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CipherLab
Reference Manual

RK25WO Mobile Computer

Android 7.0, Nougat

Version 1.12

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CIPHERLAB CO., LTD.
Website: http://www.CipherLab.com

IMPORTANT NOTICES

FOR USA

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 communication. 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.

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.

FCC Caution:
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Find the certificate information from:

Setup → About Phone → Regulatory information

Tested to Comply with FCC Standards

FOR HOME OR OFFICE USE

FOR PRODUCT WITH LASER

- This laser component emits FDA / IEC Class 2 laser light at the exit port. Do NOT STARE INTO BEAM DIRECTLY.
- Do not aim the beam at the eyes.
- Any adjustments or performance excluding those specified herein may result in hazardous laser light exposure.

ENVIRONMENT

- Operate the mobile computer at ambient temperatures from -20℃ to 50℃ and with humidity range from 10% to 90%.
- Store the device at ambient temperatures from -30℃ to 70℃ and with humidity range from 5% to 95%.
- Charge the device at ambient temperatures from 0℃ to 45℃.
- This device is built with a dust-proof and splash-proof structure that conforms to protection class IP65.

SPECIFIC ABSORPTION RATE (SAR) INFORMATION

The product complies with the FCC / Canada portable RF exposure limit set forth for an uncontrolled environment and are safe for intended operation as described in this manual. The further RF exposure reduction can be achieved if the products can be kept as far as possible from the user body or set the device to lower output power if such function is available.

For body-worn operating conditions please use belt-clips, holsters, and/or accessories that have no metallic component in the assembly and must provide at least 10mm separation between the device and the user's body.

- FCC SAR Value (Standard limit is 1.6 W/Kg)
- USA (1g): Max. 0.52 W/Kg

A minimum separation distance of 0.5 cm must be maintained between the user's body and the device, including the antenna during body-worn operation to comply with the RF exposure requirements in Europe.
To compliance with RF Exposure requirements in Europe, third-party belt-clips, holsters or similar accessories used by this device should not contain any metallic components. The use of accessories that do not satisfy these requirements may not comply with RF exposure requirements, and should be avoided.

- CE SAR Value (Standard limit is 2 W/Kg)
- EU (10g): Max. 1.03 W/Kg
- 台灣 NCC 注意事項

  第十二條 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者不得擅自變更頻率、加大功率或變更原設計之特性及功能。

  第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

  前項合法通信，指依電信法規定作業之無線電通信。

  低功率射頻電機需忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

  註：若要減少電磁波影響，請妥適使用。SAR 標準值 2.0W/Kg；送測產品實測值為：0.882W/Kg。

IMPORTANT SAFETY INSTRUCTIONS AND WARNINGS FOR LI-ION/POLYMER BATTERY

- It is important for users to be aware of the risks associated with lithium batteries.
- Lithium Polymer and Li-ion batteries are volatile. Failure to read and follow the below instructions may result personal injury and damage to device if charged or used improperly.
- Lithium Polymer/Li-ion batteries have limited life cycle for charging and discharging. When life cycle has been reached, battery may swell.
- Must keep Lithium Polymer and Li-ion battery away from children.
- Never make wrong polarity connection when charging and discharging battery. Always double check polarity of battery's connector.
- If battery has not been using or staying in device for 2 months, please do battery complete discharging and charging once before use. Always detach battery from device if you will not use device for long period of time.

GENERAL GUIDELINE AND WARNING

- Use specific Lithium Polymer/Li-ion charger from CipherLab only. Failure to do so may cause fire, which may result in personal injury and property damage.
- Never charge batteries unattended. When charging Lithium Polymer/Li-ion batteries, you should always remain in constant observation to monitor the charging process and react to potential problems that may occur.
- Some Polymer/Li-ion chargers on the market may have technical deficiencies that may cause it to charge the LiPo/Li-ion batteries incorrectly or at an improper rate. Assure the charger you purchased works properly and always monitor charging process to ensure batteries are being charged properly. Failure to do so may result in fire.
- If at any time you witness a battery starting to balloon, swell up, smoke or hot; stop using this battery at once and **contact your dealer immediately**.
- If you accidentally short the battery polarity, the battery must be placed in a safe area for observation for approximately 15 minutes. Additionally, if a short occurs and contact is made with metal (such as rings on your hand), severe injuries may occur due to the conductibility of electric current.
- In the event of a crash due to bad shipment or other reasons, you must remove damaged battery for observation and place the damaged batteries from other good batteries.
- Never drop the batteries.
- Do NOT expose battery to water.
- Do NOT attempt to dis-assemble battery.
- Recommended to put the battery in an enclosure to protect it from damages by liquid or dropping from height accidentally.

CHARGING PROCESS

- Please ensure to charge battery indoor such as a well-ventilated room between 20℃ to 30℃.
- Do NOT charge battery under direct sunlight.
- When selecting the cell count or voltage for charging purposes, select the cell count and voltage as it appears on the battery label. As a safety precaution, please confirm the information printed on the battery is correct.
- Lithium Polymer/Li-ion batteries has limited life cycle for charging and discharging. When life cycle has been reached, battery may swell.
- The allowed charging temperature is from 0℃ to 45℃.
- During discharge and handling of batteries, do not exceed 50℃.

STORAGE & TRANSPORTATION

- CipherLab battery is charged in manufacturing to around 30% of its full capacity. It is a good capacity for long-term storage & transportation.
- Battery should NOT be stored in full-charged or full-discharge state; otherwise it will damage battery permanently.
- Battery subjects to discharge even when not installed in a device. For any stored & un-used battery, it is highly recommended for every 3 months to charge battery to 40%~60% of its original capacity to prolonged storage.
- Always detach battery from device if you will not use device for long period of time.
- Store battery indoor temperature between 0℃ to 30℃ for the best performance.
- Do NOT store battery in temperature exceeding 50℃, and never expose battery pack to high external pressure for extended periods, which can lead to an internal short circuit and overheating.
- When transporting or temporarily storing in a vehicle, temperature range should be greater than 0℃ but no more than 45℃.
- Storing battery at temperatures greater than 50℃ for extended periods of time (more than 2 hours) may cause damage to battery.

TO USE, HANDLE, AND DISPOSE BATTERY

- For Li-ion / Li-polymer battery, it is normal to balloon, expand, or swell after one year or 500 cycles (full charge-discharge cycles). Although we guarantee it will NOT cause any damage, it can't be used again and must be disposed at once, therefore we strongly recommend to replace battery every year or after 500 cycles, depend on which comes first.
- If a battery performance decreases more than 20%, it means the battery is at the end of its life cycle. Please stop using this battery, dispose properly according to the location's safe battery disposal procedures, and replace with a new / healthy one.
- The actual number of charge cycle will vary depending on usage conditions, patterns, ambient temperature, and other variables.
- Do NOT discharge battery to a level below 5V per battery under load. Deep discharge below 3V per battery can deteriorate battery performance.
- Use caution to avoid puncture of the battery. Puncture of battery may damage battery cell.
- Periodically and properly dispose used battery according to local regulations.

PRODUCT WARRANTY

- Product warranty is limited to original manufacturing defects in material only. Warranty will not apply to batteries with reduced capacity due to user scenario, unless determined to be a manufacturing flaw.
- Warranty does not cover collateral damage. Due Misuse, abuse, incorrect charging and other inappropriate use of this product are not covered under warranty.

SAFETY PRECAUTIONS

Warning statement:

A pleine puissance, l'écoute prolongée du baladeur peut endommager l'oreille de l'utilisateur.

To prevent possible hearing damage, do not listen at high volume levels for long periods.

使用過度，恐傷害視力。

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

For people's safety

- Do not listen at high volume levels for long periods to prevent possible hearing damage.
- Do not operate this device while walking, cycling or car driving.

For the equipment

- Do not use any batteries or charging devices which are not originally sold or manufactured by CIPHERLAB CO., LTD.
- Do not replace the battery with an incorrect type, to avoid the risk of heat generation, fire, or explosion.
- Do not disassemble, incinerate or short circuit the battery.
- Do not touch the contact pins of the battery pack.
- Do not expose the mobile computer or battery to any flammable sources.
- Do not expose the mobile computer to extreme temperatures or soak it in water.
- Do not use any pointed or sharp objects against the screen surface.
- Do not use the styluses which are not supplied or approved by CIPHERLAB CO., LTD., to prevent possible scratches to the touch screen.
- Water residue on the touch screen may cause abnormal behaviors or the fall of its sensitivity levels.
- On the surface of the terminal and the barcode reading window, the fog or water drops caused by low temperatures may influence barcode reading.
- Do not use bleaches or cleaners to clean the device. Use a clean, wet cloth instead.

BATTERY

- The main battery may not be charged to full for shipment. Charge the main battery to full before using the mobile computer for the first time.
- **Main battery:** The main battery powers the mobile computer to work. It takes approximately 4 hours to charge an empty main battery to full. For the first time charging the main battery, please charge it for at least 8 to 12 hours. The charging LED above the screen will light up in red while charging and will turn green when charging is complete.
- When the main battery is removed, RTC retention will be maintained for at least 30 minutes.
- **Backup battery:** The backup battery is mounted on the main board. Its role is to temporarily keep the mobile computer in suspension when the main battery is drained out so data in DRAM will be retained. The backup battery takes approximately 3.5 hours to charge to full by the main battery or power adapter.
- To preserve battery life and avoid battery bulge:
  1) Please do not use your device while continuously connected with a power supply or cradle for charging. If you need to use your RK25 mobile computer with a power supply or cradle continuously connected, be sure to turn on "**Balance Mode**".
  2) If the main battery is fully charged, do not keep connecting your RK25 mobile computer with charging it a power supply or cradle for charging. If you need to continuously connect your RK25 mobile computer with a power supply or cradle, be sure to turn on "**Balance Mode**".
- The allowed battery charging ambient temperature is between 0℃ to 45℃. It is recommended to charge the battery at room temperature (18℃ to 25℃) for optimal performance.
- Please note that battery charging stops when ambient temperature drops below 0℃ or exceeds 45℃.
- In order to prevent system from shutting down after the battery is drained out, keep a fresh battery for replacement at all times, or connect the mobile computer to an external power.
- If there are drippings or dust on the device or battery pack, wipe them away with a soft clean cloth before battery replacement.
- Turn off the power before battery replacement.
- If you want to put away the mobile computer for a period of time, remove the battery pack from the mobile computer's battery compartment. Store the mobile computer and battery pack separately.
- Recycle batteries in a proper way for the green-environment issue.

SCANNER

- Scan a 1D barcode

I) Open **ReaderConfig** and tap **Scan Test** on the menu bar.

2) Aim the scanning window at the barcode to read. Move the device, having the barcode located in the center of the scanning area.

3) Press any of the two side triggers. The scanning light beams to read the printed barcodes. The buzzer beeps after scanning. The scanning light goes off once the data is decoded, or when the decode timeout period has passed.

- Scan a 2D barcode

I) Open **ReaderConfig** and tap **Scan Test** on the menu bar.

2) Aim the scanning window at the barcode to read. Move the device, having the barcode located in the center of the scanning area.

3) Press any of the two side triggers. The scanning light beams to read the printed barcodes. The buzzer beeps after scanning. The scanning light goes off once the data is decoded, or when the decode timeout period has passed.

CONNECTION

Via Bluetooth or WLAN

- Connection may fail when the mobile computer is around other wireless machines or power cables as the radio frequencies of those may cause interferences.
- If communication fails, move the devices much closer to each other, and try to communicate again
- After turning on, Bluetooth power is sustained even when the mobile computer is suspended. However, if the power mode is switched to Airplane Mode, Bluetooth power will be turned off regardless of the settings.

To a Charging & Communication Cradle

- Do not insert the mobile computer to a Charging & Communication Cradle if water or drippings are staying on the device.
- The LED indicator on a Charging & Communication Cradle shows the status of battery charging only; the status of terminal charging is shown on the device itself.
- Not Charging could be the result of battery damage, battery's failure to touch the connector or AC plug coming off.
- Charging error could be due to high battery temperature.

CARE & MAINTENANCE

- This mobile computer is intended for industrial use. The mobile computer is rated IP65, however, damage may be done to the mobile computer if it is exposed to extreme temperatures or soaked in water.
- When the body of the mobile computer gets dirty, use a clean, wet cloth to wipe off dust and debris. DO NOT use bleaches or cleaners.
- Use a clean, non-abrasive, lint-free cloth to wipe dust off the LCD touch screen. DO NOT use any pointed or sharp objects against the surface. Always keep the LCD dry.
- If you want to put away the mobile computer for a period of time, download the collected data to a host computer, and then remove the battery pack from the mobile computer's battery compartment. Store the mobile computer and battery pack separately.
- If you encounter malfunction on the mobile computer, write down the specific scenario and consult your local sales representative.

E-LABLE

Mobile Computer
Model : RK25

US W/O WWAN SKU

FCC ID : Q3N-RK25

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.

CA W/O WWAN SKU

IC : 5121A-RK25

Complies with Canadian ICES-003 Class B.
Conforme a la NMB-003 classe B du Canada.

This device complies with ISED's licence-exempt RSSs.
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.

TW

CCAJ18Z10160T8

減少電磁波影響,請妥適使用

MY

MCMC
HIDF16000073

JP

R 020-180143
T AD 180067020

電波法により W52 , W53 は屋内使用限定

KR

R-C-Q3N-RK25
LTE 이동통신용 무선설비의 기기
Cipherlab Co., LTD

Mobile Computer
Model : RK25 J

TW

CCAJ18Z10320T4

減少電磁波影響,請妥適使用

JP

R 020-180143
T AD 180067020

電波法により W52 , W53 は屋内使用限定

CE DECLARATION

CIPHER LAB

CE Declaration of Conformity

Manufacturer

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Type of Equipment

Mobile Computer

Model(s) Declared

RK25

Initial Year of Manufacture **2018**
CE issued date **2018.04.10**

Reference to the specification under which conformity is declared in accordance with Council Directive- 2014/30/EU(EMC), 2014/35/EU(LVD), 2011/65/EU (RoHS), 1999/519/EC (EMF), 2014/53/EU(RED).

EN 300 328 V2.1.1
EN 303 413 V1.1.0
EN 301 511 V12.1.1
EN 301 908-2 V11.1.1
EN 50360 :2001 A1:2012
EN 300 330 V2.1.1
EN 55024 : 2010 + A1:2015
EN 55032: 2015+AC:2016
EN 60950-1 : 2006+A2:2013
EN 301 893 V2.1.1
EN 301 908-13 V11.1.1
EN 301 489-3 V2.1.1
EN 50566:2013 AC:2014
EN 301 489-52 V1.1.0
EN 301 489-1 V2.1.1
EN 301 489-17 V3.1.1
EN 301 489-19 V2.1.0
EN 301 908-1 V11.1.1
EN 62479:2010
EN 61000-3-2 :2014
EN 61000-3-3 :2013

I the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s) and Standard(s).
The Notified Body Telefication B.V., with Notified Body number 0560 performed:
choose applicable Modules: B+C
Where applicable:
The issued EU-type examination certificate: note certificate number

Manufacture Signature

Full Name :Herbie Jiang
Title : Manager
Date: 2018.04.10

THAILAND CAUTION

เครื่องโทรคมนาคมและอุปกรณ์นี้มีความสอดคล้องตามมาตรฐานหรือข้อกำหนดของกสทช.

เครื่องวิทยุคมนาคมนี้มีอัตราการดูดกลืนพลังงานจำเพาะ (Specific Absorption Rate - SAR) อันเนื่องมาจากเครื่องวิทยุคมนาคมเท่ากับ 0.95 W/kg
ซึ่งสอดคล้องตามมาตรฐานความปลอดภัยต่อสุขภาพของมนุษย์จากการใช้เครื่องวิทยุคมนาคมที่คณะกรรมการกิจการโทรคมนาคมแห่งชาติประกาศกำหนด

RELEASE NOTES

Version	Date	Notes
1.12	March 9, 2021	Add "**Intent & KeyEvent**" to "**Data Output Method"** in **Section 6.2.1: General Settings**
1.11	Oct. 8, 2020	Add "**Convert UHF EPC to ASCII**" to Section **2.7.7: Enterprise Settings** Update **Section 3.5: OS Update**. Update **Section 3.7: Reset to Factory Default**. Update **Section 4.1.4: Configure Wi-Fi**. Update "**Data Output**" to **Section 5.2.1: General Settings**
1.10	Aug. 19, 2020	Update **WPAN** in **Specifications**
1.09	April 22, 2020	Add new section "**Battery Sensor**" to **Section 2.1: Battery**. Add description about "**Doze Mode**" to **Section 2.7.7: Enterprise Settings**. Add new section "**Enable WLAN Blacklist**" to **Section 4.1: Use Wireless Local Area Network (Wi-Fi)**.
1.08	April 1, 2020	Add description about "Intent Action" & "Intent Decode Data" to **Section 5.2.1: General Settings**.
1.07	Dec. 27, 2019	Add new section "**Data Formatting**" to **Chapter 5: ReaderConfig**
1.06	Nov. 22, 2019	Add "**Important Safety Instructions and Warnings for Li-ion/Polymer Battery**" to "**Important Notice**". Add "**Battery Mode Selection**" to Section **2.1.5**: **Battery Precautions** Update Section **2.7.7: Enterprise Keypad Mode**. Update Section **3.3.1: Application Menu**. Add description about "**Release Scan Mode**", "**Aimer Mode**", & "**Amier Mode Timeout**" to the table "**2D Imager Settings**" of Section **5.2.1: General Settings**. Add "**Key Event Delay Time**" to the table "**How to Output**" of Section **5.2.1: General Settings**.
1.05	July 26, 2019	Add "**Thailand Caution**"
1.04	July 01, 2019	Add high temperature warning to Section 2.1.5: Battery Precautions. Update Section 3.3.1: Application Menu. Update Chapter 5: ReaderConfig
1.03	Feb. 22, 2019	Add 70° tilted reader model Add "**Battery Protection Mode**" to Section **2.1.5**: **Battery Precautions** Update Section **2.4.1**: **Status LED** Update Section **2.6.2**: **On-screen Keyboard** Add "**Function Lock Mode**" to Section **2.7.3**: **Function Key** Add Section **2.7.5**: **Enterprise Keypad Mode**
1.02	Oct. 04, 2018	Update Chapter 5 "**Using Reader Configuration Utility**": ▸ Update all figures. ▸ Remove "Presentation Mode" & "Presentation Usage Time" ▸ Change Import & Export file format to .json
1.01	Aug. 09, 2018	Change "**Tumble Test**" in "**Specification**"

1.00	Aug. 02, 2018	Initial release

CONTENTS

IMPORTANT NOTICES ..... - 2 -

For USA ..... - 2 -

For Product with Laser ..... - 3 -

Environment ..... - 3 -

Specific Absorption Rate (SAR) information ..... - 3 -

Important Safety Instructions and Warnings for Li-ion/Polymer Battery ..... - 4 -

General Guideline and Warning ..... - 4 -

Charging Process ..... - 5 -

Storage & Transportation ..... - 5 -

To Use, Handle, and Dispose Battery ..... - 6 -

Product Warranty ..... - 6 -

Safety Precautions ..... - 7 -

Battery ..... - 8 -

Scanner ..... - 9 -

Connection ..... - 9 -

Care & Maintenance ..... - 9 -

E-Lable ..... - 10 -

CE Declaration ..... - 11 -

Thailand Caution ..... - 12 -

RELEASE NOTES ..... - 13 -

INTRODUCTION 20

Features 21

Inside the Package 21

Accessories 21

Related Documentation 21

QUICK START 22

1.1. Overview 23

1.1.1. Install/ Remove Battery 26

1.1.2. Installing Memory Card 29

1.1.3. Power On/Off Mobile Computer 31
1.1.4. Homescreen Selection 32
1.1.5. Using Hardware Buttons 33
1.1.6. Connecting Headset 34
1.2. Charging & Communication 35
1.2.1. Charge Mobile Computer 35
1.2.2. Wired Data Transmission 42
1.2.3. Using Wireless Networks 43
USING RK25WO MOBILE COMPUTER 44
2.1. Battery 45
2.1.1. Battery Status Indicators 46
2.1.2. Monitor Battery Level 48
2.1.3. Replace Main Battery 54
2.1.4. Power Management 57
2.1.5. Battery Precautions 59
2.1.6. Battery Sensor 63
2.2. Memory 65
2.2.1. Check Memory Usage 66
2.2.2. Manage Storage Space 67
2.3. Touch Screen 75
2.3.1. Screen Brightness 75
2.3.2. Screen rotation 76
2.3.3. Screen Timeout Settings 80
2.3.4. Text Size 81
2.3.5. Display Size 82
2.4. Notifications 83
2.4.1. Status LED 83
2.4.2. Audio 83
2.4.3. Sounds and Vibration 84
2.5. Date and Time 87
2.6. Language & Keyboard Input 88
2.6.1. Change Display Language 88
2.6.2. On-screen Keyboard 90
2.7. Physical Keypad 102

2.7.1. Basic Key....103
2.7.2. Alpha Key....104
2.7.3. Function Key (only for 25-key Model)....106
2.7.4. Shift Keys....108
2.7.5. Key Functions in Different Modes....109
2.7.6. Keypad Lock....112
2.7.7. Enterprise Keypad Mode....113
2.7.8. Keypad backlight....119
2.8. Sound and Volume....120
2.9. Data Capture....121
2.9.1. Barcode Reader....121
2.9.2. Digital Camera....121
BASIC OPERATION....122
3.1. Home Screen....123
3.1.1. Customize Home Screen....125
3.2. Status Bar....136
3.2.1. Icons on Status Bar....137
3.2.2. Open Quick Setting Menu....139
3.2.3. Open Notifications Drawer....142
3.3. Manage Applications....144
3.3.1. Application Menu....144
3.3.2. Current Applications....147
3.4. Suspend & Lock....148
3.4.1. Suspend Device....148
3.4.2. Lock Device....149
3.5. OS Update....151
3.5.1. Network Update....151
3.5.2. SD Card Update....152
3.6. Back up Your Data....153
3.7. Reset to Factory Default....154
3.7.1. Factory data reset....154
3.7.2. Erase all data (factory reset with Enterprise)....155
3.7.3. Welcome Wizard....156

WIRELESS RADIOS 159
4.1. Use Wireless Local Area Network (Wi-Fi) 160
4.1.1. Connect to Wi-Fi Network 160
4.1.2. Manually Add Wi-Fi Network 161
4.1.3. Advanced Wi-Fi Settings 162
4.1.4. Configure Wi-Fi 163
4.1.5. Configure Proxy Server 166
4.1.6. Use Static IP Address 166
4.1.7. Connect With Wi-Fi Protected Setup (WPS) 166
4.1.8. Modify Wi-Fi Network 167
4.1.9. Disconnect Wi-Fi Network 167
4.1.10. Enable WLAN Blacklist 168
4.2. Use Bluetooth 169
4.2.1. Bluetooth Profiles 169
4.2.2. Turn On Bluetooth 170
4.2.3. Change Bluetooth Name 171
4.2.4. Pair Bluetooth Devices 172
4.2.5. Unpair Bluetooth Device 172
4.3. Use Near Field Communications 173
USING READER CONFIGURATION UTILITY 176
5.1. ReaderConfig Profile Managment 177
5.1.1. ReaderConfig Main Menu 178
5.1.2. Profile Menu 182
5.2. Configuring Reader 186
5.2.1. General Settings 186
5.2.2. Advanced Data Formatting 193
5.2.3. Symbology 205
5.2.4. Profile 207
5.2.5. Reset 211
5.3. Read Printed Barcodes 212
SPECIFICATIONS 214
Platform, Processor & Memory 214
Communication & Data Capture 215
Electrical Characteristics 216

Physical Characteristics 216
Environmental Characteristics 217
Programming Support 218
APPENDIX I 219
Scan Engine Settings 219
Symbologies Supported 219
APPENDIX II 222
2D Imager 222
Symbology Settings 222
Symbology Settings (for SM2) 233
APPENDIX III 244
Open Source License 244

INTRODUCTION

The **RK25WO** mobile computer, powered by Android 7.0 Nougat, is light-weight, easy to use, providing powerful and handy tools for the purpose of delivering flexibility in customization.

Specifically designed to work as an industrial PDA, it provides rich options of data collection, voice and data communication, long-lasting working hours, and so on. Its large color transmissive display guarantees ease in reading in all lighting conditions. Integrated with Bluetooth Class I, v4.0, v4.1, V4.2 v2.1 BLE, v2.1 with Enhanced Data Rate (EDR)+EDR, 802.11 b/g/n and 802.11 a/ac/n networking technologies, the mobile computer also includes a GSM/GPRS/EDGE/WCDMA/UMTS/HSDPA/HSUPA/HSPA+/LTE module to gain greater speeds and optimal mobility. In particular, an integrated GPS receiver is made available for use with third-party location-based applications.

This manual serves to guide you through how to install, configure, and operate the mobile computer. The Care & Maintenance section is specifically crucial for those who are in charge of taking care of the mobile computer.

We recommend you to keep one copy of the manual at hand for quick reference or maintenance purposes. To avoid any improper disposal or operation, please read the manual thoroughly before use.

FEATURES

- Built tough to survive drop test and sealed against moisture/dust to industrial standard IP65.
- Android 7.0 Nougat operating system with a powerful Cortex 1.45 GHz Quad-Core processor
- 16GB eMMC flash memory to store OS and software programs
- 2GB LPDDR3 SDRAM to store and run programs, as well as store program data
- One expansion slot for microSDHC card up to 32GB and microSDXC card up to 64GB.
- Built-in 8.0 Megapixel rear camera with white LED for flash and auto focus.
- Left and right side triggers for ambidextrous scanning
- Total wireless solution —connectivity includes Bluetooth Class I, v4.0, v4.1, V4.2 v2.1 BLE, v2.1 with Enhanced Data Rate (EDR)+EDR, BLE, 802.11 b/g/n and 802.11 a/ac/n networking, GSM/GPRS/EDGE/WCDMA/UMTS/HSDPA/HSUPA/HSPA+/LTE, and near field communication (NFC)
- A 4.0 inch, LCD, Corning Gorilla Glass 3 display with 480x800 pixels to deliver excellent visibility in all lighting conditions
- Configurable feedback indicators including speaker and vibrator
- Built-in scan engine setting tool Reader Configuration which serves out-of-the-box keyboard wedge functionality

INSIDE THE PACKAGE

The following items are included in the kit package. Save the box and packaging material for future use in case you need to store or ship the mobile computer.

- RK25WO Mobile Computer
- USB Cable (optional)
- Snap-on Cable (optional)
- AC Power Adaptor (optional)
- Hand Strap (optional)
- Quick Start Guide

ACCESSORIES

- 1-slot Charging + Communication Cradle
- Pistol Grip

RELATED DOCUMENTATION

Log in to **GoBetween** to access related documentation about the RK25WO mobile computer from the CipherLab Central Service (CCS) platform. Download the **GoBetween desktop** or mobile device application, or launch the GoBetween Lite web application from the following site: http://ccs.cipherlab.com/.

Chapter 1

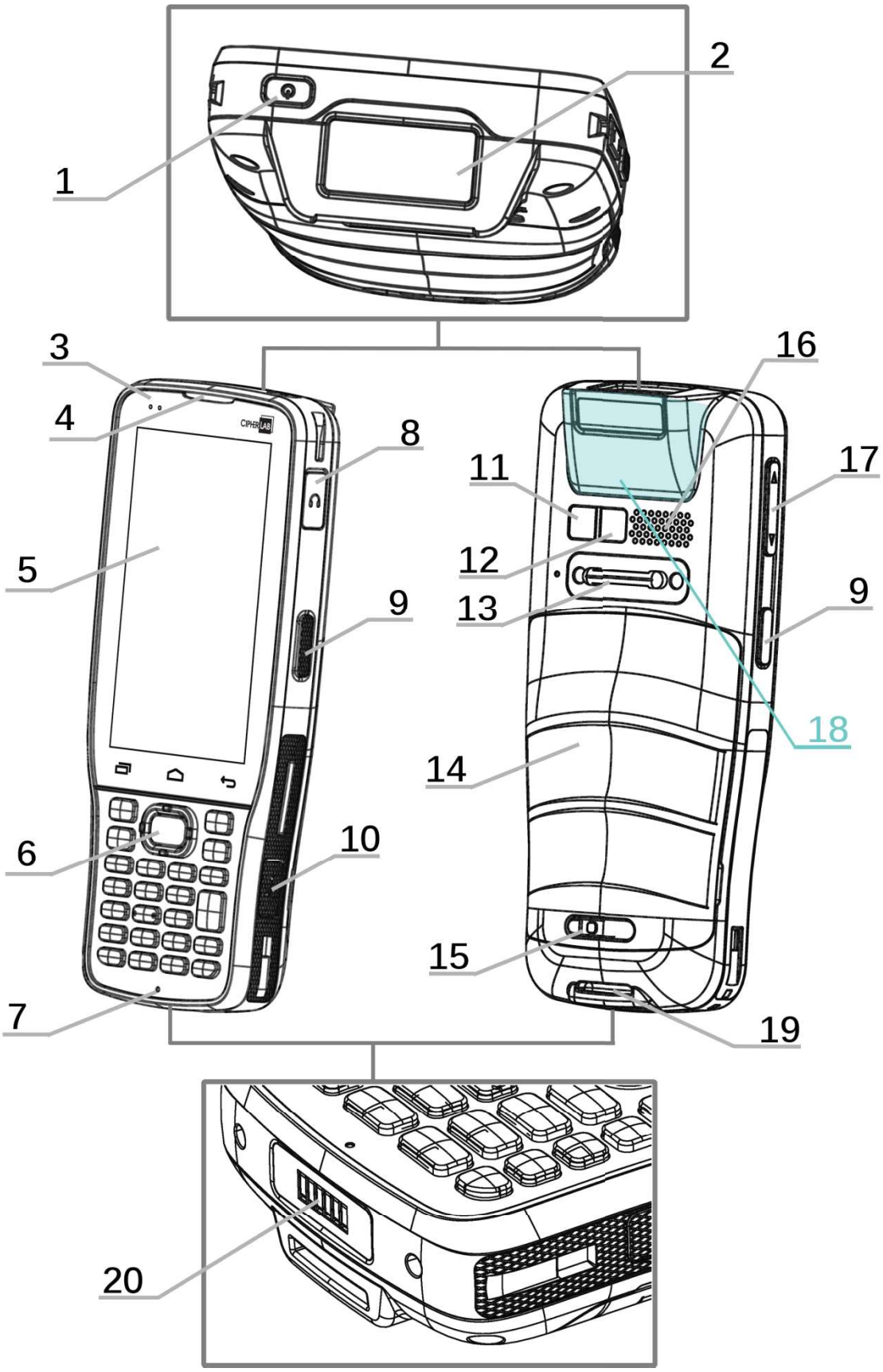
QUICK START

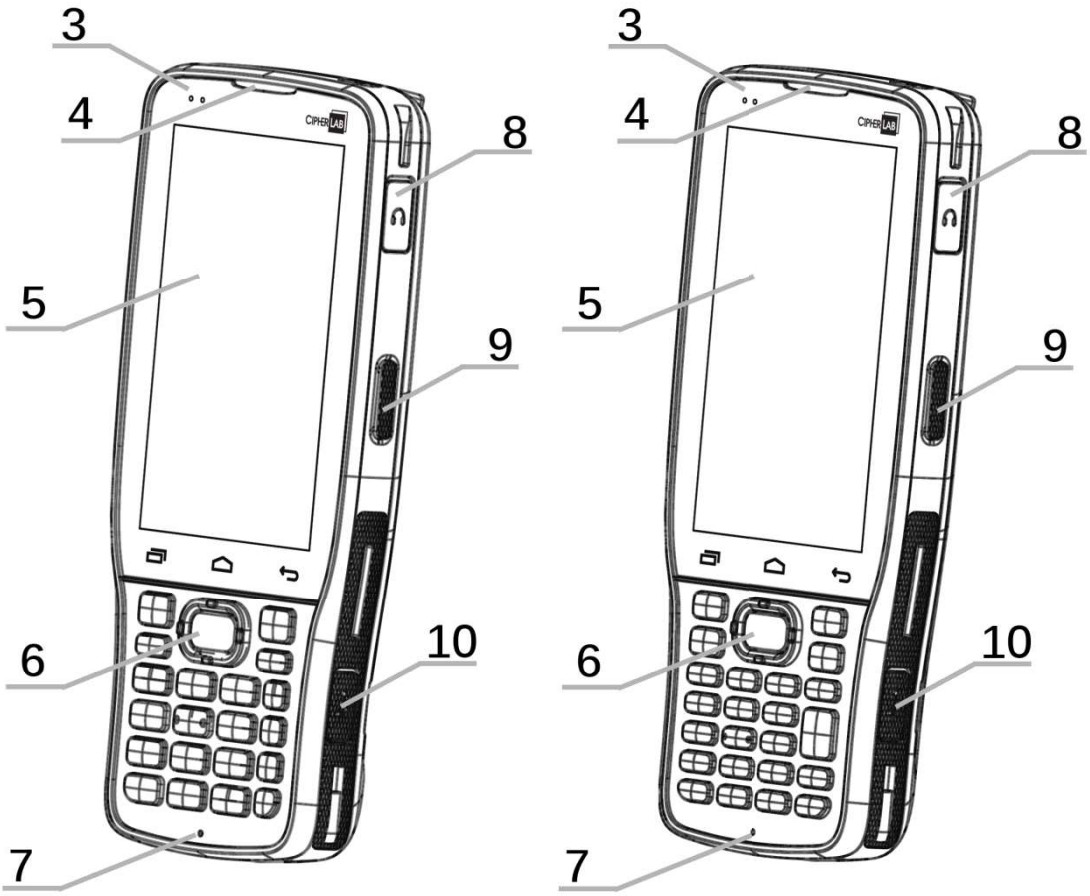
This chapter helps you get ready for starting using the mobile computer.

IN THIS CHAPTER

1.1 Overview 23
1.2 Charging & Communication 35

1.1. OVERVIEW

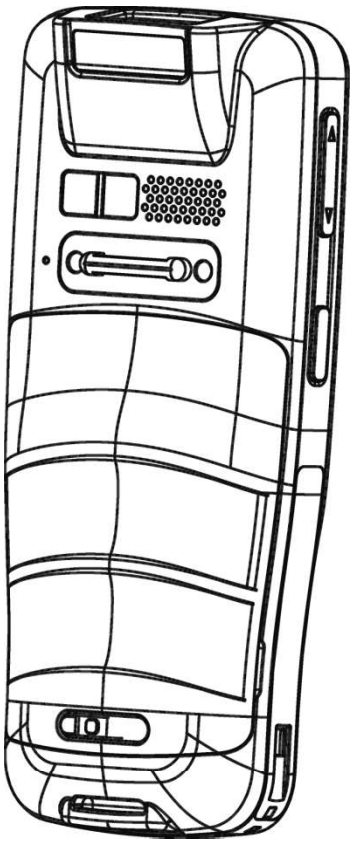




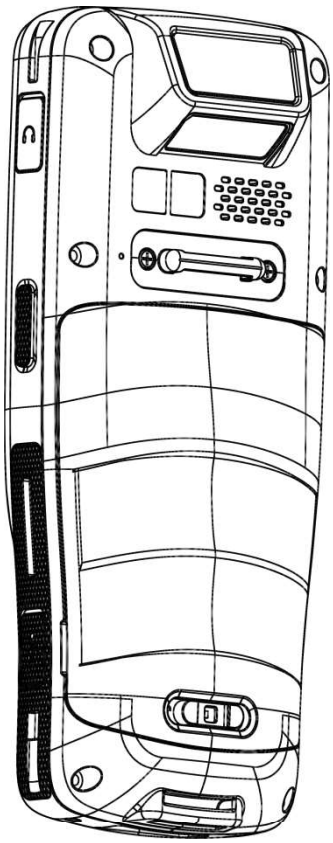
25-key Model **28-key Model**

No.	Description	No.	Description
1	Power Button	2	Scan Window
3	Status LED	4	Receiver
5	Touchscreen	6	Scan Key
7	Microphone	8	Headset Jack
9	Side-Trigger	10	Micro USB Port
11	Camera	12	Camera Flash
13	Wrist Band Cover	14	Battery
15	Battery Cover Latch and Lock	16	Speaker
17	Volume Buttons	18	NFC Detection Area
19	Wrist Band Hole	20	Charging & Communication Pins

Note: Please refer to "Physical Keypad" for the difference between 28-key Model and 25-key Model.



10° Tilted Reader



70° Tilted Reader

Note:

NFC function is unavailable for 70° tilted reader model & 25-Key model.

1.1.1. INSTALL/ REMOVE BATTERY

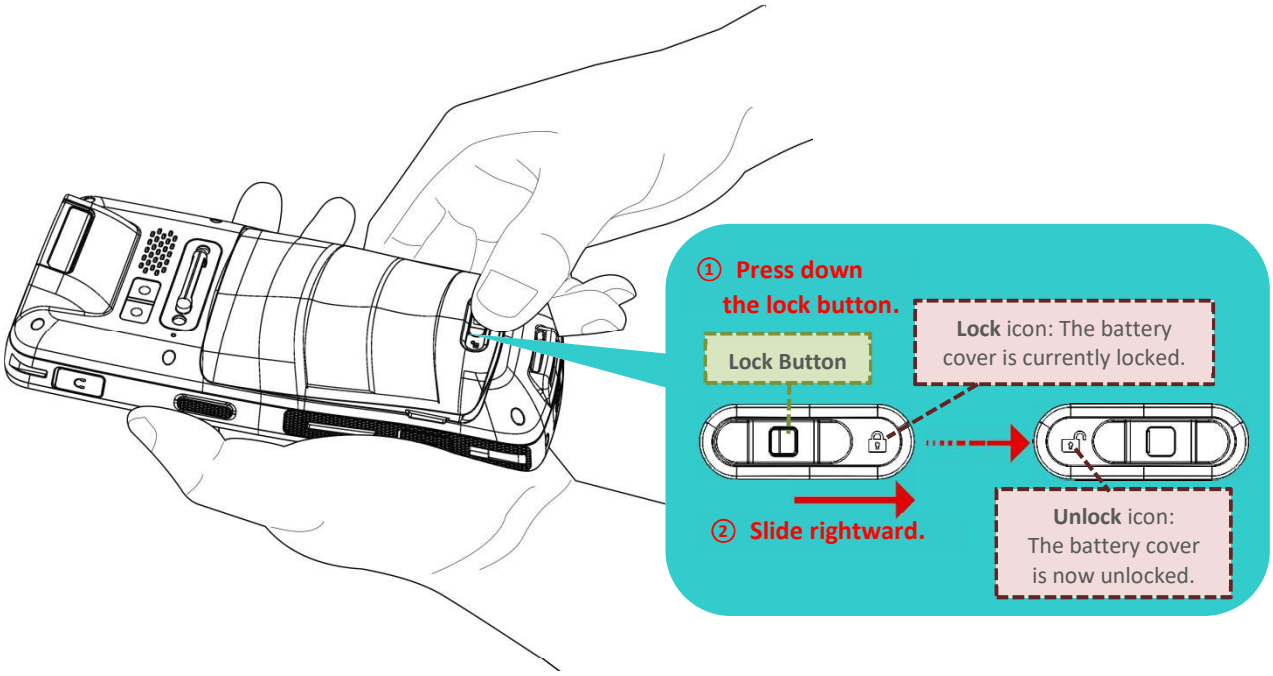
For shipping and storage purposes, the mobile computer and the main battery are saved in separate packages.

Note:

Any improper handling may reduce the battery life.

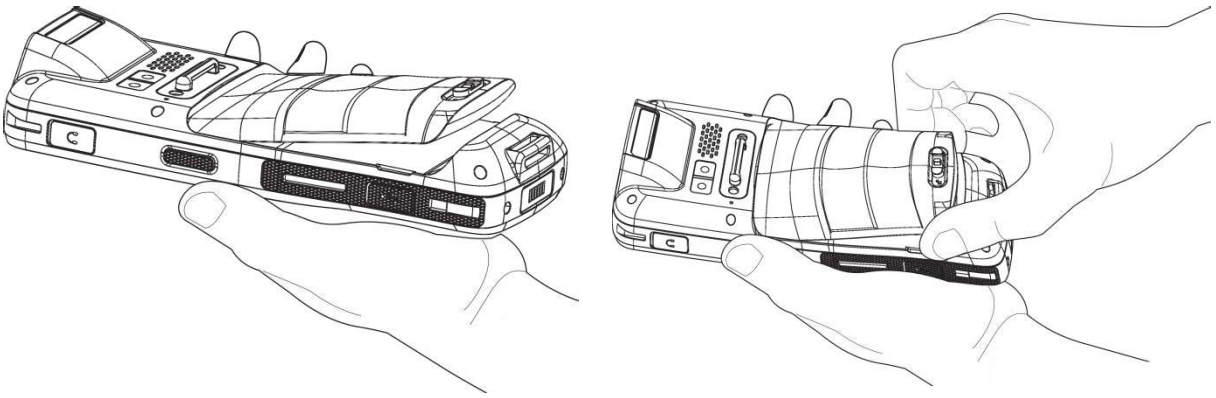
To install the main battery:

I) Keep pressing down the lock button and slide the battery latch rightward to unlock it.

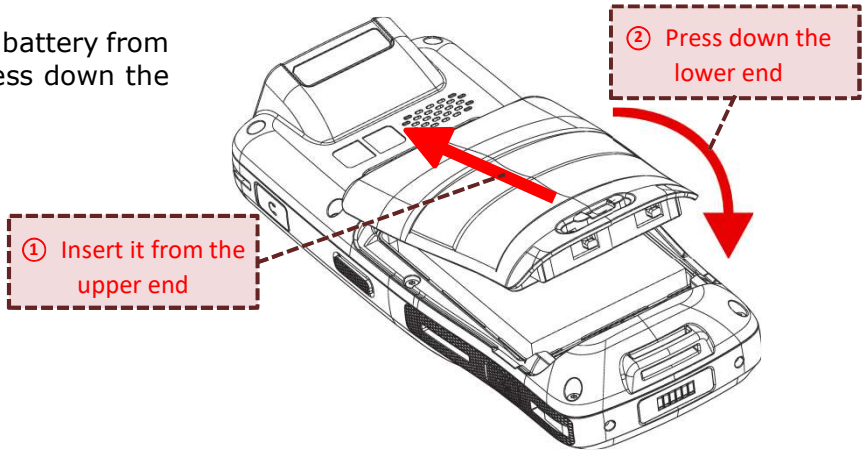


2) Once the battery cover is unlocked, it slightly tilts up and is ready to be removed.

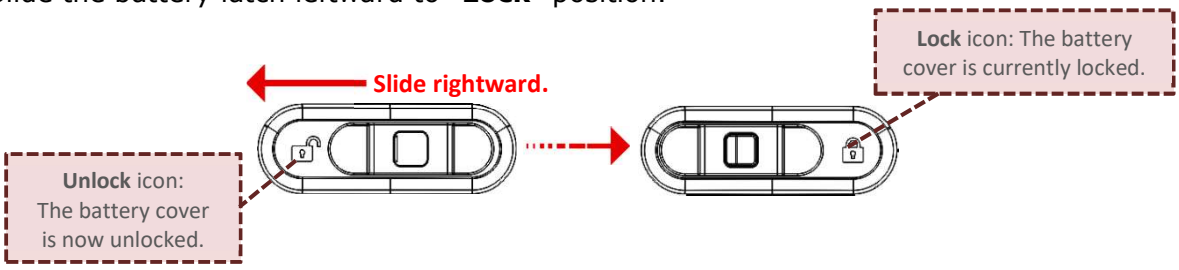
By holding the two sides of the battery cover, lift up the main battery (which is with the battery cover) from its lower end to remove it.



3) Insert a fully-charged main battery from its upper end, and then press down the lower edge of the battery.



4) Slide the battery latch leftward to "**Lock**" position.

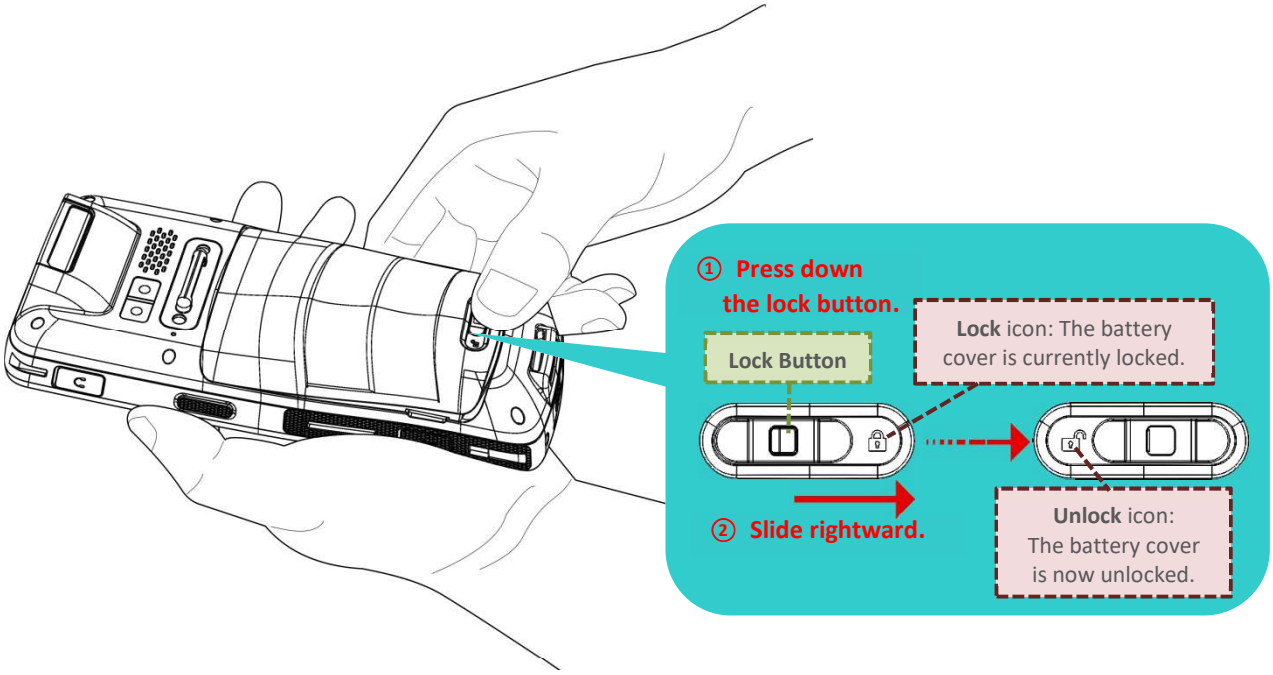


Warning:

1) **Make sure the battery latch is at the "Lock" position before powering on the device.**
2) **For initial use, insert a charged battery, lock the battery cover in place, and then press the Power key to power on the mobile computer.**

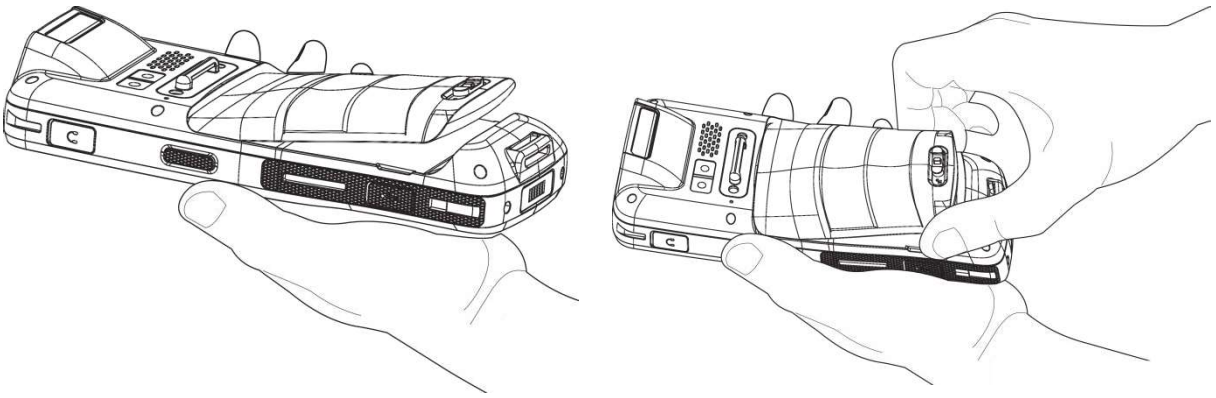
REMOVE BATTERY

1) Keep pressing down the lock button and slide the battery latch rightward to unlock it.



2) Once the battery cover is unlocked, it slightly tilts up and is ready to be removed.

   By holding the two sides of the battery cover, lift up the main battery (which is with the battery cover) from its lower end to remove it.

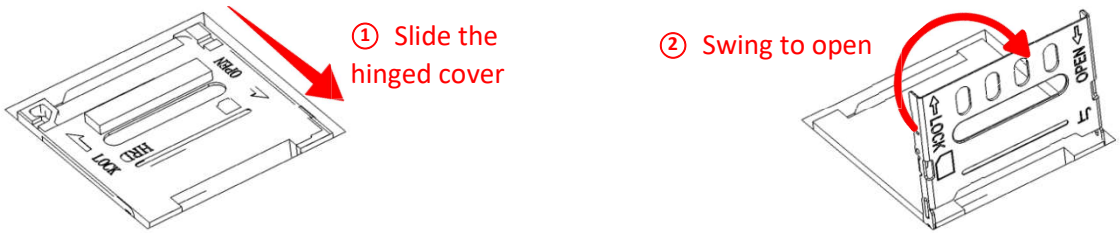


1.1.2. INSTALLING MEMORY CARD

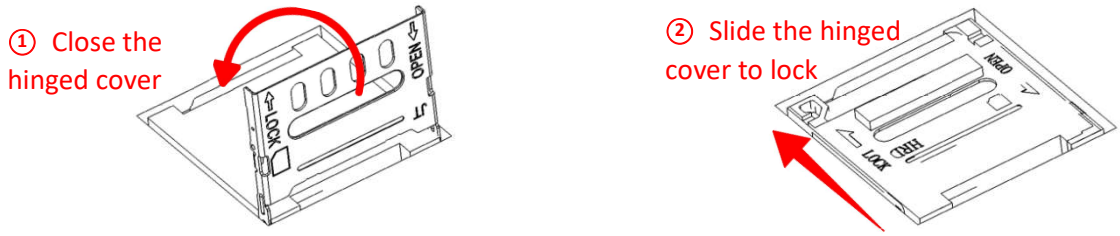
The RK25WO mobile computer is equipped with 2 SIM card slots and 1 memory card slot (or 1 SIM, 1 SAM, and 1 memory card slot); however, the SIM card slots are with no function for Wi-Fi only model.

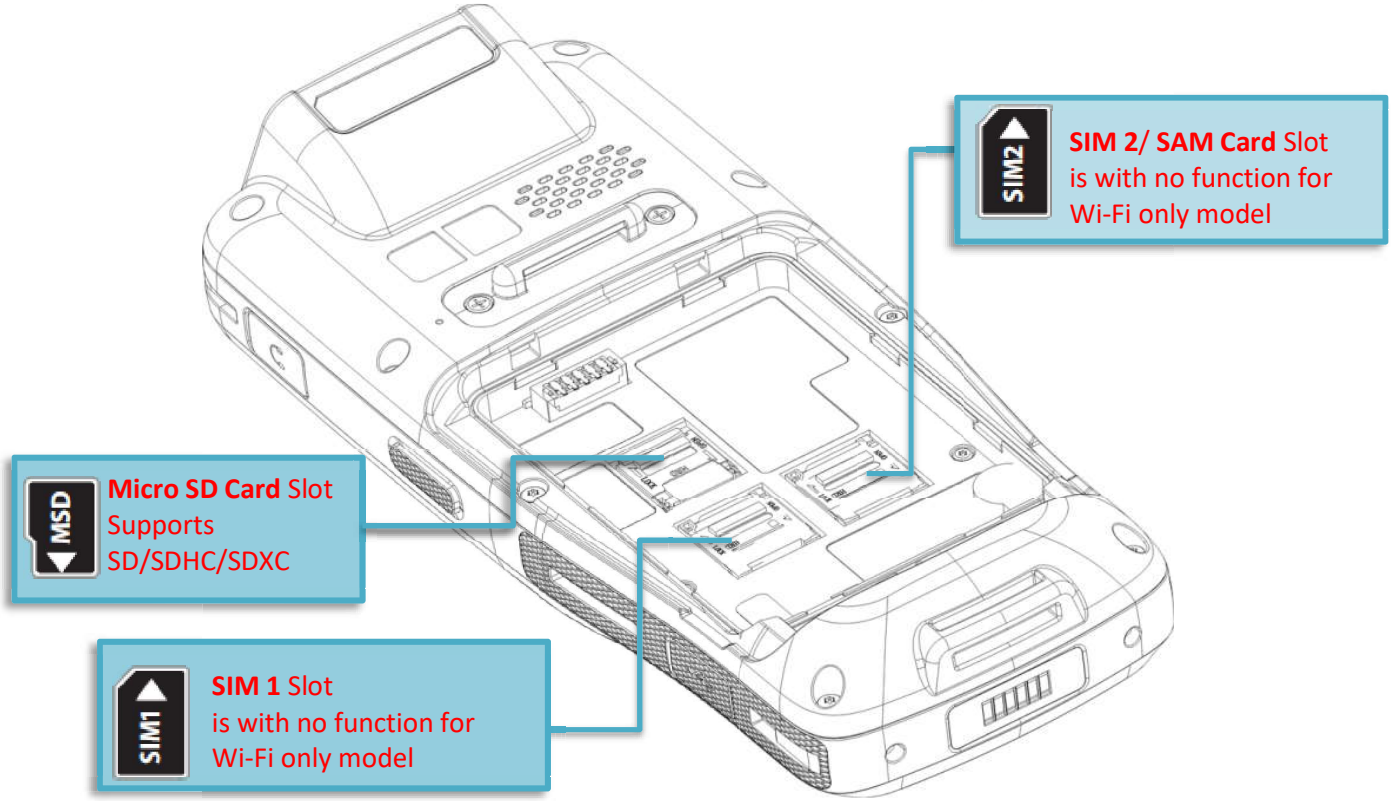
To insert the cards:

1) Remove the battery as described in Remove Battery.
2) Slide the hinged cover backward, and swing the top to open.



3) Place the card into the slot with its metal contacts downward.
4) Close the hinged cover, and then push it toward to lock.



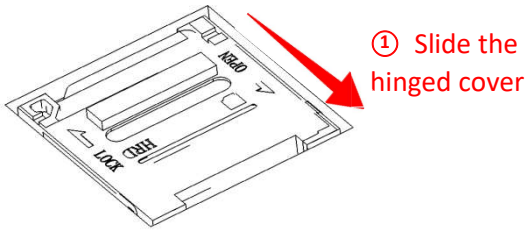


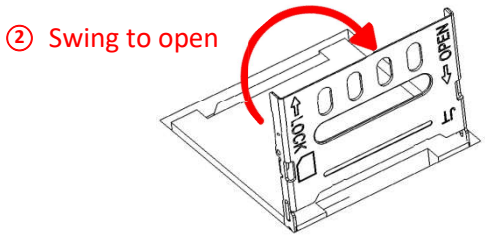
5) Replace the battery cover and push the battery latch back to the "**Lock**" position.

REMOVE THE CARD

1) Remove the battery cover as described in Remove Battery.

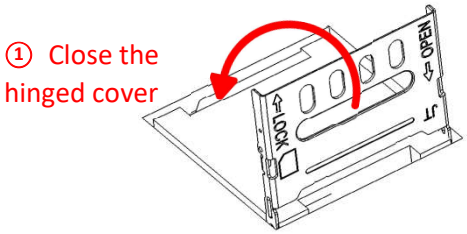
2) Slide the hinged cover backward, and swing the top to open.

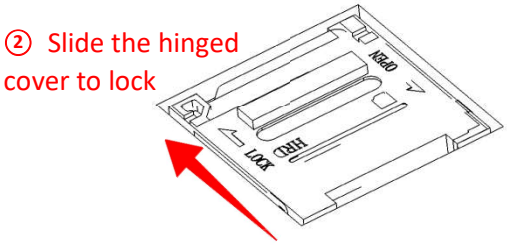




3) Take out the card directly from the slot.

4) Close the hinged cover, and then push it toward to lock.



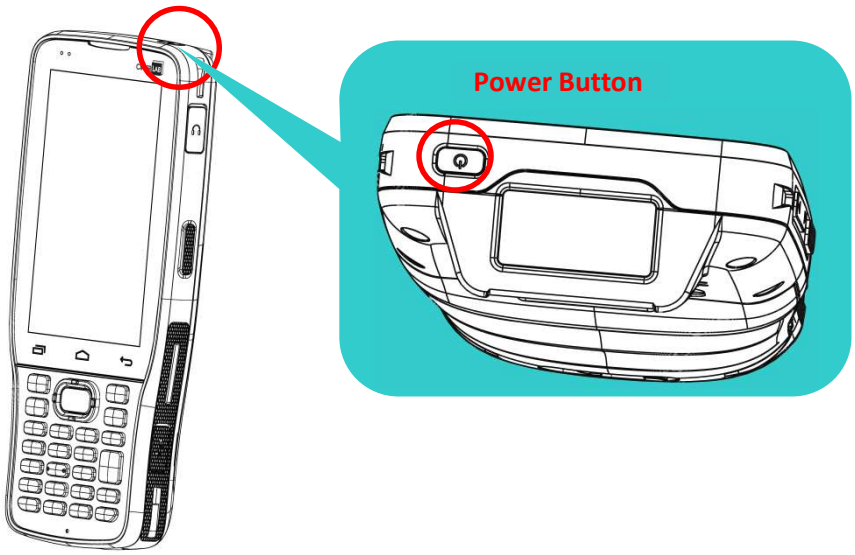


5) Replace the battery cover and push the battery latch back to the "**Lock**" position.

1.1.3. POWER ON/OFF MOBILE COMPUTER

POWER ON

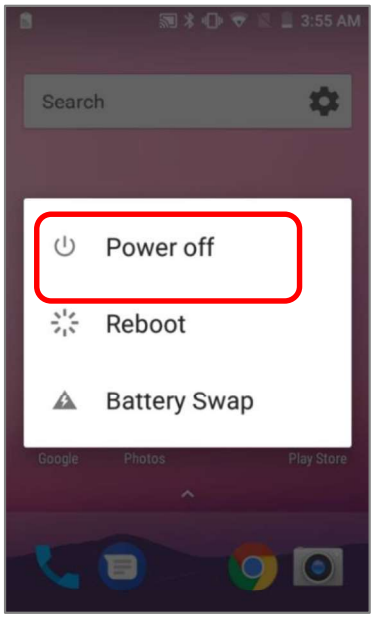
To power on the mobile computer, press and hold the power button located on the top end of the device. The mobile computer will turn on and show the Home Screen after splash screen.



Note:
For the mobile computer to power on, the battery cover must be secured in place.

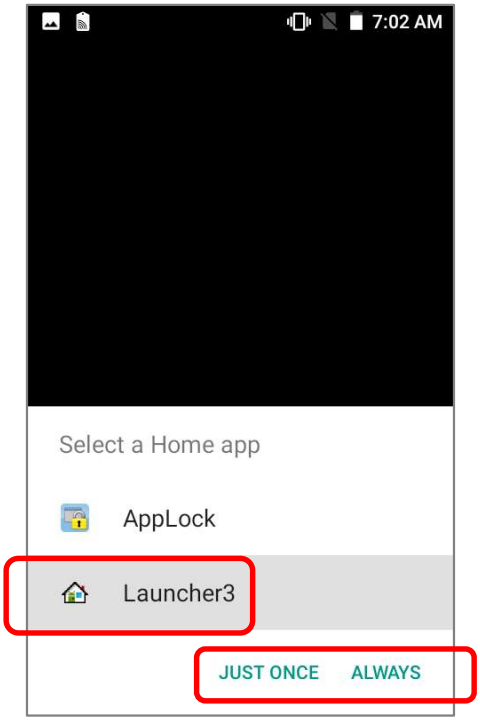
POWER OFF

To power off the mobile computer, press and hold the power button for more than three seconds. A menu will appear on-screen which allows you to power off the device. Make sure all user data and tasks have been stored before tapping on **Power off**.



1.1.4. HOMESCREEN SELECTION

Upon the first time you launch the system, a **Select Home app** window will pop up to request your immediate choice of home screen. By selecting "**AppLock**", you will directly enter AppLock application (please refer to *AppLock User Guide* for detailed instructions on AppLock settings) to start configuring the interface provided to normal users of this device; by selecting "**Launcher**", you will enter the default Android 7.0 home screen.



1.1.5. USING HARDWARE BUTTONS

Beneath the LCD display are three hardware buttons that deliver the following functions:

Button	Function	Description
	Back button	Returns to the previous screen or closes the active window or keyboard.
	Home button	Displays the Home screen.
	Recent apps button	Opens a list of recently used applications.

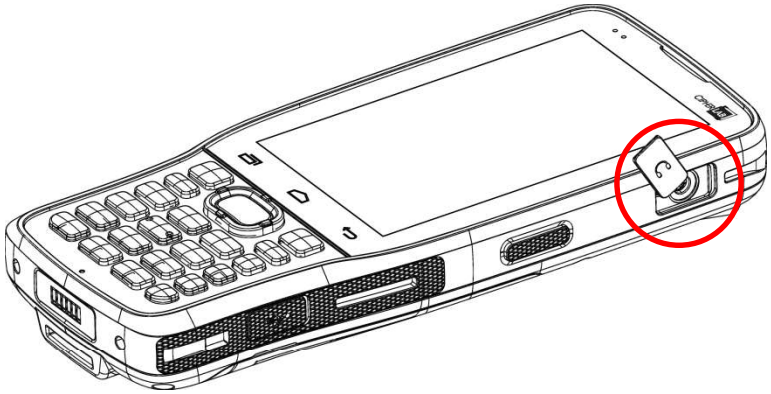
1.1.6. CONNECTING HEADSET

The headset jack is located on the upper right side of the mobile computer. You can use the headset for audio playback.

1) Flip up the rubber cover.

2) Connect the headset to the headset jack.

3) Once the headset is removed, please replace the rubber cover.



1.2. CHARGING & COMMUNICATION

1.2.1. CHARGE MOBILE COMPUTER

The main battery may not be charged to full for shipment. When you first receive the kit package, you will need to charge the main battery to full before using the mobile computer. You may use the Snap-on Charging Cable or Charging & Communication Cradle along with a power adapter to charge the mobile computer.

Your device can also be charged by connecting to a host computer using the USB cable. It's slower than charging using the supplied snap-on cable or Charging & Communication Cradle.

CHARGING TIME

- **Main battery:**

  The main battery powers the mobile computer to work. It takes approximately 4 hours to charge an empty main battery to full. For the first time charging the main battery, please charge it for at least 8 to 12 hours. The charging LED above the screen (located on the left) will light up in red while charging and will turn green when charging is complete.

  When the main battery is removed, RTC retention will be maintained for at least 30 minutes.

- **Backup battery:**

  The backup battery is mounted on the main board. Its role is to temporarily keep the mobile computer in suspension when the main battery is drained out so data in DRAM will be retained. The backup battery takes approximately 3.5 hours to charge to full by the main battery or power adapter.

CHARGING TEMPERATURE

The allowed battery charging ambient temperature is between 0℃ to 45℃. It is recommended to charge the battery at room temperature (18℃ to 25℃) for optimal performance.

Please note that battery charging stops when ambient temperature drops below 0℃ or exceeds 45℃.

OPERATION ON BATTERY POWER

When Bluetooth Class I, v4.0, v4.1, V4.2 v2.1 BLE, v2.1 with Enhanced Data Rate (EDR)+EDR, 802.11 b/g/n and 802.11 a/ac/n networking, GSM/GPRS/EDGE/WCDMA/UMTS/HSDPA/HSUPA/HSPA+/LTE, and GPS are all enabled on battery power, the main battery level will drop down substantially. Prolonged use of the display and continued scanning of barcodes will also affect battery level.

In order to prevent system from shutting down after the battery is drained out, we suggest that you keep a fresh battery for replacement at all times, or connect the mobile computer to an external power.

BATTERY STATUS & STATUS LED DURING CHARGE

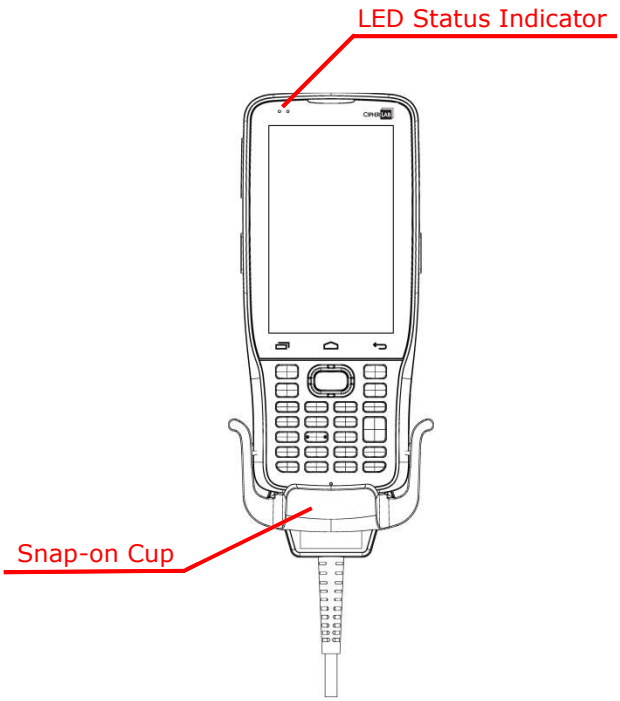
To prevent the battery from keeping being continuously charged and discharged, RK25WO mobile computer will automatically stops charging the battery when the battery level reaches 100% even if it is connected with a snap-on cable/ charging & communication cradle/ micro USB cable for external power supply.

When RK25WO mobile computer is connected with the external power source, the Status LED located above the touch screen shows as below:

LED Status	Description
Red, solid	Charging the mobile computer (0% to 99%)
Red, blink	Charging error
Green, solid	Charging complete (100%)
No light	The cable is not correctly connected

Note:
RK25WO mobile computer stops charging when the main battery power level reaches 100%, and it will resume charging the battery when the battery power level is lower than approximate 90% and the voltage is 4.15v. During the period when RK25WO mobile computer stops charging the battery (from the battery power level 100% to 90%), the status LED is still solid red.

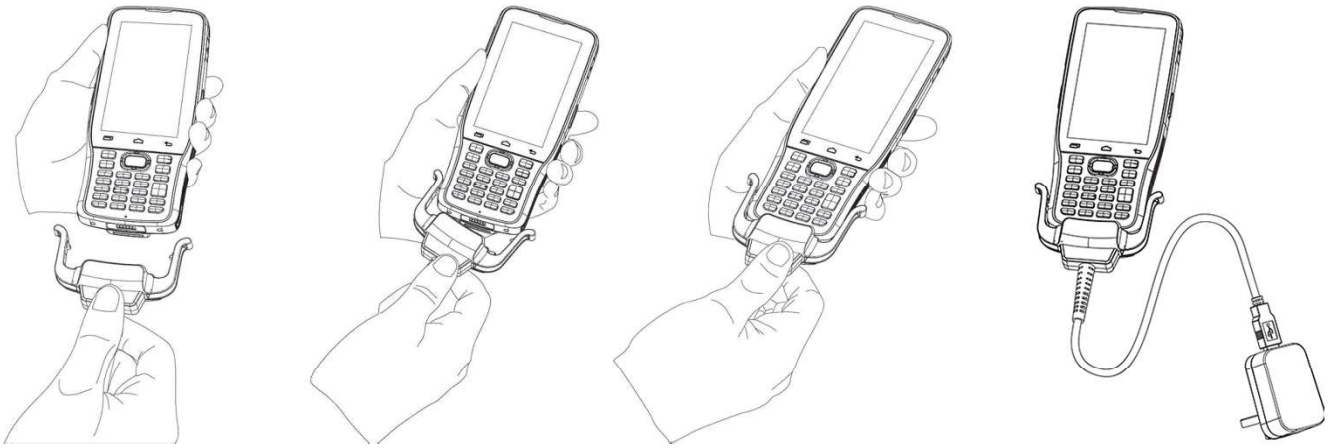
USE SNAP-ON CABLE



The Snap-on Cable provides a convenient way to charge your mobile computer as well as data communication.

To install:

1) Remove the micro USB cable if it is connected with the RK25WO mobile computer.
2) Hold the snap-on cup toward the bottom of the RK25WO mobile computer, and place one of the snap-on cup side to the side of the RK25WO mobile computer.
3) Push the Snap-on cup upwards to make its another side to be attached to the RK25WO mobile computer.
4) A "click" sound is made once the Snap-on cable is connected with the bottom of the RK25WO mobile computer in place.
5) Connect the USB plug to the approved adapter for external power connection, or plug it to the USB port of PC/laptop for data transmission/ charging.



While the device battery is being charged, the LED on mobile computer will indicate charging status.

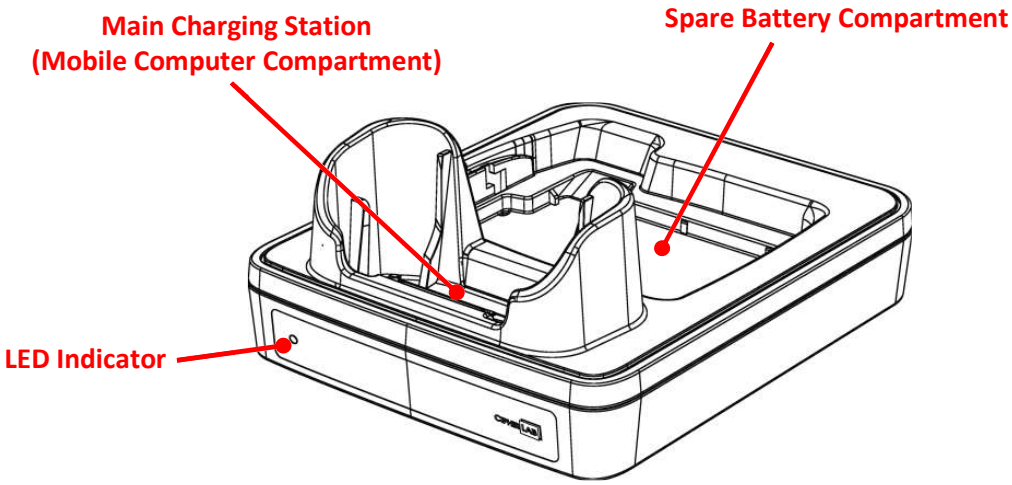
LED Indicator	Status	Description
Charging	Red, solid	Charging the mobile computer (0% to 99%)
	Red, blink	Charging error
	Green, solid	Charging complete (100%)
	No light	The cable is not correctly connected

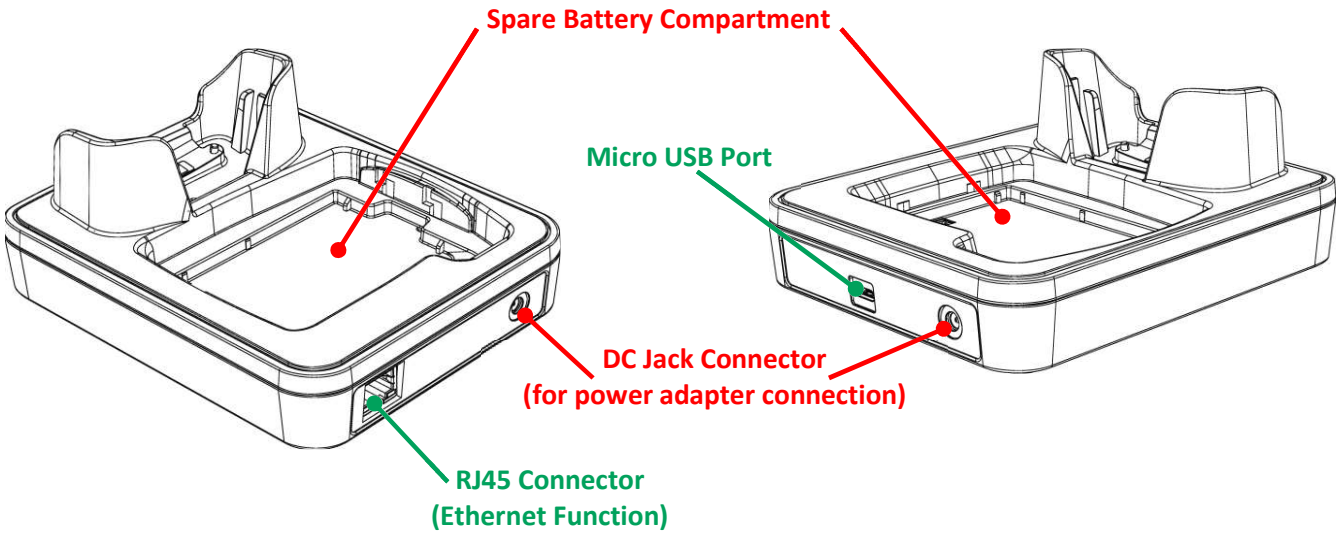
Note:

1) **The micro USB cable must be removed before installing the Snap-on Cable.**
2) **For data communication, you could also use the micro USB cable to connect the mobile computer to your PC or laptop.**
3) **RK25WO mobile computer stops charging when the main battery power level reaches 100%, and it will resume charging the battery when the battery power level is lower than approximate 90% and the voltage is 4.15v. During the period when RK25WO mobile computer stops charging the battery (from the battery power level 100% to 90%), the status LED is still solid red.**

USE CHARGING & COMMUNICATION CRADLE

The Charging & Communication Cradle charges your mobile computer and a spare battery at the same time, and it could also be used for data communication.





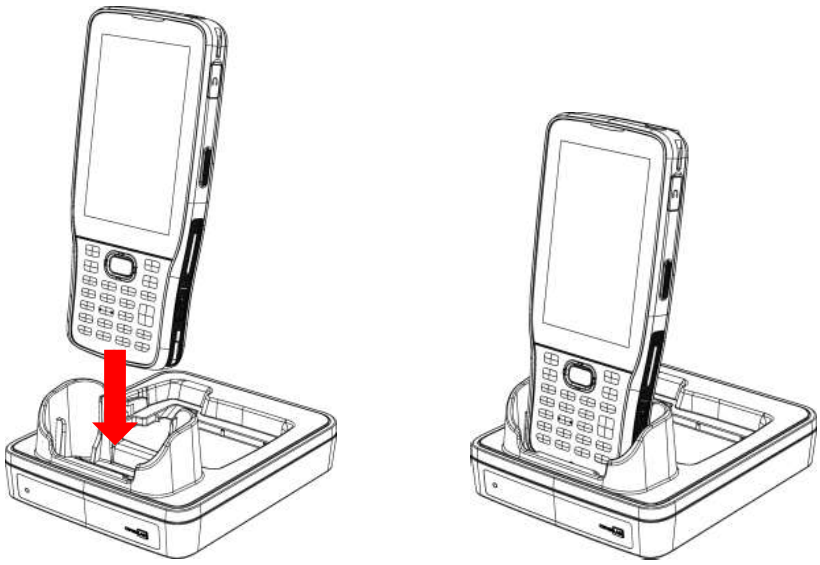
ENCR Model **CCCR Model**

Note:
The Charging & Communication Cradle is equipped with either one Micro USB Port (CCCR Model) or one RJ45 Connector (ENCR Model).

To charge your mobile computer on the Charging & Communication Cradle:

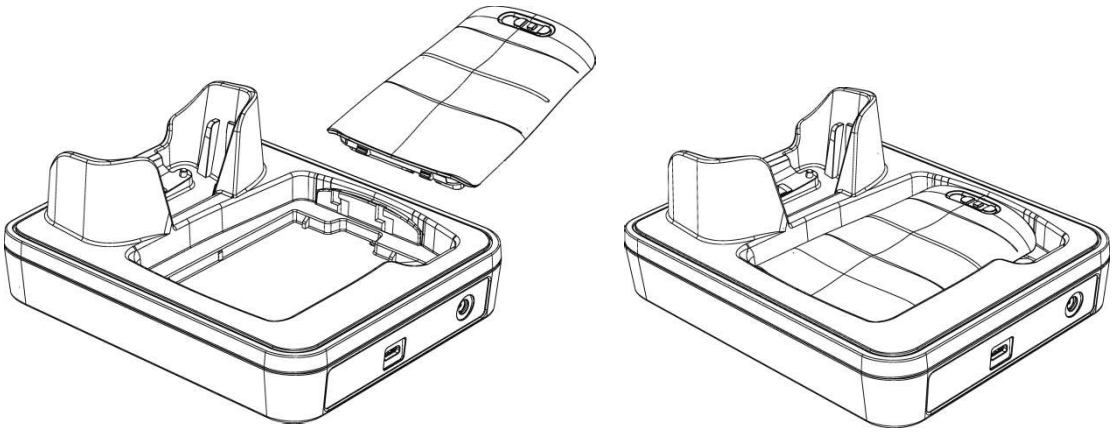
1) Remove the micro USB cable if it is connected with the RK25WO mobile computer.

2) Insert the RK25WO mobile computer onto the Cradle. The installed hard shell or hand strap is not necessary to be removed in advance before inserting the mobile computer. To remove, please take out the RK25WO mobile computer directly.



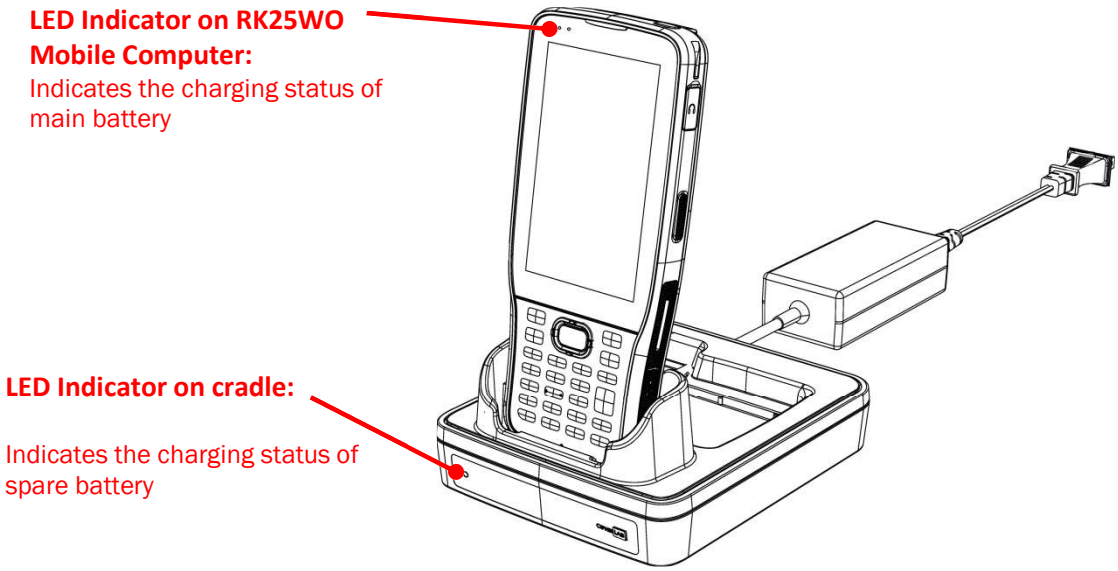
3) For the spare battery, please make sure the battery latch is at "**Unlock**" position, and then insert the battery from its top side (where the contact pins are located) into the spare battery compartment of the cradle with their contact pins connected. Press down the bottom side of the battery (where the battery latch is located), and slide the battery latch leftward to "**Lock**" position to fasten it.

   To remove, please slide the battery latch to "**Unlock**" position, and directly take the battery out.



4) Connect the adapter to the Cradle, and plug the other end into an electrical outlet.

The status of the mobile computer charging is shown on the device itself, while the LED indicator on RK25WO Charging & Communication Cradle shows the status of battery charging as below:



Cradle LED Indicator	Status	Description
Charging	Red, solid	Charging the battery
	Red, blink	Charging error
	Red, flash once	No battery
	Green, solid	Charging complete
	No light	Not charging

Note:

(1) *Not Charging* could be the result of battery damage, battery's failure to touch the connector, or AC plug coming off.

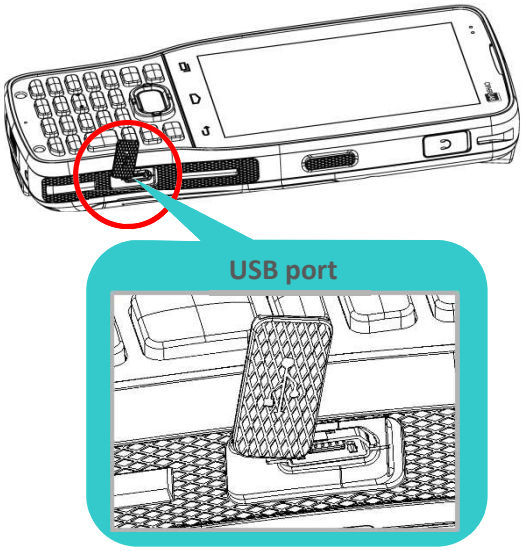
(2) Charging error could be due to high battery temperature.

(3) The micro USB cable must be removed before inserting the device onto the cradle.

1.2.2. WIRED DATA TRANSMISSION

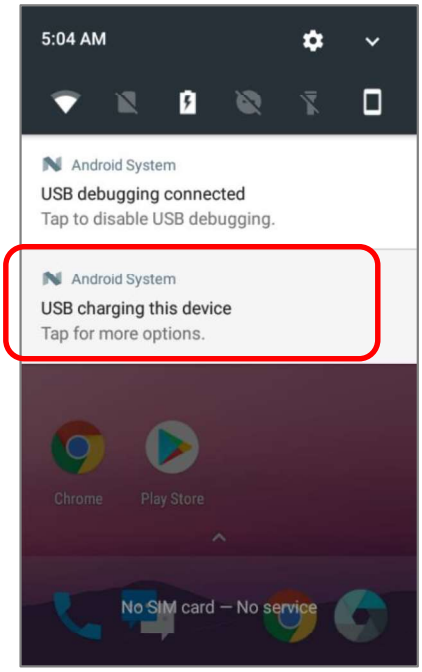
Use the micro USB cable/ the Snap-on Cable to connect the mobile computer to your PC for data transmission.

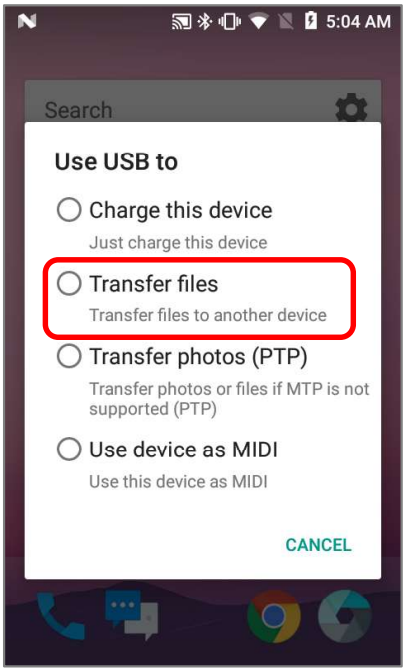
1) Connect your device to the computer with supplied USB cable/ Snap-on Cable / Cradle.



2) Swipe down from the status bar to reveal Notifications Drawer.

3) Tap "**USB charging this device**" to enter USB options. By default, the device will be in charging mode, in which you are unable to access the files on this device from the PC client. To transfer all types of files between your device and PC, choose "**Transfer files**". To transfer videos and photos, you can select "**Transfer photos (PTP)"**, in which your device will share only videos and photos in *DCIM* and *Pictures* folders.





1.2.3. USING WIRELESS NETWORKS

The mobile computer supports widely applied wireless technologies including Bluetooth Class I, v4.0, v4.1, V4.2 v2.1 BLE, v2.1 with Enhanced Data Rate (EDR)+EDR, 802.11 b/g/n and 802.11 a/ac/n networking, and is able to send/receive data in real time in an efficient way.

Select GSM/GPRS/EDGE/WCDMA/UMTS/HSDPA/HSUPA/HSPA+/LTE modules embedded for a total wireless solution for data and voice communication.

Chapter 2

USING RK25WO MOBILE COMPUTER

This chapter walks you through the fundamental usage and features of this device.

IN THIS CHAPTER

2.1 Battery 45
2.2 Memory 65
2.3 Touch Screen 75
2.4 Notifications 83
2.5 Date and Time 87
2.6 Language & Keyboard Input 88
2.7 Physical Keypad 102
2.8 Sound and Volume 120
2.9 Data Capture 121

2.1. BATTERY

- **Main Battery**

  The mobile computer is powered by a rechargeable 3.8V / 4000 mAh Li-Polymer battery pack, and it takes approximately 4 hours to charge it to full from the power adaptor (for the first time charging the main battery, please charge it for at least 8 to 12 hours). However, the charging time may vary by your working condition.

- **Spare Battery**

  A spare battery pack is provided as an accessory. We recommend keeping a fully charged spare battery at hand in order to replace the main battery when it is nearly drained out.

- **Backup Battery**

  Settled on the main board is a backup battery that keeps the mobile computer in suspension when the main battery is depleted. The backup battery is a 60 mAh rechargeable Li-Polymer battery, and can retain data in the DRAM for 30 minutes when it is fully charged (as long as wireless modules on the mobile computer are inactive). The backup battery can be charged by the main battery or the power adapter, and takes approximately 3.5 hours to charge to full.

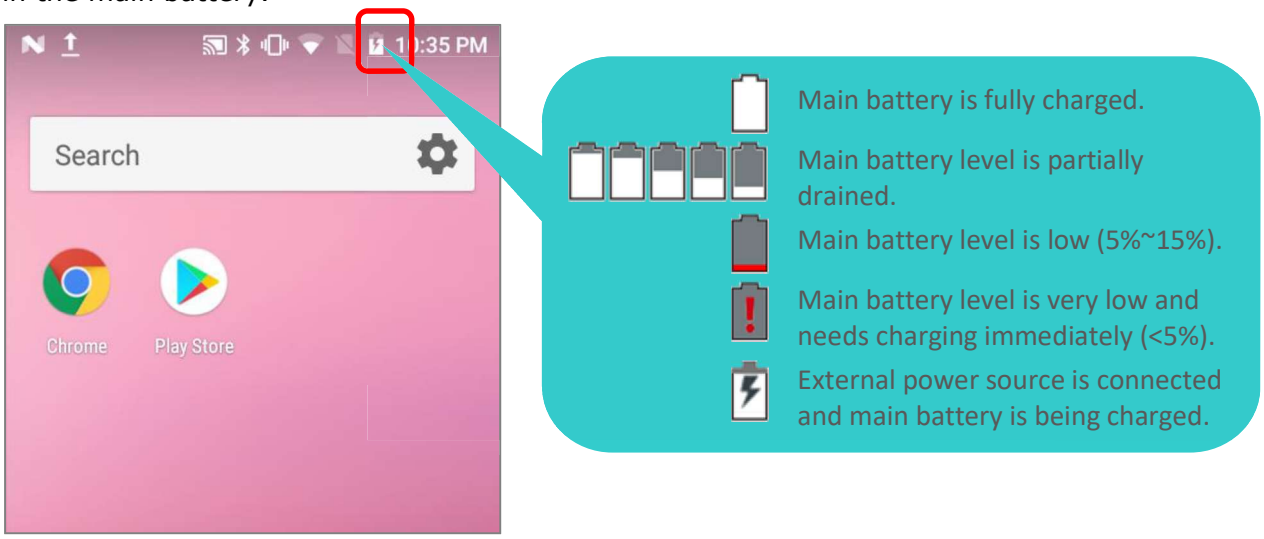
Warning:

1) **The battery cover must be secured in position with its latch locked.**
2) **For a new battery, make sure it is fully charged before using.**
3) **To avoid data loss, when replacing the main battery, make sure you replace it with a well-charged spare battery pack. Always prepare a spare battery at hand, especially when you are on the road.**
4) **When the mobile computer has been on backup battery for 30 minutes, the system will shut down. Be sure to replace the main battery as soon as possible in order to avoid data loss.**

2.1.1. BATTERY STATUS INDICATORS

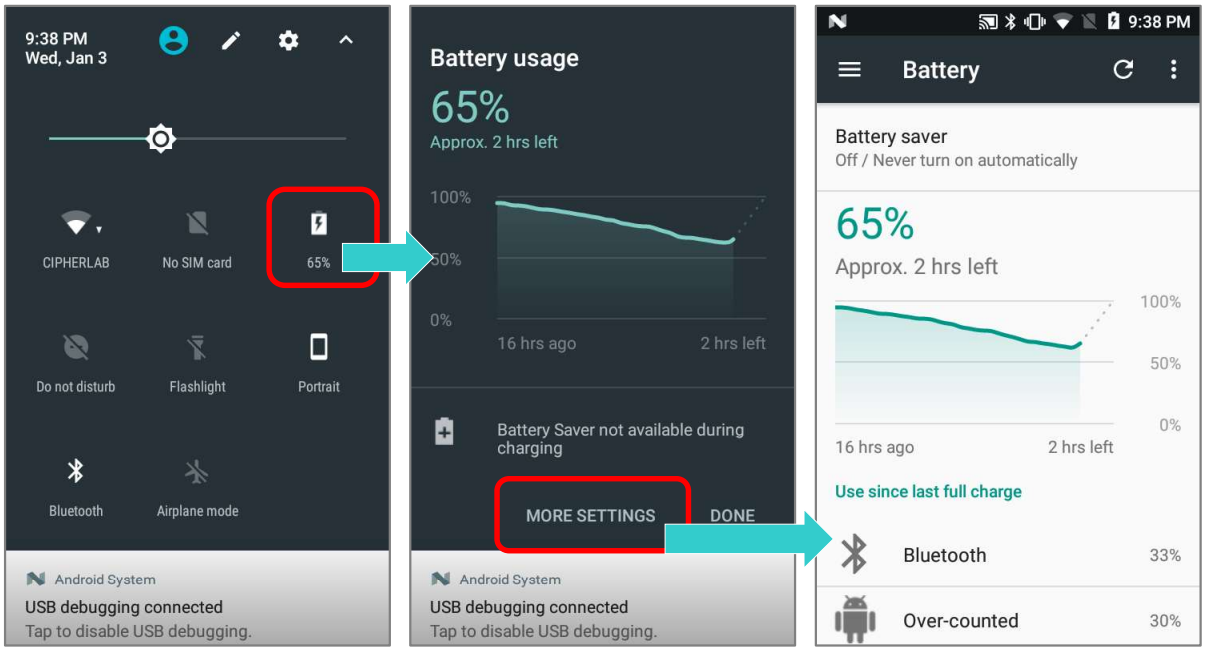
The main battery pack is the only power source for the mobile computer to work. Therefore, when the main battery level goes low, you need to replace the battery pack with a charged one or charge it as soon as possible. Most of all, you should backup important data on a regular basis.

By checking the battery status icon on **Status Bar**, you can tell the battery level remaining in the main battery.

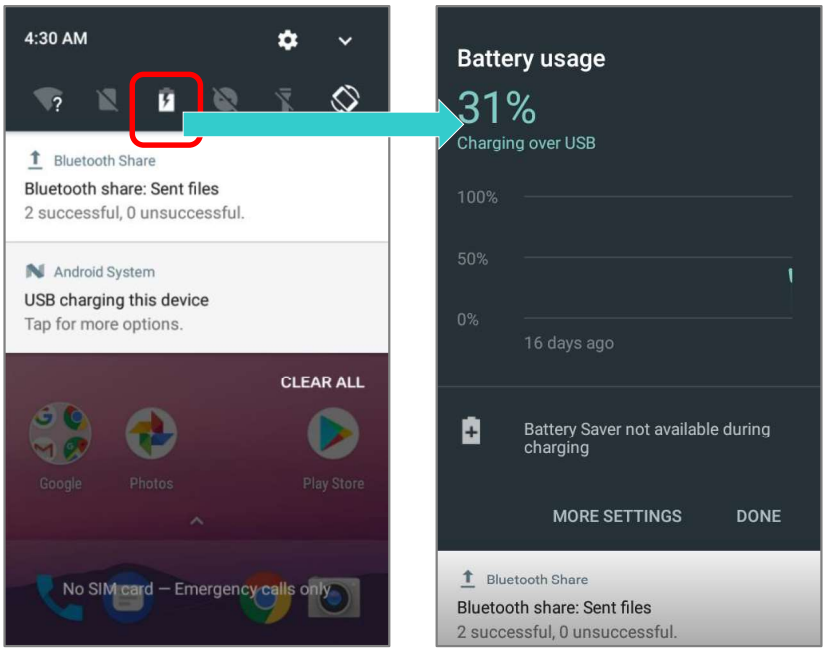


To check the exact remaining percentage of power and battery life:

1) Use two fingers to swipe down from the top of the screen to open **Quick Settings**.
2) The percentage of remaining battery power is shown below the battery icon; you can tap on it to enter **Battery usage** for quick setting. Tap "**DONE**" to exit **Battery usage** page or "**MORE SETTINGS**" for more details and configurations.



Also, you can simply swipe down from the status bar to open Notifications Drawer, and tap the battery icon to enter **Battery usage** page.



Note:

When the mobile computer is fully charged and battery level reaches 100%, the battery icon will change from to to indicate charging is completed.

Warning:

(1) Once the battery level drops below 15%, the low battery notification will be displayed on the screen.

(2) Data loss with RAM may occur when battery level is low. Always save data before the battery runs out of power or keep a fresh battery for replacement.

(3) Constant usage of the mobile computer at low battery level can affect battery life. For maximum performance, recharge the battery periodically to avoid battery drain out and maintain good battery health.

2.1.2. MONITOR BATTERY LEVEL

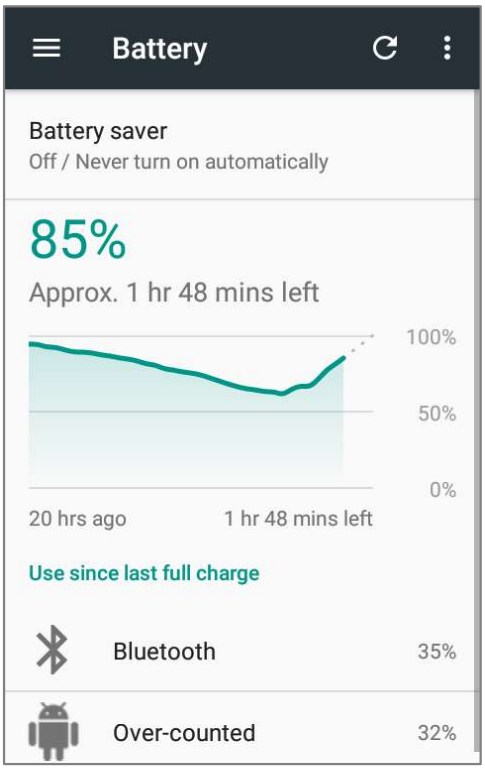
MAIN BATTERY LEVEL

The main battery is the only source that feeds the mobile computer to work. It also supplies the backup battery on the main board in order to retain the data stored in DRAM. When main battery level gets low, recharge it or replace it as soon as possible. Most critically, back up the important data from time to time to protect your work.

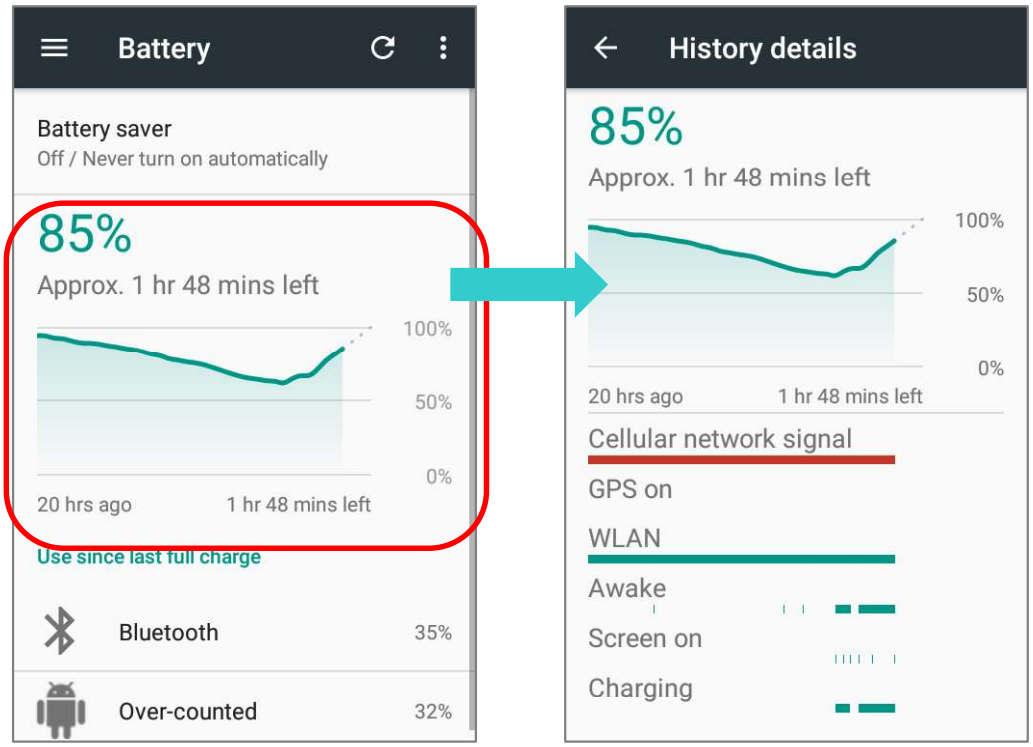
To check main battery level:

Go to **App Drawer** | **Settings** | **Battery**

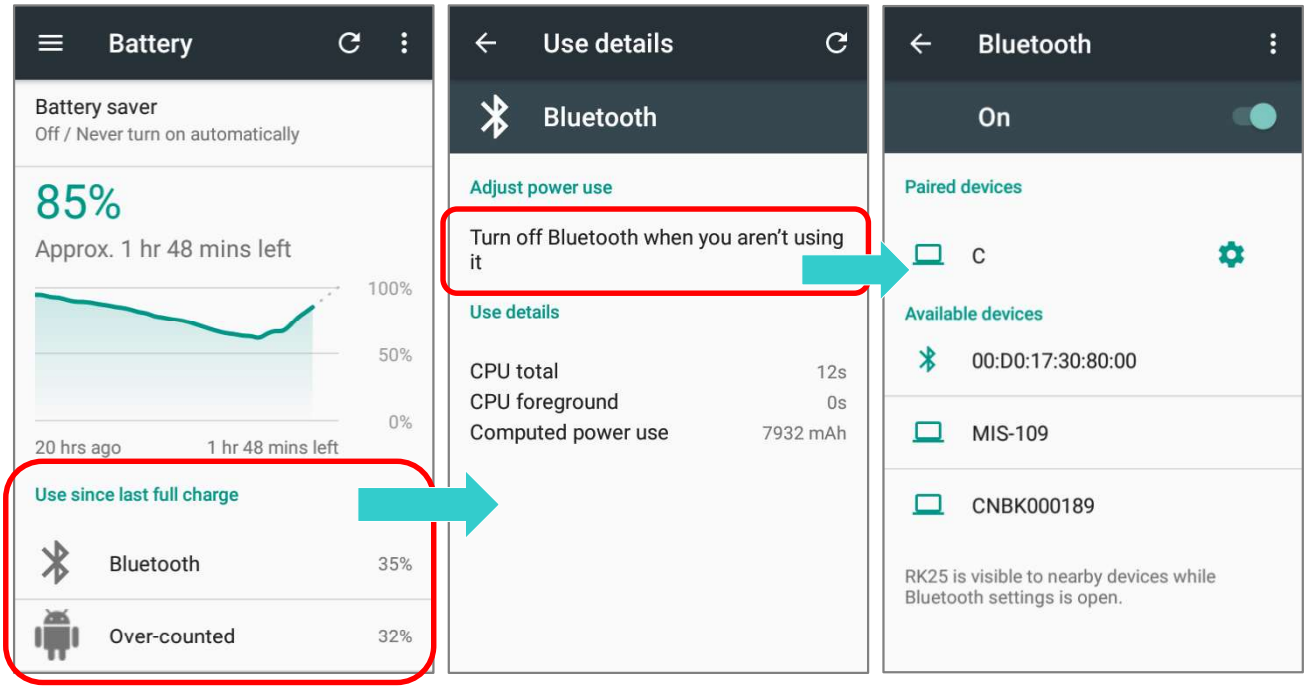
Battery level percentage is shown to provide a clear grasp of the remaining battery power. The screen also shows the rate of battery discharge since the last battery charging session, how long the device has been running on battery power, and which applications are consuming the most battery power.



- To look at the timeline of each application that drained or has been draining the battery power, tap on the chart; with this, you can diagnose any serious power drains.



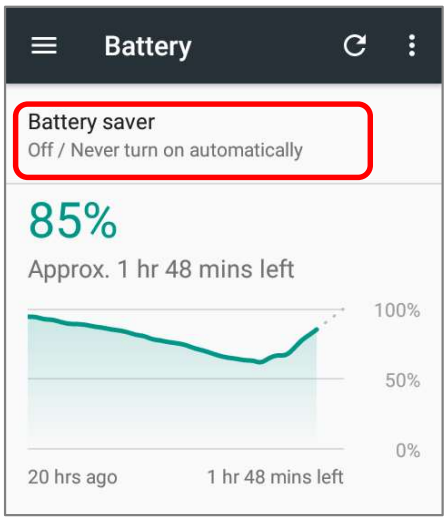
- To prevent certain applications from being draining the battery power, tap the application listed in "**Use since last full charge**" to get into its **Use details** page for "**Adjust power use**" suggestion. Tap the suggestion part to get into the related page and change the configurations for saving battery power.



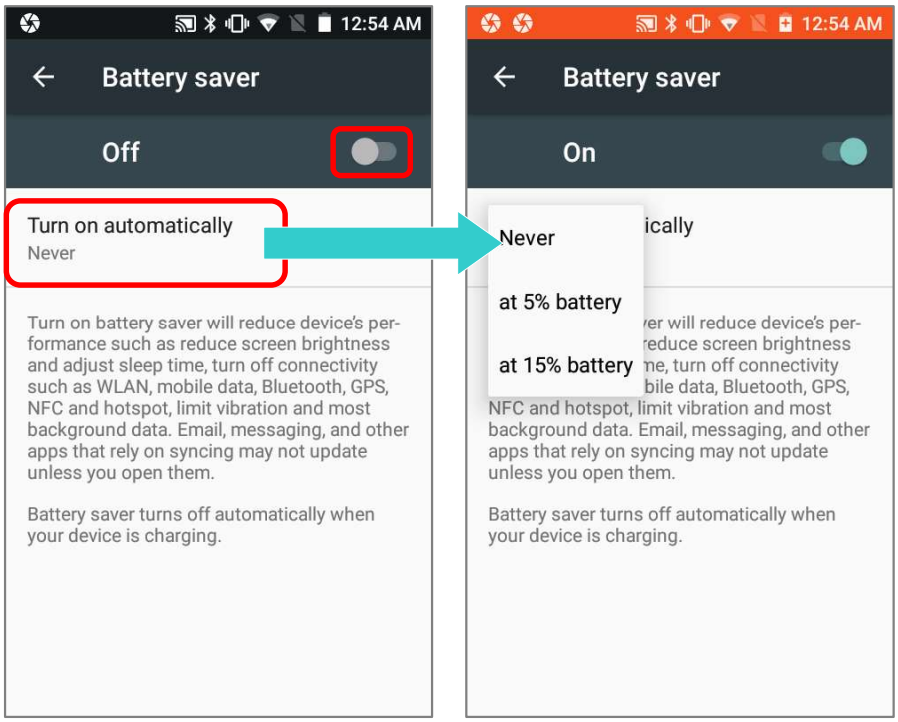
BATTERY SAVER MODE

You can have the **Battery saver** mode automatically turned on when the main battery gets low. This mode will limit the use of location services, vibration and most background processing data.

1) On Battery screen, tap "**Battery saver**".



2) Switch on the function to directly enable battery saver function, or choose when to have this mode automatically activated. After this function is enabled, the title bar of your screen will turn orange.



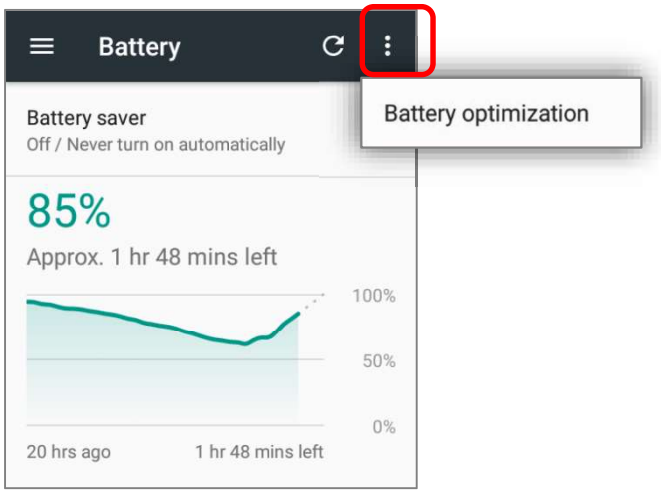
Note:

This mode will automatically become inactive when your device is being charged.

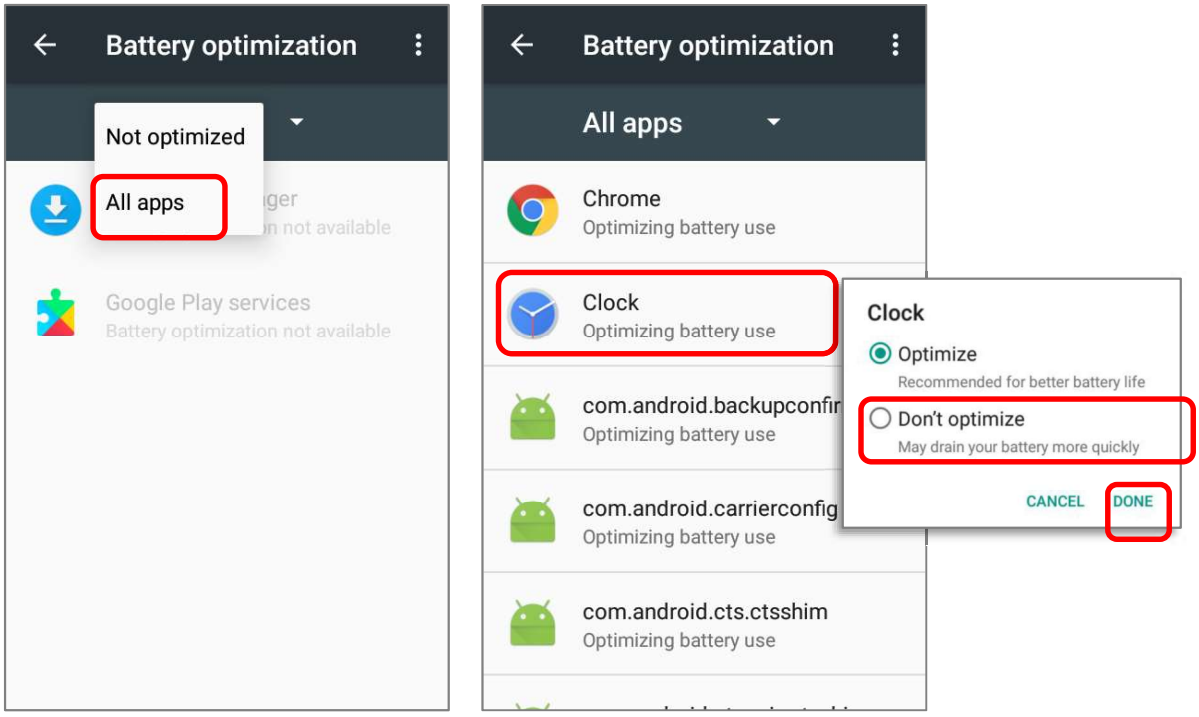
BATTERY OPTIMIZATION

With **Battery optimization enabled** for the applications, you can make sure they stay inactive when your device is idle or when they have not been used for days.

1) On **Battery** screen, tap **More** ⋮ and then select "**Battery optimization**".



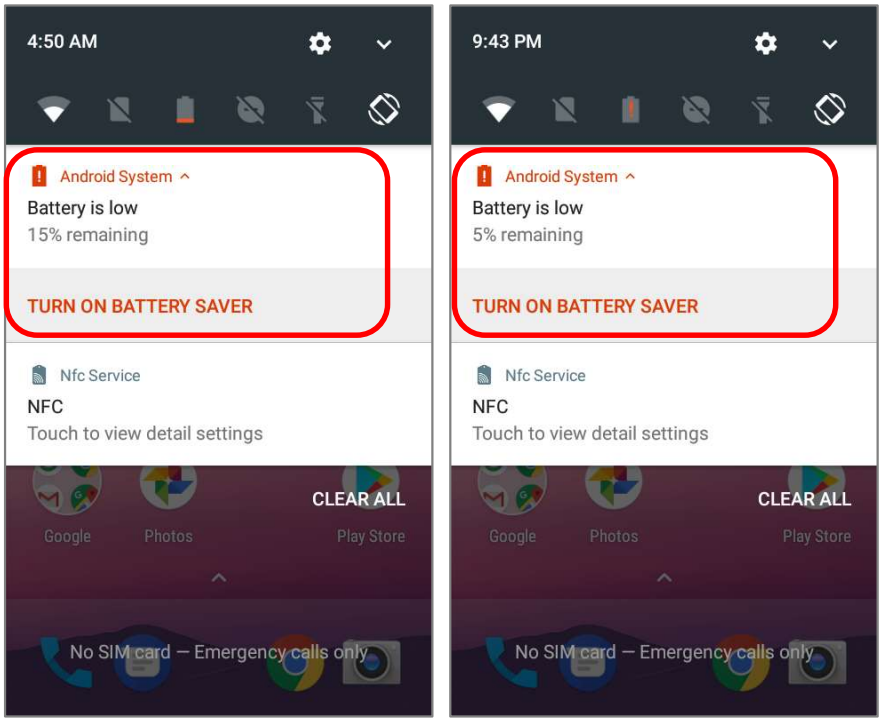
2) On dropdown list, select "**All apps**"; all the applications will be optimized by this function by default. You can individually turn off the optimization mode of a certain app if you would like it always activated by tapping on the app name and select "**Don't optimize**" and then "**DONE**".



LOW BATTERY ALERT

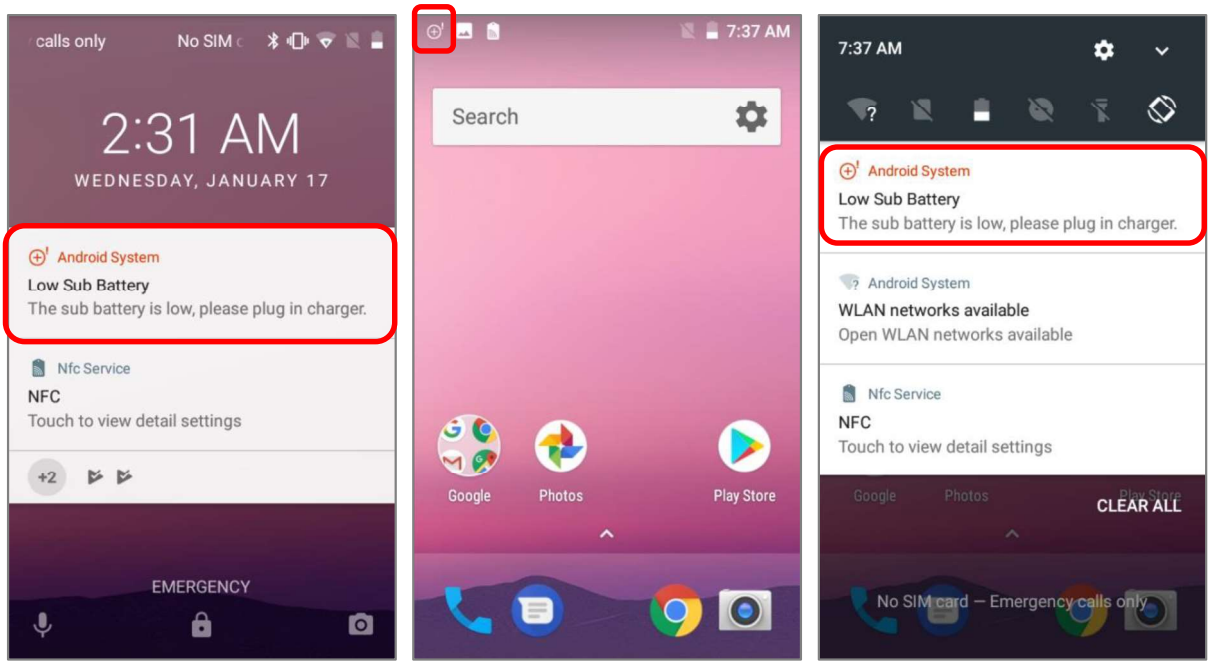
The mobile computer prompts a warning notification reminding you to charge the main battery when the main battery level drops to **15%** and **5%**.

Opening Notifications Drawer, you will also see this warning appearing on the notifications list; you may turn on Battery Saver Mode, connect the mobile computer to an external power source, or replace the main battery pack as soon as possible. To replace the main battery pack, see Replace Main Battery.



LOW SUB BATTERY ALERT

When the main battery's power is drained out, RK25WO mobile computer will automatically suspend by backup battery's power for 30 minutes. When backup battery's power is low, the "**Low Sub Battery**" notification will remind you to connect the device with an external power source to charge it immediately. Please note that do not replace the main battery at this moment, otherwise data loss may occur.



2.1.3. REPLACE MAIN BATTERY

When main battery level is low, follow the steps below to replace the main battery.

SHUT DOWN TO REPLACE THE MAIN BATTERY

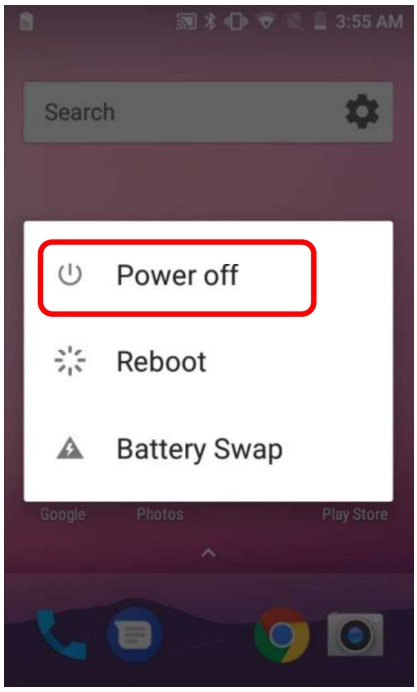
Shut the device down to replace the main battery, please:

1) Make sure the sub battery (backup battery) and the new main battery are fully-charged.

2) Press and hold the power button on the top end of the mobile computer.

3) Tap "**Power off**" in the pop-up menu. The mobile computer will power off.

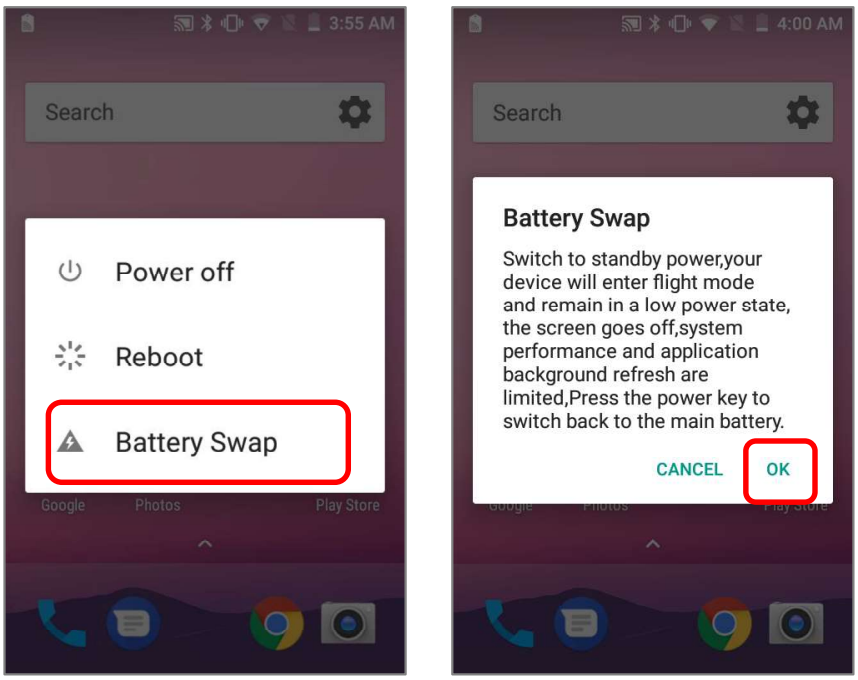
4) Follow the steps as Install/ Remove Battery describes to remove the main battery and replace it with the new one.



BATTERY SWAP

RK25WO backup battery supplies system power during battery swap. When battery cover is removed, the system will enter suspend mode and not wake up until battery cover is put back and the power button is pressed. Please refer to "Low Sub Battery Alert" section to make sure the sub battery is fully charged before battery swap process.

1) Press and hold the power button on the top end of the mobile computer, and select "**Battery Swap**" and then "**OK**" in the pop-up menus. The system will prepare to enter suspend mode with the red Status LED on the front panel lit.
2) Observe the red light on the front panel; as it goes off, the device is in complete suspend mode and Main battery is ready to be replaced. Fellow the steps described in Install/ Remove Battery to remove the battery and replace it with the new one.
3) When the main battery is removed, system can stay in suspend mode at least 5 minutes. Please replace with a fully-charged main battery as soon as possible.
4) Make sure the battery latch is properly locked before pressing the power button to wake up the mobile computer from suspend mode.



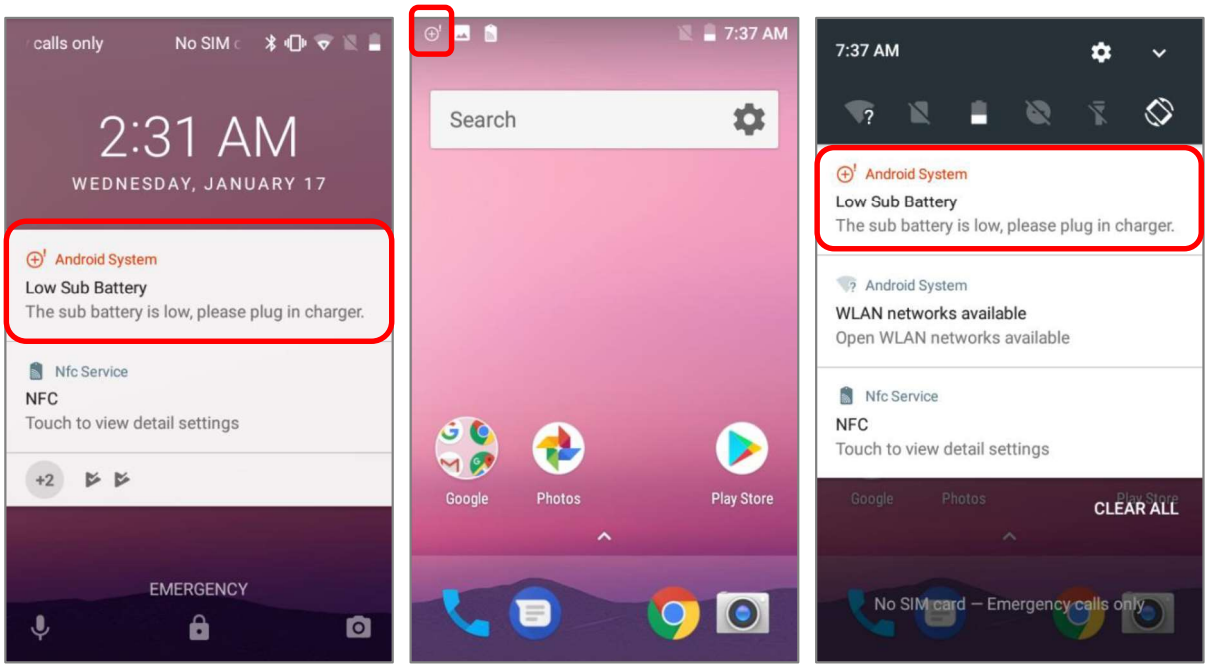
Warning:

Please do not perform a battery swapping before the mobile computer's OS is ready. Removing the battery cover during powering up your mobile computer may cause system failure.

Note:

(1) When main battery is removed, the system will stay in suspend mode for at least 5 minutes. To prevent the system from being shut down without advance warning, please DO replace the main battery within the 5 minutes.

(2) Backup battery keeps the mobile computer in suspension when the main battery is depleted. Thus, to prevent data loss, DO NOT replace the main battery when backup battery's power is low. Please connect RK25WO mobile computer with the external power source to charge it till the "Low Sub Battery" notification icon disappears from the status bar. Once the "Low Sub Battery" notification disappears, the main battery replacement could be proceeded.



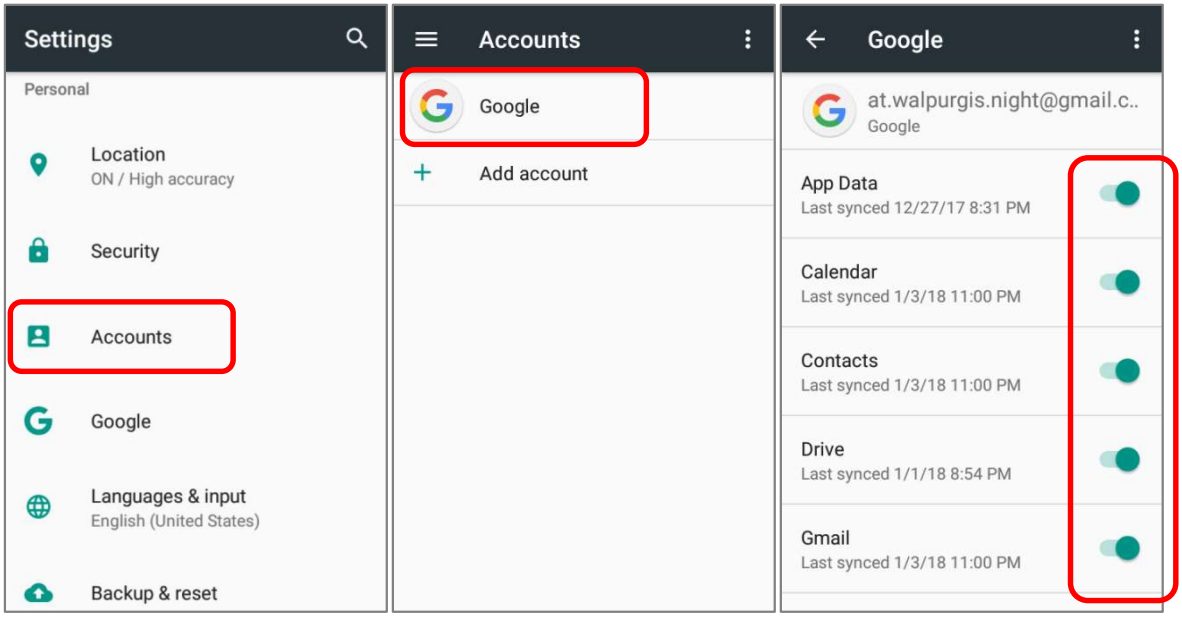
2.1.4. POWER MANAGEMENT

For any portable device, power management is a critical issue especially when you are on the road. Below are some tips to help you save battery power.

Warning:

Using backlight, wireless connectivity, and peripheral devices while on battery power will substantially reduce battery power.

- Bring an additional main battery pack with you on the road.
- End wireless connections (such as Bluetooth transmission, wireless connection, NFC and GPS) which are not in use.
- Shorten the screen off time. See Screen Timeout Settings.
- Reduce the screen brightness level, see Screen Brightness.
- If you have had your Google account signed in on this device, you could turn off certain automatic data syncing of applications (such as Email, Calendar, and Contacts). Go to **App Drawer** | **Settings** | **Accounts** | **Google** and disable the data syncing services of your desired items.



- Enable **Battery saver** mode and **Battery optimization** mode. See Battery Saver Mode and Battery Optimization.

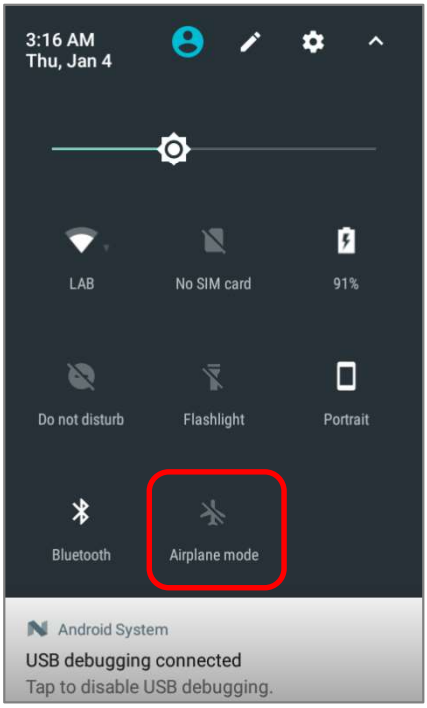
ENTER AIRPLANE MODE

You can enable **Airplane** mode to have all the wireless radios (including data connections such as Bluetooth and Wi-Fi) on your mobile computer turned off, which will considerably reduce the power consumption of your battery.

To enter **Airplane** mode, please:

1) Use two fingers to swipe down from the top of the screen to open **Quick Settings** menu.

2) Tap on the **Airplane** mode icon to enable/disable the mode.



2.1.5. BATTERY PRECAUTIONS

To preserve battery life and avoid battery bulge:

1) Please do not use your device while continuously connected with a power supply or cradle for charging. If you need to use your RK25 mobile computer with a power supply or cradle continuously connected, be sure to turn on "**Balance Mode**".

2) If the main battery is fully charged, do not keep connecting your RK25 mobile computer with charging it a power supply or cradle for charging. If you need to continuously connect your RK25 mobile computer with a power supply or cradle, be sure to turn on "**Balance Mode**".

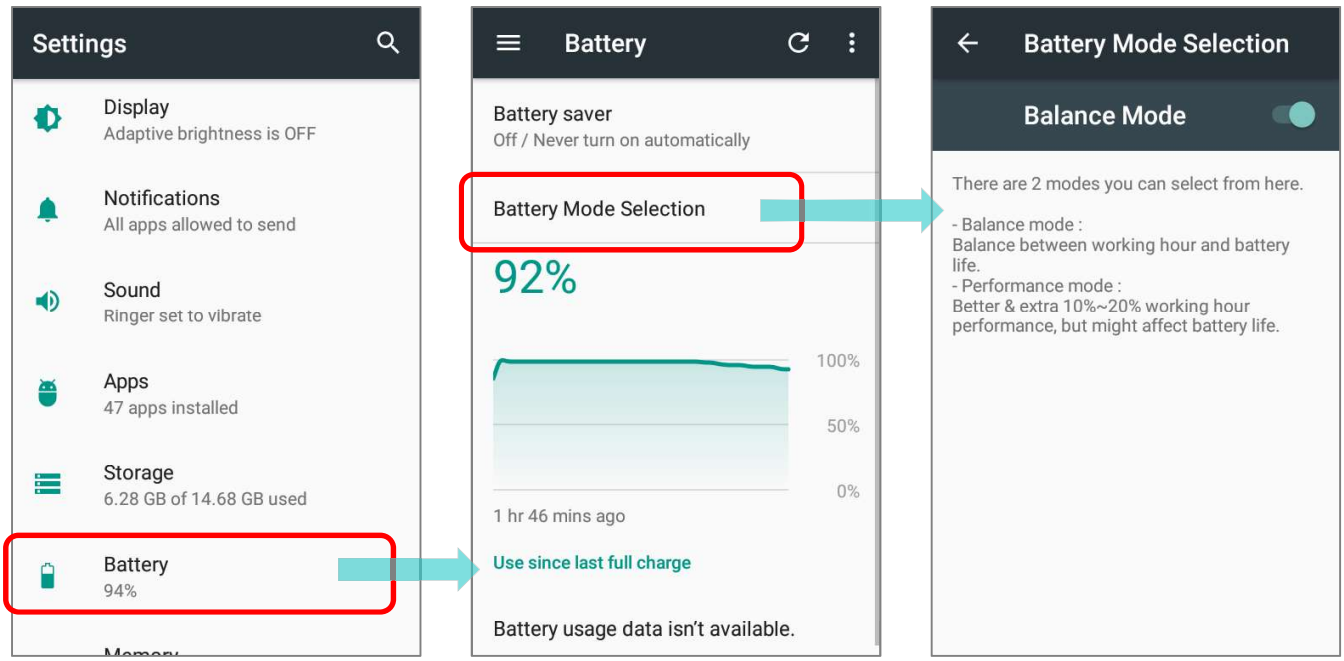
BATTERY MODE SELECTION

If you need to use RK25 mobile computer while charging, or if the device needs to be connected with the power supply for charging all the time, it is suggested that switching on "**Balance Mode**" for battery life.

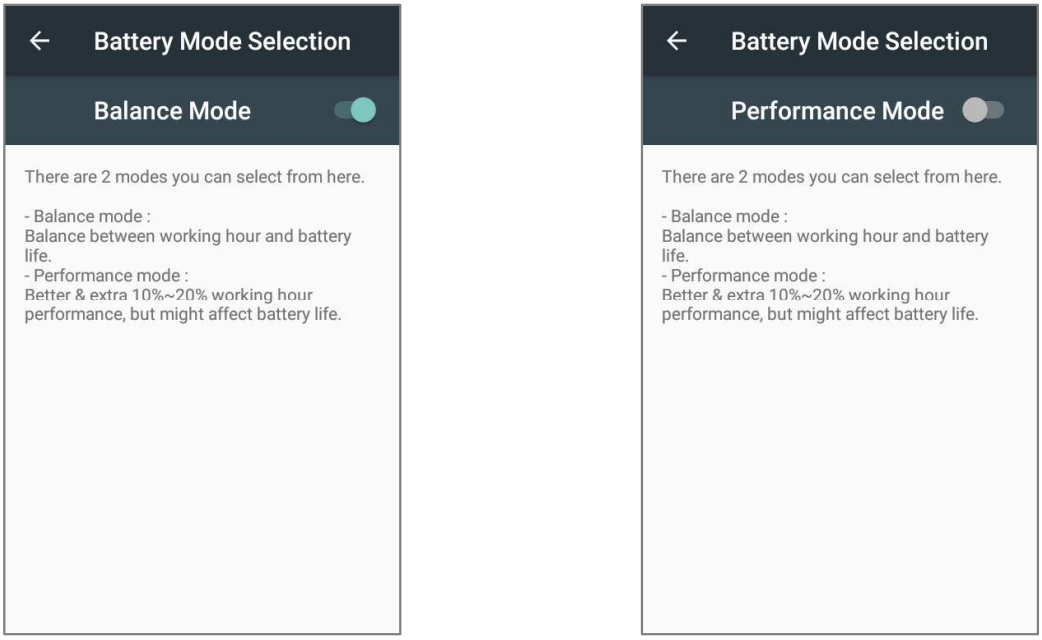
The default battery mode is set to be "**Balance Mode**". To switch between "Balance Mode" and "Performance Mode":

1) Go to **App Drawer** | **Settings** | **Battery**.

2) Tap on "**Battery Mode Selection**".

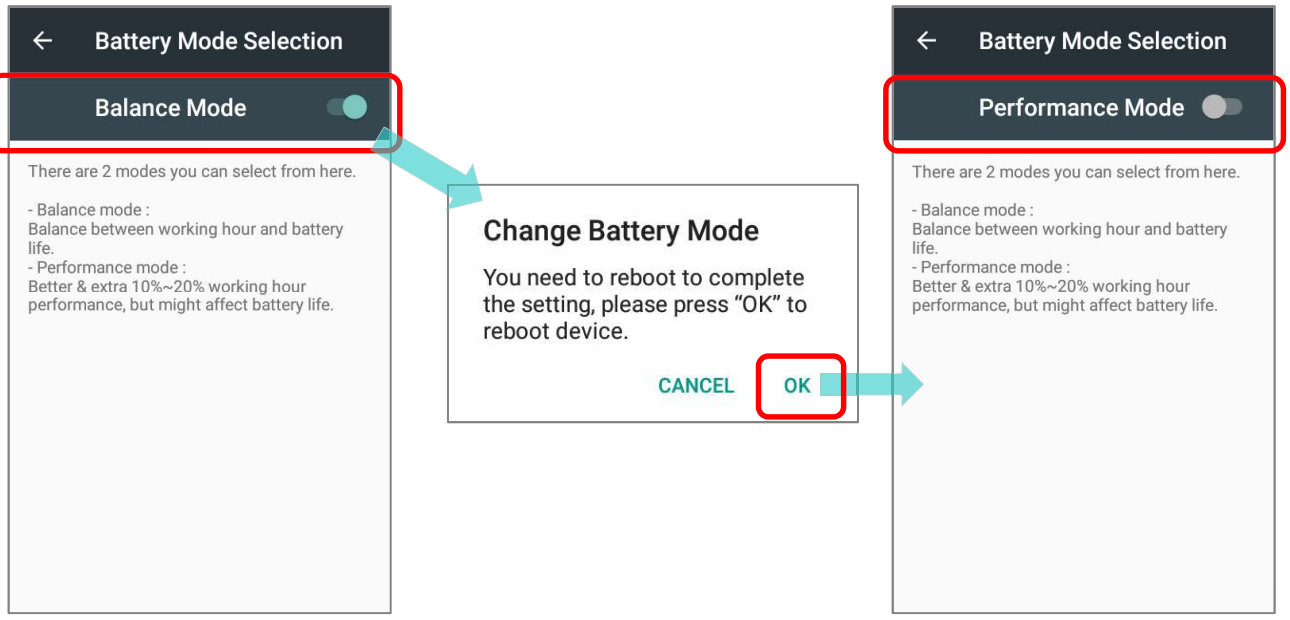


3) Tap on the switch to toggle between "**Balance Mode**" and "**Performance Mode**".



Mode	Description
Balance Mode	Balance between working hour and battery life.
Performance Mode	Better & extra 10% to 20% working hour performance, but might affect battery life.

4) Once you change the mode, a pop-up message appears to indicate the device needs to reboot to make the change take effect. Tap on "**OK**" to confirm, and the device will automatically shut down and reboot.



PRECAUTIONS WHEN CHARGING THE MAIN BATTERY FOR A LONG TIME

Please avoid using RK25WO mobile computer with heavy system loading when it is being charged for a long time, for the battery is continuously charged and discharged in this period of time, and it might result in battery bulge.

Due to safety precautions, it is a normal phenomenon that the battery status shows it is not fully recharged when RK25WO mobile computer is connected to an external power supply for a long time. Please pull out the charging cable and then plug it again to recharge the battery.

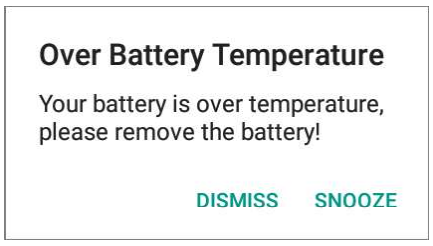
When being connected with a snap-on cable/ charging & communication cradle/ micro USB cable for external power supply, RK25WO mobile computer will automatically stops charging the battery once the battery level reaches 100%. It resumes charging the battery when the battery power level is lower than approximate 90% and the voltage is 4.15v.

BATTERY TEMPERATURE ANOMALY

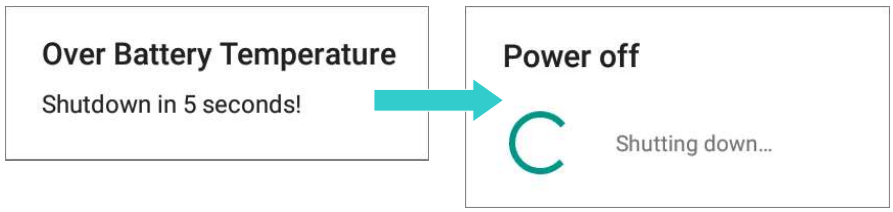
High ambient temperature or keeping using RK25WO mobile computer while charging might results in battery temperature rises. RK25WO mobile computer will automatically suspend charging battery or shut down for safety purpose. Once the battery temperature cools down to normal temperature, battery charging could be proceeded again.

The warning "**Over Battery Temperature**" shows up to instruct you to remove the battery if the temperature of the RK25 battery reaches **55**℃ while it prompts to automatically shut down if the temperature of the RK25 battery reaches **60**℃.

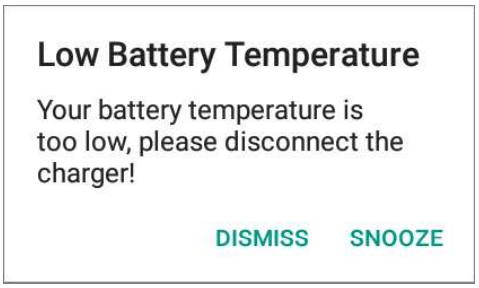
At 55℃



At 60℃



Using RK25 mobile computer under low-temperature environment may cause the device shut down automatically. If the battery temperature is at **0**℃ or even **lower than 0**℃ while charging, the red Status LED in the front panel blinks with a warning window popup to remind the user to disconnect the charger, and RK25 mobile computer will automatically suspend charging the battery.



For battery life, please unplug the charger immediately and charge your RK25 mobile computer under appropriate temperature conditions.

2.1.6. BATTERY SENSOR

"**Battery Sensor**" can be switch on or off in "**Developer Options**", and thus "**Developer Options**" needs to be enabled in advanced.

ENABLE DEVELOPER OPTIONS

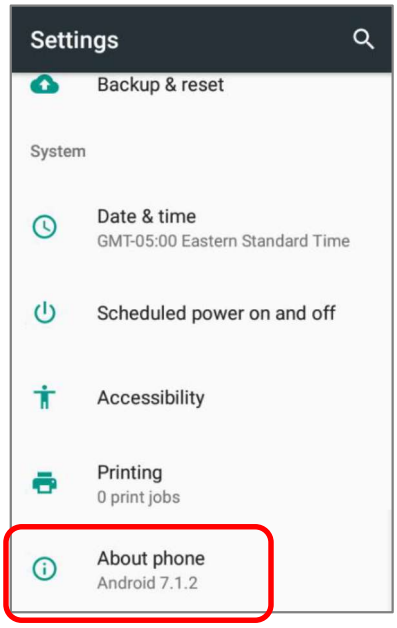
To enable "**Developer Options**":

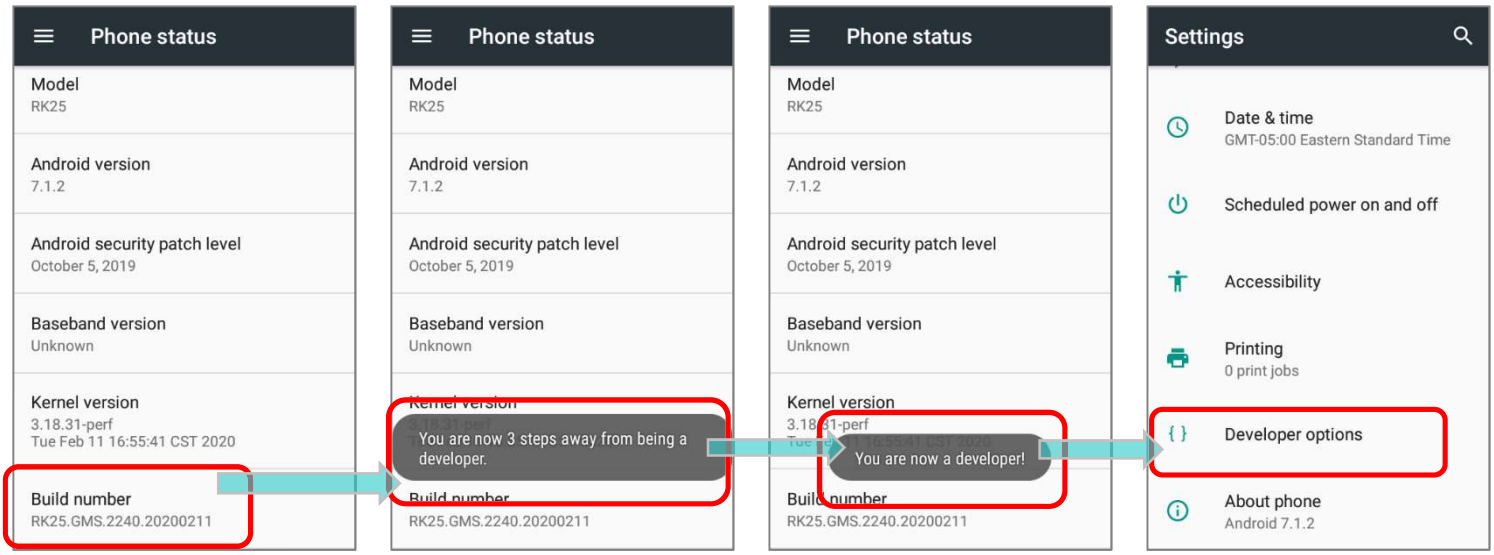
1) Go to **App Drawer** | **Settings** | **About phone**.

2) Tap on "**Build number**" 7 times to enable it. During the process, you'll see a prompt with a countdown reading "**You are now X steps way from being a developer.**"

3) Once the prompt "**You are now a developer!**" showing up, you have succeeded in entering developer mode.

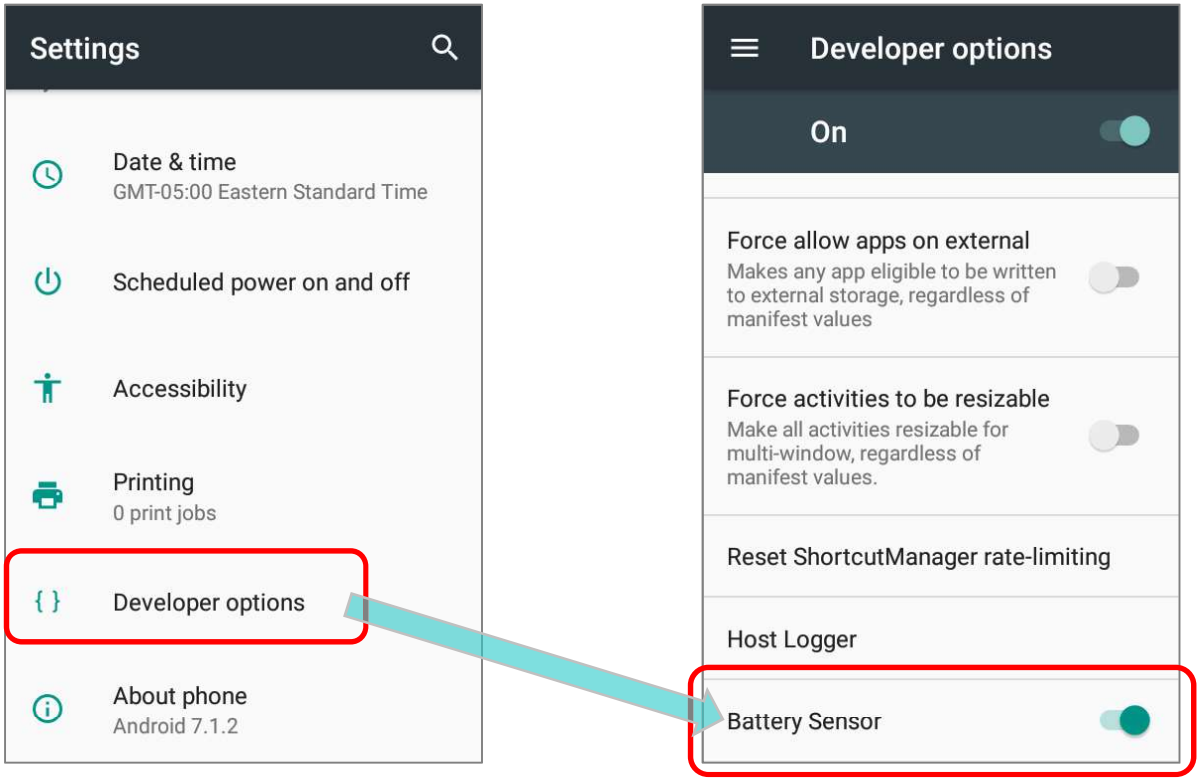
   You can find **Developer option** is now enabled in **Settings** page.





BATTERY SENSOR

"**Battery Sensor**" can be switch on or off in **App Drawer** | **Settings** | **Developer option** { }. Swipe down to the bottom and you will find the function "Battery Sensor" is enabled by default.



By enabling "**Battery Sensor**", the screen will be automatically off if the Battery Cover Latch and Lock is detected to be unlocked. When the battery latch is unlocked, the screen is off and the red light on the front panel blink and then goes off which means the RK25 mobile computer is now enter low power consumption mode. In low power consumption mode, the main battery can be replaced without powering off the RK25 mobile computer.

To avoid screen off caused by loosening the battery latch accidentally, you can turn off "**Battery Sensor**".

2.2. MEMORY

- Flash Memory (ROM)
  16GB flash memory for storing the OS (Android 7.0 Nougat and custom application programs).
- Random-access Memory (RAM)
  2GB RAM for storing and running programs, as well as storing program data.
- Expansion Slot
  The mobile computer is equipped with one SD card slot which can accommodate a micro SD card, a **microSDHC** (up to **32GB**) or a **microSDXC** (up to **64GB**). When choosing an SD card for best compatibility and performance with RK25WO, please make sure of the capacity you need. For the use of SDXC card, please use a new card and make sure it has not been used in other host devices (computers, cameras, or readers).

CAUTION OF DATA LOSS

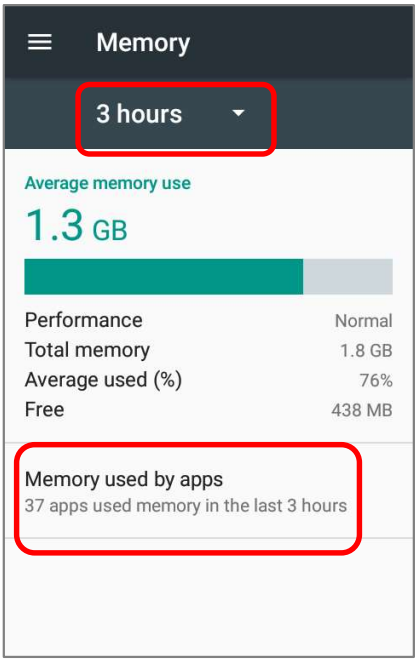
When the main battery is removed or drained, the backup battery on the main board takes over to supply the mobile computer and keep it in suspension. A fully charged backup battery will retain the data in the RAM for **30 minutes**. When the backup battery is drained out as well, the mobile computer will shut down, and only the contents of RTC will be retained. All other unsaved data will be lost.

If you want to put away the mobile computer for a couple of days, you should be aware that data loss occurs when the main battery and backup battery discharges completely. Therefore, it is necessary to backup data and files before putting away the mobile computer.

2.2.1. CHECK MEMORY USAGE

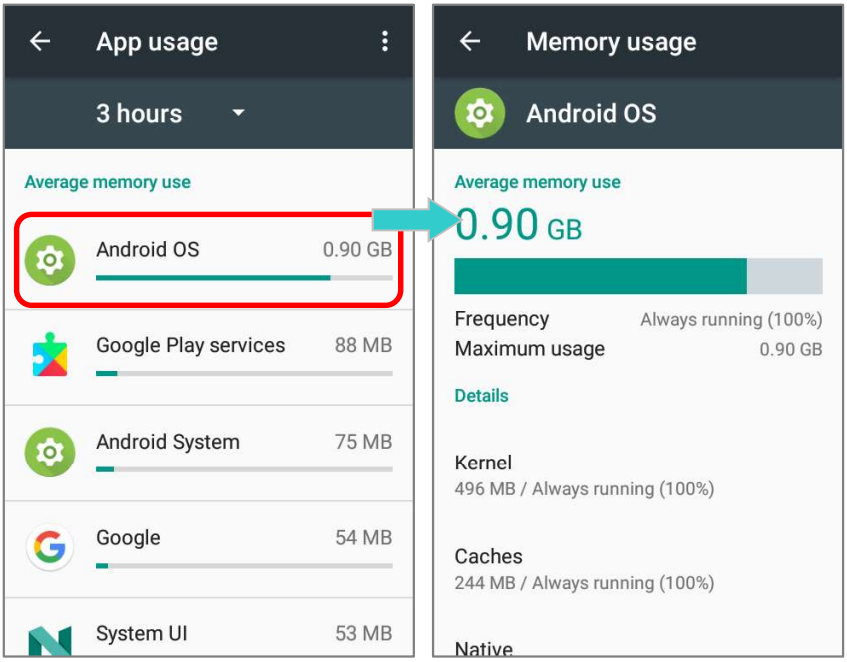
The memory manager can offer a glance of how the device is using its RAM.

Go to **App Drawer** | **Settings** | **Memory** to enter memory manager screen.



On the main screen, it tells you not only the used and free memory space of the RAM, but how your pattern of usage has impacted the device's overall performance. To figure out how the system and apps have been taking up the memory over a longer period, tap the dropdown list to choose a different time span.

To look at how individual apps are consuming the memory space, tap "**Memory used by apps**" to get a breakdown of memory usage by apps.



Tap an application name to check its memory usage. This allows you to make sense of how much memory a newly-installed application can potentially consume your RAM.

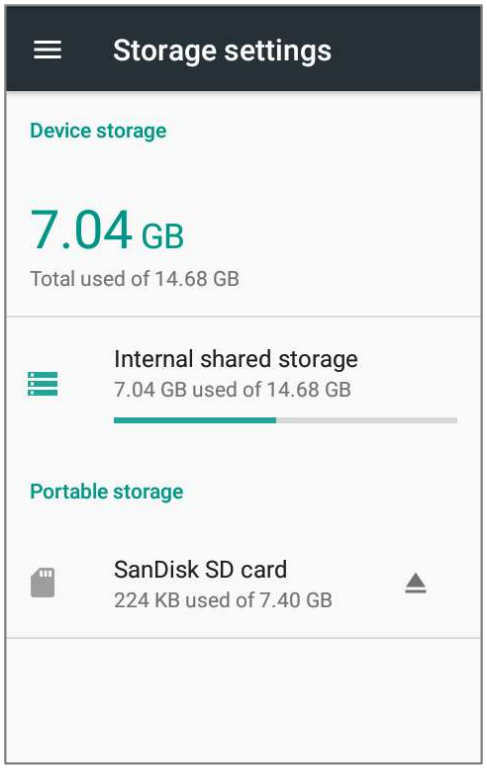
2.2.2. MANAGE STORAGE SPACE

To your Android device, the SD card can serve as an extension of your device's internal storage (which comes as 16 GB of flash memory to store the OS, applications and files) other than a portable storage place.

Go to **App Drawer** | **Settings** | **Storage** to check usage of the internal and external storage spaces.

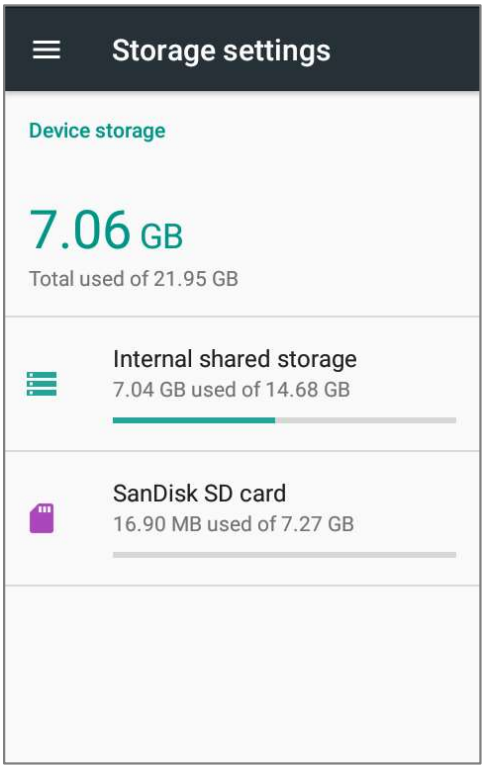
By default, all the videos, photos and downloaded files are directly saved to the device's internal storage. If you have previously inserted and mounted an SD card as portable storage, you could transfer/save photos & other media in this SD card; if the SD card is set as internal storage, photos, files, and some apps could be moved to the SD card.

SD card as portable storage in Storage Settings page



. The SD card is used for moving photos and other media between devices.

SD card as internal storage in Storage Settings page

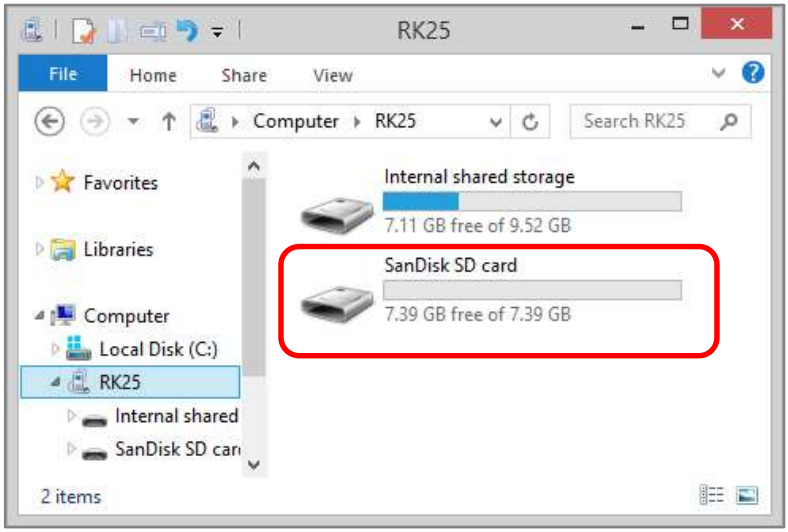


The SD card is used for storing anything on this device only, including apps and photos. Requires formatting that prevents it from working with other devices.

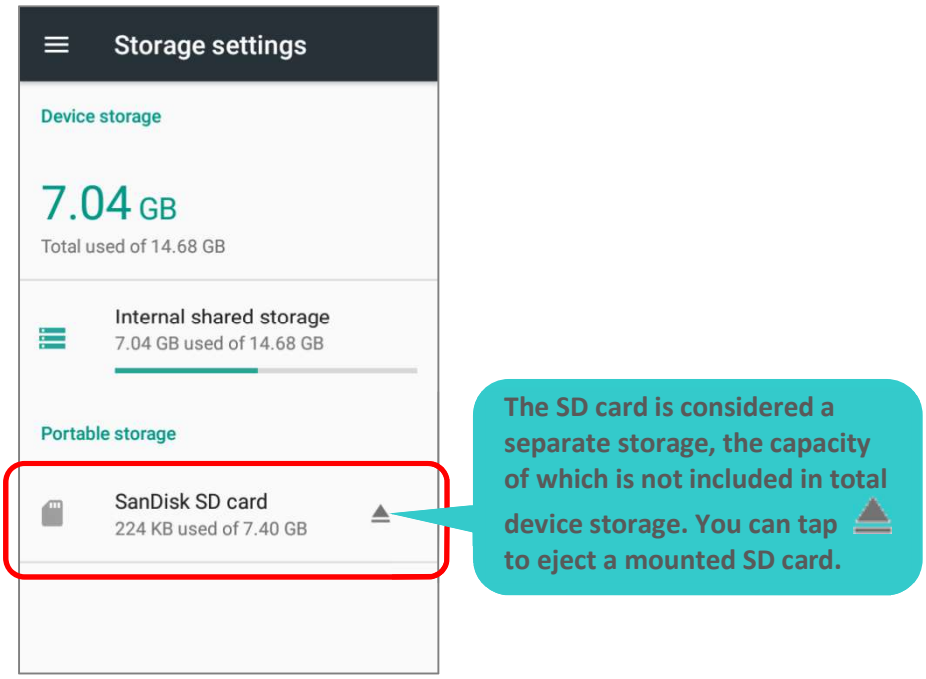
SET UP SD CARD AS PORTABLE STORAGE

Using SD card as a portable device allows you to treat it as a USB disk, by swapping it between your Android device and the computer to easily transfer files. This is quite handy when there is a need to offload files that are taking up too much storage space.

When this device is connected with PC, the disk content is readable from PC client:

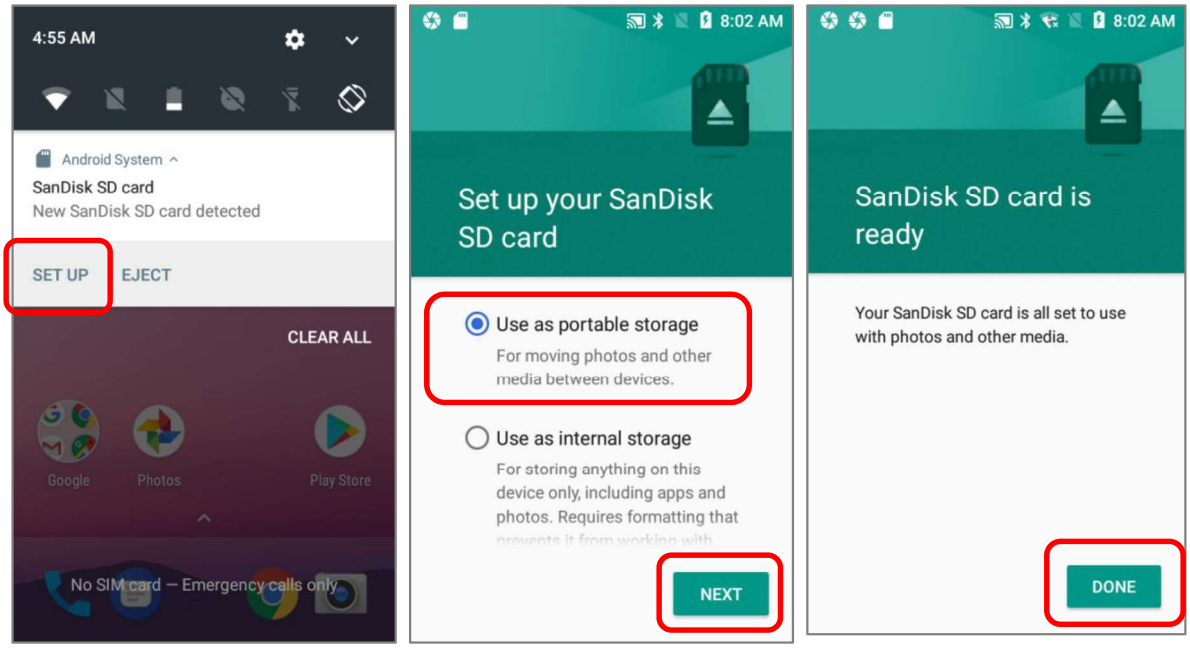


On **Storage** screen, this disk can be managed separately.

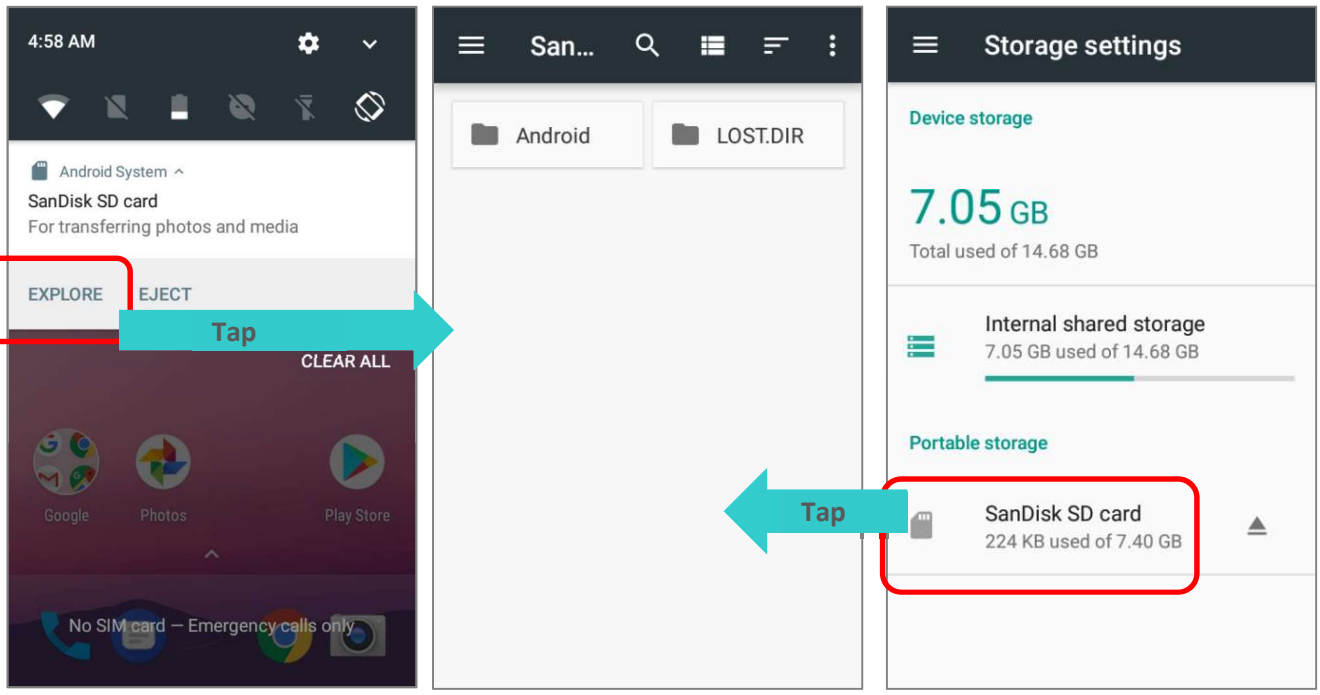


To start:

1) Insert the SD card. A notification icon indicating that an SD card is detected will be shown in the status bar; swipe down from the status bar and tap "**SET UP**".
2) Tap "**Use as portable storage**" and then "**NEXT**".
3) When the setting is completed, tap "**DONE**".



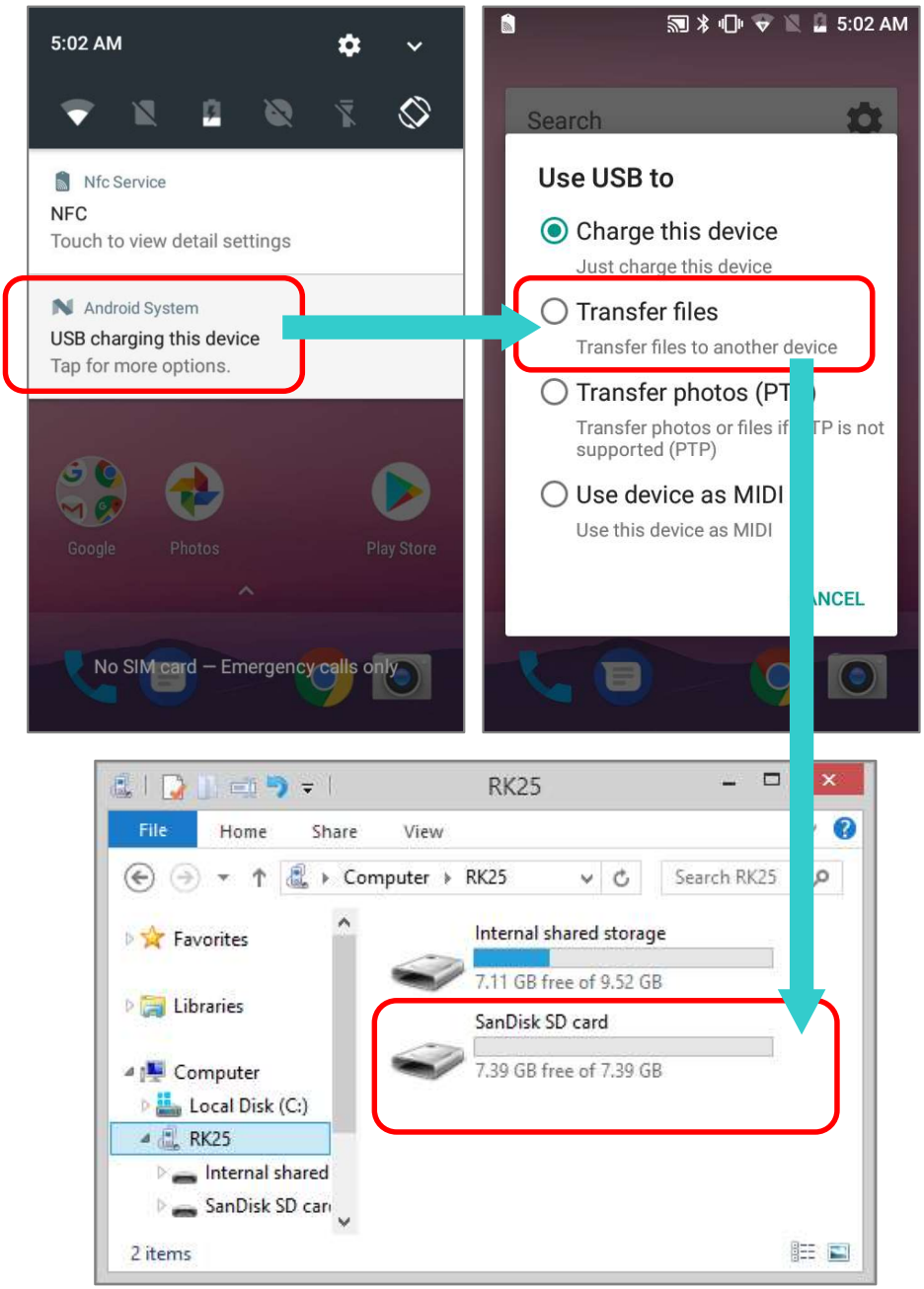
4) Swipe down from the status bar to reveal Notifications Drawer, and you will find a notification indicating that the SD card is for transferring photos and media; tap "**EXPLORE**" to check its content.
   OR tap the SD card in **Storage Settings** page to check it.



TRANSFER PHOTOS & MEDIA BETWEEN THE DEVICE & PC

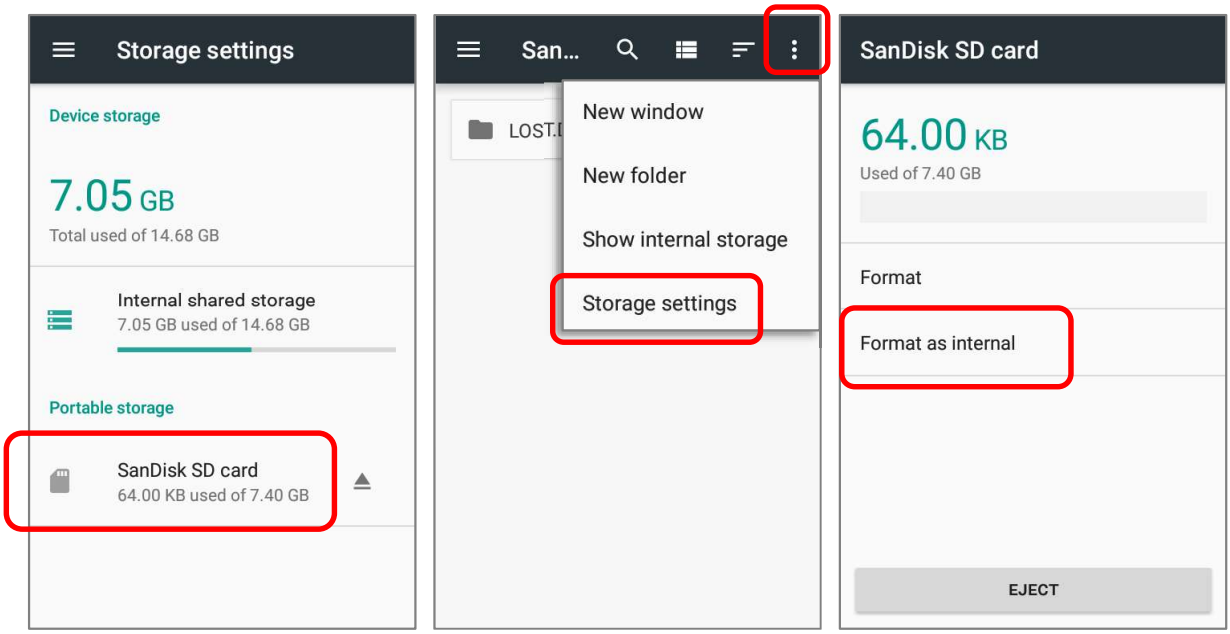
To transfer photos and media between this device and PC when the mounted SD card is set as portable storage, please:

1) Connect your mobile computer with PC with supplied USB cable.
2) Swipe down from the status bar to reveal Notifications Drawer, and tap "**USB charging this device**" to enter USB options menu.
3) Choose "**Transfer files**", and now you will find the disk content is readable from PC client. Please make sure the USB cable is properly connected while transferring files over USB connection.

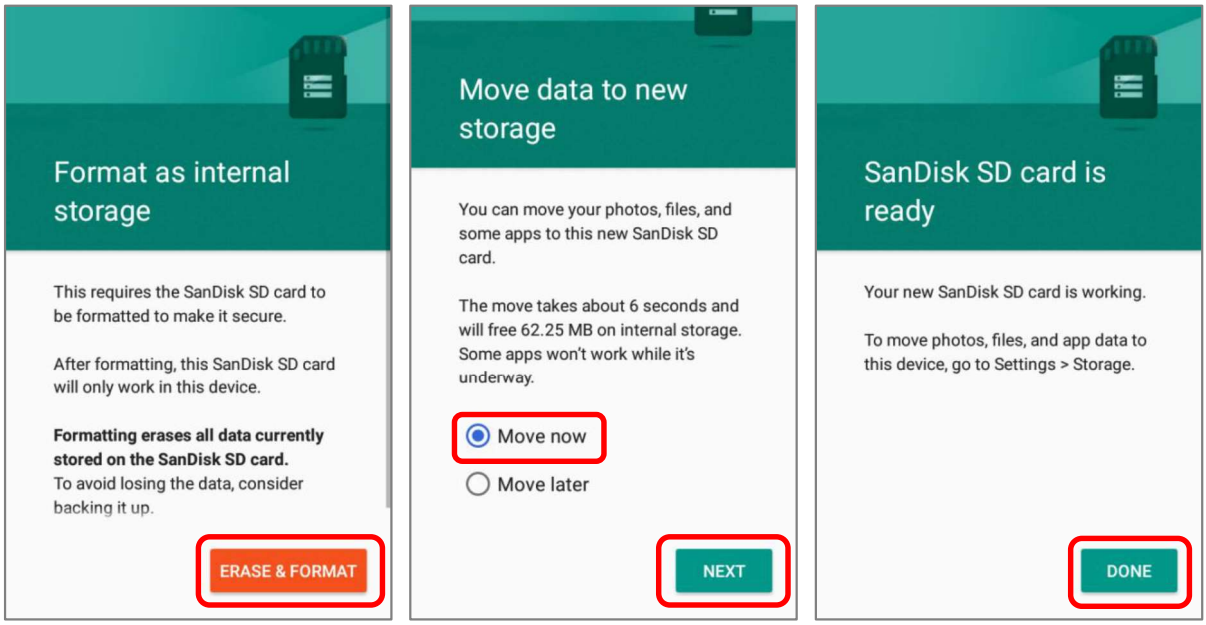


CONVERT THE SD CARD TO INTERNAL STORAGE

1) You can always convert the SD Card from portable storage to internal storage. On **Storage** screen, tap the SD card. Before you start, make a backup of the files on this disk if you would like to keep them.
2) On SD card content screen, tap **More** and then tap "**Storage settings**".
3) By selecting "**Format as internal**", the device will eventually format this SD card into a specific file format only readable by this device.



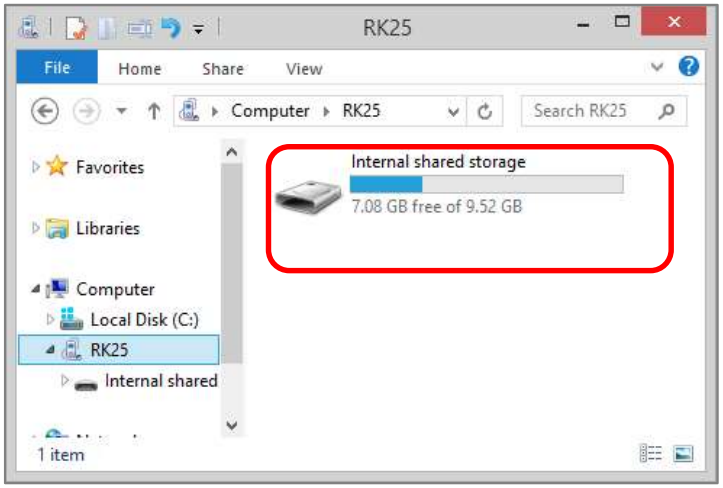
4) On Format as internal storage screen, tap "**ERASE & FORMAT**" to format the card.
5) You will then be asked whether to move multimedia files to this new SD card right away or later; make your choice and then tap "**Next**".
6) When the formatting is completed, tap "**DONE**".



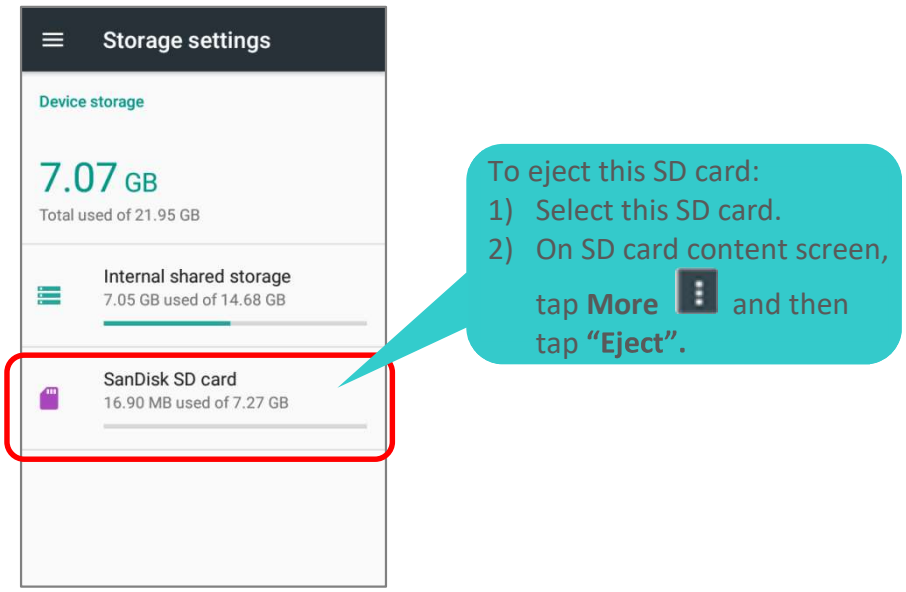
SET UP SD CARD AS INTERNAL STORAGE

Using SD card as internal storage allows you to extend your existing device storage and to store huge applications. This SD card will be reformatted and encrypted with a file format that is not readable by another device. Therefore, it is essential that you back up important files on this SD card in advance. Please note that if you eject this SD card, the applications and media files stored on it will not be available until you reinsert the card.

When this device is connected with PC, the disk content is not readable from PC client:



On **Storage** screen, the capacity of this SD card is merged into the total device storage. Please note that. In this setting, you will have no control of which files to be stored on SD card.

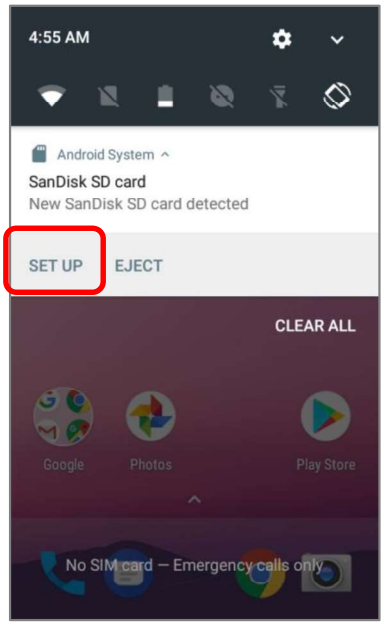


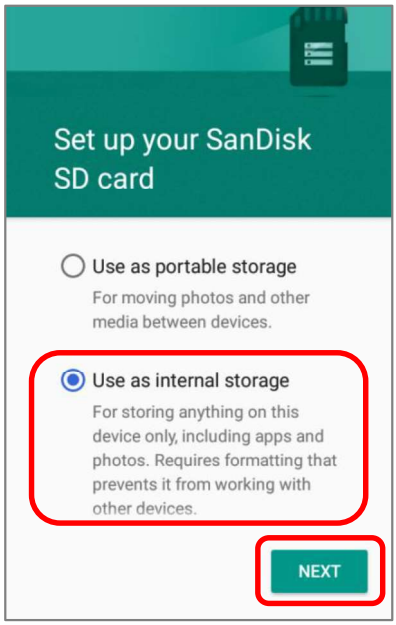
Warning:

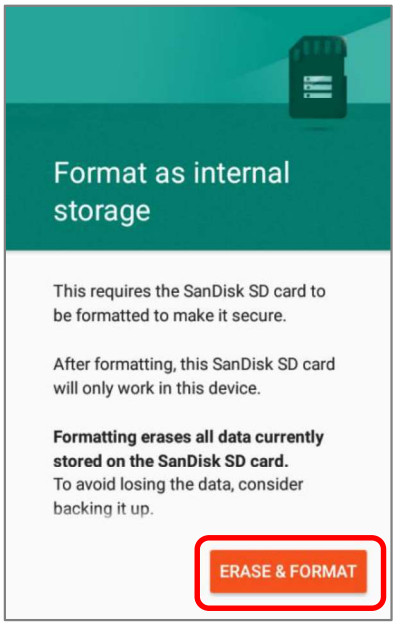
Do not physically remove the SD card from the device without ejecting this card in advance.

To start:

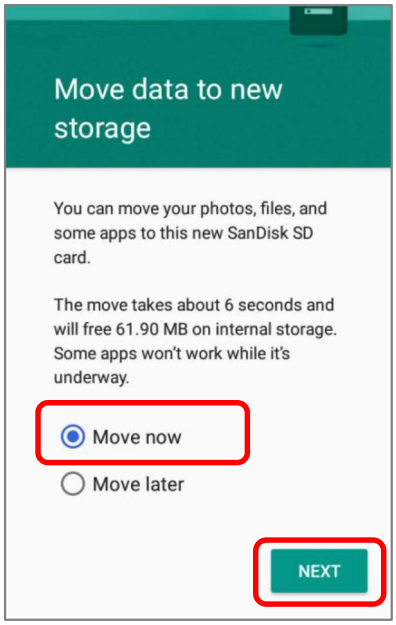
1) Insert the SD card. A notification will pop up indicating that an SD card is detected tap "**SET UP**".
2) Tap "**Use as internal storage**" and then "**NEXT**".
3) Tap "**ERASE & FORMAT**" to format this card.

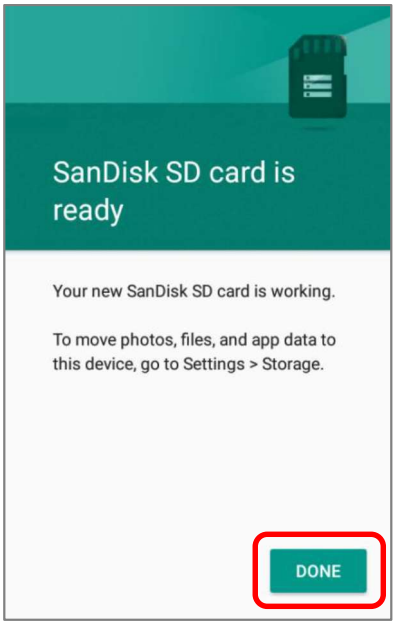






4) You will then be asked to whether to move media files to this new SD card, make your choice and then tap "**Next**".
5) When the setting is completed, tap "**DONE**".



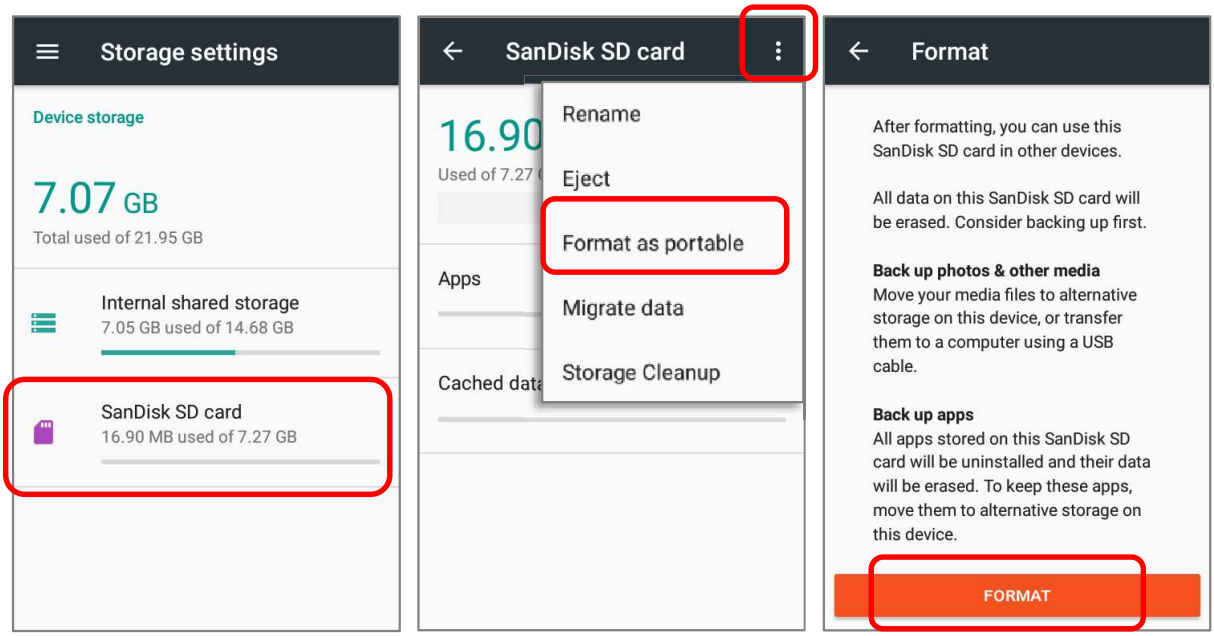


Note:

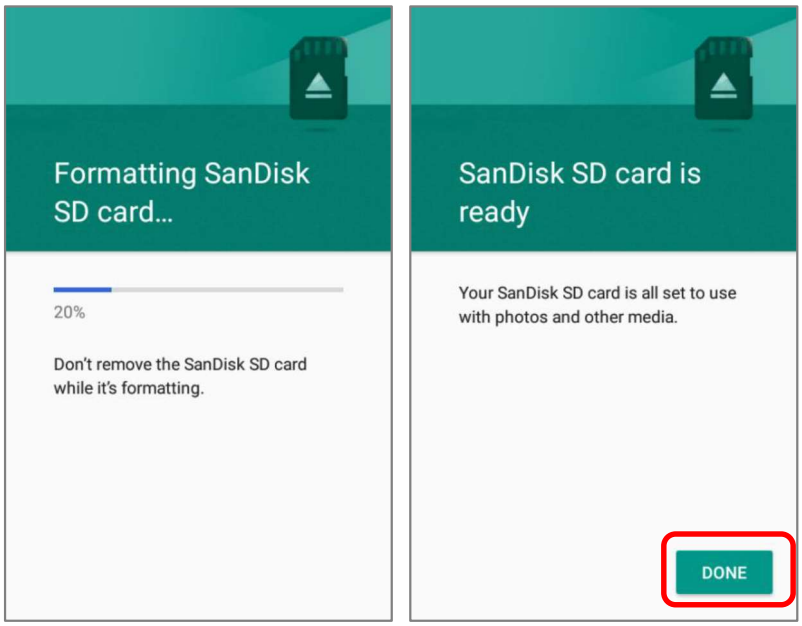
It is recommended that you select "**Move now**" at **Step 4** to have the device immediately start making use of SD card space. If you select "**Move later**", the device will continue to consider device's original storage the primary location to save files.

CONVERT THE SD CARD TO PORTABLE STORAGE

1) You can always convert the SD Card from internal storage to portable storage. On **Storage** screen, tap the SD card. Before you start, make a backup of the files on this disk if you would like to keep them.
2) On SD card content screen, tap **More** ⋮ and then tap "**Format as portable**".
3) Tap "**Format**" to have this SD card re-formatted into a file type accessible by other devices.



4) When the formatting is completed, tap "**DONE**".



Note:

Please do back up important files on this SD card before proceeding formatting.

2.3. TOUCH SCREEN

The mobile computer comes with a 4.0 inch, LCD, Corning Gorilla Glass 3 with 480RGBx800 resolution. The LED backlight of the screen, which helps ease reading under dim environments, can be controlled manually and automatically.

Warning:

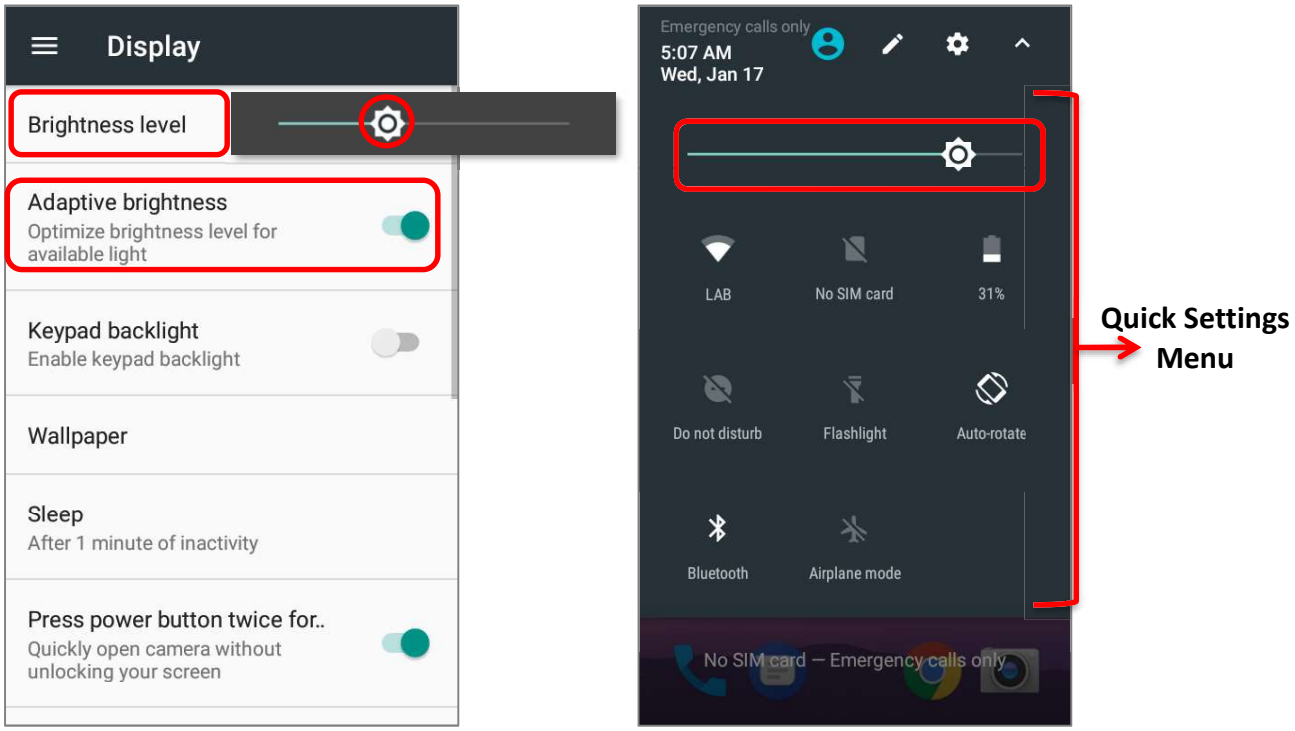
DO NOT use any pointed or sharp objects to move against the surface of the screen.

2.3.1. SCREEN BRIGHTNESS

Go to **App Drawer** | **Settings** | **Display** | **Brightness level**.

Adjust screen brightness by dragging the slider to the right (to increase brightness) or left (to reduce brightness). Switch on the **Adaptive brightness** to enable automatic backlight adjustment with the mobile computer's built-in sensor.

You can also use the shortcut button on **Quick Settings** menu to adjust the brightness level.



Note:

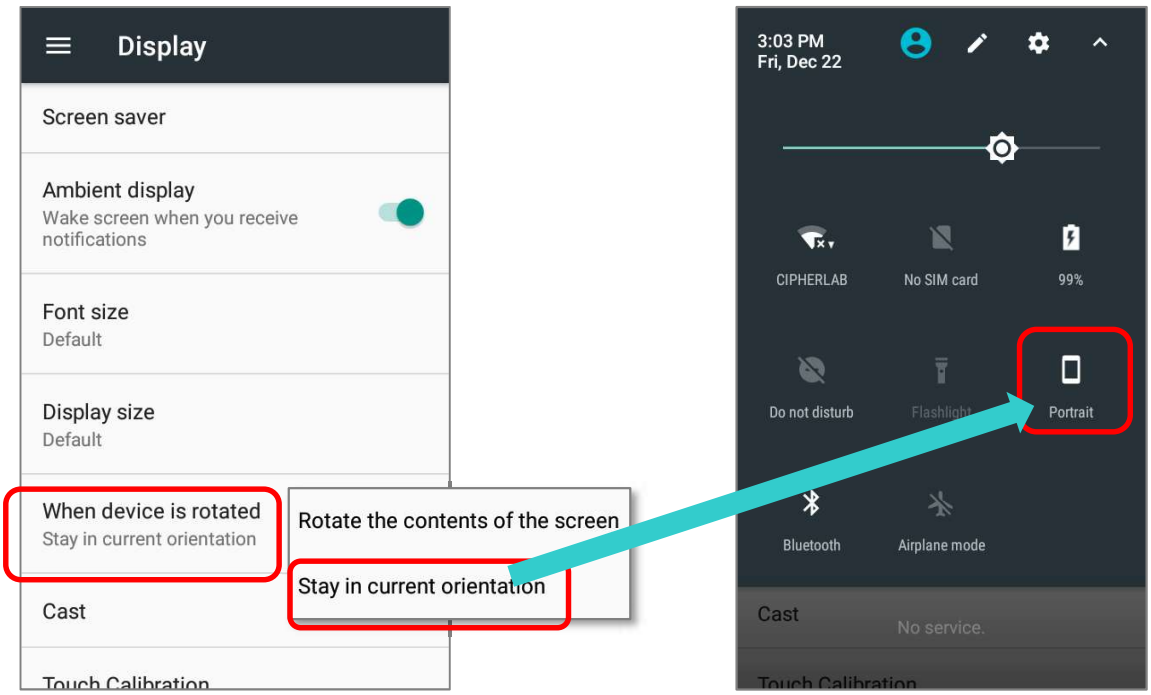
To save battery power, dim the screen brightness while working in a well-lit area, or set a shorter sleeping plan for the screen backlight to go off.

2.3.2. SCREEN ROTATION

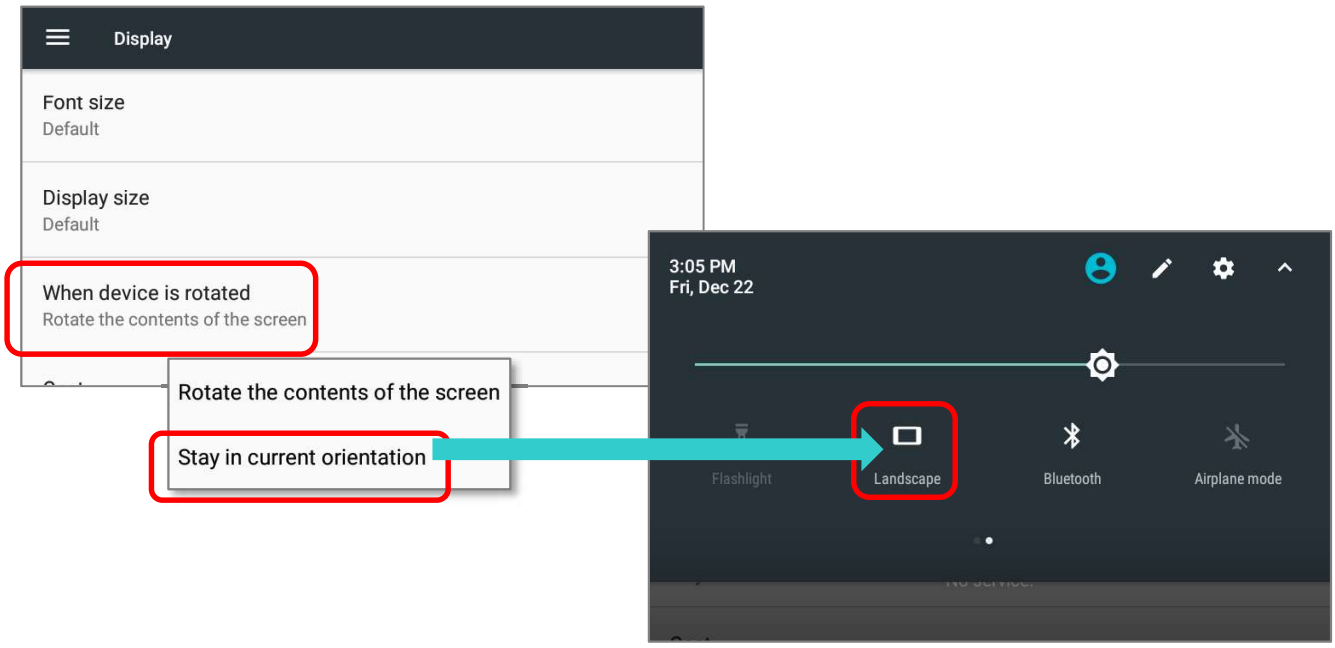
By default, the device automatically rotates the screen to when you turn the device sideways. To switch this function on or off:

1) Go to **App Drawer** | **Settings** | **Display**

2) Tap **When device is rotated** and then select **Stay in current orientation** to turn the rotation function off or tap **Rotate the contents of the screen** to enable it.

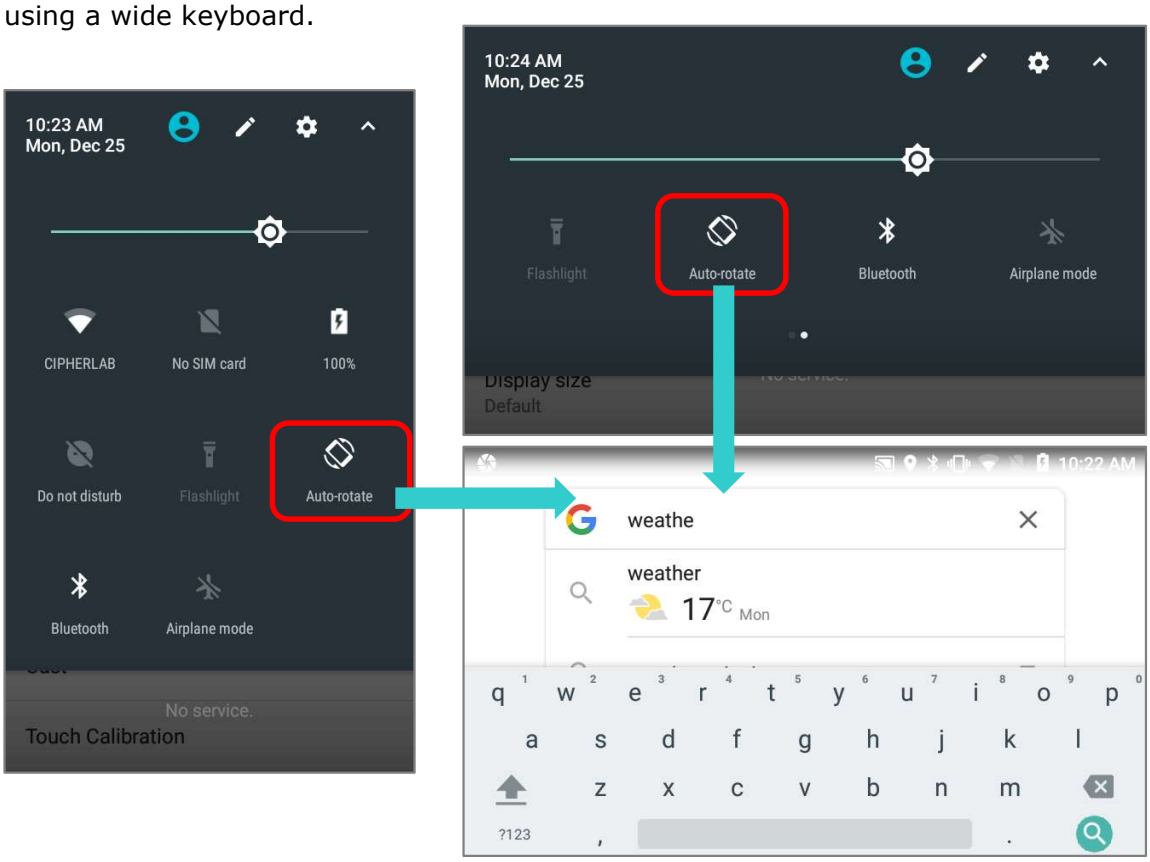


Please note that "**Stay in current orientation**" might be portrait or landscape depending on the screen display orientation when you select it.

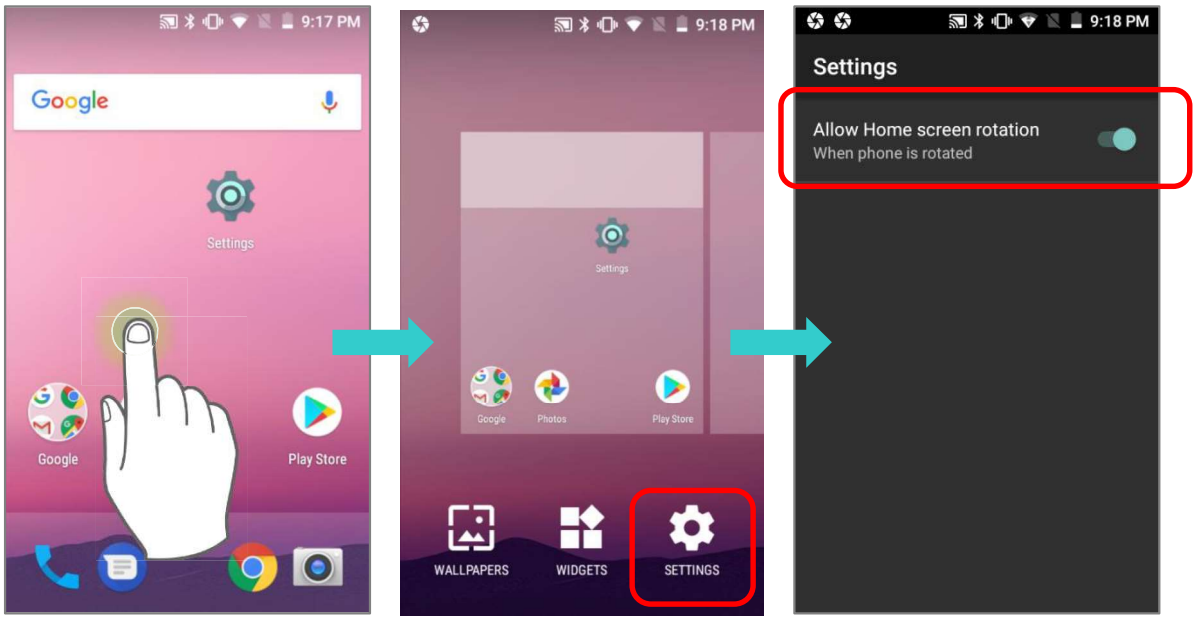


OR

3) Use two fingers to swipe down from the top of the screen to open **Quick Settings** and tap the **Auto rotate** status icon to enable screen rotation. This quick setting method allows you to temporarily enter landscape mode to enhance your typing experience by using a wide keyboard.



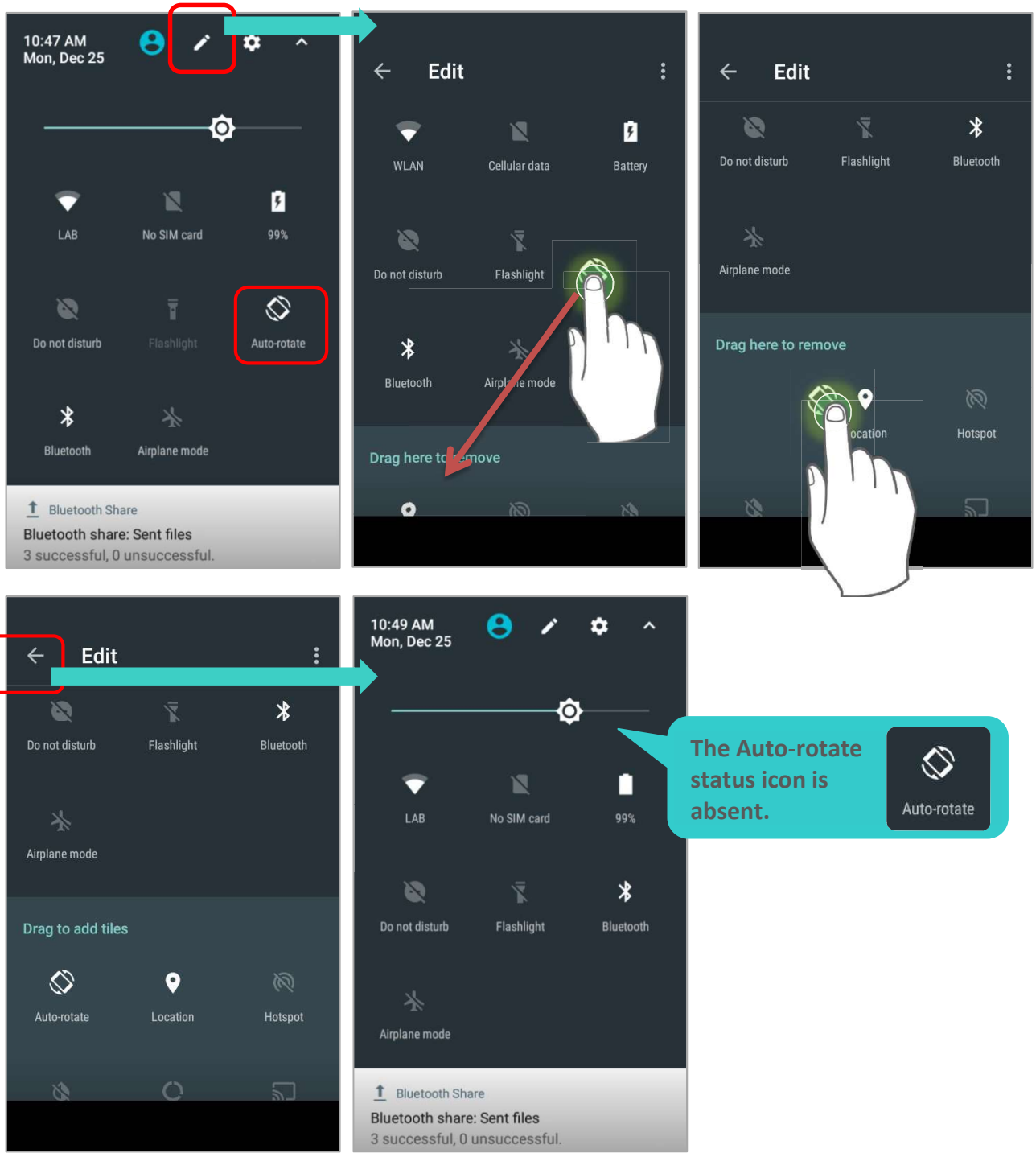
To enable Home screen rotation, please make sure Auto Rotation is enable, and press any empty spot on Home screen, tap "**Setting**" and enable "**Allow Home screen rotation**":



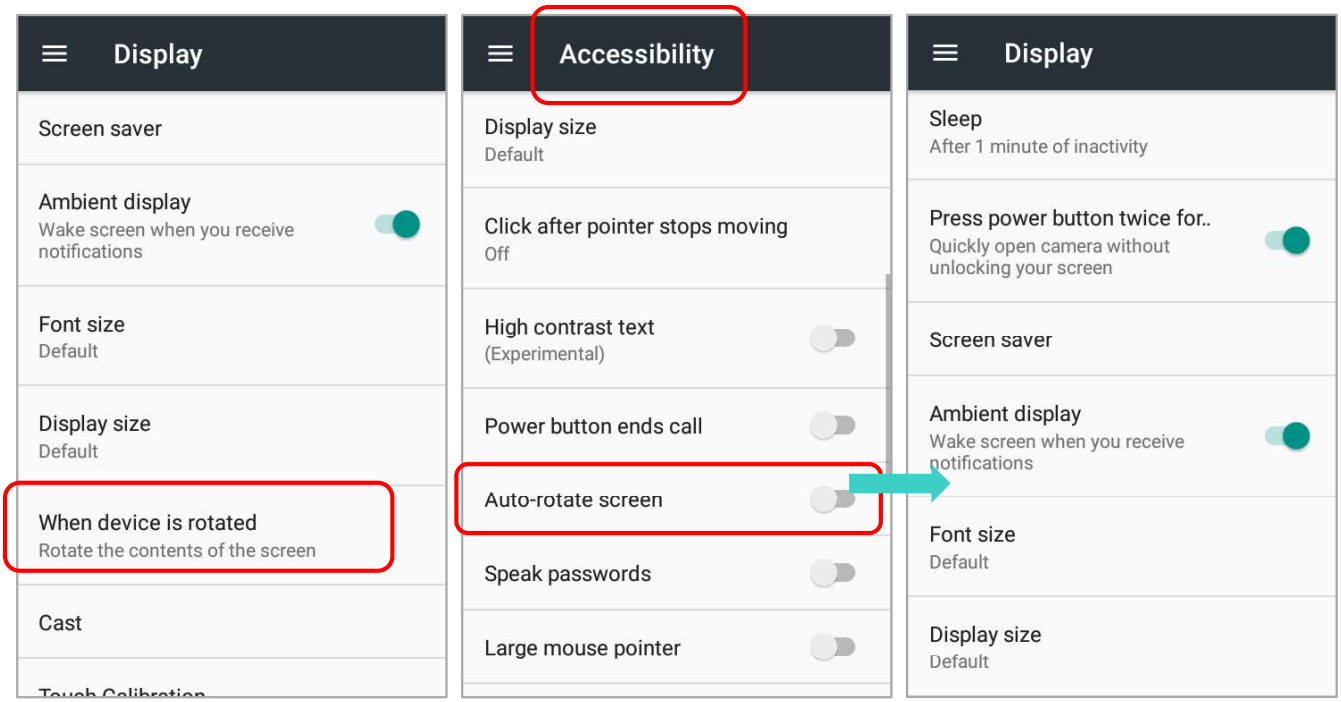
REMOVE AUTO ROTATION FROM QUICK SETTING MENU & DISPLAY SETTINGS

You can remove the **Auto rotate** switch icon on **Quick Settings** menu to minimize the possibility of accidentally turning on the auto-rotation function:

1) Use two fingers to swipe down from the top of the screen to open **Quick Settings** menu.
2) Click button to get into **Edit** page; tap on and hold the **Auto rotate** switch icon, and drag it to the light gray area and then release it.
3) Return to the **Quick Settings** menu, the **Auto rotate** switch icon is now hidden.



Go to **App Drawer** | **Settings** | **Accessibility** and switch off **Auto-rotate screen**. By doing so, the auto-rotation option will be hidden in **Settings** | **Display**.



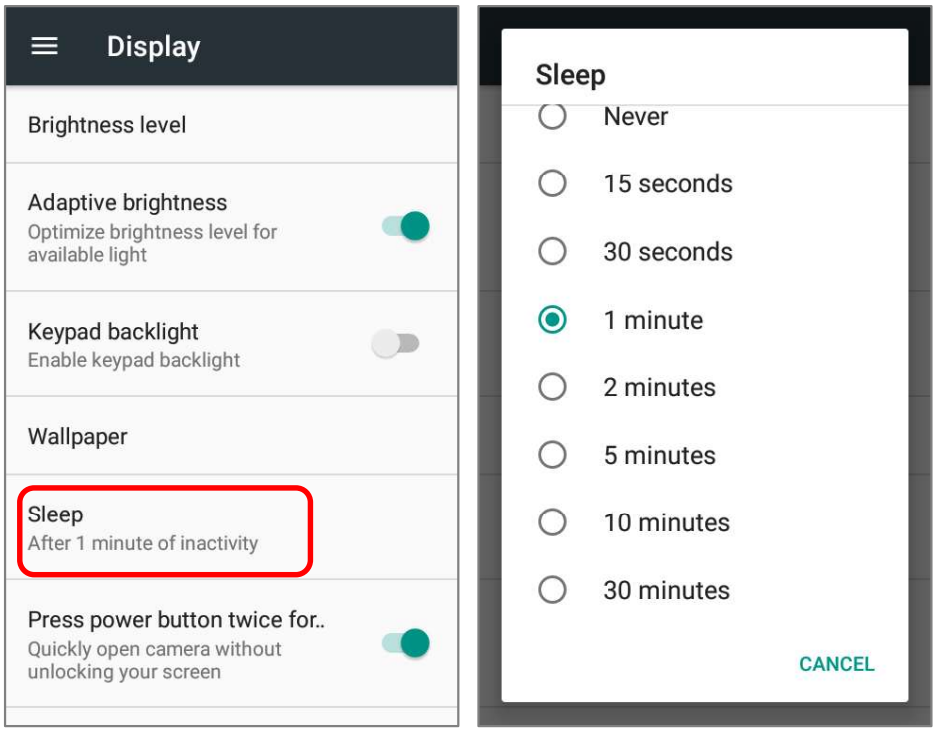
Note:

Auto-rotation is not supported for certain applications. Without enabling "**Allow Home Screen Rotation**", auto-rotation is inapplicable in **Home** Screen and **App Drawer** screen.

2.3.3. SCREEN TIMEOUT SETTINGS

Go to **App Drawer** | **Settings** | **Display** | **Sleep**.

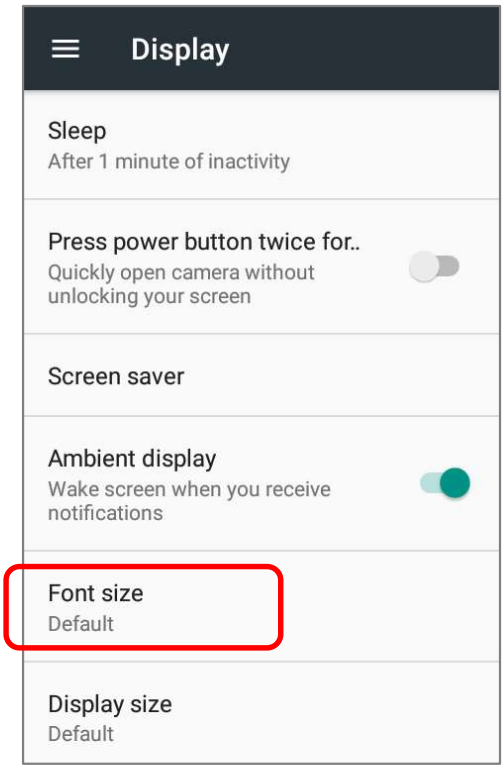
Select the time lapse for screen timeout.

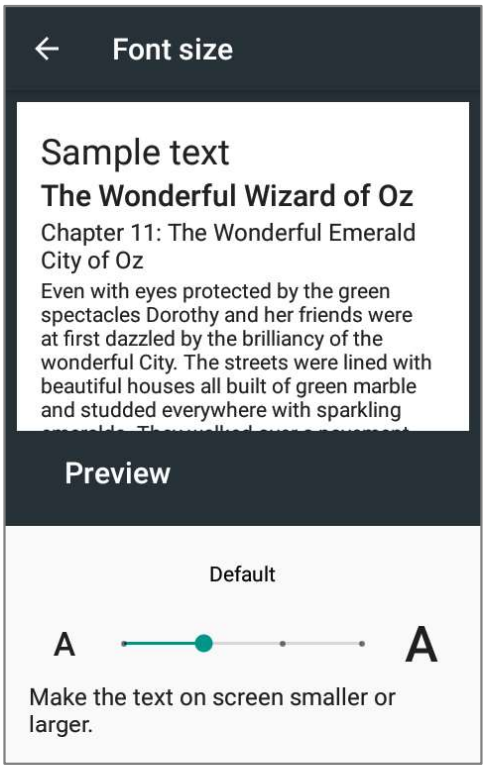


2.3.4. TEXT SIZE

Go to **App Drawer** | **Settings** | **Display** | **Font size**.

Tap the small A icon A or the large A icon A to select the font size between **Small**, **Default**, **Large** and **Largest**.

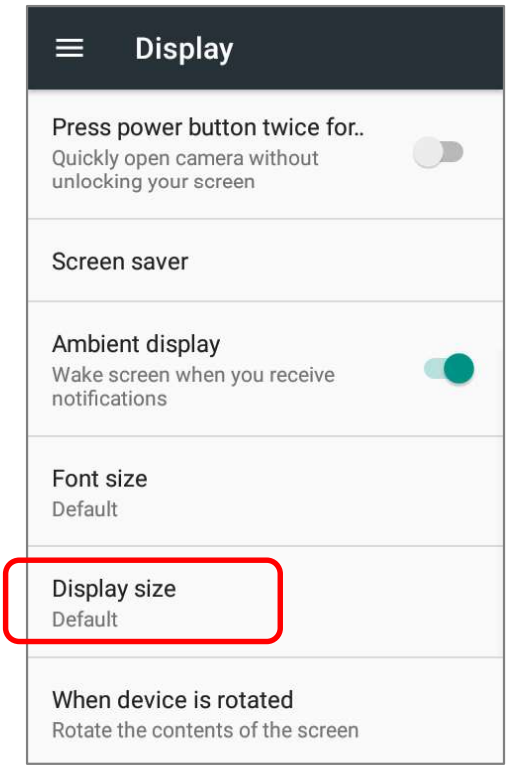


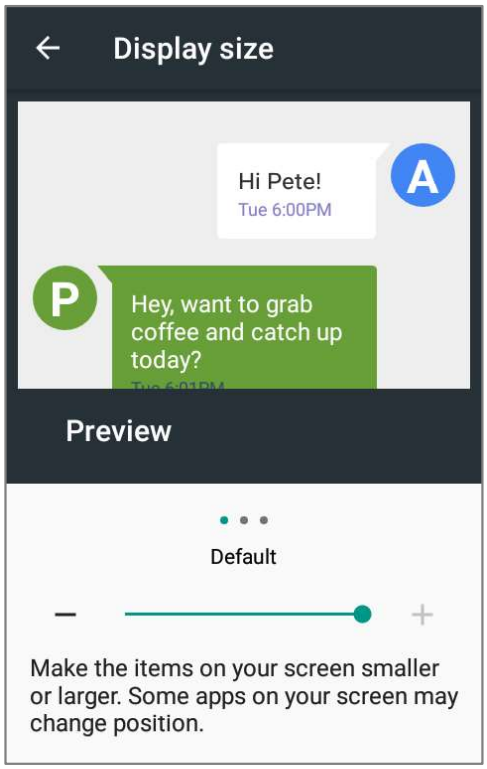


2.3.5. DISPLAY SIZE

Go to **App Drawer** | **Settings** | **Display** | **Display size**.

Tap the plus icon + or the minus icon − to select the display size as **Small** or **Default**.





2.4. NOTIFICATIONS

2.4.1. STATUS LED

Two LED indicators located above the touch screen provide information about charging status, scanner light beam, and scanner "**Good Read**" during data collection.

LED 1 for Power Indication		
Indicator	Status	Description
Charging	Green, solid	Charging complete (100%)
	Red, solid	Charging the mobile computer (0% to 99%)
	Red, blinking	Charging temperature error (lower than 0℃ or exceed 45℃)
Battery Swap	Red, flash once	Pressing power button and select "Battery Swap" in the pop-up menu, and the red status LED lights up. As the red light goes off, the device is in complete suspend mode and Main battery is ready to be replaced

LED 2 for Reader & System Notification		
Indicator	Status	Description
Barcode decode	Green, flash once	Good read

Note: For Scanner decode and Scanner beam LED to function, LED notification must be enabled in Reader Configuration.

2.4.2. AUDIO

The speaker is used to play sounds for events in windows and programs, or play audio files. In addition, it can be programmed for status feedback. In noisy environments, you may consider connecting a headset instead. A headset jack is provided on the upper right size of the mobile computer, which is a 3.5 mm DIA stereo earphone jack. The mobile computer also supports using Bluetooth headsets.

Supported audio file formats include: MP3, AAC, He-AAC v1 and v2, WMA9/Pro, Dolby AC-3, DTS-HD M6 and DTS-HD M8.

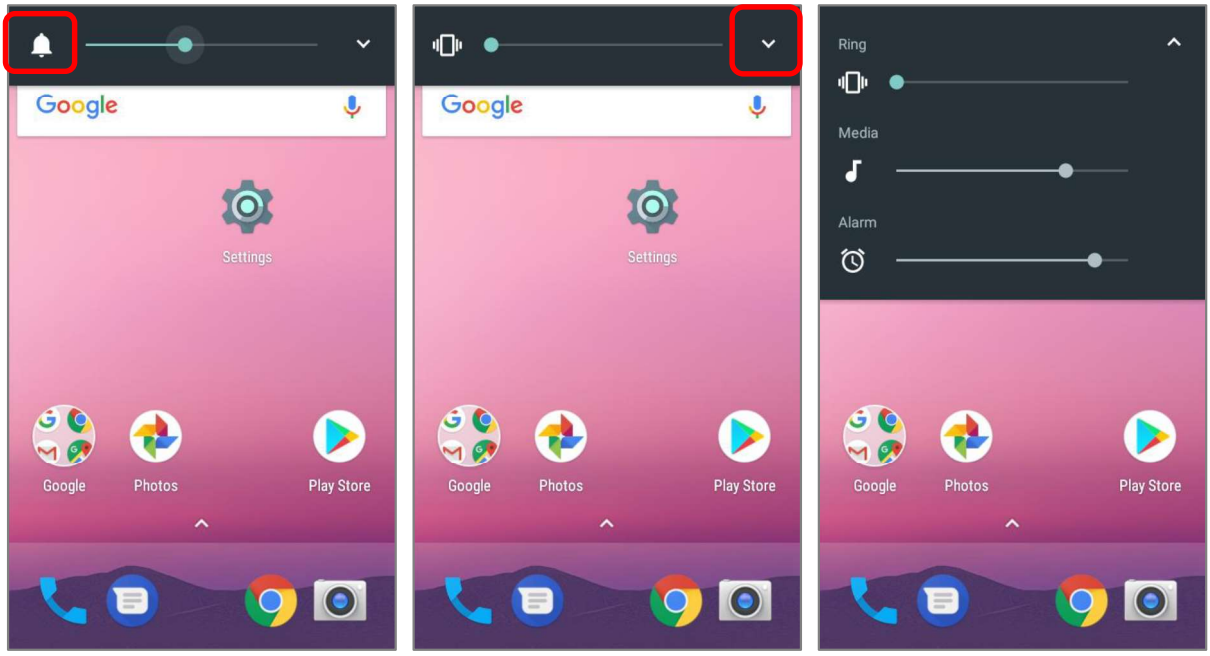
Use the volume buttons on the side of the mobile computer to adjust the system volume.

2.4.3. SOUNDS AND VIBRATION

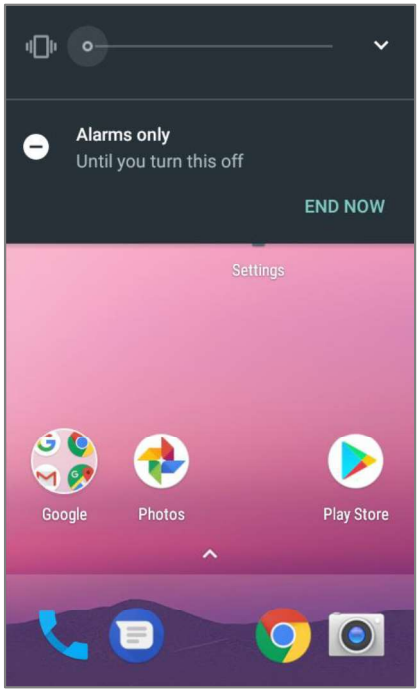
The mobile computer is integrated with a vibrator, which is software programmable for tactile feedback. This can be helpful when working in noisy environments.

You may also set the mobile computer to vibrate only, in which all system sounds will be muted and replaced by the vibrator.

On any screen, press down **Volume Up** or **Volume Down** key to open quick sound menu. Tap to switch this device to **Vibration mode**. To modify specific sound settings, tap to access more settings.

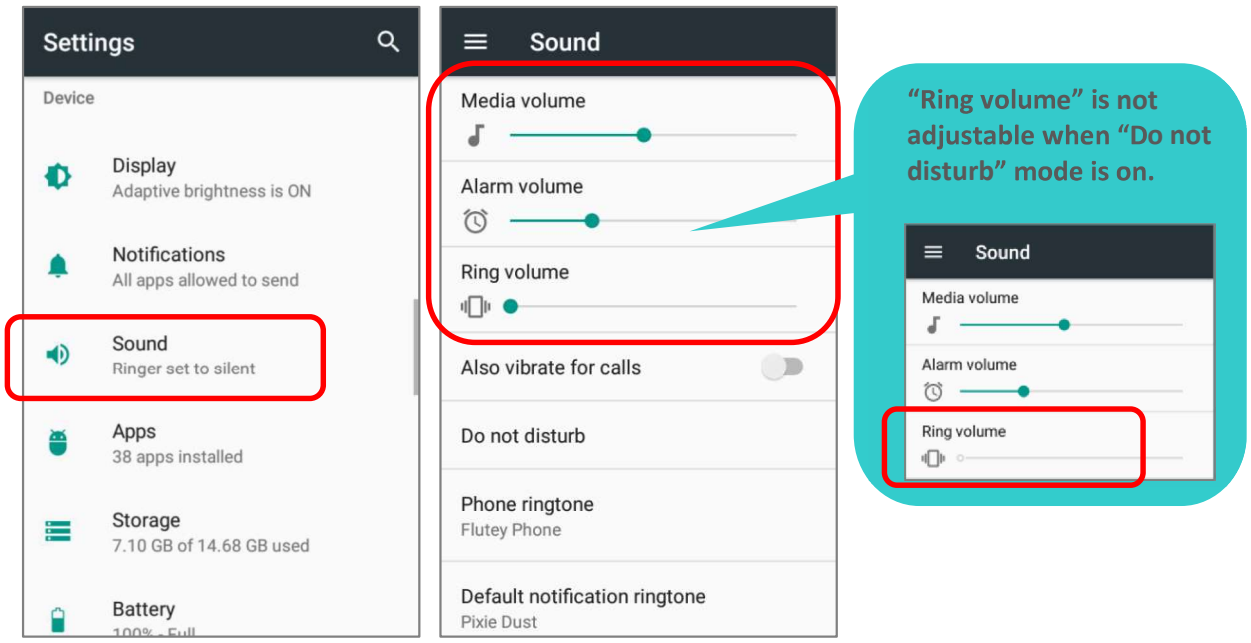


Keep pressing **Volume Down** key to turn the device into **Do not disturb** mode directly.



SOUND SETTINGS

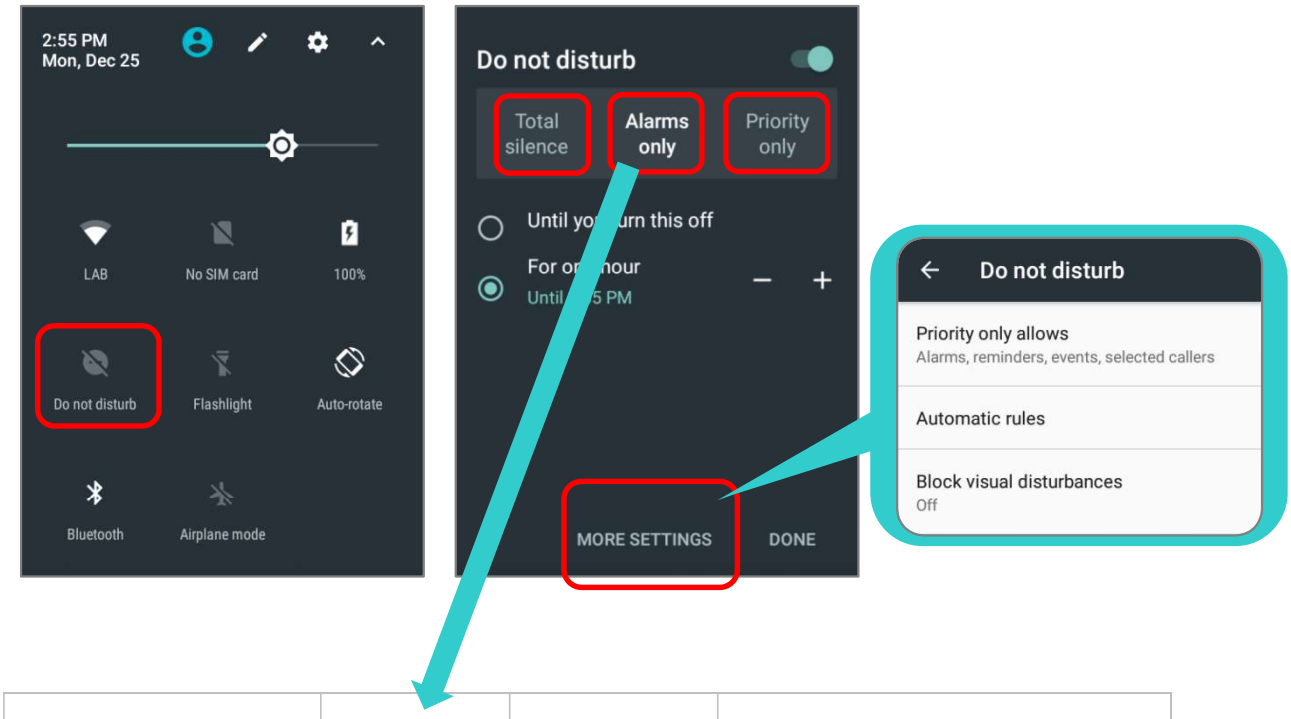
Go to **App Drawer** | **Settings** | **Sound** for more sound settings.



DISABLE UNWANTED NOTIFICATIONS WITH "DO NOT DISTURB"

You can temporarily disable specific notifications (vibration or sound) using "**Do Not Disturb**" in Quick Settings menu**.** What's more, you can schedule the duration of the disabled status so that the notifications will switch to enabled state automatically based on your arrangement.

Use your two fingers to swipe down from the status bar to open Quick Settings, tap on "**Do not disturb**" to enable this feature and make further adjustment.



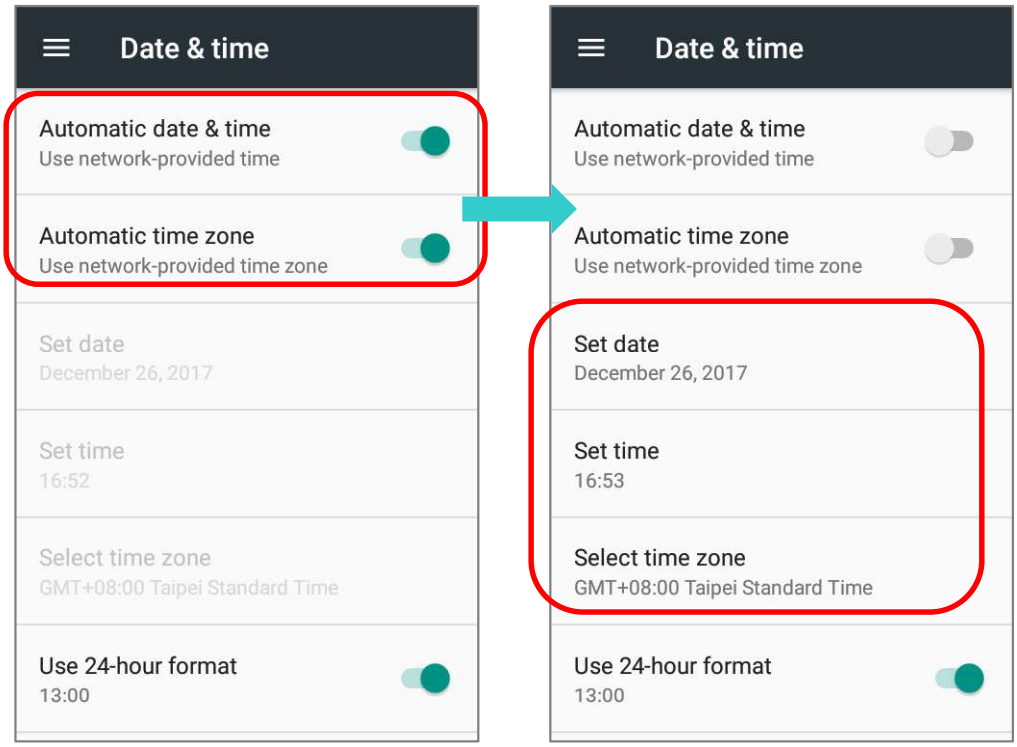
Item	Total Silence	Alarm Only	Priority Only
Alarm	OFF	ON	ON
Reminders	OFF	OFF	Adjustable(Default:ON)
Events	OFF	OFF	Adjustable(Default:ON)
Music, Video, Game or Media	OFF	ON	ON

2.5. DATE AND TIME

By default, the mobile computer automatically synchronizes the date and time to the WLAN network (if connected).

To set the date and time manually:

1) Go to **App Drawer** | **Settings** | **Date & time**
2) Tap **Automatic date & time** and select **Off** to disable using network-provided time.
3) Deselect **Automatic time zone**.
4) Tap **Set date**. Use the sliders to select the correct month, date and year. Tap **OK** to save.
5) Tap **Set time**. Use the sliders to select the correct time. Tap **OK** to save.
6) Tap **Select time zone**. Select the correct time zone from the list.



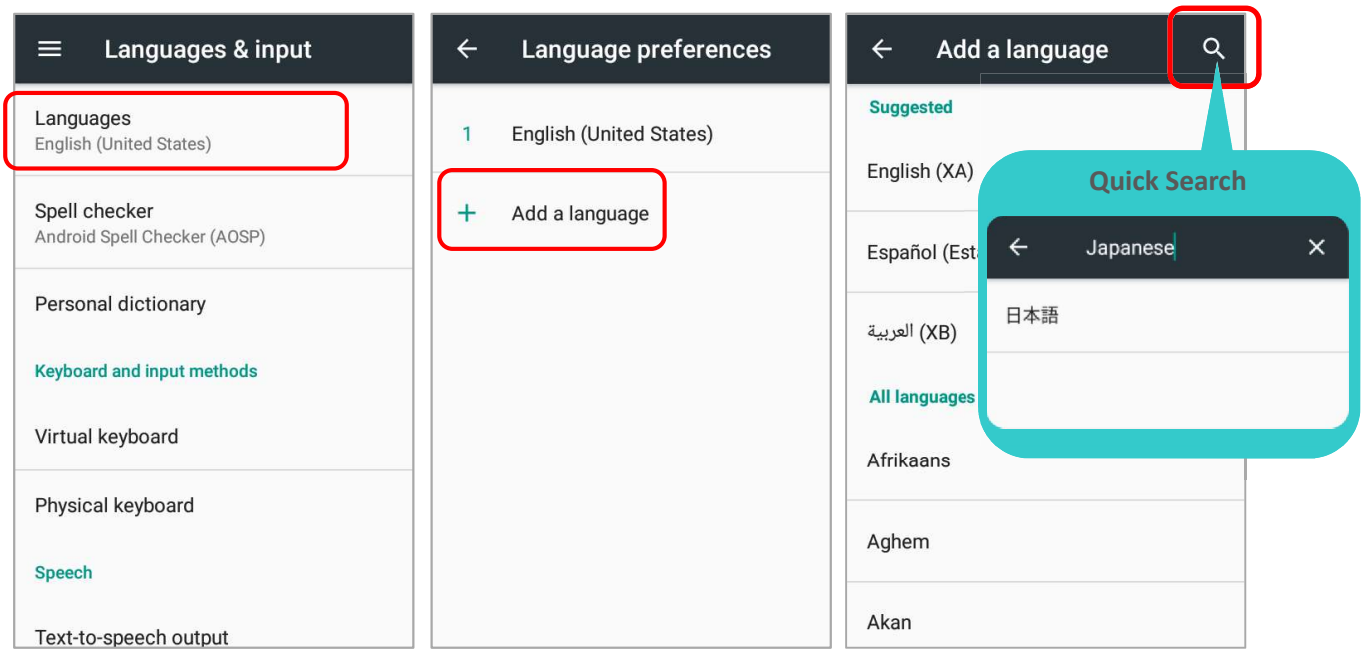
2.6. LANGUAGE & KEYBOARD INPUT

Go to **App Drawer** | **Settings** | **Language & input** to change the system language, default keyboard type, and configure keyboard input and speech settings.

2.6.1. CHANGE DISPLAY LANGUAGE

To change display language:

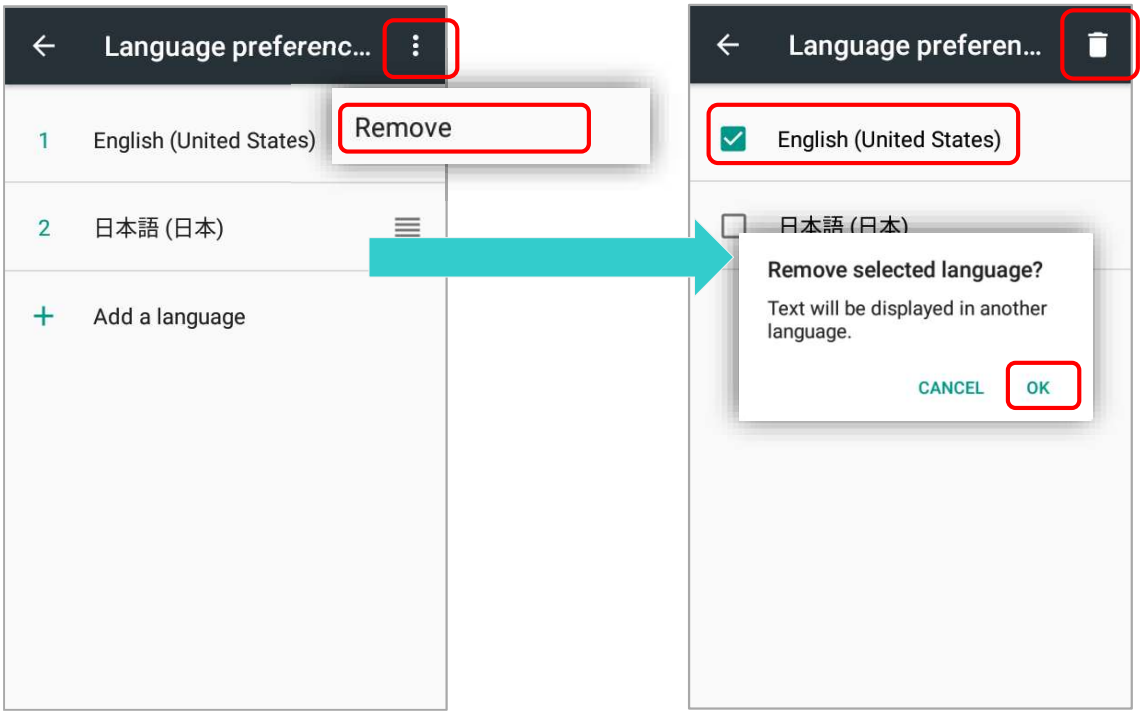
1) On **Language & input** screen, tap **Language** to get into "**Language preference**" page, and then click "**Add a language**" to select your desired system language.



2) Press and hold your desired system language to change its sorting order to the 1st by dragging. Once it is released, the new language setting will immediately be applied.

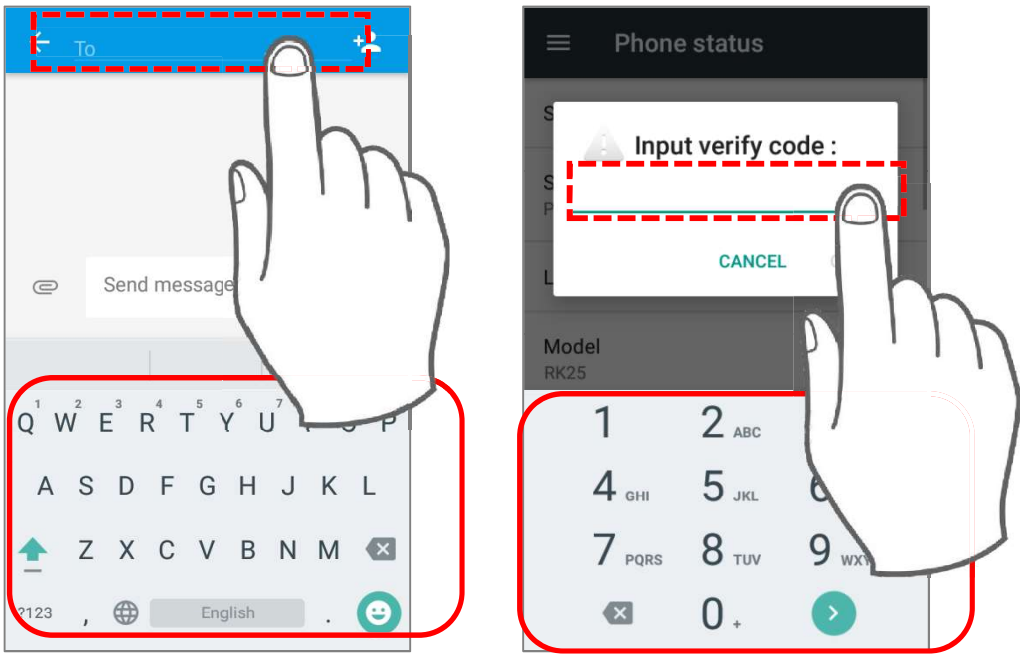
DELETE LANGUAGE

Tap ⋮ in the upper right corner and tap "**Remove**" option; select the language to delete. Please note that the display language will be changed if it is selected to be deleted.



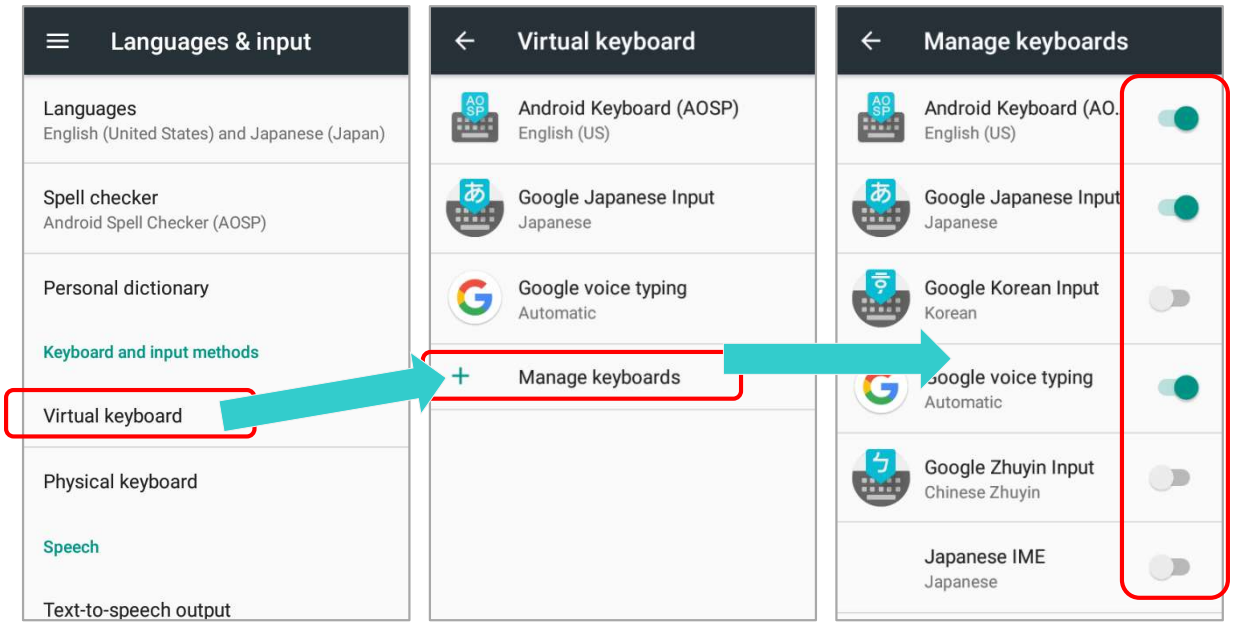
2.6.2. ON-SCREEN KEYBOARD

Tap a text input field to automatically open an on-screen keyboard. The virtual keyboard will vary depending on the data type (text or numbers) this field requires.



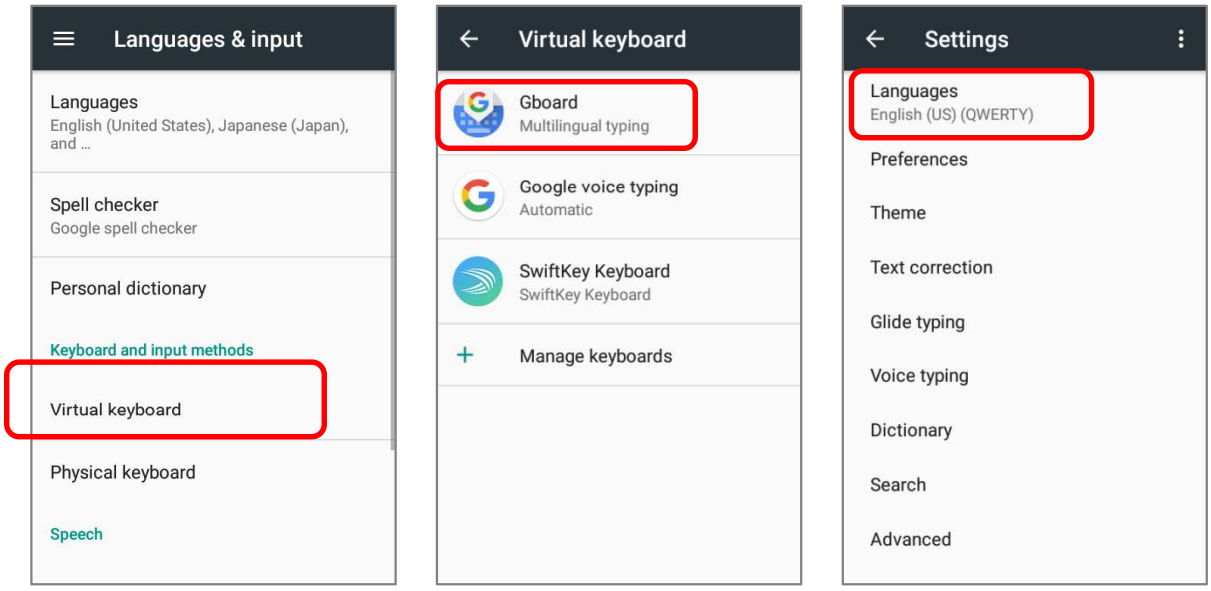
SELECT KEYBOARD (INPUT METHOD)

On **Language & input** screen, select **Virtual Keyboard** to manage the installed keyboards by taping "**Manage keyboard**" and switch on/off the input methods you need.

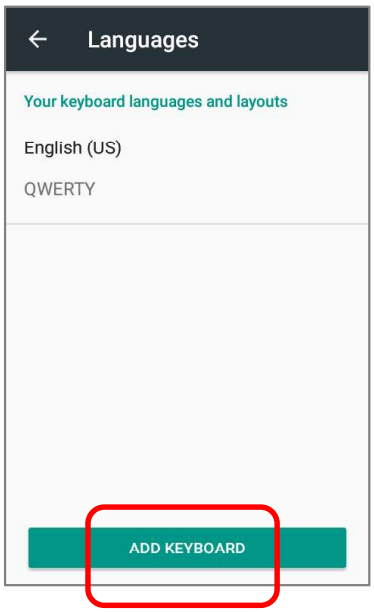


The default keyboard "**Gboard**" supports multilingual typing. To have more options of key layouts, for example, Japanese, you can:

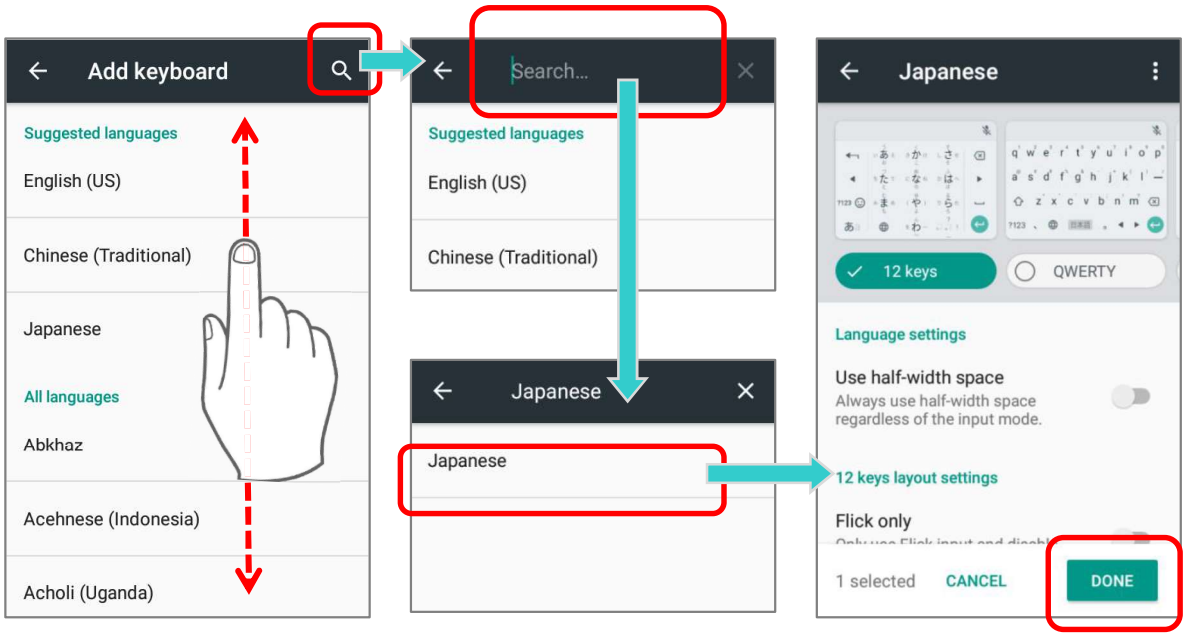
1) On **Language & input** screen, tap on **Virtual Keyboard**, select **Gboard**, and then **Languages**.



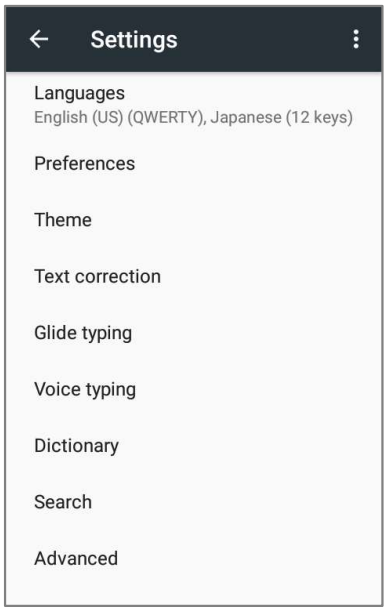
2) On Languages screen, tap on "**ADD KEYBOARD**".



3) Swipe or input the keyword to search for your desired language, and tap on it to select the keypad layouts.

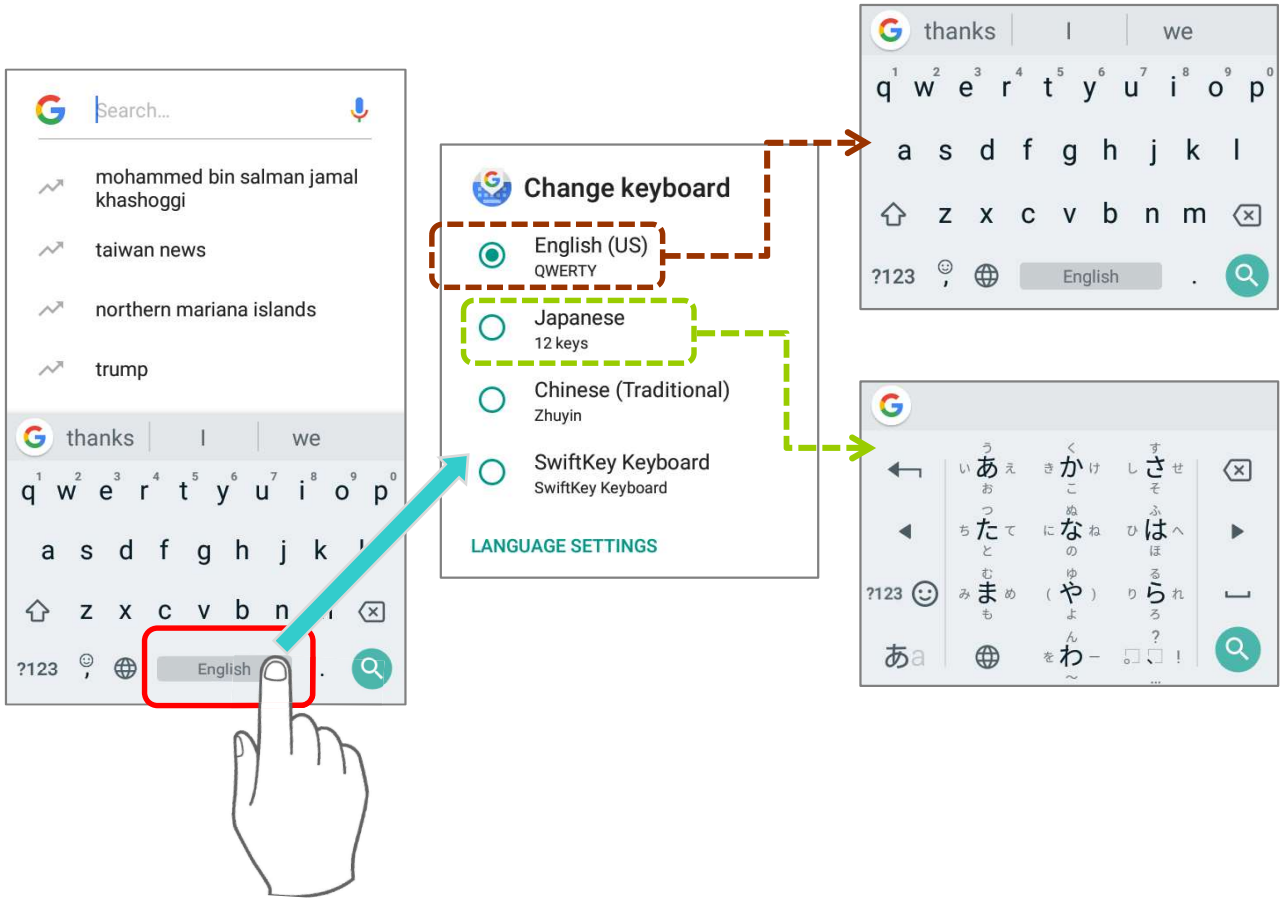


4) Return to **Languages Setting** screen, and your keyboard language and layouts now lists more languages below.



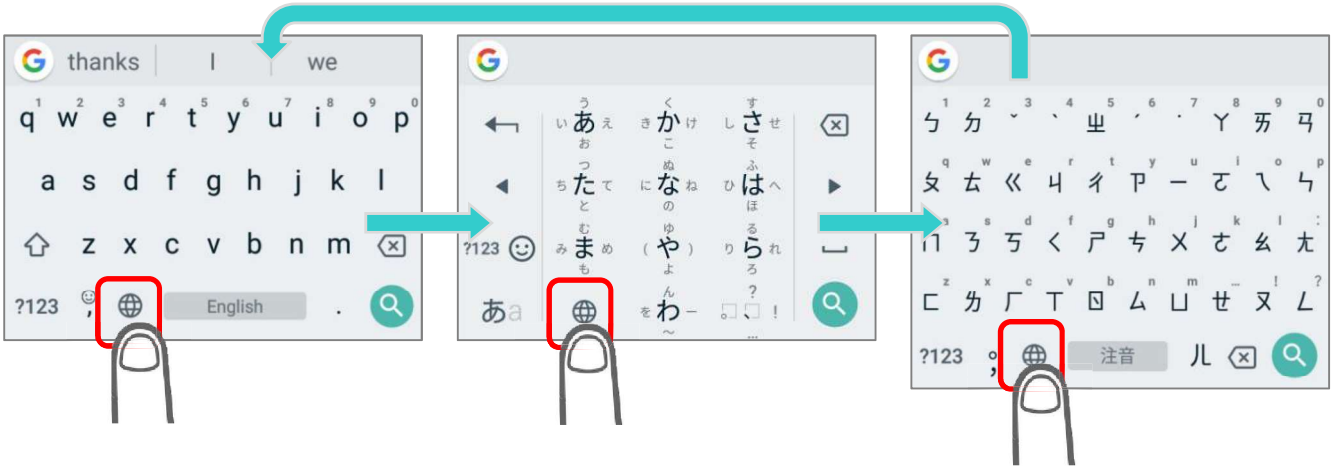
CHANGE KEYBOARD (INPUT METHOD)

Expand your Gboard and long press space key or to open "**Change Keyboard**" menu and select your desired input language.

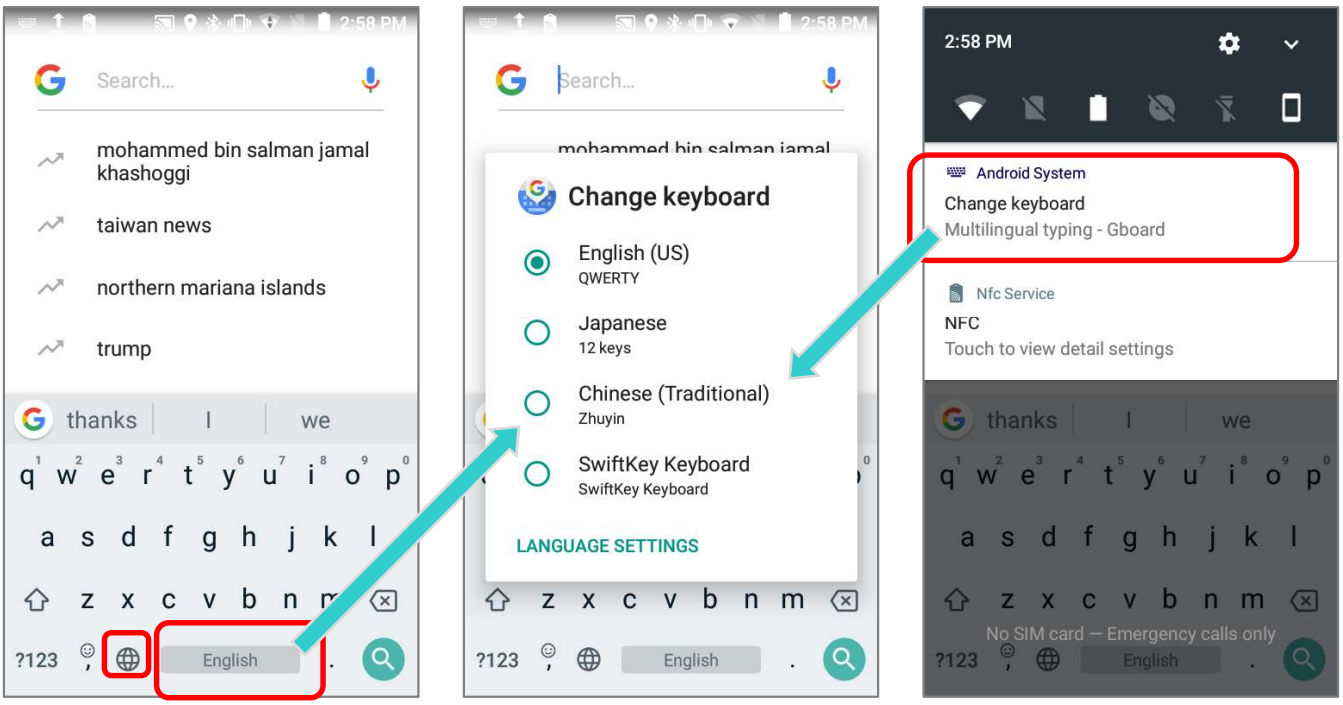


Or

Simply tap to cycle through the options:

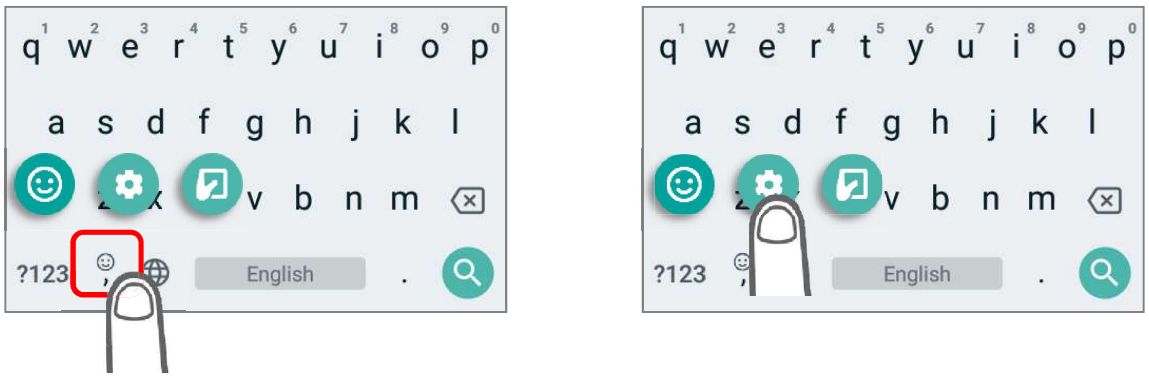


If there's any other keyboards installed by you, please long press space key or of **Gboard** till "**Change Keyboard**" menu appears and select the keyboard you need**.** Or swipe down from the status bar to open **Notifications Drawer** and tap "**Change Keyboard**" notification to change it.

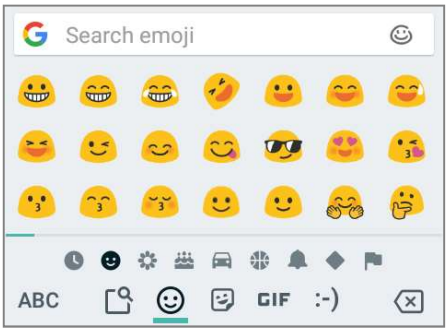
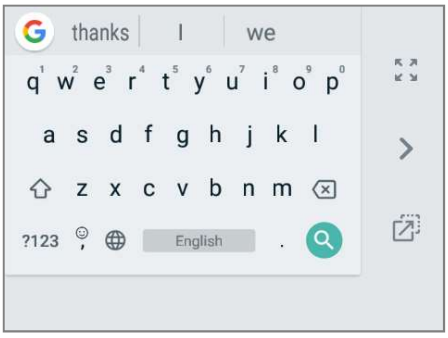


ADJUST KEYBOARD SETTINGS

To configure keyboard settings, tap and hold the comma button and the settings buttons appear. Keep pressing on the screen and swipe to the button to select the function you need.

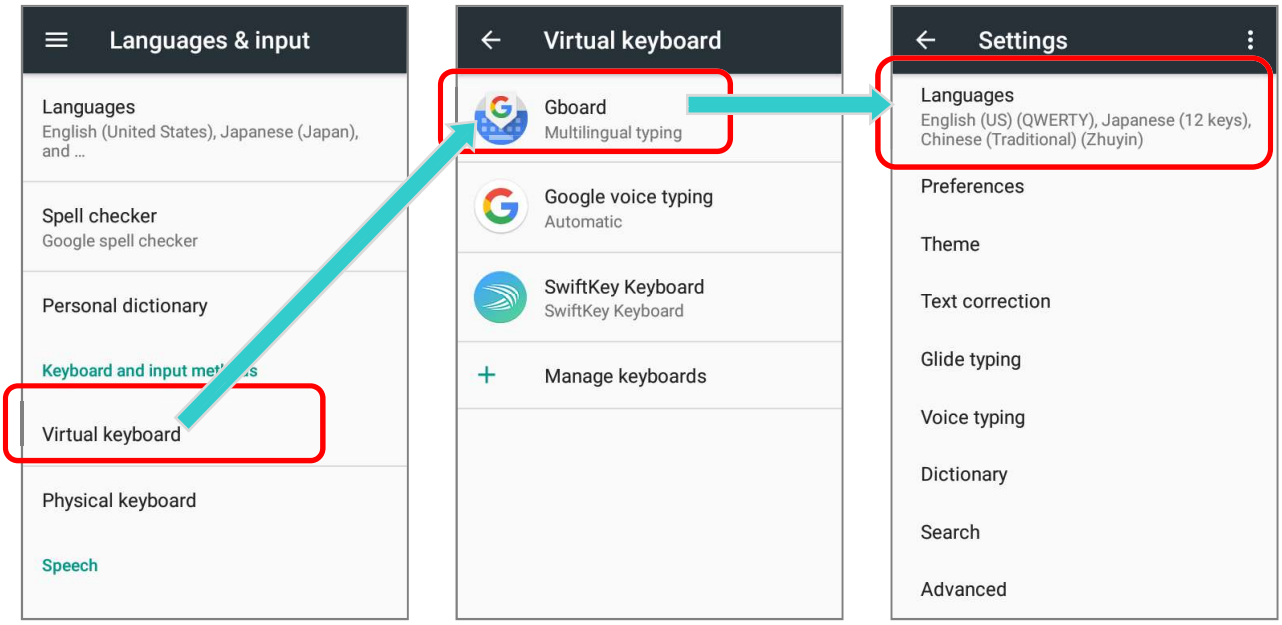


By taping on the settings buttons, you can:

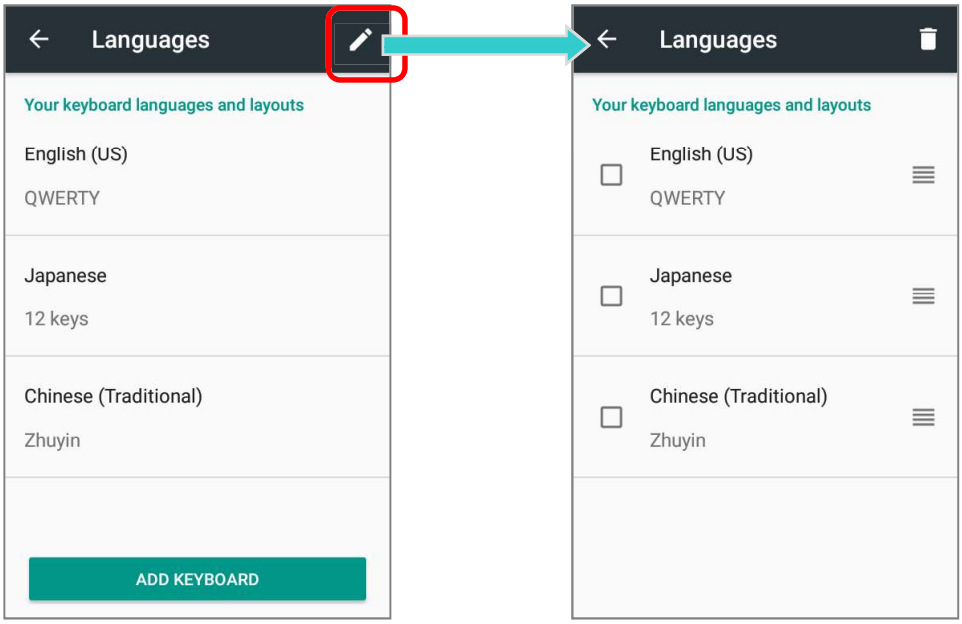
Button	Description	Figure
	To enter Gboard setting page for further settings.	
	To show the emoji keyboard. Tap ABC to return to the text keyboard.	
	To adjust the keyboard layout to meet your need. Tap to resume the default keyboard layout. Tap or to switch the keyboard layout to right-handed mode or left-handed mode. Tap to adjust the keyboard position.	

EDIT KEYBOARD LANGUAGE (INPUT METHOD)

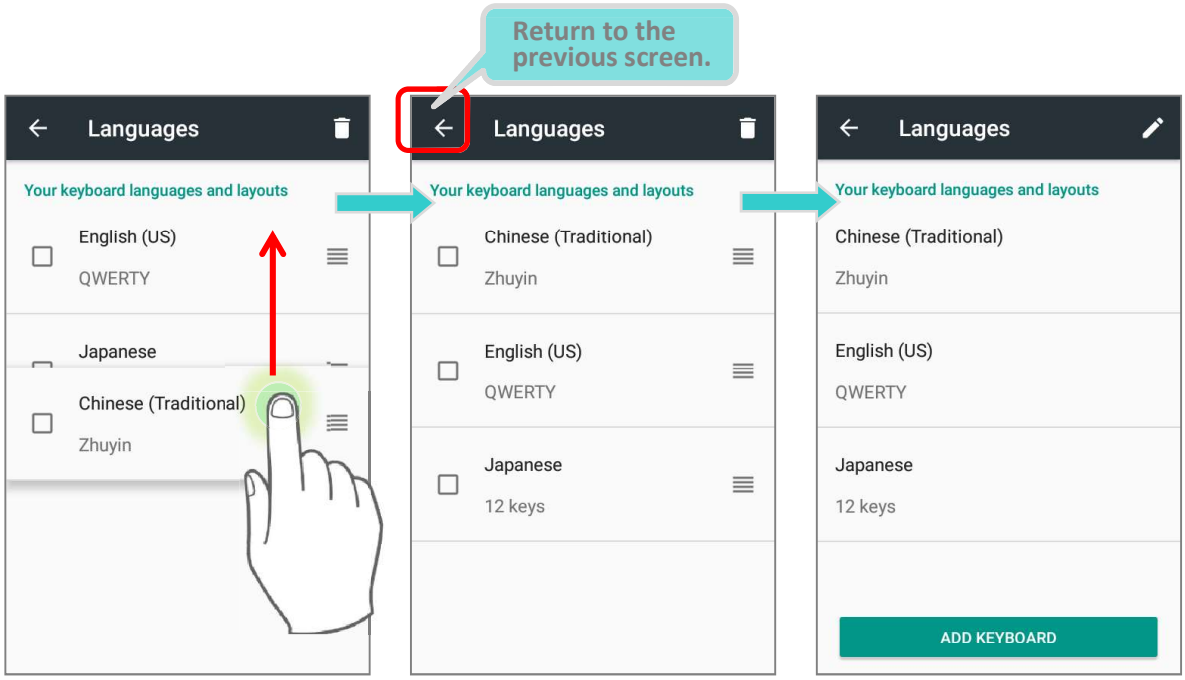
The keyboard language you enabled in Gboard can be edited from **Language & input** | **Virtual keyboard** | **Gboard** | **Languages** , and on **Languages** screen, you can add/delete keyboard languages, and change the keyboard language sorting order.



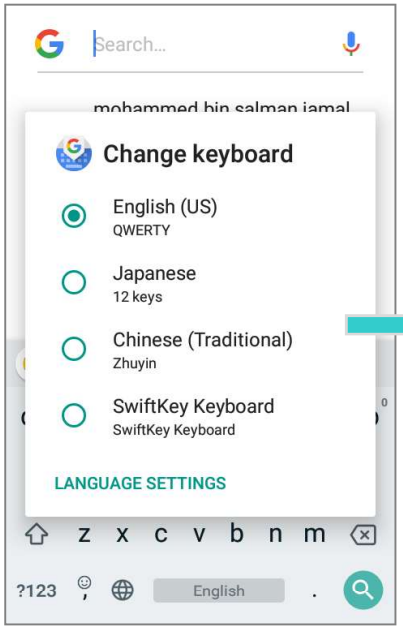
On **Languages** screen, tap on the edit icon at the upper-right corner to enter edit mode.



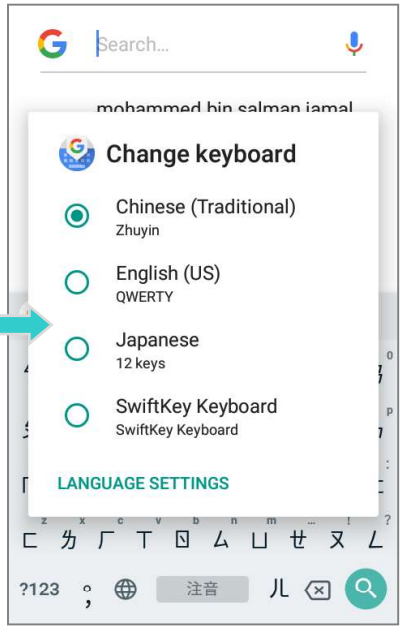
To change the keyboard language sorting order, keep pressing the language, drag it upward or downward to change its sorted position, and then release to have it placed. Return to the previous screen, and tap on any text input field to expand **Gboard** to reveal "**Change Keyboard**" menu by long pressing space key / the button or tapping "**Change Keyboard**" notification. Now the language sorting order listed on "**Change Keyboard**" menu is changed.



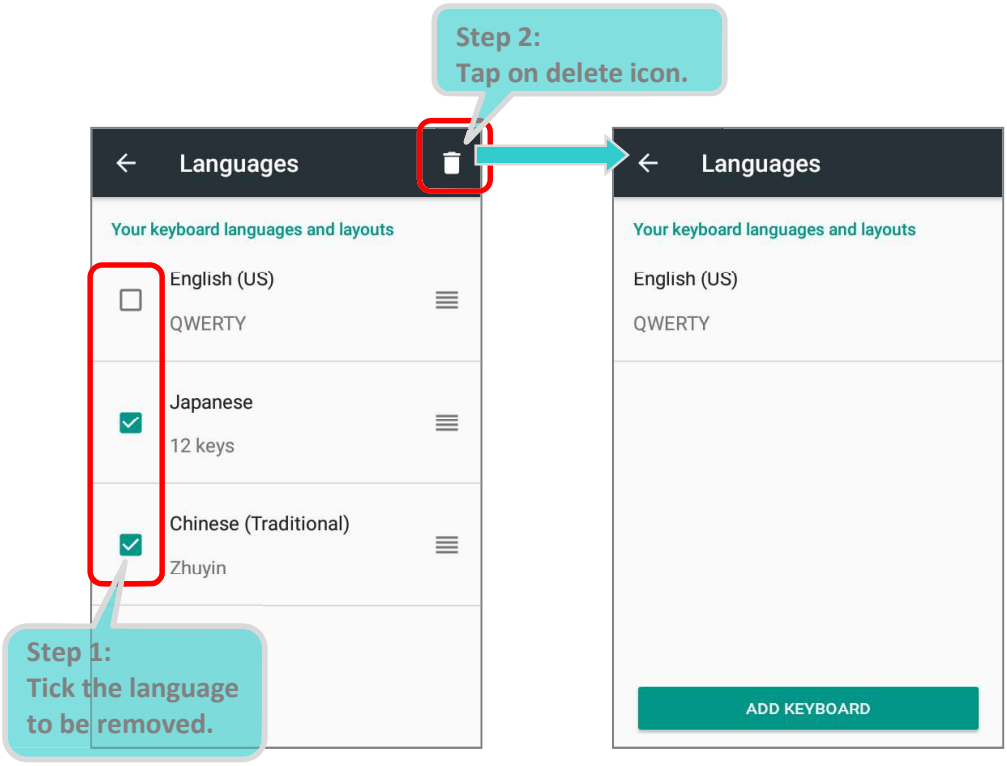
Original Language Sorting Order



New Language Sorting Order

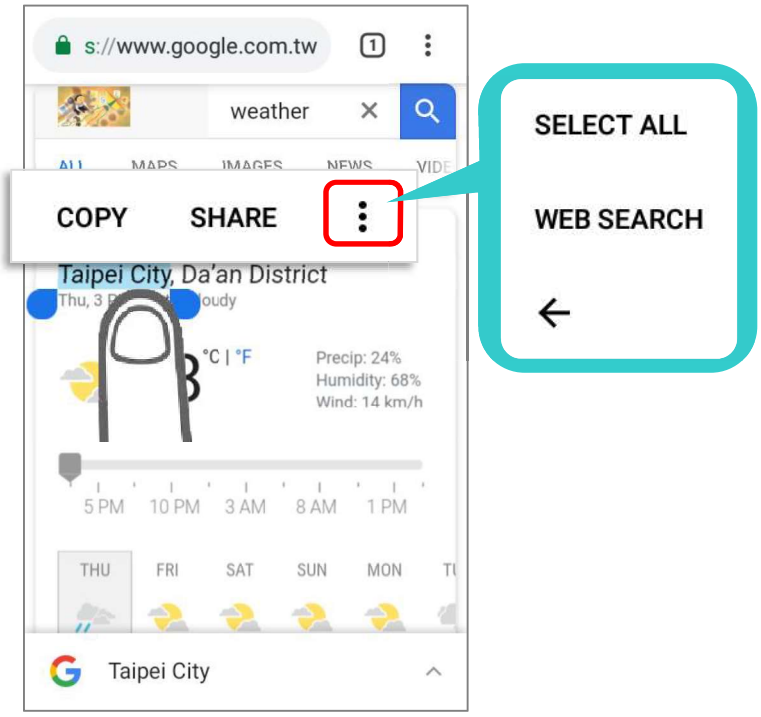


To delete keyboard language, simply tick the check box of the language(s) to be removed, and tap on the delete icon at the upper-right corner. Please note that you should keep at least one keyboard language.



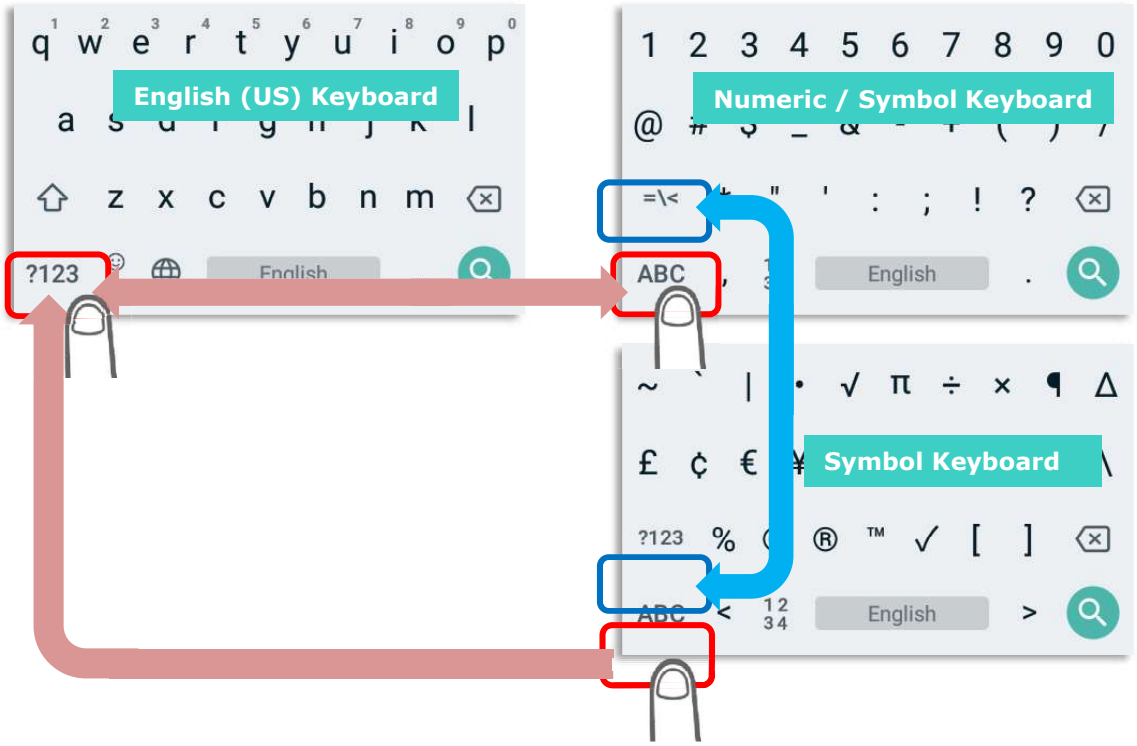
EDIT TEXT

Tap and hold text on the screen to enable a text editing menu for selecting all text, or copying and pasting text within or across applications. Some applications may use different ways to select or edit text.



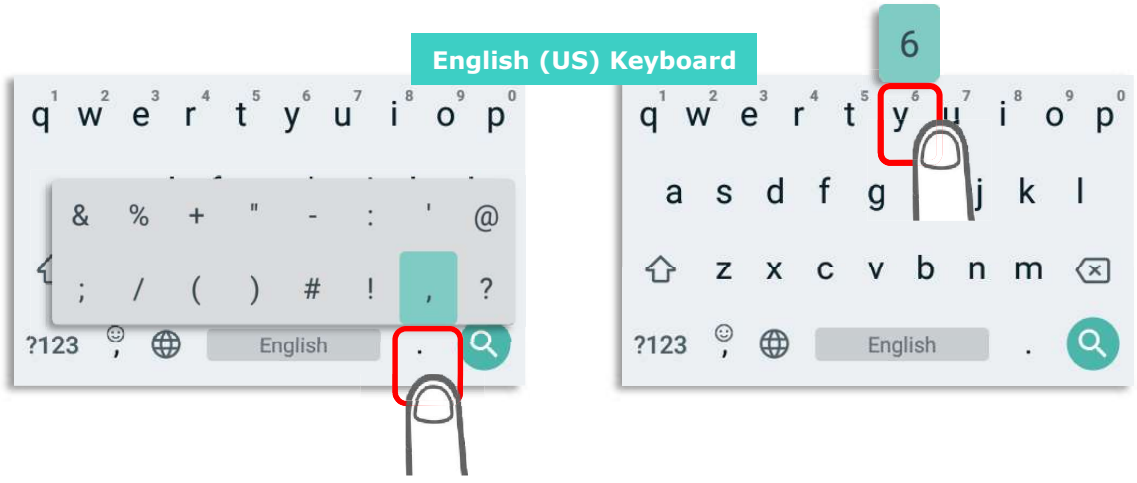
ENTER NUMBERS AND SYMBOLS

The appearance of the switch button to numeric or symbol keyboard may vary; the example below demonstrates how to use the switch key to access your desired numeric or symbol keyboards from the default **Gboard** keyboard. To enter **Numeric / Symbol** keyboard, tap ?123 .On **Numeric / Symbol** keyboard, tap =\< to access more symbols or tap ABC to return to **Android English (US)** keyboard.



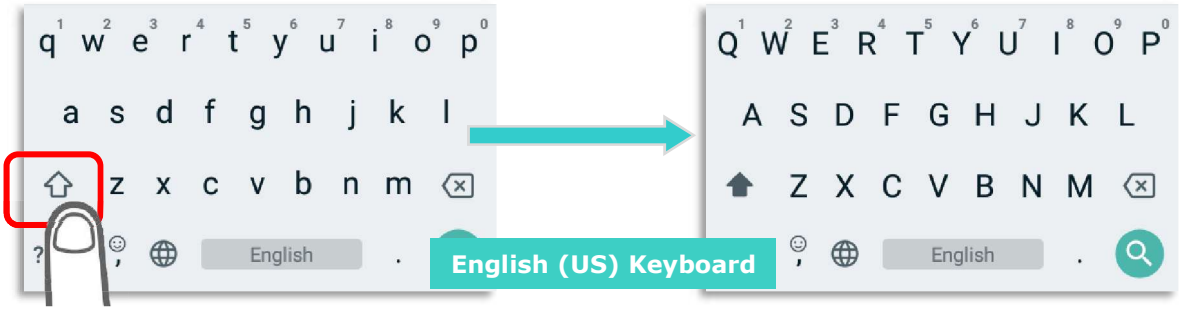
On **Gboard** keyboard, you can input number or symbols without switching to **Numeric / Symbol** keyboard.

- Tap and hold the period button . to open quick symbol keyboard.
- Tap and hold a letter from **q~p** on the top row to bring up the specific number key.

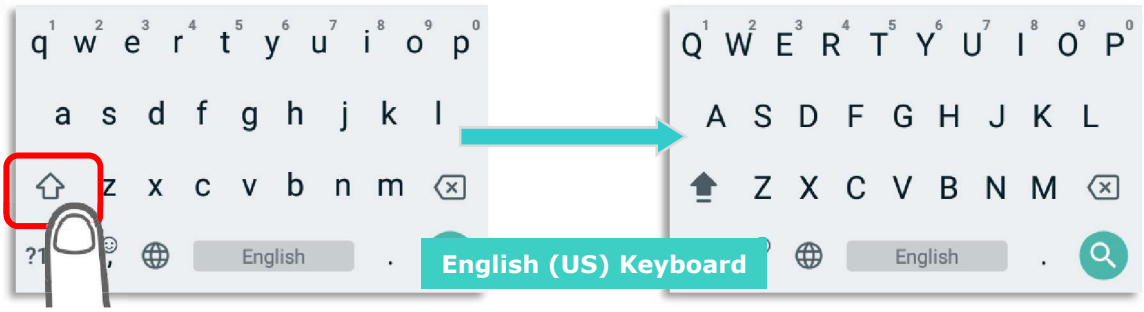


ENTER UPPERCASE LETTERS

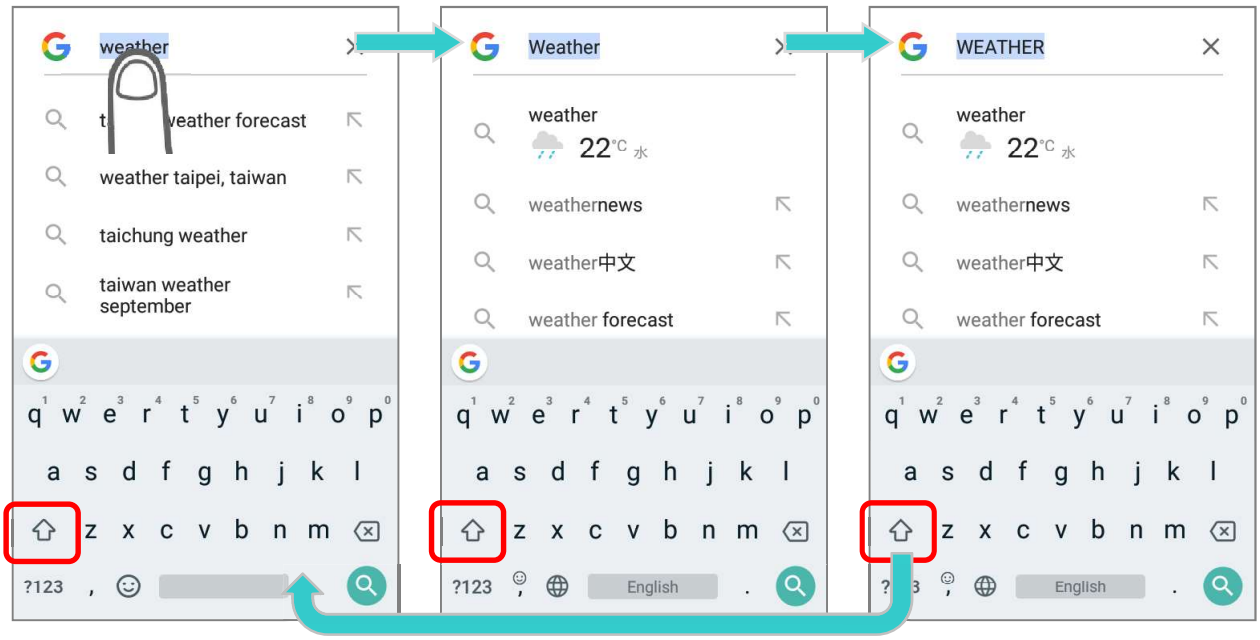
Tap the shift key once to switch it to be , and tap a character key to enter an uppercase letter. The letters will return to lower case once an uppercase letter is entered.



Tap on the shift key twice to switch it to be , and the following letters you enter will all be uppercase. Tap on the shift key again to resume lowercase keyboard.



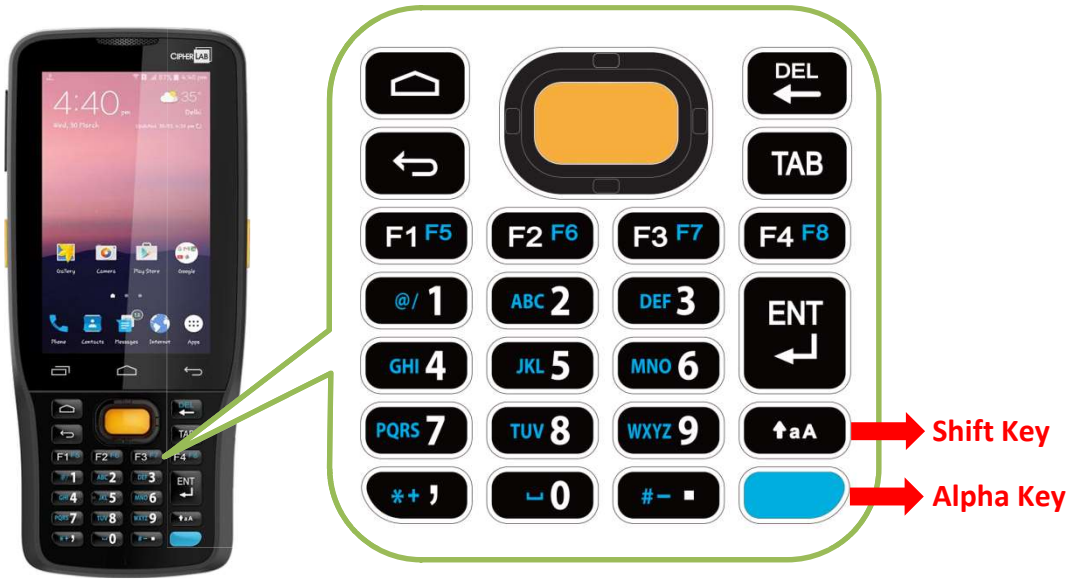
Or, directly input the words and then tap on the word to highlight it and tap on shift. You can capitalize all the whole word or just the first letter by tapping on the shift key.



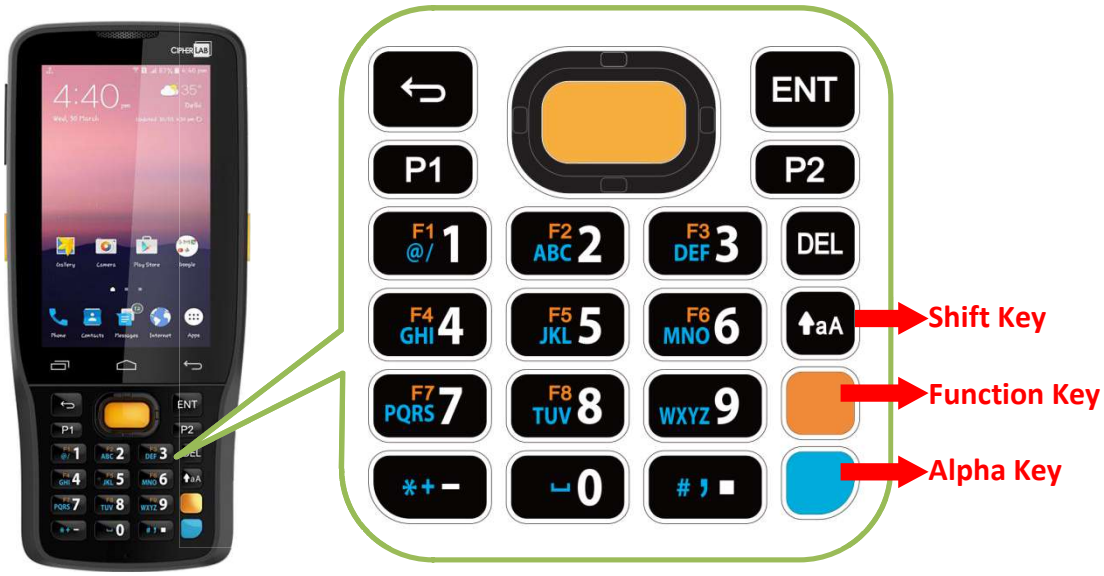
2.7. PHYSICAL KEYPAD

The physical keypad receives supplementary backlight along with the screen, and supports multi-key operation, which normally requires two keys hit simultaneously. The keypad is capable of entering numbers, letters, symbols and punctuation marks.

Keypad of 28-key Model:



Keypads of 25-key Model:



2.7.1. BASIC KEY

Basic Keys deliver the folloing functions:

BASIC KEY OF 28-KEY MODEL

Key		Description
Scan		Press the scan key to read a barcode in place.
Arrows		The arrow keys are circled around the center scan key. These can be used to move the cursor up, down, left or right during text input, or move between items in certain applications.
Home		Displays the Home screen.
Back		Returns to the previous screen or closes the active window or keyboard.
Backspace		Remove the last input letter.
Tab		To advance the cursor to the next tab stop.
Enter		Enter key works as tap or double-tap.

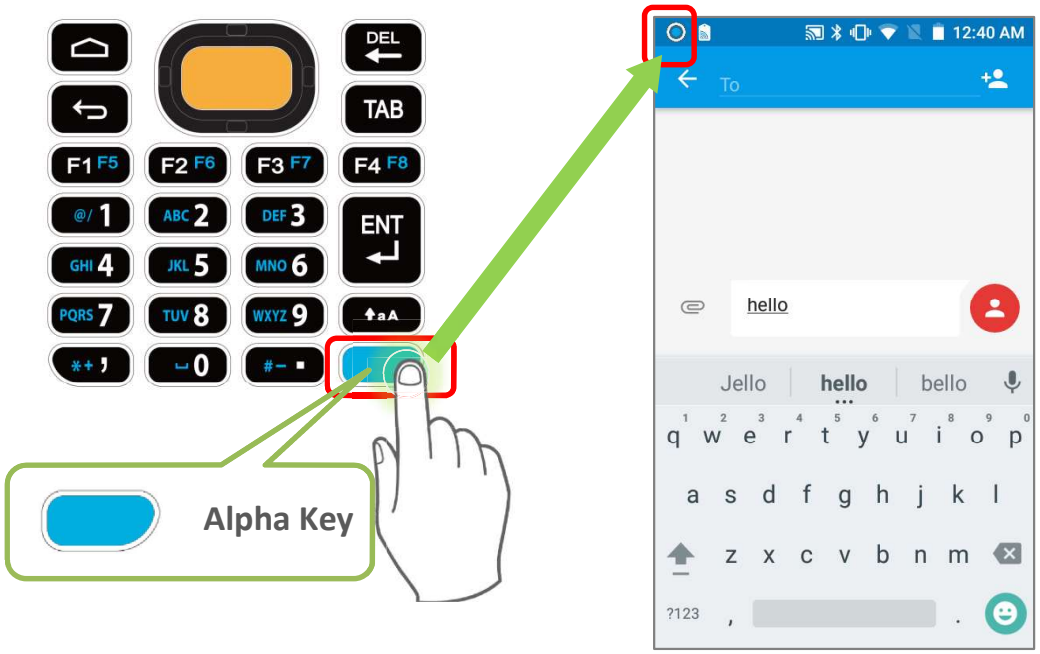
BASIC KEY OF 25-KEY MODEL

Key		Description
Scan		Press the scan key to read a barcode in place.
Arrows		The arrow keys are circled around the center scan key. These can be used to move the cursor up, down, left or right during text input, or move between items in certain applications.
Back		Returns to the previous screen or closes the active window or keyboard.
Delete		Remove the last input letter.
Enter		Enter key works as tap or double-tap.

2.7.2. ALPHA KEY

ALPHA KEY OF 28-KEY MODEL

The Alpha key is the blue button located in the bottom right corner of the keypad. When the Alpha key is pressed, a blue icon shows up in the status bar to indicate that **Alpha Mode** is on:



When Alpha Mode is on, the keypad enter Alpha lock mode, and the keys deliver the function as the text in blue on the keys (please refer to Key Functions in Different Modes for details). To turn off Alpha Mode, press Alpha key again to return to the default input mode.

Default Input Mode

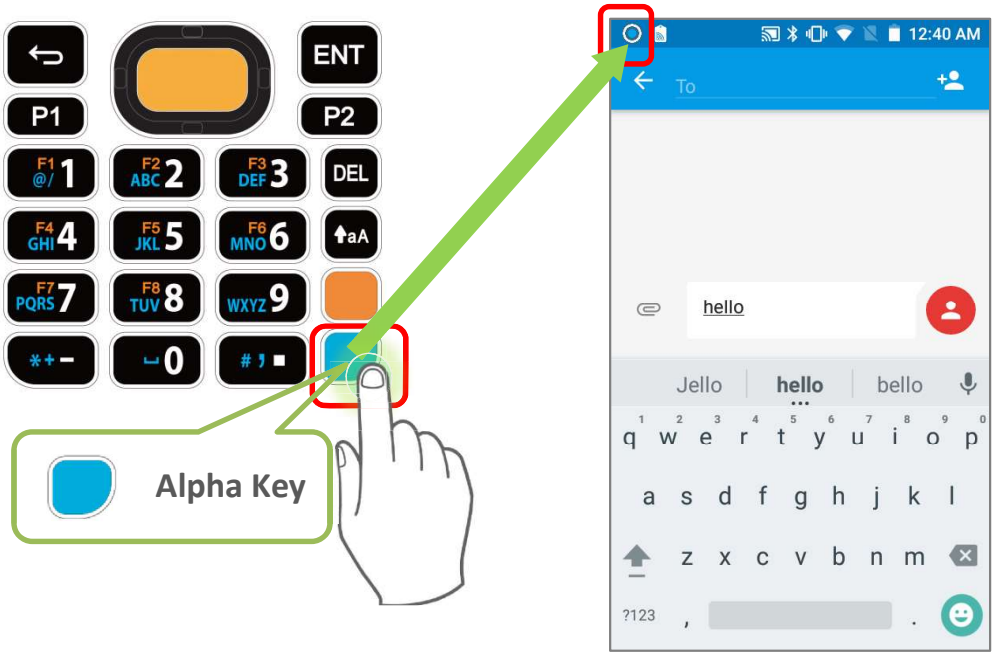
Alpha Mode

Note:

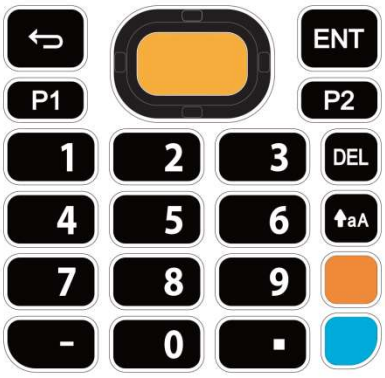
Alpha mode can coexist with Shift mode. When both modes are active, the input letters will be uppercase. Please refer to Key Functions in Different Modes.

ALPHA KEY OF 25-KEY MODEL

The Alpha key is the blue button located in the bottom right corner of the keypad. When the Alpha key is pressed, a blue icon shows up in the status bar to indicate that **Alpha Mode** is on:



When Alpha Mode is on, the keypad enter Alpha lock mode, and the keys deliver the function as the text in blue on the keys (please refer to Key Functions in Different Modes for details). To turn off Alpha Mode, press Alpha key again to return to the default input mode.



Default Input Mode

Alpha Mode

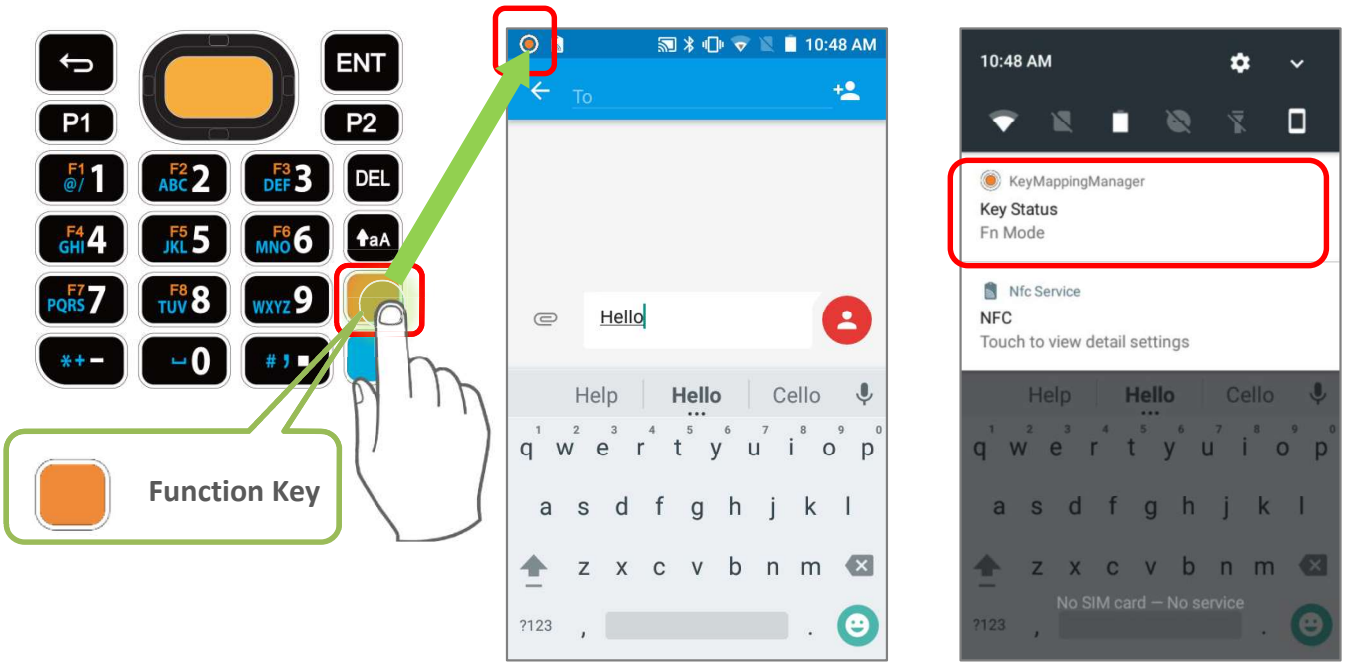
Note:

Alpha mode can coexist with Shift mode & Function Mode. When both Shift mode and Alpha Mode are active, the input letters will be uppercase. Please refer to Key Functions in Different Modes for details.

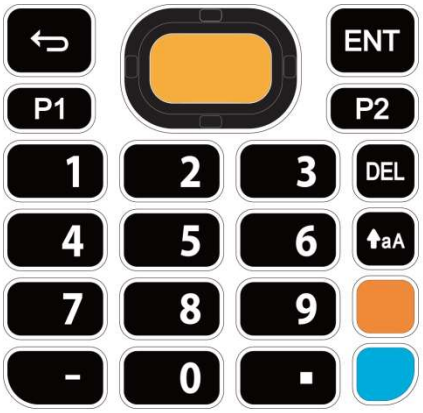
2.7.3. FUNCTION KEY (ONLY FOR 25-KEY MODEL)

The Function key is the orange button located right above in the Alpha Key (the blue button).

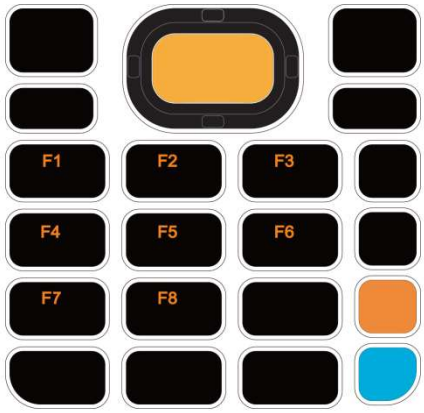
When the Function key is pressed, a orange icon shows up in the status bar to indicate that Function Mode is on:



Keypad returns from Function Mode to Default Input Mode upon pressing any button engraved in orange. If Alpha key/Shift Key is pressed, keypad will return to Alpha mode/Shidt Lock Mode until Alpha key/Shift Key is pressed again.



Default Input Mode

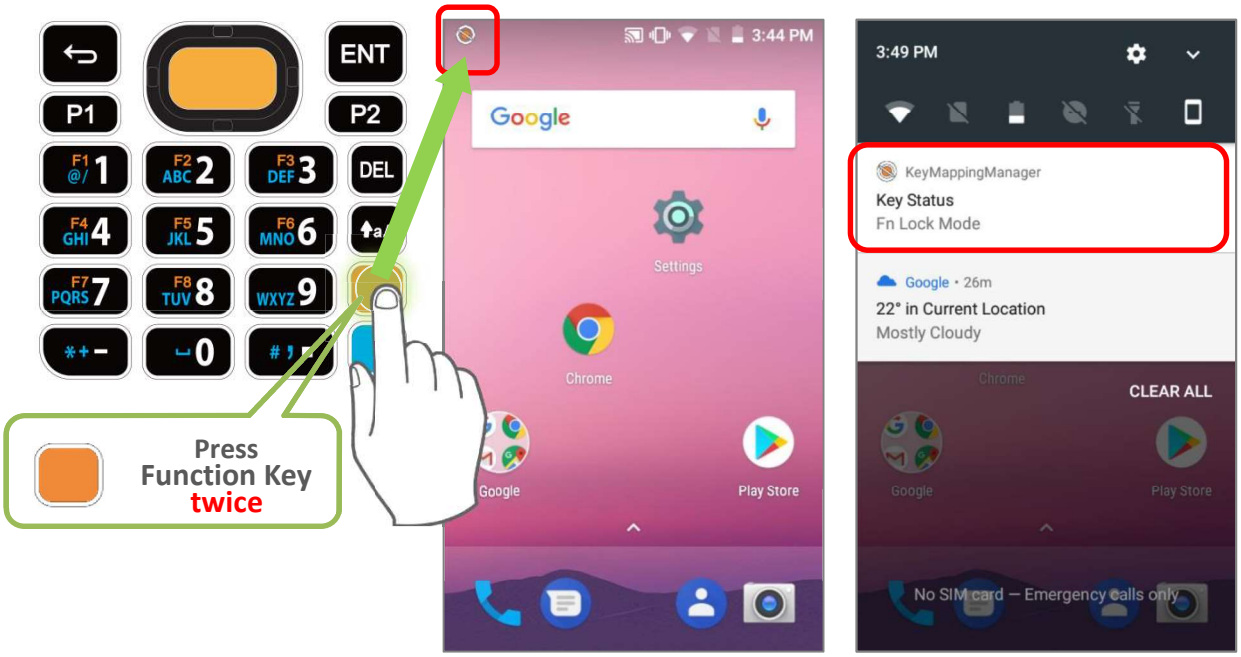


Function Mode

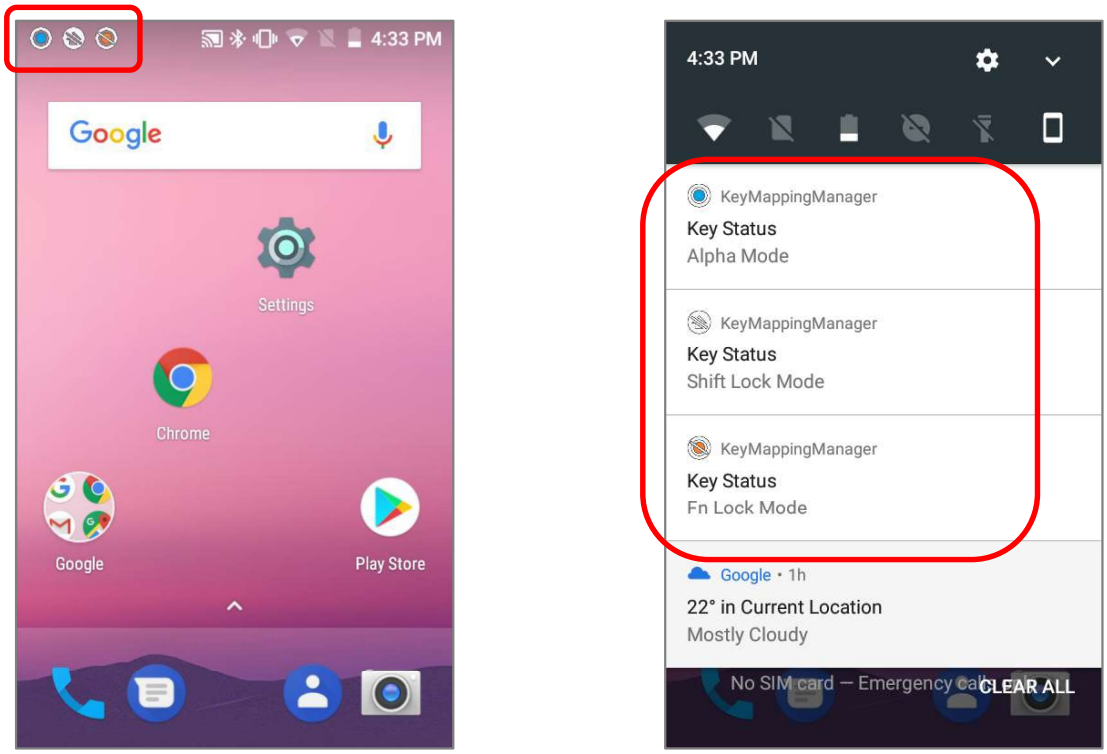
Note:

Function mode can coexist with Shift mode & Alpha Mode. Please refer to Key Functions in Different Modes for details.

Press **Function key** twice, and the keypad will enter **Fn Lock Mode** (**Function Lock Mode**) with an icon appears in the status bar. The keypad stays in **Function Lock Mode** till the **Function key** is pressed again.



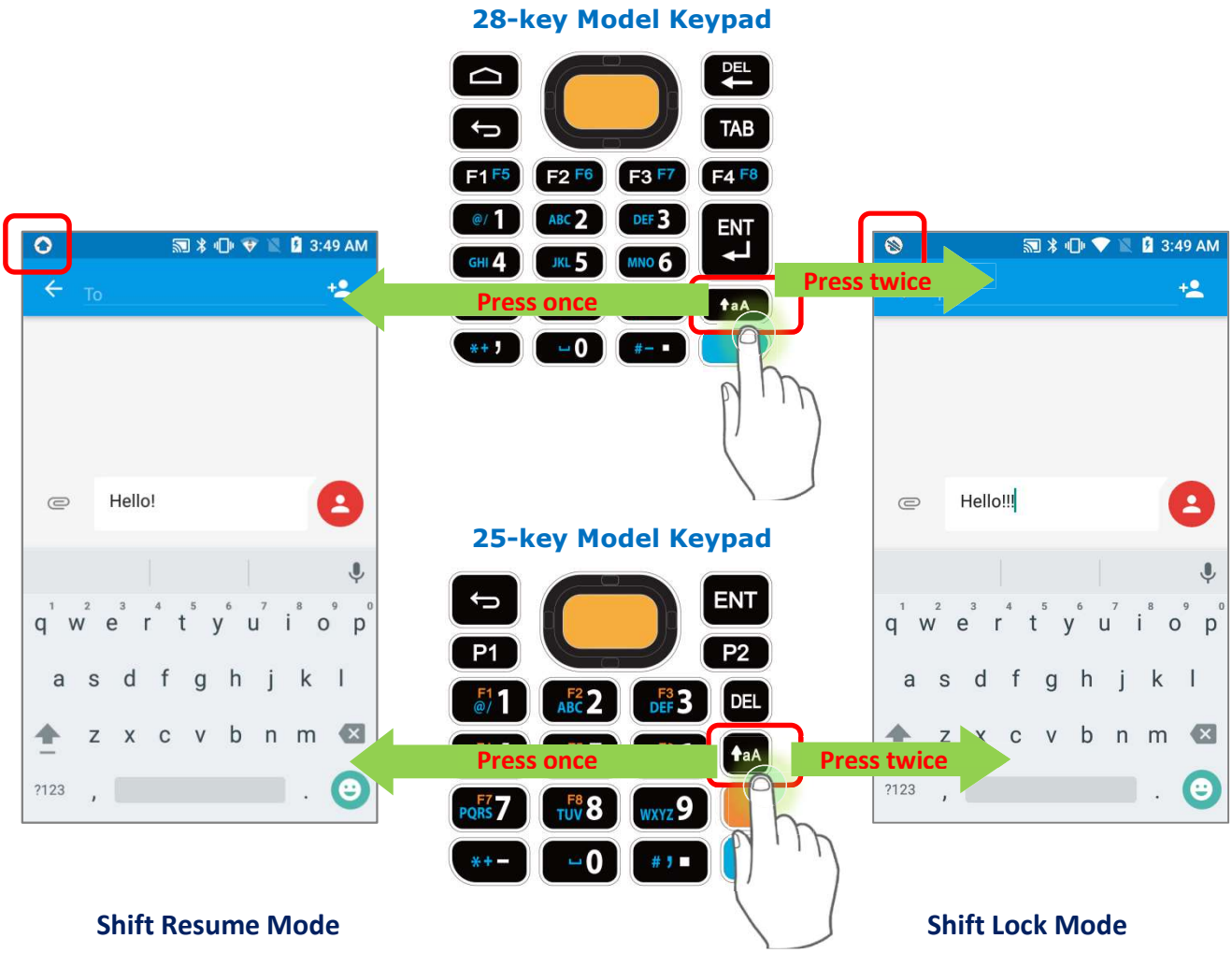
In **Function Lock Mode**, you can still enable **Alpha mode** and **Shift mode** if it is needed. Please refer to [Key Functions in Different Modes] for details.



2.7.4. SHIFT KEYS

The **Shift key**

is located right above the **Alpha key** for 28-key Model, while it is located right above the **Function Key** for 25-key Model. When the Shift key is pressed once, an icon shows up in the status bar to indicate the Key Status is in **Shift Resume Mode**. The keypad will return to the **Default Input mode** right after pressing any key (except of **Backspace** key for **28-key Model** and **Delete** key for **25-key Model**).



When the Shift key is pressed twice, the keypad will enter **Shift Lock Mode** with an icon appears in the status bar, and the keypad stays in Shift Lock Mode till the Shift key is pressed again.

In both **Shift Resume Mode** and **Shift Lock Mode**, the keys deliver the functions as Key Functions in Different Modes describes:

2.7.5. KEY FUNCTIONS IN DIFFERENT MODES

FOR 28-KEY MODEL KEYPAD

Default Input Mode	Shift Mode	Alpha Mode	Shift Mode+ Alpha Mode
DEL	DEL	N/A	N/A
F1	F1	F5	F5
F2	F2	F6	F6
F3	F3	F7	F7
F4	F4	F8	F8
1	!	@/	@/
2	@	ABC	A, B, or C in uppercase
3	#	DEF	D, E, or F in uppercase
4	$	GHI	G, H, or I in uppercase
5	%	JKL	J, K, or L in uppercase
6	^	MNO	M, N, or O in uppercase
7	&	PQRS	P, Q, R, or S in uppercase
8	*	TUV	T, U, or V in uppercase
9	(	WXYZ	W, X, Y, or Z in uppercase
0	)	␣	␣
,	<	*+	*+
.	>	#–	#–
ENT	Return to the next line or start a new paragraph in text input field.	ENT	ENT

FOR 25-KEY MODEL KEYPAD

Default Input Mode	Shift Mode	Alpha Mode	Function Mode
P1	N/A	N/A	N/A
P2			
1	!	@/	F1
2	@	ABC	F2
3	#	DEF	F3
4	$	GHI	F4
5	%	JKL	F5
6	^	MNO	F6
7	&	PQRS	F7
8	*	TUV	F8
9	(	WXYZ	N/A
0	)	␣	0
-	<	*+	-
.	>	# '	.
ENT	Return to the next line or start a new paragraph in text input field.	N/A	N/A

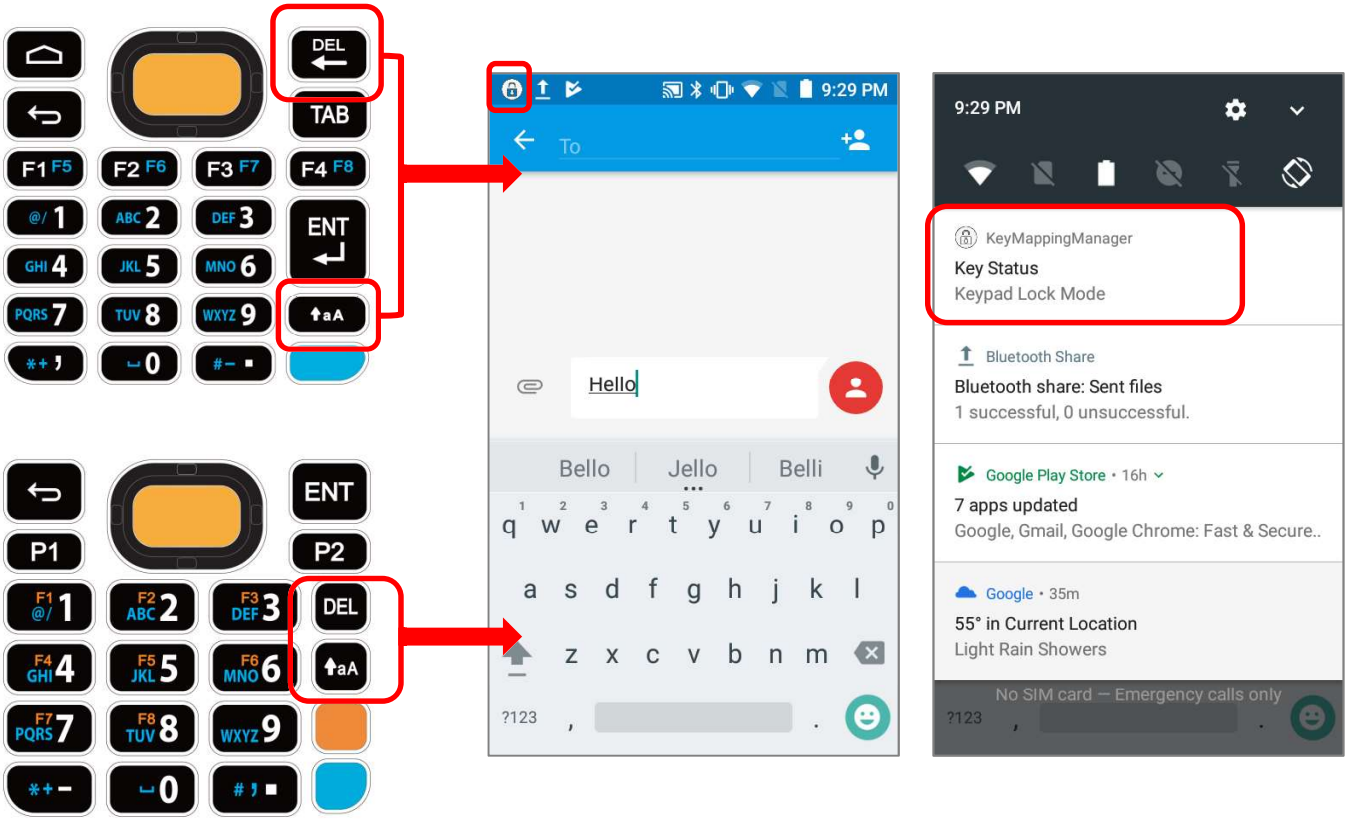
Default Input Mode	Shift Mode + Alpha Mode	Shift Mode + Alpha Mode + Function Mode Alpha Mode + Function Mode Shift Mode+ Function Mode
P1	N/A	N/A
P2	N/A	
1	@/	
2	A, B, or C in uppercase	
3	D, E, or F in uppercase	
4	G, H, or I in uppercase	
5	J, K, or L in uppercase	
6	M, N, or O in uppercase	
7	P, Q, R, or S in uppercase	
8	T, U, or V in uppercase	
9	W, X, Y, or Z in uppercase	
0	␣	)
-	*+	_
.	#'	>
ENT	N/A	Return to the next line or start a new paragraph in text input field.

2.7.6. KEYPAD LOCK

The keypad lock mode can be triggered by pressing:

1) For **28-key Model**: **Shift key** and **Backspace key**

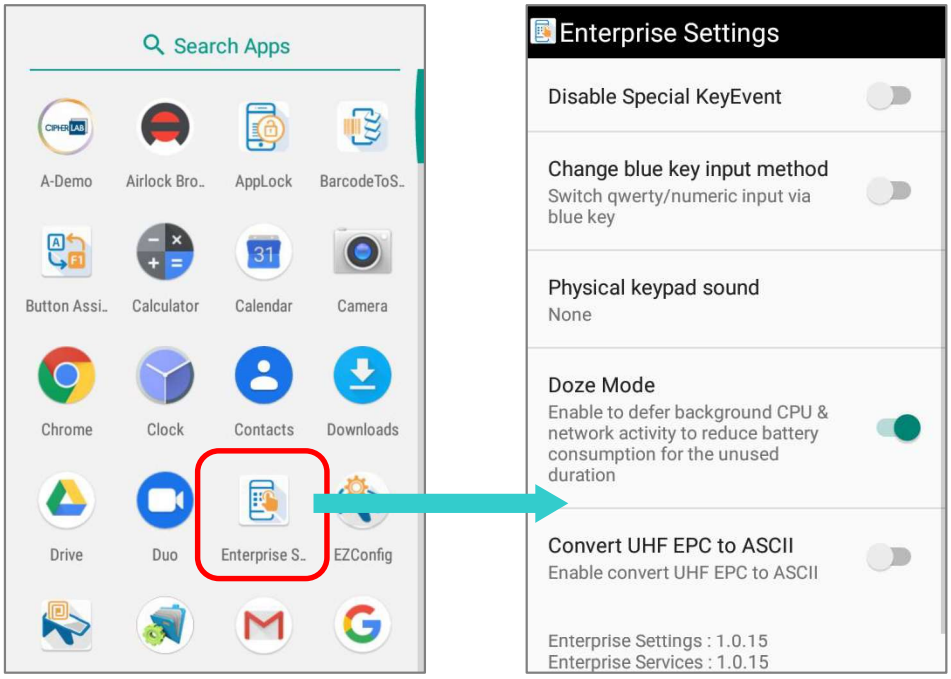
2) For **25-key Model**: **Shift key** and **Delete key**



When the keypad lock mode is triggered, all keys on the keypad will become locked to prevent any accidental pressing of keys. A keypad lock icon will appear on the status bar to indicate keys are currently locked.

Note:
When Alpha Mode is on, the hot key combination (**Shift** + **Backspace**) would not work for **28-key Model**, because Backspace key becomes "**Delete**" in Alpha Mode. For **25-key Model**, the hot key combination (**Shift** + **Delete**) would not work.

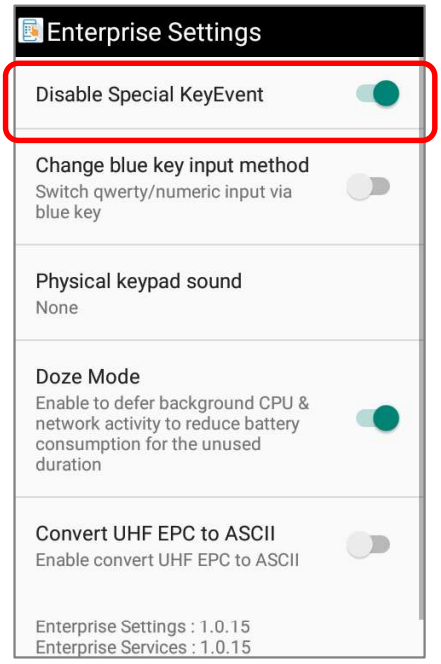
2.7.7. ENTERPRISE KEYPAD MODE



The app "**Enterprise Settings**" helps you to control the physical keypad. Go to **App Drawer** and tap on "**Enterprise Settings**" for the following functions:

DISABLE SPECIAL KEYEVENT

"**Disable Special Keyevent**" is to disable the special keycode sent by pressing **Function Key**, **Alpha Key**, and **Trigger Keys**. The default setting of "**Disable Special Keyevent**" is off. Simply tap on the switch to turn it on.

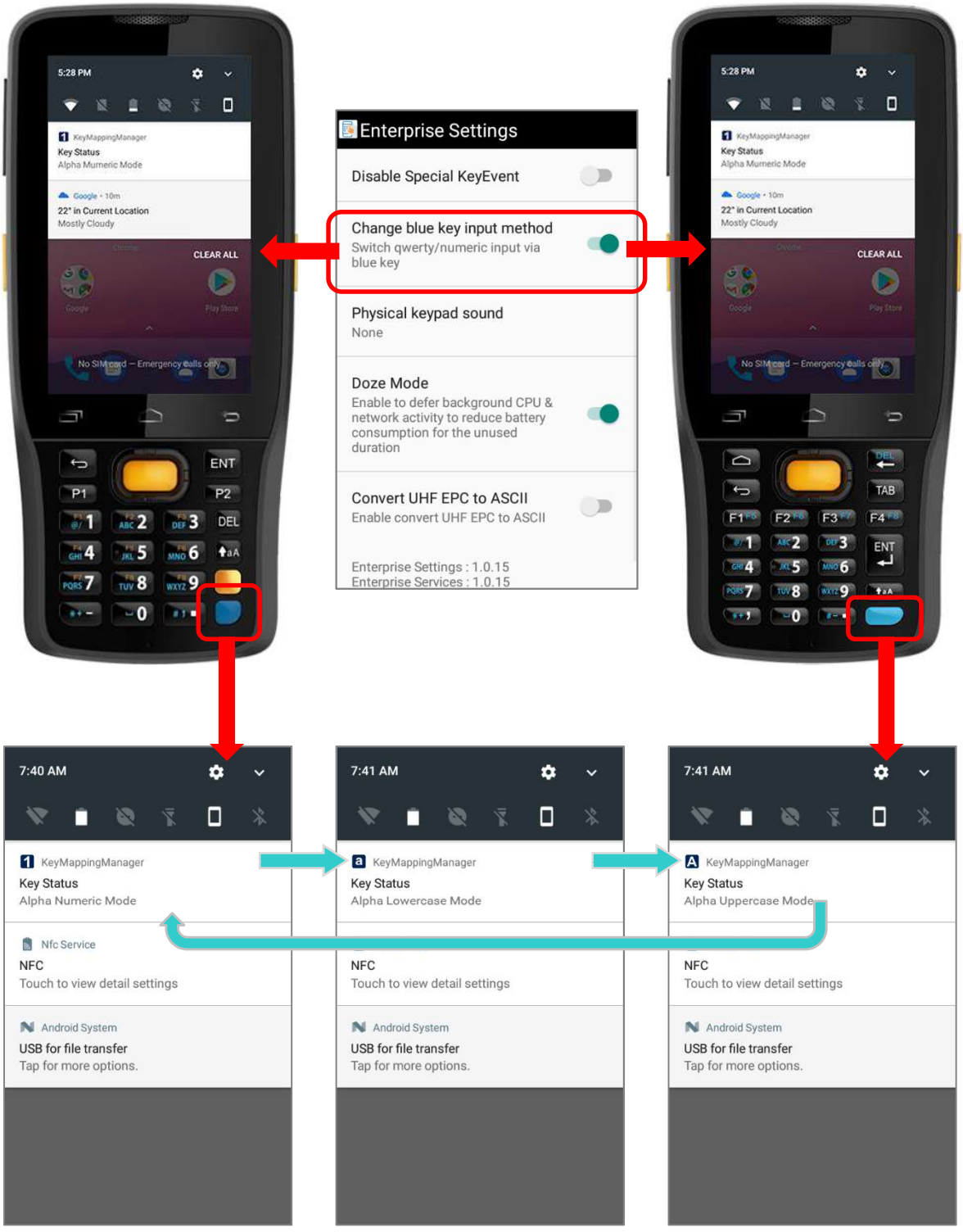


Note:

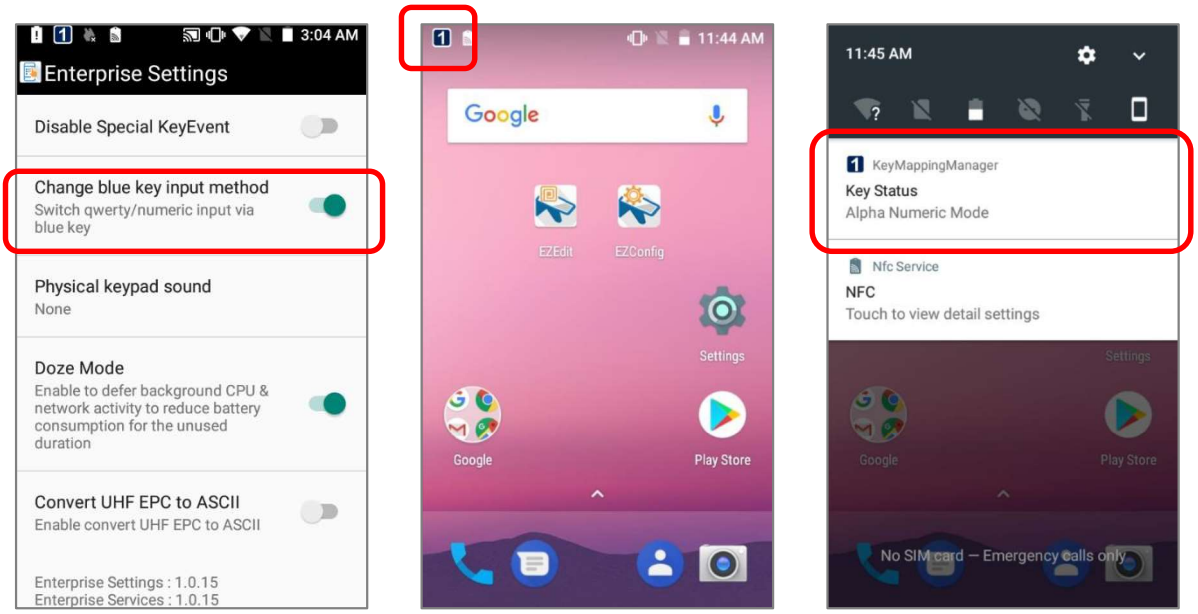
Turning on "Disable Special Keyevent" will not affect barcode scanning by pressing trigger keys.

CHANGE BLUE KEY INPUT METHOD

You can turn on "**Change blue key input method**" to change input mode of the physical keypad. By enabling this function, you can cycle through **Alpha Numeric Mode**, **Alpha Lowercase Mode**, and **Alpha Uppercase Mode** with simply pressing **Alpha Key** (the blue key).

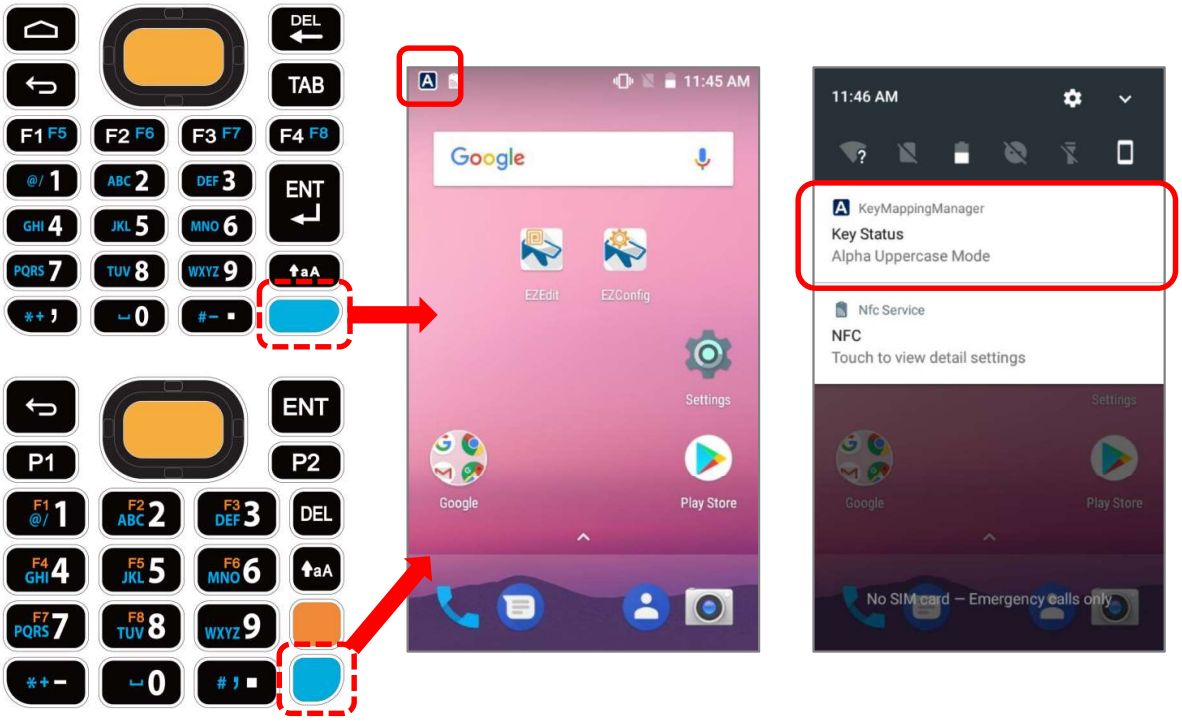


1) **Alpha Numeric Mode**:
Once you turn on "**Change blue key input method**", the physical keypad changes to be numeric keypad immediately. An icon 1 shows up in the status bar to indicate **Alpha Numeric Mode** is on.



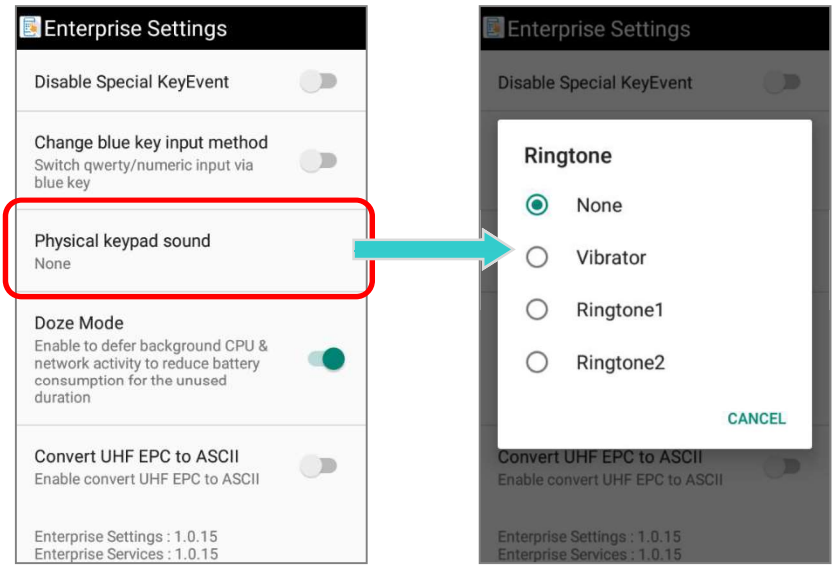
2) **Alpha Lowercase Mode**:
In **Alpha Numeric Mode**, press **Alpha Key** (the blue key) once, and the physical keypad will change to be lowercase keypad with an icon a appears in the status bar.

3) **Alpha Uppercase Mode**:
In **Alpha Numeric Mode**, press **Alpha Key** (the blue key) twice, or press **Alpha Key** (the blue key) once in **Alpha Lowercase Mode** to change the physical keypad into uppercase keypad with the **Alpha Uppercase Mode** icon shows up in the status bar. Press **Alpha Key** (the blue key) again to switch to **Alpha Numeric Mode**.



PHYSICAL KEYPAD SOUND

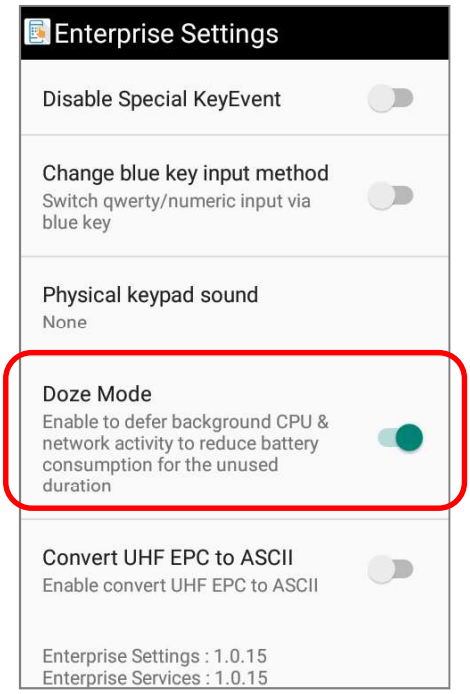
Tap to select the physical keypad sound from the pop-up window. The default setting is "**None**".



DOZE MODE

"**Doze Mode**" is enabled by default.

Please refer to https://developer.android.com/training/monitoring-device-state/doze-standby for details.

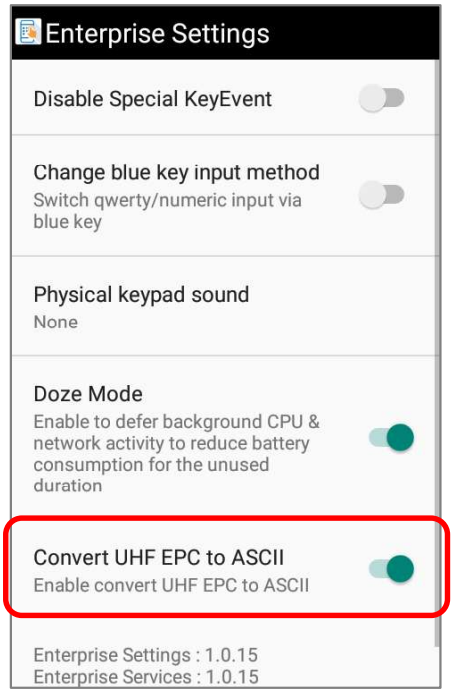


CONVERT UHF EPC TO ASCII

Enable "**Convert UHF EPC to ASCII**" to work with RK25 UHF RFID Reader to convert the EPC code (hexadecimal) to ASCII code under the following conditions:

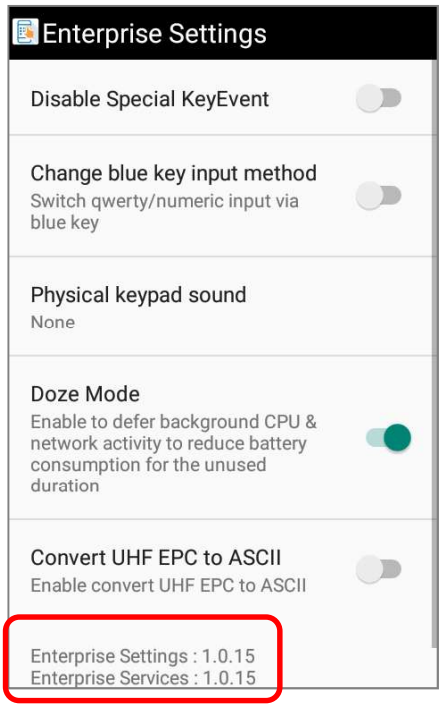
- All the decoded EPC code (hexadecimal) corresponds to ASCII code must be visible characters. If not, the EPC code would not be converted and remaind as hexadecimal values.

- If the last two values are 00, the 00 will be deleted and then the EPC code is converted to ASCII code, e.g. the decoded EPC code is 3538355959504a5442434900, and it becomes ASCII mode EPC "585YYPJTBCI" after being converted.



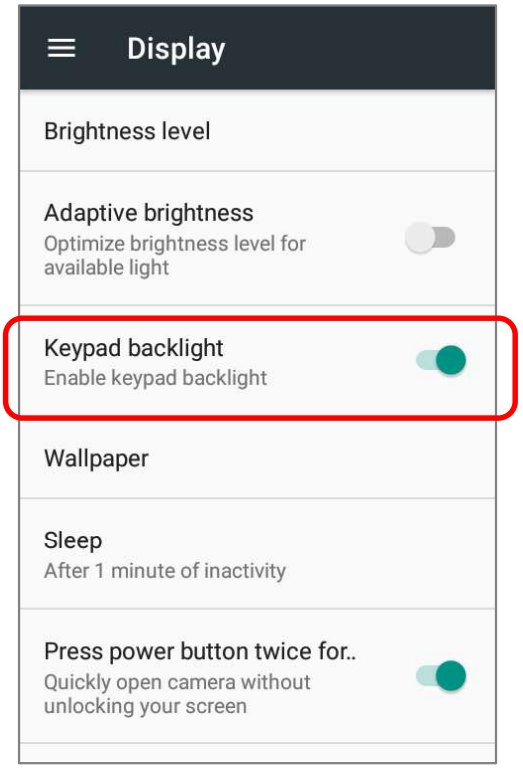
VERSION

The version information about **Enterprise Settings** is listed right below "**Doze Mode**".



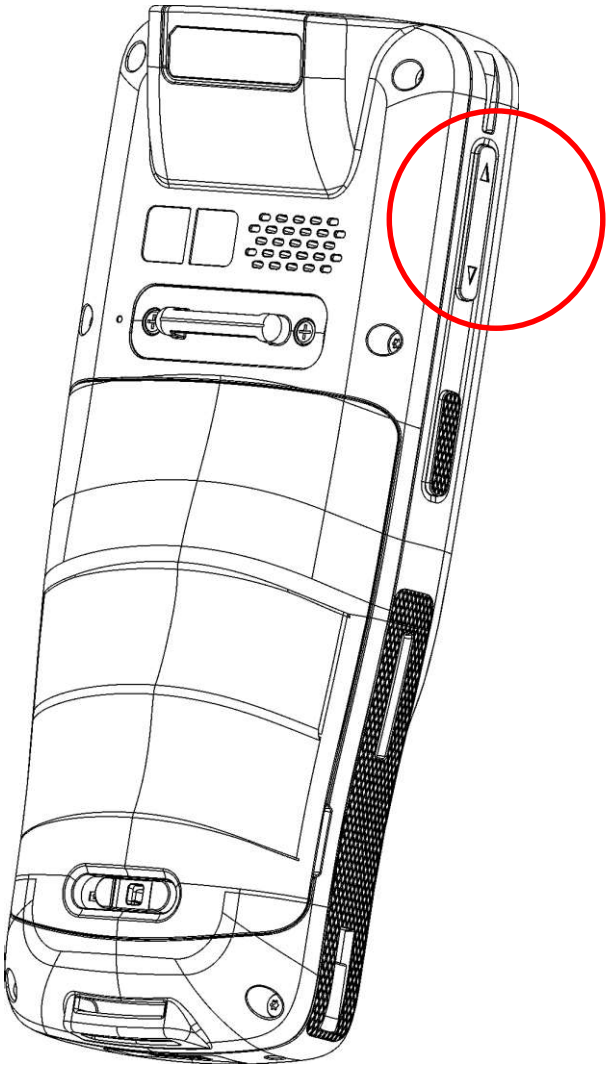
2.7.8. KEYPAD BACKLIGHT

The default setting of keypad backlight is enabled. To turn on/off the keypad backlight, please go to **App Drawer** | **Settings** | **Display**, and tap "**Keypad backlight**" to enable/disable it.



2.8. SOUND AND VOLUME

Use the volume buttons on the left side of the mobile computer to adjust system and ringer volume.



2.9. DATA CAPTURE

2.9.1. BARCODE READER

A selection of scan engines is available for delivering flexibility to meet different requirements. Depending on the scan engine integrated, the mobile computer is capable of scanning barcodes of a number of symbologies that are enabled by default while running the ReaderConfig application. You won't be able to scan a specific barcode symbology which is not enabled. Run ReaderConfig.exe to enable/disable barcode symbologies.

2.9.2. DIGITAL CAMERA

An integrated 8 megapixel rear camera in the mobile computer is specifically designed for collecting image data. You may use the image capture utility to turn on the camera and capture images. By default, the images taken by this camera application are saved as JPG files in the **DCIM** folder in the device's primary storage.

Chapter 3

BASIC OPERATION

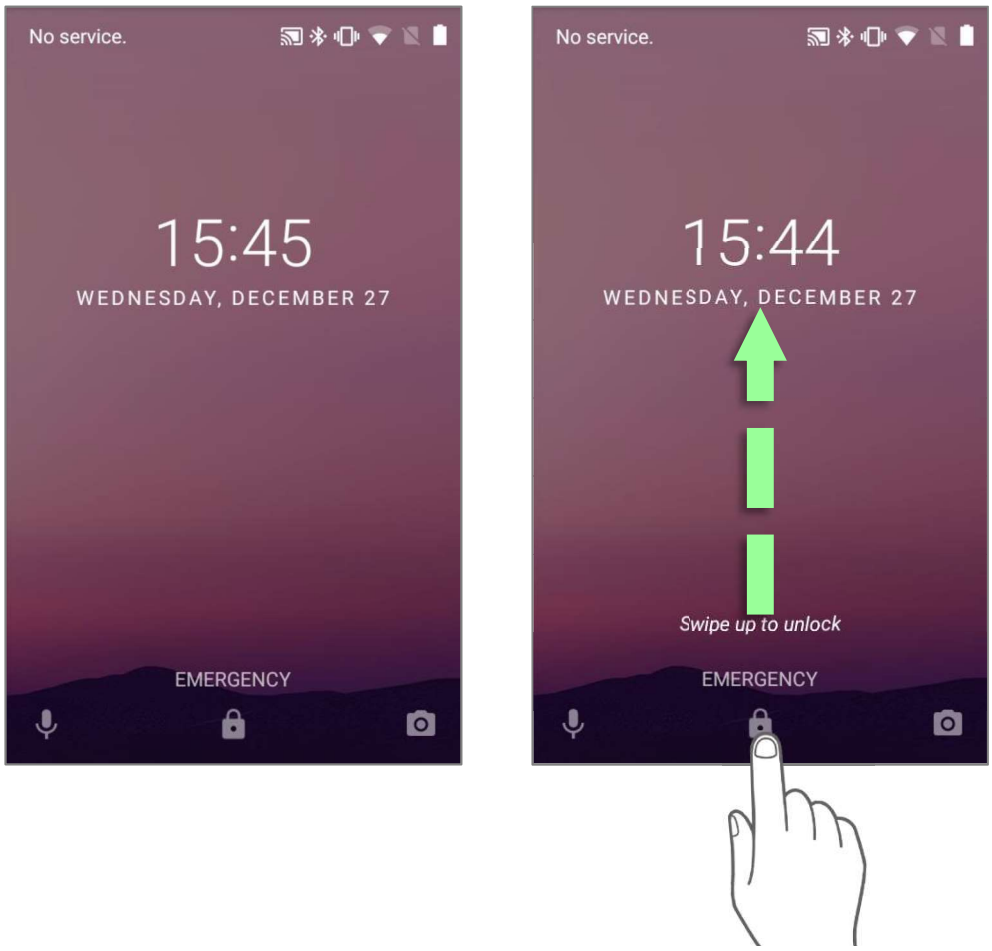
This chapter describes the basic skills to work with the RK25WO mobile computer, for instance how to operate the home screen, check system status and manage notifications. The add-on utilities for applications regarding data collection, processing, and transmission are introduced in the following chapters.

IN THIS CHAPTER

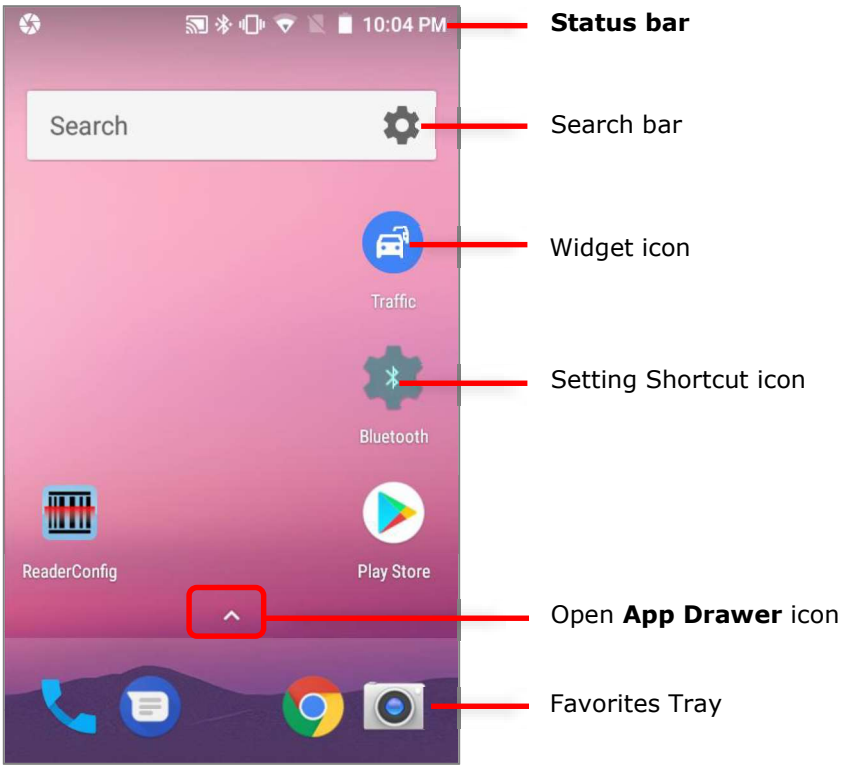
3.1 Home Screen..... 123
3.2 Status Bar..... 136
3.3 Manage Applications..... 144
3.4 Suspend & Lock..... 148
3.5 OS Update..... 151
3.6 Back up Your Data..... 153
3.7 Reset to Factory Default..... 154

3.1. HOME SCREEN

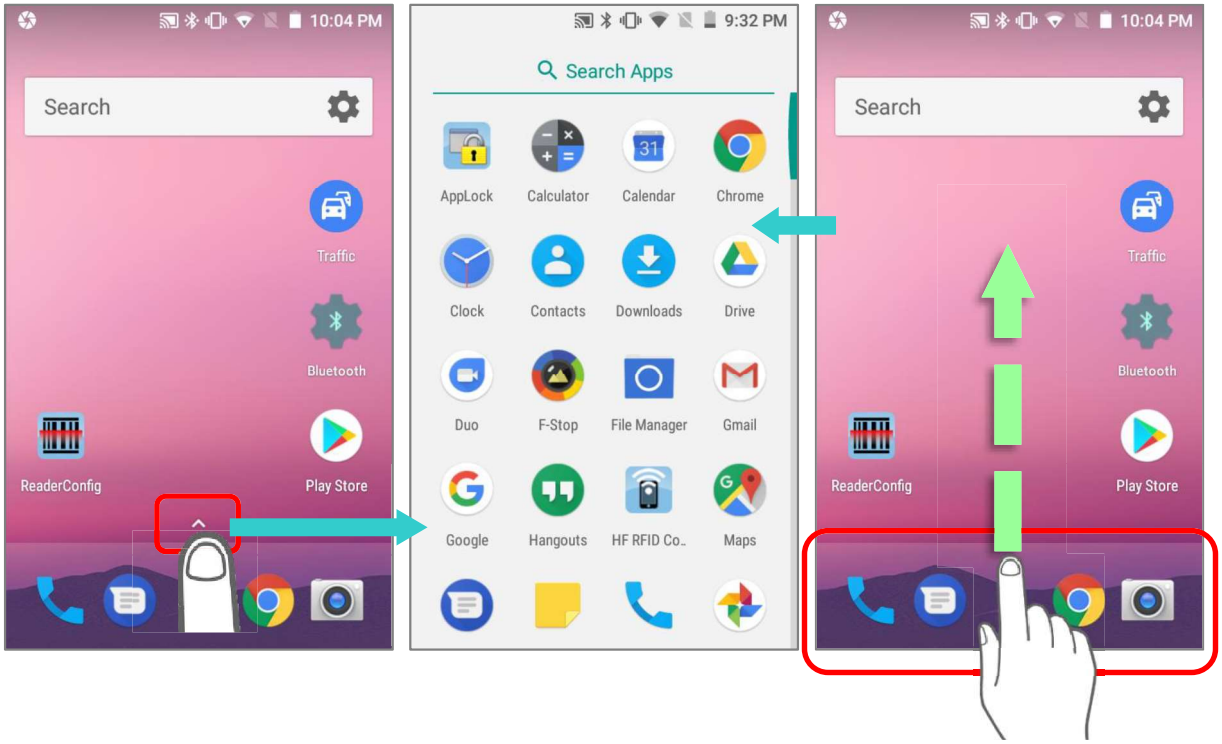
When the mobile computer is fully charged, press the Power key for three seconds to turn on the mobile computer. A locked screen will appear. Slide the lock button upward to unlock the screen.



The **Home Screen** appears showing a status bar, shortcut icons, an icon to open **App Drawer**, and the Favorites tray. The home screen allows multiple pages for placing shortcut icons and widgets. You may customize the home screen according to your preferences.



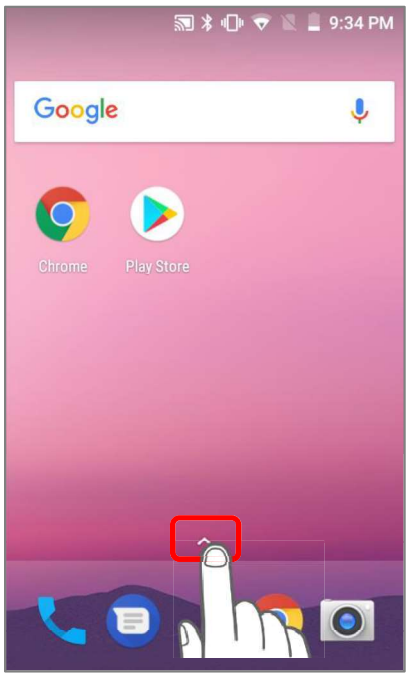
To open App Drawer, please tap icon, or slide up from the **Favorites Tray**:

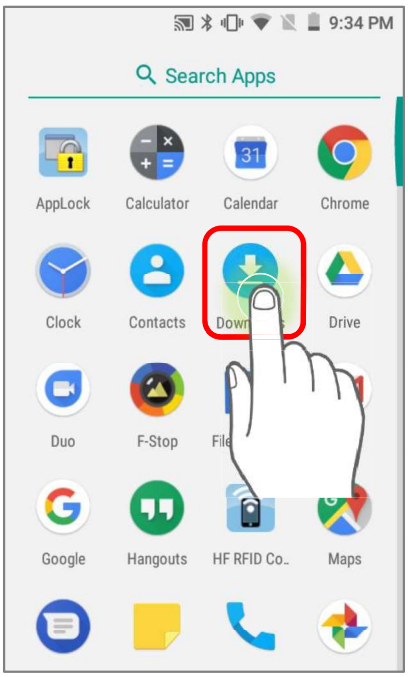


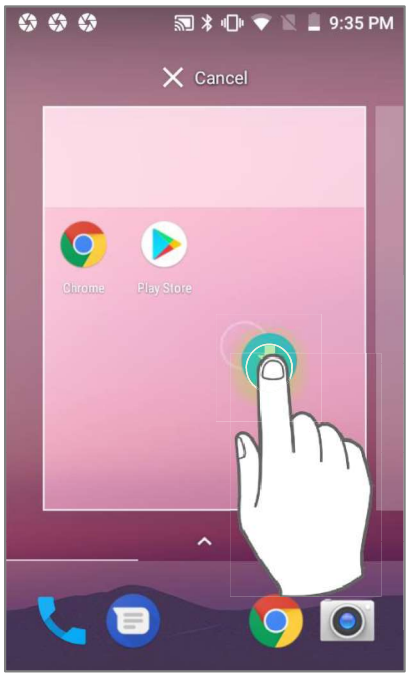
3.1.1. CUSTOMIZE HOME SCREEN

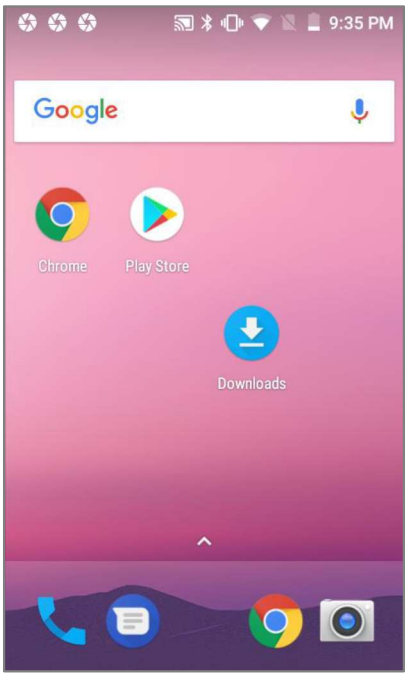
ADD APPLICATION SHORTCUT TO HOME SCREEN

1) On the home screen you would like to customize, tap open **App Drawer** icon , or slide up from the Favorites tray.
2) Locate the application to add, tap on and hold the application icon.
3) The home screen will appear. Drag the application icon to your preferred position and release to have it placed.





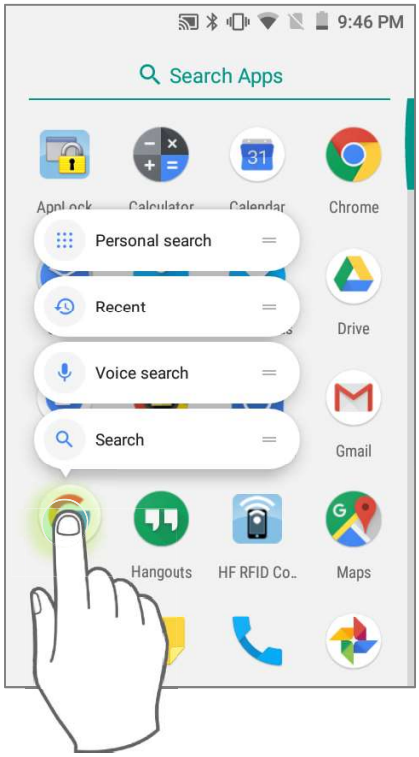


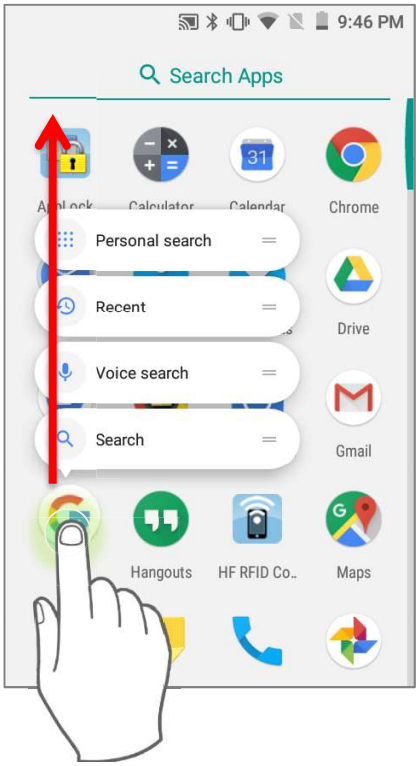


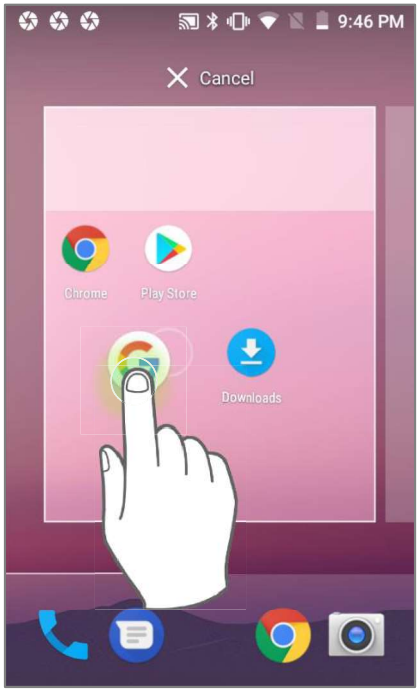
Long pressing certain applications such as Chrome or Gmail may show the **app shortcuts** but not Home screen. To add such applications from App Drawer to Home screen, please:

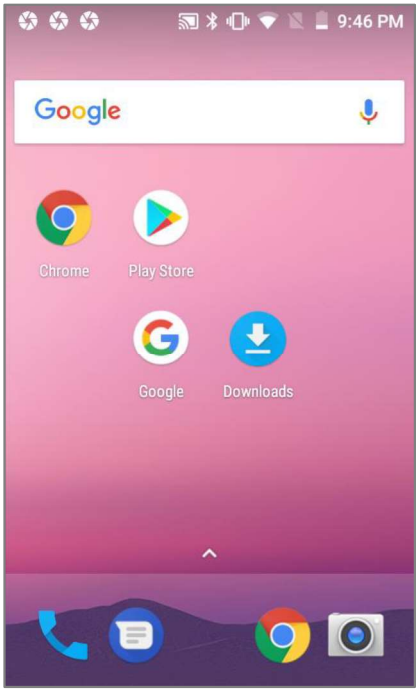
1) Keep tapping and holding the application icon and drag it upward.

2) The Home screen will appear. Drag the application icon to your preferred position and release to have it placed.



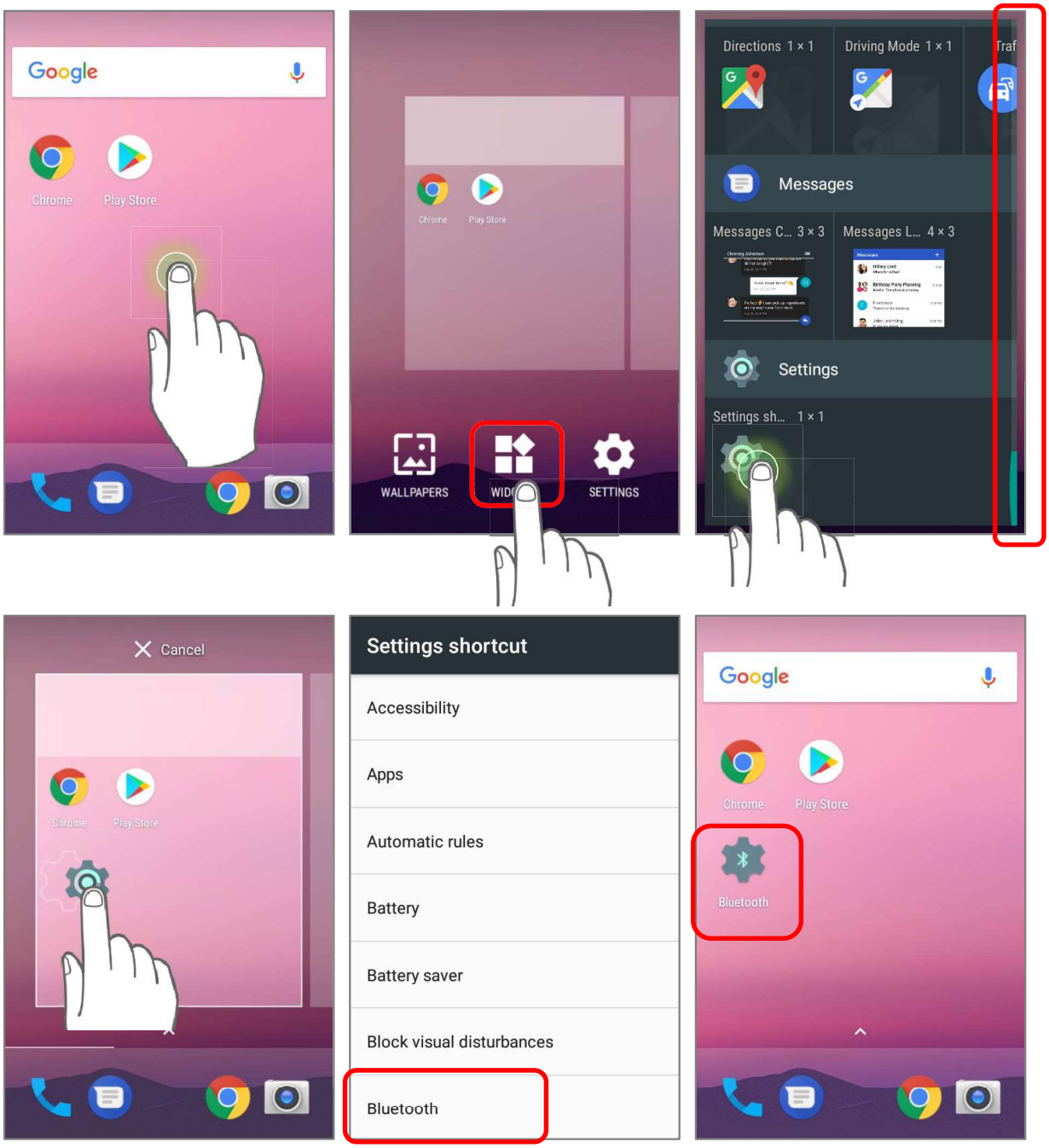






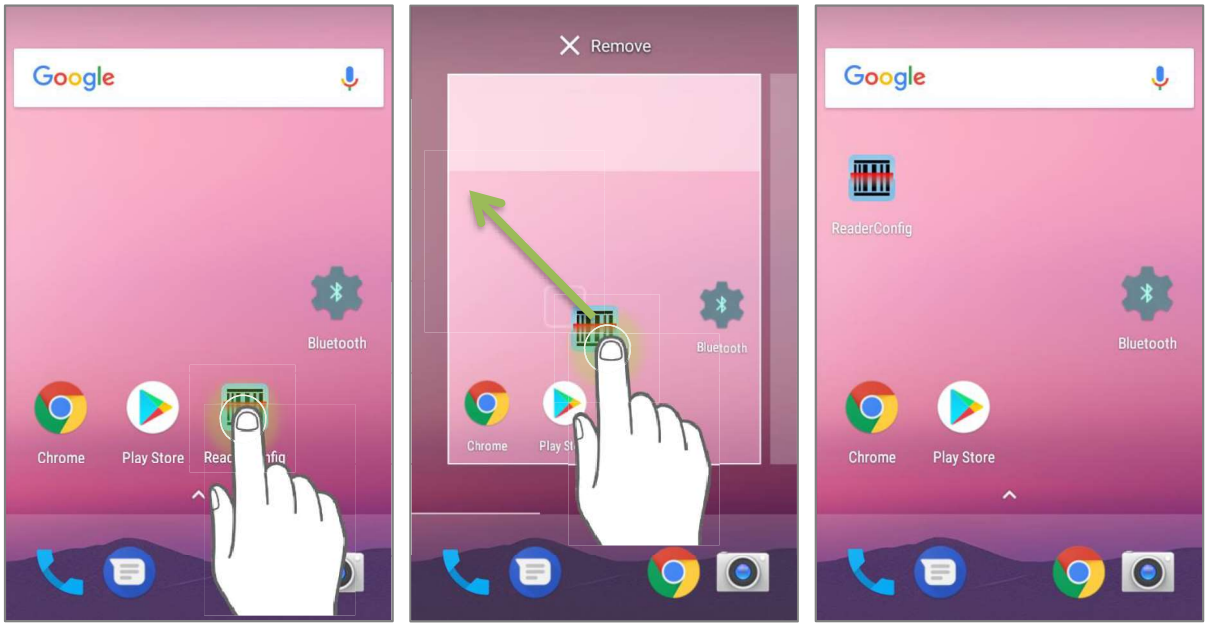
ADD WIDGET TO HOME SCREEN

1) Tap and hold any empty spot on the home screen.
2) The current layout will shrink, and the available options related to home screen appear on the bottom. Tap **Widgets** to enter the widget selection list.
3) In the widget selection list, scroll to locate your desired widget.
4) Tap and hold the widget until the home screen layout appears. Drag the widget to your preferred position and release to have it placed. For a setting shortcut, you will have to select a specific setting from the shortcuts list.

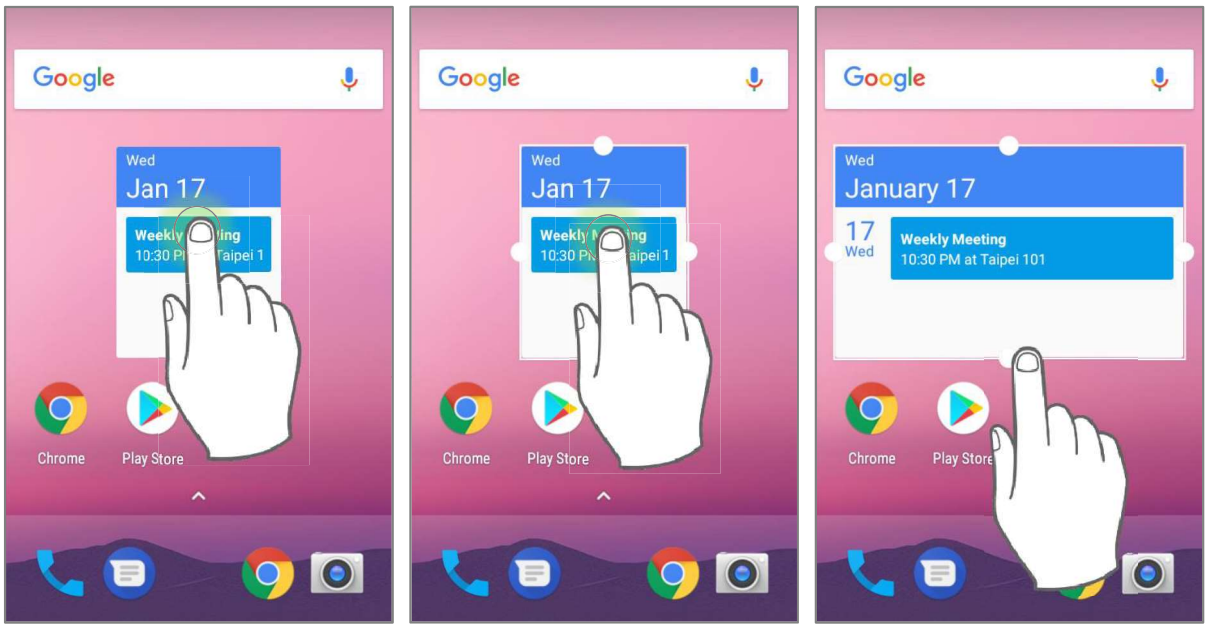


ARRANGE THE SHORTCUTS AND WIDGETS ON HOME SCREEN

To move or remove a shortcut/widget, on the home screen you would like to customize, tap and hold it to enter layout edit mode, an option "**X Remove**" will appear on top of the screen, to which you can drag the unwanted shortcut/widget to remove it. Drag the icon to the preferred position and release it to have it placed.

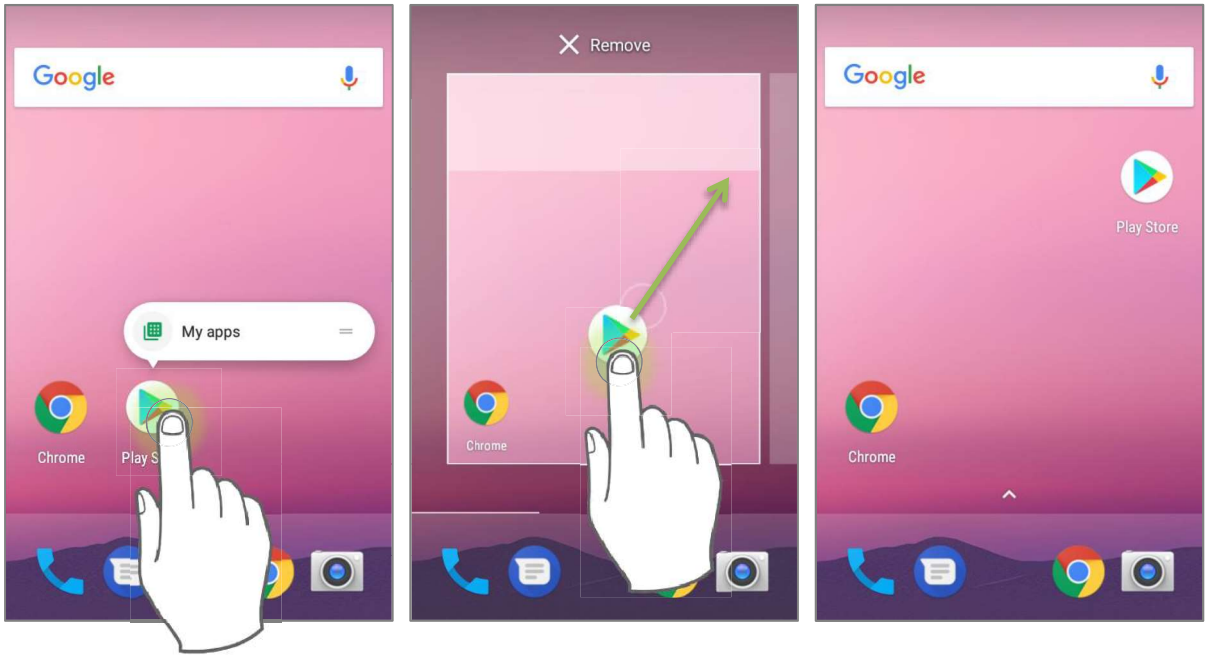


To resize a widget, tap and hold it until a white frame appears. Tap and drag a white dot to re-scale the widget.



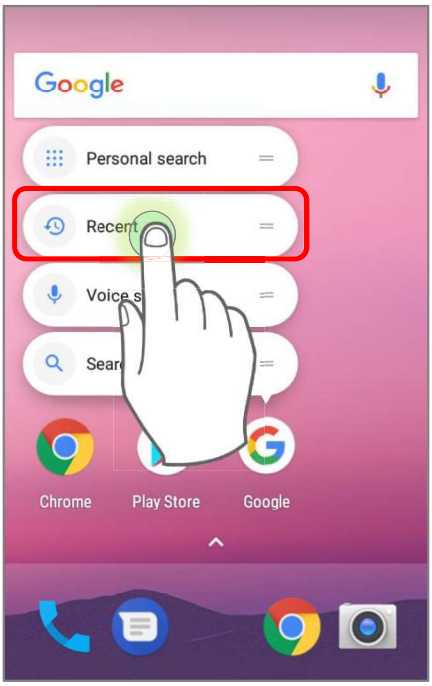
ARRANGE THE APPLICATIONS WITH APP SHORTCUTS ON HOME SCREEN

To move or remove those applications which offer app shortcuts, please hold and drag the application icon to anywhere on the screen, and layout edit mode appears. Drag the application icon to "**X Remove**" on the top of the screen to remove it, or to the preferred position and release it to have it placed.

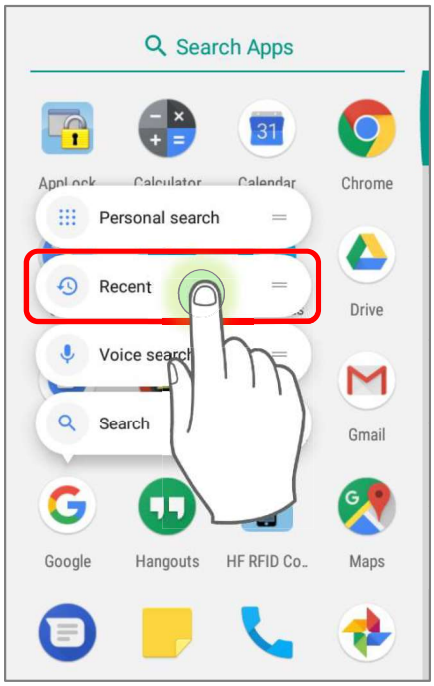


To create an **Action** icon from the **app shortcuts** to Home screen, please:

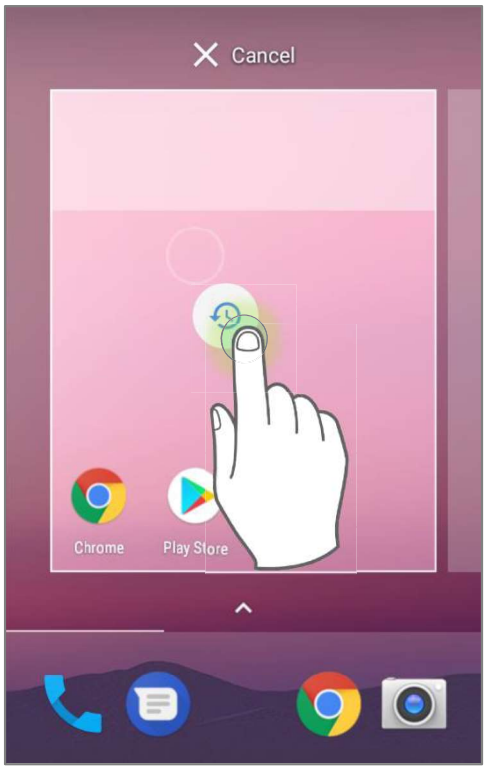
1) Long press an application icon (no matter on the **Home** screen or the **App Drawer**) to unfold its **app shortcuts**.



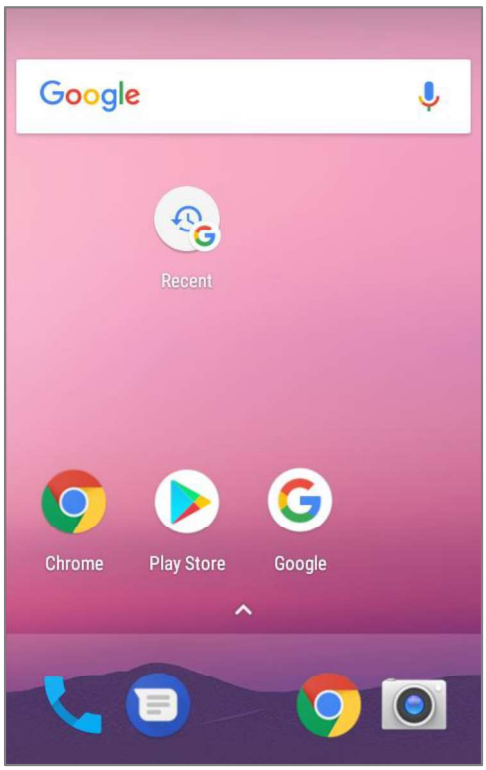
OR



2) Tap and hold an **Action** from the **app shortcuts** and drag it to the preferred position on the Home screen.

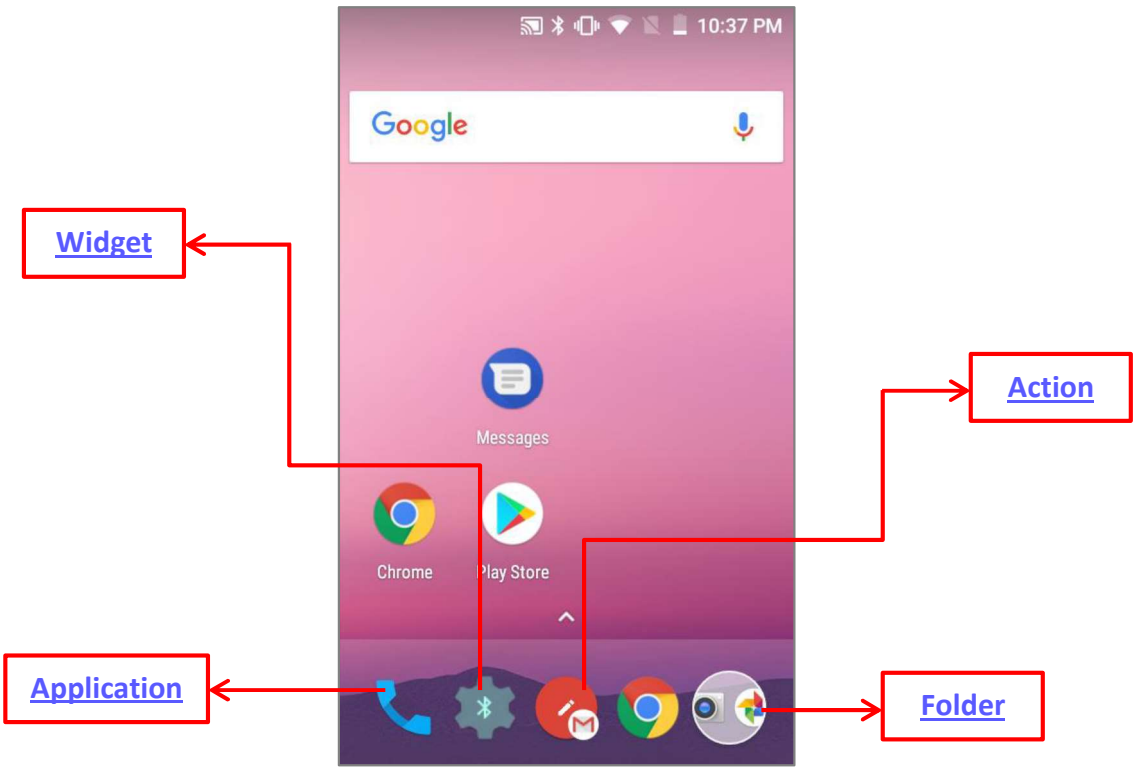


3) Release the **Action** icon to have it placed.



EDIT FAVORITES TRAY

Favorites Tray, which is located in the bottom of Home screen, contains up to 5 icons and appears on every Home screen.



Add **Widgets**, **Applications**, **Actions**, or **Folders** to Favorites Tray, please:

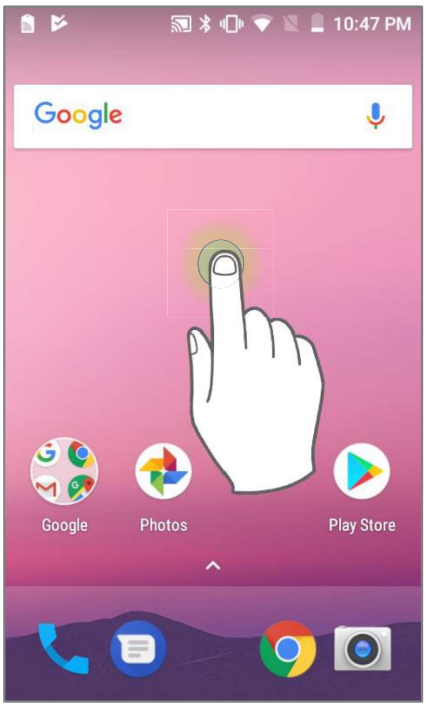
1) Tap and hold the icon and drag it to the Favorites Tray.
2) Release the icon to have it placed.

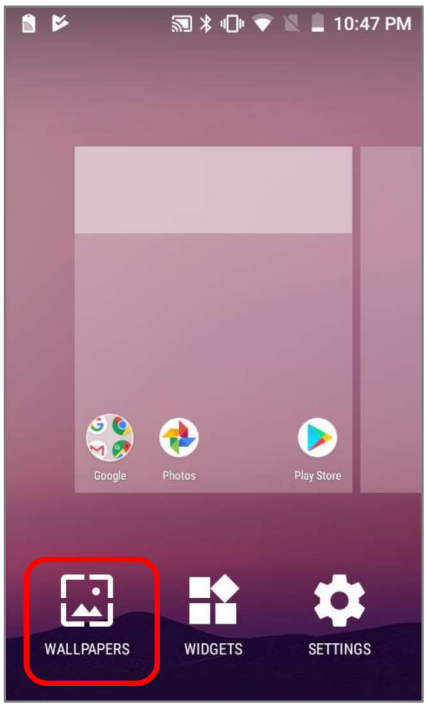
To move/remove an icon of **Widgets**, **Applications**, **Actions**, or **Folders** from the Favorites Tray:

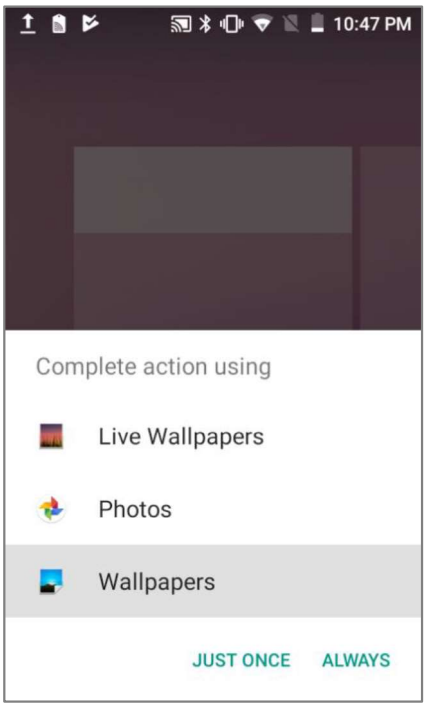
1) Tap and hold the icon to enter layout edit mode.
2) Drag the icon to the spot where you would like to have it place and release it, or drag it to "**X Remove**" on the top of the screen to delete it.

CHANGE HOME SCREEN WALLPAPER

1) Tap and hold any empty spot on the home screen.
2) Tap Wallpapers in the menu that appears, and select the app you would like to use.
3) Select an image to apply as the wallpaper.
4) Tap **Set wallpaper**.

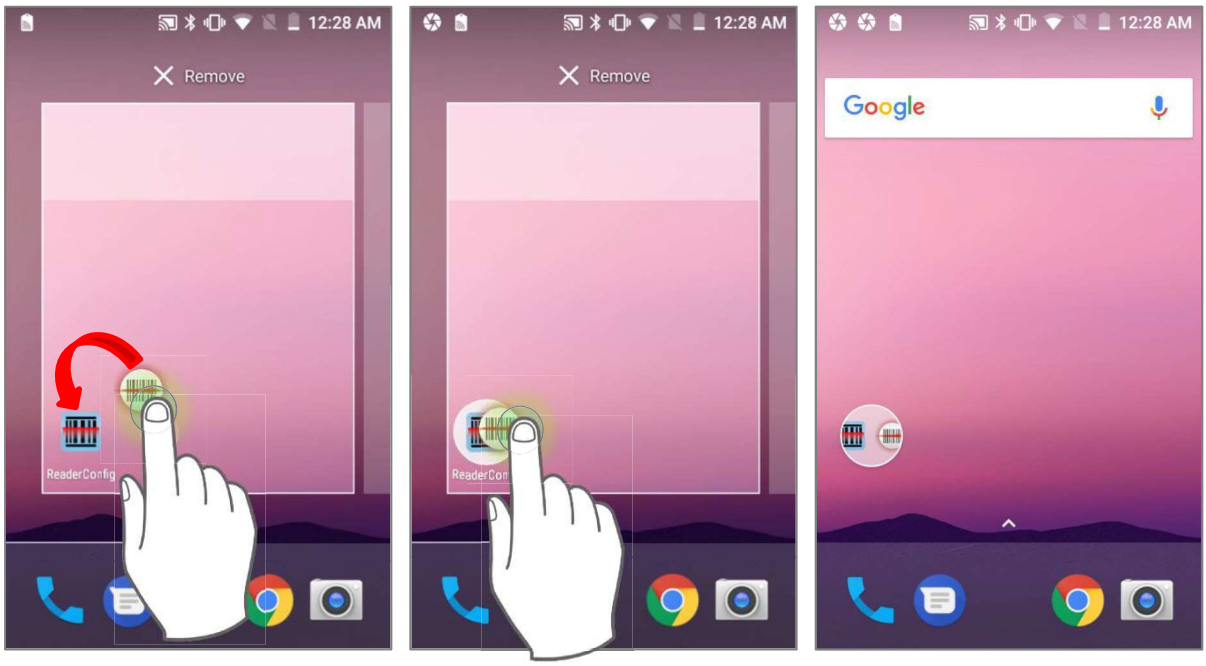






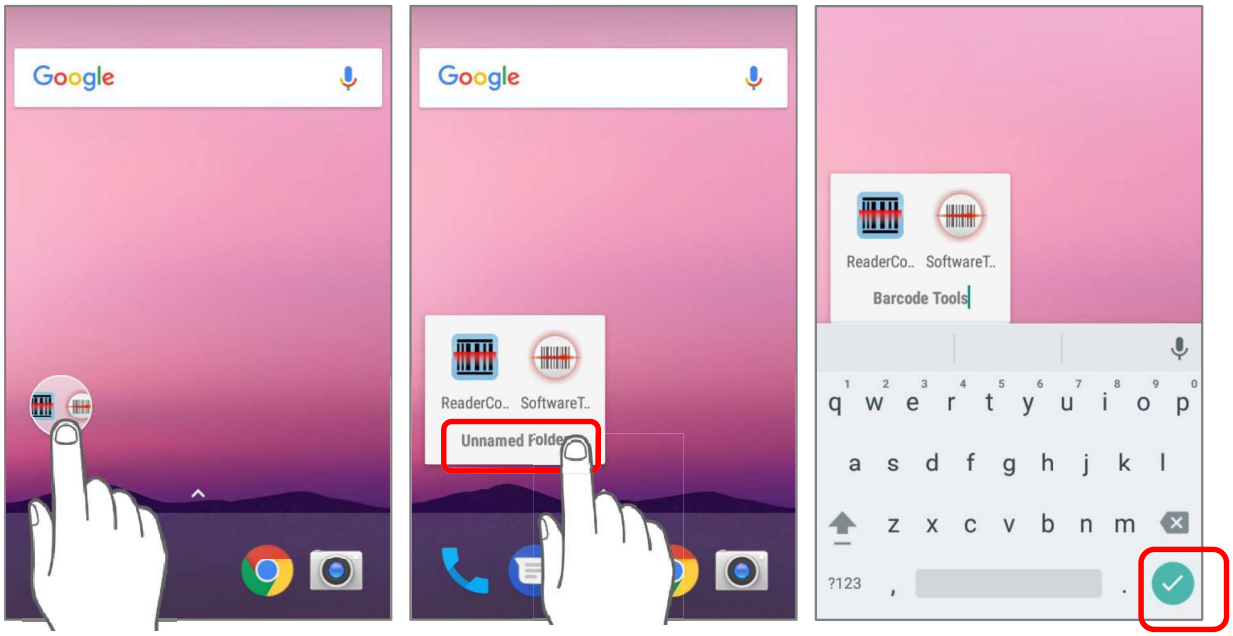
CREATE FOLDER

1) On the home screen you would like to customize, tap and hold the application shortcut you would like to move, drag the icon on the top of another icon to create a folder.
2) As these icons overlap, a folder is created.
3) After you let go your finger, these icons are enclosed in a circle.



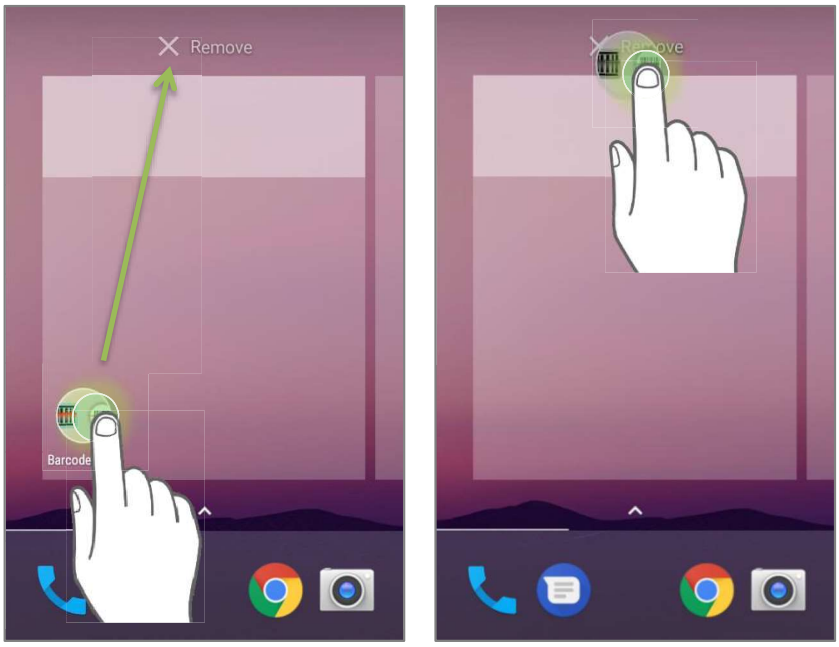
NAME A FOLDER

1) Tap the folder you would like to name.
2) The folder will expand from a small circle to a full rectangle to show all the shortcuts in it. Tap "**Unnamed Folder**" and edit the folder name.
3) Tap **Done** on the on-screen keyboard.
4) Tap elsewhere on the screen, the folder will shrink to a small circle with its new name.



REMOVE FOLDER

1) Tap and hold the folder you would like to remove.
2) Drag the folder to the top of the screen where the option **"X Remove**" is located.

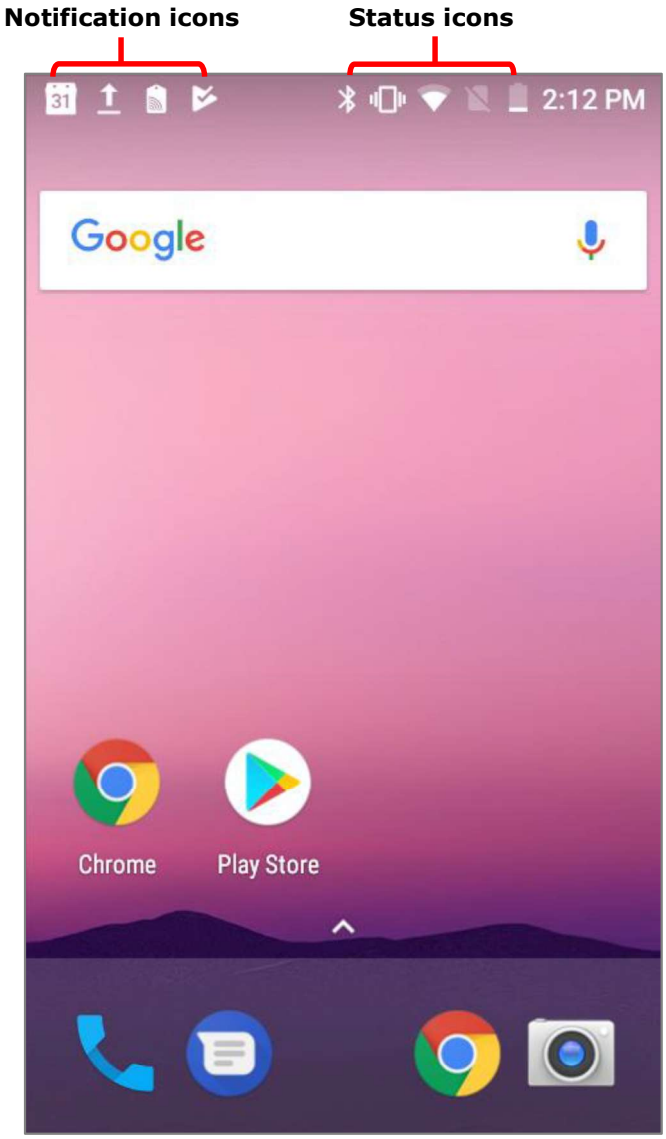


Note:

Please note when you remove a folder, the shortcuts contained in it will be removed as well.

3.2. STATUS BAR

The left side of the status bar shows **notification icons**, and the right side of the status bar shows **status icons**.



3.2.1. ICONS ON STATUS BAR

STATUS ICONS

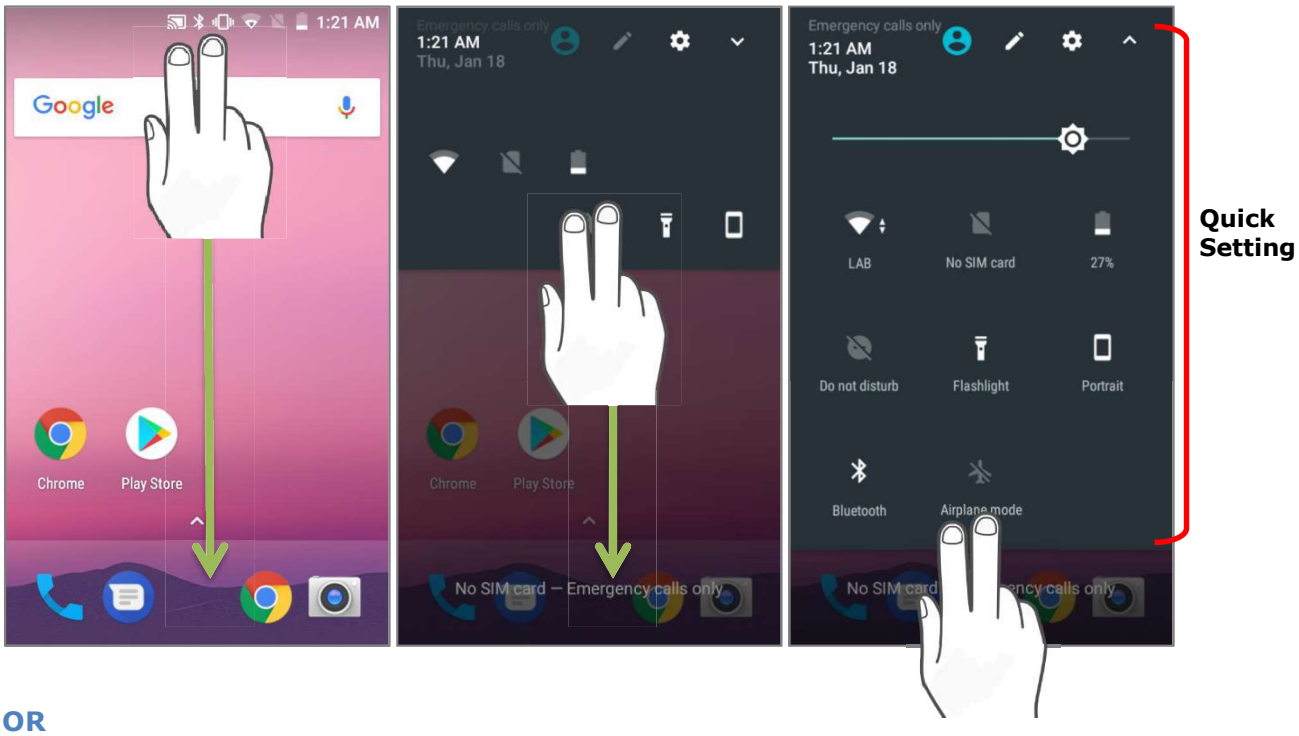
Icon	Description
	Bluetooth is on.
	The device has been connected to a Bluetooth device.
	The device is currently connected to a Wi-Fi network and performing data transmission.
	Airplane mode is active, which means all radios are inactive now.
	Alarm is active.
	All sounds are silent except for alarms (Vibration mode).
	The main battery is fully charged.
	The main battery is partially drained.
	Main battery level is very low and needs charging immediately (<5%).
	External power source is connected and main battery is being charged.

NOTIFICATION ICONS

Icon	Description
	USB debugging mode is enabled on this device
	The device is performing data synchronization.
	There is an upcoming event.
	The device is downloading data.
	The device is uploading data.
	An open Wi-Fi network is available.
	A memory card has been inserted.
	There has been a problem. Open **Notifications Drawer** for more details.
	The headset has been inserted.
	Wi-Fi hotspot is active.
	Bluetooth tethering is active.
	USB tethering is active.

3.2.2. OPEN QUICK SETTING MENU

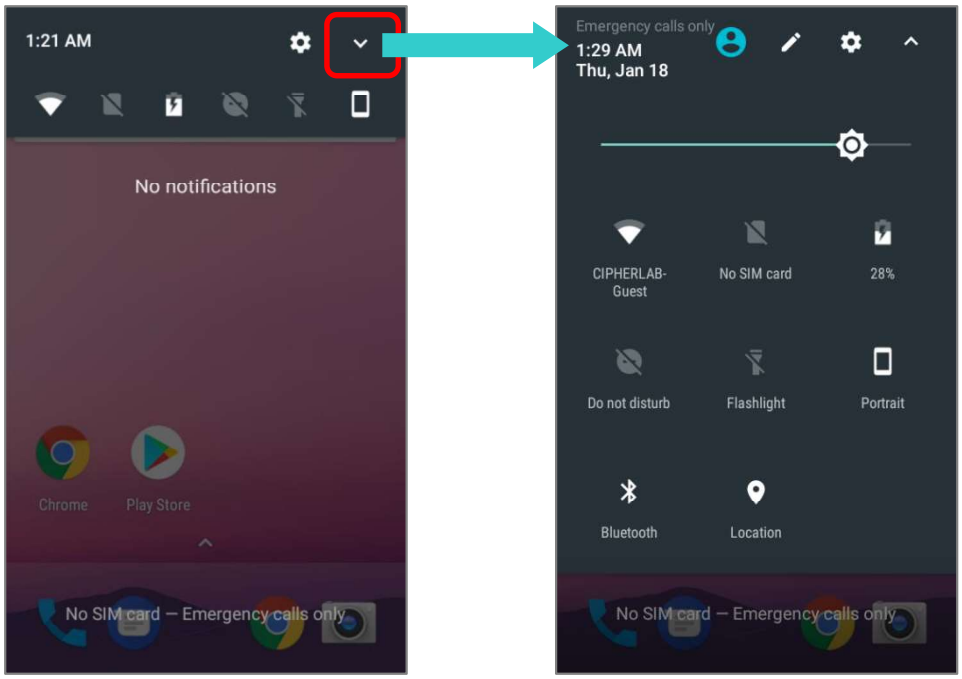
The **status icons** are related to essential settings regarding the device's remaining power, Bluetooth status or Wi-Fi connectivity status. The status bar offers a quick access for you to easily make adjustments of the settings. To open **Quick Setting** menu, use you two fingers, swipe from the top to the bottom of the screen. You can tap on each status icon on the menu to switch among different modes or enter the settings.



OR

1) Swipe down form the status bar by one finger to open Notifications Drawer.

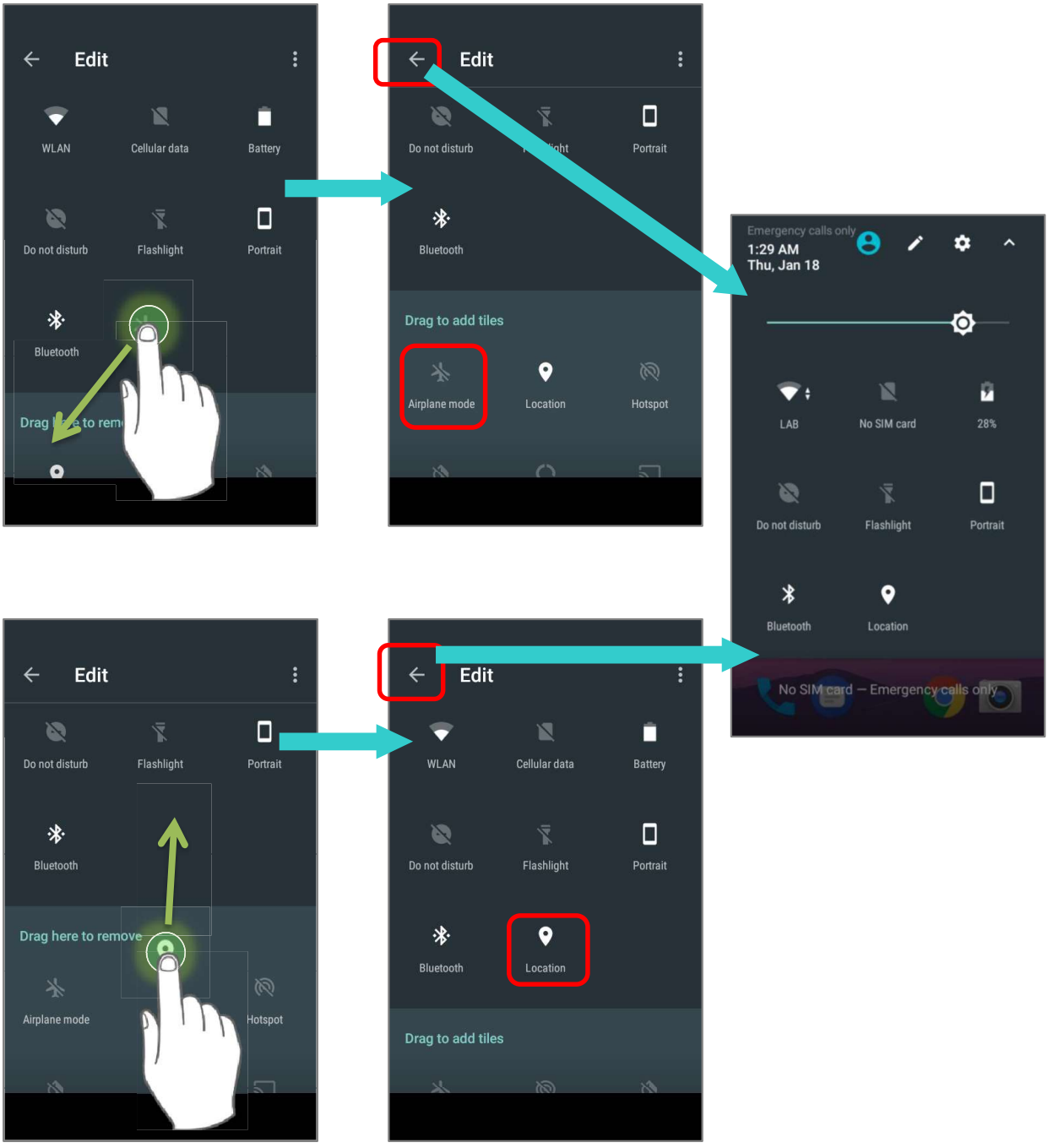
2) Click icon to open **Quick Setting** Menu.



EDIT QUICK SETTING MENU

To customize **Quick Setting** Menu, please:

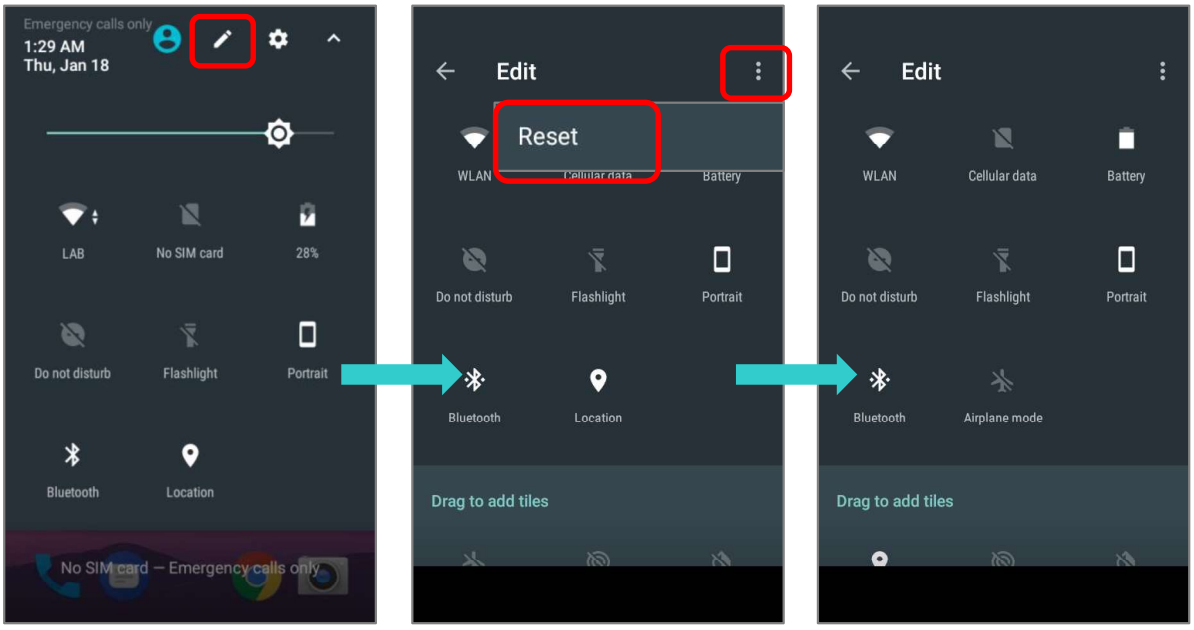
1) Click "**EDIT**" to get into **Edit** page.
2) Remove: To remove certain item, please tap on and hold the icon to be removed, and drag it to the light gray area and then release it.
3) Add: To add certain item, please tap on and hold the icon to be added and drag it to the dark gray area and then release it.
4) Return to the **Quick Settings** menu, all the settings are done.



To reset the **Quick Setting** Menu, please:

1) Tap to enter **Edit** page.

2) Tap **setting** icon in the upper-right corner, and tap "**Reset**".

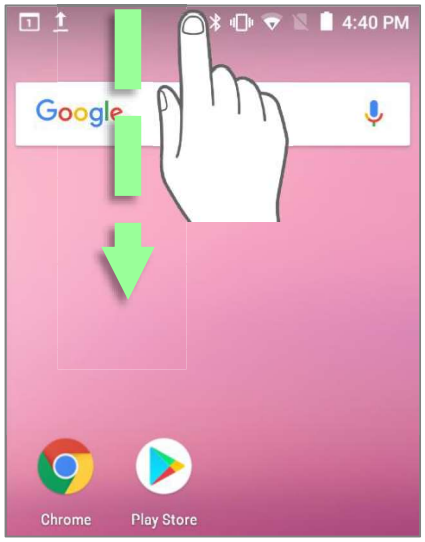


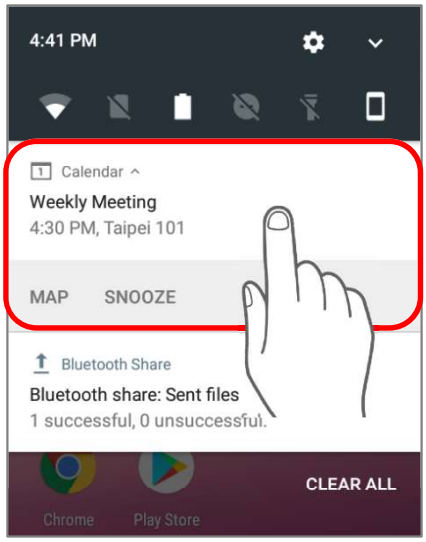
3.2.3. OPEN NOTIFICATIONS DRAWER

The **notifications icons** on status bar inform you of the new events such as USB connection.

CHECK OUT NOTIFICATION

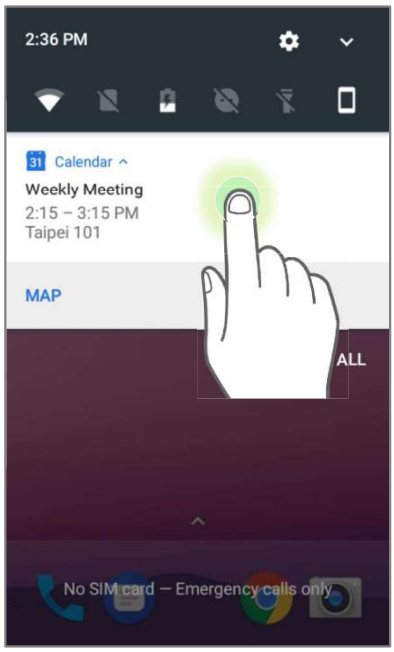
To check out details of the events, swipe down from the status bar to open Notifications Drawer. Tap on the individual notification card to carry out immediate action or to open the corresponding application.

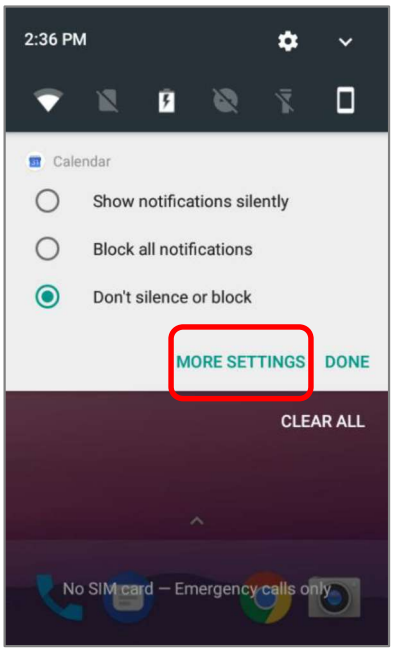


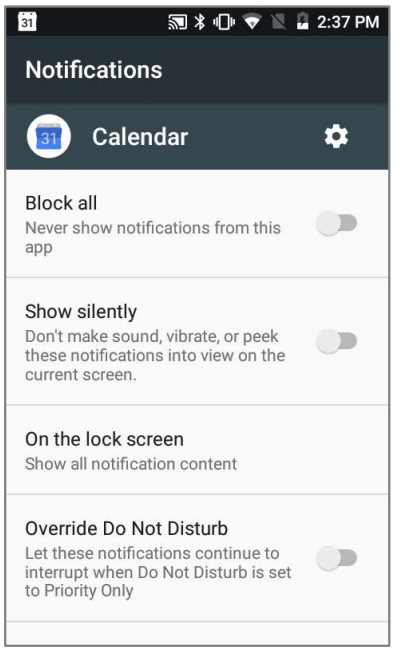


DISABLE NOTIFICATION

You can change or turn off the notification of a specific app by tapping and holding on the notifications card until the corresponding app name reveals. Tap "**MORE SETTINGS**" to modify the notification-related setting.

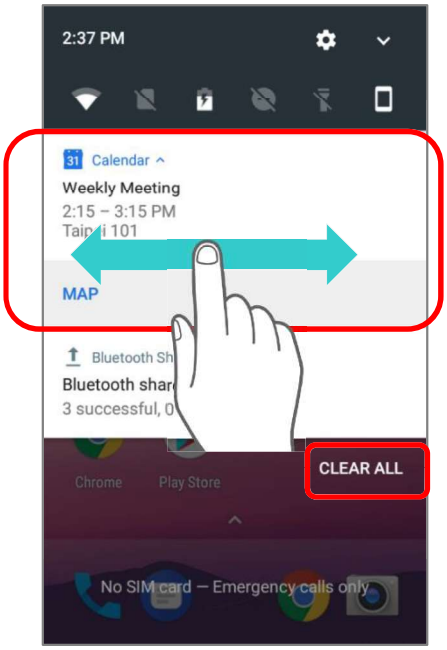






CLEAR NOTIFICATION

To dismiss a single notification, simply swipe the notification card right or left. You can also dismiss all notifications at a time by tapping "**CLEAR ALL**". Ongoing notifications and notifications that require subsequent activity to be cleared will remain on the list.



3.3. MANAGE APPLICATIONS

3.3.1. APPLICATION MENU

Open **App Drawer** to check the applications menu:

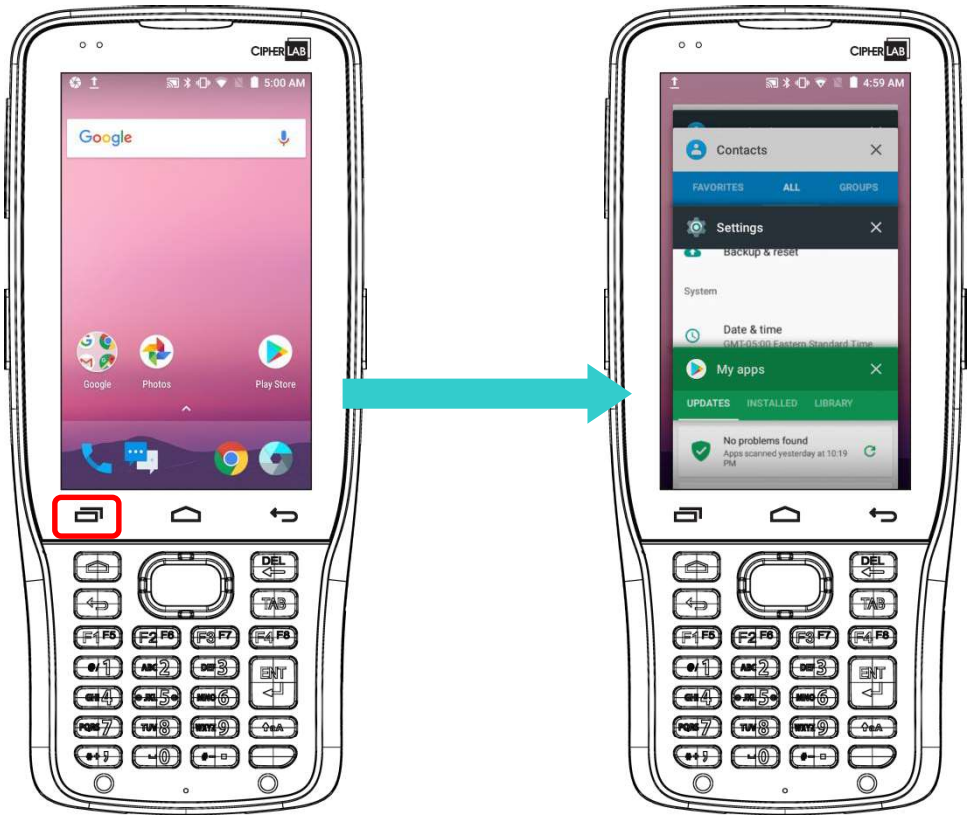
Icon	Name	Description
	A-Demo	An application which give the brief introduction about CipherLab's applications. Users can launch those apps by tapping "START" on the app's introduction page.
	Airlock Browser	Airlock Browser is a modern, feature rich, highly configurable web browser that allows mobile workers to be more productive.
	AppLock	An application used to limit the system resources made available to Users
	BarcodeToSetting	To help users to easily configure all the devices by exporting and generating the configurations as barcodes to be scanned by the devices to apply the configurations.
	Button Assignment	The application "Button Assignment" can redefine the functions of physical keys so that they trigger different actions. Settings made to one or more keys can be saved as a profile, allowing users to switch conveniently in between different sets of settings.
	Calculator	Performs mathematical calculations.
	Calendar	Creates and manages events, meetings and appointments.
	Camera	Takes pictures and shoots videos.
	Chrome	An Android built-in browser application developed by Google.
	Clock	Sets date, time, time zone according to your locale, and sets and manages alarms.
	Downloads	List all files downloaded on the mobile computer.
	Drive	An Android built-in application for a file storage and synchronization service created by Google.
	Duo	A one-to-one video call application developed by Google.
	Enterprise Keypad Mode	An application to control how the physical keypad works.

EZConfig	A UHF RFID application for RK25 mobile computer to works with RK25 UHF RFID Reader to read RFID tags.
EZEdit	An application to work with the RK25 UHF RFID Reader for reading from and writing onto a Gen2 RFID tag.
File Manager	Browses and manages files on the local storage and storage card.
Gmail	An Android built-in application for Gmail, a free email service provided by Google.
Google	An Android built-in application providing you easy access to handy services provided by Google such as searching for nearby restaurants or updates on traffic alerts.
HF RFID Configuration	An application for the configuration of RFID & NFC.
Maps	An Android built-in app developed by Google.
Photos	An Android built-in application for a photo and video sharing and storage service developed by Google.
Play Movies & TV	An Android built-in application for an online video on demand service operated by Google.
Play Music	An Android built-in application for a music streaming service and online music locker operated by Google.
Play Store	An Android built-in application providing access to a digital distribution service, including a digital media store, **Play Store** operated and developed by Google.
Reader Config	Sets scanner preferences, data output format and destination, symbology settings, and reads barcodes.
Settings	Opens settings to configure the mobile computer.
Signature Capture	A simple and easy application which transforms your device into a signature pad.
SIP Controller	An application for quickly open or close virtual keyboard by tapping on the floating button.
SoftwareTrigger	An application serving as a real trigger key, floating on top of all other programs for convenient trigger control of the bardcode scanner.
Terminal Emulation	The application is developed for industries which make extensive use of terminal emulators. It enables your mobile computer to act as a terminal emulator while communicating with a host of the same environment
Voice Search	An Android built-in Google product allowing users to use Google Search by speaking on a mobile phone.

WMDS	Wireless Mobile Deployment System for Android is a windows-based server program that can deploy the configuration projects (created by Android Deployment Configurator) to Android devices through wireless network.
WMDSInstaller	The WMDSInstaller will fetch the latest WMDS Agent version over the Internet and then perform auto-installation
YouTube	An Android built-in application for a video-sharing service.

3.3.2. CURRENT APPLICATIONS

Tap the **Recent Apps** button . The screen will show a list of recently used applications.



On this screen, you can:

SWITCH BETWEEN APPLICATIONS

Swipe up or down to check the listed applications, tap on your desired one to open it on the screen.

END APPLICATION

Slide an application to the left or right, or tap the **X** on top right to close it.

Note:

Close unused applications in order to release RAM. Remember to save your data or settings before closing any application.

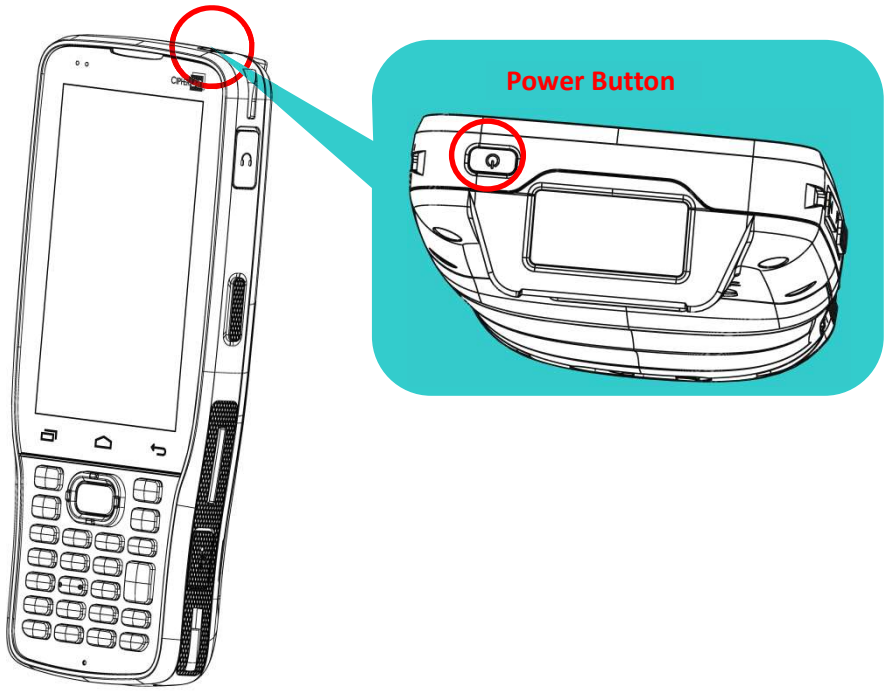
3.4. SUSPEND & LOCK

3.4.1. SUSPEND DEVICE

The mobile computer operates continuously once it is powered on. To minimize power consumption and prevent unintended operation, suspend the mobile computer if you are not actively using it. The mobile computer can be quickly awoken from suspend mode to operate as needed. When the mobile computer enters suspend mode, the system is in a power-saving status, meaning the device will not respond to screen touch, and volume keys and side buttons will also be unavailable until the device is unlocked.

SUSPEND RK25WO

Press the power button to suspend the mobile computer. The mobile computer will automatically suspend when the time period set in Screen Timeout Settings has passed without any activity.

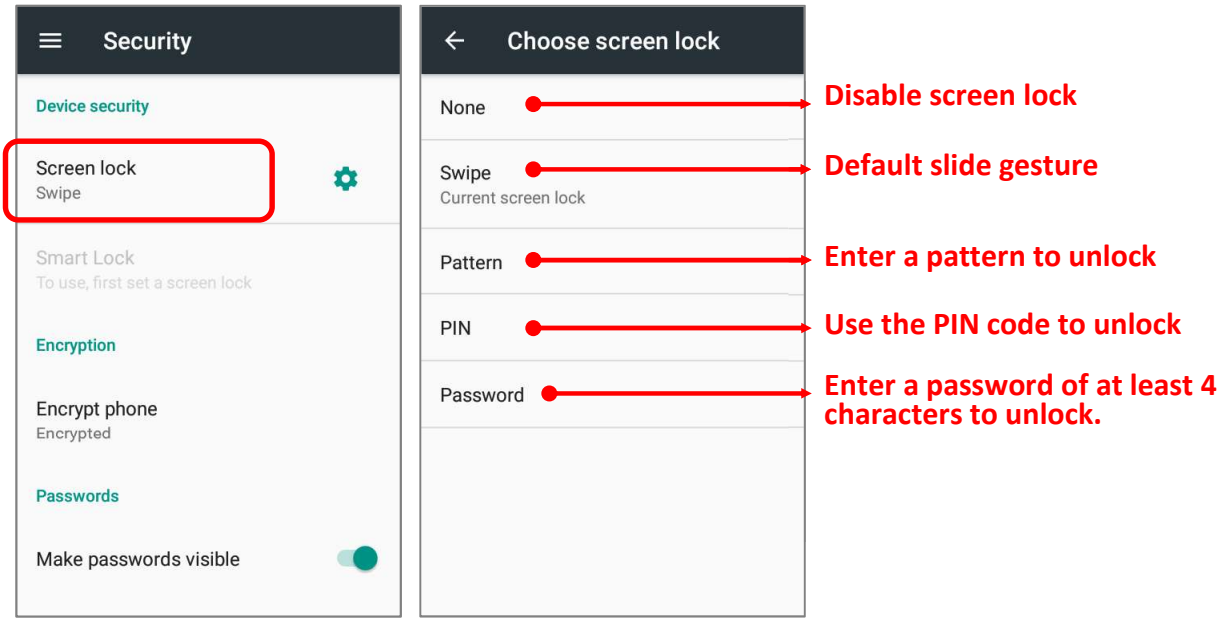


3.4.2. LOCK DEVICE

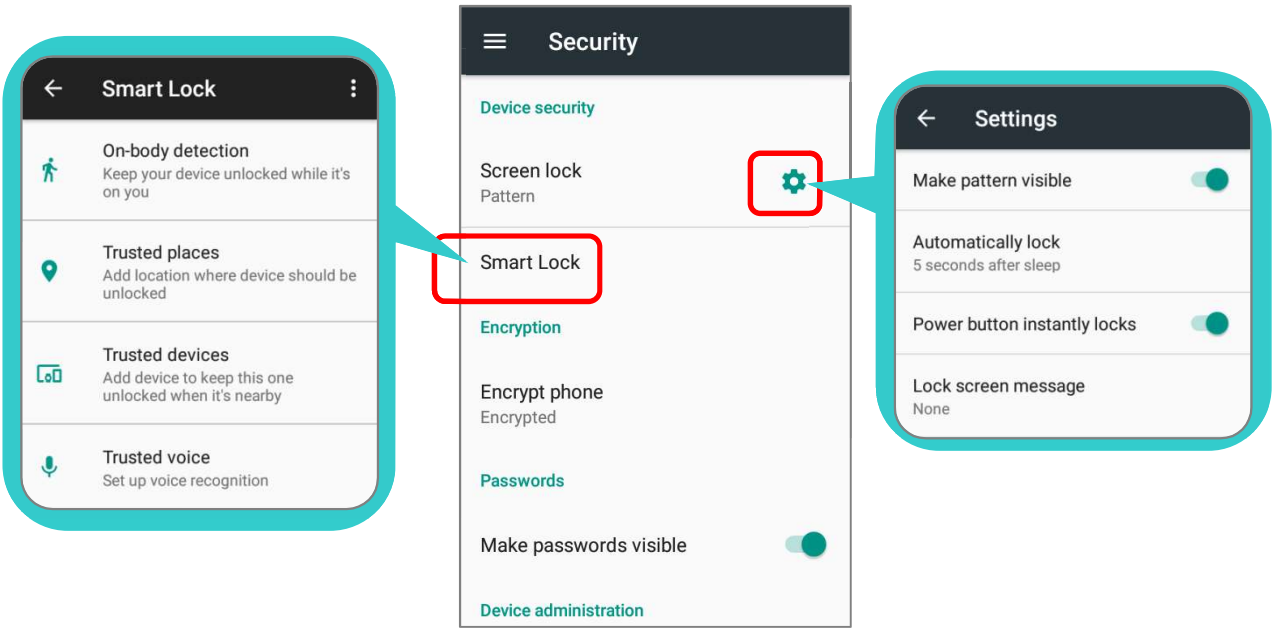
Setting a screen lock allows you to protect your personal data on this device while the device is not at your hand. With various types of screen lock available and Smart Lock, you can not only enjoy the benefits of this function but also great convenience.

LOCK RK25WO

Go to **App Drawer** | **Settings** | **Security** | **Screen lock** to change the lock method.



By selecting a pattern, Pin or Password method, you can access advanced settings and **Smart Lock** to customize personal lock settings.



Warning:

To save battery power, suspend the mobile computer when not in use.

3.5. OS UPDATE

Updating the operating system on the mobile computer helps maintain it at an optimized state. You may choose to update the system by establishing a wireless network connection to the Internet and downloading the update file from the OTA server.

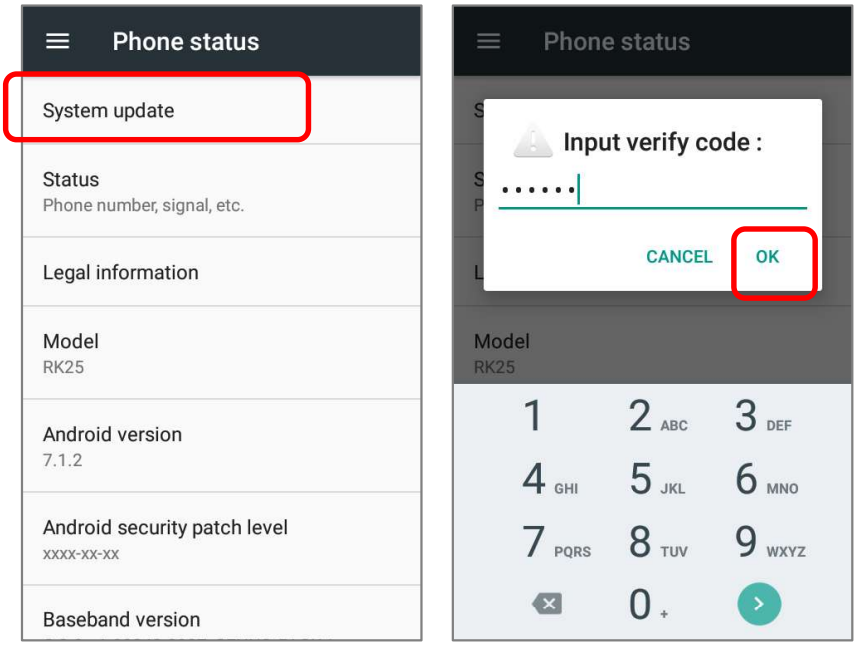
Note:
The mobile computer will shut down during system update. Save any unfinished tasks and data before updating the system in order to avoid data loss.

3.5.1. NETWORK UPDATE

In order to check for and download the latest system update file on the server, make sure a wireless network connection to the Internet is established on the mobile computer.

Note:
To avoid any additional charges to your wireless data plan, Wi-Fi connection to the Internet is recommended for downloading the file.

1) Go to **App Drawer** | **Settings** | **About phone** | **System updates**. A window pops up asking you to input the password for system update. Please contact with support@cipherlab.com.tw for the password. Enter the password and tap **OK**.



2) The mobile computer searches for the latest system update file on the server. Tap **DOWNLOAD AND INSTALL** to download the update file.

3) When a new system update file is detected on the server, a notification icon will appear on the status bar, and a text notification will pop up in the notifications panel.

AUTOMATIC UPDATE

The automatic update feature of RK25 mobile computer is off by default, and you can change the setting by **ADC** (Android Deployment Configurator) to turn it on.

By enabling automatic update feature, RK25 mobile computer automatically detects whether there's the latest OS update and downloads it. The update is scheduled to proceed on early morning when the device is on and left idle.

3.5.2. SD CARD UPDATE

RK25 mobile computer automatically searches the available update files in your mobile computer's storage and then install it.

Please obtain the latest system update image file, and copy the file "sdupdate.zip" onto the folder "sdupdate" of your SD card. Insert the SD card into the memory card slot on the device. Press the power button to power it on.

OR

Transfer the update image file to the root directory of the device's internal storage via a micro USB cable/ the snap-on cable.

The newest version of OS will be automatically installed and take effect next time the device is booted up.

Note:

Make sure the SD card is properly inserted in the mobile computer; otherwise the system is regarded as currently up to date.

3.6. BACK UP YOUR DATA

With **Android Backup Service**, you can have your personal data (Google calendar settings, Google contacts, Chrome browser data and Gmail settings) and certain system settings under your Google account backed up (over network connection) on the cloud. This allows you to easily restore the settings on this device after a Factory Reset (refer to Reset to Factory Default).

Note:

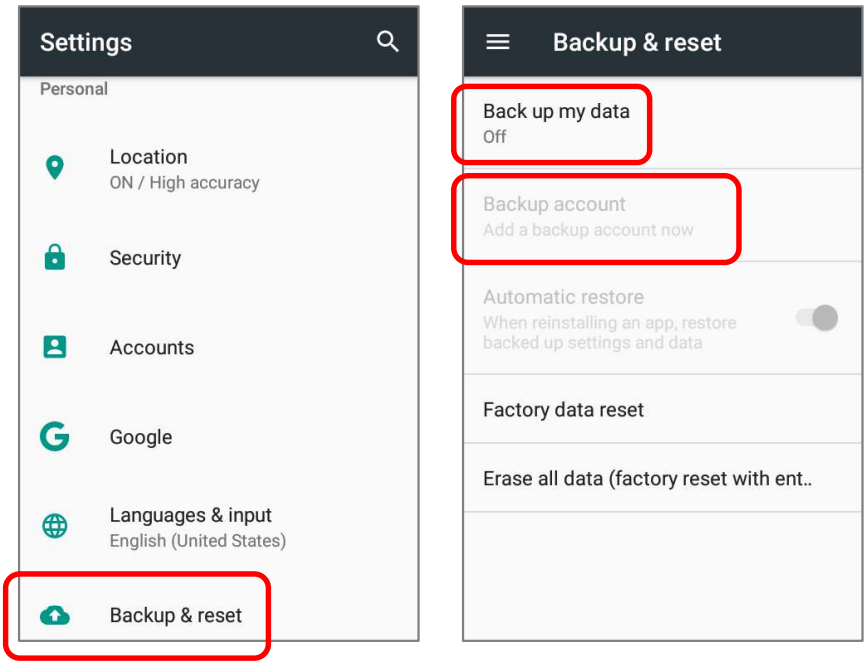
(1) To back up your photos and videos, go to **App Drawer** | **Photos** to sync the files on your device with Google Photo Library.

(2) To back up other documents such as audio or video files on the device's storage, you can make use of Google Drive service.

(3) **Android Backup Service** does not handle SMS messages and certain app progress data and settings.

To start:

1) Make sure your device is connected with network.
2) Go to **App Drawer** | **Settings** | **Backup & reset** and enable **Back up my data**.
3) Tap **Backup Account** to log in to your Google account.



To restore your backed up personal data of a Google Account, just add that account to the device.

3.7. RESET TO FACTORY DEFAULT

Performing a factory reset will erase all data on your mobile computer (including call logs, messages, files as well as your installed apps and their associated data) and revert the device back to its original state in which it is powered on by you for the first time.

It is strongly recommended that you follow the instructions in **Back up Your Data** to back up important data before performing a factory reset.

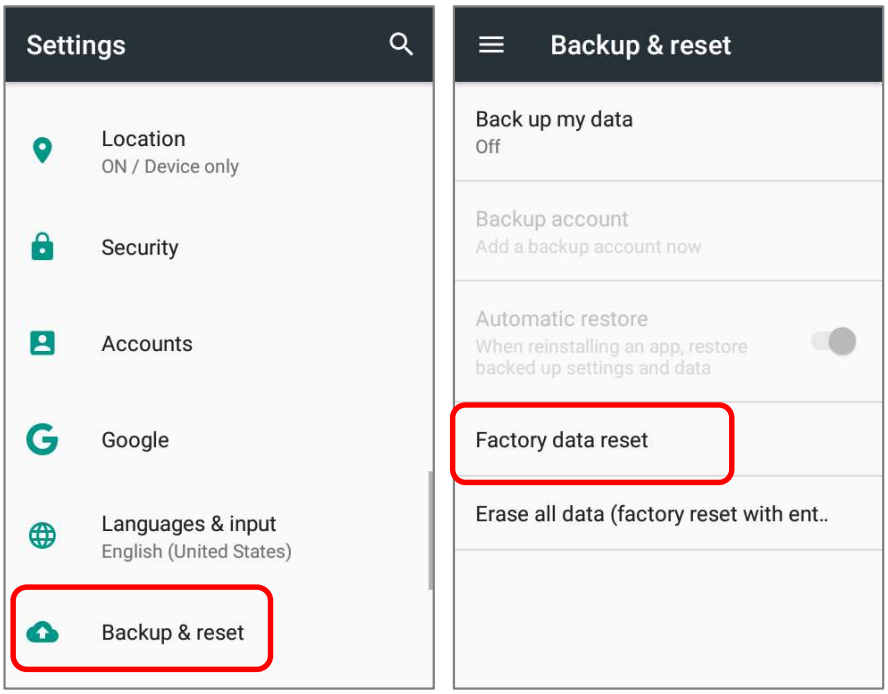
When setting your RK25 mobile computer by ADC (Android Deployment Configurator), the settings will automatically backup to "enterprise partition" of your RK25 mobile computer, and the settings saved in enterprise partition will not be erased by proceeding "Factory data reset". To erase all the settings, please select "Erase all data (factory reset with enterprise)".

3.7.1. FACTORY DATA RESET

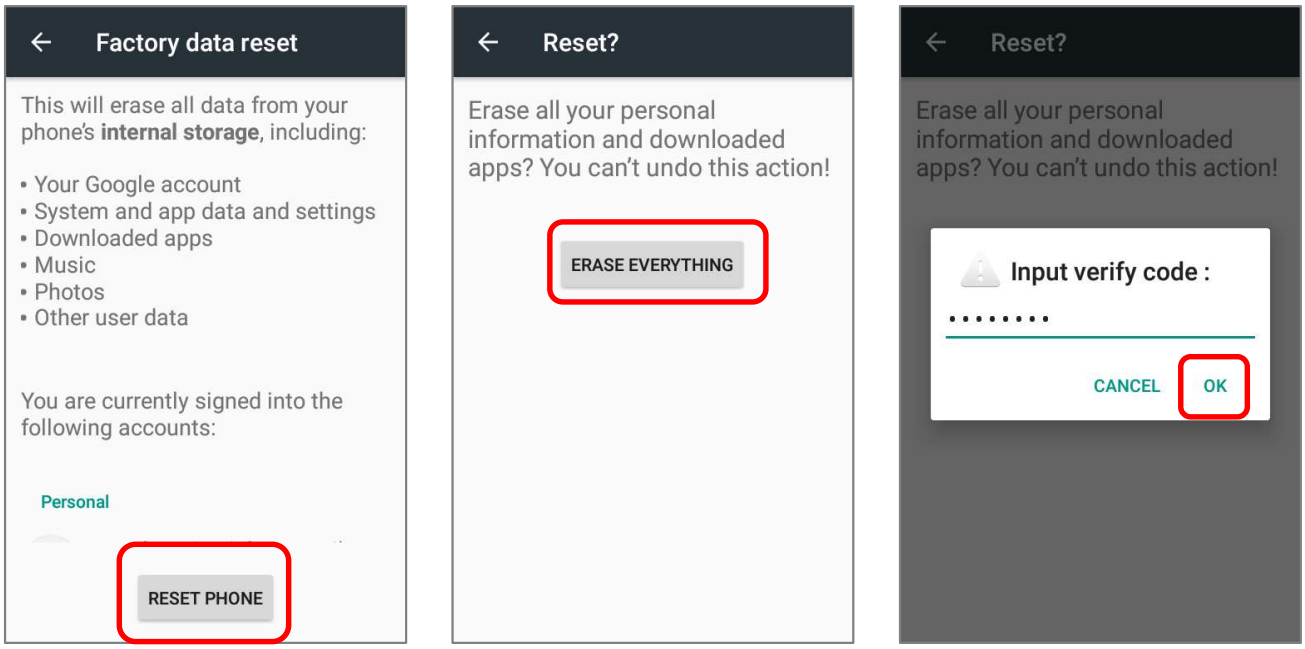
"**Factory data reset**" will erase all the data except of the settings backed up in enterprise partition by ADC (Android Deployment Configurator).

To start:

1) Go to **App Drawer** | **Settings** | **Backup & reset** and **Factory data reset**.



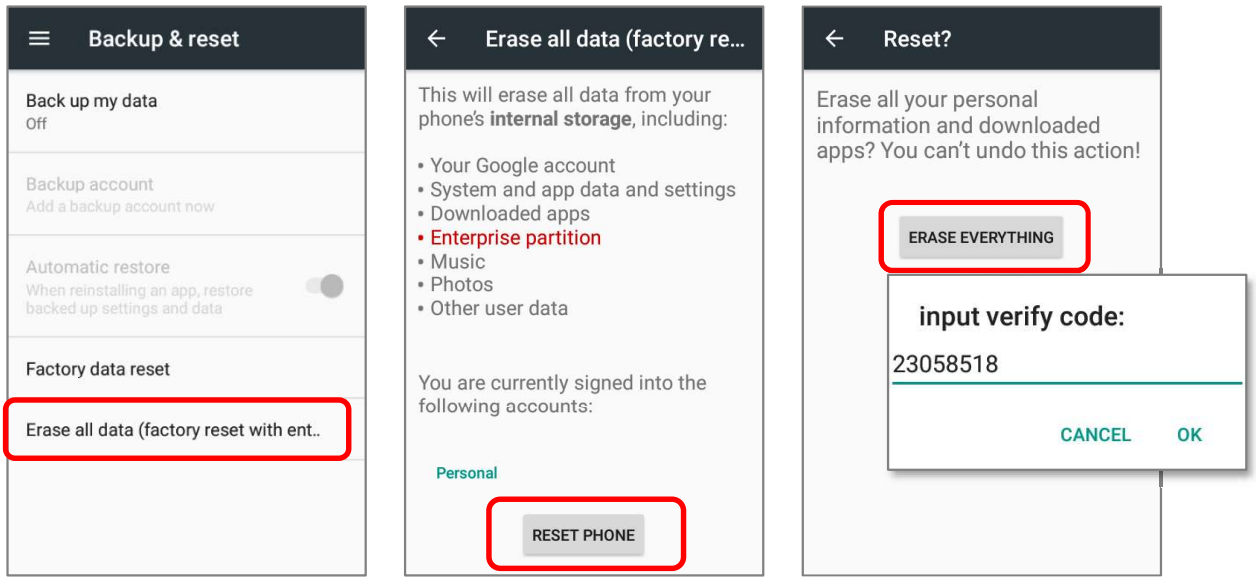
2) Confirm the action by tapping on the buttons and input the verification code (Please contact with support@cipherlab.com.tw to obtain your verification code). Finally, tap **OK** to perform a factory reset.



3.7.2. ERASE ALL DATA (FACTORY RESET WITH ENTERPRISE)

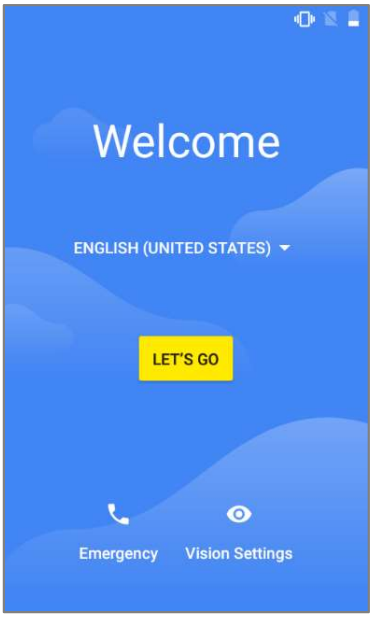
Go to **App Drawer** | **Settings** | **Backup & reset** | **Erase all data (factory reset with enterprise)**.

Confirm the action by tapping on the buttons and input the verification code (Please contact with support@cipherlab.com.tw to obtain your verification code). Finally, tap **OK** to perform a factory reset.



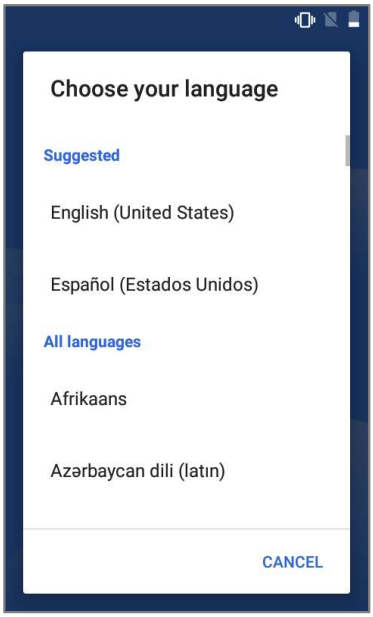
3.7.3. WELCOME WIZARD

As the mobile computer boots up for the first time after the reset, the Welcome wizard will run you through setting up the environment as well as restoring apps and data. During setup, you can skip to continue to the next step (you can finish the respective settings in **App Drawer** | **Settings** at any time). Please note that to have the backed up data in your Google accounts restored right in this stage, log in to a Wi-Fi network when prompted to **Select Wi-Fi Network**.



Step 1-1:

Tap "**LES'S GO**" to proceed, or tap to enter "**Choose your language**" page/ "**Vision Settings**" page.

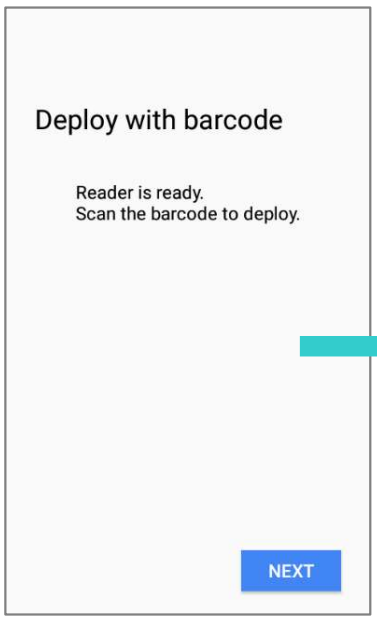


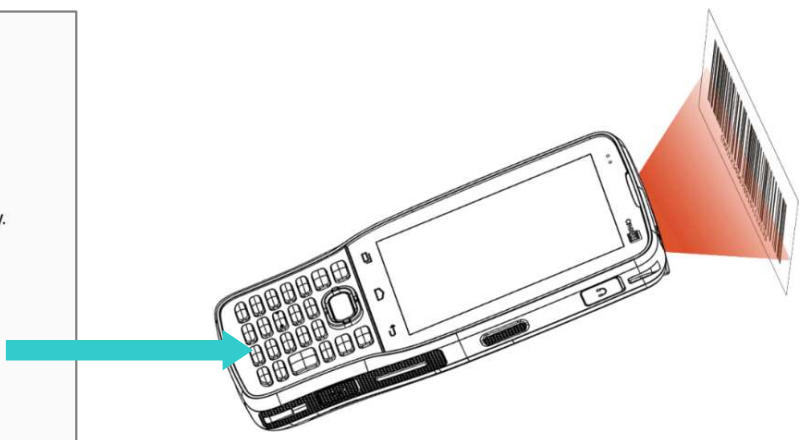
Step 1-2:

Select your system language.

Step 1-3:

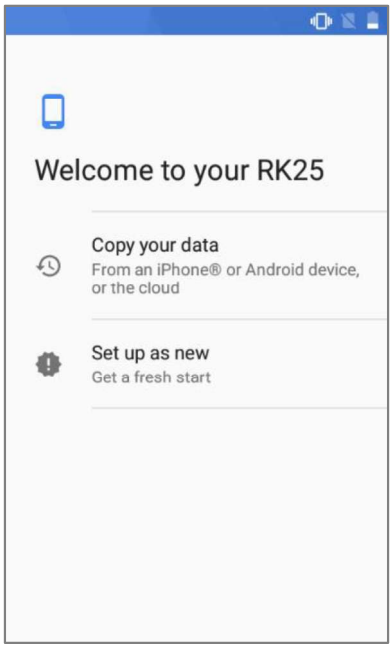
Customize your device if needed.





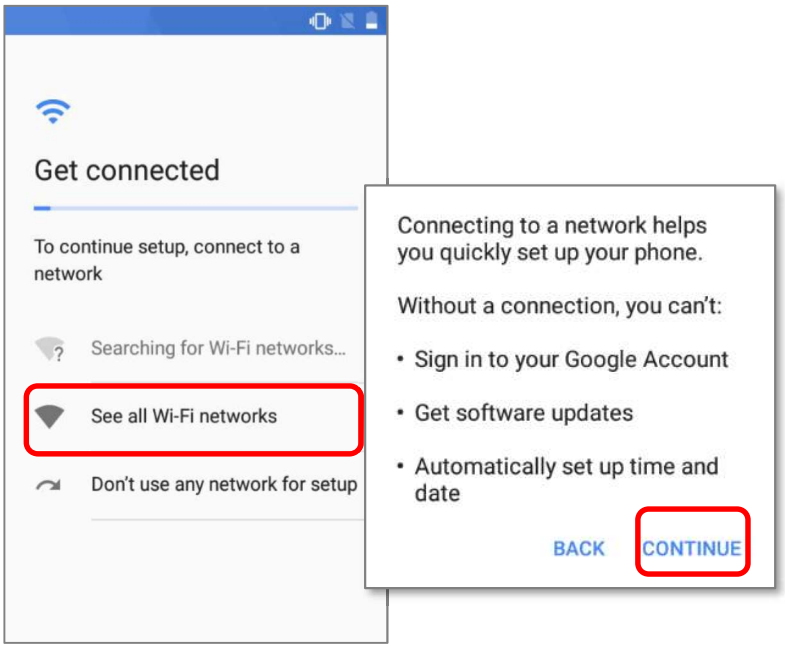
Step 2:

Press the trigger to scan the settings barcode generated by ADC (Android Deployment Configurator) to deploy the settings, or tap on "**NEXT**" to continue setting up by Welcome Wizard.



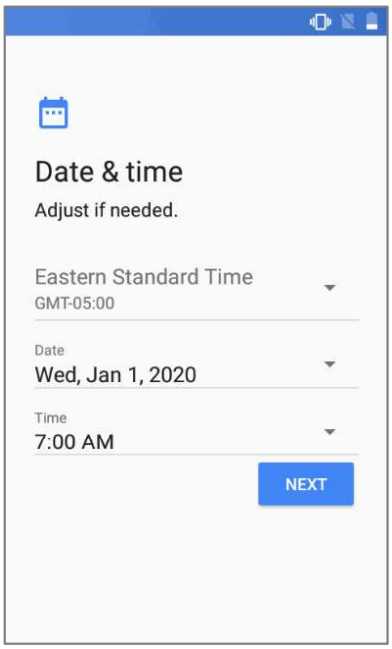
Step 3:

Set up your RK25 as a new one or restore data from your Google™ account/ other devices.



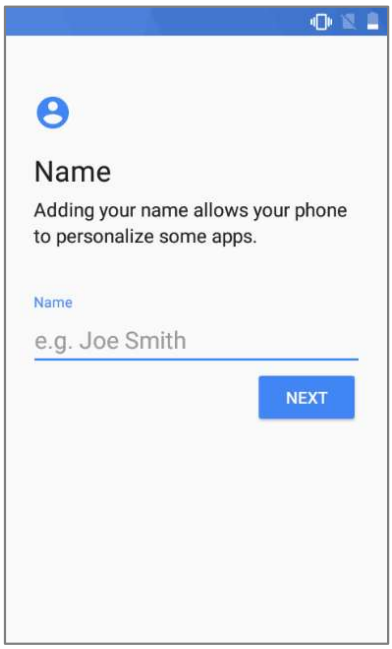
Step 4:

Log in to your Wi-Fi network. If logged in, you will be further asked to sign in your Google™ account to restore data.



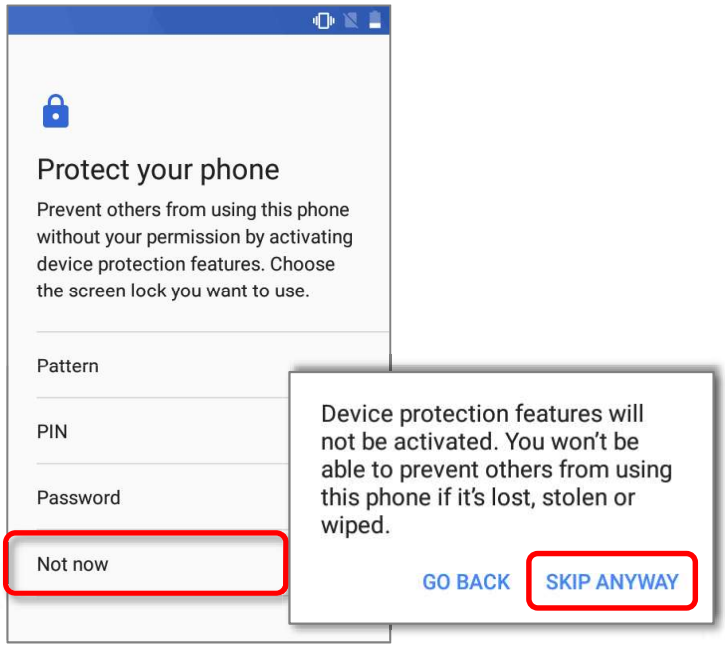
Step 5:

Set date and time, or merely skip this step by tapping "**NEXT**".



Step 6:

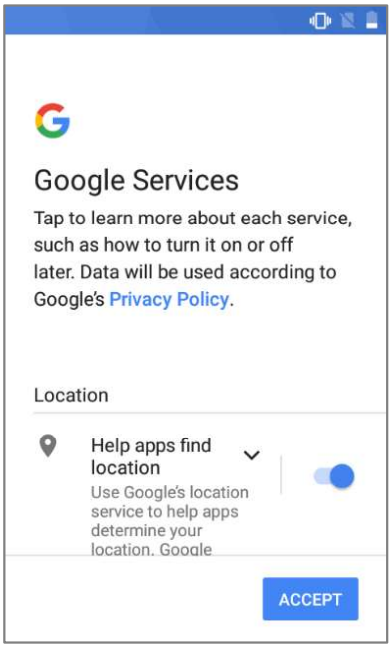
Input your name, or merely skip this step by tapping "**NEXT**".



Step 7:

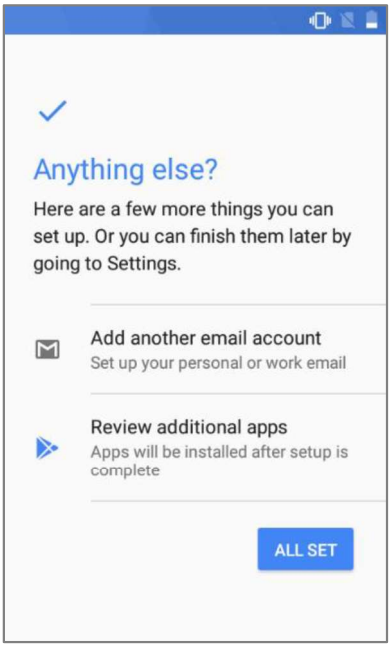
Set up the protection methods to protect this device.

Select "**Not now**" to skip.



Step 8:

Choose Google services that you want to be enabled, and tap "**ACCEPT**" to proceed.



Step 9:

Other settings to proceed. You could tap "**ALL SET**" to skip.

Once the initial setup is completed, the Home app screen shows up. Apps and settings will be restored in the background.

Chapter 4

WIRELESS RADIOS

The Wi-Fi module integrated on the mobile computer lets you configure and connect to network wirelessly.

IN THIS CHAPTER

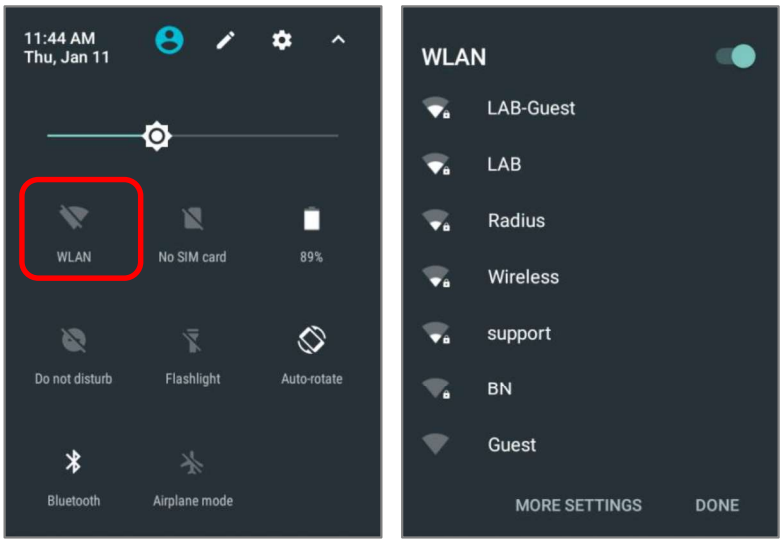
4.1 Use Wireless Local Area Network (Wi-Fi) 160
4.2 Use Bluetooth 169
4.3 Use Near Field Communications 173

4.1. USE WIRELESS LOCAL AREA NETWORK (WI-FI)

4.1.1. CONNECT TO WI-FI NETWORK

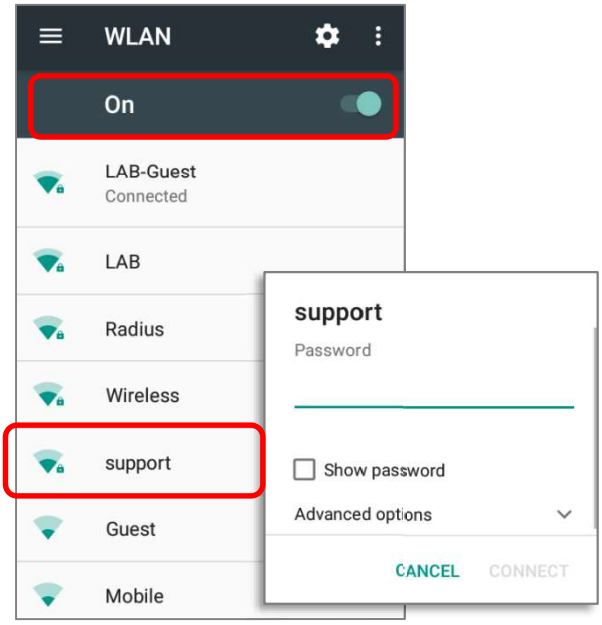
To power on Wi-Fi:

1) Use two fingers to swipe down from the top of the screen to open **Quick Settings** Menu.
2) Tap **WLAN** ▾ to scan for available networks. Select a network to connect.



OR

1) Go to **App Drawer** | **Settings** | **WLAN**
2) Tap the Wi-Fi switch to scan for available networks. Select a network to connect. If the network is an open one, the mobile computer will attempt to connect to it directly. When connected, the status will change to show "**Connected**". If the network is a secured one, the mobile computer prompts a dialog to enter the password for the connection.



4.1.2. MANUALLY ADD WI-FI NETWORK

If the network you would like to connect to does not broadcast its SSID, or if the network is out of range, you may add it manually.

1) Go to **App Drawer** | **Settings** | **WLAN**
2) Slide down to the bottom of the page, and select "**Add network**".
3) In the dialog box, enter the name of the network in the **Network name** field, and select a security method in the **Security** field (None, WEP, WPA/WPA2 PSK, 802.1x EAP).

- For WEP/WPA/WPA2 PSK connections: Enter the required password and tap **Save**.
- For 802.1x EAP connections: Tap **Advanced options** and select the **EAP method** in the drop-down box (PEAP, TLS, TTLS, PWD, SIM, AKA), and the **Phase 2 authentication** in the drop-down box (None, MSCHAPV2, GTC). Select a **CA certificate** and **User certificate** if required (certificates may be installed under

  App Drawer | **Settings** | **Security** | **Install from SD card**

  OR

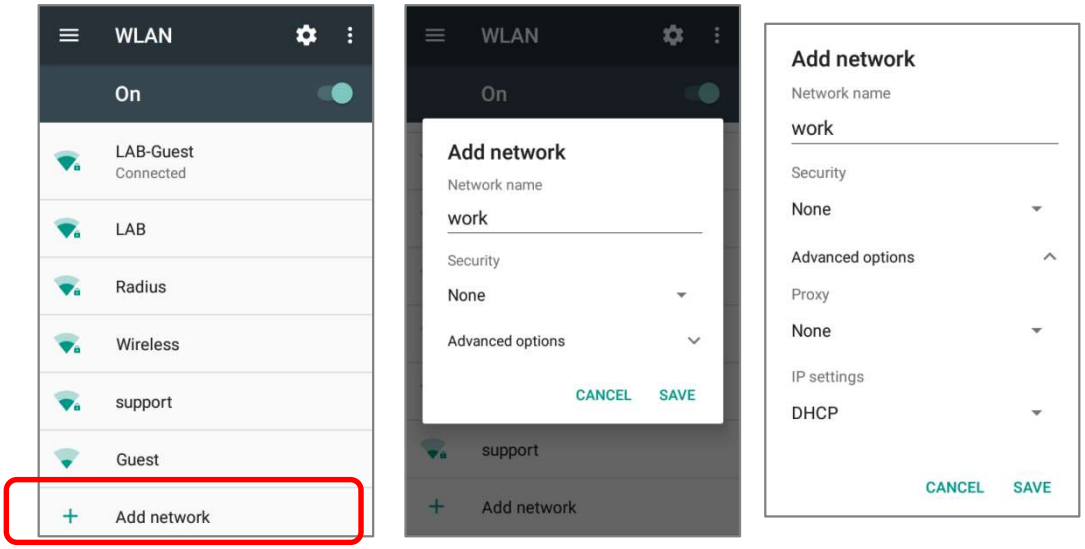
  App Drawer | **Settings** | **WLAN** | **More** | **Advanced** | **Install certificates**.)

  Enter your username in the **Identity** box and the password in the **Password** box if required.

The mobile computer supports the following certificate file extensions:

File Extension Type	Standard Certificate	Key Stored
Description	DER-encoded X.509 certificates saved in .crt or .cer files.	X.509 certificates saved in PKCS#12 key store files with a .p12 or .pfx extension.
How to install	change the extension to .crt or .cer.	Change the extension to .p12 or .pfx.

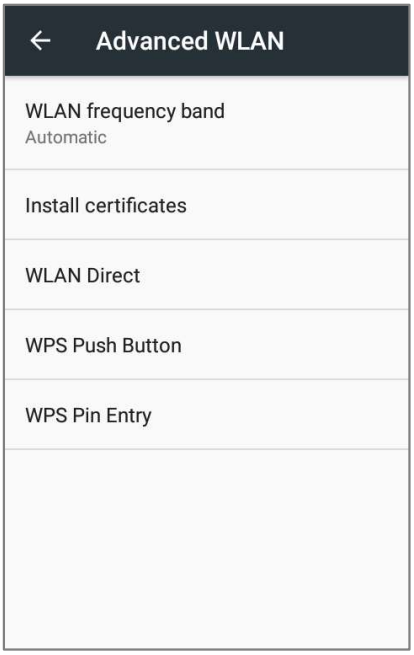
4) If necessary, select the **Proxy** server and **IPv4** settings. By default, no proxy is set and IP settings are set to **DHCP**.



4.1.3. ADVANCED WI-FI SETTINGS

To access advanced Wi-Fi settings:

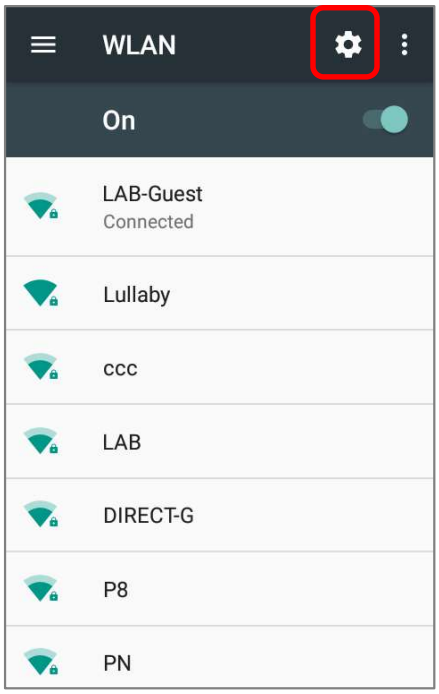
1) On the **WLAN** screen, tap **More** .
2) Select **Advanced** in the pop-up menu. Available settings are as below:

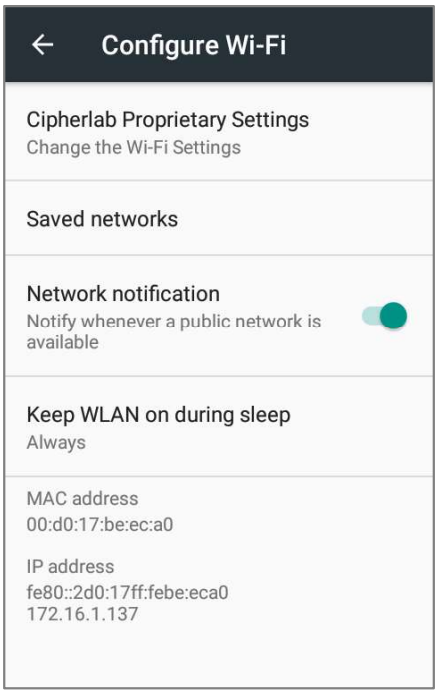


Item	Description
WLAN frequency band	Select **Automatic**, **5 GHz**, or **2.4 GHz** for your Wi-Fi frequency band. The default setting is **Automatic**.
Install certificates	Installs certificates recently downloaded or placed on the internal storage.
WLAN Direct	Enables your device to connect with a Wi-Fi Direct-capable device.
WPS Push Button	Initialize the Wi-Fi protected setup (WPS) for a WPS-capable network. You will also have to press down the WPS button on your router.
WPS in Entry	Enter the personal identification number (PIN) for Wi-Fi protected setup (WPS) process.

4.1.4. CONFIGURE WI-FI

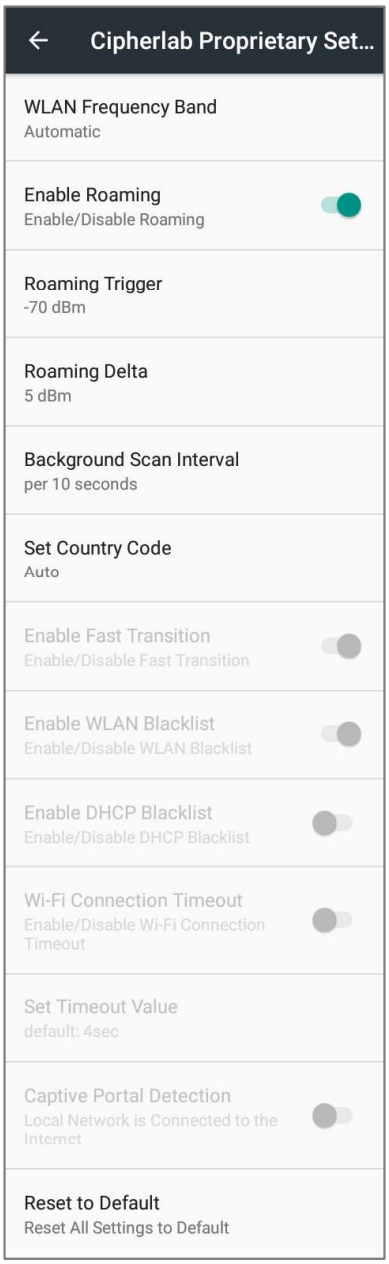
To configure Wi-Fi settings, please tap **setting** icon on the **WLAN** screen:





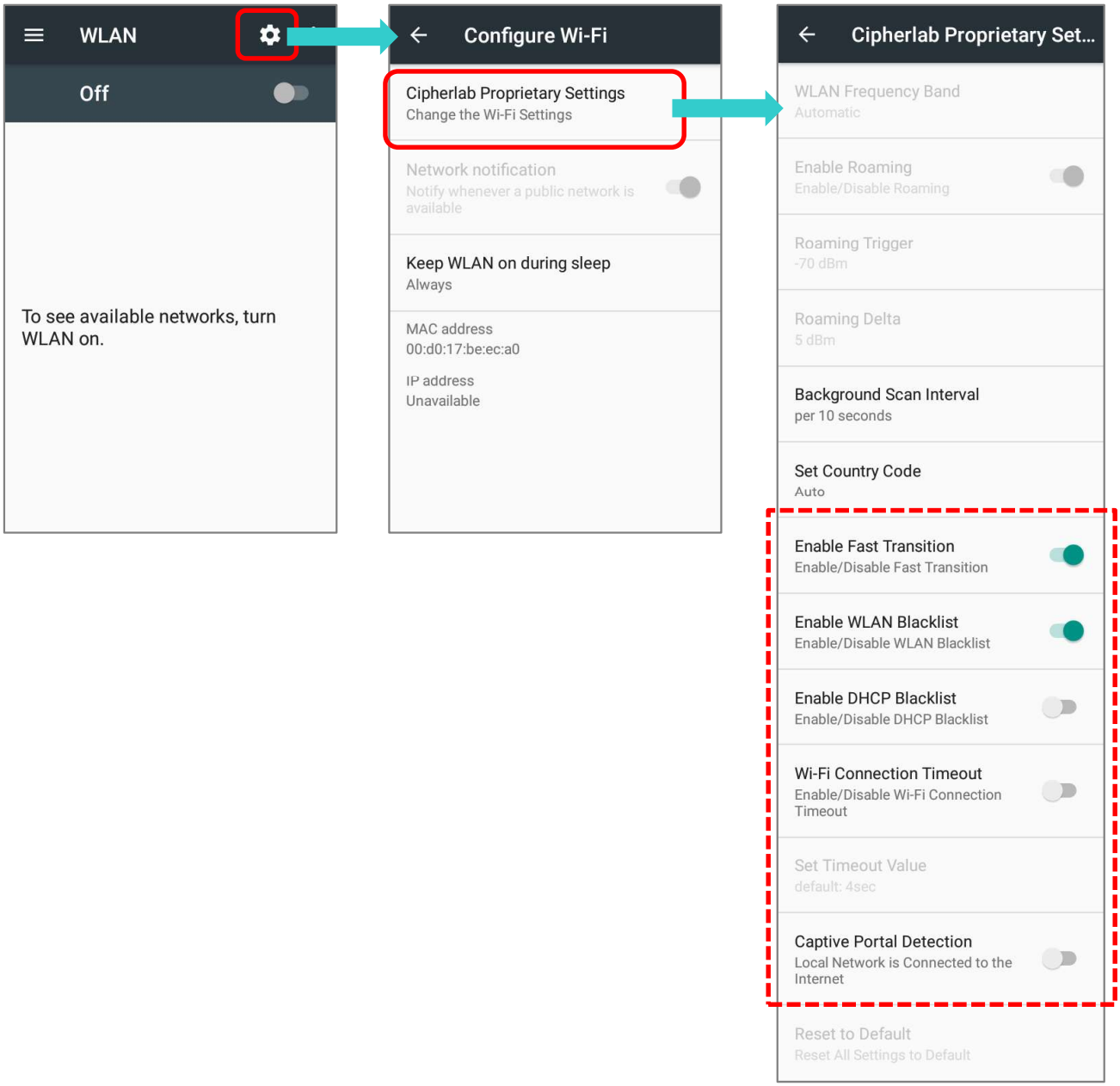
Item	Description
Cipherlab Proprietary Settings	Tap to enter the page for further settings. Please refer to Cipherlab Proprietary Settings for details.
Saved networks	List of the saved network(s). Click the saved network and select "**FORGET**" to disconnect/delete.
Network notification	Notify when an open network is available.
Keep WLAN on during sleep	Set when to turn Wi-Fi on during sleep.
MAC address	Displays the MAC address of the device when connecting to Wi-Fi networks.
IP address	Displays the IP address of the device.

CIPHERLAB PROPRIETARY SETTINGS



Item	Description
WLAN Frequency Band	Select **Automatic**, **5 GHz only**, or **2.4 GHz only** for your Wi-Fi frequency band. The default setting is **Automatic**.
Enable Roaming	Select whether to enable Wi-Fi roaming or not.
Roaming Trigger	The signal strength when triggering Wi-Fi roaming. The higher value means the sensitivity of triggering roaming is higher.
Roaming Delta	The qualification for roam candidates. The higher value means the signal strength of candidate APs should be higher than the current connected AP.
Background Scan Interval	The frequency of background scan when the device does not connect the internet. The shorter time means the scanning frequency is higher.
Set Country Code	Select the Wi-Fi country code for your mobile computer. The default country code setting is automatically set by your SIM card.
Enable Fast Transition	Enable 802.11r Fast Transition feature.
Enable WLAN Blacklist	Deny the Wi-Fi AP (access point) which is failed to access for several time, and add the denied AP to the blacklist.
Enable DHCP Blacklist	Forbid the device to connect to the Wi-Fi network whose SSID is on the blacklist.
Wi-Fi Connection Timeout	The device retains network connection and takes a while to wait for the response from the Wi-Fi till the device cannot reconnect to the previously connected Wi-Fi AP.
Set Timeout Value	Once “Wi-Fi Connection Timeout” is enabled, you can further set the timeout value.
Captive Portal Detection	To determine Internet connectivity when the device connects to a network.
Reset to Default	Restore all the settings in “Cipherlab Propruetary” to default.

To configure "**Enable Fast Transition**", "**Enable WLAN Blacklist**", "**Enable DHCP Blacklist**", "**Wi-Fi Connection Timeout**", and "**Captive Portal Detection**", Wi-Fi must be turned off. Turn on Wi-Fi again to apply the setting(s) once the configuration is done.



4.1.5. CONFIGURE PROXY SERVER

A proxy server acts as an intermediary between an endpoint device and another server from which the device is requesting a service.

To change the proxy settings for a connection:

1) Tap a network in the available Wi-Fi hotspot list.
2) Tap **Advanced** options.
3) Tap **Proxy** and select **Manual** in the pop-up menu.
4) Enter the address of the proxy server in the **Proxy hostname** field. Enter the port number for the proxy server in the **Proxy port**. Enter the addresses of websites which are allowed to bypass the proxy server in the **Bypass proxy for** field. (Use the separator | between addresses.)
5) Tap **CONNECT**.

4.1.6. USE STATIC IP ADDRESS

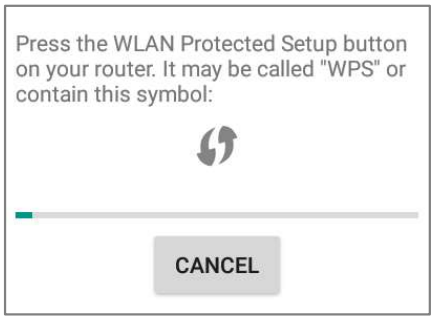
By default, the device uses DHCP to assign an IP address when connecting to a wireless network. You may set for the device to connect to a network using a static IP address.

I) Tap a network in the available Wi-Fi hotspot list.
2) Tap **Advanced** options
3) Tap **IP settings** and select **Static** in the pop-up menu.
4) Enter the IP address, gateway, network prefix length, DNS 1 address and DNS 2 address in the fields provided.
5) Tap **CONNECT**.

4.1.7. CONNECT WITH WI-FI PROTECTED SETUP (WPS)

Wi-Fi protected setup (WPS) allows easy establishment of a secure wireless network. The mobile computer supports WPS through push button configuration.

1) On the Wi-Fi hotspot scanning screen, tap **More** ⋮, select **Advanced** and then **WPS Push Button**.
2) A dialog will pop-up on the screen showing the remaining time allowed for pressing the WPS button on the router.



3) On your wireless router, press the WPS button. The device will connect to your router.

4.1.8. MODIFY WI-FI NETWORK

To change the settings for a connected network:

1) Tap and hold a connected network in the Wi-Fi hotspot list.
2) Tap **Modify network** in the pop-up menu.
3) In the dialog box that opens, modify the network settings, and tap **Save**.

4.1.9. DISCONNECT WI-FI NETWORK

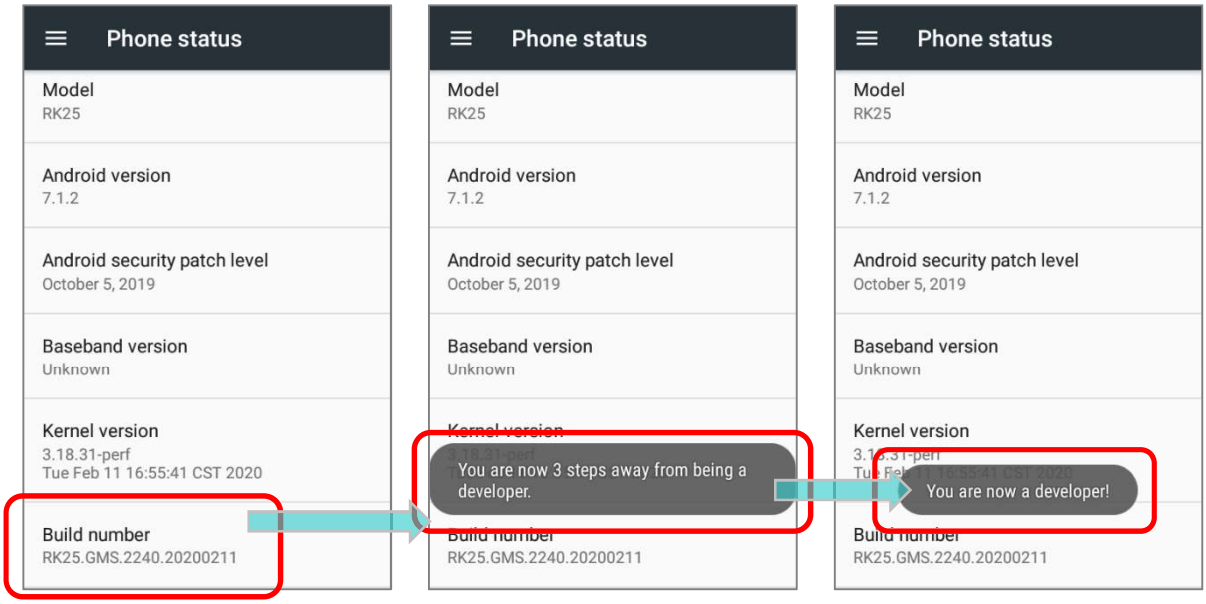
To disconnect a connected network:

1) Tap and hold a connected network in the Wi-Fi hotspot list.
2) Tap **Forget network** in the pop-up menu.

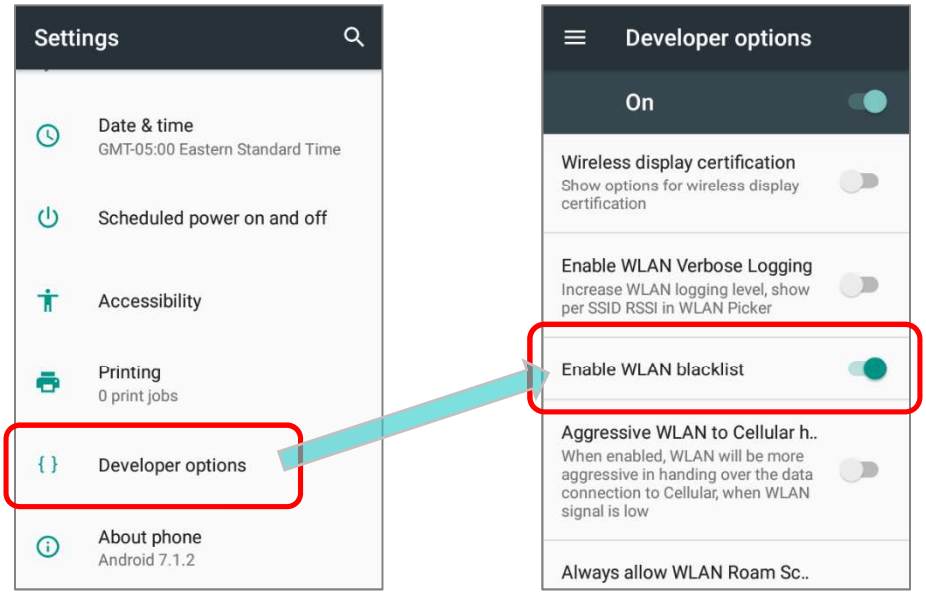
4.1.10. ENABLE WLAN BLACKLIST

"**WLAN blacklist**" is to deny the Wi-Fi AP (access point) which is failed to access for sever time, and add the denied AP to the blacklist. To enable/ disable "**WLAN blacklist**":

1) Enable "**Developer Options**" by going to **App Drawer** | **Settings** | **About phone**, and then tapping on "**Build number**" 7 times.



2) In **App Drawer** | **Settings** | **Developer option** { }, swipe down to "**Enable WLAN blacklist**"under "**Networking**", tap on the switch to turn on or off this function.



4.2. USE BLUETOOTH

The RK25WO mobile computer lets you configure Bluetooth settings and manage Bluetooth services provided on remote devices.

4.2.1. BLUETOOTH PROFILES

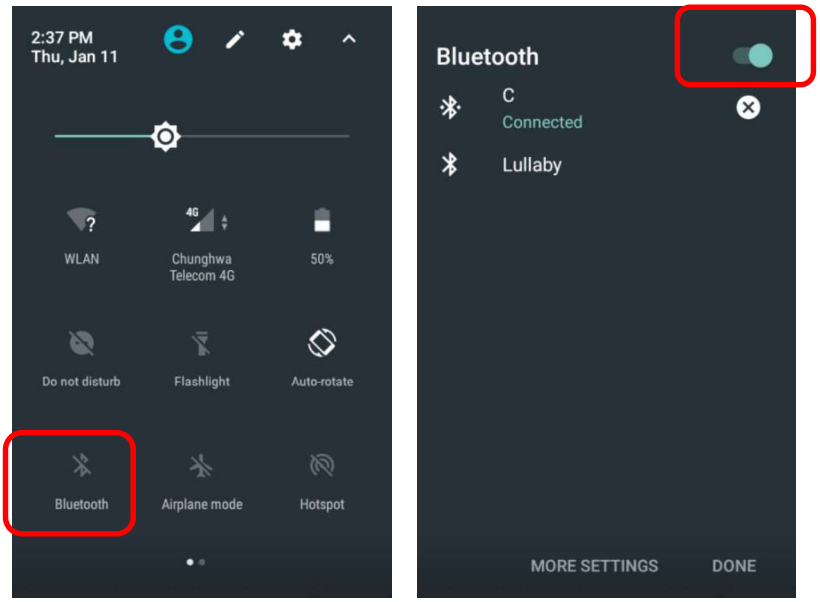
Bluetooth Profiles Supported

Generic Access Profile	(GAP)	For device discovery and authentication.
Service Discovery Access Profile	(SDAP)	Discovers services on remote devices.
Headset Profile	(HSP)	Describes how a Bluetooth enabled headset should communicate with a Bluetooth enabled device
Serial Port Profile	(SPP)	Sets up a virtual serial port to connect two Bluetooth devices.
Human Interface Device Profile	(HID)	Provides a low latency Bluetooth connection with keyboards, pointing devices, etc.
Object Push Profile	(OPP)	Pushes and pulls objects to and from a push server.
Hands-Free Profile (AG1.5)	(HFP)	Allows using a hands-free device to place and receive calls.
Advanced Audio Distribution Profile	(A2DP)	Streams stereo-quality audio to a wireless headset or speaker.
Audio/Video Remote Control Profile	(AVRCP)	Allows controlling of television and Hi-Fi equipment.
Generic Object Exchange Profile	(GOEP)	Provides a basis for other data profiles.
Personal Area Networking Profile	(PAN)	Uses Bluetooth Network Encapsulation Protocol for Bluetooth transmission.
General Audio/Video Distribution Profile	(GAVDP)	Provides a basis for A2DP and VDP.
Phone Book Access Profile	(PBAP)	Transfers Phone Book Objects to a car kit to display the information of an incoming call received on the mobile computer, or initiate a call.
Out of band and Near Field Communications	(OOB, NFC)	Manages the pairing process by using NFC.
Symbol Serial Interface Profile	(SSI)	Supports additional scanner.
Dial-up Networking Profile	(DUN)	Provides a standard to access the Internet and other dial-up services over Bluetooth.

4.2.2. TURN ON BLUETOOTH

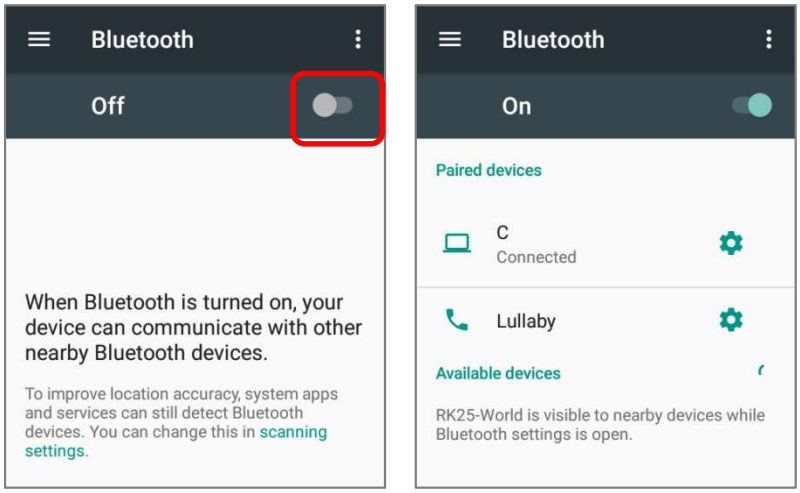
By default, Bluetooth is turned off, to turn it on:

1) Use two fingers to swipe down from the top of the screen to open **Quick Settings**.
2) Tap **Bluetooth** to turn on this function while enabling the Bluetooth visibility of this device.



OR

1) Go to **App Drawer** | **Settings** | **Bluetooth**.
2) Tap the switch to turn on this function while enabling the Bluetooth visibility of this device.

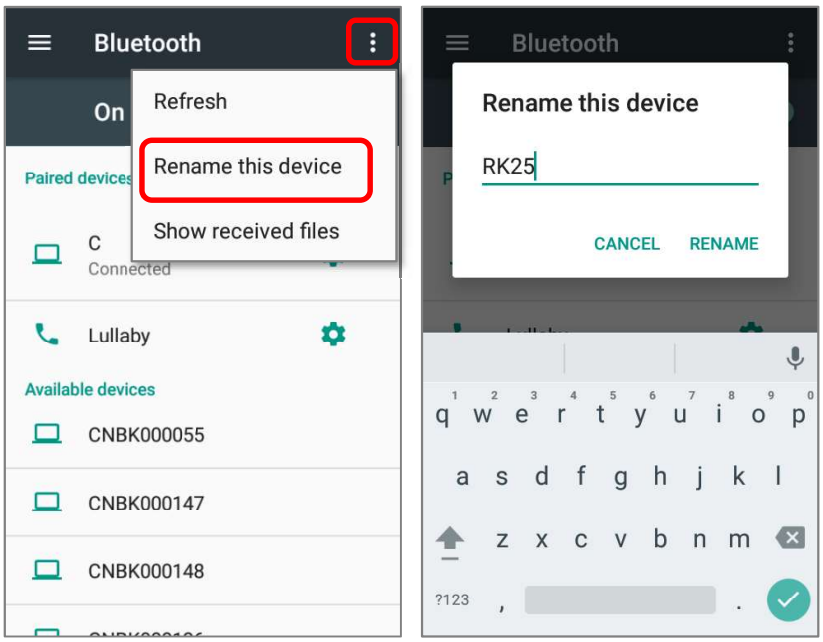


Note:
Having been turned on, Bluetooth is active even when the mobile computer is suspended. However, if the power mode is switched to Airplane Mode, Bluetooth power will be turned off regardless of the settings.

4.2.3. CHANGE BLUETOOTH NAME

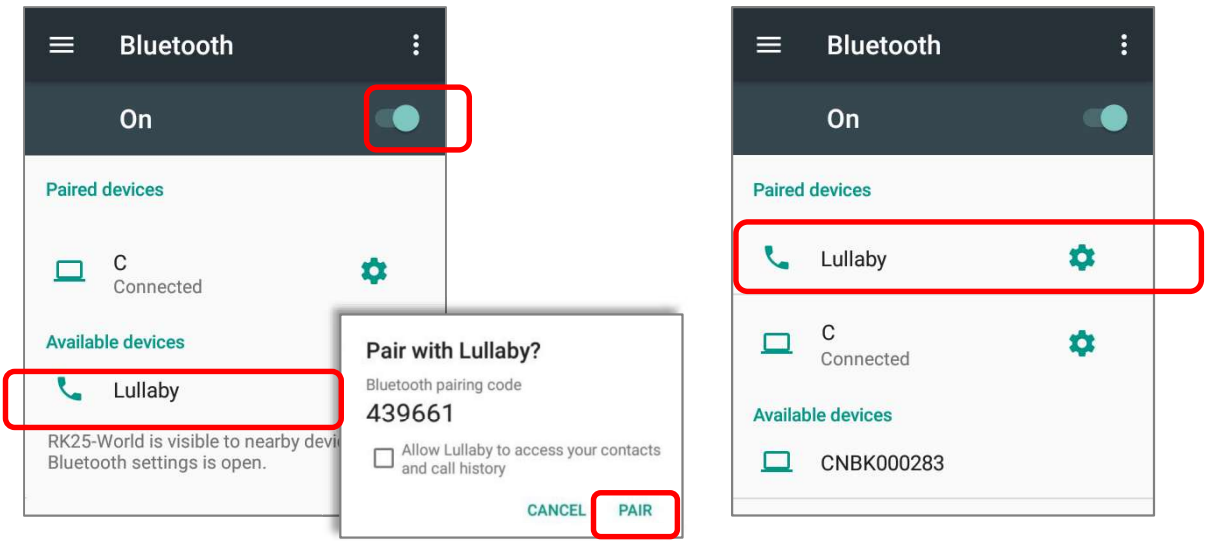
To change the Bluetooth name of this mobile computer:

1) On the available Bluetooth devices screen, tap **More** and select **Rename this device** in the pop-up menu.
2) Type a new name in the field and tap **RENAME**.



4.2.4. PAIR BLUETOOTH DEVICES

1) Go to **App Drawer** | **Settings** | **Bluetooth**.Tap the switch to **On** to scan for available Bluetooth devices nearby. Scroll through the list and tap the device you would like to pair.
2) The **Bluetooth pairing request** window opens. Depending on the pairing settings of the Bluetooth device, you may need to enter a passkey, or confirm the assigned passkey on the device to pair if a smart pairing method is applied. Enter/confirm the passkey on the device to pair.
3) Once pairing is done, the Bluetooth device will be listed in the **Paired Devices** list.

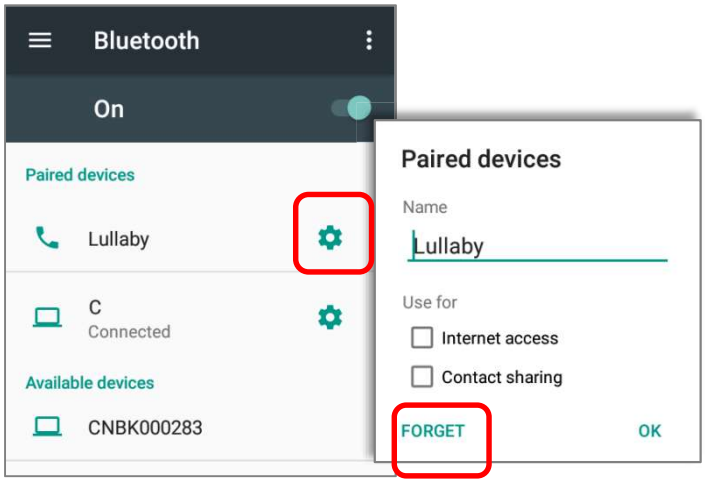


Note: If the device you would like to pair with is not listed, make sure Bluetooth visibility is enabled on the device.

4.2.5. UNPAIR BLUETOOTH DEVICE

To unpair a paired device:

I) In the **Paired Devices** list, tap the settings button next to the paired device.
2) On the **Paired device** screen, tap **FORGET**.



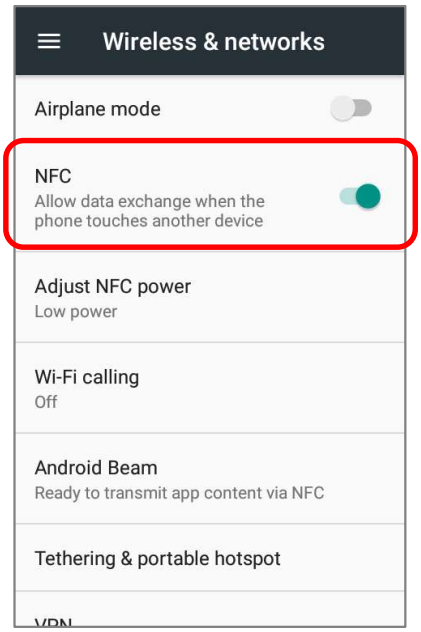
4.3. USE NEAR FIELD COMMUNICATIONS

Near field communications (NFC) uses close proximity (4 cm or less) to establish radio communication through electromagnetic fields. With NFC enabled, the mobile computer can collect information from NFC tags, exchange information with other NFC supported devices, and even change information on the NFC tag if authorized.

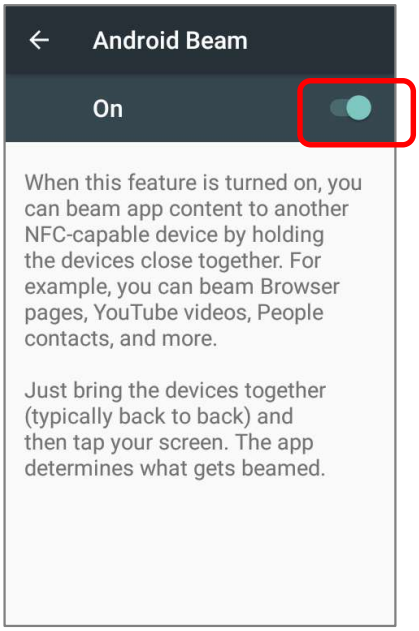
Before starting to communicate through NFC, perform the following:

1) On the mobile computer, go to **App Drawer** | **Settings** | **More**

2) On the Wireless & networks page, make sure the **NFC** switch is enabled.



3) Tap **Android Beam** and enable it.



Note: NFC is optional for only 28-Key model.

PAIR WITH NFC ENABLED BLUETOOTH DEVICES

1) On the device you would like to pair with, make sure NFC is enabled and Bluetooth discovery is enabled.
2) Hold the mobile computer without covering the antenna area.

3) Move the mobile computer in proximity with the device for pairing. A screen notification will appear to indicate that pairing is successful.

Note:

NFC function is unavailable for 70° tilted reader model and 25-Key model.

SHARE INFORMATION

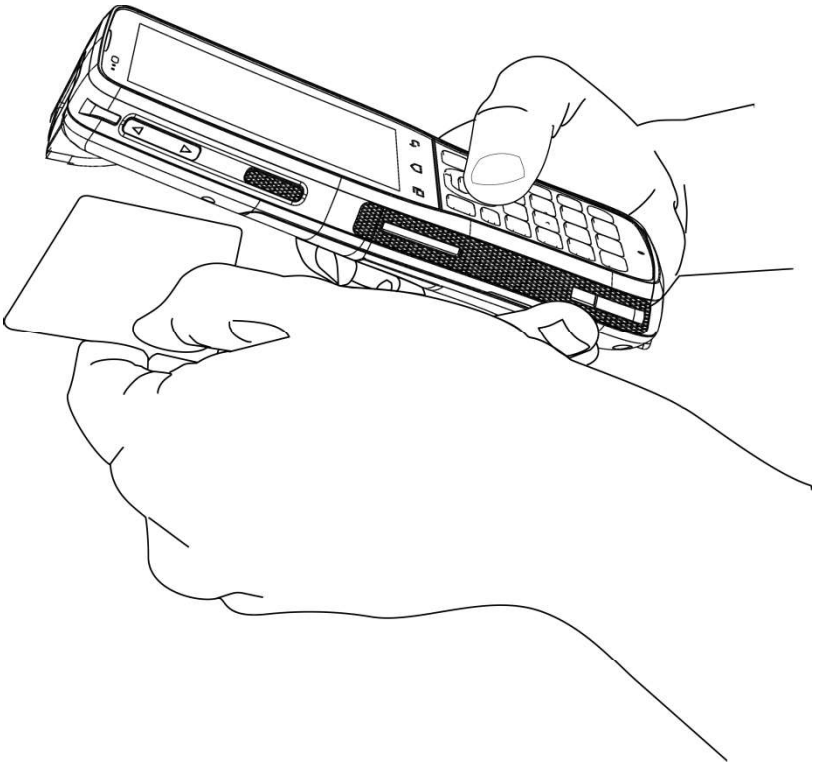
1) Open the web page, video, photo or contact info page you would like to transfer.
2) Place the back of the mobile computer in close proximity with the other device you would like to share data with.
3) When the two devices connect, a **"Touch to beam**" notification will appear on the screen.
4) Touch the screen to initiate data transfer.

Note:

Once the data begins to transfer, the two devices only need to be held within a 10 m (32.8 ft.) range; they no longer have to be held within close range in order to transfer successfully.

COMMUNICATION WITH NFC

1) On the mobile computer, launch an NFC enabled application.
2) Hold the mobile computer without covering the antenna area.
3) Place the mobile computer close to the NFC tag or device until the application indicates data transfer is complete.



Chapter 5

USING READER CONFIGURATION UTILITY

The **Reader Configuration** utility allows you to manage the barcode reader integrated on the mobile computer.

IN THIS CHAPTER

5.1 ReaderConfig Profile Managment 177
5.2 Configuring Reader 186
5.3 Read Printed Barcodes 212

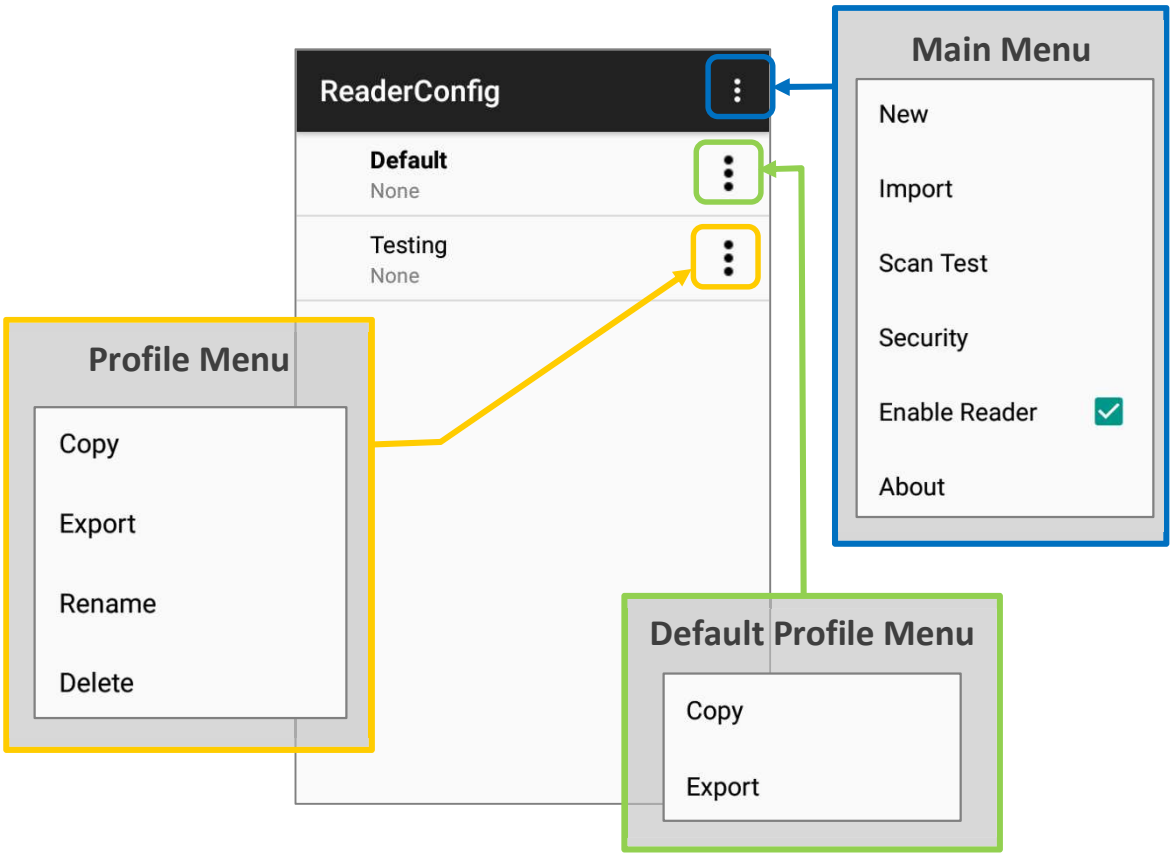
5.1. READERCONFIG PROFILE MANAGMENT

The mobile computer is capable of reading printed barcodes. The reader module can be either a (laser) 1D reader or a 2D imager. The mobile computer is installed with a ***ReaderConfig*** to configure the scan engine built inside. Use it to create a profile of settings that best suits your needs.

LAUNCH READERCONFIG

To launch ***ReaderConfig***, please go to ***App Drawer (All Apps)*** | ***ReaderConfig*** to open the reader configuration utility.

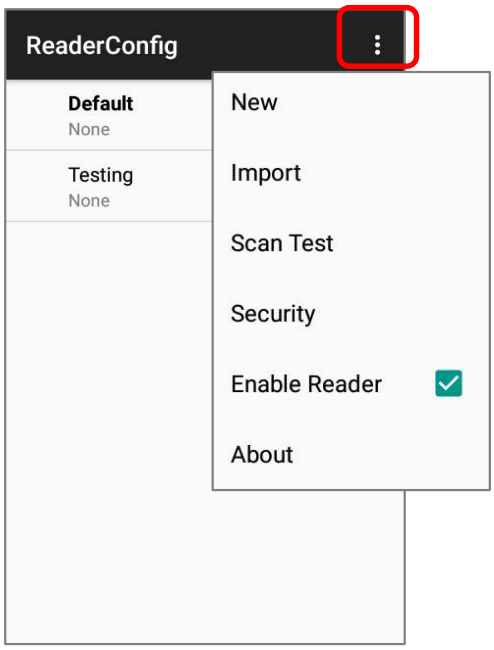
The main screen of ***ReaderConfig*** consists of main menu and a list of profiles, including a "***Default***" profile which cannot be deleted. Next to each profile, there is also a profile menu which includes a set of operations that are specific to the profile.



Note:
The "Default" profile is always enabled. Please refer to "Profile" for how to enable a profile.

5.1.1. READERCONFIG MAIN MENU

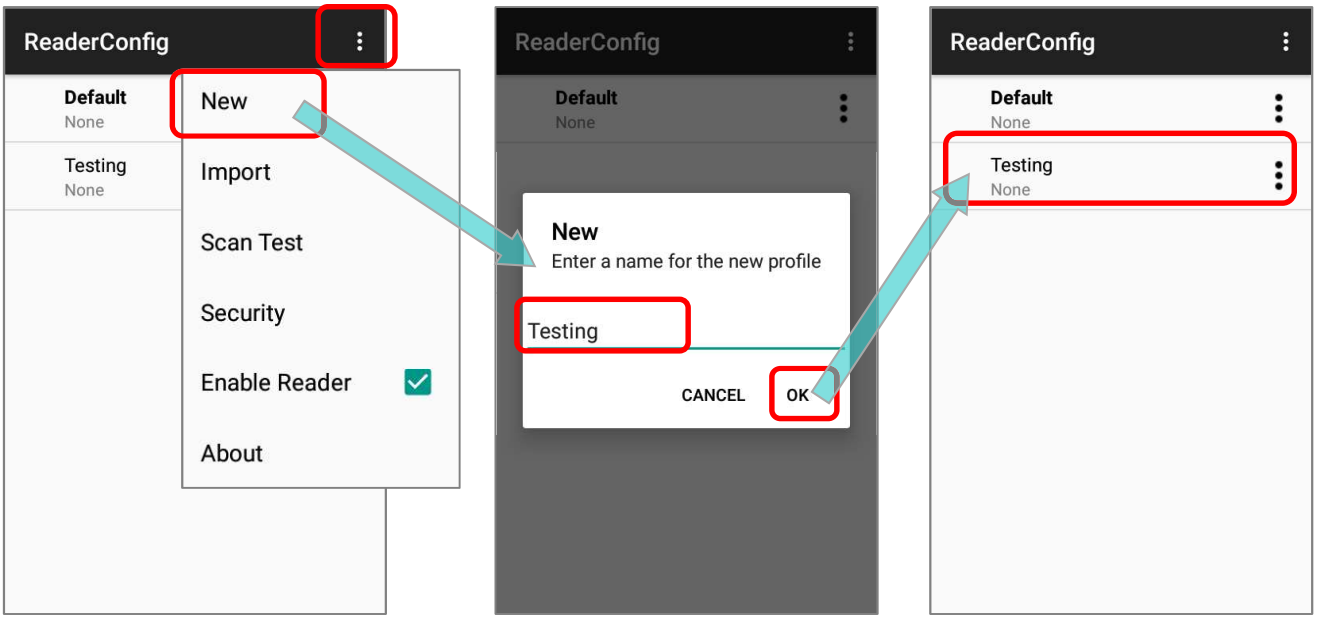
ReaderConfig provides an main menu which is accessible on the action bar of the main screen. This menu allows you to create new profiles, import profile(s) in a re-usable format, test scan barcodes, set a password for certain configurations of ReaderConfig, and view copyright and version information.



NEW

To create a new profile, please:

1) Tap the more button on the action bar to display the main menu.
2) Tap "**New**" and enter a name for new profile in the pop-up dialog**.** Tap "**OK**" to create the profile.



IMPORT

ReaderConfig supports saving the profile settings and exporting them as a ***.json*** file.

Previously exported profile(s) can be imported again on the mobile computer. This can also be used to implement identical ReaderConfig settings on multiple devices.

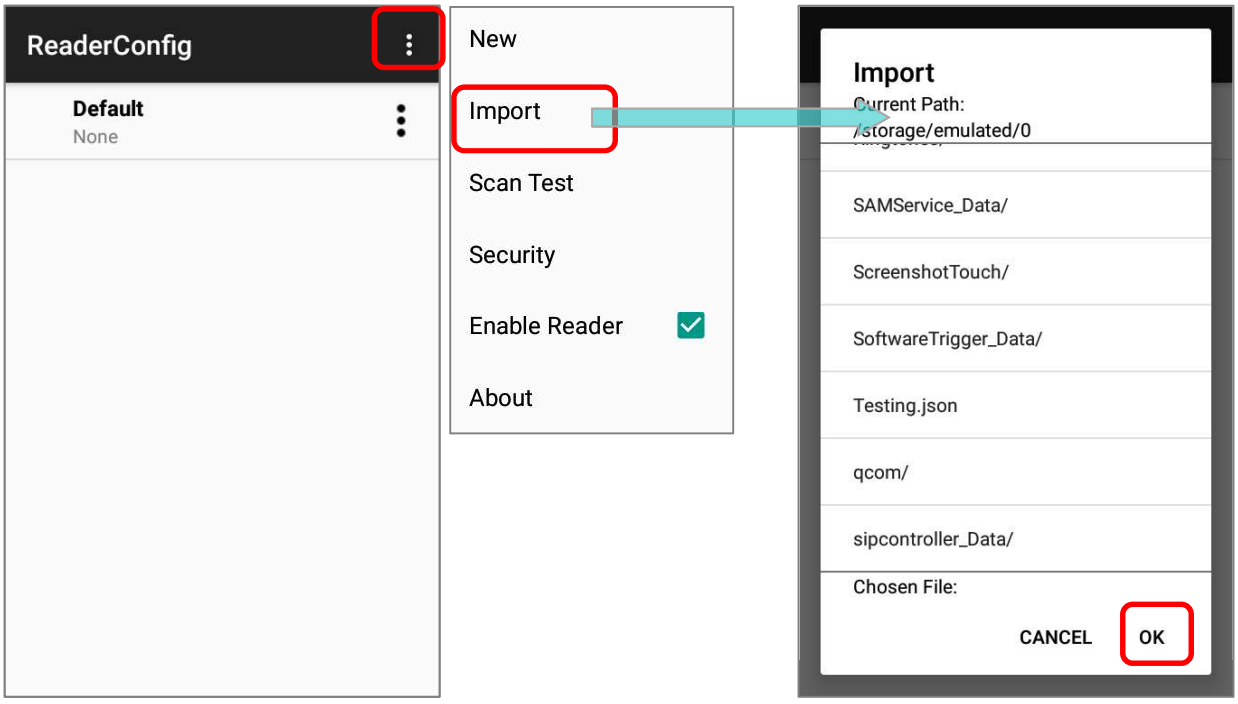
To import settings:

1) Open ***ReaderConfig*** as described in Launch ReaderConfig.

2) Tap the more button on the action bar to open the main menu.

3) Tap ***Import*** in the option menu.

   A page opens allowing you to select a previously saved profile.



4) Tap ***OK***. In a few seconds a prompt will appear on the mobile computer to indicate settings have been imported successfully.

Note:
As to exporting a profile, please refer to "Export" of "Profile Menu".

When importing a profile that has the same name with an existing profile, a confirmation dialog appears to make sure whether you really want to replace existing profile with the one to be imported.

Tap on ***OK*** to proceed importing.

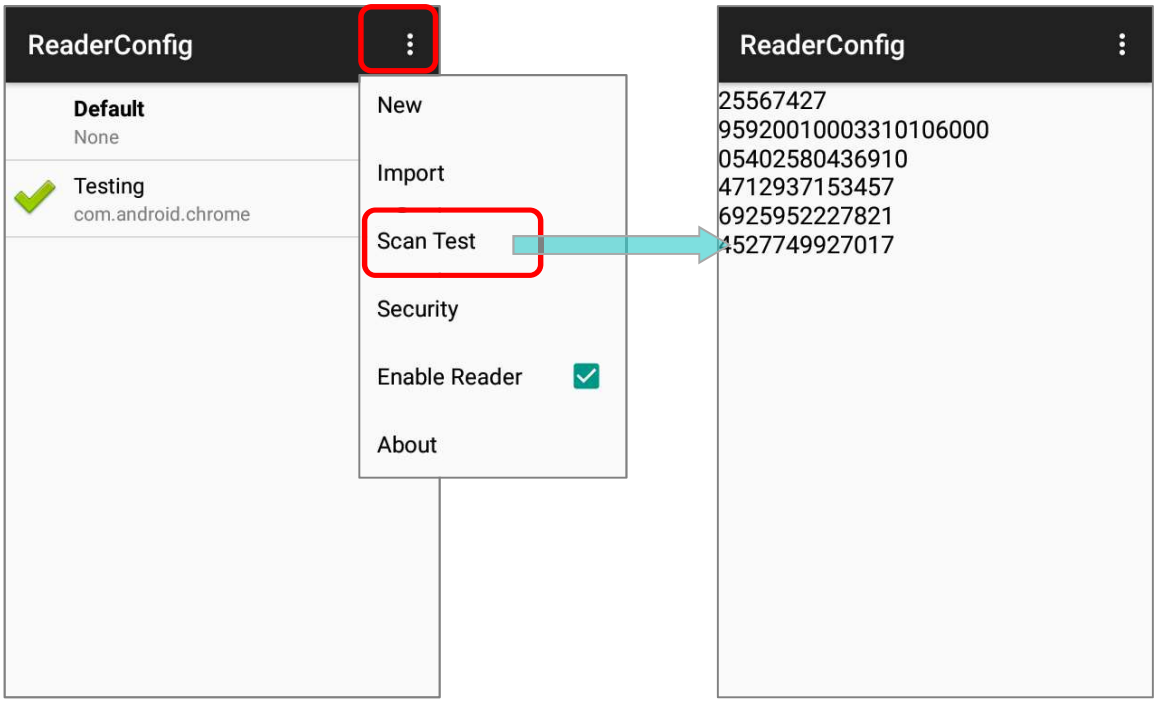
SCAN TEST

To test scan a barcode:

1) Open ***ReaderConfig*** as described in Launch ReaderConfig.

2) Tap the more button on the action bar to open the option menu.

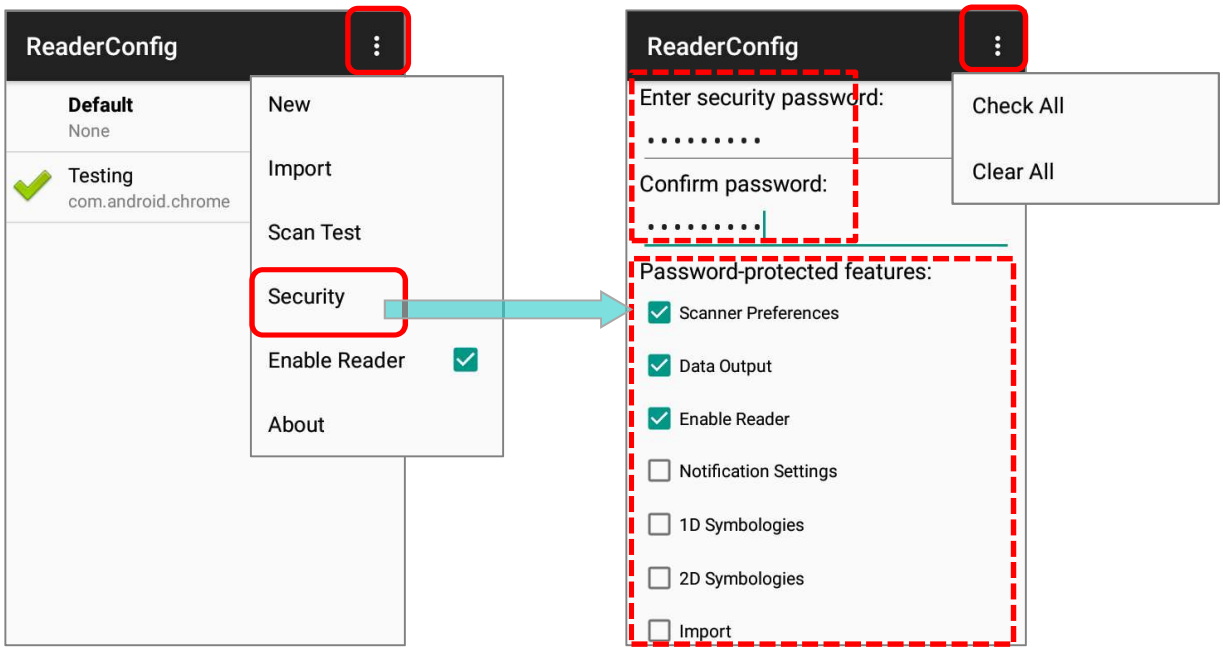
3) Tap ***Scan Test*** in the main menu. A page opens for test scanning.



SECURITY

You can set a password to restrict other users of this mobile computer from changing certain configurations or accessing certain functions in ReaderConfig.

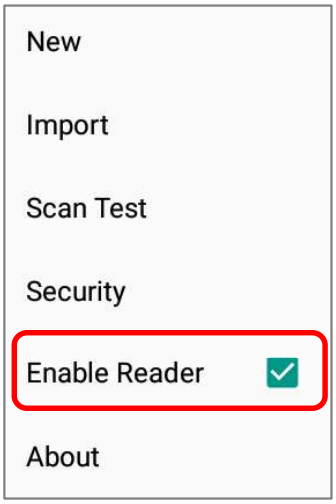
1) Open ***ReaderConfig*** as described in Launch ReaderConfig.
2) Tap the more button ⋮ on the action bar to open the option menu.
3) Tap ***Security***.
4) Enter and confirm a password
   (up to 32 characters, containing at least 1 digit or 1 alphabetic letter).
5) Check the items that will be protected by this password.



ENABLE READER

Tick or untick the checkbox to enable or disable reader scanning ability. When enabled, a light beam will be sent out from the scanning window each time the trigger (scan key) is pressed.

By default, the reader is enabled.

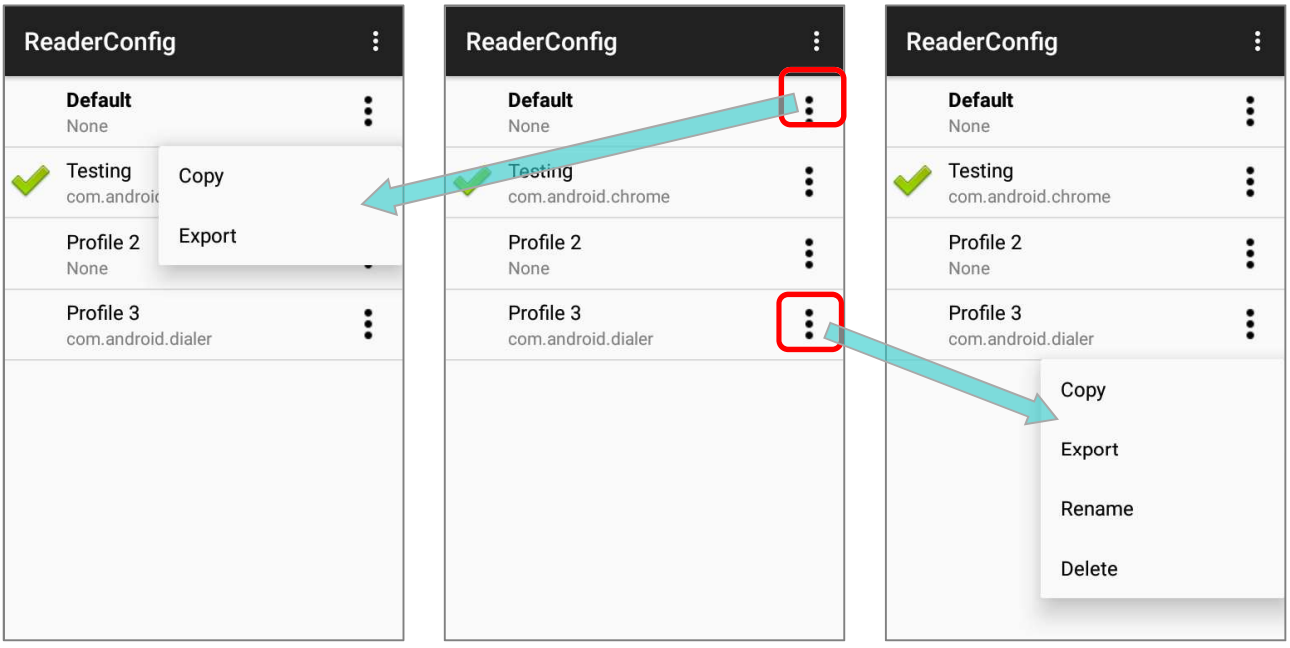


ABOUT

Tap ***About*** in the ***ReaderConfig*** main menu to display software version and copyright information.

5.1.2. PROFILE MENU

Tap more button on the right of the profile to display the profile menu. The profile menu contains options that are specific to the profile. The options are described in the followings sections:

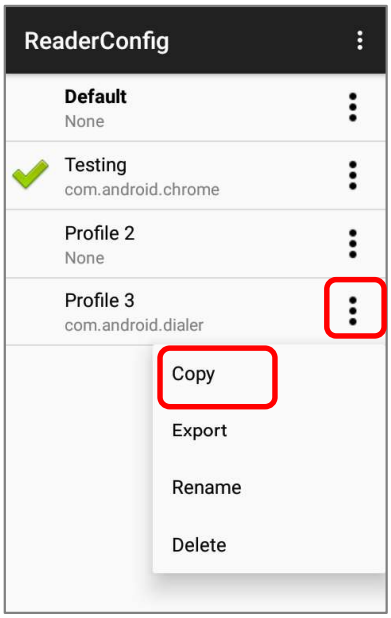


Default Profile Menu **Profile Menu**

COPY

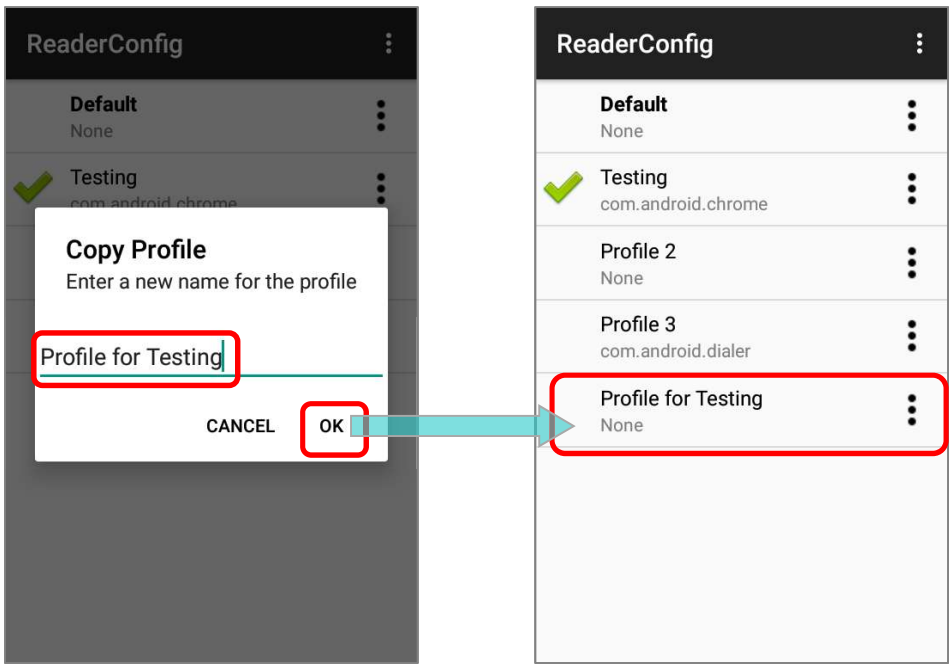
You can copy an existing profile and make changes from it.

To copy a profile:



1) Tap the more button next to the profile you would like to copy, and select "**Copy**" from its profile menu.

2) Enter a name for the new profile and press the "**OK**" button to make a copy.



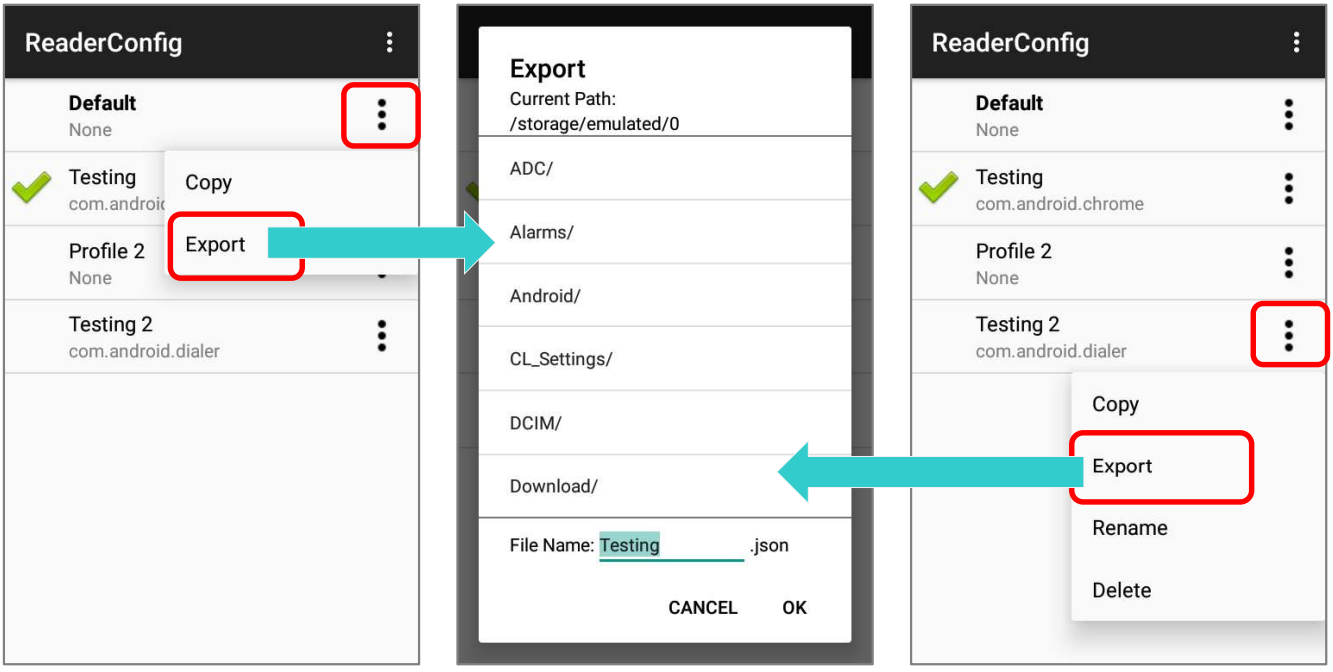
Note: An app can be set as the associated app to only one profile. Thus, the "Profile" part will not be duplicated when copying a profile.

EXPORT

To export a profile, tap the more button next to the profile that you would like to export and select "***Export***". An export page opens allowing you to enter the name and location of the profile to save.

Tap ***OK*** to export. A prompt will appear on-screen to notify that settings have been exported.

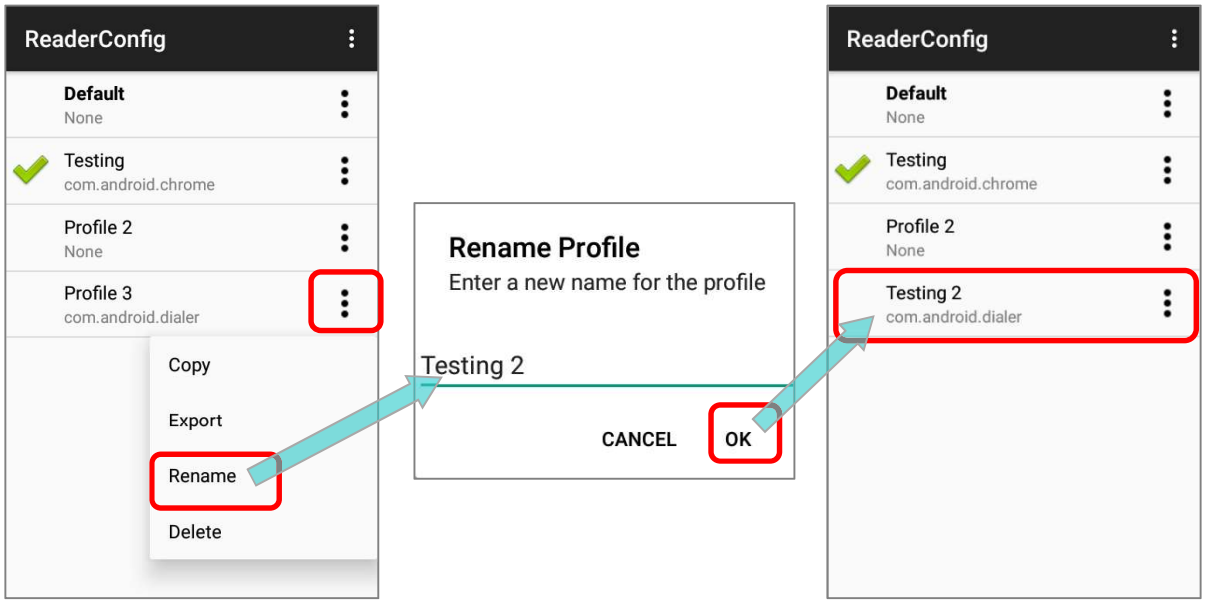
Default Profile Menu **Profile Menu**



Note: **The exporting profiles will be saved as a .json file.**

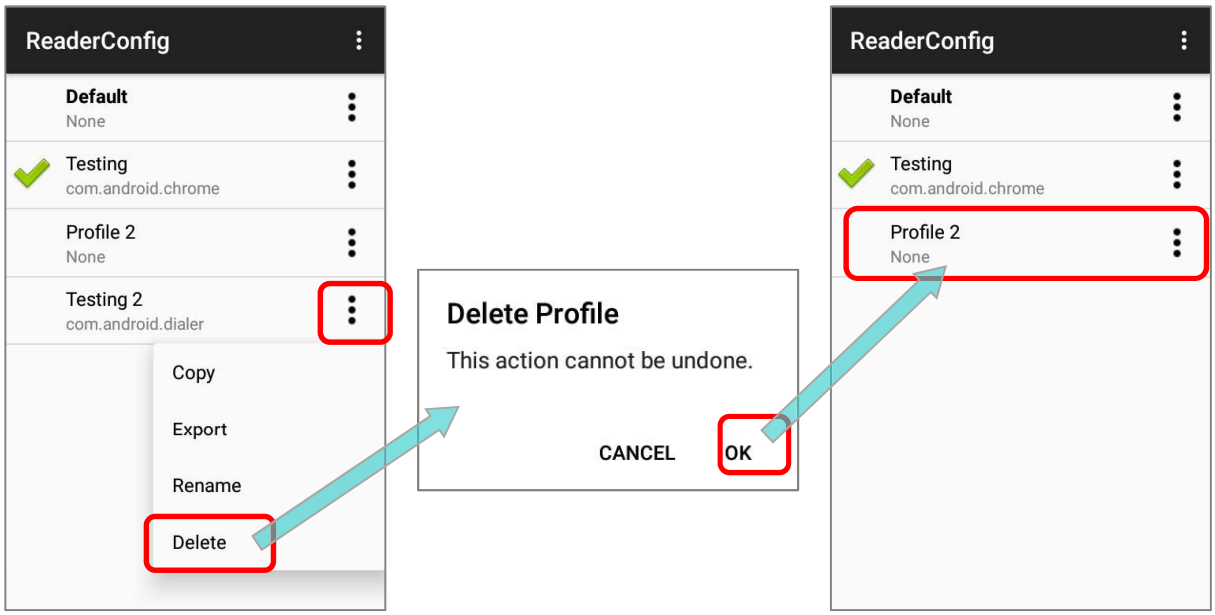
RENAME

To rename an existing profile, simply tap on the more button next to the profile you'd like to rename and select "***Rename***". Then, enter a new name for the profile. Finally, tap "***OK***" button to change its name.



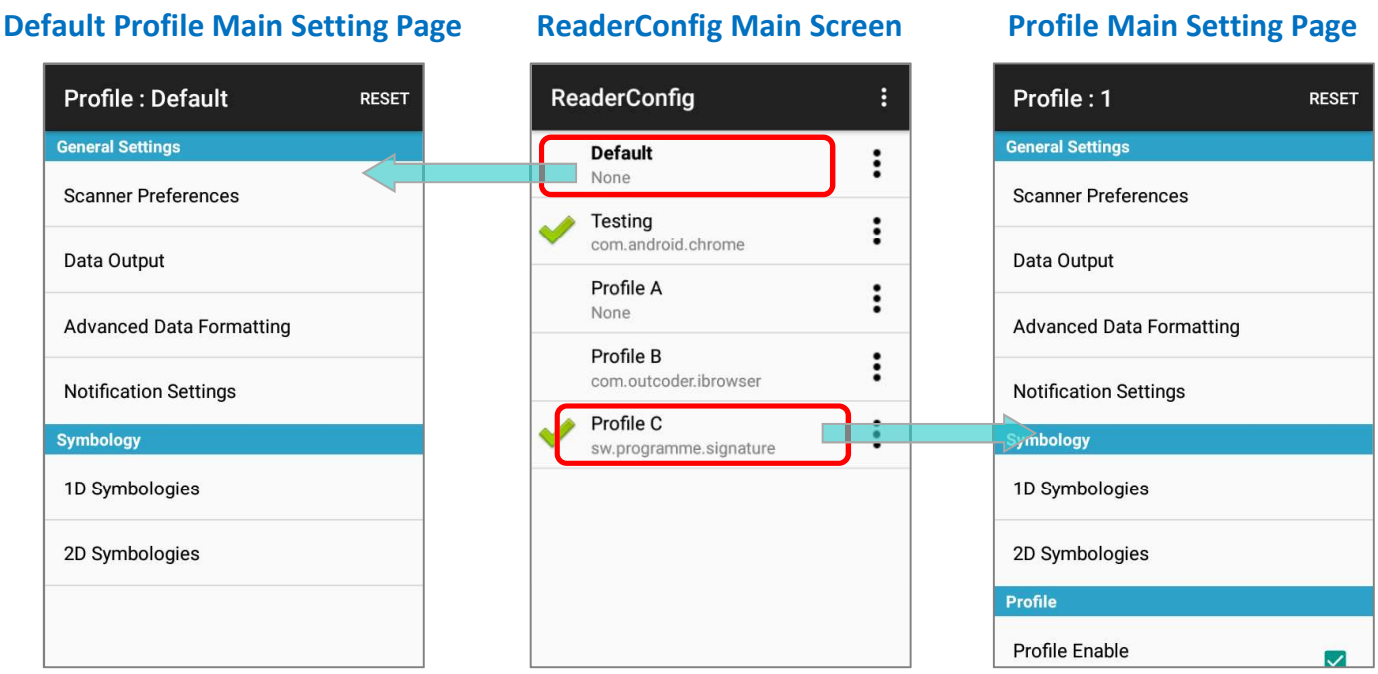
DELETE

To delete a profile, simply tap on the more button next to the profile you would like to delete and select "***Delete***". Tap "***OK***" on the confirmation dialog to delete the profile.



5.2. CONFIGURING READER

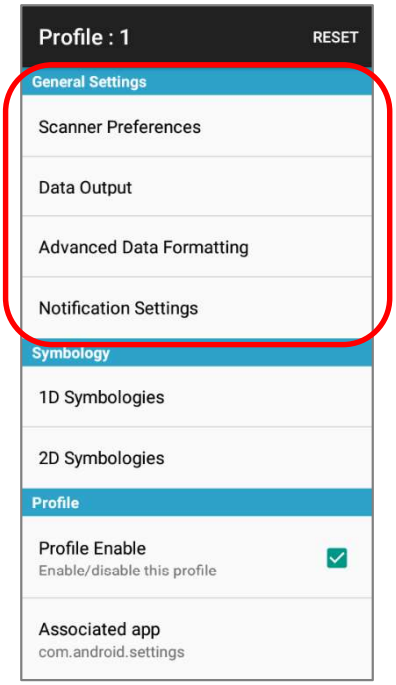
Tap on a profile to enter the profile main page for further settings.



ReaderConfig launches in context with the reader module(s) on board the mobile computer. On the profile main settings page are three sections: ***General Settings***, ***Symbology*** and ***Profile***.

5.2.1. GENERAL SETTINGS

General Settings is where all reader settings are accessed from. Tap each item to enter its sub-menu.



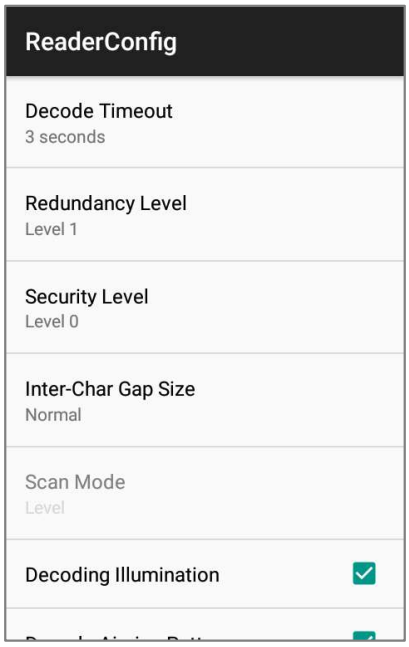
The functions under ***General Settings*** include:

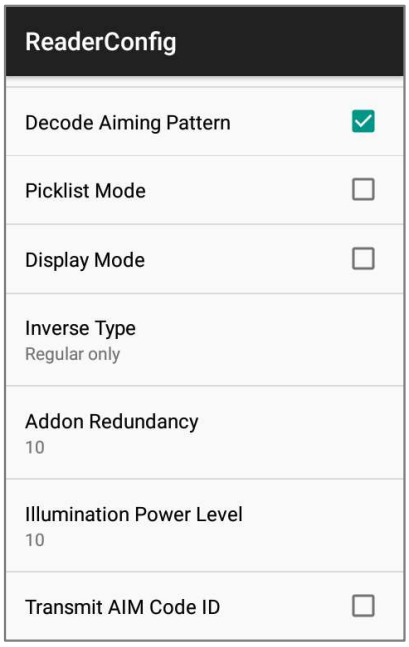
- Scanner Preferences
- Data Output
- Advanced Data Formatting
- Notification Settings

SCANNER PREFERENCES

Options on the ***Scanner Preferences*** page differ according to the type of scan engine built within the mobile computer.

Simply tap on ***Scanner Preferences*** to open ***Scanner Preferences*** page:





2D IMAGER SETTINGS

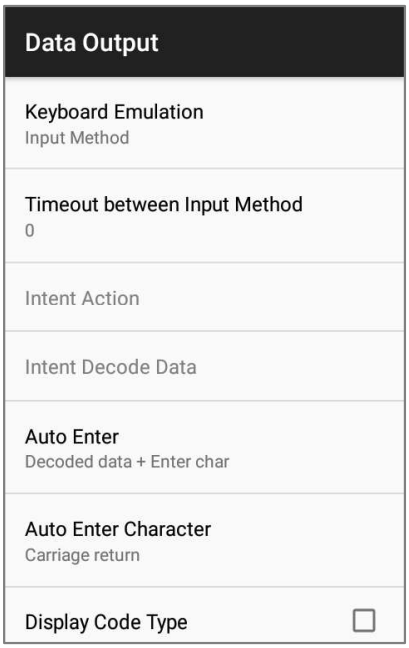
Setting	Description	Default
Decode Timeout	Sets the maximum time for the decoding process during a scan. Configurable between 1 sec to 9 sec.	3 sec.
Redundancy Level	Sets how many successful readings should be done before linear barcodes such as Codabar, MSI, and Interleaved 2 of 5 can be decoded. Levels 1 to 4 available.	Level 1
Security Level	Sets the security level to ensure decoding accuracy considering the printed quality of barcodes such as Code 128, Code 93, and UPC/EAN. The higher the level is, the more security is ensured. Options are:	Level 0

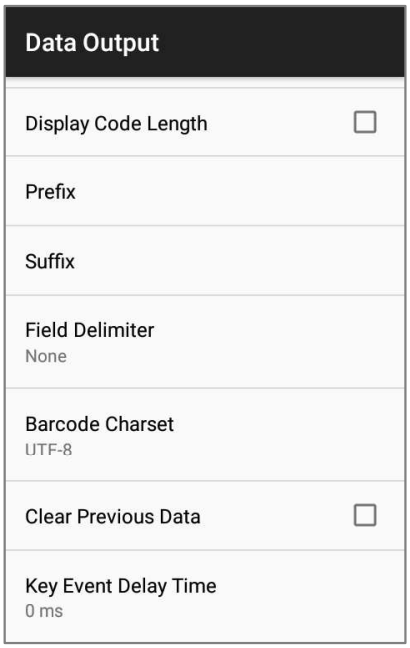
Level	Description
0	**With this default, the scan engine is aggressive enough to decode most "in-spec" barcodes.**
1	**Select this level if misdecodes have occurred. It fixes most misdecodes.**
2	**Select this level if Level 1 should fail to eliminate misdecodes.**
3	**Select this level if Security Level 2 should fail to prevent misdecodes. However, as this level actually impairs the decoding ability of the decoder, a safer solution would be to improve the quality of the bar codes to read.**

Setting	Description	Default
Inter-Char Gap Size	Sets the intercharacter gap size for Code 39 and Codabar. This option is to allow the digital scanner to adjust its decoding standard so as to tolerate out-of-specification bar codes that are improperly printed out (which may cause the intercharacter size to become larger). Switch between **Normal** and **Large**.	Normal
Scan Mode	Sets the reader's scanning behavior. **Level Mode**: The decoding process is activated by a trigger event, and continues until the trigger event ends, a valid decode happens or decode session time-out is reached. **Release Scan Mode**: Keep pressing the scan key to project the aiming pattern, and the decoding process is not triggered till the scan key is released. **Aimer Mode**: Press the scan key once to project the aiming pattern, and then press the scan key again (before the aiming pattern fades) to trigger the decoding process. **Level and Aim Mode**: Press the scan key once to project the aiming pattern and then press again to decode. The aiming pattern remains after successfully decoding, and the reader is ready to decode by pressing the scan key again.	Level
Aimer Mode Timeout	A time period that the aiming pattern is projected for **Aimer Mode**. This function is only available when setting **Scan Mode** as **Aimer Mode** or **Level and Aim Mode**.	3
Decoding Illumination	Enables an LED light beam to aid barcode reading.	Selected (Enabled)
Decode Aiming Pattern	Projects a crosshair at the center of the laser light beam to facilitate barcode reading.	Selected (Enabled)
Picklist Mode	When selected, only barcodes aligned at the crosshair of the laser light beam will be decoded.	Deselected (Disabled)
Display Mode	Enable improved performance for reading barcodes on electronic displays and mobile phones.	Deselected (Disabled)
Inverse Type	Decide whether to disable or enable decoding inverse barcodes, or set as auto.	Regular only
Addon Redundancy	Functions when "auto-discriminate" is applied for UPC/EAN addons. Decides the number of times of supplemental decoding of the same barcode in order to count as a valid read. Configurable between 2 and 30.	10
Illumination Power Level	Users can adjust the illumination brightness of the LED light source. Move the slider to specify a value ranging from 1 to 10 to set the brightness level which is set to 10 by default meaning 100% illuminated.	10
Transmit AIM Code ID	Sets whether to include AIM code ID character in the decoded data. For AIM code ID, see the following: Code 128 Emulation of 2D Imager Symbology Settings.	Deselected (Disabled)

DATA OUTPUT

Data Output allows users to set the way to output decoded data.





DATA OUTPUT METHOD

Keyboard Emulation setting controls in which way the data is sent. Tap the switch to enable. When enabled, the reader module treats decoded data as typed text and outputs it to the active application on the mobile computer. The default setting is "**Input Method**", and the options are:

Item	Descriptions
None	Disables keyboard emulation. The decoded data will be sent by the broadcast intent message. By selecting "None", you can further set the followings: ▸ **Intent Action:** Specify the intent name according to the application which will receive the decode intent. ▸ **Intent Decode Data:** Define the intent data name according to the application which will receive the decode intent.

Item	Descriptions
Input Method	Allows the active application to receive characters or symbols that can be input by the input method.
Key Event	Allows the active application to receive characters or symbols that can be input by key events.
Copy & Paste	Copy the decoded data and paste it to the active application.
Intent & KeyEvent	The decoded data will be sent by the brocadcast, and enable keyboard emulation via key event.

HOW TO OUTPUT

After determining the keyboard emulation type, please configure how to output decoded data, i.e. the "format" to present decoded data.

Setting	Description	Default
Timeout between Input Method	To specify the pause time between data to be transmitted. The function is only available if "**Keybaord Emulation**" is set as "**Input Method**".	0
Auto Enter	Adds an ENTER character before or after each string of decoded data. The ENTER character can be defined in the "Auto Enter character" field below. This function saves the trouble of pressing a confirmation key to accept each string of decoded data. Options are: ▸ Disable ▸ Decoded data + Enter char ▸ Enter char + Decoded data	Decoded data + Enter char
Auto Enter character	Adds a key code before or after the decoded data. If [Auto Enter] is enabled, select the ENTER character to send. Options are: ▸ None ▸ Carriage Return ▸ Tab4 ▸ Space ▸ Comma ▸ Semicolon	Carriage Return
Display Code Type	Prefixes the output data with code type information.	Deselected (Disabled)

Setting	Description	Default
Display Code Length	Suffixes the output data with code length information.	Deselected (Disabled)
Prefix	Affixes 0 to 20 characters to the left of the output data. Tap the label to open a character table for entering the prefix. ▸ Prefixes containing invisible characters are supported.	--
Suffix	Affixes 0 to 20 characters to the right of the output data. Tap the label to open a character table for entering the suffix. ▸ Suffixes containing invisible characters are supported.	--
Field Delimiter	Sets the delimiter to separate the output barcode data to the following pieces: code type, decoded barcode data, and code length (if applicable). Options are: ▸ None ▸ Comma ▸ Semicolon ▸ Full stop	None
Barcode charset	Specifies the current decoding for barcode data.	UTF-8
Clear Previous Data	By enabling this option, only the last scanned data entry will be output.	Deselected (Disabled)
Key Event Delay Time	Set the millisecond you need to postpone the key event triggered by the decoded data.	0 ms

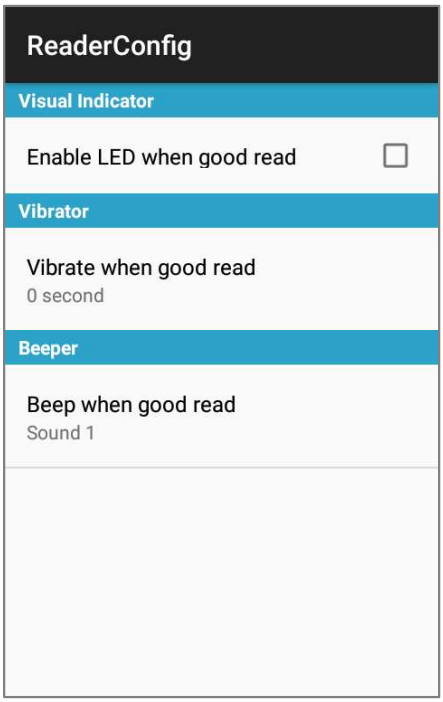
ADVANCED DATA FORMATTING

Advanced Data Formatting is to customize the decoded data and then output it by rules, and therefore ***Advanced Data Formatting*** rule(s) needs to be created beforehand. A rule combines "***criteria***" with "***actions***" to be performed. If the decoded data meets the "criteria", it will be output according to the "actions".

Please refer to section 5.2.2 "***Advanced Data Formatting***" for further description.

NOTIFICATION SETTINGS

Notification Settings enables audible, visible and tactile feedback for scanning good read, which helps notify the user of a successful decoding.



Setting		Description	Default
LED	Enable LED when good read	Selects to enable/disable LED light (left) for scanning good read. See Status LED for details.	Deselected (Disabled)
Vibrator	Vibrate when good read	Enables/disables tactile feedback (vibration) for good read and sets the duration to vibrate.	0 second (Disabled)
Beeper	Beep when good read	Sets the beeper sound for scanning good read. Users can choose to mute the beeper sound, or configure the beeper between sounds 1 to 9.	Sound 1

5.2.2. ADVANCED DATA FORMATTING

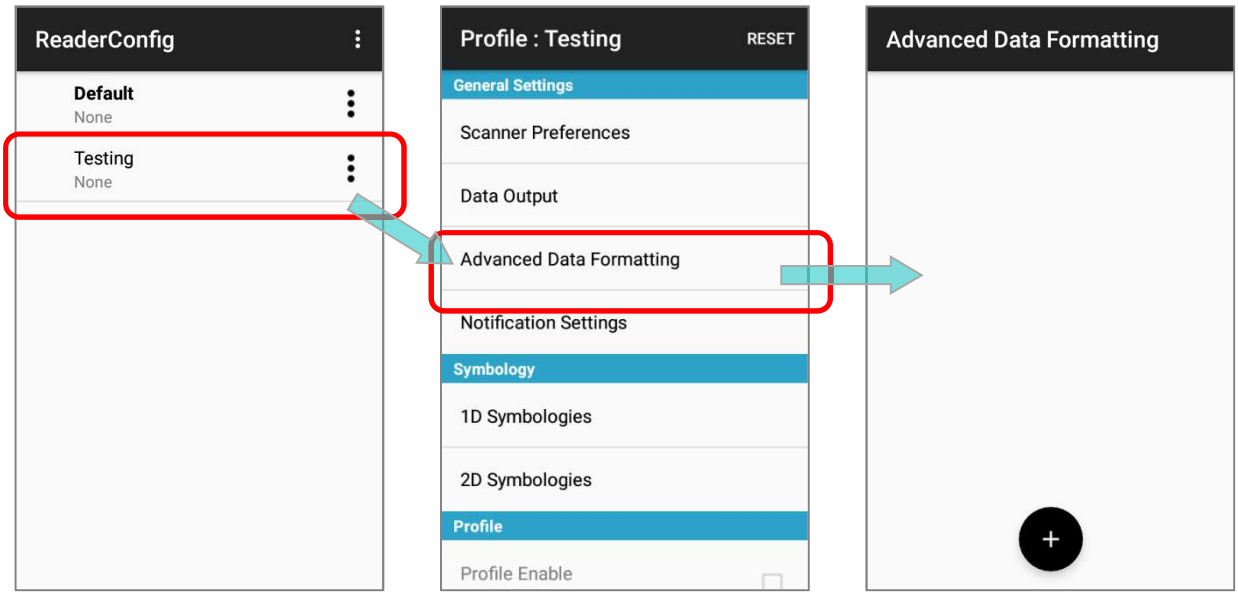
User can customize the output data through the defined rules in "***Advanced Data Formatting***".

CREATE A NEW RULE

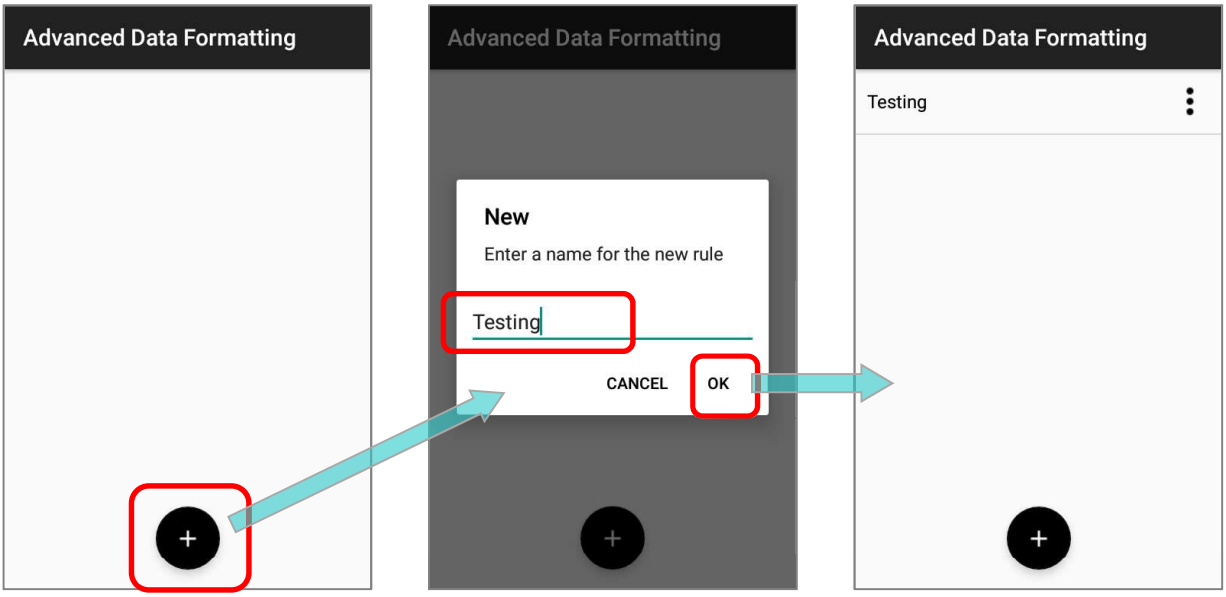
Please follow the steps below to create a new rule:

1) Launch the app ***ReaderConfig*** and tap to enter the profile you would like to set.

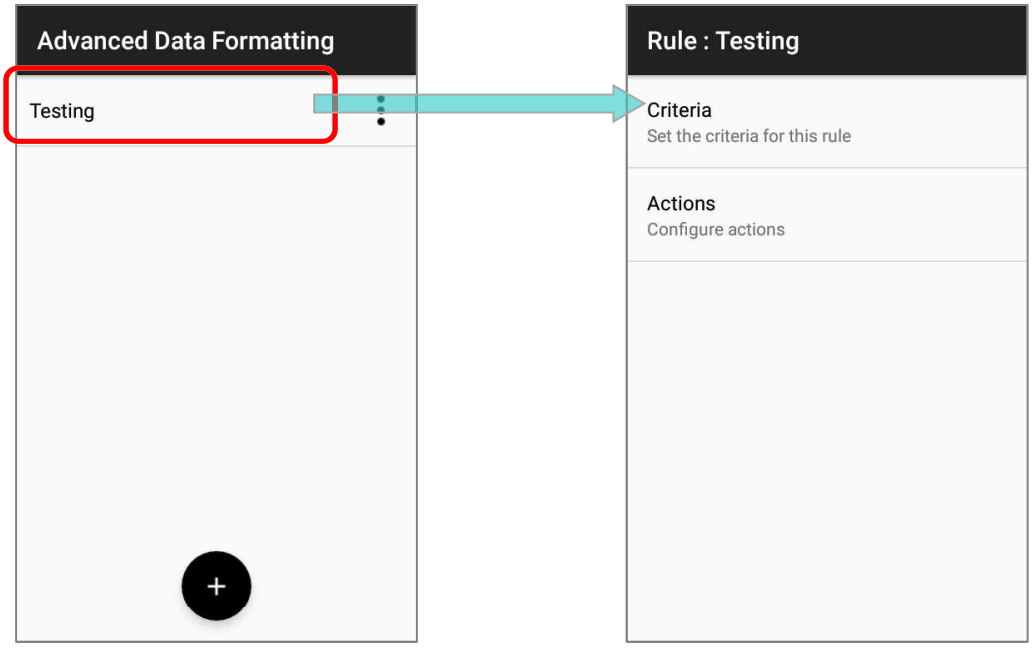
2) Tap on "***Advanced Data Formatting***".



3) Tap on the "***Add***" button + and enter the name for this new rule. Create it by tapping on "***OK***".

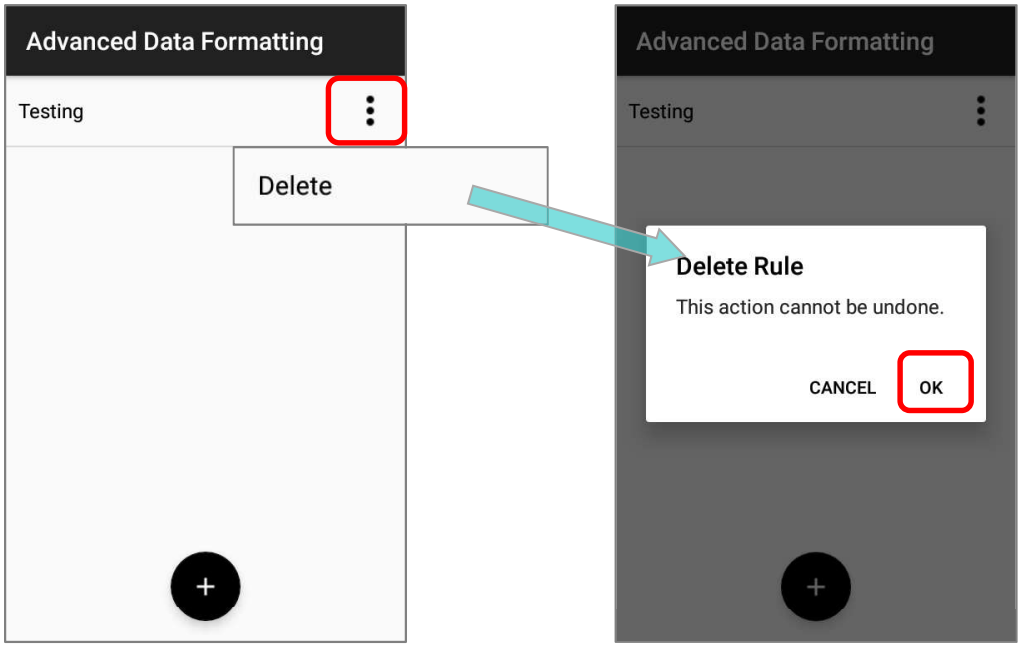


The rule is created, and now you can enter its main page for further settings in "***Criteria***" and "***Actions***" to specify your customized reformatting instructions.



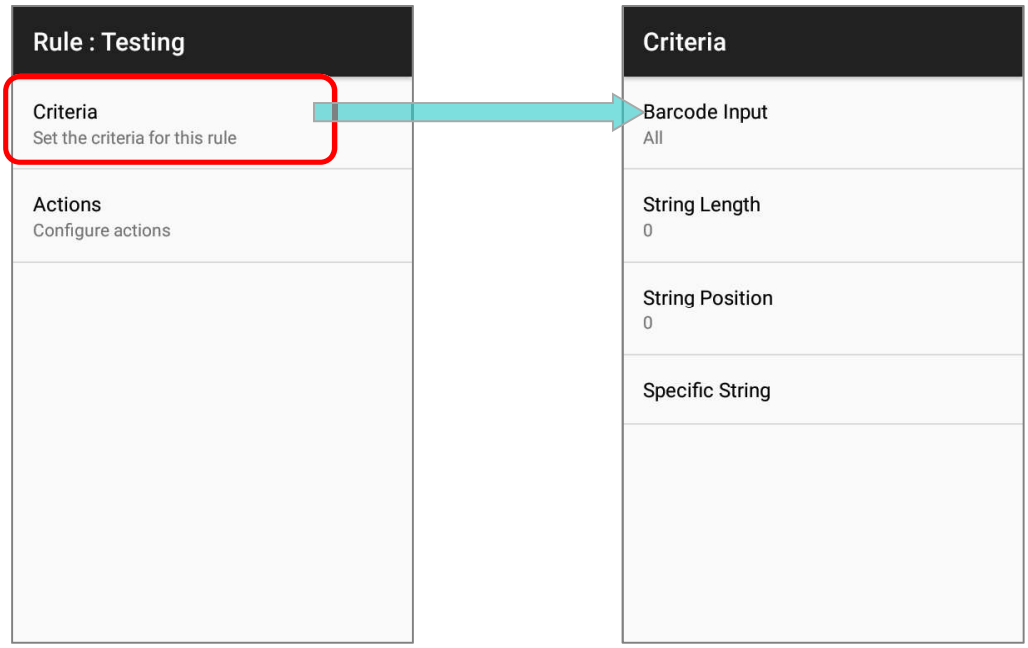
DELETE A RULE

To delete a rule, tap on the more button next to the rule to be removed and then "***Delete***". Confirm deleting it by tapping on "***OK***".



CRITERIA

"***Criteria***" is to set the limits and requirements to filter the decoded data. When the barcode is read and the input data fulfils the "***criteria***", it will be dealt with by the associated "***actions***" which defines the output data format.



The available criteria to be set are:

Item	Description
Barcode Input	To designate the barcode symbology. By selecting "**All**", all the barcode symbologies will be reformatted by "**actions**".
String Length	To set the barcode length to limit the decoded data to be reformatted.
String Position	This function works with "**Specific String**" to designate the particular position this specific string should be in. By selecting "0", the specific string can be in any position.
Specific String	To designate the string the decoded data must include.

The decoded data should meet all the criteria you set and then the data will be reformatted by "***actions***" before outputting.

EXAMPLE

The followings are the examples of barcodes to be filtered by criteria:

Barcode	Details	
Barcode 1	Symbology: Barcode data: Length:	EAN13 0001112223334 13
Barcode 2	Symbology: Barcode data: Length:	EAN13 4445556667778 13
Barcode 3	Symbology: Barcode data: Length:	EAN13 888999000 9A
Barcode 4	Symbology: Barcode data: Length:	Code39 5555222221111 13

If the criteria are set as:

1) "**Barcode Input**" is "**All**":
Barcode 1 (EAN13), Barcode 2 (EAN13), Barcode 3 (EAN13),and Barcode 4 (Code39) all match the criteria.

2) "**Barcode Input**" is "**EAN13**":
Barcode 1 (EAN13), Barcode 2 (EAN13), and Barcode 3 (EAN13) meet the criteria.

3) "**Barcode Input**" is "**EAN13**", and "**String Length**" is "**9**":
Only Barcode 3 (EAN13; length= 9) matches the criteria.

4) "**Barcode Input**" is "**EAN13**", and "**String Length**" is "**10**":
None of the barcodes fulfils the criteria.

5) "**Barcode Input**" is "**All**", and "**String Length**" is "**13**":
Barcode 1 (EAN13; length= 13), Barcode 2 (EAN13; length= 13), and Barcode 4 (Code39; length= 13) meet the criteria.

6) "**Barcode Input**" is "**All**", and "**Specific String**" is "**000**":
Barcode 1 (EAN13; 0001112223334) and Barcode 3 (EAN13; 888999000) meet the criteria.

7) "**Barcode Input**" is "**All**", and "**Specific String**" is "**111**":
Barcode 1 (EAN13; 0001112223334) and Barcode 4 (Code39; 5555222221111) match the criteria.

8) "**Barcode Input**" is "**All**", "**Specific String**" is "**111**", and "**String Position**" is "**4**":
Only Barcode 1 (EAN13; 0001112223334) matches the criteria.

9) "**Barcode Input**" is "**All**", "**Specific String**" is "**111**", and "**String Position**" is "**1**":
None of the barcodes fulfils the criteria.

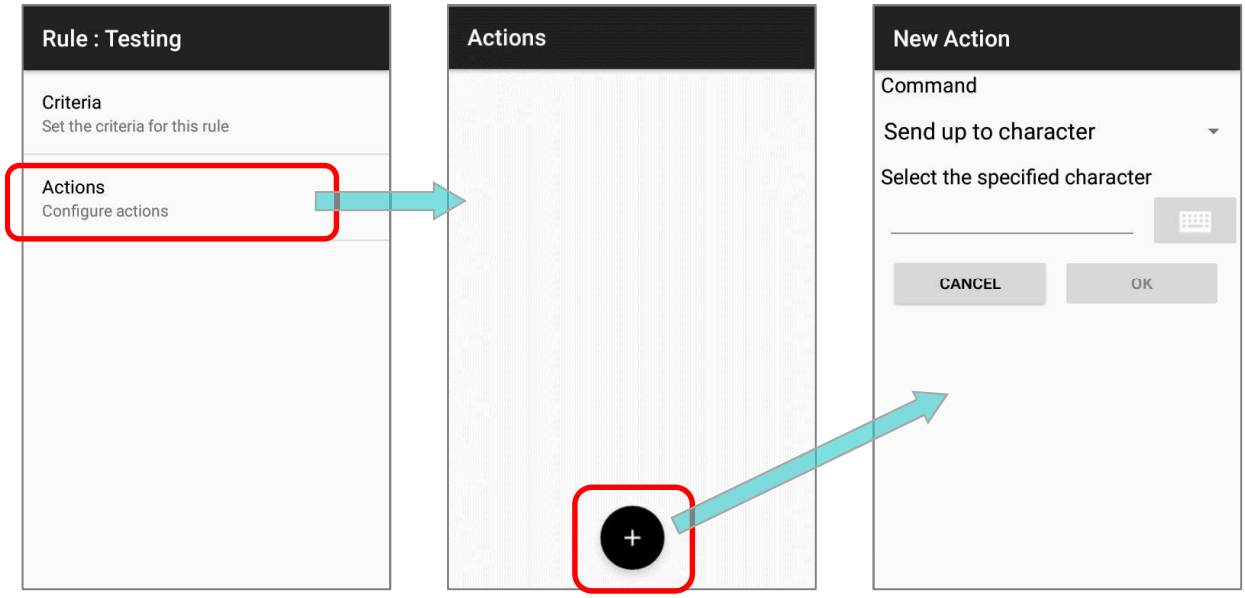
ACTIONS

A rule contains multiple "***Actions***" which process the decoded barcode data conforms to the "***criteria***" and reformat the data to be transmitted.

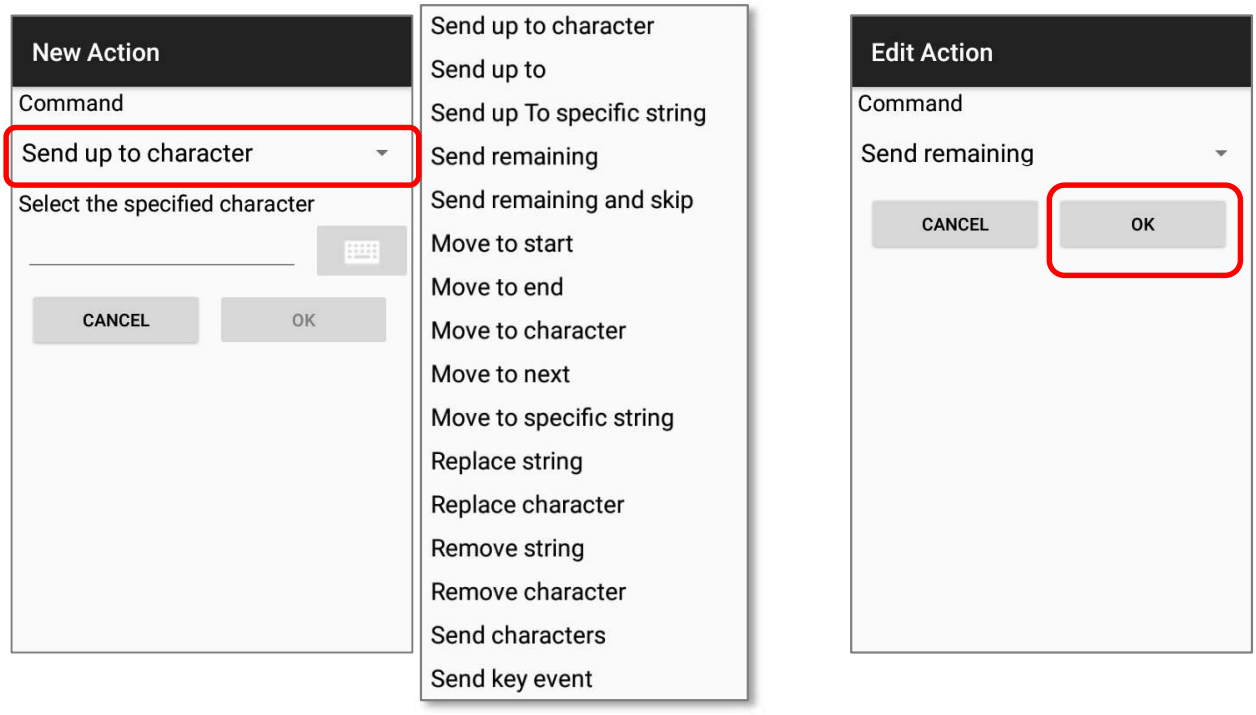
CREATE A NEW ACTION

Please follow the steps to create a new action and define the reformatting instructions:

1) Tap on the "***Add***" button ⊕ and "***New Action***" page shows up:



2) Select the command from the drop-down menu, enter the necessary item(s) depending on the command you choose, and tap on "***OK***" to save the action.



The available commands are devided into 6 groups:

SEND BARCODE DATA

"***Send Barcode Data***" actions affect the output character field and the output length (count of characters). All the other kinds of actions must collaborated with the "***Send Barcode Data***" actions to reformat the barcode data to be sent out.

<table>
<tr><th>Command</th><th>Description</th></tr>
<tr><td>Send up to character</td><td>To set a specific character as a period, and only the part anterior to this specific character will be output.
<table>
<tr><td colspan="2">Example</td></tr>
<tr><td>The decoded data:</td><td>0001112223334</td></tr>
<tr><td>Actions:</td><td>Send data up to “3”.</td></tr>
<tr><td>The output data:</td><td>000111222</td></tr>
</table></td></tr>
<tr><td>Send up to</td><td>To set how many characters to be output.
<table>
<tr><td colspan="2">Example</td></tr>
<tr><td>The decoded data:</td><td>0001112223334</td></tr>
<tr><td>Actions:</td><td>Send up to “3” characters.</td></tr>
<tr><td>The output data:</td><td>000</td></tr>
</table></td></tr>
<tr><td>Send up To specific string</td><td>To send the part up till the specific string (this specific string is excluded).
<table>
<tr><td colspan="2">Example</td></tr>
<tr><td>The decoded data:</td><td>0001112223334</td></tr>
<tr><td>Actions:</td><td>Send up to the string “333”.</td></tr>
<tr><td>The output data:</td><td>000111222</td></tr>
</table></td></tr>
<tr><td>Send remaining</td><td>This command works with those commands of “Move Cursor” to send the data posterior to the cursor.
<table>
<tr><td colspan="2">Example</td></tr>
<tr><td>The decoded data:</td><td>0001112223334</td></tr>
<tr><td>Actions:</td><td>Move cursor to next 1.
Send all the data that remains.</td></tr>
<tr><td>The output data:</td><td>001112223334</td></tr>
</table></td></tr>
<tr><td>Send remaining and skip</td><td>To send all the data (posterior to the cursor) aside from the last character(s) you set.
<table>
<tr><td colspan="2">Example</td></tr>
<tr><td>The decoded data:</td><td>0001112223334</td></tr>
<tr><td>Actions:</td><td>Send all the data that remains and skip the last 1.</td></tr>
<tr><td>The output data:</td><td>000111222333</td></tr>
</table></td></tr>
</table>

MOVE CURSOR

The actions of "***Move Cursor***" must work with those "***Send Barcode Data***" actions to define the start position to output the decoded data.

<table>
<tr><th>Command</th><th>Description</th></tr>
<tr><td>Move to start</td><td>To move the cursor to the very beginning.
<table>
<tr><th colspan="2">Example</th></tr>
<tr><td>The decoded data:</td><td>0001112223334</td></tr>
<tr><td>Actions:</td><td>Move cursor to the start.
Send all the data that remains.</td></tr>
<tr><td>The output data:</td><td>0001112223334</td></tr>
</table></td></tr>
<tr><td>Move to end</td><td>To move the cursor to the end.
<table>
<tr><th colspan="2">Example</th></tr>
<tr><td>The decoded data:</td><td>0001112223334</td></tr>
<tr><td>Actions:</td><td>Move cursor to the end.
Send all the data that remains.</td></tr>
<tr><td>The output data:</td><td>None.</td></tr>
</table></td></tr>
<tr><td>Move to character</td><td>To move the cursor in front of the specific character you set.
<table>
<tr><th colspan="2">Example</th></tr>
<tr><td>The decoded data:</td><td>0001112223334</td></tr>
<tr><td>Actions:</td><td>Move cursor to the character "2".
Send all the data that remains.</td></tr>
<tr><td>The output data:</td><td>2223334</td></tr>
</table></td></tr>
<tr><td>Move to next</td><td>To move the cursor to the specific position from the beginning.
<table>
<tr><th colspan="2">Example</th></tr>
<tr><td>The decoded data:</td><td>0001112223334</td></tr>
<tr><td>Actions:</td><td>Move cursor to the next "5".
Send all the data that remains.</td></tr>
<tr><td>The output data:</td><td>12223334</td></tr>
</table></td></tr>
<tr><td>Move to specific string</td><td>To move the cursor in front of the specific string you set.
<table>
<tr><th colspan="2">Example</th></tr>
<tr><td>The decoded data:</td><td>0001112223334</td></tr>
<tr><td>Actions:</td><td>Move cursor to the string "333".
Send all the data that remains.</td></tr>
<tr><td>The output data:</td><td>3334</td></tr>
</table></td></tr>
</table>

REPLACE DATA

<table>
<tr><th>Command</th><th>Description</th></tr>
<tr><td>Replace String</td><td>To replace the speicifc string with the one you designate.
<table>
<tr><th colspan="2">Example</th></tr>
<tr><td>The decoded data:</td><td>0001112223334</td></tr>
<tr><td>Actions:</td><td>Replace the string “333” with “CCC”.
Send all the data that remains.</td></tr>
<tr><td>The output data:</td><td>000111222CCC4</td></tr>
</table></td></tr>
<tr><td>Replace character</td><td>To replace the speicifc character with the one you designate.
<table>
<tr><th colspan="2">Example</th></tr>
<tr><td>The decoded data:</td><td>0001112223334</td></tr>
<tr><td>Actions:</td><td>Replace the character “0” with “C”.
Send all the data that remains.</td></tr>
<tr><td>The output data:</td><td>CCC1112223334</td></tr>
</table></td></tr>
</table>

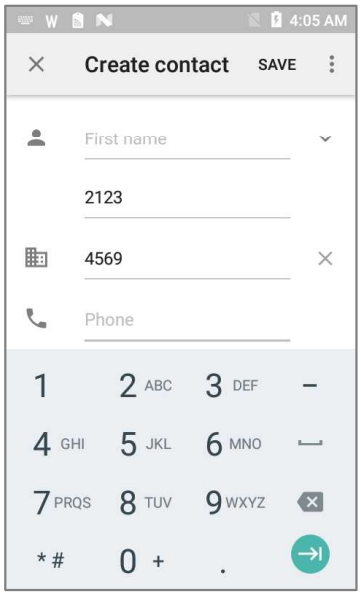
REMOVE DATA

<table>
<tr><th>Command</th><th>Description</th></tr>
<tr><td>Remove string</td><td>To delete the specific string.
<table>
<tr><th colspan="2">Example</th></tr>
<tr><td>The decoded data:</td><td>0001112223334</td></tr>
<tr><td>Actions:</td><td>Remove the string “222”.
Send all the data that remains.</td></tr>
<tr><td>The output data:</td><td>0001113334</td></tr>
</table></td></tr>
<tr><td>Remove character</td><td>To delete the specific character.
<table>
<tr><th colspan="2">Example</th></tr>
<tr><td>The decoded data:</td><td>0001112223334</td></tr>
<tr><td>Actions:</td><td>Remove the character “3”.
Send all the data that remains.</td></tr>
<tr><td>The output data:</td><td>0001112224</td></tr>
</table></td></tr>
</table>

SEND CHARACTER

<table>
<tr><th>Command</th><th>Description</th></tr>
<tr><td>Send character</td><td>To add a specific character in front of the output data.
<table>
<tr><th colspan="2">Example</th></tr>
<tr><td>The decoded data:</td><td>0001112223334</td></tr>
<tr><td>Actions:</td><td>Send the character “C”.
Send up to “5” characters</td></tr>
<tr><td>The output data:</td><td>C00011</td></tr>
</table></td></tr>
</table>

SEND KEYEVENT

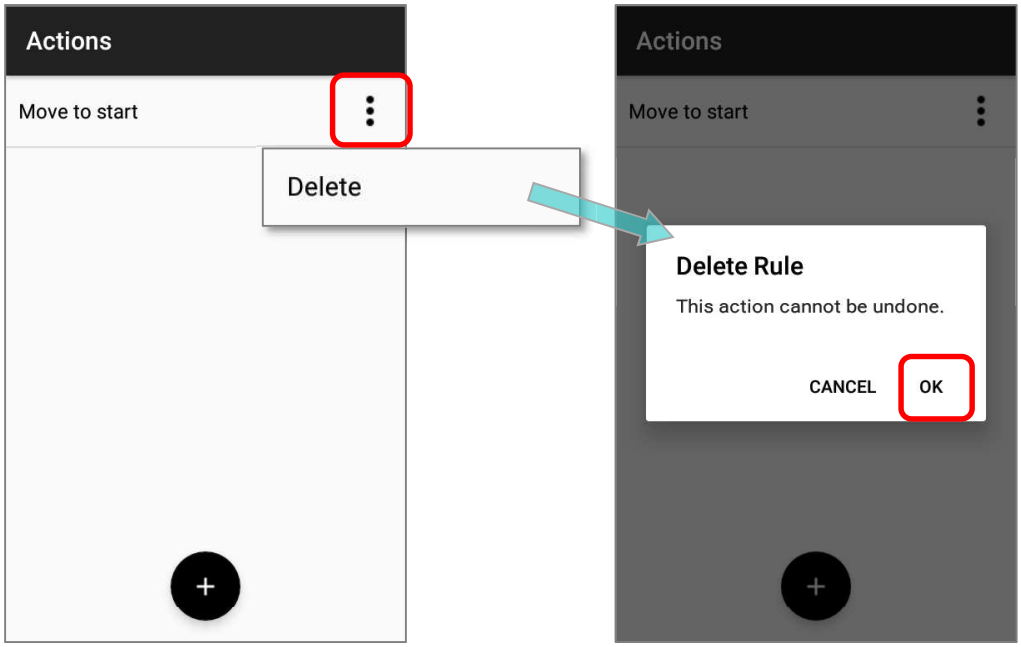
<table>
<tr><th>Command</th><th>Description</th></tr>
<tr><td>Send key event</td><td>To make a “Send key event” action to be effective, “Keyboard Emulation” should be set as “KeyEvent”.
The following example is to output the data to two fields by “KeyEvent”:
<table>
<tr><th colspan="2">Example</th></tr>
<tr><td>The decoded data:</td><td>21234569</td></tr>
<tr><td>Actions:</td><td>Send data Next 4
Send KeyEvent 0x1D
Sebd Data Next 4</td></tr>
<tr><td>The output data:</td><td> 
</td></tr>
</table></td></tr>
</table>

Note: The decoded data is processed by actions sequentially. The permutation of actions affects the output data, that is, different permutations of actions may result in different output data.

DELETE AN ACTION

1) Tap on more button on the right of the action and select "***Delete***" from the menu.

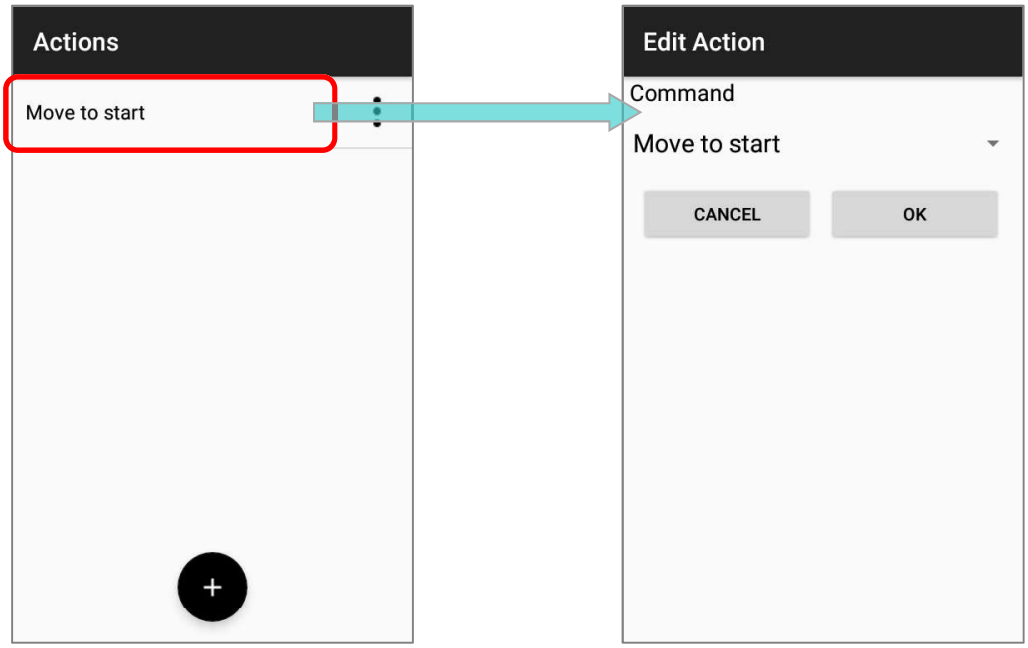
2) Confirm that deleting this action by tapping on "***OK***".



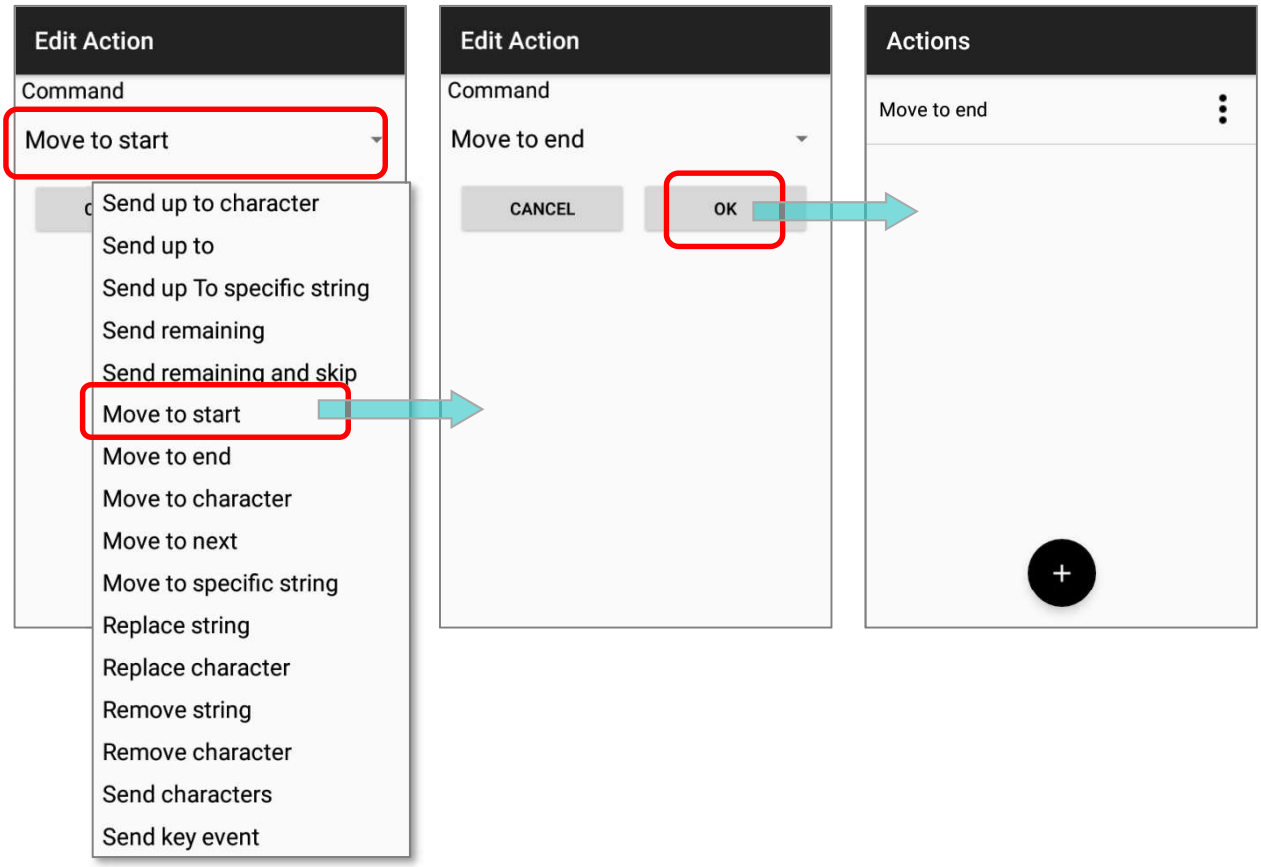
EDIT AN ACTION

To modify an existed action:

1) Tap on the action to be modified to enter "***Edit Action***" page.



2) Select the command and tap on "***OK***" to complete editing action.



Note:

To make "Advanced Data Formatting" work, the profile must be enabled.

EXAMPLES

The followings are some examples of ***Advanced Data Formatting***:

EXAMPLE 1

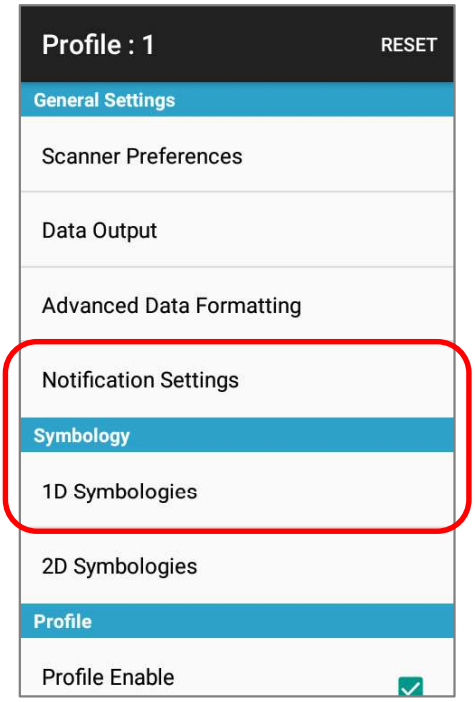
<table>
<tr><td>Code Type</td><td>GS1-128</td></tr>
<tr><td>Barcode</td><td>1193160905021011063294</td></tr>
<tr><td>Criteria</td><td>Barcode Input = GS1-128 (EAN 128)</td></tr>
<tr><td>Actions</td><td>
<table>
<tr><th>Action</th><th>Process</th></tr>
<tr><td>Move Cursor To Next 3</td><td>1193160905021011063294</td></tr>
<tr><td>Send Data Next 5</td><td>1193160905021011063294</td></tr>
<tr><td>Move Cursor To Next 7</td><td>1193160905021011063294</td></tr>
<tr><td>Send Data Next 7</td><td>1193160905021011063294</td></tr>
</table>
</td></tr>
<tr><td>Result</td><td>316091063294</td></tr>
</table>

EXAMPLE 2

Code Type	EAN8
Barcode	21234569 and 11234569
Criteria	Barcode Input = EAN8 Specific String = 2 String Position = 1
Actions	Send All Data That Remains Send Character 0 Send Character 0 Send Character 0 Send Character 0 Send Character 0
Result	2123456900000 But barcode is 11234569 without change.

5.2.3. SYMBOLOGY

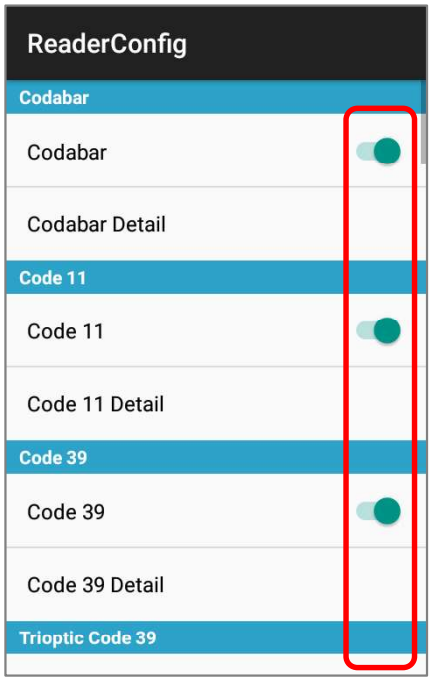
The ***Symbology*** page sets the symbologies to read, and also enables/disables some feature(s) for a symbology to read, such as:



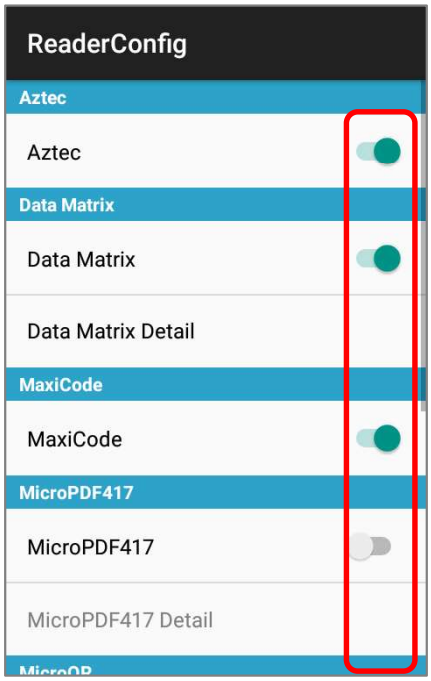
- Customize and transmit start/stop characters
- Verify/transmit check digits
- Enable/disable addon digits
- Convert to another symbology
- Transmit symbology ID

To open ***Symbology*** settings page, simply tap ***1D Symbologies*** or ***2D Symbologies*** (in case of a 2D imager) to list all symbologies which can be decoded.

1D Symbologies



2D Symbologies

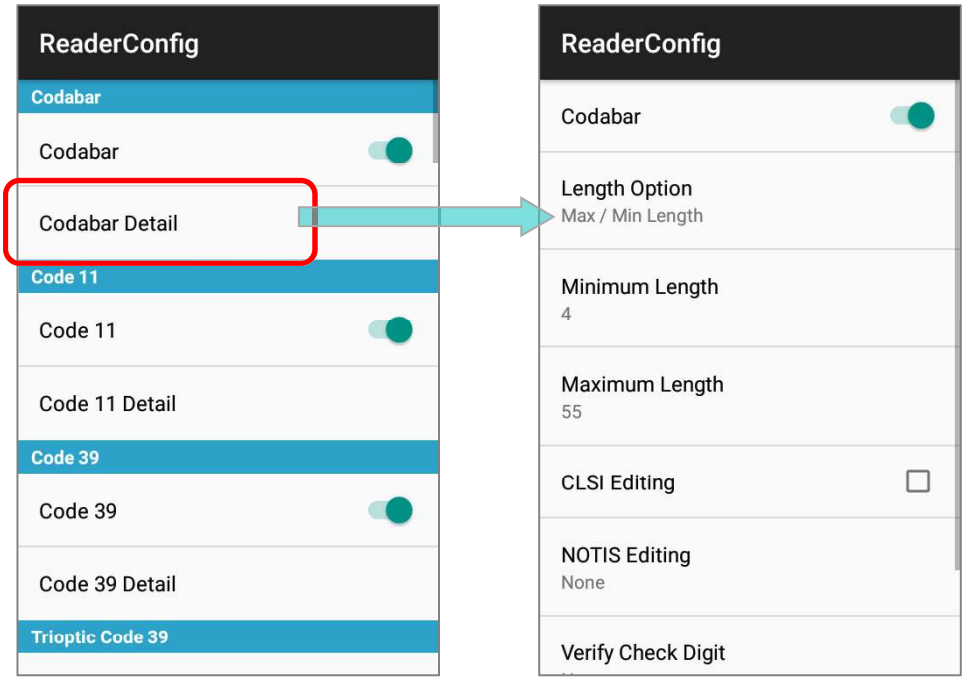


ENABLE/DISABLE SYMBOLOGY

Tap the label of each symbology to enable or disable it.

SYMBOLOGY SETTINGS

Tap the ***Detail*** label below each symbology to access detailed settings for the specific symbology.

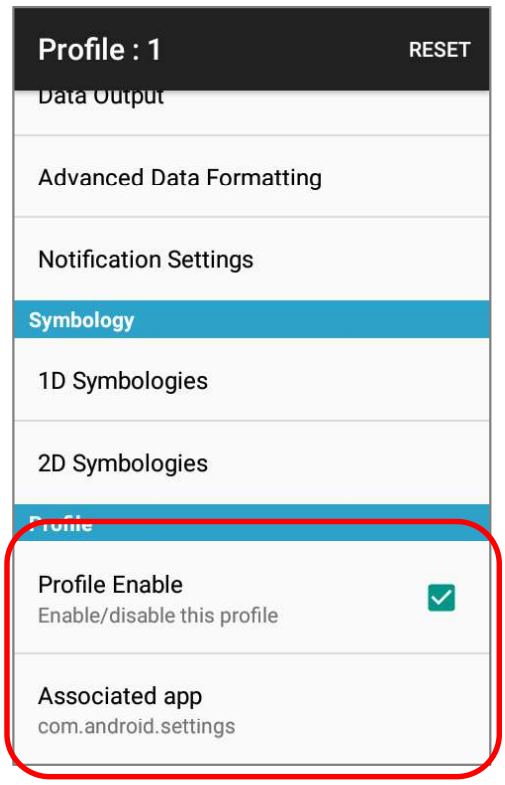


For details about the featured settings:

- See 2D Imager Symbology Settings.

5.2.4. PROFILE

With an "***Associated app***", the profile can be enabled, and the "***Associated app***" will receive the decoded data output by ***ReaderConfig*** once the profile is enabled.



Note:

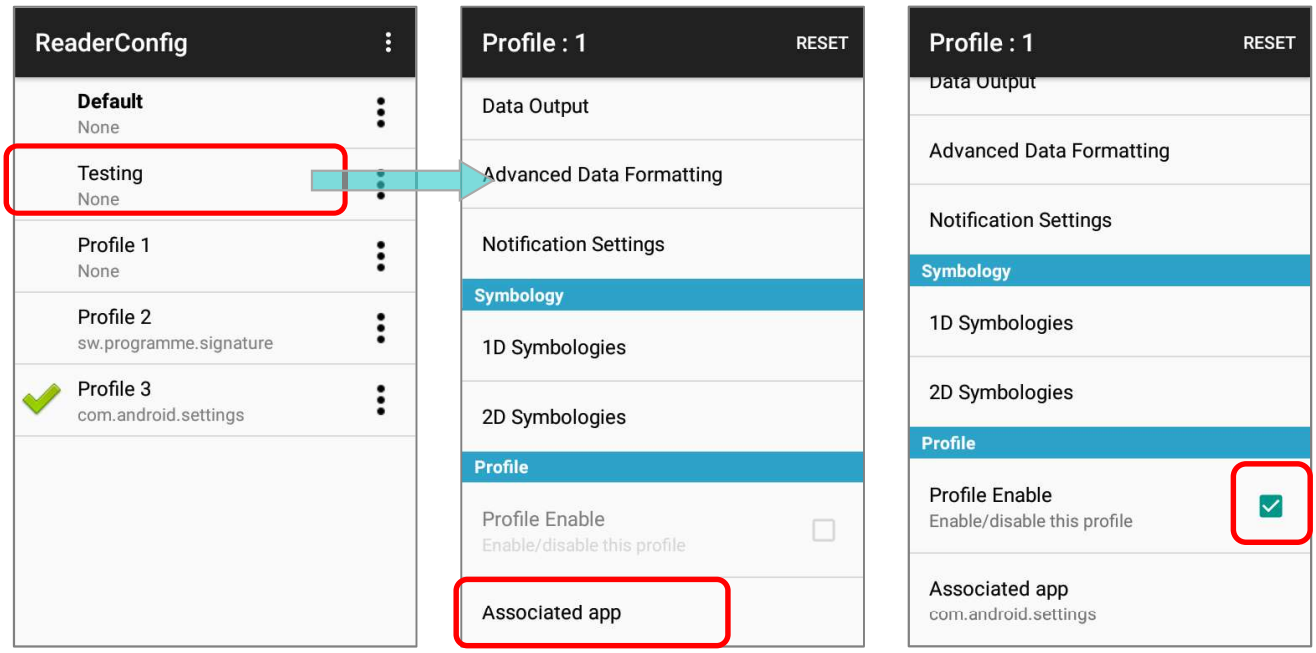
(1) The "Default" profile doesn't support "Associated app", please assign "Associated app" to the profile(s) you create.

(2) Mutiple profiles can be enabled at the same time.

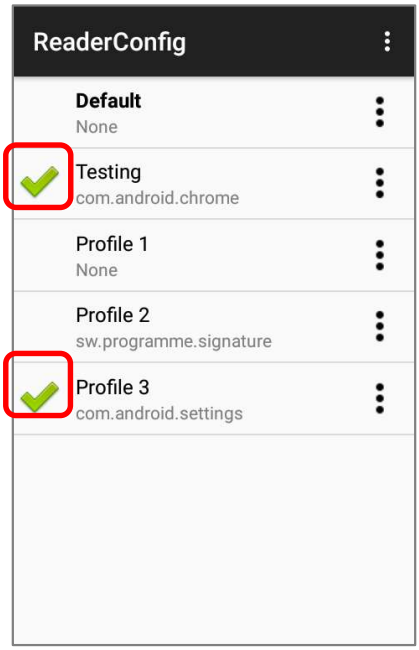
PROFILE ENABLE

To enable a profile:

1) Tap on the profile you'd like to enable to enter the profile main page.
2) Tap on "***Associated app***" under "***Profile***" to assign an app to be the "***Associated app***" to this profile.
3) Now the function "***Profile Enable***" is available for user to tick the checkbox to enable this profile.



Return to ***ReaderConfig*** main screen, and you will find that the enabled profile(s) is with a check mark ✓ next to it.

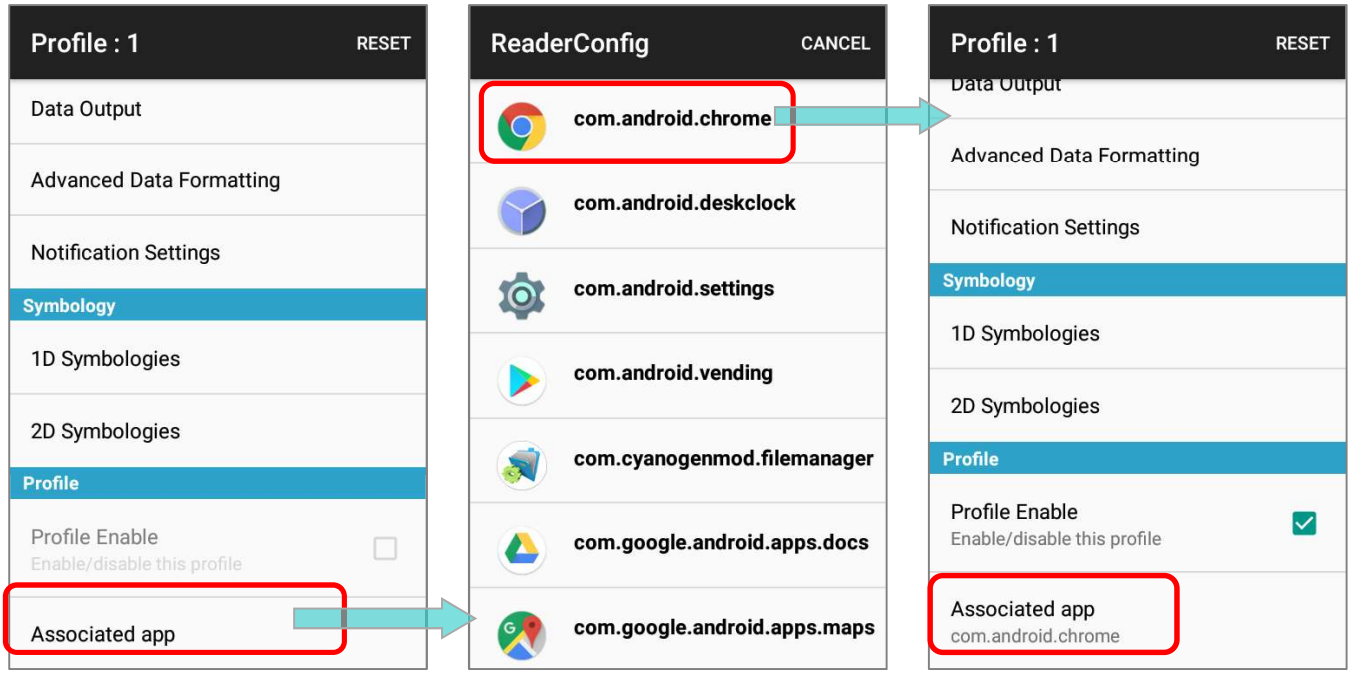


Note: **Mutiple profiles can be enabled at the same time.**

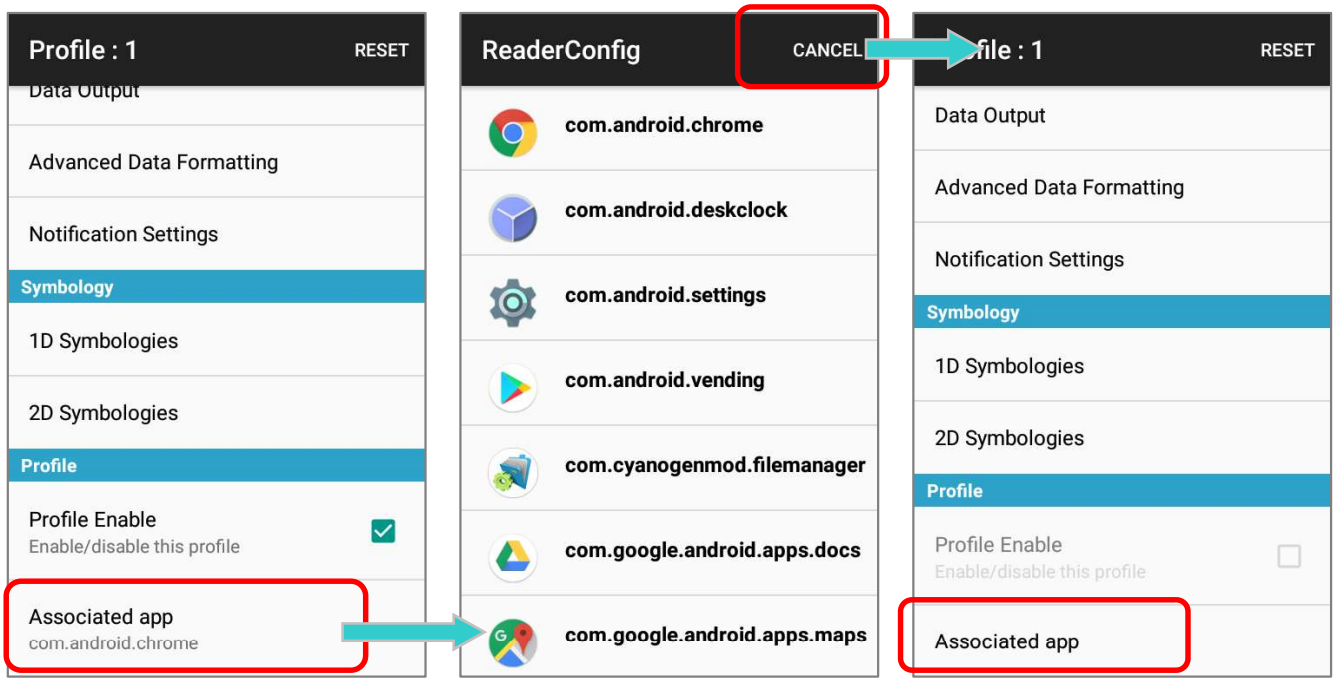
ASSOCIATED APP

To assign an app as the "***Associated app***" to a profile:

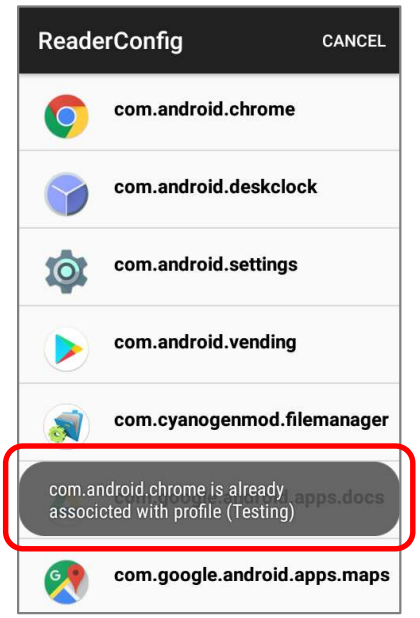
1) Enter the profile main page and tap on ap on "***Associated app***" under "***Profile***".
2) Select the app to be the "***Associated app***" of this profile.

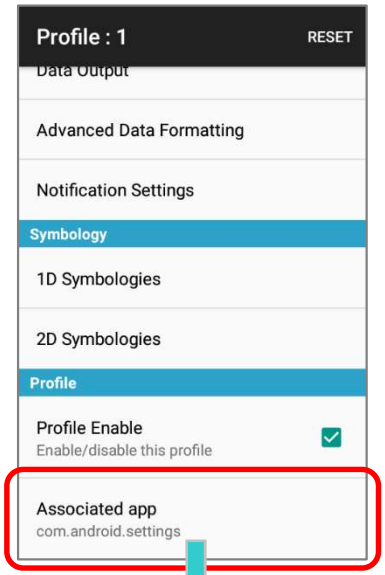


To clear the assigned "***Associated app***", please tap on "***Associated app***" to enter the app list page, and tap on "***CANCEL***" on the action bar:



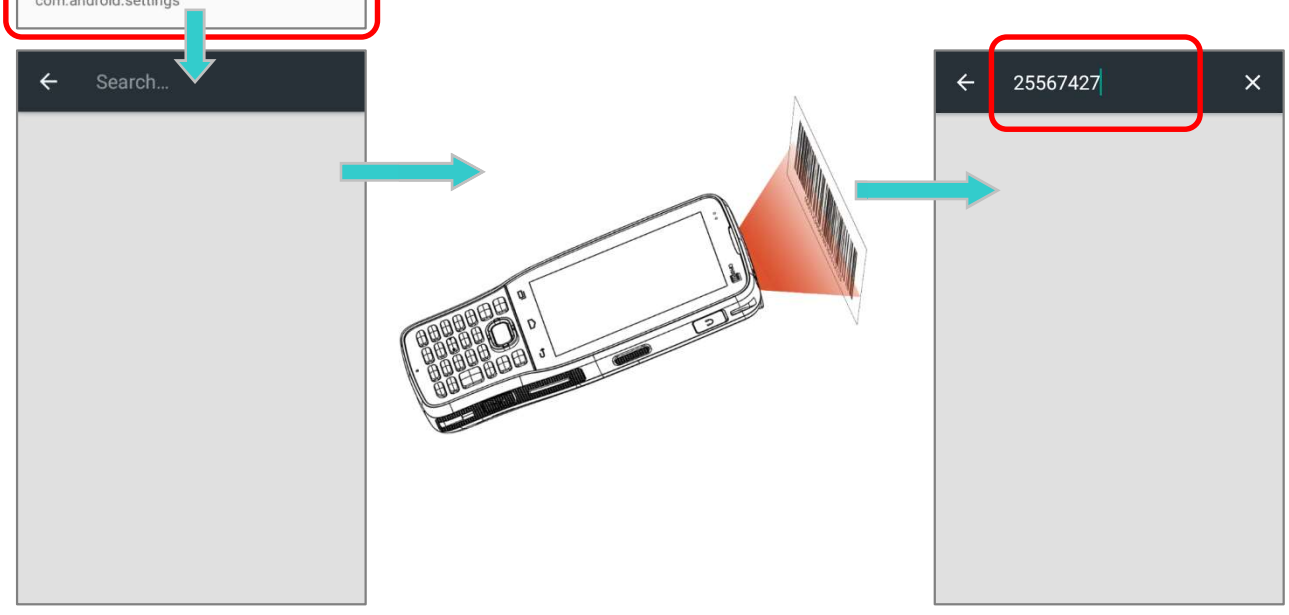
An app can be set as the associated app to only one profile. If the app you would like to select is already assigned to other profile, a prompt appears to remind you about this app is occupied by which profile.





If a profile is enabled, its "***Associated app***" will receive the decoded data output by ***ReaderConfig***.

1) Launch the "***Associated app***" of the enabled profile.
2) Aim the scan window at the barcode and press the side trigger to read it.
3) The decoded data is sent to the "***Associated app***".



5.2.5. RESET

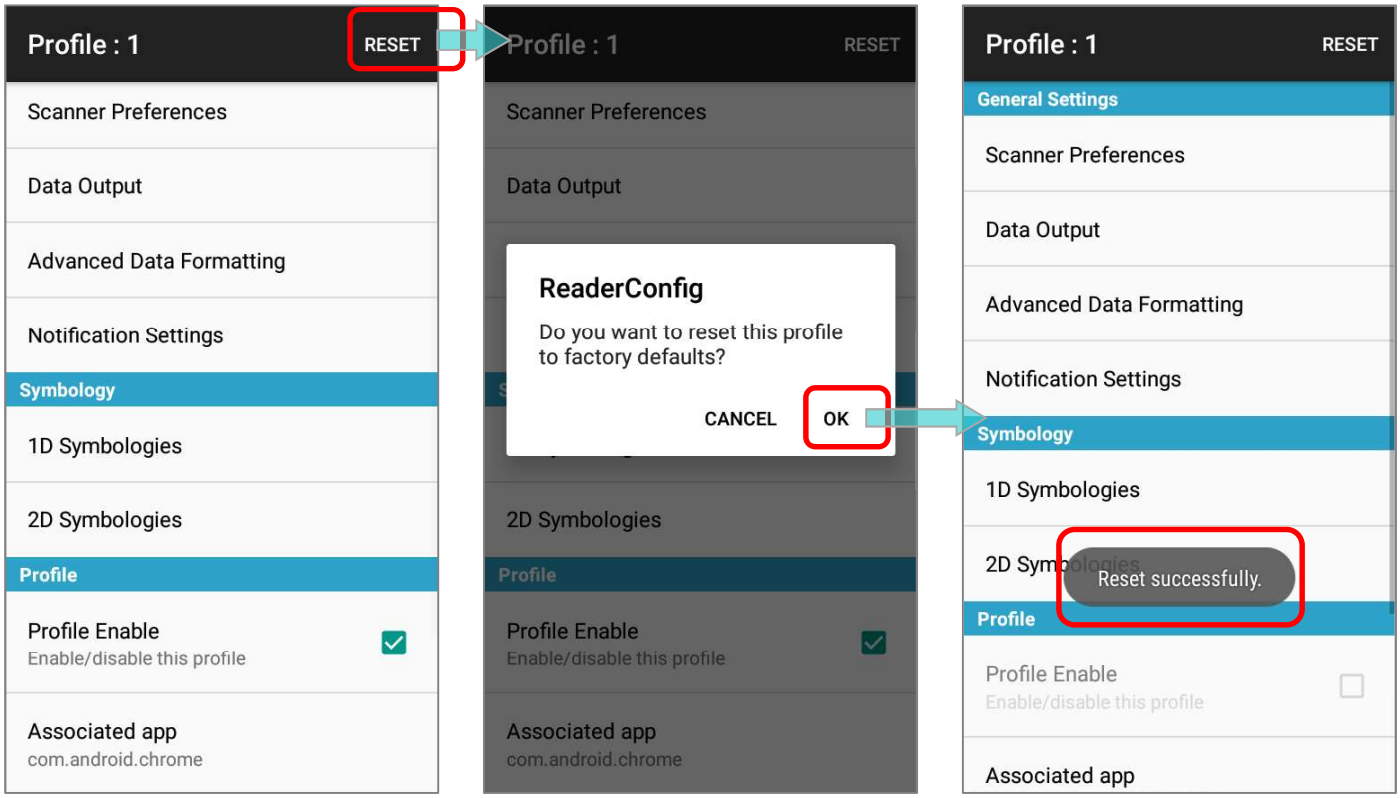
This function restores all settings in a profile to default.

To enable ***Reset***:

1) Enter the profile main page of the profile you'd like to reset its settings.

2) Tap on "***RESET***" on the action bar.

3) Tap on "***OK***" on the confirmation dialog to reset or ***Cancel*** to close the dialog.

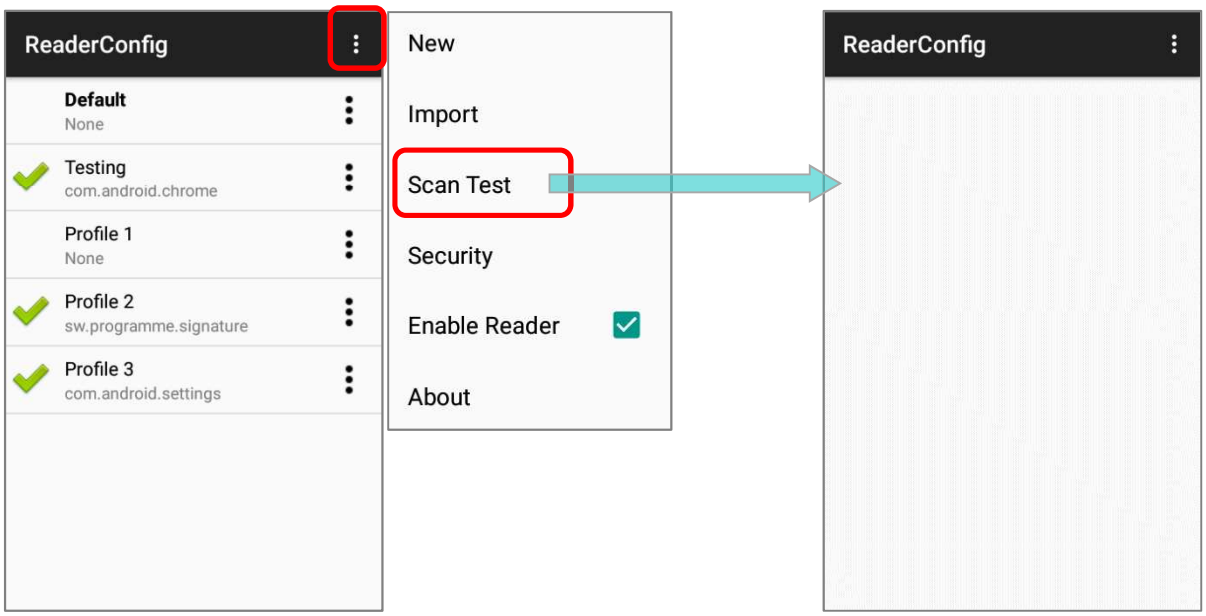


5.3. READ PRINTED BARCODES

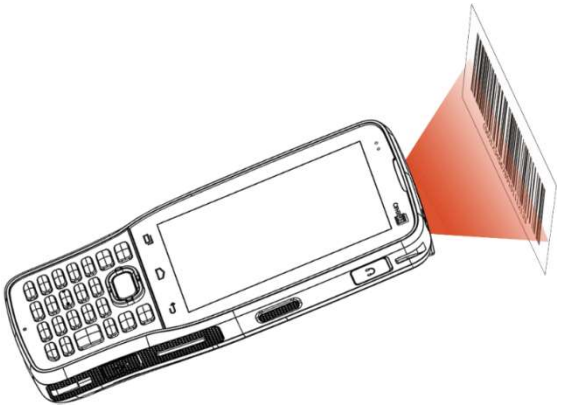
Aside from output to destinations as per Keyboard Emulation settings, ***ReaderConfig*** provides a ***Scan Test*** feature for quick viewing of decoded data.

To perform test scanning of barcodes:

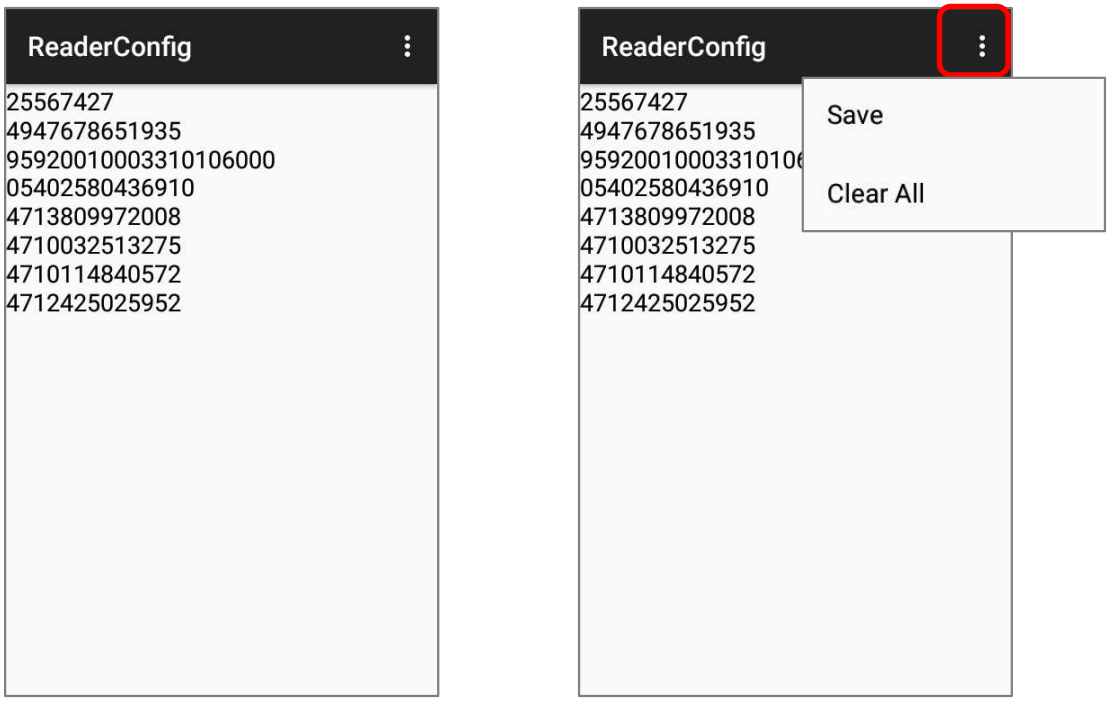
1) Open ***ReaderConfig*** as described in Launch ReaderConfig.
2) On ***ReaderConfig*** main screen, tap the more button on the action bar to open the main menu.
3) Tap on ***Scan Test***. A Test Scan Form opens for displaying the scanned data.



4) Aim the scanning window at the barcode to read and press any of the side trigger. The scanning light beams to read the printed barcodes. The scanning light goes off once the data is decoded, or when the decode timeout period has passed.



The decoded data will appear on the page. When finished viewing, tap ⮌ to leave the test scan page; or tap the more button ⋮ and then "***Save***" to save the decoded data as a .txt file, or "***Clear All***" to clear all data on the screen.



SPECIFICATIONS

PLATFORM, PROCESSOR & MEMORY

Operating System & CPU

OS Version	Android 7.0 Nougat with GMS Certified
CPU	4x Cortex A53 Quad core 1.45GHz

Memory

ROM	16GB eMMC(MLC) / User data 10GB
RAM	2GB LPDDR3 SDRAM
Expansion Slot	One Micro SDHC card slot (up to 32GB) SDXC supported (up to 64GB) 70° tilted reader model: Micro SIM socket x2 (no function for Wi-Fi only model) 10° tilted reader model: Micro SIM socket x1, Micro SAM socketx1 (no function for Wi-Fi only model)

COMMUNICATION & DATA CAPTURE

Communication

USB Client	USB 2.0 OTG
WPAN	Bluetooth Class I, v4.0, v4.1,V4.2 v2.1, BLE, (2402~2480 MHz: 4.05dBm)
WLAN	802.11 b/g/n and 802.11 a/ac/n networking (2412~2472 MHz: 18.34dBm 5180~5240MHz: 17.04dBm, 5260~5320MHz: 17.04dBm, 5500~5700MHz: 17.01dBm)
WWAN	Built-in WWAN modem for Quad-band GSM, UMTS, LTE functions: GSM/GPRS/EDGE/WCDMA/UMTS/HSDPA/HSUPA/HSPA+/LTE **Frequency band** GSM: Quad Band(850/900/1800/1900Mhz) TD-SCDMA: Band34, Band39 WCDMA: Band1, Band2, Band5, Band8, TDD-LTE: Band38, Band39, Band40, Band41 FDD-LTE: Band1,Band2, Band3, Band5, Band7, Band8, Band20
GPS	GPS, GLONASS, BeiDou, AGPS

Data & Image Capture

Digital Camera	Rear: 8 Mega pixels with user-controllable flash
Barcode Reader	2D Imager
HF RFID Reader	HF RFID 13.56 MHz (-1.17 dBuA/m at 10m) frequency which supports ISO14443A, ISO14443B, ISO15693, Felica ▸ Supports NFC (Peer-to-Peer, Card Reader, Card Emulation)

ELECTRICAL CHARACTERISTICS

Li-Polymer

Main Battery Pack	Rechargeable Li-polymer battery: 3.8V, 4000 mAh Charging temperature: 0-45℃ Minimum charging time: 4 hours @25℃ For the first time charging the main battery, please charge it for at least 8 to 12 hours. The allowed battery charging ambient temperature is between 0℃ to 45℃. It is recommended to charge the battery at room temperature (18℃ to 25℃) for optimal performance. Please note that battery charging stops when ambient temperature drops below 0℃ or exceeds 45℃.
Backup Battery	Rechargeable Li-Polymer battery: 3.7V, 60 mAh Data retention for 30 minutes Charging time: 4 hours

Power Adaptor

Power Supply Cord with Universal Power Adaptor	Input	AC 100~240 V, 50/60 Hz
	Output	DC 5V, 2A BSMI, CCC, FCC, CE, RCM, PSE, PSB

Working Time

Supports working time for up to 10 hours at 25 degrees

PHYSICAL CHARACTERISTICS

Color Touch Screen Display

Display	4.0 inch, LCD, Corning Gorilla Glass 3
Resolution	800(RGB) X 480 Pixel

Notifications

Status LED	2 LEDs include one bi-color (green & red) LED for power indications, and one tri-color (blue, green, & red) LED for reader and system notification.
Audio	Integrated with one speaker, microphones with echo and noise cancellation, HD voice support

Dimensions & Weight

Dimensions	168 mm (L) x 73.8mm (W) x 25.85mm (H)
Weight	292g (with 4000mAr battery pack and SE4750 reader) ±5g

ENVIRONMENTAL CHARACTERISTICS

Temperature

Operating	-20℃ to 50℃
Storage	-30℃ to 70℃
Charging	0℃ to 45℃

Humidity

Operating	10% to 90% (non-condensing)
Storage	5% to 95% (non-condensing)

Resistance

Impact Resistance	Multiple drops onto concrete at 1.5m on all six sides
Tumble Test	150 tumbles (300 drops/hits) at 0.5 meter per applicable IEC tumble specifications
Splash/Dust Resistance	IP65 per applicable IEC sealing specifications
Electrostatic Discharge	±15 kV air discharge, ±8 kV contact discharge

PROGRAMMING SUPPORT

Development Environment & Tools

JAVA	Environment Android studio Software Development Kit: JAR
C#	Environment: Visual Studio Software Development Kit: DLL (Xamarin Library)

Software & Utilities

Software Package	Reader Config Software Trigger Mobile Deployment Suite for Android App Lock Xamarin Binding Button Assignment HF RFID Configuration Signature Capture Terminal Emulation

APPENDIX I

SCAN ENGINE SETTINGS

Reader Configuration sets the following reader types:

- 2D Imager

SYMBOLOGIES SUPPORTED

Depending on the scan engine integrated on the mobile computer, supported symbologies will differ as listed below. For details on configuring associated settings, refer to Appendix II.

		2D
Codabar		✓
Code 11		✓
Code 39	Code 39	✓
	Trioptic Code 39	✓
	Italian Pharmacode (Code 32)	✓
Code 93		✓
Code 128	Code 128	✓
	GS1-128 (EAN-128)	✓
	ISBT 128	✓
Code 2 of 5	Chinese 25	✓
	Industrial 25 (Discrete 25)	✓
	Interleaved 25	✓
	Convert Interleaved 25 to EAN-13	✓
	Matrix 25	✓
Composite Code	Composite CC-A/B	✓
	Composite CC-C	✓
	Compostie TLC 39	✓

GS1 DataBar (RSS)	GS1 DataBar-14 (RSS-14)	✓
	GS1 DataBar Limited (RSS Limited)	✓
	GS1 DataBar Expanded (RSS Expanded)	✓
	Convert to UPC/EAN	✓
Korean 3 of 5		✓
MSI		✓
Postal Codes	Australian Postal	✓
	Japan Postal	✓
	Netherlands KIX Code	✓
	US Postnet	✓
	US Planet	✓
	USPS Postal	✓
	UPU FICS Postal	✓
	UK Postal	✓
EAN/UPC	EAN-8	✓
	EAN-8 Extend	✓
	EAN-13	✓
	Bookland EAN (ISBN)	✓
	ISSN EAN	✓
	UPC-A	✓
	UPC-E	✓
	Convert to UPC-A	✓
	UPC-E1	✓
	Convert to UPC-A	✓

Coupon Code		✓
2D Symbologies	Aztec	✓
	Data Matrix	✓
	Maxicode	✓
	MacroPDF	✓
	MicroPDF417	✓
	MicroQR	✓
	PDF417	✓
	QR Code	✓

APPENDIX II

2D IMAGER

The tables below list the symbology settings for 2D imager.

SYMBOLOGY SETTINGS

1D SYMBOLOGIES

Symbology	Description	Default
CODABAR		
Codabar		Enable
Codabar	Switch to enable Codabar decoding.	Enable
Length Option	Set the length of the Codabar symbols to decode. ▸ One Fixed length (Length 1) ▸ Two Fixed lengths (Length 1>Length 2) ▸ Max / Min Length (range: 0-55; Length 1<Length 2) ▸ Any Length	Max / Min Length (4-55)
CLSI Editing	When applied, the CLSI editing strips the start/stop characters and inserts a space after the first, fifth, and tenth characters of a 14-character Codabar barcode. ▸ The 14-character barcode length does not include start/stop characters.	Disable
NOTIS Editing	Set whether to include start/stop characters in the transmitted data. ▸ NOTIS Editing is to strip the start/stop characters, i.e. to disable "Transmit Start/Stop Characters".	Disable
NOTIS Editing Type	Options are **None**, **ABCD/ABCD**, **abcd/abcd**. "NOTIS Editing" must be enabled.	None
Verify Check Digit	Select whether to verify the Modulo 43 check digit. If the check digit is incorrect, the barcode will not be accepted.	None
Transmit Check Digit	Decide whether to include the check digit in the data to transmit. "Verify Check Digit" must be enabled.	Enable

Symbology	Description	Default
CODE 11		
Code 11		Enable
Code 11	Switch to enable Code 11 decoding.	Enable
Check Digit Option	Set whether to verify check digits according to the selected option. If the check digits are incorrect, the barcode will not be accepted. ▸ Disable ▸ One Check Digit ▸ Two Check Digit	Disable
Transmit Check Digit	Selects whether to include check digits in the transmitted data. ▸ "Check Digit Option" must be enabled.	Disable
Length option	Sets the length of the Code 11 symbols to decode. ▸ One Fixed length (Length 1) ▸ Two Fixed lengths (Length 1>Length 2) ▸ Max / Min Length (range: 0-55; Length 1<Length 2) ▸ Any Length	Max / Min Length (4-55)
CODE 39		
Code 39		Enable
Code 39	Switch to enable Code 39 decoding.	Enable
Convert to Code 32	Selects whether to convert decoded data to Italian Pharmacode.	Disable
Code 32 Prefix	Prefix character "A" to Code 32 barcodes. ▸ "Convert to Code 32" must be enabled for this to function properly.	Disable
Verify Check Digit	Selects whether to verify the Modulo 43 check digit. If the check digit is incorrect, the barcode will not be accepted.	Disable
Transmit Check Digit	Decide whether to include the check digit in the data to transmit. ▸ "Verify Check Digit" must be enabled.	Disable
Support Full ASCII	Selects whether to enable Code 39 Full ASCII decoding. Characters are paired to encode the full ASCII character set.	Disable
Length option	Sets the length of the Code 39 symbols to decode. ▸ One Fixed length (Length 1) ▸ Two Fixed lengths (Length 1>Length 2) ▸ Max / Min Length (range: 0-55; Length 1<Length 2) ▸ Any Length	Max / Min Length (4-55)
Security Level	Select the security level from **Level 0** to **Level 3**	Level 1

Symbology	Description	Default
Trioptic Code 39		
Trioptic Code 39		Disable
Trioptic Code 39	Switch to enable Trioptic Code 39 decoding.	Disable
Code 93		
Code 93		Enable
Code 93	Switch to enable Code 93 decoding.	Enable
Length option	Sets the length of the Code 39 symbols to decode. ▸ One Fixed length (Length 1) ▸ Two Fixed lengths (Length 1>Length 2) ▸ Max / Min Length (range: 0-55; Length 1<Length 2) ▸ Any Length	Max / Min Length (4-55)
CODE 128		
Code 128		Enable
Code 128	Switch to enable Code 128 decoding.	Enable
Length option	Sets the length of the Code 128 symbols to decode. ▸ One Fixed length (Length 1) ▸ Two Fixed lengths (Length 1>Length 2) ▸ Max / Min Length (range: 0-55; Length 1<Length 2) ▸ Any Length	Max / Min Length (4-55)
GS1-128		Enable
GS1-128	Switch to enable GS1-128 decoding.	Enable
Separator Character	Enable the function code character separator, which is used to separate data fields of variable length and application identifiers of subsequent data fields in concatenated data strings. Tap on to choose your input method between **Keyboard input** and **Symbol table input** to set a separator character to replace with.	None
Enable App ID Separator	Check to enable the separator configuration for Application Identifier. You can respectively set the Left Separator and Right Separator. Tap on to choose your input method between Keyboard input and Symbol table input to set a separator character to replace with.	Disable

Symbology	Description	Default
ISBT 128		Enable
ISBT 128	Switch to enable ISBT 128 decoding.	Enable
Concatenation	Sets whether to enable decoding ISBT 128 by performing concatenation of ISBT data. ▸ **Disable**: Does not perform concatenation ▸ **Enable**: Performs concatenation on all ISBT-128 barcodes. ▸ **Auto-discriminate**: Auto-discriminates between the ISBT 128 barcodes which require concatenation and those which do not need concatenation.	Auto-discriminate
Redundancy	When "Auto-discriminate" is applied, decide the number of times of supplementary decoding the same barcode to count as a valid read. Configurable between 2 and 20.	10
CODE 2 OF 5		
Chinese 25		Enable
Chinese 25	Switch to enable Chinese 2 of 5 decoding.	Enable
Discrete 25		Enable
Discrete 25	Switch to enable Discrete 2 of 5 decoding.	Enable
Length option	Sets the length of the Discrete 2 of 5 symbols to decode. ▸ One Fixed length (Length 1) ▸ Two Fixed lengths (Length 1>Length 2) ▸ Max / Min Length (range: 0-55; Length 1<Length 2) ▸ Any Length	Max / Min Length (4-55)
Interleaved 25		
Interleaved 25		Enable
Interleaved 25	Switch to enable Interleaved 2 of 5 decoding.	Enable
Length option	Sets the length of Interleaved 2 of 5 symbols to decode. ▸ One Fixed length (Length 1) ▸ Two Fixed lengths (Length 1>Length 2) ▸ Max / Min Length (range: 0-55; Length 1<Length 2) ▸ Any Length	Max / Min Length (4-55)
Verify Check Digit	Decide whether to verify the check digit. If the check digit is incorrect, the barcode will not be accepted.	Disable
Transmit Check Digit	Decide whether to include the check digit in the data to transmit.	Disable
Convert to EAN-13	Convert a 14-character Interleaved 25 barcode into EAN-13 if the following requirements are met: ▸ The barcode must have a leading 0 and a valid EAN-13 check digit.	Disable
Security Level	Select the security level from **Level 0** to **Level 3**	Level 1

Symbology	Description	Default
Matrix 25		Enable
Matrix 25	Switch to enable Matrix 2 of 5 decoding.	Enable
Length option	Sets the length of the Matrix 2of 5 symbols to decode. ▸ One Fixed length (Length 1) ▸ Two Fixed lengths (Length 1>Length 2) ▸ Max / Min Length (range: 0-55; Length 1<Length 2) ▸ Any Length	Max / Min Length (4-55)
Redundancy	Enables or disable read redundancy for Matrix 2 of 5.	Disable
Verify Check Digit	Decide whether to verify the check digit. If the check digit is incorrect, the barcode will not be accepted.	Disable
Transmit Check Digit	Decide whether to include the check digit in the data to transmit.	Disable
Composite		
Composite CC-A/B		Disable
Composite CC-A/B	Switch to enable Composite CC-A/B decoding.	Disable
Composite CC-C		Enable
Composite CC-C	Switch to enable Composite CC-C decoding.	Enable
Composite TLC-39		Disable
Composite TLC-39	Switch to enable Composite TLC-39 decoding.	Disable
Composite General Preference		
UPC Composite Mode	UPC barcodes can be "linked" with a 2D barcode during transmission as if they were one barcode. ▸ **UPC Never Linked**: Transmit UPC barcodes regardless of whether a 2D barcode is detected. ▸ **UPC Always Linked**: Transmit UPC barcodes and the 2D portion. If the 2D portion is not detected, the UPC barcode will not be transmitted. **Note: CC-A/B or CC-C must be enabled.** ▸ **Auto-discriminate**: Transmit UPC barcodes as well as the 2D portion if present.	UPC always Linked
GS1-128 Emulation Mode	Sets GS1-128 emulation mode for UCC/EAN Composite Codes.	Disable

Symbology	Description	Default
GS1 DataBar		
GS1 DataBar-14		Enable
GS1 DataBar-14	Switch to enable GS1 DataBar-14 decoding.	Enable
Convert to UPC/EAN	Strips the leading '010' of GS1 DataBar and converts the barcode to EAN-13.	Disable
Security Level	Select the security level from **Level 0** to **Level 3**	Level 1
GS1 DataBar Limited		Enable
GS1 DataBar Limited	Switch to enable GS1 DataBar Limited decoding.	Enable
Convert to UPC/EAN	Strips the leading '010' of GS1 DataBar Limited and converts the barcode to EAN-13.	Disable
Security Level	Select the security level from **Level 0** to **Level 3**	Level 3
Transmit Check Digit	Decide whether to include the check digit in the data to transmit.	Enable
Transmit Application ID	Decide whether to transmit the Application ID ("01").	Enable
GS1 DataBar Expanded		Enable
GS1 DataBar Expanded	Switch to enable GS1 DataBar Expanded decoding.	Enable
Separator Character	Separator Character Enable the function code character separator, which is used to separate data fields of variable length and application identifiers of subsequent data fields in concatenated data strings.	None
Security Level	Select the security level from **Level 0** to **Level 3**	Level 1
Korean 3 OF 5		
Korean 3 of 5		Disable
Korean 3 of 5	Switch to enable Korean 3 of 5 decoding.	Disable
MSI		
MSI		Enable
MSI	Switch to enable MSI decoding.	Enable
Length option	Sets the length of the MSI symbols to decode. ▸ One Fixed length (Length 1) ▸ Two Fixed lengths (Length 1>Length 2) ▸ Max / Min Length (range: 0-55; Length 1<Length 2) ▸ Any Length	Max / Min Length (4-55)

Symbology	Description	Default
Verify Check Digit	One check digit is mandatory for decoding MSI barcodes. Select whether a second check digit should be verified. If the check digits are incorrect, the barcode will not be accepted. ▸ One Check Digit ▸ Two Check Digits	One Check Digit
Transmit Check Digit	Decide whether to include the check digit in the data to transmit.	Disable
Algorithm	When two check digits are set for verification, two choices are available for the pair of check digits. ▸ Modulo10 / Modulo11 ▸ Double Modulo 10	Double Modulo 10
Postal		
Australian Postal		Enable
Japan Postal		Enable
Netherlands KIX Code		Enable
US Postnet		Enable
US Planet		Enable
USPS Postal		Enable
UPU FICS Postal		Enable
UK Postal		Enable
Postal General Preference		
US Postal Check Digit	Decide whether to transmit check digit for US Postnet or US Planet.	Enable
UK Postal Check Digit	Decide whether to transmit check digit for UK Postal.	Enable
EAN		
EAN-8		Enable
EAN-8	Switch to enable EAN-8 decoding.	Enable
Addon 2	Decide whether to decode EAN-8 with addon 2. ▸ Ignore Addon ▸ Auto-discriminate	Ignore addon
Addon 5	Decide whether to decode EAN-8 with addon 5. ▸ Ignore Addon ▸ Auto-discriminate	Ignore addon
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Enable
Convert to EAN-13	Checkbox to enable converting EAN-8 to EAN-13 format.	Disable

Symbology	Description	Default
EAN-13		Enable
EAN-13	Switch to enable EAN-13 decoding.	Enable
Bookland EAN	Checkbox to enable ISBN decoding. If enabled, select Bookland ISBN Format below.	Disable
Bookland ISBN Format	Decodes Bookland data starting with 978 in 10-digit format along with the Bookland check digit, or Bookland data starting with 978/979 in 13-digit format.	Bookland ISBN-10
Addon 2	Decide whether to decode EAN-13 with addon 2. ▸ Ignore Addon ▸ Auto-discriminate	Ignore addon
Addon 5	Decide whether to decode EAN-13 with addon 5. ▸ Ignore Addon ▸ Auto-discriminate	Ignore addon
Transmit Check Digit	Decide whether to include the EAN-13 check digit (the last character in the barcode) in the data being transmitted.	Enable
ISSN EAN	Checkbox to enable ISSN EAN decoding.	Disable
UPC		
UPC-A		Enable
UPC-A	Switch to enable UPC-A decoding.	Enable
Addon 2	Decide whether to decode UPC-A with addon 2. ▸ Ignore Addon ▸ Auto-discriminate	Ignore addon
Addon 5	Decide whether to decode UPC-A with addon 5. ▸ Ignore Addon ▸ Auto-discriminate	Ignore addon
Preamble	Decide whether to include the UPC-A preamble System Character (and Country Code) in the data being transmitted. ▸ **No transmit**: transmits none of the above ▸ **Transmit System Character**: transmits system number only ▸ **Transmit Sys. Character and Country Code**: transmits system number and country code	Transmit System Character
Transmit Check Digit	Decide whether to include the UPC-A check digit (the last character in the barcode) in the data being transmitted.	Enable
Convert to EAN-13	Checkbox to enable converting EAN-8 to EAN-13 format.	Disable

Symbology	Description	Default
UPC-E		Enable
UPC-E	Switch to enable UPC-E decoding.	Enable
Addon 2	Decide whether to decode UPC-E with addon 2. ▸ Ignore Addon ▸ Auto-discriminate	Ignore addon
Addon 5	Decide whether to decode UPC-E with addon 5. ▸ Ignore Addon ▸ Auto-discriminate	Ignore addon
Preamble	Decide whether to include the UPC-E preamble System Character (and Country Code) in the data being transmitted. ▸ **No transmit**: transmits none of the above ▸ **Transmit System Character**: transmits system number only ▸ **Transmit Sys. Character and Country Code**: transmits system number and country code	Transmit System Character
Convert to UPC-A	The UPC-E barcode will be expanded into UPC-A format, and the next process will follow the settings configured for UPC-A.	Disable
Transmit Check Digit	Decide whether to include the UPC-E1 check digit (the last character in the barcode) in the data being transmitted.	Enable
UPC-E1		Disable
UPC-E1	Switch to enable UPC-E1 decoding.	Disable
Addon 2	Decide whether to decode UPC-E1 with addon 2. ▸ Ignore Addon ▸ Auto-discriminate	Ignore addon
Addon 5	Decide whether to decode UPC-E1 with addon 5. ▸ Ignore Addon ▸ Auto-discriminate	Ignore addon
Preamble	Decide whether to include the UPC-E1 preamble System Character (and Country Code) in the data being transmitted. ▸ **No transmit**: transmits none of the above ▸ **Transmit System Character**: transmits system number only ▸ **Transmit Sys. Character and Country Code**: transmits system number and country code	Transmit System Character
Convert to UPC-A	The UPC-E1 barcode will be expanded into UPC-A format, and the next process will follow the settings configured for UPC-A.	Disable
Transmit Check Digit	Decide whether to include the UPC-E1 check digit (the last character in the barcode) in the data being transmitted.	Enable

Symbology	Description	Default
Coupon Code		
Goupon Code		Disable
Coupon Code	Switch to enable Coupon Code decoding.	Disable

2D SYMBOLOGIES

Symbology	Description	Default
Aztec		
Aztec		Enable
Aztec	Switch to enable Aztec decoding.	Enable
Data Matrix		
Data Matrix		Enable
Data Matrix	Switch to enable Data Matrix decoding.	Enable
Decode Mirror Image	Switch to enable decode mirror images. • **Never**: Does not decode Data Matrix barcodes that are mirror images. • **Always**: Decodes Data Matrix barcodes that are mirror images. • **Auto-discriminate**: Decodes both mirrored and unmirrored Data Matrix barcodes.	Never
Separator Character	Enable the function code character separator, which is used to separate data fields of variable length and application identifiers of subsequent data fields in concatenated data strings. Tap on to choose your input method between Keyboard input and Symbol table input to set a separator character to replace with.	None
Enable App ID Separator	Check to enable the separator configuration for Application Identifier.You can respectively set the **Left Separator** and **Right Separator**. Tap on to choose your input method between **Keyboard input** and **Symbol table input** to set a separator character to replace with.	Disable

Symbology	Description	Default
MaxiCode		
MaxiCode		Enable
MaxiCode	Switch to enable MaxiCode decoding.	Enable
MicroPDF417		
MicroPDF417		Disable
MicroPDF417	Switch to enable MicroPDF417 decoding.	Disable
Code 128 Emulation	Transmit data from certain Micro PDF 417 barcodes as if it was encoded in Code 128 barcodes. **Note: Transmit AIM code ID character in "Scanner Preferences" must be enabled first. When applied, the MicroPDF417 barcodes are transmitted with one of these prefixes:** ▸ **The first codeword of MicroPDF417 is 903-905**: The original Code ID "]L3" will be changed to "]C1". ▸ **The first codeword of MicroPDF417 is 908 or 909**: The original Code ID "]L4" will be changed to "]C2". ▸ **The first codeword of MicroPDF417 is 910 or 911**: The original Code ID "]L5" will be changed to "]C0".	Disable
MicroQR		
MicroQR		Enable
MicroQR	Switch to enable MicroQR decoding.	Enable
PDF417		
PDF417		Enable
PDF417	Switch to enable PDF417decoding.	Enable
QR Code		
QR Code		Enable
QR Code	Switch to enable QR Code decoding.	Enable
MRZ		
MRZ		Disable
MRZ	Switch to enable MRZ decoding.	Disable
MRZ Mode	Tap to select: ▸ OCR-B Travel Documents Version 1 (3-Line ID Cards) ▸ OCR-B Travel Documents Version 2 (2-Line ID Cards) ▸ OCR-B Travel Documents 2 or 3-Line ID Cards Auto-Detect ▸ OCR-B Passport ▸ OCR-B Visa Type A ▸ OCR-B Visa Type B ▸ OCR-B ICAO Travel Documents	OCR-B ICAO Travel Documents

SYMBOLOGY SETTINGS (FOR SM2)

1D SYMBOLOGIES

Symbology	Description	Default
CODABAR		
Codabar		Enable
Codabar	Switch to enable Codabar decoding.	Enable
Length Option	Set the length of the Codabar symbols to decode. ▸ One Fixed length (Length 1) ▸ Two Fixed lengths (Length 1>Length 2) ▸ Max / Min Length (range: 0-55; Length 1<Length 2) ▸ Any Length	Max / Min Length (4-55)
CLSI Editing	When applied, the CLSI editing strips the start/stop characters and inserts a space after the first, fifth, and tenth characters of a 14-character Codabar barcode. ▸ The 14-character barcode length does not include start/stop characters.	Disable
NOTIS Editing	Set whether to include start/stop characters in the transmitted data. ▸ NOTIS Editing is to strip the start/stop characters, i.e. to disable "Transmit Start/Stop Characters".	Disable
NOTIS Editing Type	Options are **None**, **ABCD/ABCD**, **abcd/abcd**. "NOTIS Editing" must be enabled.	None
Verify Check Digit	Select whether to verify the Modulo 43 check digit. If the check digit is incorrect, the barcode will not be accepted.	None
Transmit Check Digit	Decide whether to include the check digit in the data to transmit. "Verify Check Digit" must be enabled.	Enable
Security Level	Setting options are **Normal** and **High**.	High

Symbology	Description	Default
CODE 11		
Code 11		Disable
Code 11	Switch to enable Code 11 decoding.	Disable
Check Digit Option	Set whether to verify check digits according to the selected option. If the check digits are incorrect, the barcode will not be accepted. ▸ Disable ▸ One Check Digit ▸ Two Check Digit	Disable
Transmit Check Digit	Selects whether to include check digits in the transmitted data. ▸ Check Digit Option" must be enabled.	Disable
Length option	Sets the length of the Code 11 symbols to decode. ▸ One Fixed length (Length 1) ▸ Two Fixed lengths (Length 1>Length 2) ▸ Max / Min Length (range: 0-55; Length 1<Length 2) ▸ Any Length	Max / Min Length (4-55)
Security Level	Setting options are **Normal** and **High**.	High
CODE 39		
Code 39		Enable
Code 39	Switch to enable Code 39 decoding.	Enable
Convert to Code 32	Selects whether to convert decoded data to Italian Pharmacode.	Disable
Transmit Check Digit (Code 32)	Decide whether to include the check digit in the data to transmit. ▸ "Convert to Code 32" must be enabled.	Disable
Verify Check Digit	Selects whether to verify the Modulo 43 check digit. If the check digit is incorrect, the barcode will not be accepted.	Disable
Transmit Check Digit	Decide whether to include the check digit in the data to transmit. ▸ "Verify Check Digit" must be enabled.	Disable
Support Full ASCII	Selects whether to enable Code 39 Full ASCII decoding. Characters are paired to encode the full ASCII character set.	Disable
Length option	Sets the length of the Code 39 symbols to decode. ▸ One Fixed length (Length 1) ▸ Two Fixed lengths (Length 1>Length 2) ▸ Max / Min Length (range: 0-55; Length 1<Length 2) ▸ Any Length	Max / Min Length (4-55)

Symbology	Description	Default
Security Level	Setting options are **Normal** and **High**.	Normal
Tramsmit Start/Stop Character	Select whether to include start/stop characters in the transmitted data.	Disable
Asterisk As Data Characters	Select whether to use asterisk as the data characters.	Disable
CODE 93		
Code 93		Enable
Code 93	Switch to enable Code 93 decoding.	Enable
Length option	Sets the length of the Code 93 symbols to decode. ▸ One Fixed length (Length 1) ▸ Two Fixed lengths (Length 1>Length 2) ▸ Max / Min Length (range: 0-55; Length 1<Length 2) ▸ Any Length	Max / Min Length (4-55)
CODE 128		
Code 128		Enable
Code 128	Switch to enable Code 128 decoding.	Enable
Security Level	Setting options are **Normal** and **High**.	Normal
Length option	Sets the length of the Code 128 symbols to decode. ▸ One Fixed length (Length 1) ▸ Two Fixed lengths (Length 1>Length 2) ▸ Max / Min Length (range: 0-55; Length 1<Length 2) ▸ Any Length	Max / Min Length (4-55)
GS1-128		Enable
GS1-128	Switch to enable GS1-128 decoding.	Enable
Separator Character	Enable the function code character separator, which is used to separate data fields of variable length and application identifiers of subsequent data fields in concatenated data strings. Tap on to choose your input method between **Keyboard input** and **Symbol table input** to set a separator character to replace with.	None

Symbology	Description	Default
Enable App ID Separator	Check to enable the separator configuration for Application Identifier. You can respectively set the Left Separator and Right Separator. Tap on to choose your input method between Keyboard input and Symbol table input to set a separator character to replace with.	Disable
ISBT 128		Enable
ISBT 128	Switch to enable ISBT 128 decoding.	Enable
Concatenation	Sets whether to enable decoding ISBT 128 by performing concatenation of ISBT data. ▸ **Disable**: Does not perform concatenation ▸ **Enable**: Performs concatenation on all ISBT-128 barcodes. ▸ **Auto-discriminate**: Auto-discriminates between the ISBT 128 barcodes which require concatenation and those which do not need concatenation.	Disable
Discrete 25		
Discrete 25		Enable
Discrete 25	Switch to enable Discrete 2 of 5 decoding.	Enable
Length option	Sets the length of the Discrete 2 of 5 symbols to decode. ▸ One Fixed length (Length 1) ▸ Two Fixed lengths (Length 1>Length 2) ▸ Max / Min Length (range: 0-55; Length 1<Length 2) ▸ Any Length	Max / Min Length (4-55)
Start Stop Selection	This decides the readability of all 2 of 5 symbology Variants. For example, flight tickets actually use an Industrial 2 of 5 barcode but with Interleaved 2 of 5 start/stop pattern. In order to read this barcode, the start/stop pattern selection parameter of Industrial 2 of 5 should set to "Interleaved 25" ▸ Discrete 25 ▸ Interleaved 25 ▸ Matrix 25	Discrete 25
Verify Check Digit	Decide whether to verify the check digit. If the check digit is incorrect, the barcode will not be accepted.	Disable
Transmit Check Digit	Decide whether to include the check digit in the data to transmit.	Enable

Symbology	Description	Default
Interleaved 25		
Interleaved 25		Enable
Interleaved 25	Switch to enable Interleaved 2 of 5 decoding.	Enable
Length option	Sets the length of Interleaved 2 of 5 symbols to decode. ▸ One Fixed length (Length 1) ▸ Two Fixed lengths (Length 1>Length 2) ▸ Max / Min Length (range: 0-55; Length 1<Length 2) ▸ Any Length	Max / Min Length (4-55)
Verify Check Digit	Decide whether to verify the check digit. If the check digit is incorrect, the barcode will not be accepted.	Disable
Transmit Check Digit	Decide whether to include the check digit in the data to transmit.	Disable
Start Stop Selection	This decides the readability of all 2 of 5 symbology Variants. For example, flight tickets actually use an Industrial 2 of 5 barcode but with Interleaved 2 of 5 start/stop pattern. In order to read this barcode, the start/stop pattern selection parameter of Industrial 2 of 5 should set to "Interleaved 25" ▸ Discrete 25 ▸ Interleaved 25 ▸ Matrix 25	Interleaved 25
Matrix 25		
Matrix 25		Enable
Matrix 25	Switch to enable Matrix 2 of 5 decoding.	Enable
Length option	Sets the length of the Matrix 2 of 5 symbols to decode. ▸ One Fixed length (Length 1) ▸ Two Fixed lengths (Length 1>Length 2) ▸ Max / Min Length (range: 0-55; Length 1<Length 2) ▸ Any Length	Max / Min Length (4-55)
Verify Check Digit	Decide whether to verify the check digit. If the check digit is incorrect, the barcode will not be accepted.	Disable
Transmit Check Digit	Decide whether to include the check digit in the data to transmit.	Disable
Start Stop Selection	This decides the readability of all 2 of 5 symbology Variants. For example, flight tickets actually use an Industrial 2 of 5 barcode but with Interleaved 2 of 5 start/stop pattern. In order to read this barcode, the start/stop pattern selection parameter of Industrial 2 of 5 should set to "Interleaved 25" ▸ Discrete 25 ▸ Interleaved 25 ▸ Matrix 25	Matrix 25

Symbology	Description	Default
Composite		
Composite CC-A/B		Disable
Composite CC-A/B	Switch to enable Composite CC-A/B decoding.	Disable
Composite CC-C		Disable
Composite CC-C	Switch to enable Composite CC-C decoding.	Disable
Composite General Preference		
UPC Composite Mode	UPC barcodes can be "linked" with a 2D barcode during transmission as if they were one barcode. ▸ **UPC Never Linked**: Transmit UPC barcodes regardless of whether a 2D barcode is detected. ▸ **UPC Always Linked**: Transmit UPC barcodes and the 2D portion. If the 2D portion is not detected, the UPC barcode will not be transmitted. **Note: CC-A/B or CC-C must be enabled.** ▸ **Auto-discriminate**: Transmit UPC barcodes as well as the 2D portion if present.	UPC always Linked
GS1 DataBar		
GS1 DataBar-14		Disable
GS1 DataBar-14	Switch to enable GS1 DataBar-14 decoding.	Disable
Security Level	Setting options are **Normal** and **High**.	Normal
Transmit Check Digit	Decide whether to include the check digit in the data to transmit.	Enable
Transmit Application ID	Decide whether to transmit the Application ID ("01").	Enable
GS1 DataBar Limited		Disable
GS1 DataBar Limited	Switch to enable GS1 DataBar Limited decoding.	Disable
Security Level	Setting options are **Normal** and **High**.	Normal
Transmit Check Digit	Decide whether to include the check digit in the data to transmit.	Enable
Transmit Application ID	Decide whether to transmit the Application ID ("01").	Enable
GS1 DataBar Expanded		Disable
GS1 DataBar Expanded	Switch to enable GS1 DataBar Expanded decoding.	Disable
Security Level	Setting options are **Normal** and **High**.	Normal

Symbology	Description	Default
MSI		
MSI		Disable
MSI	Switch to enable MSI decoding.	Disable
Length option	Sets the length of the MSI symbols to decode. ▸ One Fixed length (Length 1) ▸ Two Fixed lengths (Length 1>Length 2) ▸ Max / Min Length (range: 0-55; Length 1<Length 2) ▸ Any Length	Max / Min Length (4-55)
Verify Check Digit	One check digit is mandatory for decoding MSI barcodes. Select whether a second check digit should be verified. If the check digits are incorrect, the barcode will not be accepted. ▸ One Check Digit ▸ Two Check Digits	One Check Digit
Transmit Check Digit	Decide whether to include the check digit in the data to transmit.	Disable
Algorithm	When two check digits are set for verification, two choices are available for the pair of check digits. ▸ Modulo10 / Modulo11 ▸ Double Modulo 10	Double Modulo 10
EAN		
EAN-8		Enable
EAN-8	Switch to enable EAN-8 decoding.	Enable
Addon 2	Decide whether to decode EAN-8 with addon 2. ▸ Ignore Addon ▸ Auto-discriminate	Ignore Addon
Addon 5	Decide whether to decode EAN-8 with addon 5. ▸ Ignore Addon ▸ Auto-discriminate	Ignore Addon
Transmit Check Digit	Decide whether to include the check digit in the data to transmit.	Enable
Convert to EAN-13	Decide whether to enable converting EAN-8 to EAN-13 format.	Disable

Symbology	Description	Default
EAN-13		Enable
EAN-13	Switch to enable EAN-13 decoding.	Enable
Bookland EAN	Switch to enable Bookland EAN decoding.	Disable
Addon 2	Decide whether to decode EAN-13 with addon 2. ▸ Ignore Addon ▸ Auto-discriminate	Ignore Addon
Addon 5	Decide whether to decode EAN-13 with addon 5. ▸ Ignore Addon ▸ Auto-discriminate	Ignore Addon
Transmit Check Digit	Decide whether to include the check digit in the data to transmit.	Enable
ISSN EAN	Switch to enable ISSN EAN decoding.	Disable
Security Level	Setting options are **Normal** and **High**.	Normal
UPC		
UPC-A		Enable
UPC-A	Switch to enable UPC-A decoding.	Enable
Addon 2	Decide whether to decode UPC-A with addon 2. ▸ Ignore Addon ▸ Auto-discriminate	Ignore Addon
Addon 5	Decide whether to decode UPC-A with addon 5. ▸ Ignore Addon ▸ Auto-discriminate	Ignore Addon
Preamble	Decide whether to include the UPC-A preamble System Character (and Country Code) in the data being transmitted. ▸ **No transmit**: transmits none of the above ▸ **Transmit System Character**: transmits system number only ▸ **Transmit Sys. Character and Country Code**: transmits system number and country code	Transmit System Character
Transmit Check Digit	Decide whether to include the UPC-A check digit (the last character in the barcode) in the data being transmitted.	Enable
Convert to EAN-13	Checkbox to enable converting EAN-8 to EAN-13 format.	Disable

Symbology	Description	Default
UPC-E		Enable
UPC-E	Switch to enable UPC-E decoding.	Enable
Addon 2	Decide whether to decode UPC-E with addon 2. ▸ Ignore Addon ▸ Auto-discriminate	Ignore Addon
Addon 5	Decide whether to decode UPC-E with addon 5. ▸ Ignore Addon ▸ Auto-discriminate	Ignore Addon
Preamble	Decide whether to include the UPC-E preamble System Character (and Country Code) in the data being transmitted. ▸ **No transmit**: transmits none of the above ▸ **Transmit System Character**: transmits system number only	Transmit System Character
Conver to UPC-A	The UPC-E barcode will be expanded into UPC-A format, and the next process will follow the settings configured for UPC-A.	Disable
Transmit Check Digit	Decide whether to include the UPC-E check digit (the last character in the barcode) in the data being transmitted.	Enable
Selection System Number	Decide whether to decode the ordinary UPC-E barcodes only or both UPC-E0 and UPC-E1 barcodes. ▸ 0 only ▸ 0 and 1	0 only
Telepen		Disable
Telepen	Switch to enable Telepen decoding.	Disable
Plessey		Disable
Plessey	Switch to enable Plessey decoding.	Disable
Transmit Check Digit	Decide whether to include the check digit in the data to transmit.	Enable
Convert UK Plessey	Decide whether to change each occurrence of the character 'A' to character 'X' in the decoded data.	Disable
French Pharmacode		Disable
French Pharmacode	Switch to enable French Pharmacode decoding.	Disable
Transmit Check Digit	Decide whether to include the check digit in the data to transmit.	Disable

2D SYMBOLOGIES

Symbology	Description	Default
Aztec		
Aztec		Enable
Aztec	Switch to enable Aztec decoding.	Enable
Decode Mirror Image	Switch to enable decode mirror images. ▸ **Never**: Does not decode Aztec barcodes that are mirror images. ▸ **Always**: Decodes Aztec barcodes that are mirror images. ▸ **Auto-discriminate**: Decodes both mirrored and unmirrored Aztec barcodes.	Never
Inverse Type	Decide whether to disable or enable decoding inverse barcodes, or set as auto. ▸ Regular only ▸ Inverse only ▸ Inverse Auto-detect	Regular only
Data Matrix		
Data Matrix		Enable
Data Matrix	Switch to enable Data Matrix decoding.	Enable
Decode Mirror Image	Switch to enable decode mirror images. ▸ **Never**: Does not decode Data Matrix barcodes that are mirror images. ▸ **Always**: Decodes Data Matrix barcodes that are mirror images. ▸ **Auto-discriminate**: Decodes both mirrored and unmirrored Data Matrix barcodes.	Never
Separator Character	Enable the function code character separator, which is used to separate data fields of variable length and application identifiers of subsequent data fields in concatenated data strings.	None
Enable App ID Separator	Check to enable the separator configuration for Application Identifier.You can respectively set the **Left Separator** and **Right Separator**. Tap on to choose your input method between Keyboard input and Symbol table input to set a separator character to replace with.	Disable
Inverse Type	Decide whether to disable or enable decoding inverse barcodes, or set as auto. ▸ Regular only ▸ Inverse only ▸ Inverse Auto-detect	Regular only

Symbology	Description	Default
MaxiCode		
MaxiCode		Enable
MaxiCode	Switch to enable MaxiCode decoding.	Enable
MicroPDF417		
MicroPDF417		Disable
MicroPDF417	Switch to enable MicroPDF417 decoding.	Disable
MicroQR		
MicroQR		Enable
MicroQR	Switch to enable MicroQR decoding.	Enable
PDF417		
PDF417		Enable
PDF417	Switch to enable PDF417 decoding.	Enable
QR Code		
QR Code		Enable
QR Code	Switch to enable QR Code decoding.	Enable
Decode Mirror Image	Switch to enable decode mirror images. ▸ **Never**: Does not decode QR Code that are mirror images. ▸ **Always**: Decodes QR Code that are mirror images. ▸ **Auto-discriminate**: Decodes both mirrored and unmirrored QR Code.	Never
Inverse Type	Decide whether to disable or enable decoding inverse barcodes, or set as auto. ▸ Regular only ▸ Inverse only ▸ Inverse Auto-detect	Regular only
Hanxin		
Hanxin		Enable
Hanxin	Switch to enable Hanxin decoding.	Enable

APPENDIX III

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