

T7 Vehicle Mount Computer Quick Start Instructions for use

Version History

Version	Time	Author	Note
V0.1	2023-2-20	DW	Created, written on T10

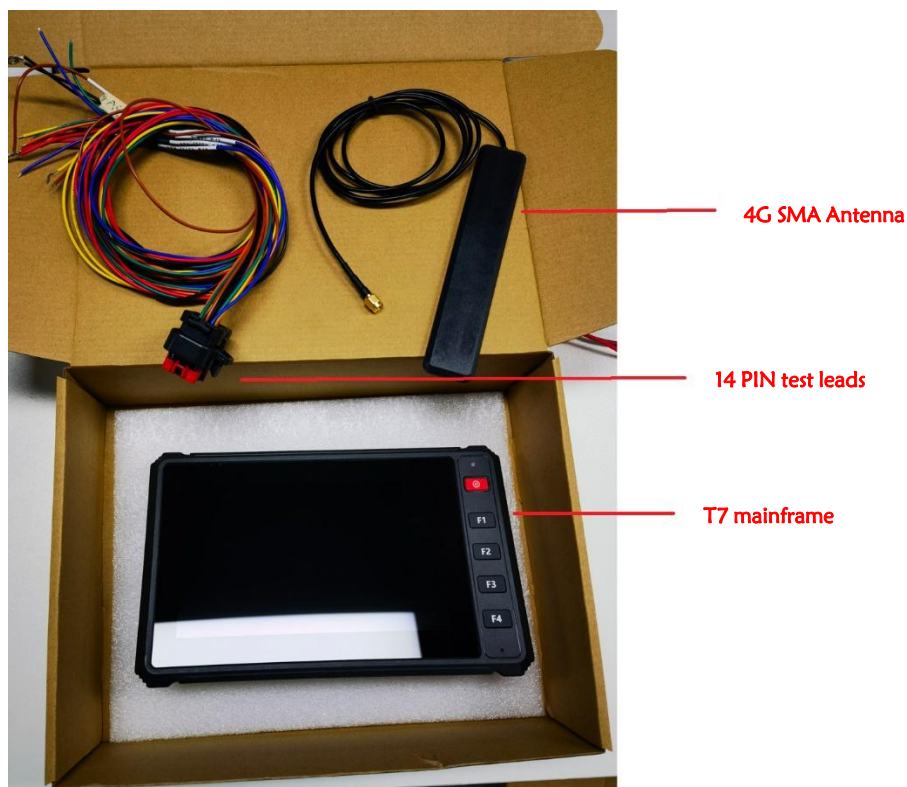
Catalogue

1. Unpacking List
2. Install Instruction
3. Interface Definition
4. How to boot to desktop
5. Software Related Notes
6. Label Silkscreen

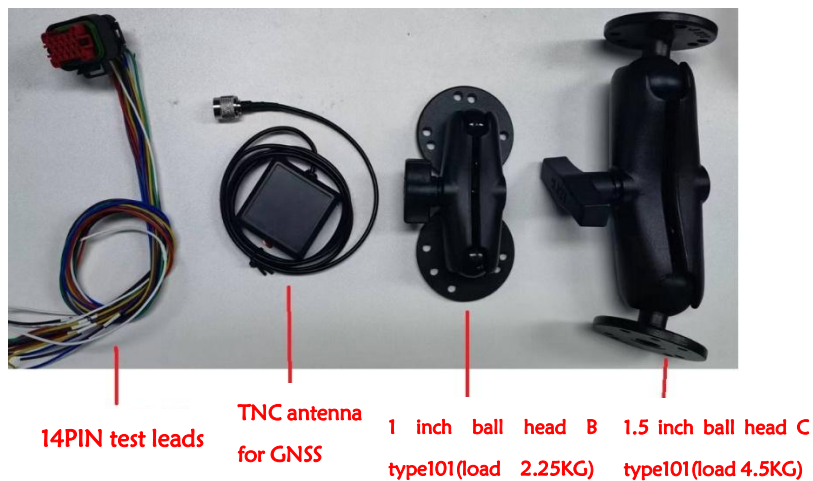
1. Unpacking List

The unpacking list normally includes the following:

List Item	Quantity	Description
T7 mainframe	1	
SMA Female 4G Antenna	1	1.5 meters length
14 PIN test leads	1	1meter length for testing and commissioning only



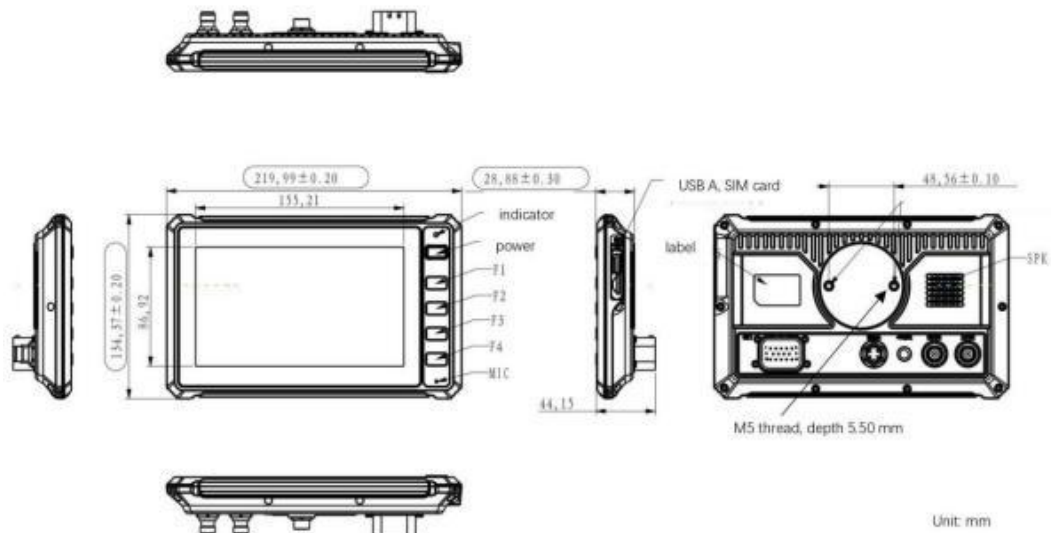
* Note: We can also deliver the following accessories upon special request.



T7 Function Diagram

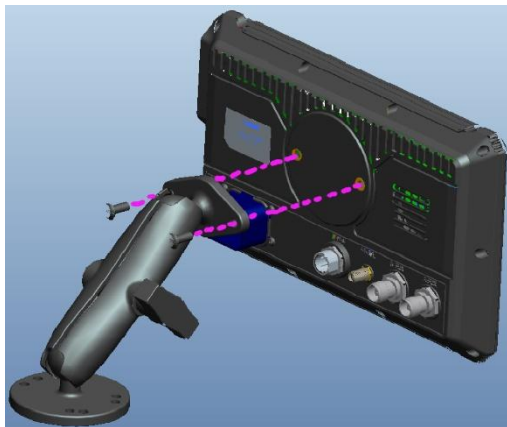


T7 3D Dimensional Diagram

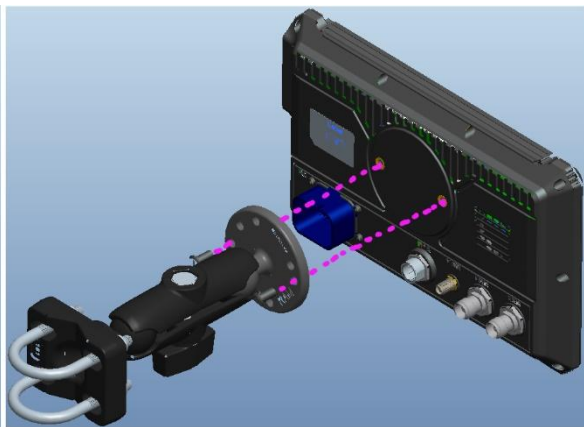


2. Installation Method Instruction

The back of the T7 is designed with standard RAM bracket screw holes for mounting a standard RAM MOUNT bracket. **Screws of M5 type 5.5mm length** can be used to lock the bracket into the holes. You can purchase the RAM MOUNT bracket from us and we will supply the appropriate screws.



Bracket type RAM installation



Lock type RAM bracket installation

3. Interface Definition

T7 has 14PIN and 4PIN connector on the back for extended function.

14PIN can be used to expand CAN and RS232, 4PIN is mainly used to expand the connection of AHD 720P HD camera.

14PIN + 4PIN interface definition



14-PIN CONNECTOR		4PIN-AVIATION CONNECTOR	
PIN No	configuration(1*CAN+2*OS232)	PIN No	pin function
1	CAN H	1	Camera POWER DC12V
2	RS232 RX3	2	GND
3	RS232 TX3	3	NC
4	RS232 TX4	4	AHD1 (720P input)
5	RS232 RX4		
6	CAN L		
7	B- Vehicle Power Input Negative		
8	B- Vehicle Power Input Negative		
9	ACC		
10	B+ Vehicle Power Input Positive		
11	B+ Vehicle Power Input Positive		
12	DC5V OUT@500mA (PE18)		
13	NC		
14	NC		

*Note: PIN13 and PIN14 can be utilized if there are more expansion needs. Currently B+, B- use 2 sets of PIN pins, for practical application, one set can be used.

4. How to boot to desktop

connect as shown below



Step 1: Open the side cover, insert the 4G SIM card to be NANO type.

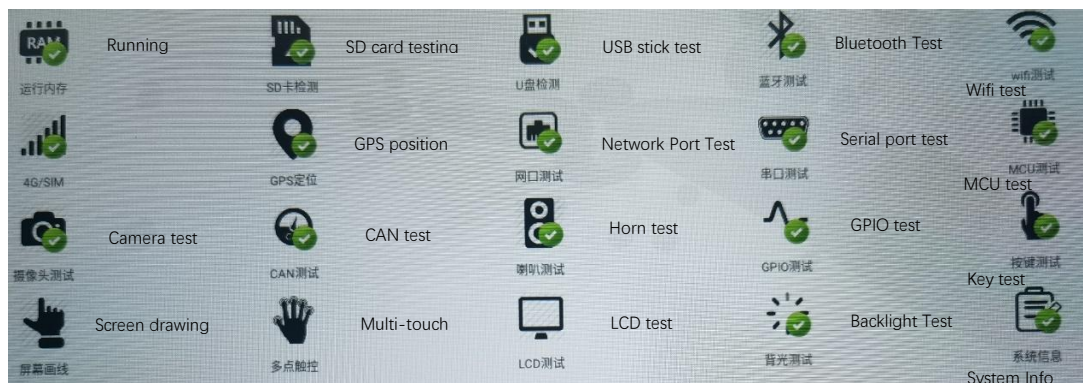
Step 2: Plug in the 14PIN test lead until you hear a "ta-da" sound, indicating that it is fastened.

Step 3: Connect the 14PIN black wire (B-negative ground, PIN7 or PIN8) to the negative terminal of the power supply, and screw the red wire (B+positive power, PIN10 or PIN11) with the ACC ignition signal (PIN9) to the positive terminal of the power supply of 9-36V, and then the machine will be powered on automatically until it enters into the ANDROID or LINUX system desktop.



Step 4: Enter the system, you can click on the built-in Machine Testing

Enter the whole machine hardware function test to confirm the hardware function as shown:



5. Software Related Notes

5.1 switching mode

When the ACC_IN signal of the 9th PIN of the 14PIN connector of T7 is connected to the ACC (Car Ignition signal) signal of the vehicle, the device turns on automatically when ACC is ON. When ACC is OFF, ACC OFF is detected, a message will popup and the device will turn off automatically.

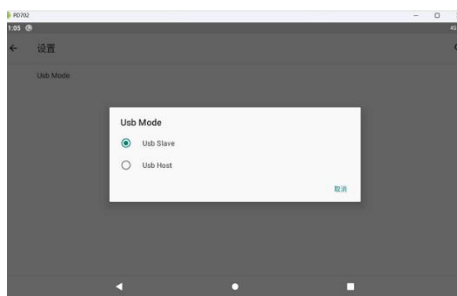
- It can also be achieved that the customer doesn't need ACC signal to turn on the machine but only use the key. You need to contact us to explain, and we will change the software.

5.2 Forced Reset

Force and hold down the power button for 6 seconds to hard reset the device.

5.3 USB Mode

T7 currently has a USB A port on the side, which supports OTG function. After booting into the ANDROID system, this USB A-type port becomes USB2.0 HOST, which can be used to connect a USB disk. If you want to switch to USB SLAVE, you need to enter the "Settings" - "USB Mode" in the following figure to switch. After switching to USB SLAVE mode, you can use the ADB debugging function, T7 uses a double-ended TYPEA debugging cable. (Note: After power down, the USB mode setting will not be saved, and it will automatically change to USB HOST mode every time you turn on the power and enter the ANDROID system.)



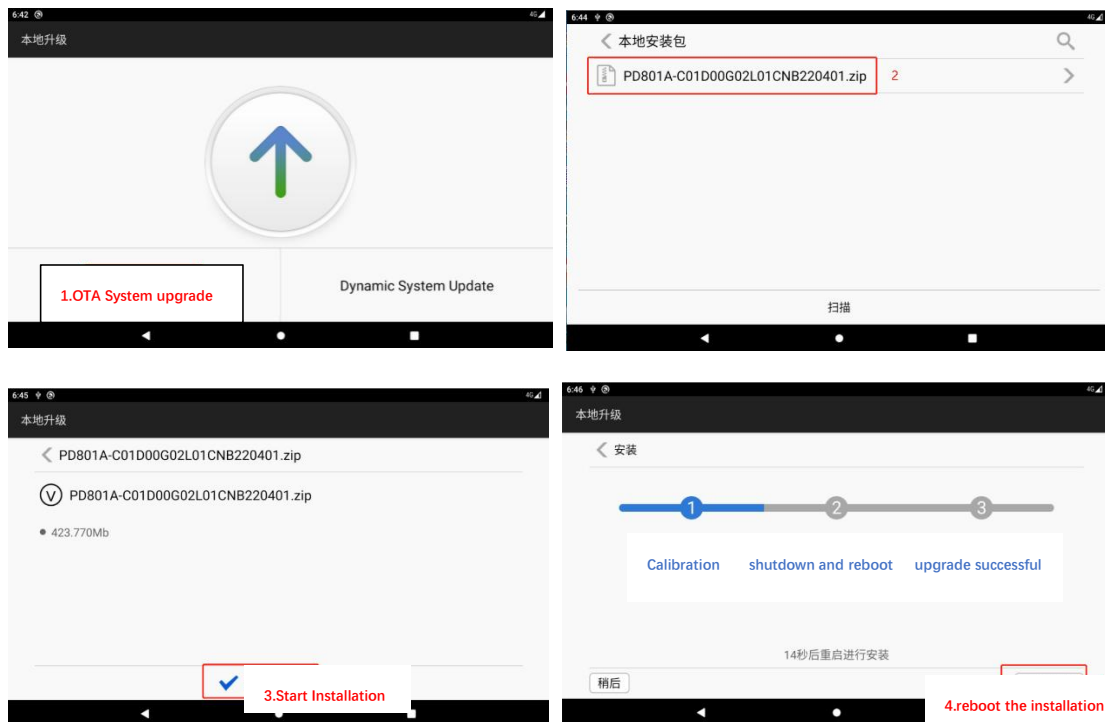
T7 debugging cable,
double head type A

5.4 Software Upgrade

1) Copy the upgrade zip package, e.g. "T7A-XX.zip", to a USB flash drive and insert the USB flash drive into the device.



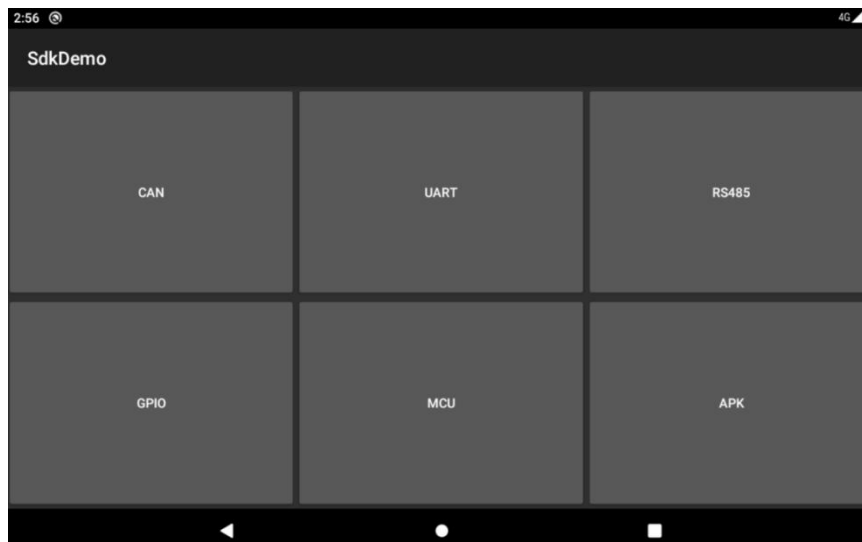
2) Run the built-in "Local Upgrade" application and follow the screenshot below to complete the OS upgrade.



5.5 Software Development

Software SDK Introduction

The secondary development SDK package for T7 can be used to develop built-in CAN, UART, RS485, GPIO, MCU and other functions. We provide reference source code examples as below:



In addition, the 14PIN's software program access nodes are described below.

PIN No	Model T7 (default) 14PIN function (1*CAN+2*RS232)	Corresponding software access nodes
1	CAN_H	Supply CAN DEMO program
2	RS232_RX3	ttyS3
3	RS232_TX3	ttyS3
4	RS232_TX4	ttyS4
5	RS232_RX4	ttyS4
26	CAN_L	Supply CAN DEMO program
7	B- (Vehicle Power Input Negative)	
8	B- (Vehicle Power Input Negative)	
9	ACC	
10	B+ (Vehicle Power Input Positive)	
11	B+ (Vehicle Power Input Positive)	
12	DC5V OUT@500mA (PE18)	
13	Empty (reserve)	Reserve Example: it can be defined as GPIO input
14	Empty (reserve)	Reserve Example: it can be defined as GPIO input

* Internal high-precision software node ttyS5 (access to high-precision boards and high-precision NEMA data through this interface)

5.6 Introduction to software version naming

Example:PD702-C02D00G02L01CNR220720

PD702	PD10:10.1 inch, PD8:8 inch, PD7:7inch
C02	C00:No sim C01:Single Card C02:Dual Card
D00	Reserve
G02	G00:reserve for other situations G01:ublox G02:high precision G03:Taito GNSS
L01	L00:1024*600 L01:1280*800 L02:1920*1080
CN	CN: Chinese EN:English

R	R: release version B:debug version
220720	Release date

- For more detailed documentation of the software or DEMO source code, please contact front-end sales.

6.Label & Silkscreen

The size of the labeling section is shown below, and we usually confirm the contents with our customers of bulk orders.

Vehicle Computert
Model: T7
FCC ID: 2BTMJ-T7
This device complies with part 15 of the FCC Rules.
Operation is subject to the following two conditions:(1)
This device may not cause harmful interference, and (2)
this device must accept any interference received,
including interference that may cause undesired
operation.

FCC Statement

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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