Bita-International Co., Ltd

HC60 User Manual

Statement

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Chapter 1 Brief Instruction

1.1 Brief Instruction

Bita-International HC60 is our newly-developed rugged handheld computer which exhibits extremely powerful performance, and that too while being immensely lightweight and portable. Built with Android 10/ Android 11 OS and Qualcomm high-performance processor, it features a removable large capacity battery and vigorous system configuration. It has rich functionality features for barcode scanning, RFID, NFC, front and rear cameras, etc., and can support 4G and WiFi. The ergonomic narrow-edge design makes it immensely comfortable to operate & employ for numerous projects. The device can be implemented in a wide spectrum of industries, including logistics, warehousing, retail, asset tracking, etc., assisting customers to improve operation and management level significantly.

1.2 Precaution Before Using Battery

- Do not leave batteries unused for extended periods of time, either in the product or in storage. When the battery has been unused for 6 months, check the charge status and charge or dispose of the battery as appropriate.
- The typical estimated life of a Lithium-Ion battery is about two to three years or 300 to 500 charge cycles, whichever occurs first. One charge cycle is a period of use from fully charged, to fully discharged, and fully recharged again. Use a two to three year life expectancy for batteries that do not run through complete charge cycles.
- Rechargeable Lithium-Ion batteries have a limited life and will gradually lose their capacity to hold a charge. This loss of capacity (aging) is irreversible. As the battery loses capacity, the length of time it will power the product (run time) decreases.
- Lithium-Ion batteries continue to slowly discharge (self-discharge) when not in use or while in storage. Routinely check the battery's charge status. The user manual typically includes information on how to check battery status, as well as battery charging instructions.
- Observe and note the run time that a new fully-charged battery provides for powering your product. Use the new battery run time as a basis to compare run times for older batteries. The run time of your battery will vary depending on the product's configuration and the applications that you run.
- Routinely check the battery's charge status.
- Carefully monitor batteries that are approaching the end of their estimated life.
- Consider replacing the battery with a new one if you note either of the following conditions:
- The battery run time drops below about 80% of the original run time.

- The battery charge time increases significantly.
- 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.
- Always follow the charging instructions provided with your product. Refer to your product's user manual and/or online help for detailed information about charging its battery.
- Charge or discharge the battery to approximately 50% of capacity before storage.
- Charge the battery to approximately 50% of capacity at least once every six months.
- Remove the battery and store it separately from the product.
- Store the battery at temperatures between 5 °C and 20 °C (41 °F and 68 °F).

Chapter 2 Installation Guide

2.1 Appearance

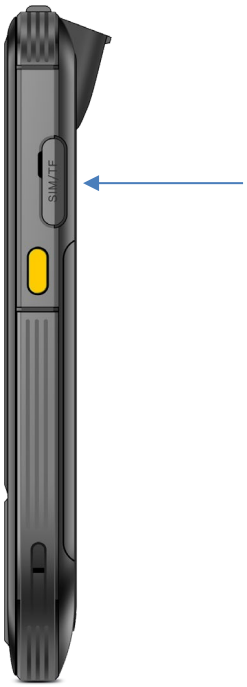
The HC60 device appearance is as follows.

2.2 Buttons

Button	Function
Power Button	Press and hold to turn the device on or off.
Custom Function Button	Customize function by software
SCAN	Scan Button
X	Cancel Button
Num	Switch white keyboard function
Fn	Switch orange keyboard function
Direction Buttons	Move cursor and select different functions
Enter	Enter Button

2.3 Micro SD、SIM card Installation

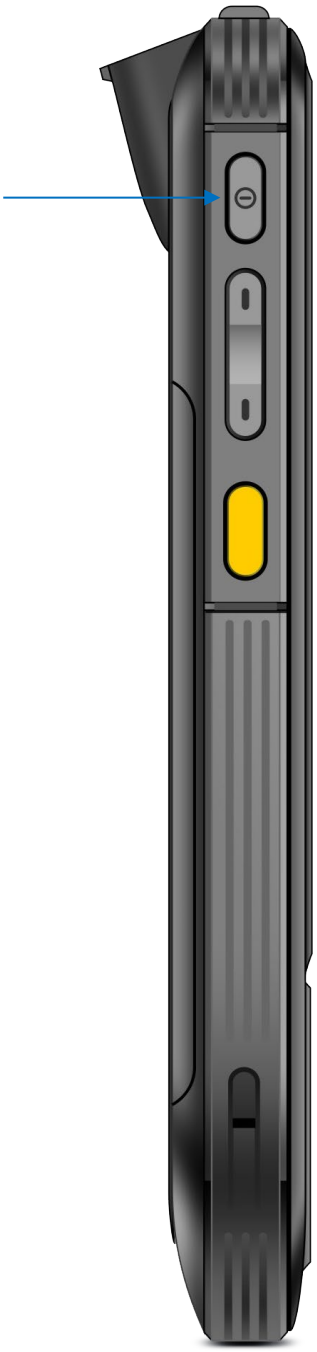
User need to install TF card and SIM card according to the slots of card tray as below. Then insert into slot of SIM/TF.



2.4 Battery Charging

Use the adapter to charge the battery. Don't use other brands of charger for device.

2.5 Device Power on/off



Press the ‘Power’ button on side about 3s due to power on/off. And press it shortly to wake up.

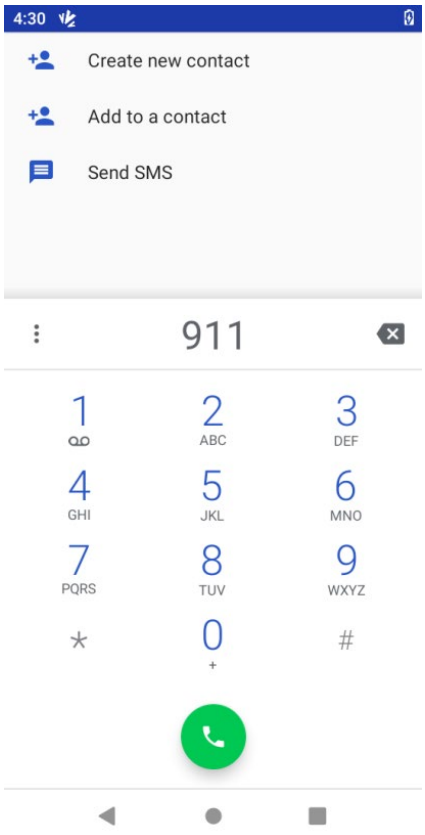
Chapter 3 Call Function

3.1 Phone

Click this icon  .
Click the number button to input the numbers.

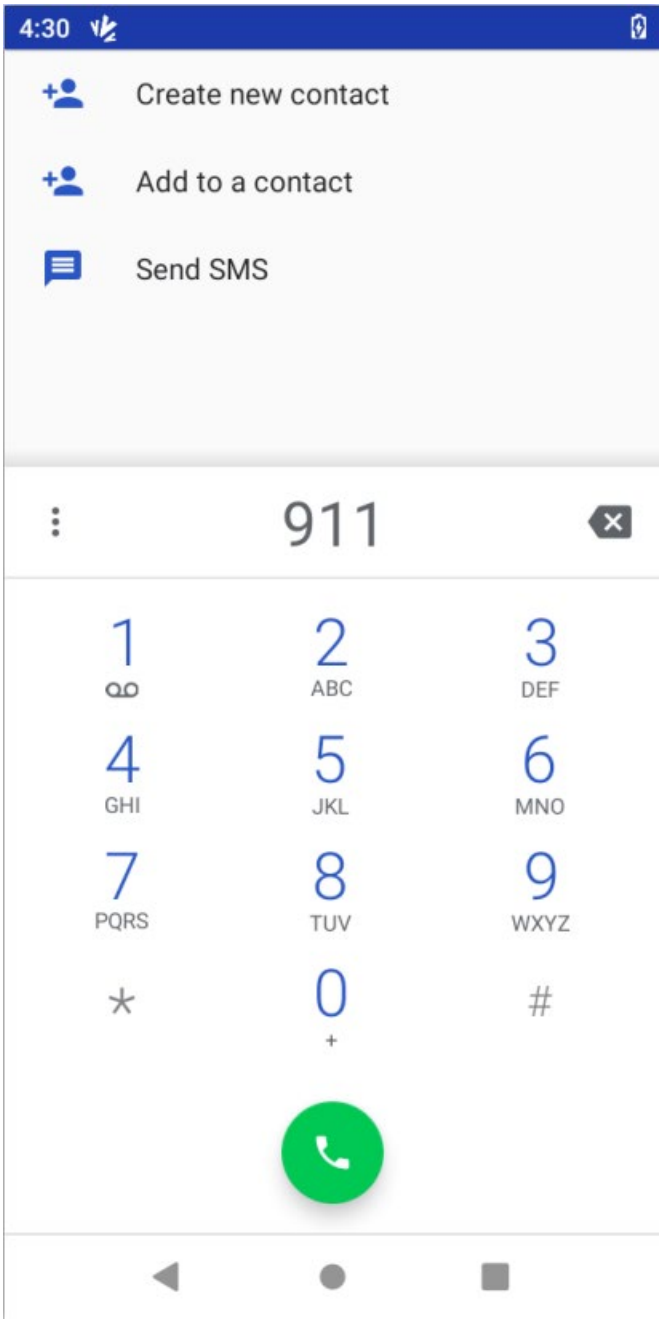
Click the  button to confirm and dial.

Click the  to end the calling.



3.2 Contacts

Click ‘Contacts’ to open the contacts list.
Click “Create new contact” to add the new contact.



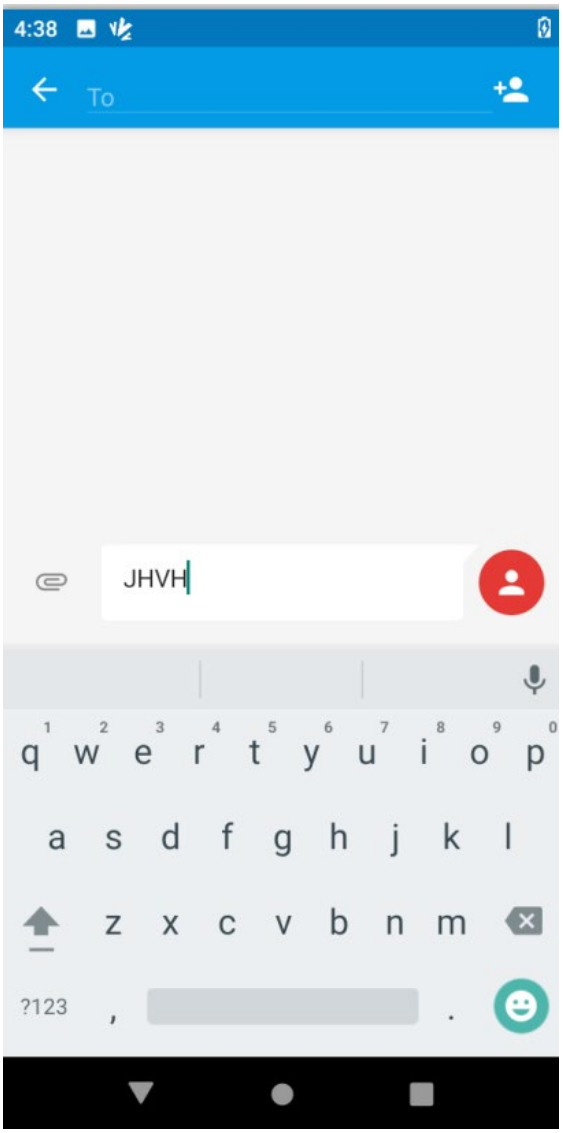
3.3 Messaging

Click  to open the message list.

Click  to input the content.

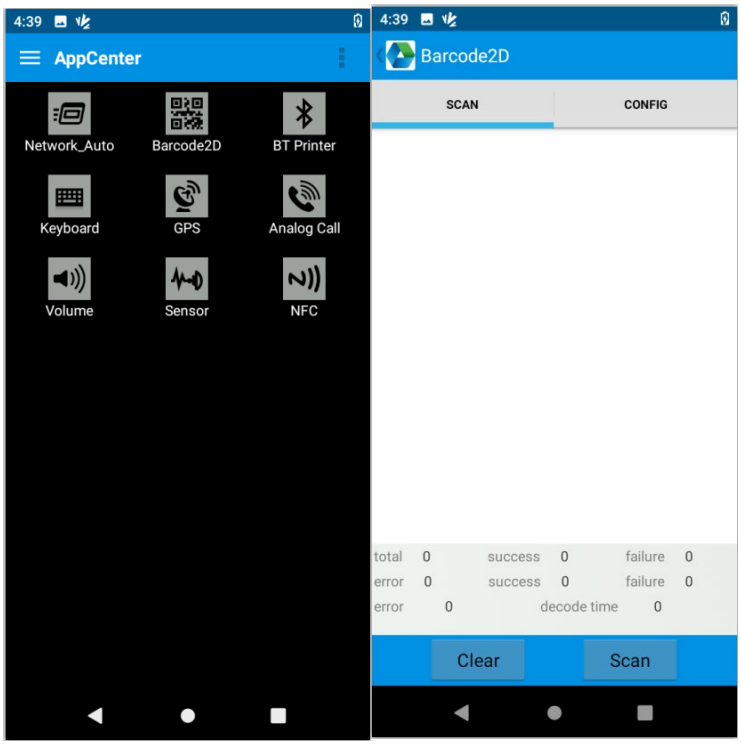
Click  to send the message.

Click  to add photos, videos.

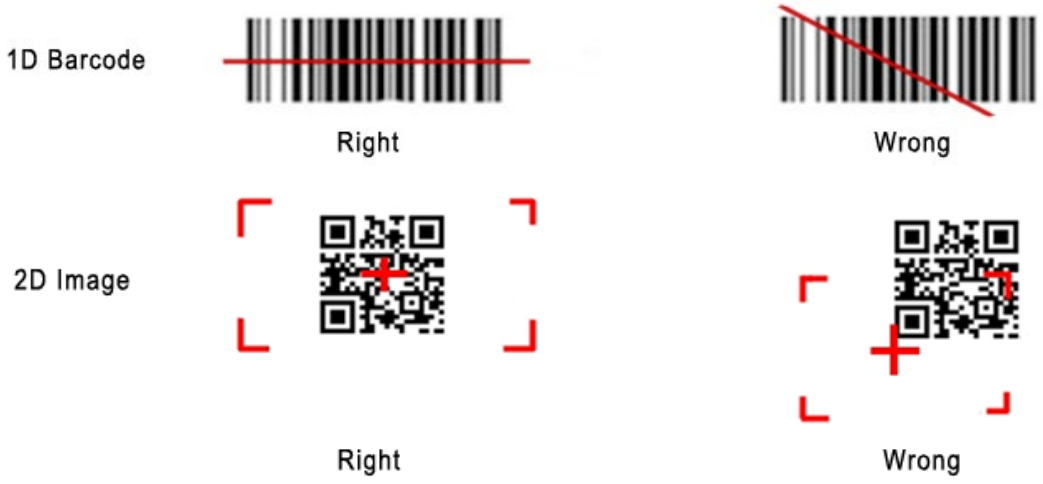


Chapter 4 Barcode Reader

Open the Barcode2D Demo in APP Center and then press the ‘Scan’ button to start scanning.



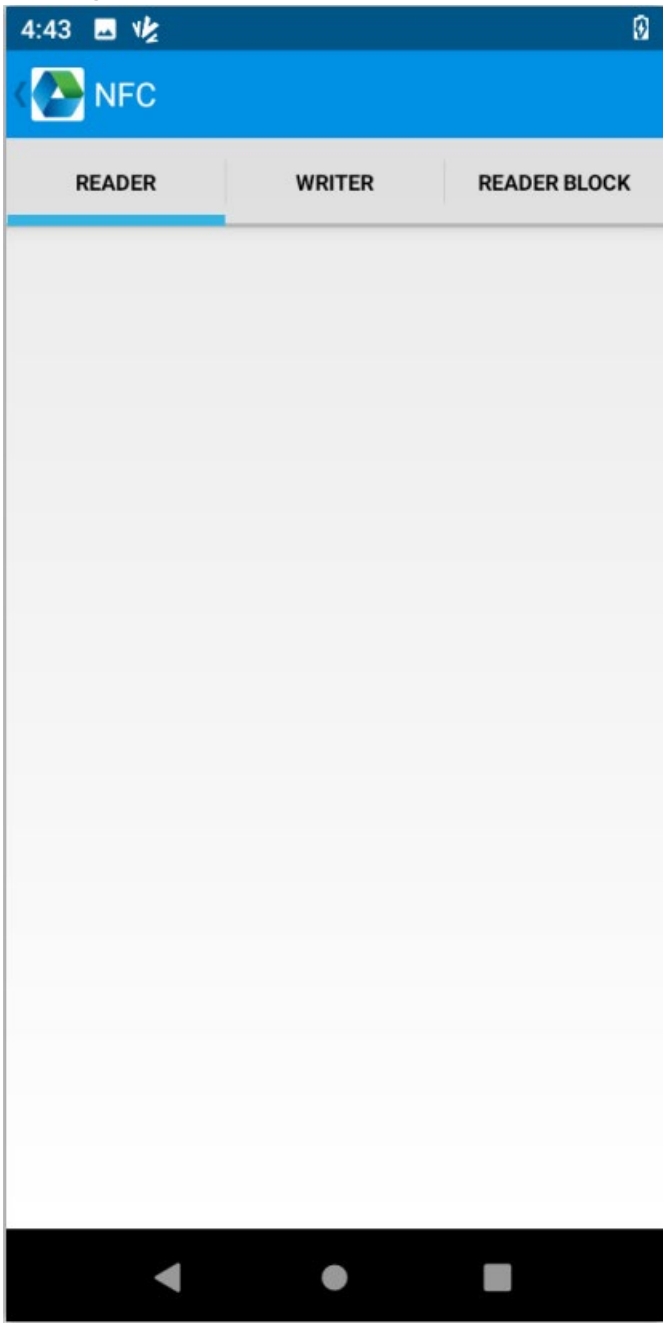
Note: Please scan the barcode correctly, otherwise the scanning might be failed.



Chapter 5 RFID Reader(optional)

5.1 NFC

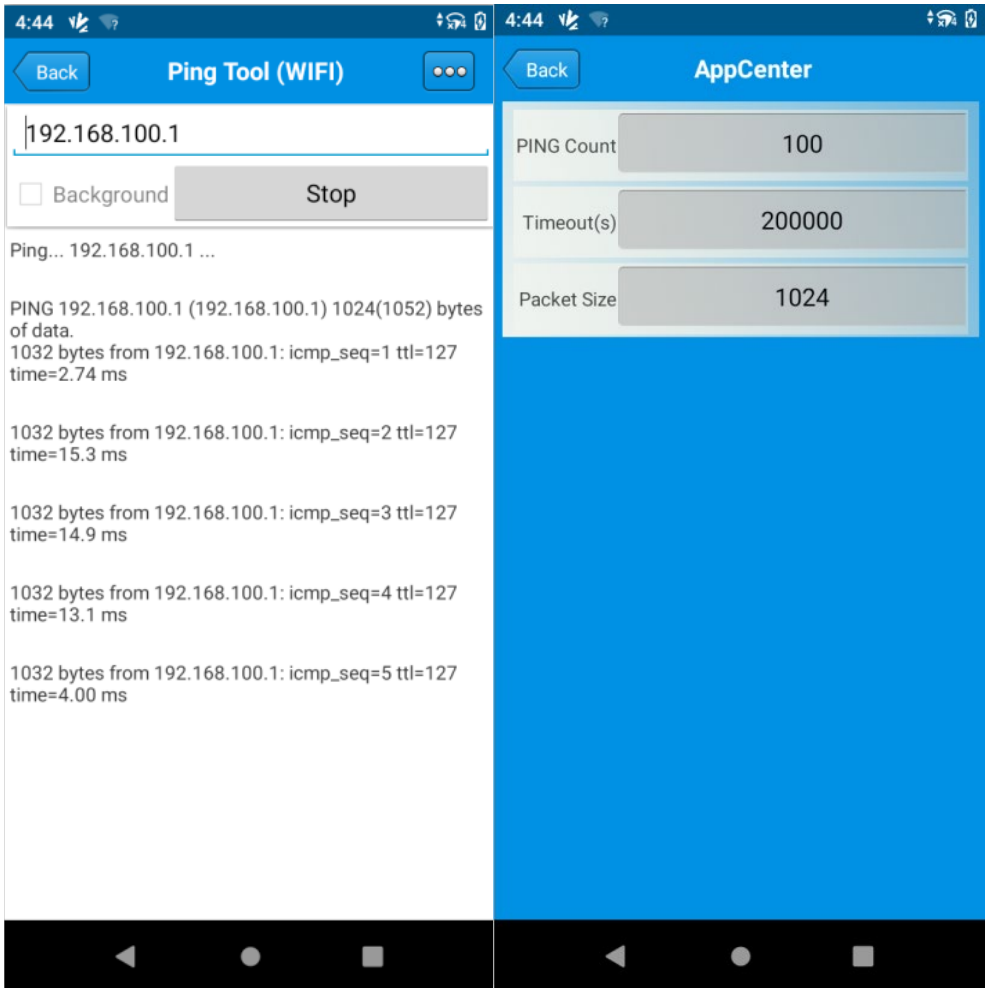
Open the “NFC” demo within Appcenter, and then reading and writing information of the tag.



Chapter 6 Other Functions

6.1 PING

1. Open the Ping in Appcenter.
2. Set the Ping parameters and select the internal/external addresses.

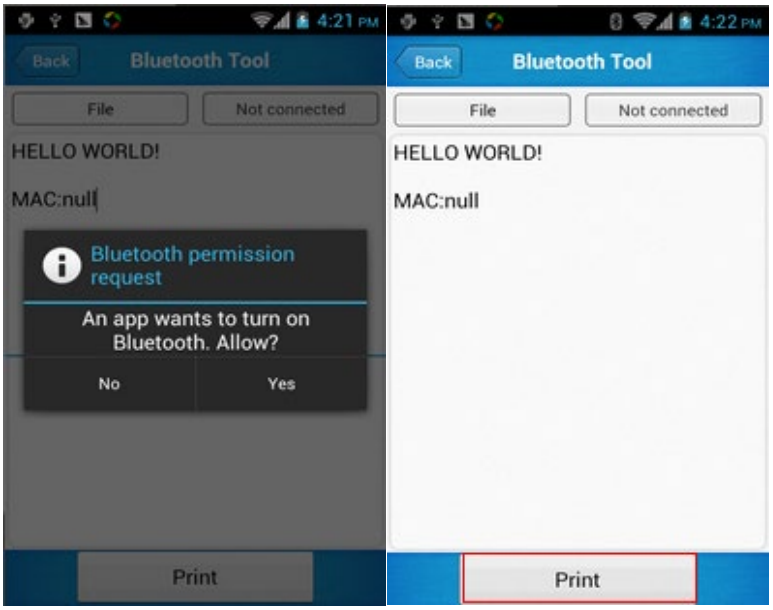


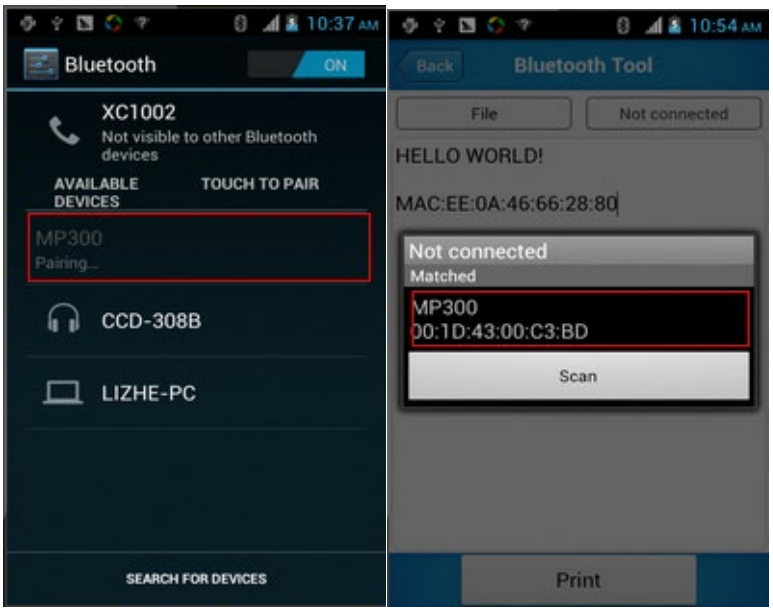
6.2 Bluetooth

1. Open the Bluetooth demo in Appcenter and turn on the Bluetooth.

2. Input the content or select the file, then scan the nearby Bluetooth printer and pair them.

3. Select the printer and click ‘Print’ to print the content.

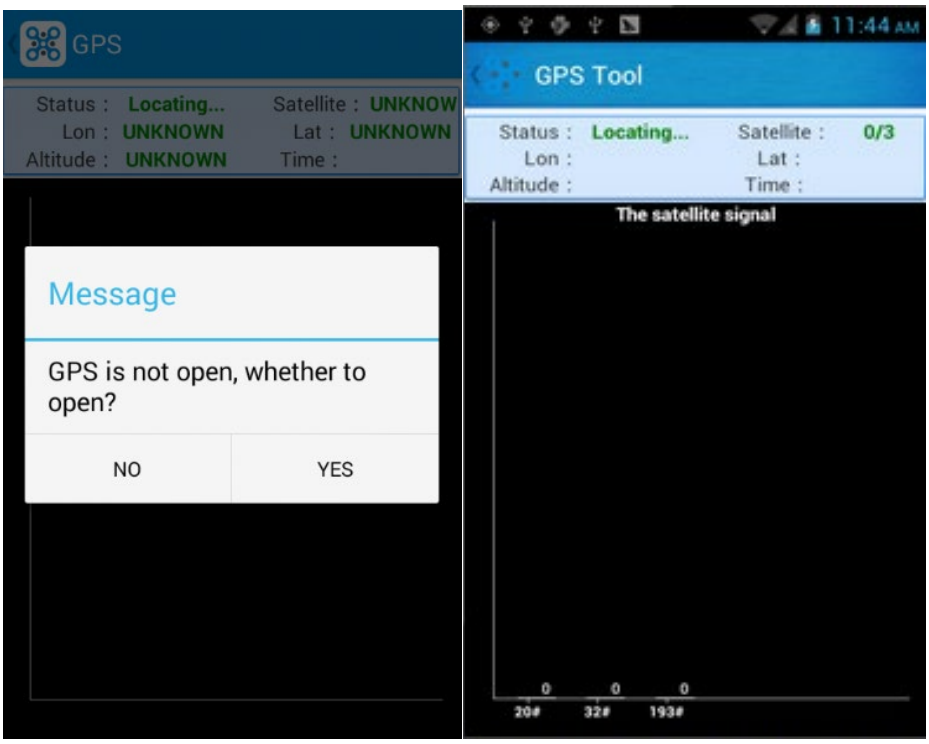




6.3 GPS

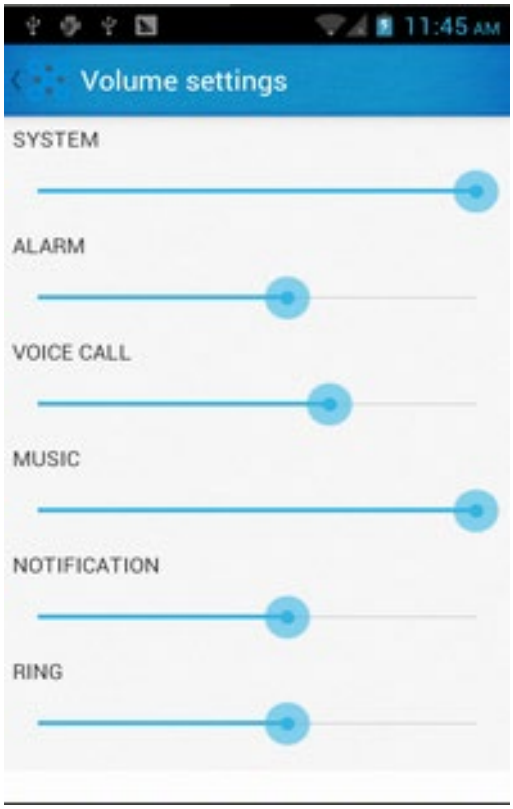
1. Open the GPS demo in Appcenter and turn on GPS module.

2. Set the GPS parameters and get the GPS data information.



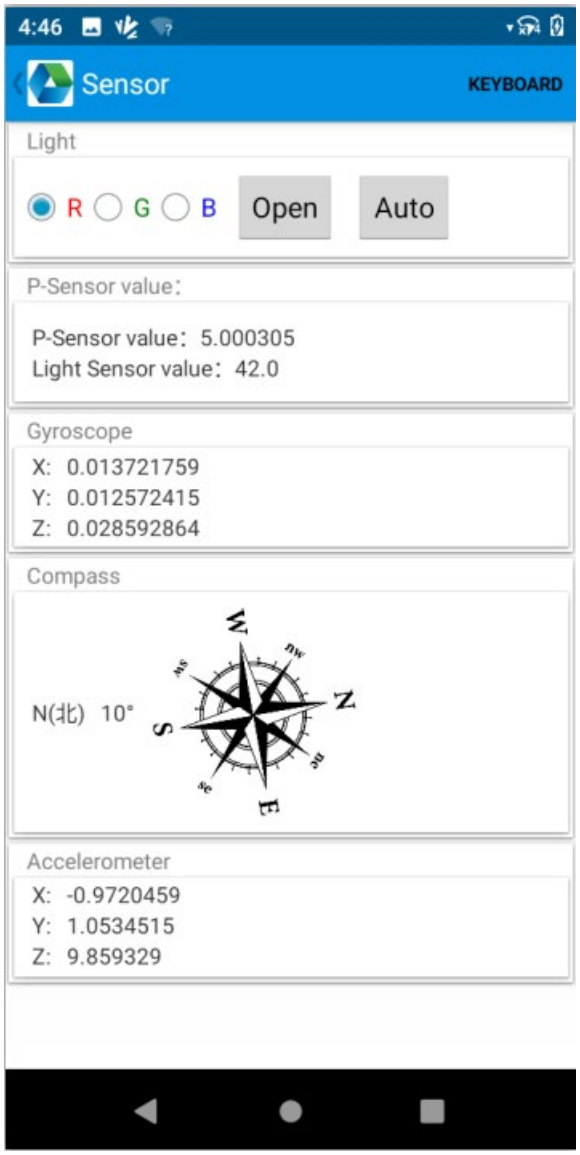
6.4 Volume Settings

1. Open the Volume Setting demo in Appcenter.
2. Set the volumes based on the requirements.



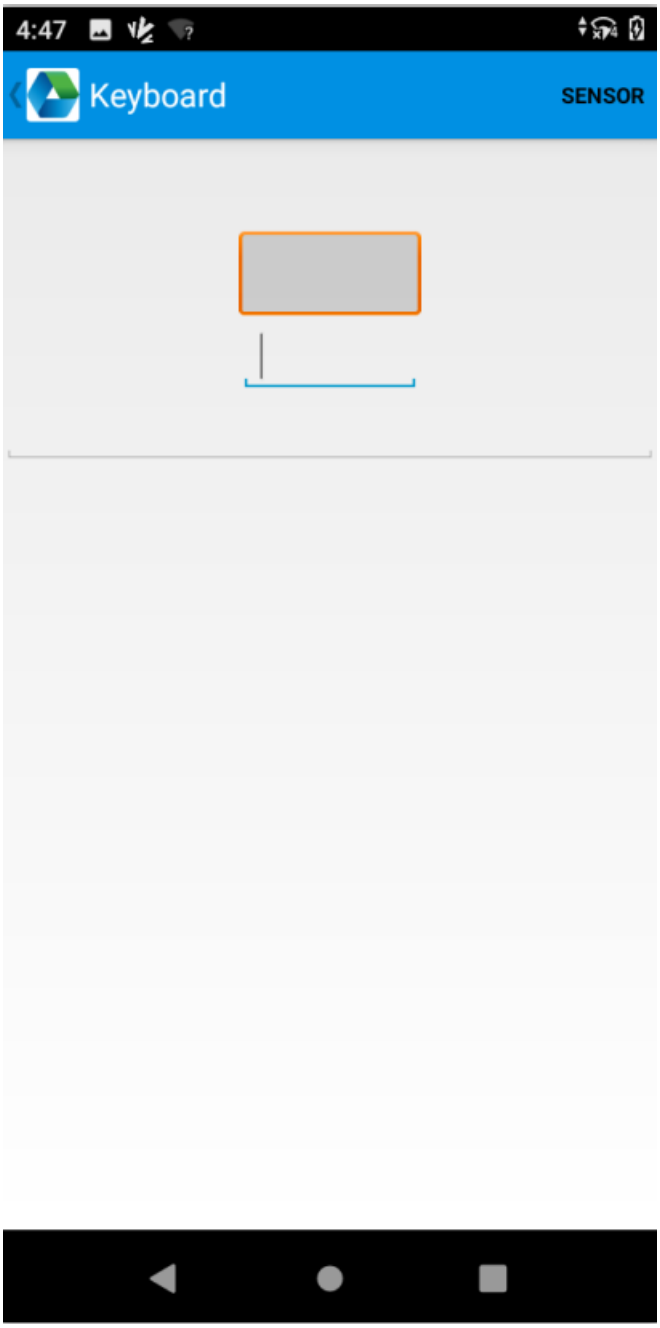
6.5 Sensor

1. Open the Sensor demo in Appcenter.
2. Test the sensor based on the requirements.



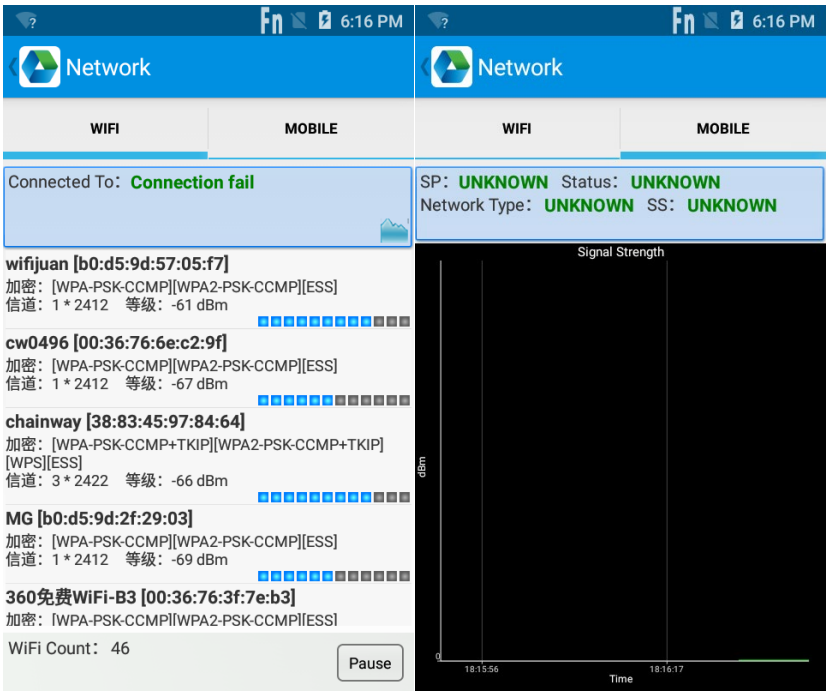
6.6 Keyboard

1. Open the Keyboard demo in Appcenter.
2. Set and test the key values of the device.



6.7 Network

1. Open the Network demo in Appcenter.
2. Test the WIFI/Mobile signal based on the requirements.



Chapter 7 Device Specifications

Physical Parameters

Dimensions	159.5 x 65.7 x 16.8 mm / 6.28 x 2.58 x 0.66 in.
Weight	219g / 7.72 oz. (device with battery)
Screen	4-inch (18:9), IPS LTPS 1080*540
Keyboard	5 side keys : power, 2 scan keys, volume +/- Main keyboard: 22 keys (numeric keys, direction key, screen-lock key, Enter, Del, F1-F10, etc.)
Battery	4350 mAh removable main battery, 2600 mAh pistol battery (UHF version optional) Standby: up to 490 hours (only main battery ; WiFi: up to 470h; 4G: up to 440h) Continuous use: over 12 hours (depending on user environment) Charging time: 2.5 hours (charge device by standard adaptor and USB cable)
Expansion Slot	1 slot for SIM card, 1 slot for SIM or TF card Supports up to 128 GB Micro SD card
SIM Slot	1 slot for SIM card, 1 slot for SIM or TF card
Camera	Front Camera 5MP Rear Camera Rear 13MP Autofocus with flash

Performance Parameters

CPU	Qualcomm 1.8 GHz Octa-core / Cortex-A53 2.0GHz Octa-core
OS	Android 10 / Android 11

Memory	3GB+32GB
Interface	USB2.0, Type-C, OTG
Storage Card Type	TF card
Maximum Expansion Storage	128GB

Environmental Parameters

Operating Temperature	-20 ℃~+50 ℃
Storage Temperature	-40 ℃~+70 ℃
Humidity	5%RH-95%RH (non-condensing)
Dropping Survive	Multiple 2.0 m / 6.56 ft. drops to the concrete across the operating temperature range
Sealing	IP65, IEC compliance
Tumble Specification	1000 x 0.5 m/1.64 ft falls at room temperature

Wireless Communication

WWAN	2G: 850/900/1800/1900 MHz 3G: CDMA EVDO: BC0 WCDMA: 850/900/1700/1900/2100MHz TD-SCDMA: A/F(B34/B39) 4G: B1/B2/B3/B4/B5/B7/B8/B12/B13/B17/B20/B28/ B38/B39/B40/B41
WLAN	Support 802.11 a/b/g/n/ac/d/e/h/i/k/r/v, 2.4G/5G dual-band, IPV4,IPV6; Fast roaming: PMKID caching, 802.11r, OKC

	Operating Channels: 2.4G(channel 1~13), 5G(channel36,40,44,48,52,56,60,64,100,104, 108,112,116,120,124,128,132,136,140,144,149, 153,157,161,165) Depends on local regulations Security and Encryption: WEP,WPA/WPA2-PSK(TKIP and AES), WAPI-PSK—EAP-TTLS,EAP-TLS, PEAP-MSCHAPv2, PEAP-LTS,PEAP-GTC, etc.
Vo-LTF	Support Vo-LTE HD video voice call
Bluetooth	Bluetooth 4.2/4.1+HS/4.0/3.0+HS/2.1+EDR
GNSS	GPS/AGPS, GLONASS, Galileo, Internal Antenna

Data Collection

2D Barcode Scan Engine	Zebra: SE4710; Honeywell: N6603; Coasia: IA166S	
	1D Symbologies	UPC/EAN, Code128, Code39, Code93, Code11, Interleaved 2 of 5, Discrete 2 of 5, Chinese 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 (KIX),etc.
RFID	NFC	

Developing Environment

SDK	Bita-International SDK
Programming Language	Java
Developing Tool	Eclipse/Android Studio

Hereby, [Bita-International Co., Ltd.] declares that the radio equipment type [HC60] is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.bita.com.tw

The device is restricted to indoor use only when operating in the 5150 to 5250 MHz frequency range.

	AT	BE	BG	HR	CY	CZ	DK
	EE	FI	FR	DE	EL	HU	IE
	IT	LV	LT	LU	MT	NL	PL
	PT	RO	SK	SI	ES	SE	UK

The SAR limit of Europe is 2.0 W/kg. Device types HC60 has also been tested against this SAR limit. The highest SAR value reported under this standard during product certification for use at the ear is 0.219W/kg and when properly worn on the body is 1.216 W/kg. This device was tested for typical body-worn operations with the back of the handset kept 0.5cm from the body. To maintain compliance with RF exposure requirements, use accessories that maintain a 0.5cm separation distance between the user's body and the back of the handset. The use of belt clips, holsters and similar accessories should not contain metallic components in its assembly. The use of accessories that do not satisfy these requirements may not comply with RF exposure requirements, and should be avoided.

This radio equipment operates with the following frequency bands and maximum radio-frequency power：

Operating Mode	Operating Frequency Range		Maximum Transmit Power (Conducted) dBm
	TX(MHz)	RX(MHz)	
GSM900	880 - 915	925 - 960	32
GSM1800	1710 - 1785	1805 - 1880	30.5
UTRA FDD BAND 1	1920 - 1980	2110 - 2170	23.5
UTRA FDD BAND 8	880 - 915	925 - 960	23
E-UTRA FDD BAND 1	1920-1980	2110-2170	23.5
E-UTRA FDD BAND 3	1710-1785	1805-1880	23
E-UTRA FDD BAND 7	2500-2570	2620-2690	23
E-UTRA FDD BAND 8	880-915	925-960	22.5
E-UTRA FDD BAND 20	832-862	791-821	24
E-UTRA FDD BAND 28	703-748	758-803	23
E-UTRA FDD BAND 38	2570-2620		23
E-UTRA FDD BAND 40	2300-2400		22.5
Operating Mode	Operating Frequency Range		Maximum Transmit Power (EIRP) dBm
	TX(MHz)	RX(MHz)	
Bluetooth	2402 - 2480		12.35
2.4G WiFi (20MHz)	2412 - 2472		17.78
2.4G WiFi (40MHz)	2422 - 2462		17.78
5G WiFi (20MHz)	5180 - 5240		13.78
5.8G Non-Specific SRD	5745 - 5825		13.85

Operating Mode	Operating Frequency Range	Strength Field
NFC	13.56	-14.95 dBu A/m at 10m

Caution: Risk of explosion if battery replaced by an incorrect type. Dispose of used batteries according to the instructions.

Adapter shall be installed near the equipment and shall be easily accessible.

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