iStartek Vehicle GPS Tracker
VT800-L User Manual
V1.0

Content

1. Copyright and Disclaimer

2. Product Description

VT800-L is a 4G based GPS vehicle tracker. With built-in high-precision GPS positioning module reports the vehicle location and vehicle status to the vehicle tracking service platform through the 4G network for real-time monitoring, anti-theft and scheduling management of the vehicle. It can be applied to fleet management, public transport management, school bus management, taxi operation management, vehicle insurance management, lease management and private car anti-theft, etc.

With built-in 128Mb Flash memory. VT800-L will automatically save historical in blind area and resend it to server once signal is restored.

VT800-L contains an RS232 port that can be connected to RFID or ibutton for vehicle driver identification and vehicle control. It can also be connected the OBD decoder to read the car ECU data and connect other RS232 peripherals to achieve the corresponding function.

3. Product Function

- ✧ GPS+GSM base station dual-mode positioning
- ✧ Real-time tracking
- ✧ Track by time interval
- ✧ Track by distance
- ✧ Heading change report
- ✧ Mileage report
- ✧ External power disconnection alarm
- ✧ SMS alarm
- ✧ SOS alarm
- ✧ Low battery alarm
- ✧ Engine and door status change alarm
- ✧ Support dual servers
- ✧ Geo-fence alarm
- ✧ Speeding alarm

- ✧ GPS signal loss alarm
- ✧ Harsh acceleration alarm
- ✧ Harsh deceleration alarm
- ✧ Harsh turning alarm
- ✧ Impact alarm
- ✧ Vibration (towing) alarm
- ✧ Idling alarm
- ✧ Fatigue driving alarm
- ✧ Fuel theft alarm
- ✧ Low fuel alarm
- ✧ High and low temperature alarm
- ✧ 128 Mb Flash
- ✧ FOTA upgrade
- ✧ ACC ON、ACC OFF set time interval upload
- ✧ Remote fuel/electricity cut off
- ✧ RFID、iButton、MSR driver identification
- ✧ Buzzer alarm
- ✧ Fuel level monitoring
- ✧ Temperature monitoring
- ✧ OBD data reading
- ✧ RS232 camera
- ✧ Data transmission by WIFI
- ✧ Speed limiting

4. Product Specification

Item	Specification
Size	78mm（L）*61mm（W）*26mm（H）
Weight	107g
Input voltage	DC 9- 100V/1.5A
Inbuilt Battery	500mAh/3.7V（High temperature resistant battery）
Consumption	70mA/h
Operating hours	Sleep mode 56 hours, standby mode 6.7 hours
Working temperature	-20℃to 80℃
Working humidity	5% to 95%
LTE/WCDMA/GSM Bands	**VT800-L ACN：（EC200A-CN，CAT4)** LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/B38/B39/B40/B41 WCDMA: B1/B5/B8 **VT800-L UEU：（EC200U-EU，CAT1)**

	LTE-FDD: B1/B3/B5/B7/B8/B20/B28 LTE-TDD: B38/B40/B41 GSM: 850/900/1800/1900MHz **VT800-LAAU： (EC200A-AU，CAT4)** LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B28/B66 LTE-TDD: B40 WCDMA：B1/B2/B4/B5/B8 GSM: 850/900/1800/1900MHz
MCU	Cortex-M4，AT32F415RBT7
GPS module	L76K（GPS+BDS）Dual mode positioning
GPS sensitivity	-165dB
Positioning accuracy	2.5m
LED Indicator	2 LED lights indicate GPS/GSM status
GSM antenna	Built-in FPC
GPS antenna	Built-in ceramic antenna，25*25*4mm
Flash memory	32M bit
Sensor	3D accelerometer
Switch	External toggle switch
SIM card	Nano SIM card
Input/output	3 digital inputs (can be configured for positive and negative trigger.) 2 analog input (default AD input, can be configured for positive and negative trigger, AD input (0-36V)) 2 output 1 1-wire 2 RS232 1 Micro USB 1 Speaker 1 Microphone

5. Products And Accessories

5.1 Standard Accessories

Main Unit

Power Wire

GPS Antenna

GSM Antenna

5.2 Optional Accessories

RFID Card Reader

RFID Tag

iButton Reader

iButton

Ultrasonic Fuel Sensor

Capacitive Fuel Sensor

Temperature Sensor

12V/24V Relay

OBD Reader

USB Cable

Buzzer

Speaker

Microphone

SOS Button

Speed limiter

WIFI Modem

Camera

MSR

6. Product Appearance

7. Product Operation

7.1 Recharge

When using V800-L for the first time, please connect the tracker's red wire (positive) and black (ground wire) to a 12V or 24V power supply and charge for at least 2 hours to ensure sufficient power. After configuration and testing are completed, install it on the vehicle.

7.2 Install SIM Card

The device supports 2G/3G/4G SIM card.
Please make sure that the SIM card has sufficient balance, the GPRS function has been activated and the correct APN of the SIM card has been confirmed.
Please make sure that the PIN lock function of the SIM card is turned off.
If users need to use the function: Call to reply location, please make sure that the SIM card has the caller ID display Function.
Please make sure the device is turned off before inserting SIM card.
a. Unscrew the front baffle and take out the PCBA
b. Install the SIM card
c. Install the GSM/GPS antenna
Screw the GSM antenna on the SMA connector marked with "GSM" and the GPS antenna on the SMA connector marked with "GPS" to ensure that both antennas are tight and not loose.
The GSM antenna can be hidden anywhere away from the power supply and cannot be glued to the metal surface, otherwise it will affect the GSM signal strength.
The GPS antenna must face the open sky and cannot be installed in a place shielded by metal.

7.3 Turn On Device

Switch ON or connect to external power supply, V800-L will start up and run.
LED lights indicate operating conditions:

GPS Indicator (Blue)	
OFF	Power OFF or in sleep mode
Flash (every 0.1 sec)	GPS module is starting or restarting
Fast Flash (0.1 sec ON, 2.9 sec OFF)	GPS signal received

Slow Flash (1sec ON, 2 Sec OFF)	No GPS signal
GSM Indicator (Green)	
ON	There is an incoming call or is in a call
OFF	Device is OFF or in sleep mode
Fast Flash (every 0.1 sec)	GSM module is starting or restarting
Fast Flash(0.1 sec ON, 2.9 sec OFF)	GSM signal received
Slow Flash (1sec ON, 2 Sec OFF)	No GSM signal

7.4 Track By SMS

Send SMS command to VT800-L: 0000,800

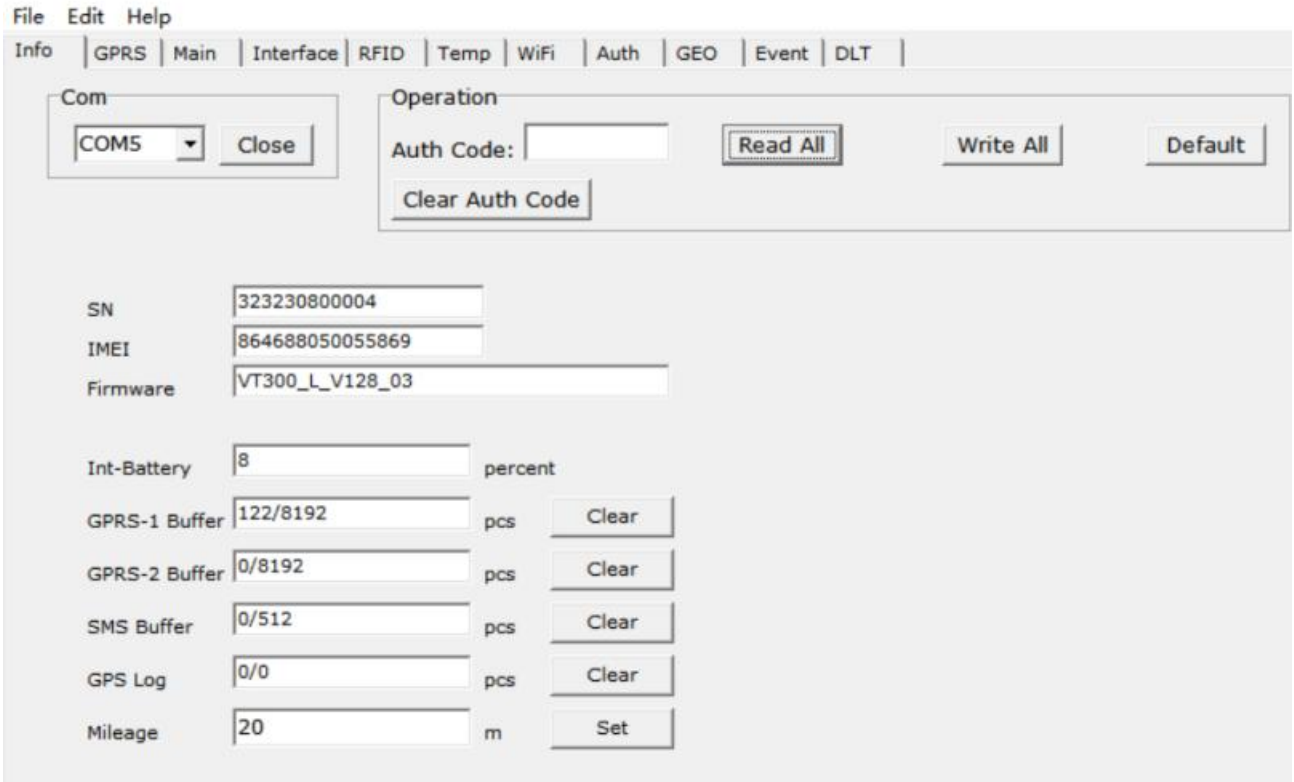
Users will receive a text message with a link to Google maps. Click to open the link to display the current location on Google maps.

Please refer to "iStartek GPS Tracker Communication Protocol V2.0" for the description of SMS content and more SMS commands

7.5 Parameter Configuration

Download and install the USB cable driver "PL2303_Prolific_Driver".

After the device is turned on, connect the VT800-L to the computer via a USB cable, run the "iStartek Parameter Editor" configuration software and open the port to enter the parameter configuration status.



For more parameter configuration, please refer to "iStartek Parameter Editor User Manual".

7.6 Track By GPS Tracking Platform

1. Users can set the server IP, Port, and APN parameters through SMS commands 100, 102, and 109, and users can also use the iStartek Parameter Editor software to configure related parameters.
2. Check the parameters of commands 100, 101, 102, 105, 106 and 109 through SMS command 808, and users can also use iStartek Parameter Editor software to configure related parameters.

For more SMS command functions and parameter configuration, please refer to "iStartek GPS tracker Communication Protocol V2.0" and "iStartek Parameter Editor User Manual".

8. Product Installation

8.1 Power Wire Function Introduction

DC	**AD1**	**OUT2**	**OUT1**	**1-wire**
GND	**AD2**	**IN3**	**IN2**	**IN1**

PIN	Color	Function
DC	Red	DC In (power input), connect to the positive pole of the car battery. Input voltage 9-100V.
GND	Black	GND, connect to the negative pole of the car battery, or to the iron place on the car.
IN1	White	Digital input 1, the default negative trigger, it can be configured positive/negative trigger, and can be connected to SOS button.
IN2	Orange	Digital input 2, default is positive trigger. Positive/negative trigger can be configured by Parameter Editor. It can be used for ACC detection.
IN3	Gray	Digital input 3, default is positive trigger. Positive/negative trigger can be configured by Parameter Editor.
AD1	Blue	Default AD1 input, AD1 input (0-36V, 12-bit precision), positive/negative trigger can be configured by Parameter Editor.
AD2	Green	Default AD2 input, AD2 input (0-36V, 12-bit precision), positive/negative trigger can be configured by Parameter Editor.
OUT1	Yellow	Open-drain output, drive capacity greater than 500MA. An external relay can be connected to remotely cut off the car's fuel/engine power supply, etc.
OUT2	Brown	Open-drain output, drive capacity greater than 500MA. External buzzer can be connected.
1-wire	Purple	The wire transmit digital signal. It can be connected to iButton and temperature sensor, and can support up to 8 temperature sensors.

8.2 RS232 Port

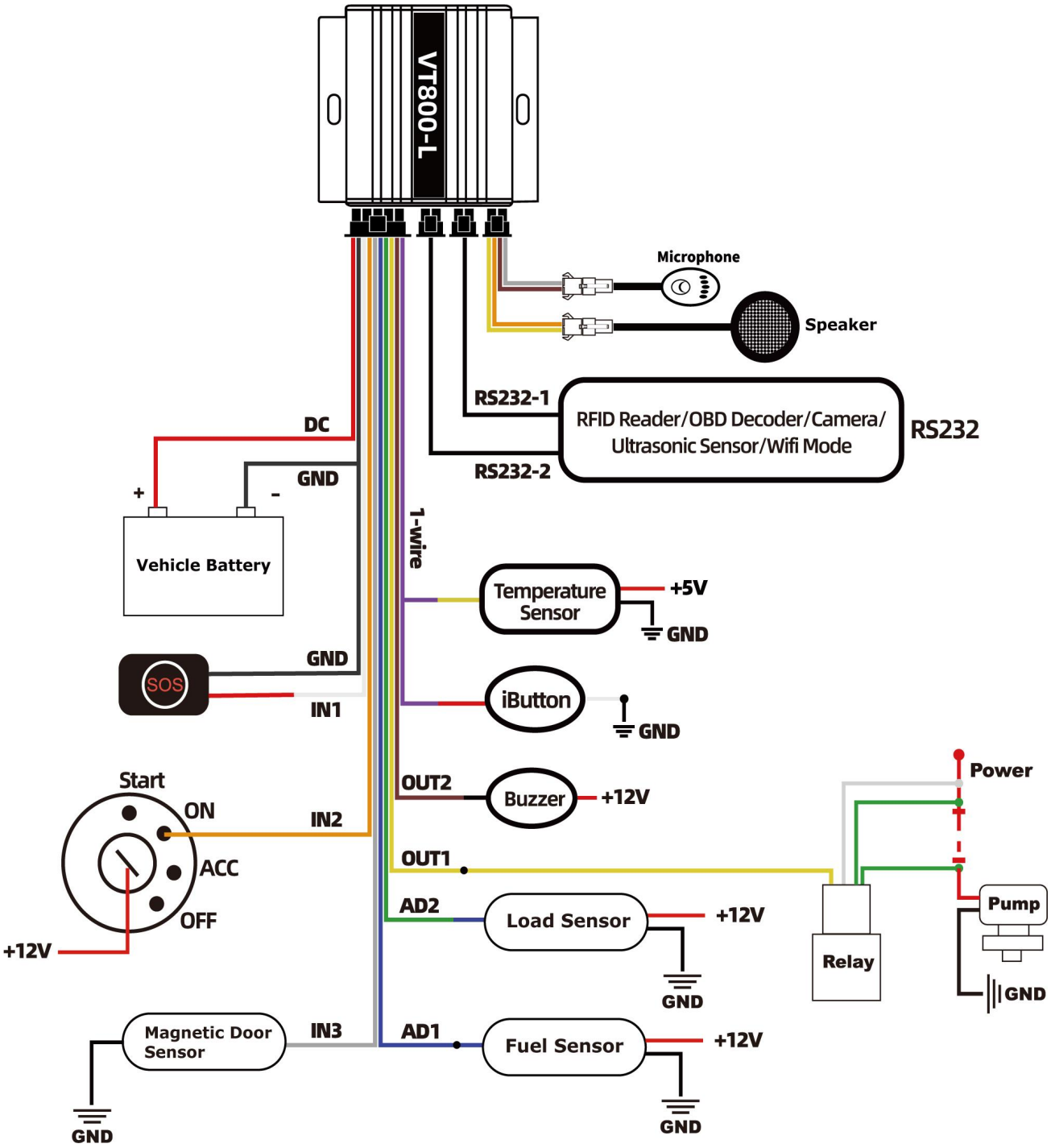
The RS232 Port can be connected to RFID, MSR, RS232 camera, RS232 ultrasonic fuel level sensor and other RS232 communication peripherals.

1 DC 5V OUTPUT	3 VT800-L RX
2 GND	4 VT800-L TX

8.3 Microphone&Speaker Port

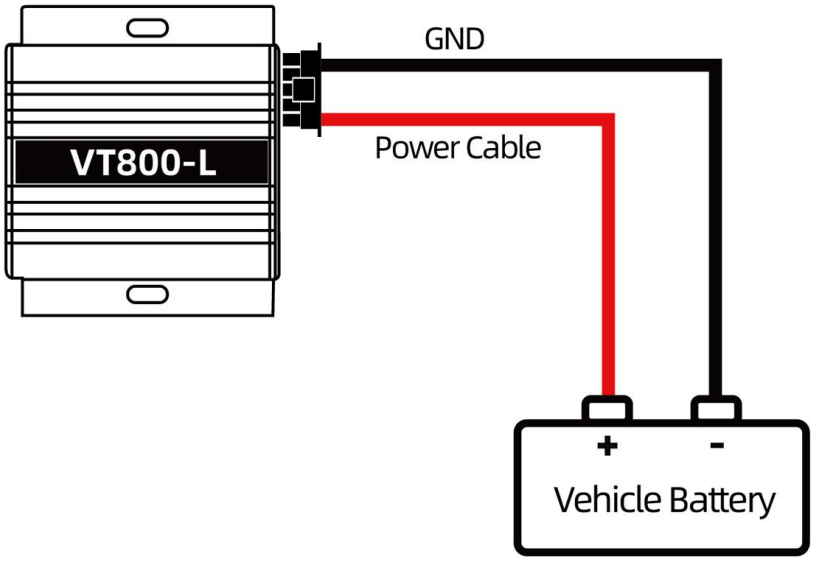
1 Speaker+	3 Microphone+
2 Speaker+	4 Microphone-

8.4 Device Installation Diagram



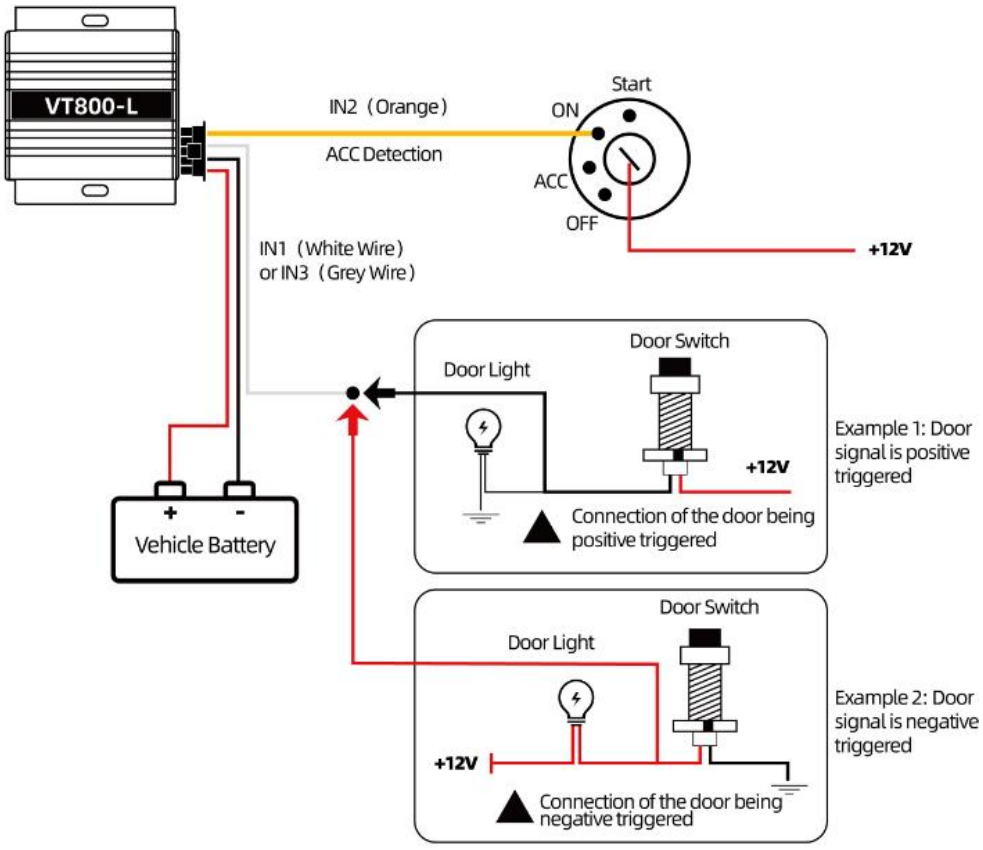
8.4.1 Power/Ground Wire Connection

Connect the red power wire and black ground wire to the positive and negative pole of the car battery to get power supply.



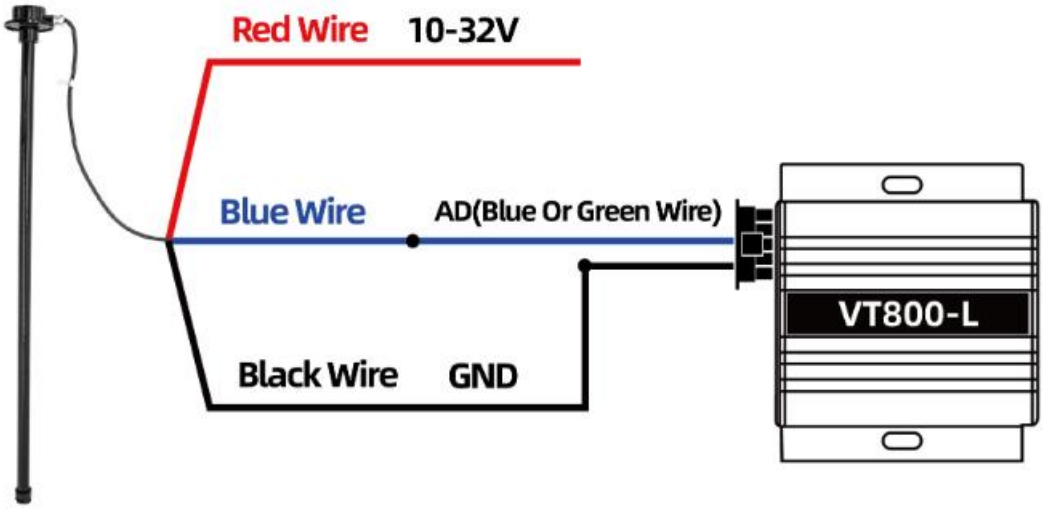
8.4.2 Digital Input Installation

Input2 can be connected to the ignition switch of the car to detect the ignition status, Input1 can be connected to the car door to detect the door status.

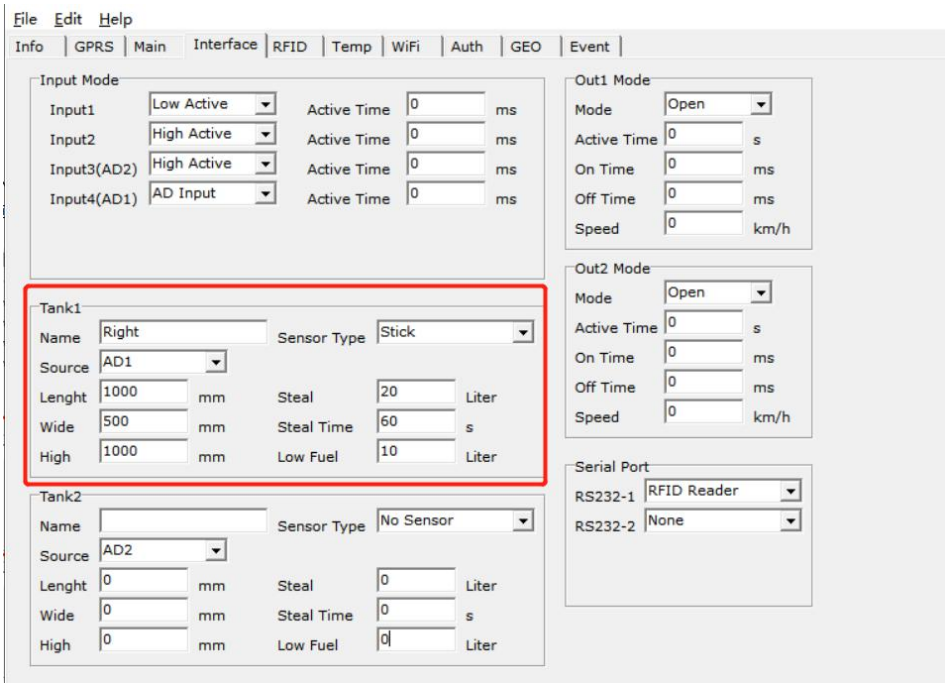


8.4.3 Analog Input Installation

Analog input AD voltage range is 0-36V, up to two fuel sensors can be connected to the same voltage output type sensor, the wiring is as below:



After connecting the wires, can set the size of the fuel tank (length, width, height),data source (AD1/AD2), sensor type (capacitive fuel sensor or ultrasonic fuel sensor), liters of fuel stolen, fuel stolen time, low fuel alarm by Parameter Editor.



For example, as above parameters setting, when the fuel sensor is connected to AD1 and fuel level decreases more than 20 liters within 60 seconds, an fuel theft alarm will be triggered, and if the fuel volume is less than 10 liters, a low fuel alarm will be triggered.

Example: The fuel tank height is 100cm and full fuel is 50 liters, GPRS data as below:

&&A147,021104023195429,000,0,,180106093046,A,22.646430,114.065730,8,0.9,54,86,76,326781,460|0|27B3|0EA7,27,0000000F,02,01,04E2|018C|01C8|0000,1,0104B0,01013D|02813546\r\n

AD1 voltage is 0x01C8 (hexadecimal)=456 (decimal), AD1=456/100 (fixed value)=4.56V;

AD2 voltage is 0x0000=0, AD2=0/100=0V;

Example: Connect the GPS Tracker analog input to capactive fuel sensor, the yellow-green wire of the sensor are connected to the blue wires (AD) of the VT800-L. When the fuel is empty, the sensor output voltage is 0V, when the fuel is full, the sensor output voltage is 5V

Calculate the percentage of remaining fuel:

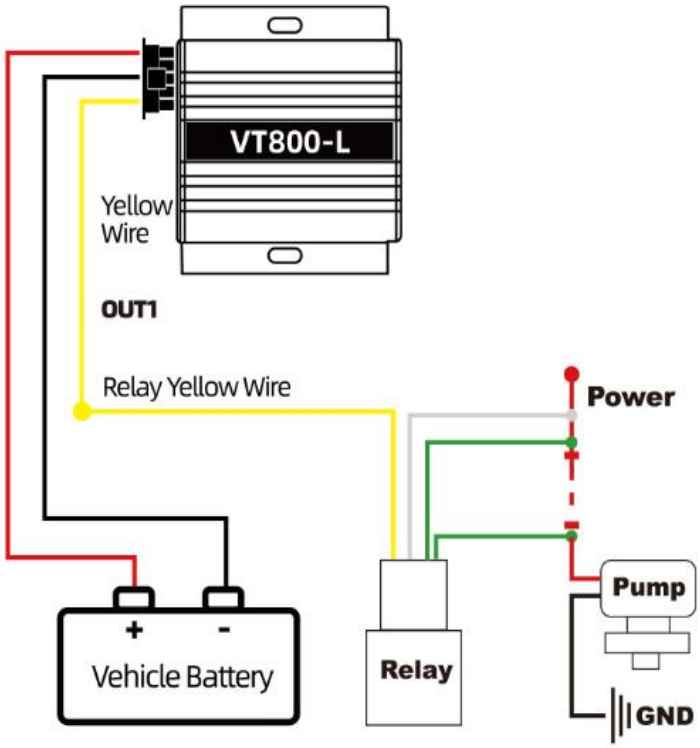
Fuel percentage=(AD/5)*100%=(4.56/5)*100%=91.2%.

Calculate the remaining fuel in liters:

The remaining fuel in liters = (AD/5) * 50 liters = 45.6 liters

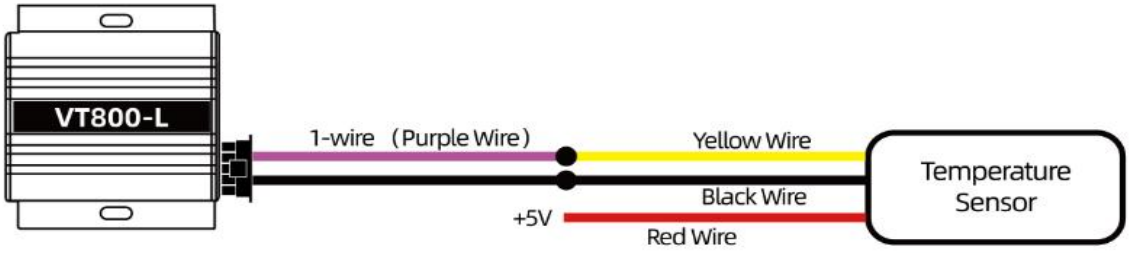
8.4.4 Output Control Wire Installation

The output wire can be connected to an external relay to cut off fuel/power supply and control the vehicle. users can also connect the buzzer to alarm.



8.4.5 Temperature Sensor Installation

Connect device to a temperature sensor, the wiring connection is as below:



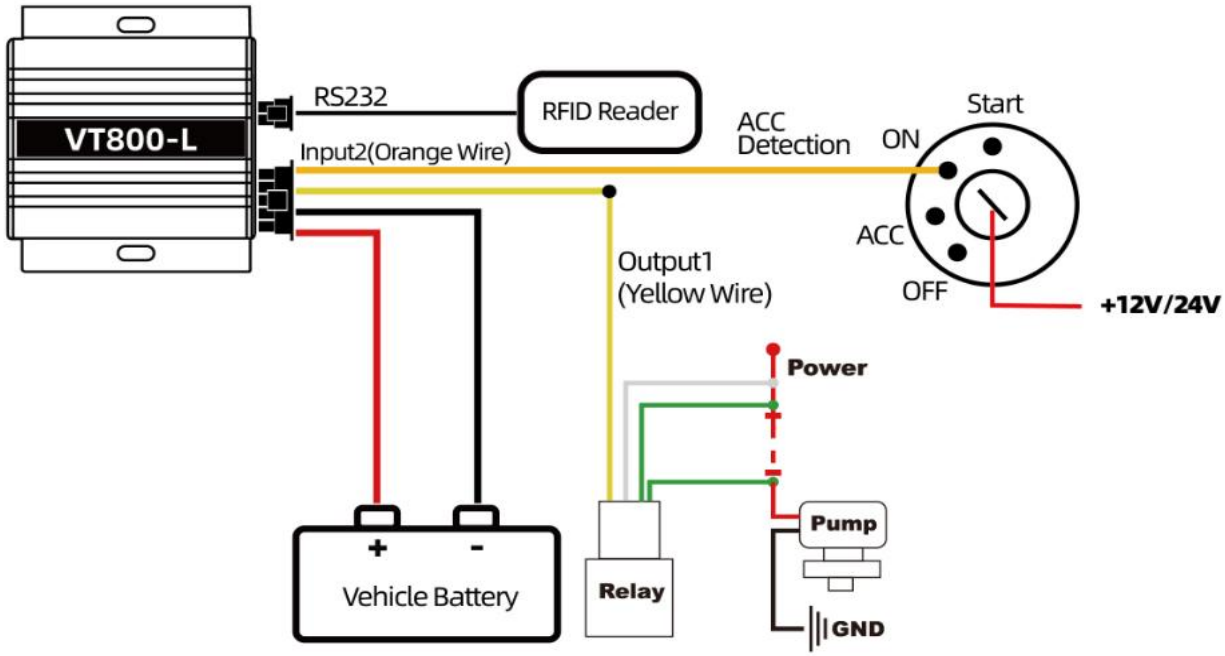
After connecting the wires, the temperature sensor can be configured through SMS commands, set high and low temperature alarms, and collect temperature value. For related parameter setting instructions, please refer to "iStartek GPS tracker Communication Protocol V2.0".

Example: after connecting a temperature sensor as shown above,

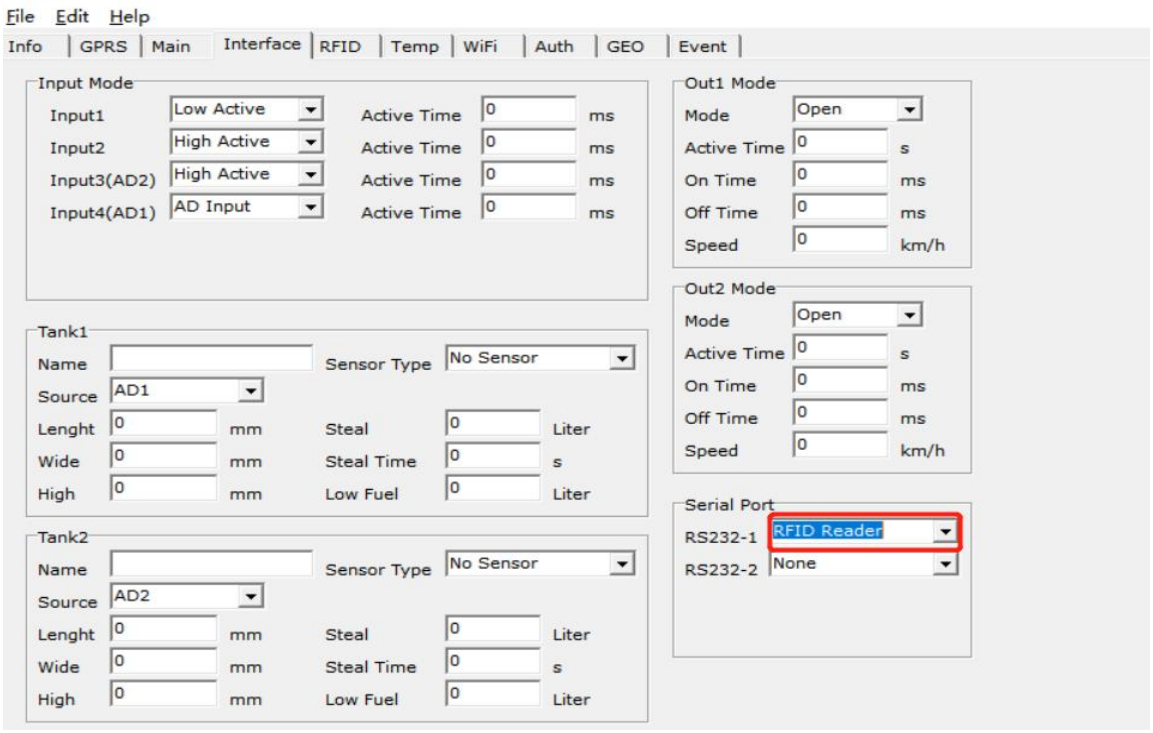
1) Configure temperature sensor, can send command: **0000,135,1,Storage room**
Description: 1 is the serial number of the temperature sensor, and Storage room is the name of the temperature sensor.
2) Set high and low temperature alarm, users can send command: **0000,136,1,40.5,-10**
Description: 1 is the serial number of the temperature sensor, 40.5℃ is the high temperature value to trigger alarm, and -10℃ is the low temperature value to trigger alarm.
3) Get the temperature value, users can send the command: **0000,137**
Reply: 137, 1: 29.0, 2: 28.8
Description: 1 is the first temperature sensor with a temperature value of 29.0°C, 2 is the second temperature sensor with a temperature value of 28.8°C.

8.4.6 RFID Reader Installation

When the device is connected to an RFID card reader, it can prevent illegal starting of the vehicle. The wiring connection is as below:
When the driver does not swipe the authorized card to start the vehicle, it is considered to be illegally started, the device will automatically disconnect the fuel supply and power supply, and the vehicle cannot be started.
For related parameter setting instructions, please refer to "iStartek GPS tracker Communication Protocol V2.0".



After connecting the wires, users need to set the serial port to connect to the external device by using the parameter configuration software or SMS command:
1). Parameter Configuration Software Settings



2). Send SMS configuration, set by SMS command 252, send: **0000,252,1,1**

After connecting the wires as above, users can authorize the RFID card, delete the RFID card, and query the authorization status of the RFID card according to the SMS instructions.

Example: to authorize an RFID card, users can send SMS command: **0000,144,123456789,987654321**

Description: The authorization ID number is 123456789,987654321.

After authorization, set OUT1 to control vehicle fuel and power supply. When OUT1 is required to control the fuel and power supply, it is necessary to use the 212 command to set the 53 event to control OUT1. Swiping the card to control the fuel and power supply is a separate control logic, not controlled by the output mode set by 251 command.

Command that can be sent: **0000,212,1,1,53**

To delete the RFID card, users can send the SMS command: **0000,145,123456789,987654321**

Delete the ID number 123456789,987654321.

Description: To query the authorization status of the RFID card, users can send the SMS command:

0000,146,123456789,987654321

Query ID number 123456789,987654321

SMS reply 146,123456789:1,987654321:1

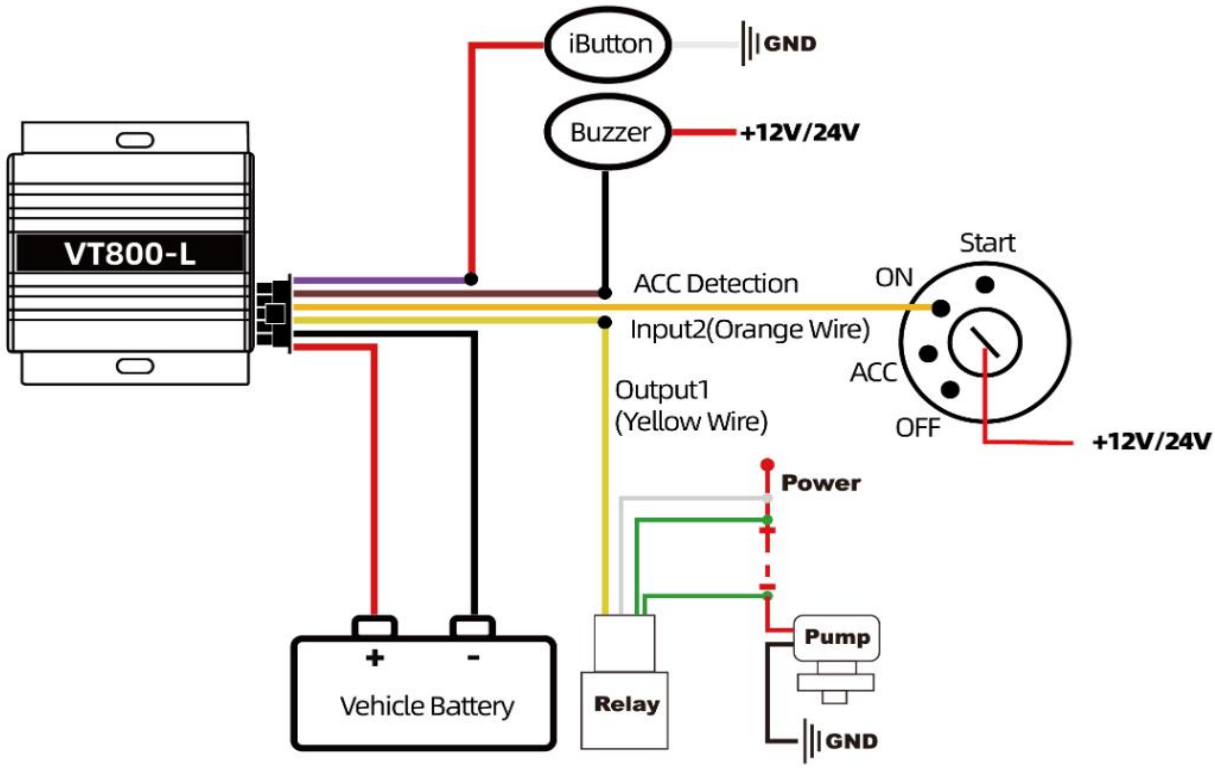
Description: 1 means authorized (authorization status: 0 means not authorized, 1 means authorized).

8.4.7 iButton Installation

When the device is connected to an iButton, it can prevent illegal starting of the vehicle. The wiring connection is as below:

When the driver does not swipe the authorized button to start the vehicle, it is considered to be illegally started, the device will automatically disconnect the fuel supply and power supply, and the vehicle cannot be started.

For related parameter setting instructions, please refer to "iStartek GPS tracker Communication Protocol V2.0".



After connecting the wires as above, users can authorize the iButton ID, delete the iButton ID, and query the authorization status of the iButton ID according to the SMS instructions.

Example: to authorize an iButton ID, users can send SMS command: **0000,144,#00000A678C,#00000E4321F**

Description: The authorization ID number is 0x00000A678C,0x00000E4321F.

After authorization, set OUT1 to control vehicle fuel and power supply. When OUT1 is required to control the fuel and power supply, it is necessary to use the 212 command to set the 53 event to control OUT1. Swiping the button to control the fuel and electricity is a separate control logic, not controlled by the output mode set by 251 command.

Commands that can be sent: **0000,212,1,1,53**

When use the ibutton function, Output2 is defaulted as the card swiping prompt tone. A beep sound will be heard when the iButton is swiped.

To delete the iButton ID, users can send the command: **0000,145,#00000A678C,#00000E4321F**

Delete the ID number 0x00000A678C,0x00000E4321F

To query the authorization status of the iButton ID, users can send the command:

0000,146,#00000A678C,#00000E4321F

Query ID number 0x00000A678C,0x00000E4321F

SMS reply 146,#00000A678C:1,#00000E4321F:1

Description: 1 means authorized (authorization status: 0 means not authorized, 1 means authorized).

8.4.8 Ultrasonic Fuel Sensor Installation

8.4.8.1 Ultrasonic fuel sensor installation with AD Port

Example, V800-L analog input connect to the ultrasonic fuel sensor. The green wire of the sensor is connected to the AD1 blue wire or the white wire (AD2) of the VT800-L.

The height measurement range of the ultrasonic sensor is 0~250cm, and the corresponding voltage output range is 0~5V.When the fuel lever is empty, the output voltage of the sensor is 0V, when the fuel level is full ,the output voltage of the sensor is 5V.

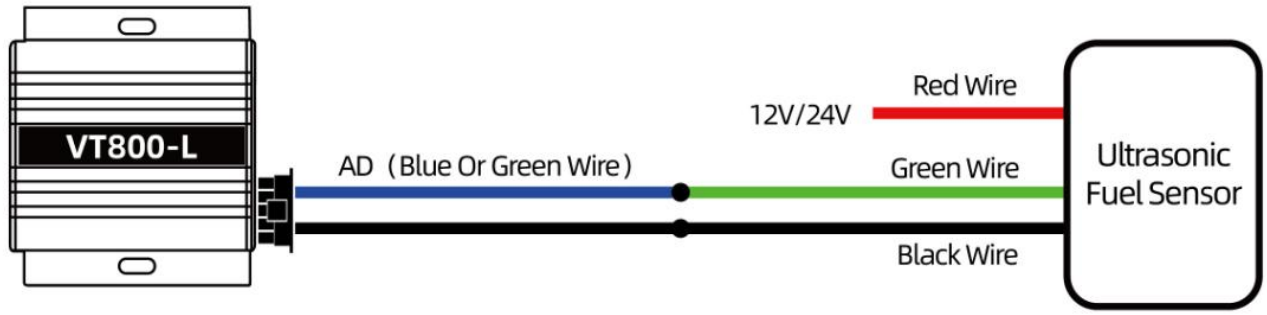
If the height of the fuel tank is H0cm and the fuel tank is full of F liters, the fuel sensor output voltage is $V=H_0/50$.

Calculate the remaining fuel volume:

Percentage of fuel = (AD/V)*100%

The fuel volume height is: H=(AD/5)*250cm

The remaining liters of fuel volume = (AD/V)*F liters



For example: GPRS data with a fuel tank height of 100cm and a full fuel of 50 liters,

&&A147,021104023195429,000,0,,180106093046,A,22.646430,114.065730,8,0.9,54,86,76,326781,460|0|27B3|0EA7,27,0000000F,02,01,04E2|018C|01C8|0000,1,0104B0,01013D|02813546\r\n

AD1 voltage is **0x01C8 (hexadecimal)=456 (decimal), AD1=456/100 (fixed value)=4.56V;**

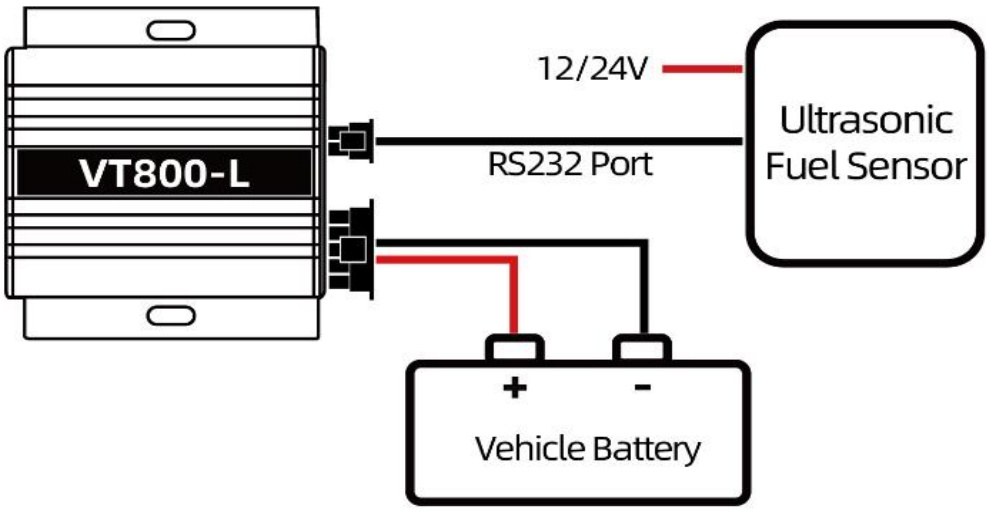
AD2 voltage is **0x0000=0, AD2=0/100=0V;**

Fuel percentage=**(AD1/5)*100%=(4.56/5)*100%=91.2%**

Fuel height: **H=(AD1/5)*100cm=(4.56/5)*100cm =91.2 cm**

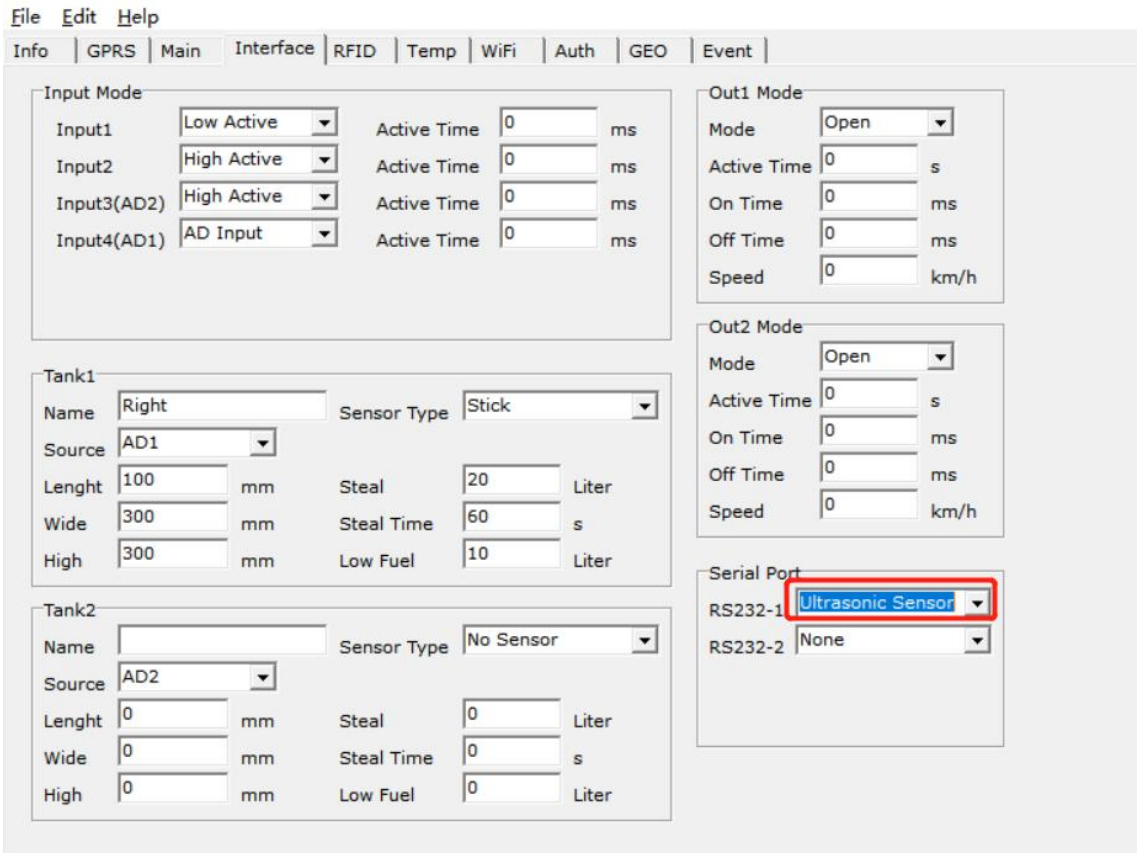
The remaining fuel volume in liters = **(AD1/5) * 50 liters = 45.6 liters**

8.4.8.2 Ultrasonic fuel sensor installation with RS232 Port



After connecting the wires and power on, set the serial port to connect to the external device through the parameter configuration software or SMS command:

Parameter configuration software: select "Ultrasonic Sensor"

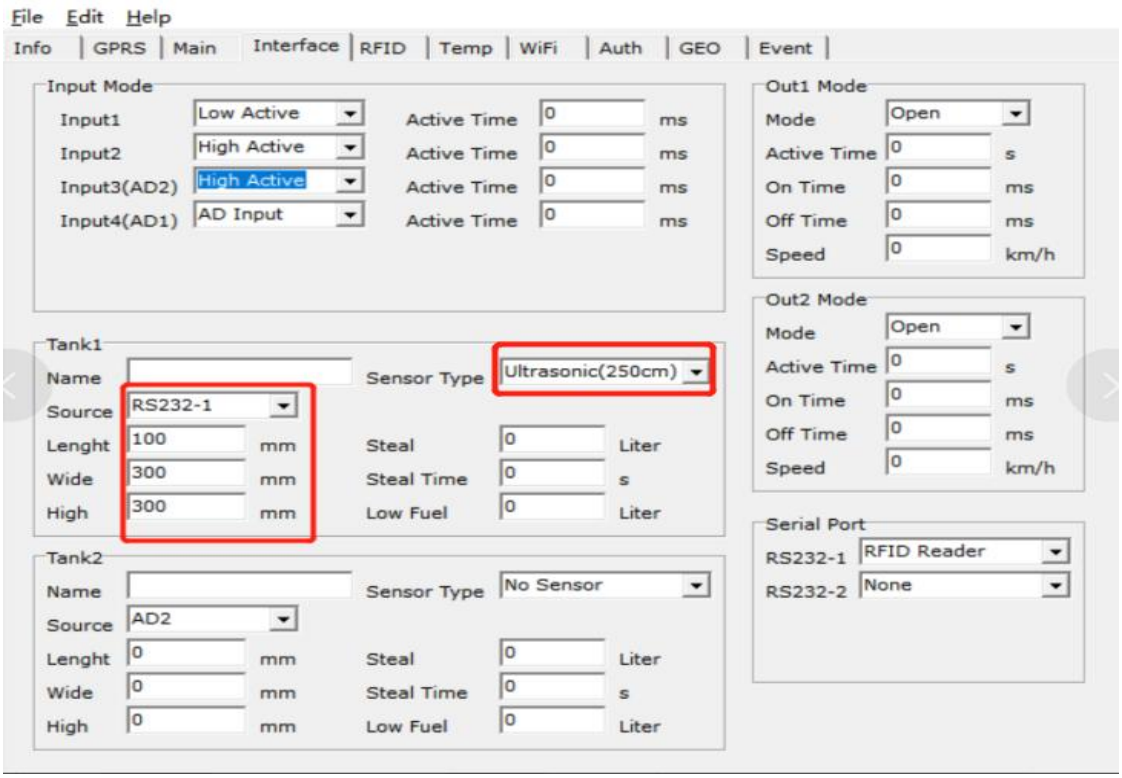


2). Send SMS configuration, set by SMS command 252, send: **0000,252,1,4**

After configuring the serial port docking device, it is necessary to set parameters such as data source of the fuel tank (select RS232-1/2), sensor type as Ultrasonic fuel sensor (100cm)/(250cm)) and size of the fuel tank (length, width and height) to obtain the remaining fuel.

Set the above parameters through the parameter configuration software or SMS command:

1). Parameter configuration Software Settings:



2). Send SMS configuration,set the device through SMS instructions 138, 139, 142 instructions to set:

Follow the parameters set in the picture above to send SMS commands.

Set the fuel tank parameters to send commands: **0000,138,1,100,300,300**

1 is the serial number of the fuel tank. The length of the fuel tank is 100mm, the width is 300mm, and the height is 300mm.

Set the fuel sensor type and send commands: **0000,139,1,3,Right Tank**

"1" is the serial number of the Tank, "3" is the ultrasonic fuel sensor 250cm, and the Right Tank is the name of the tank.

Set the data source of the tank to send: **0000,142,1,2**

The data source for 1# tank is RS232-1.

If the remaining fuel is L_0 liters, the full fuel tank is F liters, and the tank height is Hcm, the percentage of remaining fuel and the remaining fuel height can be calculated:

Percentage of remaining fuel = $(L_0/F)*100\%$

Remaining fuel height $H_0 = (L_0/F)*H$

For example: GPRS data with a fuel tank height of 200cm and a full fuel of 60 liters,

&&k147,860262050015374,000,0,,210814070734,A,22.678986,114.046146,12,0.9,0,279,13,65,460|1|2609|061E2783,31,0000003F,00,00,0493|019F|0000|0000,1,01001F,,D6\r\n

01001F: 01#tank; 0x001F, decimal value is 31, remaining fuel is 31/10=3.1 liters

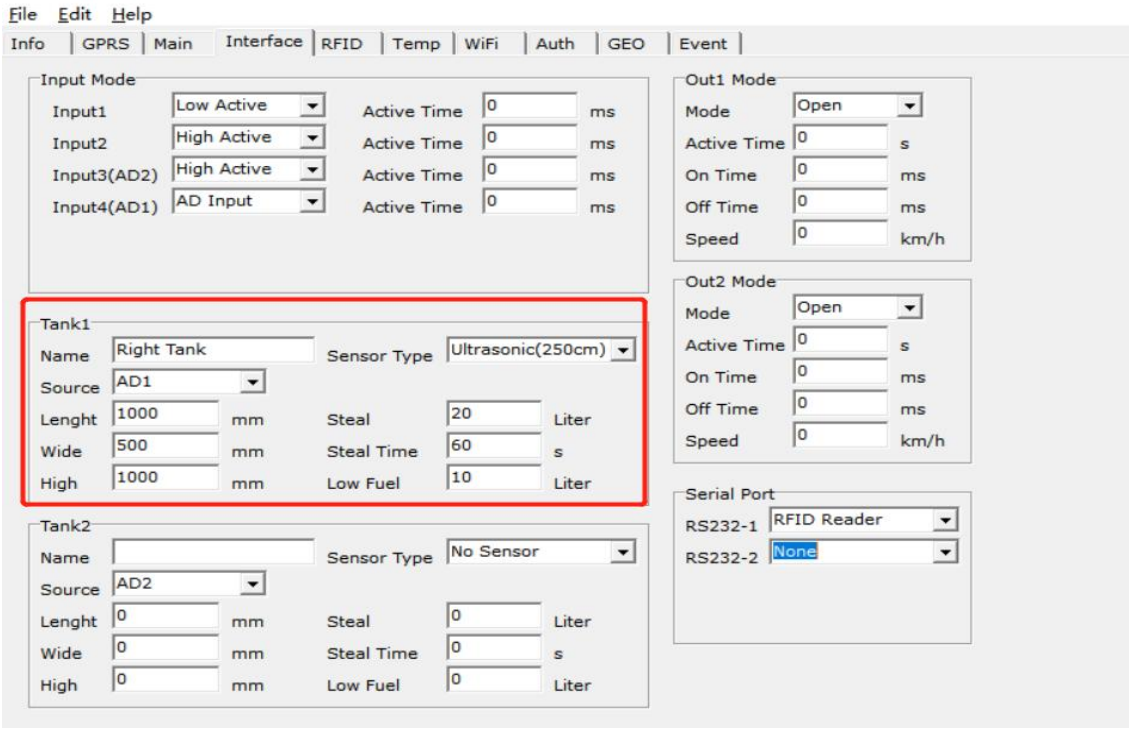
Percentage of remaining fuel=$(L_0/F)*100\%$ =(3.1/60)*100%=5.17%

Remaining fuel height $H_0 = (L_0/F)*H$=(3.1/60)*200cm =10.4 cm

8.4.8.3 Set fuel theft alarm and Low fuel alarm

After connecting the wires, users can set the size of the fuel tank (length, width, height), data source of the fuel tank, fuel tank type (capacitive fuel sensor and ultrasonic fuel sensor), fuel theft alarm, low fuel alarm through the parameter configuration software or SMS command.

1). Parameter configuration software: set the parameter Tank name to "Right Tank". The data source of the fuel tank is AD1. The type of tank is ultrasonic fuel sensor. The size of the tank, length 1000mm, width 500mm, height 1000mm. Set fuel theft alarm to trigger fuel theft alarm when the amount is reduced more than 20 liters within 60 seconds. Set low fuel alarm to trigger low fuel alarm when the fuel is less than 10 liters.



2). Configuration by SMS Command: Set fuel tank parameters through SMS commands 138, 139, 140, 141and142. For related parameter setting commands, please refer to "iStartek GPS tracker Communication Protocol V2.0".

Send above parameters by SMS commands:

Set fuel tank parameters, users can send commands: **0000,138,1,1000,500,1000**

Description: 1 is the serial number of the fuel tank. The length of the fuel tank is 1000mm, the width is 500mm, and the height is 1000mm.

Set the type of fuel sensor, users can send commands: **0000,139,1,1,Right Tank**

Description: The first "1" is for the serial number of the fuel tank, the second "1" is AD1 connected to ultrasonic fuel sensor, and Right Tank is the name of the fuel tank.

Set the fuel theft alarm, users can send commands: **0000,140,1,20,60**

Description: Set AD1 as the corresponding fuel tank, and the fuel theft alarm will be triggered when the fuel reduction exceeds 20 liters within 60 seconds.

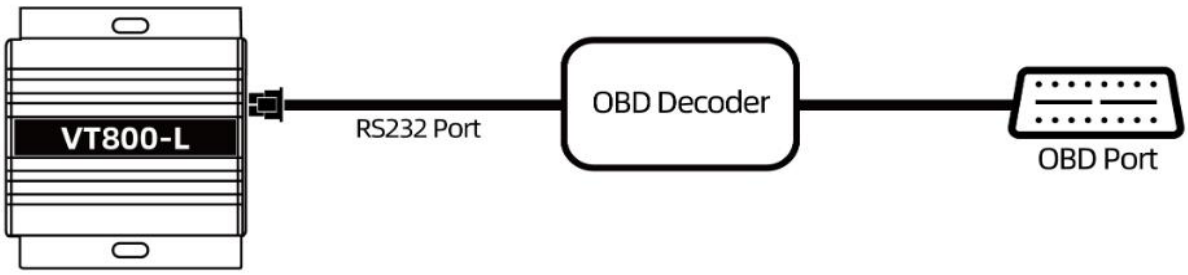
Set low fuel alarm, users can send commands: **0000,141,1,10**

Description: Set AD1 as the corresponding fuel tank, and a low fuel alarm will be triggered when the fuel volume is less than 10 liters. Note: The default data source of the fuel tank is AD1, and the default data source of the 2# fuel tank is AD2.

Note: The 138, 139, 140, 141, 142 commands must be used to set the fuel tank parameters to detect the alarm.

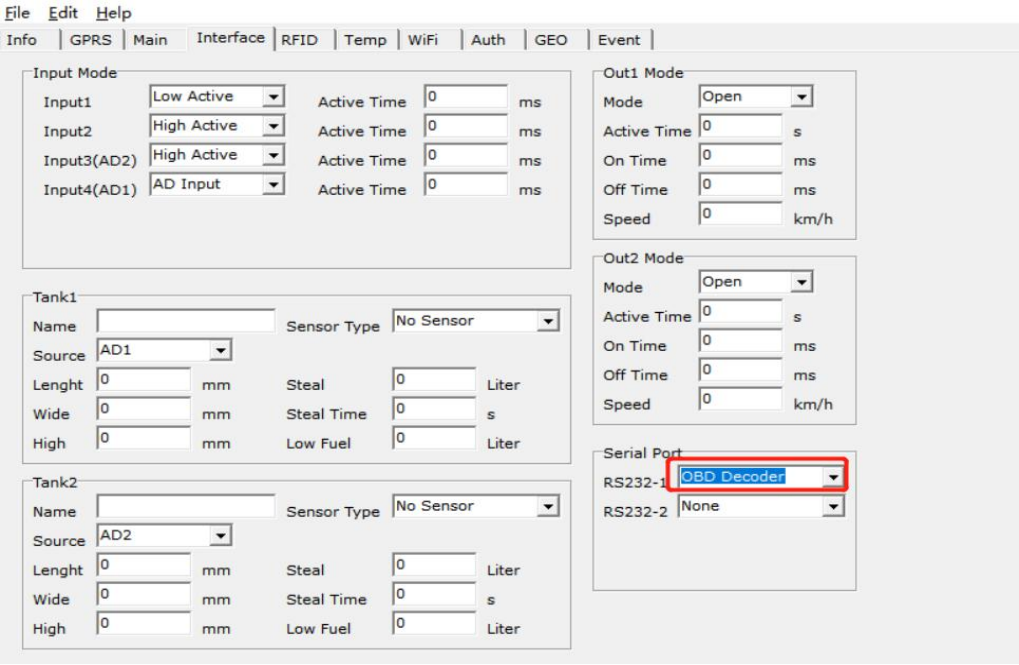
8.4.9 OBD Reader Installation

Connection graph as below,



After connecting the wires, users can set the serial port to be connected to the external device through the parameter configuration software or SMS command:

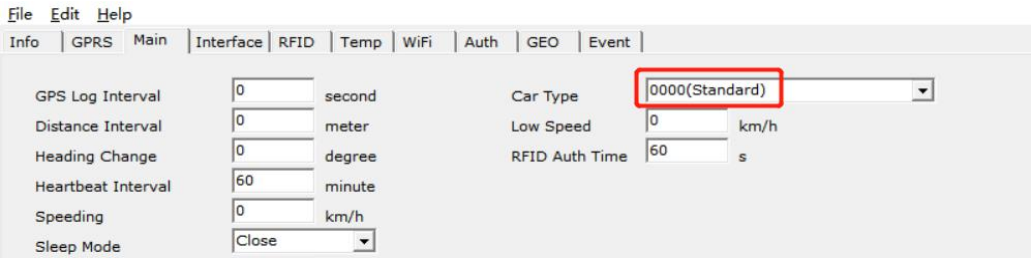
1). Parameter configuration software: Select "OBD Decoder"



2). SMS configuration,set it by SMS command 252, send command: **0000,252,1,2**

After configuring the serial port, users can set the vehicle type through the parameter configuration software or SMS command.

1). Parameter configuration software, select the corresponding vehicle type.



2). Send SMS configuration, set by SMS command 270, for example, the vehicle type is a standard type, send command: **0000,270,0000**

After setting the vehicle type, users can see the OBD decoder data in the uploaded data, such as:

&&|170,666666666666666,000,0,,210730034922,A,22.678570,114.046301,9,1.1,1,279,73,176,460|0|249F|0094045

7,27,0000001D,00,00,0498|01A1|0000|0000,1,,,85|42|69|123|63|70|91|230|38%D7

85 indicates the engine speed, which means that the engine speed is 85 revolutions per minute.

42 indicates engine load, representing engine load 42%.

69 is the intake flow, 69 gallons per second.

123 represents the intake pressure, representing the absolute pressure of the intake pipe 123 kpa.

63 indicates the intake air temperature, representing the intake air temperature 63-40=23℃.

70 indicates the throttle position, indicating that the throttle position is 70%.

91 indicates the coolant temperature, representing the engine coolant 91-40=51℃.

230 indicates instantaneous fuel consumption, representing instantaneous fuel consumption of 23 liters /h.

38% indicates the fuel level, representing the remaining 38% of fuel.

Please refer to iStartek GPS tracker Communication Protocol V2.0 for more details.

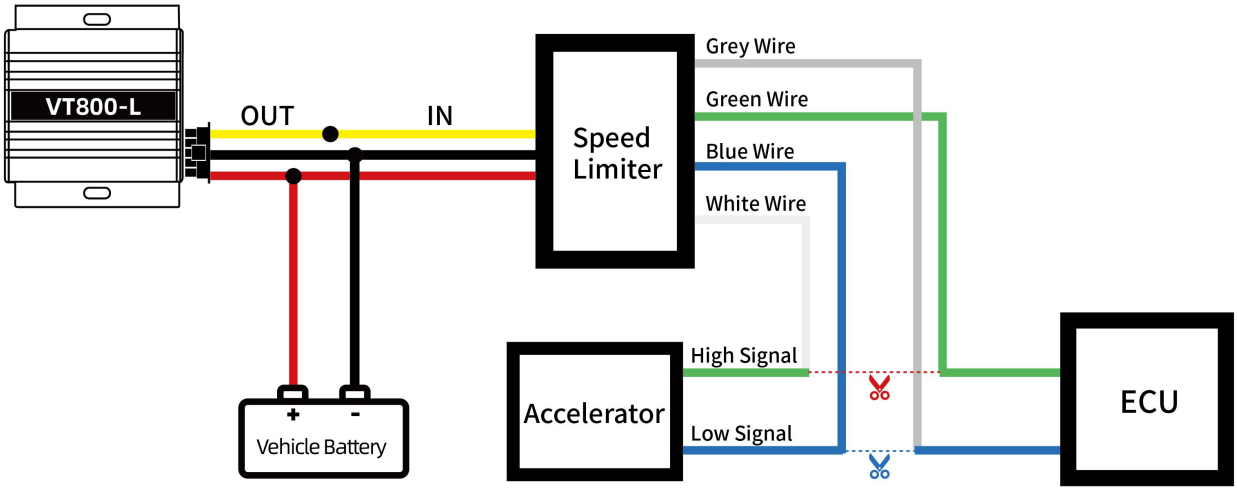
8.4.10 Speed limiter Installation

a. When the car's ignition is on and idling, use a multimeter to measure and record the voltage V_H of the gas pedal high-level signal line and the voltage value V_L of the low-level signal line, as shown in the figure below. (Note: The position and color of the gas pedal signal wire of different models may be different, subject to actual measurement)

b. Connect the A01 speed limiter to the vehicle power supply, and connect the yellow control wire to the ground wire, open the bottom cover of the speed limiter housing, and use a screwdriver to adjust the two variable resistors (clockwise to increase the voltage value, counterclockwise to decrease the voltage Value) so that the output voltage of the green signal wire is equal to the voltage value V_H, and the output voltage of the gray signal

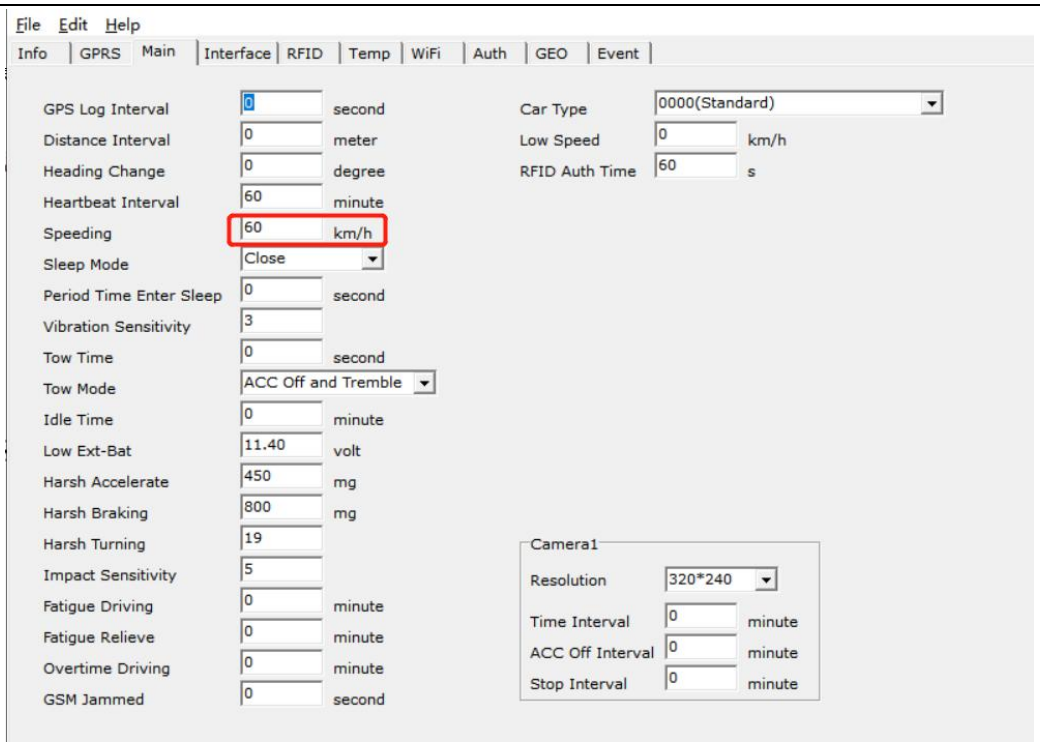
wire is equal to the voltage value V_L.

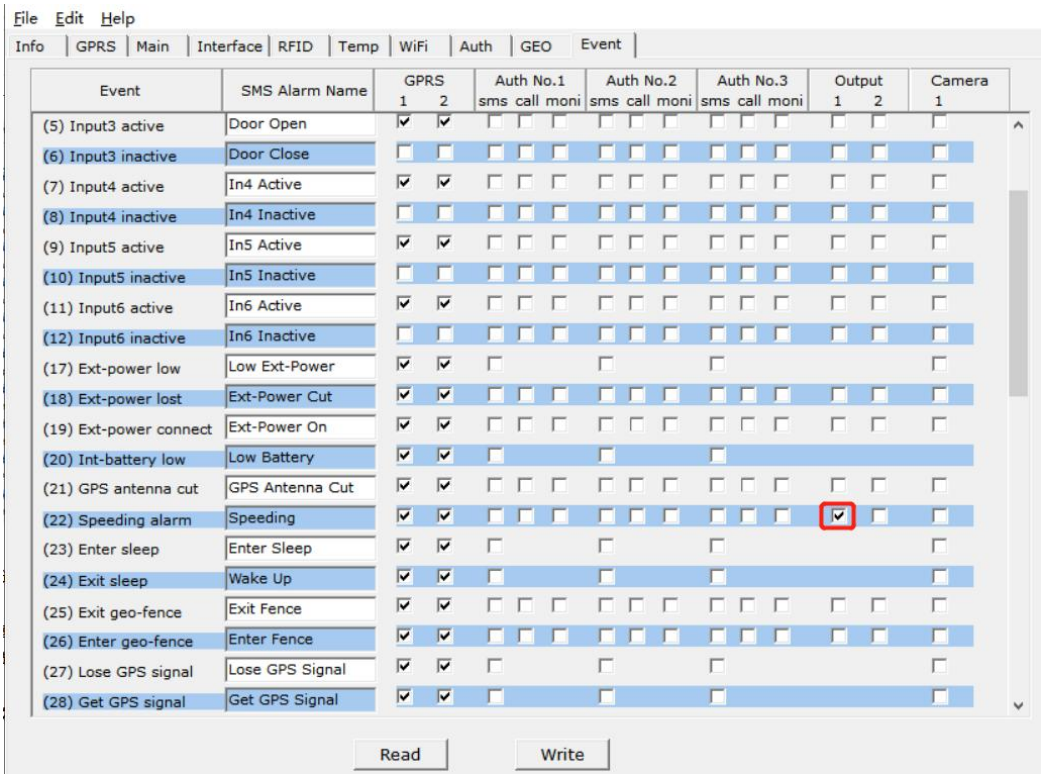
c. Cut off the gas pedal signal wire of the car, and connect the GPS Tracker and speed limiter as shown in the figure below. (Note: The color of the gas pedal signal wire of different car models may be different. The following figure is only an example, and the result is based on the actual vehicle signal line)



After connecting the wires, the speed limit value can be set through the parameter editor or SMS command:

1). Parameter Configuration Software Settings:



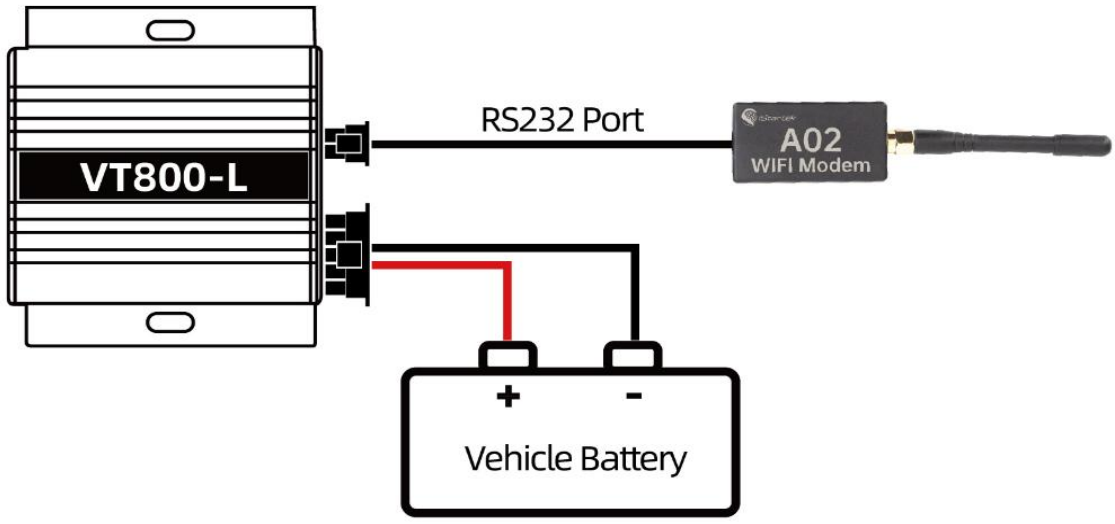


2). SMS command settings: send 123 command and 212 command, for example:

0000,123,60 Set the speed limit value to 60KM/H

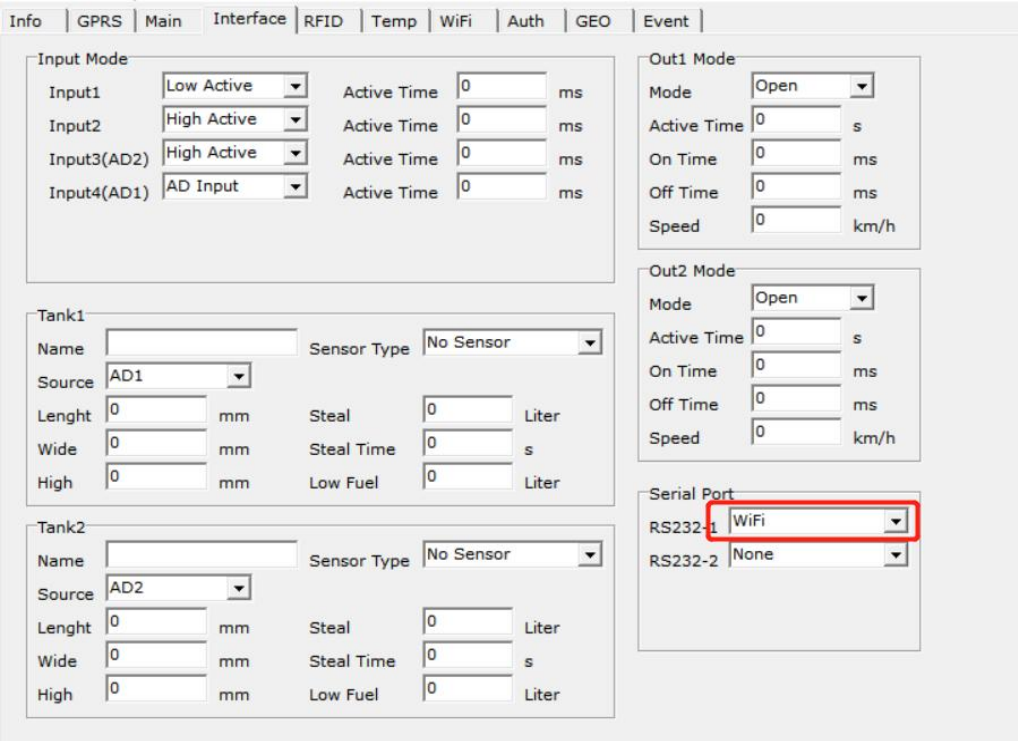
0000,212,1,1,22 Set to trigger output 1 after exceeding the set speed value

8.4.11 WIFI Installation



After connecting the wires, users can set the serial port to be connected to the external device through the parameter configuration software or SMS command:

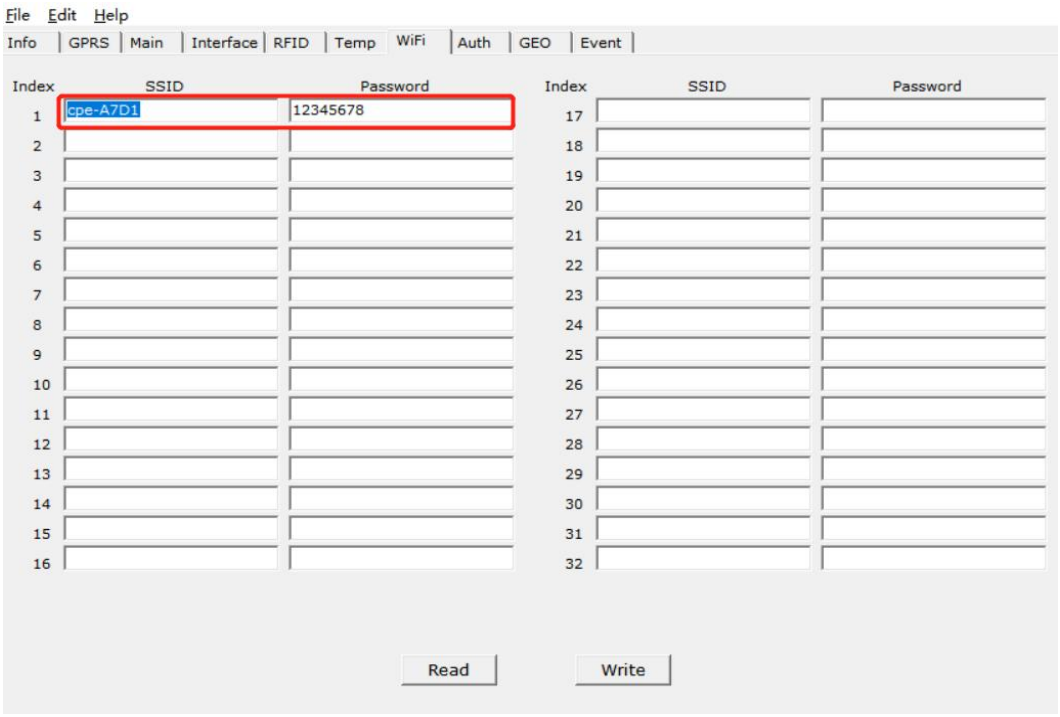
1). Parameter configuration software: Select "WIFI"



2). Send SMS configuration, set by SMS command 252, send: **0000,252,1,5**

After configuring the serial port, users can add the SSID and Password of WIFI through the parameter configuration software or SMS command

1). On the parameter configuration software, set the SSID and Password of the WIFI, making sure that the signal for connection.

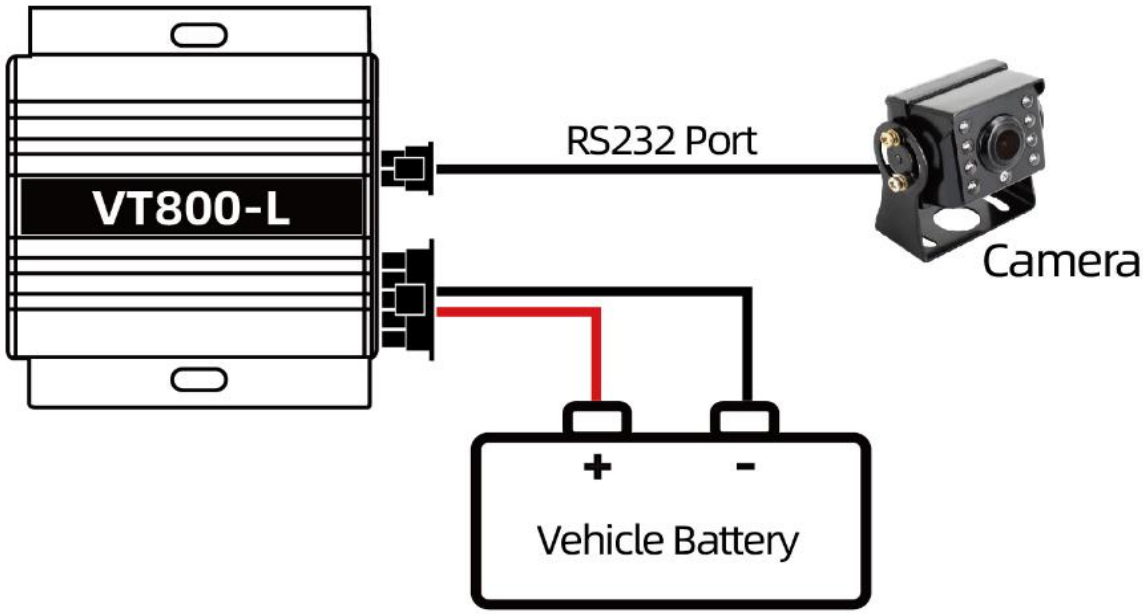


2) . Send SMS configuration, set by SMS command 290, such as WiFi SSID and Password,

send: 0000,280,1,cpe-A7D1,12345678

1 is the location parameter number of WiFi AP, cpe-A7D1 is SSID, 12345678 is Password, please refer to iStartek GPS tracker Communication Protocol V2.0 for parameter setting instructions.

8.4.12 RS232 Camera Installation

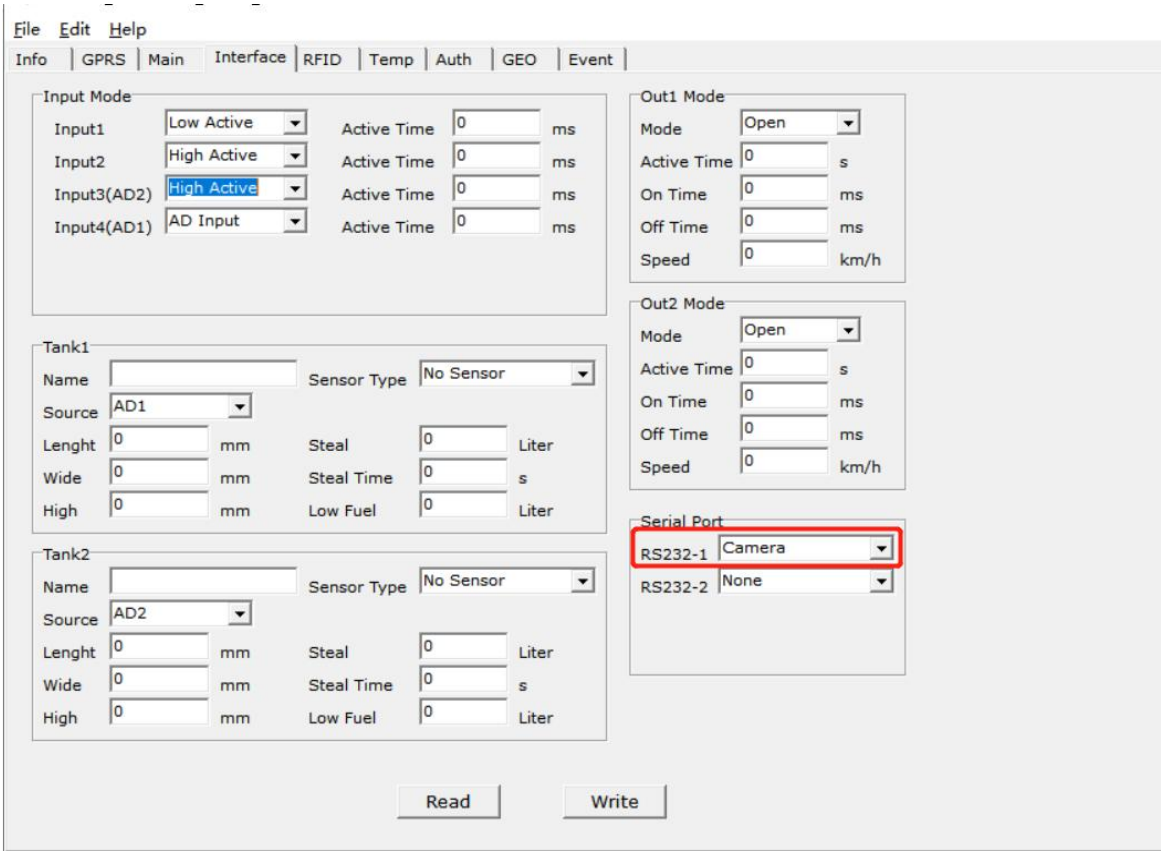


Note: For preventing the camera from being damaged by the high voltage when the device is powered on, the camera must be connected after the device is connected to the external power supply.

8.4.12.1 After connecting the serial port to an external device, users can configure the serial port to be

connected to an external device by using the parameter configuration software or SMS command:

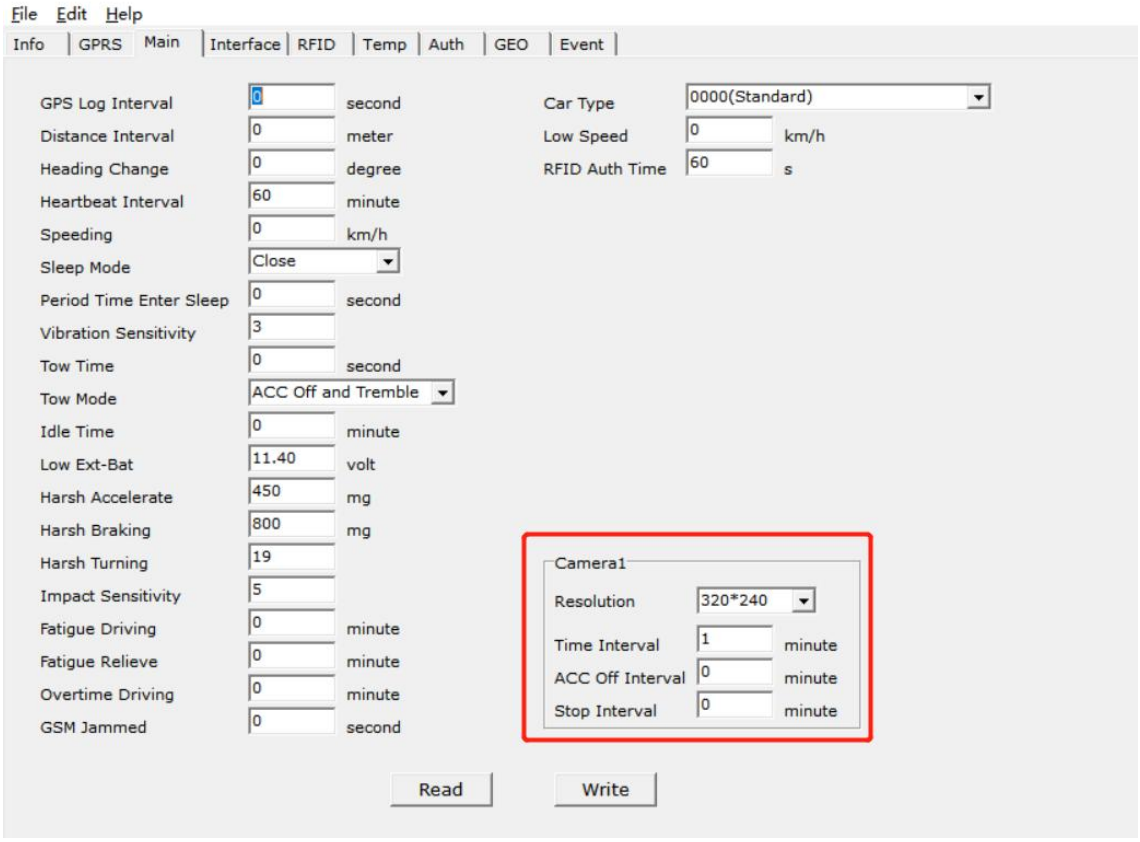
①. Parameter configuration software: Select "Camera"

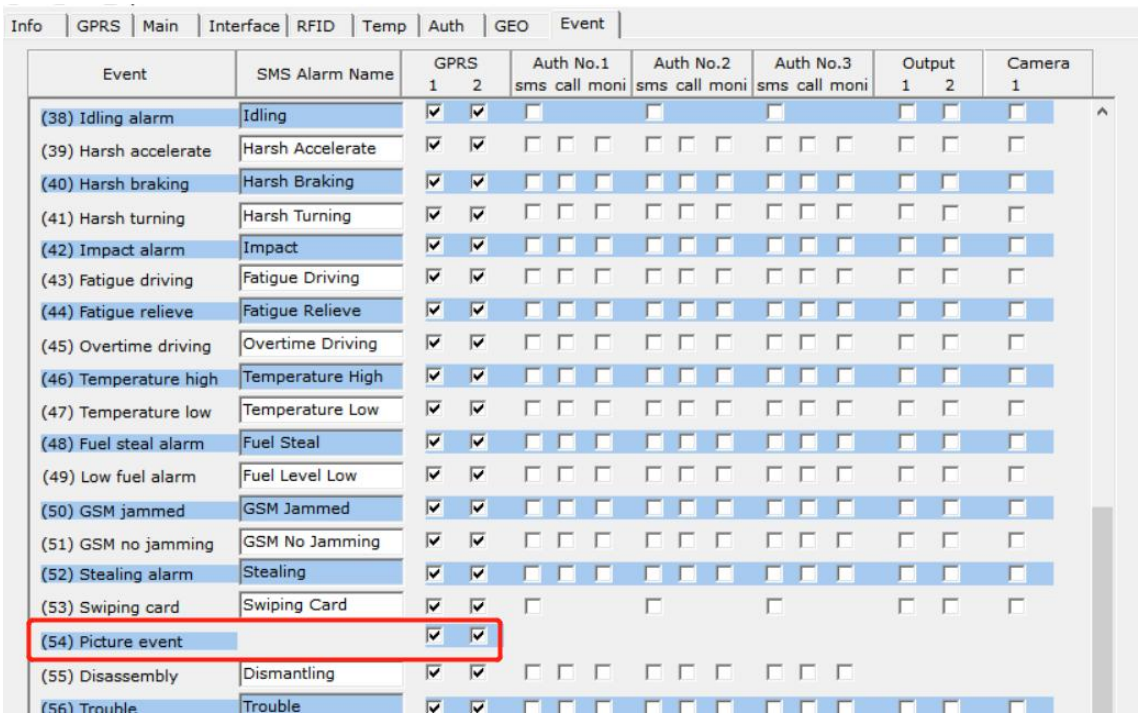


②. SMS configuration by the SMS command 252, send: **0000,252,1,3**

8.4.12.2 After the serial port is configured, users can set camera parameters though the configuration software or SMS commands

①. Open Parameter configuration software, select the corresponding resolution and the time interval for uploading photos, enable the "GPRS events for taking pictures by default".





②. Send SMS to configure camera parameters: Set the resolution of the camera by SMS command 260 (1:160 *128, 2:320 *240, 3:640 *480).

For example, set the resolution of the 1# camera to 320*240, users can send: **0000,260,1,2**

Set the upload interval of the camera by SMS command 261.

For example, set the time interval of camera 1# to one minute,users can send: **0000,261,1,1**

8.4.12.3 Send commands to take pictures

Send 262 commands to take pictures, after the device uploads the photo event to the platform, the platform send 265 commands to read the photo data. After the device uploads the complete photo data, the platform can send 264 commands to delete the photo (VT800-L series devices support up to 128 photos storage, when the number more than 128 photos, the earliest photos will be overwritten)

①. Send SMS commands to take photos.For example, to take a picture of the 1# camera,
users can send: **0000,262,1**

②. Send GPRS commands to take photos. For example, to take a picture of the 1# camera,
users can send: $$W22, 868703050178631262161 \ r \ n

8.4.12.4 Read Photos

Only through the platform (GPRS) send 265 commands to read the photo, the device does not automatically delete the photo after uploading the photo data, the platform needs to send 264 commands to delete the photo. For example, read the picture 220611023057 C1E34. JPG,
users can send: $$X42, 868703050178631265220110305 7 C1E34. Jpg22 \ r \ n

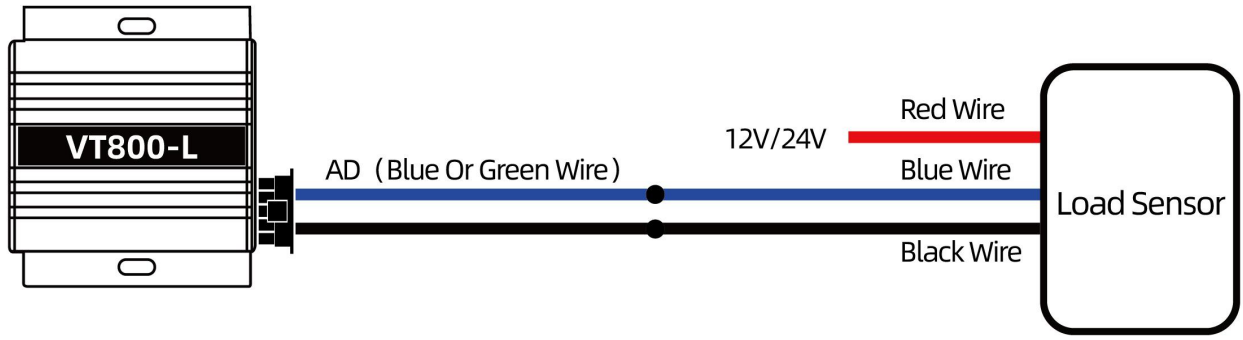
8.4.12.5 Read the photo list and delete the photos

①. Only 263 commands can be sent through the platform (GPRS) to read the photo list, the device uploads a packet of data up to 50 photo names, if the data is exceeded, it will be uploaded in multiple packages. VT800-L series devices support up to 128 photos storage. For example, to read the list of photos stored by the device, users can send: $$[20,868703050178631,26307\r\n
Device reply:
&&[400,868703050178631,263,220611022424C1E0.jpg,220611022527C1E0.jpg,220611022628C1E0.jpg,220611022730C1E0.jpg,220611022831C1E0.jpg,220611022932C1E0.jpg,220611023031C1E0.jpg,220611023057C1E34.jpg,220611023133C1E0.jpg,220611023234C1E0.jpg,220611023320C1E34.jpg,220611023337C1E0.jpg,220611023438C1E0.jpg,220611023540C1E0.jpg,220611023641C1E0.jpg,220611023742C1E0.jpg,220611023843C1E0.jpg,220611023944C1E0.jpg6D\r\n

②. Only through the platform (GPRS) send 264 commands to delete photos, the command supports the deletion of up to 50 photos, if users only send 264 commands without the name of the photo, it will be delete all photos. For example, to delete 220611023944 C1E0. JPG,
users can send: $$] 418680300176312642201103944 C1E0. JpgF3 \ r \ n

8.4.13 load Sensor Installation

According to the installation time marker fixed point array, it is assumed that the current vehicle operating voltage (AD value) is Vx, and V1<Vx<V2 .
The linear equation is obtained from two points (V1,T1)(V2,T2) :
(T-T1)/(T2-T1)=(Vx-V1)/(V2-V1)
By calculating the above formula, T can be obtained, that is the current vehicle load. Similarly, when Vx falls in other intervals, the two adjacent standard points are used as linear equations.



The following is an example of installing the time marker fixed-point array and receiving GPRS data:

The output voltage value (AD) of the sensor corresponds to the load weight value

Voltage (AD) Value (V)	Deadweight (tons)
0	0
2.3	1.3
3.5	2.6
5	3

&&A147,021104023195429,000,0,,180106093046,A,22.646430,114.065730,8,0.9,54,86,76,326781,460|0|27B3|0EA7,27,0000000F,02,01,04E2|018C|0145|0000,1,0104B0,01013D|02813546\r\n

AD1 input voltage is 0x0145 (hexadecimal) =325 (decimal), AD1=325/100 (fixed value) =3.25V

AD2 input voltage is 0x0000=0, AD2=0/100=0V

The current shipment: T = [((Vx - V1) * (T2 - T1))/(V2 V1)] + T1 = [((3.25 2.3) * (2.6 1.3))/(3.5 2.3)] + 1.3 = 2.33 (T)

If you have any other questions, please send an email to info@istartek.com, we are happy to serve you.