

MEITRACK T633G User Guide

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2 Product Introduction

The T633G is a brand new 3G vehicle tracker specially designed for Thailand DLT project. This unit can connect to multiple accessories: magnetic card reader, camera and LED display. In addition, it supports driving behavior analysis, fuel level monitoring and temperature monitoring and its performance has been significantly improved.

2.1 Product Features

2.1.1 Idling Detection

When the device detects that the vehicle stops moving for a long time and the ACC is on, an idling alert will be generated and the buzzer will make sounds every 0.5 seconds. When the ACC is off or the vehicle starts moving, the device will exit the idling state and the buzzer will not make sounds.

To implement this function, you must connect device's input 3 to ACC detection cable and output 2 to the buzzer, or connect device's input 3 to ACC detection cable and ensure that the magnetic card reader supports buzzer alerts.

For details, see the section 6.6.2 "Setting the Idling Alert – B14."

2.1.2 Fatigue Driving Detection

When the device detects that the driver has been driving a vehicle for a long time, a fatigue driving alert will be generated the buzzer will beep twice every 1 second.

To implement this function, you must connect device's input 3 to ACC detection cable and output 2 to the buzzer, or connect device's input 3 to ACC detection cable and ensure that the magnetic card reader supports buzzer alerts.

For details, see the section 6.6.3 "Setting Fatigue Driving – B15."

2.1.3 Controlling Buzzer Sounds

When the device detects speeding, the buzzer will make sounds (BI-BI-BI-BI).

To implement this function, you must connect device's output 2 to the buzzer or ensure that the magnetic card reader supports buzzer alerts.

For details, see the section 6.6.1 "Setting the Speeding Alert – B07."

3 Product Functions and Specifications

3.1 Product Functions

3.1.1 Position Tracking

- GPS + LBS positioning
- Real-time location query
- Track by time interval
- Track by distance
- Cornering report
- Track by mobile phone

3.1.2 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
- Geo-fence alert

3.1.3 Monitoring

- Harsh acceleration and braking detection
- Idling detection
- Fatigue driving reminder and monitoring
- Speeding reminder and monitoring
- Driver authorization detection
- Fuel level monitoring
- Temperature monitoring

3.1.4 Other Functions

- SMS/GPRS (TCP/UDP) communication (Meitrack protocol)
- Built-in 8 MB buffer for recording driving routes (Store 4,096 GPRS cache records, 256 SMS cache records, and 65,536 GPS logs)
- Mileage report
- Low power alert for internal battery
- Build-in 3-axis accelerometer
- Over-the-Air (OTA) update

3.1.5 Functions of Optional Accessories

Optional Accessory		Function
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.
2 RS232 ports	Magnetic card reader/RFID reader	Identify the driver ID and grant permission to start the vehicle. Monitor driver attendance by RFID report.
	LED display	Display advertisements, announcements, driving speed, etc.
	A21 LCD display	Used for real-time vehicle dispatching and management.
	Ultrasonic fuel level sensor	Detect the fuel level.
4 RS485 ports	2 camera ports	Photographing and monitoring
	2 A82 LED display ports	Display driving speed in real time.

3.2 Specifications

Item	Specifications
Dimension	106 mm x 24.5 mm x 70 mm
Weight	190g
Power supply	DC 11.4–36 V/1.5 A
Backup battery	400 mAh/3.7 V
Power consumption	Current in sleep mode: 11 mA
Operating temperature	-20°C to 55°C
Operating humidity	5% to 95%
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 signal
Button/Switch	1 SOS button (for sending SMSs or dialing) 1 power button
Memory	8 MB byte
Sensor	3-axis accelerometer (used to wake the device up by vibration and detect towing alerts)
Frequency band	T633G-E: UMTS/HSDPA: 900/2100 MHz GSM/GPRS: 900/1800 MHz T633G-A: UMTS/HSDPA: 850/1900 MHz GSM/GPRS: 850/900/1800/1900 MHz T633G-T: UMTS/HSDPA: 850/2100 MHz GSM: 850/900/1800/1900 MHz

	Note: Select proper device according to the local frequency band.
GPS sensitivity	-163 dB
Positioning accuracy	2.5m
I/O port	<p>The device supports 3 digital input ports, 3 output ports, 2 AD input ports, and 1 1-Wire digital temperature sensor (iButton) interface by default. At most 9 positive or negative input ports, 8 output ports, or 4 AD input ports can be configured. For details, see the section 8.2 "Installing an I/O Cable."</p> <p>2 RS485 ports (4 pins) for connecting to the LED display</p> <p>2 RS485 ports (4 pins) for connecting to the camera</p> <p>1 CAN bus interface (FMS protocol)</p> <p>1 RS232 port (8 pins) for connecting to the magnetic card reader</p> <p>1 extended RS232 port (4 pins) for connecting to the A21 LCD display</p> <p>1 audio port (3.5 mm)</p> <p>1 Micro USB port</p>

4 T633G and Accessories

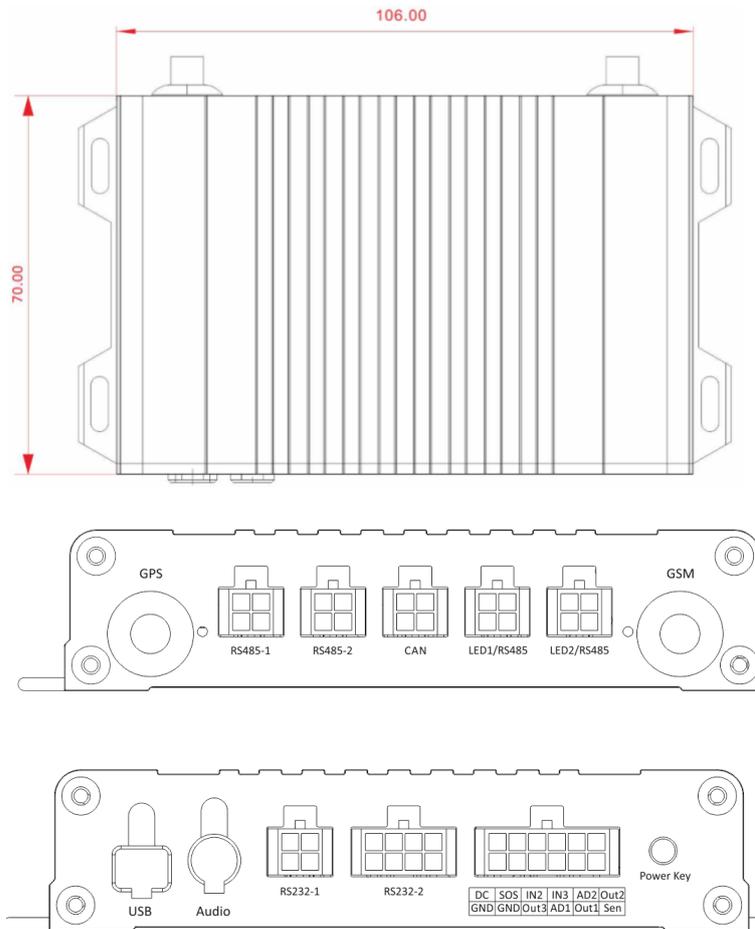
T633G and standard accessories:

- T633G tracker
- External 3G antenna
- External GPS antenna
- I/O cable with an SOS button (2 meters)
- CD download card

Optional accessories:

- USB cable
- iButton
- Relay (12 V/24 V)
- A53 fuel level sensor (voltage sensor)
- A52 digital temperature sensor
- RFID reader
- Magnetic card reader
- Buzzer
- Camera
- LED display
- Digital LED display
- Speaker and microphone
- A21 LCD display

5 Appearance



6 First Use

6.1 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.

6.2 Charging the Device

When you use the device for the first time, connect the device's 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 three hours. Eight hours are recommended.

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

6.3 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.
Blink (every 0.1 seconds)	The device is being initialized or the battery power is low.
Blink (0.1 seconds on and 2.9 seconds off)	A GPS signal is received.
Blink (1 second on and 2 seconds off)	No GPS signal is received.
3G Indicator (Green)	
Steady on	A call is coming in.
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)	No base station signal is received.

6.4 Configuring Device Parameters by Meitrack Manager

This section describes how to use Meitrack Manager (version 6.0.0.11 or later) to configure the device on a computer.

Procedure:

1. Install the 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:



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

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

6.5 Tracking by Mobile Phone

Call or send the **0000,A00** command by SMS to the device's SIM card number. The device will reply to an SMS with a map link.

Click the SMS link. The device's location will be displayed on Google Maps on your mobile phone.

Note: Ensure that the device's SIM card number has subscribed the caller ID service. Otherwise, the tracking function by mobile phone will be unavailable.



SMS example:

Now,061314 10:36,V,26,0Km/h,96%,http://maps.meigps.com/?lat=22.513781&lng=114.057183

The following table describes the SMS format:

Parameter	Description	Remarks
Now	Indicates the current location.	SMS header: indicates the current location or the alert type.
061314 10:36	Indicates the date and time in MMDDYY hh:mm format.	None
V	The GPS is invalid.	A = Valid V = Invalid
26	Indicates the 3G signal strength.	Value: 1–32 The larger the value is, the stronger the signal is. If the value is greater than 12, GPRS reaches the normal level.
0Km/h	Indicates the speed.	Unit: km/h
96%	Indicates the remaining battery power.	None
http://maps.meigps.com/?lat=22.513781&lng=114.057183	Indicates the map link. Latitude: 22.513781 Longitude: 114.057183	None



6.6 Common SMS Commands

6.6.1 Setting the Speeding Alert – B07

SMS sending: 0000,B07,*Driving speed*,*Buzzer mark*

SMS reply: IMEI,B07,OK

Description:

Driving speed: The parameter value ranges from 0 to 255. Unit: km/h. When the driving speed is 0, the speeding alert will be disabled.

When the buzzer mark is 0 (default) and speeding is detected, the buzzer will make sounds to alert users.

When the buzzer mark is 1 and speeding is detected, the buzzer will not make sounds.

Example:

Sending: 0000,B07,40,0

Reply: 353358017784062,B07,OK

6.6.2 Setting the Idling Alert – B14

SMS sending: 0000,B14,*Duration of low speed*,*Driving speed*,*Alert time*

SMS reply: IMEI,B14,OK

Description:

Duration of low speed: The parameter value ranges from 0 to 60000. The default value is 900. Unit: second.

Driving speed: The parameter value ranges from 0 to 200. The default value is 5. Unit: km/h.

Alert time: The parameter value ranges from 0 to 60000. The default value is 120. Unit: second.

If you want to read idling parameters, send 0000,B14.

Example:

Sending: 0000,B14,180,5,120

Reply: 353358017784062,B14,OK

6.6.3 Setting Fatigue Driving – B15

SMS sending: 0000,B15,*Consecutive driving time*,*Alert time*,*ACC off time*

SMS reply: IMEI,B15,OK

Description:

Consecutive driving time: The parameter value ranges from 0 to 1000. The default value is **240**. Unit: minute.

Alert time: The parameter value ranges from 0 to 60000. The default value is **300**. Unit: second.

ACC off time: The parameter value ranges from 0 to 1000. The default value is **20**. Unit: minute.

If you want to read fatigue driving parameters, send **0000,B15**.

Example:

Sending: 0000,B14,180,5,120

Reply: 353358017784062,B14,OK

6.6.4 Setting the Driving License Type – C50

SMS sending: 0000,C50,*Driving license type 1,Driving license type 2,...Driving license type n*

SMS reply: IMEI,C50,OK

Description:

Driving license type: The parameter value ranges from 0 to 65535. At most 16 types of driving licenses are supported.

The default parameter value is **0**, indicating that no driving license type is set.

If you want to read all types of driving licenses, send **C50**.

After a new parameter value is set, the existing parameter values will be deleted.

Example:

Sending: 0000,C50,24,12

Reply: 353358017784062,C50,OK

6.6.5 Setting the Duration of Buzzing – C51

SMS sending: 0000,C51,*Time*

SMS reply: IMEI,C51,OK

Description:

Time: indicates the maximum duration that the buzzer sounds. Unit: minute; value range: 0–255; default value: 10.

When the parameter value is **0**, the buzzer will sound all the time once it is pressed.

Example:

Sending: 0000,C51,10

Reply: 353358017784062,C51,OK

For details about SMS commands, see the *MEITRACK SMS Protocol*.

Note:

1. The default SMS command password is **0000**. You can change the password by using Meitrack Manager and SMS command.
2. The device can be configured by SMS command with a correct password. After an authorized phone number is set, only the authorized phone number can receive the preset SMS event report.

7 Logging In to MS03 Tracking System

Visit <http://ms03.trackingmate.com>, enter the user name and password, and log in to the MS03. (Purchase the login account from your provider.)

For more information about how to add a tracker, see the *MEITRACK GPS Tracking System MS03 User Guide* (chapter 4 "Getting Started").

The MS03 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, see the *MEITRACK GPS Tracking System MS03 User Guide*.

8 Installing the T633G

8.1 Installing GPS and 3G Antennas

Connect the 3G antenna to the connector which is labeled "GSM". The 3G antenna is non-directional, so you can hide it in any place of a vehicle.

Connect the GPS antenna to the connector which is labeled "GPS". It is recommended that the antenna is facing up to the sky and the antenna side with words is downwards. Secure the antenna by using double sided tapes.

Note: Do not install the GPS antenna at a metal covered place.

8.2 Installing an I/O 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.

1 Power (+)	3 Input 1	5 Input 2	7 Input 3	9 Fuel level sensor	11 Output 2
2 GND (-)	4 GND (-)	6 Output 3	8 AD input 1	10 Output 1	12 Digital temperature sensor

Pin Number (Cable Name)	Optional	Color
1 (Power cable)		Red
2 (GND)		Black
3 (SOS)		White
4 (GND)		Black
5 (IN2)	AD3/OUT5	White & brown
6 (OUT3)	IN6	Yellow & red
7 (IN3)	AD6/OUT6	White & red
8 (AD1)	IN4/OUT7	Blue
9 (AD2)	IN5/OUT8	Blue & brown
10 (OUT1)	IN7	Yellow
11 (OUT2)	IN8	Yellow & brown
12 (SEN)	IN9/OUT4	Green

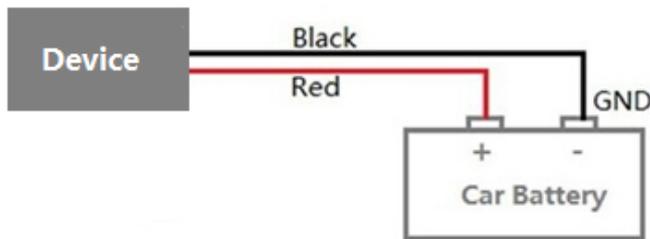
Pin Number	Color	Description
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1 (Power +)	Red	Positive charge of the power input, connected to the positive charge of the vehicle battery. Input voltage: 11.4–36 V.
2 (GND)	Black	Ground wire, connected to the negative charge of the vehicle battery or 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 edge-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): 40 V Maximum current for output low voltage (valid): 500 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 input 6.
7 (Input 3)	White & red	Digital input 3 (positive trigger) Connect to the vehicle ACC cable by default to detect the vehicle ACC status. The port can be set to negative trigger, AD input 6 (0–30 V), output 6.
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 input 4 or output 7.
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 input 5 or output 8.
10 (Output 1)	Yellow	Output 1 Valid: low level (0 V) Invalid: open collector Maximum voltage for output open collector (invalid): 40 V Maximum current for output low voltage (valid): 400 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 input 7.
11 (Output 2)	Yellow & brown	Output 2 Valid: low level (0 V) Invalid: open collector

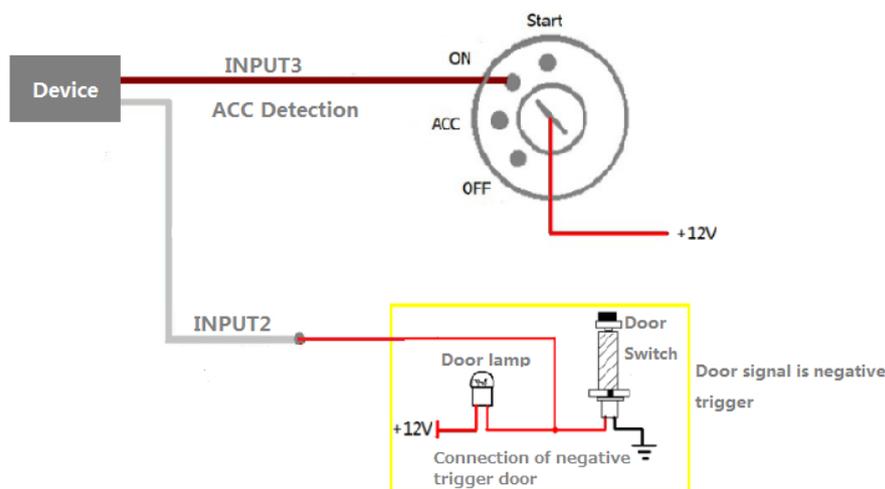
		<p>Maximum voltage for output open collector (invalid): 40 V</p> <p>Maximum current for output low voltage (valid): 400 mA</p> <p>Connect to an external relay to remotely cut off the vehicle fuel cable or engine power supply.</p> <p>The port can be set to positive or negative input 8.</p>
12 (Digital 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 9 or output 4.</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>

8.2.1 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.



8.2.2 ACC and Door Detection (Pin 5/7)



Note: 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.

If you have any questions, do not hesitate to email us at info@meitrack.com.