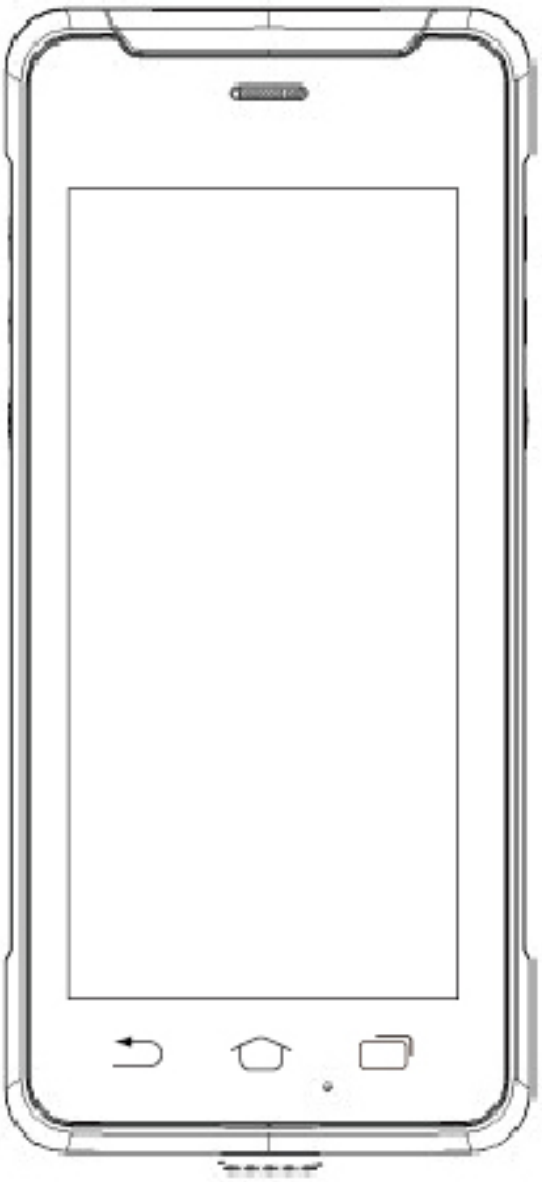
Wasp
BARCODE TECHNOLOGIES

DR5 Rugged Handheld Computer



User's Manual

Version 1.0

Wasp
BARCODE TECHNOLOGIES

Table of Contents

Chapter 1 - Overview 1

1.1 Package 1
1.2 Product Detail 2
1.3 Specifications 5
1.4 Getting Started 10

Chapter 2 – Installation & Operation 18

2.1 Barcode Setting 18
2.2 HF Setting 22
2.3 UHF Setting 23
2.4 WWAN Setting 24
2.5 WLAN Setting 26
2.6 PAN Setting 31
2.7 GPS Setting 32
2.8 PC Setting 33
2.9 Camera Setting 34
2.10 Performing a Hardware Reset 39
2.11 Performing Factory data reset 40
2.12 Programmable Keys 42
2.13 Battery Swap 49

Chapter 3 – Introduction to Applications 52

3.1 USS (scan service) 52
3.2 File Manager 58
3.3 APP Update Center 59
3.4 StageGO 60
3.5 MoboLink 62

Chapter 1 - Overview

1.1 Package

Please make sure the following contents are in the DR5 gift box.
If something is missing or damaged, please contact your Wasp representative.

The basic package contents

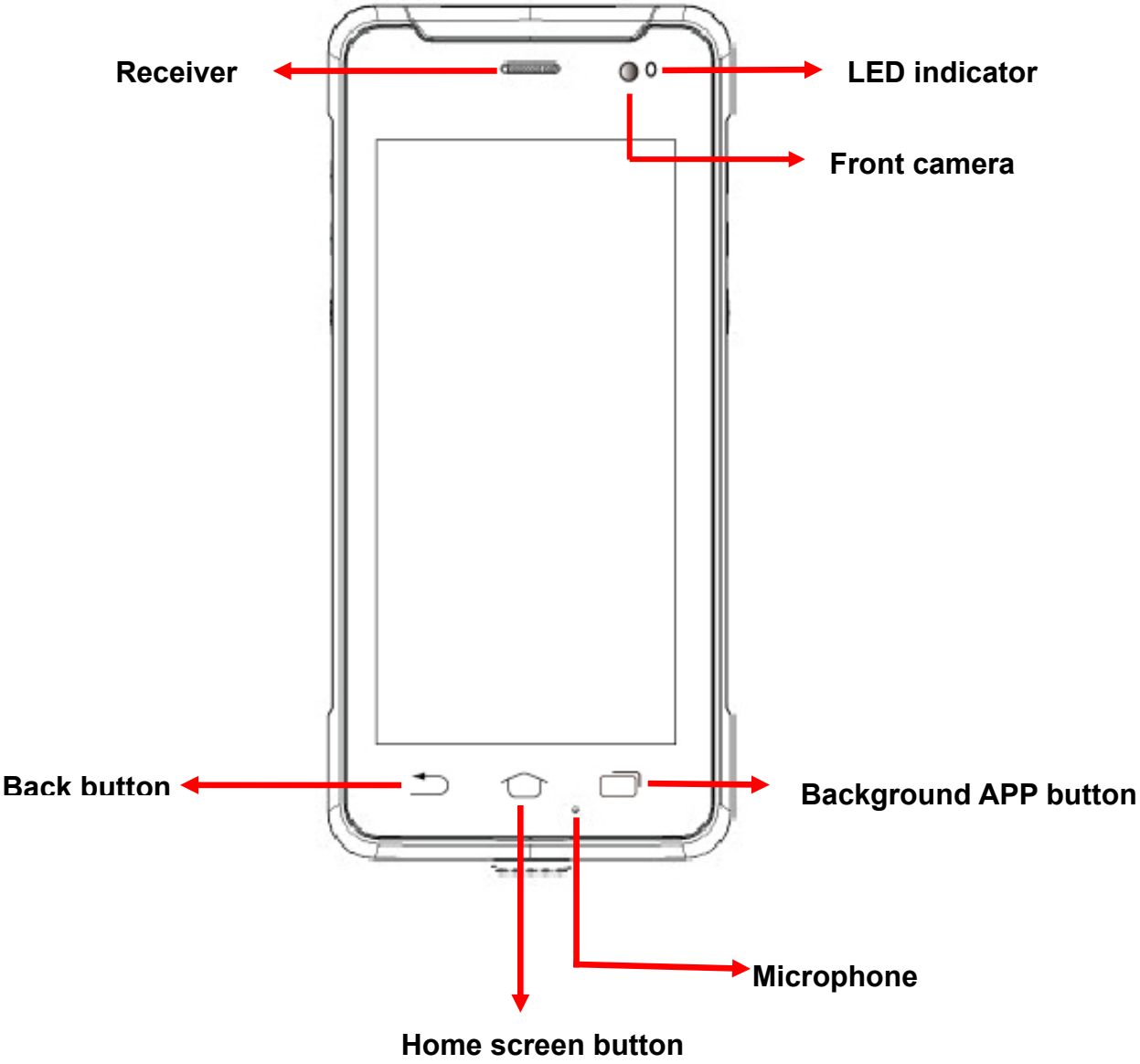
- DR5 Terminal
- Battery
- Hand Strap
- Adapter (with US, EU, UK plugs)
- Quick Start Guide
- USB Type C Cable
- Tray Ejector tool
- Quick Start Guide
- Regulatory Compliance Statements

Optional accessories

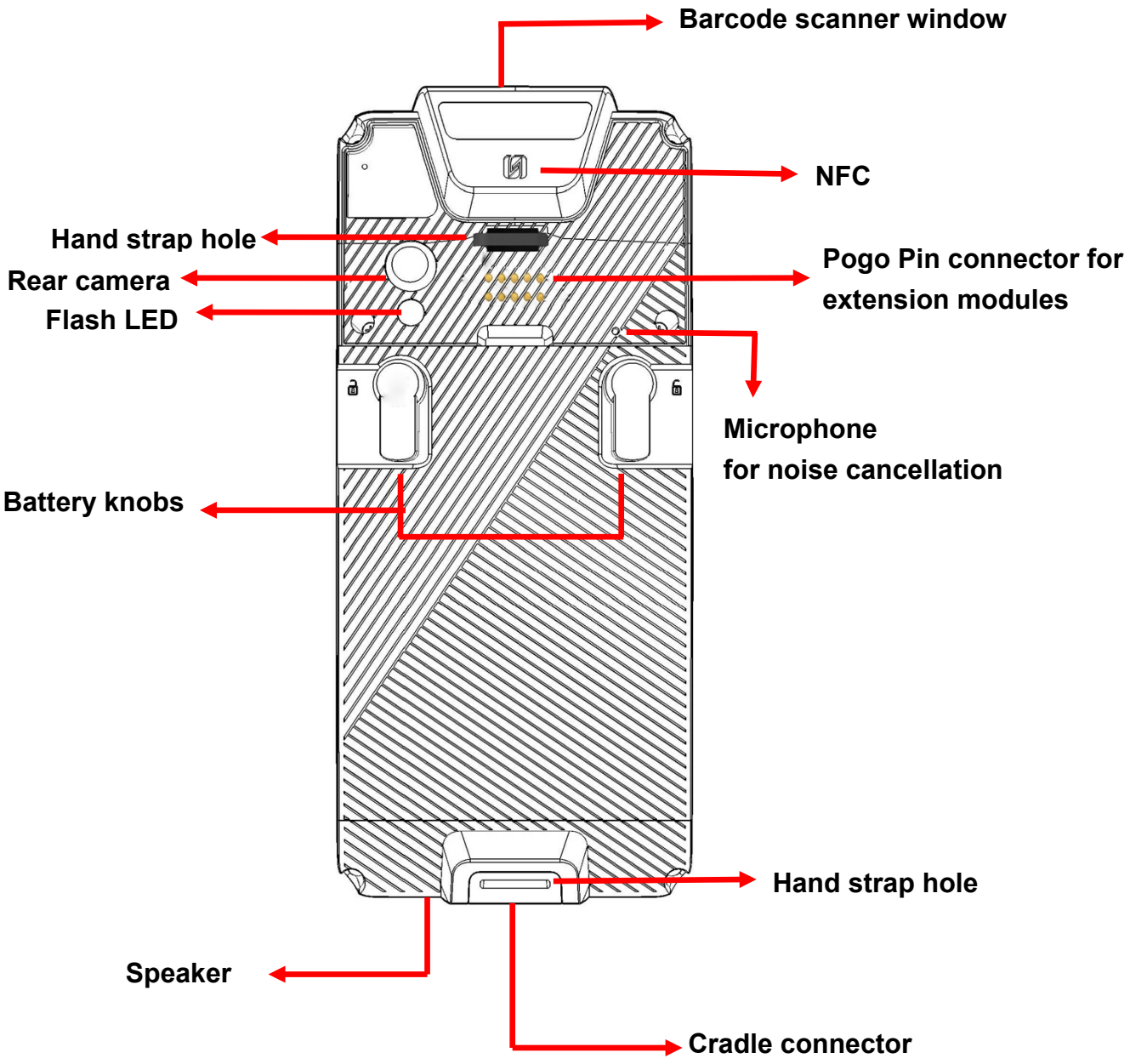
- 1-slot Terminal & Battery Charging Cradle
- 1-slot Ethernet & Battery Cradle
- 4-slot Terminal Charging Cradle
- 4-slot Ethernet Cradle
- Bumper or Extended Battery (Depends on model selection)
- Gun Grip

1.2 Product Detail

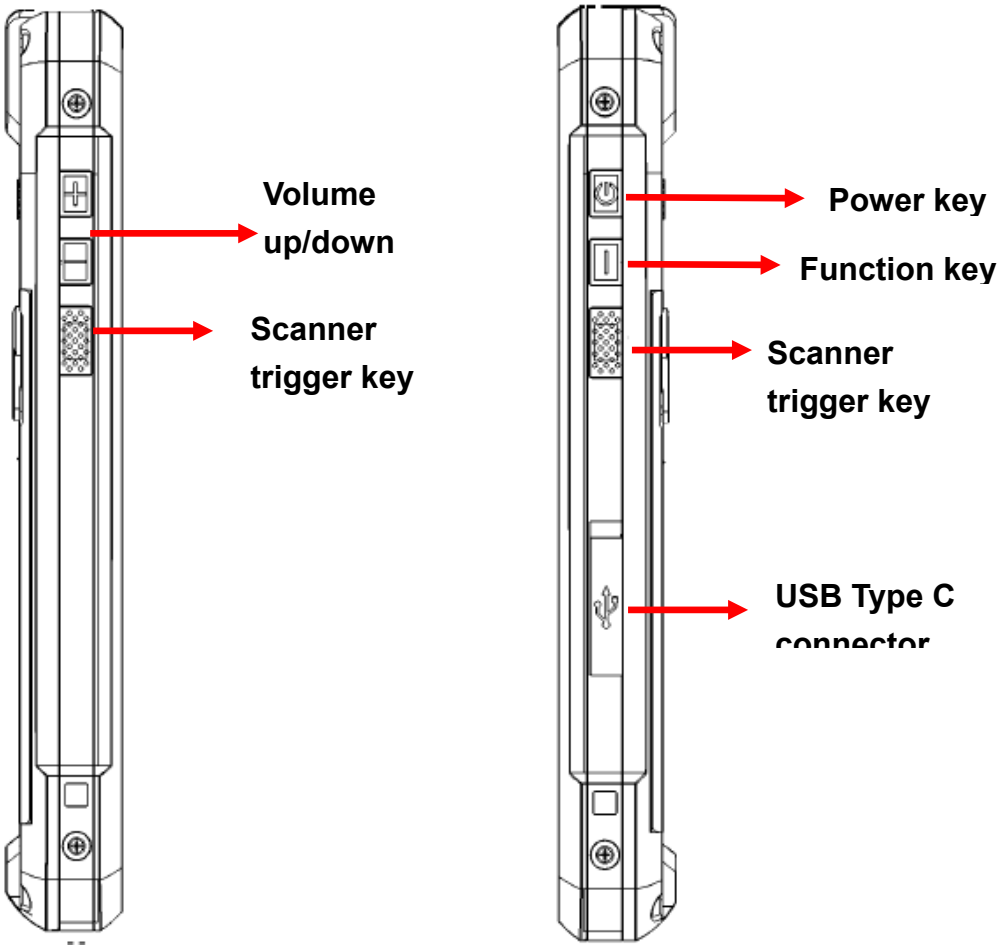
DR5 Front View



DR5 Rear View



DR5 Left and Right View



1.3 Specifications

System Features		
CPU	2.2 GHz, Qualcomm Snapdragon™ 660 Octa Core Processor, 64bits	
Memory	4 GB RAM 64GB Flash	
Expanded slot	MicroSD, up to 128GB	
OS	Android 10 (Guaranteed security updates to Sep., 2024)	
Languages supported	English, Simplified Chinese, Traditional Chinese, Japanese, Spanish, German, French and more	
Display		
Gorilla Glass Ⅲ with 5-point capacitive touch panel		
5.45” Color LCD 1440x720 High Resolution Display 500 cd/m2 Brightness		
Physical keys		
1 x Function key	1 x Power key	2 x Volume keys
2 x Scan trigger keys		
On screen buttons		
1x Back button	1x Home button	1 x Background app button
Indicator		
1 x LED indicator Vibrator		

Comes with the Google™ app and Google Chrome™

Android is a trademark of Google LLC.

Engines	
1D	SE655 Illumination/AIMER : LED 630 ± 30 nm Optical Resolution : 5 mil (minimum readable bar code module size) Scan Repetition Rate : Nominally 50 scans/second Print Contrast : 20% (minimum print contrast) Ambient Light Immunity Light Source : 4845(lux) ± 5% Symbologies : UPC-A/E, EAN-8/13, Codabar, Code 39, Code 39Full ASCI, Code 93, Code 32, Interleaved & Std.2 of 5, EAN 128, Code 11, MSI/Plessey, Code128, RSS Expended, RSS Limited, RSS14
2D	N6603 : Sensor Resolution : Proprietary CMOS sensor with global shutter and 844 x 640 pixel resolution Illumination Element : White LED (exempt risk group) Aiming : 650 nm high-visibility red laser (class 2 laser safety) Symbol Contrast : 20% minimum reflectance Ambient Light : 0–100,000 lux (total darkness to bright sunlight) Scan Angles : Tilt: 360°, Pitch: ± 45, Skew: ± 60° Symbologies : **Linear:** UPC/EAN/JAN, GS1 DataBar, Code 39, Code 128, Code 32, Code 93, Codabar/NW7, Interleaved 2 of 5, Code 2 of 5, Matrix 2 of 5, MSI, Telepen, Trioptic, China Post **2D Stacked :** PDF417, MicroPDF417, GS1 Composite **2D Matrix:** Aztec Code, Data Matrix, QR Code, Micro QR Code, MaxiCode, Han Xin Code, DotCode **Postal:** Intelligent Mail Barcode, Postal-4i, Australian Post, British Post, Canadian Post, Japanese Post, Netherlands (KIX) Post, Postnet, Planet Code **OCR Option:** OCR-A, OCR-B, E13B (MICR)
Audio	
1 W output ,95 dB at 10cm, Microphone*2	
Regulatory Approvals	

CE, FCC, NCC, BSMI, VCCI, TELEC, CCC, SRRC, RoHS, DoC, BQB, GMS, N-Mark compliance	
Communication	
USB	USB OTG Type C Connector for PC/USB drive POGO PIN connector for Cradle
WLAN	IEEE802.11 a/b/g/n/ac/d/h/i/r, support fast roaming, MIMO(2x2)
PAN	Bluetooth® 5
WWAN	LTE FDD: Band 1(2100), Band 2(1900), Band 3(1800), Band 4(1700), Band 5(850), Band 7(2600), Band 8(900), Band 17(700bc), Band 20(800), Band 28(700) TDD: Band 38(2600), Band 39(1900), Band 41(2500) *Support Dual Nano SIM Slot
GPS	GPS/GLONASS/Gallileo/Beidou
Others	Support NFC, fingerprint
Camera and Flash Light	
16 MP Rear, 5 MP Front camera	
Power Source	
Standard Battery	4000mAh / battery with cover in one piece
Extended Battery	6000mAh / battery with cover in one piece
Enclosure	
Weight	Approximately 300g
Dimension	163mm (L) x 17.4mm (H) x 75mm (W)
Environmental	
Operating temperature	-4°F to 122°F (-20°C to 50°C)
Storage temperature	-22°F to 140°F (-30°C to 60°C)
Relative Humidity	5% ~ 95% (non-condensing)
Drop test to Concrete	1.5 meter, 1.8 meter with bumper
Environmental Sealing	IP65 & IP67
Software	
Android 10 Support camera API and Camera 2 API.	

Radio type / Description		Transmitter Frequency	Maximum Output Power
GSM	GSM850	824 – 849MHz	32.5dBm
	EGSM900	880 – 915MHz	32.5dBm
	DCS1800	1710-1785MHz	29.5dBm
	PCS1900	1850 – 1910MHz	29.5dBm
UMTS	FDD 1	1920-1980MHz	23dBm
	FDD 2	1850 – 1910MHz	23dBm
	FDD 5	824 – 849MHz	23.5dBm
	FDD 8	880 – 915MHz	23.5dBm
LTE	FDD 1	1920-1980MHz	22.5dBm
	FDD 2	1850 – 1910MHz	22.5dBm
	FDD 3	1710-1785 MHz	22.5dBm
	FDD 4	1710 – 1755MHz	22.5dBm
	FDD 5	824 – 849MHz	22.5dBm
	FDD 7	2500 – 2570MHz	22.5dBm
	FDD 8	880 – 915MHz	22.5dBm
	FDD 17	704 – 716MHz	22.5dBm
	FDD 20	832 – 862MHz	22.5dBm
	FDD 28	718 – 748MHz	22.5dBm
	TDD 38	2570 – 2620MHz	22.5dBm
	TDD 39	1880 – 1920MHz	22.5dBm
	TDD 41	2496 – 2690MHz	22.5dBm
WLAN 2.4GHz	IEEE 802.11b	2400-2483.5MHz	17dBm
	IEEE 802.11g	2400-2483.5MHz	14dBm
	IEEE 802.11n	2400-2483.5MHz	14dBm
WLAN 5GHz	IEEE 802.11a	5150-5350MHz	14dBm
		5470-5725MHz	14dBm

	IEEE 802.11n	5150-5350MHz	14dBm
		5470-5725MHz	14dBm
	IEEE 802.11ac	5150-5350MHz	13dBm
		5470-5725MHz	13dBm
Bluetooth®	Bluetooth®	2400-2483.5MHz	9dBm
RFID	NFC	13.56MHz	N/A

Note:

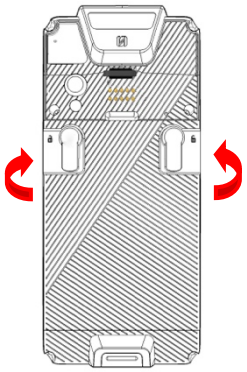
The device is restricted to indoor use only when operating in the 5150 to 5350 MHz frequency range.

	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
	IS	LI	NO	CH	TR		

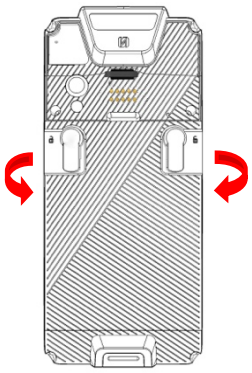
1.4 Getting Started

1.4.1 Remove / Install the Battery Cover

1. To unlock the battery by turning up the two knobs. And pull the battery up to remove it.



2. To lock the battery by turning down the two knobs. Make sure the battery is securely closed, or you may be unable to turn on the terminal.



WARNING! *There is a risk of fire and burns if the battery is handled improperly. DO NOT disassemble, crush, puncture, short external contacts, or dispose the battery pack in fire or water. DO NOT attempt to open or service the battery. Dispose of used batteries according to local recycling guidelines in your area.*

1.4.2 Charging the Battery

If the battery has been discharged for several days, you may need to charge for several minutes before powering it on.
Use only the adapter and the USB type C cable that came with this device to charge the battery.
When the battery power is too low, make sure to use the power adapter or put into the cradle (strongly recommend) to charge, not the USB type C cable connection with your computer.

1.4.3 Turning on the terminal for the first time

It is recommended to fully charge DR5 before first use. You can now start up your device to set up the languages, WLAN setting, and date and time.

Power-On Button

Turn ON your device by pressing the power button on the right side of the terminal.

1.4.4 Checking the LED status

	LED	Description
Terminal	Red Light	■ Battery Charging ■ Blinking to indicate battery low status(less than 15%)
	Green Light	■ Battery Fully charged ■ Barcode scan good read
	Blue Light	Message
	All of LEDs can be controlled by software API	If scanner app is running, LED control by scanner app.
	No LED (Red and Green) display when battery is out(even AC IN)	

Checking the Battery Status

If the battery level becomes low in the course of normal use, a status icon appears on the device screen indicating low or very low battery status. In both cases, connect PC with USB to back up your data, and then recharge your device as soon as possible.

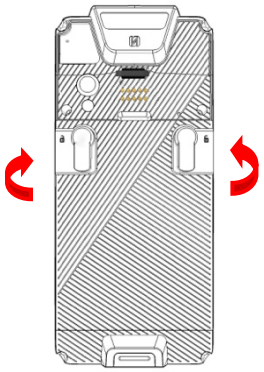
1.4.5 Using the Micro SD/ Nano SIM Card

The DR5 has 1 x micro SD and 2 x nano SIM card slots inside the battery compartment.

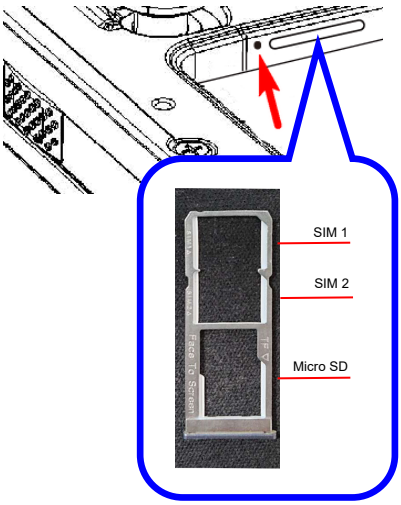
Note: Before inserting or removing micro SD card or nano SIM card, please <u>TURN OFF</u> DR5 for the first step.

Inserting a Micro SD/ Nano SIM Card

1. To unlock the battery by turning up the two knobs. And pull the battery up to remove it.

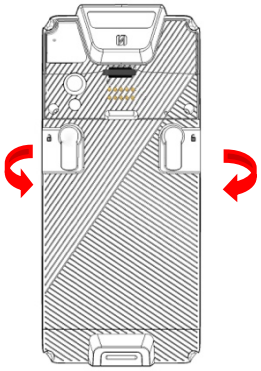


2. Insert the tip of the tray ejector tool that came with the package or a small bent paperclip into the eject hole. Then pull the tray out.

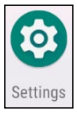


3. Now you can access the Micro SD card slot and two nano SIM card slots.

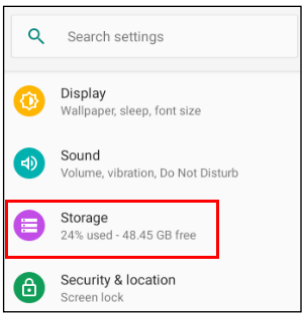
4. To lock the battery by turning down the two knobs. Make sure the battery is securely closed, or you may be unable to turn on the terminal.



Checking DR5 storage

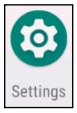
Please go to **Settings** 

and tap **Storage** to check the DR5 storage.

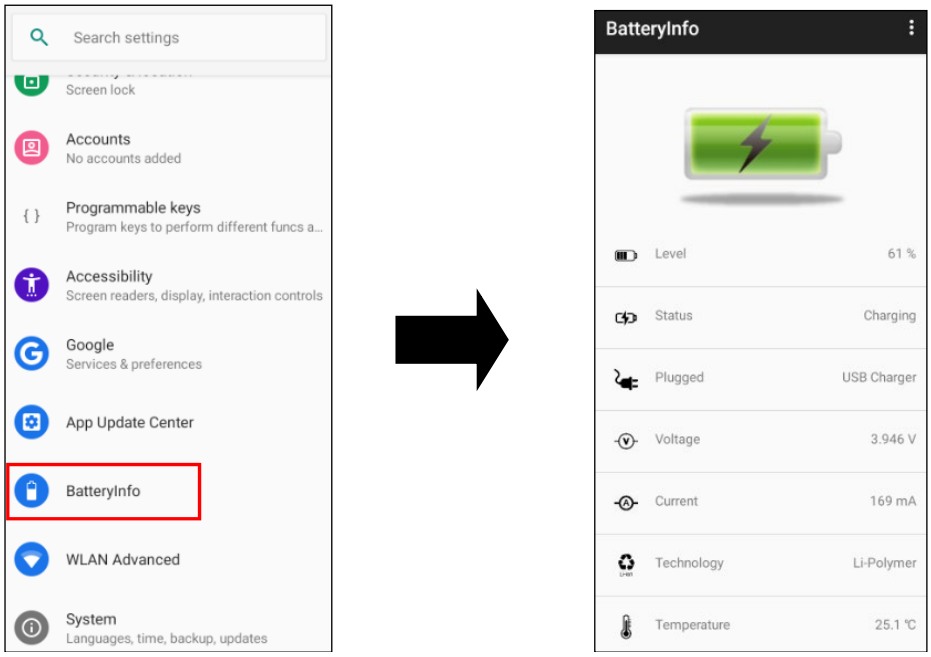


1.4.6 Battery Status

The DR5 provides **battery info** for users to check the battery status, history view and also set up users preferences.

1. On the main screen, scroll the screen from down to top to reach the APPS, and tap 

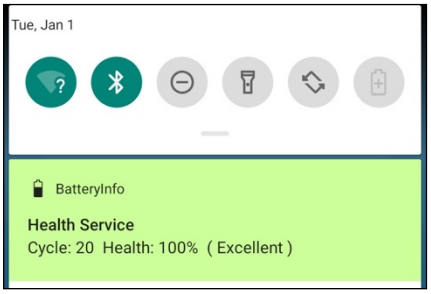
Settings and then tap **BatteryInfo**.
2. **BatteryInfo** shows the details of the battery use.



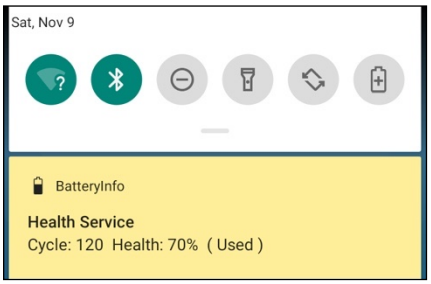
1.4.7 BatteryInfo Health Service

BatteryInfo health service information will display on both DR5 lock screen and the notification bar.

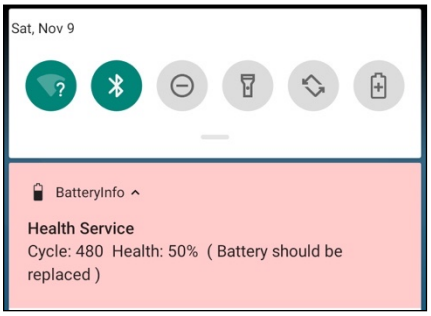
- When the battery health is higher than 80% :



- When the battery health is higher than 60%:

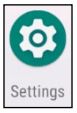


- When the battery health is lower than 60% : (Battery should be replaced)

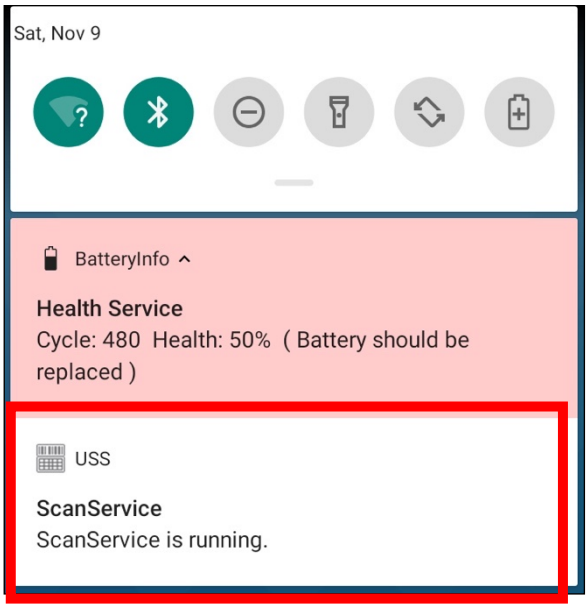


Chapter 2 – Installation & Operation

2.1 Barcode Setting

1. On the main screen, scroll down to reach the APPS, and tap 

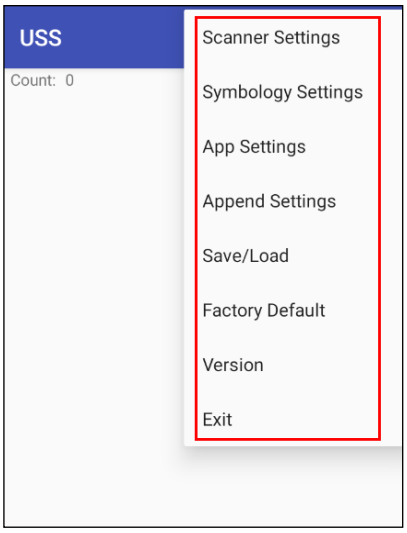
Settings and then tap **USS** (scan service).
Or from the notification bar to tap USS (scan service).



2. You are now entering the ScanService application.

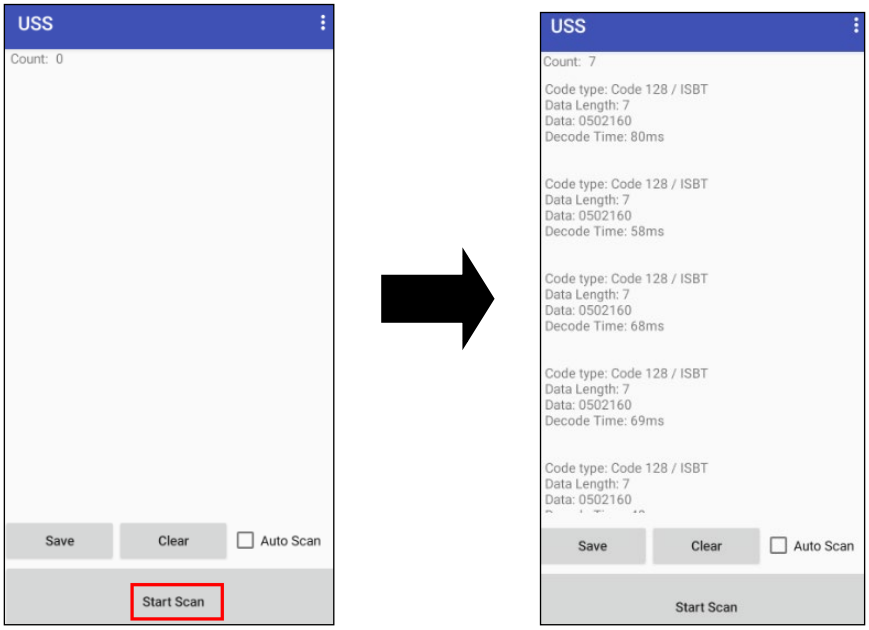
2.1.1 Settings

1. Please tap on the screen to see all the settings of **USS**.



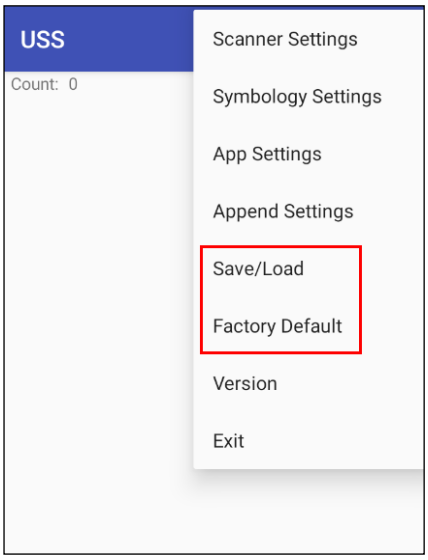
2.1.2 Barcode Scan

1. Please tap **Start Scan** to get ready for barcodes scan service.

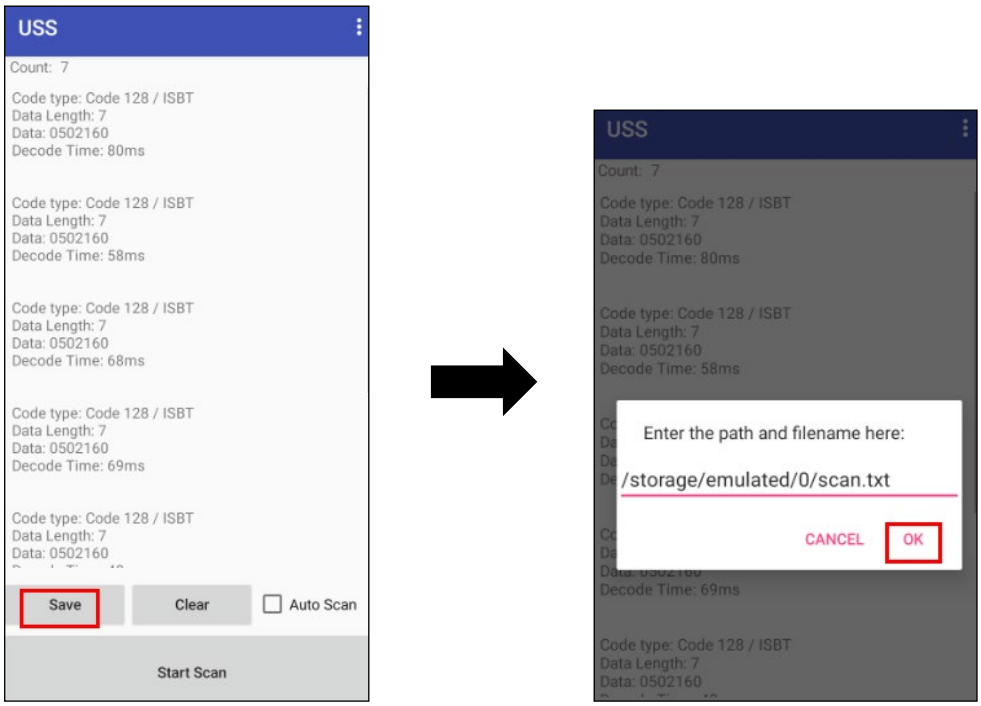


2. For **Save / Load Settings,** and **Factory Default ,**

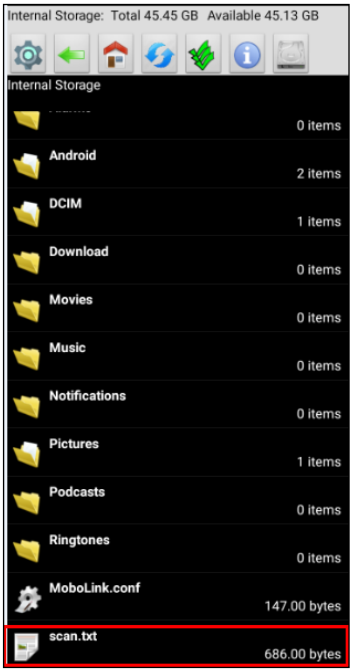
   Please tap and then tap **Save / Load Settings,** and **Factory Default.**



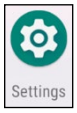
3. To save settings, you can also tap **Save** on the screen and input path then tap **OK**.



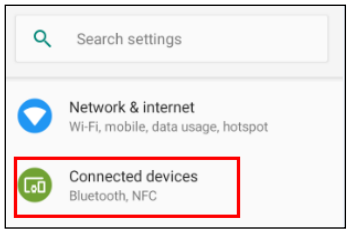
The saved data is stored in File Manager. (Please see 3.2 File Manager)



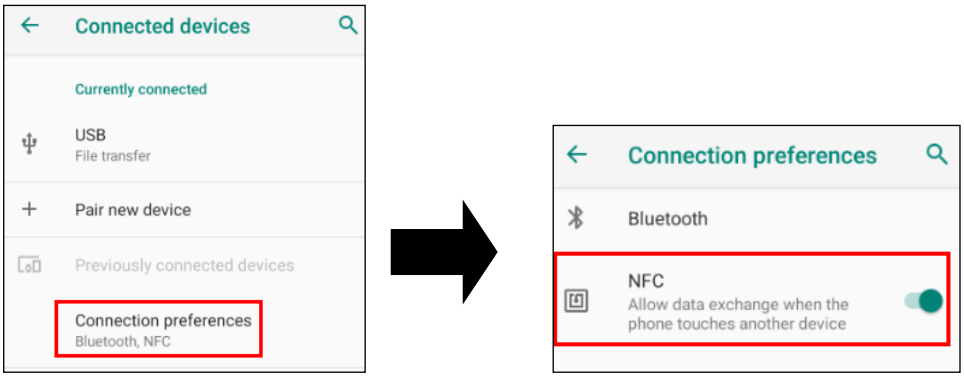
2.2 HF Setting

1. On the main screen, scroll the screen from down to top to reach the APPS, and tap 

Settings and then tap **Connected devices**.



2. Tap **Connection Preferences** to enable **NFC**



3. Make sure that both devices are unlocked and have NFC turned on. Also make sure that the NFC antenna area of DR5 and the other phone's NFC area are close to one another. Slightly moving the phones until a connection is made. Tap the screen.

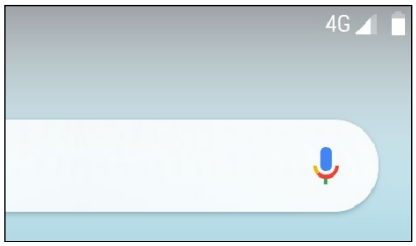
2.3 UHF Setting

Current model is not available.

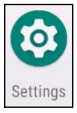
2.4 WWAN Setting

1. Turn off the terminal to insert the SIM card.
   Note : • *For the instruction, please refer to 1.4.5 Using the Micro SD/ Nano SIM Card.*
   • *It only applies to the device which supports WWAN.*

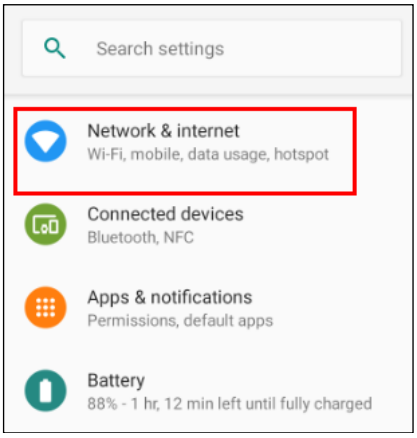
2. Turn on the terminal, 4G signal will show at the top of the screen.



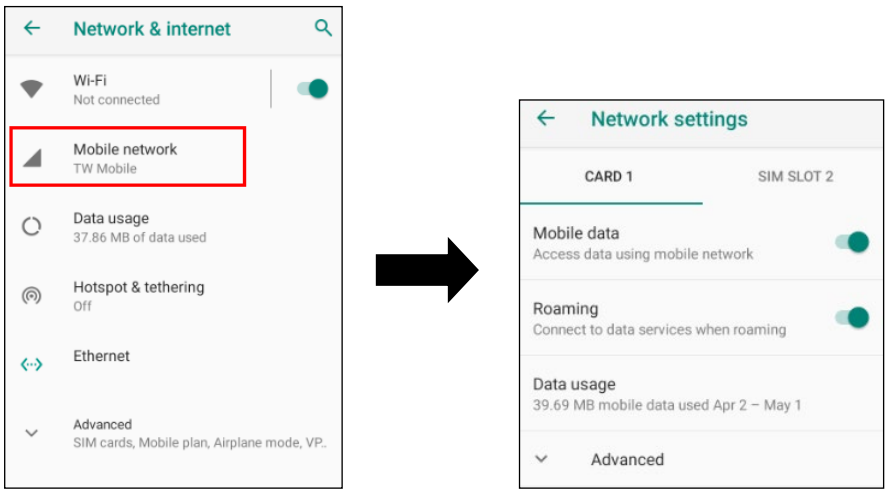
2.4.1 Mobile Network Settings

1. On the main screen, scroll the screen from down to top to reach the APPS, and tap 

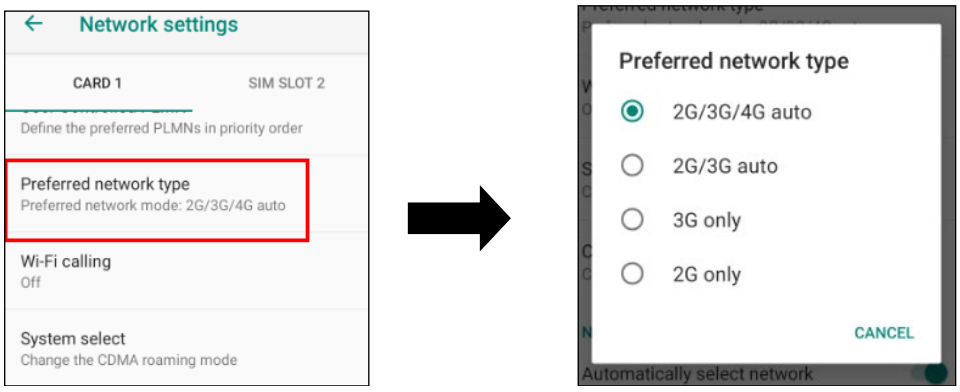
Settings and then tap **Network & internet.**



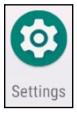
2. Tap **Mobile network** for more network settings.



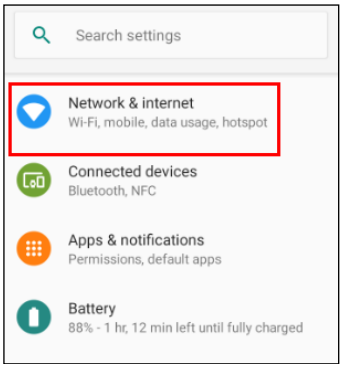
3. To choose different network type, please tap **Preferred network type.**



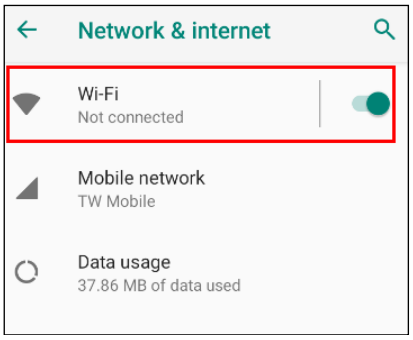
2.5 WLAN Setting

1. On the main screen, scroll the screen from down to top to reach the APPS, and tap 

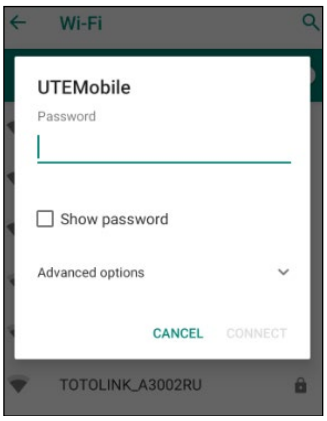
Settings and then tap **Network & internet.**



2. To see available networks, turn WLAN **ON**. And tap to choose the available networks.



3. Choose the available networks, and enter the Password and tap **Connect.**



4. If the wireless network that you want is not listed, tap **+ Add network** to manually add it.

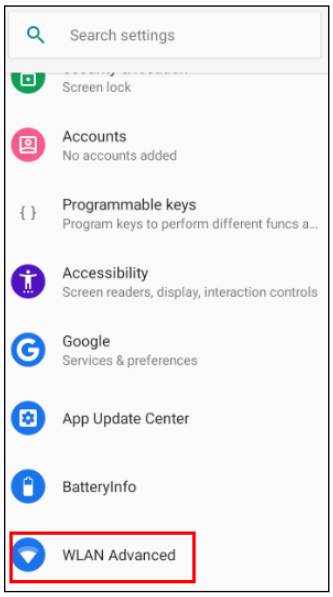
5. When enabled, the icon is displayed on the status bar.

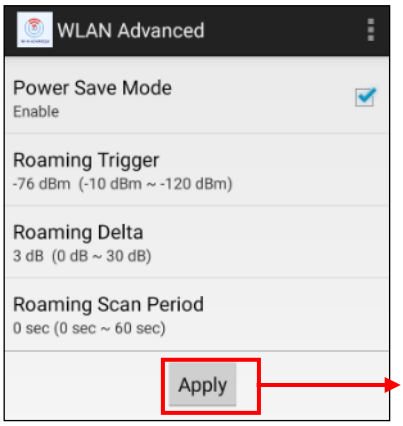
2.5.1 WLAN Advanced

WLAN advanced can enhance the roaming behavior when the device is in areas of particularly low coverage or losing its connection to the network infrastructure and provides the power save mode to control the power consumption setting.
WLAN advanced will help users to manage the seamless roaming.

1. On the main screen, scroll the screen from down to top to reach the APPS, and tap

Settings and then tap **WLAN Advanced.**





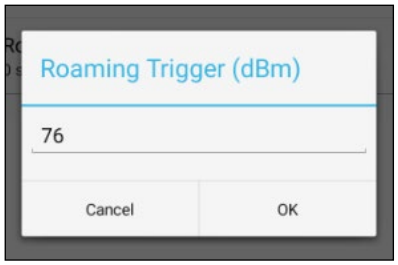
Always tap "**Apply**" to finish the setting.

● **Power Save Mode**

Tap to enable the power save mode to set the WLAN module to its optimum power consumption setting.

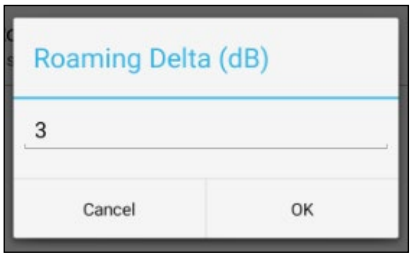
● **Roaming Trigger (Default : -78 dBm Range : -40 dBm ~ - 90 dBm)**

Roaming trigger will help users to look for a better and stronger signal strength (in dBm) by scanning many access points. When the signal strength is lower than roaming trigger value, roaming trigger will start to look for better access points.



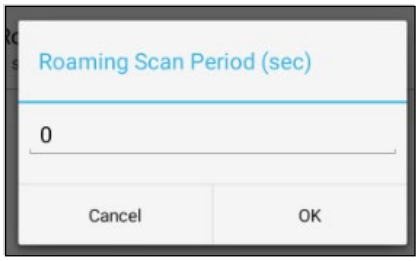
● **Roaming Delta (Default : 5 dBm Range : 5 dBm ~ 50 dBm)**

Based on roaming delta value, the device will roam to a better signal strength access point.



● **Roaming Scan Period (Default : 0 sec Range : 0 sec ~ 60 sec)**

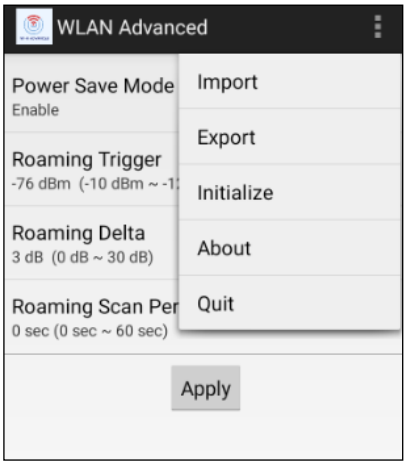
The device will stay with the current AP based on the roam period value before it roams to a different AP.



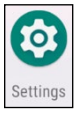
2.5.1.1 Other options

Tap for more options to import / export the current data from the device.

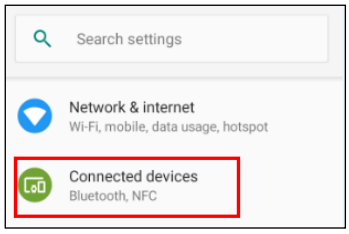
Initialize is able to restore the default settings.



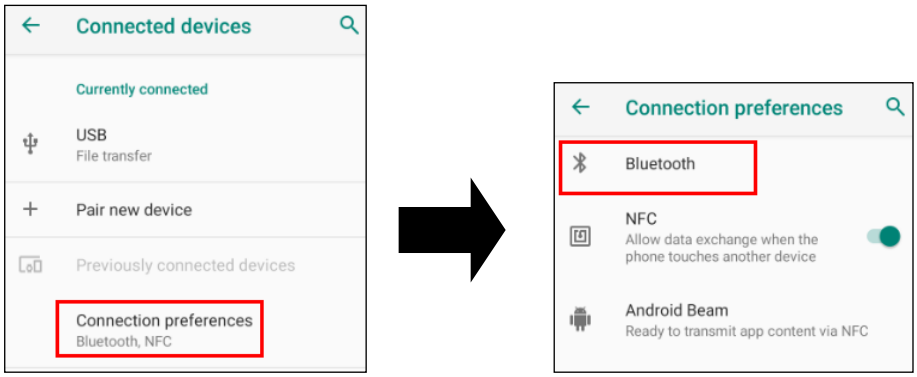
2.6 PAN Setting

1. On the main screen, scroll the screen from down to top to reach the APPS, and tap 

Settings and then tap **Connected devices**.

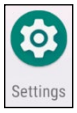


2. Tap **Connection Preferences** to enable **Bluetooth**



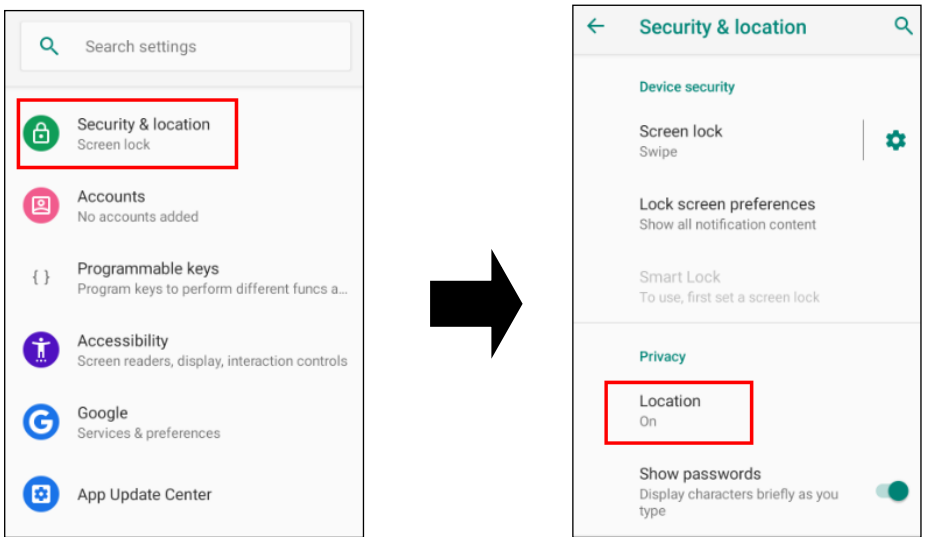
3. Tap **ON / OFF** to enable / disable Bluetooth® .
To pair the available device, turn Bluetooth® **ON** to choose the available device.

2.7 GPS Setting

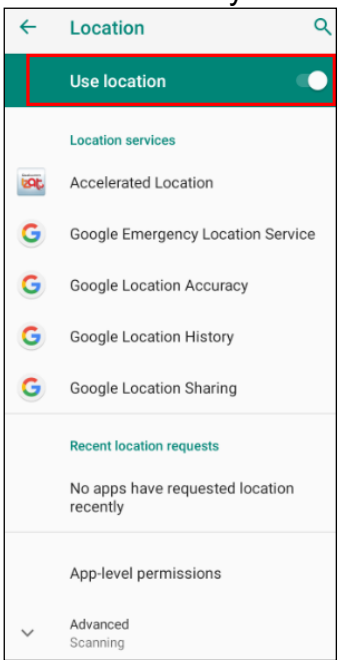
1. On the main screen, scroll the screen from down to top to reach the APPS, and tap 

Settings and then tap **Security & location.**

   Tap **Location.**

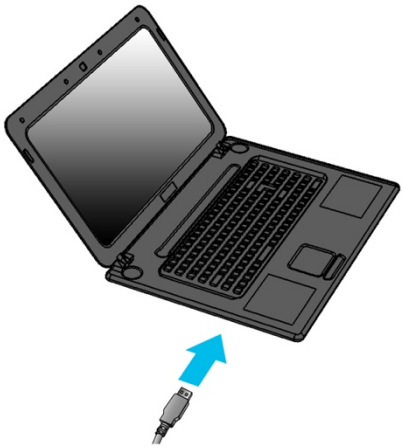


2. Tap **ON/OFF** for the permission to use your location information.

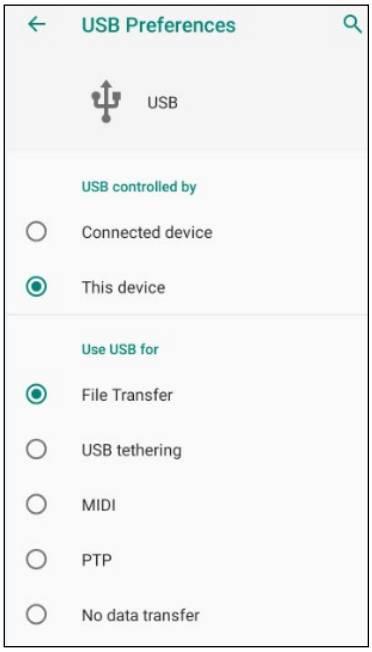


2.8 PC Setting

1. Connect DR5 to your computer with the USB type C cable. Your computer will recognize it is USB charging.



2. Slide down from top, the system will show as follow picture, then you can select File transfers.

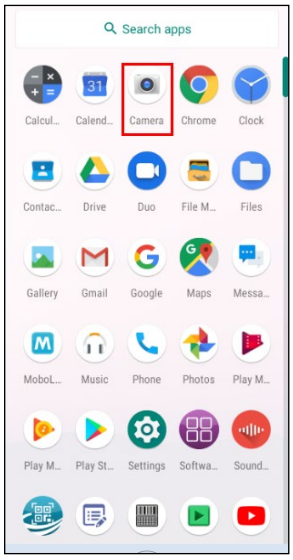


2.9 Camera Setting

1. Tap **Camera** on the main screen.

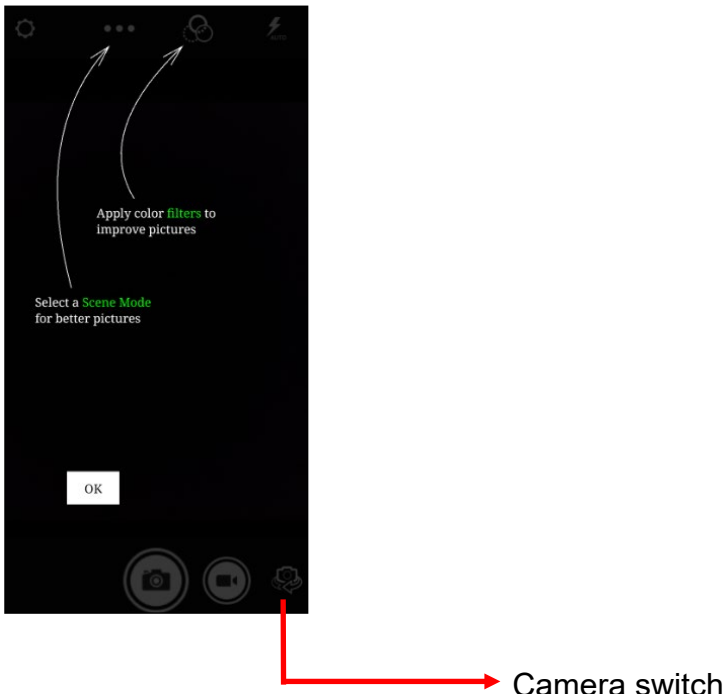
   Or scroll the screen from down to top to reach the APPS, and tap **Camera**.

OR

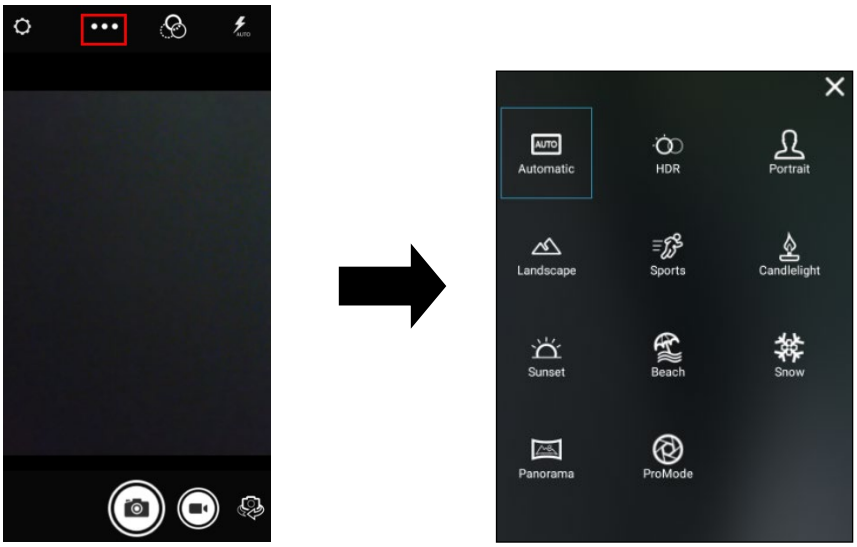


2.9.1 Camera Settings

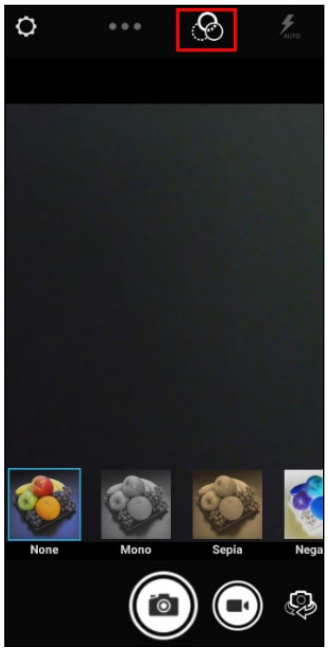
For the first time turn on, the screen will show a brief introduction about camera settings.



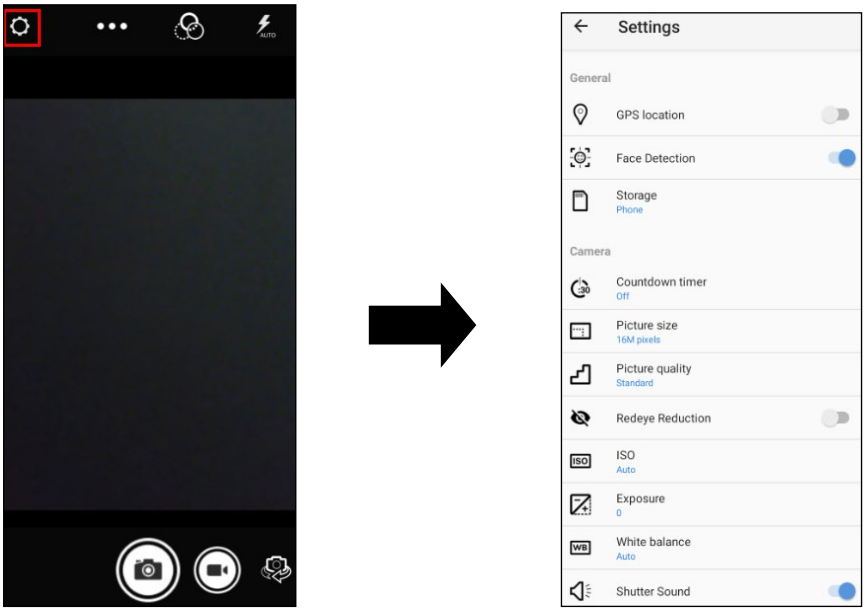
2.9.1.1 Scene Mode Setting



2.9.1.2 Camera filter effects

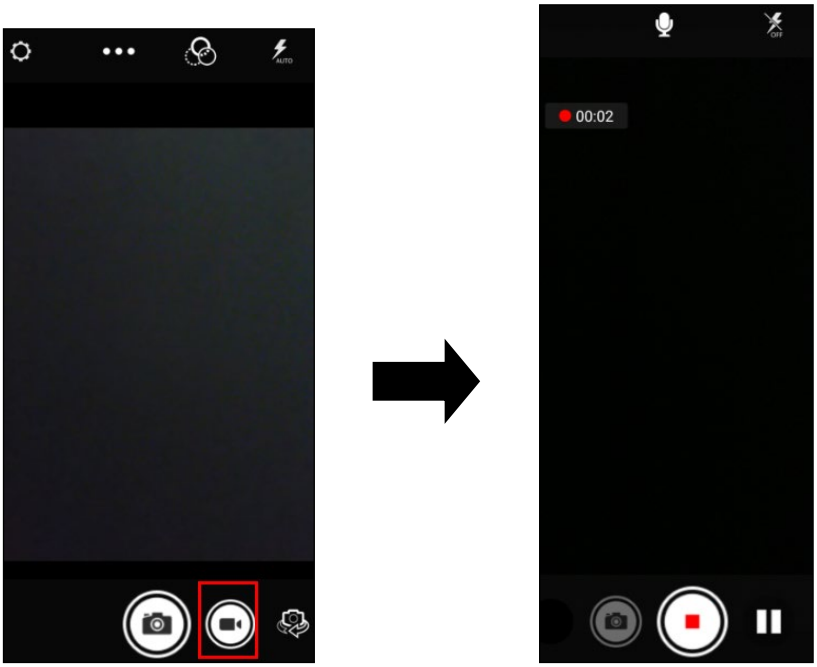


2.9.1.3 Settings



2.9.2 Record Videos

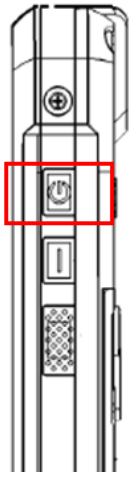
Once tap the record button, it will start recording.



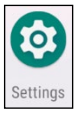
2.10 Performing a Hardware Reset

You may have to perform a reset if the device freezes (i.e., the terminal no longer responds to the buttons or tapping on the screen).

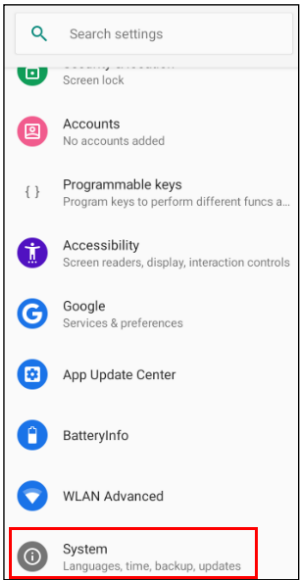
Long press and hold **Power button** around 10 seconds to restart the device.



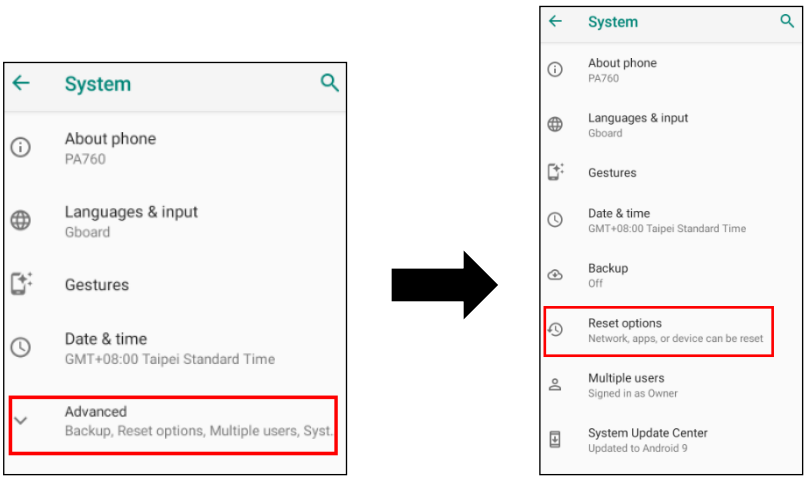
2.11 Performing Factory data reset

1. On the main screen, scroll the screen from down to top to reach the APPS, and tap 

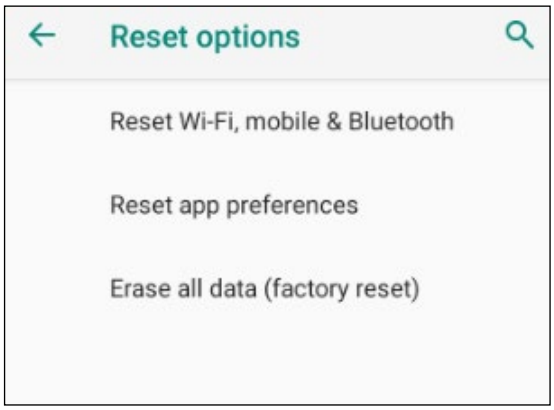
Settings and then tap **System.**



2. Tap **Advanced** for more options, and then tap **Reset options**.



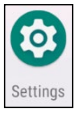
3. You can reset the system on **Reset options**.
   When you select **Erase all data (factory reset)**, it will erase all folders.


Reset options
Reset Wi-Fi, mobile & Bluetooth
Reset app preferences
Erase all data (factory reset)

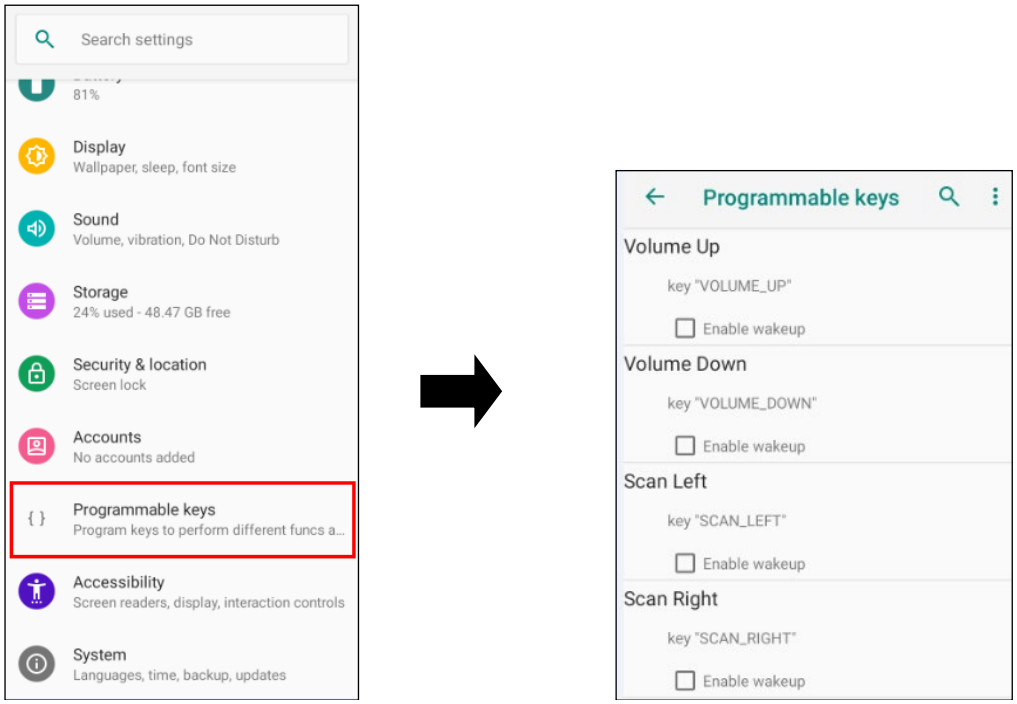
2.12 Programmable Keys

The DR5's keys can be programmed for users to be able to perform different functions or applications.

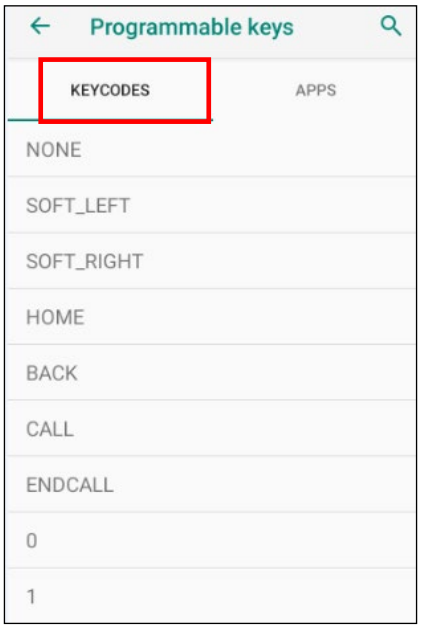
2.12.1 Programming a key

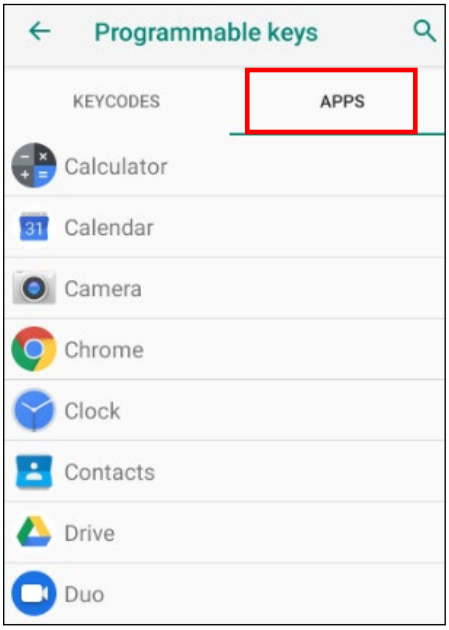
1. On the main screen, scroll the screen from down to top to reach the APPS, and tap 

Settings.
2. Tap **Programmable keys** and select the keys to remap.

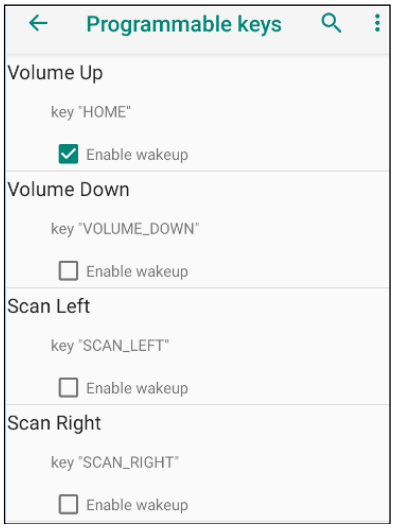


3. Tap one of **KEYCODES** or **APPS** that lists the available functions or applications and select one shortcut to map to the key.



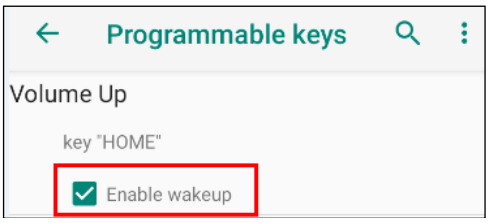


4. The key is successfully mapped to a key code.



2.12.2 Enable/ Disable wakeup

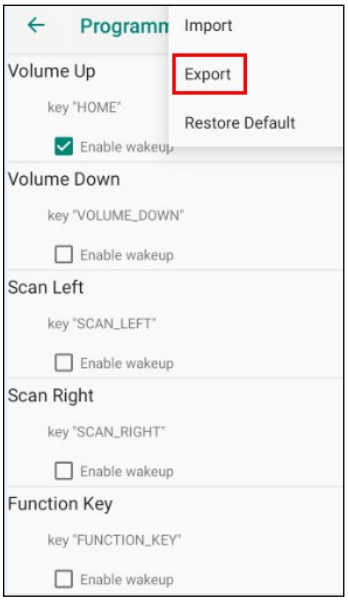
After the key is mapped to a key code, check the **Enable wakeup** checkbox to wake DR5 by pressing the programmable keys when DR5 is in sleep mode. ***Note:*** *This function only applies to* ***KEYCODES.***



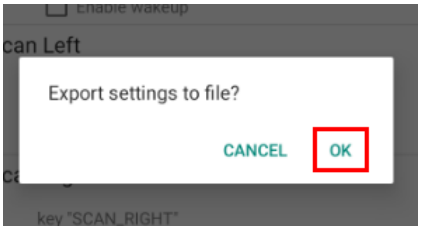
2.12.3 Export / Import a Programmable Key Configuration file

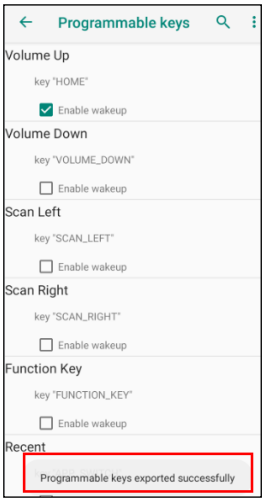
■ Export file

1. Tap
2. Select **Export**



3. Tap **OK** ➡ Programmable keys exported successfully

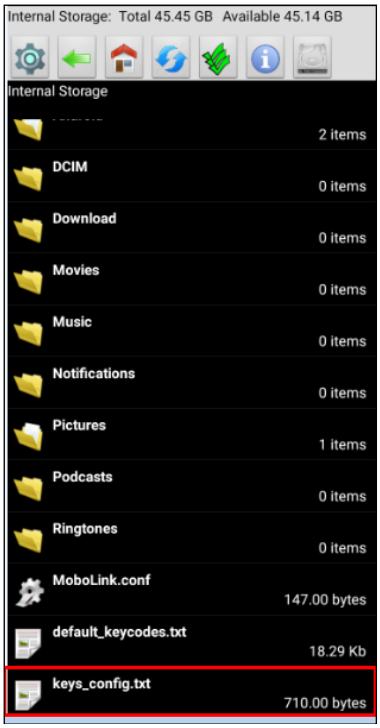




The Programmable Key configuration can be exported to a text file or imported into DR5.

Note: *The configuration file (keys_config.txt) is saved in File Manager.*

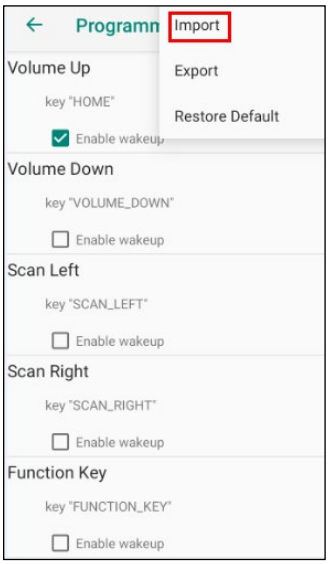
(For File Manager setting, please refer to 3.2 File Manager)



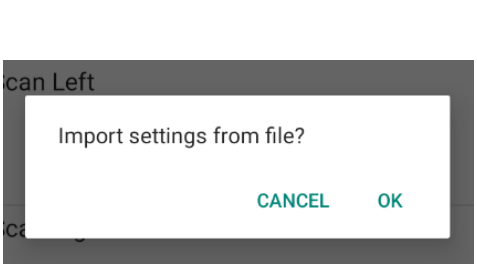
■ Import file

Before importing the file, please make sure the configuration file (keys_config.txt) is in File Manager.

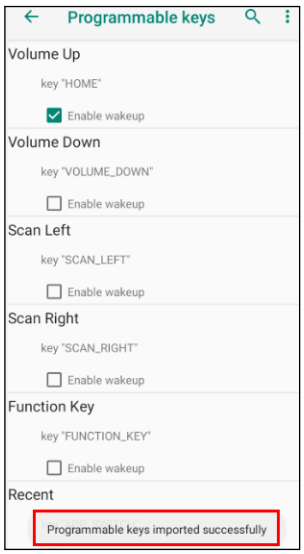
1. Tap
2. Select **Import**



3. Tap **Ok** ➡ **Programmable keys imported successfully**
   The new configuration will be applied immediately after import.

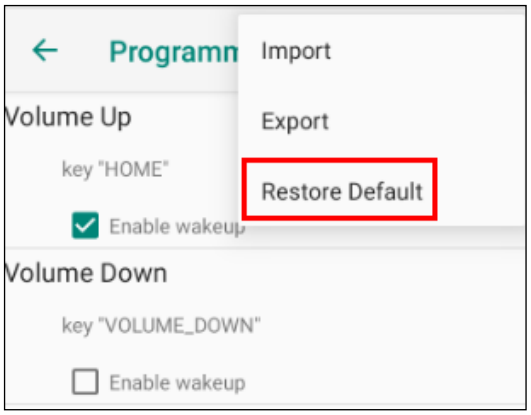


➡



■ Reset default

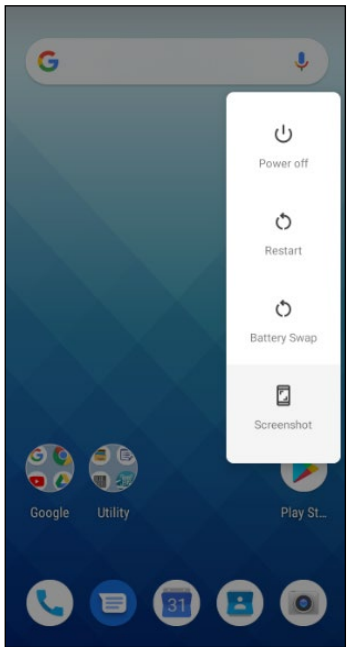
1. Tap
2. Select **Reset to default**



2.13 Battery Swap

Please follow the steps for the battery swap.

1. Long press power button until you see the pop up window and tap **Battery Swap.**



2. The LED indicator will start showing red light. **Please swap the battery after the LED red light goes off.** Please do not turn on DR5 during the battery swap.

Note: When the battery level is extremely low (lower than 15 %), the termial LED will start blinking red light constantly before and after the battery swap signal (the solid LED red light).

3. When the battery swap is done, you can press the power button to wake DR5 again.

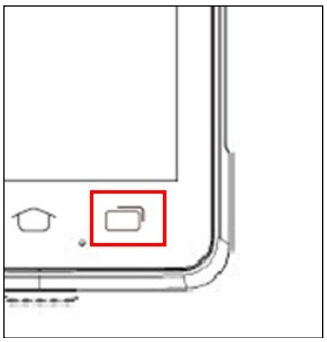
Note :Please see 1.4.1 Installing the Battery for more information.
Caution: ■ Do not press the power key during the battery swap, it will turn off the DR5.
■ If not finish the battery swap within 3 minutes, it will turn off the DR5.

2.14 Split Screen

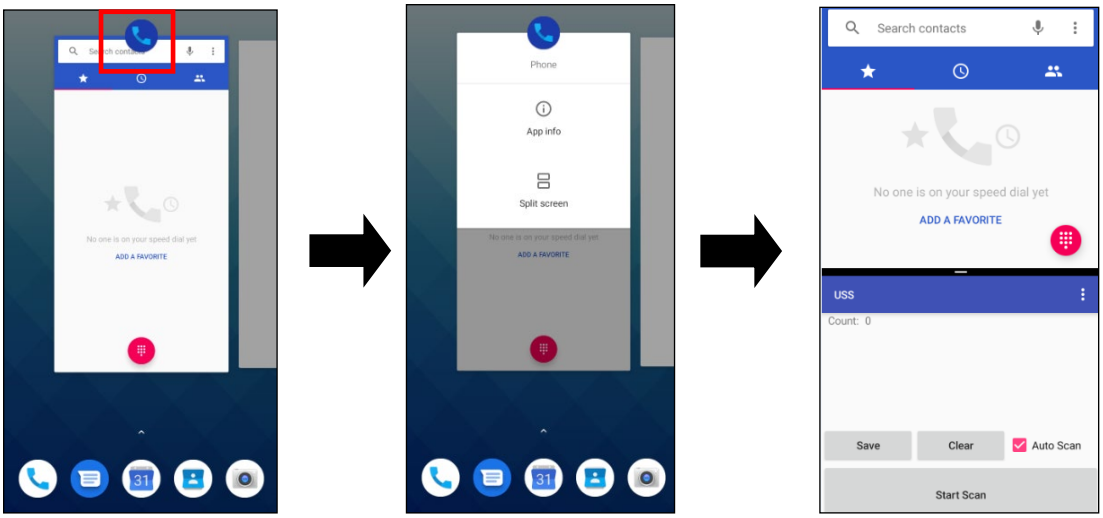
Split screen function allows you to have two apps work side by side on the same screen. Please follow the steps to enable split screen multitasking.

Note: Some apps may not work with split-screen.

1. Tap **Background APP button** until you see those background apps on the screen.

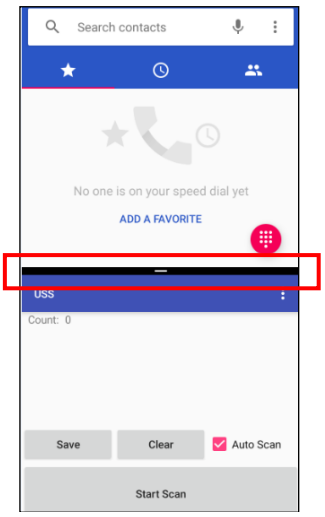


2. Tap and hold the icon which appears above the APP thumbnail and then select “Split screen.” First APP “Split screen” will be on top of the screen. For another APP to show on the bottom half of the screen, simply tap on the APP thumbnail.



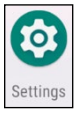
3. To cancel split screen, simply drag up or down the black bar in the middle of

the two APPs to expand the app that you would like to keep in full screen.

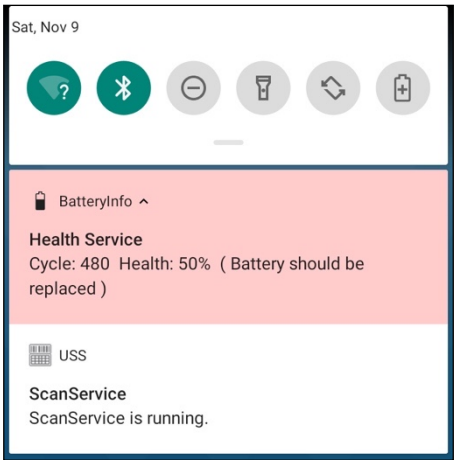


Chapter 3 – Introduction to Applications

3.1 USS (Wasp scan service)

1. On the main screen, scroll the screen from down to top to reach the APPS, and tap 

Settings and then tap **USS** (Wasp scan service).
Or from the notification bar to tap USS (Wasp scan service).

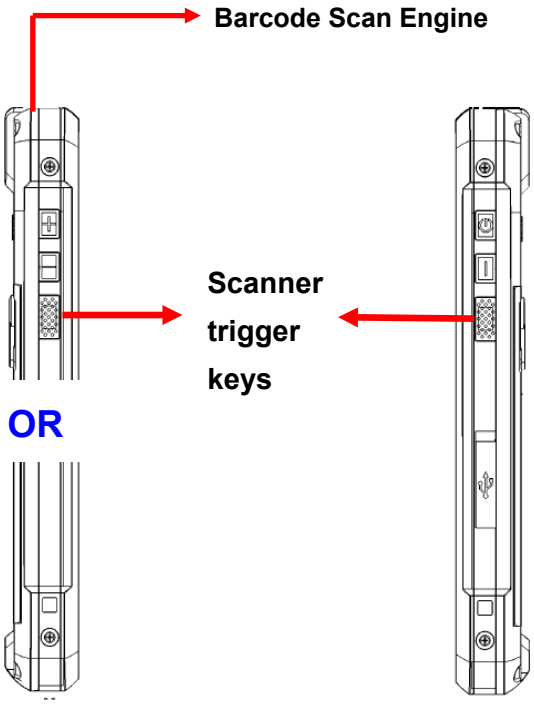


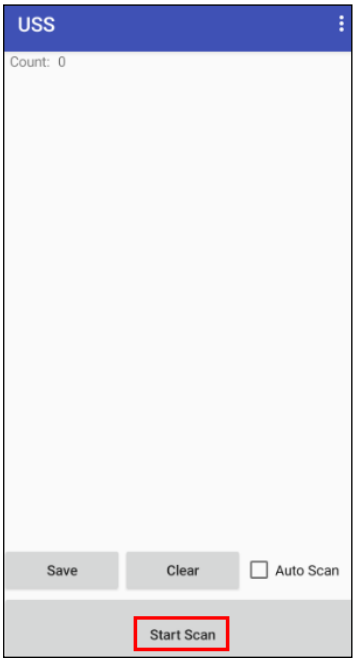
2. You are now enter the Wasp scan service application.

Note : *For more Scan Service settings, please refer to 2.1 Barcode Setting.*

3.1.1 How to scan

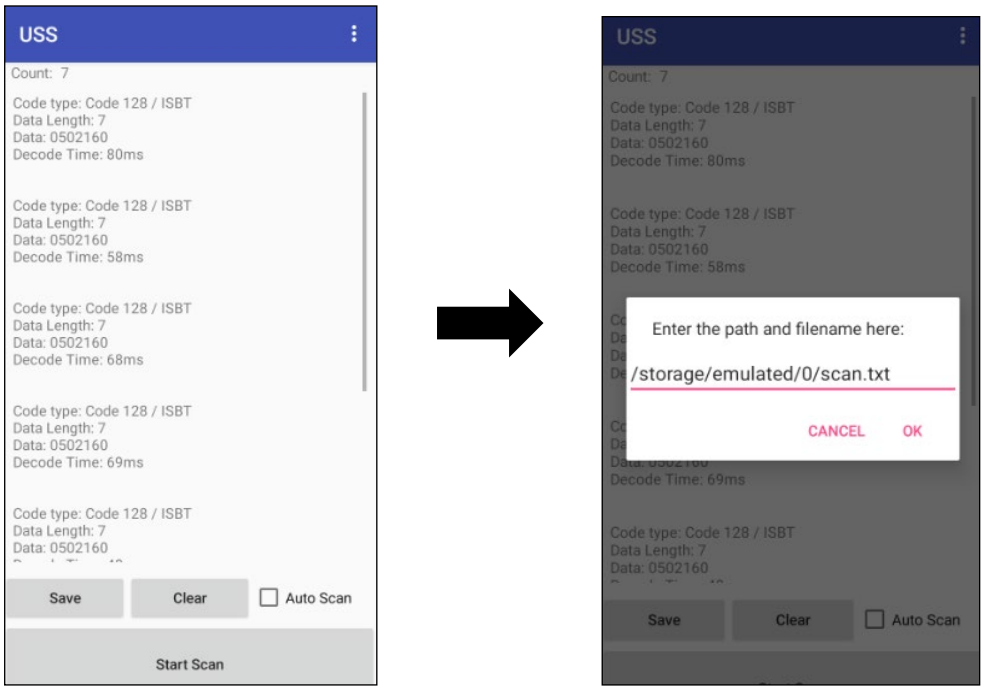
1. Aim the Barcode Scan Engine to the barcode and press one of two scan trigger keys or tap **Start Scan button**.





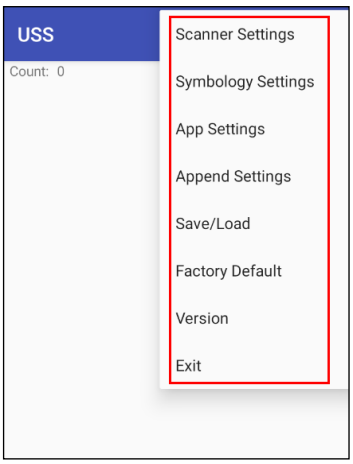
2. After scanning the barcodes, the barcode information is as shown below.

3. To save the scanned data, tap **Save** and enter the path and filename, then tap **OK.**



■ More Options

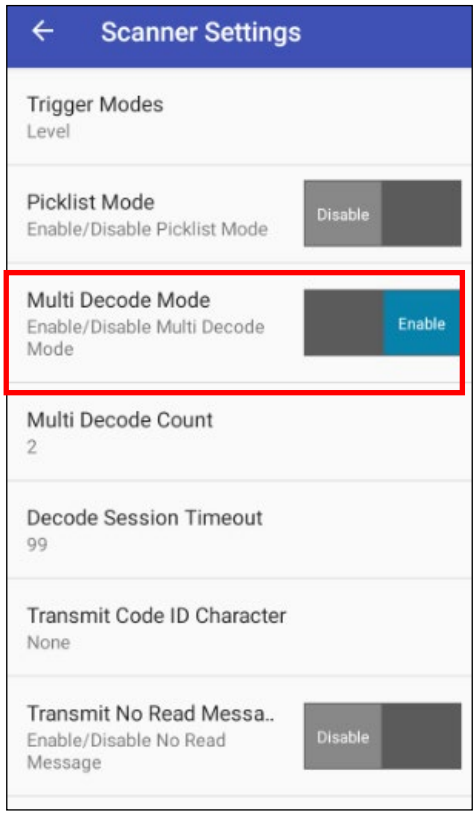
For more options and settings, please tap .



3.1.2 Multi Decode Scan Mode

Multi decode scan function allows users to scan multiple barcodes at once.

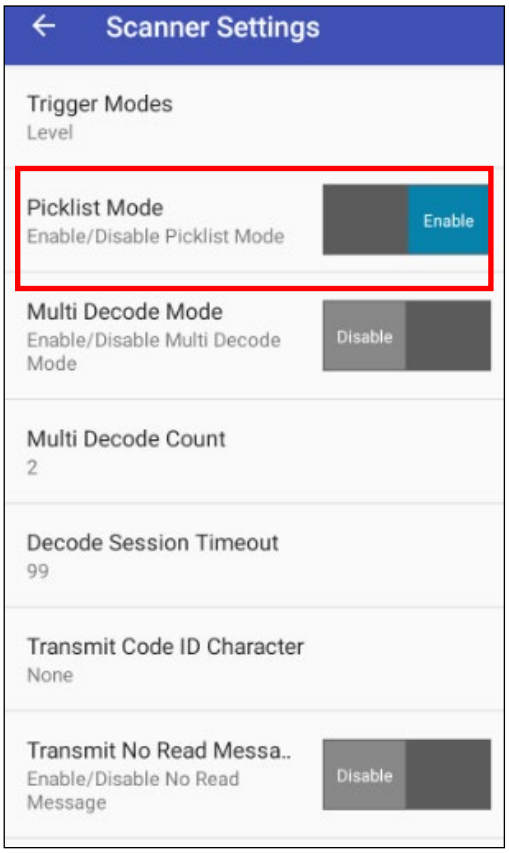
1. Tap , Choose **Scanner Settings**
2. Enable **Multi Decode Mode**, and input the barcode decode count and start multi decode scan.



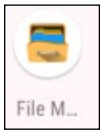
3.1.3 Picklist Mode

Picklist mode enables DR5 to decode only barcodes that are aligned under the laser crosshair or LED aiming dot.
For picklist mode demonstration, please click on our youtube channel for more information : https://www.youtube.com/watch?v=QjT2E6hxD_k

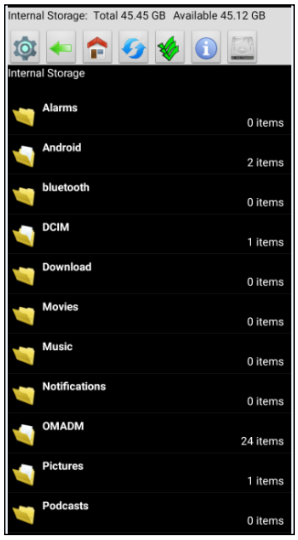
1. Tap , Choose **Scanner Settings**
2. Enable **Picklist Mode**, and allows users to easily select and scan a single or specific barcode from a field of barcodes.



3.2 File Manager

1. On the main screen, scroll the screen from down to top to reach the APPS, and tap 

File Manager.



: Settings

: Return to the previous page

: Main page

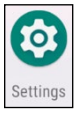
: Refresh

: Folder arrangement

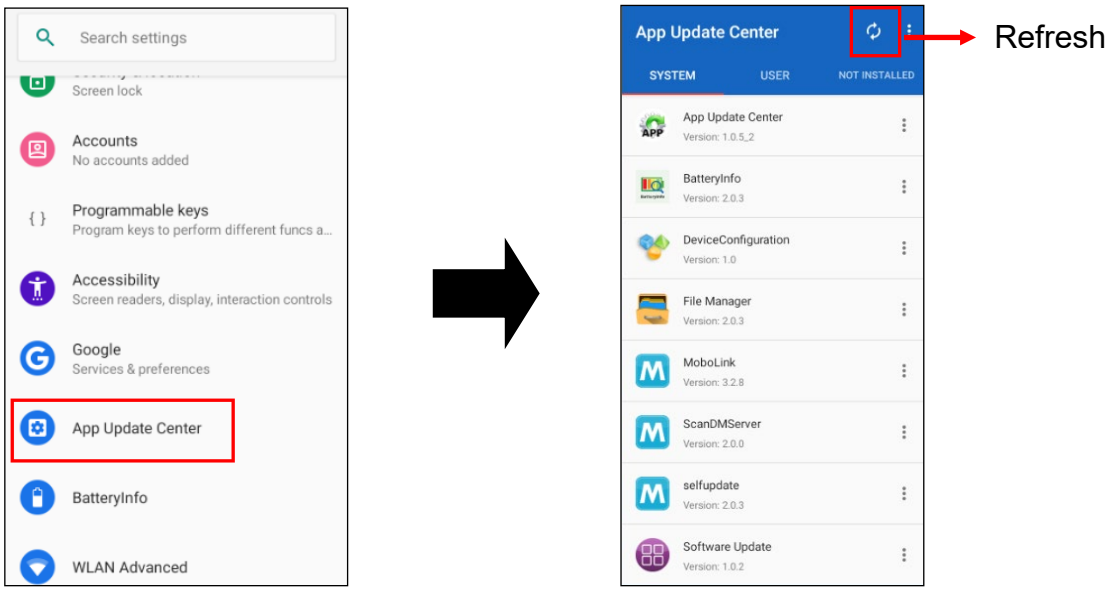
: Folder Information

: Flash Storage

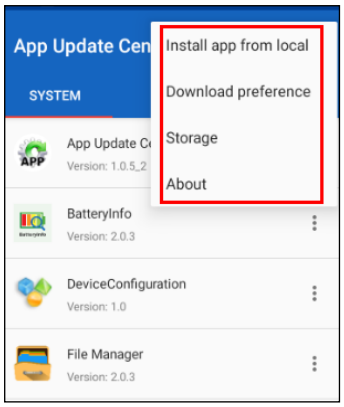
3.3 APP Update Center

1. On the main screen, scroll the screen from down to top to reach the APPS, and tap 

Settings and then tap **App Update Center**.
2. To update or check the latest version of each application, you will need to do it manually.



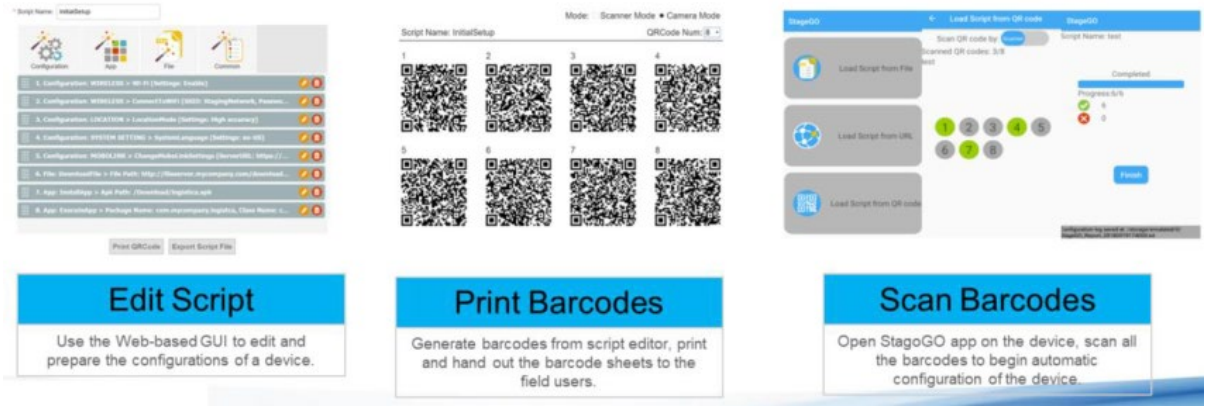
3. Tap for more settings on App Update Center.



3.4 StageGO

StageGO is a configuration staging solution for Wasp mobile devices. StageGO helps IT admins to use the 1-click auto configure feature to set up and initialize a device quickly. Devices configure themselves by using configuration scripts and barcodes prepared by the IT admins, the StageGO app, currently available for Android devices, uses Wasp devices' barcode scanning capabilities to load the script barcode into the device and start the self-configuration process.

- Using StageGO to configure a device is in 3 simple steps:



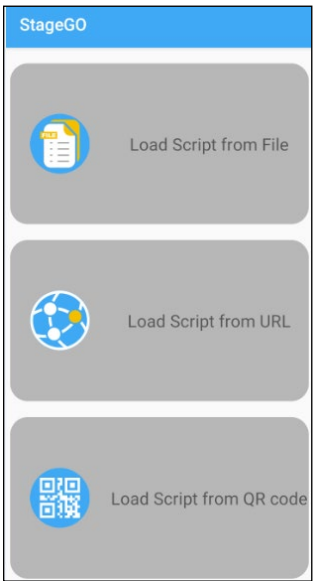
Step 1. Edit Script:
IT admins can prepare a configuration script by using StageGO's web-based script editor. The web-based script editor can be access by following this link: http://www.ute.com/utestagego/services_StageGO.php?rbu=0

Step 2. Print Barcodes:
Upon completion of editing a script, IT admins may either download the script file or to generate barcodes that represent the entire script. The script file or the barcode printouts can then be handed over to the device users for scanning.

Step 3. Scan Barcodes:
When device users receive the barcode printouts (or the script file) from the IT admins, they can then run the StageGO app on their DR5, scan all the barcodes on the printouts (or load the script file). When all barcodes are

scanned, StageGO is ready to begin self-configuration. StageGO can also be configured for 1-click auto configuration. On the main screen, scroll the screen from down to top to reach the APPS, and tap

StageGO.



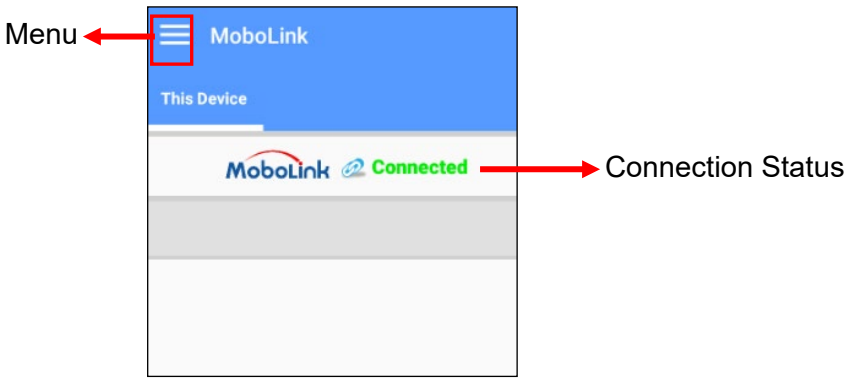
3.5 MoboLink

MoboLink is a software platform that helps Wasp customers to remote manage their purchased devices and applications. The core of the MoboLink platform provides functionalities in the MDM (Mobile Device Management) and MAM (Mobile Application Management) domains, and then further extends into other management functions such as alert notification management and account management.

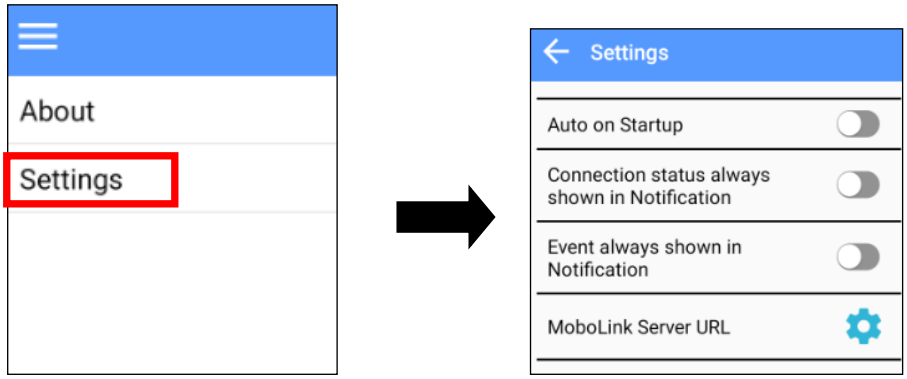
1. On the main screen, scroll the screen from down to top to reach the APPS, and tap

MoboLink.

2. **MoboLink** setting is as shown below :



3. Tap , go to Settings.



4. In the Settings section, go to **MoboLink Server URL** to setup MoboLink server URL.

3.5.1 More about MoboLink

For detailed operation, solution and usage, please refer to **MoboLink** user's guide. (http://mobolink.tw.ute.com/support)