protocol and the

CAN1 interface of the vehicle tracker.

Parameter	Description	Others
J1939/J1979	CAN1 interface protocol, corresponding to physical layer PIN CAN_1L(PIN 11) and CAN_1H(PIN 24)	CAN1 default configuration
J1939	CAN1 interface protocol, corresponding to physical layer PIN CAN_1L(PIN 11) and CAN_1H(PIN 24)	
J1939	CAN1 interface protocol, corresponding to physical layer PIN CAN_1L(PIN 11) and CAN_1H(PIN 24)	

sable	Disable	e CAN1	
		Vehicle Tracking Gateway Configuration Tool	- ×
Status	OBD CAN1		
System settings	Protocol type	J1939/J1979	
Cellular		J1939/J1979	
OBD settings		J1939	
Cloud Platform		J1979 Disable	
Security		Disable	
Maintenance			
Help			
中文			
Disconnect		Read again Save of	configurations

• The function of CAN1 and OBD can be enabled at the same time.

6. Configuration of the Cloud Platform

The configuration of the cloud platform is the North-direction interface and protocol configuration option of the vehicle tracker. The VT310 can only be connected to one cloud platform at a time. The configuration of the platform takes effect only after the device is restarted. Click "Platform" to enter the configuration page. Click "Modify" to enter the configuration page. As is shown below.

	Vehicle Tracking Gateway Configuration Tool				
Status	Function Status	Connection Status	Platform Type	Connected Domain	Action
System settings	Enabled	Disconnect	Smartfleet	che.inhandiot.com	Modify
Cellular					
OBD settings					
Cloud Platform					
Security					
Maintenance					
Help					
中文					
Disconnect					Refresh Configuration

6.1 SmartFleet Platform

The SmartFleet platform is a SaaS platform for the Internet of Vehicles market launched by InHand Networks. It mainly includes vehicle profile, alarms, driving behavior monitoring, statistical analysis of driving information, electronic fence and other functions. Through the visual user interface and simple operation, you can manage and monitor your hardware devices such as the InVehicle Gateway with speed and ease. Deployment in the cloud allows you to focus on your core business. Login address: https://che.inhandiot.com. For more information about the platform, please visit https://www.inhandnetworks.com and chat with us.

Cloud Platform >> Platform Type: SmartFleet, Cloud Platform >> Enable Cloud Platform >> Domain name: smartfleet.cloud Cloud Platform >> Account (Enter the platform's registered account) Cloud Platform >> License Plate Number Click "Show Advanced Options" to show hidden configuration items. Configure the LBS reporting interval, traffic reporting interval, and heartbeat reporting interval as needed. The reporting interval is measured in seconds, as is shown below. Click "Save configuration" and restart the device. As is shown below.

Status	Vehicle Tracking Gateway Configuration Tool				
	Function Status	Connection Status	Platform Type	Connected Domain	Action
System Settings	Enabled	Connected	Smartfleet	smartfleet.cloud	Modify
Cellular					
OBD Settings					
Cloud Platform					
Security					
1-Wire					
Maintenance					
Heip					
中文					

On the Cloud Platfrom homepage, view the link status of the platform. The link status is "linked". As is shown below.

Log in the platform and choose Gateways >> Gateway List. You can see if the vehicle tracker is online. As is shown below.

Smart Fleet	Home	Vehicle Ga	teway Events	Reports …			8 liwei@inhand.co
me / Gateway List							
All Online	Offl	ine					
Name V Plate Num	nber	Custome	er name: All Custo	mers V	Search Reset		Export
Name	Signal	Battery Voltag	e SN	IMSI		Current Version	Operation
• JI A3L731	att		RW911120170118	1 Analog	data	3731951254	2 -
• JHZ9022	att		VF3102102000207	460010	100114835	VT3_V1.0.26	2
2 records in total; page 1 o	f1					<	< 1 > 10 / page >

6.2 Wialon Platform

Wialon has more than 18 years of best practice in software engineering in the area of GPS vehicle tracking and a team of talented specialists committed to the common goal. The community is united by continuous advancement of the proprietary products and five offices around the world - the headquarters and development center in Minsk and sales offices in Moscow, Boston, Dubai and Buenos Aires. Nowadays solutions by Gurtam take up about 36% of the CIS commercial carrier market and are actively expanding to Europe, the Middle East, the USA, South America, Africa and Australia, with even New Zealand market tapped. For more information, visit <u>https://gurtam.com/en/wialon</u>. To test the Wialon platform, you can contact manager Sun sunzd@inhand.com.cn for more support. Cloud Platform >> Platform Type: Wialon, Cloud Platform >> Enable Cloud Platform >> Domain name: nlgpsgsm.rog Cloud Platform >> Port : 21000 Cloud Platform >> Account (Enter the platform's registered account) Cloud Platform >> License Plate Number

To adjust the reporting frequency, click "Show Advanced Options" to show hidden configuration items. Set the reporting interval reporting interval in seconds. As is shown in the following.

		Vehicle Tracking Gateway Configuration Tool
Status		
System Settings	Platform Type	Wialon 👻
Cellular	Enabled	\checkmark
OBD Settings	Domain	nl.gpsgsm.org 👻
Cloud Platform		
Security	Port	21000
1-Wire	Show Advanced Option	
Maintenance		
Help		
中文		

If you have obtained an independent domain name provided by Wialon, enter the custom domain name and port number. As is shown below.

		Vehicle Tracking Gateway Configuration Tool
Status		
System Settings	Platform Type	Wialon
Cellular	Enabled	V
BD Settings	Domain	nl.gpsgsm.org 👻
loud Platform		
ecurity	Port	21000
-Wire	Show Advanced Option	
laintenance	Upload Interval	3
lelp		
中文		

6.2.1 Configuration on Wialon Platform

Platform website: https://hosting.wialon.com

New devices:

🗘 ယ၊်ဂါဝဂ 🔟 Dashboard 🚱 Monitoring 🕮 Tracks	E Me	assag	es	🗟 Reports 🛟 Geofences 🕭 Routes 😠 Drivers 🗟 Trailers 🎉 Passengers 🖸 Jobs 🔞 Notifications 🤱 User, 屎 Units
Units Groups				N Q Visition The North Western GREENLAND Biorents See
New Create from WLP Q. Search				Passages Passages Baffin Bay
ź	+	ъ	×	
3Pillarstc_001	4	η	×	
20201116	4	η	×	Davis Stratt NORTHATLANTIC
A-show	4	$\eta_{\rm H}$	×	+ ICELAND ICELAND
Evan_device_1	4	$\eta_{\rm I}$	×	- Dovis Strat
FQ58	4	r _{it}	×	Hudson Bay
FQ58-LIYB-1	4	r _i	×	North Sea
FQ58-v1.0.11-01	4	r _i	×	Labrador Sea North Sea Baltic Sea
FS31-Evan-test	4	$\eta_{\rm H}$	x	IRELAND

The device configuration information is as follows:

- Name: Custom
- Device Type: Select "Wialon Combine"
- Special ID: Enter the device-specific serial number. View the serial number of the device or the serial number on the status page of the configuration tool. The information shown in the following figure is for example only.

General	Access Icon Advar	nced Sensors	Custom Fields	Unit Groups	Commands	Eco Driving	
Profile Tr	ip Detector Service Inte	ervals					
	Unified library of ve	hicle types!				×	
-		the library are the san	ne for all users. To be	able to search for u	nits by vehicle type	on	
		and to display vehicle t					
		previously are saved i	in the "Comment" field	d.		Try it	
Name: *	us-FS31-Ming						
Unit type:		~					
Device type: *	Wialon Combine	🔧 Wialon Comb	oine WiaTag InHa	and VT310			
Server address:	nl.gpsgsm.org:21000	P					
Unique ID:	VF3102104000						
Phone number:							
Password:							
Creator:	inhand_free	~					
	inhand free						
Account:	innanu_nee						

6.2.2 View Data Uploaded by Devices

- ① Select "Message"
- 2 Select the name of the target device to be viewed
- ③ Select the time range of interest
- (4) Select the data type. Currently the colelcted I/O data is viewed through

Raw Data

(5) Click the "Execute" button to view the information of the target device at

the position of 6, as is shown below.

🔷 🔘 wir		Tracks 📄	Messa		eri 🛕 Routes 😝 Drivers	🔜 Trailers 🦹 Passer	🕄 Jobs	Notificat	& Users	🕞 Units		inhand_free
Unit	test1	• •2	Q	Û								
Today	Yesterday Week Mor	ith										
Interval:	Specified interval	• 3								đ		
From:	2020 April 02 00:00		PU		-				VT310_	_FS31_zy2	+	
To:	2020 April 02 23:59				0	4			+			
Message type:	Data messages	•	+	4 	VT310_FS31_zy3							
Show parameters as:	Raw data	• ④	P-					and the second				
parametero do.	Clear Exec	ute (5)	1 201	n I			VT310)_FS52_De	ev_new			
			10	0 ft enStreetMap contributor							N 30° 35.2946	: E 104º 03.1809'
	Result	-								-		
Statistics Total messages	2											
Total time:			#	∽ Time	Parameters			Media				
Distance:	0.00 km		1	2020-04-02 11:00:02	param2=0, param3=3346, pa					6		
Average speed:			2	2020-04-02 10:59:51	param2=0, param3=3352, pa	aram4=0, param1=4.926875	15694e-38, I/O=I	0				
Maximum speed	t:	L										
E	Export and Import Messages		? →	50 • « < Pa	age 1 of 1 > >>	Displaying 1 to 2 from 2 me	ssages		7	₹ × :		

Note: The information display of the target device can be selected by clicking the configuration method, as is shown below.

	* Time	Parameters	Media	
	2020-04-02 11:00:02	param2=0, param3=3346, param4=0, param1=4.92687515694e-38, I/O=0		
2	2020-04-02 10:59:51	param2=0, param3=3352, param4=0, param1=4.92687515694e-38, I/O=0		

6.3 Azure IoT Hub

Azure IoT builds IoT applications that offer highly secure and reliable two-way communication between IoT applications and their managed devices. Azure IoT Center provides the back end of cloud hosting solutions, which can

connect to almost any device. The solution is extended from the cloud to the edge through authentication, built-in device management, and extended configuration of each device. For more information, visit https://azure.microsoft.com/zh-cn/services/iot-hub

Cloud Platform >> Platform Type: Azure IoT

Cloud Platform >> Enable

Cloud Platform >> Connect String

The Connect String is created from Microsoft IoT platform. See in the next section.

To see invalid data, click "Show Advanced Options" to view hidden configuration items. Tick "Show Invalid Data", as is shown below.

		Vehicle Tracking Gateway Configuration Tool
Status System Settings	Platform Type	Azure IoT 🗸
Cellular	Enabled	
OBD Settings	Connect String	HostName=VT310.azure-devices.cn;DeviceId=;SharedAccessK
Cloud Platform	Show Advanced Option	
1-Wire	Publish Invalid Data	\checkmark
Maintenance		
Help		
中文		
Disconnect		Back Read again Save configurations

6.3.1 Configure Azure IoT Platform

 Before configuring the Connect String, log in the Azure IoT platform to create a device. In the left-side navigation pane of the IoT Center, choose "IoT devices", and then select "New". As is shown below.

Home > All resources > iot-hub-contor	so-one - IoT devices				
iot-hub-contoso-one - le	oT devices				\$ X
	+ New 🖒 Refresh 📋 🛙	Delete			
Overview	View, create, delete, and upd	late devices in your IoT Hub.			
Activity log					
Access control (IAM)	Field		Operator	Value	
🥏 Tags		ter a property name	~ =	✓ specify constraint value	
🗲 Events	+ Add a new clause				
Settings	Query devices				Switch to query editor
Shared access policies	DEVICE ID	STATUS	LAST ACTIVITY TIME (U	JTC) LAST STATUS UPDATE (UTC)	AUTHENTICATION T CLOUD
Pricing and scale					
∃ → IP Filter	No results				
🔎 Certificates					
e Built-in endpoints					
Manual failover (preview)					
E Properties					
Locks					
Export template					
Explorers					
Query explorer					
IoT devices					
Automatic Device Management					
~					

 On the "Create a device" page, provide the name of the new device, such as myDeviceId, and then select "Save". This creates a device identifier for IoT Center. As is shown below.

Home > All resources > iot-hub-contoso-one - IoT devices > Create a device		
Create a device		×
Find Certified for Azure IoT devices in the Device Catalog	Z	
* Device ID 🛛		٦
myDeviceId	~]
Authentication type 👩		
Symmetric key X.509 Self-Signed X.509 CA Signed		
* Primary key 🚯		
Enter your primary key		
* Secondary key 🗊		
Enter your secondary key		
Auto-generate keys 👔 🔽 🔽 Connect this device to an IoT hub 🚯		
Enable Disable		
Parent device 👩		
No parent device Set a parent device		
Save		

 After creating the device, open the device in the "IoT devices" pane. Copy the "Primary Connection String" and later paste to the "Connection String" of the configuration tool ". As is shown below.

nyDeviceId			
t-hub-contoso-one			
🛛 Save 🛛 Message to Device 🗡 D	rect Method 🕂 Add Module Identity 🔳 Device Twin 🔍 Manage keys 🗸 🕐 Refresh		
Device ID	myDeviceId		Į
trimary Key 🌘	HZAww1PN3suNBkailQU1UeEilNB3j0=	\$] (
econdary Key 🌘	G7615rzcbqyWFzcfTigmad55lGVa4I=	ଷ୍ଡ] q
rimary Connection String 🌘	HostName=iot-hub-contoso-one.azure-devices.net;DeviceId=myDeviceId;SharedAccessKey=QdSim6i7cptUCeMYGVSeiRKOV2ZGFSJpbmykIVYM9df=	ଷ୍ଡ	Q
econdary Connection String 🌘	HostName=iot-hub-contoso-one.azure-devices.net;DeviceId=myDeviceId;SharedAccessKey=q32joiXuw/fEXbbqKYKjv8sF82qZInqzGZspqkl2nqz=	ଙ୍କ] q
nable connection to IoT Hub 🌘	Enable Disable		
arent device 🌘	No parent device		
Module Identities Configurations			
MODULE ID	ONNECTION STATE CONNECTION STATE LAST UPDATED (U LAST ACTIVITY TIME (UTC)		

6.4 AWS IoT Platform

With the AWS IoT Core, you can connect your IoT devices to the AWS cloud without configuring or managing the server. The AWS IoT Core supports billions of devices and trillions of messages, and can process those messages before routing them to AWS terminal nodes and other devices with security and reliability. With the AWS IoT Core, your applications can track all devices and communicate with them anytime, even if those devices are not connected. Build your IoT applications with AWS services, so that you can collect, process and analyze data generated by connected devices and take action without managing any infrastructure. For more information, please visit https://aws.amazon.com/iot-core/.

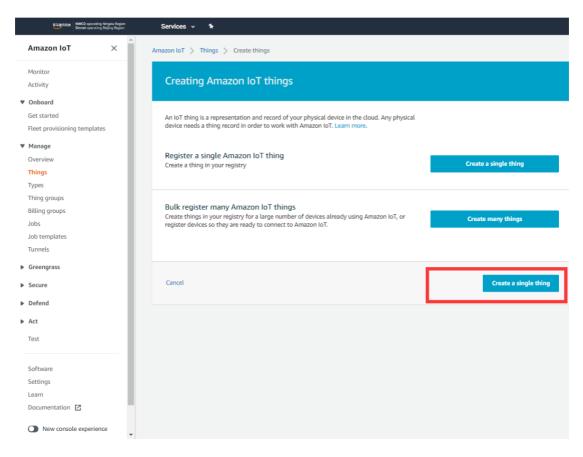
6.4.1 Configure AWS IoT Platform

Method 1: Creat A Thing for link

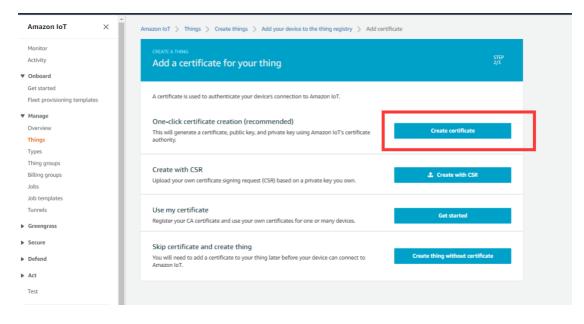
 Go to the Amazon IoT console >> Things page, and click "Create", as is shown below.

Amazon IoT ×	Anazon IoT > Things Things	[Create
Onboard Get started	Search things Q Plant to dealing into		
Fleet provisioning templates Manage	Name test_V73102102000178	Туре \/T310	
Overview Things	test	NO TYPE	
Types Thing groups Billing groups	text, text, Texh	NO TYPE VT310	
Jobs Job templates	test Booffest	VT310	
Tunnels Greengrass	C test_VT3109999999999	VT310	
Secure	test_VF3102102000169	VT310 VT310	
Defend	□ VT310V3102/00169	VT310 VT310	
Test	VT310_CURT_PROVISION	VT310	
Software	c testil_Core	NO TYPE	
Settings Learn Documentation	2 xb,1g V1310, V93102102000169	NO TYPE VT310	
New console experience	U V66511	NO TYPE	

Amazon IoT >> Things >> Create a single thing



Amazon IoT >> Things >> Create a single thing >> Add your device to the thing registry >> Add certificate On this page, create a certificate for the thing just created, as is shown below.



2. Download certificate file

- Download certificate >> A certificate for the things >> Download the file format is as follows: ***.cert.pem;
- Download private >> A private key >> Download. The file format is:
 ***.private.key;
- AWS CA files have been download in the vehicle tracker, so you do not need to Download CA files. If you need to update, click "A root CA for Amazon IoT Download";
- Click "Activate" to activate the certificate of the thing;
- Click the "Attache a policy", enter additional policy page. As shown in the following illustration.

Amazon IoT ×	
Monitor	⊘ Success
Activity	Successfully generated certificate. Please download certificate files.
♥ Onboard	
Get started	
Fleet provisioning templates	Certificate created!
▼ Manage	
Overview	
Things	Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved
Types	Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved after you close this page.
Thing groups	
Billing groups	In order to connect a device, you need to download the following:
sdoL	A certificate for this thing da3668b653.cert.pem Download
Job templates	A public key da3668b653.public.key Download
Tunnels	
Greengrass	A private key da3668b653.private.key Download
Secure	You also need to download a root CA for Amazon IoT:
Defend	A root CA for Amazon IoT Download
▶ Act	Activate
Test	
Software	
Settings	Cancel Done Attach a policy
Learn	

• On the "Attach a policy" page, config additional policy for the certificate and click "Register Thing" to register the item, as is shown below.

4onitor Activity	CREATE A THING Add a policy for your thing	STEP 3/3
Onboard		
Set started	Select a policy to attach to this certificate:	
leet provisioning templates	Select a policy to attach to this certificate:	
Manage	Q. Search policies	
Overview	VI3T0_POLICY	Hide
Things		Hide 🔺
ypes	{	
'hing groups	"Version": "2012-10-17", "Statement": [
Billing groups	{ "Effect": "Allow",	
obs	"Action": "iot:*",	
ob templates	"Resource": "*" },	
unnels	{ "Effect": "Allow",	
Greengrass	"Action": ["iot:Publish",	
	"iot:Receive"	
Secure], "Resource": "*"	
Defend	}, {	
Act	"Effect": "Allow", "Action": "iot:Subscribe",	
	"Resource": "*"	
'est		
	VG710sample	View
oftware		····· •
ettings		
earn		
Documentation 🛛	1 policy selected	Register Thing
New console experience		

- 3. Use the configuration tool to import the certificate file to the tracker
- Security >> Import digital certificate >> Select a certificate (select the downloaded digital certificate ***.cert.pem in the displayed dialog box); click "Import certificate"
- Security>> Import private key certificate >> Select a file (select the downloaded digital certificate ***. private.key in the dialog box that appears); click "Import file";
- As the AWS CA files have been built into the vehicle tracker, there is no need to download them. If you need to update them, go to Security >> Import CA certificate >> Select a file (select the downloaded digital certificate ***. private.key in the dialog box that appears); click import certificate, as is shown below.

		Vehicle Tracking Gateway	Configuration 1001
Status			
System Settings	Import certificate		
Cellular	Import DC	Select file	Select certificate Import certificate
OBD Settings	Import private key	Select file	Select file Import file
Cloud Platform	Import CA	Select file	Select certificate Import certificate
Security			
1-Wire			
Maintenance			
Help			
Maintenance Help 中文			

4. Enable AWS Platform

Cloud Platform >> Platform Type: AWS IoT Cloud Platform >> Enable Cloud Platform >> Domain name Cloud Platform >> Port: 8883

		Vehicle Tracking Gateway Configuration Tool
Status		
System Settings	Platform Type	AWS Iot
Cellular	Enabled	\checkmark
OBD Settings	Domain	
Cloud Platform	Port	8883
Security		
1-Wire	Enable Device Provision	
Maintenance	Show Advanced Option	
Help		
中文		
Disconnect		Back Read again Save configurations

"Cloud Platform >> Domain name" AWS IoT >> Things >> "Select the created things" >> Interact Copy this domain name paste to "Cloud Platform >> Domain name"

Amazon loT ×	Amazon IoT > Thing	s >	
Monitor Activity	THING		
Onboard Get started	NO TYPE		Actions -
Get started Fleet provisioning templates	Details	This thing already appears to be connected.	Connect a device
Manage	Security		
Overview	Thing groups	HTTPS	
Things	Billing Groups	Update your Thing Shadow using this Rest API Endpoint. Learn more	
Types Thing groups	Shadows		
Billing groups	Interact	aicotnny7sen7e.ats.iot.cn-north-1.amazonaws.com.cn	
lobs			
ob templates	Activity	MQTT	
Tunnels	Jobs	Use topics to enable applications and things to get, update, or delete the state in	nformation for a Thing (Thing Shadow)
ireengrass	Violations Defender metrics	Learn more	
Secure			
Defend			
Act			
Test			
Software			
Settings			
l earn	-		

Save the configuration and restart the device. On the Cloud Plateform Cloud Platform page, check the connection status:

			Vehicle Track	ng Gateway Configuration Tool	
s	Function Status	Connection Status	Platform Type	Connected Domain	Actio
m settings	Enabled	Connected	AWS IoT	a1cotnny7sen7e.ats.iot.cn-north-1.amazonaws.com.cn	Мо
lar					
settings					
Platform					
rity					
enance					
nnect				Refresh Co	onfigur

By default, invalid data is not reported. To report invalid data, tick "Report invalid data" in the advanced options. After that, the reported data value that does not exist is NULL, as is shown below.

Method 2: Create a provisioning template connection for AWS

 Create a prefabricated templet: Amazon IoT >> Fleet provisioning templates >> Create, as is shown below.

Amazon IoT ×	Amazon IoT > Fleet provisioning templates		
Monitor	Fleet provisioning templates		Create
Activity			
Onboard	Search templates Q		
Get started			
Fleet provisioning templates	Name Name	Status	
Manage	VT310_T1	Enabled	
Overview	D. mark		
Things	VT310_T2	Enabled	
Types			
Thing groups			
Billing groups			
Jobs			
Job templates Tunnels			
Tunnels			
Greengrass			
Secure			
Defend			
Act			
Test			
Software			
Settings			
Learn	¥		

Creat Certificate: Amazon IoT >> Certificates

Amazon loT ×	Amazon IoT 〉 Certificates		
Monitor Activity	Certificates		Create
Onboard Get started	Search certificates Q		
Fleet provisioning templates	Name	Status	
Manage	da3668b653077b106cd8bf89502f54e7df5329970034f298fc185164581eab9e	Inactive	
hings	Ba185e47f47a6a7f9d2faf803ee258657b874de70b17ff4590d6298ef7202ece	Active	
ypes 'hing groups	bf2e870162179b93b9ff750f20ce627c94c724d0460e6153958df85a4eaa5d55	Active	
lling groups	e2836cfac5f8d096749aef5fbac74443682dfd8bdb1d2f7cbff5a4a26fa4155e	Inactive	
bs b templates	cae7a42460842edf36762603bedff86dff326a8cadce29448cedaa12c4aefc87	Inactive	
nnels	806f5e40768f624fd86e1f3348b6a3655fb133a41327174e0a8d9dd39b2a6049	Active	
reengrass	a1ce6973c7e41566e74edee56baebb0b594b5ba4346d57430111310253046c46	Active	
cure rtificates	74f71a2120e293c283fdfd4196d290882667f054e95608261f0b158c81b9e1f2	Active	
licies s	916b8b572412157004739e9bdb61b2d77b94ed68c2a0ef16138bb5726453a406	Active	
le Aliases	c822904b92641a95d2190b771e0af9745f66038430d495dee1f1d8f8efe84002	Active	
thorizers	3eb68fff2f2a1e8b76517a6e5b5b8f27bd406bd8dbf4e019e9fa51103924a0e4	Inactive	
t	a62d86fc03f7c87efd0545355f3f84f4bb568d5e3a8fbb5fe74518ca3076ec28	Inactive	

Amazon IoT >> Things >> Create a single things >> Add your device to the thing registry >> Add certificate

On this page, create a certificate for the thing just created, as is shown below.

Amazon IoT ×	Amazon IoT > Certificates > Create a certificate	
Monitor Activity	Create a certificate	
Onboard Get started Fleet provisioning templates	A certificate is used to authenticate your device's connection to Amazon IoT.	
Manage Overview Things	One-click certificate creation (recommended) This will generate a certificate, public key, and private key using Amazon IoT's certificate authority.	Create certificate
Types Thing groups Billing groups Jobs	Create with CSR Upload your own certificate signing request (CSR) based on a private key you own.	2 Create with CSR
Job templates Tunnels Greengrass	Use my certificate Register your CA certificate and use your own certificates for one or many devices.	Get started
Secure Certificates Policies CAs Role Aliases Authorizers		
Defend Act		

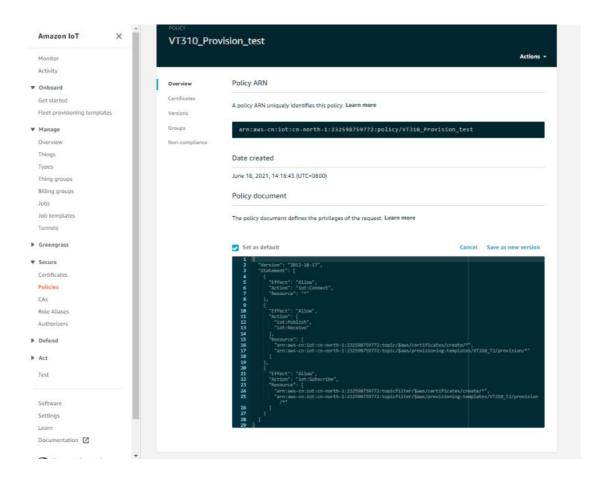
- 2. Download a certificate file
- Download a public key file >> A certificate for the things >> Download. The file format is ***.cert.pem;
- Download the private key file >> A private key >> Download. The file format is
 ***.private.key;
- As the AWS CA files have been built into the tracker, there is no need to download them. If you need to update, click"A root CA for Amazon IoT Download";
- Click Activate to activate the certificate;
- Click the "Attach a policy", enter additional policy page, as is shown below.

Amazon loT $$	Or Success Success/ Success/
Monitor	
Activity	
Onboard	Certificate created!
Get started	
Fleet provisioning templates	
Manage	Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved
Overview	after you close this page.
Things	
Types	In order to connect a device, you need to download the following:
Thing groups	A certificate for this thing f0b76b8292.cert.pem Download
Billing groups	A public key f0b76b8292.public.key Download
Jobs	A private key f0b76b8292.private.key Download
Job templates Tunnels	
Greengrass	You also need to download a root CA for Amazon IoT: A root CA for Amazon IoT Download
Secure	Activate
Certificates	
Policies	
CAs	
Role Aliases	
Authorizers	Cancel Done Attach a policy
Defend	
Act	

• On the previous window, click "Activate" to enter the certificate list. Click "Done" and complete certification.

Amazon IoT ×	Add authorization to certificate	
Monitor		
Activity	You are attaching a policy to the following certificate:	
▼ Onboard	f0b76b8292ac2af975aad7552e2160c765e20c69151d7716606ce99d54c1396e	
Get started	Select a policy to attach to this certificate:	
Fleet provisioning templates	sense a point to anoth to one of ontailer	
Fleet provisioning templates	Q. Search policies	
▼ Manage		
Overview	sub_gg-policy	View
Things	pub_gg-policy	View
Types		View
Thing groups	12W dd droub Core-bolicy	View
Billing groups	VT310_Provision_test	Hide
Jobs		
Job templates	("Effect": "Allow",	
Tunnels	"Action": "iot:Connect", "Resource": """	
▶ Greengrass), (("Effect": "Allow",	
▼ Secure	"Action": [
Certificates	"iot:Publish", "iot:Receive"	
Policies		
CAs		
Role Aliases	Create new policy	
Authorizers		
▶ Defend	1 policy selected	Done
▶ Act		

 On the previous window, click "Attach a policy" to enter the Amazon IoT >> Policy list to add a policy, as is shown below.



- 3. Use the configuration tool to import the certificate file to the vehicle tracker
- Security >> Import digital certificate >> Select a certificate (select the downloaded digital certificate ***.cert.pem in the displayed dialog box), click "Import certificate"
- Security >> Import private key certificate >> Select a file (select the downloaded digital certificate \\. private.key in the dialog box that appears); click "Import file";
- As the tracker already has a built-in AWS CA file, the CA file is not required. If you need to update the CA file, go to Security >> Import CA certificate >> Select a file (select the downloaded digital certificate ***.cert in the pop-up dialog box), click "Import certificate";

		Vehicle Tracking Gateway	
Status	Import certificate		
System Settings			
Cellular	Import DC	Select file	Select certificate Import certificate
OBD Settings	Import private key	Select file	Select file Import file
Cloud Platform	Import CA	Select file	Select certificate Import certificate
Security	L		
1-Wire			
1-110			
Maintenance			
Wantonanco			
Help			
Help			

4. Enable AWS

Cloud Platform >> Platform Type: AWS IoT Cloud Platform >> Enable Cloud Platform >> Domain name Cloud Platform >> Port : 8883

		Vehicle Tracking Gateway Configuration Tool -
Status		
System Settings	Platform Type	AWS Iot 👻
Cellular	Enabled	\checkmark
OBD Settings	Domain	
Cloud Platform Security	Port	8883
1-Wire	Enable Device Provision	
Maintenance	Show Advanced Option	
Help	Publish Invalid Data	\checkmark
中文		
Disconnect		Back Read again Save configurations

▲ If you create a preset template on AWS, you need to enable device preset in the configuration tool. Tick ✓ to enable it, and enter the preset template name. The template name can be found in AWS IoT >><u>Fleet provisioning</u>_ templates.

Copy the address in the AWS IoT >> Things >> "Select created things">> Interact option. Enter the domain name on the AWS IoT page.

Amazon IoT ×	Amazon IoT > Thing	ys >	
Monitor Activity	THING		
Onboard	NO TYPE		Actions -
Get started			
Fleet provisioning templates	Details	This thing already appears to be connected.	Connect a device
Manage	Security		
Overview	Thing groups	HTTPS	
Things	Billing Groups		
Types		Update your Thing Shadow using this Rest API Endpoint. Learn more	
Thing groups	Shadows	a1cotnny7sen7e.ats.iot.cn-north-1.amazonaws.com.cn	
Billing groups	Interact		
lobs	Activity	MQTT	
Job templates	Jobs		
Tunnels	Violations	Use topics to enable applications and things to get, update, or delete the state information for a T	hing (Thing Shadow)
Greengrass	Defender metrics	Learn more	
Secure			
Defend			
Act			
Test			
Software			
Settings			
learn 🔻			

Save the configuration and restart the device. On the Cloud Platform Cloud Platform page, check the connection status:

		7	Vehicle Tracki	ing Gateway Configuration Tool	- ×
Status	Function Status	Connection Status	Platform Type	Connected Domain	Action
System settings	Enabled	Connected	AWS IoT	a1cotnny7sen7e.ats.iot.cn-north-1.amazonaws.com.cn	Modify
Cellular					
OBD settings					
Cloud Platform					
Security					
Maintenance					
Help					
中文					
Disconnect				Refresh Co	onfigurations

6.4.2 Subscription and Publishing of AWS

1. Subscribe to messages reported and published by VT310

Amazon IoT >> Test

Amazon loT ×	Amazon IoT > Test		
Monitor Activity	MQTT client Info		Connected as iotconsole-1625648602778-0 •
♥ Onboard Get started	Subscriptions		
Fleet provisioning templates	Subscribe to a topic	Subscribe	
Overview	Publish to a topic	Devices publish MQTT messages on topics. You can use this client to subscribe to a topic and receive these messages. Subscription topic	
Things Types		Specify a topic to subscribe to, e.g. myTopic/1	Subscribe to topic
Thing groups Billing groups		Max message capture linfo 100	
Jobs Job templates		Quality of Service Info	
Tunnels		O - This client will not acknowledge to the Device Gateway that messages are received 1 - This client will acknowledge to the Device Gateway that messages are received	
 Greengrass Secure 		HQTT payload display	
Certificates Policies		Objeky payloada as strings (more accusted) Display raw payloads (in hexadecimal) Display raw payloads (in hexadecimal) Display raw payloads (in hexadecimal)	
CAs Role Aliases		Public	
Authorizers		Specify a topic and a message to publish with a QoS of 0.	
Defend Act		Specify a topic to publish to, e.g. my?opic/1	Publish to topic
Test		1 (0 "message": "weller from Ad bit console"	
Software			
Settings Learn			

Amazon IoT >> Test >> enter the published topic in the Subscription topic text box, as is shown below.

For example: v1/VT310 SN/motion/info

Amazon IoT ×	î	Amazon IoT > Test		
Monitor Activity	L	MQTT client Info		Connected as iotconsole-1625648435350-2 *
Onboard Get started	L	Subscriptions		
Fleet provisioning templates	L	Subscribe to a topic	Subscribe	
Manage Overview		Publish to a topic	Devices publish MQTT messages on topics. You can use this client to subscribe to a topic and receive these messages. Subscription topic	
Things			v1/VT310999999999/mation/info	Subscribe to topic
Types			Haz minisipe capitant inte	
Thing groups Billing groups			100 v1/VT310 SN/reserve group/info	
Jobs			Quality of Service Info	
Job templates Tunnels			0 - This client will not acknowledge to the Device Gateway that messages are received	
Greengrass	L		1 - This client will acknowledge to the Device Gateway that messages are received	
▼ Secure			MQTT payload display Ø Auto-format JSON payloads (improves readability)	
Certificates			Display payloads as strings (more accurate) Display raw payloads (in hexadecimal)	
Policies			 nuthrak saw bakanan (nu numaerumat) 	
CAs Role Allases				
Authorizers			Publish Specify a topic and a message to publish with a QoS of 0.	
Defend			Specify a topic to publish to, e.g. my/Topic/1	
▶ Act			1 (f 2 Yeelig from Add Inf conside"	
Test			2 "message": "Wello from AdG Inf consola" 3 ()	
Software Settings				
Learn				
Documentation				

By default, the VT310 reports messages from the retention groups of GNSS, Sysinfo, Motion, Cellular1, IO, and OBD. You only need to subscribe to topics to receive messages, as is shown below.

Amazon loT X	Amazon IoT > Test		
Monitor	MQTT client Info		Connected as iotconsole-1625648602778-0 *
Activity			
▼ Onboard	Subscriptions	v1/VF3102102000178/motion/info	Export Clear Pause
Get started			
Fleet provisioning templates	Subscribe to a topic	Publish	
▼ Manage	Publish to a topic	Planan Specify a topic and a message to publish with a QoS of 0.	
Overview		v1/VF3102102000178/motion/Info	Publish to topic
Things	v1/VF3102102000178/moti ×	*1/**3 102 102001 / 2/million/mmu	Future to topic
Types		1 "message": "Hello from Ad Lot console"	
Thing groups		3 0	
Billing groups			
Jobs			
Job templates			
Tunnels			
Greengrass			
▼ Secure		v1/VF3102102000178/motion/info July 07, 2021, 17:06:37 (JTC-0800)	Export Hide
Certificates			
Policies		"motion.ts": 1635648796, "motion.as": 0.110776,	
CAs		"notion.a;" - 0.00784, "notion.a;" - 0.00784,	
Role Aliases		"motion.gr": +0.07, "motion.gr": +0.98,	
Authorizers		antion.gz ⁺ , 0.28	
Defend			
▶ Act			
Test			
Software			
Settings			
Learn			
Documentation 🛃			

For more information, see API documentation.

```
《FlexAPI_over_MQTT_Reference_for_3rd_party_platform_VT310.pdf》
```

6.5 Aliyun IoT

The Alibaba Cloud Enterprise IoT platform provides fully-hosted instance services. It allows you to easily access and manage devices without building IoT infrastructure by yourself. It features low costs, high reliability, high performance, and easy operation and maintenance. With powerful data processing capabilities, it can better analyze and visualize device data. Realtime security threat detection ensures that each instance is secure and reliable. It is the first choice for each enterprise device to migrate to the cloud. For more information, visit the Alibaba Cloud product page. <u>https://www.aliyun.com/product/iot</u>.

Method 1: One machine and one key

For more information: https://help.aliyun.com/document_detail/74006.html

 Go to the Alibaba Cloud Console IoT Platfrom >> Device >> Devices >> Device Details. Create a Device and view the Device Secret, as is shown below.

C-) Alibaba Cloud		✿ Worktench China (Shanghai) > Q Search Expenses Tickets ICP Enterprise Support App E⊒ Q											
← Public Instance		IoT Platform / Devices /											
Devices ^		← mqtt_ten										_	
Products			测试温度或温度 (SCAKQ Copy	View					DeviceSecre	t	View		
Devices		Device Information		TSL Data	Device Shadow	Manage Fi	Device Les	Online Debug	Crewer	Task			
Groups		Device information	Topic List	ISL Data	Device Shadow	Manage P	les Device Log	Unline Debug	Groups	lask			
Jobs		Device Information											
CA Certificate		Product Name	MQTT测试量	MQTT测试温度或温度			ProductKey	a10IaXSCAKQ Copy				Region	China (Shanghai)
Rules 🗸		Node Type	Devices	Devices			DeviceName	mqtt_temp Co	mqtt_temp Copy			Authentication Mode	Device Secret
Maintenance V		Alias 💿	Edit	Edit			IP Address	119.4.252.82				Firmware Version	
Resource Allocation \checkmark		Created At	Jul 5, 2021, 1	15:05:19			Activated At	Jul 5, 2021, 15:45:37.40				Last Online	Jul 15, 2021, 16:05:49.419
Link Visual V		Current Status	Offline			Real-time Delay 🔘	Test				Device local log reporting	Enabled	
Documentation and Tools More Device Information													
		SDK Language	JS[Broswer				Version	1.2.7				Module Manufacturer	
		Module Information -											
		Tag Information	Edit										

The Device Certificate of the replication Device includes three parameters: Product Key, Device Name, and Device Secret, as is shown below.

😑 C-J Alibaba Cloud		A Workbench Chi	ina (Shanghai) \vee								Expenses Tickets ICP	Enterprise Support App
← Public Instance		oT Platform / Devices /	/ Devices / Device Deta	eiti								
Devices 🗠		← mqtt_ter										
Products			T新式温度成温度 View						DeviceSecret	View		
Devices												
Groups		Device Information	Topic List TSL D	ata Devic	e Shadow	Manage Files	Device Log	Online Debug	Groups Task			
Jobs	1	Device Information								1		
CA Certificate		Product Name	MQTT测试量度或显度			Certificate				×	Region	China (Shanghai)
Rules 🗸		Node Type	Devices		Device	certificate Copy					Authentication Mode	Device Secret
Maintenance 🥪					Product	Key	a10IaXSCAKQ C	9PV				
Resource Allocation		Aliat ()	Edit		Device	lame	mqtt_temp Cop				Firmware Version	
Link Analytics 🖾		Critated At	Jul 5, 2021, 15:05:19							_	Last Online	Jul 15, 2021, 16:05:49:419
Link Visual V		Current Status	Offline		Devices	iecret	8785cbdae030c8	85508444658581769	Сору		Device local log reporting	Enabled 💽
Documentation and Tools	2	More Device Informati	ion			te Installation I		e and unique-certifica	te-per-product modes			
		SDK Language	/SjBroswer							Close	Module Manufacturer	
		Module Information										
		Fag Information	∠ Edit 4									

2. Config Aliyun IoT

Cloud Platform >> Platform Type: Aliyun IoT Cloud Platform >> Enable Cloud Platform >> Device Name: Cloud Platform >> Product Key Cloud Platform >> Authentication Mode: Unique Certificate Per Device

Cloud Platform >> Device Secert

Tick vertificate Per Certification Mode: Unique Certificate Per Device/Unique Certificate Per Model

The three parameters from Alibaba Cloud ProductKey, DeviceName, and DeviceSecret. Enter the corresponding parameters in the configuration tool. In the upper-left corner of the IoT platform console, view the region where your service is located. For more information about the Region ID values, see Region and zone.

Staus Platform Type Aliyun Iot Aliyun Iot Image: Collular Enabled Device Name Device Name Region ID Product Key Authentication Mode Unique Certificate Per Device Authentication Mode Unique Certificate Per Device Product Key Device Secret Show Advanced Option Publish Invalid Data 			Vehicle Tracking Gateway Configuration Tool
System Settings Celtular Enabled 「 DBD Settings Cloud Platform Security 1-Wire Product Key Maintenance Authentication Mode Unique Certificate Per Device Help 中文 Device Secret Show Advanced Option	Status	Di co m	
Device Name Cloud Platform Security I-Wire Maintenance Help 中文 Device Secret Show Advanced Option	System Settings	Platform Type	Aliyun lot 👻
Cloud Platform Region ID Security Product Key I-Wire Product Key Maintenance Authentication Mode Help Device Secret Device Secret Show Advanced Option	Cellular	Enabled	\checkmark
Security I-Wire Product Key Maintenance Authentication Mode Unique Certificate Per Device Procesecret Device Secret Show Advanced Option		Device Name	
I-Wire Product Key Maintenance Authentication Mode Idep Device Secret Show Advanced Option		Region ID	
Authentication Mode Unique Certificate Per Device Help 中文 Device Secret Show Advanced Option		Product Key	
Device Secret Show Advanced Option	Maintenance	Authentication Mode	Unique Certificate Per Device 💌
Device Secret Show Advanced Option	Help		
	中文	Device Secret	
Publish Invalid Data		Show Advanced Option	
		Publish Invalid Data	\checkmark
	Disconnect		Back Read again Save configurations

6.6 Configuration of MQTT Platform Link

MQ Telemetry Transport (MQTT) is a lightweight proxy-based message transmission protocol for Publishing/Subscribing. It is designed to be open, simple, lightweight, and easy to implement. These features make it suitable for restricted network environments, including but not limited to high-costs, low-bandwidth and unreliable networks. CPU and memory resources are limited for embedded devices. This protocol provides one-to-many message publishing and discoupling applications using the publish/subscribe message mode. It supports transmission of messages blocked by load content with TCP/IP. Open-source software that supports MQTT, such as ThingsBoard and EMQ, allows customers to develop their own IoT platforms.

6.6.1 MQTT Broker

Cloud Platform >> Platform Type >> Mqtt Broker: Enable, configure domain name, port, username, and password ". Click "Save configuration" and restart, as is shown below.

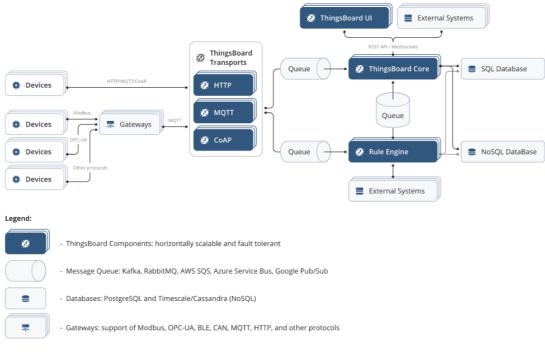
		Vehicle Tracking Gateway Configuration Tool	1
Status	Platform Type		
System Settings	Platform Type	Mqtt Broker 👻	
Cellular	Enabled		
OBD Settings	Domain		
Cloud Platform Security	Port	1883	
1-Wire	username		
Maintenance	password		
Help			
中文	Show Advanced Option		

If you want to view invalid data, click "Show Advanced Options" to see hidden configuration items. Select "Show invalid data", as is shown below.

		Vehicle Tracking Gateway Configuration Tool
Status	Platform Type	Mqtt Broker 🗸
System Settings		
Cellular	Enabled	
OBD Settings Cloud Platform	Domain	
Security	Port	1883
1-Wire	username	
Maintenance Help	password	
中文	Show Advanced Option	
ΨX	Publish Invalid Data	
Disconnect		Back Read again Save configurations

6.6.2 Configure ThingBoard Open-source IoT Platform

ThingsBoard is an open-source IoT platform where you can quickly develop, manage, and expand IoT projects. It is an open-source IoT platform for data collection, processing, visualization, and device management. It connects devices through the industry-standard IoT protocols - MQTT, CoAP, and HTTP, and supports cloud and local deployment. For more information, go to <u>https://thingsboard.io</u>.



ThingsBoard Architecture

 Register an account and add a device. After adding a device, use the open Device Device Credentials >> MQTT Basic to enter the Client ID, User Name, and Password parameters. For more information, visit <u>https://thingsboard.io/docs/getting-started-guides</u>.

	🗔 Device groups 🗧 🗔 All	Current subscription (ThingsBload Gload Maker) Statur (Initianida on the Step 1, 2023) C3 OF Tenant administrator :
🔒 Home		VT3102102000207
Plan and billing	All: Devices 🥒	Device details
III Solution templates	Created time 🕹	Name Details Attributes Latest telemetry Alarms Events Relations Audit Logs
↔ Rule chains		
다. Data converters	2021-08-02 11:33:03	VT310210200207 Manage credentials Delete device
		Device Credentials × 1QTT credentials
😲 Roles		Credentials type
- Customers hierarchy		MQTT Basic -
😝 User groups 🗸 🗸 🗸		Client ID VT3102102000207
📇 Customer groups 🗸 🗸		User Name *
🏥 Asset groups 🗸 🗸		InHand207
Device groups		Password
[00 AII		
D Device profiles		
📰 Entity view groups 🛛 🗸		Cancel Save
😫 Widgets Library		
Dashboard groups 🗸 🗸		
() Scheduler		
👕 White Labeling 🛛 🗸		
🕑 Audit Logs		

Platform Device Parameters

 In the configuration tool, enter the thingsboard.cloud, port number 1883, username User Name, Password, Password of the device parameters added by the platform.

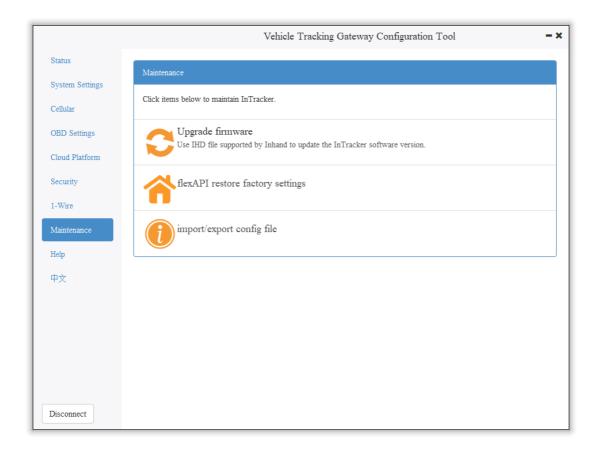
		Vehicle Tracking Gateway Configuration Tool
Status		
System Settings	Platform Type	Mqtt Broker 👻
Cellular	Enabled	
OBD Settings	Domain	thingsboard.cloud
Cloud Platform Security	Port	1883
1-Wire	username	xxxxxx
Maintenance	password	
Help	Show Advanced Option	
中文	Publish Invalid Data	

7. Maintenance

You can upgrade the firmware with the local upgrade configuration tool, xshell, or through OTA. OTA upgrading includes Alibaba Cloud standard OTA upgrading, SmartFleet platform OTA upgrading and FlexAPI upgrading. Now we will only introduce how to upgrade with local configuration tools. For more information about upgrading, please contact technical support of InHand Networks.

7.1 Firmware Upgrade

Step 1: Go to Maintenance >> Upgrade firmware, as is shown below:



Step 2: Click "Browse file" to select the firmware. Click "Upgrade" and wait for firmware installation, as is shown below:

	Vehicle Tracking Gateway Configuration Tool -×
Status	
System Settings	Upgrade firmware
Cellular	Firmware of InTracker: Browse file
OBD Settings	Select Upgrade File ? ×
Cloud Platform	Look in: 💦 C:\ - 😋 📀 🎝 🖡 🔃 🗏
Security	S My Comp
1-Wire	 sunzhandc Program Files Program Files (x86)
Maintenance	Users
Help	VT3.V1.0.8.IHD
中文	
	File name: VT3, V1, 0, 8, IHD Open
	Files of type: Upgrade File(*.IHD) Cancel
Disconnect	Back Upgrade

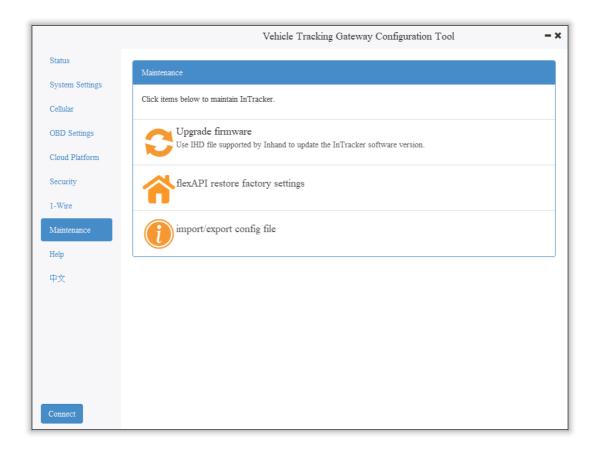
When a prompt box says "Will switch to the new version after restarting VT310", new firmware has been imported successfully. Click "Restart" to upgrade the firmware.

	Vehicle Tracking Gateway Configuration Tool
Status	
System Settings	Upgrade firmware
Cellular	Firmware of InTracker: C:/VT3.V1.0.8.IHD
OBD Settings	
Cloud Platform	
Security	Upgrade success X
1-Wire	Will switch to the new version after restarting
Maintenance	VT310
Help	ОК
中文	
Disconnect	Back Upgrade

Note: After the device is upgraded, restart the device and then configure it.

7.2 Restore Factory Settings of FlexAPI

Go to Maintenance >> FlexAPI restore factory settings to reset FlexAPI settings.



7.3 Import/Export Configuration

To back up and import configuration, go to Maintenance >> Import/export congifuration file, as is shown below. Click "Export configuration" to back up configuration, and click "Import configuration" to load the configuration file.

		Vehicle T	racking Gateway C	onfiguration Tool	- ×
Status					
System Settings	import/exp	oort config	file		
Cellular	Export configurations	Import configurations			
OBD Settings					
Cloud Platform					
Security					
1-Wire					
Maintenance					
Help					
中文					
Connect			bac	k Read configurations	Save configurations

To back up configuration, click "Export configuration". The configuration tool can read device configuration and pop up file storage window. Enter the name of the backup file, and click "Open".

	Vehicle Tracking Gateway Configuration Tool
Status	
System Settings	import/export config file
Cellular	Export configurations Import configurations
OBD Settings	\blacksquare Select the exported configuration file ? $ imes$
Cloud Platform	
Security	Look in:
1-Wire Maintenance Help 中文	 My Comp PerfLogs Program Files Program Files (x86) Users Windows back.json backup.json
	File name: backup.json Open
Disconnect	Files of type: configuration file(*.json) Cancel

▲ In the exported configuration file, Username and Password are not available. If you hope to import the modified username and password to the new device, you can modify them in the exported file. Replace the admin characters with a new admin account, and input in the password of the new account. After the modified configuration file is saved, import it into the new device and restart the device. Log in the new device with the new admin account and password.

▲ In the exported configuration file, Username and Password are not available. If you hope to import the modified username and password to the new device, you can add them in the exported configuration file. Enter your admin account in "" of "user:":"", and enter the password in "" of "passwd":"". After the modified configuration file is saved, import it into the new device and restart the device. Log in the new device with the new admin account and password.

	i action_produce_key i j
55	"aliyun_auth_type": "0",
56	"aliyun_deviceSec": "",
57	"aliyun_productSec": "",
58	"tcp_udp_enable": "1",
59	"tcp_udp_domain": "118.122.120.22",
60	"tcp_udp_port": "44444"
61	},
62	"admin": {
63	"user": "admin",
64	"passwd": "123456"
65	}
66	}

8. Restoration of the Default Account and

Password for Hardware

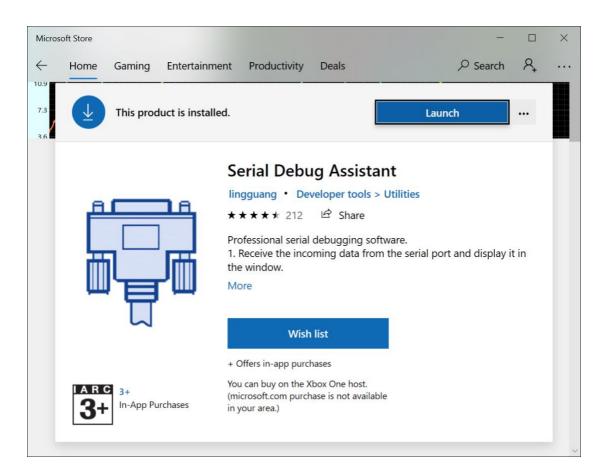
Because configuration usually involves the device certificate file, when the device is restored to the factory via hardware, only the username and password are restored to admin/123456. As is shown in the following picture, press the Reset button with a screwdriver or other tools for more than 8 seconds, and then loosen it.



ps: By double-clicking "Reset", you can restart the device when it goes wrong.

9. How to Get the Device Log

Make sure that the computer is connected to the VT310 through USB to serial port through configuration wire, and open a serial port connection tool such as the serial port debugging software. The software can be downloaded in Mircrosoft Store.



 Open the serial port debugging software and select the link serial port. The default baud rate of the serial port is 115200/8/n/1. Click "Open serial port". Note that the Character encoding mode (Character encoding) is ASCII, and the line break mode (Linet break) is \n(LF).

COM3,115200,None,8,One - Serial Debug Assista	int	- 🗆 X
🗚 🖾 ? 😅		ණ
Serial Port : COM3 Baud Rate : 115200 Data Bits : 8 Parity : None Stop Bits : One		Character encoding ASCII Language Default Theme Default
Open serial port Receiving settings. Receive and save to file HEX display Pause receiving display Auto break frame ? Receive scripts Add Timesta Save data Empty data		Keep the screen constant light Off Press "ESC" to send On Show font size A JavaScript Script folder Change Default Change
Send settings. Send a file <u>Extension cmd</u> HEX Send Sending scripts M <u>ADD8</u> ~ Timing send <u>1.0 sec</u> DTR RTS Line break \n (LF) ~		⊳
Show Send string	Send : 0 R	eceive : 0 Reset count

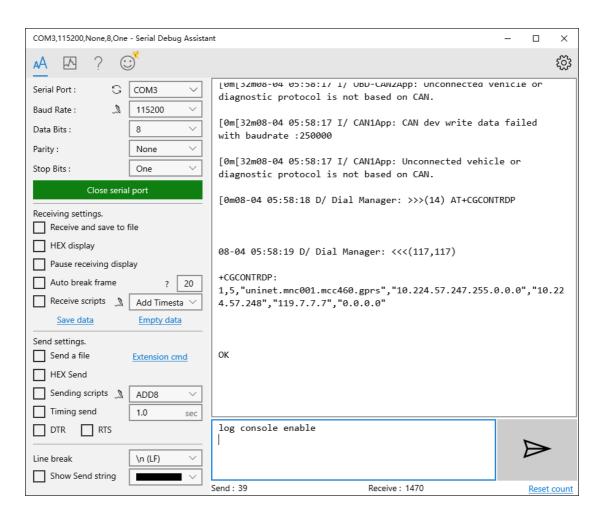
 Enter +++ in the content sending serial port to activate the CLI mode, as is shown below;

🗚 🗠 ? 😅		୍ରେ
Serial Port : COM3 Baud Rate : M 115200 Data Bits : B Parity : None Stop Bits : One Close serial port	Enter cli mode username:	
Receiving settings. Receive and save to file HEX display Pause receiving display Auto break frame ? 20 Receive scripts A Add Timesta \checkmark Save data Empty data		
Send settings. Send a file <u>Extension cmd</u> HEX Send Sending scripts A <u>ADD8</u> Timing send <u>1.0</u> sec DTR <u>RTS</u>	+++	
Line break \n (LF) \log Show Send string	Send : 3 Receive : 31	Reset count

Enter the Username admin (press the enter key), click "Send", enter the password 123456 (press the enter key), and click send to enter the command line mode.

🗚 🖸 ? 😅		ŝ
Serial Port : G COM3 \checkmark		
Baud Rate : 🤳 115200 🗸	Enter cli mode	
Data Bits : 8 ~		
Parity : None 🗸	username:	
Stop Bits : One ~		
Close serial port		
Receiving settings. Receive and save to file HEX display Pause receiving display		
Auto break frame ? 20		
Receive scripts 🔊 Add Timesta 🗸		
Save data Empty data		
Send settings. Send a file <u>Extension cmd</u> HEX Send Sending scripts <u>ADD8</u> Timing send <u>1.0</u> sec		
DTR RTS	admin	
Line break \n (LF)		\triangleright
Show Send string	Send : 3 Receive : 31	Reset count
COM3,115200,None,8,One - Serial Debug Assista	nt	- 🗆 ×
A A ?		- □ ×
	Enter cli mode	
A A ? C Serial Port: C COM3 ~		
A Image: A Image: A Image: A Serial Port : Image: A Image: A Image: A Baud Rate : Image: A Image: A Image: A Data Bits : Image: A Image: A Image: A Parity : Image: A Image: A Image: A Stop Bits : Image: A Image: A Image: A	Enter cli mode	
AA Image: Asymptotic constraints Image: Comparison constraints Serial Port : S COM3 Baud Rate : Image: Comparison constraints Image: Comparison constraints Data Bits : 8 Parity : None	Enter cli mode username: admin password: *****	
A A ? C Serial Port : C COM3 Baud Rate : A 115200 Data Bits : 8 Parity : None Stop Bits : One Close serial port Receiving settings.	Enter cli mode username: admin	
A A ? C Serial Port : C COM3 ~ Baud Rate : A 115200 ~ Data Bits : A 115200 ~ Parity : None ~ 8 ~ Parity : None ~ Stop Bits : One ~ Close serial port Receiving settings. Receive and save to file	Enter cli mode username: admin password: ***** login success!	
A A ? C Serial Port : C COM3 > Baud Rate : A 115200 > Data Bits : B > > Data Bits : B > > Parity : None > > Stop Bits : One > > Ecceiving settings. Receive and save to file	Enter cli mode username: admin password: *****	
A A ? CM Serial Port : COM3 ~ Baud Rate : N 115200 ~ Data Bits : 8 ~ Parity : None ~ Stop Bits : One ~ Close serial port Receiving settings. Receive and save to file HEX display Pause receiving display	Enter cli mode username: admin password: ***** login success!	
A A ? COM3 Serial Port : S COM3 Baud Rate : M 115200 Data Bits : 8 Data Bits : 8 Parity : None Stop Bits : One Close serial port Receive and save to file HEX display Pause receiving display Auto break frame ? 20	Enter cli mode username: admin password: ***** login success!	
A A ? CM Serial Port : COM3 ~ Baud Rate : N 115200 ~ Data Bits : 8 ~ Parity : None ~ Stop Bits : One ~ Close serial port Receiving settings. Receive and save to file HEX display Pause receiving display	Enter cli mode username: admin password: ***** login success!	
A A Serial Port : Baud Rate : A Baud Rate : A I15200 Data Bits : B Parity : None Parity : None Parity : None One Close serial port Receiving settings. Receive and save to file HEX display Pause receiving display Auto break frame ? Auto break frame ? Add Timesta Save data Empty data	Enter cli mode username: admin password: ***** login success!	
A A Serial Port : Serial Port : Baud Rate : M 115200 Data Bits : 8 Parity : None Parity : None Stop Bits : One Close serial port Receive and save to file HEX display Pause receiving display Auto break frame ? 20 Receive scripts	Enter cli mode username: admin password: ***** login success!	
A A Serial Port : Serial Port : COM3 Baud Rate : M 115200 Data Bits : 8 Parity : None Parity : None Parity : None Stop Bits : One Close serial port Receive and save to file HEX display Pause receiving display Auto break frame ? 20 Receive scripts Save data Send settings. Send a file Extension cmd HEX Send	Enter cli mode username: admin password: ***** login success!	
A A Serial Port: Serial Port: COM3 Baud Rate: A 115200 Data Bits: 8 Parity: None Parity: None Parity: One Close serial port Close serial port Receiving settings. Receiving settings. Receive and save to file HEX display Pause receiving display Auto break frame Save data Send settings. Send a file Extension cmd HEX Send Sending scripts ADD8	Enter cli mode username: admin password: ***** login success!	
A A A A Serial Port : COM3 Baud Rate : A 115200 Inscreption Data Bits : 8 Parity : None Data Bits : 8 Parity : One Stop Bits : One Close serial port Receive and save to file HEX display Pause receiving display Auto break frame ? 20 Receive scripts Save data Send settings. Send a file Extension cmd HEX Send Sending scripts ADD8 1.0	Enter cli mode username: admin password: ***** login success! InTracker />	
A A Serial Port : Serial Port : COM3 Baud Rate : M 115200 Data Bits : 8 Parity : None Data Bits : 8 Parity : One Stop Bits : One Close serial port Receiving settings. Receive and save to file HEX display Pause receiving display Auto break frame ? 20 Receive scripts Save data Empty data Send a file Extension cmd HEX Send Sending scripts ADD8	Enter cli mode username: admin password: ***** login success!	
A A Serial Port : Serial Port : COM3 Baud Rate : M 115200 Data Bits : 8 Parity : None Parity : None Parity : None Stop Bits : One Close serial port Receiving settings. Receive and save to file HEX display Pause receiving display Auto break frame ? 20 Receive scripts Save data Empty data Send a file Extension cmd HEX Send Sending scripts ADD8 Iniming send	Enter cli mode username: admin password: ***** login success! InTracker />	
A A Serial Port : Serial Port : COM3 Baud Rate : Inscredent in the serial port Baud Rate : Inscredent in the serial port Data Bits : 8 Parity : None Parity : None Close serial port Receive and save to file HEX display Pause receiving display Auto break frame ? 20 Receive scripts Save data Empty data Send a file Send a file Sending scripts ADD8 Timing send 1.0 DTR RTS	Enter cli mode username: admin password: ***** login success! InTracker />	

 Enable the log function. In the send text box, enter "log console enable" (press the enter key) and click "Send". The following screenshot shows the log information in the receive window.



4. Close log function, write "log console disable" (press the enter key) in the send text box and click "Send". The receive window stops receiving logs.

COM3,115200,None,8,One - Serial Debug Assis	tant	_		×
🗚 \Lambda ? 😅				ŝ
Serial Port : COM3 V	[0m[32m08-04 06:00:34 I/ MqttTp: Clear MQTT client.			
Baud Rate : 115200 Data Bits : 8	[0m[32m08-04 06:00:34 I/ MqttTp: retry times:346, W seconds to reconnect!	aiting	20	
Parity : None ~	[0m[32m08-04 06:00:35 I/ OBD-CAN2App: CAN dev write	data	fail	ed
Stop Bits : One ✓ Close serial port	with baudrate :500000			
Receiving settings.	[0m[32m08-04 06:00:35 I/ CAN1App: CAN dev write dat with baudrate :500000	a fail	.ed	
Receive and save to file HEX display	[0m[32m08-04 06:00:35 I/ OBD-CAN2App: CAN dev write with baudrate :250000	data	faile	≥d
Pause receiving display	[0m[32m08-04 06:00:35 I/ OBD-CAN2App: Unconnected v	ehicle	or	
Auto break frame ? 20	diagnostic protocol is not based on CAN.		0.	
Save data Empty data	[0m[32m08-04 06:00:35 I/ CAN1App: CAN dev write dat with baudrate :250000	a fail	ed	
Send settings. Send a file Extension cmd	[0m[32m08-04 06:00:35 I/ CAN1App: Unconnected vehic	le or		
HEX Send	diagnostic protocol is not based on CAN.			
Sending scripts ADD8 V Timing send 1.0 sec	[Omlog console disable InTracker />			
	log console disable	,	_	
Line break \n (LF) \				
Show Send string	Send : 59 Receive : 29367		Reset	count

5. If you need to link the configuration tool after exiting the serial port, write "exit" (press the enter key) in the send text box, click "Send" (used to exit the CLI mode), and then close the serial port. Or you wait for 180 seconds when the device automatically exits the CLI mode.