MACTRON GROUP

AutoTRON

MAA1221

User's Manual



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Revision History

The revision history of MAS1015 User Manual is described below:

Version No.	Revision History	Date
1.0	Initial Release	2026/03/06

Thank you for choosing MACTRON Tablet

This instruction serves to enable users to get to know our product as soon as possible. Here we have made a brief introduction to the key layout and definitions in figures and words. And a brief explains for the basic operating functions

Attention:

1. The instructions in this guide refer to the Android system. If you are using other operating systems, some operations may be slightly different.
2. The instructions describe the general functions of most models. Your computer may not have some functionality, or some features on your computer are not described in the manual.
3. This instruction applies the following models: MAA1221 rugged tablet.
4. The illustrations in this instruction may be different from the product itself.

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1. Getting Started

Thank you for purchasing our MAA1221 products! To help you get familiar with the product faster, please refer to the user manual if you have any problems during use. This document mainly introduces the interface and system usage instructions of the rugged tablet MAA1221 and helps you quickly understand the use of the product through the picture instruction. If you have any insoluble problems during use, please contact our technical personnel to deal with them.

1.1 Packing List

After unpacking the shipping carton, you should find these standard items. If you discover any of the items listed below are damaged or lost, please contact your local distributor immediately.

- MAA1221 x 1
- Hand-Strap x 1
- AC Power Adapter x 1

2. Product Information

2.1 Specifications

Display	
Display Type	12.2" LCD
Resolution	1920 x1200 FHD
Brightness	700 nits
Touch Panel	10 Points, Capacitive Multi-Touch Screen Support Active Stylus
System	
CPU	Qualcomm® QCM6490 Processor(up to 2.7GHz，8cores)
GPU	Qualcomm® Adreno™ 643L
Memory	8GB LPDDR4
Storage	128GB UFS
OS	Android 14
I/O Ports	USB 2.0 Type-A x 2
	USB3.0 Type-A x 1
	USB 2.0 Type-C x 1
	3.5mm AudioJack x 1
	HDMI 1.4 mini x1

	10/100M/1000M Ethernet (RJ45) x1
	Serial port (RS232: D-sub, 9-pin) x1
	Serial port (RS485: D-sub, 9-pin) x1
	DC-In 3.5mm jack x 1
	Micro SD card x1
	SIM Card x1
	12pin POGOPin x1(Charge&USB)
WiFi	Wi-Fi 6E
Bluetooth	Bluetooth® 5.2
4G/5G	5G
GPS	GPS/GLONASS/BEIDOU/Galileo/QZSS(L1+L5)
Data Collection	NFC Module
	Barcode Scanner Module (Optional)
Physical	
Camera	FF 5.0 MP front camera
	AF 13.0 MP rear camera
Audio	Speaker 1W x2
Color	Black
Buttons	P1 Key (User-definable keys（Default Home key）)x1
	P2 Key (User-definable keys（Default return key）)x1
	Scan Key (User-definable keys（Default Scan key）)x1
	Power On/Off x1
	Volume + Key x1
	Volume - Keyx1
	Home Keyx1
Indicator LED	Charge LED indicator x1
	Power LED indicator x1
	4G/5G LED indicator x1
Sensors	Hall sensor, G-sensor, Light Sensor, Geomagnetic sensor
Battery	Battery Li-Ion, 3.7V, 12600mAh, 7.9h
RTC Battery	RTC 3V/1mAh on board
Power Adapter	AC adapter: 100-240V, 5V/4A/20W
	USB-Type-C Adapter: 5V/4A/20W (Optional)
Standard Accessory	Power Adapter x1
	Hand Strap x1
Optional Accessory	Removable Battery
	Power Adapter
	Docking Station
	Mounting Holder

	Vehicle Charger
	Detachable Keyboard
	Shoulder Strap
	Back Strap
Packing List	
Accessories	Power Adapter x1
	Hand-strap x 1
	Carry handle x 1
	Bracket x 1
Product Dimension	319.6*216*24.3 mm
Product Weight	1500g
Box Dimension	TBD
Box Weight	TBD
Environment	
IP Rating	IP65
Drop Test	1.22m drop resistance
Certification	CE,CCC / MIL-STD-810H
Operating Temperature	-20°C ~ 60°C （-4°F~140°F）
Storage Temperature	-30°C ~ 70°C（-22°F~158°F）
Relative Humidity	95% Non-Condensing
Warranty	2 Years

2.2 Product Overview

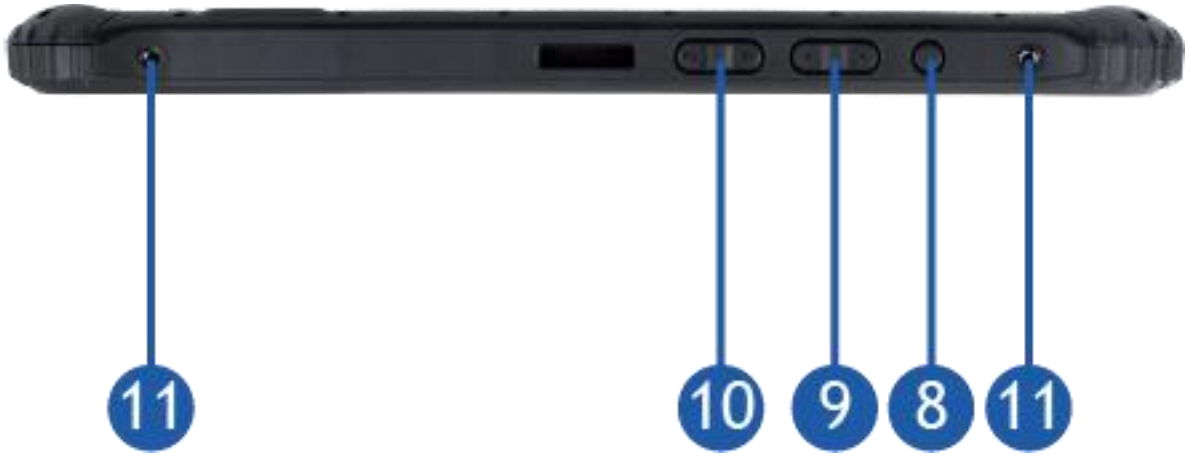
Note: Depending on the special model you purchased, the look and color of the device may be different from the graphics shown in this manual.
Note: Please open the waterproof plug before using the ports or device. When not using ports or device, please completely cover the waterproof plug to isolate water and dust.



2.3 System Configuration



Ref. No.	Component	Description
1	Power light	The indicator will light when system is started after press power button.
2	Charging light	The indicator will light when the device connect to adapter for charging.
3	Network light 3G/4G	The indicator will often light after network 3G/4G is recognized.
4	Front camera	5.0MP, take photos and record video.
5	Light sensor	The light sensation can adjust the brightness automatically.
6	TP	10 point capacitive, G+G, Corning gorilla glass, Rigidity: 7H above, anti-scratch, COF.
7	LCD	12.2-inch, Resolution: 1920*1200.



Ref. No.	Component	Description
8	Power Key	Press it to turn your tablet PC on or off. Pressing with 5 seconds to turn on. Pressing with 10 seconds to turn off. Pressing with short time, for sleep mode or awaken
9	Sound - / Sound+	Reduce / Increase the volume.
10	P1/P2	Development for customer customized
11	Nut	For the belt and strap

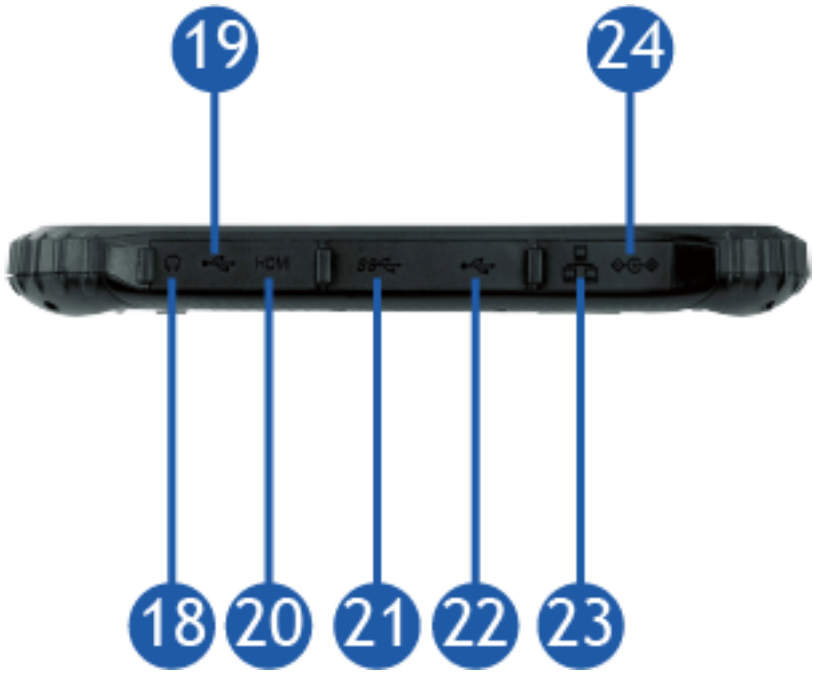


Ref. No.	Component	Description
12	Lock keyboard screw	Attach the keyboard lock to the tablet body by provided screws when installing the keyboard.
13	Keyboard locating hole	Device connect base or keyboard by this two-positioning hole. This can prevent poor contact because of shaking.

14	Pogo Pin	This interface matched with location hole, convenient aim and firm link rugged tablet and key or docking.

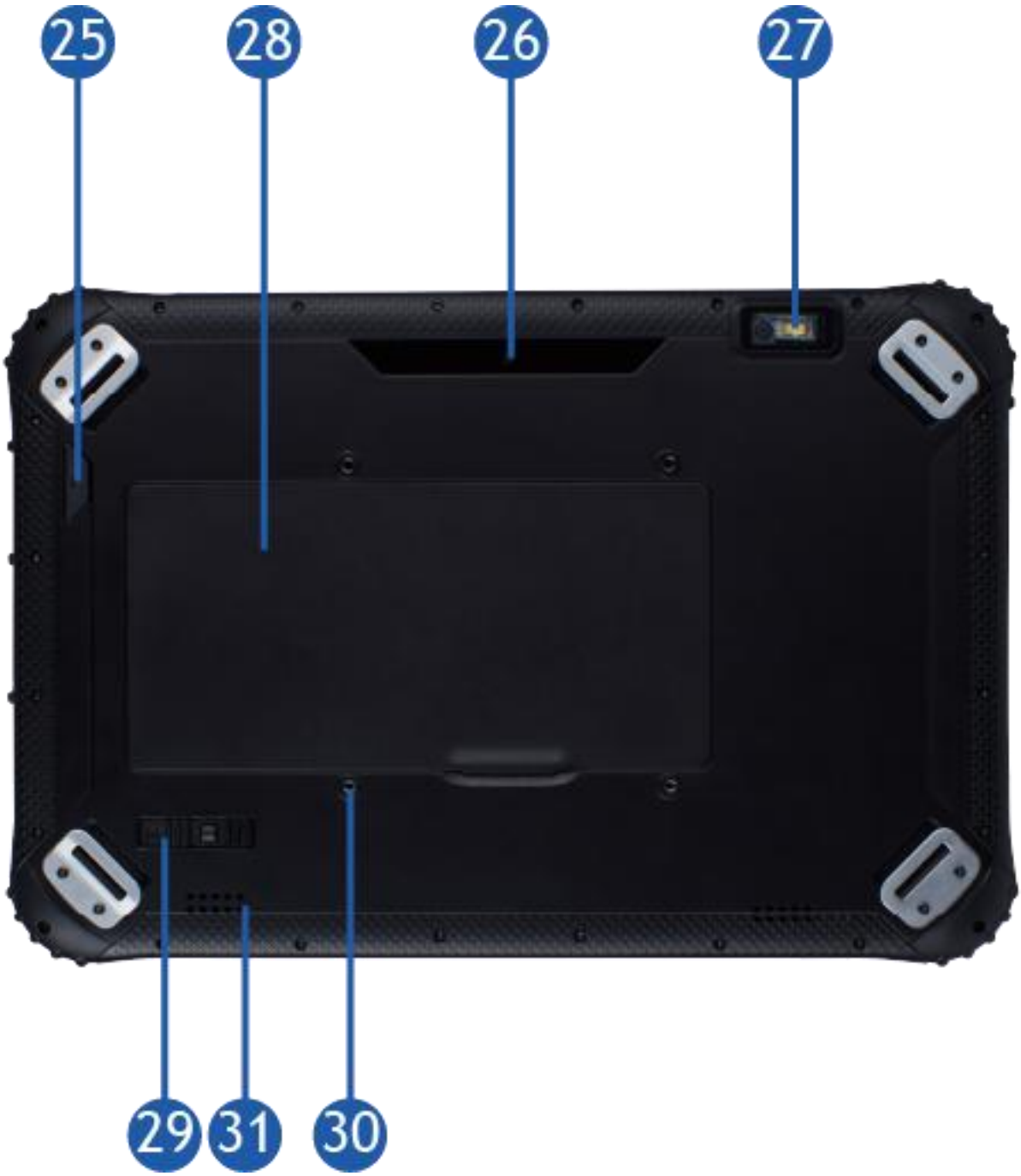


Ref. No.	Component	Description
15	RS232	Standard protocol of RS232, interface can be used to develop and connect other devices.
16	RS485	Standard protocol of RS485, interface can be used to develop and connect other devices.
17	USB2.0	Standard data transmission interface.



Ref. No.	Component	Description
18	Earphone jack	3.5mm standard Earphone Audio output Interface.
19	Micro USB	Interface for Data transferring. Possible for using

		the pallet to transfer it into standard USB interface.
20	HDMI	Standard data transmission interface.
21	USB3.0	Data high speed transmission interface (Android system without USB3.0, if USB3.0 function is needed, OTG function cannot be used).
22	USB2.0	Standard data transmission interface
23	Ethernet port	RJ45 net export, user can link internet to using in this.
24	DC jack	By DC interface charge for your rugged tablet.



Ref. No.	Component	Description
25	F Key	Barcode scan.
26	Rear camera	Rear 13.0MP, the function is take photos and videos.
27	1D/2D Scanner	Support one-dimensional/two-dimensional.
28	Battery	3.7V/12600mAh Removable polymer lithium battery.
29	Battery lock	User can left and right slide for unlock; Let the battery lock to lock the state when be used, which can prevent the battery from falling of.

30	VESA holes	VESA hole can be fixed directly to the vehicle or other facilities by screws.
31	Speaker	Built loudspeaker let you not link extra equipment can hear voice.

3. Operating Your System

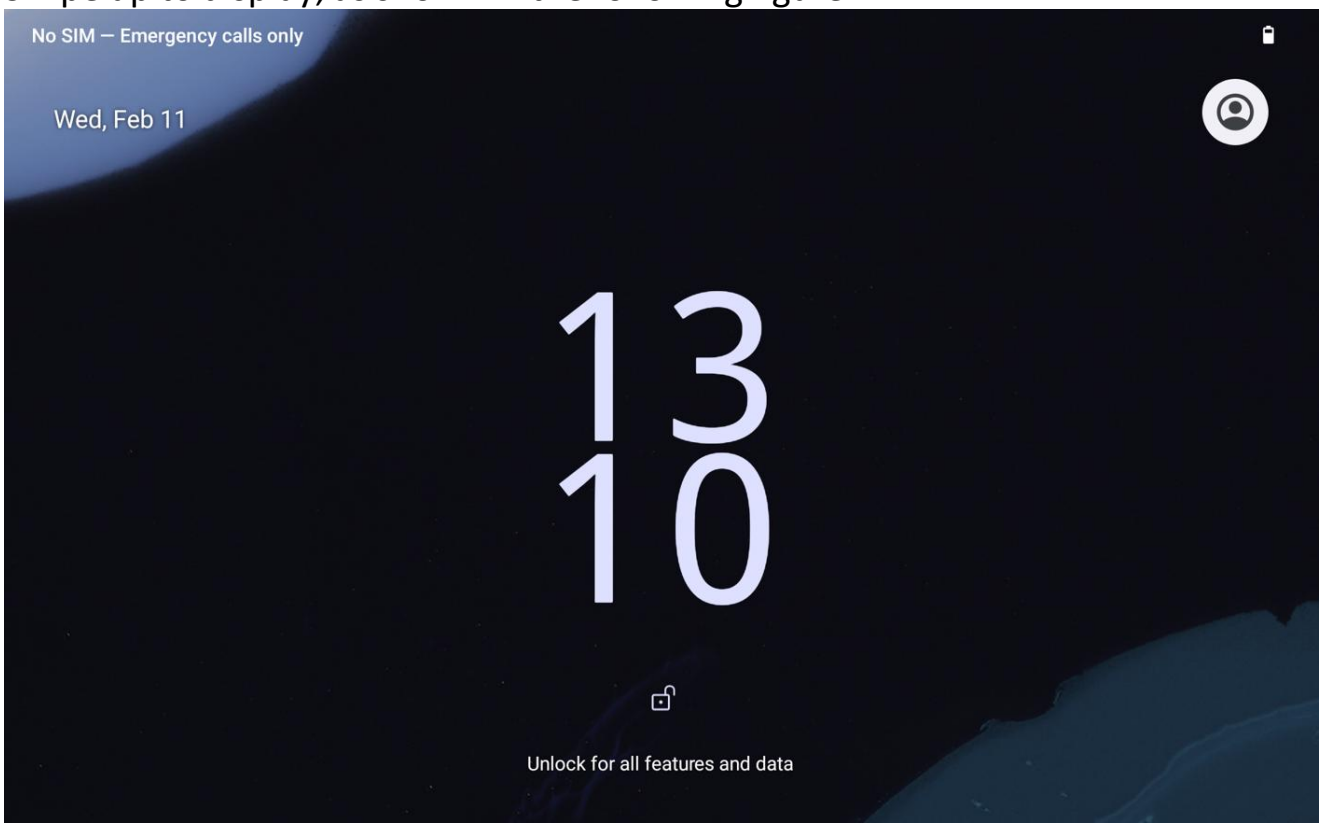
This chapter provides information about the use of the Tablet. If you are new to Tablets, reading this chapter will help you learn the operating basics. If you are already a Tablet user, you may choose to read only the parts containing information unique to your Tablet.

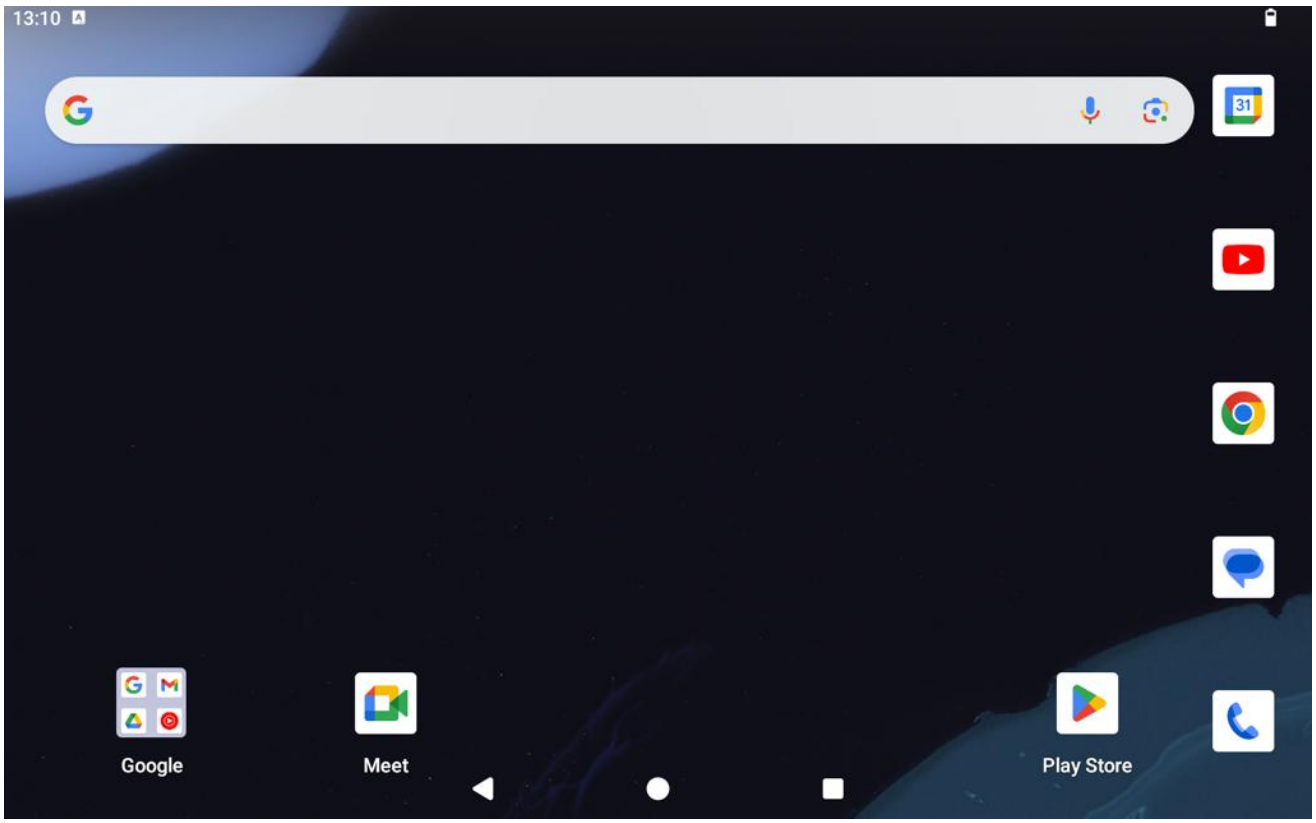
CAUTION：

- Do not expose your skin to the Tablet when operating it in a very hot or cold environment.
- The Tablet can get uncomfortably warm when you use it in high temperatures. As a safety precaution in such a circumstance, do not place the Tablet on your lap or touch it with your bare hands for extended periods of time. Prolonged body contact can cause discomfort and potentially a burn.

3.1 Display Layout

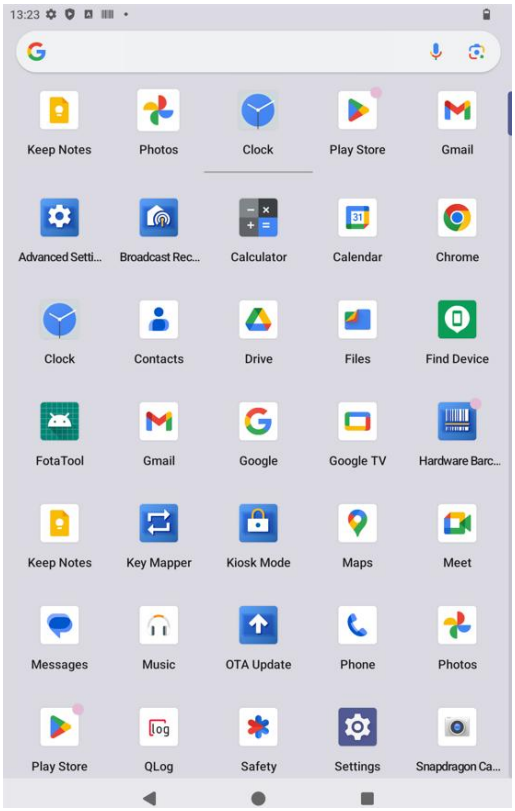
Swipe up to display, as shown in the following figure.




13:10
Google
Meet
Play Store

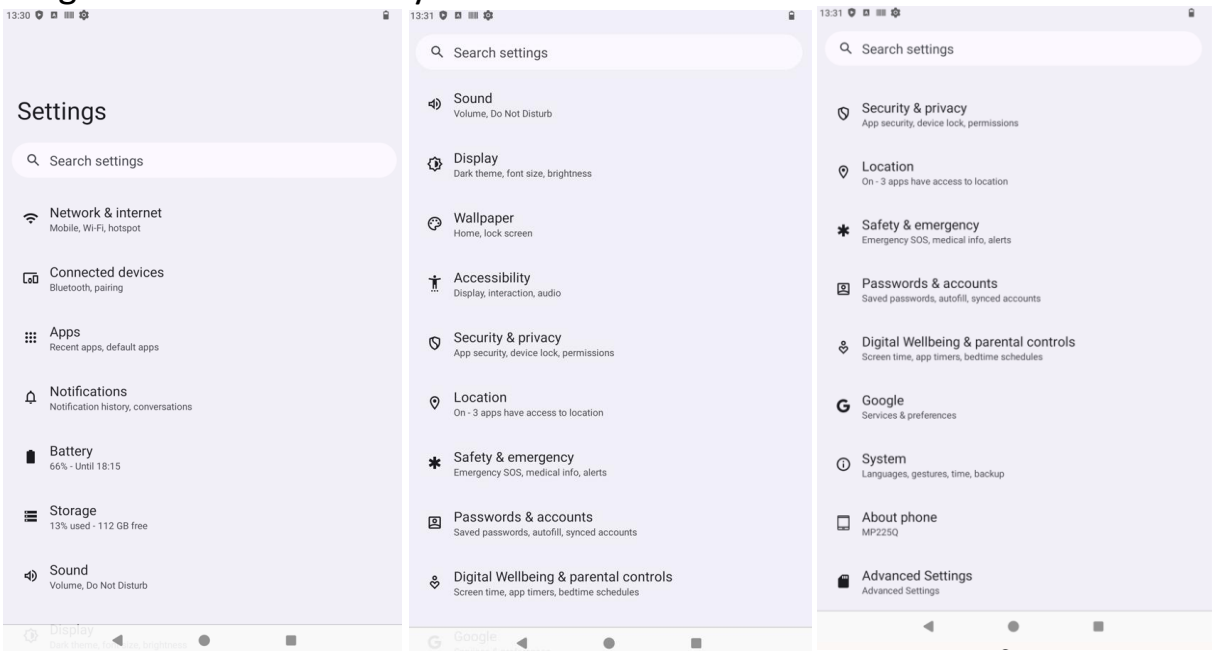
3.2 Display Menu Introduction

All applications are showed in here. In this interface, you can quickly start and operate the application.



3.3 System Settings

Settings: Users can set the system in this interface.

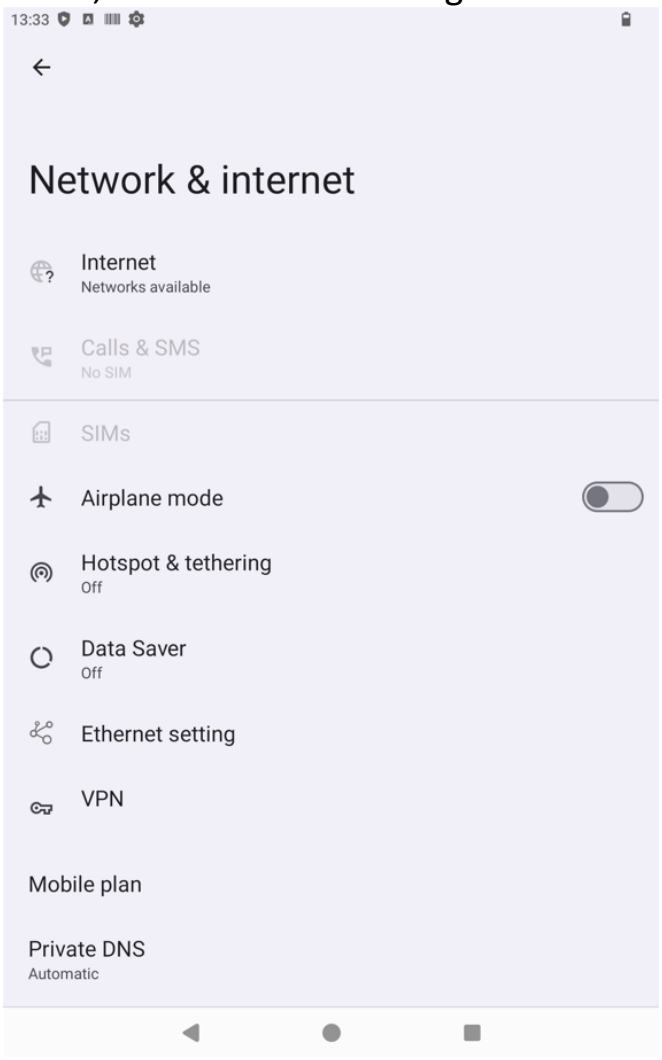


3.4 Network and Internet

You can set WLAN, mobile network, and Ethernet, query network traffic usage, hotspot, network sharing (support hotspot continuation), set SIM card, flight mode, VPN connection, and other functions in this interface.

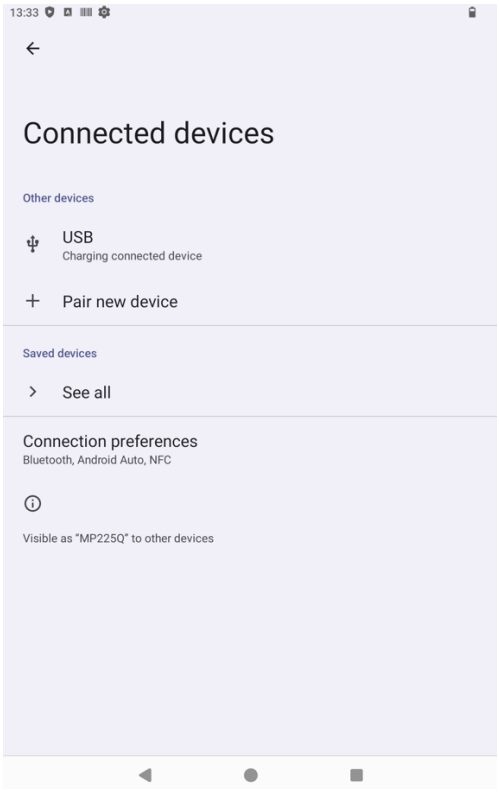
3.4.1 Wi-Fi Settings

You can search for and connect to Wi-Fi networks, set Wi-Fi preferences, view saved networks, and check traffic usage in this interface.



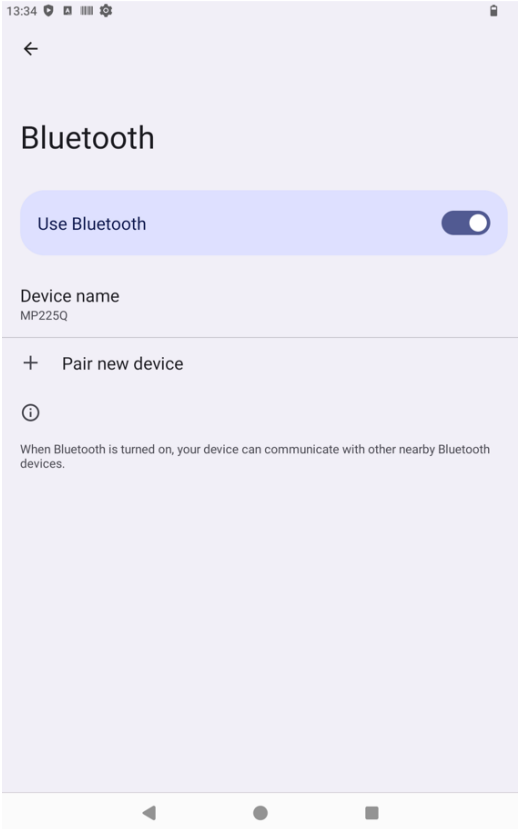
3.4.2 Connected device

In this interface, you can set Bluetooth, NFC, projection, print, view files received by Bluetooth, and so on.



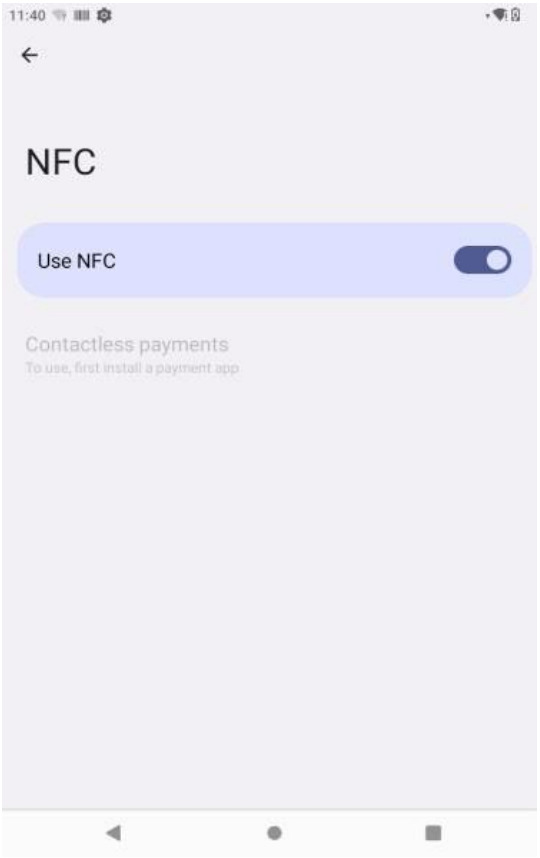
3.4.3 Bluetooth Settings

You can search and match Bluetooth in this interface.



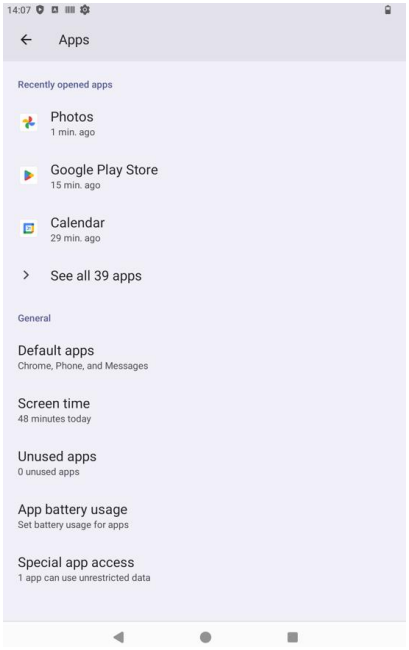
3.4.4 NFC Settings

You can set the NFC function in this interface, which supports card reading and importing functions and touch payment.



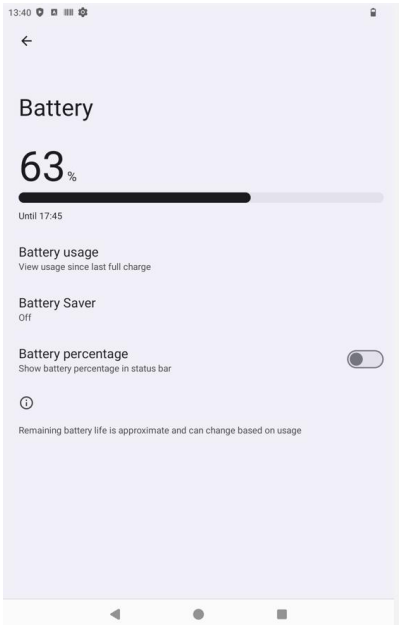
4. Applications and notifications

You can view all applications, notification Settings, default applications, and permission management in this interface.



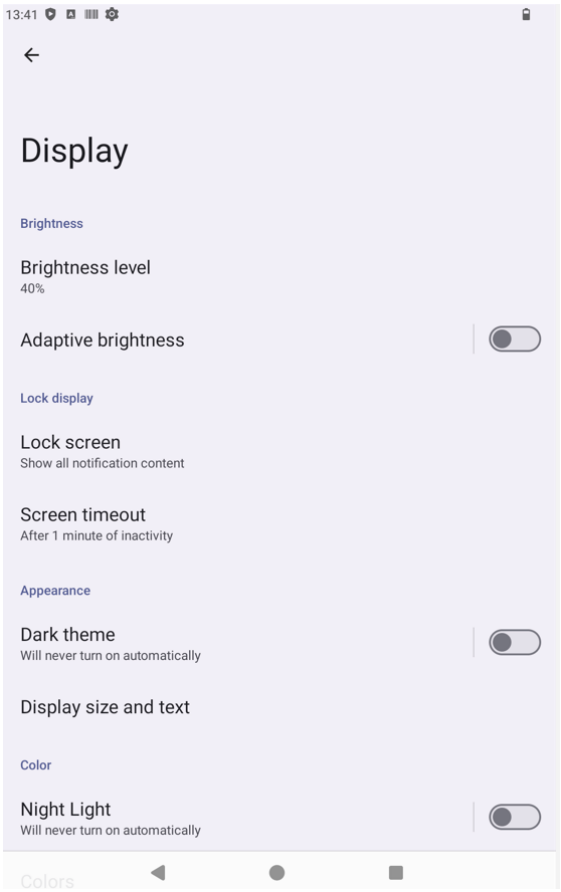
4.1 Battery

You can view the remaining battery power, the power saving mode, and battery power percentage in this interface.



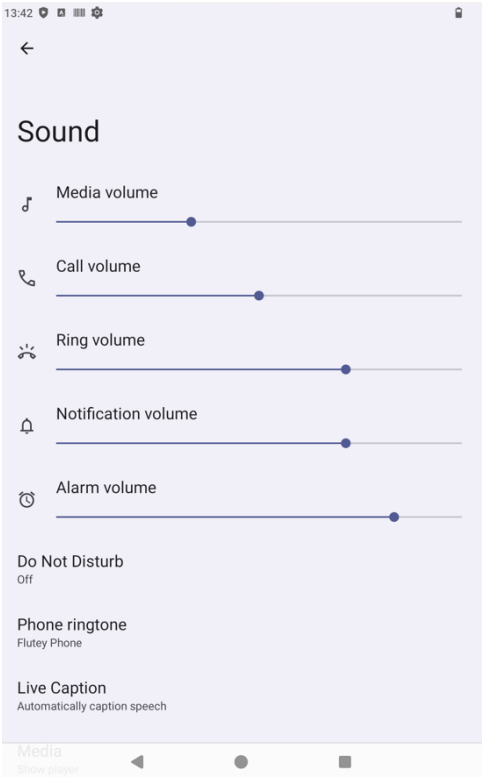
4.2 Display

In this interface, you can adjust the brightness, set night mode, wallpaper, dark theme, eye protection mode, automatic rotation screen, font size, display size, and screen saver, lock the screen, and wake up the device when picking it up, and other functions.



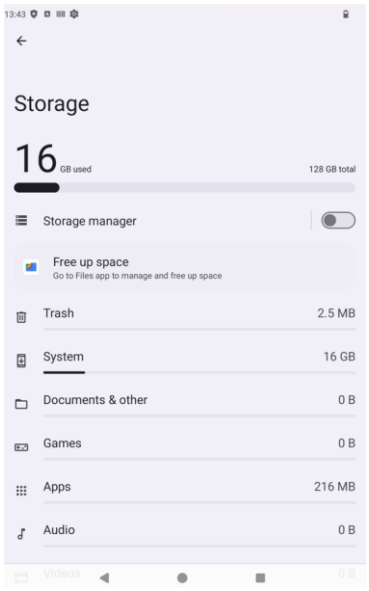
4.3 Volume

You can set the media volume, call volume, ringtone volume, alarm volume, incoming call vibration, Do-Not-Disturb mode, block ringing (press the power button and volume + at the same time), ring tone, notification tone, alarm tone, and other functions.



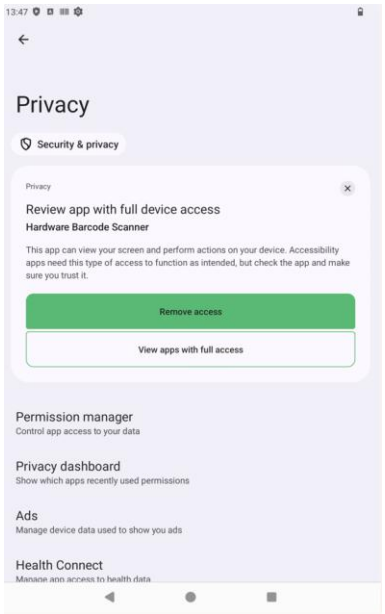
4.4 Storage

You can view the memory usage and space occupied by applications in this interface.



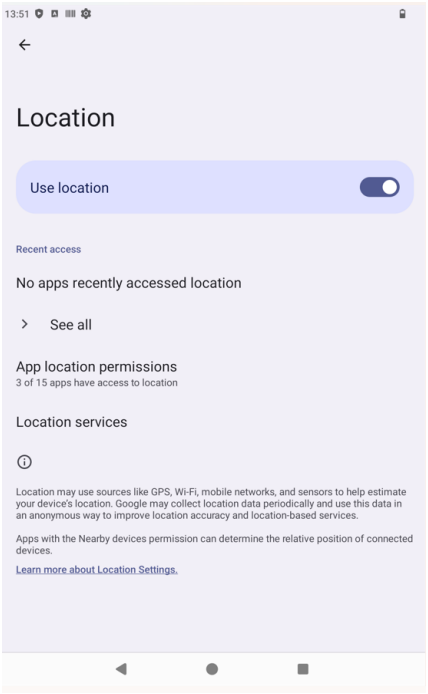
4.5 Privacy

You can view the license status of each software in this interface, set it to display briefly when entering a password, and set whether the lock screen displays the notification.



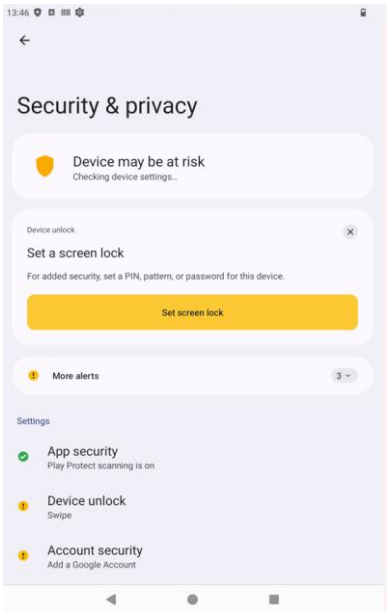
4.6 Location

In this screen, you can turn GPS on or off, and allow or restrict the use of an application to obtain location information.



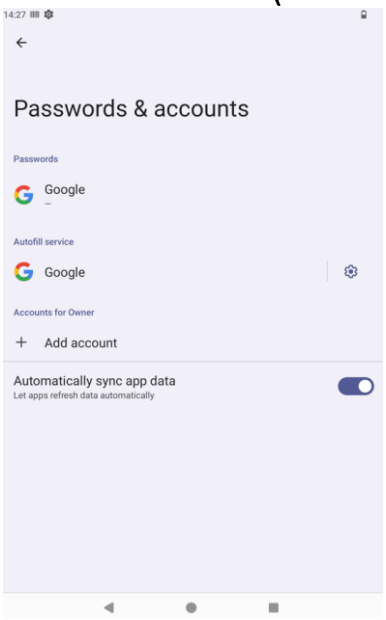
4.7 Security

In this interface, you can set screen lock mode (none, slide, pattern, PIN code, password), device management application, encryption and credentials, fixed screen, etc.



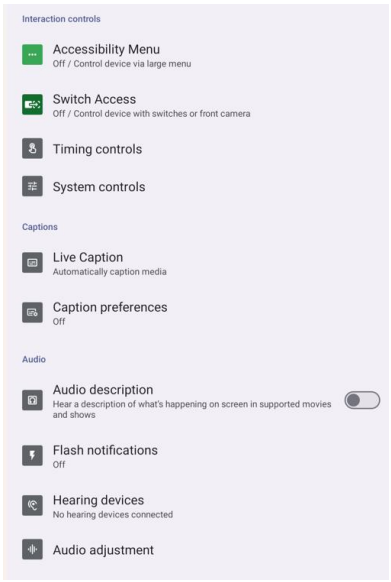
4.8 Account

You can add other accounts in this interface. (Exchange, IMAP, POP3)



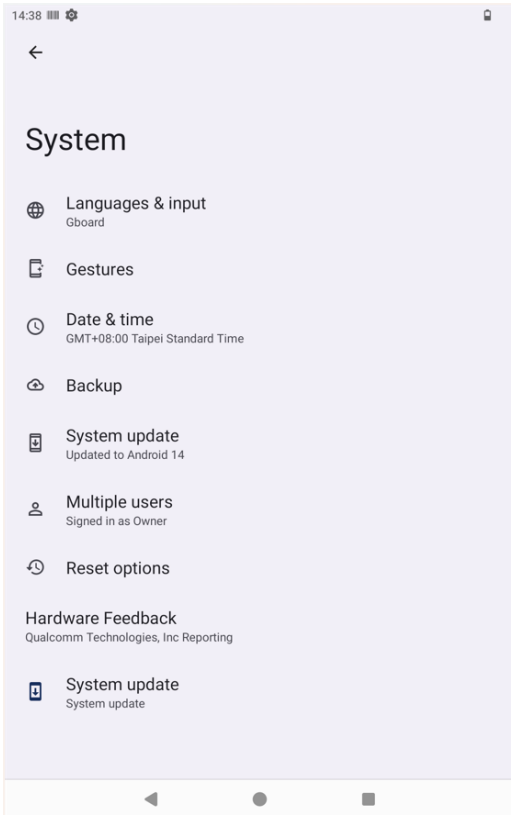
4.9 Accessibility

Settings for screen readers, displays, and interactive controls. For example: font size, display size, dark themes, enlarged gestures (3 consecutive screen clicks), color correction, color reversal, removing animations, pressing the power button to end a call, etc.



4.10 System

You can set the wireless upgrade, Language, input method, date, time, backup, reset options, as well as the debugging related to the developer options (to enter the “about the phone”, click 7 times of version number).



4.10.1 Language & Input

You can add and switch other languages, and you can set up a virtual keyboard and a physical keyboard.

4.10.2 Date and Time

You can set the date and time manually or obtain them automatically over the network. You can set the display in 24-hour format.

4.10.3 Hand Gestures

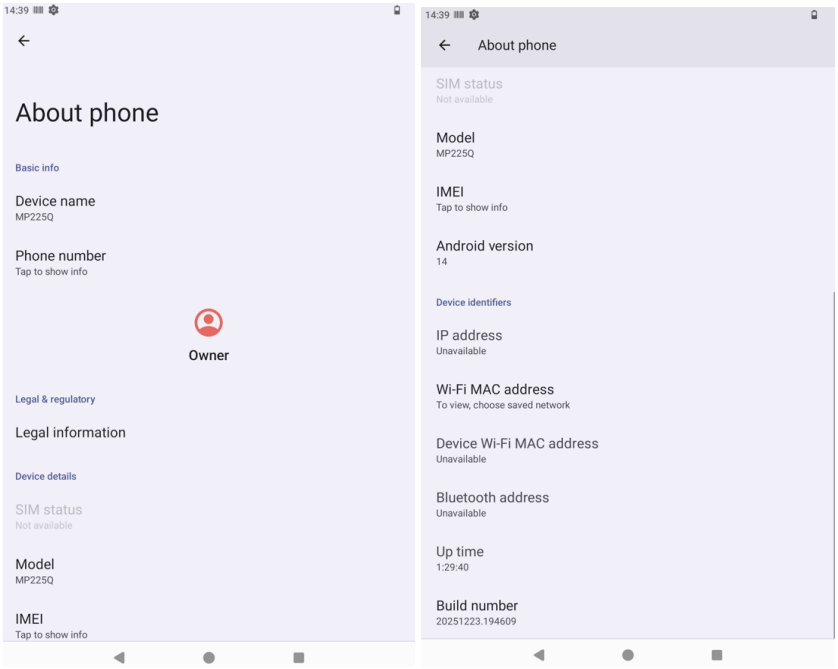
You can quickly turn on the camera (press power button twice) by gesture Settings; System navigation can be switched in gesture navigation and three-button navigation; Vibration when incoming call (press power button and volume + at the same time) .

4.10.4 Reset options

You can reset WLAN, mobile data network, and Bluetooth Settings, and reset app preferences, or restore factory Settings.

4.11 About Tablet

This interface allows you to view basic device information. For example: device name, storage, operating memory, screen resolution, front and rear cameras, phone number, emergency information, SIM card status, model and serial number, IMEI, Android version, IP address, WLAN MAC address, Bluetooth, power-on time, version number.



5. Troubleshooting

Tablet problems can be caused by hardware, software, or both. When you encounter any problem, it might be a typical problem that can easily be solved. This chapter tells you what actions to take when solving common Tablet problems.

5.1 Preliminary Checklist

Here are helpful hints to follow before you take further actions when you encounter any problem:

- Try to isolate which part of the Tablet is causing the problem.
- Make sure that you turn on all peripheral devices before turning on the Tablet.
- If an external device has a problem, make sure that the cable connections are correct and secure.
- Make sure that the configuration information is properly set in the BIOS Setup program.
- Make sure that all the device drivers are correctly installed.
- Make notes of your observations. Are there any messages on the screen? Do any indicators light? Do you hear any beeps? Detailed descriptions are useful to the service personnel when you need to consult one for assistance.

If any problem persists after you follow the instructions in this chapter, contact an authorized dealer for help.

5.2 Solving Common Problems

Battery Problems

The battery does not charge（The red indicator is not on）.

Make sure that the AC adapter is properly connected.
Make sure that the battery is not too hot or cold. Allow time for the battery pack to return to room temperature.
If the battery doesn't charge after it has been stored in very low temperatures, try disconnecting and reconnecting the AC adapter to solve the problem.
Make sure that the battery pack is installed correctly.
Make sure that the battery terminals are clean.

The operating time of a fully charged battery becomes shorter.

If you often partially recharge and discharge, the battery might not be charged to its full potential. Initialize the battery to solve the problem. (Fully charge in the shutdown state, discharge to 0%, and then fully charge the shutdown, cycle 2-3 times).

The battery operating time indicated by the battery meter does not match the actual operating time.

The actual operating time can be different from the estimated time, depending on how you are using the Tablet. If the actual operating time is much less than the estimated time, initialize the battery.

Startup Problems

When you turn on the Tablet, it does not seem to respond.

If you are using an external AC power, make sure that the AC adapter is correctly and securely connected. If so, make sure that the electrical outlet works properly.
If you are using the battery power, make sure that the battery is not discharged.

WLAN Problems

If cannot use the WLAN feature.

Make sure that the WLAN feature is turned on.

Transmission quality is poor.

Your Tablet may be in an out-of-range situation. Move your Tablet closer to the Access Point or another WLAN device it is associated with.

Check if there is high interference around the environment and solve the problem as described next.

Radio interference exists.

Move your Tablet away from the device causing the radio interference such as microwave oven and large metal objects.

Plug your Tablet into an outlet on a different branch circuit from that used by the affecting device.

Consult your dealer or an experienced radio technician for help.

If cannot connect to another WLAN device.

Make sure that the WLAN feature is turned on.

Make sure that the SSID setting is the same for every WLAN device in the network.

Your Tablet is not recognizing changes. Restart the Tablet.

Make sure that the IP address or subnet mask setting is correct.

If cannot access the network.

Make sure that the network configuration is appropriate.

Make sure that the user name or password is correct.

You have moved out of range of the network.

Bluetooth Problems

If cannot connect to another Bluetooth-enabled device.

Make sure that both devices have activated Bluetooth feature.
Make sure that the distance between the two devices is within the limit and that there are no walls or other obstructions between the devices.
Make sure that the other device is not in“Hidden”mode.
Make sure that both devices are compatible.

Sound Problems

No sound is produced

Make sure that the volume control is not set too low.
Make sure that the Tablet is not in mute mode.
Make sure that the Tablet is not in Sleep mode.
If using an external speaker, make sure that the speaker is properly connected.

Distorted sound is produced.

Make sure that the volume control is not set too high or too low. In most cases, a high setting can cause the audio electronics to distort the sound.

Software Problems

An application program does not work correctly.

Make sure that the software is correctly installed.
If an error message appears on the screen, consult the software program’s documentation for further information.
If you are sure the operation has stop, reset the Tablet.