

Shenzhen Chainway Information Technology Co.,Ltd.

Mobile Data Terminal

C72 User Manual



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Statement

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Chapter 1 Product Intro

1.1 Intro

Chainway C72 is an industrial-grade Android mobile computer. With an in-built Zebra scan engine, the device ensures powerful barcode scanning performance that can accurately & quickly read various Symbologies of 1D/2D barcode labels even if the barcode is dirty, damaged, or wrinkled. In addition, C72 features Android 11 / 8.1 OS, Octa-core processor, 8000mAh powerful battery, 13 MP camera, and optional NFC reading. The device is perfectly suitable for various applications in power inspection, asset management, retail, warehousing, logistics, finance & manufacturing industries, etc.

1.2 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 checked 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 use, it will continue to 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).

1.3 Charger

The charger type is NA010050020, output voltage/current is 5V DC/2A. The plug considered as disconnect device of adapter.

1.4 Notes

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

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

Note: The suitable temperature for the product and accessories is -20°C to 50°C.

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

Chapter 2 Installation instructions

2.1 Appearance

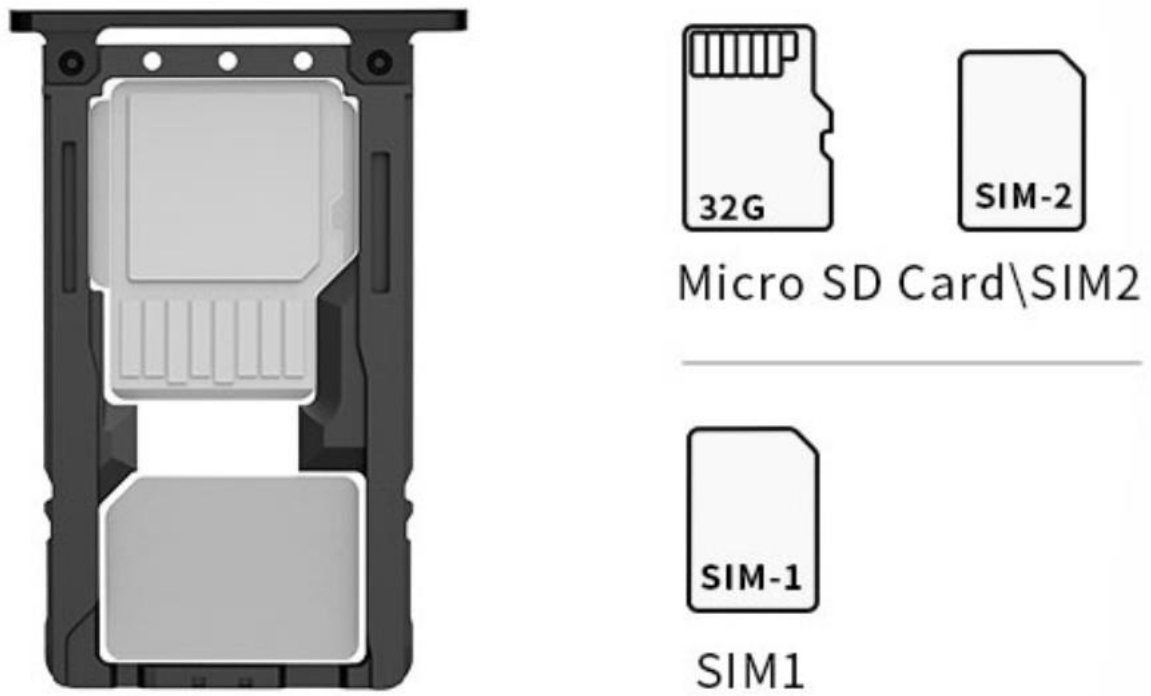


Buttons instruction

Button		Description
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	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.

2.2 Install Micro SD and SIM cards

The cards sockets are showing as follows:



2.3 Battery charge

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.

2.4 Buttons and function area display

C72 has 4 side buttons, 4 main buttons and trigger on pistol, UHF scanning area, 2D scanning module, HD camera and flashlight locate on the top.

Chapter 3 Call function

3.1 Calling numbers

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

3.2 Contacts

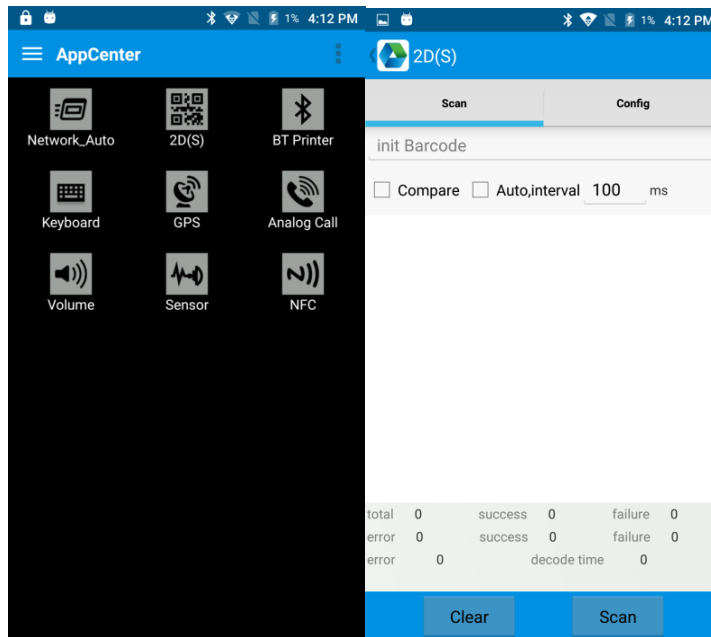
1. Click contacts to open contacts list.
2. Click icon  to add new contacts.
3. Click icon  to import/export contacts.

3.3 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.

Chapter 4 Barcode reader-writer

1. In App Center, to open 2D barcode scan test.
2. Press “SCAN” button or click scan key to start scanning, the parameter “Auto interval” can be adjusted.



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

1D barcode:



Correct



Incorrect

2D code:



Correct



Incorrect

Chapter 5 Infrared read-write function

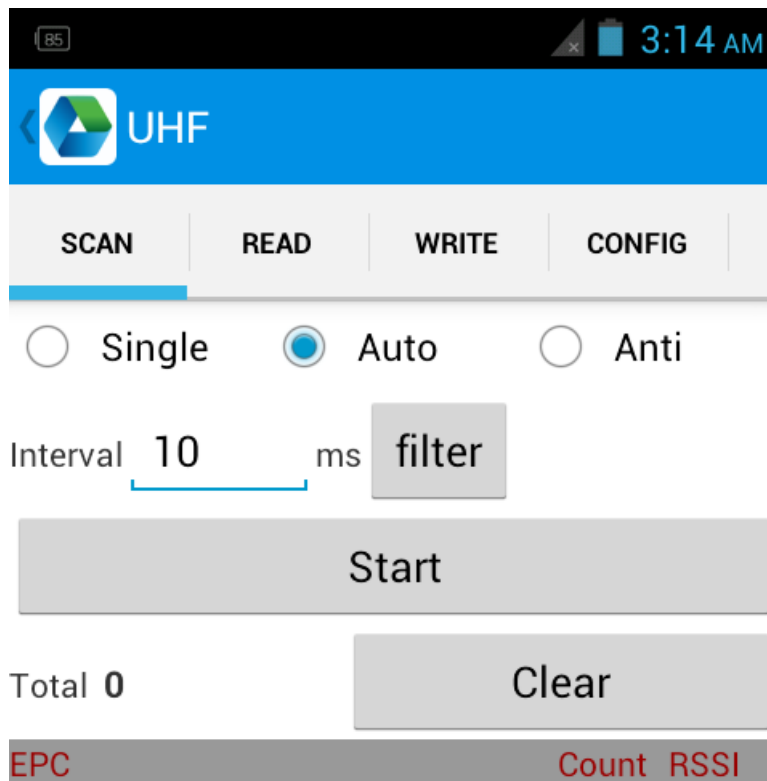
1. Open infrared function in App Center.
2. Click button “Open” to start infrared scanning function. Click “LED” for infrared scanning aim assist. Depending on different application status to compile different commands to realize infrared read and write function.

The screenshot shows the 'Infrared' app interface. At the top, there's a status bar with a lock icon, signal strength, 30% battery, and 6:48 PM. Below the title bar, there's a 'Check:' dropdown menu set to 'None', and 'Open' and 'Close' buttons. A status bar shows 'success 0', 'failure 0', and 'elapsed time 0'. The main area has a 'Received data' label and a large text input field containing the hexadecimal string '68AAAAAAAAAAAA68010243C3D516'. At the bottom, there are checkboxes for 'Auto' (unchecked) and 'HEX' (checked), an 'Interval' field set to '1' s, and radio buttons for '97' (selected) and '07'. There are also checkboxes for 'Get Power' (unchecked) and 'LED' (unchecked). At the very bottom, there are 'Clear' and 'Send' buttons.

Chapter 6 RFID reader

6.1 UHF

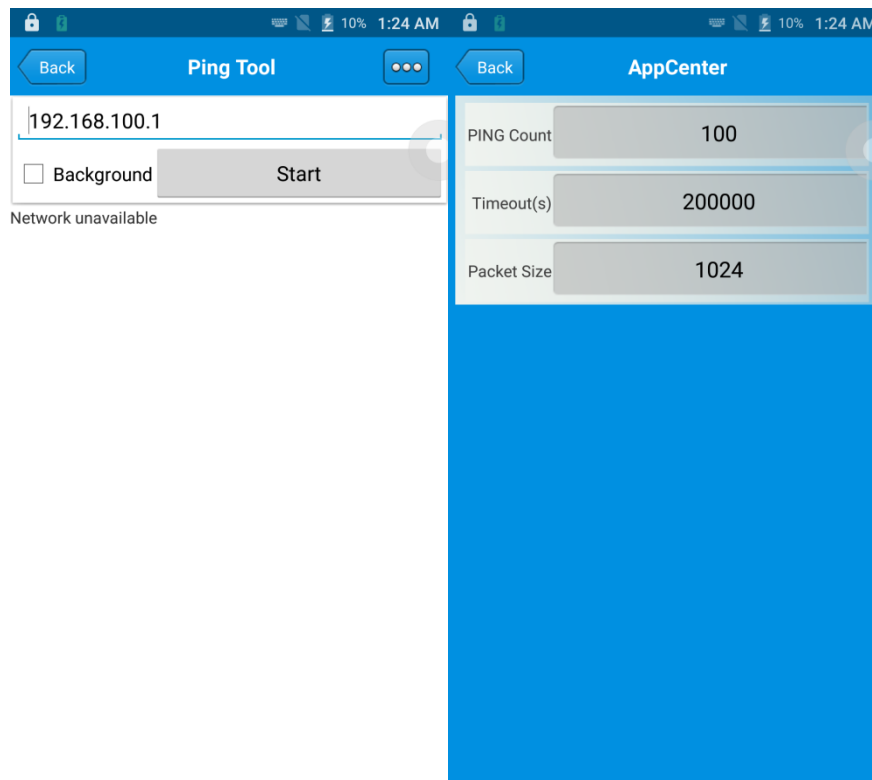
Click App Center, open “UHF” to read and write, kill and lock UHF tag.



Chapter 7 Other functions

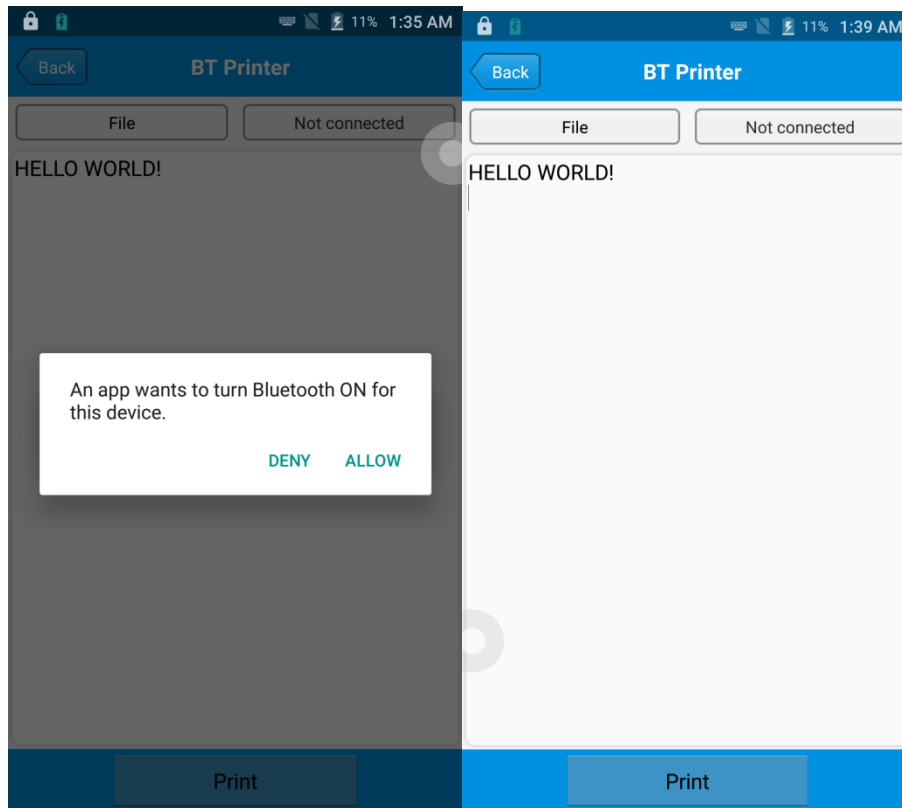
7.1 PING tool

1. Open “PING” in App Center.
2. Setup PING parameter and select external/internal address.



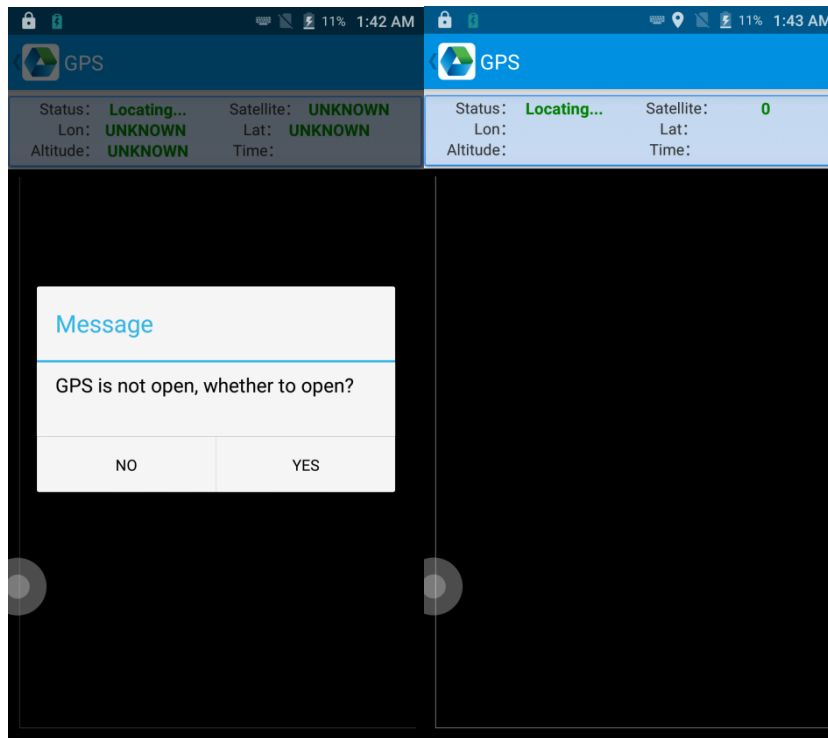
7.2 Bluetooth

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.



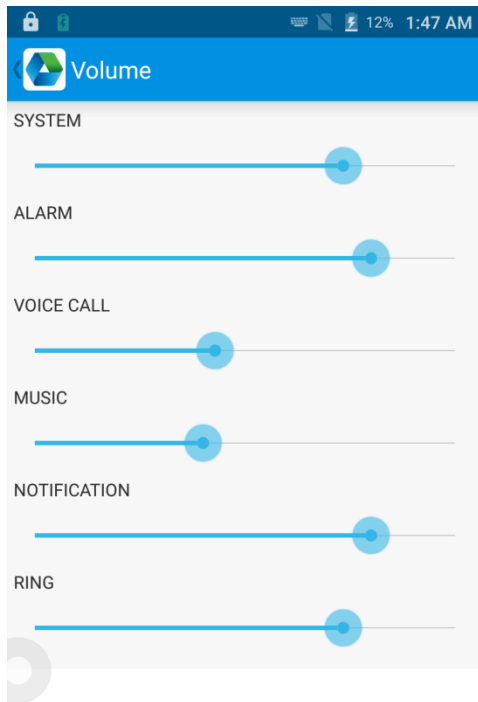
7.3 GPS

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



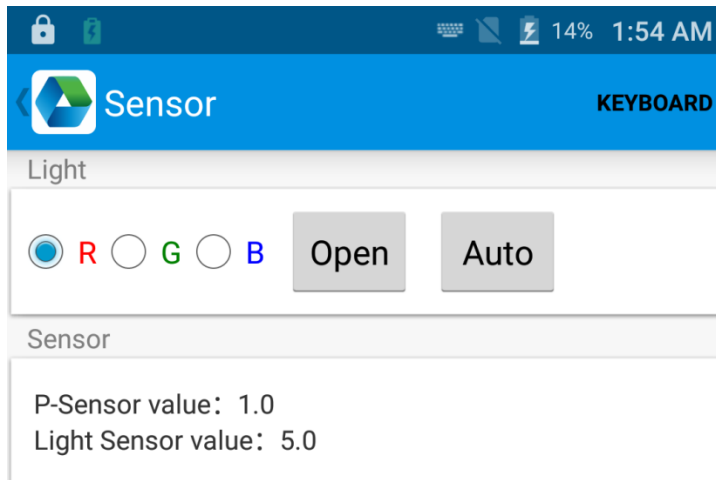
7.4 Volume setup

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



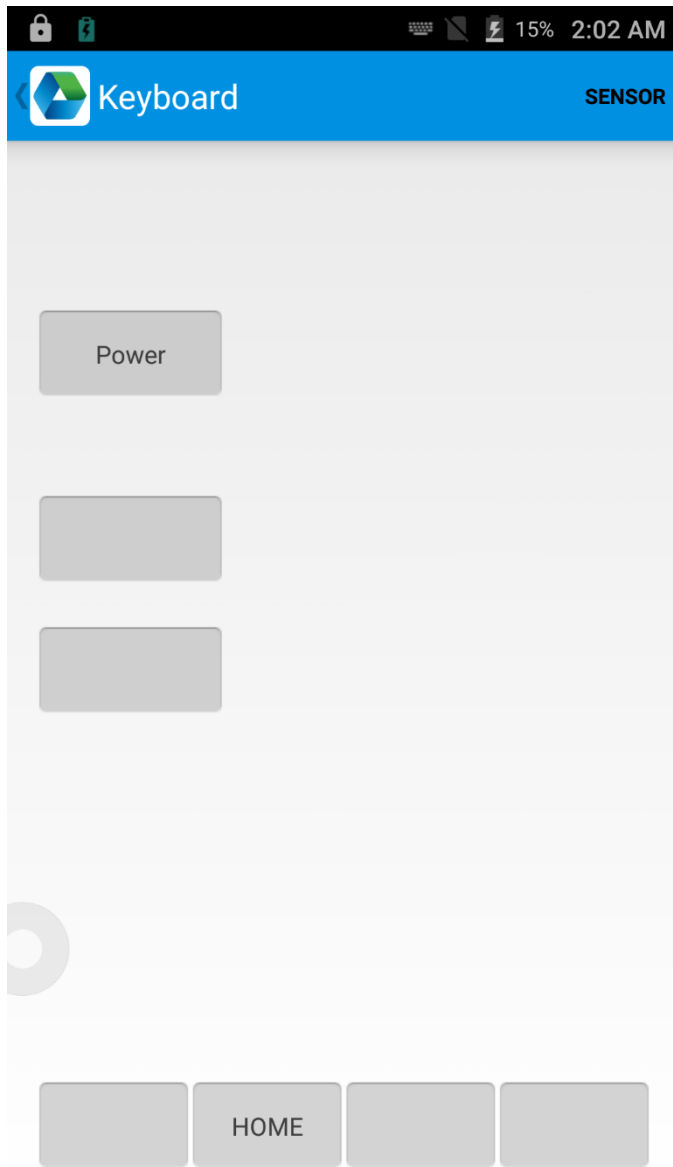
7.5 Sensor

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



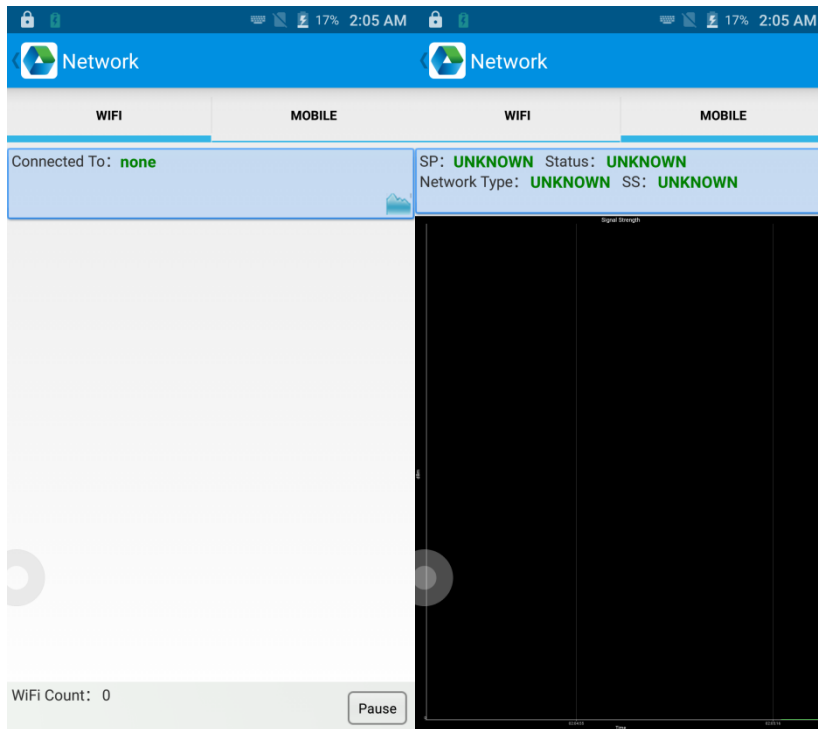
7.6 Keyboard

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



7.7 Network

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



7.8 Keyboard emulator (optional)

The keyboard emulator can be used in multiple operating background and output formats directly. And it includes Prefix/Suffix/Enter/TAB.

Please check Keyboard emulator manual for more details.

The screenshot shows the 'Keyboard Emulator 1.7.1' application interface. At the top, there's a status bar with a lock icon, a battery icon, and the text '18% 2:14 AM'. Below the status bar is a header bar with a yellow icon and the text 'Keyboard Emulator 1.7.1'. The main interface is divided into several sections: a 'Function' section with a list of checkboxes and labels (Barcode_1D, Barcode_2D, RFID_14443A, RFID_15693, UHF) and corresponding 'Keypcode' input fields; a 'Process mode' section with two radio buttons ('Keyboard input' and 'Clipboard'); an 'Extras' section with 'Prefix' and 'Suffix' input fields; and an 'End mark' section with two checkboxes ('Enter' and 'TAB').

Keyboard Emulator 1.7.1

☐ Open

Function

☐ Barcode_1D Keypcode

☐ Barcode_2D Keypcode

☐ RFID_14443A Keypcode

☐ RFID_15693 Keypcode

☐ UHF Keypcode

Process mode

☒ Keyboard input

☐ Clipboard

Extras

Prefix

Suffix

End mark

☐ Enter

☐ TAB

Chapter 8 Device characteristic

Physical characteristics

Size	164.2 x 80.0 x 24.3 mm
Weight	<654g(battery included)
Display	5.2 inch, IPS FHD 1920*1080P
Touch panel	4 main keyboards, 1 power button, 2 scan buttons, 1 multi-function button
Battery	Li-ion, rechargeable, 8000mAh
Expansion	Supports up to 32 GB Micro SD card
Expansion Slot	1 slot for SIM card, 1 slot for SIM or TF card
Audio	speaker, 2 microphones, voice call
Camera	13MP autofocus camera with flashlight

Performance

CPU	Cortex-A53 2.3 GHz Octa-core
OS	Android 11
RAM	3GB
Communication Interface	USB2.0,Type-C,OTG
ROM	32GB
Max.expansion	Supports up to 128 GB Micro SD card

User environment

Operating temp.	-20°C to 50°C
Charging temp	-20 to 40°C
Storage Temp.	-40°C to 70°C
Humidity	5%RH - 95%RH non condensing
Sealing	IP65, IEC sealing standard
Drop specification	Multiple 1.8m/4.0ft drops to the concrete

Communication

WWAN	2G: GSM850/GSM900/DCS1800/PCS1900 3G: WCDMA: B1/B2/B4/B5/B8 CDMA2000 EVDO: BC0 TD-SCDMA: A/F 4G: B1/B2/B3/B4/B5/B7/B8/B12/B17/B20/B28A/B28B/B38/B39/B40/B41
WLAN	IEEE802.11 a/b/g/n/ac, 2.4G/5G dual-band, internal antenna
WPAN	Bluetooth 5.0, BR+EDR+LE, Supports 1M and 2M

Data collection

Barcode Scanning	Zebra: SE4710
RFID	NFC 13.56Mhz

Developing Environment

SDK	Chainway software develop kit
Language	Java
Develop	Eclipse/Android Studio

Appendix

Restrictions:

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

This device is restricted to indoor use where operated in the European Community using frequency in 5150MHz-5350MHz to reduce the potential for interference.

Simplified EU declaration of conformity

Hereby, Shenzhen Chainway Information Technology Co., Ltd. declares that the radio equipment type C72 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.chainway.net

Signature:

SAR Information

The SAR limit of Europe is 2.0 W/kg. Device types C72 has also been tested against this SAR limit. The maximum SAR value was 0.15 W/kg for the head, 1.315 W/kg for the body, 1.961 W/kg for the limbs.. 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.

Frequency bands and power

	Bands	Operation Frequency	Max.Power
GSM	900	880-915MHz	32 dBm
	1800	1710-1785MHz	29 dBm
WCDMA	1	1920-1980MHz	22.5 dBm
	8	880-915MHz	24 dBm
LTE	1	1920-1980MHz	22.5 dBm
	3	1710-1785MHz	23 dBm
	7	2500-2570MHz	23 dBm
	8	880-915MHz	23 dBm
	20	832-862MHz	23 dBm
	28	703-748MHz	23 dBm
	38	2570-2620MHz	23 dBm
	40	2300-2400MHz	23 dBm
Bluetooth	2.4GHz	2402-2480 MHz	EIRP 8.92 dBm
Wi-Fi	2.4GHz	2412-2472MHz	EIRP 19.61 dBm
	5GHz	5180-5240MHz	EIRP 16.59 dBm
		5260-5320MHz	EIRP 15.53 dBm
		5500-	EIRP 17.01

		5700MHz	dBm
		5745-5825MHz	EIRP 13.88 dBm
RFID		865.7-867.5MHz	ERP 32.332 dBm
GNSS		1559-1610MHz	-
NFC		13.56MHz	-10.48 dBμA/m at 10m

FCC statements:

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.

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications or changes to this equipment. Such modifications or changes 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.

The SAR limit of USA (FCC) is 1.6 W/kg averaged over one gram of tissue. Device types C72(FCC ID: 2AC6AC72P) has also been tested against this SAR limit.

The exposure standard for wireless mobile hotspots employs a unit of measurement known as

the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6W/kg. Tests for SAR are

conducted using standard operating (10 mm) positions accepted by the FCC with the mobile

hotspot transmitting at its highest certified power level in all tested frequency bands. The SAR

guideline includes a considerable safety margin designed to assure the safety of all persons

regardless of age and health.

The FCC has granted an Equipment Authorization for this model mobile hotspot with all reported

SAR levels evaluated as in compliance with the FCC RF exposure guidelines.

The device for operation in the band 5150 – 5350 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.