

MEITRACK T633Li User Guide



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Document Changelog

Version	Date	Modification
1.0	2025-09-02	1.first draft
1.1	2025-09-30	Modify the memory to 32MB;

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1 Product Introduction

The T633Li is a brand new high-end vehicle GPS tracker with market-proven quality and precise positioning. In addition to real-time tracking, it supports Iridium communication mode and can be compatible with various peripherals. Even in some areas with poor GSM signals, it can work properly.

1.1 Product Features

1.1.1 Iridium Communication

The device can search for Iridium satellites to implement network communication without no SIM card installed.

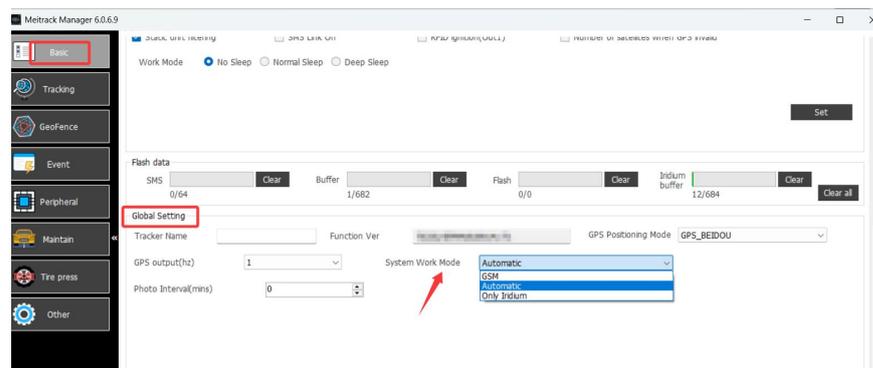
Before the device is connected to an Iridium satellite, make sure that:

1. The device is connected to an external power supply.
2. The Iridium satellite communication is enabled for the device.

For more information about how to enable the Iridium satellite communication and about the related fees, email us at alan.chang@joyntech.com.

The IP address of the server to be connected, port number, and the IMEI number of the device need to be provided for us.

3. The Iridium satellite uploading mode is set. Automatic and Only Iridium are available. You can use the Meitrack Manager software or MS06 platform to set the Iridium satellite uploading mode, as shown in the following figure.



GSM: Transmit data over a GSM network.

Automatic: A GSM network is used first. When the device cannot be connected to the server over a GSM network, the network is automatically switched to the Iridium network. Once a GSM signal recovers, the network is automatically switched to the GSM network.

Only Iridium: Only Iridium satellite networks are used.

4. The Iridium satellite time interval is set. You can use Meitrack Manager to set the time interval.

Iridium Setting	
Iridium Interval	180 X10 secs
Iridium Interval (ACC Off)	4320 X10 secs

5. The data uploaded by Iridium satellite is set. By default, the data includes events, longitude, latitude, and the number of GPS satellites. A piece of data uploaded by Iridium satellite contains about 15 bytes by default.

CCA Upload Option: By default, **GPRS** is selected. We recommend that you do not select **GPRS** and **Iridium** at the same time. CCA is the format of the data uploaded by Iridium satellite. Each time the device is powered on or restarted, or the ID of the Iridium satellite used to upload data is changed, a piece of CCA data is uploaded. The CCA data contains about 50 bytes and is used for the platform to identify the format of the data uploaded by Iridium satellite.

Upload Head: ACAC. By default, the parameter item is deselected. You can select the parameter item when a third-party platform requires the header setting.

Upload Version: By default, the parameter item is deselected. You can select the parameter item when Iridium satellite data IDs are defined on a third-party platform. The parameter is used to identify the format of the data uploaded by Iridium satellite.

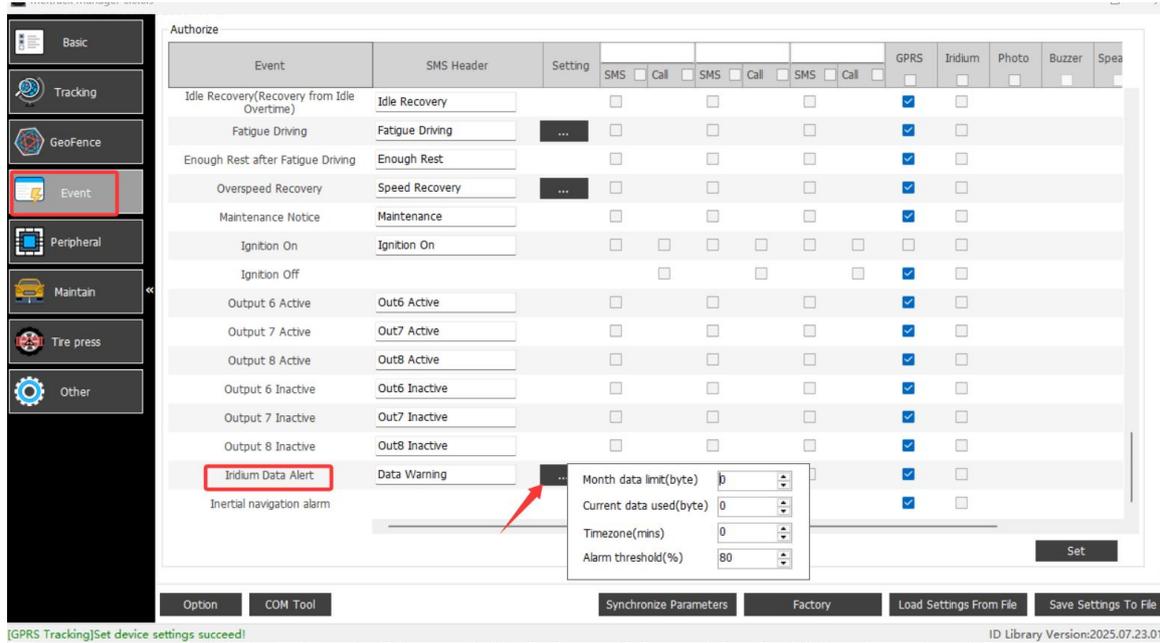
Note:

When the device is connected to the MS06 platform for the first time, a GSM network is required to upload a piece of CCA data. After the CCA data is uploaded, data uploaded by Iridium satellite can be tested. Otherwise, the platform cannot detect the format of the data uploaded by Iridium satellite.

A piece of data is calculated as 15 bytes by default.

Data transmission interval	Number of transmissions per day	Iridium satellite data traffic (monthly)
30 minutes	48	21.1KB
1 hour	24	10.8KB
2 hour	12	5.4KB
4 hour	6	2.7KB
6 hour	4	1.8KB
12 hour	2	0.9KB

6. Iridium Data Alert is set. You can set the monthly data usage limit of Iridium satellites.



Month data limit: specifies the monthly data usage limit of Iridium satellites. If the data usage exceeds the preset value, the Iridium satellite network is disabled. The data usage is refreshed at 00:00 on the first day of every month.

Current data used: specifies the data usage of Iridium satellites.

Timezone: Set the time of the data usage limit of Iridium satellites based on the GPRS time zone. The default parameter value is 0.

Alarm threshold: specifies the alert percentage of the Iridium satellite data usage. If the Iridium satellite data usage exceeds the preset value, an Iridium satellite data event is generated.

7.The Iridium antenna should be installed at the car roof without any metal materials cover.

There are five Iridium satellite signal levels. When the signal level is 0, the Iridium communication cannot be established. To receive Iridium satellite signals, the signal level must be greater than 1. (The Iridium satellite signals will be stable at open places. For example, in underground parking lots, the device cannot receive Iridium satellite signals.)

Cautions:

1. Iridium communication is expensive. Before enabling Iridium communication, please confirm the **data uploading time interval**.
2. Iridium satellites are used for network communication only and don't support voice communication.
3. If the device uses Iridium communication, it will upload positioning data only and will not upload CAN bus data.

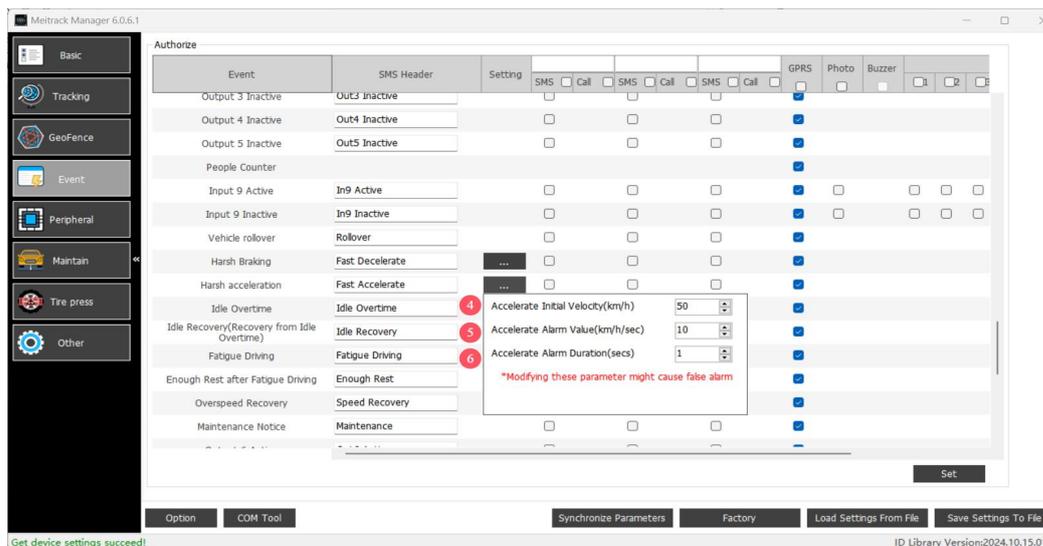
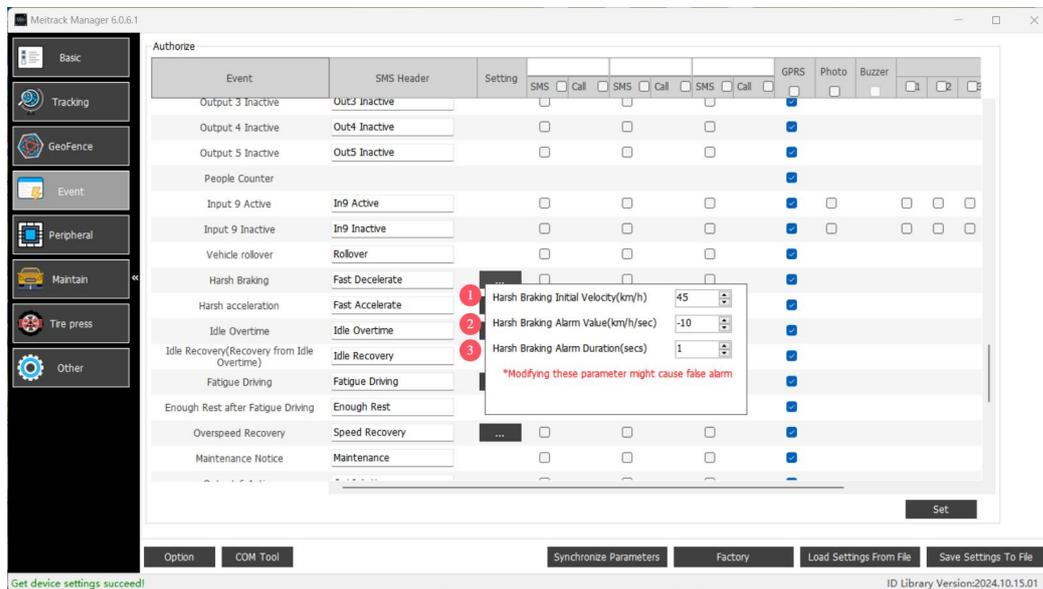
1.1.2 Setting Up the GPRS network

Using MS06 platform, default IP: ms06.trackingmate.com; Port: 6006;

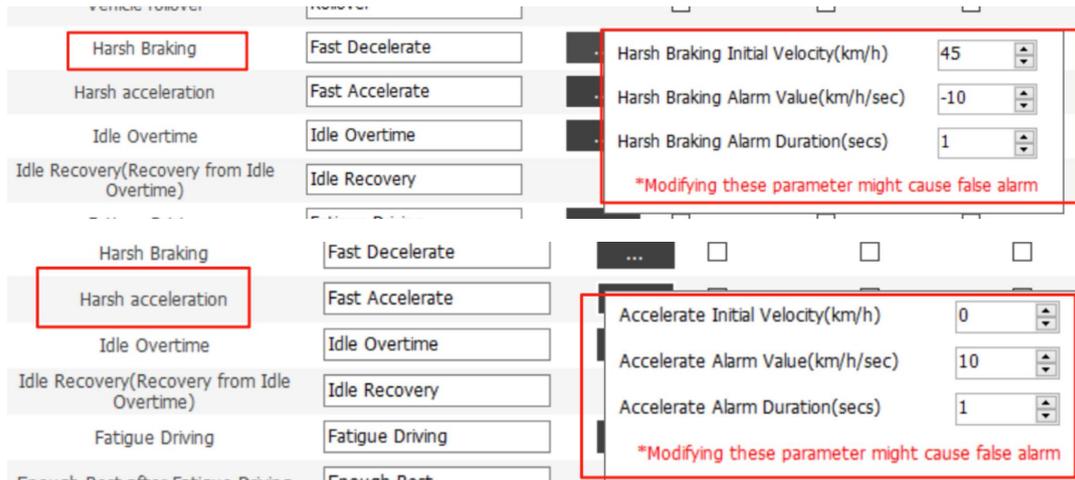
For other third-party platforms, ensure that the T633Li protocol has been integrated.

1.1.3 Harsh Acceleration/Braking Alert

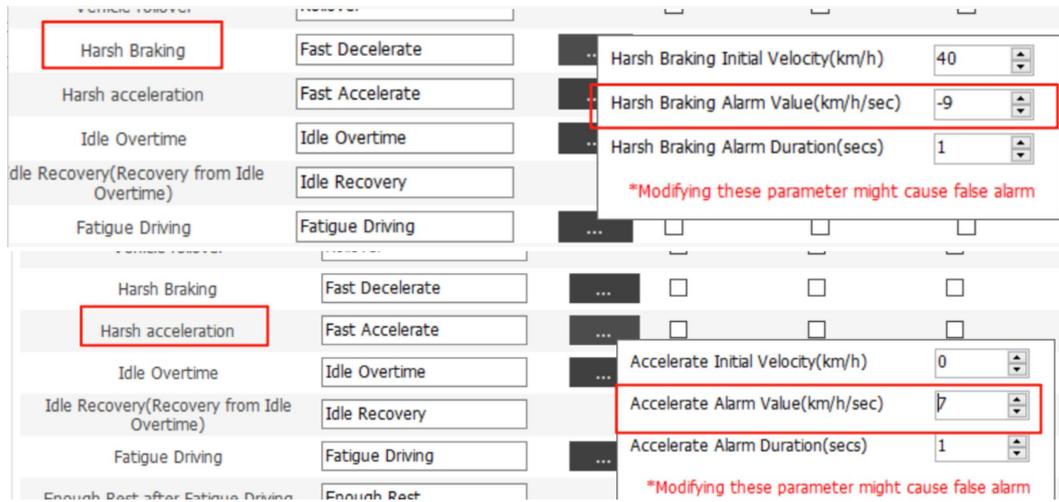
1. Functional Significance: To monitor the vehicle's driving process, enabling control over the driver's behavior and reducing the risk of accidents.
2. Functional Description: During vehicle operation, when the vehicle's initial speed exceeds the preset initial speed and the acceleration magnitude surpasses the preset threshold, the device issues a sudden acceleration or deceleration alarm according to the configured alarm method and duration.
3. Parameter Settings: Within the MM sudden acceleration and deceleration event configuration, the alarm method can be set to SMS, phone call, or GPRS. For sudden acceleration events, the initial speed ①, acceleration magnitude ②, and alarm duration ③ can also be configured. During the sudden deceleration interval, the initial speed ④, acceleration magnitude ⑤, and alarm duration ⑥ can also be configured. (Note: The acceleration value for sudden deceleration events must be negative.)



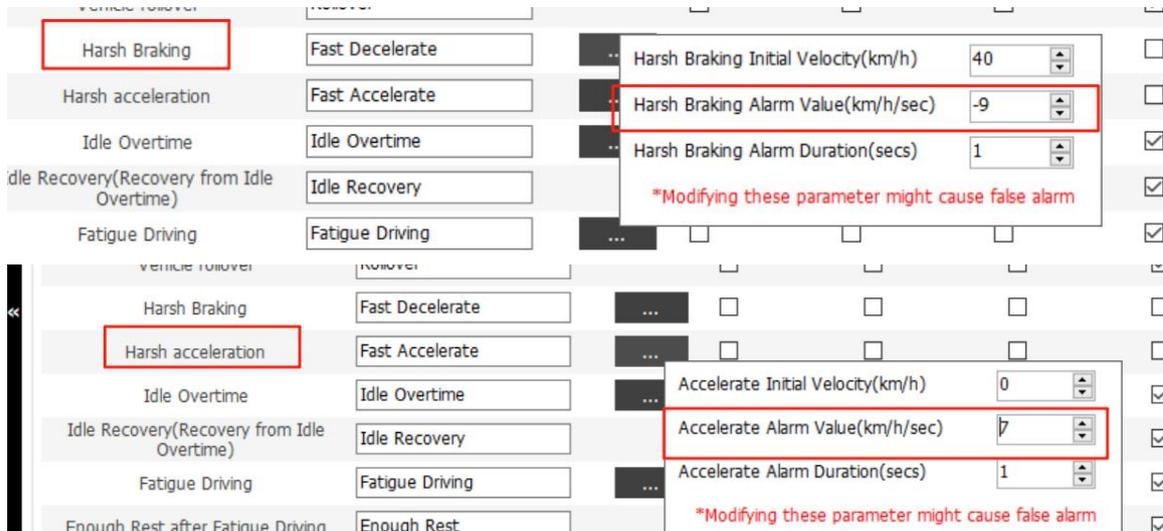
4. These are the default parameters recommended by the car.



5.This is the default parameter recommended for buses.



Notes: The heavier the car is, the smaller these two parameter values will be. For other large vehicles, the harsh acceleration should not be lower than 5. The emergency deceleration value should not be lower than -7. The above are the parameter values.



1.1.4 CAN Bus Interface

The device can read CAN bus data of a vehicle that supports the FMS protocol.

The following data can be read: vehicle speed, vehicle control status, accelerator pedal position (%), total fuel consumption, engine rotational speed, total engine run time, total mileage, engine coolant temperature, fuel level, engine torque, ambient temperature, torque at current speed, fuel consumption rate, axle weight, service distance, and instantaneous fuel consumption.

Caution:

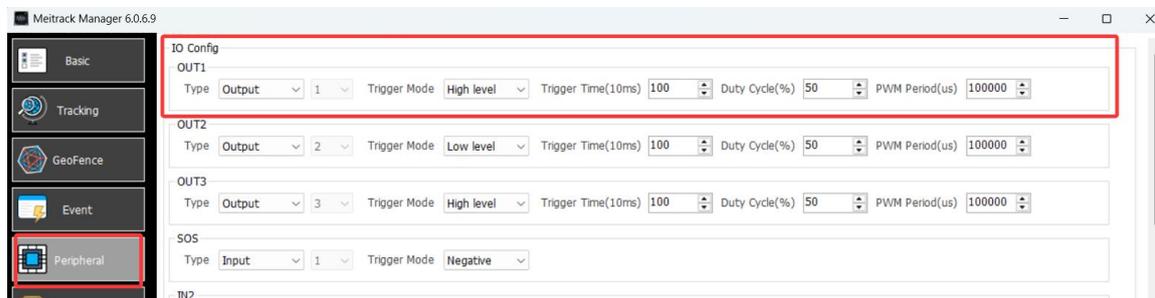
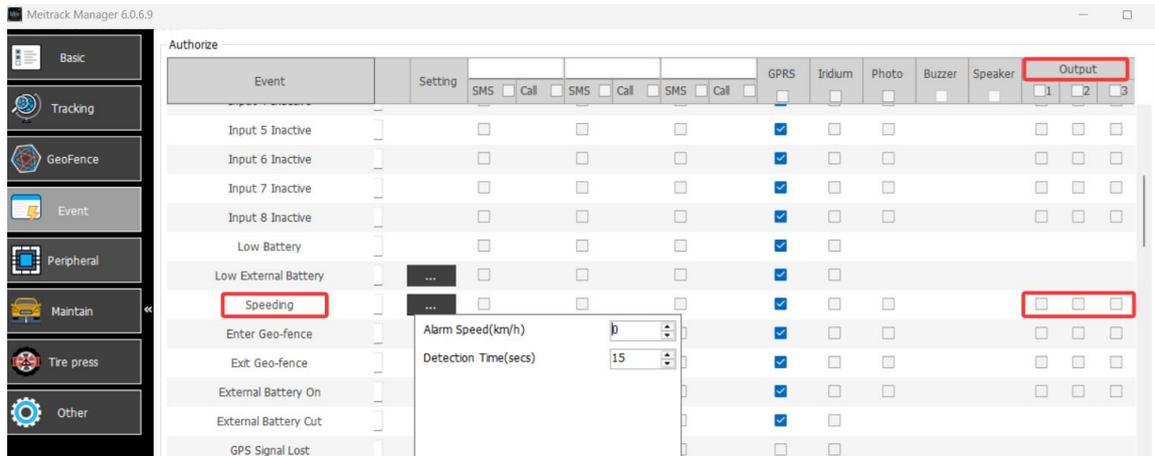
1. To obtain the preceding data, the vehicle must support the FMS protocol.
2. Install the device based on vehicle types. Connect vehicle's CANH and CANL wires to tracker's CANH and CANL connectors respectively.

1.1.5 Activating Output by Event

You can activate output by event.

For example:

1. When speeding is detected, the device can control buzzer sounds.
2. When unauthorized ignition or GPS antenna cut-off is detected, the engine will not be able to start.
3. When RFID triggering is detected, the device can control the vehicle door.
4. When input or output status is detected, the output will be active or inactive.



2 Product Functions and Specifications

2.1 Product Functions

2.1.1 Position Tracking

- GPS + LBS positioning
- Real-time location query
- Track by time interval
- Track by distance
- Cornering report
- Speeding alert
- Track by mobile phone
- Harsh acceleration/braking alert
- GPS data filtering
- Iridium communication mode

2.1.2 Anti-Theft

- SOS alert
- GPS antenna cut-off alert
- External power supply cut-off alert
- GPS blind spot alert
- Remote vehicle fuel/power cut-off
- Engine or vehicle door status alert
- Towing alert
- Polygonal geo-fence alert
- Fuel monitoring

2.1.3 Other Functions

- SMS/GPRS (TCP/UDP) communication (Meitrack protocol)
- Built-in 8 MB buffer for recording driving routes (storing 256 SMS cache records. The quantity of GPRS cache and GPS logs can be set and their sum is a fix value.)
- Mileage report
- Low power alert for internal battery
- 3-axis accelerometer
- Over-the-Air (OTA) update
- Activate output by event
- Stop Moving and Start Moving alerts
- Online Parameter Editor
- Support a CAN bus interface.
- Set device parameters in roaming mode. (Switch to roaming parameters when the device is in roaming mode.)

2.1.4 Functions of Optional Accessories

Optional Accessory		Function
Microphone & Speaker		Two-way calling OR monitoring
iButton		Identify the driver ID and grant permission to start the vehicle.
A53 resistive fuel level sensor		Detect the fuel level.
A52 digital temperature sensor + A61 sensor box		Detect temperature.
1 RS232 ports	RFID reader	Identify the driver ID and grant permission to start the vehicle. Monitor driver attendance by RFID report.
	Tire pressure sensor	used to detect tire pressure and temperature status.
	Ultrasonic fuel level sensor	Detect the fuel level.
2 RS485 ports	2 Camera ports	Photographing and monitoring
	Passenger flow sensor (ASPC102)	used to collect and analyze pedestrian traffic data.

2.2 Specifications

Item	Specifications
Dimension	106 mm x 24.5 mm x 70 mm
Weight	190g
Power supply	DC 11.4–40 V/1.5 A(without accessories)
Backup battery	400 mAh/3.7 V
Power consumption	Current in sleep mode: 11 mA
Operating temperature	-10°C to 55°C (with Battery); -20 °C to 80 °C (without battery)
Operating humidity	5% to 95%
Battery working hour	45 hours in power-saving mode 4 hours in normal mode
LED indicator	Green indicator showing the GSM signal Blue indicator showing the GPS signa Green indicator showing the Bluetooth status Green indicator showing the iridium status
Button/Switch	1 power button
Flash	32 MB

TF Card (not included)		Up to 32GB
USB Port		Mirco USB
CAN protocol		J1939 (FMS)
Sensor		3-axis accelerometer (used to wake the device up by vibration and detect towing alerts with $\pm 2g/\pm 4g/\pm 8g/\pm 16g$ full scale)
Frequency band	T633Li-EMEA/BR/AU/NZ	LTE FDD: B1 / B3/ B5 / B7/ B8/ B20/ B28
	T633Li-LA	LTE FDD: B2/ B3/ B4/ B5/ B7/ B8/ B28/ B66
Iridium		Frequency band: 1616–1626.5 MHz
BlueTooth		V5.1+BR+EDR+BLE specification/SMA plug with male pin
GNSS		GPS/GLONASS/BeiDou /SMA plug with female pin/Dual frequency(optional)
GPS sensitivity		-161 dB
Positioning accuracy		Standard L1: 2.5m L1+L5 or L1+L5+DR (optional): 1m.
Audio interface		For connecting Mic & Speaker
I/O port		SOS*1+ Independent ACC*1 + IN*7/AD*4/OUT*4 (multiplexed) + RS232*1 + CAN*1 + DC_IN*1 + GND*2 + RS485*2 + 1-Wire*1 1 Micro USB port 1 Audio port (3.5 mm, for connecting speaker & mic)

3 T633Li and Accessories

3.1 Standard accessories:

- T633Li tracker
- External 4G antenna
- External Iridium antenna
- External GPS antenna
- External BLE antenna
- I/O cable (without SOS button) 1 meter
- CANBUS adapter cable (4-pin to bare wire)
- CD download card

The external Iridium antenna has a standard version and two optional versions: standard Iridium antenna, high-end

Iridium antenna and super-high-end Iridium antenna.

3.2 External Iridium antenna accessories:

- Standard Iridium antenna

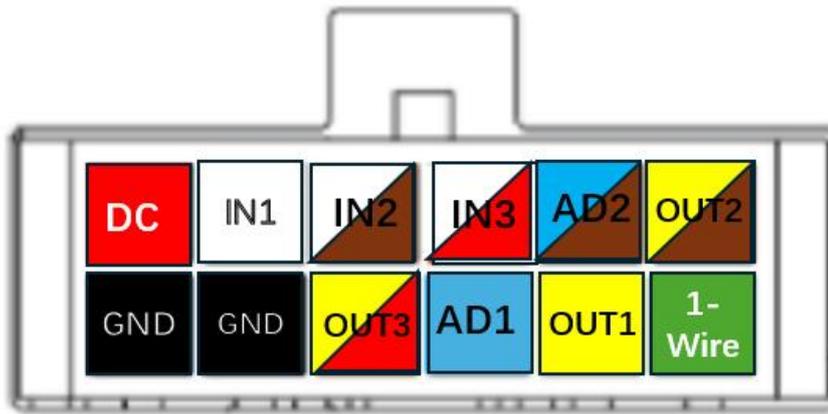
Appearance	
Specification	25*25*4mm
Frequency	1621MHz±5 MHz
Frequency bandwidth	> 10MHz
Impedance	50Ω
Gain	5dB
Polarization	RHCP

3.3 Optional accessories:

- SOS button
- Micro USB cable
- iButton
- Relay (12 V/24 V)
- A53 fuel level sensor (voltage sensor)
- A52 digital temperature sensor
- RFID reader
- Buzzer
- Camera
- A81 LED Nixie Tube Display
- Speaker and microphone
- USB cable
- Ultrasonic fuel level sensor
- Passenger flow sensor (ASPC102)
- Tire pressure sensor

3.4 IO Cable:

The I/O cable is a 12-pin cable, including the power, analog input, digital temperature sensor input, and negative/positive input and output interfaces.



Pin Number	Color	Description
1 (Power +)	Red	Positive charge of the power input, connected to the positive charge of the vehicle battery. Input voltage: 11.4–40 V.
2 (GND)	Black	Ground wire, connected to the negative charge of the vehicle battery or to the negative terminal.
3 (Input 1)	White	Digital input 1, negative trigger (SOS button by default)
4 (GND)	Black	Ground wire, connected to input 1 (SOS button)
5 (Input 2)	White & brown	Digital input 2 (negative trigger) Connect to a door trigger signal cable to detect vehicle door status. (Most Chinese, Korean, and Japanese cars are negative triggered.) The port can be set to positive trigger, AD input 3 (0–30 V), or output 5.
6 (Output 3)	Yellow & red	Output 3 Valid: low level (0 V) Invalid: open collector Maximum voltage for output open collector (invalid): 45 V Maximum current for output low voltage (valid): 300 mA Connect to an external relay to remotely cut off the vehicle fuel cable or engine power supply. The port can be set to positive or negative digital input and AD input.
7 (Input 3)	White & red	Digital input 3 (positive trigger) Connect to the vehicle ACC cable by default to detect the vehicle ACC status.
8 (AD Input 1)	Blue	Analog input 1 with 12-bit resolution and valid voltage 0–30 V Connect to an external sensor, such as the fuel level sensor. The port can be set to positive or negative digital input.
9 (Fuel level sensor input)	Blue & brown	Analog input 2 with 12-bit resolution and valid voltage 0–30 V There is a white plug on the AD cable, and the cable is connected to the A53 fuel level sensor by default. The port can be set to positive or negative digital input or output.

10 (Output 1)	Yellow	<p>Output 1</p> <p>Valid: low level (0 V)</p> <p>Invalid: open collector</p> <p>Maximum voltage for output open collector (invalid): 40 V</p> <p>Maximum current for output low voltage (valid): 300 mA</p> <p>Connect to an external relay to remotely cut off the vehicle fuel cable or engine power supply.</p> <p>The port can be set to positive or negative input 7.</p>
11 (Output 2)	Yellow & brown	<p>Output 2</p> <p>Valid: low level (0 V)</p> <p>Invalid: open collector</p> <p>Maximum voltage for output open collector (invalid): 45 V</p> <p>Maximum current for output low voltage (valid): 300 mA</p> <p>Connect to a buzzer.</p> <p>The port can be set to positive or negative input.</p>
12 (1-wire, Digital temperature sensor or iButton input port)	Green	<p>TTL3.3V level</p> <p>Connect to the A52 digital temperature sensor or iButton by default by using the A61 sensor box.</p> <p>The port can be set to negative input.</p> <p>Note: The DC or AC voltage that is greater than 3.3 V is not allowed. Otherwise, the device may be damaged.</p>

4 Appearance



5 First Use

5.1 Installing the SIM Card

1. Loosen the screws, and remove the front cover of the device.
2. Insert the SIM card into the card slot with its gold-plated contacts facing towards the Printed Circuit Board (PCB).
3. Close the cover, and tighten the screws.

Note:

- Power off the device before installing the SIM card.
- Ensure that the SIM card has sufficient balance.
- Ensure that the phone card PIN lock has been closed properly.
- Ensure that the SIM card in the device has subscribed the caller ID service if you want to use your authorized phone number to call the device.

5.2 Charging the Device

When you use the device for the first time, connect the device GND (-Black) and Power (+Red) wires to 12 V or 24 V external power supply for charging. Ensure that the device is charged at least two hours. Eight hours are recommended.

The device can be installed on a vehicle only after it is configured and tested.

5.3 LED Indicator

Press and hold down the power button for 3–5 seconds to start the device.

GPS Indicator (Blue)	
Steady on	A button or an input is triggered.
Quick Blink (every 0.1 seconds)	The device is being initialized or the battery power is low.
Slow Blink (0.1 seconds on and 2 seconds off)	Searching GPS signal(unlocated)
Quick Blink (1 second on and 2.9 seconds off)	GPS signal is received.
Rapid Blink (On 0.1 seconds, off 0.1 seconds; cycles of 2 seconds of continuous blinking followed by 1 second of pause)	GPS Faults
LTE Indicator (Green)	
Steady on	A call is coming in or a call is being made.
Blink (every 0.1 seconds)	The device is being initialized.
Blink (0.1 seconds on and 2.9 seconds off)	A base station signal is received.
Blink (1 second on and 2 seconds off)	base station signal is received.
Rapid Blink (On 0.1 seconds, off 0.1 seconds; cycles of 2 seconds of continuous blinking followed by 1 second of pause)	LTE Faults (No SIM Card, LTE Module Abnormality)
On 3 secs, off 1 sec (Last for 90 seconds)	Receive CAN data
Iridium indicator(Green)	

Steady OFF	In shutdown, hibernation, or non - Iridium mode
Quick Blink (every 0.1 seconds)	Iridium is initializing
Slow Blink (0.1 seconds on and 2 seconds off)	Searching for Iridium signals
Quick Blink (1 second on and 2.9 seconds off)	Received Iridium signal
Rapid Blink (On 0.1 seconds, off 0.1 seconds; cycles of 2 seconds of continuous blinking followed by 1 second of pause)	Iridium Fault
BLE indicator(Green)	
Steady OFF	Shutdown, in hibernation, or BLE disabled
Slow Blink (0.1 seconds on and 2 seconds off)	Host scanning (no recognizable accessories found) or slave broadcasting (when not connected)
Quick Blink (1 second on and 2.9 seconds off)	Recognizable accessories scanned or connection and pairing successfully
Rapid Blink (On 0.1 seconds, off 0.1 seconds; cycles of 2 seconds of continuous blinking followed by 1 second of pause)	BLE Fault

5.4 Configuring Device Parameters by Meitrack Manager

This section describes how to use Meitrack Manager (version 6.0.6.9 or later) to configure the device on a computer.

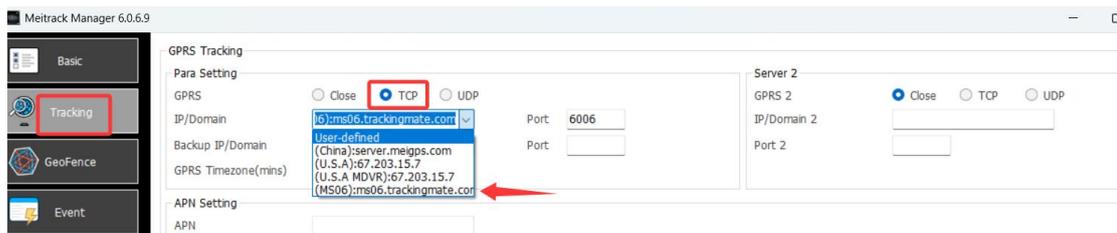
Procedure:

1. Install the STM32 USB driver and Meitrack Manager.
2. Connect the device to a computer by using the USB cable.
3. Run Meitrack Manager, then the following dialog box will appear:



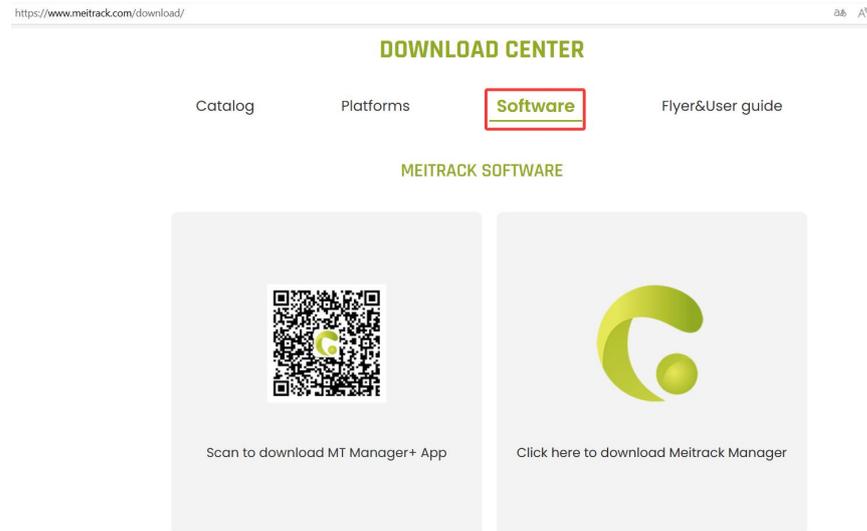
Power on the device, then Meitrack Manager will detect the device model automatically and the parameter page will appear accordingly.

4. Configure the server IP On tracking page:



For details about Meitrack Manager, see the *MEITRACK Manager User Guide*.

Download link: [DOWNLOAD CENTER – meitrack](#)

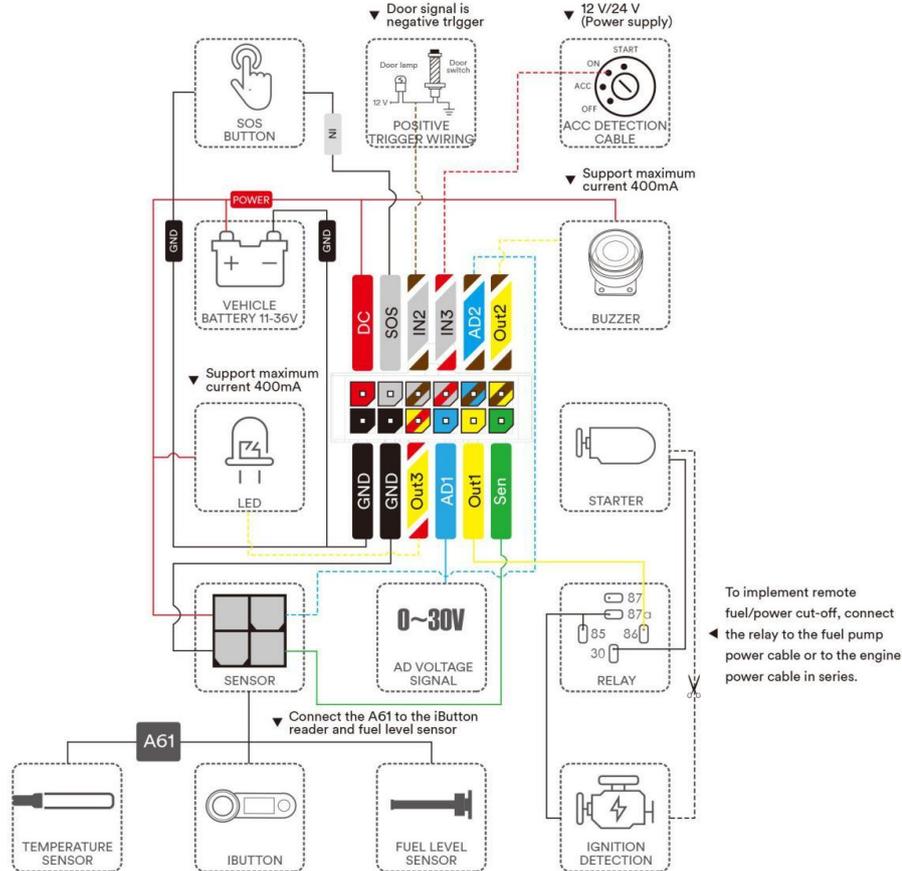


5.5 Installing Antennas

1. Connect the GSM antenna to the connector.
2. Connect the GPS and Iridium antenna to the connector. Please make sure the antennas **is facing up to the sky** without and the antenna side with words is downwards. Secure the antenna by using double sided tapes. Installation on the edge of the windshield is feasible.
3. Connect the GPS and Iridium antenna to the connector. Please note that the antenna cannot be installed inside the vehicle. **It should be installed on the car roof**, pointing toward the sky. (The side that has the sticker should face downward.)
4. Connect the BLE antenna to the connector (if the BLE sensor is required).

Note: The antenna should be away from any metal material and without any frequency interference, such as WiFi, frequency modulation (FM), etc.

5.6 Device Connection Diagram



6 Logging In to MS06 Tracking System

Visit <http://ms06.trackingmate.com>, enter the user name and password, and log in to the MS06. (Purchase the login account from your provider.)

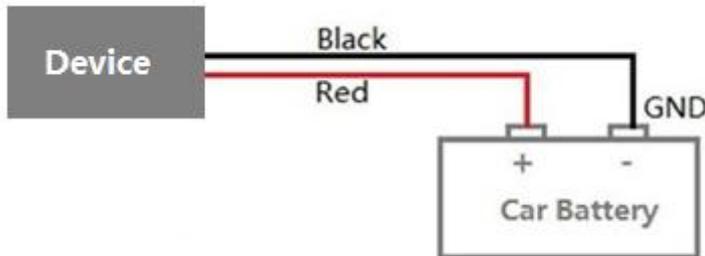
The MS06 supports the following functions:

- Track by time interval or distance.
- Query historical trips.
- Set polygonal geo-fences.
- Bind driver and vehicle information.
- View various reports.
- Send commands in batches.
- Support OTA updates.

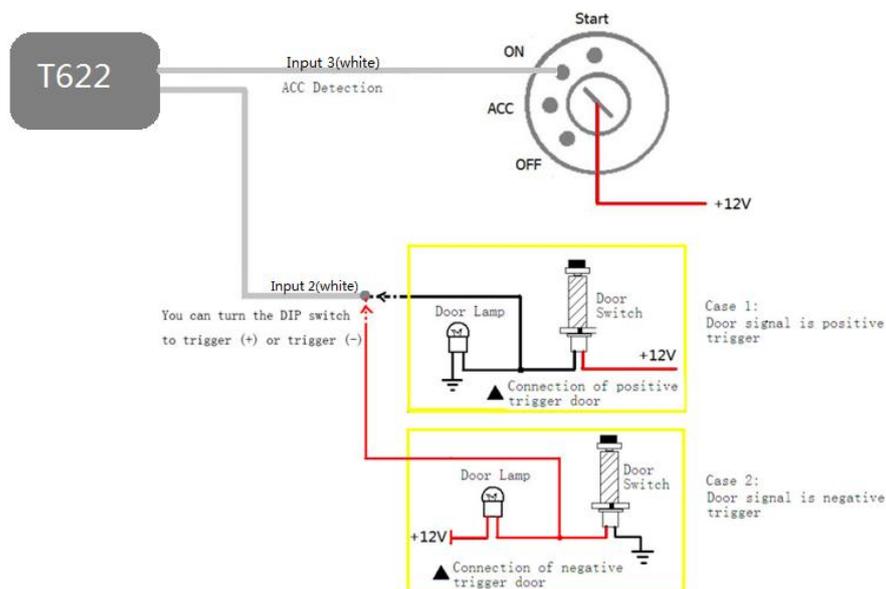
For details, please refer to the *MEITRACK GPS Tracking System MS06 User Guide*.

6.1.1 Power Cable/Ground Wire (Pin 1/2)

Connect the power cable (red) and ground wire (black) to the positive and negative charges of the vehicle battery respectively.



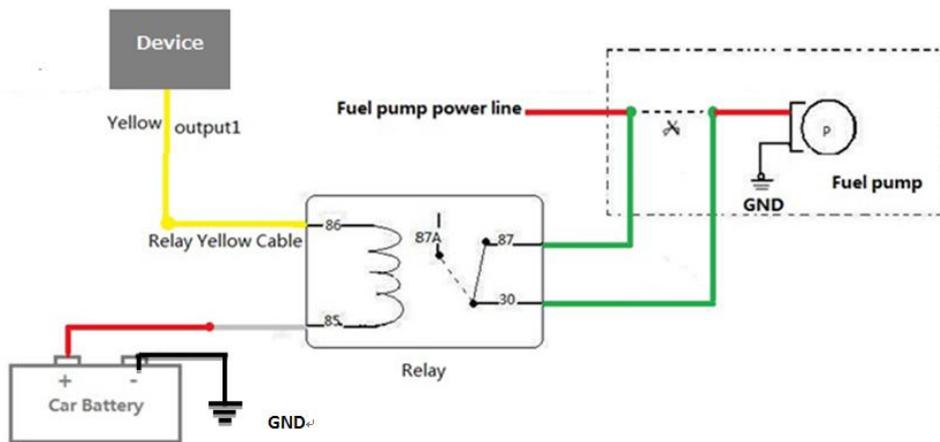
6.1.2 ACC and Door Detection (Pin 5/7)



Note:

1. If input 3 is connected to the "ACC" position, after the engine is started, the platform will read it as ON-OFF-ON. If input 3 is connected to the "Start" position, after the engine is started, the platform will read it as OFF-ON-OFF. If installed correctly, after the engine is started, the platform will read it as OFF-ON.
2. Input 2 is the positive or negative selectable start cable. By default it is positive. Install and configure the cable according to your requirements.

6.1.3 Output Control (Pin 10/11)



Note: To implement remote fuel/power cut-off, connect the relay to the fuel pump power cable or to the engine power cable in series.