

ShenZhen Chainway Information Technology Co., Ltd

Mobile Data Terminal

C66 User Manual



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Statement

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Chapter 1 Product intro

1.1 Intro

Chainway C66 is a newly-developed rugged handheld computer with large screen and strong extensibility. Based on Android 11.0 OS, it is equipped with Qualcomm Octa-core processor for high-speed processing. With 5.5-inch high-definition display, it is integrated with barcode scanning, NFC and other functions. The data collection device supports quick charge and UHF sled for good extensibility that can meet the needs in logistics, warehouse, manufacturing, retail, asset tracking, power patrol inspection, 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 DBS15QG(EU)/ DBS15Q(US), output voltage/current is 9V 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 operating temperature for the product and accessories is -20 °C to 50 °C . Charging temperature is -20 °C to 40 °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

C66 back and front appearances are showing as follows:

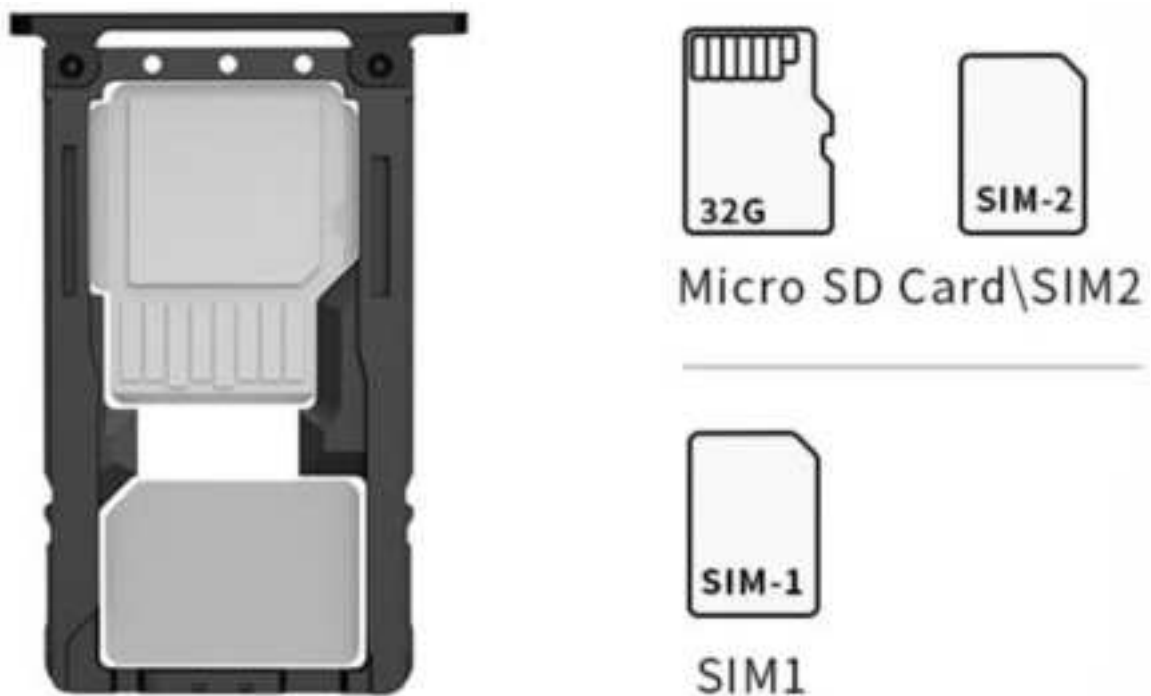


Buttons instruction

Button		Description
Side button	1. Power	Locate on right side, press to ON/OFF device.
	2. PTT key	Locate on right side, its function can be defined by software.
	3.SCAN	Scanning button located on both sides. There are two scanning buttons.
	4. Volume +/-	Volume up and down

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.

Note:

1. Main logic is pistol grip battery will work as power bank to give power to main device battery, when device battery power is under 50 percent, it start to charge the main device battery. It will keep charging until pistol grip battery is at percentage of 15%.
2. Once installed the pistol grip to main device, must restart the device once so the pistol grip battery will be correctly detected.
3. When put the device with pistol grip together to charge, it will charge main device battery first, once main device battery is up to 95%, it will start to charge pistol grip battery.




2.4 Buttons and function area display

C66 has 6 side buttons, 2D scanning module locates on the top. HD camera and flashlight locate at rear. NFC identification surrounds the camera.





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.

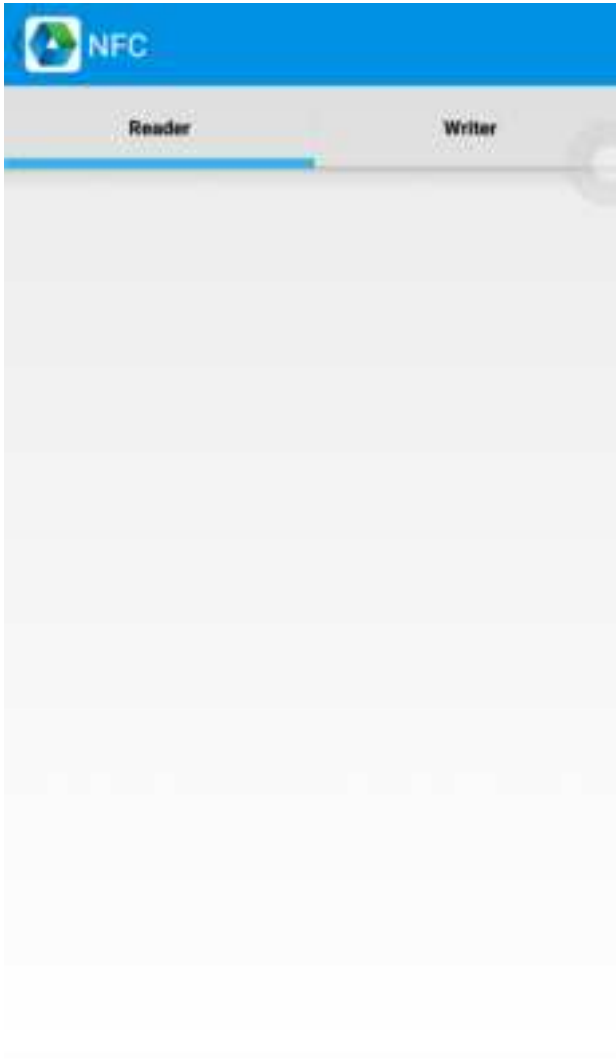
2D code:



Chapter 5 RFID reader

5.1 NFC

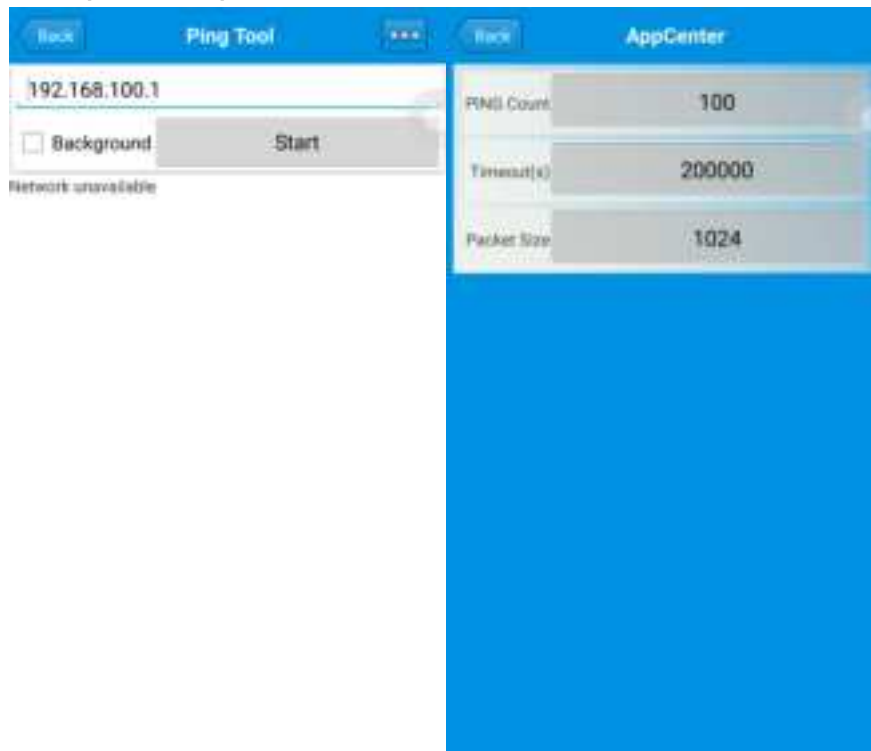
Click App Center, open “NFC” to read and write tag information.



Chapter 6 Other functions

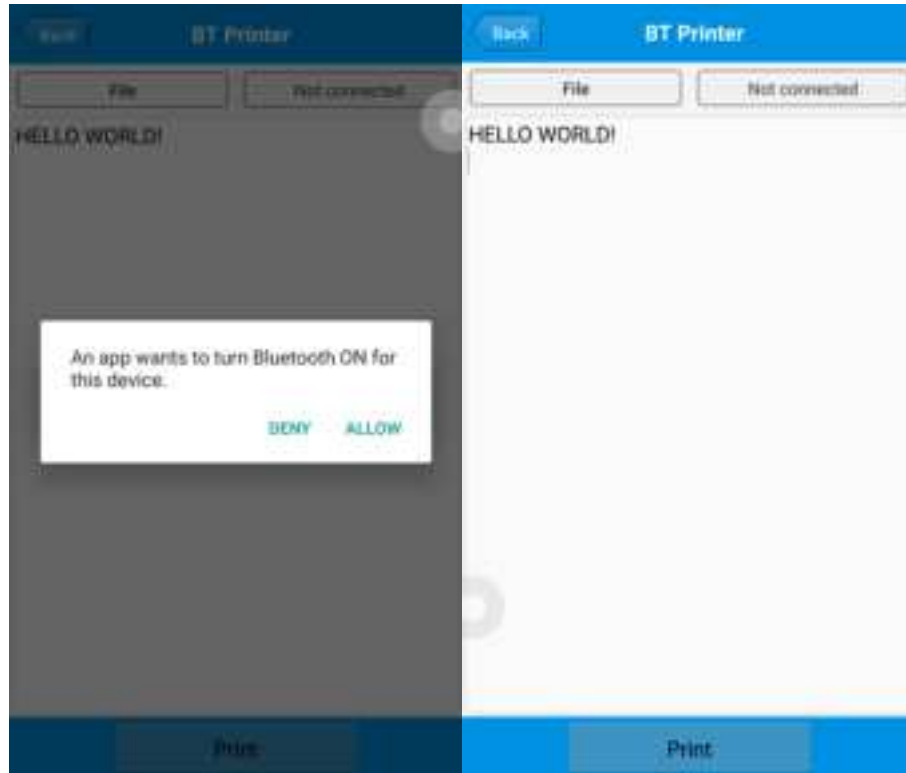
6.1 PING tool

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



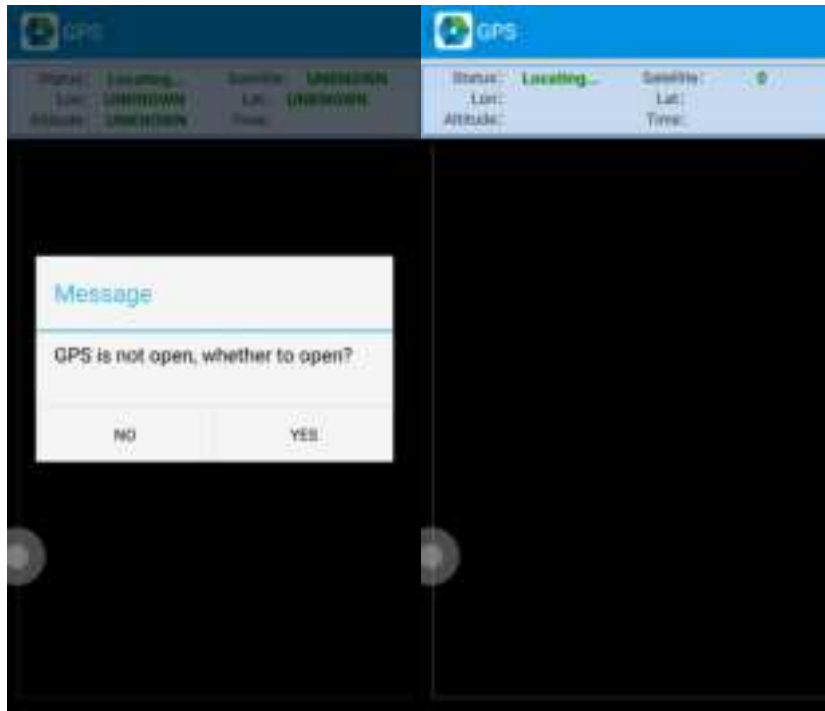
6.2 Bluetooth

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.



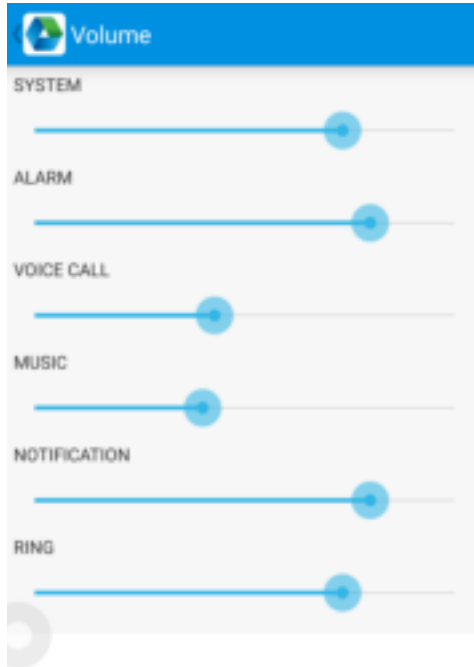
6.3 GPS

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



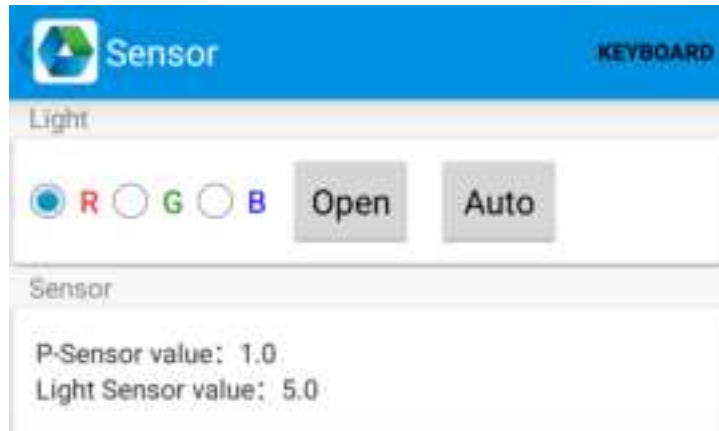
6.4 Volume setup

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



6.5 Sensor

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



6.6 Keyboard

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



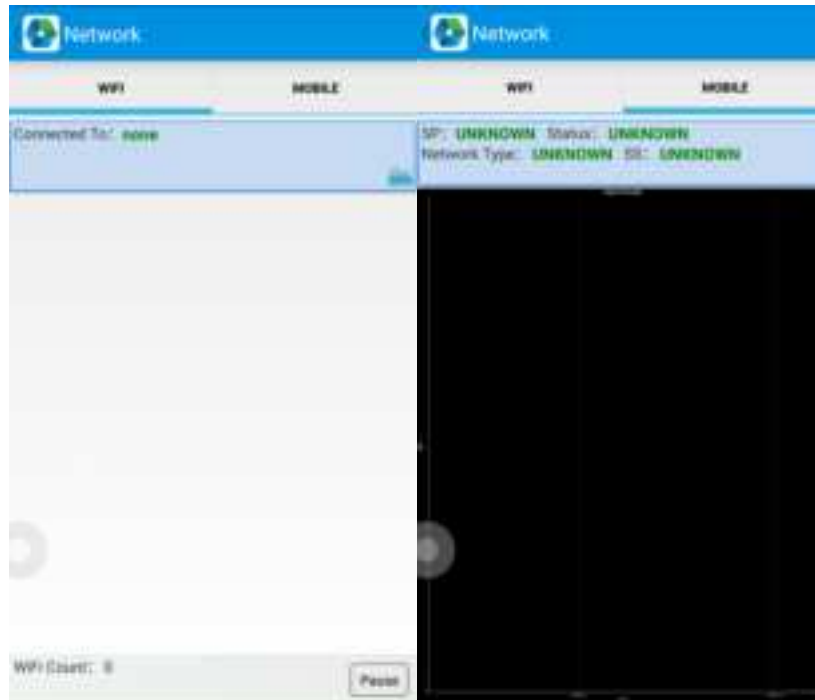
6.7 OTG Function

C66 Cradle OTG Connection:

1. Install C66 rubber boot.
2. Pay attention to installing direction of RB-C66-RRHP Type C & Pogo Pin.
3. Install device onto cradle and select OTG mode on pop-up menu to switch on OTG.

6.8 Network

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



6.8 Keyboard emulator

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.

Note:

For each model, keycode of side button would be different, user needs to use keyboard in appcenter to check keycode and bind in Barcode2D.

The screenshot shows the 'keyboardemulator v2.2.9.6.2' application. At the top, there is a blue navigation bar with four icons: a grid (Function), a gear (AppSettings), a link (2DSettings), and a calculator (Test). Below the navigation bar, there is a toggle switch for 'Enable Scanner' which is currently 'OFF'. The main content area is divided into several sections, each with a header and a list of items. The 'Barcode' section has two columns: 'Barcode' and 'KeyCode'. It contains two items: 'Barcode1D' with a checkbox and 'Barcode2D' with a checked checkbox. The 'Barcode2D' item has a 'KeyCode' value of '280' and a '278' value. The 'RFID' section has a 'KeyCode' column and contains two items: '14443A' and '15693', both with a 'KeyCode' value of '280'. The 'UHF' section has a 'KeyCode' column and contains one item: 'UHF' with a 'KeyCode' value of '280'. The 'LF' section has a 'KeyCode' column and contains seven items: 'IDCard', 'Animal', 'HiTag', 'HDX', 'EM4450', 'TinyAniTag', and 'EM4305', all with a 'KeyCode' value of '280'.

Barcode	KeyCode
<input type="checkbox"/> Barcode1D	
<input checked="" type="checkbox"/> Barcode2D	280 278

RFID	KeyCode
<input type="checkbox"/> 14443A	
<input type="checkbox"/> 15693	280

UHF	KeyCode
<input type="checkbox"/> UHF	280

LF	KeyCode
<input type="checkbox"/> IDCard	
<input type="checkbox"/> Animal	
<input type="checkbox"/> HiTag	
<input type="checkbox"/> HDX	280
<input type="checkbox"/> EM4450	
<input type="checkbox"/> TinyAniTag	
<input type="checkbox"/> EM4305	

Chapter 7 Device characteristic

Physical characteristics

Size	160x76x15.5mm / 6.3*2.99*0.61in
Weight	<287g/10.12oz(with battery)
Display	5.5-inch display, IPS LTPS 1440*720
Touch panel	Corning Gorilla Glass, multi-touch panel, gloves and wet hands supported
Battery	4420mAh(type)/4300mAh(min) removable main battery, support QC3.0 and RTC 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: 2.5hours (charge device by standard adaptor and USB cable)
Expansion	Supports up to 128 GB Micro SD card
Expansion Slot	2 slot for SIM card, 1 slot for TF card
Audio	2 Microphones, 1 for noise reduction
Camera	13MP autofocus camera with flashlight

Performance

CPU	Qualcomm 2.0 GHz Octa-core
OS	Android 11
RAM	3GB
Communication Interface	USB3.1,Type-C,OTG
ROM	32GB
Max. expansion	Supports up to 128 GB Micro SD card

User environment

Charging temp.	-20°C to 40°C
Operating temp.	-20°C to 50°C
Storage Temp.	-40°C to 70°C
Humidity	5%RH - 95%RH non condensing
Sealing	IP65, IEC sealing standard
Drop specification	<p>Multiple 1.8m/5.91ft drops (at least 20 times) to the concrete across the operating temperature range</p> <p>Multiple 2.4m/7.87ft drops (at least 20 times) to the concrete after installed rubber bumper</p>

Communication

WAN	<p>EU/CH: 2G: 900/1800MHz 3G: CDMA EVDO: BC0 WCDMA: 900/2100MHz TD-SCDMA: A/F(B34/B39) 4G: B1, B3, B5, B7, B8, B20, B28A, B28B, B38, B39, B40, B41</p> <p>US: 2G: 850/1900MHz 3G: 850/1700MHz, 1900MHz CDMA: BC0 4G: B2/B4/B5/B7/B12/B13/B17/B38/B40/B41</p>
Vo-LTE	Support Vo-LTE HD video voice call
WLAN	Support 802.11 a/b/g/n/ac/d/e/h/i/k/r/v, 2.4G/5G dual-band, IPV4, IPV6, 5G PA;
Bluetooth	Bluetooth 5.1, BR+EDR+LE

Data collection

Barcode scanning	SE4710
RFID	NFC 13.56Mhz

Developing Environment

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

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 C66(FCC ID: 2AC6AC66P) 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.

CE statements:

Declaration of Conformity Hereby, Shenzhen Chainway Information Technology Co., Ltd. declares

that the radio equipment type C66 is in compliance with directive 2014/53/EU




The declaration of conformity is available at the following internet address: www.chainway.net

Specific Absorption Rate (SAR)

- Your device is tested to comply with applicable requirements and regulations of the European Union of human exposure to radio wave.
- Specific Absorption Rate (SAR) is used to measure radio waves absorbed by a body. The device complies with RF specifications when the device used at a distance of 5 mm from your body. The SAR limit is 2.0 W/kg averaged over 10 gram of tissue in the European Union.
- This product was tested and recorded the maximum SAR value was 0.405 W/kg for the head, 1.456 W/kg for the body, 2.939 W/kg for the limbs.

5150 – 5350 MHz can be used indoor only.

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

Frequency bands and power

	Bands	Operation Frequency	Max.Power
GSM	900	880-915MHz	33 dBm
	1800	1710-1785MHz	30 dBm
WCDMA	1	1920-1980MHz	23.5 dBm
	8	880-915MHz	23dBm
LTE	1	1920-1980MHz	23.5 dBm
	3	1710-1785MHz	24 dBm
	7	2500-2570MHz	23.5 dBm
	8	880-915MHz	23.5 dBm
	20	832-862MHz	24 dBm
	28	703-748MHz	24.5 dBm
	38	2570- 2620MHz	23 dBm
	40	2300-2400MHz	23.5 dBm
Bluetooth	2.4GHz	2402-2480 MHz	EIRP 12.63 dBm
Wi-Fi	2.4GHz	2412-2472MHz	EIRP 17.26 dBm
	5GHz	5180-5240MHz	EIRP 17.57 dBm
		5260-5320MHz	EIRP 17.86 dBm
		5500-5700MHz	EIRP 17.54 dBm
		5745-5825MHz	EIRP 13.74 dBm
GNSS		1559-1610MHz	-
NFC		13.56MHz	-17.24 dBμA/m at 10m