

FMT-G632

User's Manual



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Chapter1. About this Manual



1.1 Introduction

This is a user manual about FMT-G632, which mainly includes introduction, application environment of the product, description of appearance, product characteristics, technical parameters, setting of common functions, machine installation, matters needing attention and after-sales common problem diagnosis. This manual is designed to help users solve problems encountered in the process of use, please be sure to read this manual in detail, so as to better use the FMT-G632.

1.2 User and Product Safety

- Never use strong pressure onto the screen or subject it to severe impact, as the LCD panel could become cracked and possibly cause personal injury. If the LCD panel is broken, never touch the liquid inside because the liquid irritates the skin.
- Although the VT has passed the test of IP54 standard for water and dust resistance, avoid prolonged exposure to rain or other concentrated moisture. Such condition exceeds the IP54 standard, and could result in water or other contaminants entering into the VT.
- Use only the original approved AC/DC Adapter with the VT. Use of an unapproved AC/DC Adapter could result in electrical problems, or even cause a fire or electrical shock to the user.
- Do not disassemble the VT. Servicing should be done by supplier only. If the VT or accessories gets damaged due to wrong handling or unauthorized repair, warranty is void. In case the warranty seals are broken, warranty is void too.
- Make regularly back-up of all important data.
- Under no circumstance will supplier be liable for any direct, indirect, consequential or incidental damages arising out of the use or inability to use the hardware and software and/or any data loss, even if supplier has been informed about the possibility of such damages.

1.3 Recycling & disposal instructions



Do not throw this product in the home waste bin.



1.4 Regulatory information



For CE, FCC, RoHS and other Document of Conformities, consult the Contact Window of Darveen Computer.

1.5 Product application scenario

FMT-G632 is a fleet management data terminal featuring an 8-inch touchscreen and the Rockchip RK3562 platform. It comes pre-installed with the Android 13 operating system, tailored for applications in the fleet management industry.

Chapter2. Description of Product



2.1 Overview

The FMT-G632 is a fleet management data terminal featuring an 8-inch touchscreen and the Rockchip RK3562 platform. It comes pre-installed with the Android 13 operating system, tailored for applications in the fleet management industry. The FMT-G632 supports integration of WiFi, LTE, Bluetooth, and GPS modules for real-time data exchange, navigation, and communications. With a 10-point capacitive touchscreen, users can enjoy intuitive and efficient operation during actual use. These features as:

- 8" TFT-LCD with projective capacitive touch screen
- Rugged metal enclosure and fanless design
- Wide range 8 to 36VDC power input with ignition control
- Flexible expansion capability for Wi-Fi, Bluetooth, LTE, GPS
- Supports Android 13 operating system



2.2 General View of the FMT-G632

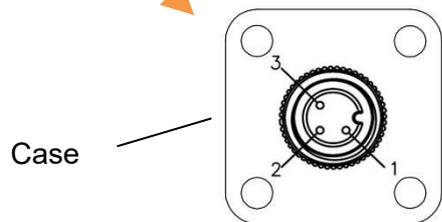


2.3 Power Supply Connector

FMT-G632 internal power supply can accept DC input voltages in the range of 8 to 36V DC.



Pin	Signal	Description
1	V In+	DC Input+ (8-36V DC)
2	Ignition	ACC Delay Ignition Switch
3	V In-	DC Input-
	Case	Chassis ground



2.4 System Specifications

The FMT-G632 detailed specifications as follows. Unless otherwise noted, all the specifications are subject to change without prior notification.

FMT-G632	
Processor	- Rockchip RK3562, quad core (2.0 GHz)
Memory	- 2GB LPDDR4 on board
Storage	- 16GB eMMC 5.1
Operating System	- Android 13
Display	- 8 inch (16:10) TFT LCD - 300 nits - 1280 x 800 Resolution
Touch Panel	- Projected capacitive multi touch
Input / Output Ports	- 3x USB 2.0 (Type A) - 1x USB 2.0/OTG (Type A) - 1 x GbE LAN (RJ45) - 1x SIM Socket - 4x SMA connector for external antenna (Wi-Fi, Bluetooth, WWAN, GPS)
Audio	- 3.5mm Audio Jack (Line-out/Mic-in)
Speaker	- 8Ω/2W, dual studio speakers
Wi-Fi	- Wi-Fi 5: 802.11a/b/g/n/ac, 2.4G/5G
Cellular	- 4G, LTE

Bluetooth	- Bluetooth 4.1
GNSS	- GPS, GLONASS, Galileo, BeiDou
Keyboard	- Power ON/OFF - Brightness Adjustment - Power LED Indicator
Power System	- DC Input: 8~36V DC - Power Consumption: 12W Typ. - Mode:ATX - Power on delay, default 10 seconds - Power off delay, default 10 seconds
Dimensions and Weight	- Dimensions (W x D x H):202 x 135 x 34.35 mm(7.95 x 5.3 x 1.35 inches) - Weight(N.W.) : 1.05 kg (2.3 lbs)
Material	- Aluminum+SGCC
Certification	- CE, FCC

2.5 Environment Standard

Operating Temperature	-20 to 60°C (-4 to 140°F)
Storage Temperature	-30 to 70°C (-22 to 158°F)
Mounting Mode	VESA 75
Relative Humidity	95% @ 70°C (158°F), non-condensing
Shock	MIL-STD-810H Method 514.8 Procedure I
Vibration	MIL-STD-810H Method 516.8 Procedure I
Water & Dust proof	IP54 compliant

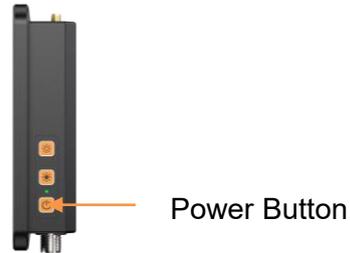
Chapter3. Function Using



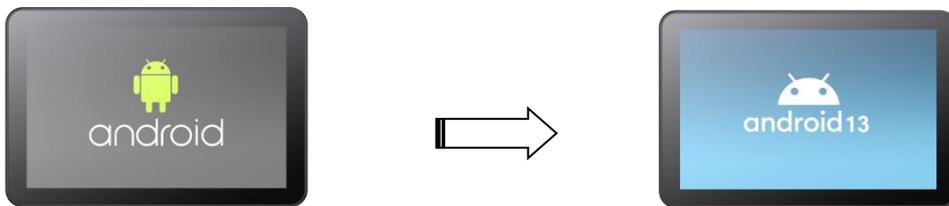
3.1 Key Operation

3.1.1 Turn on the FMT-G632

Press the power button to turn on the FMT-G632. If the FMT-G632 does not power on, check the power supply has been connected normally and you should try again.



When the FMT-G632 is powered on, its operating system starts up. A splash screen of Darveen logo appears for a short period of time followed by the Android13 desktop window.



3.1.2 Adjust brightness and volume

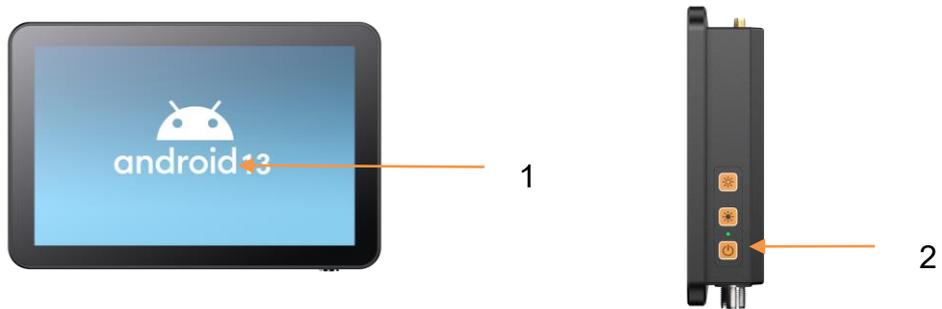
When the FMT-G632 is powered on and login Windows system, you can adjust screen brightness manually by pressing the button on the front of FMT-G632.



Increasing brightness



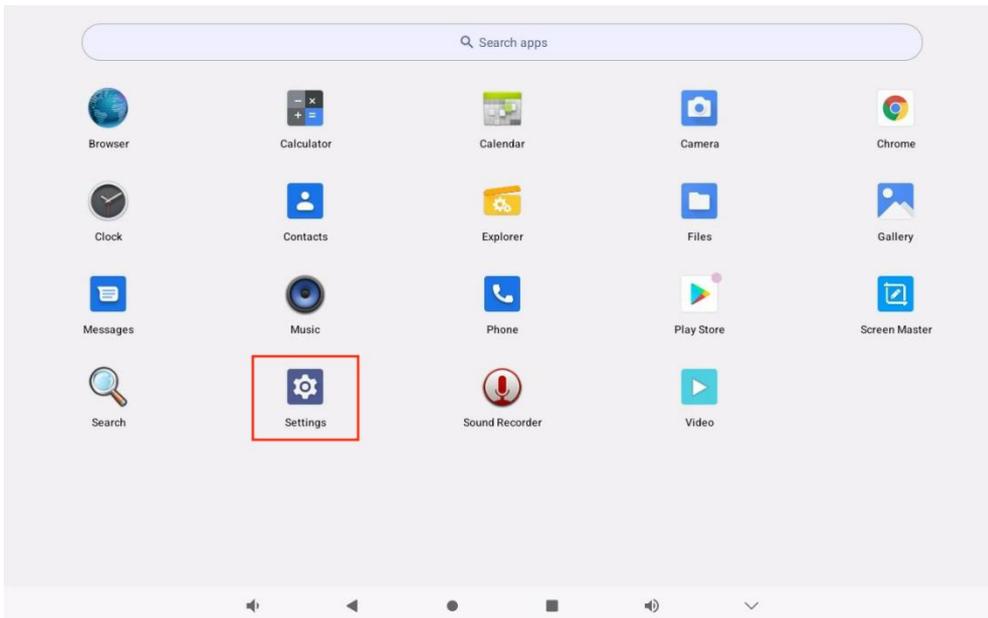
Decreasing brightness



Label nr.	Description
1	LCD panel ,touch panel
2	Keypad for power on/off, brightness control buttons

3.2 WiFi

1. Open the main application menu and and Click the “**Settings**”.



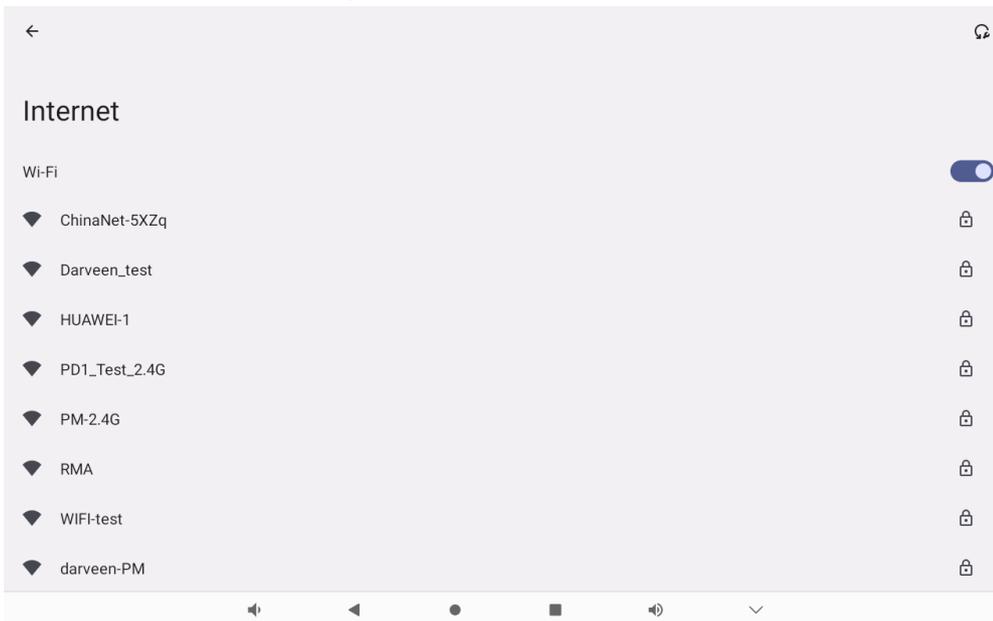
2. Select the “**Network& internet**” .



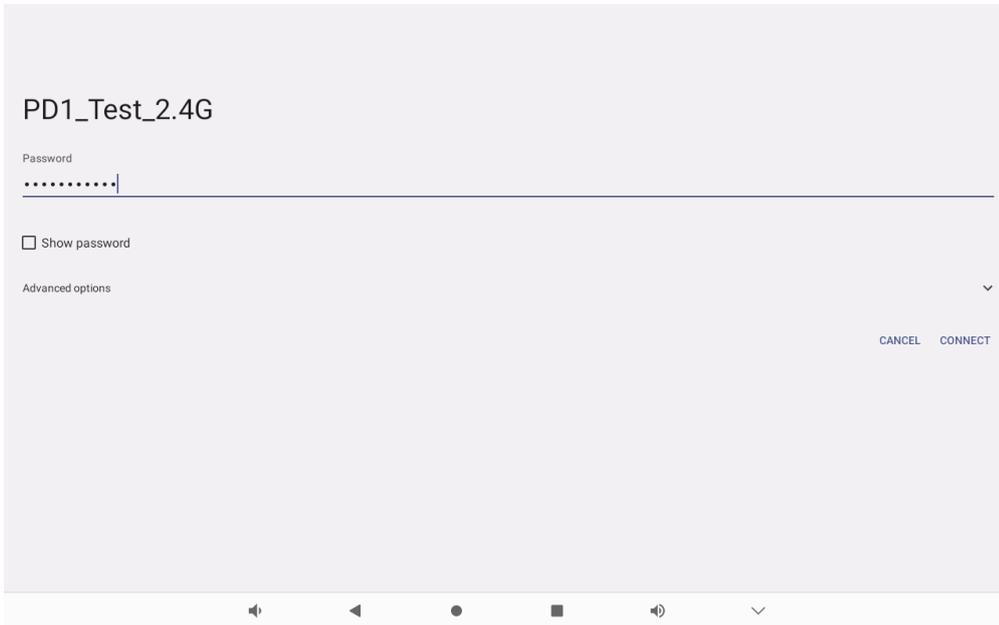
3. Select the “Internet”.



4. Select the WiFi network you want to connect to.



5. Enter its password and click **CONNECT**.

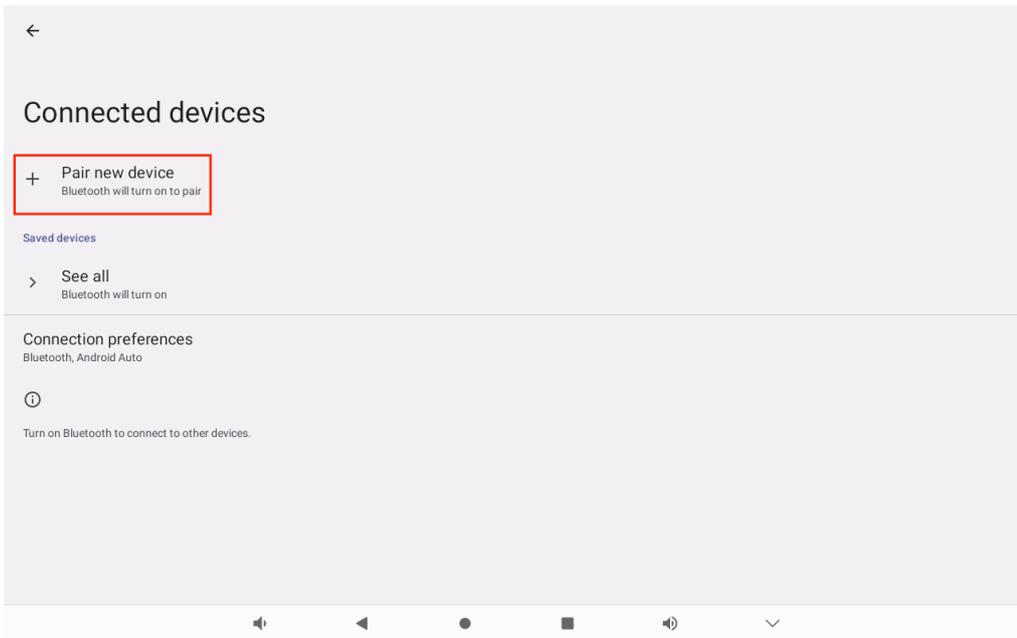


3.3 Bluetooth

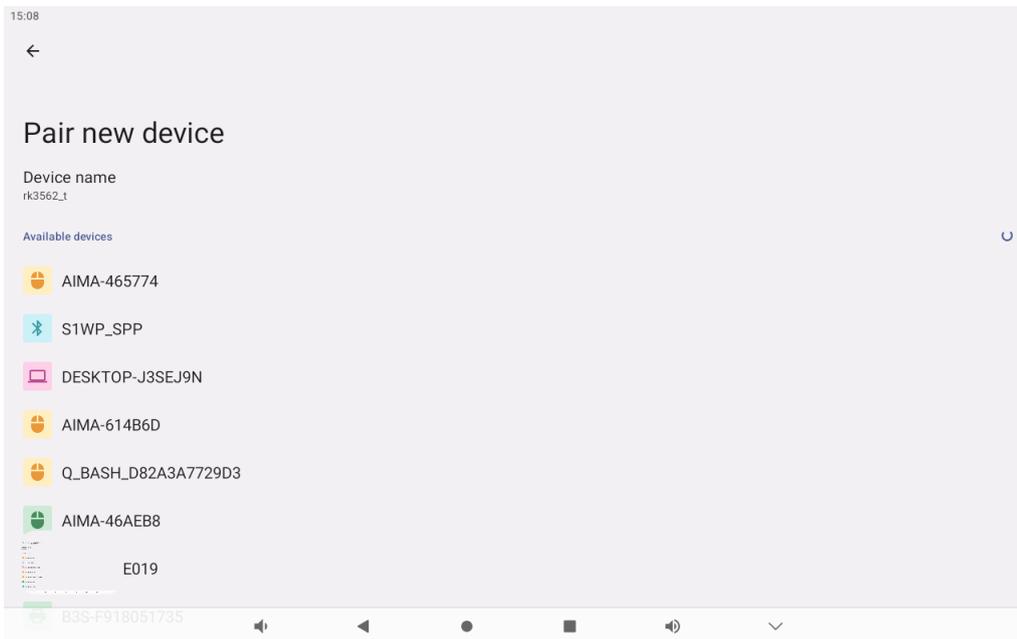
1. **Settings** → **Connected devices**.



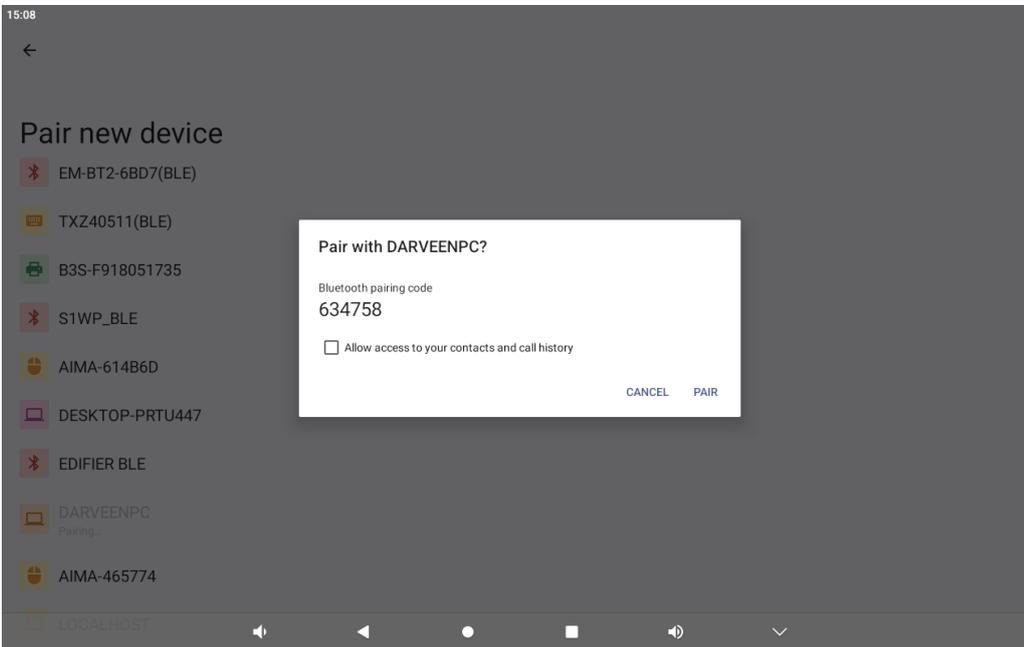
2. Pair new device.



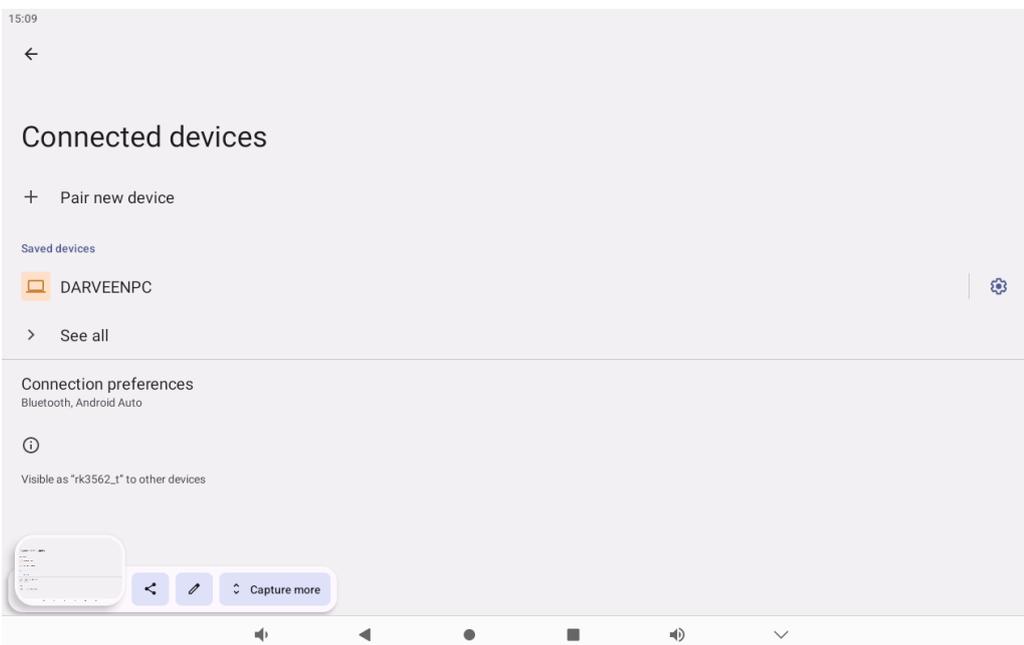
3. Click on the Bluetooth device you want to connect to and pair it.



4.Ensure the pairing password on FMT-G632 and the device you want to connect to are the same. It helps you ensure you're connecting the device to the correct machine, and not another nearby device.



5.Paired Bluetooth devices will appear in the **“Saved devices”** .When the Bluetooth connection is set up, you can transfer files between the two devices.



3.4 4G/5G

1. Insert the SIM card into the FMT-G632. The SIM card slot is push-pull. The SIM card slot position is as follows.

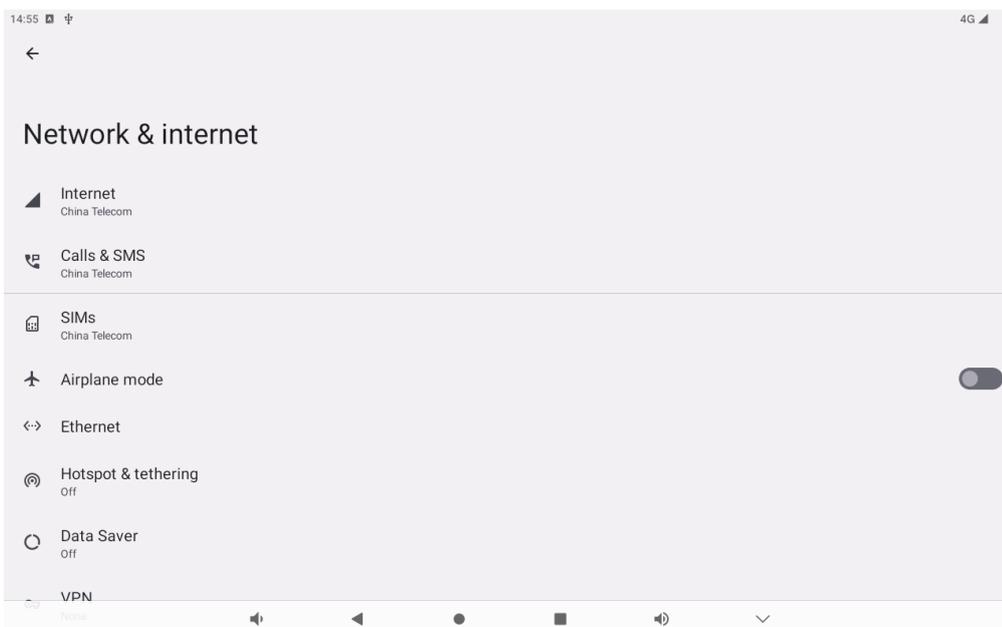


SIM Slot

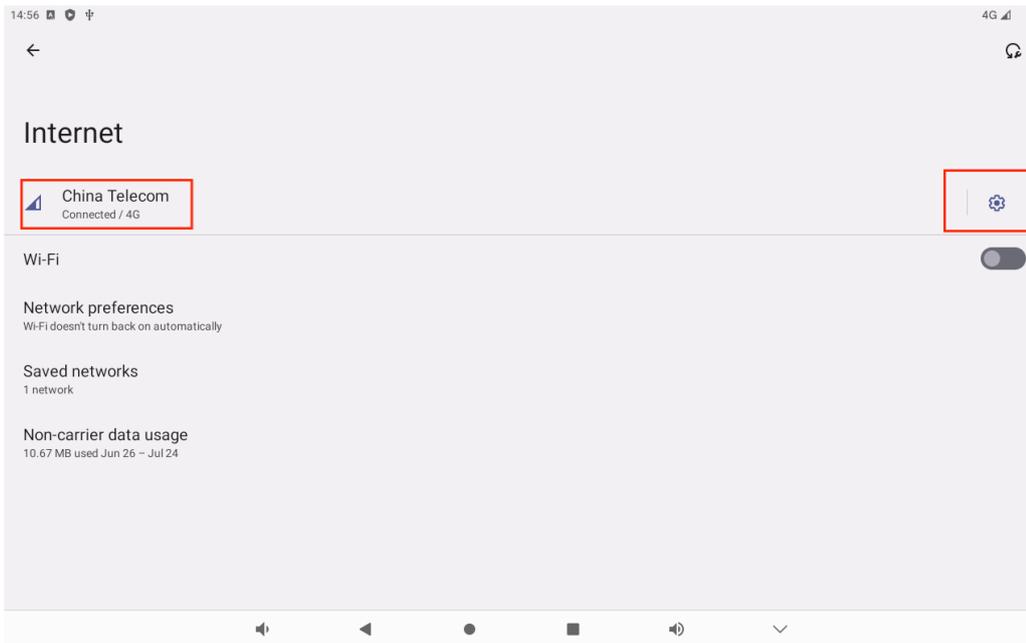
Note: Please ensure that the machine is completely powered off before inserting and removing the SIM card.

After installing SIM card, if the network can be connected normally, the installation is completed. If not, manually input the corresponding APN access points of SIM card operators.

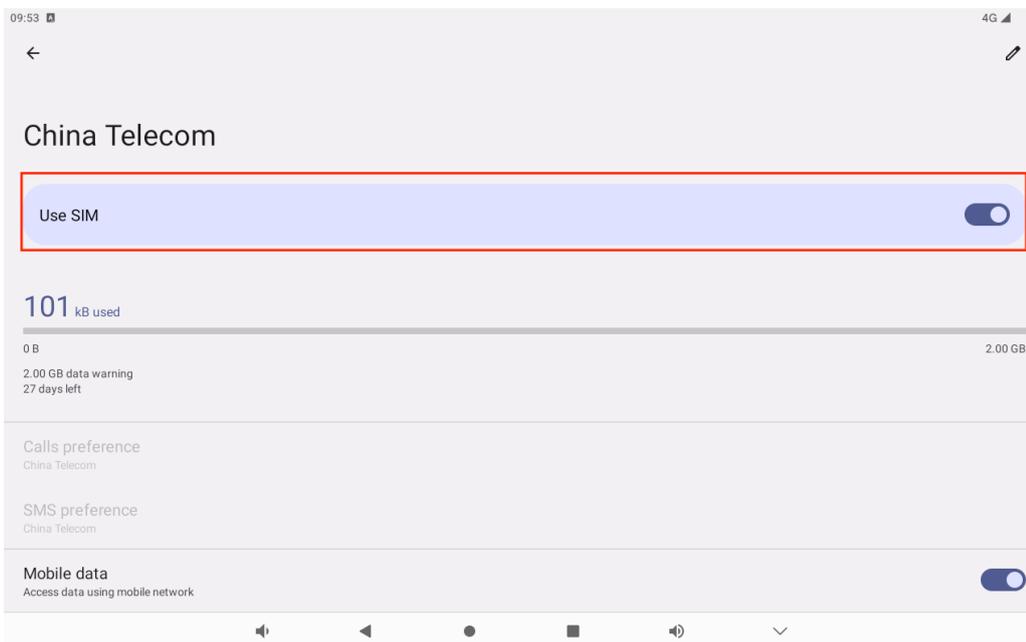
2. Settings → Network & internet.



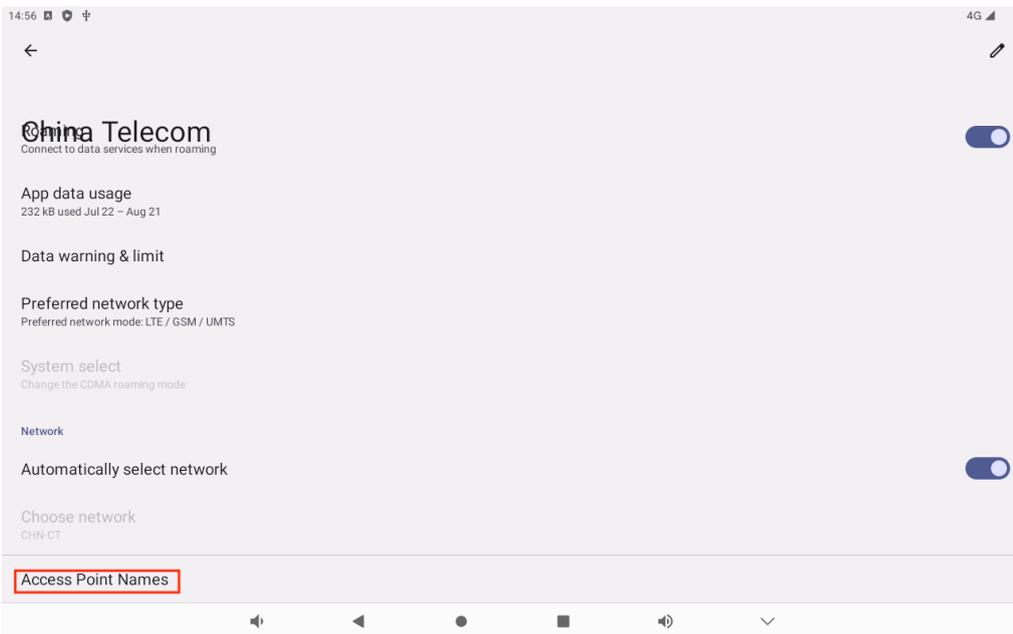
3. Internet Settings.



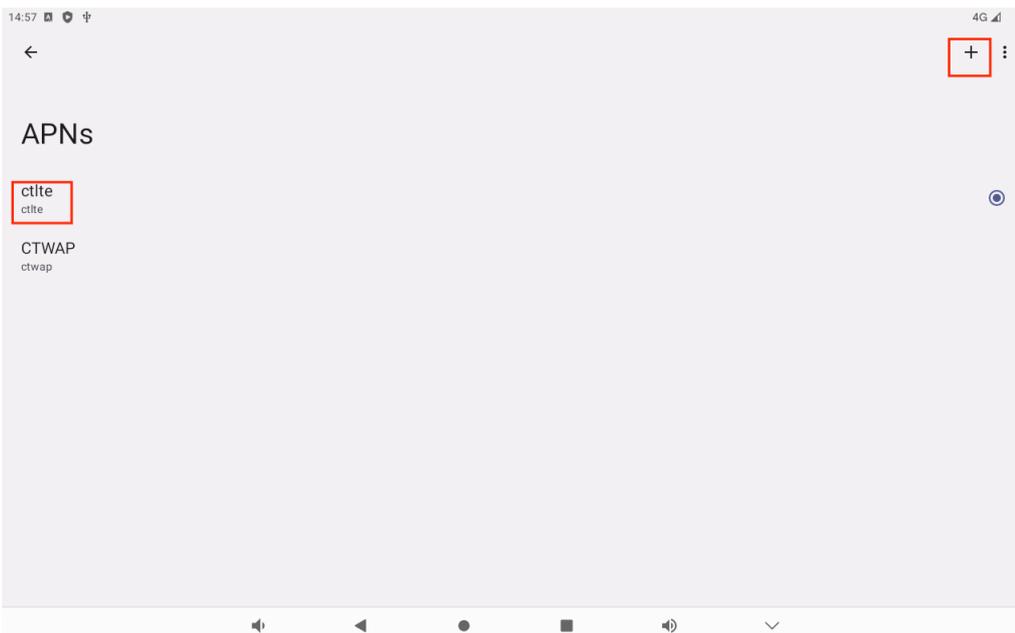
4. Open the “Use SIM”.



5. Click on “**Access Point Names**” option and select APN corresponding to SIM card in APN list. In China, China Mobile is **cmnet**, China Unicom is **3gnet** and China Telecom is **ctnet**.



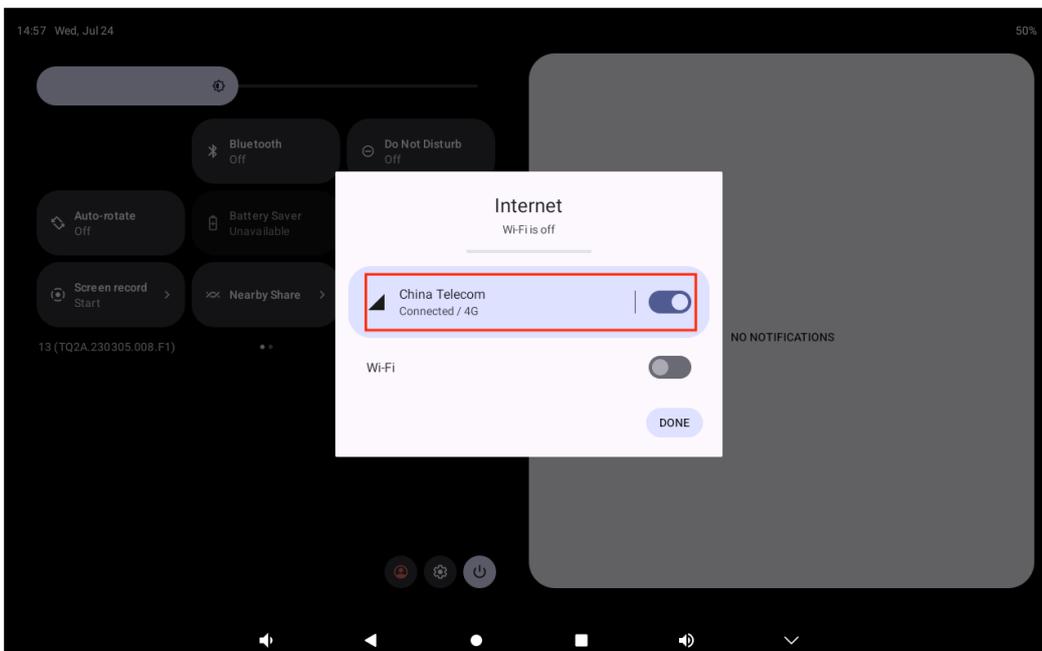
6. If you want to change the APN configuration information, you can double-click the name of the APN in the list. However, unlike China Mobile and China Unicom, sim cards of China Telecom are not automatically connected to the default APN, so we need to add new APN manually by click the "+" symbol in the top right corner.



7. In the “**Edit access point**” interface, enter the custom name and APN of China Telecom(**ctlte**). Then click the “**Save**” option in the top right corner. Finally, you can select China Telecom's APN (**ctlte**) from the saved APN list.



8. To make sure you're connected to 4G/5G, you can pull down the signal status bar above the FMT-G632 desktop. Click the “**Internet**” to see if the connection has been successful.



3.5 GPS

1. Install GPS antenna on antenna interface (**marked GPS**) of FMT-G632. You can buy antennas with better signals. Install those on the antenna interface.

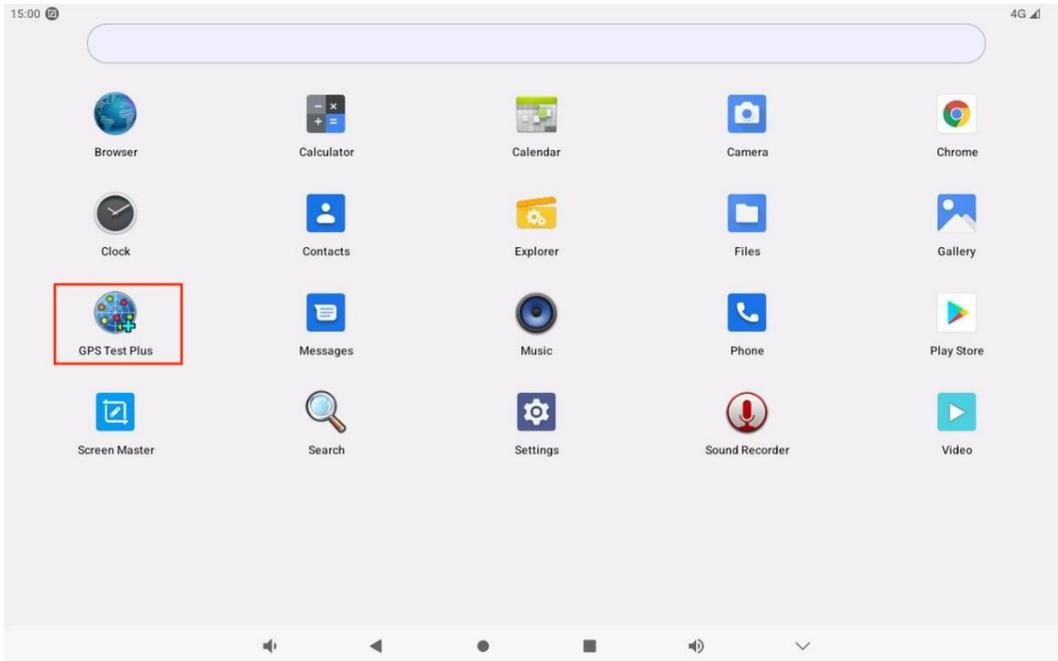


SMA Antenna Interface

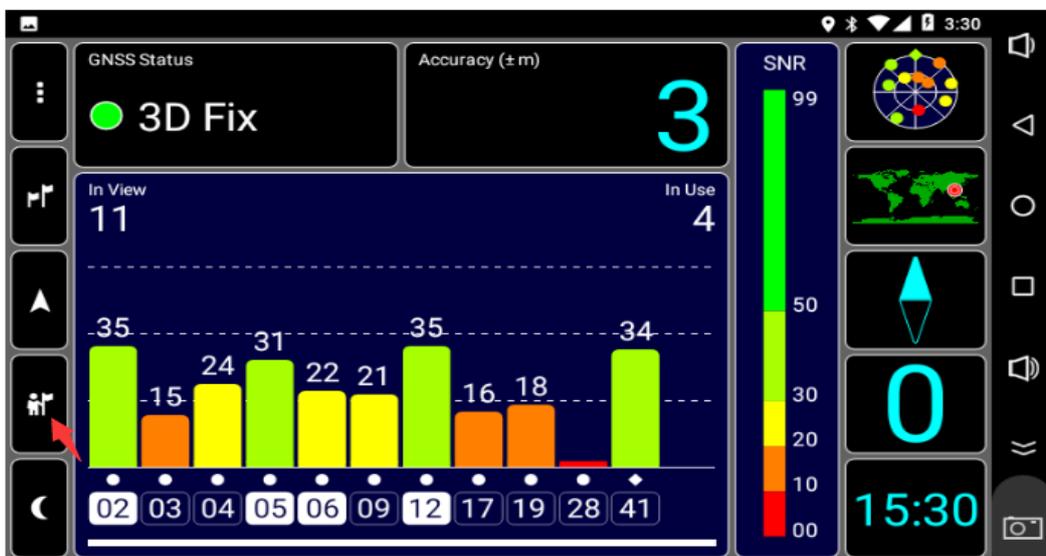
2. **Settings-Location.** Open “Use location”.



3.FMT-G632 is commonly used in **GPS Test Plus** for GPS positioning. **GPS Test Plus** is an easy to use Android GPS real-time positioning tool, it supports automatic detection of GPS in the history of Android devices, automatic search satellite, can also display the current dimensions, longitude, elevation, movement speed, the compass, the global time zones, sunrise and sunset, and historical sites and the distance from the center of the current direction information.



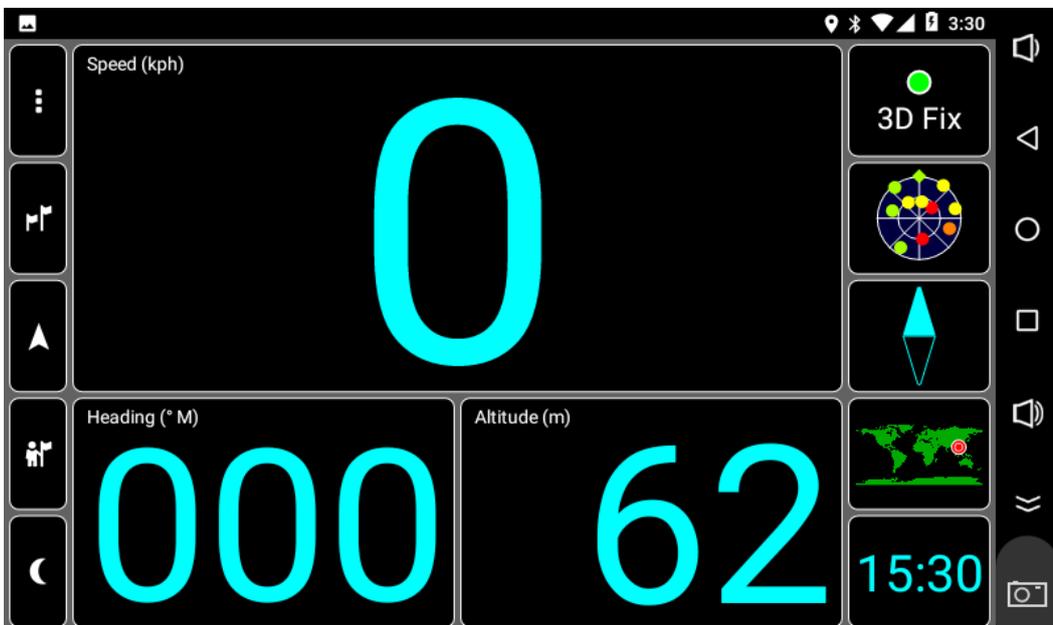
4.GPS positioning is best done outdoors in open areas.After the above preparations are completed, enter the **GPS Test Plus** for the first GPS signal positioning.As can be seen from the figure below.The first location information can be saved by clicking the indication option below.GPS signal (SNR) bar chart showing the signal strength of each satellite, as well as the accuracy and GPS status.



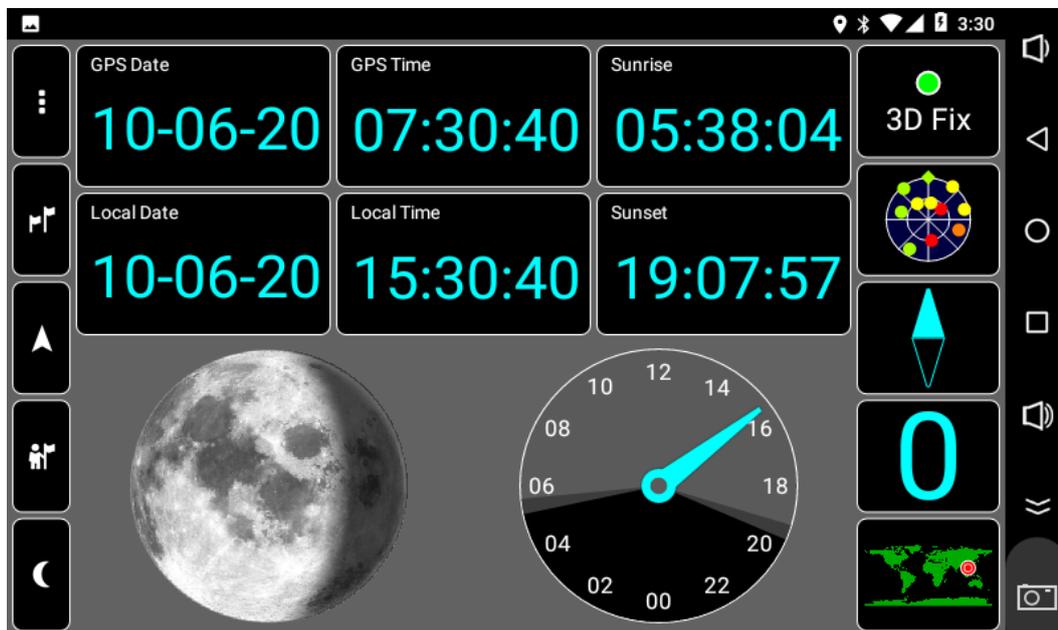
5. GPS Test Plus is provided by a variety of navigation systems, including Beidou in China, GPS in the United States, Glonass in Russia and QZSS in Japan.



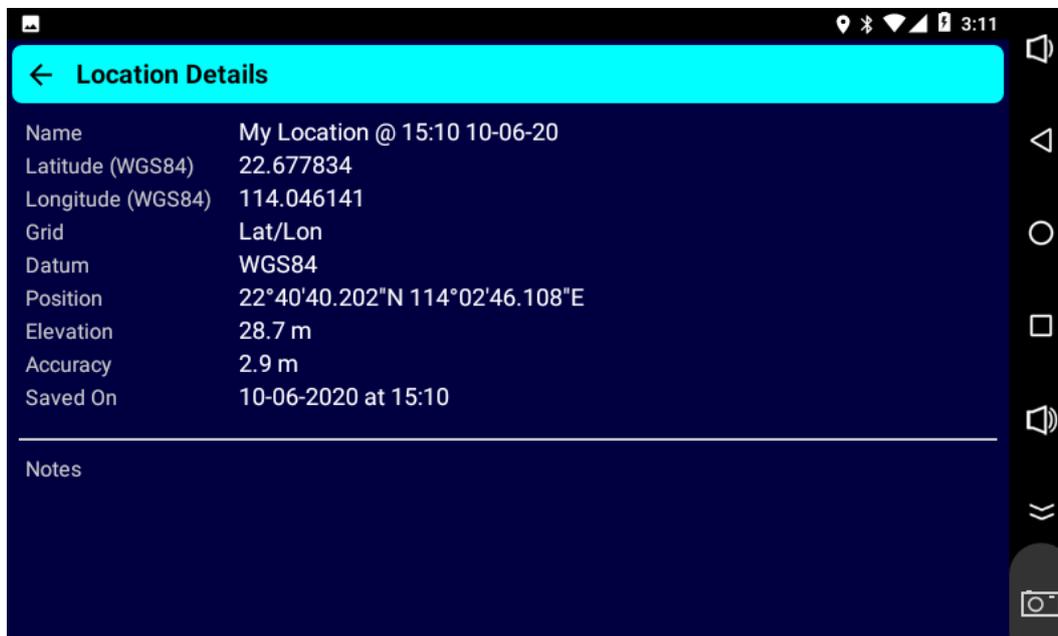
6. Not only can you get information about your current speed, heading and altitude from it, but it also has a compass function.



7.It can display sunrise, sunset, altitude, direction, UTC time and other information. Satellites in the sky can be displayed by a rotating compass.



8.The following table shows the saved GPS positioning details, including latitude and longitude, accuracy,Grid,Datum,altitude and time.



Chapter4. Accessories and Power connection



4.1 Check the package

Open the package and check all the parts are inside without shortage and damage.

A. FMT-G632 (Main Unit)

Standard package is including a FMT-G632 main unit and a power cable.

1	Main unit	FMT-G632	
2	Power cable	PC-03M-20-ACC	

B. Accessories (Optional)

According to the use of different environment, you can choose some different parts, the list is as below:

1	Power Adapter	PWR220A12-M12 * AC-DC Adapter * 100~240V AC Input, 12V/5A DC Output	
2		PWR836D512-M12 * DC-DC Adapter * 8~36V DC Input, 12V/3A and 5V/2A Output	
3		PWR1872D512-M12 * DC-DC Adapter * 18~72V DC Input, 12V/3A and 5V/2A Output	
4	Mounting Kits	RAM-MOUNT-02 * Universal Adjustable * Marine Grade Aluminum * VESA Standard (75x75mm and 100x100mm)	
5		DV-MOUNT-1002 * Forklift Roof Mounting Kits * Universal Adjustable * Marine Grade Aluminum * VESA Standard (75x75mm and 100x100mm)	

6		<p>DV-MOUNT-2002</p> <ul style="list-style-type: none"> * Forklift U-shaped Mounting Kits * Universal Adjustable * Marine Grade Aluminum * VESA Standard (75x75mm and 100x100mm) 	
7		<p>DV-MOUNT-60</p> <ul style="list-style-type: none"> * Lifting Mounting Kits * Stainless Steel Material * Lifting Height Adjustable Range 50~100cm * VESA Standard Holes(75x75mm & 100x100mm) 	
8	Power cable	<p>PC-03M-20-ACC</p>	
9		<p>PC-23MM-20</p>	
10		<p>PC-23MM-20-ACC</p>	
11	Antenna	<p>Rubber Duck Antenna ANT- R3S SMA(Female), 3dB, Universal</p>	
12		<p>Rubber Duck Antenna ANT- R3T TNC(Female), 3dB, Universal</p>	
13		<p>Rubber Duck Antenna ANT- R4T TNC(Female), 2~4dB, Cisco</p>	

14		<p>Magnetic Mount Antenna ANT-S7S SMA(Female), 7dB, 5meters long</p>	
15		<p>Magnetic Mount Antenna ANT-S7T TNC(Female), 7dB, 5meters long</p>	
16		<p>Fiberglass Antenna ANT-G5N N(Female), 5dB, 0.3meters long</p>	
17		<p>GPS Antenna ANT-GPSS SMA(Female), 3meters cable, GPS</p>	
18		<p>GPS Antenna ANT-GPST TNC(Female), 3meters cable, GPS</p>	
19		<p>GPS Antenna ANT-GNSSS SMA(Female), 3meters cable, GPS&GNSS</p>	
20		<p>GPS Antenna ANT-GNSST TNC(Female), 3meters cable, GPS&GNSS</p>	
21	<p>Industrial Keyboard</p>	<p>DKB-70 * 70 Keys QWERTY Full-function Keyboard * LED Backlight, Independent Swich Control * F1-F24 Function Keys, 0-9 Numeric and A-Z Alpha Keys * IP54 Waterproof * Support Windows and Andriod Operating System</p>	

22		Keyboard Mounting Bracket BK-VT1	
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4.2 Power Connection

4.2.1 Power Options

Before using the FMT-G632, choose different power adapters for different vehicle power.

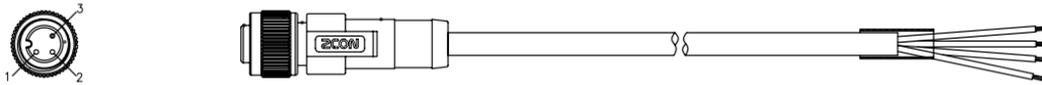
Power Options including:

- **12 VDC Vehicles** (8-36VDC Direct Connection) – Direct connection to vehicle power.
- **24 VDC Vehicles** (8-36VDC Direct Connection) – Direct connection to vehicle power.
- **48 VDC Vehicles** – Requires the use of a DC-DC power supply.
- **80 VDC Vehicles** – Requires the use of a DC-DC power supply.
- **External AC/DC Power Supply** – For use when DC power supply is not available to power the FMT-G632, such as in an office environment.

4.2.2 Power Cable Identification

PC-03M-20-ACC

Power cable with straight connector and 4 wires, 2 meters long:

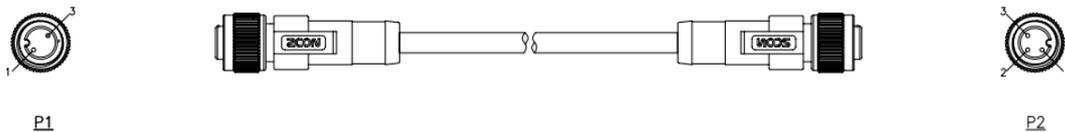


M12 Connector	Wire Color	Connection
P1	Red	DC+ (8-36 VDC)
P2	Yellow Green	Ignition Input (Optional)
P3	Black	DC-
Case	Black	Ground

Note: PC-03M-20-ACC cable is use for direct connection from vehicle power to FMT-G632 or DC-DC power input.

PC-23MM-20

Power cable with straight connector, 2 meters long:

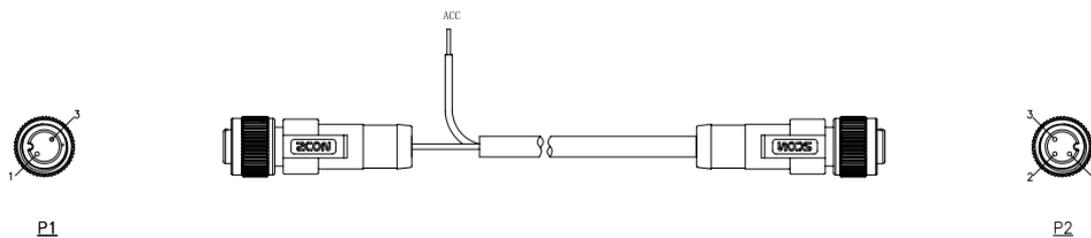


M12 Connector(P1)	M12 Connector(P2)	Connection
P1	P1	DC+ (8-36 VDC)
(NC)	P2	Ignition Input (Optional)
P3	P3	DC-
Case	Case	Ground

Note: PC-23MM-20 cable is use for connection from FMT-G632 to DC-DC power output, just without power ignition function.

PC-23MM-20-ACC

Power cable with straight connector and 1 wire, 2 meters long:



M12 Connector(P1)	M12 Connector(P2)	Connection
P1	P1	DC+ (8-36V DC)
(Yellow)	P2	Ignition Input (Optional)
P3	P3	DC-
Case	Case	Ground

Note: PC-23MM-20 cable is use for connection from FMT-G632 to DC-DC power output, also with power ignition function.

4.2.3 External Power Adapter Options

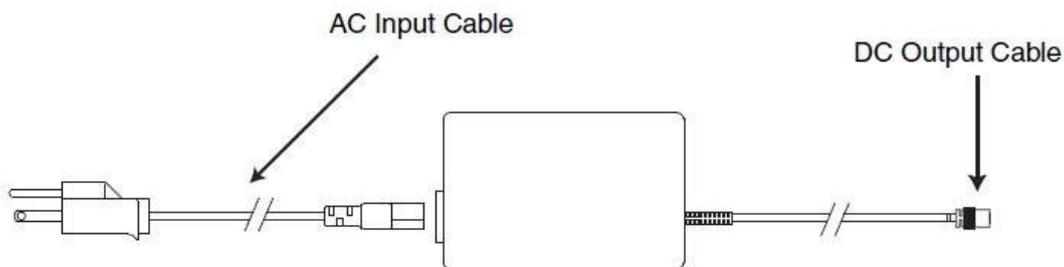
1. External AC-DC Power Supply

PWR220A12-M12

The optional external AC/DC power supply is for use in environments, such as an office, where DC power is not available.

PWR220A12-M12 is support 100V-240V ac input, provide 12V DC and 5A power output, the power connector is an M12 male type which can meet IP54 dust and water proof.

Note: The Darveen-approved AC/DC Power Supply and Adapter Cable are only intended for use in a 25°C (77°F) maximum ambient temperature environment.



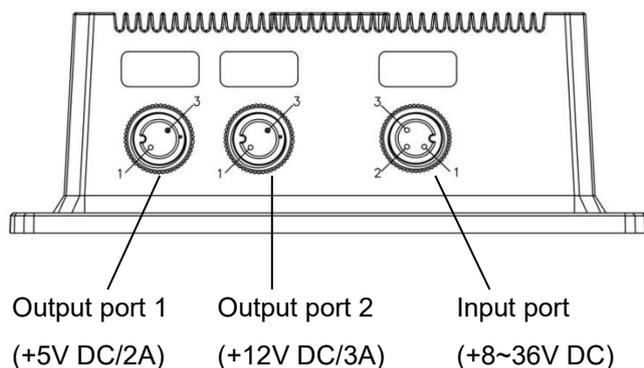
Connect External AC/DC Power Supply

1. Connect the provided detachable cord set (all others must order cable separately) to the external power supply.
2. Plug cord set into appropriate, grounded, electrical supply receptacle (AC mains).
3. Connect the watertight connector end of the Adapter Cable to the FMT-G632 Power Connector by aligning the connector pins to the power connector; push down on the watertight connector and twist it to fasten securely.
4. Press the Power Button on the front of the FMT-G632 to turn on the FMT-G632.

2. External DC-DC Power Supply

PWR836D512-M12

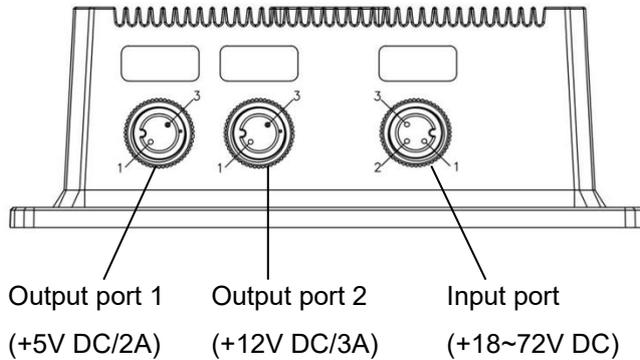
PWR836D512-M12 is an optional external DC/DC power supply, that is for use in vehicles provided 12V DC or 24V DC power. The power input and output connectors are M12 male type which can meet IP54 dust and water proof.



Input Port		Output Port 1		Output Port 2	
Pin	Signal	Pin	Signal	Pin	Signal
1	DC In+ (8-36 VDC)	1	DC Out+ (+5V/2A)	1	DC Out+ (+12V/3A)
2	NC	3	DC Out-	3	DC Out-
3	DC In-				

PWR1872D512-M12

PWR1872D512-M12 is an optional external DC/DC power supply, that is electronic isolation for use in the vehicles provided 48V DC power. The power input and output connectors are M12 male type which can meet IP54 dust and water proof.



Input Port		Output Port 1		Output Port 2	
Pin	Signal	Pin	Signal	Pin	Signal
1	DC In+ (18-72 VDC)	1	DC Out+ (+5V/2A)	1	DC Out+ (+12V/3A)
2	NC	3	DC Out-	3	DC Out-
3	DC In-				

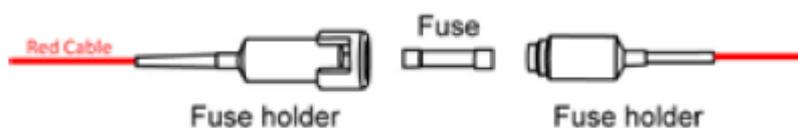
4.2.4 12-24 VDC Vehicles (8-36VDC Direct Connection)



Fuse Requirements:

WARNING - For proper and safe installation, the input power cable must be connected to a fused circuit on the vehicle. If the supply connection is made directly to the battery, the fuse should be installed in the positive lead within 5 inches of the battery's positive (+) terminal. The fused circuit requires a maximum time delay (slow blow) fuse with a current rating as noted below.

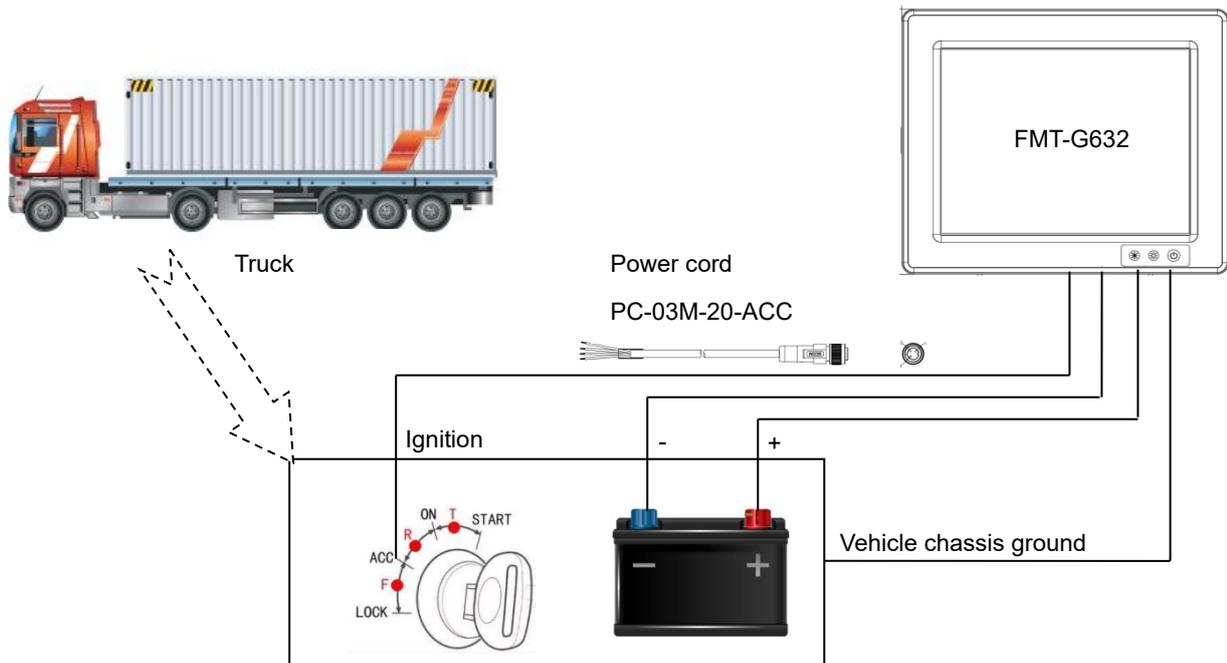
- For **12V DC** input, use a 10A slow blow fuse that has a DC voltage rating greater than 12VDC.
- For **24V DC** input, use a 6A slow blow fuse that has a DC voltage rating greater than 24VDC.



1. Connected vehicle directly.

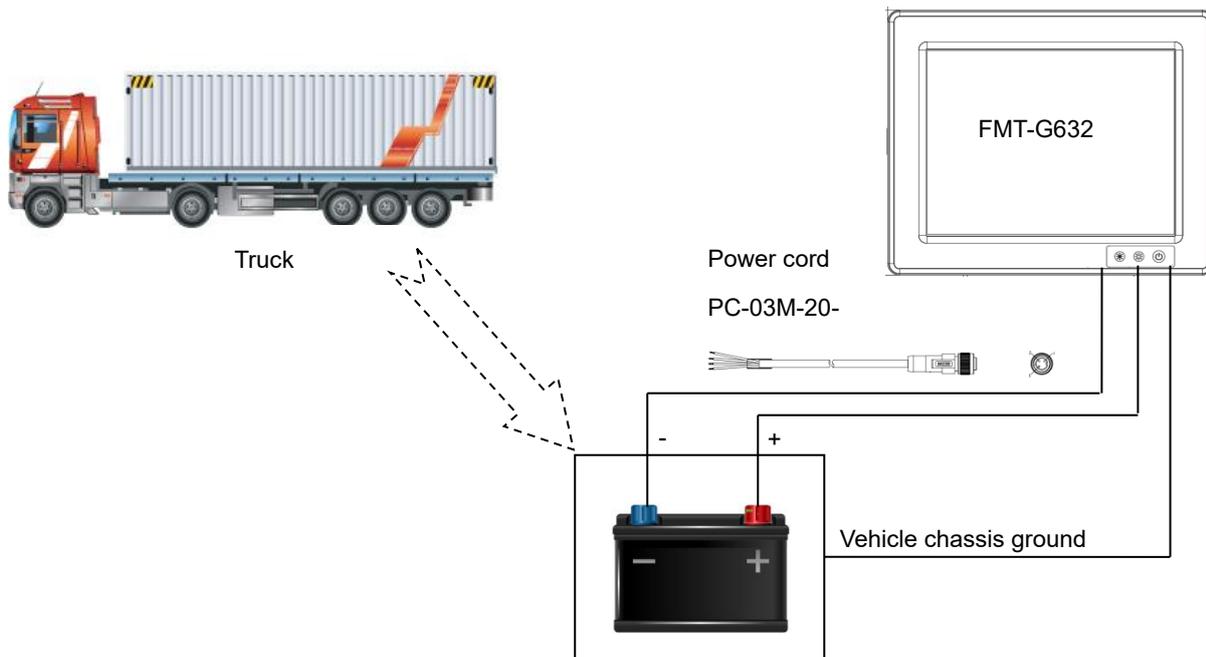
(1) Use the ignition ON/OFF function.

Connect the watertight connector end of the power cable to the FMT-G632 power connector by aligning the connector pins to the power connector, push down on the watertight connector and twist it to fasten securely.



(2) Without the ignition ON/OFF function.

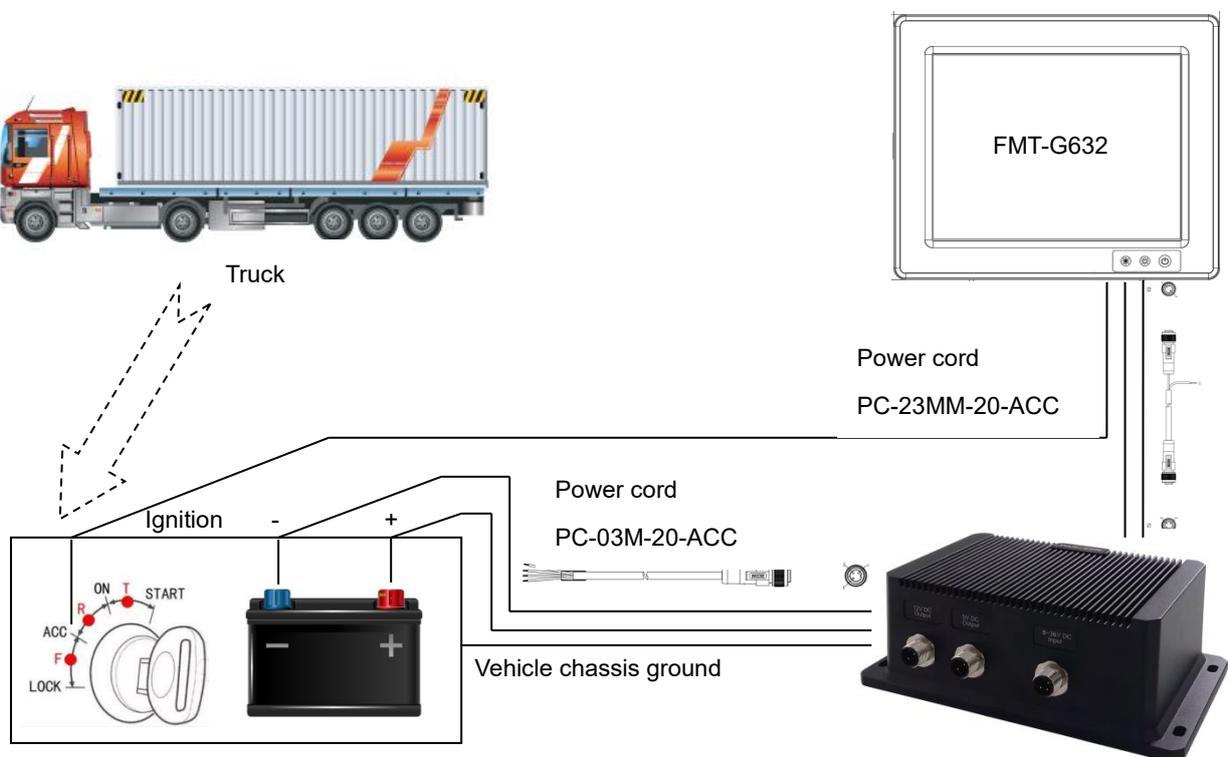
- a. Cut off the yellow wire (Ignition wire) on the power cord (PN: PC-03M-20-ACC);
- b. Connect the watertight connector end of the power cable to the FMT-G632 power connector by aligning the connector pins to the power connector, push down on the watertight connector and twist it to fasten securely.



2. Connected vehicle via DC-DC power adapter.

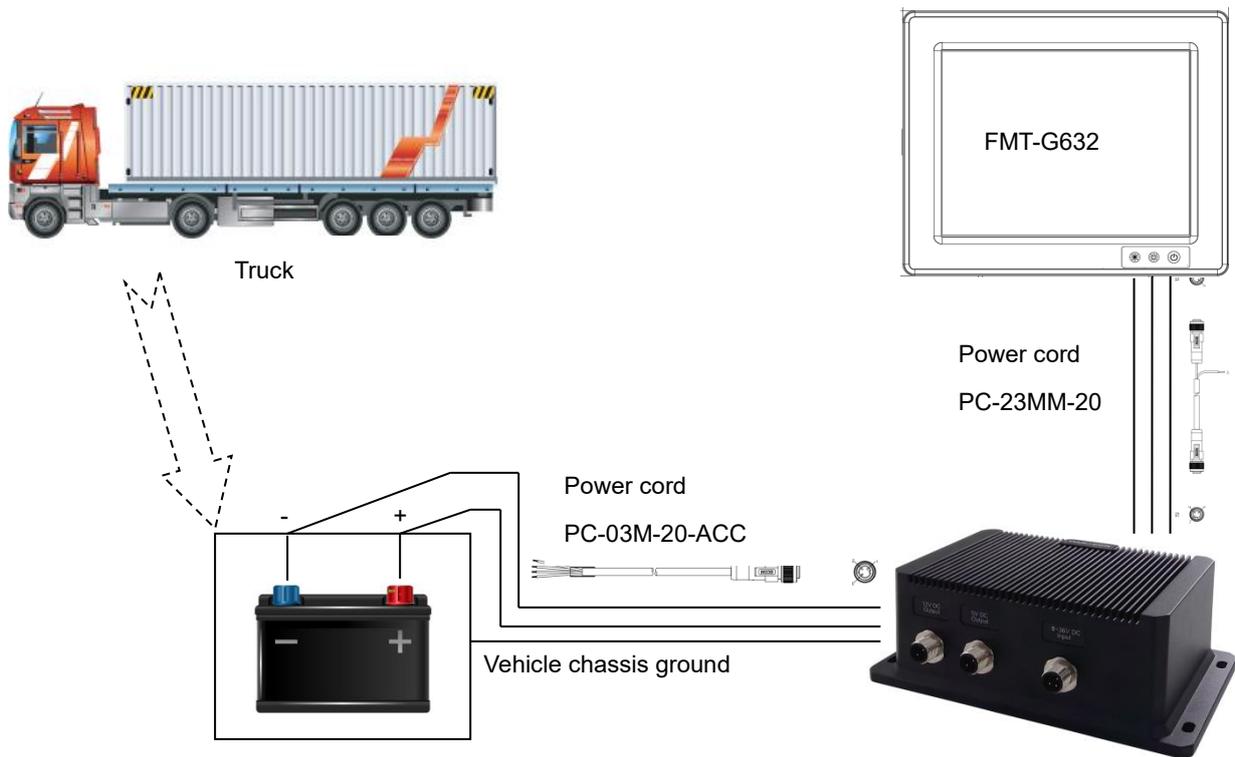
(1) Use the ignition ON/OFF function.

- a. Connect the watertight connector end of the power cable (PC-03M-20-ACC) to the PWR836D512-M12 power connector by aligning the connector pins to the power connector, push down on the watertight connector and twist it to fasten securely.
- b. Connect the watertight connector end of the power cable (PC-23MM-20-ACC) to FMT-G632 and PWR836D512-M12, then connect the yellow wire (ignition wire) to the vehicle ignition signal pin.



(2) Without the ignition ON/OFF function.

- a. Cut off the yellow wire (Ignition wire) on the power cord (PN: PC-03M-20-ACC);
- b. Connect the watertight connector end of the power cable (PC-03M-20-ACC) to the PWR836D512-M12 power connector by aligning the connector pins to the power connector, push down on the watertight connector and twist it to fasten securely.
- c. Connect the watertight connector end of the power cable (PC-23MM-20) to FMT-G632 and PWR836D512-M12.



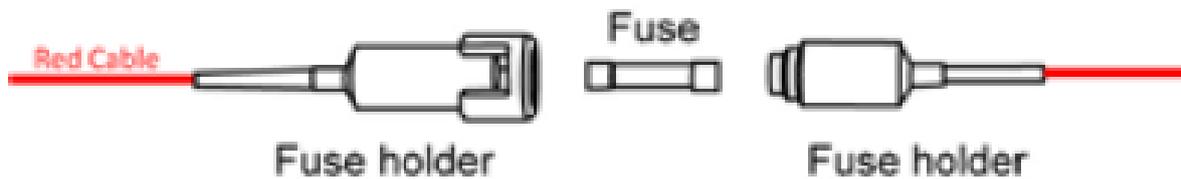
4.2.5 48 VDC Vehicles (Connected via DC/DC power)



Fuse Requirements:

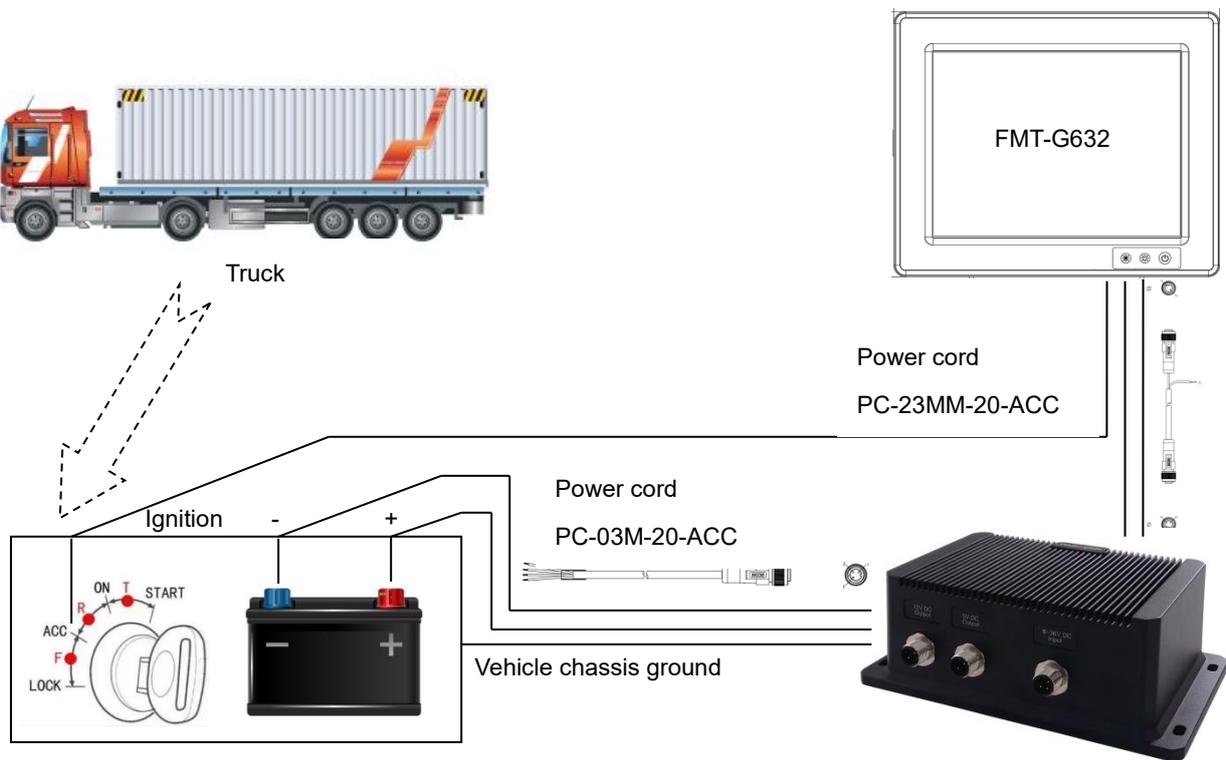
WARNING - For proper and safe installation, the input power cable must be connected to a fused circuit on the vehicle. If the supply connection is made directly to the battery, the fuse should be installed in the positive lead within 5 inches of the battery's positive (+) terminal. The fused circuit requires a maximum time delay (slow blow) fuse with a current rating as noted below.

- For **48VDC** input, use a 3A slow blow fuse that has a DC voltage rating greater than 48VDC.



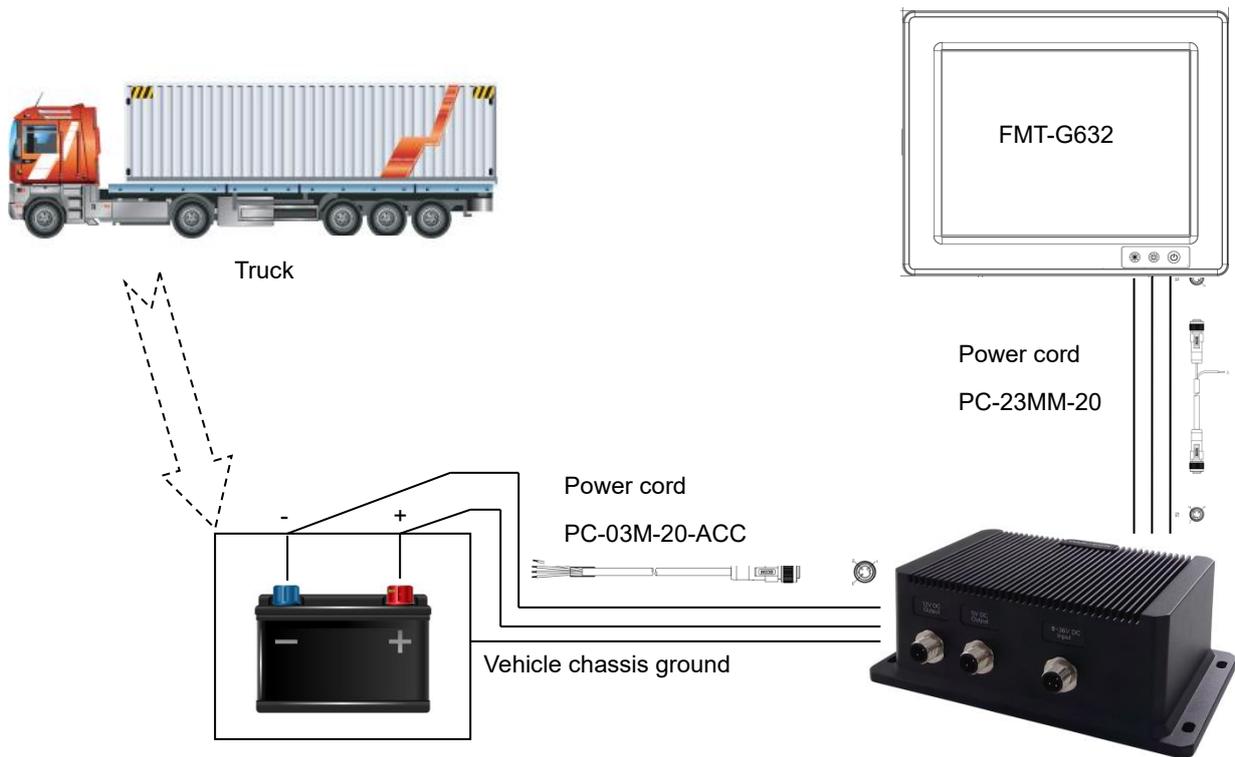
(1) Use the ignition ON/OFF function.

- c. Connect the watertight connector end of the power cable (PC-03M-20-ACC) to the PWR1872D512-M12 power connector by aligning the connector pins to the power connector, push down on the watertight connector and twist it to fasten securely.
- d. Connect the watertight connector end of the power cable (PC-23MM-20-ACC) to FMT-G632 and PWR1872D512-M12, then connect the yellow wire (ignition wire) to the vehicle ignition signal pin.



(2) Without the ignition ON/OFF function.

- d. Cut off the yellow wire (Ignition wire) on the power cord (PN: PC-03M-20-ACC);
- e. Connect the watertight connector end of the power cable (PC-03M-20-ACC) to the PWR1872D512-M12 power connector by aligning the connector pins to the power connector, push down on the watertight connector and twist it to fasten securely.
- f. Connect the watertight connector end of the power cable (PC-23MM-20) to FMT-G632 and PWR1872D512-M12.



Chapter5. Installation and FAQ



5.1 Installation

FMT-G632 is mainly used in the warehousing forklift, logistics, container trucks and so on. In order to adapt to its operating environment, there are a variety of mounting methods, including boom mounting, VESA mounting, wall mounting, etc.



5.2 FAQ

Q1: Does the on-board terminal support ACC ignition signal delay switch?

A: FMT-G632 car terminal optional ACC ignition signal intelligent switch machine functions. Under the function of the ACC mode, when the on-board computer off, if the detected signal when the ACC will automatic startup latency for 10 seconds, and car terminal in the boot state, if detected the ACC will delay 10/30/120 seconds after the automatic shutdown, without artificial operation in the process of the on-board computer; When ACC is selected, the power interface of the on-board terminal will be changed to 3Pin, positive pole, negative pole, ACC detection pole. Generally, positive and negative pole are connected to vehicle batteries, and ACC detection pole is connected to ignition signal.

Q2: Why is it necessary to add a DC-DC power adapter for the installation of forklifts, trailers, front cranes and stacker?

A: The car always has a peak value at startup. In order to avoid burning out the equipment power board, the power adapter of DC-DC is needed to stabilize the voltage. The current equipment installed power board supports the voltage of 8-36V

Description:

For these battery models, there are three voltage output specifications, as follows:

- 1, trailer battery output voltage: 12V
2. Battery output voltage of front lifting and stacking machine: 24V
3. Forklift battery output voltage: 48V

Q3:How to ensure the normal use of the FMT-G632 under the impact of high strength vibration?

A:1.FMT-G632 shell is made of strong aluminum alloy.

- 2.The FMT-G632's built-in electronic modules offer excellent shock resistance, such as a gauge LCD screen and a shock-resistant solid-state drive (SSD), enabling the FMT-G632 to withstand harsh vibration.

5.3 Warranty and after service

Should this VT be malfunctioned, please contact your original retailer providing information about the product name, the serial number, and the details about the problem.



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