

MBA5-P22 V8

User guide



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1 Background

Description	Date	Version	Author	Auditor
First parution	14/05/2019	V1.0	CLO	ACA

2 Product introduction

2.1 Introduction

The MBA5-P22 V8 PDA is a rugged IP65 mobile terminal designed for use in industrial environments (laundry, construction, logistics, railways, etc.). It runs on the Android 8.1 operating system.

This industrial terminal is available with HF/NFC and/or a 1D/2D scanner. For ease of use, it is supplied with a gun.

The device's 8000 mAH battery provides long battery duration.

The 5" FHD touchscreen ensures comfortable reading and can be used with wet hands or gloves.

The rugged terminal also features wireless communication: NFC, 4G/LTE, Wifi, Bluetooth, GPS.

MBA5-P22 can be used with keyboard emulation for 2D scanner to facilitate your software integration.

2.2 Precaution before using battery

- Do not leave battery unused for long time, no matter it is in device or inventory. If battery has been used for 6 months already, it should be check for charging function or it should be disposed correctly.
- The lifespan of Li-ion battery is around 2 to 3 years, it can be circularly charged for 300 to 500 times. (One full battery charge period means completely charged and completely discharged.)
- When Li-ion battery is not in used, it will continue discharge slowly. Therefore, battery charging status should be checked frequently and take reference of the related battery charging information on the manuals.
- Observe and record the information of a new unused and non-fully charged battery. On the basis of operating time of new battery and compare with a battery that has been used for long time. According to product configuration and application program, the operating time of battery would be different.
- Check battery charging status at regular intervals.
- When battery operating time drops below about 80%, charging time will be increased remarkably.
- If a battery is stored or otherwise unused for an extended period, be sure to follow the storage instructions in this document. If you do not follow the instructions, and the battery has no charge remaining when you check it, consider it to be damaged. Do not attempt to recharge it or to use it. Replace it with a new battery.
- Store the battery at temperatures between 5 °C and 20 °C (41 °F and 68 °F)

2.3 Charger

The charger type is GME10D-050200FGu, output voltage/current is 5V DC/2A. The plug considered as disconnect device of adapter.

2.4 Notes

Note 1:

Using the incorrect type battery has danger of explosion. Please dispose the used battery according to instructions.

Note 2:

Due to the used enclosure material, the product shall only be connected to a USB Interface of version 2.0 or higher. The connection to so called power USB is prohibited.

Note 3:

The adapter shall be installed near the equipment and shall be easily accessible.

Note 4:

The suitable temperature for the product and accessories is 010°C to 50°C.

Note 5:

CAUTION RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

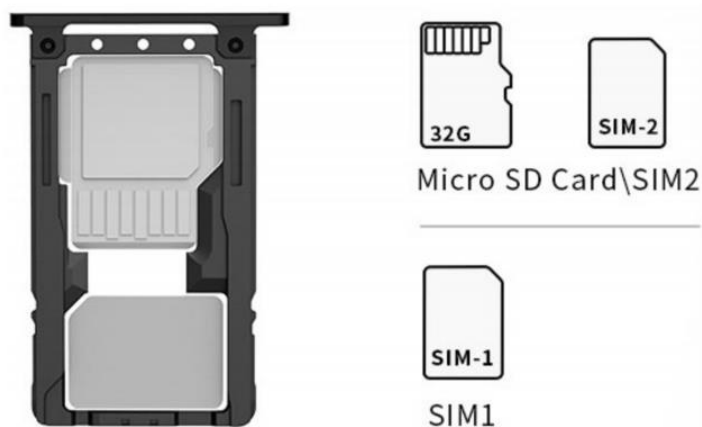
3 Installation instructions

3.1 Appearance



3.2 Install Micro SD and SIM cards

The cards sockets are showing as follows:



3.3 Battery Charging

By using USB Type-C contact, the original adaptor should be used for charging the device. Make sure not to use other adaptors to charge the device.

3.4 Buttons and Function Area






Buttons instructions



Side button	1	Power	Located on left side, press to ON/OFF device.
	2	Function key	Located on left side, its function can be defined by software.
	3	SCAN button	Scanning button located on both sides. There are two scanning buttons.
Main button	4	Menu	Display main menu.
	5	Home	Touch it back to main screen.
	6	Enter	Press to confirm current selection
	7	Backspace	Return to last step to setup.

4 Call function





4.1 Calling numbers

1. Click icon  .
2. Click number key to input phone numbers.
3. Click icon  to call.
4. Click icon  to end call.

4.2 Contacts

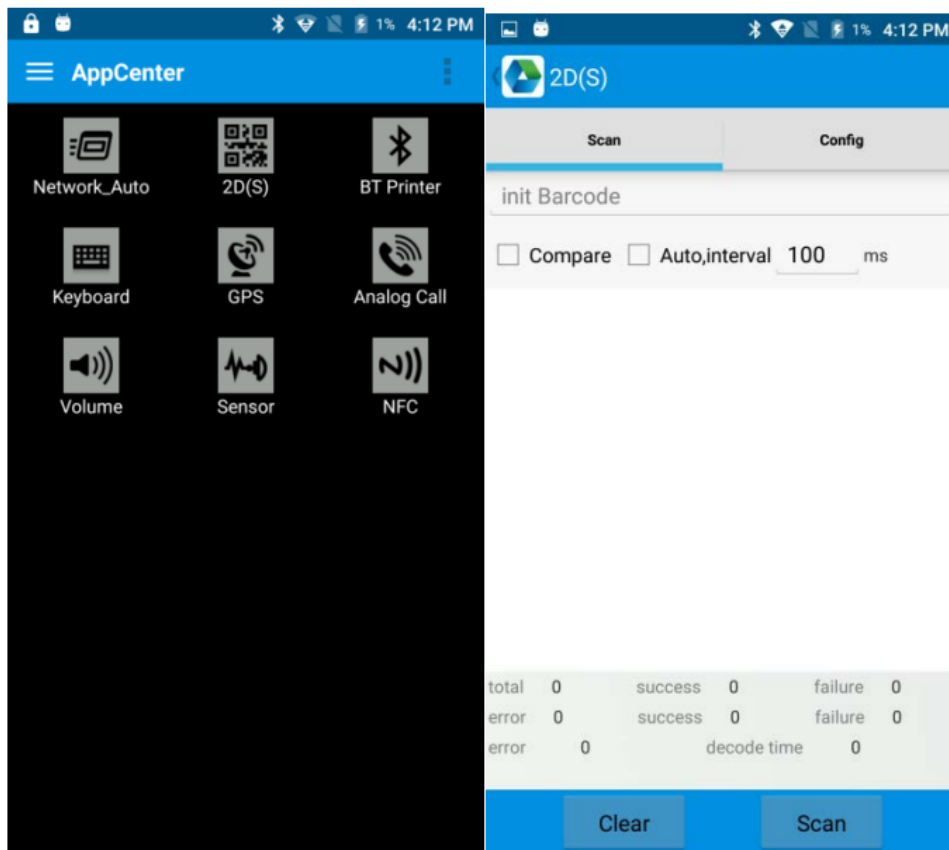
1. Click contacts to open contacts list.
2. Click icon  to add new contacts.
3. Click icon  to import/export contacts.

4.3 SMS and MMS

1. Click  to open message window.
2. Click  to input message receiver and contents.
3. Click  to send out messages.
4. Click  to add attachment pictures and videos.

5 Barcode reader-writer

1. In App Center, open 2D barcode scan test.
2. Press "SCAN" button or pull the trigger.
The parameter "Auto interval" can be adjusted.



Caution: Please scan codes in correct way otherwise the scanning will be failed.

1D barcode:



2D barcode:



Max. radiant power: 0.6mW

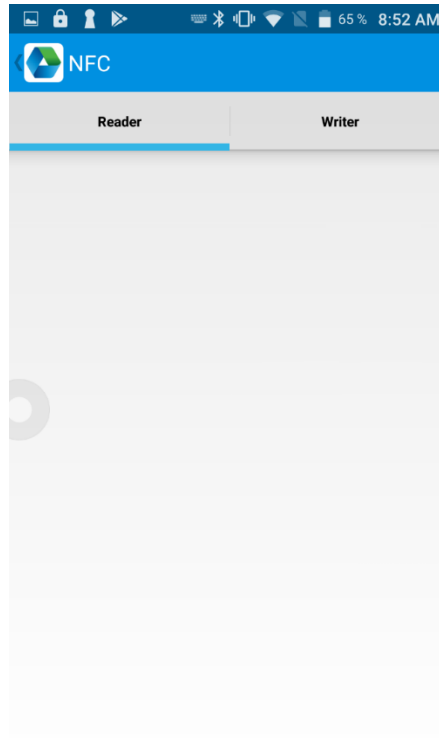
Wave length: 655nm

IEC 60825-1 (Ed.2.0). 21CFR 1040.10 and 1040.11 standard.

6 NFC RFID reader

6.1 Read functionality

1. Click App Center, open “NFC” to read tag information.



2. Place the tag you want to read in front of the RFID antenna as shown below:



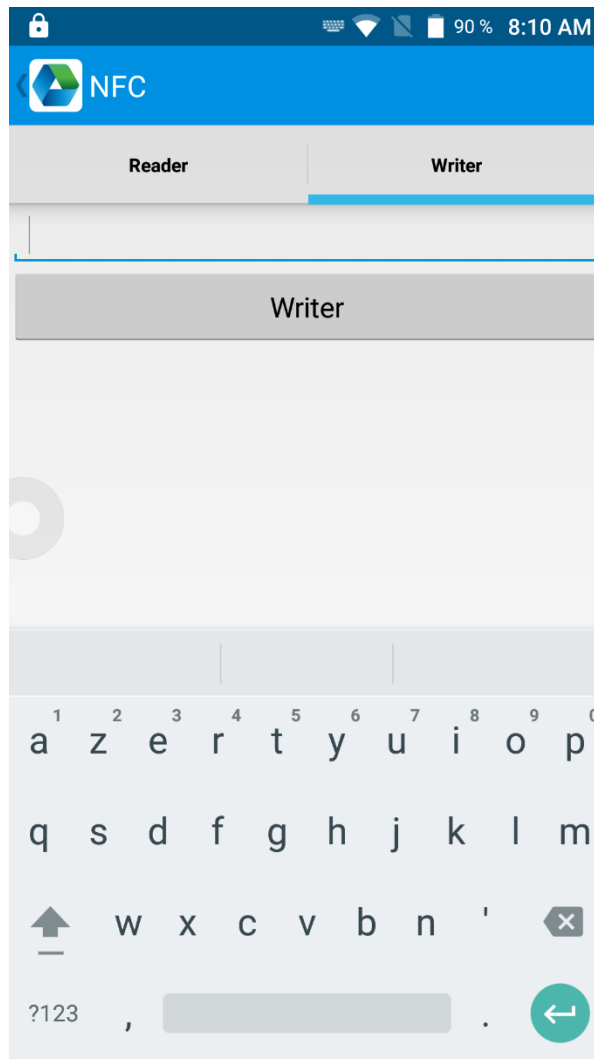
3. The tag will be read.

You can also select a text zone to read the tag. It is not needed to open the application since the device is equipped with keyboard emulation.

6.2 Write functionality

The storage of one tag has 4 zones: RESERVED, EPC, TID and USER. Normally, the default password is 00000000. And TID zone can only be read, other zones can be read and written.

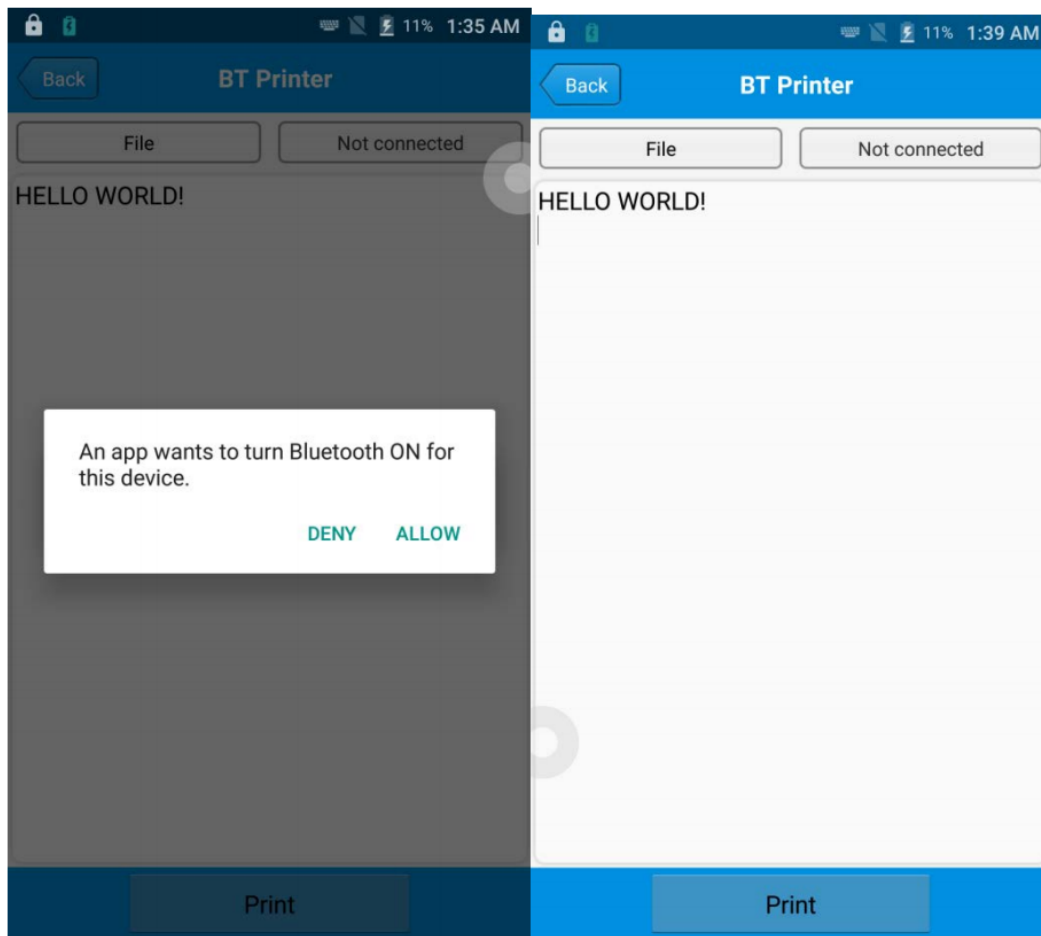
1. Click App Center, open “NFC” to write information in the tag.
2. Place the tag in front of the RFID antenna.
3. Write information in the tag by using the keypad as shown below:



7 Other functions

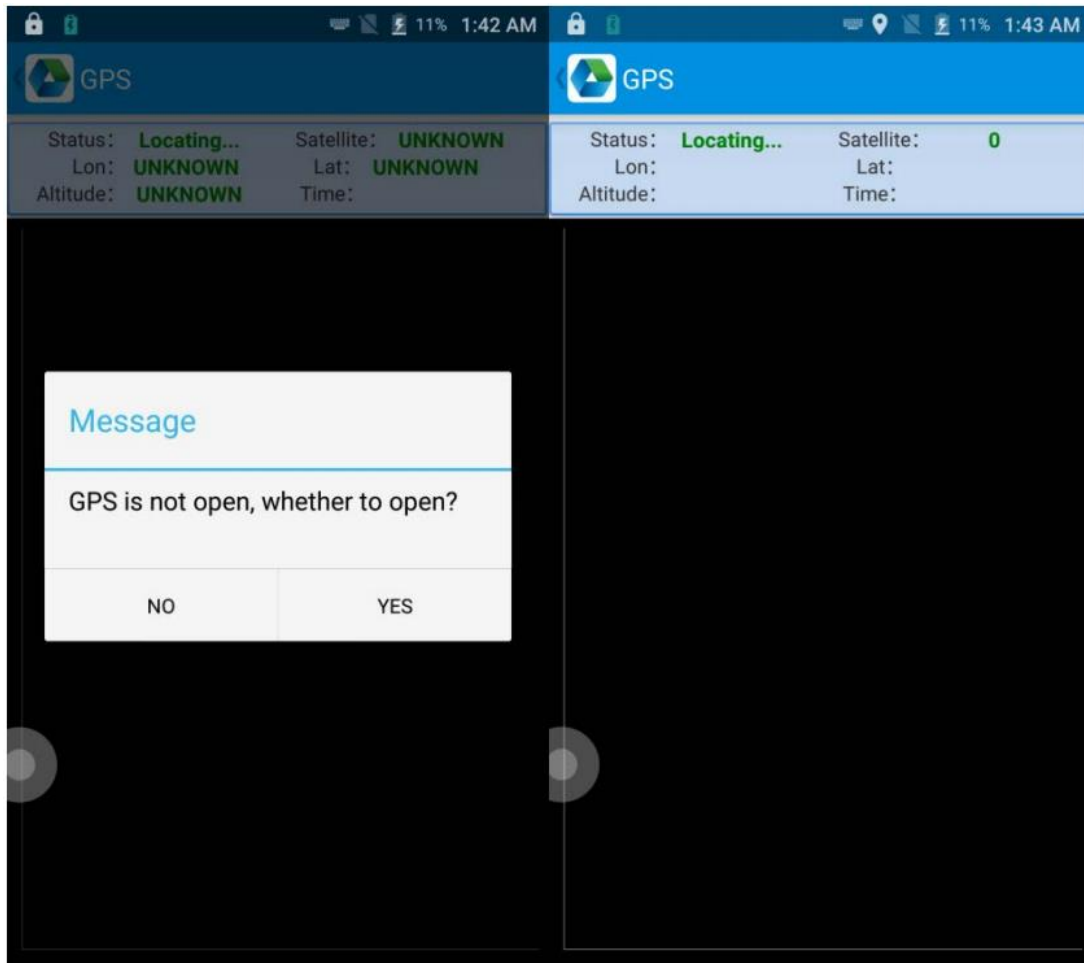
7.1 Bluetooth

1. Open “BT Printer” in App Center.
2. In the list of detected devices, click the device that you want to pair.
3. Select printer and click “Print” to start printing contents.



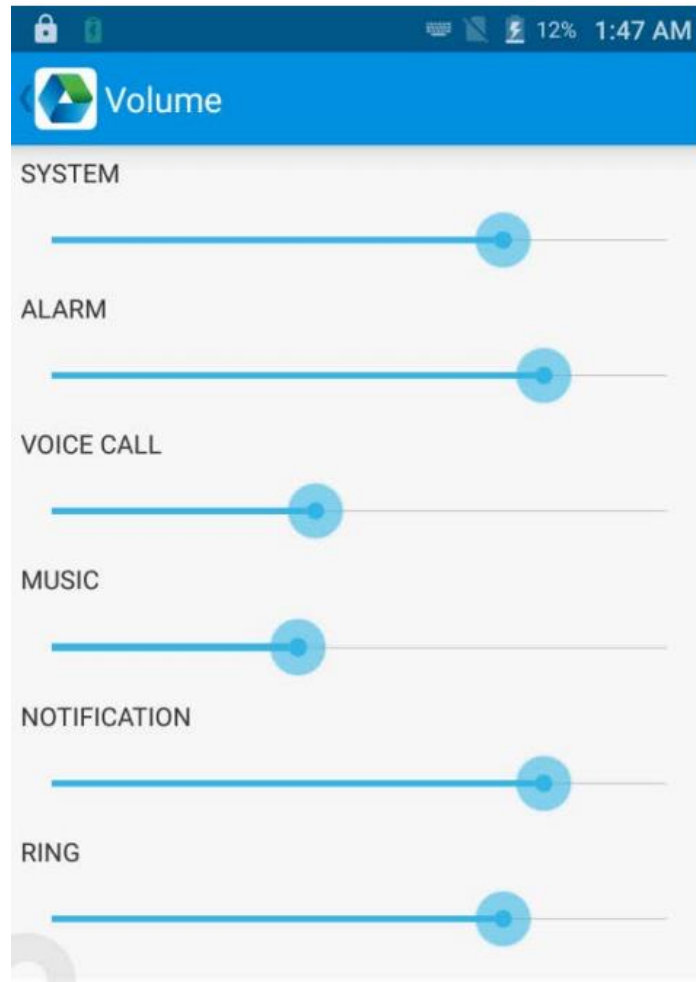
7.2 GPS

1. Click “GPS” in App Center to open GPS test.
2. Setup GPS parameters to access GPS information.



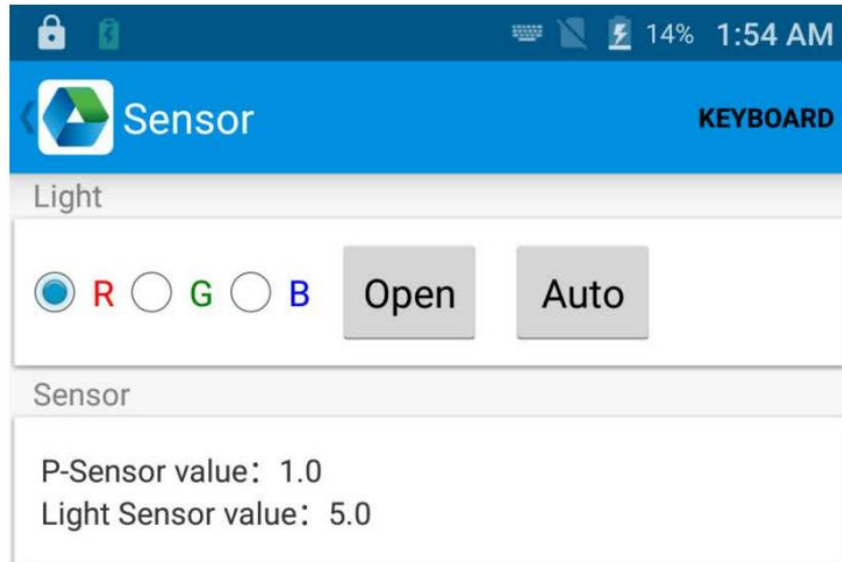
7.3 Volume setup

1. Click "Volume" in App Center.
2. Setup volume by requirements.



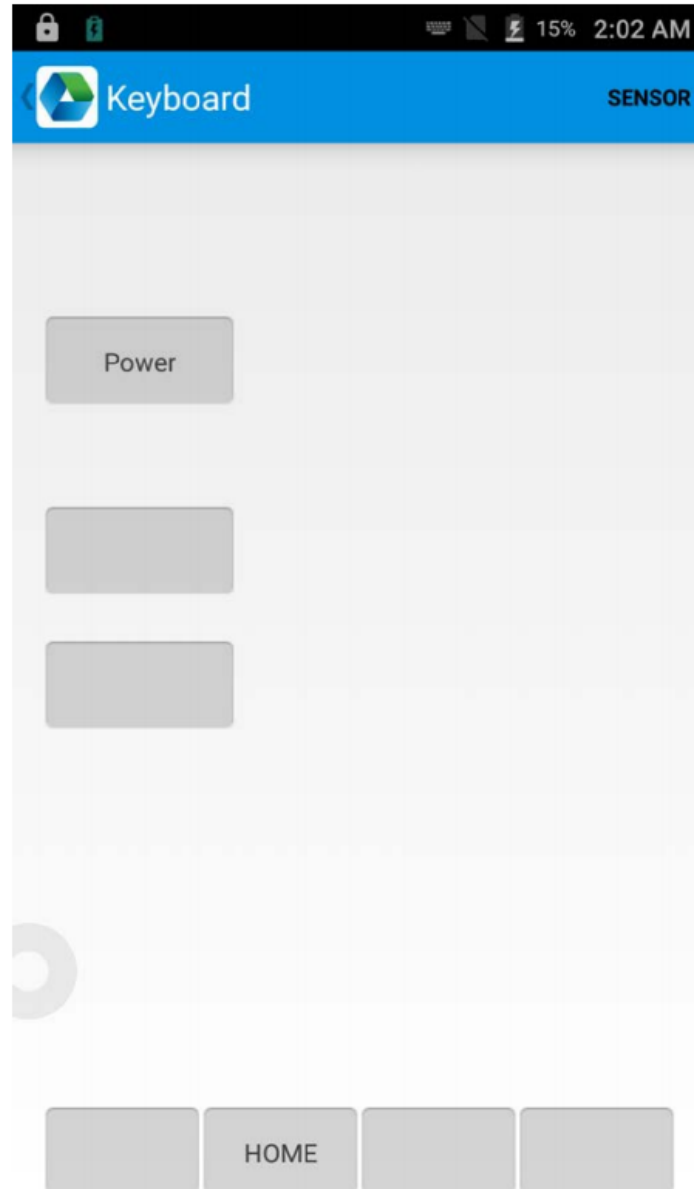
7.4 Sensor

1. Click “Sensor” in App Center.
2. Setup the sensor by requirements.



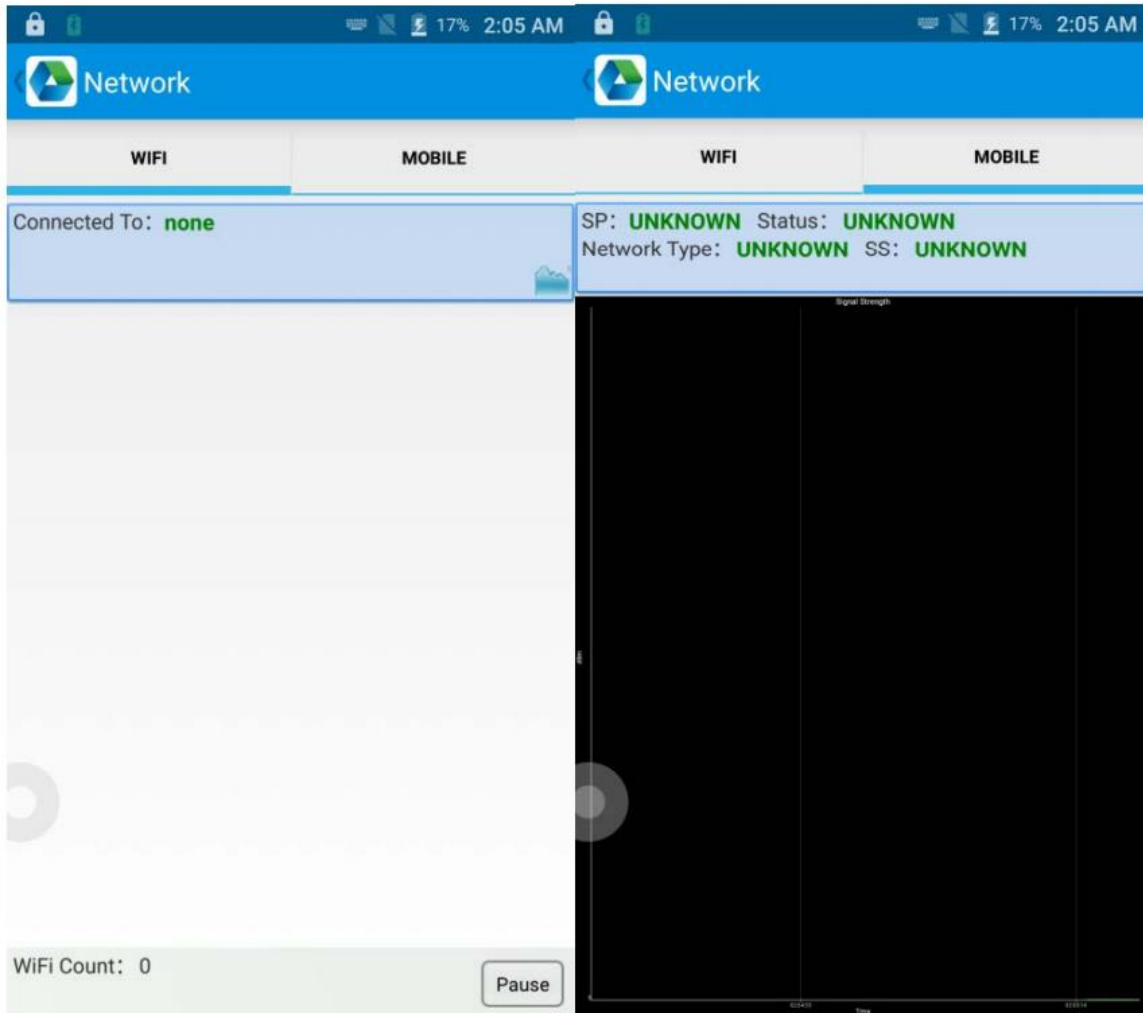
7.5 Keyboard

1. Click “Keyboard” in App Center.
2. Setup and test the main value of the device.



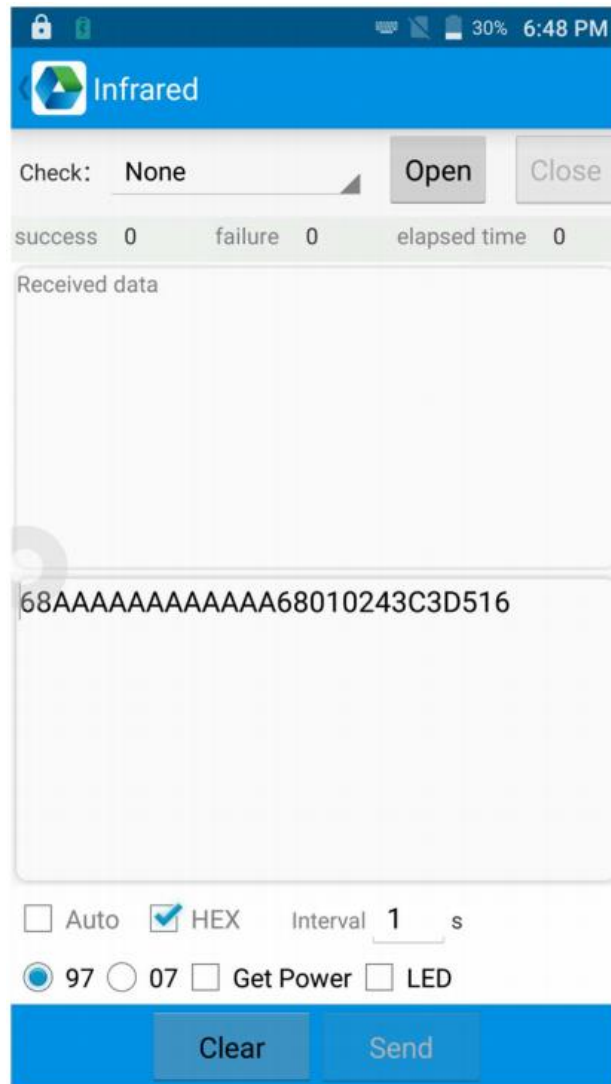
7.6 Network

1. Click “Network” in App Center.
2. Test WIFI/Mobile signal by requirements.



7.7 Infrared read-write function (option)

1. Open infrared function in App Center.
2. Click button “Open” to start infrared scanning function. Click “LED” for infrared scanning aim assist. Depending on different application status to compile different commands to realize infrared read and write function.



8 Device characteristics

8.1 General characteristics

Operating System	Android 6.0
CPU	Cortex-A53 Quad-core 1.3GHz
Memory	RAM: 2Gb ROM: 16Gb
Extended storage	Supports up to 32 GB Micro SD card
Dimensions	164.2 x 80 x 24.3mm
Weight	654g
Display	5.2" IPS FHD 1920x1080P Corning Gorilla Glass, multi-touch panel, gloves and wet hands supported
Battery	8000mAh, Li-ion, rechargeable Standby: over 500 hours Continuous use: over 12 hours (depending on user environment) Charging time: 3-4 hours (with standard adaptor and USB cable)
I/O Ports	1 Type C USB 1 slot for SIM card, 1 slot for SIM or TF card
Keys	4 front buttons, 1 side button, 2 scan keys, 1 multifunctional key
Camera	13MP Autofocus with flash
Other - general	Audio: speaker Sensors: Gravity sensor, Light Sensor, Proximity Sensor

8.2 User environment

Operating temperature	-20°C to +50°C
Storage temperature	-40°C to +70°C
Humidity	5% – 95% relative humidity, no condensation
Protection grade	IP65 Drop Specification Multiple 1.5m/4.9ft drops (at least 20 times) to the concrete across the operating temperature range Tumble Specification 1000 x 0.5m/1.6ft falls at room temperature

8.3 Communication

Wifi	Dual Wifi 2,4 + 5GHz IEEE802.11 a/b/g/n, 2.4G/5G dual-band, internal antenna
Bluetooth	Bluetooth 4.0, BLE
3G / 4G	3G / 4G
GPS	GPS/AGPS, GLONASS, BeiDou; internal antenna

8.4 Data collection

8.4.1 Barcode Scanning

1D/2D Barcode Scanner	Zebra: SE4710 Option: SE4750 / SE4750MR; Honeywell: N6603 (on request)
1D Symbologies	UPC/EAN, Code128, Code39, Code93, Code11, Interleaved 2 of 5, Discrete 2 of 5, Codabar, MSI, RSS, etc.
2D Symbologies	PDF417, MicroPDF417, Composite, RSS, TLC-39, Datamatrix, QR code, Micro QR code, Aztec, MaxiCode; Postal Codes: US, PostNet, US Planet, UK Postal, Australian Postal, Japan Postal, Dutch Postal (KIK, etc).

8.4.2 RFID NFC

HF/NFC	13.56MHz 2-4cm
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8.4.3 Other data modules (option)

Fingerprint identification	Supports fingerprint entry, image collection, fingerprint recognition, fingerprint deletion etc. Type: TCSIST Sensor type: capacitive Acquisition window size: 24.5*19mm Effective image size: 15.5*18.5mm Image size: 256*360 Resolution: 500 DPI contrast mode(1:1); search mode(1:N)
Far infrared meter reading	Working frequency 37.9KHZ

8.5 Developing Environment

SDK	Available
Language	Java
Develop	Eclipse/Android Studio

8.6 Accessories



Holster



Cradle