





# Vehicle Telematics 200 Series User Manual

VT200 Series

Version: 1.0

Revision History

Version	Data Author		Description		
1.0	2023-1-10	Sun Zhandong	Creation of the document		



# Chapter I Product Introduction and Preparation

#### 1. Introduction

#### 1.1 Overview

The VT200 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.

#### 2. Start to use VT200

#### 2.1 Check necessary accessories

Different accessories need to be ordered when purchasing the product. You can also purchase it yourself.

In order to help customers test and log in the equipment in the office, InHand provides test kits: 9-36V adapter or AC to DC  $9^{3}6V$  power supply, RS232 to USB as shown in the table below.



Product Name	MLFB	
DC 5.5*2.1mm Female Connector	ECON000047	
Power adapter 12V/2A	APWR000122/121	REMARKS: 1.Colour: Black 副色
20PIN All-in-one Test Cable	SCAB000381	

## 2.2 About VT200 interface





#### 2.2.1 RS232 Serial Port

VT200, RS232 serial port is used for data transfer only, not for configuring the device. Configuration device requires USB-Type C. 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.

#### 2.2.2 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 VT200 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:





#### 2.2.3 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.



#### 2.2.4 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:



#### 2.2.5 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



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pin (signal line) of the 1-Wire device to the VT200 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.



#### 2.2.6 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 VT200

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 VT200 needs to be activated by external power supply or the vehicle diagnostic interface.

#### 3.1 Steps for usage

Steps:

- 1. Insert the 20PIN female head of P1 into the VT200;
- Connect PIN20 CONN-X-V- and PIN10 CONN-X-V+ to the negative and positive poles of the power adapter respectively. PIN9 CONN-X-IGT and V + are both connected to the positive side of the power supply;





- 3. Use USB-Type C Debug and config VT200
- 4. Insert Micro-SIM card as shown with PIN request. Make sure that Micro-SIM card cut-off corner is pointing forward to slot.



5. After configuration, see "PC Connection (Windows)", attach device top and bottom cover back. Download the configuration tool and connect the computer and VT200 with a USB Type C cable.



6. For external antenna models, please connect the 4G antenna to the ANT antenna interface of the device. The GNSS antenna is connected to the GNSS antenna interface of the device.

## 3.2 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 Time service succeeded GNSS delivery successful
Slow flash (frequency: 1Hz)	GNSS function enabled
Solid	Location success

# 3.3 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:  ${\tt Windows} \ 10$  ;

Not support Windosw 7.

#### 1.1 Download Configuration Tools

Enter the Download Center of InHand's Website, 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.





cx_Freeze	e: Python error in main script	×
8	Traceback (most recent call last): File "D:\Program Files (x86)\python37\lib\site-packages\cx_Freeze\initscripts\_startuppy", line 40, in run File "D:\Program Files (x86)\python37\lib\site-packages\cx_Freeze\initscripts\Console.py", line 23, in run File "VT310ConfigurationTool.py", line 1283, in <module> File "VT310ConfigurationTool.py", line 1272, in create_save_path FileNotFoundError: [WinError 3] 系统找不到指定的路径。: 'C:\\Program Files (x86)\\InHand\\VT310ConfigurationTool\\log'</module>	
	确定	

#### 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

an administrator.

The VT310 and VT320 software have the same functions and configuration methods.



If an error message appears, open it as

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.



	_	1	Vehicle Tı	racking Gat	eway Confi	guration Tool	
Status	Summary C	ellular Network	Location In	formation	L/O Informati	ion	
System setting Cellular	Connect to VT310						
OBD settings	Username	Connect via	serial port	Connect vi	a bluetooth		
Cloud Platform	admin						
Maintenance	Password	Serial port	COM3			Refresh Serial	
Help		Baud rate	115200		•		
中文	Forget password?						
		Property	8 •	None			
						Court Court	
						Cancer	
Connect	Refresh every 1	5s				Reboot	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	Summary Ce	Ilular 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	
Maintenance	Password	Select Device Please select a device   Ketresh Device List
Help	Forget password?	
		Cancel Connect
Connect	Refresh every 15	is 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.



			Vehicle Tracking G	ateway Costiguration Tool	- ×
Status	Summary	Celhular Network	Location Information	I/O Information	
System settings					
Cellular					
OBD settings				$(\mathbf{o})$	
Cloud Platform	-			· · · · ·	
Security	inphand	ogin success.		×	
Maintenance	G	You can no	w view the device st	tatus and operate	
Help		on the devi	ICe.		
中文	Serial			ОК	
	Device time:				
Disconnect	Refresh eve	ry 15s			Reboot Read again

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



ľ

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 Gateway Configuration Tool					
Status	Summary	Cellular Network	Location Information	VO Information	
System Settings Cellular	Physical	Layer Inform	ation:		
OBD Settings	Module status Signal Level:	:: Normal 19(61%)	IMEI: Registration status:	352835102369918 Registered(local)	CELL_ID: 71CF520 ICCID: 89860118802389175315
Cloud Platform	MCC/MNC: SIM status:	460/01 Normal	LAC: IMSI:	EA00 460010100114835	
1-Wire	Network	Information:			
Maintenance	Ip address: Cellular netwo	ork status:	10.1.126.130 Connected	Authentication:	CHAP certification
Help					
中文					
Disconnect	Refresh ev	ery 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	Summary	Cellular Network	Location Information	1 I/O Informati	ion		
Cellular	Location	Information:					
OBD settings	Longitude: Altitude:	104.053 397.399	8619 °E 9994 m	Latitude: Satellites:	30.58 10	8234 °N	
Cloud Platform	Speed: HDOP:	0.00000	00 knot 00	Course: Status:	0.000 Fix	° 000 °	
Security Maintenance	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 agai	in



# 2.3 I/O Information

	Vehicle Tracking Gateway Configuration Tool					
Status	Summary Cellular Network	Location Information	I/O Information			
System settings		Location Information	PO Information			
Cellular	I/O Information:					
OBD settings	Ignition Signal:			High		
Claud Distance	Digital Input 1:			Low		
Cloud Platform	Digital Input 2: Digital Input 3:			Low		
Security	Digital Input 4:			Low		
	Analog Input[mv]:			0		
Maintenance	1-Wire:					
Help						
ф÷	1-Wire Type:		Unknown			
ΨX	1-Wire ROM ID:		Unknown			
	1-Wire Data:		Unknown			
Disconnect	Refresh avery 15a			Pahaat Read amin		
Disconnect	L Reffestitevery 155			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;



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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 fromSleep 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);

Configure the sleep mode:

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.



			Vehicle Tracking Gateway Configuration Tool	-
Status	Sleep mode	Account		
System settings	Eachia ICT			
Cellular	Ellable IG1			
OBD settings	Wakeup interv	al	0	Minutes
Cloud Platform	Wakeup runtin	ie	5	Minutes
Security				
Maintenance				
Help				
Help 中文				

## 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 Configuration Tool	-
status	Sleep mode	Account		
ystem settings				
ellular	Administrator	account		
BD settings	Administrator	password		
loud Platform	Confirm passy	word		
ecurity				
Maintenance				
lelp				
文				
				All and a second s

# 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 Security	Authentication mode	Auto	
Maintenance	Show Advanced Option		
Help	Network dialing number	*99***1#	
中文	PIN		
	Default bearer APN	uninet	
Disconnect		Read again Sav	e configurations

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.

	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-
Authentication mode	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.
	The default parameter is * 99 *** 1#, which
Network dial number	is required by mobile network operators.
	PIN (Personal Identification Number) refers
	to the Personal Identification password of
	the SIM card. When the SIM card is enabled
PIN	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
Protocol Type	AUTO (J1939/J1979)	ODB CAN2 interface protocol, corresponding to physical layer PIN CAN_2L(PIN 12) and CAN_2H(PIN 25)	OBD default configuration
	AUTO (J1939/J1979/J1708)	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	When Auto mode is used, the CAN1 and J1708 interfaces are enabled at the same time.





		protocol, the	
		vehicle tracker will	
		choose this protocol	
		for communication.	
		ODB CAN2 interface	
		protocol,	
		corresponding to	
	J1939	physical laver PIN	
		CAN 2L(PIN 12) and	
		CAN 2H(PIN 25)	
		ODB CAN2 interface	
		protocol.	
		corresponding to	
	J1939	nhysical layer PIN	
		CAN 21 (DIN 12) and	
		$CAN_2L(TIN_1Z) and$	
		CAN_2H(PIN 25)	
		I1708 interface	
		protocol	
		corresponding to	
	J1708	physical layer DIN	
		11709 D(DIN12) and	
		J1708 $B(PIN13)$ and $J1708$ $A$ (PIN 96)	
		J1708_A (PIN 26)	
		Disable ODR CAN2 and	
	Disable	11708	
		71100	
Mode	Active mode		
	Passive mode		
Baudrate	default		



	250K	
	500K	
Data Upload Format		
Scan Interval		
BLE Data Forward		

				Vehicle Tracking Gateway Configuration Tool	-
Status	OBD	CANI	R\$332	T1 708/R \$485	
System Settings	CED	CAIVI	ROLDL	51706(83765)	
Cellular	Protoco	ol Type		Auto (J1939/J1979/J1708)	
Interface	Mode			Active Mode	
Cloud Platform					
Security	Baud ra	ate		Default	
1-Wire	Data U	pload Format		FlexAPI Data Only	
Maintenance					
Help	Scan Ir	nterval		10	S
中文	BLE D	ata Forward			



# 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
Protocol Type	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)	
	Disable	Disable CAN1	
Mode	Active mode		
	Passive mode		



Baudrate	default	
	250K	
	500K	
Data Upload Format		
Scan Interval		
BLE Data Forward		

				Vehicle Tracking Gateway Configuration Tool	
Status	OBD	CAN1	RS232	J1708/RS485	
System Settings	Protoco	1 Tune		Auto (11020/11070)	-
Cellular	i loce i jp			Auto (11939/11979)	3 TA
Interface	Mode			Active Mode	
Cloud Platform Security	Baud ra	te		Default	•
1-Wire	Data Up	oload Forma	t	FlexAPI Data Only	
Maintenance					
Help	Scan In	Scan Interval		10	s
中文	BLE Da	ta Forward			
a constant of the second					and the second second second



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

#### 5.3 How to use ELD?

After ELD is enabled, the data read by CAN, OBD and J1708 will be forwarded as Bluetooth notification.

Status System Settings Cellular	OBD Protocol	CAN1	RS232	J1	708/RS485					
System Settings Cellular	Protocol	l Type								
Teterfee	Protocol Type				Auto (J1939/J1979)					
Interface	Mode				A stime Market					
Cloud Platform	Mode				Active Mode					
Security	Baud rat	e			Default			3. 	•	
1-Wire	Data Up	load Forma	t		FlexAPI Data Only					
Help	Scan Interval			60				S		
中文	BLE Dat	a Forward		Þ	2					
			1							
Discompost								Pand again	Corres comfort	mbiome

Download Bluetooth LE Explorer from the Microsoft Store to connect to VT.

Click Start to search VT. The bluetooth name is the same as SN.





Then select the last one to read the Bluetooth notification.





Turn on Notify (Ignore error messages). Bluetooth notification messages is in Read Value. Data format:

```
<ESN | VIN | SPEED | ODOMETER | ENGINEHOURS | RPM>
```





# 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.



		Vehi	cle Tracking Gat	eway 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					
m-h-					
ΨX					
Disconnect					Refresh Configurations

#### 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.

		Vehi	ele Tracking Gat	eway Configuration Tool	
Status	Function Status	Connection Status	Platform Type	Connected Domain	Action
System Settings	Enabled	Connected	Smartfleet	smartfleet.cloud	Modify
Cellular					
OBD Settings					
Cloud Platform					
Security					
-Wire					
Maintenance					
Jeln					
ΗX.					
					6
lisconnect					Refresh Configuratio

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.



Sinar	t Fleet	Home	Vehicle	Gateway	Events	Reports	<b>***</b> :		Iiwei@	inhand.co
me / Gatev	way List									
All	Online	Offli	ne							
Name	✓ Plate Nun	iber	Ci	ustomer name:	All Custor	mers	Search	Reset		Export
	Name	Signal	Battery \	Voltage SN			IMSI	Current Version	Operation	
	• JI A3L731	att	<u></u>	RW911	120170118	1	Analog data	3731951254	2 🖵	
	• JHZ9022	att		VF3102	2102000207		460010100114835	VT3_V1.0.26	2 📮	
2 records i	• JHZ9022 in total; page 1 o	attl f 1		VF3102	2102000207		460010100114835	VT3_V1.0.26	< 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 https://gurtam.com/en/wialon. 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 Co	nfiguration 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 Co	nfiguration Tool	
Status				
System Settings	Platform Type	Wialon		
Cellular	Enabled	$\checkmark$		
OBD Settings	Domain	nl.gpsgsm.org		
Cloud Platform				
Security	Port	21000		
l-Wire	Show Advanced Option			
Maintenance	Upload Interval	3		
Help				
中文				

# 6.2.1 Configuration on Wialon Platform

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

New devices:

🚺 ເພ່ດໄດດ 🖬 Dashboard 🚯 Monitoring 🕮 Tracks	E Messages	📓 Reports 🖏 Geofences 🛕 Routes 😽 Drivers	🛱 Trailers 💃 Passengers 🖸 Jobs 🔞 Notifications	옶 Usen, 🙀 Units
Units Groups		N Q Vestern The North Wastern	GREENLAND	Barents Sea
New Create from WLP Q. Search		Prasages Passages Baffin Bay	*	
A <sup>+</sup> <sub>Z</sub>	十百		2	
3Pillarstc_001	4 fi 1		7	Martin -
20201116	4 B	Davis Strait	NORTH ATLANTIC	56.67
A-show	4 6		ICELAND	E ENLAND
Evan_device_1	4 頃	- Davis Strait		FINDAND
FQ58	4 Fa 1	Hudson Bay	NORV	NAY
FQ58-LIYB-1	4 14		North Sea	
FQ58-v1.0.11-01	4 Fa 3	< Labrooor	North Sea	Baltic Sea
FS31-Evan-test	4 10		IRELAND	TTE

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.

Ochicial	Access Ic	on Advan	ced S	ensors	Custom Fi	elds l	Unit Groups	Commands	Eco Driving	
Profile T	rip Detector	Service Inte	rvals							
	Unifie Now v the "M	d library of vel ehicle types in t lonitoring" tab a	hicle types the library a nd to displa	re the same for y vehicle type	or all users. es in reports	To be able , specify th	to search for u e vehicle type o	nits by vehicle type on the "Profile" tab	e on of	
	The va	alues specified	previously a	re saved in th	ne "Comme	nt" field.			Try it	
lame: *	us-FS31-Min									
Jnit type:										
Device type: *	Wialon Comb	pine	🔺 Wia	Ion Combine	WiaTag	InHand V	T310			
Server address:	nl.gpsgsm.or	g:21000	P							
Jnique ID:	VF31021040	00								
hone number:										
Password:	inhand free	×								
Password: Creator:										

### 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 collected 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.



🔷 🔘 wi		Tracks 📄	Messa	Report	🗘 Geofer	A Routes	Drivers	🕞, Trailers	💃 Passer	💽 Jobs	C Notificat	& Users	🔛 Units		008 800 881	1	inhand_free
Unit	test1	•	Q	0													
Today Interval: From: To: Message type: Show parameters as	Vesterday Week Month Specified interval 2020 April 02 00:00 2020 April 02 02:59 Data messages Raw data Clear Events	3 (4) (5)	() () () () () () () () () () () () () (	n   0 ft   enStreetHap	e+	VT310_FS	31_zý3	-1	<b>4</b> -2		F310_F552_	VT310 ← → Dev_new	<b>1</b> F531_zy2 →	+ N 30*	15.2946		← , 64* 03.1809'
Statistics		ſ		K									1				
Total message Total time:	HS: 2		#	- Time		Parameters					Media						
Distance:	0.00 km		1	2020-04-02	11:00:02	param2=0, par	am3=3346, p	param4=0, par	am1=4.926875	515694e-38,	NO=C		6				
Average speed Maximum spee	ž eđ:	L	2	2020-04-02	10:59:51	paramz=0, par	am3=3352, j	saram4=0, par	am 1=4.9258/	915694e-38,	IVIEC						
	Export and Import Messages		2	50 •	« « Pag	e 1 of	1 > >	Displaying 1	to 2 from 2 me	essages			γ × ∶				

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

2020-04-02 11:00:02       param2=0, param3=3346, param4=0, param1=4.92687515694e-38, I/O=C         2020-04-02 10:59:51       param2=0, param3=3352, param4=0, param1=4.92687515694e-38, I/O=C	▲ Time	Parameters	Media	
2020-04-02 10:59:51 param2=0, param3=3352, param4=0, param1=4.92687515694e-38, I/O=C	2020-04-02 11:00:02	param2=0, param3=3346, param4=0, param1=4.92687515694e-38, I/O=0		
	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	$\checkmark$		
OBD Settings	Connect String	HostName=VT310.azure-devices.cn;DeviceId=;Sh	aredAccessK	
Cloud Platform	Show Advanced Option			
Security	Bublich Instalid Data			
1-Wire	Puonsn mvand Data	∑.		
Maintenance				
Help				
中文				

### 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-contoso-o	ne - IoT devices							
iot-hub-contoso-one - IoT	devices						\$	×
	+ New 🖒 R	fresh 🔝 Delete						
Overview     Activity log	View, create, c	elete, and update devices in your IoT Hub.						
Access control (IAM)		Field		Operator	Value			
🛷 Tags	$+ \times$	select or enter a property name	$\sim$	-	✓ specify constraint value			
Events	+ Add a new	clause						
Settings	Query device					Switch to query editor		
Shared access policies								
O Pricing and scale	DEVICE II	D STATUS	LAST	ACTIVITY TIME (UTC)	LAST STATUS UPDATE (UTC)	AUTHENTICATION T CLOUD	)	
📲 - IP Filter	No resu	ts						
🔎 Certificates								
Built-in endpoints								
Manual failover (preview)								
E Properties								
Locks								
関 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.



Create a device		
		>
	Z	
Find Certified for Azure IoT devices in the Device Catalog		
* Device ID 👔		
myDeviceId	~	
Authentication type		
Symmetric key X.509 Self-Signed X.509 CA Signed		
* Primary key n		
Enter your primary key		
* Secondary key 🚯		
Enter your secondary key		
Auto-generate keys 🛭 Connect this device to an IoT hub 🌚		
Enable Disable		
No parent device		
no parent device		
Set a parent device		

 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.



wDaviceId	метнер л. пуметнем		1
t-hub-contoso-one			N
Save 🖾 Message to Device	S Direct Method 🕂 Add Module Identity 🔳 Device Twin 🔍 Manage keys 🗸 🖒 Refresh		
Device ID 👩	myDeviceId		D
Primary Key 🍈	HZAww1PN3suNBkaiQU1UeEIINB3j0=	68	D
Secondary Key 🌘	G7615rzcbqyWFzcffIgmad55iGVa4i=	43	D
Primary Connection String	HostName=int-hub-contoso-one.azure-devices.net;DeviceId=myDeviceId;SharedAccessKey=QdSim6i7cptUCeMYGVSeiRKOV2ZGFSJpbmyklVYM9df=	4	Ð
Secondary Connection String 🌘	HostName=iot-hub-contoso-one.azure-devices.net.DeviceId=myDeviceId.SharedAccessKey=q32joiXuvHEXbbqKYky8sF82qZInqzGZspqkl2nqz=	4	D
Enable connection to IoT Hub	Enable      Disable		
Parent device	No parent device		
	tions		
Module Identities Configura			

## 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

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



Amazon loT ×	Amazon loT > Things		
Monitor Activity	Things		Create
Onboard	Search things.		
Fleet provisioning templates	Name	Туре	
Manage	test, WF3102102000178	VT310	
Things	D tex	NO TYPE	
Types Thing groups	Rems_test	NO TYPE	
Billing groups Jobs	test_test_Tmh	VT330	
Job templates	test_Examiner	VT510	
Tunnels Greengrass	test_VT3109999999999	утаза	
Secure	test, VF3102102000169	VTS10	
Defend	VT310VF3102102000169	VTS10	
Act	VTS10VT310AWSTEST	VT310	***
Test	VTS10_CERT_PROVISION	01ETV	
Software	test111_Core	NO TYPE	•••
Settings Learn	() m.9	NO TYPE	
Documentation	VT310_VT3102102000169	VT510	
New console experience	VG0511	NO TYPE	

### Amazon IoT >> Things >> Create a single thing

Sineat operating Ningela Region	Services 🗸 🔭	
Amazon IoT ×	Amazon IoT > Things > Create things	
Monitor Activity	Creating Amazon IoT things	
▼ Onboard		
Get started Fleet provisioning templates	An IoT thing is a representation and record of your physical device in the cloud. Any physical device needs a thing record in order to work with Amazon IoT. Learn more.	
▼ Manage	Penister a single Amazon IoT thing	
Overview	Create a thing in your registry	Create a single thing
Types		
Thing groups		
Billing groups	Bulk register many Amazon IoT things Create things in your registry for a large number of devices already using Amazon IoT, or	Craste many things
Jobs	register devices so they are ready to connect to Amazon IoT.	Create many things
Job templates		
Tunnets		
<ul> <li>Greengrass</li> </ul>		
Secure	Cancel	Create a single thing
Defend		
▶ Act		
Test		
Software		
Settings		
Learn		
Documentation 12		
New console experience		



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.

Monitor	CREATE A THING	
Petivity	Add a certificate for your thing	
Onboard		
Get started		
Fleet provisioning templates	A certificate is used to authenticate your device's connection to Amazon IoT.	
' Manage	One-click certificate creation (recommended)	
Overview	This will expecte a certificate public key and private key using Amazon IoTy certificate	Create certificate
Things	authority.	
Types		
Thing groups		
Billing groups	Create with CSR	🛓 Create with CSR
Jobs	Upload your own certificate signing request (CSR) based on a private key you own.	
Job templates		
Tunnels	Use my certificate	
Greengrass	Register your CA certificate and use your own certificates for one or many devices.	Get started
Secure	Skip certificate and create thing	
Defend	You will need to add a certificate to your thing later before your device can connect to	Create thing without certificate
Derend	Amazon IoT.	
Act		

- 1. 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 loT ×	Success Successfully created thing.
Monitor	A Survey
Activity	Successfully generated certificate. Please download certificate files.
▼ Onboard	
Get started	
Fleet provisioning templates	Certificate created!
▼ Manage	
Overview	
Things	
Types	after you close this page.
Thing groups	
Billing groups	In order to connect a device, you need to download the following:
Jobs	A certificate for this thing da3668b653.cert.pem Download
Job templates	A sublic key doze50b552 sublic key Deweload
Tunnels	A bronk key associouss-honikirkey powilload
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.

Monitor		
Activity	CREATE A THING	STEP
	Add a policy for your thing	3/3
Onboard		
Get started	Salart a policy to attach to this cartificator	
Fleet provisioning templates	Jeter a policy to actability this cel binate.	
Manage	Q. Search policies	
Overview		Hide
Things		
Types	ť	
Thing groups	"Version": "2012-10-17", "Statement": [	
Bitling groups	{ "Effect": "Allow".	
Jobs	"Action": "iot:*",	
Job templates	),	
Tunnels	' "Effect": "Allow",	
Greengrass	"Action": [ "iot:Publish",	
Secure	"iot:Receive"	
	"Resource": "*"	
Defend	( martine and a second	
Act	"Action": "iot:Subscribe",	
Test	"Resource": """ }	
	, <sup>1</sup>	
	VG710sample	View 🗸
Sottions		
Loam		
Documentation 12		and the second se
	1 policy selected	Register Thing
New console experience		



- 1. 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 Gatew	vay Configuration Tool	
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
1-Wire				
1-Wire Maintenance Help				
1-Wire Maintenance Help 中文				
1-Wire Maintenance Help 中文				
1-Wire Maintenance Help 中文				

1. Enable AWS Platform



Cloud Platform >> Platform Type: AWS IoT

Cloud Platform >> Enable

Cloud Platform >> Domain name

Cloud Platform >> Port: 8883

		Vehicle Tracking Gateway Cor	figuration Tool
Status	Distform True	ANUC T-4	
System Settings	Flattorini Type	AWS lot	
Cellular	Enabled	$\checkmark$	
OBD Settings	Domain		
Cloud Platform	Port	8883	
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 IoT > Things	
THING	
simple -	
NO TYPE	Actions 🔻
Details	This thing already appears to be connected. Connect a device
Security	
Thing groups	HTTPS
Dilling Crowns	
billing droups	Update your Thing Shadow using this Rest API Endpoint. Learn more
Shadows	a1cotnny7sen7e.ats.iot.cn-north-1.amazonaws.com.cn
Interact	
Activity	MOTT
Jobs	
	Use topics to enable applications and things to get, update, or delete the state information for a Thing (Thing Shadow)
Defender metrics	Learn more
	Amazon IoT > Thing: THING Details Security Thing groups Billing Groups Shadows Interact Activity Jobs Violations Defender metrics

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



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			Vehicle Track	ing Gateway Configuration Tool	
	Function Status	Connection Status	Platform Type	Connected Domain	Action
n settings	Enabled	Connected	AWS IoT	a1cotnny7sen7e.ats.iot.cn-north-1.amazonaws.com.cn	Modif
r					
settings					
Platform					
ity					
enance					

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.



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nitor	Amazon to 7 Fleet provisioning templates Fleet provisioning templates		Crea
ivity			
nboard	Search templates Q		
t started			
et provisioning templates	Name	Status	
tage	U VT310_T1	Enabled	
rview	CT ANY ANY ANY	Participation of the second	
95	U VISIO_12	Enabled	
5			
g groups			
ng groups			
templates			
inels -			
engrass			
ire			
end			
ware			
nos			

#### Creat Certificate: Amazon IoT >> Certificates

Amazon loT ×	Amazon IoT >> Certificates		
Manitor Activity	Certificates		Create
Onboard     Get started	Search certificates Q		
Fleet provisioning templates	Name	Status	
▼ Manage Overview	da3668b653077b106cd8bf89502f54e7df5329970034f298fc185164581eab9e	Inactive	
Things	8a185e47f47a6a7f9d2faf803ee258657b874de70b17ff4590d6258ef7202ece	Active	
Types Thing groups	bf2e870162179b93b9ff750f20ce627c94c724d0460e6153958df85a4eaa5d55	Active	
Billing groups	e2836cfac5f8d096749aef5fbac74443682dfd8bdb1d2f7cbff5a4a26fa4155e	Inactive	
Jobs Job templates	Cae7a42460842edt36762603bedff86dff326a8cadce29448cedaa12c4aefc87	Inactive	
Tunnels	806f5e40768f624fd86e113348b6a3655fb133a41327174e0a8d9dd39b2a6049	Active	
▶ Greengrass	a1ce6973c7e41566e74edee56baebb0b594b5ba4346d57430111310255046c46	Active	
▼ Secure			
Certificates	74f71a2120e293c283fdfd4196d290882667f054e95608261f0b158c81b9e1f2	Active	
Policies CAs	916b8b572412157004739e9bdb61b2d77b94ed68c2a0ef16138bb5726453a406	Active	***
Role Aliases Authorizers	c822904b92641a95d2190b771e0af9745f66038430d495dee1f1d8f8efe84002	Active	
▶ Defend	3eb68fff2f2a1e8b76517a6e5b5b8f27bd406bd8dbf4e019e9fa51103924a0e4	Inactive	
▶ Act	a62d86fr03f7c87efd0545355f3f84f4bb568d5e3a8fbb5fe74518ca3076ec28	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.	▲ 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 Allases Authorizers		
<ul> <li>Defend</li> <li>Act</li> </ul>		

- 1. 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 IoT ×	Success Successfully generated certificate. Please download certificate files.	
Monitor		
Activity		
▼ Onboard	Certificate created!	
Get started		
Fleet provisioning templates		
▼ Manage		
Overview	Lownroad these these and save them in a sare place. Lortificates can be retrieved at any time, but the private and public keys cannot be retrieved 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 Downlaad	
Jobs		
Job templates	A private key f0b76b8292.private.key Downlaad	
Tunnels		
▶ Greengrass	You also need to download a root CA for Amazon IoT: A root CA for Amazon IoT Download	
▼ Secure		
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	0 Earth patieles	
anage	C. Search poucies	
verview	sub_gg-policy	View
hings	pub_gg-policy	View
Types	Lizw on group Core-policy	View
hing groups		
Billing groups	VI310_Provision_test	Hide
ds termolater		
funnels	"Effect": "Allow", "Action": "iot:Connect",	
	"Resource": "*"	
reengrass	( "fffert": "Allow".	
ecure	"Action": [ "fat Sublish"	
ertificates	"iot:Receive"	*
icles		
45 sla Aliacos	Create new policy	
athorizers		-
and and a		
perend	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.





1. 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";



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		Vehicle Tracking Gatew	vay Configuration Tool	•
Status	Import certificate			
System Settings	20			
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
1 Wire				
1-wile				
Maintenance				
Help				
Help 中文				

### 1. Enable AWS

Cloud Platform >> Platform Type: AWS IoT

Cloud Platform >> Enable

Cloud Platform >> Domain name

Cloud Platform >> Port : 8883



		Vehicle Tracking Gateway Con	figuration Tool	- >
Status		ананананананананананананананананананан		
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 >>Fleet provisioning templates.

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



Mapitar			
Artivity	THING		
ACTIVITY	1000		
Onboard	NO TYPE		Actions +
Set started			
leet provisioning templates	Details	This thing already appears to be connected.	Connect a device
1anage	Security		
verview	Thing groups	HTTPS	
hings	Dilling Groups		
fypes	biung droups	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		
obs	Activity	MOTT	
ob templates	Jobs		
unnels	Malations	Use topics to enable applications and things to get, update, or delete the state in	nformation for a Thing (Thing Shadow)
ireengrass	Defender metrics	Learn more	
ecure			
efend			
let			
est			
oftware			
ettings			

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



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		N N	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

Monitar Activity	MQTT client		Connected as letconsole-1625648602778-0
Onboard Get started	Subscriptions		
Fleet provisioning templates	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 tepic	
Things.		Specify a topic to adminible to, e.g. myTopic/T	
Thing groups		Max message capture with	
Bitling groups		100	
Job templates Turnols		Quality of Service Info © 0 - This discussion will not acknowledge to the Device Gateway that messages are received 1. This discussion discussion data to be Parison discusses that meanwards are provided	
Groengrass		MOTT auviend disatar	
Secure		Auto-format JSON payloads (improves readability) Ditabay payloads as strings (more accurate)	
Policies		Display vaw paylearts (in hexadecimal)	
CAs			
Role Aliases Authorizers		Publish Specify a topic and a message to publish with a QoS of 0.	
Defend		Specify a topic to publish to, e.g. myTopic/1	
Act			
Test		1 Decrete restriction and the second second second	
Software			
Settings			



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

For example: v1/VT310 SN/motion/info

	MQTT client		Connected as intransole-16256-
	Subscriptions		
t			
isioning templates	Subscribe to a tapic	Schorthe	
	Publish to a topic	Devices publish MQTT messages on topics. You can use this client to subscribe to a topic and receive these messages	
		Subactiption topic	
		v1/v731069999999999999/motion/info	Subscribe to b
405		Han minorgin capital	
upi		100 V1/V1310 SN/reserve group/into	
ates.		Quality of Service and 0. This club will not acknowledge to the Revice Contenue that measures are social 0. This club will not acknowledge to the Revice Contenue that measures are social.	
		1 - This tilter will acknowledge to the Device Gainway that messages are received	
		MQTT payload dlaplay	
		Auto-format JSON payinads (improves readability)	
		Outplay payloads as writings (more accurate)	
		2.2 million and and a second sec	
n		Publish	
•)		Specify a topic and a message to publish with a QoS of 0.	
		Specify a topic to publish to, e.g. myTopic/1	
		Second Control of the second of the second of	

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 IoT X	Amazon IoT ) Test		
Monitor Activity	MQTT client www		Connected as intensiole-1625646602778-0 +
<ul> <li>Onboard</li> <li>Get started</li> <li>First provisioning templates</li> </ul>	Subscriptions Subscribe to a topk	er (vers 11231021001)78) (mediae) (heles	Equal Clear Paule
♥ Manage Overview Things	Publish to a bopic v1/VE3102102000175/moti ¥	Specify a topic and a measage to publish with a QoS of 8. v1/v151122102000176/mellov/who	Publish to topic
Types Thing groups Billing groups Jobs Job merplates Tunnels		1 0 *eessage"; "eddar from And 2nd provide"	
▶ Greengrass		v1/VF3102102000178/motion/info July 07, 2021, 17:06:37 (JTC-0800)	Export Hide
Secure     ContRicates     Publices     CAs     Role Allases     Authoritors		*writes x**         0.10758.           *writes x**         0.10758.           *writes x**         0.10758.           *writes x**         0.17788.           *writes x**         0.17788.	
<ul> <li>Defend</li> <li>Act</li> <li>Test</li> </ul>			
Software Settings			
Documentation			

For more information, see API documentation.

 $\label{eq:FlexAPI_over_MQTT_Reference_for_3rd_party_platform_VT310.pdf \end{tabular}$ 

# 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. Real-time 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. https://www.aliyun.com/product/iot.

### 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.

Public Instance		tol Platform / Devices /	Devices / Device Details				
Products	^	← mqtt_ten	np Offline Rit正定式指定 View		DeviceSecret ******* View		
Devices		Productkey alola	XSCARQ Copy				
Groups		Device Information	Topic List TSL Data Device Shadow Manag	je Files. Device Log	Online Debug Groups Task		
Jobs		Device Information					
CA Certificate		Product Name	MQIT例试温度或湿度	ProductKey	a10laKSCAKQ Copy	Region	China (Shanghai)
ules	~	Node Type	Devices	DeviceName	matt_temp Copy	Authentication Mode	Device Secret
laintenance	*	Ales @	Edit	IP Address	119.4.252.82	Firmware Version	÷.
source Allocation	~	Created At	Jul 5, 2021, 15:05:19	Activated At	Jul 5, 2021, 15:45:37.40	Last Online	Jul 15, 2021, 16:05:49:419
nk Visual	~ ~	Current Status	Offline	Real-time Delay	Test	Device local log reporting	Enabled
ocumentation and Tool	5	More Device Informati	on				
		SDK Language	JSjBroswer	Version	1.2.7	Module Manufacturer	2
		Module Information					

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





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E C-J Alibaba Cloud	Chi Workbench Chi	na (Sbanghai) 🛩				Q Dearch.		Expenses Tickets ICP	Enterprise Support App (
← Public Instance	IoT Platform / Devices /	Designs / Device Defails							
Devices ^	← mqtt_ter						anness Views		
Products	ProductKey a10b	NSCARD Copy							
Devices	Device Information	Topic List TSL Data	Device Shadow Manage Files	Device Log	Online Debug	Groups Ta	sk.		
Jobs	Device Information								
CA Certificate	Product Name	MOTTHICEREER	Device Certificate				×	Region	China (Shanghai)
Rules 🗸	Node Type	Devices	ProductKey	a10/aXSCAKQ_Copy				Authentication Mode	Device Secret
Resource Allocation	Alas IQ	Edit	DevireName	matt temp. Com				Firmware Version	
Link Analytics E	Created At	/wł 5, 2021, 15:05:19	Development	8785-bit-020-8285	LORAAAELELE17ED	C		Last Online	Jul 15, 2021, 16:05:49:419
Link Visual 🗸 🗸	Current Status	Offine	Devicement	0103000803300303	10000000000000000	Copy		Device Rocal log reporting	Enabled 🌑
Documentation and Tools	More Device Informati	on	Certificate Installation N	Modes -certificate-per-device a	nd unique-certificat	e-per-product mode			
	5DK Language	15jBrouwer					Close	Module Manufacturer	
	Module Information								
	Tag Information Device Tag: No results found	Z 501							

#### 1. 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 to enable Secure 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.



		Vehicle Tracking Gateway Confi	guration Tool	-
Status				
System Settings	Platform Type	Aliyun lot	•	
Cellular	Enabled	$\checkmark$		
OBD Settings	Device Name			
Cloud Platform Security	Region ID			
1-Wire	Product Key			
Maintenance	Authentication Mode	Unique Certificate Per Device	•	
Help				
中文	Device Secret			
	Show Advanced Option			
	Publish Invalid Data	$\checkmark$		
Disconnect			Back Read again Save con	nfigurations

# 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 Con	figuration Tool	-
Status	Platform Type	Mqtt Broker	•	
System Settings				
Cellular	Enabled	$\checkmark$		
OBD Settings	Domain			
Cloud Platform	Port	1883		
Security		1005		
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 Con	figuration Tool	-
Status	Platform Type	Matt Broker		
System Settings	Tallorin Type	Mqt Diokei		
Cellular	Enabled	$\checkmark$		
OBD Settings	Domain			
Cloud Platform Security	Port	1883		
1-Wire	username			
Maintenance	password	1		
Help	Show Advanced Option			
ΨX	Publish Invalid Data	$\checkmark$		

## 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 https://thingsboard.io.





### 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 https://thingsboard.io/docs/gettingstarted-guides.

	🗔 Device groups 👌 🗔 All	Current subscription [ThingsBoard Gloud Maker] Station Entertained and Scription (1997) 1992210 C Serie (1997) 1992
🔒 Home	All: Devices 🧳	VT3102102000207 Device details
III Solution templates	Created time 4	Name Details Attributes Latest telemetry Alarma Events Relations Audit Logs
Rule chains	2021-08-02 11:33:03	VT310210200207
다. Data converters		Wanupe creations Deter dovice
Integrations		Device Credentials X tott credentials
😯 Roles		Credentials type
E Customers hierarchy		MQTT Basic -
😝 User groups 🗸 🗸		Claret (0)
💒 Customer groups 🗸 🗸		
💼 Asset groups 🗸 🗸		InHand207
a Device groups		Password
LoO All		
D Device profiles		
🔚 Entity view groups 🗸 🗸		Cancel Save
Widgets Library		
🔡 Dashboard groups 🛛 👻		
Scheduler		
P 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	$\checkmark$				
OBD Settings	Domain	thingsboard.cloud				
Cloud Platform	Port	1883				
1-Wire	username	XXXXXX				
Maintenance	password	1				
Help	Show Advanced Option					
中文	Publish Invalid Data	$\checkmark$				
Disconnect			Back Read again Save configurations			

# 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 Cellular OBD Settings	Upgrade firmware Firmware of InTracker: Browse file	? ×
Cloud Platform	Look in:	1 . =
Security 1-Wire Maintenance Help 中文	<ul> <li>My Comp</li> <li>PerfLogs</li> <li>Program Files</li> <li>Program Files (x86)</li> <li>Users</li> <li>Windows</li> <li>VT3.V1.0.8.IHD</li> </ul>	
	File name: VT3. V1. 0. 8. IHD	Open 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.





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 Gatewa	y Confr	iguration 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				back	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 Cellular	import/export config file Export configurations Import configurations	
OBD Settings	Select the exported configuration file ?	$\times$
Security	Look in: C:\ - C O O I II	
1-Wire Maintenance Help 中文	<ul> <li>My Comp</li> <li>PerfLogs</li> <li>sunzhandc</li> <li>Program Files</li> <li>Program Files (x86)</li> <li>Users</li> <li>Windows</li> <li>back.json</li> <li>backup.json</li> </ul>	
	File name: backup.json Open	
Disconnect	Files of type:     configuration file(*.json) <ul> <li>Cancel</li> <li>Cancel</li> </ul> <ul> <li>Cancel</li> <li>Cancel</li> </ul> <ul> <li>Cancel</li> </ul>	,,1

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.



<u> </u>		, our contract of the second s
55	"aliyun_a	uth_type": "0",
56	"aliyun_c	leviceSec": "",
57	"aliyun_p	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).



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COM3,115200,None,8,One - Serial Debug Assista	ant	- 🗆 X
🗚 🖸 ? 😅		<u>نې</u>
Serial Port : G COM3 ~		
Baud Rate : 🔍 115200 🗸		Character encoding ASCII ~
Data Bits : 8 ~		
Parity : None 🗸		
Stop Bits : One $\checkmark$		Theme Default ~
Open serial port		Keep the screen constant light Off
Receiving settings. Receive and save to file		Press "ESC" to send On
HEX display     Pause receiving display		Show font size A A A
Auto break frame ? 20		
Receive scripts A Add Timesta V		JavaScript Script folder Change
Save data Empty data		Default
Send settings.		
Send a file <u>Extension cmd</u>		
HEX Send		
Sending scripts 🐊 ADD8 🗸		
Timing send 1.0 sec		
DTR RTS		
Line break \n (LF)		$\triangleright$
Show Send string	a share an a	
	Send : 0	Receive : 0 Reset count

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



Serial Port: COM3    Baud Rate: 115200    Data Bits: 8    Parity: None    Stop Bits: One    Inter cli mode username:   Close serial port   Receiving settings.   Receiving settings.   Receive and save to file   HEX display   Pause receiving display   Auto break frame   ?   Save data   Empty data   Send a file Extension cmd	
Data Bits : 8   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   Add Timesta   Save data   Empty data	
Stop Bits : One   Close 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   Send a file	
Receiving settings.   Receive and save to file   HEX display   Pause receiving display   Auto break frame   ?   Receive scripts   Add Timesta   Save data   Empty data	
Send settings.	
HEX Send       Sending scripts ♪ ADD8 ∨       Timing send       1.0	
DTR RTS   Line break \n (LF)   Show Send string	

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 V		
Close serial port		
Receiving settings. Receive and save to file		
HEX display		
Pause receiving display		
Auto break frame ? 20		
$\square$ Receive scripts $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$		
Save data Empty data		
Send settings.		
Send a file Extension cmd		
HEX Send		
Sending scripts 2 ADD8 ~		
Timing send 1.0 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 Assistant				×
🗚 🖸 ? 😅				ŝ
Serial Port : G COM3 V	to to Max 4			
Baud Rate : 🦼 115200 🗸	Enter cli mode			
Data Bits : 8 ~				
Parity : None 🗸	username: admin			
Stop Bits : One ~				
Close serial port	password: ******			
Receiving settings.	login success!			
Receive and save to file				
HEX display	InTracker />			
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 🔊 ADD8 🗸				
Timing send 1.0 sec				
DTR RTS	123456			
Line break			$\triangleright$	
Show Send string				
Se	nd : 16 Receive : 92		Reset	count

 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.



COM3,115200,None,8,One - Serial Debug Assistant			×
A IA ? O			ŝ
Serial Port: COM3 V [Um[32m08-04 05:58:1/ 1/ UBU-LANZAPP: Unconnected diagnostic protocol is not based on CM	venici	e or	
Baud Rate : 115200 V			
Data Bits: 8 [0m[32m08-04 05:58:17 I/ CAN1App: CAN dev write with baudrate :250000	data fai	led	
Parity : None V	-		
Stop Bits:       One       [0m[32m08-04 05:58:17 I/ CAN1App: Unconnected ve diagnostic protocol is not based on CAN.	nicle or		
Close serial port [0m08-04 05:58:18 D/ Dial Manager: >>>(14) AT+CG	CONTRDP		
Receiving settings.			
HEX display 08-04 05:58:19 D/ Dial Manager: <<<(117,117)			
Pause receiving display			
Auto break frame ? 20 +CGCONTRDP: 1.5, "uninet.mnc001.mcc460.gprs", "10,224,57,247,2	55.0.0.0	","10	.22
Receive scripts Add Timesta 4.57.248", "119.7.7.7", "0.0.0.0"		<u>,</u>	
Save data Empty data			
Send settings.			
Send a file Extension cmd OK			
HEX Send			
Sending scripts 🔊 ADD8 🗸			
Timing send 1.0 sec			
DTR RTS log console enable			
Line break \n (LF)		$\triangleright$	
Show Send string			
Send : 39 Receive : 1470		Reset	count

 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 Assista	nt	8. <del></del>		×
🗚 🗠 ? 😅				ŝ
Serial Port : G COM3 $\checkmark$	[0m[32m08-04 06:00:34 I/ MattTp: Clear MOTT client.			
Baud Rate : 🦼 115200 🗸	LL			
Data Bits : 8 🗸	[0m[32m08-04 06:00:34 I/ MqttTp: retry times:346, Wasseconds to reconnect!	aiting	20	
Parity : None 🗸				
Stop Bits : One ~	[0m[32m08-04 06:00:35 I/ OBD-CAN2App: CAN dev write with baudrate :500000	data	faile	ed
Close serial port Receiving settings.	[0m[32m08-04 06:00:35 I/ CAN1App: CAN dev write data with baudrate :500000	a fail	.ed	
Receive and save to file	[0m[32m08-04 06:00:35 I/ OBD-CAN2App: CAN dev write data failed			
HEX display	with baudrate :250000			
Auto break frame ? 20     Receive scripts & Add Timesta ~	[0m[32m08-04 06:00:35 I/ OBD-CAN2App: Unconnected ve diagnostic protocol is not based on CAN.	ehicle	or	
Save data Empty data	[0m[32m08-04 06:00:35 I/ CAN1App: CAN dev write data with baudrate :250000	a fail	.ed	
Send settings.				
Send a file <u>Extension cmd</u>	[Um[32m08-04 06:00:35 ]/ CAN1App: Unconnected vehic. diagnostic protocol is not based on CAN.	le or		
HEX Send				
Sending scripts 🔊 ADD8 🗸	[Omlog console disable InTracker />			
Iming send 1.0 sec	les console dischle			
	TOR CONSOLE GISADIE	,		
Line break				•
	Send : 59 Receive : 29367		Reset	count

 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.



#### According to RSS-GEN section 6.8

For licence-exempt equipment with detachable antennas, the user manual shall also contain the following notice in a conspicuous location:

This radio transmitter 11594A-VT2FQ33 and 11594A-VT2FQ02 has been approved by

Innovation, Science and Economic Development Canada to operate with the antenna types list ed below, with the maximum permissible gain indicated. Antenna types not included in this li st that have a gain greater than the maximum gain indicated for any type listed are strictly p rohibited for use with this device.

Antenna type and gain for HVIN:FQ33,FQ33-BAT,FQ02,FQ02-BAT

Ceramic Chip Antenna with maximum antenna gain 3.2dBi

Antenna type and gain for HVIN:FQ33-ANT,FQ33--ANT-BAT,FQ02-ANT,FQ02-ANT-BAT

Patch Antenna with maximum antenna gain 1.23dBi

Note: -ANT represents external antenna(Patch Antenna), without adding - ANT represents internal antenna(Ceramic Chip Antenna), - BAT represents internal battery, without adding - BAT represents no battery.



#### FCC STATEMENT

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.

NOTE 1: 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, 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.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

RF Exposure



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The equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This device should be installed and operated with minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. The availability of some specific channels and/or operational frequency bands is country dependent and firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.



### IC STATEMENT

This device complies with Industry Canada license-exempt RSS standard(s): Operation is

subject to the following Two conditions:

(1) this device may not cause interference, and

(2) This device must accept any interference, including interference that may cause

undesired operation

of the device.

Le present appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) l'appareil ne doit pas produire de brouillage, et

(2) l'utilisateur de l'appareildoit accepter tout brouillage radioélectrique subi, même si le

brouillage est

susceptible d'en compromettre le fonctionnement.

CAN ICES-3 (B)

Avis d'Industrie Canada

Le présent appareil est conforme aux CNR d'industrie Canada applicables aux appareils radio exem pts de licence L'exploitation est autorisée aux deux conditions suivantes:

1) l'appareil ne doit pas produire de brouillage; et

2) l'utillsateur de l'appareil doit accepterbrouillage radioélectrique subi meme si le brouillage est susceptible d'encompromettre le fonctionnement. mauvais fonctionnement de l'appareil.Cet appareil numériquie de la classe B est conforme à la norme NMB-003 du Canada.

CAN NMB-3 (B)

Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled



environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20cm de distance entre la source de rayonnement et votre corps.