

USER MANUAL FOR 15.6 " PANEL PC



Important Safety Instructions

Read these safety instructions carefully:

- Keep this equipment away from humidity and extreme temperature.
- Avoid exposing the device to direct sunlight or strong ultraviolet light for a long time.
- Do not drop the device or expose it to strong vibrations.
- Do not scratch or rub the screen with a hard or sharp object.
- Please turn off the power and unplug the power cable before cleaning the device, then wipe it with a moist and soft cloth.
- Do not disassemble or repair the device by yourselves without our authorization. If the damage is caused during the disassembly or repair, it will be out of warranty.
- Do not place your device or its accessories with flammable liquids, gases or explosive materials to avoid danger.

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Chapter 1 Introduction

1.1 Product Features

- 15.6 " 1920*1080 IPS LCD
- 10-point capacitive multi-touch screen, with anti-bacterial antiviral, alcohol, some gloves
- High performance Qualcomm processor (Qualcomm Cortex-A53 64bit Octa-core processor 1.8GHz)
- Android 9.0 operating system
- Handset (optional) for service call, key membrane and remote control
- Built-in 16 MP X COMOS camera
- RFID reader module (optional)
- RJ45 interface for Ethernet LAN, support POE+ (optional)
- Support 4G module (optional), Bluetooth 4.2

1.2 Product Specifications

SYSTEM	Processor	Qualcomm Cortex-A53 64bit Octa-core processor 1.8GHz
	Graphic	Adreno 506
	RAM	2GB LPDDR3 (default) / 4GB(optional)
	ROM	16GB eMMC (default) / 64GB(optional)
	OS	Android 9.0
DISPLAY	LCD panel	15.6 " IPS LCD
	Resolution	1920*1080
	Brightness	250 nits
	Contrast	800:1
	Ratio	

	View Angle	85°/85°(L/R), 85°/85°(U/D)
	Touch Panel	Sensitive 10-point capacitive multi-touch screen
WIRELESS	WIFI	802.11a/b/g/n/ac 2.4GHZ&5GHZ
	Bluetooth	2402MHz~2480MHz
	3G/4G	Support worldwide LTE-FDD, LTE-TDD, DC-HSDPA, DC-HSUPA, HSPA+, HSDPA, HSUPA,WCDMA, EDGE, GPRS and GSM coverage
	RFID	Combo smart card reader & Mifare RFID(optional)
OTHER FUNCTIONS	Camera	16 MP COMS front camera
	RTC Battery	Button battery
MULTIMEDIA	Video	Video encoding and decoding: up to 1080P @60fps Wi-Fi Video: encoding up to 1080P @30fps; decoding up to 1080P @60fps
	Audio	Output:speaker 4Ω/2W Internal microphone
USER INTERFACE	Onboard	Earphone interface ×2
	I/O ports	DC in ×1
		USB HOST 2.0 ×2
		RJ45 100M ×1 (default) + POE (optional)
		TYPE C ×1
		Micro SD card slot ×1
		Nano SIM card slot ×1
		RS232 ×1
	Function Key	Power,vol+,vol-,channel+,channel+,home,backlight control,return,lamp
	Handset (optional)	Call and listen to the medical staff (optional) and operate the tablet
POWER SUPPLY	DC IN	12V DC

ENVIRONMENT	Operating Temp.	0°C to +50°C
	Storage Temp.	-20°C to +60°C
MECHANICAL	Dimensions	399.7 × 268.3 × 39 mm
	Weight	1.77kg (without handset)
ACCESSORIES	Standard	Power adaptor
	Optional	Handset

1.3 Supported Parameter for Cellular Network

Supported Frequency Band	EU version for EMEA, Korean and Thailand	LTE FDD: B1/B2/B3/B4/B5/B7/B8/B20/B28A/B28B LTE TDD: B38/B39/B40/B41 WCDMA: B1/B2/B4/B5/B8 GSM: 850/900/1800/1900MHz
	America version for North America	LTE FDD: B2/B4/B5/B7/B12/B13/B14/B17/B25/B26/B 66/B71 LTE TDD: B41 WCDMA: B2/B4/B5
Data Transmission	LTE	Cat 6 FDD: Max 300Mbps (DL)/Max 50Mbps (UL) Cat 6 TDD: Max 265Mbps (DL)/Max 30Mbps (UL)
	UMTS	DC-USDPA: Max 42Mbps (DL) DC-HSUPA: Max 11.2Mbps (UL) WCDMA: Max 384Kbps (DL/UL)

Chapter 2 Parts of the Device

2.1 The Details of Button



1. Handset

Call and listen to the medical staff (optional) and operate the tablet. More details please see the 2.3 The Details of Handset.

2. Front Camera

It has a lid on the camera to protect user privacy.

3. Light Sensor

4. Home Button

One Press: Back to the desktop

Double Press: Call out the background program list

5. Return Button

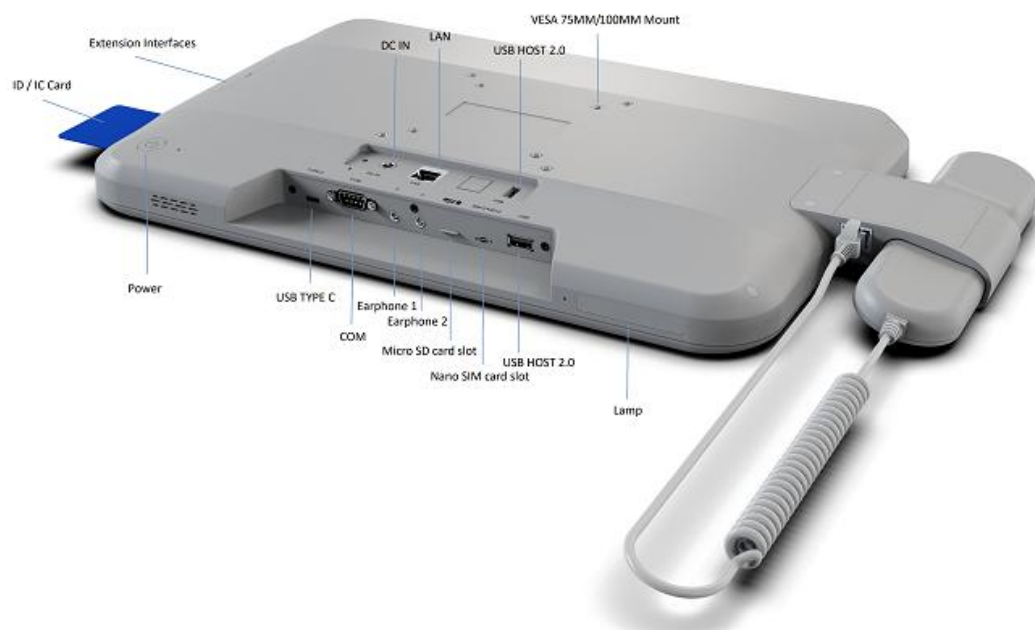
Return to the previous page of interface

6. Channel - Button : Move down

7. Channel + Button :Move up

8. Backlight Control Button: Turn on or off the screen
9. VOL- Button: Volume down, long press can gradually reduce the sound volume.
10. VOL+ Button: Volume up, long press can gradually raise the sound volume.
11. Brightness Button: Long press can gradually raise the bright degree. After controlling the backlight through this button, the backlight adaptation will be turned off.
12. Lamp Button: There are 6 brightness levels.
13. NFC/RFID
Combo smart card reader & Mifare RFID (optional)

2.2 The Details of Back Interface



1. Power Button
2. USB TYPE C ×1
3. COM: support RS232 ×1
4. Earphone ×2
5. Micro SD card slot ×1

6. Nano SIM card slot ×1
7. USB HOST 2.0 ×2
8. Lamp ×1
9. ID/IC Card
10. Extension Interfaces
11. DC IN ×1
12. LAN: RJ45 100M ×1 (default) POE + (optional)
13. VESA 75MM/100MM Mount

2.3 The Details of Handset



1. Numbers: The functions is the same ad the numbers from keyboard.
2. VOL+&VOL-: Volume up&down
3. Arrow Keys: "Direction keys", It can support up,down,left and right movement.
4. Mute: Change the volume of the tablet to 0

5. OK Key: Like the “Enter” from keyboard. It is to confirm execution command.
6. Return: Enter backspace or delete
7. Home: Back to the desktop
8. Other keys currently have no practical significance and need to be developed according to customer demands.

Chapter 3 Functions of the Device

3.1 Functions of the Desktop

●Power On

1. When connect the power supply to the DC jack, the system will turn on automatically.
2. Press and hold the power button for about 2-3 seconds to turn on the device.

●Power Off

1. When the power is unplugged from the DC jack, the system will automatically turn off.
2. Press and hold the power button for about 2-3 seconds to turn off the device.

●Shortcut Menu

Press and hold the desktop that will appear a menu, you can choose the home settings, widgets&wallpapers. See the image as below:

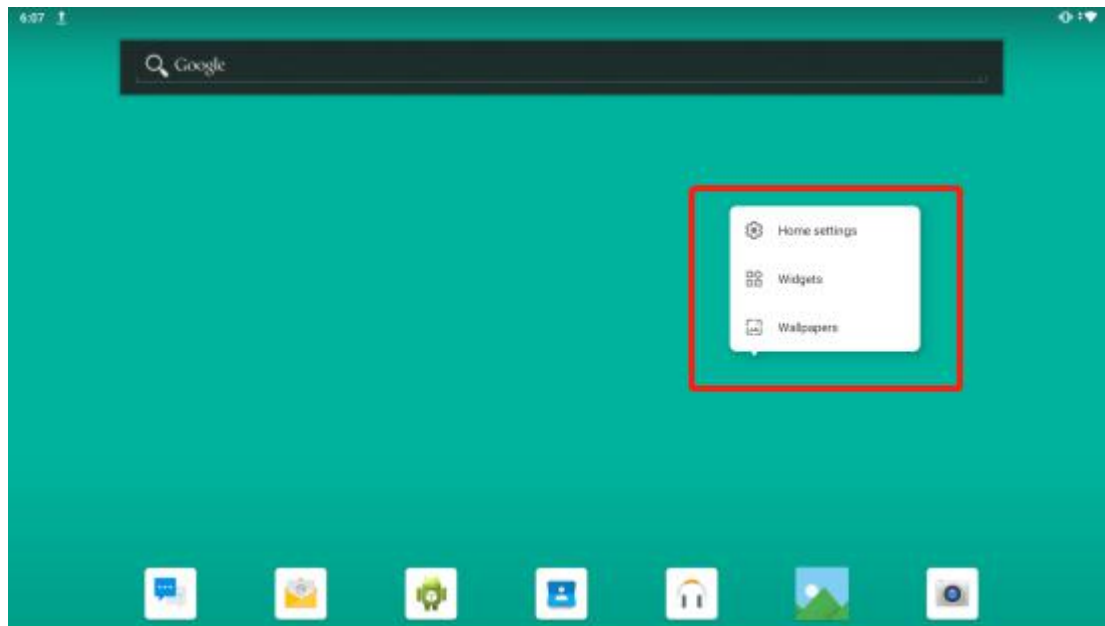


Figure 3.1.1 Shortcut Menu

●Notification Panel

Swipe your finger down at the top, and the notification bar will appear at the top of the main screen. (When sliding down from the top left side, it will appear from the left side. the middle and right sides are the same.) Sliding down on the status bar will open the full screen notification panel. And click this icon  , users can get more icons.

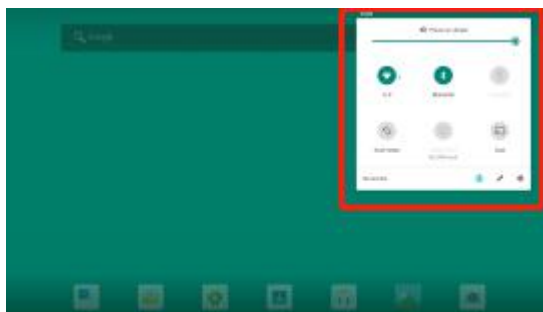


Figure 3.1.2 Notification Panel

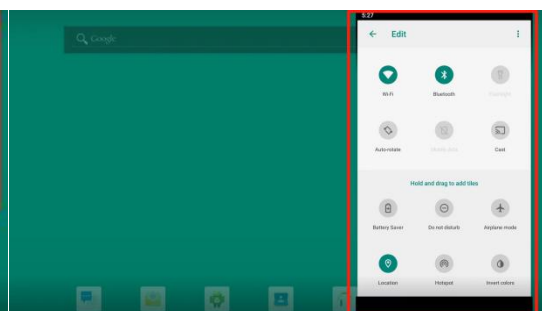


Figure 3.1.3 Full Screen Notification Panel

●Application Interface

Slide the finger up at the button and the applications interface will appear on the main screen. And if users want to use the application more quickly, long press the application icon, drag it up, and then drop it. When moving the wrong application, you can move it up and choose to cancel or uninstall it. The application that has

already appeared on the main screen, and if the users want to remove, uninstall or move it to the other interface , see the Figure 3.1.4 Remove&uninstall.(Only the applications by installing can be uninstalled, and the system's built-in applications cannot be uninstalled.)

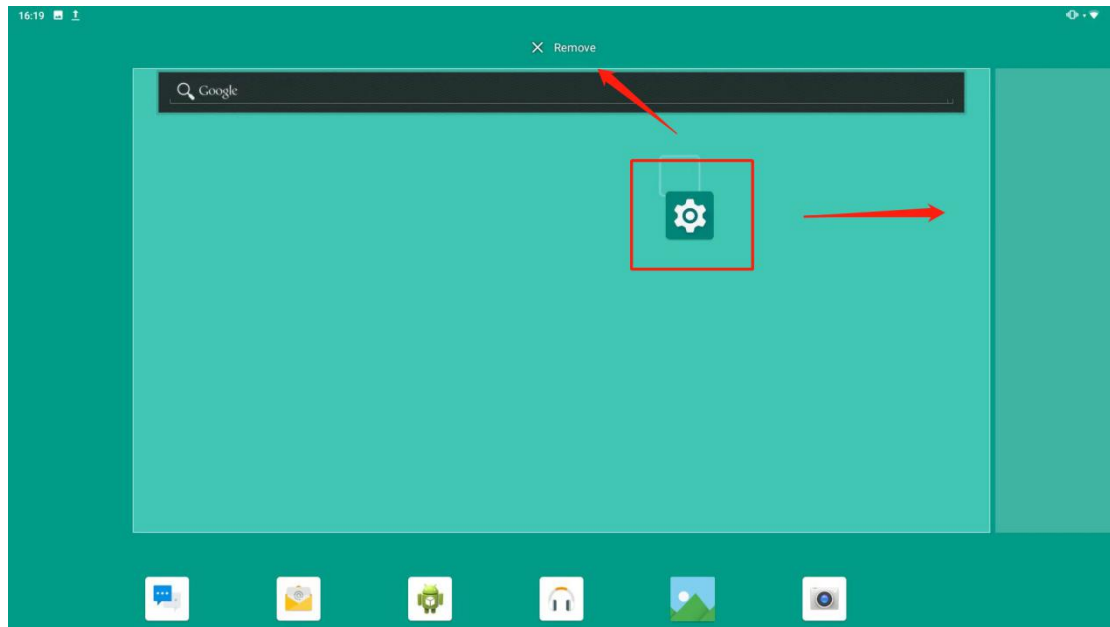


Figure 3.1.4 Remove&Uninstall

3.2 The Usage of Settings

●Application Settings

1. Click on this icon  , and tap “apps& notifications” to view the details of each application. Or long press the setting of the desktop also can check the details.
- 2.Screen time: View the usage time of the application and set timers for your applications.
- 3.Notifications settings: It is for all applications.
- 4.App permissions: It can set application access permissions.
- 5.Special app access: The setting and access of some special applications

●Display Settings

Adjust the display settings to suit the usage environment.

- 1.Brightness level: Adjust the screen brightness.
- 2.Night light: Eye care mode

- 3.Adaptive brightness: Enable the device to automatically change the screen brightness to match the surrounding lighting conditions.(Increasing the brightness through the panel backlight button, it will automatically turn off.)
- 4.Wallpaper: Set or change the wallpaper for the main screen and lock screen. This function can also be achieved by long pressing the main screen.
- 5.Sleep: Set the screen to automatically lock after a period of time.
- 6.Font size: Make the text on the screen smaller or larger.
- 7.Display size: Make the items/icons on the screen smaller or larger.
- 8.Screen saver: Set the style for using a screen saver and the activation time for the screen saver.
- 9.Ambient display: It can be activated to wake up the screen when receiving new notifications.
- 10.Device Theme: Automatically changes based on the background, light color and dark color.

●Sound Settings

Set sound, adjust volume, and switch between sound modes to ensure the best user experience.

- 1.Set the volume of media, calls, ringtones and alarm clocks by sliding back and forth.
- 2.Select the sounds of notifications, ringtones, and alarm clocks.
- 3.Turn on or off sounds: Dial pad, screen locking, charging, touch and emergency dialing signal.

●Security & Location

- 1.Google play protect: Regularly check applications and devices for harmful behavior, and if found the harmful behavior, the system will notify.
- 2.Find My Device: After turning on Find My Device, add a Google account on the device to use it. This feature can assist in remotely locating this device, and if the device is lost, it will ensure the security of your data.
- 3.Screen lock: Select the screen lock method as None, Slide, Pattern, Pin Code, and Password.

4.Show passwords: when it is turned on, these characters can be briefly displayed as you type.

5.Device admin apps: when Find My Device is turned on, Google play service will be allowed to erase all data, change the screen lock, lock the screen and disable some screen lock features.

6.Screen Pinning: when it is turned on, the pinning screen function will be used to keep the current screen in view.

●Accessibility

1.Volume key shortcut: Using this service, there are three choices: color inversion, color correction and mirroid.

2.Text-to-speech output: It can choose the use system language, and adjust speech rate & pitch via sliding the small circle left or right.

3.Also, sliding the small circle left or right to adjust font size&display size.

4.Interface controls: It can get some functions through turning on/off the buttons.Like dwell timing, powers button ends call,button light etc...

5.Mono audio: Combine channels when playing audio through turning on/off the buttons.

6.Captions: Turn on the caption, it can choose language, text size, caption style.

7.Functions: Tap these function to turn on/off. And some functions need the passwords. Like system root, dump mode, debug uart mode.

●Digital Wellbeing & Parental Controls

It can view specific usage times, notifications, and manage notifications, set the Do Not Disturb mode for the application.And set up parental controls to supervise this phone remotely with the Family Link application for parents and keep an eye on screen time and set limits.

●System

1.Languages&input:

I.Languages:Setting the language, users need to click on the language, tap Add

Language and select the language. Then click on this icon  and drag it up to the first position. Tap the icon , can remove the other language.

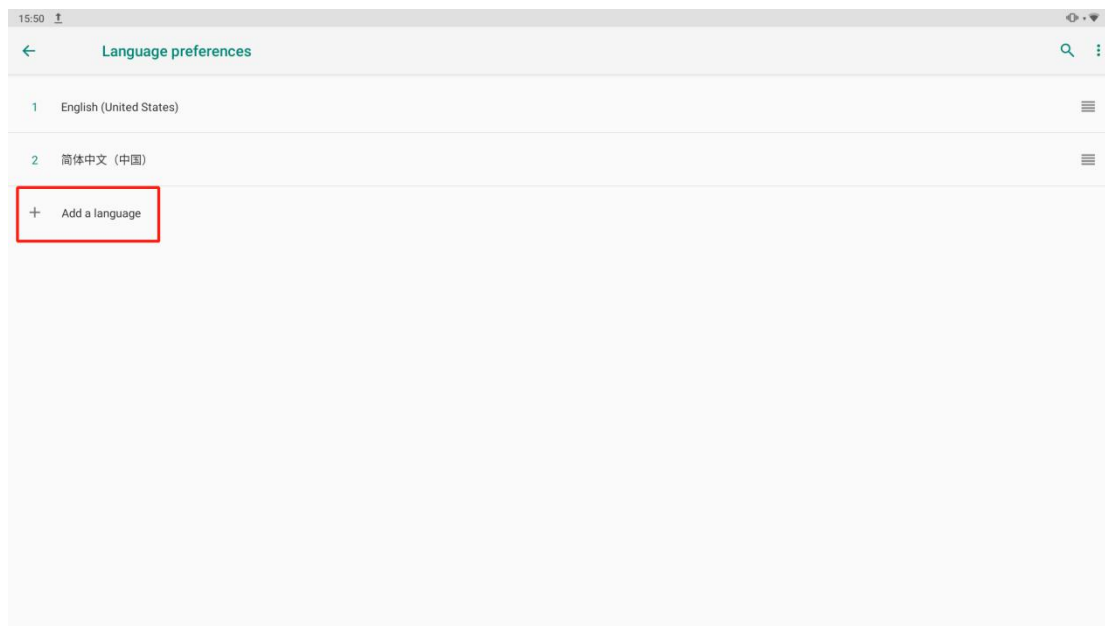


Figure 3.1.5 Add Language

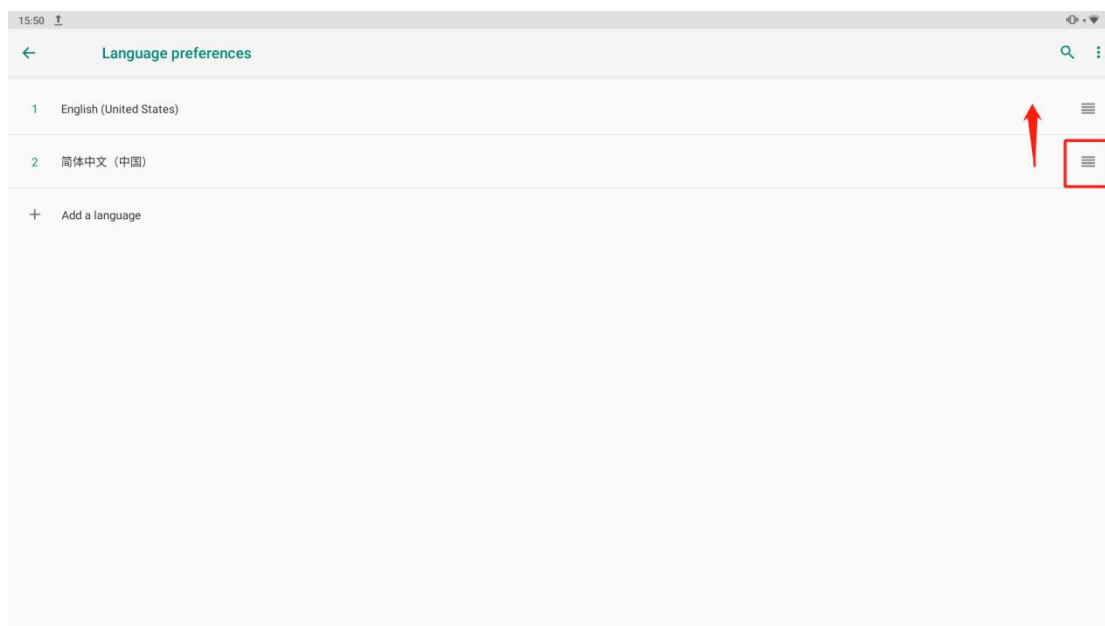


Figure 3.1.6 Change Language Preference

II.Keyboard&input

i.Tap the virtual keyboard to set and manager the keyboard.

ii.Tap physical keyboard to select show virtual keyboard or not and available keyboard shortcuts.

III.Input assistance:

i.Spell checker: Typing in content and making an error will result in a red wavy underline after turning on the Use Spell Checker. Users can select the language, and system can check according to this language.

IV.Autofill service

There are two choices: none and google.

i.None means not using this function.

ii.Choosing google will remember the email, account, password, etc., and automatically fill it in when entering.

iii.Personal dictionary: Tap this icon  to add some words.

V.Pointer speed:Through dragging lines

VI.Text-to-speed output: Tapping it can select languages, speed rate and pitch.

2.Gestures

I.Jump to camera: When this function opens,no matter what screen image is currently displayed, press the power button twice to quickly turn on the camera.

II.Prevent ringing: Tapping Press Power& Volume Up Together can select vibrate, mute and do nothing.

3.Date&time: Automatic date&time, time zone and 24-hour format settings or manual setup.

4.Backup: When it is turned on,the backups are uploaded to google and encrypted using google account password.

5.Reset options: Network, applications or device can be reset.

6.Multiple users:

There are owner and guests, users can tap ADD USER to add more guests.

Add new user: It can share this device with other people. Each user has their own space, which can customize with applications, wallpaper etc. Users can also adjust device like WIFI that affect everyone.

Click on the guest, switch to the guest space. And use the same method, also can switch back to the owner space.

●About Device

- 1.Users can check Device name, MDN, Emergency information, Legal information, SIM status, Model & hardware, IMEI, Android version, IP address, WIFI MAC address, Bluetooth address, Build number.
- 2.It can change the patient's name via tapping device name here.Or click on Add information to add more details of patient,such as address, blood type, allergies, medications,organ donor and medical notes. This function makes it more convenient for doctors and nurses to view and understand patient information. And then it also can add contact to reduce the trouble of searching and directly reach the patient's contacts. Helping the first responder in an emergency through add emergency information and contact. Anyone can read these information from lock screen,and dial the patient's contacts by tapping their names,without unlocking the patient's phones.

Chapter 4 Using COM Port

4.1 COM port

Serial port's ID is COM, the port as shown in Figure 4.1.1.



Figure 4.1.1 COM port

4.2 Instruction for COM Port Demo App

- Installation Steps for Demo App
 - Please download the SDK provided and install into the device.

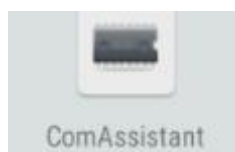


Figure 4.2.1 Demo App

- ComAssistant Instruction

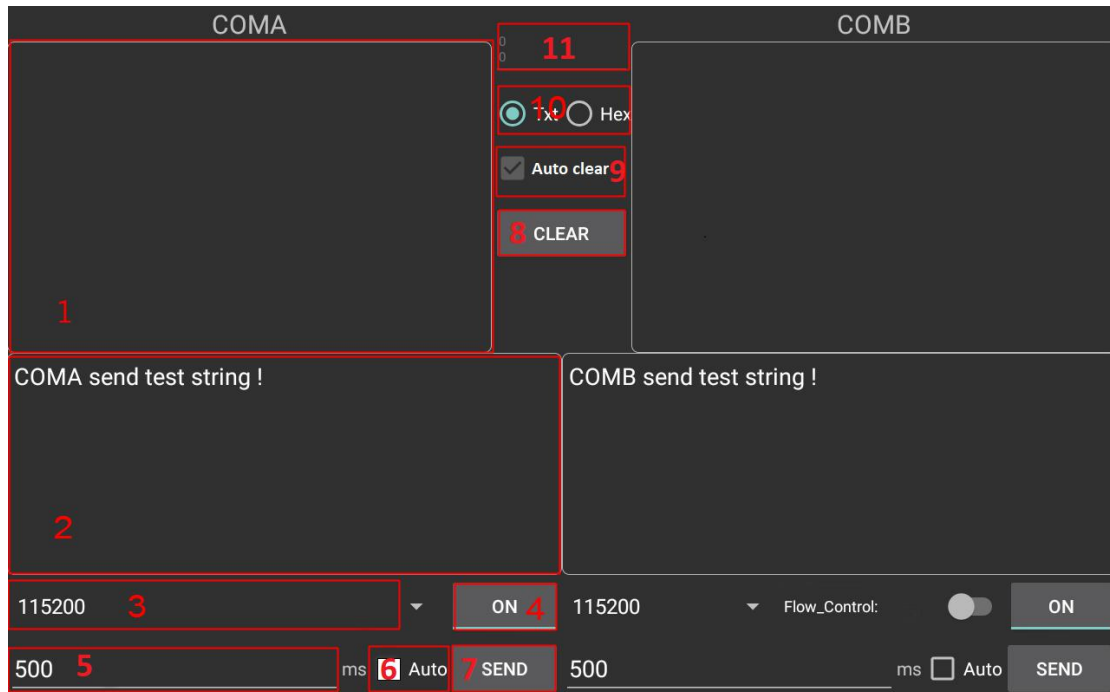


Figure 4.2.2 The Home Interface of ComAssistant

- 1) The text box in red displays the information received by corresponding COM port.
- 2) In this text box in red, you can input the information which will be sent by corresponding COM port.
- 3) Baud rate of corresponding COM port can be selected here.
- 4) Switch on/off corresponding COM port.
- 5) Set the interval time of auto sending information.
- 6) Select auto send mode.
- 7) The button of COM port information sending.
- 8) The button of manually clearing the information. Click it to clear all of the information in both of the receiving text boxes.
- 9) Auto clear the information in the receiving text box, default as auto clear once the text is up to 100 rows (Please note that auto clear function can't be canceled, and the number of text rows triggering auto clear can't be changed.)

10) The code format of sending/receiving information can be selected. Select "Txt" to send information with string code, select "Hex" to send information with hexadecimal format code.

11) It indicates the number of information rows displayed in the information receiving text box. The upper number corresponds to the receiving text box on the left, and the lower number corresponds to the one on the right.

Chapter 5 Using NFC

5.1 NFC Activation Method

- Precondition: The NFC function needs to be selected before factory delivery.
- Activate the NFC function by tapping the application.

5.2 NFC Usage Demo

- After activating the NFC function, please place the NFC card to the induction zone or the card slot. Then identify the card, other specific functions need to be developed by the customers.



Figure 5.2.1 NFC Induction Zone



Figure 5.2.2 Card slot

Chapter 6 Root Access Switch Steps

Step 1: Enter the interface of the Root Access setting from "Settings" -> "Accessibility" -> "System root", as shown in the Figure 6.1&6.2.

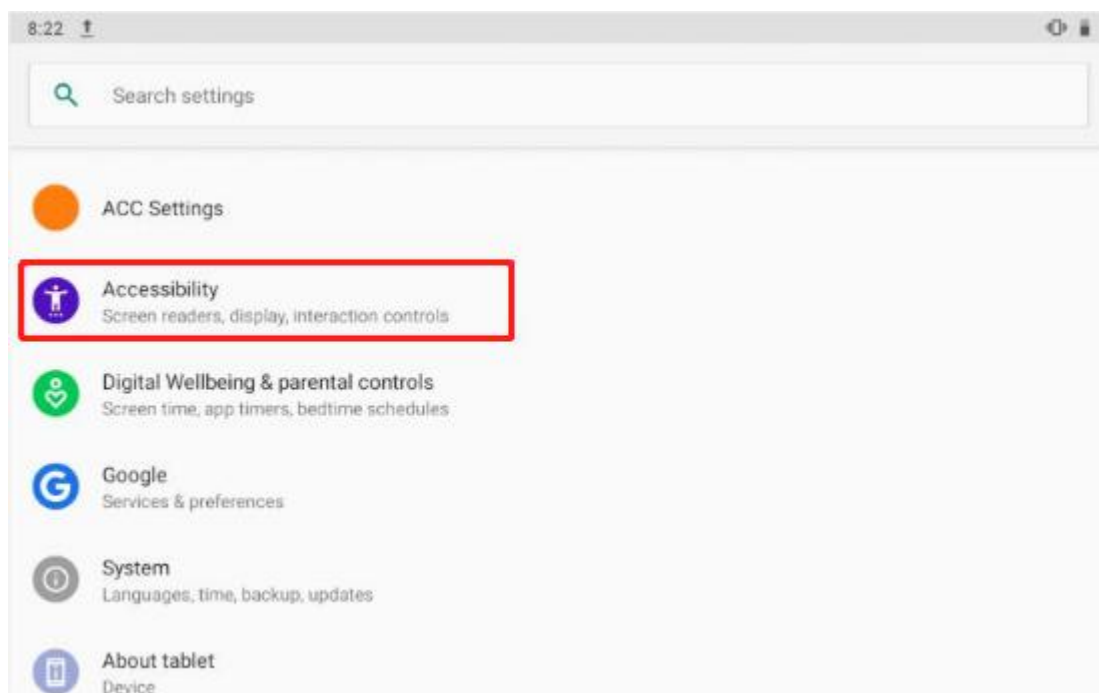


Figure 6.1

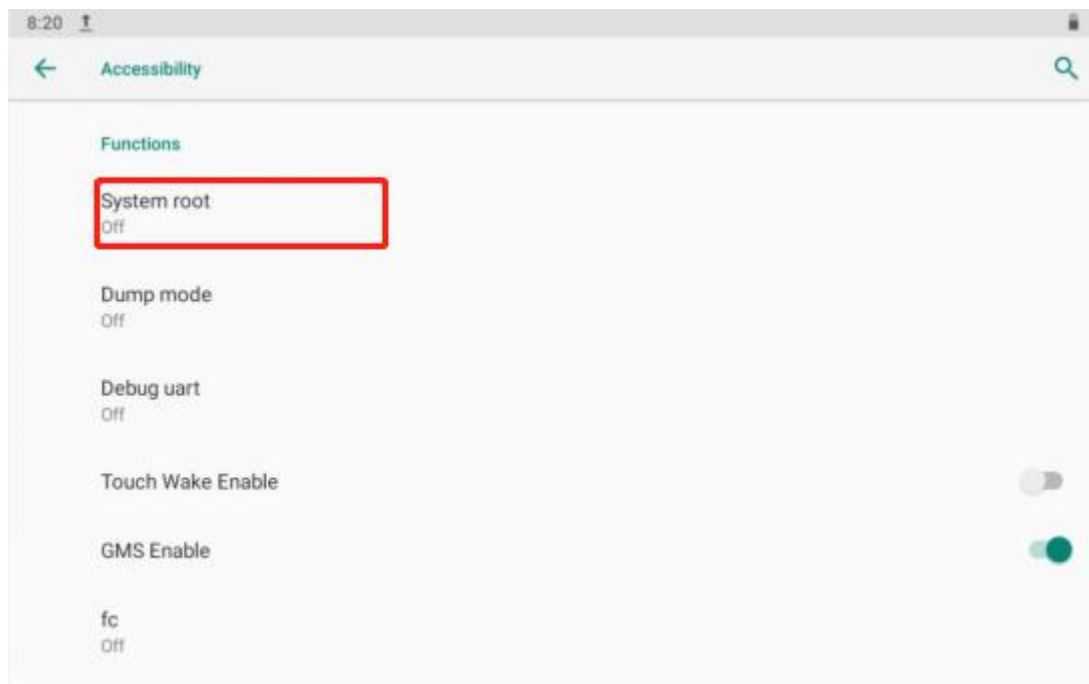


Figure 6.2

Step 2:

- 1) Turn on/off the Root Access. A dialog box as shown in Figure 6.3 will pop up and please enter the password (The initial password is qwertyuiop).
- 2) Modify the password after clicking the Password Config. A dialog box will pop up, as shown in Figure 6.4.

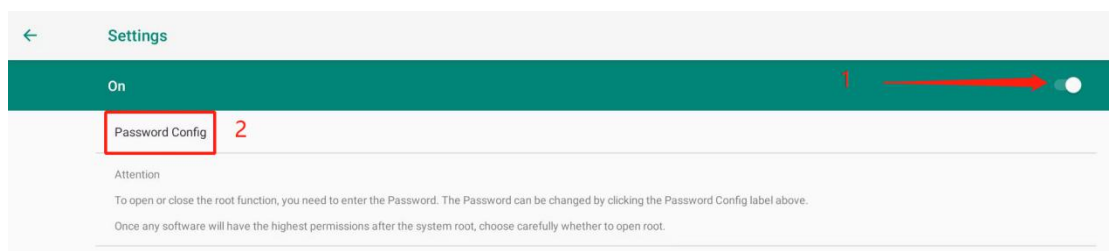


Figure 6.3 The Interface of Root Access Setting

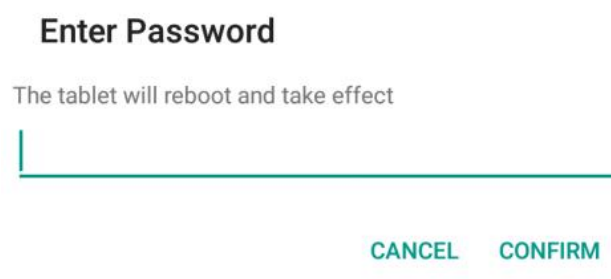


Figure 6.4 Enter Password

Configure Root Password

Origin Password

New Password

Confirm New Password

DISCARD SAVE

Figure 6.5 The Dialog Box of Modifying Password

Note: If the device is restored to the factory setting, the state of the root access will be reset to off, and the password will be restored to the initial password.

Chapter 7 Device Files Transfer

The files, such as pictures and audio files, can be transferred between your computer and your device by an USB Type-C cable.

Connect the device to the computer by an USB Type-C cable, and open the prompt message of the device, and then select "File Transfer".

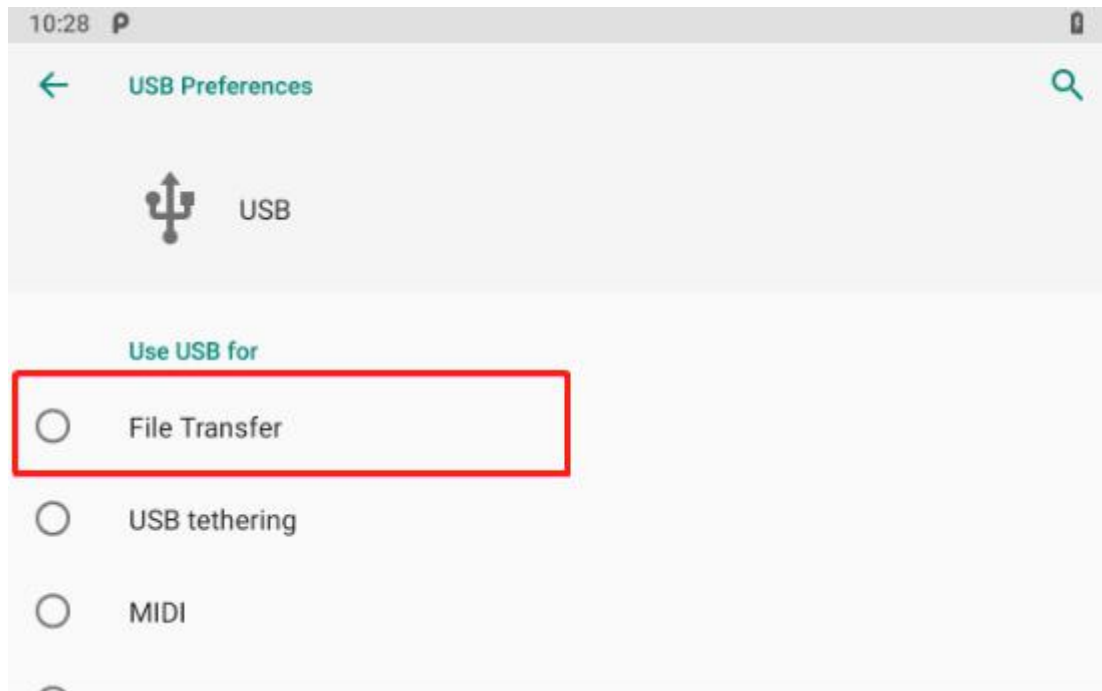


Figure 7.1

Find out the "Device" in "This PC".

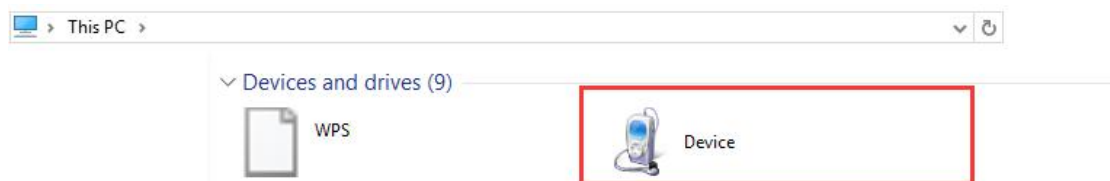


Figure 7.2

Chapter 8 SD card Usage Instruction

- The memory card and the card holder on the machine are precision electronic components. When inserting the memory card into the card holder, it must be aligned before inserting to prevent damage to the device. When taking out the card, please press the upper edge of the card lightly to release the card, and then pull the card out.
- It is normal that the memory card will heat up after a long time of use.
- If the memory card is not used correctly or the power is disconnected or the memory card is removed during reading, the data in the memory card may be

damaged.

- If you do not use it for a long time, please take it back into the card box or pocket.
- Do not forcibly insert the memory card to avoid damage to the memory card.

Chapter 9 Icons

There is a drop-down notice bar in the Home Page.

Name	Icon	Description
Wi-Fi		Long press to enter the setting windows. Choose a available network to connect. The number of displayed signal bars indicates the strength of the connection signal.
Bluetooth		Long press to open the Bluetooth setting, choose the Bluetooth name of the corresponding device to connect. After successfully connect, files can be sent and transferred.
Do not Disturb		After activating the Do not Disturb mode, the device will be in a silent state, no notifications are displayed, and no notification sound.
No SIM card		The SIM card is not inserted.
Airplane Mode		When the airplane mode is activated, the phone call, Internet and Bluetooth cannot be used.
Hotspot		After activating the Wi-Fi hotspot, the device can be used as a Wi-Fi transmitter.

Grayscale		After activating it, the display color will be only as gray.
Data Saver		After activating, it can help users save the data usage.
Cast		Activate/Deactivate the cast screen function.
Invert Colors		After activating, the UI interface will show as black.
Night Light		Eye protection mode.

Chapter 10 Standard Accessories



12V 3A DC Adapter



User Manual Card

1) DC 12V power adaptor

1pcs

2) User manual card

1pcs

Chapter 11 Troubleshooting

Problems	Problem Description	Solutions
Power Problems	Unable to boot	Please check if the connection is correct.
		Bad contact: please check the power socket and plug.
Display Problems	No display	Please restart the system.
	When clicking a function, the execution time is too long to activate.	
	The screen switching process is delayed and stagnant, causing the screen to fail to switch smoothly	
	Blurred display	Check whether there is dust on the surface of the display. If yes, please wipe the dust on the surface with a soft cloth that does not drop cotton chips.

FCC Caution:

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.

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

NOTE: 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.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.