

# CipherLab Reference Manual

RK25 Mobile Computer  
Android 7.0, Nougat

Version 1.13



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CIPHERLAB CO., LTD.

Website: <http://www.CipherLab.com>

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## 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°C to 50°C and with humidity range from 10% to 90%.
- ▶ Store the device at ambient temperatures from -30°C to 70°C and with humidity range from 5% to 95%.
- ▶ Charge the device at ambient temperatures from 0°C to 45°C.
- ▶ 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 conductivity 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 Celsius temperatures.
- ▶ 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°C to 45°C.
- ▶ During discharge and handling of batteries, do not exceed 50°C.

#### 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°C to 30°C for the best performance.
- ▶ Do NOT store battery in temperature exceeding 50°C, 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°C but no more than 45°C.

- ▶ Storing battery at temperatures greater than 50°C 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°C to 45°C. It is recommended to charge the battery at room temperature (18°C to 25°C) for optimal performance.
- ▶ Please note that battery charging stops when ambient temperature drops below 0°C or exceeds 45°C.
- ▶ 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

- 1) 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

- 1) 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.

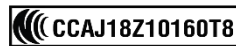
**CA W/O WWAN SKU**

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**



減少電磁波影響,請妥適使用

**MY**



**JP**



**R** 020-180143

**T** AD 180067020

電波法により W52 , W53 は屋内使用限定

**KR**



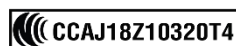
R-C-Q3N-RK25

LTE 이동통신용 무선설비의 기기  
Cipherlab Co., LTD

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Mobile Computer  
Model : RK25 J

**TW**



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



*Manufacturer*  
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**CipherLab Europe**  
 Flight Forum 40,  
 5657 DB Eindhoven, The Netherlands  
 Tel: +31 (0) 40 295 1510  
<http://www.cipherlab.eu>

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

*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  
ซึ่งสอดคล้องตามมาตรฐานความปลอดภัยต่อสุขภาพของมนุษย์จากการใช้เครื่องวิทยุคมนาคมที่คณะกรรมการ  
กิจการโทรคมนาคมแห่งชาติประกาศกำหนด

## RELEASE NOTES

Version	Date	Notes
1.13	Jan. 10, 2021	<ul style="list-style-type: none"> <li>Update “Related Documentation” of “<b>Introduction</b>”.</li> <li>Update the description about “Battery Mode Selection” of <b>Section 2.1.5: Battery Precautions</b>.</li> <li>Change “<b>Physical Keypad</b>” from Section 2.7 to be Chapter 3</li> <li>Remove <b>Chapter 6</b> “Using Reader Configuration Utility”. (Please refer to “<a href="#">ReaderConfig User Guide for Android</a>”)</li> <li>Remove <b>Scan Engine Settings &amp; 2D Imager</b> (Please refer to “<a href="#">ReaderConfig User Guide for Android</a>”)</li> <li>Add new chapter “<b>CipherLab Utilities</b>”</li> <li>Add <b>Appendix I: Application Menu</b></li> </ul>
1.12	March 9, 2021	<ul style="list-style-type: none"> <li>Add “<b>Intent &amp; KeyEvent</b>” to “<b>Data Output Method</b>” in <b>Section 6.2.1: General Settings</b></li> </ul>
1.11	Oct. 8, 2020	<ul style="list-style-type: none"> <li>Add “<b>Convert UHF EPC to ASCII</b>” to <b>Section 2.7.7: Enterprise Settings</b></li> <li>Update <b>Section 3.5: OS Update</b>.</li> <li>Update <b>Section 3.7: Reset to Factory Default</b>.</li> <li>Update <b>Section 4.2.4: Configure Wi-Fi</b>.</li> <li>Update “<b>Data Output</b>” to <b>Section 6.2.1: General Settings</b></li> </ul>
1.10	Aug. 19, 2020	<ul style="list-style-type: none"> <li>Update <b>WPAN</b> in <b>Specifications</b></li> </ul>
1.09	April 22, 2020	<ul style="list-style-type: none"> <li>Add new section “<b>Battery Sensor</b>” to <b>Section 2.1: Battery</b>.</li> <li>Add description about “<b>Doze Mode</b>” to <b>Section 2.7.7: Enterprise Settings</b>.</li> <li>Add new section “<b>Enable WLAN Blacklist</b>” to <b>Section 4.2: Use Wireless Local Area Network (Wi-Fi)</b>.</li> </ul>
1.08	April 1, 2020	<ul style="list-style-type: none"> <li>Add description about “Intent Action” &amp; “Intent Decode Data” to <b>Section 6.2.1: General Settings</b>.</li> </ul>
1.07	Dec. 27, 2019	<ul style="list-style-type: none"> <li>Add new section “<b>Data Formatting</b>” to <b>Chapter 6: ReaderConfig</b></li> </ul>

Version	Date	Notes
1.06	Nov.22, 2019	<ul style="list-style-type: none"> <li>• Add <b>“Important Safety Instructions and Warnings for Li-ion/Polymer Battery”</b> to <b>“Important Notice”</b>.</li> <li>• Add description about <b>“Release Paper”</b> to <b>Section 1.1.1: Install/Remove Battery</b>.</li> <li>• Add <b>“Battery Mode Selection”</b> to <b>Section 2.1.5: Battery Precautions</b></li> <li>• Update <b>Section 2.7.7: Enterprise Keypad Mode</b>.</li> <li>• Update <b>Section 3.3.1: Application Menu</b>.</li> <li>• Add description about <b>“Release Scan Mode”, “Aimer Mode”, &amp; “Amier Mode Timeout”</b> to the table <b>“2D Imager Settings”</b> of <b>Section 6.2.1: General Settings</b>.</li> <li>• Add <b>“Key Event Delay Time”</b> to the table <b>“How to Output”</b> of <b>Section 6.2.1: General Settings</b>.</li> </ul>
1.05	July 26, 2019	<ul style="list-style-type: none"> <li>• Add <b>“Thailand Caution”</b></li> </ul>
1.04	July 01, 2019	<ul style="list-style-type: none"> <li>• Add high temperature warning to <b>Section 2.1.5: Battery Precautions</b>.</li> <li>• Update <b>Section 3.3.1: Application Menu</b>.</li> <li>• Update <b>Chapter 6: ReaderConfig</b></li> </ul>
1.03	Feb. 22, 2019	<ul style="list-style-type: none"> <li>• Add 70° tilted reader model</li> <li>• Add <b>“Battery Protection Mode”</b> to <b>Section 2.1.5: Battery Precautions</b></li> <li>• Update <b>Section 2.4.1: Status LED</b></li> <li>• Update <b>Section 2.6.2: On-screen Keyboard</b></li> <li>• Add <b>“Function Lock Mode”</b> to <b>Section 2.7.3: Function Key</b></li> <li>• Add <b>Section 2.7.5: Enterprise Keypad Mode</b></li> </ul>
1.02	Oct. 05, 2018	<ul style="list-style-type: none"> <li>• Update Chapter 6 <b>“Using Reader Configuration Utility”</b>: <ul style="list-style-type: none"> <li>▪ Update all figures.</li> <li>▪ Remove "Presentation Mode" &amp; "Presentation Usage Time"</li> <li>▪ Change Import &amp; Export file format to .json</li> </ul> </li> </ul>
1.01	Aug. 09, 2018	<ul style="list-style-type: none"> <li>• Change <b>"Tumble Test"</b> in <b>"Specification"</b></li> </ul>
1.00	Aug. 02, 2018	<ul style="list-style-type: none"> <li>• Initial release</li> </ul>

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## INTRODUCTION

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The **RK25** 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, 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.

- ▶ RK25 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

Please visit [CipherLab website](#) to access related documentation about the RS35 mobile computer.

# Chapter 1

## QUICK START

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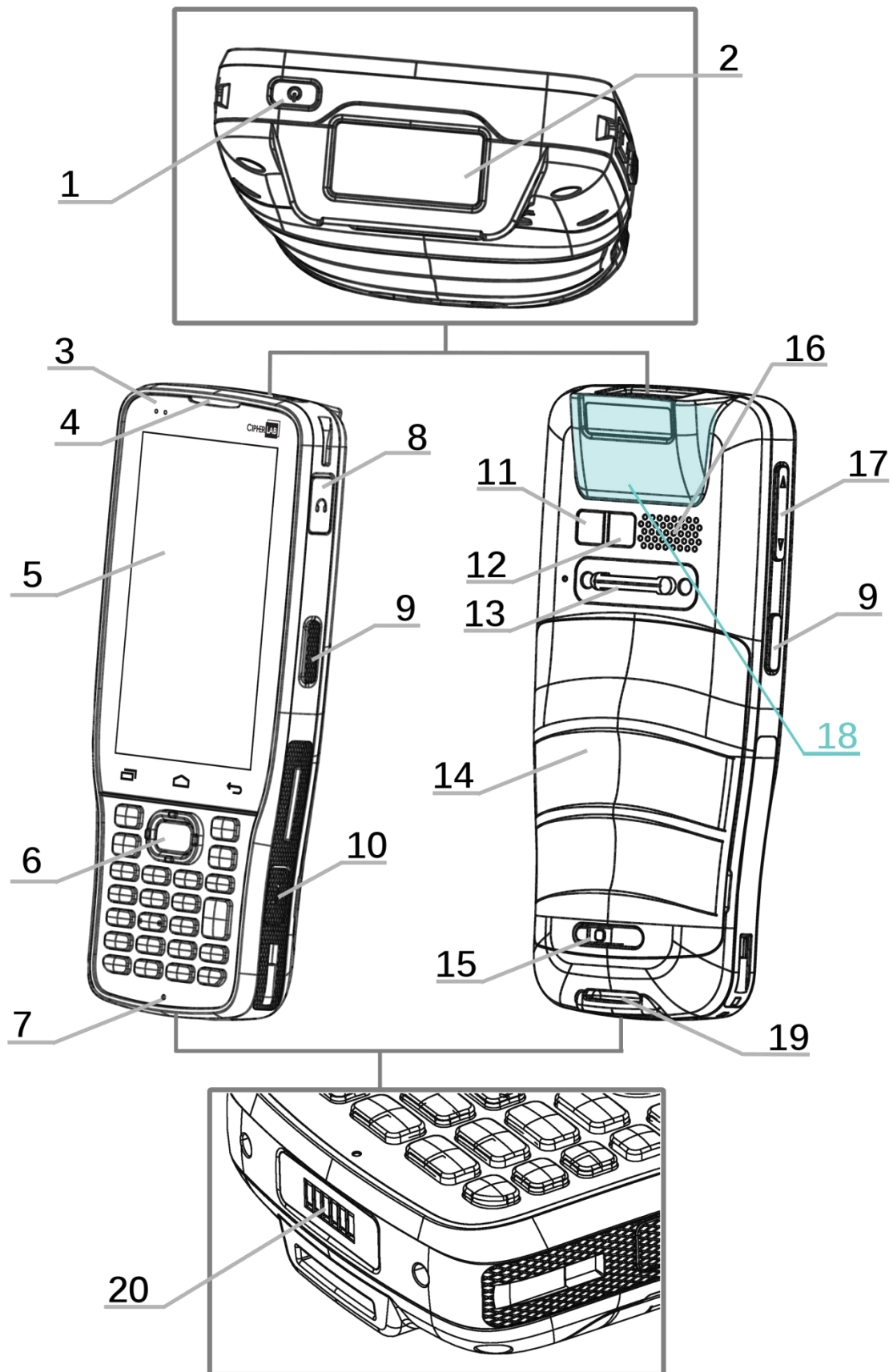
This chapter helps you get ready for starting using the mobile computer.

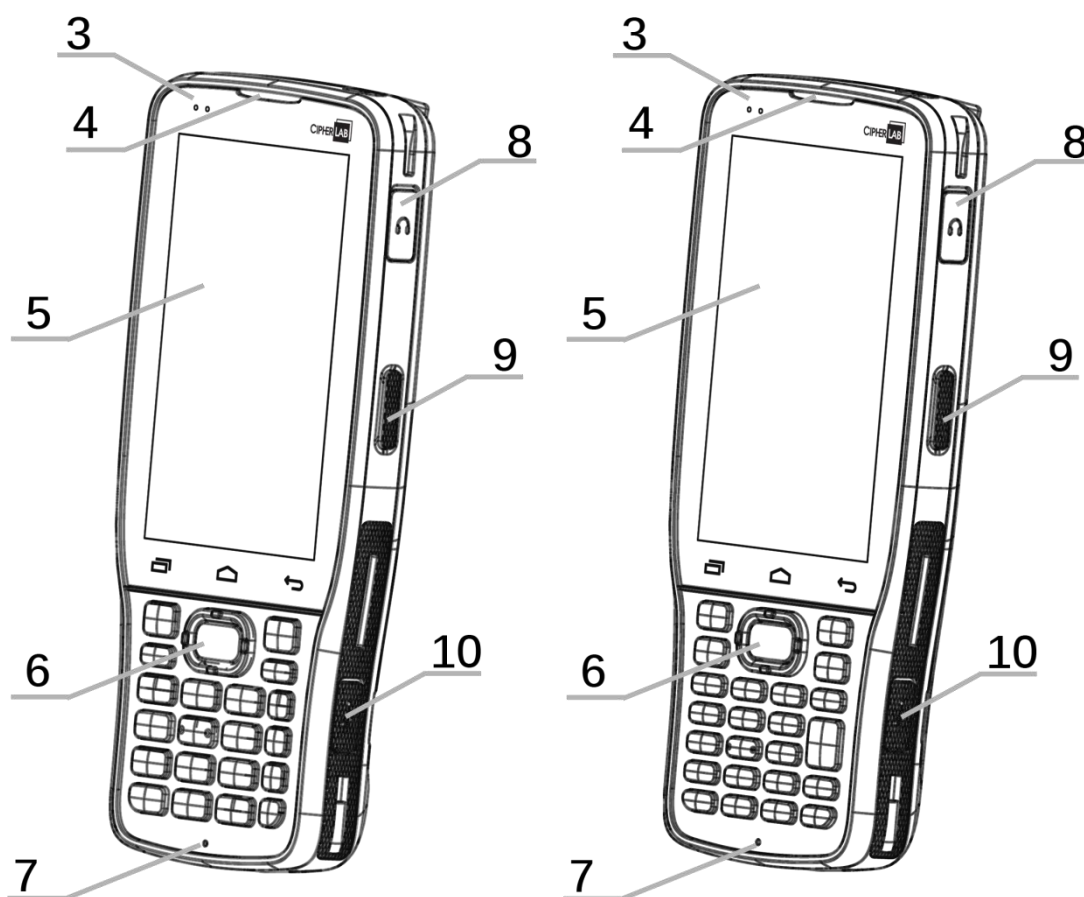
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## 1.1. OVERVIEW

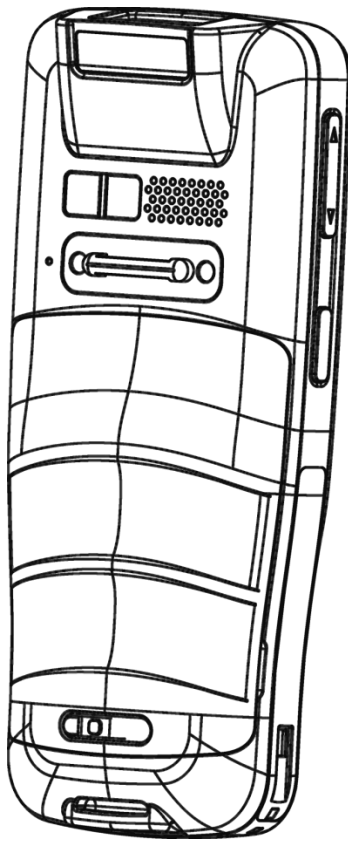




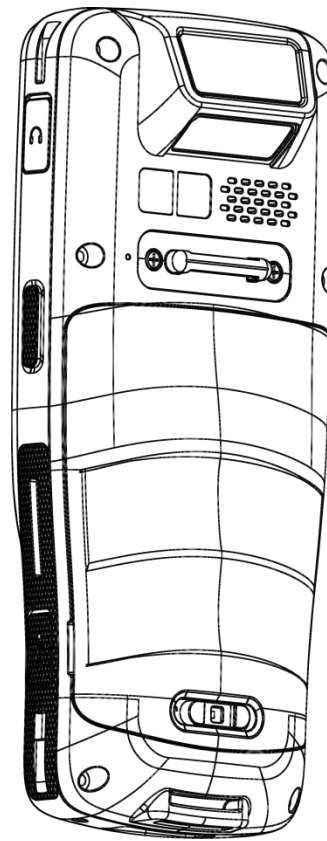
25-key Model

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



**10° Tilted Reader**



**70° Tilted Reader**

---

**Note:**

- (1) Please refer to "[Physical Keypad](#)" for the difference between 28-key Model and 25-key Model.
  - (2) NFC function is unavailable for 70° tilted reader model and 25-Key model.
  - (3) 10° tilted reader model is equipped with 1 SIM slot & 1 optional SIM/SAM slot, while 70° tilted reader model is equipped with dual SIM slot.
-

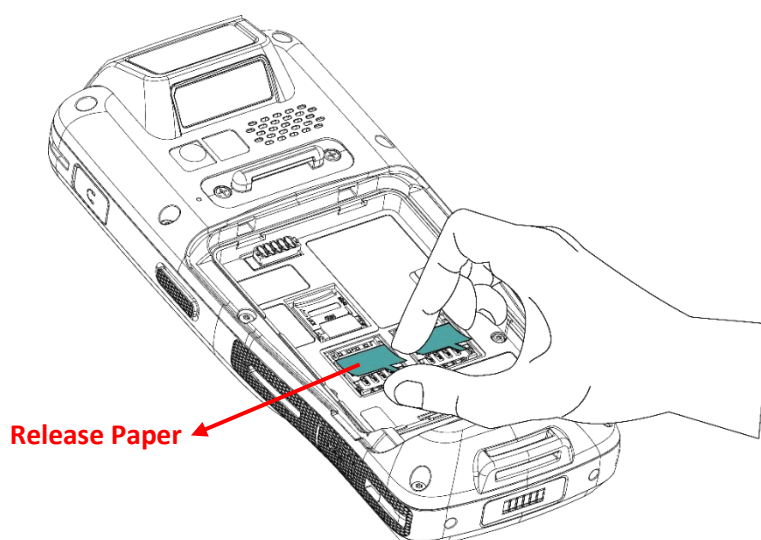


### 1.1.1. INSTALL/ REMOVE BATTERY

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

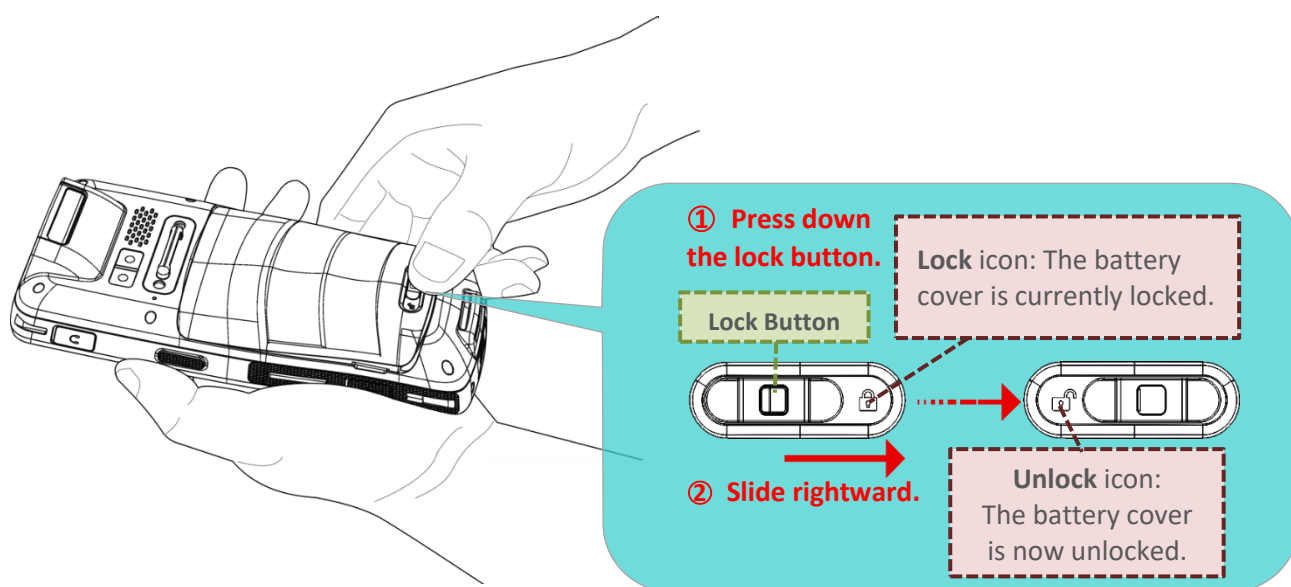
**Note:**

- (1) Any improper handling may reduce the battery life.
- (2) Before installing the main battery for the very first time, please remove the release paper on SIM card slots.



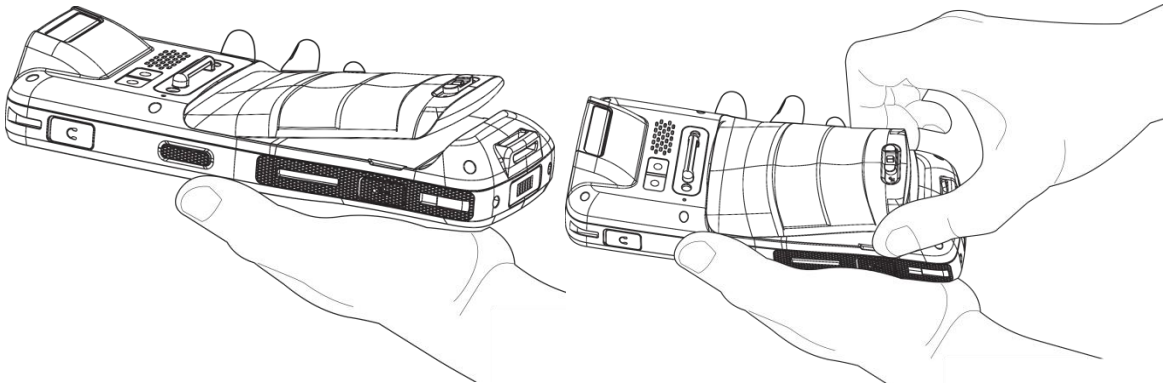
To install the main battery:

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

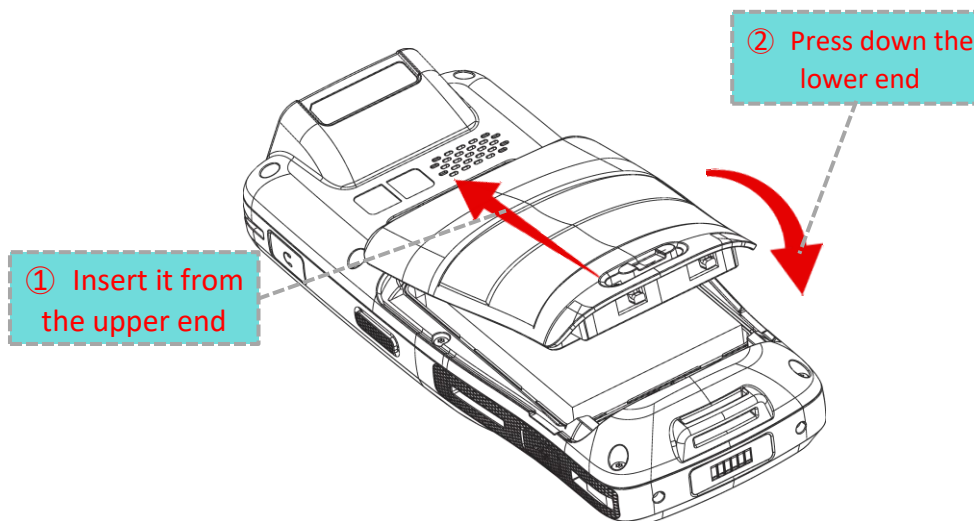


- 2) Once the battery cover is unlocked, it slightly tilts up and is ready to be removed.

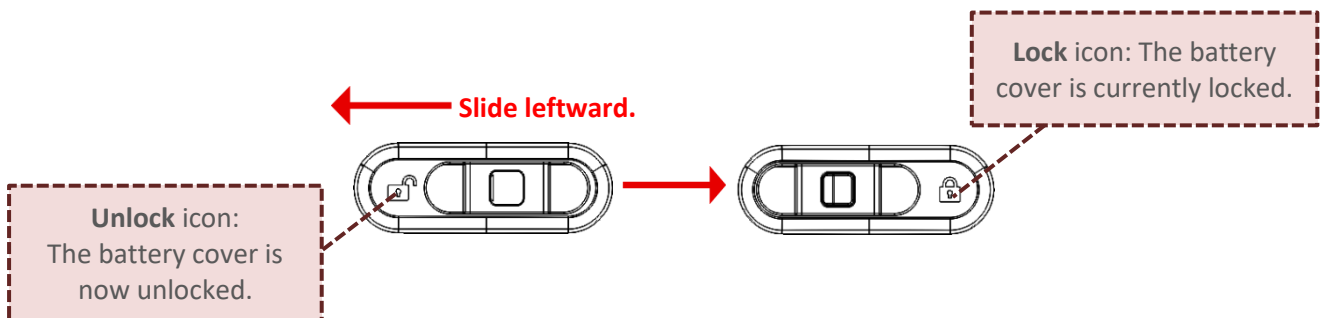
By holding the two sides of the battery cover, lift up the main battery (which is with the battery cover) from its lower end to remove it.



- 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.

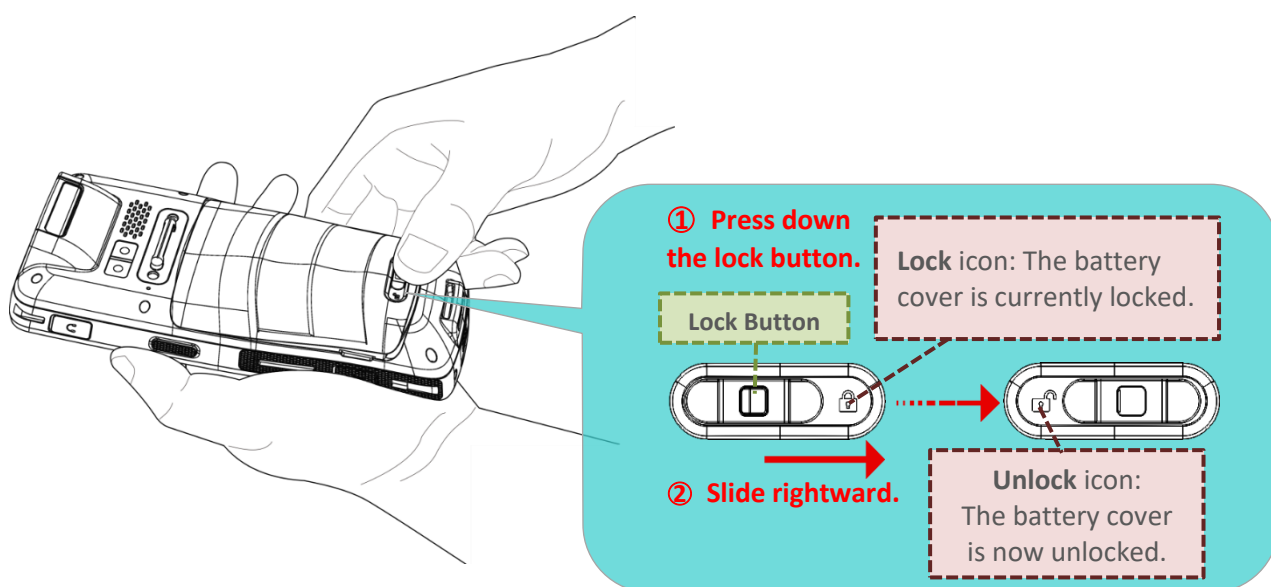


**Warning:**

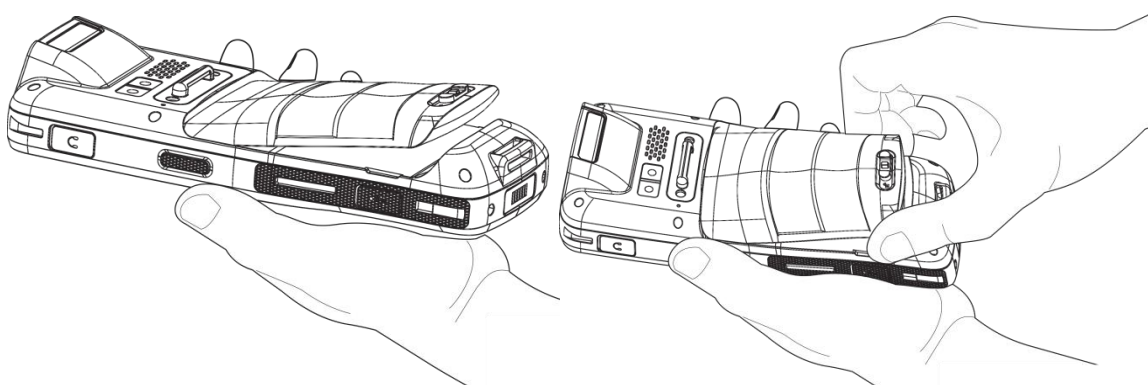
- (1) Make sure the battery latch is at the “Lock” position before powering on the device.
- (2) For initial use, insert a charged battery, lock the battery cover in place, and then press the Power key to power on the mobile computer.

**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 SIM CARD, SAM CARD AND MEMORY CARD

The RK25 mobile computer is equipped with:

- 2 SIM card slots and 1 memory card slot

**OR**

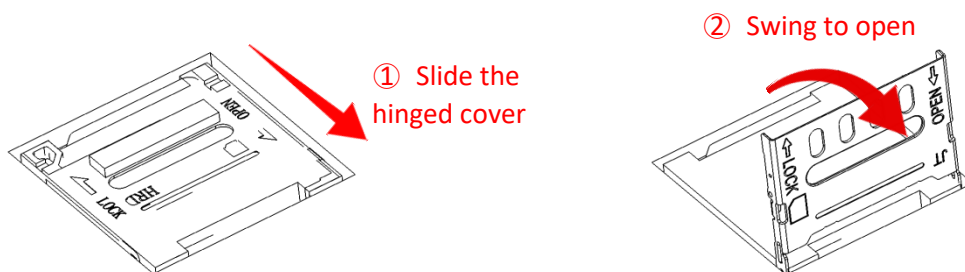
- 1 SIM slot, 1 SAM slot, and 1 memory slot.

---

#### INSTALLATION

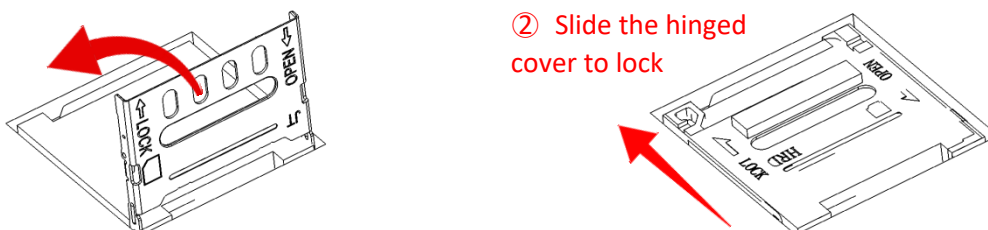
To insert the cards:

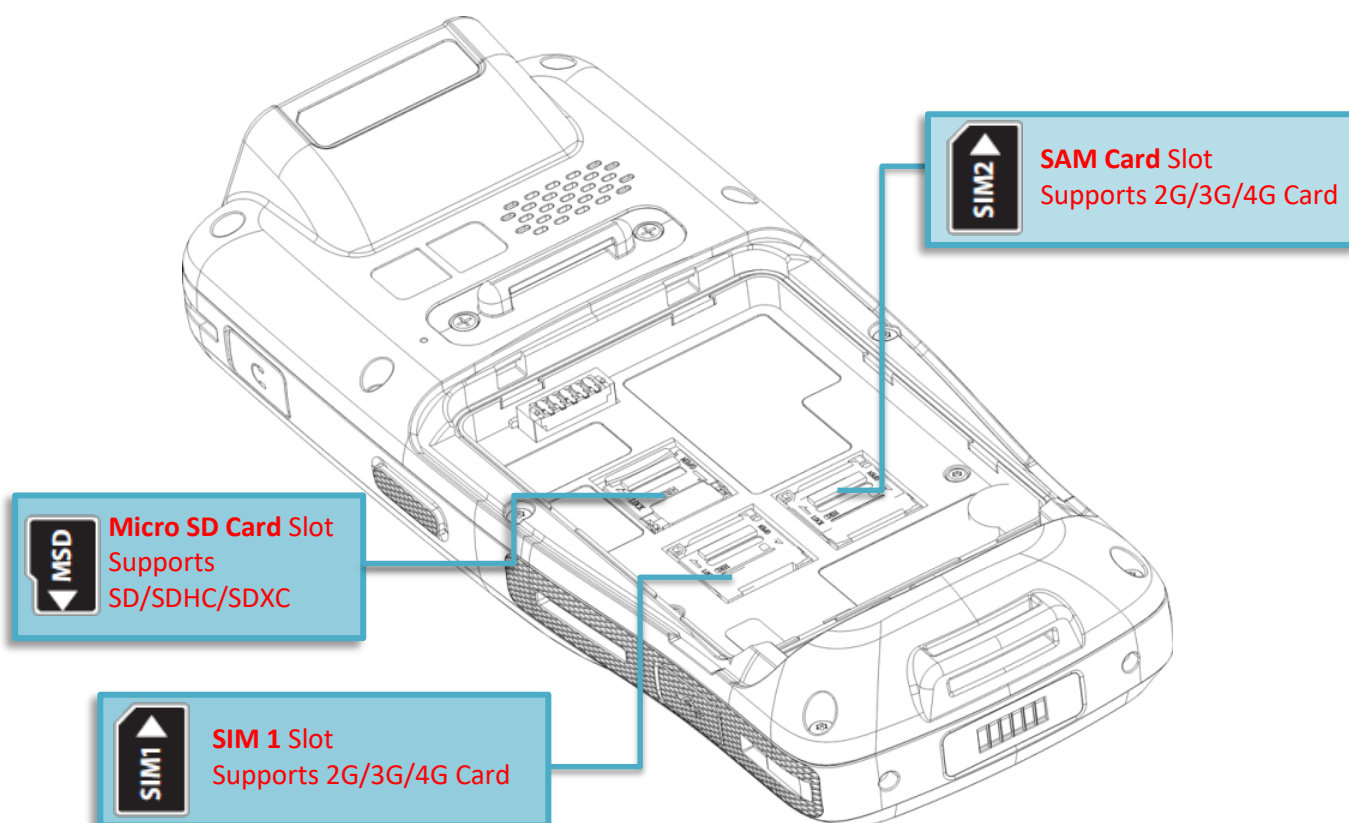
- 1) Remove the battery as described in [Remove Battery](#).
- 2) Slide the hinged cover backward, and swing the top to open.



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

① Close the hinged cover



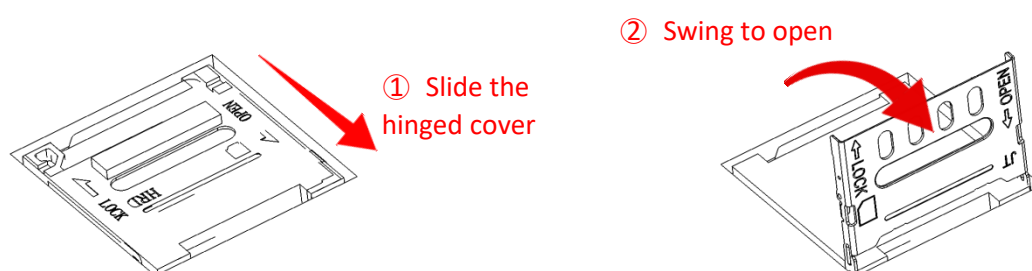
**Note:**

Both SIM1 and SIM2 card slots support 2G/3G/4G cards. However, you can have 3G/4G data transmission on either SIM but not on both at the same time. Refer to [SIM Card Management](#) for details on managing dual SIM cards.

[10° tilted reader model](#) is equipped with 1 SIM slot & 1 optional SIM/SAM slot, while [70° tilted reader model](#) is equipped with dual SIM slot.

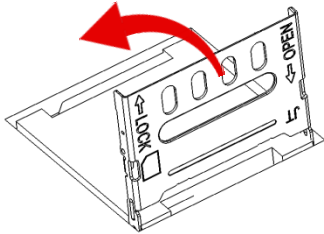
**REMOVE CARDS**

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

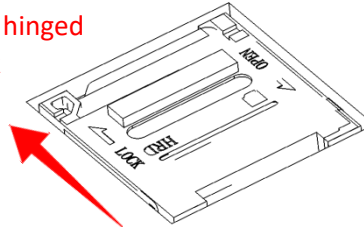


- 3) Take out the cards directly from their slots.
- 4) Close the hinged cover, and then push it toward to lock.

① Close the hinged cover




② Slide the hinged cover to lock

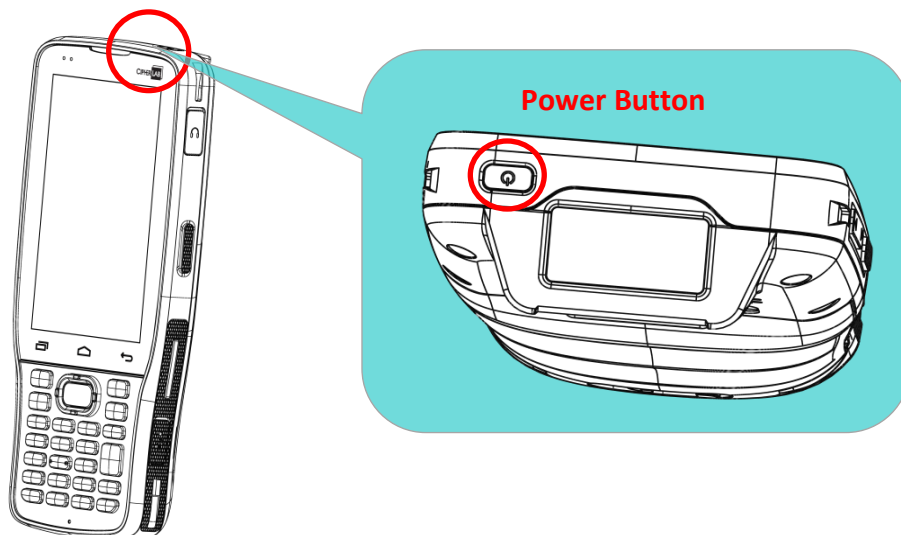


- 5) Replace the battery cover and push the battery latch back to the "**Lock**" position.

### 1.1.3. POWER ON/OFF MOBILE COMPUTER


#### POWER ON

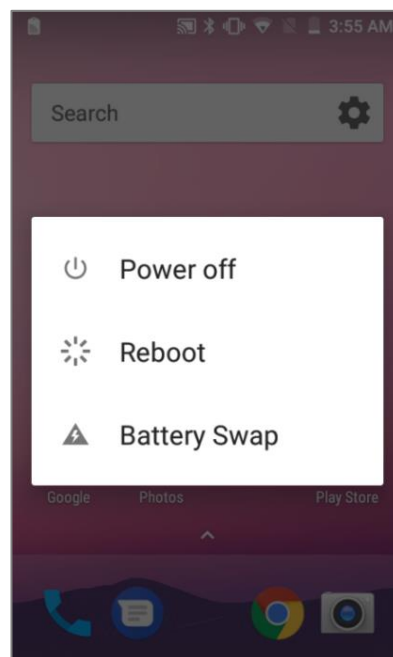
To power on the mobile computer, press and hold the power button  located on the top end of the device. The mobile computer will turn on and show the [Home Screen](#) after splash screen.



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

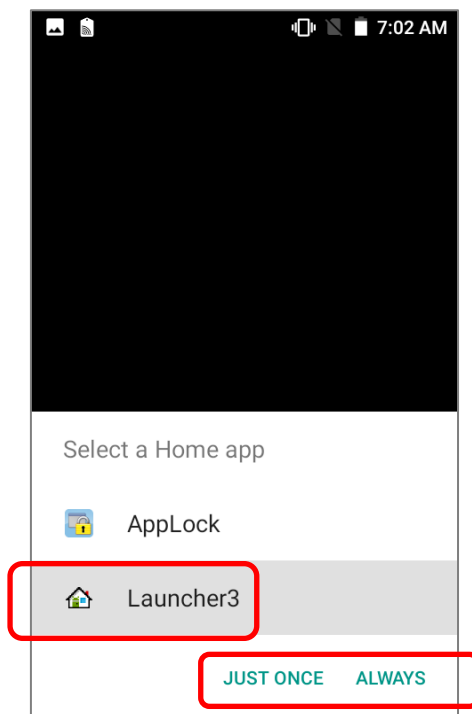
#### POWER OFF

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:

#### 28-Key Model

#### 28-Key Model

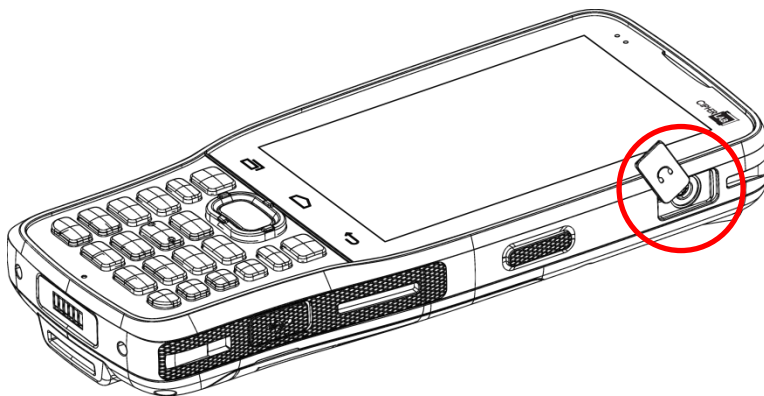


Button	Function	Description
	<b>Back button</b>	Returns to the previous screen or closes the active window or keyboard.
	<b>Home button</b>	Displays the Home screen.
	<b>Recent apps button</b>	Opens a list of recently used applications.

### 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 or communication via the phone application, audio instant messaging, etc.

- 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 °C to 45 °C. It is recommended to charge the battery at room temperature (18 °C to 25 °C) for optimal performance.

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

---

## 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, RK25 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 RK25 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

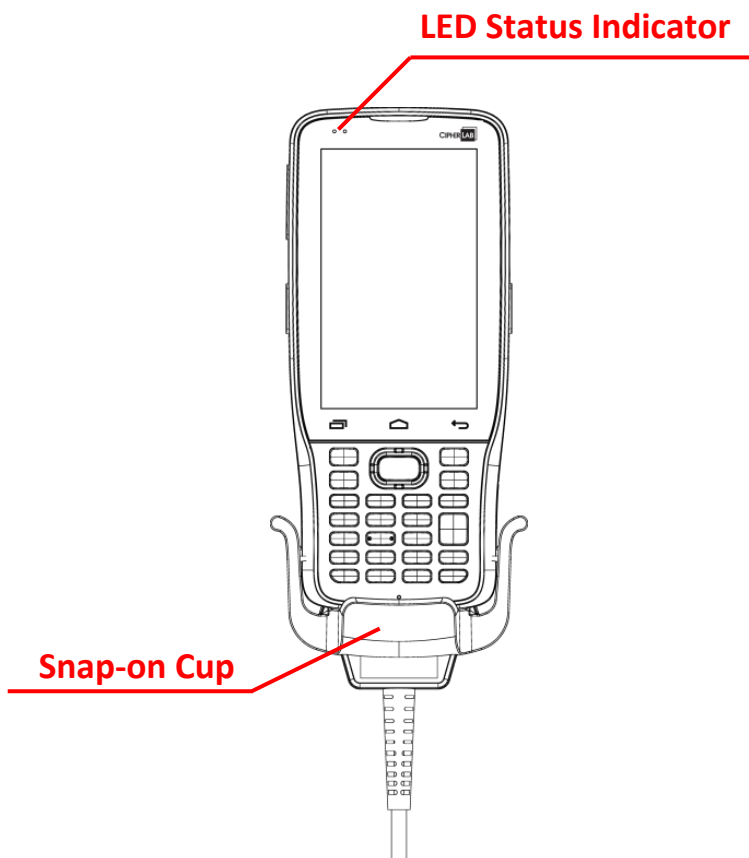
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### Note:

RK25 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 RK25 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**

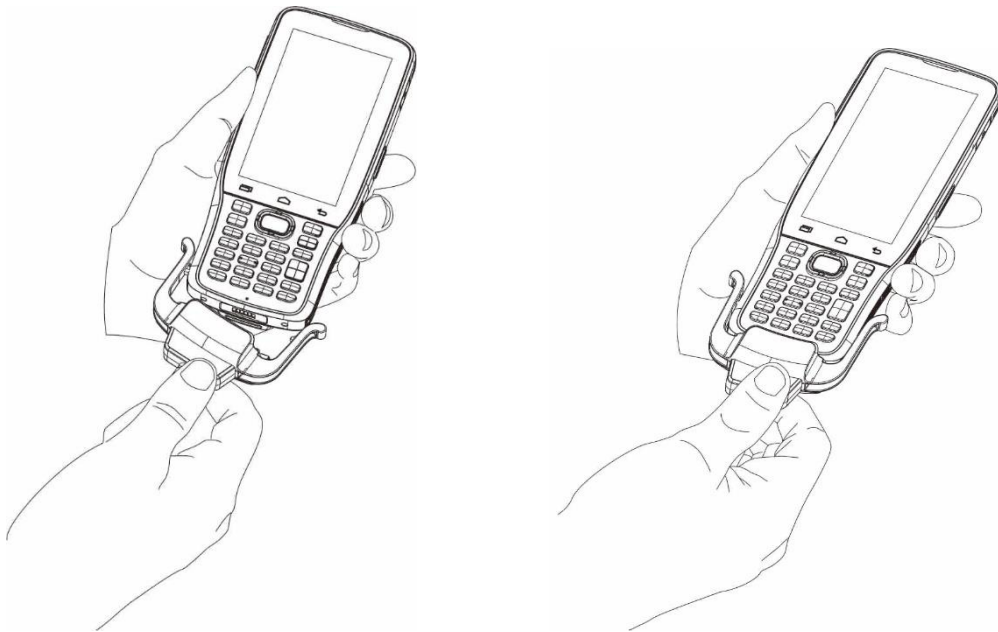
The Snap-on Cable provides a convenient way to charge your mobile computer as well as data communication.

To install:

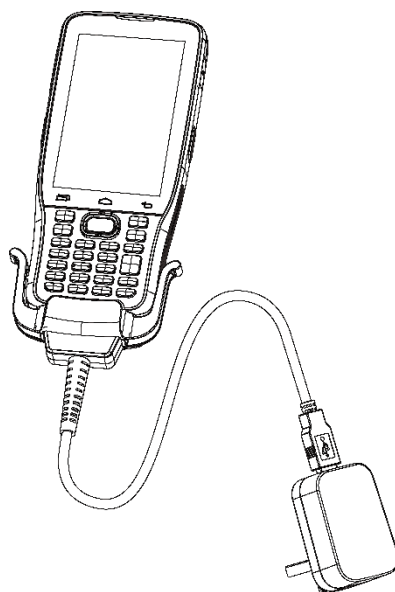
- 1) Remove the micro USB cable if it is connected with the RK25 mobile computer.
- 2) Hold the snap-on cup toward the bottom of the RK25 mobile computer, and place one of the snap-on cup side to the side of the RK25 mobile computer.



- 3) Push the Snap-on cup upwards to make its another side to be attached to the RK25 mobile computer.



- 4) A "click" sound is made once the Snap-on cable is connected with the bottom of the RK25 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
	Red, blink	Charging error
	Green, solid	Charging complete
	No light	The cable is not correctly connected

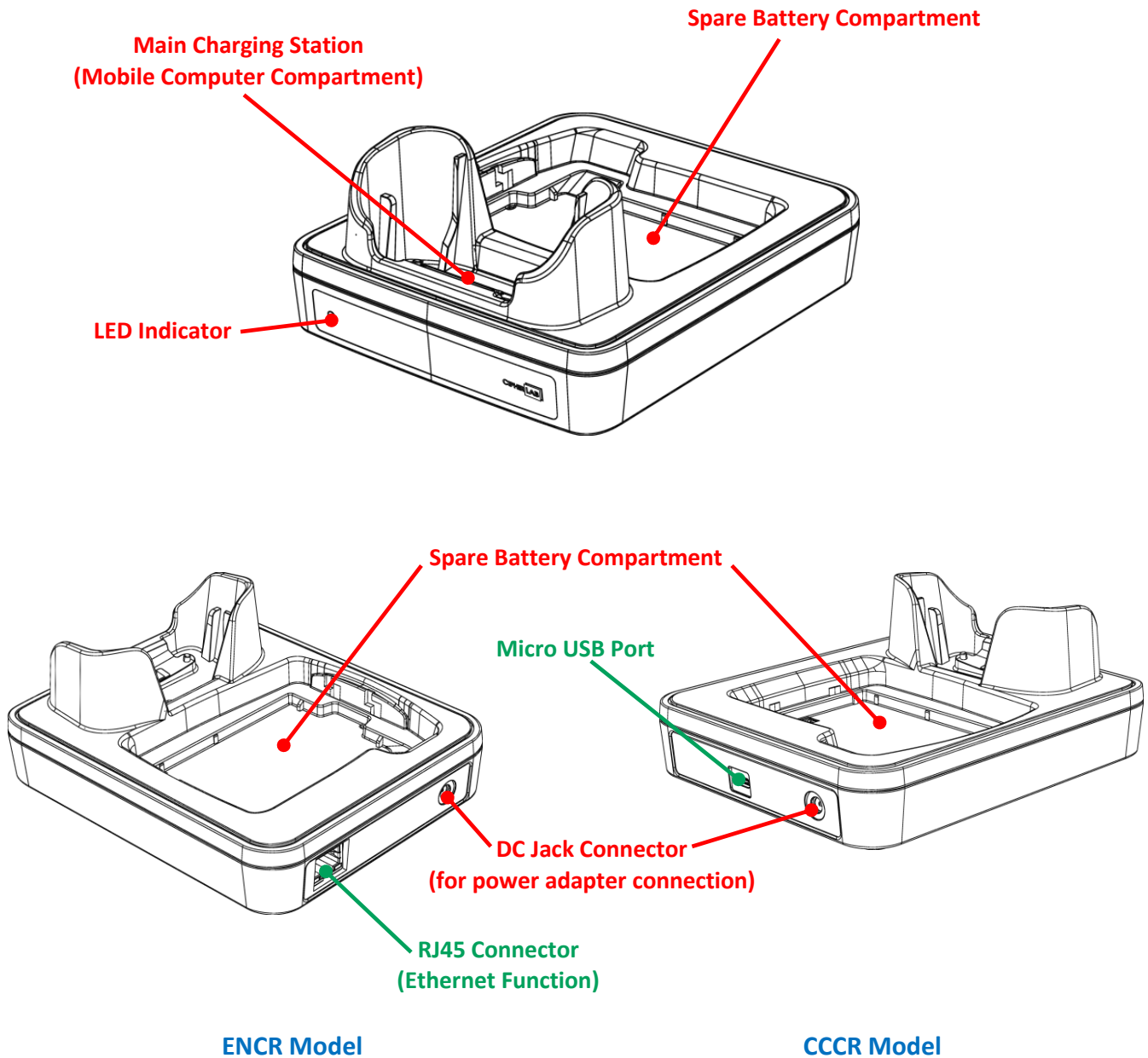
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**Note:**

- (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) RK25 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 RK25 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.



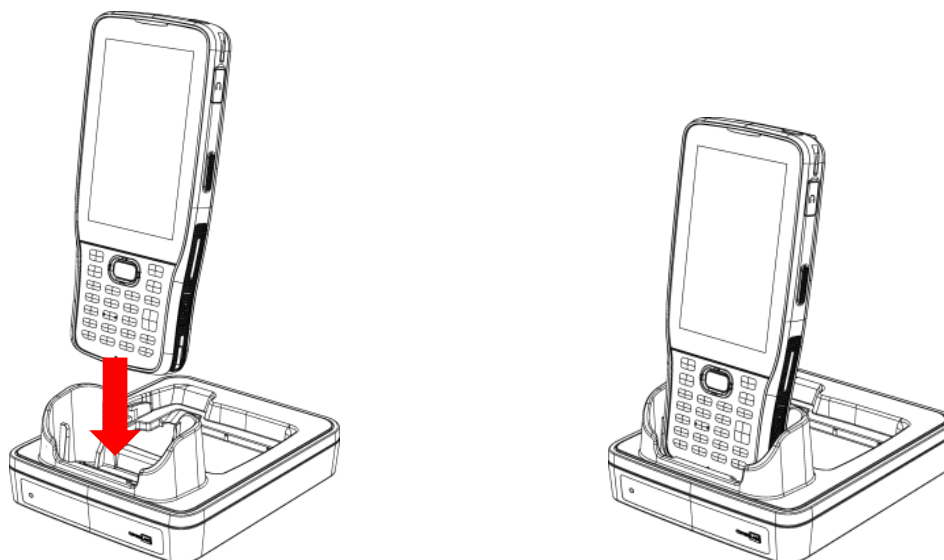
### Note:

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



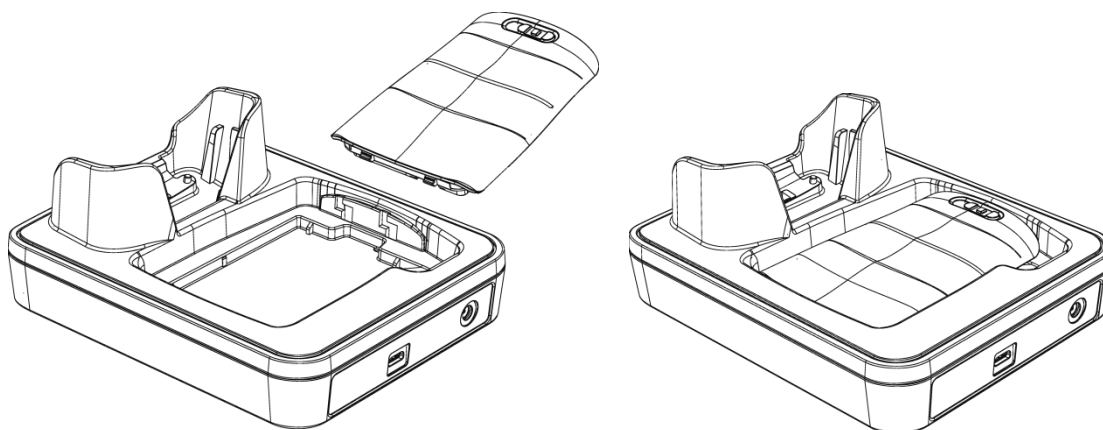
To charge your mobile computer on the Charging & Communication Cradle:

- 1) Remove the micro USB cable if it is connected with the RK25 mobile computer.
- 2) Insert the RK25 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 RK25 mobile computer directly.



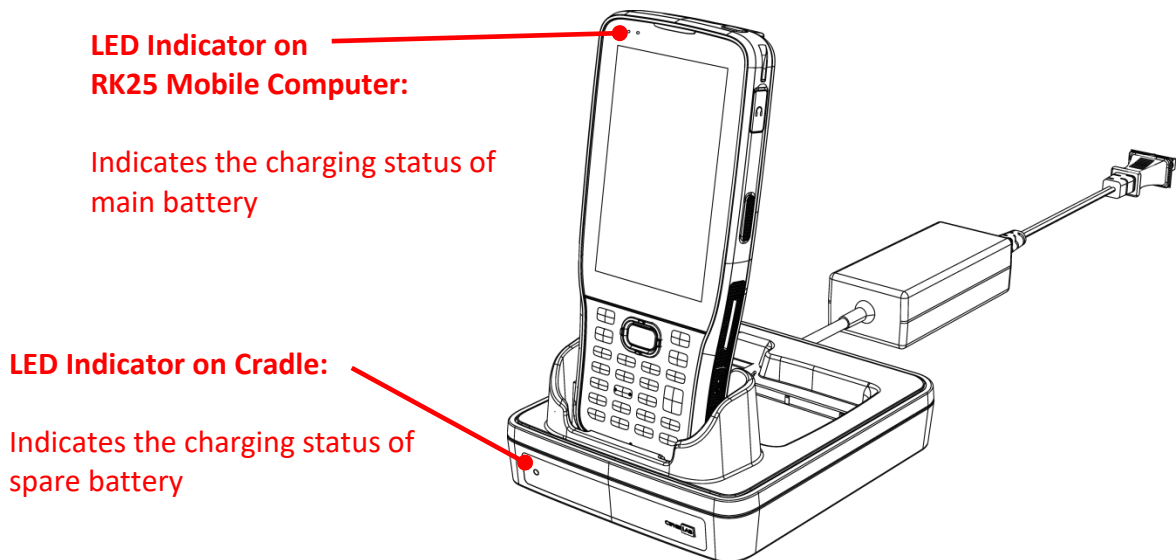
- 3) For the spare battery, please make sure the battery latch is at "**Unlock**" position, and then insert the battery from its top side (where the contact pins are located) into the spare battery compartment of the cradle with their contact pins connected. Press down the bottom side of the battery (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 RK25 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

---

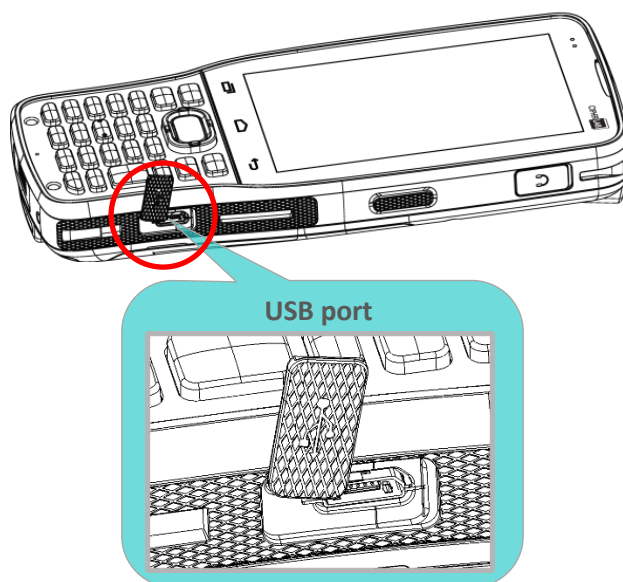
**Note:**

- (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.
-

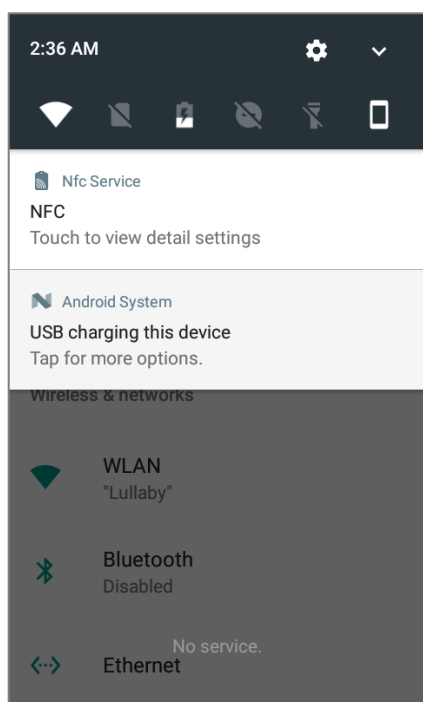
## 1.2.2. WIRED DATA TRANSMISSION

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

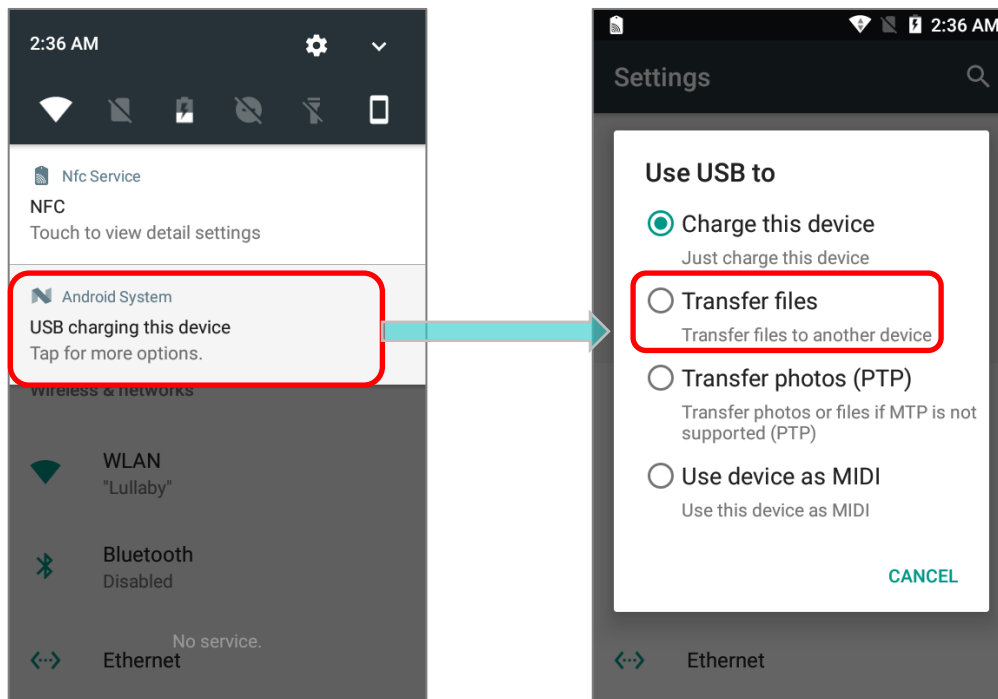
- 1) Connect your device to the computer with supplied USB cable/ [Snap-on Cable](#) / Cradle.



- 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 a/ac/n 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 RK25 MOBILE COMPUTER

---

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

#### IN THIS CHAPTER

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## 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 adaptor, and takes approximately 3.5 hours to charge to full.

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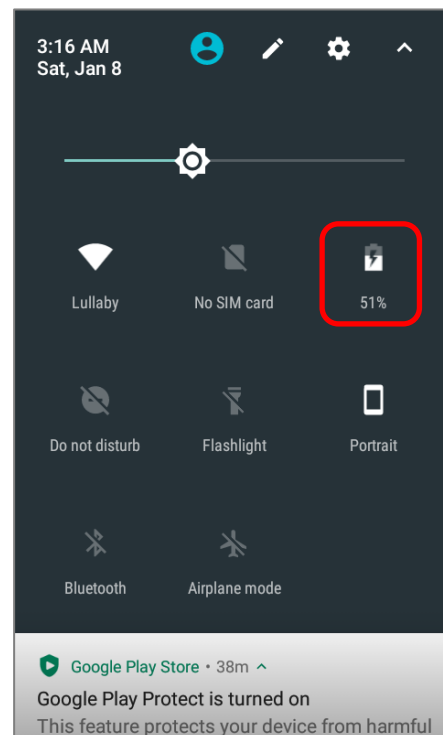
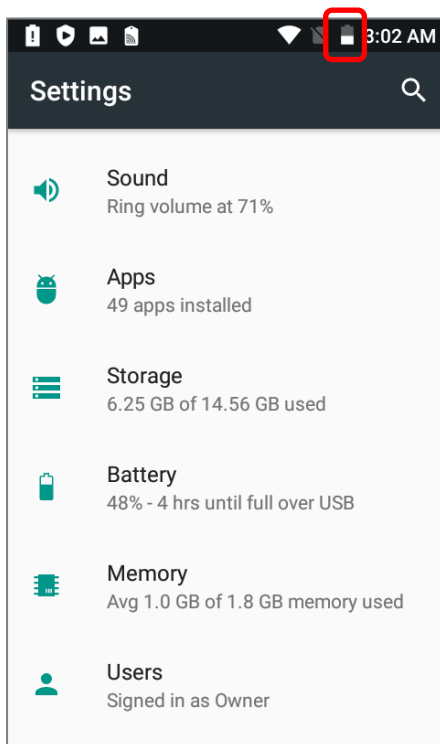
#### **Warning:**






- (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.

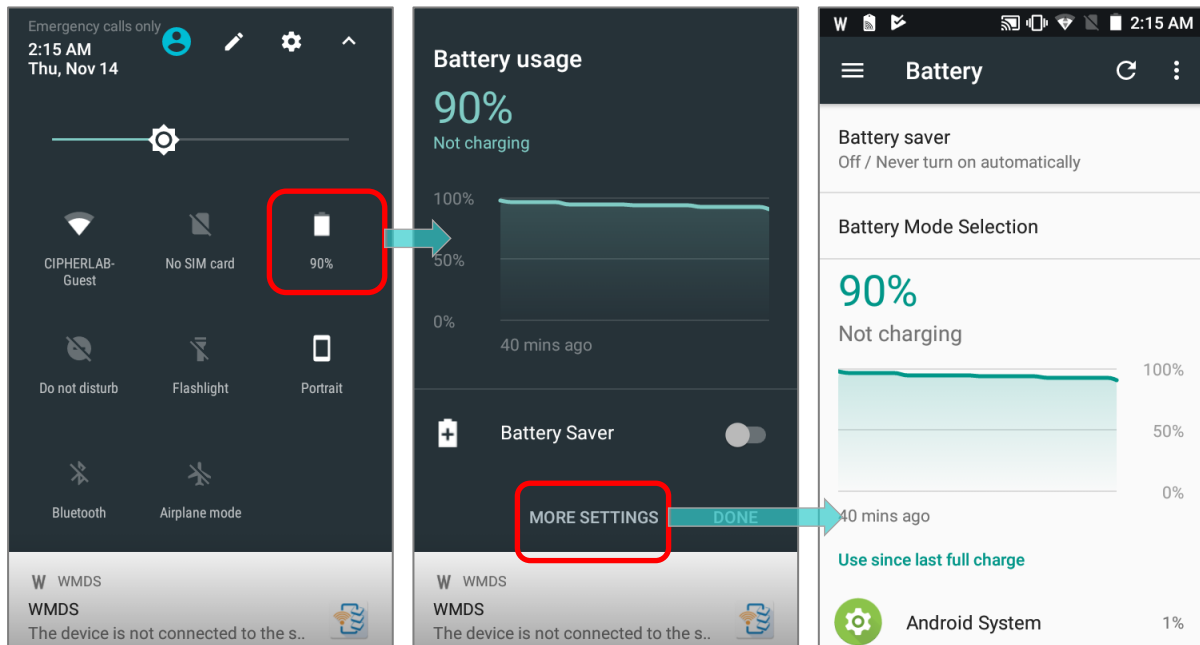
By checking the battery status icon on **Status Bar** or on [Quick Settings Menu](#), you can tell the battery level remaining in the main battery.



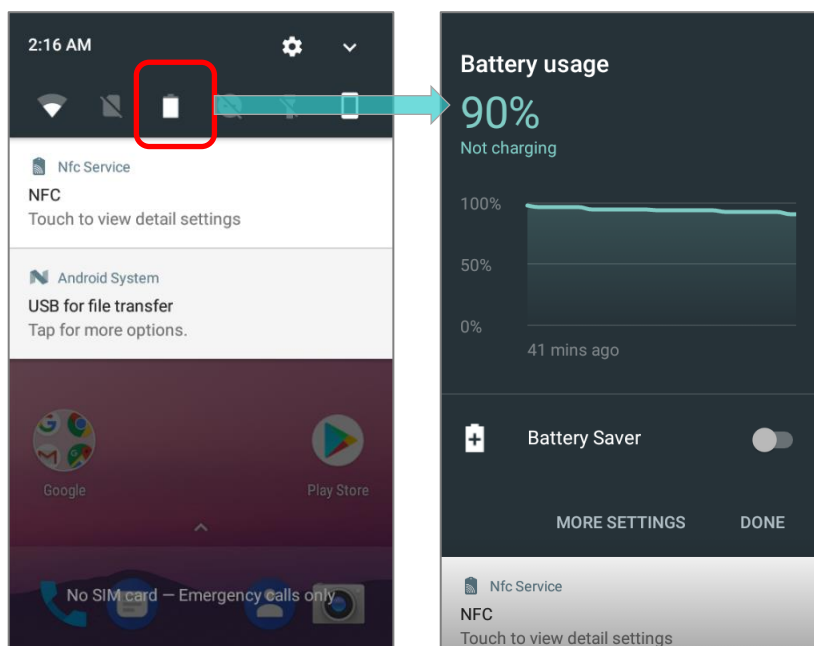
Battery Icon	Description
	Main battery is fully charged.
	Main battery level is partially drained.
	Main battery level is low (5%~15%).
	Main battery level is very low and needs charging immediately (<5%).
	External power source is connected and main battery is being charged.

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.





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**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.

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---


**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.
-

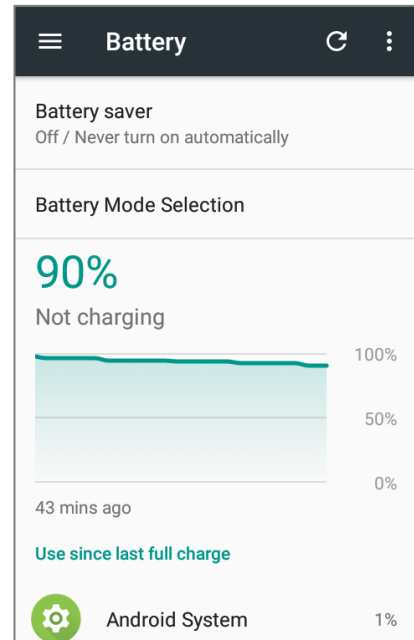
## 2.1.2. MONITOR BATTERY LEVEL

### MAIN BATTERY LEVEL

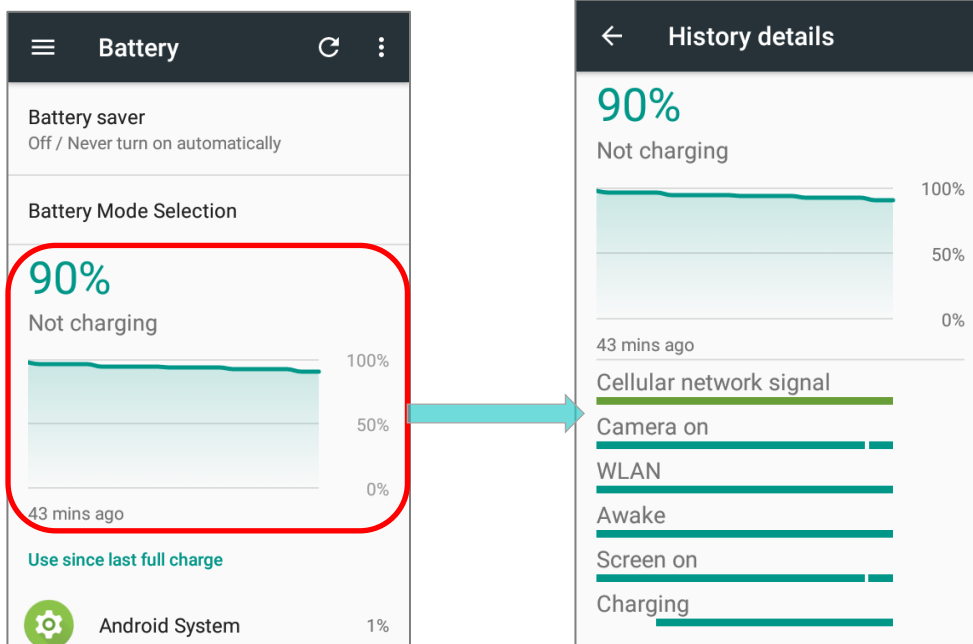
The main battery is the only source that feeds the mobile computer to work. It also supplies the backup battery on the main board in order to retain the data stored in DRAM. When main battery level gets low, recharge it or replace it as soon as possible. Most critically, back up the important data from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

To check main battery level, please go to [App Drawer](#) | **Settings**  | **Battery** .

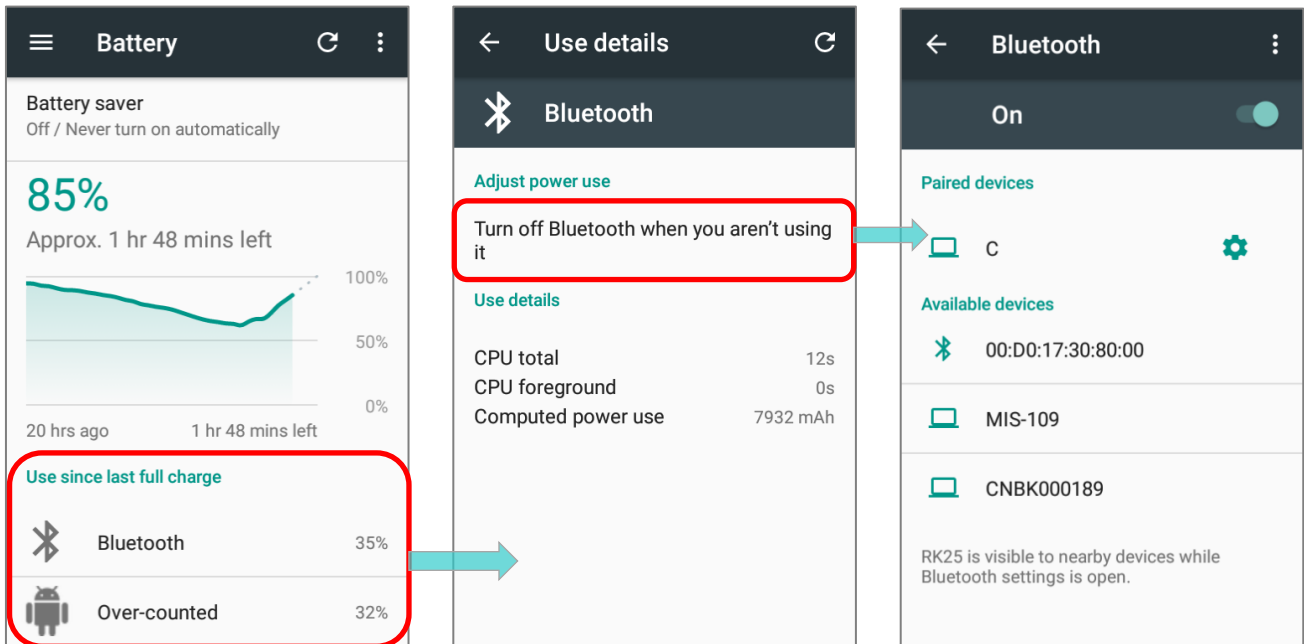
Battery level percentage is shown to provide a clear grasp of the remaining battery power. The screen also shows the rate of battery discharge since the last battery charging session, how long the device has been running on battery power, and which applications are consuming the most battery power.



- 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.



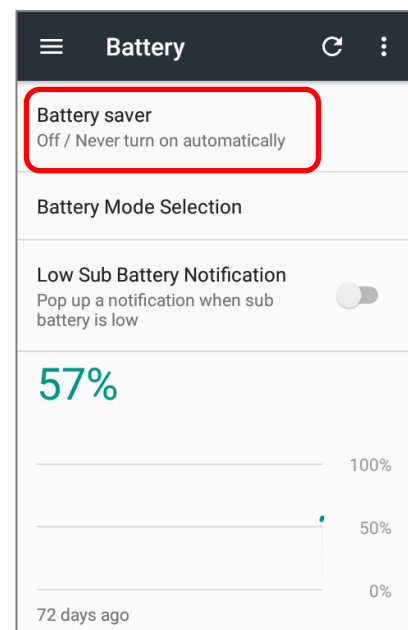
- ▶ To prevent certain applications from being draining the battery power, tap the application listed in “**Use since last full charge**” to get into its **Use details** page for “**Adjust power use**” suggestion. Tap the suggestion part to get into the related page and change the configurations for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



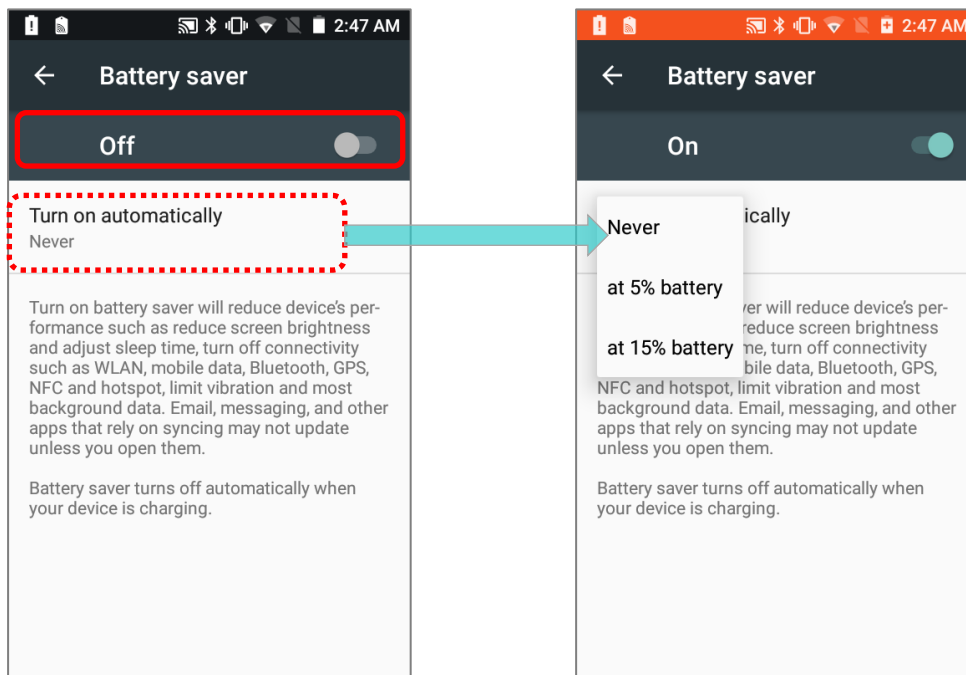
## BATTERY SAVER MODE

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.

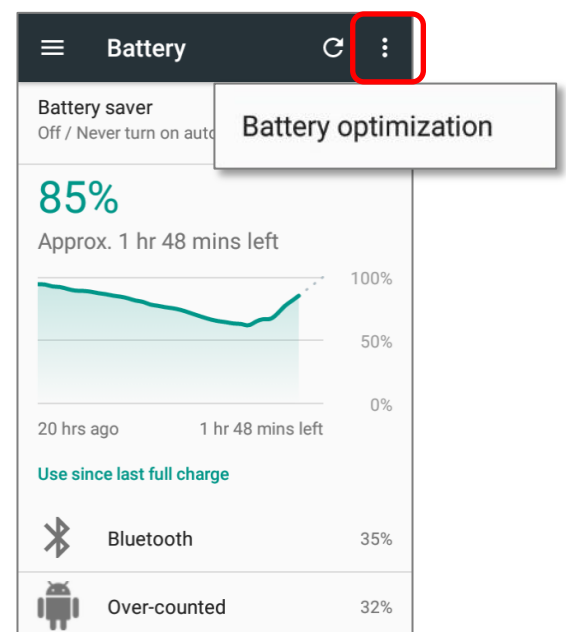


**Note:** This mode will automatically become inactive when your device is being charged.

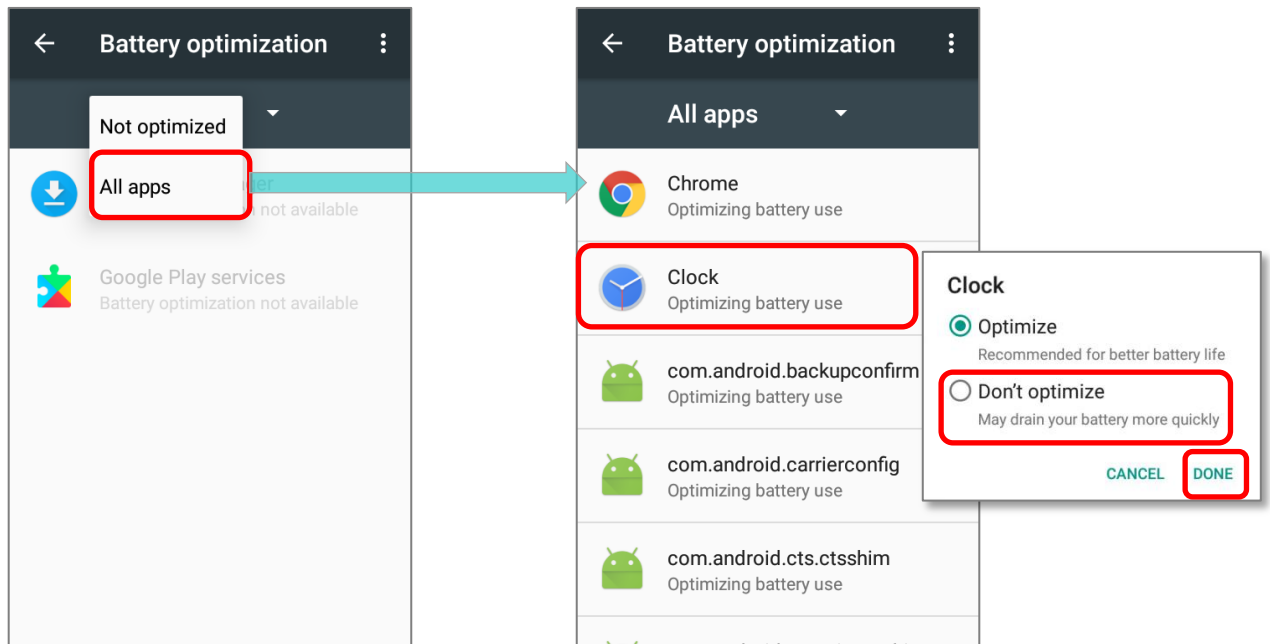
## BATTERY OPTIMIZATION

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"**.



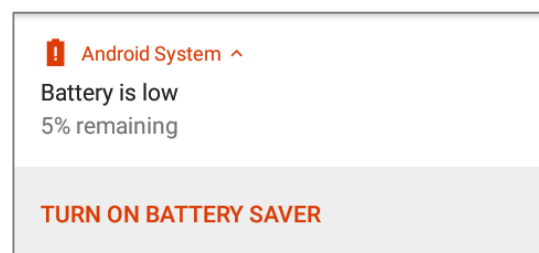
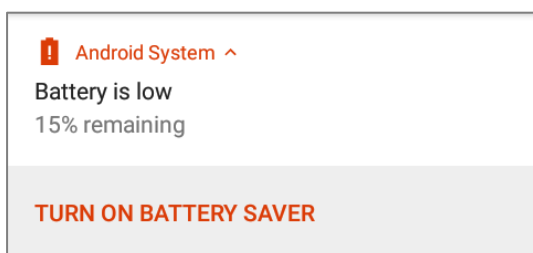
- 2) On dropdown list, select "**All apps**"; all the applications will be optimized by this function by default. You can individually turn off the optimization mode of a certain app if you would like it always activated by tapping on the app name and select "**Don't optimize**" and then "**DONE**".



## LOW BATTERY ALERT

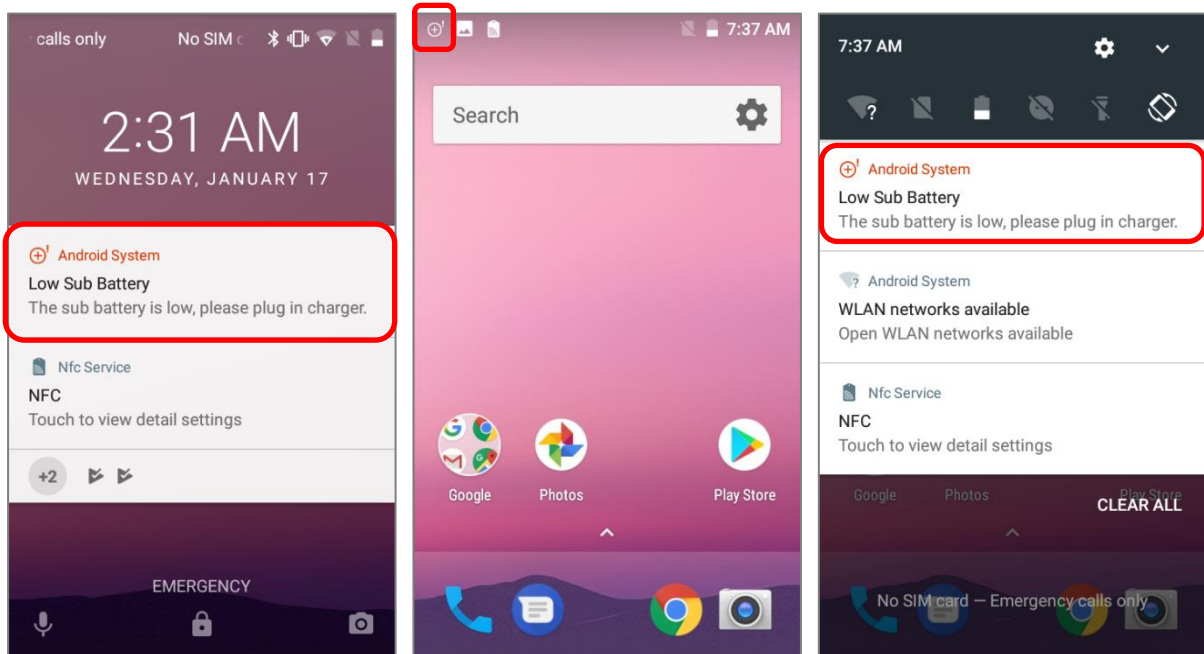
The mobile computer prompts a warning notification reminding you to charge the main battery when the main battery level drops to **15%** and **5%**.

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, RK25 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.



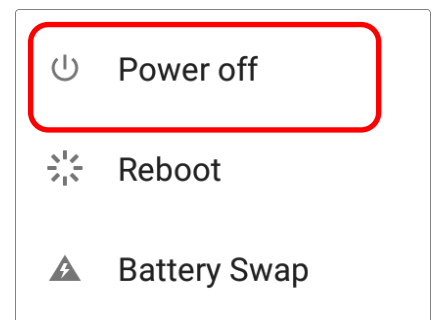
### 2.1.3. REPLACE MAIN BATTERY

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

RK25 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. Follow 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.

#### Battery Swap

Switch to standby power, your device will enter flight mode and remain in a low power state, the screen goes off, system performance and application background refresh are limited. Press the power key to switch back to the main battery.

CANCEL OK

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**Warning:**

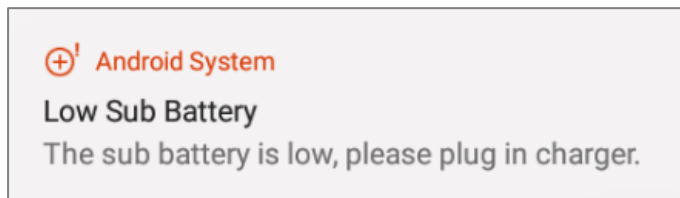
Please do not perform a battery swapping before the mobile computer's OS is ready. Removing the battery cover during powering up your mobile computer may cause system failure.

---

---

**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 RK25 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.





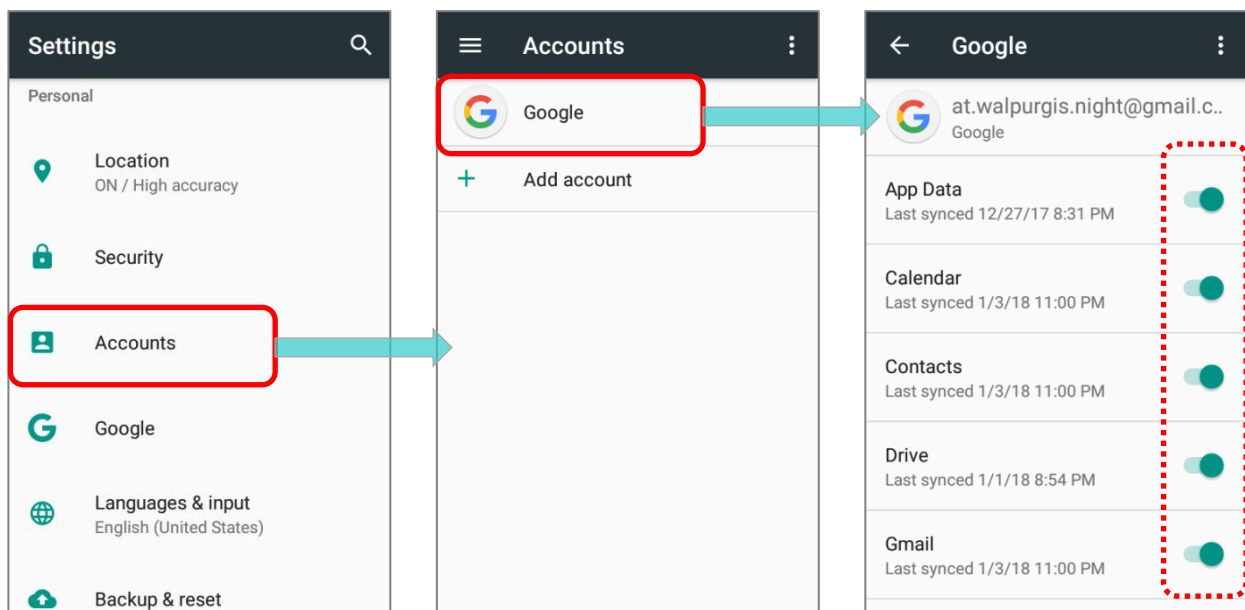
### 2.1.4. POWER MANAGEMENT

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.



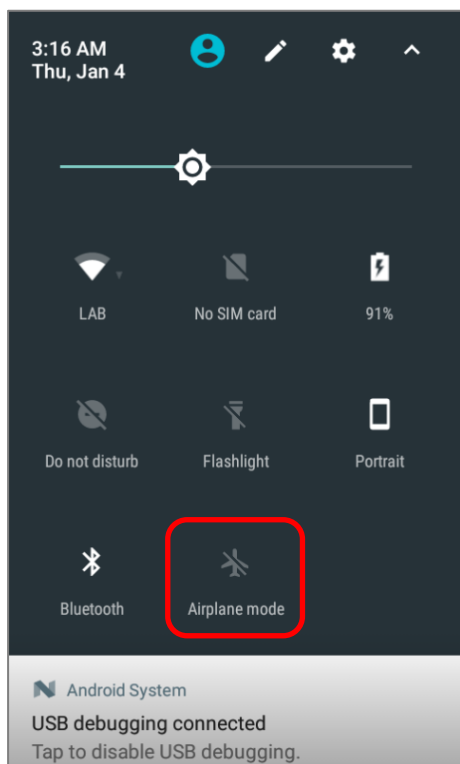
- ▶ Enable **Battery saver** mode and **Battery optimization** mode. See [Battery Saver Mode](#) and [Battery Optimization](#).

## ENTER AIRPLANE MODE

You can enable **Airplane** mode to have all the wireless radios (including call functions, data connections such as Bluetooth, Wi-Fi and 3G/4G) 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:

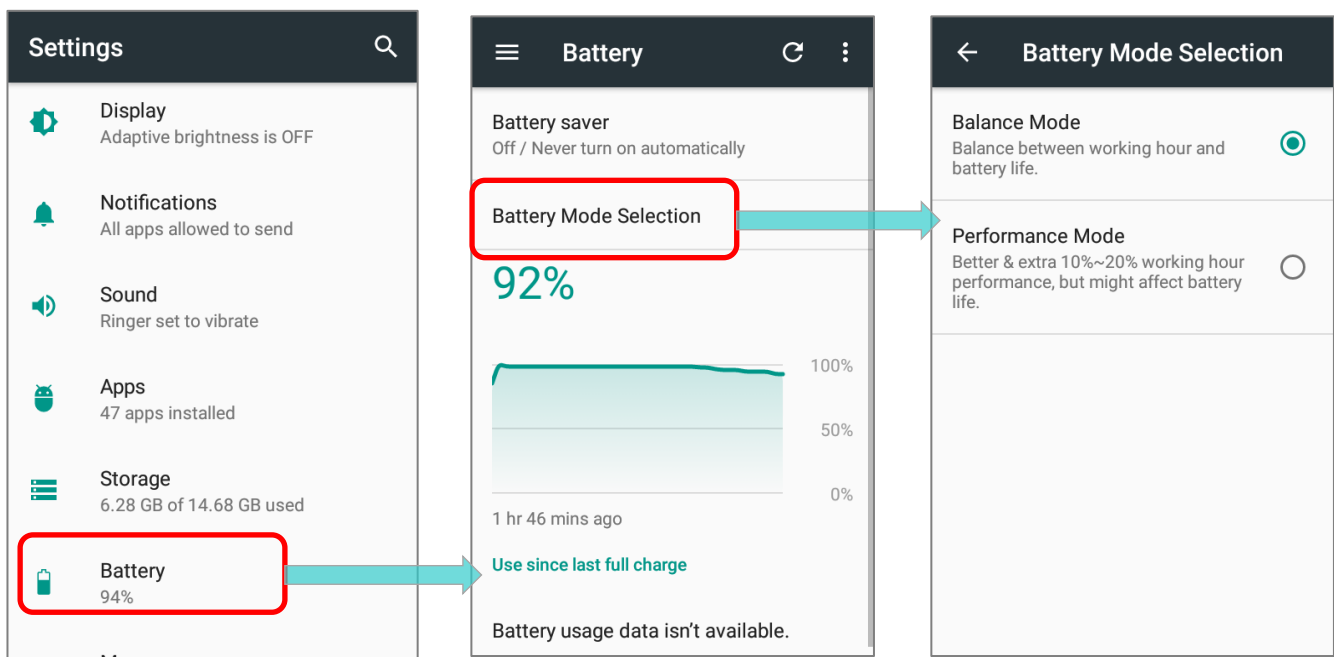
- 1) Please do not use your device while continuously connected with a power supply or cradle for charging. If you need to use your RK25 mobile computer with a power supply or cradle continuously connected, be sure to turn on "**Balance Mode**".
- 2) If the main battery is fully charged, do not keep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

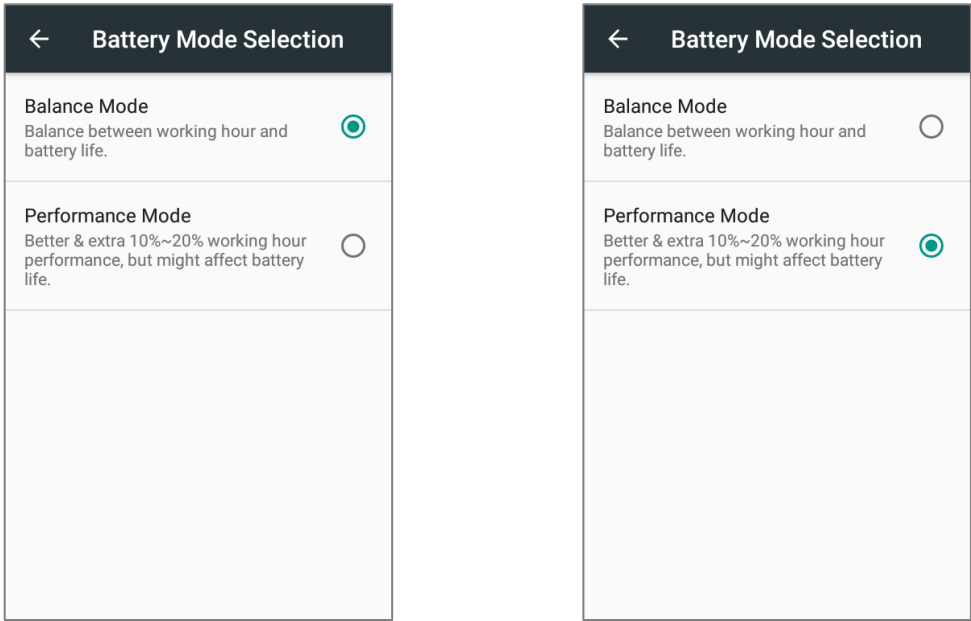
If you need to use RK25 mobile computer while charging, or if the device needs to be connected with the power supply for charging all the time, it is suggested that switching on "**Balance Mode**" for battery life.

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**".

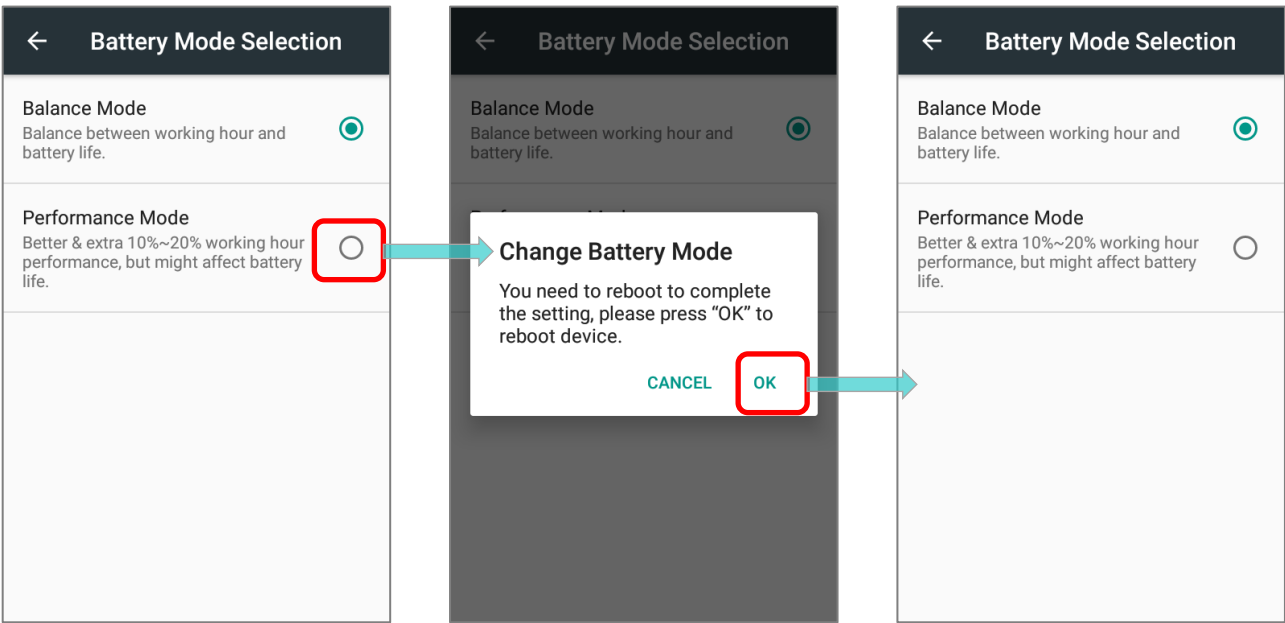


3) Tap on the radio button to select “**Balance Mode**” or “**Performance Mode**”.



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 RK25 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 RK25 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.

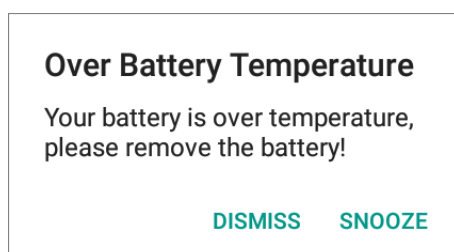
When being connected with a snap-on cable/ charging & communication cradle/ micro USB cable for external power supply, RK25 mobile computer will automatically stops charging the battery once the battery level reaches 100%. It resumes charging the battery when the battery power level is lower than approximate 90% and the voltage is 4.15v.

### BATTERY TEMPERATURE ANOMALY

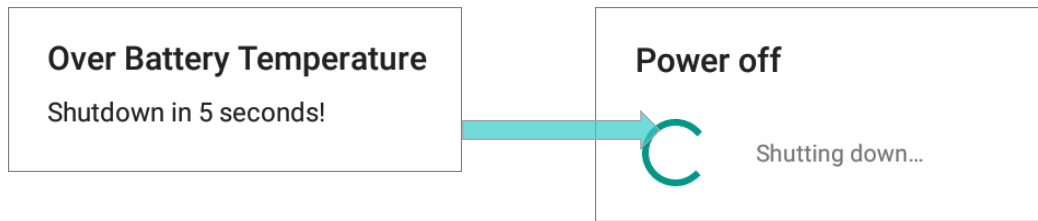
High ambient temperature or keeping using RK25 mobile computer while charging might results in battery temperature rises. RK25 mobile computer will automatically suspend charging battery or shut down for safety purpose. Once the battery temperature cools down to normal temperature, battery charging could 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°C** while it prompts to automatically shut down if the temperature of the RK25 battery reaches **60°C**.

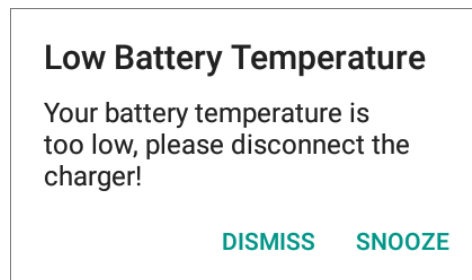
- **At 55°C**



▪ **At 60°C**



Using RK25 mobile computer under low-temperature environment may cause the device shut down automatically. If the battery temperature is at **0°C** or even **lower than 0°C** 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.

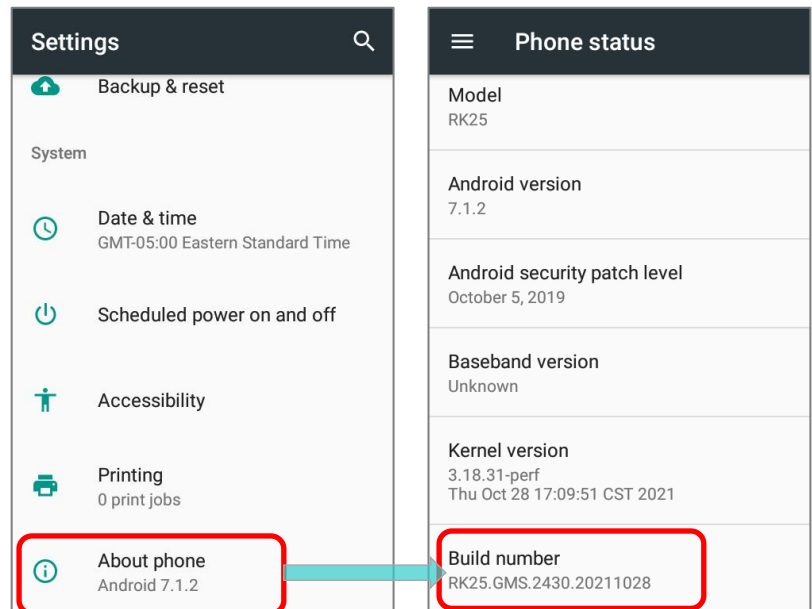
## 2.1.6. BATTERY SENSOR

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

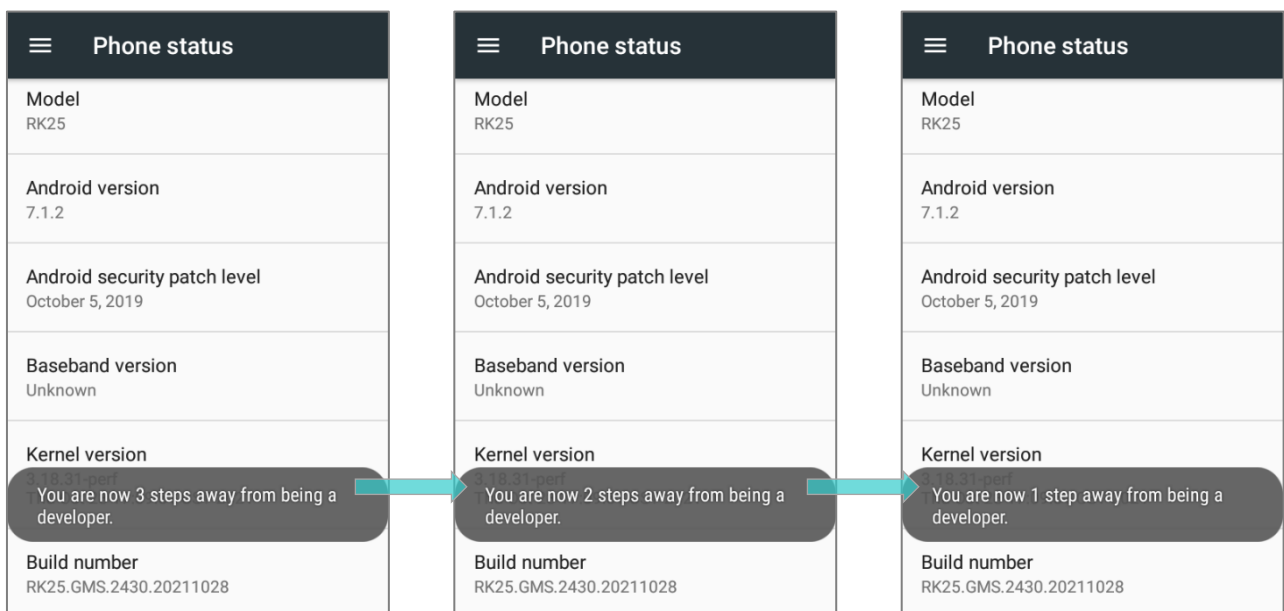
### ENABLE DEVELOPER OPTIONS

To enable “**Developer Options**”:

- 1) Go to [App Drawer](#) | **Settings**  | **About phone** , and scroll to the screen bottom to find “**Build number**”.

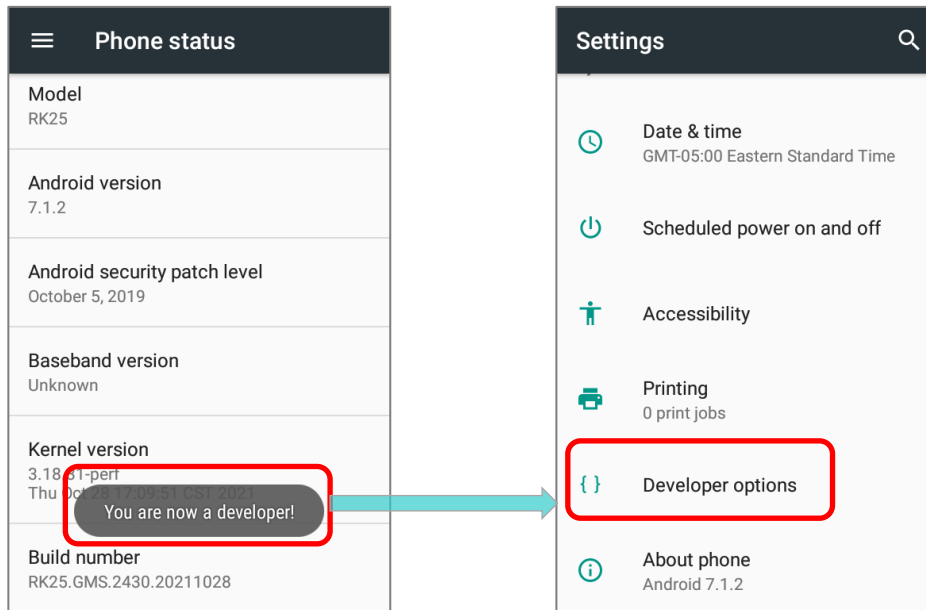


- 2) Tap on “**Build number**” 7 times to enable it. During the process, you’ll see a prompt with a countdown reading “**You are now X steps way from being a developer.**”





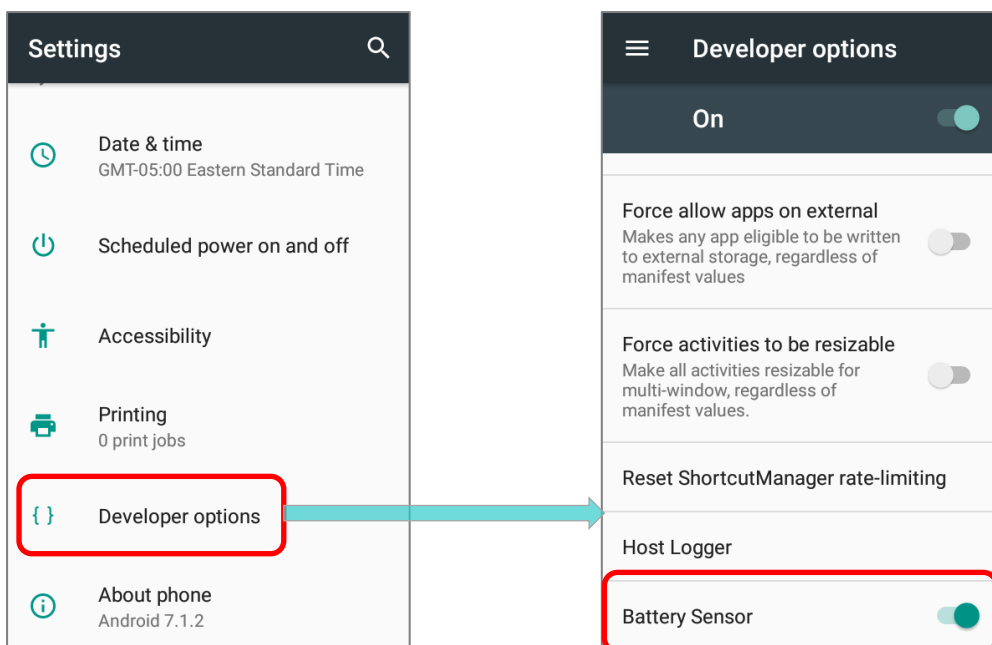
- 3) Once the prompt **"You are now a developer!"** showing up, you have succeeded in entering developer mode.

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 RK25, 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).

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### 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.

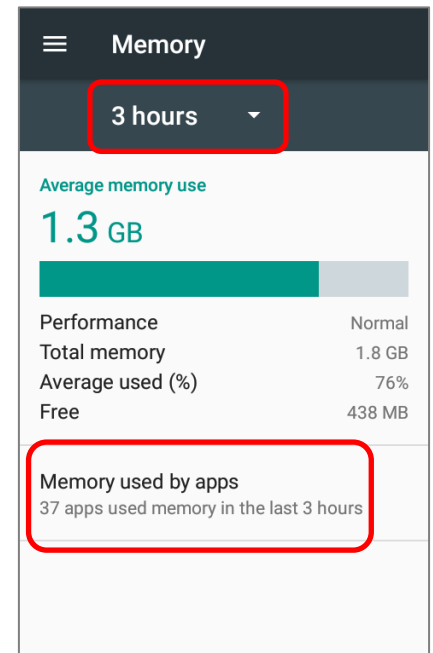
### 2.2.1. CHECK MEMORY USAGE

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

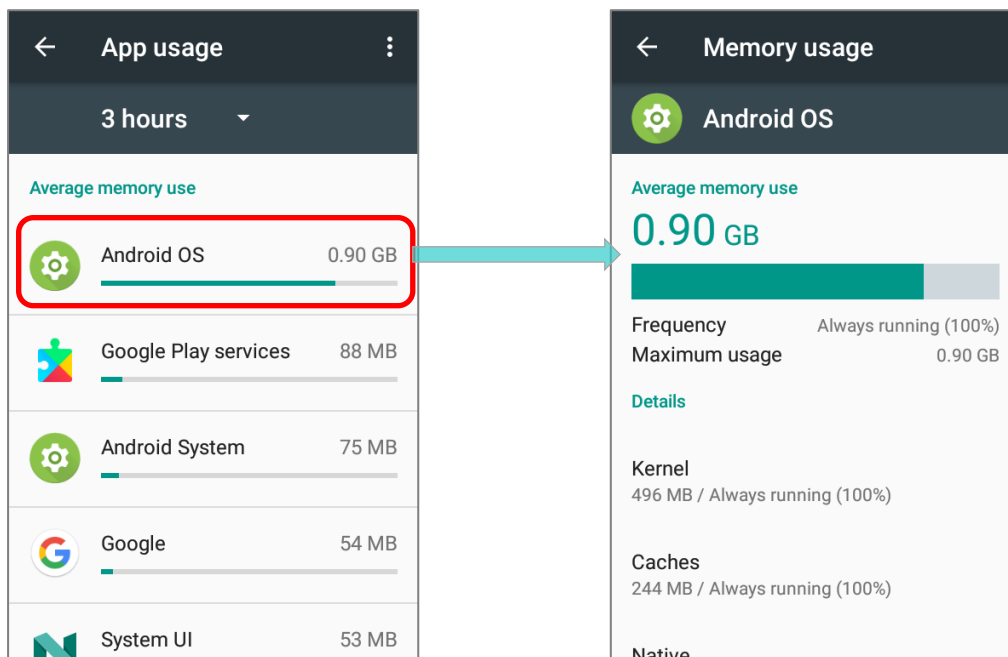
Go to [App Drawer](#) | **Settings**  | **Memory**  to enter memory manager screen.

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.



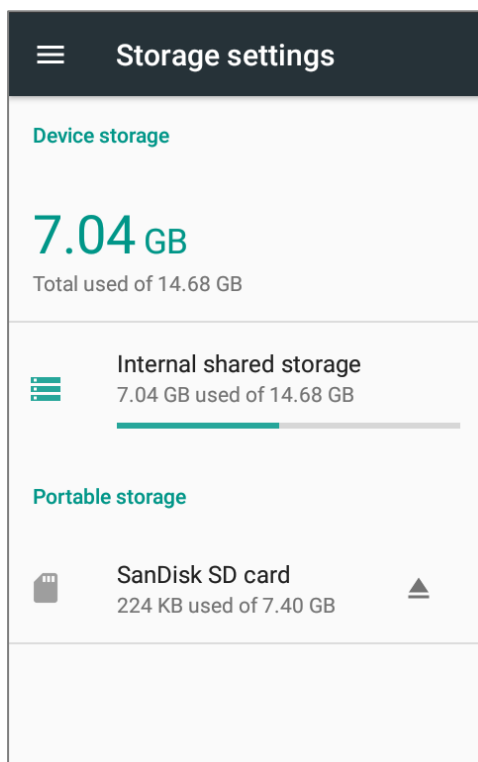
## 2.2.2. MANAGE STORAGE SPACE

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.

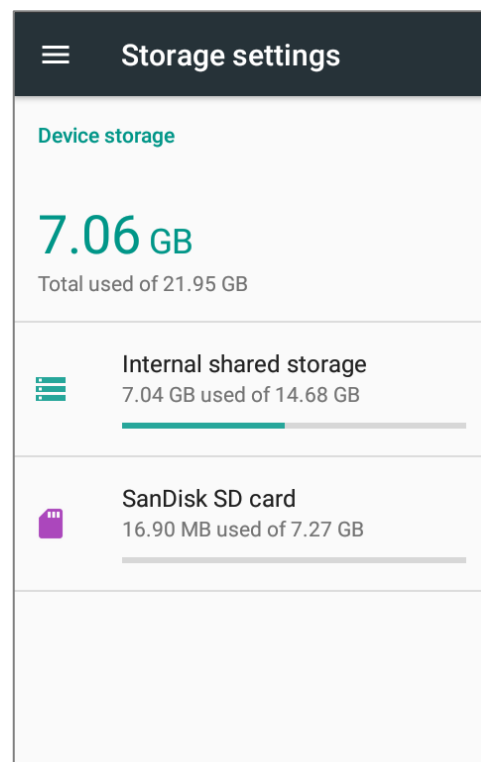
Go to [App Drawer](#) | **Settings**  | **Storage**  to check usage of the internal and external storage spaces.

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



### ▪ SD card as internal storage

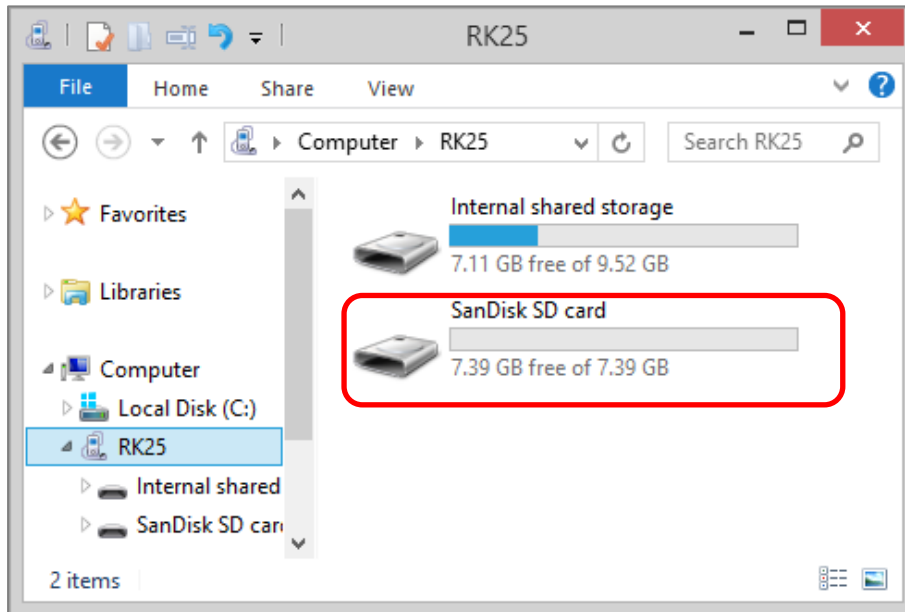


- The SD card is used for moving photos and other media between devices.
- The SD card is used for storing anything on this device only, including apps and photos. Requires formatting that prevents it from working with other devices.

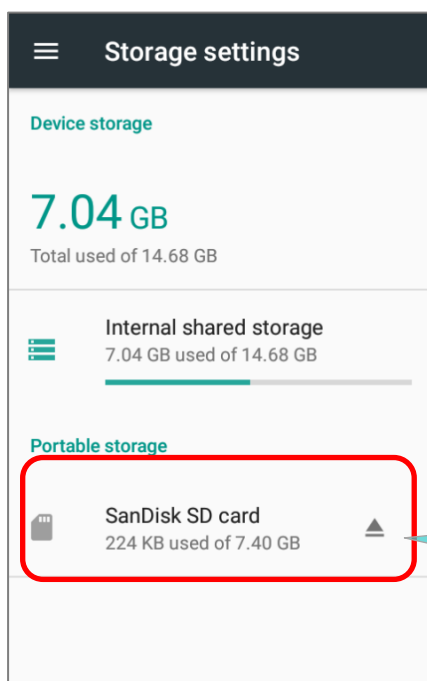
## SET UP SD CARD AS PORTABLE STORAGE


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:



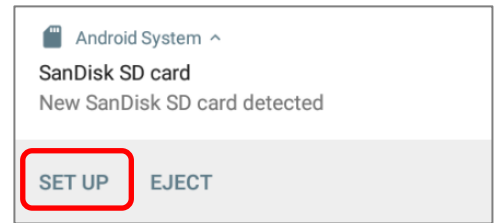
On **Storage** screen, this disk can be managed separately.



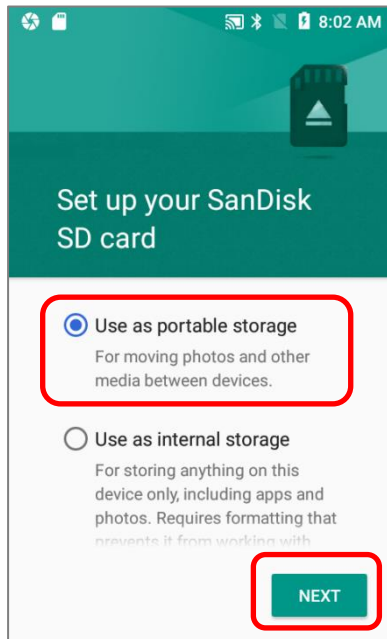
The SD card is considered a separate storage, the capacity of which is not included in total device storage. You can tap  to eject a mounted SD card.

To start:

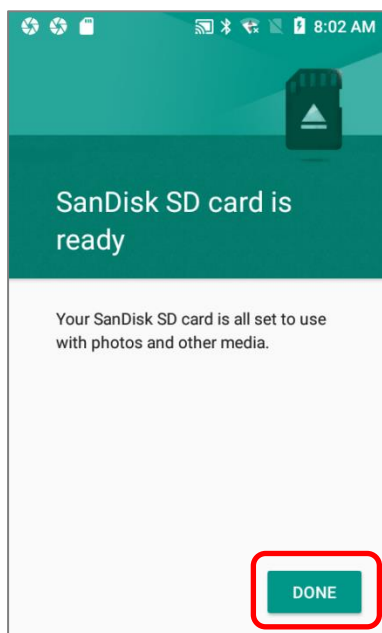
- 1) Insert the SD card. A notification icon indicating that an SD card is detected will be shown in the status bar; swipe down from the status bar and tap "**SET UP**".



- 2) Tap "**Use as portable storage**" and then "**NEXT**".

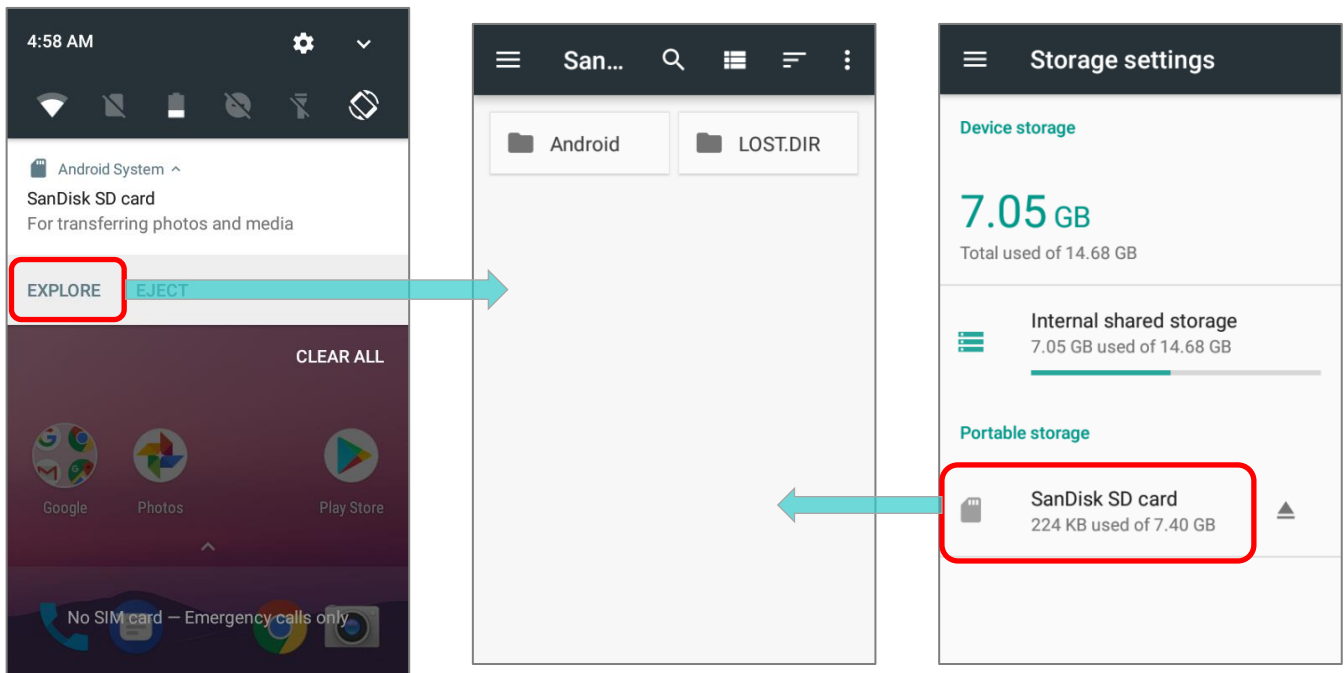


- 3) When the setting is completed, tap "**DONE**".



- 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.

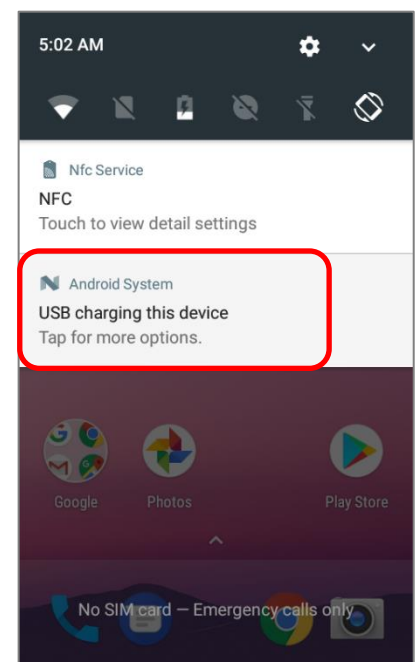
Tap "**EXPLORE**" to check its content, or tap the SD card in **Storage Settings** page to check it.



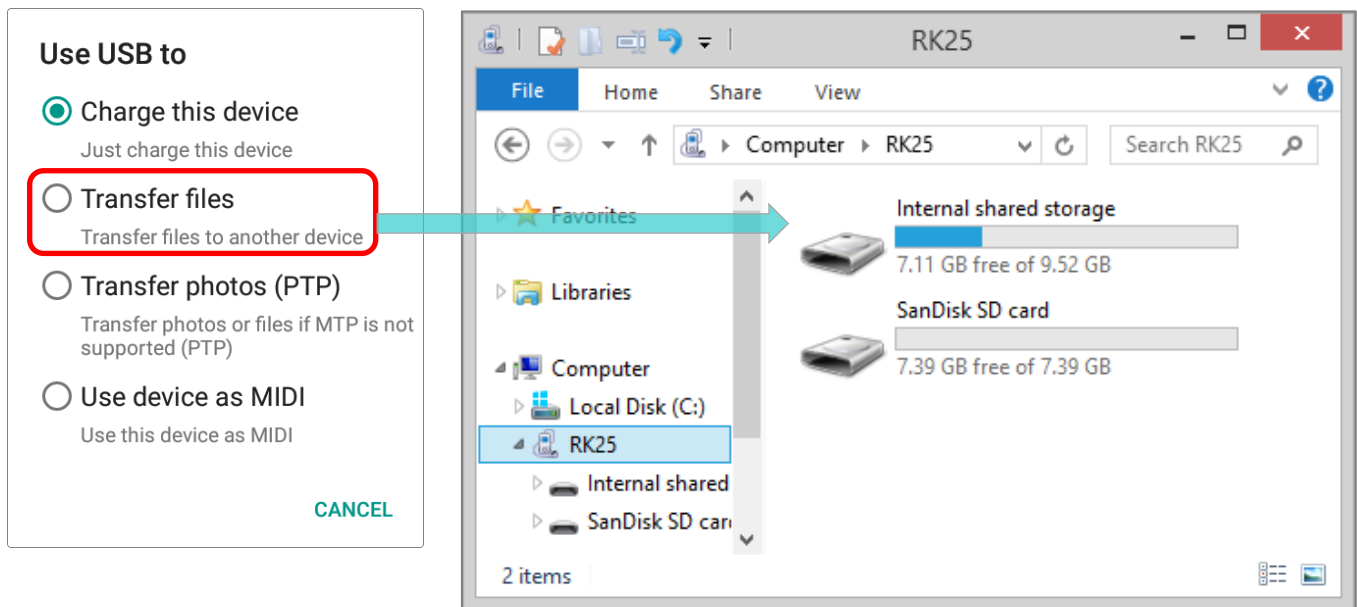
## TRANSFER PHOTOS & MEDIA BETWEEN THE DEVICE & PC

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.



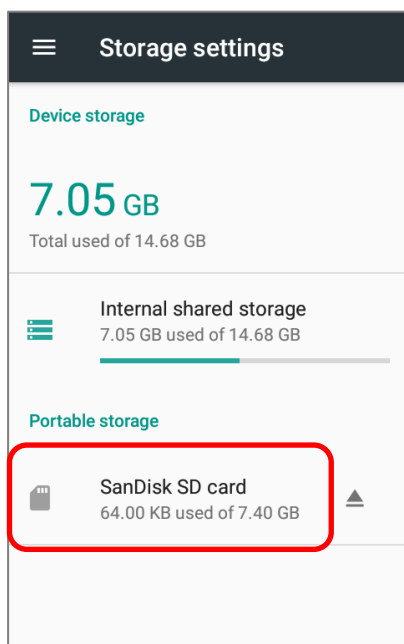
- 3) Choose "**Transfer files**", and now you will find the disk content is readable from PC client. Please make sure the USB cable is properly connected while transferring files over USB connection.




## CONVERT THE SD CARD TO INTERNAL STORAGE

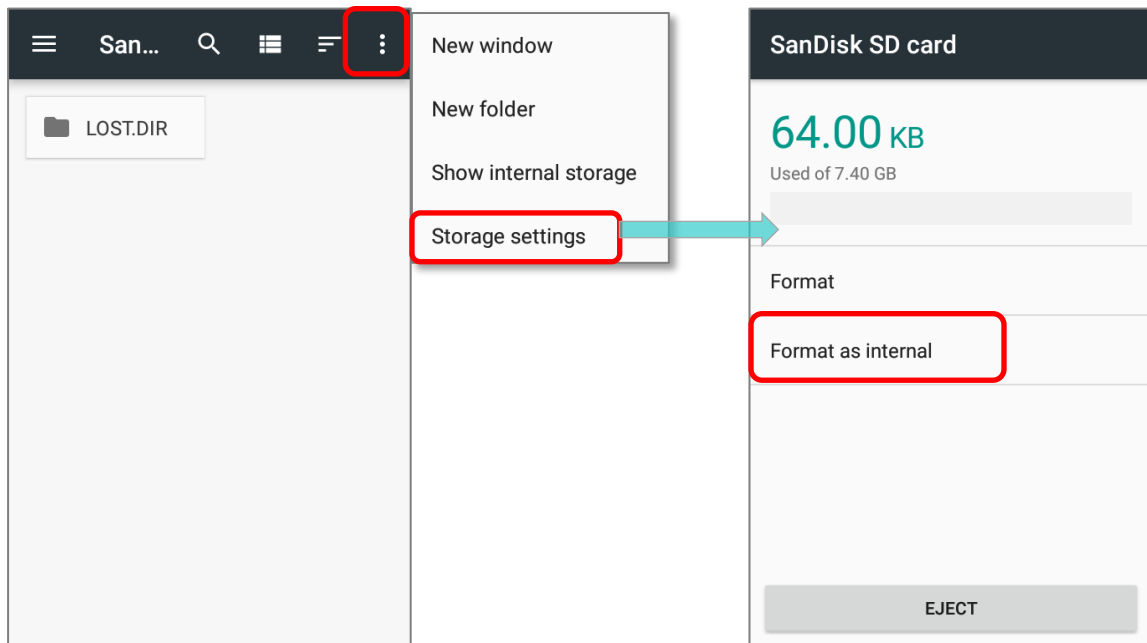
You can always convert the SD Card from portable storage to internal storage.

- 1) 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.

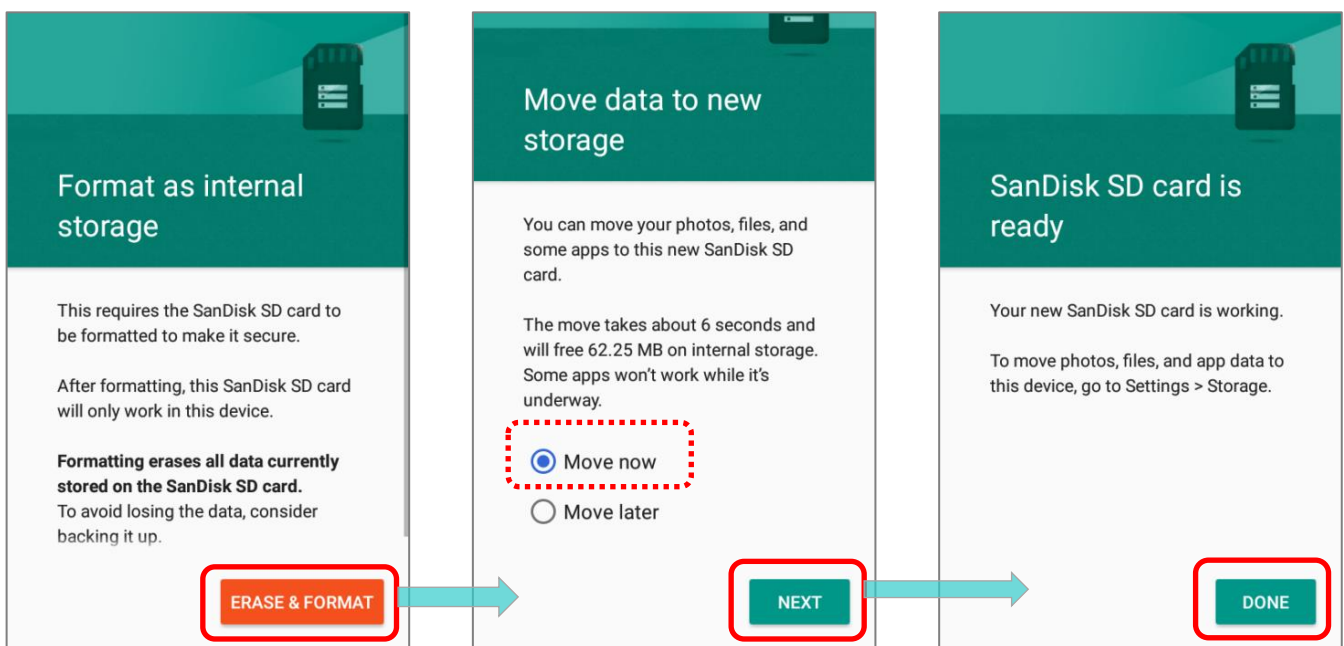




- 2) On SD card content screen, tap **More**  and then tap **"Storage settings"**.
- 3) By selecting **"Format as internal"**, the device will eventually format this SD card into a specific file format only readable by this device.



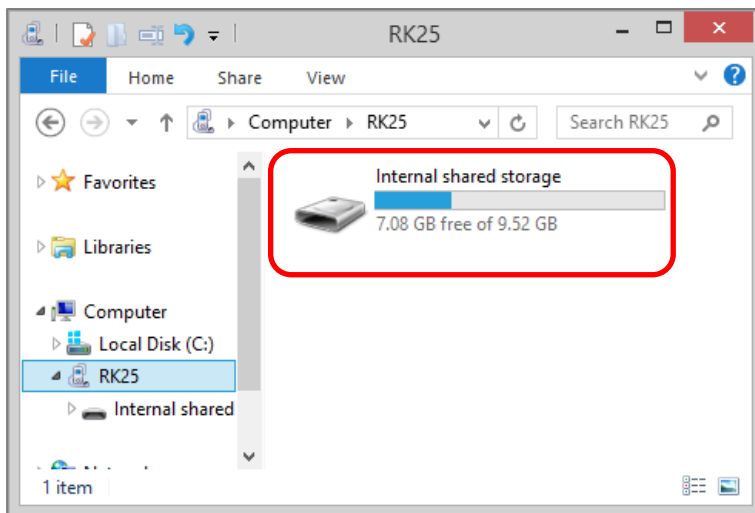
- 4) On Format as internal storage screen, tap **"ERASE & FORMAT"** to format the card.
- 5) You will then be asked whether to move multimedia files to this new SD card right away or later; make your choice and then tap **"Next"**.
- 6) When the formatting is completed, tap **"DONE"**.



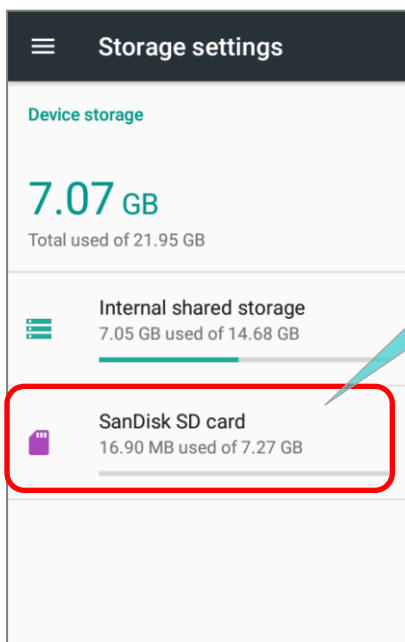
## SET UP SD CARD AS INTERNAL STORAGE


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. In this setting, you will have no control of which files to be stored on SD card.



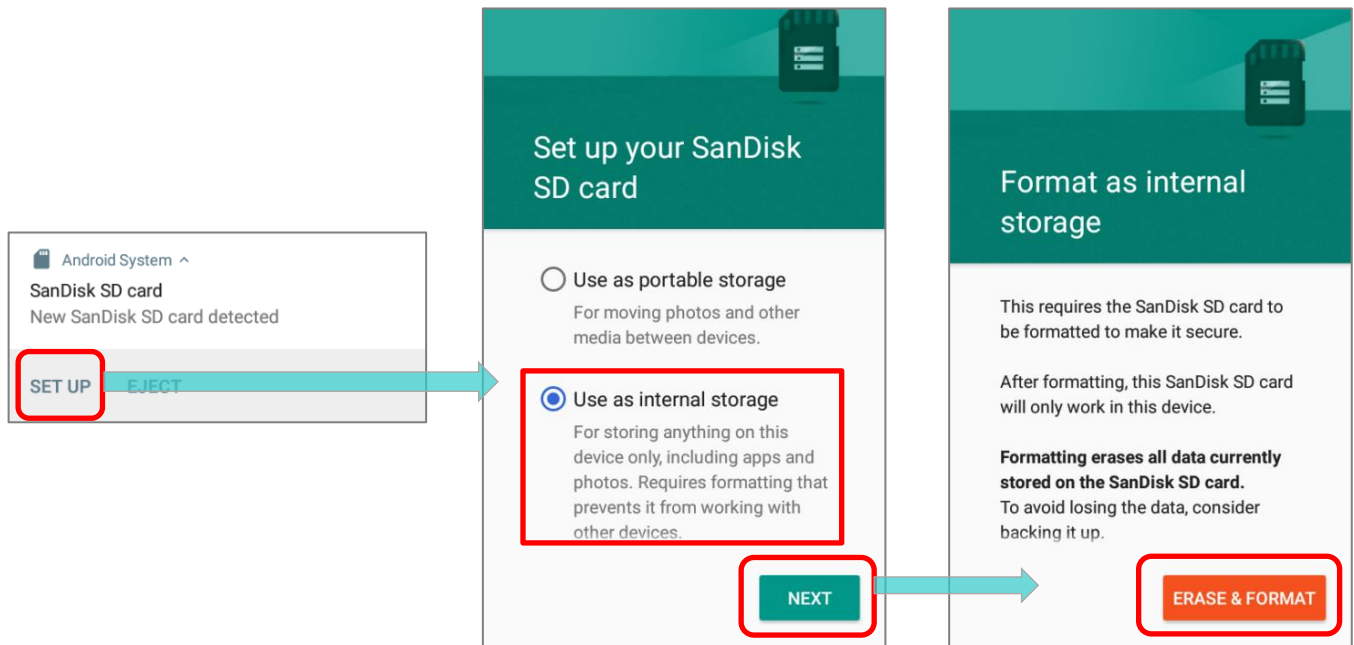
To eject this SD card:  
 (1) Select this SD card.  
 (2) On SD card content screen, tap **More**  and then tap "Eject".

### Warning:

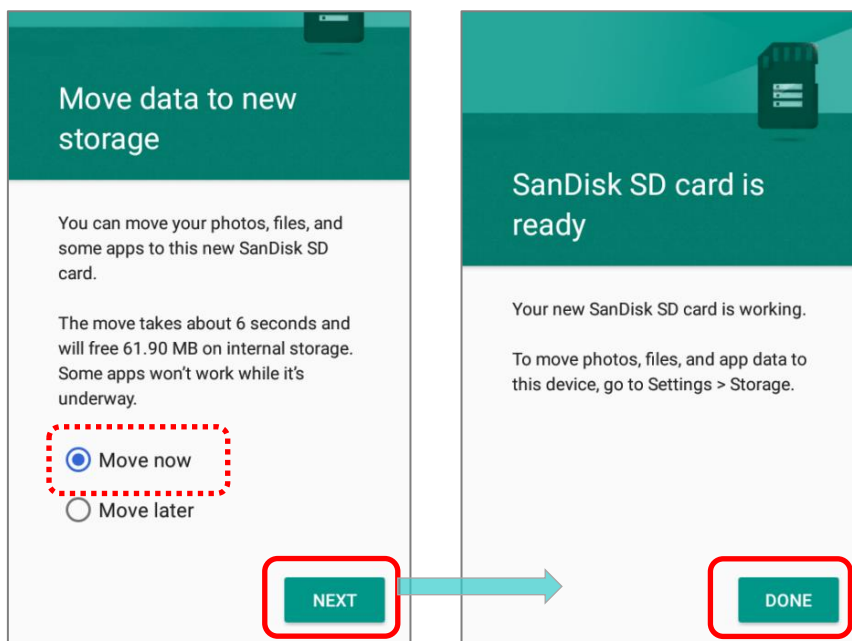
Do not physically remove the SD card from the device without ejecting this card in advance.

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:

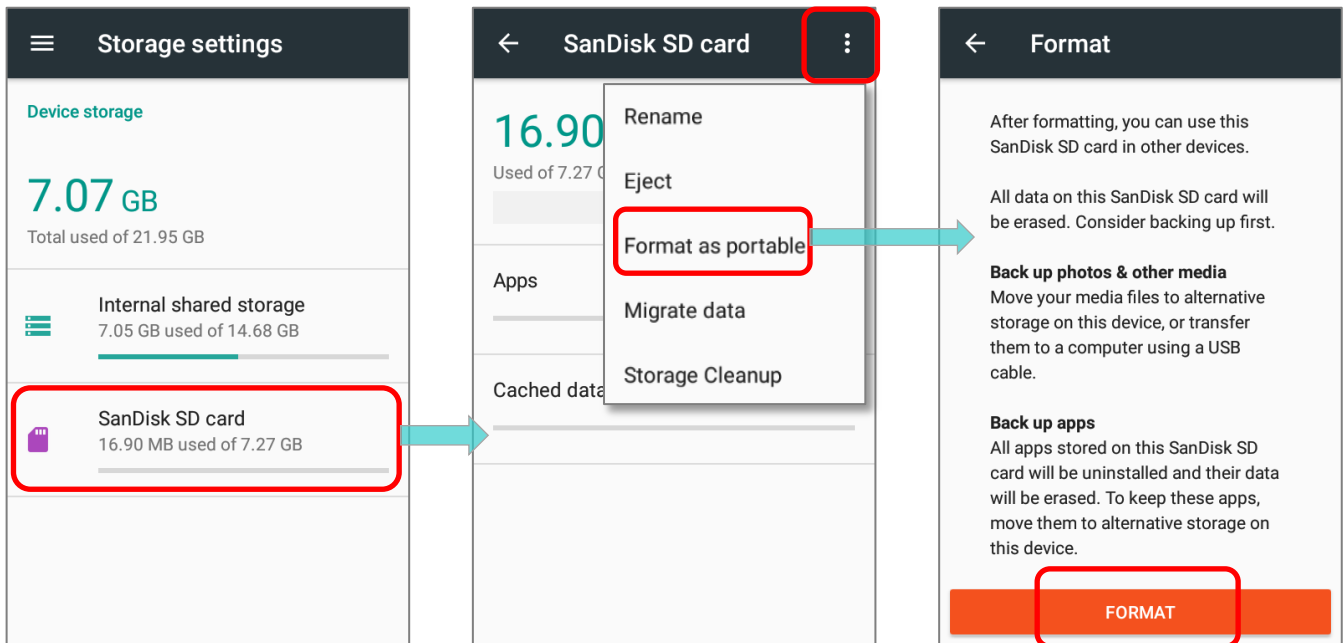
It is recommended that you select **"Move now"** at Step 4 to have the device immediately start making use of SD card space.

If you select **"Move later"**, the device will continue to consider device's original storage the primary location to save files.

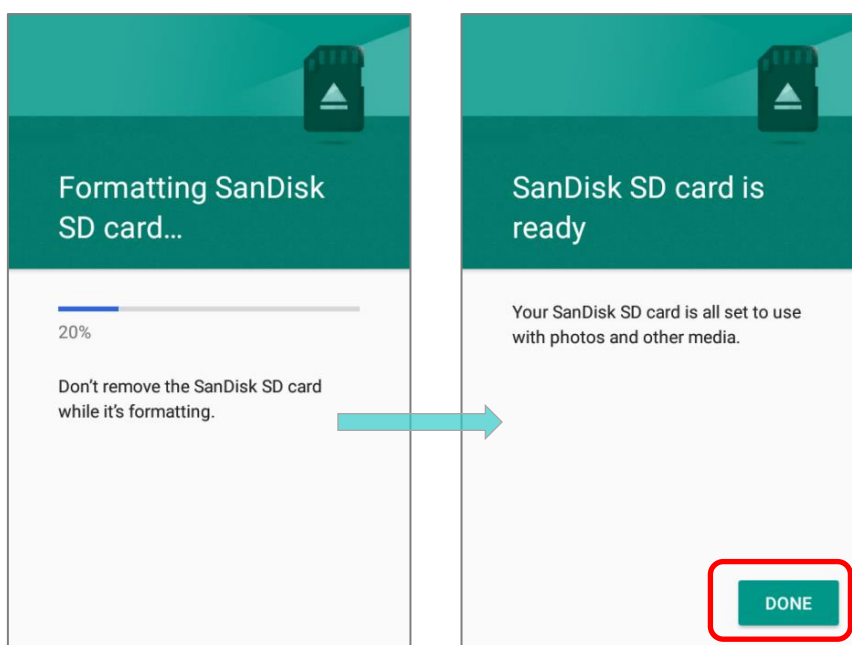
## CONVERT THE SD CARD TO PORTABLE STORAGE

You can always convert the SD Card from internal storage to portable storage.

- 1) 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 display with 480RGBx800 resolution. The LED backlight of the screen, which helps ease reading under dim environments, can be controlled manually and automatically.

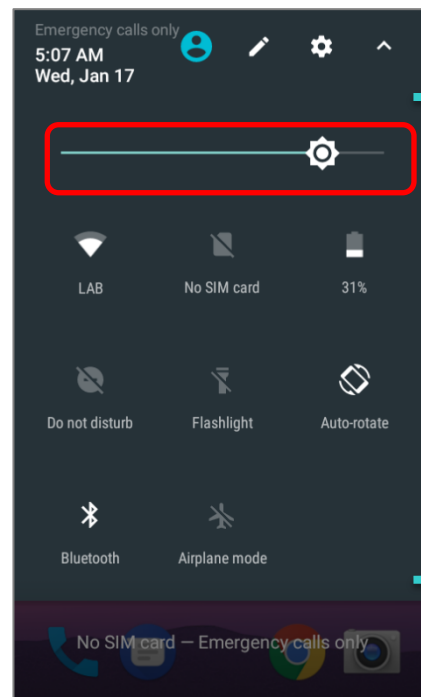
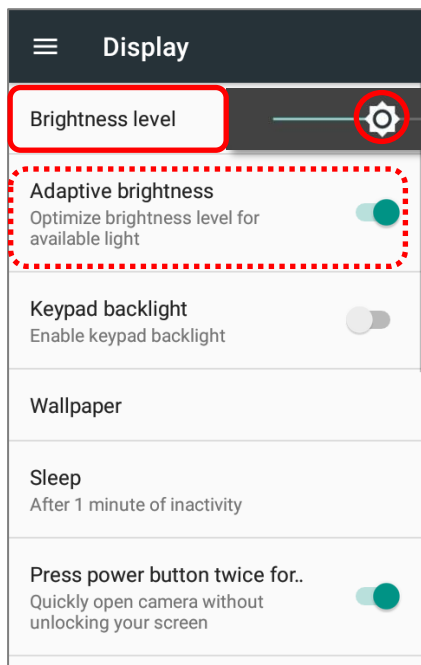
**Warning:** DO NOT use any pointed or sharp objects to move against the surface of the screen.

### 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.





Quick Settings  
Menu

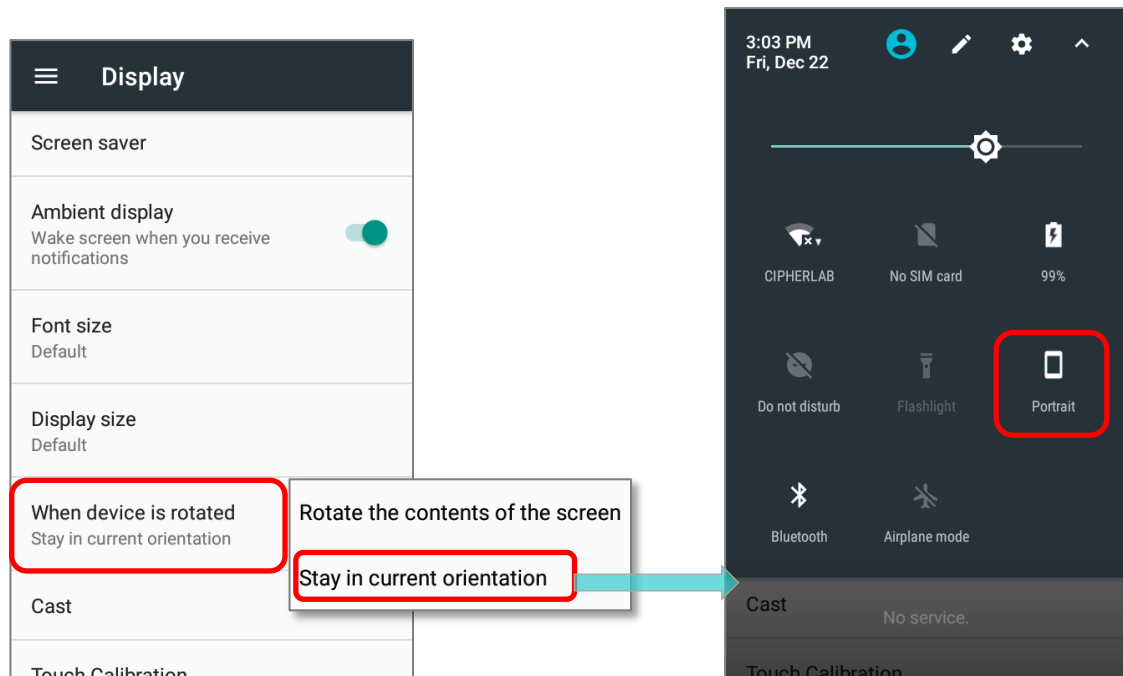
#### Note:

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.

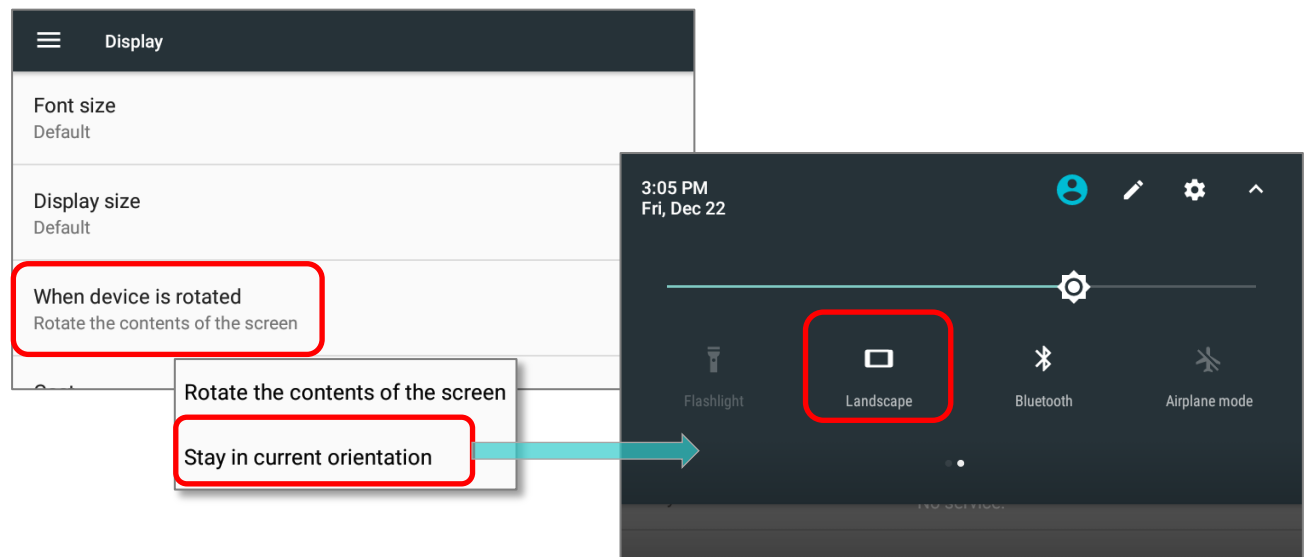
### 2.3.2. SCREEN ROTATION

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

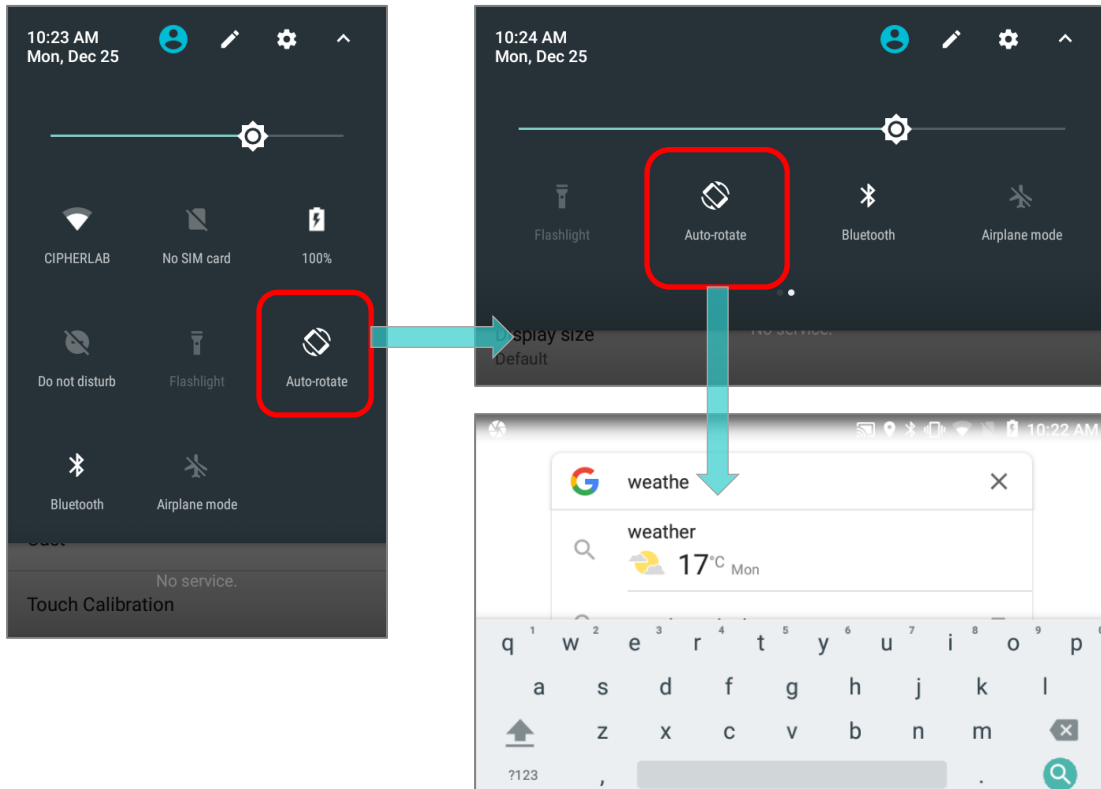
- 1) Go to [App Drawer](#) | **Settings**  | **Display** 
- 2) Tap **When device is rotated** and then select **Stay in current orientation** to turn the rotation function off or tap **Rotate the contents of the screen** to enable it.



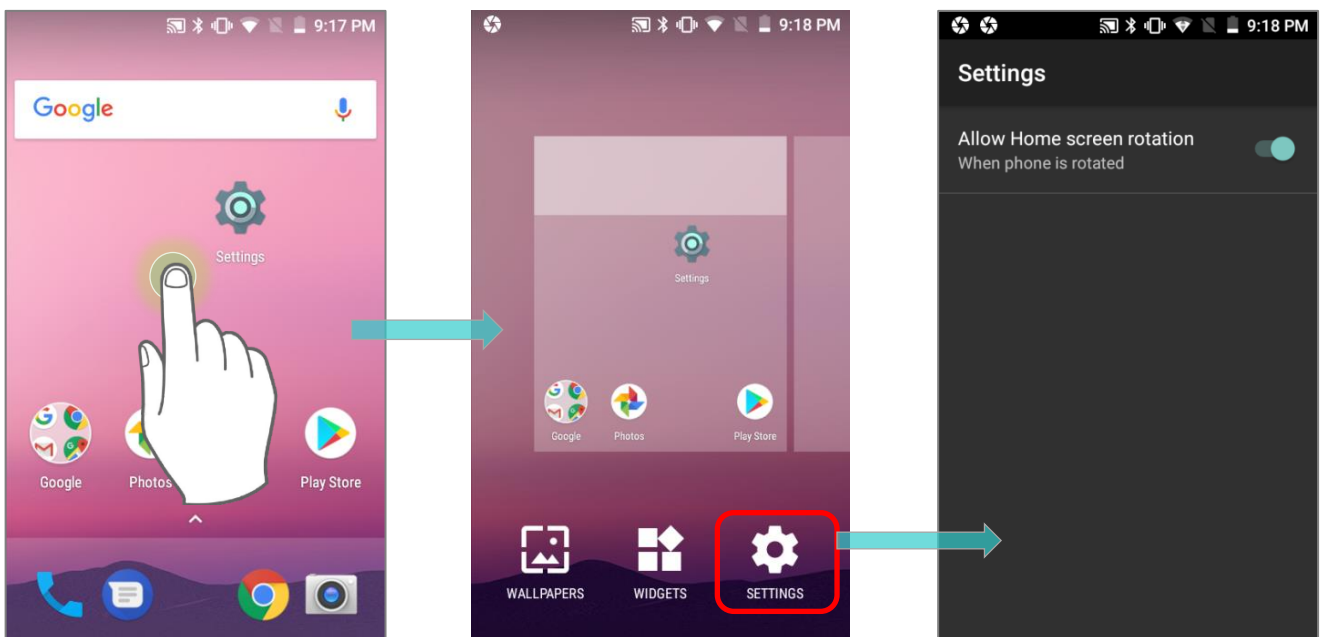
Please note that “**Stay in current orientation**” might be portrait or landscape depending on the screen display orientation when you select it.



**OR** 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.




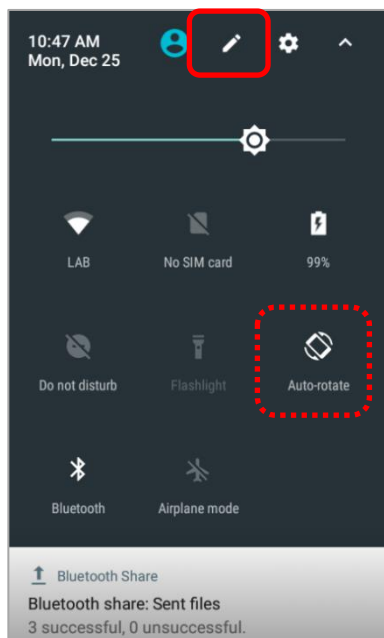
To enable Home screen rotation, please make sure Auto Rotation is enable, and press any empty spot on Home screen, tap **"Setting"** and enable **"Allow Home screen rotation"**:



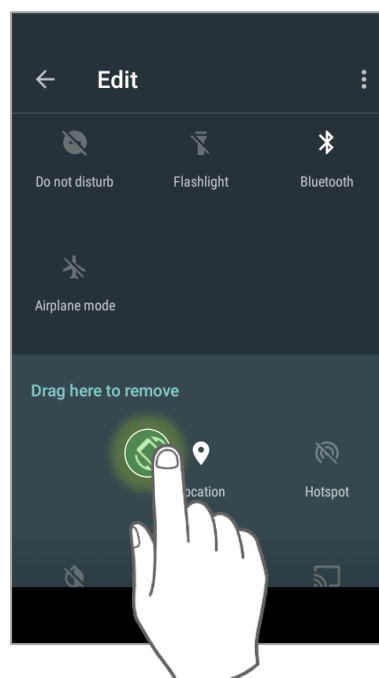
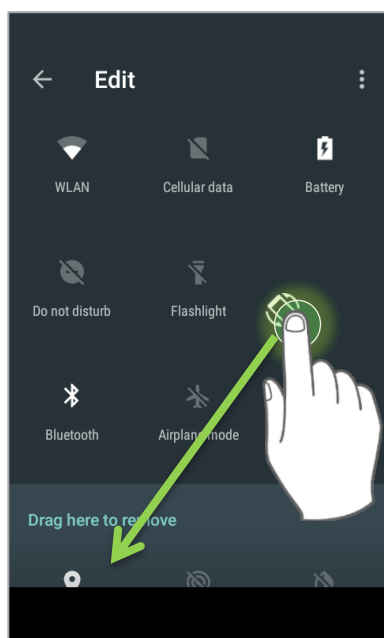
## REMOVE AUTO ROTATION FROM QUICK SETTING MENU

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.

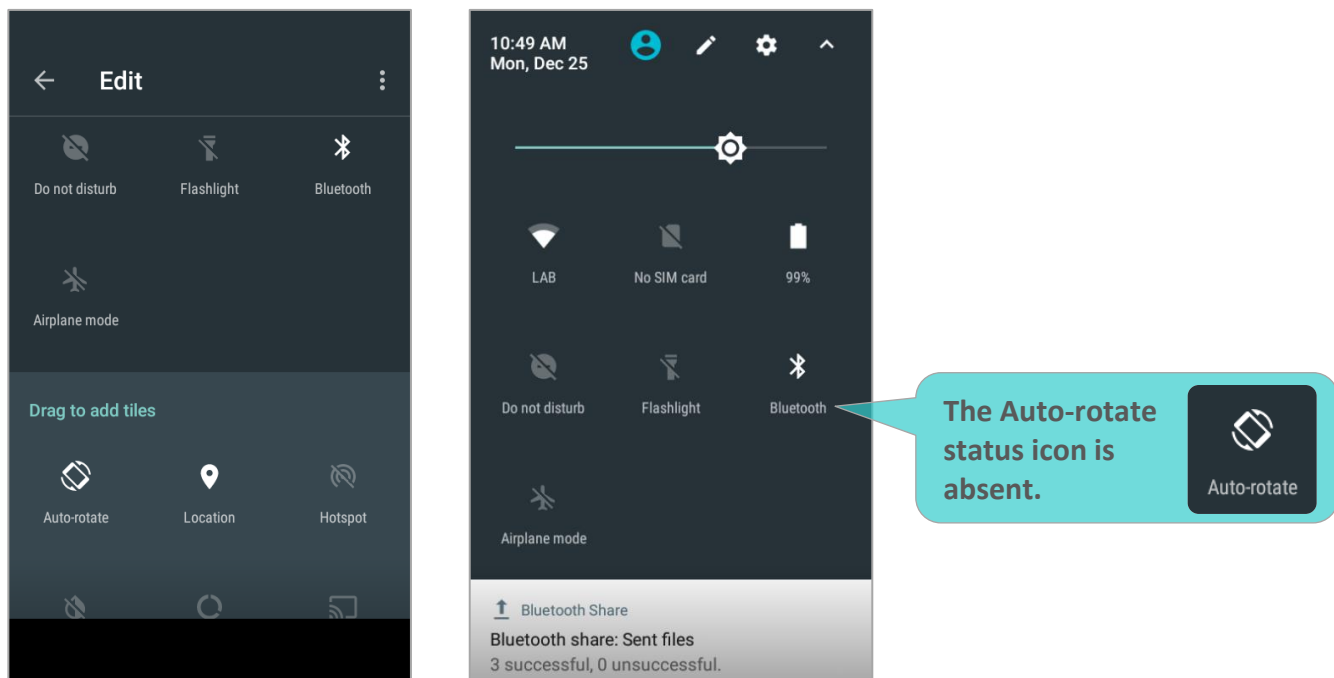


- 3) Tap on and hold the **Auto rotate** switch icon, and drag it to the light gray area and then release it.



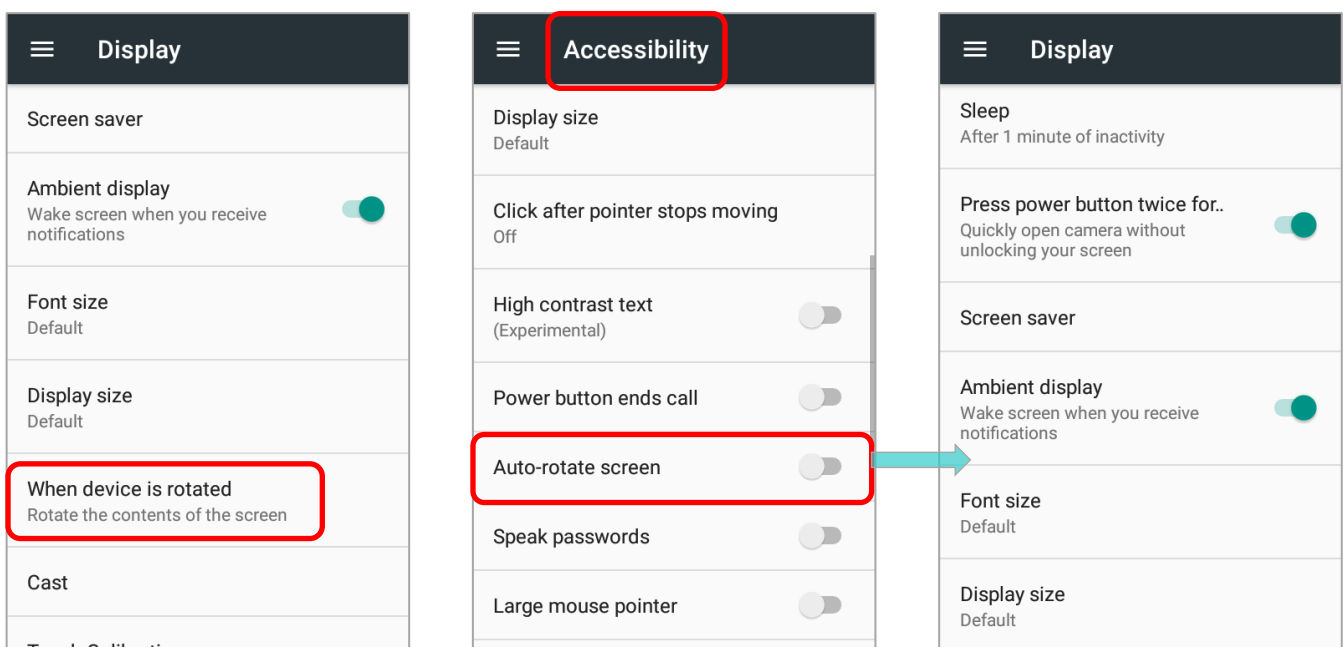


4) Return to the **Quick Settings** menu, the **Auto rotate** switch icon is now hidden.



## REMOVE AUTO ROTATION FROM DISPLAY SETTINGS

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** 🖥️.



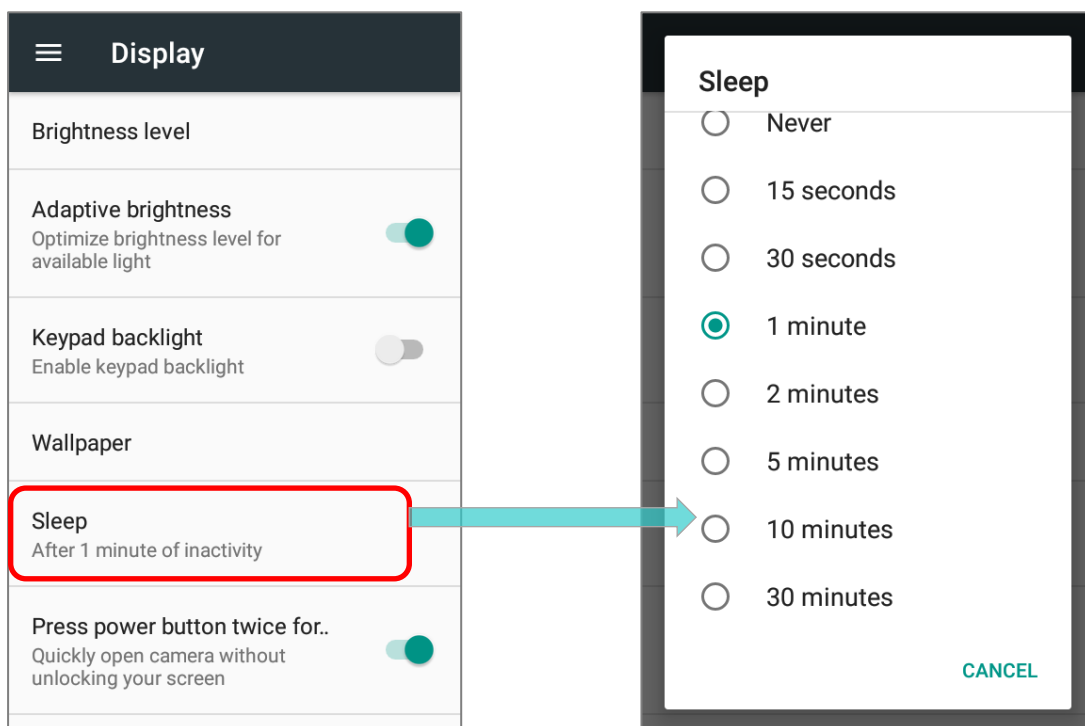
**Note:**

Auto-rotation is not supported for certain applications. Without enabling “[Allow Home Screen Rotation](#)”, auto-rotation is inapplicable on Home Screen and App Drawer screen.



### 2.3.3. SCREEN TIMEOUT SETTINGS

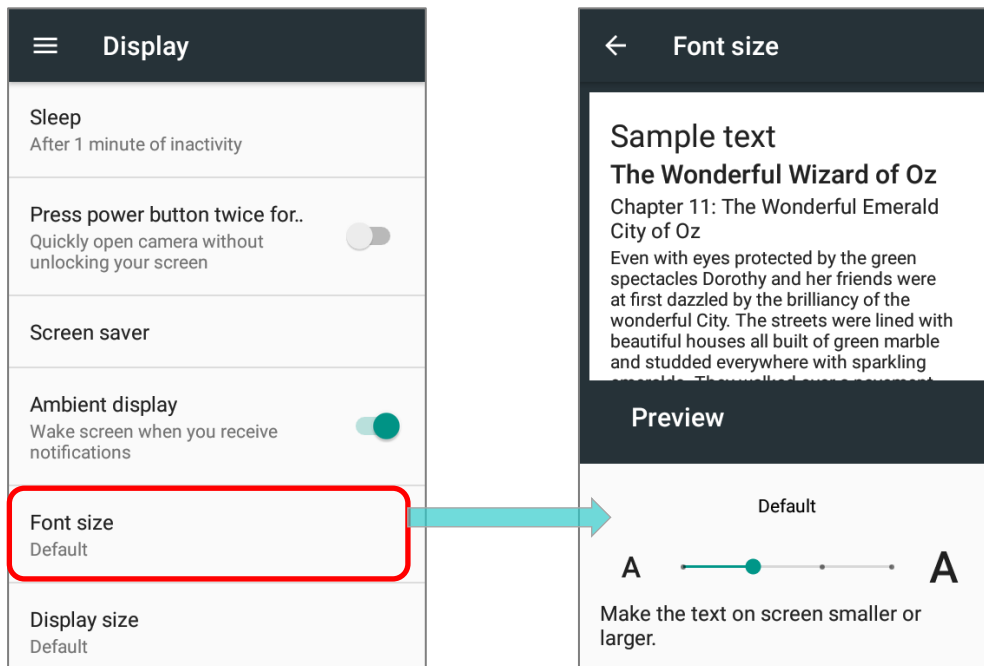
Go to [App Drawer](#) | **Settings**  | **Display**  | **Sleep**.

Select the time lapse for screen timeout.

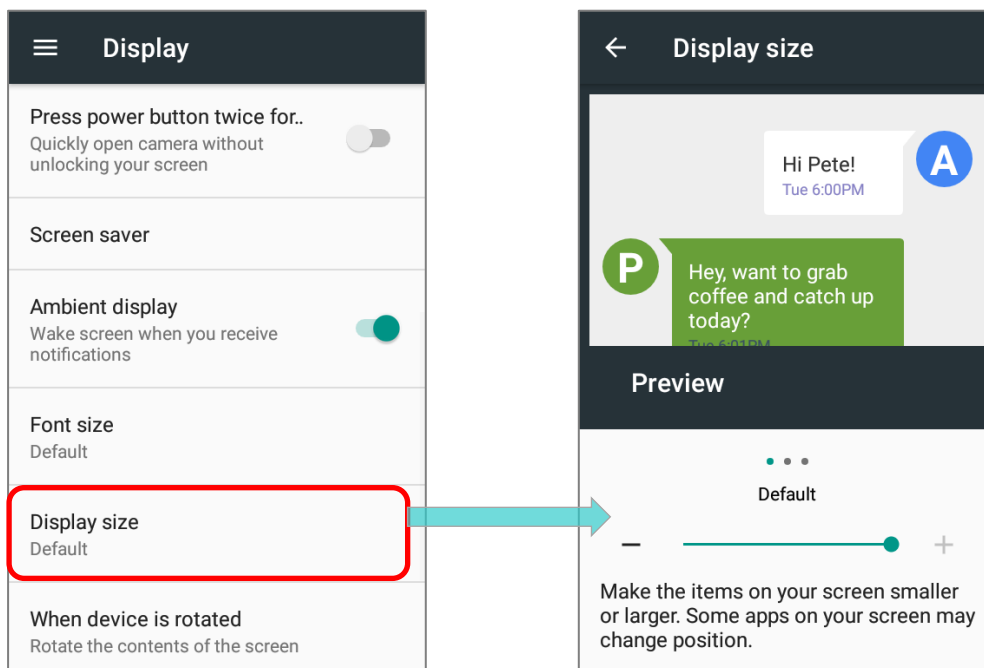


### 2.3.4. TEXT SIZE & DISPLAY SIZE

Go to [App Drawer](#) | **Settings**  | **Display**  | **Font size**. Tap the small A icon  or the large A icon  to select the font size between **Small**, **Default**, **Large** and **Largest**.



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°C or exceed 45°C)
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 side 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.

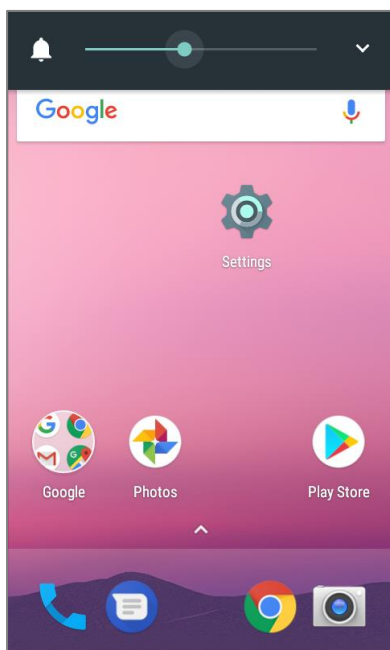
Use the volume buttons on the side of the mobile computer to adjust the system volume.



## 2.4.3. SOUNDS AND VIBRATION

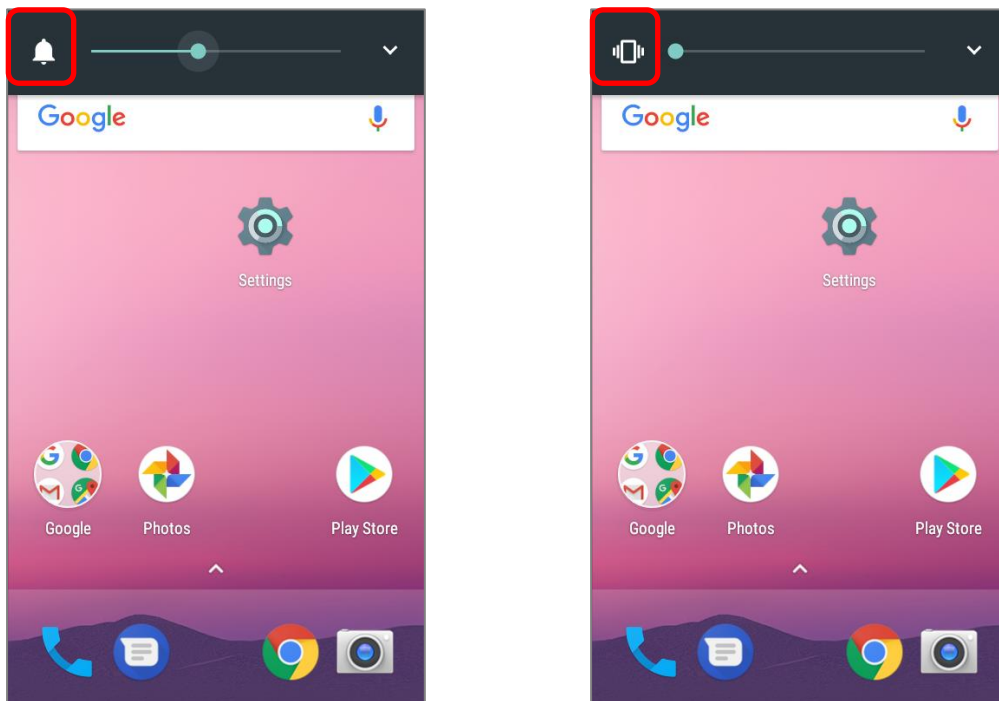
The mobile computer is integrated with a vibrator, which is software programmable for tactile feedback. This can be helpful when working in noisy environments.


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

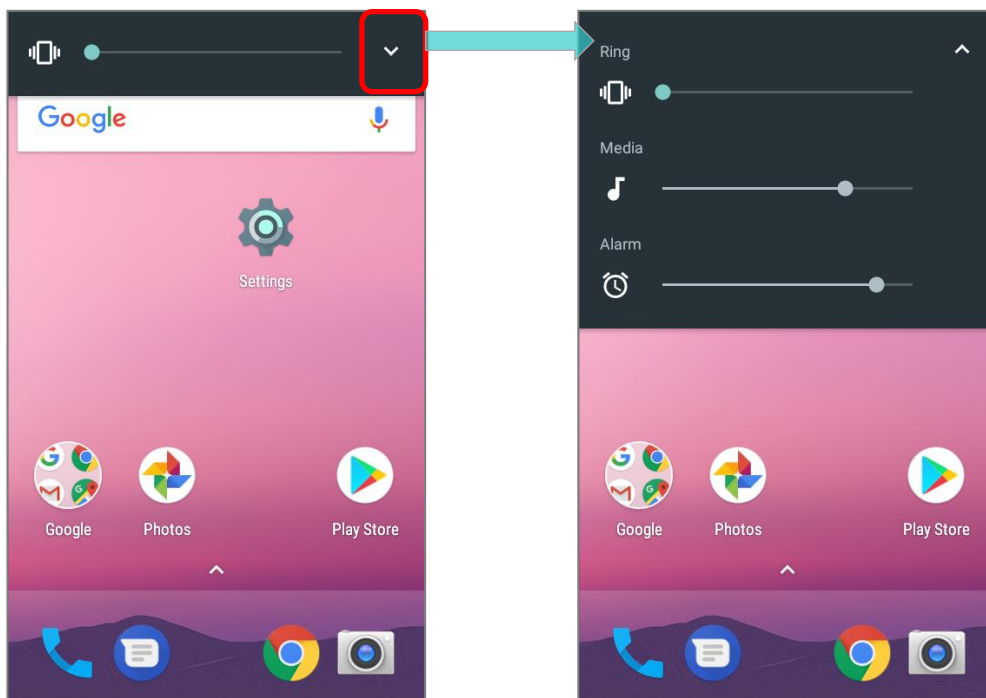
On any screen, press down **Volume Up** or **Volume Down** key to open quick sound menu.



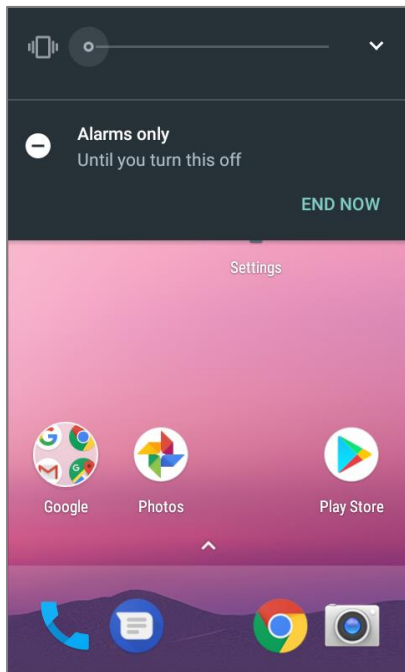
Tap  to switch this device to  **Vibration mode.**



To modify specific sound settings, tap  to access more settings.

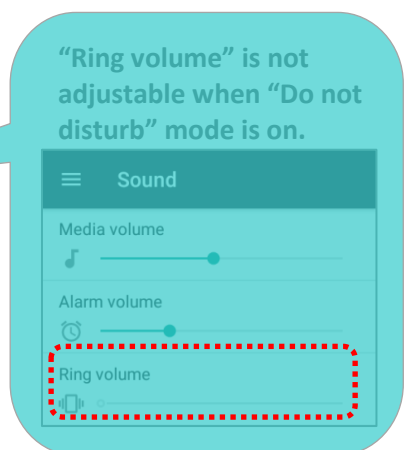
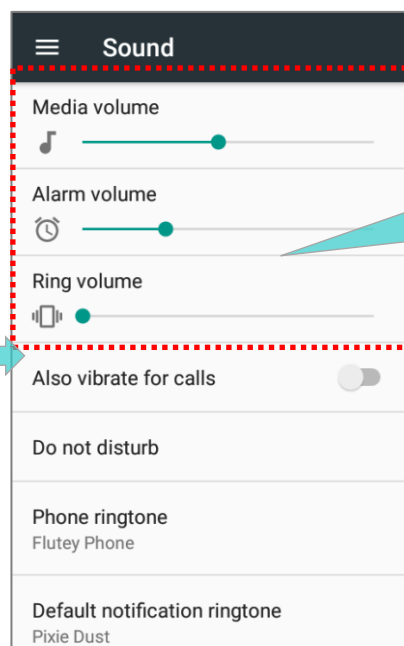
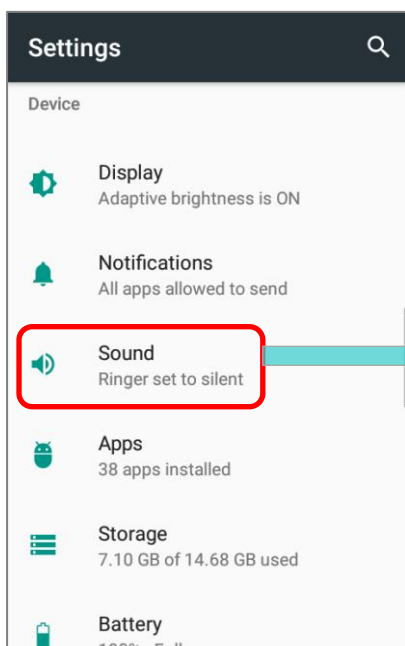


Keep pressing **Volume Down** key to turn the device into **Do not disturb** mode directly.



## SOUND SETTINGS

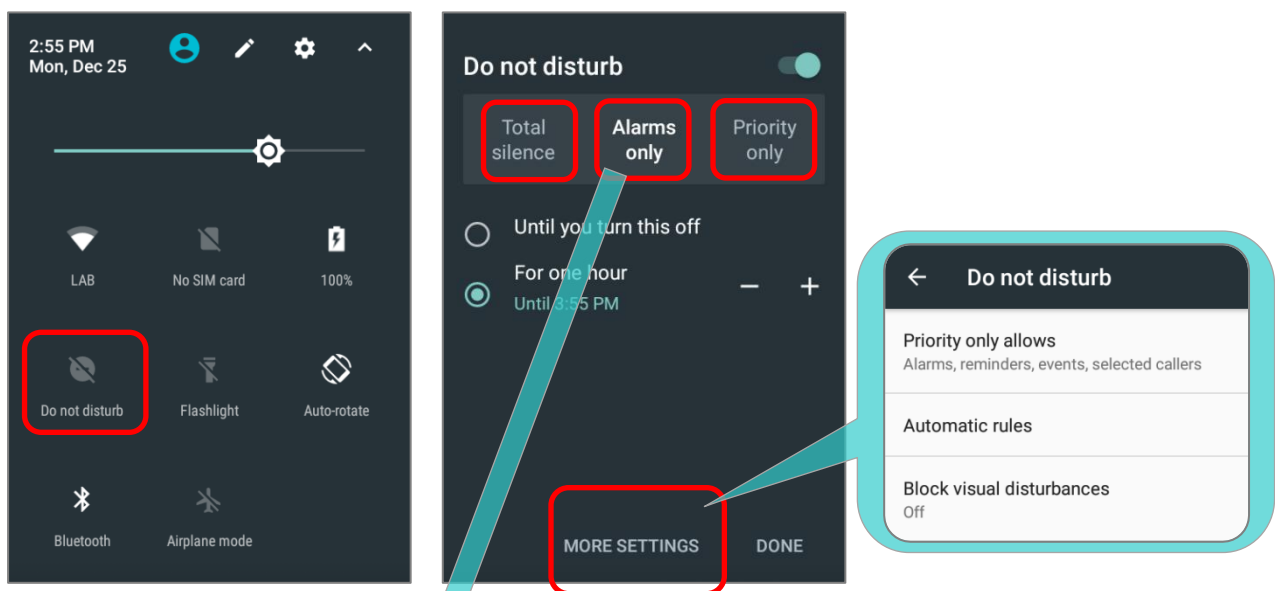
Go to [App Drawer](#) | **Settings**  | **Sound**  for more sound settings.



## 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 Menu, 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)
Incoming Calls	OFF	OFF	Adjustable (Default:From Contacts Only)
Messages	OFF	OFF	Adjustable(Default:OFF)
Music, Video, Game or Media	OFF	ON	ON
In-Call	ON	ON	ON

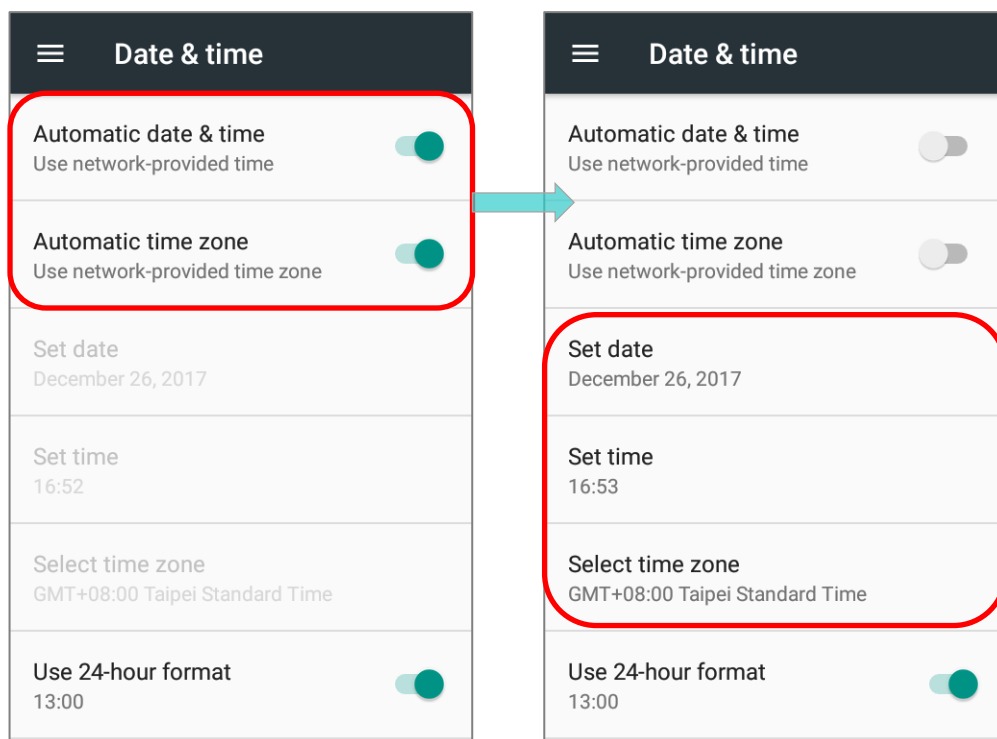


## 2.5. DATE AND TIME



By default, the mobile computer automatically synchronizes the date and time to the WWAN 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.



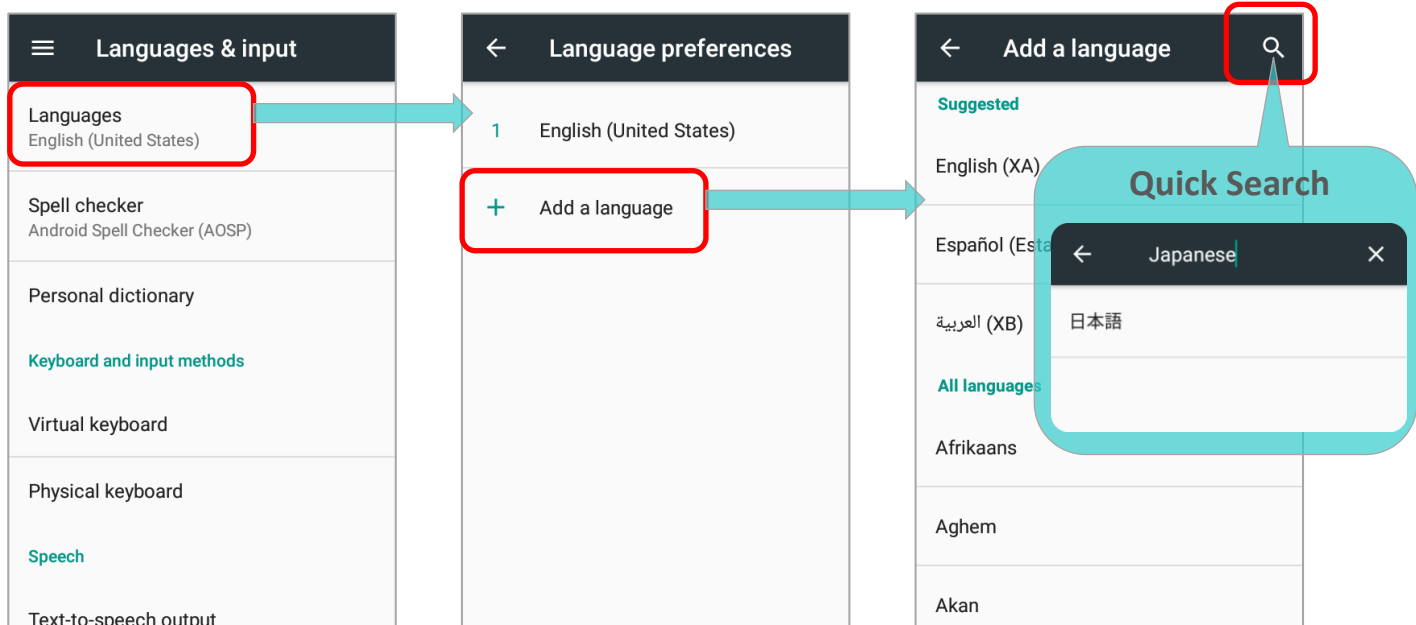
## 2.6. LANGUAGE & KEYBOARD INPUT

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

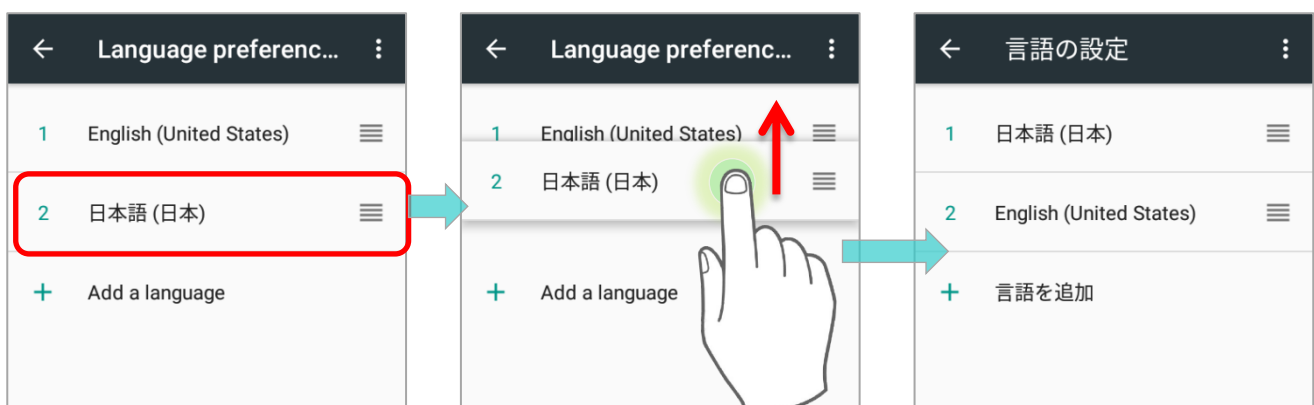
### 2.6.1. CHANGE DISPLAY LANGUAGE

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.

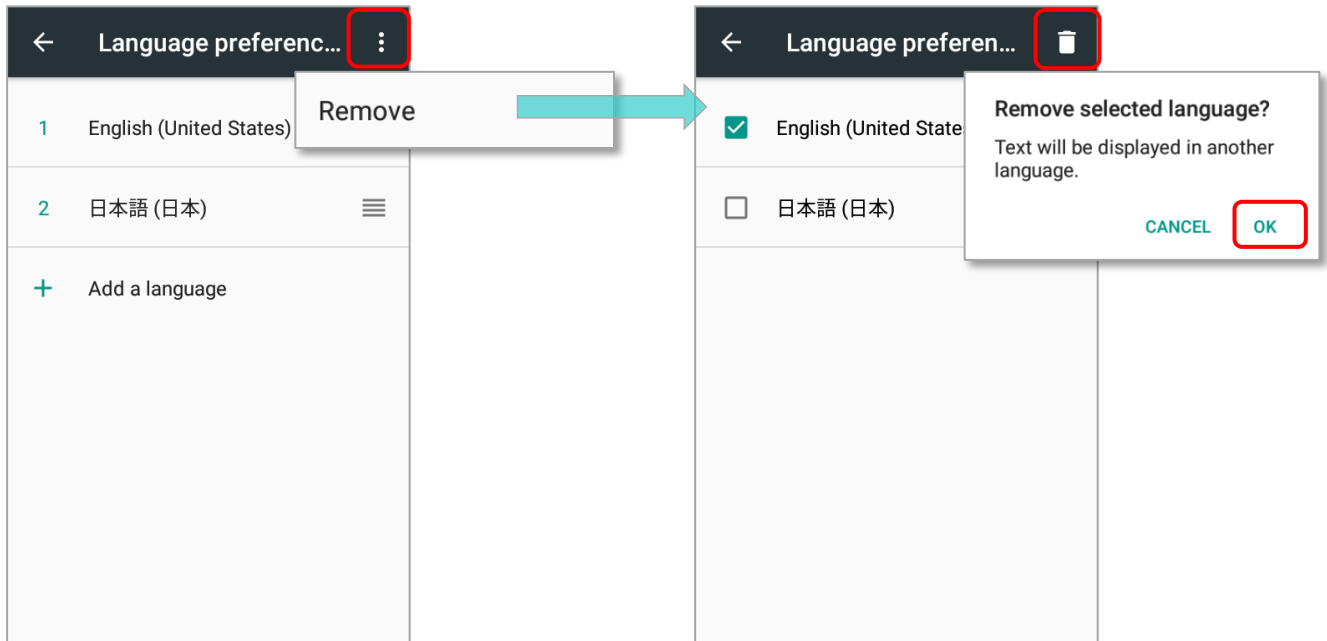


- 2) Press and hold your desired system language to change its sorting order to the 1<sup>st</sup> by dragging. Once it is released, the new language setting will immediately be applied.



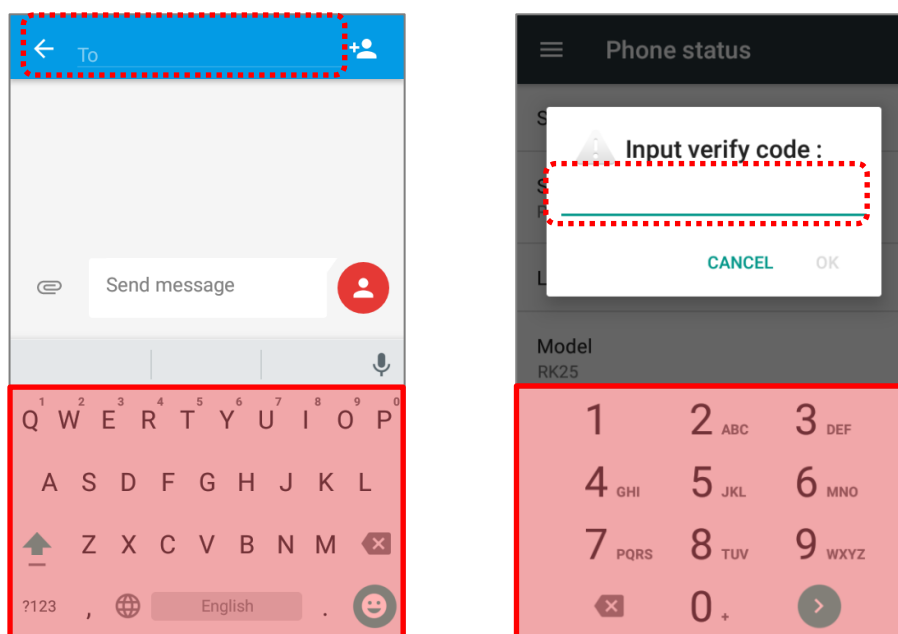
## DELETE LANGUAGE

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.



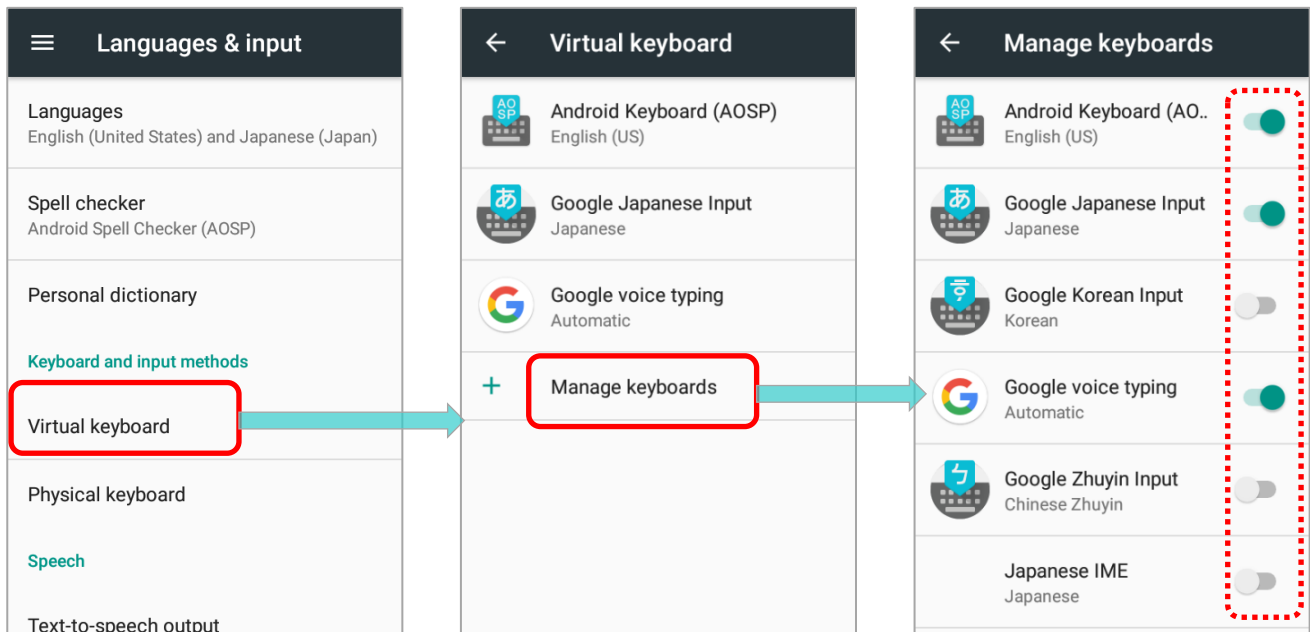
## 2.6.2. ON-SCREEN KEYBOARD

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.



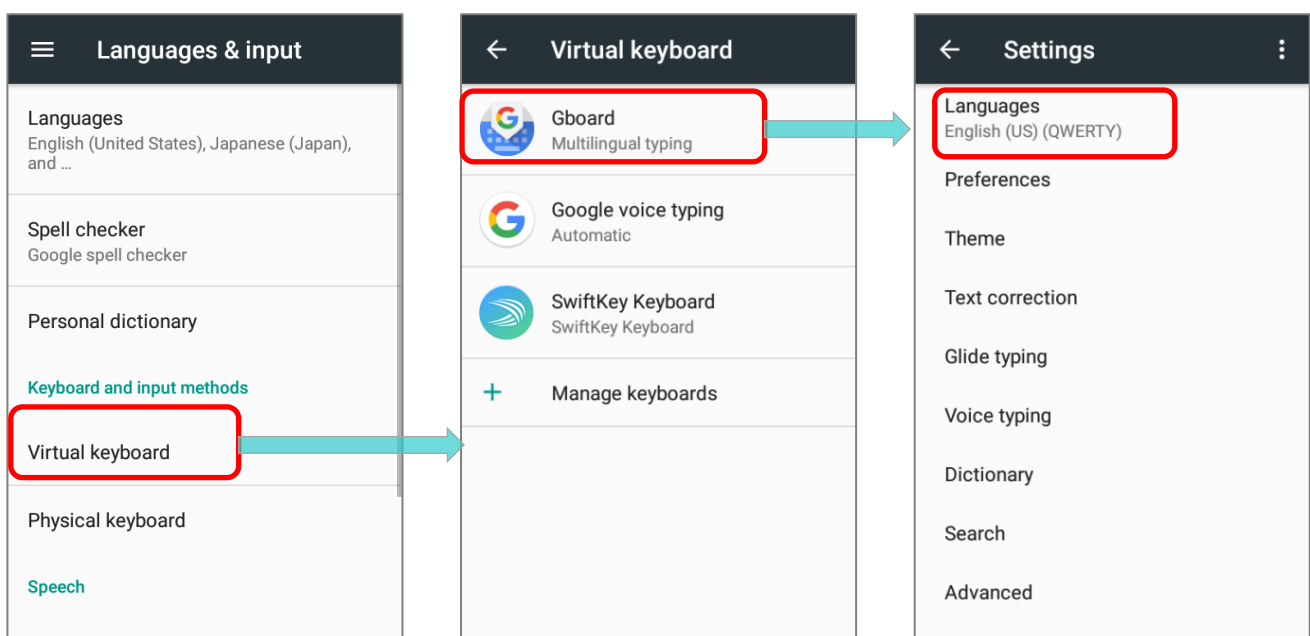
## SELECT KEYBOARD (INPUT METHOD)

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.

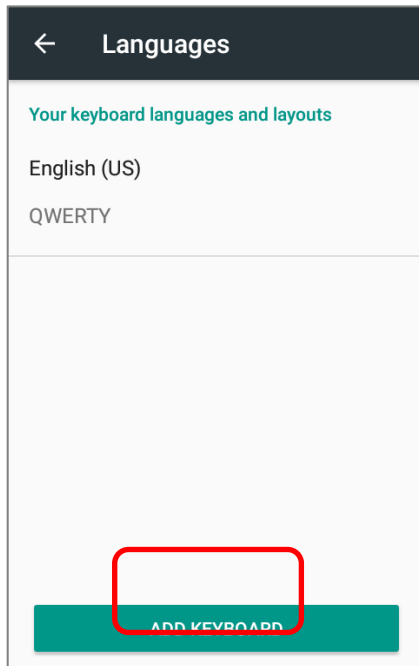


The default keyboard “**Gboard**” supports multilingual typing. To have more options of key layouts, for example, Japanese, you can:

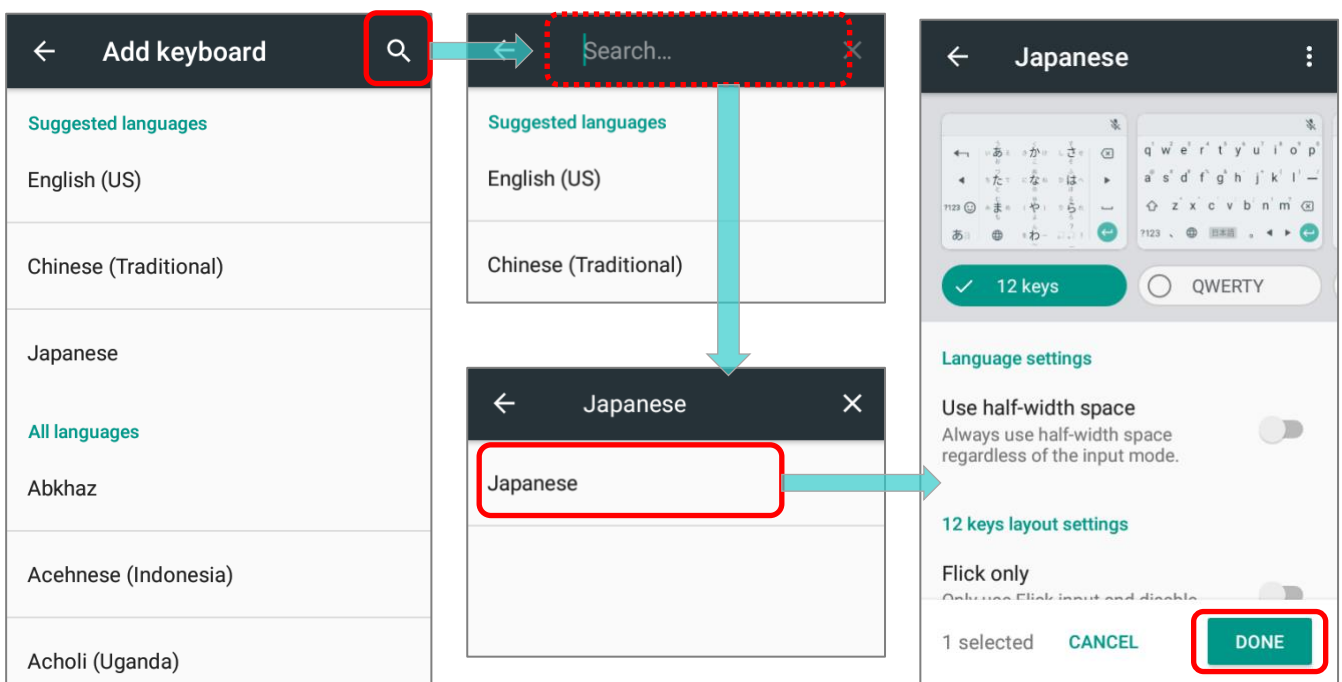
- 1) On **Language & input** screen, tap on **Virtual Keyboard**, select **Gboard**, and then **Languages**.



- 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.

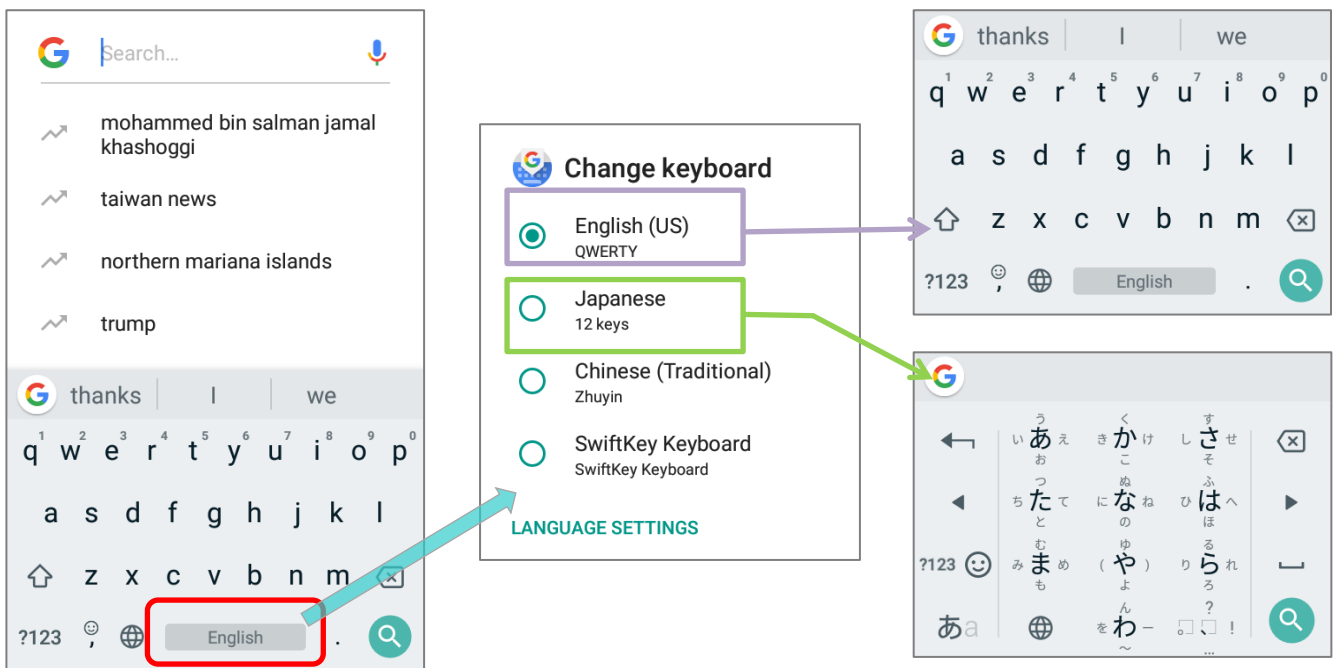


- 4) Return to **Languages Setting** screen, and your keyboard language and layouts now lists more languages below.




## 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

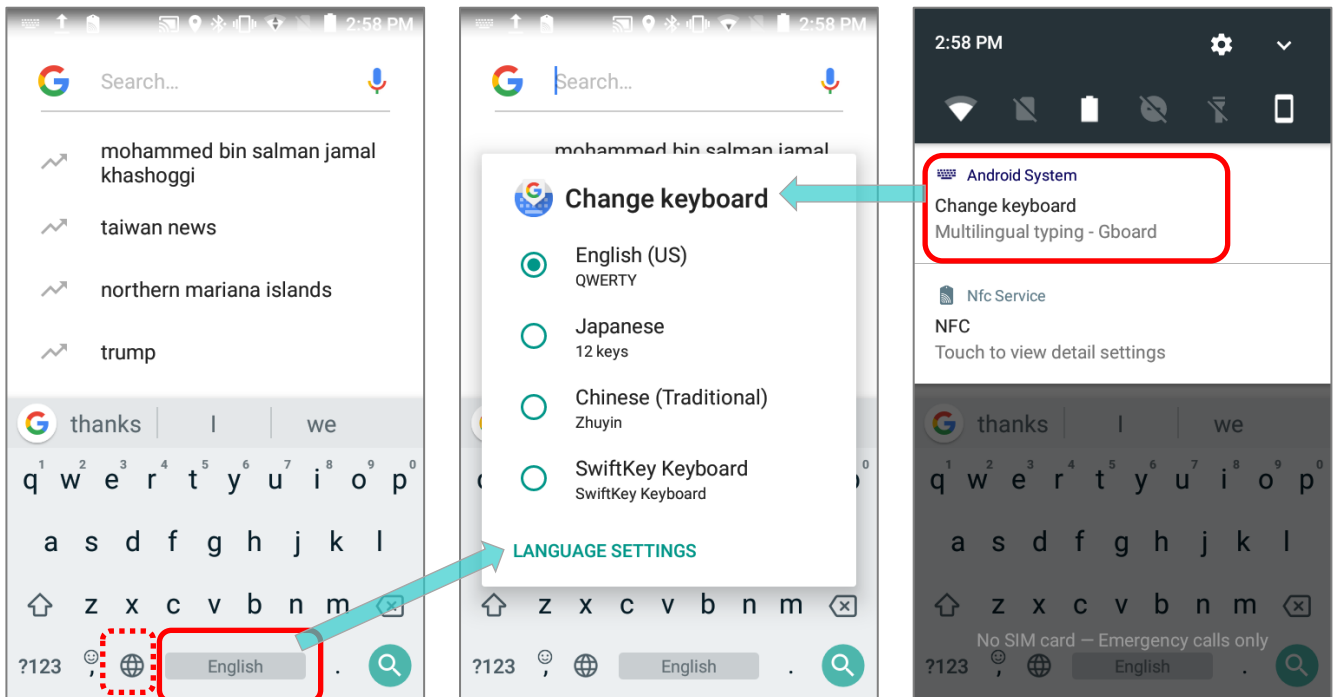
Simply tap  to cycle through the options:



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

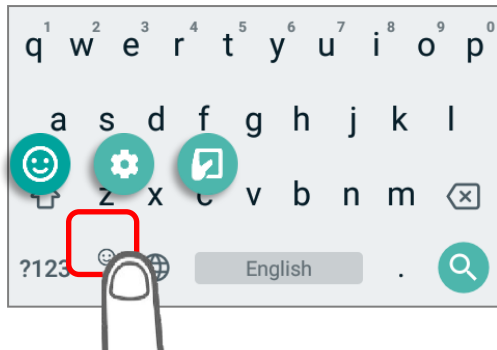
Swipe down from the status bar to open **Notifications Drawer** and tap "**Change Keyboard**" notification to change it.



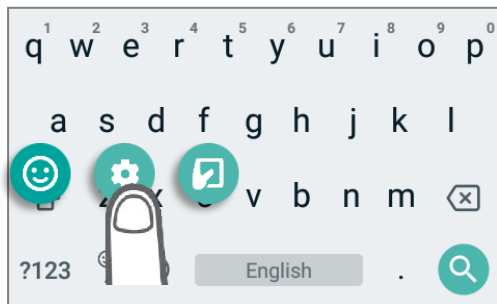
## ADJUST KEYBOARD SETTINGS

To configure keyboard settings:


- 1) Tap and hold the comma button  and the settings buttons    appear.




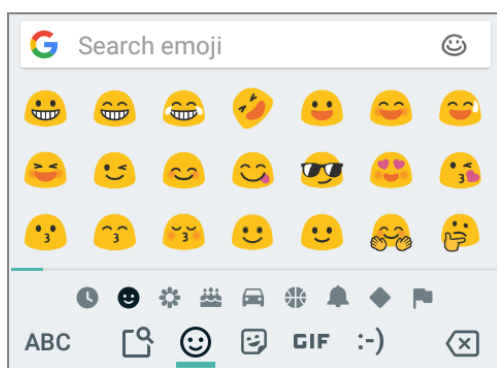
- 2) Keep pressing on the screen and swipe to the button to select the function you need.




By tapping on the settings buttons, you can:

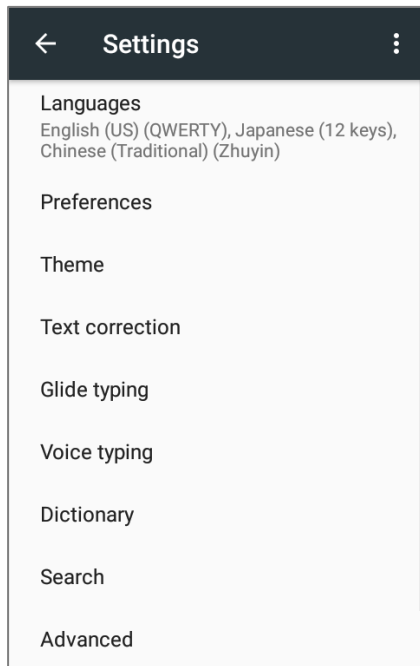
- 1) To show the emoji keyboard by tapping on .


Tap  to return to the text keyboard.

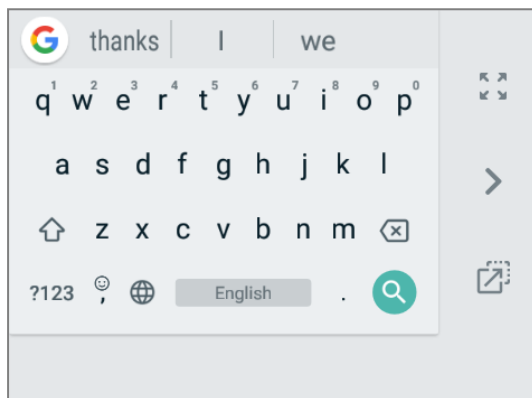







2) Enter Gboard setting page for further settings by tapping on .




3) Adjust the keyboard layout to meet your need by tapping on .




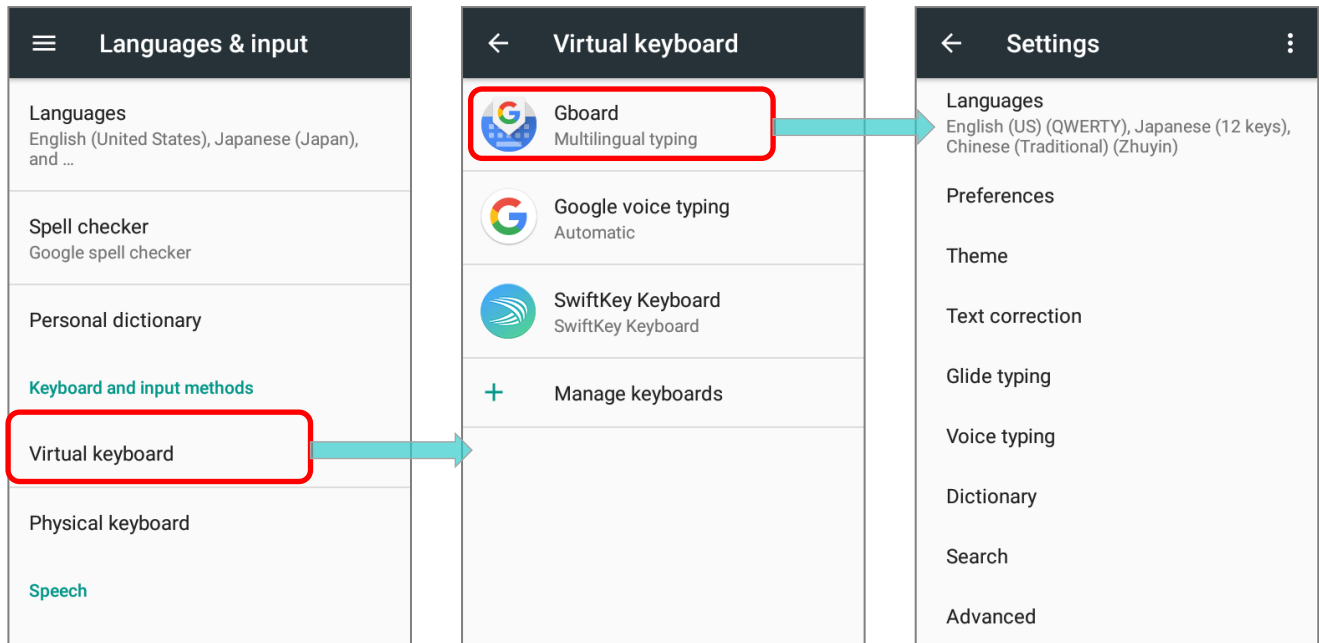
Tap  to resume the default keyboard layout.

Tap  or  to switch the keyboard layout to right-handed mode or left-handed mode.

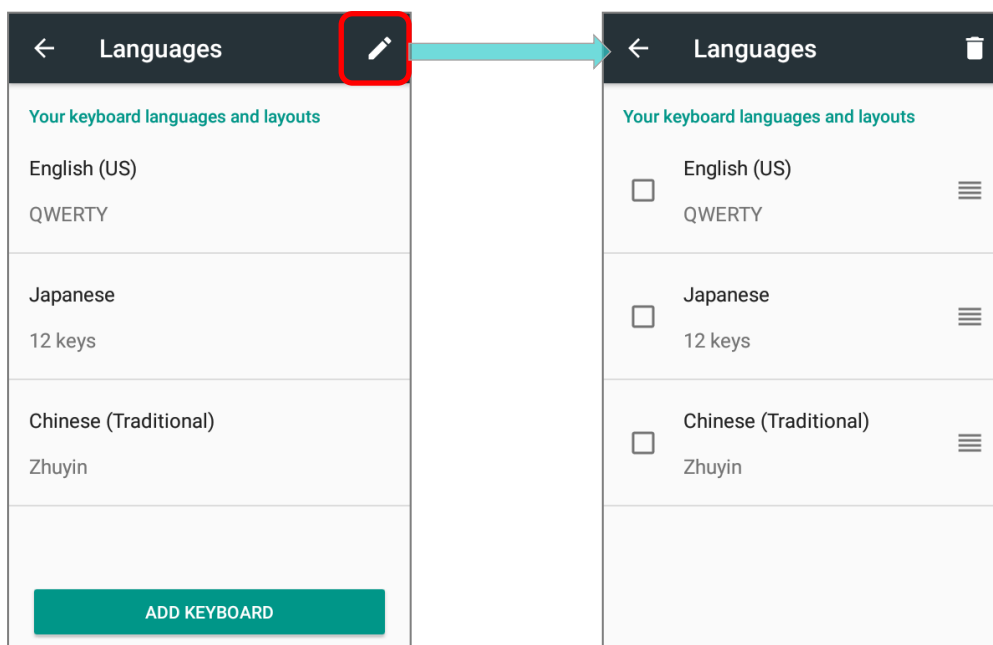
Tap  to adjust the keyboard position.


## EDIT KEYBOARD LANGUAGE (INPUT METHOD)

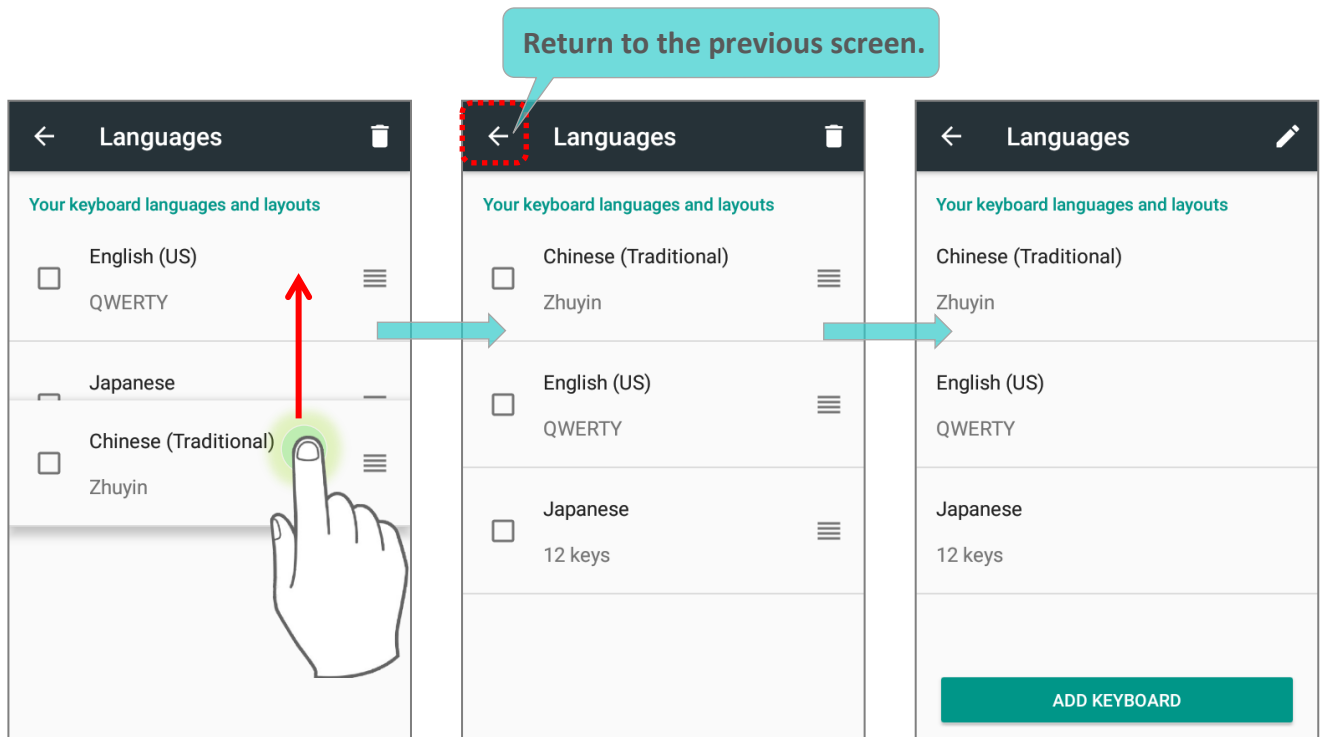
The keyboard language you enabled in Gboard can be edited from **Language & input** | **Virtual keyboard** | **Gboard** | **Languages**, and on **Languages** screen, you can add/delete keyboard languages, and change the keyboard language sorting order. 



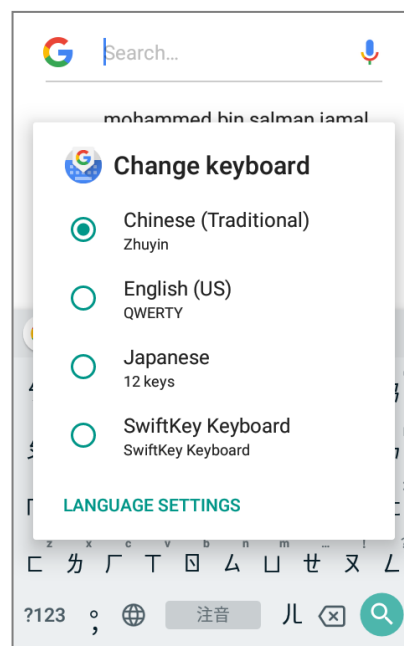
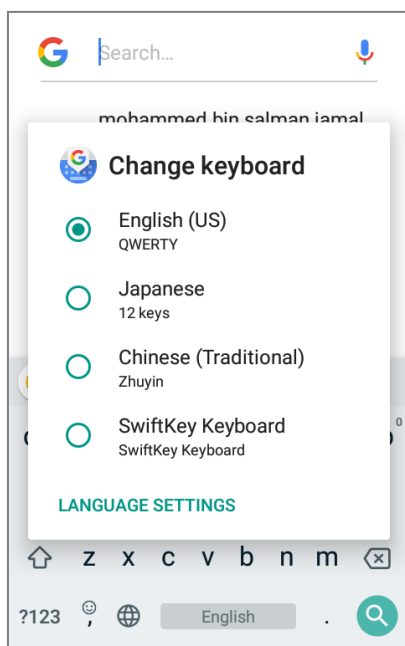
On **Languages** screen, tap on the edit  at the upper-right corner to enter edit mode.



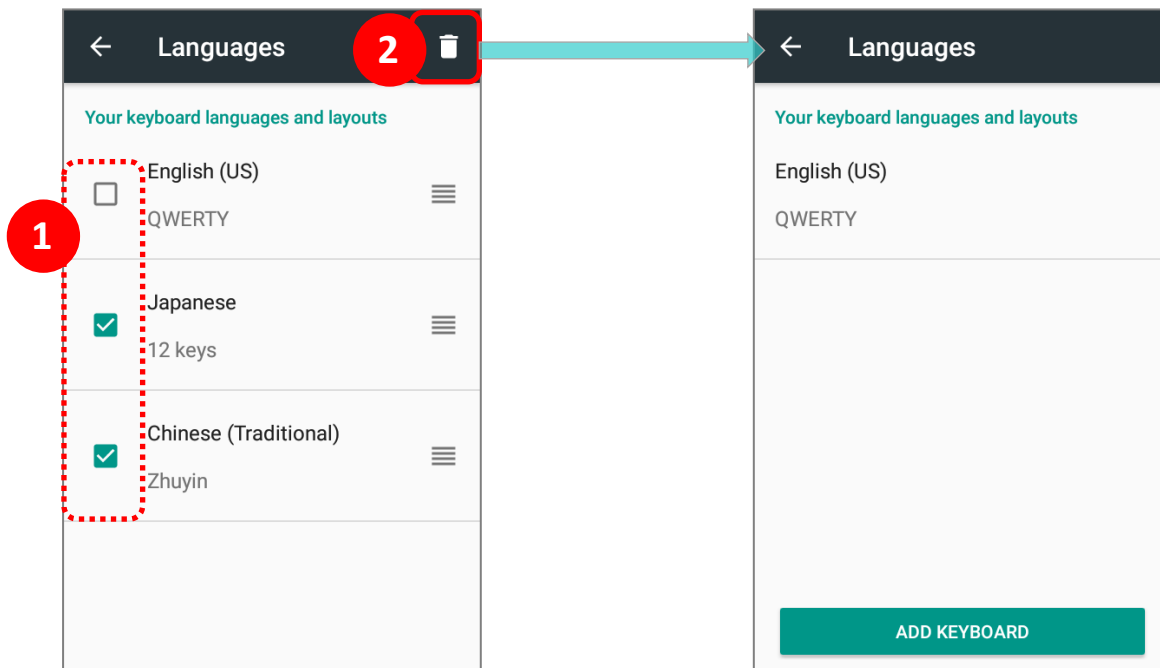
To change the keyboard language sorting order, keep pressing the language, drag it upward or downward to change its sorted position, and then release to have it placed. Return to the previous screen, and tap on any text input field to expand **Gboard** to reveal **"Change Keyboard"** menu by long pressing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

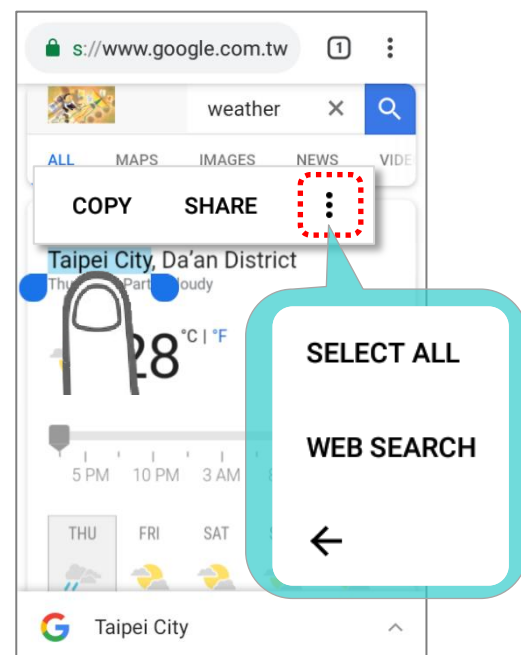


To delete keyboard language, simply tick the check box of the language(s) to be removed, and tap on the delete icon at the upper-right corner. Please note that you should keep at least one keyboard language.






## EDIT TEXT

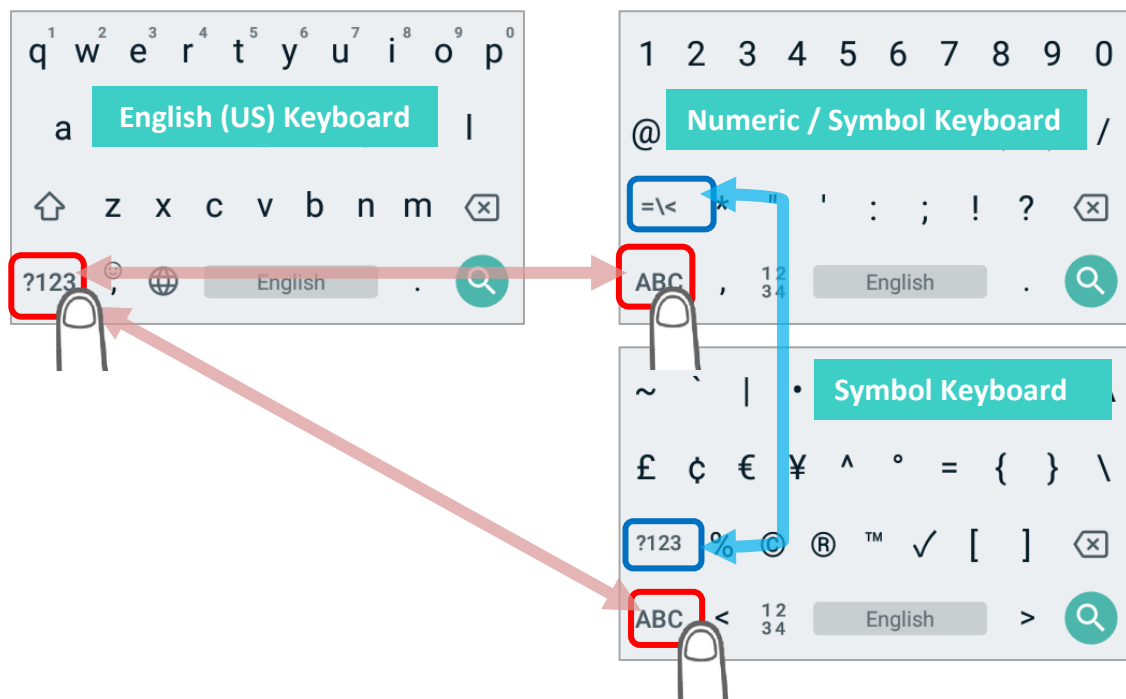
Tap and hold text on the screen to enable a text editing menu for selecting all text, or copying and pasting text within or across applications. Some applications may use different ways to select or edit text.



## ENTER NUMBERS AND SYMBOLS

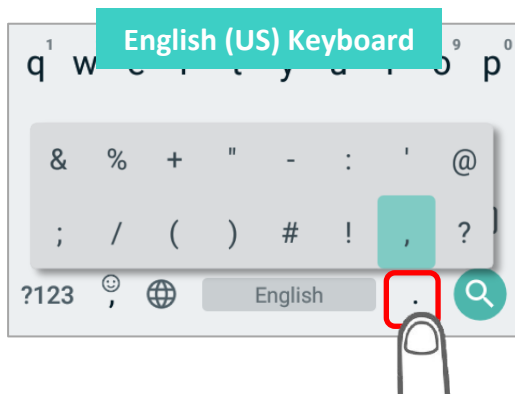
The appearance of the switch button to numeric or symbol keyboard may vary; the example below demonstrates how to use the switch key to access your desired numeric or symbol keyboards from the default **Gboard** keyboard.

- To enter **Numeric / Symbol** keyboard, tap .
- On **Numeric / Symbol** keyboard, tap  to access more symbols or tap  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.

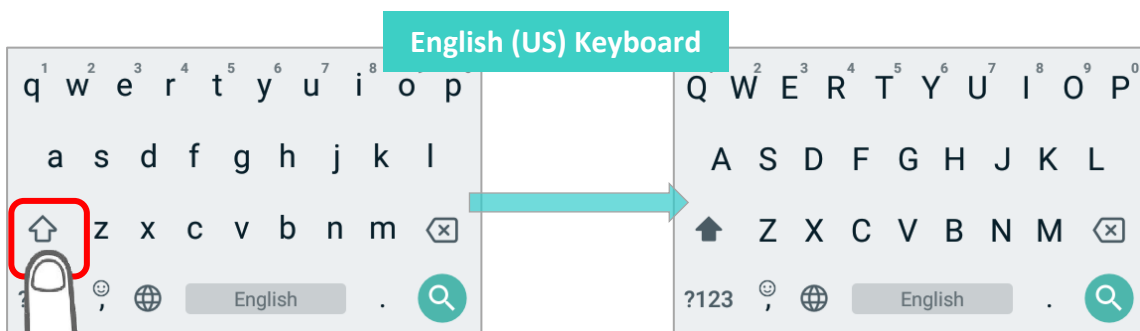




- Tap and hold a letter from **q~p** on the top row to bring up the specific number key.

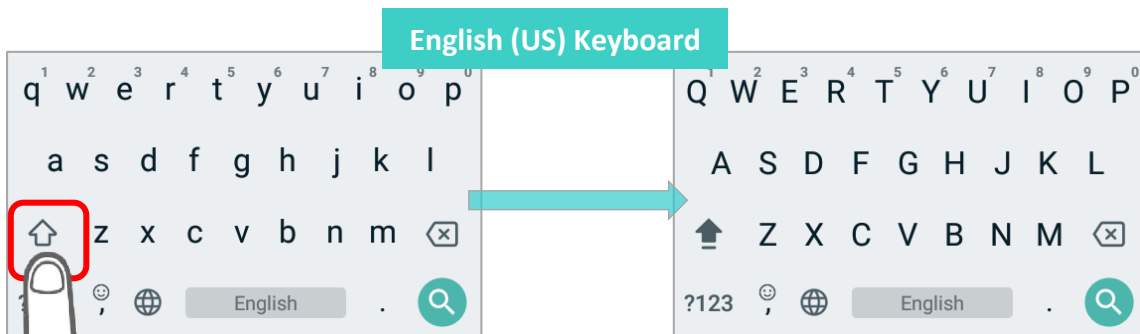


## ENTER UPPERCASE LETTERS

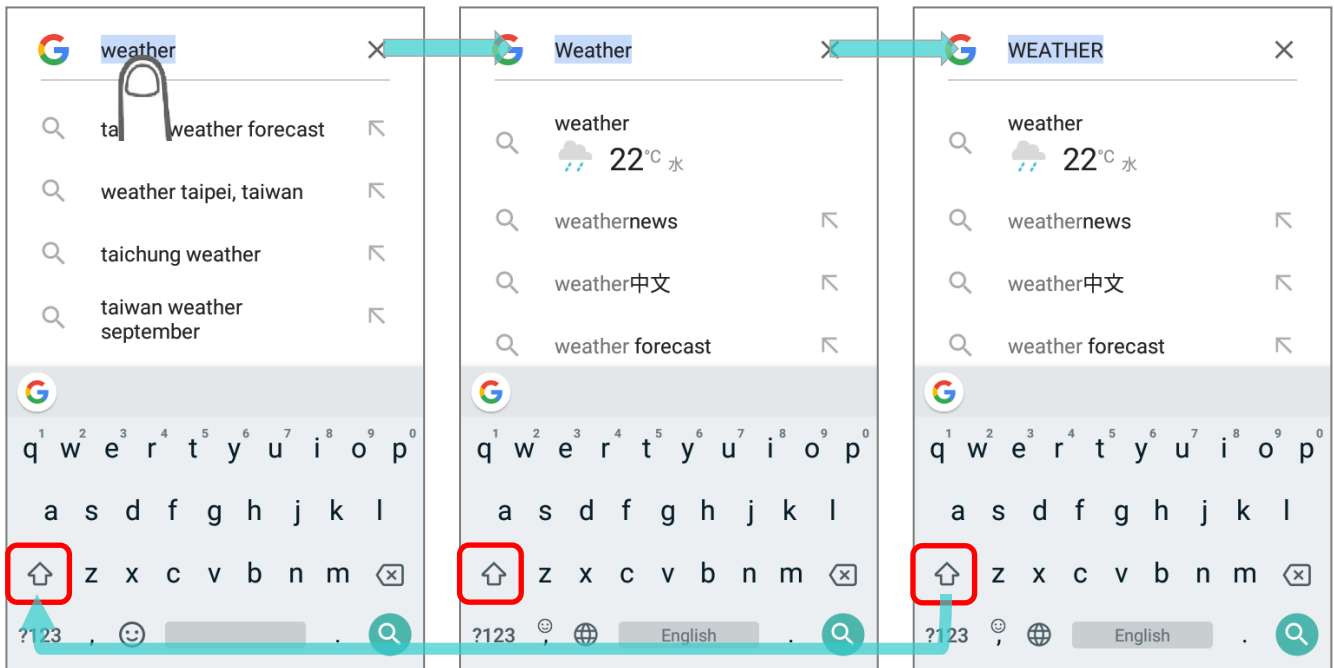
Tap the shift key  once to switch it to be , and tap a character key to enter an uppercase letter. The letters will return to lower case once an uppercase letter is entered.



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.

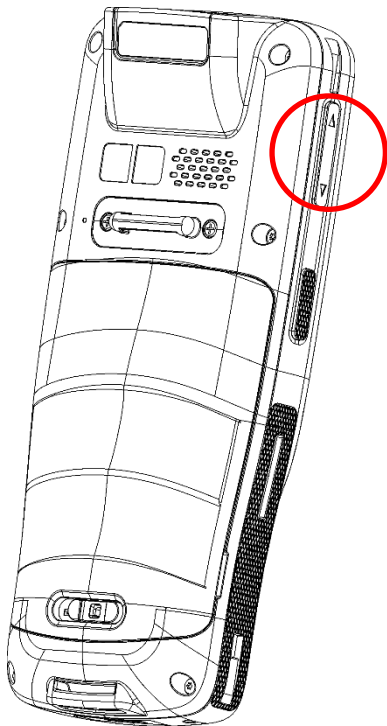


**OR**, directly input the words and then tap on the word to highlight it and tap on shift. You can capitalize all the whole word or just the first letter by tapping on the shift key.



## 2.7. SOUND AND VOLUME

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



## 2.8. DATA CAPTURE

### 2.8.1. 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.

### 2.8.2. 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

## PHYSICAL KEYPAD

---

This chapter introduces the physical keypad of RK25 mobile computer, including 28-key model and 25-key model. 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.

### IN THIS CHAPTER

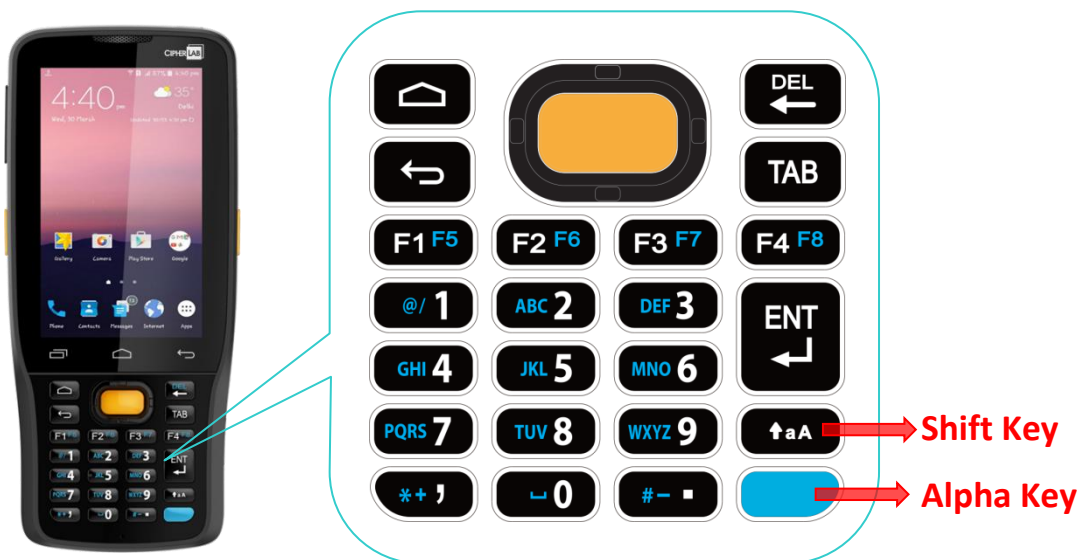
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- 3.2 Basic Key .....109
- 3.3 Alpha Key .....111
- 3.4 Function Key (only for 25-key Model) .....115
- 3.5 Shift Keys .....118
- 3.6 Key Functions in Different Modes .....120
- 3.7 Keypad Lock .....123
- 3.8 Enterprise Settings .....125

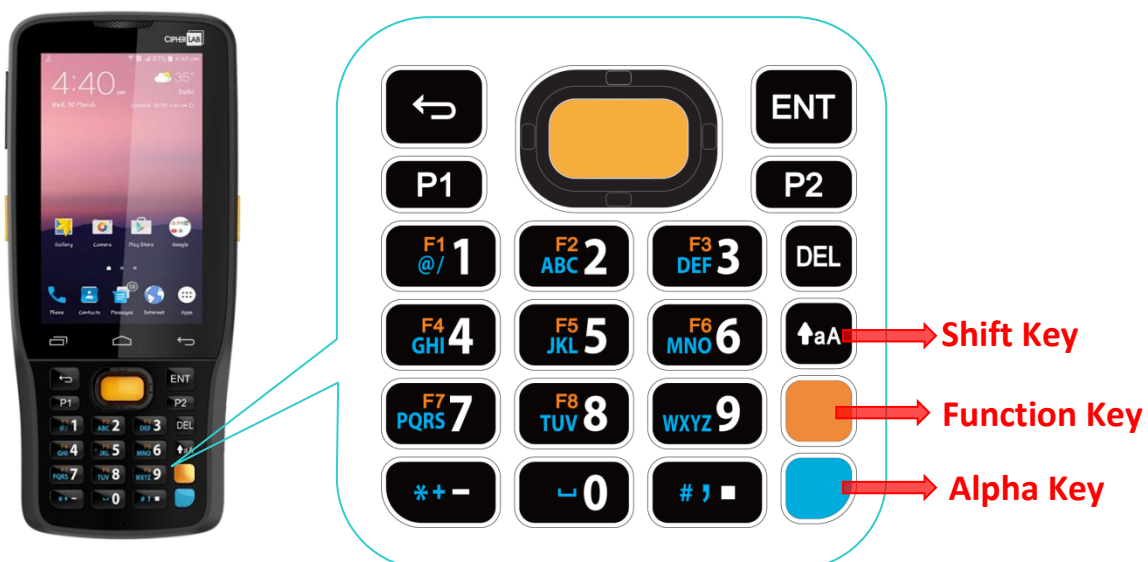
### 3.1. OVERVIEW

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.

#### 28-KEY MODEL



#### 25-KEY MODEL










3.2. BASIC KEY

Basic Keys deliver the following functions:






3.2.1. BASIC KEY OF 28-KEY MODEL



Key	Description
<b>Scan</b> 	Press the scan key to read a barcode in place.
<b>Arrows</b> 	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.
<b>Home</b> 	Displays the Home screen.
<b>Back</b> 	Returns to the previous screen or closes the active window or keyboard.
<b>Backspace</b> 	Remove the last input letter.
<b>Tab</b> 	To advance the cursor to the next tab stop.
<b>Enter</b> 	Enter key works as tap or double-tap.


### 3.2.2. BASIC KEY OF 25-KEY MODEL



Key	Description
<b>Scan</b> 	Press the scan key to read a barcode in place.
<b>Arrows</b> 	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.
<b>Back</b> 	Returns to the previous screen or closes the active window or keyboard.
<b>Delete</b> 	Remove the last input letter.
<b>Enter</b> 	Enter key works as tap or double-tap.

### 3.3. ALPHA KEY

#### 3.3.1. 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](#).

---

### 3.3.2. 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.

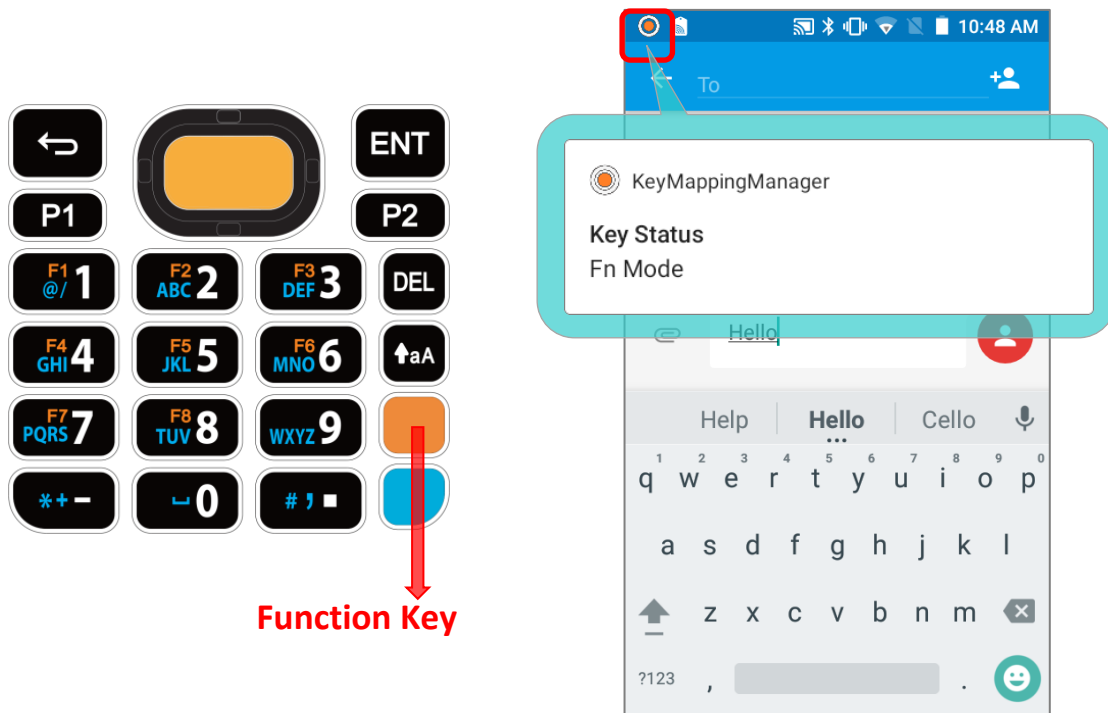
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### 3.4. FUNCTION KEY (ONLY FOR 25-KEY MODEL)

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

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

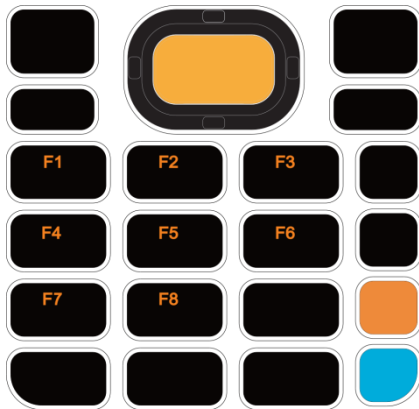


Keypad returns from **Function Mode** to **Default Input Mode** upon pressing any button engraved in orange. If **Alpha key/Shift Key** is pressed, keypad will return to **Alpha mode/Shift Lock Mode** until **Alpha key/Shift Key** is pressed again.

#### ▪ Default Input Mode




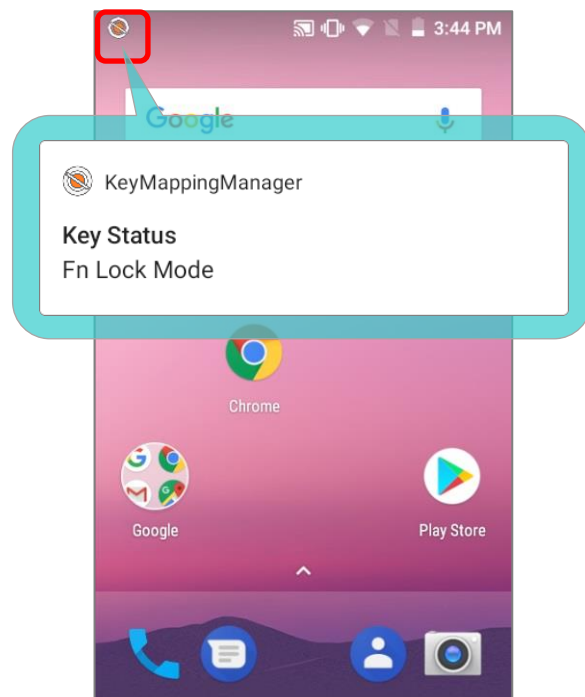
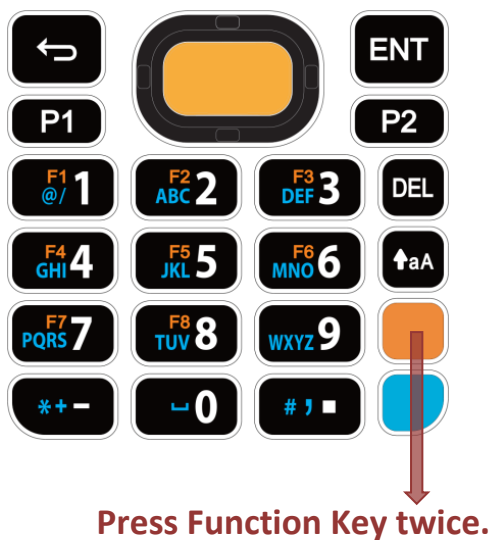
## Function Mode



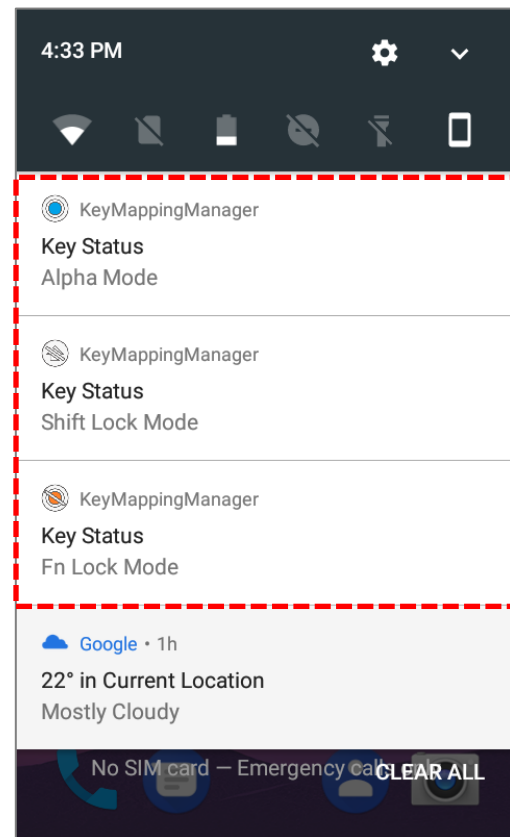
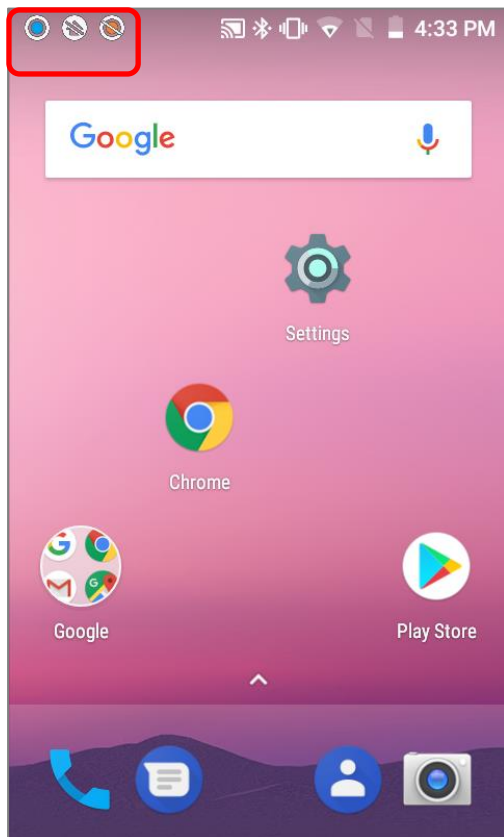
### Note:

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.

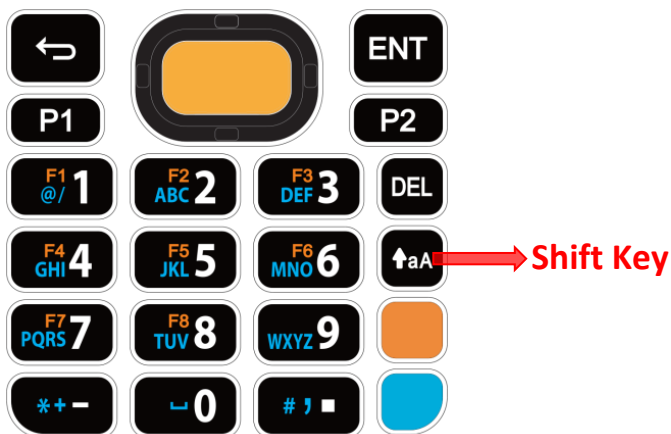


### 3.5. SHIFT KEYS

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**).

#### ▪ 28-key Model Keypad

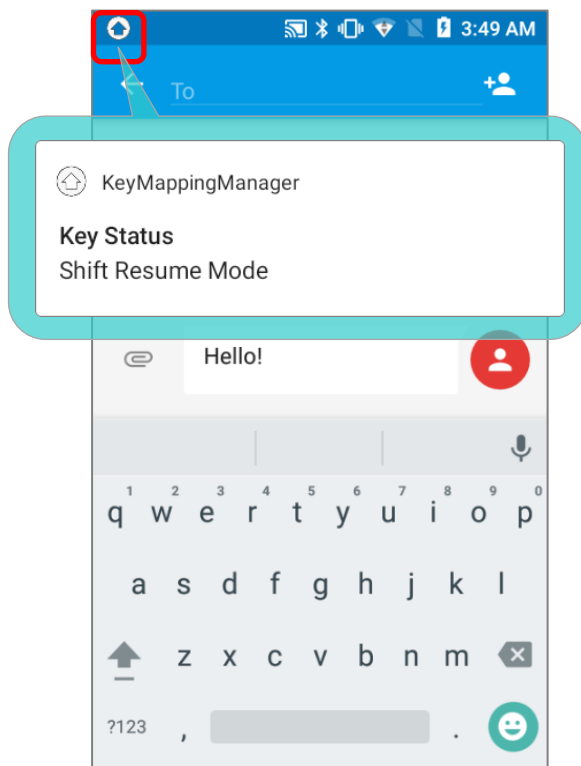


#### ▪ 25-key Model Keypad

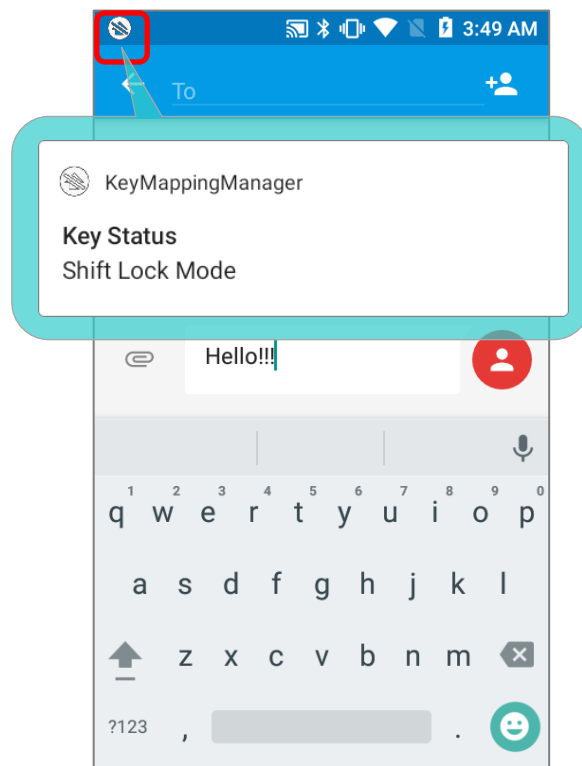


When the Shift key is pressed twice, the keypad will enter **Shift Lock Mode** with an icon  appears in the status bar, and the keypad stays in Shift Lock Mode till the Shift key is pressed again.

- **Shift Resume Mode**




















































- **Shift Lock Mode**



In both **Shift Resume Mode** and **Shift Lock Mode**, the keys deliver the functions as [Key Functions in Different Modes](#) describes.


















### 3.6. KEY FUNCTIONS IN DIFFERENT MODES

#### 3.6.1. FOR 28-KEY MODEL KEYPAD

Default Input Mode	Alpha Mode	Shift Mode	Shift Mode+ Alpha Mode
	N/A		N/A
			
			
			
			
		! (exclamation mark)	
		@ (at sign)	A, B, or C (uppercase)
		# (pound)	D, E, or F (uppercase)
		\$ (currency symbol)	G, H, or I (uppercase)
		% (percent)	J, K, or L (uppercase)
		^ (caret)	M, N, or O (uppercase)
		& (ampersand)	P, Q, R, or S (uppercase)
		* (asterisk)	T, U, or V (uppercase)
		( (parentheses)	W, X, Y, or Z (uppercase)
		) (parentheses)	
		> (more than sign)	
		< (less than sign)	
		Return to the next line or start a new paragraph in text input field.	

## 3.6.2. FOR 25-KEY MODEL KEYPAD

Default Input Mode	Alpha Mode	Shift Mode	Function Mode
<b>P1</b>	N/A	N/A	N/A
<b>P2</b>	N/A	N/A	N/A
<b>1</b>	@/	! (exclamation mark)	F1
<b>2</b>	ABC	@ (at sign)	F2
<b>3</b>	DEF	# (pound)	F3
<b>4</b>	GHI	\$ (currency symbol)	F4
<b>5</b>	JKL	% (percent)	F5
<b>6</b>	MNO	^ (caret)	F6
<b>7</b>	PQRS	& (ampersand)	F7
<b>8</b>	TUV	* (asterisk)	F8
<b>9</b>	WXYZ	( (parentheses)	N/A
<b>0</b>	_	) (parentheses)	0
<b>-</b>	* +	> (more than sign)	- (hyphen)
<b>▪</b>	# ,	< (less than sign)	. (period)
<b>ENT</b>	N/A	Return to the next line or start a new paragraph in text input field.	N/A

Default Input Mode	Shift Mode + Alpha Mode	Shift Mode + Alpha Mode + Function Mode Alpha Mode + Function Mode Shift Mode+ Function Mode
	N/A	N/A
	N/A	N/A
		N/A
	A, B, or C (uppercase)	N/A
	D, E, or F (uppercase)	N/A
	G, H, or I (uppercase)	N/A
	J, K, or L (uppercase)	N/A
	M, N, or O (uppercase)	N/A
	P, Q, R, or S (uppercase)	N/A
	T, U, or V (uppercase)	N/A
	W, X, Y, or Z (uppercase)	N/A
		) (parentheses)
		_ (underline)
		> (more than sign)
	N/A	Return to the next line or start a new paragraph in text input field.

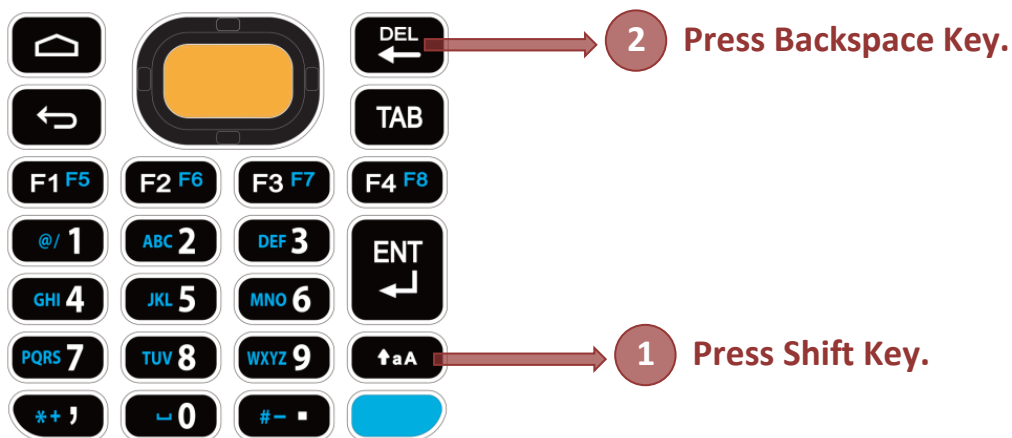


### 3.7. KEYPAD LOCK

Keypad lock is for user to lock all keys on the keypad to prevent any accidental pressing of the keys.

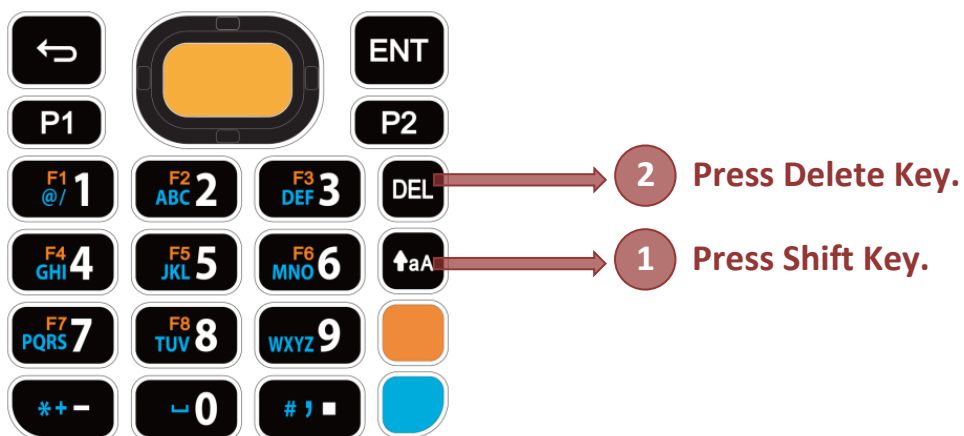
#### 28-KEY MODEL

To lock the keypad of **28-Key Model**, please press **Shift key** and then **Backspace key**.



#### 25-KEY MODEL


As to **25-Key Model**, the keypad lock mode can be triggered by pressing **Shift key** and **Delete key**.

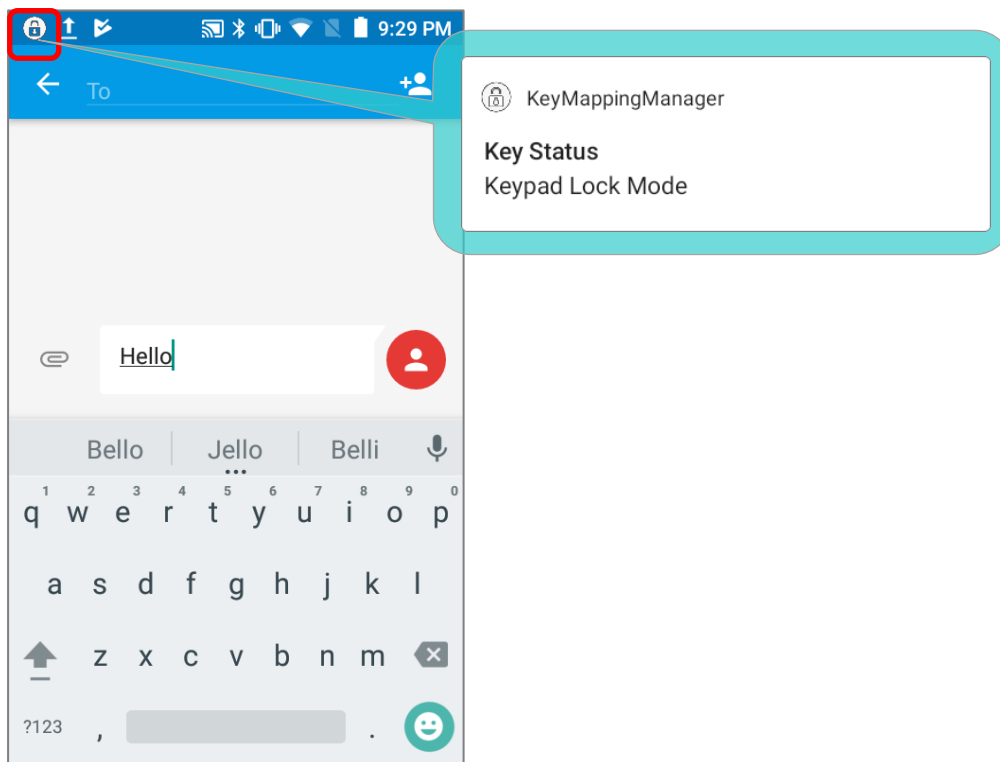


**Note:**

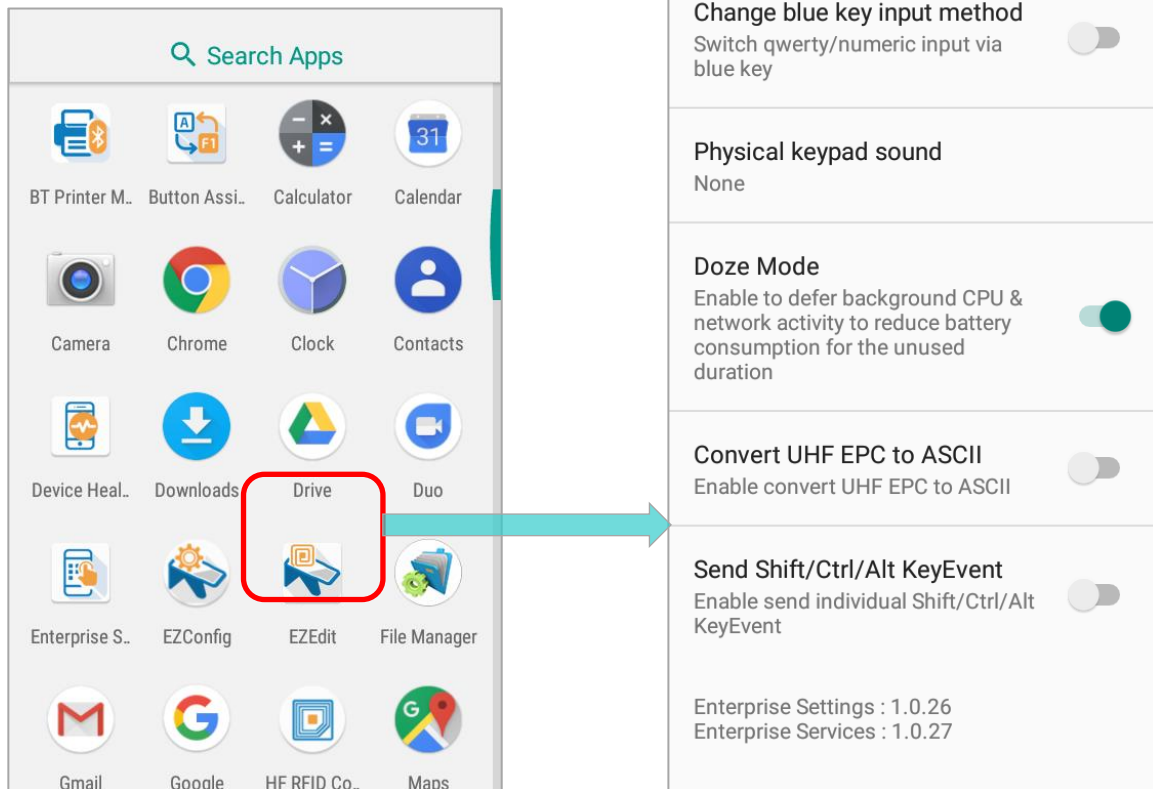
When Alpha Mode is on, the hot key combination (Shift + Backspace) would not work for 28-key Model, because Backspace key becomes “Delete” in Alpha Mode. For 25-key Model, the hot key combination (Shift + Delete) would not work.


---

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.



### 3.8. ENTERPRISE SETTINGS

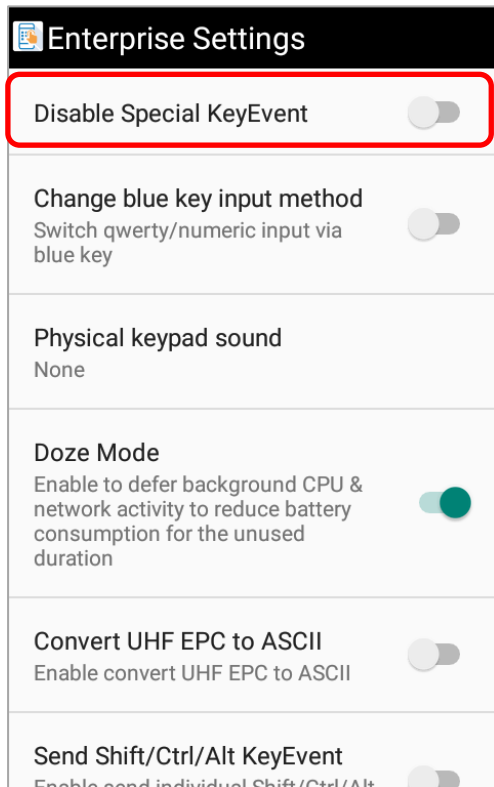


The app “**Enterprise Settings**” helps you to control the physical keypad. Go to [App Drawer \(All Apps\)](#) and tap on  “**Enterprise Settings**” for the following functions:

### 3.8.1. DISABLE SPECIAL KEYEVENT

“**Disable Special KeyEvent**” is to disable the special keycode (which is not defined by Android) 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.



---

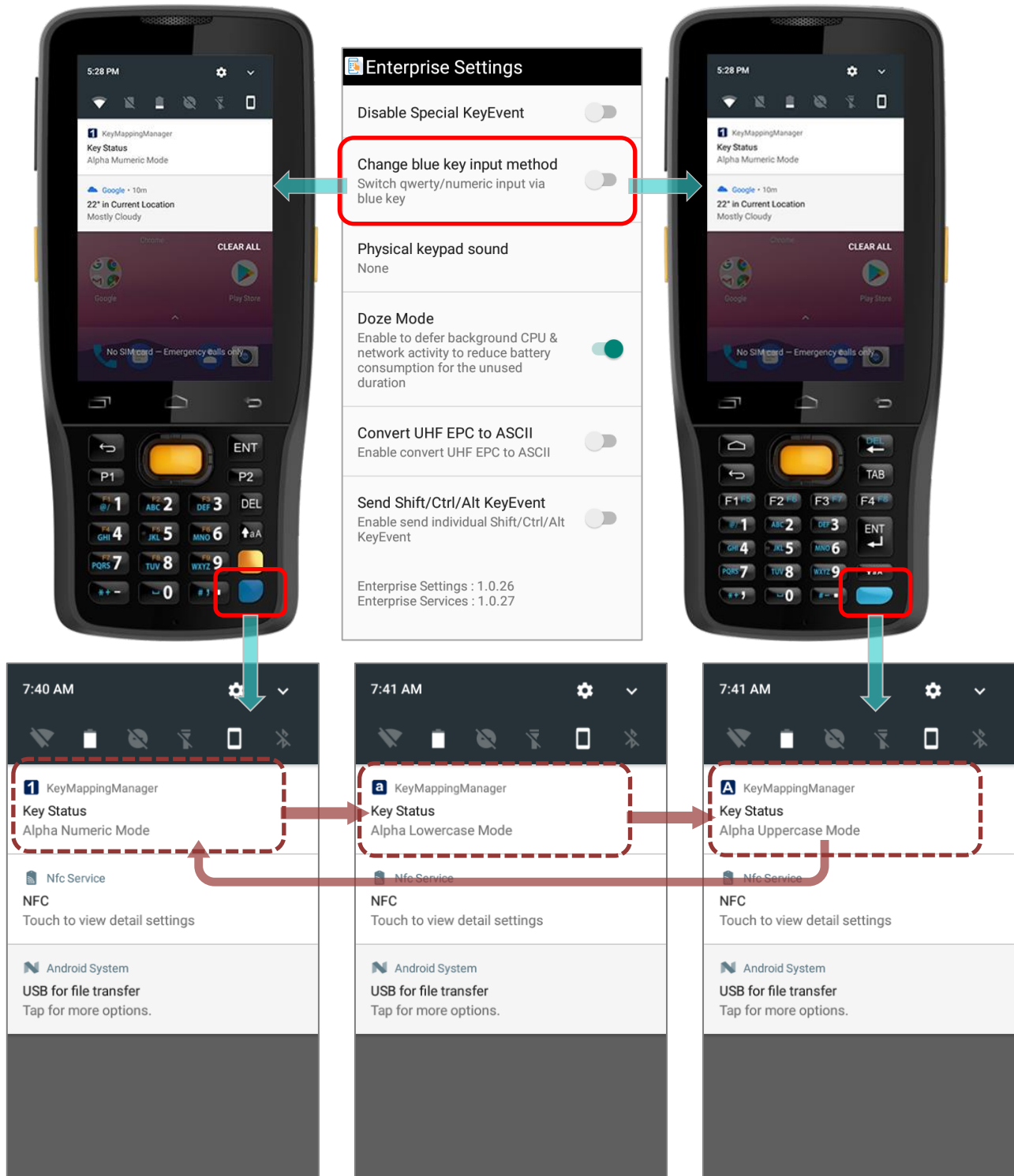
**Note:**

Turning on “**Disable Special KeyEvent**” will not affect barcode scanning by pressing trigger keys.

---

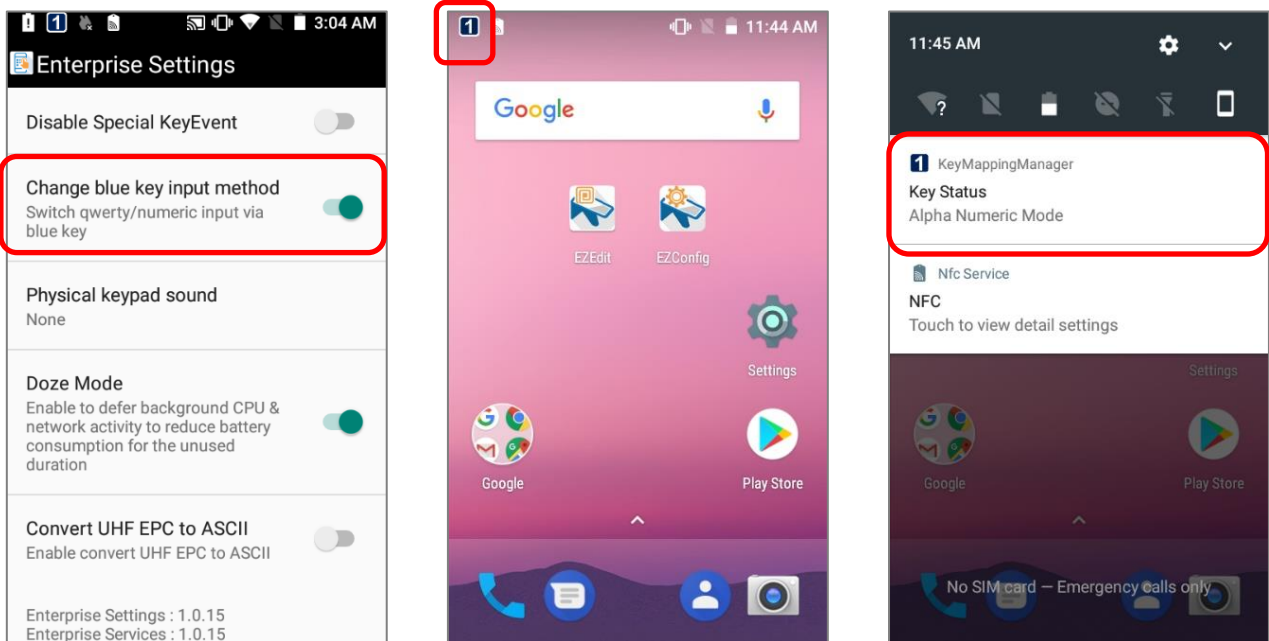
### 3.8.2. CHANGE BLUE KEY INPUT METHOD

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).



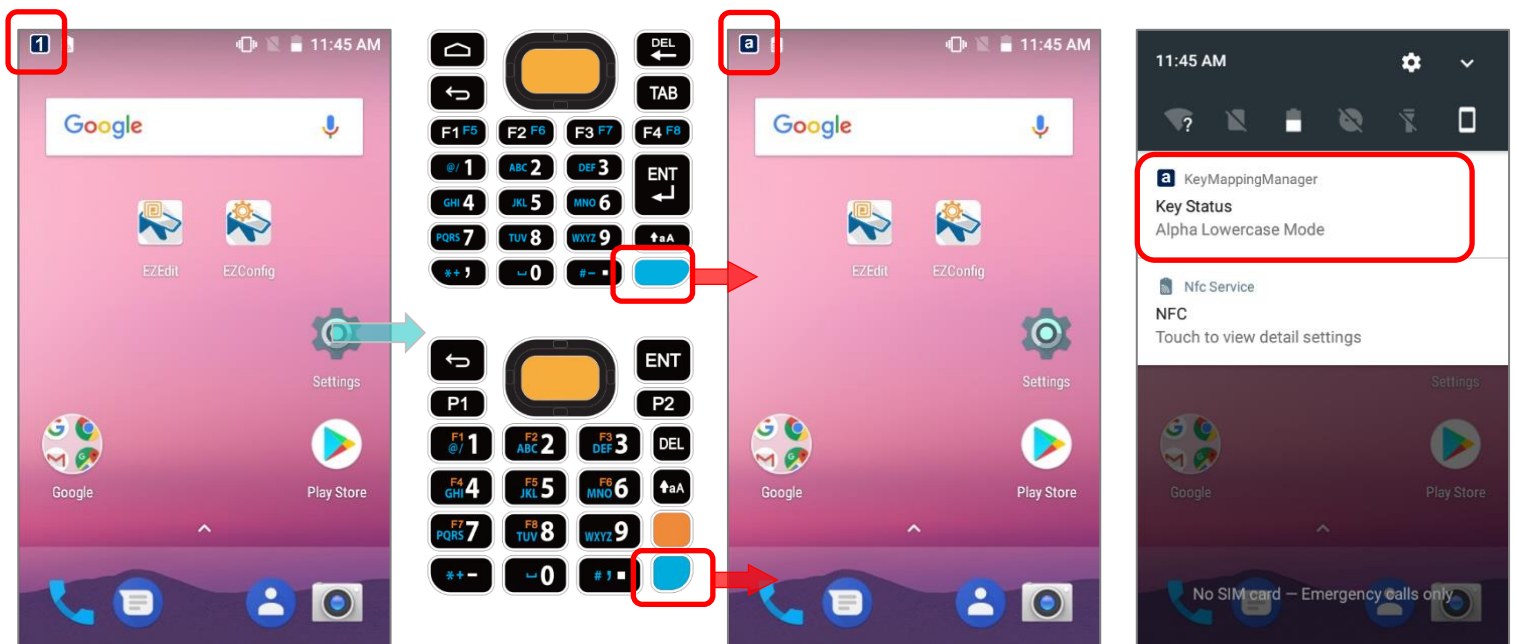
## ALPHA NUMERIC MODE

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.




## ALPHA LOWERCASE MODE

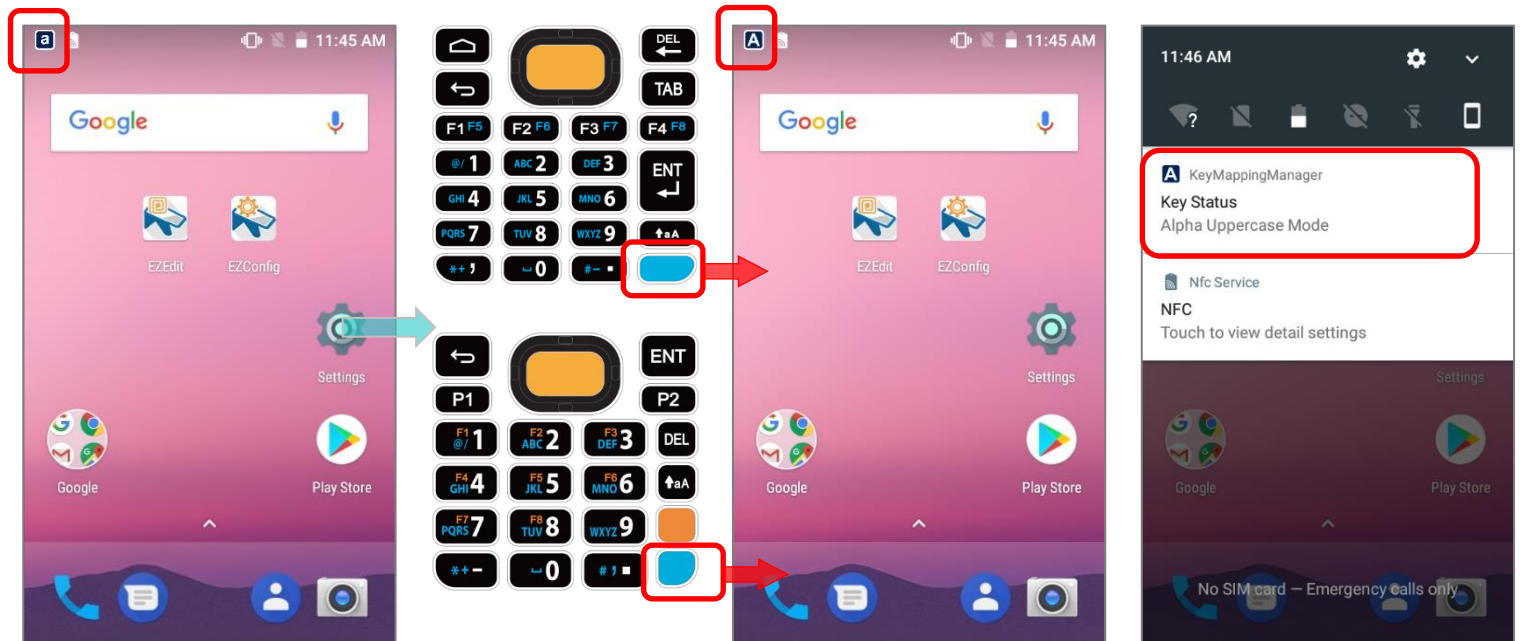
In **Alpha Numeric Mode**, press **Alpha Key** (the blue key) once, and the physical keypad will change to be lowercase keypad with an icon **a** appears in the status bar.



## ALPHA UPPERCASE MODE

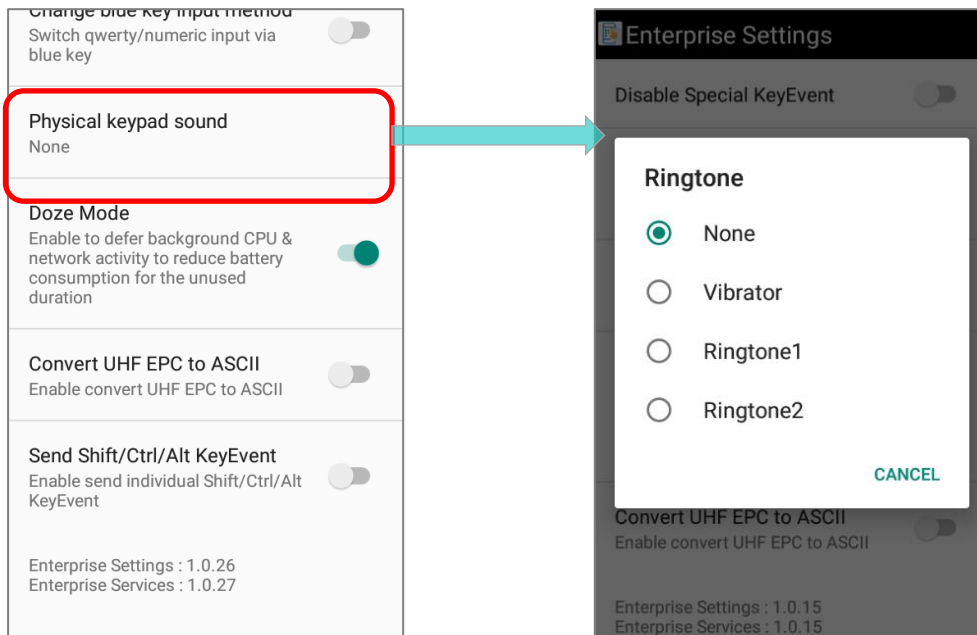
In **Alpha Numeric Mode**, press **Alpha Key** (the blue key) twice, or press **Alpha Key** (the blue key) once in **Alpha Lowercase Mode** to change the physical keypad into uppercase keypad with the **Alpha Uppercase Mode** icon  shows up in the status bar.

Press **Alpha Key** (the blue key) again to switch to **Alpha Numeric Mode**.



### 3.8.3. PHYSICAL KEYPAD SOUND

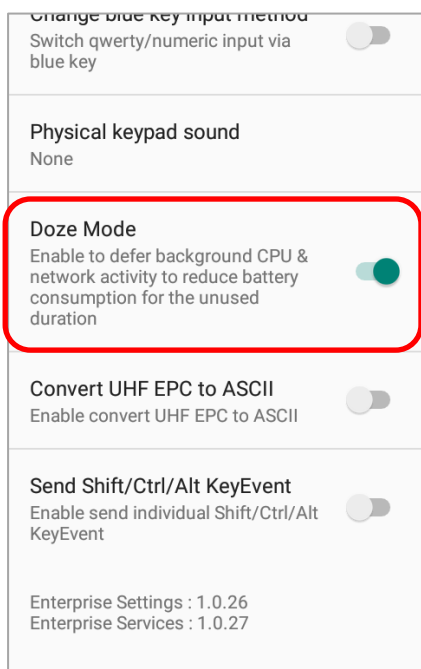
Tap to select the physical keypad sound from the pop-up window. The default setting is “None”.



### 3.8.4. DOZE MODE

“Doze Mode” is enabled by default. Please refer to

<https://developer.android.com/training/monitoring-device-state/doze-standby> for details.

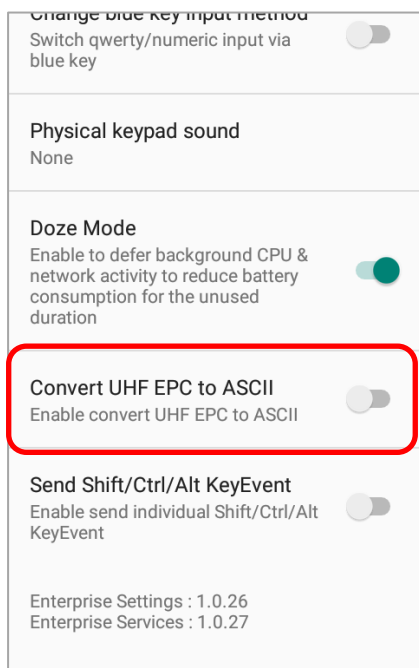




### 3.8.5. CONVERT UHF EPC TO ASCII

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 remained 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.



### 3.8.6. VERSION

The version information about **Enterprise Settings** is listed right below **"Convert UHF EPC to ASCII"**.

## Chapter 4

### BASIC OPERATION

---

This chapter describes the basic skills to work with the RK25 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

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4.5 Back up Your Data .....	162
4.6 Reset to Factory Default .....	163

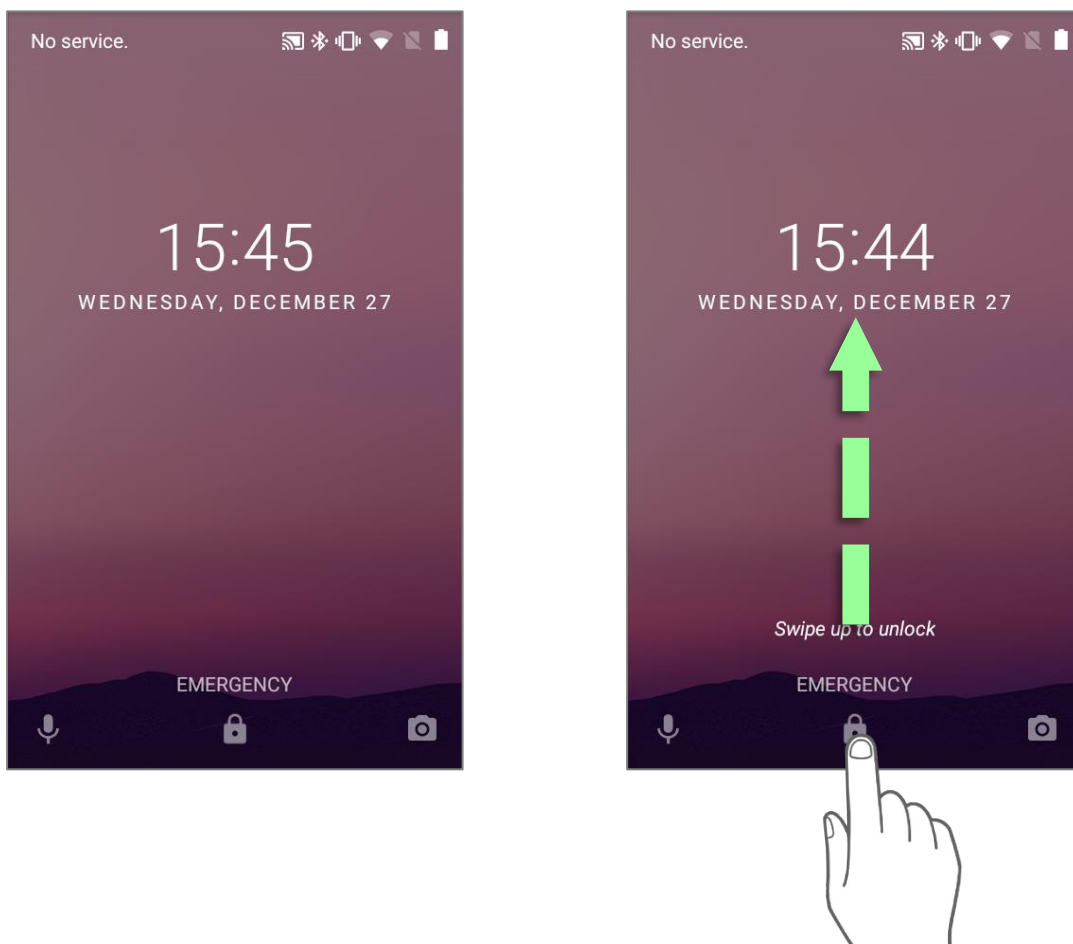
## 4.1. HOME SCREEN

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.

### LOCK SCREEN

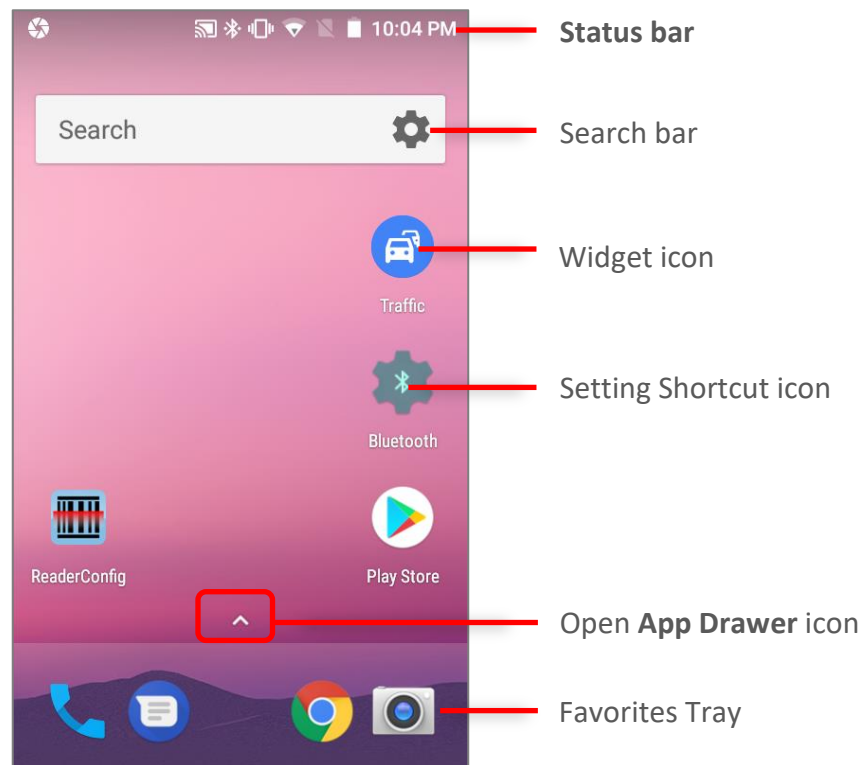
To enter the **Home** screen, you need to unlock the **Lock** screen.


Slide the lock button  upward to unlock the screen.

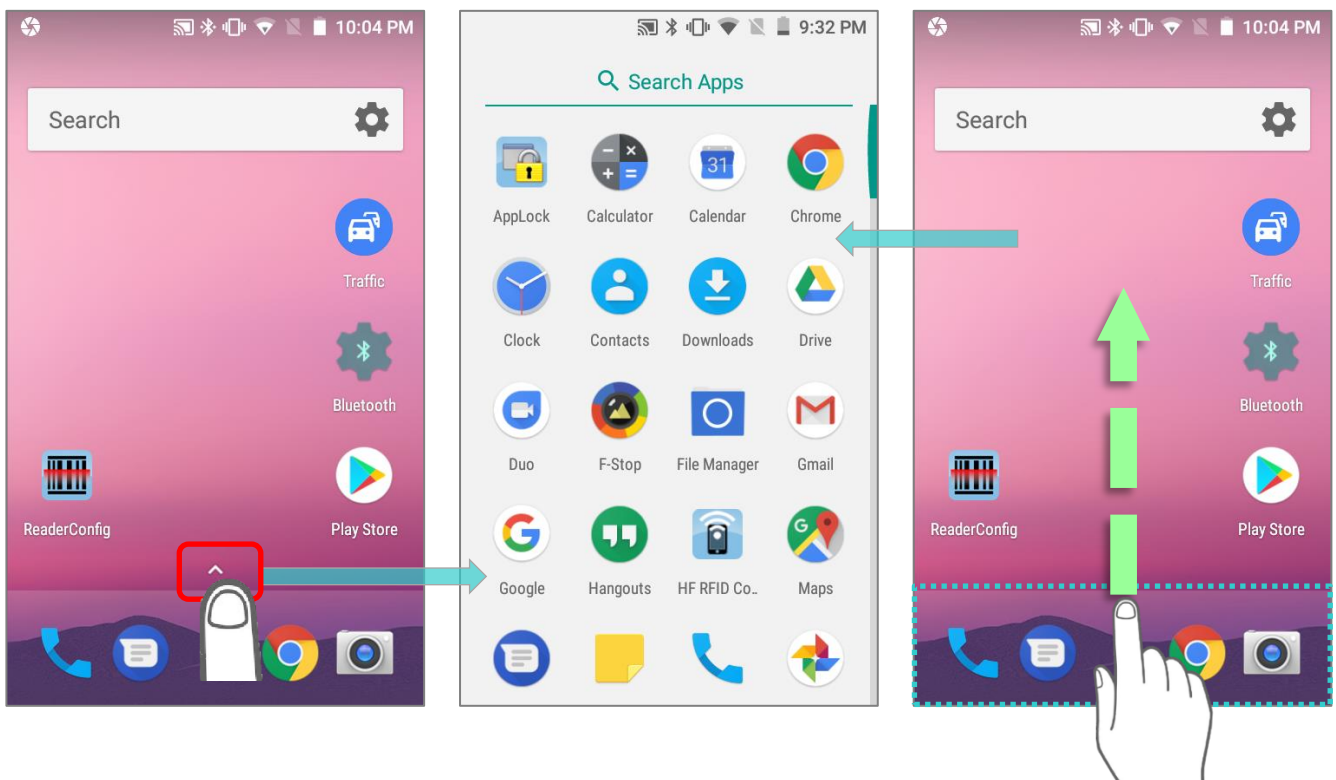


### HOME SCREEN OVERVIEW

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.

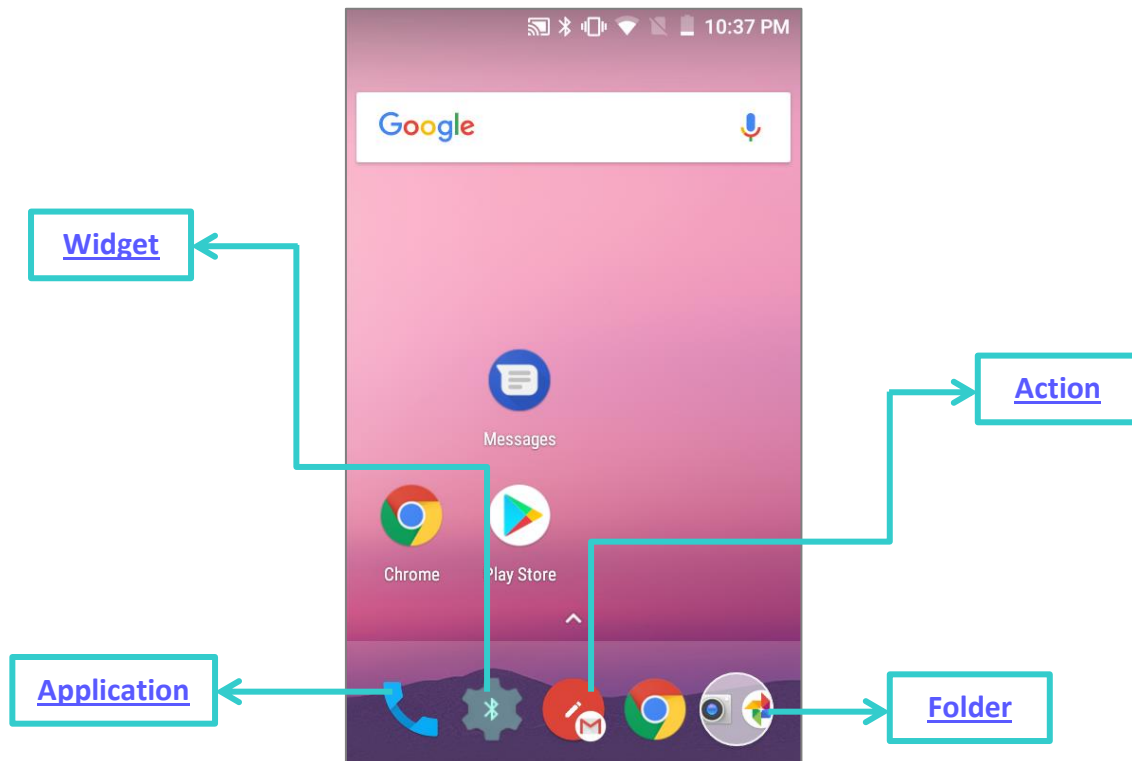


To open **App Drawer**, please tap  icon, or slide up from the **Favorites Tray**:



## EDIT FAVORITES TRAY

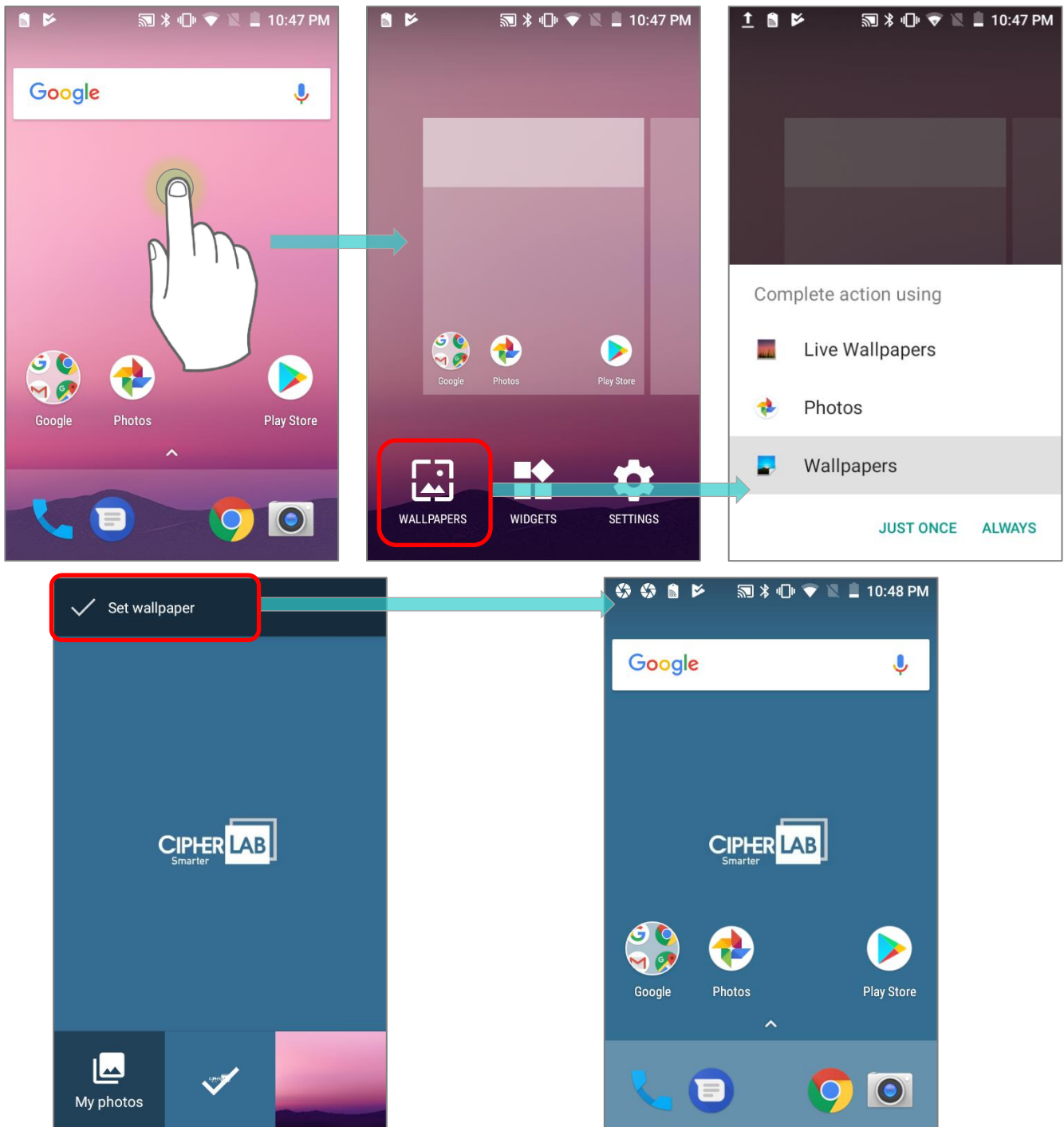
Favorites Tray, which is located in the bottom of Home screen, contains up to 5 icons and appears on every Home screen.



- 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

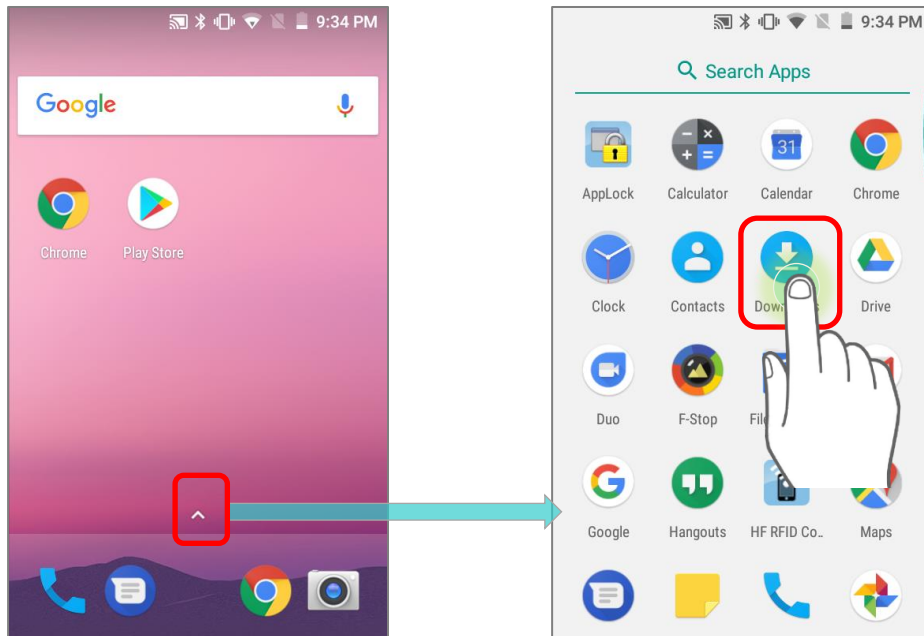
- 1) Tap and hold any empty spot on the home screen.
- 2) Tap Wallpapers in the menu that appears, and select the app you would like to use.
- 3) Select an image to apply as the wallpaper.
- 4) Tap **Set wallpaper**.



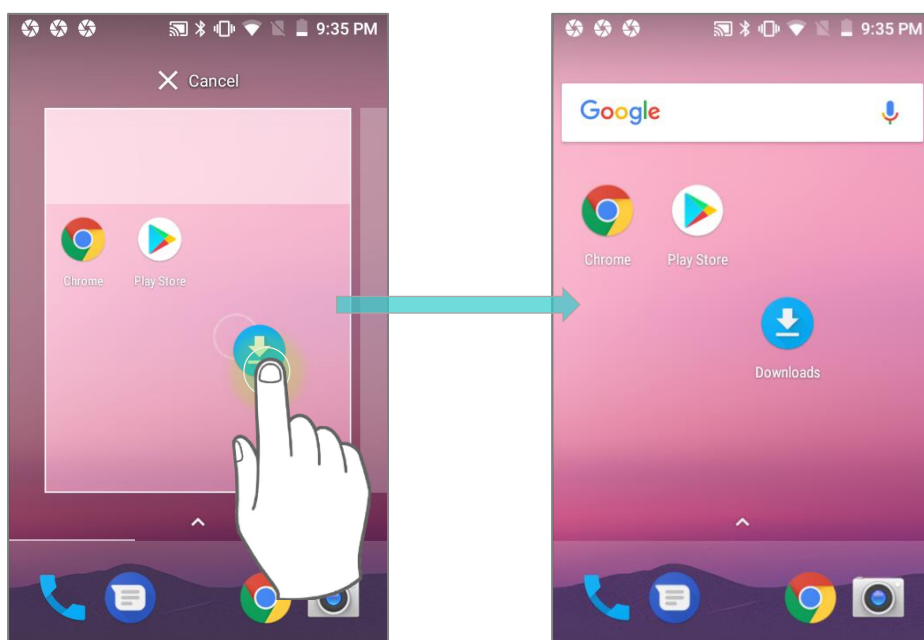
#### 4.1.1. APPLICATIONS & WIDGETS

##### 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.

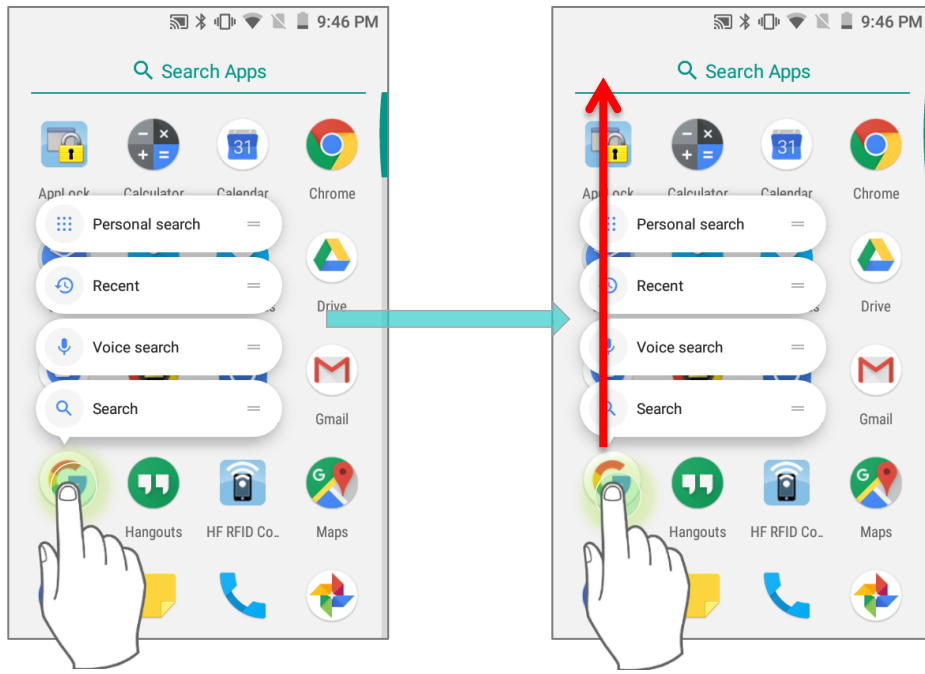


- 2) Locate the application to add, tap on and hold the application icon.
- 3) The home screen will appear. Drag the application icon to your preferred position and release to have it placed.

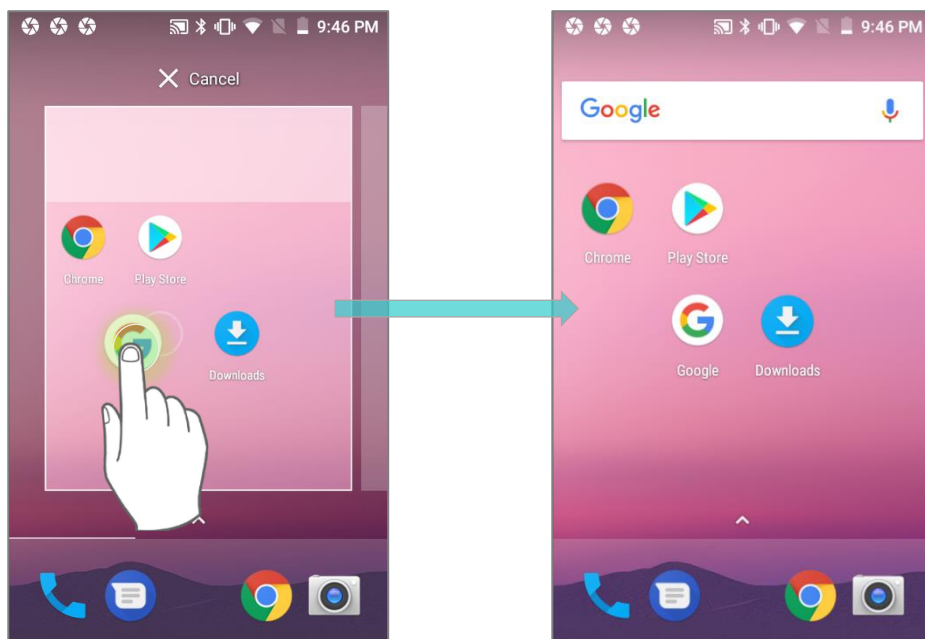


Long pressing certain applications such as Chrome or Gmail may show the **app shortcuts** but not Home screen. To add such applications from App Drawer to Home screen, please:

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



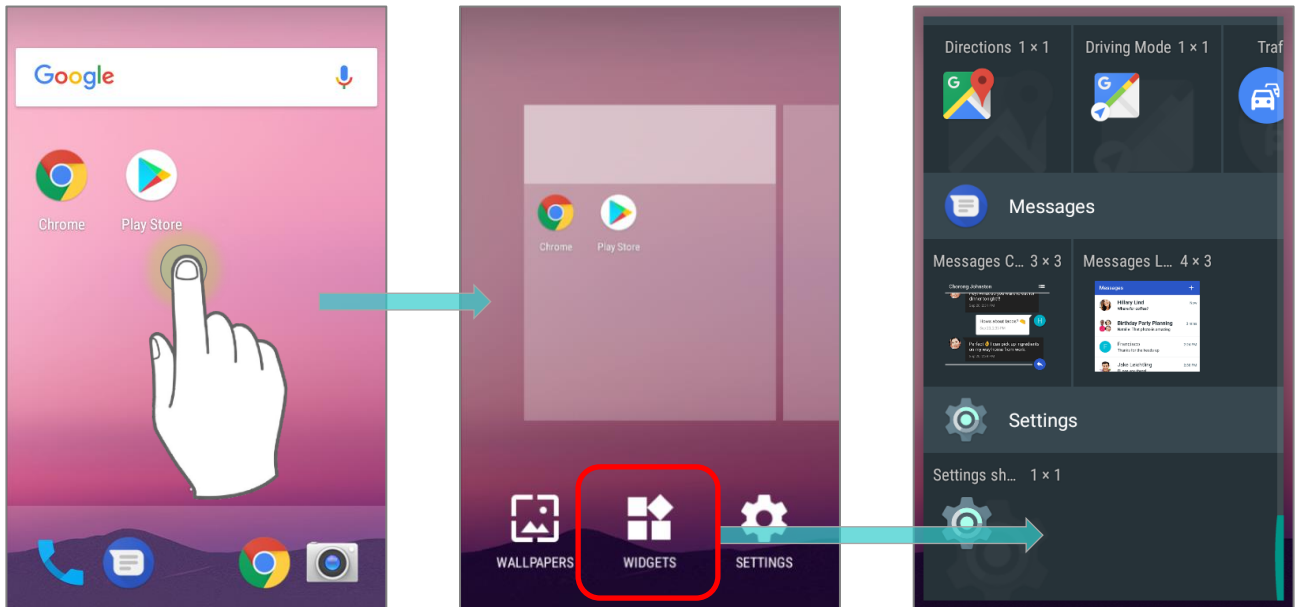
- 2) The Home screen will appear. Drag the application icon to your preferred position and release to have it placed.



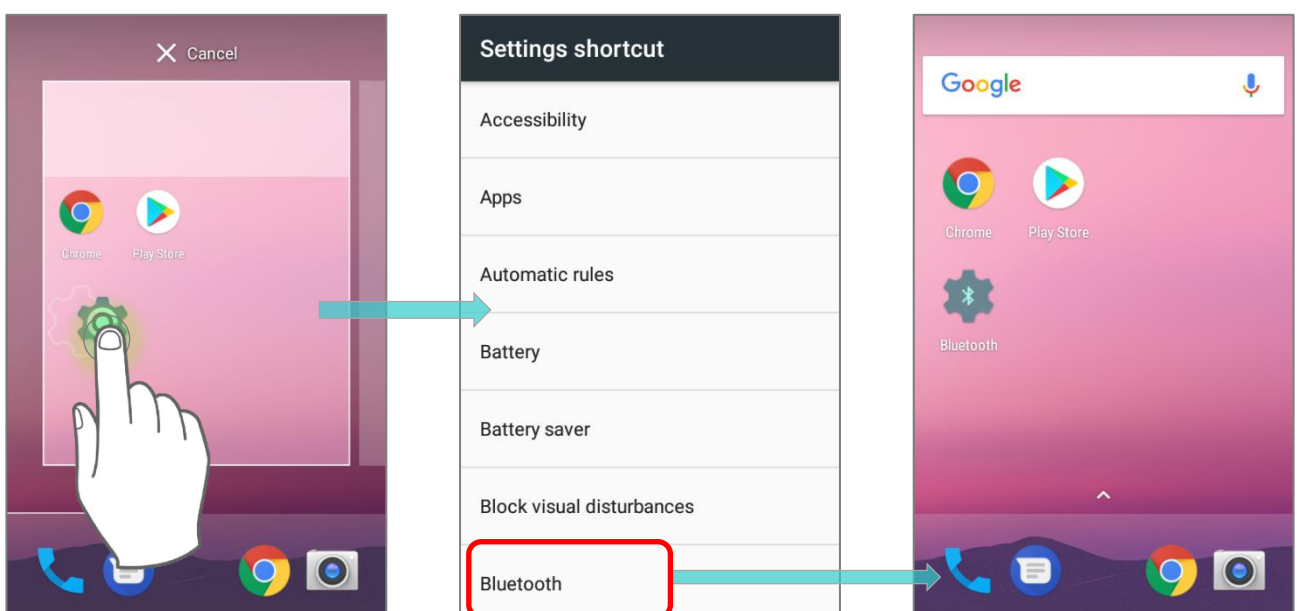


## ADD WIDGET TO HOME SCREEN

- 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.

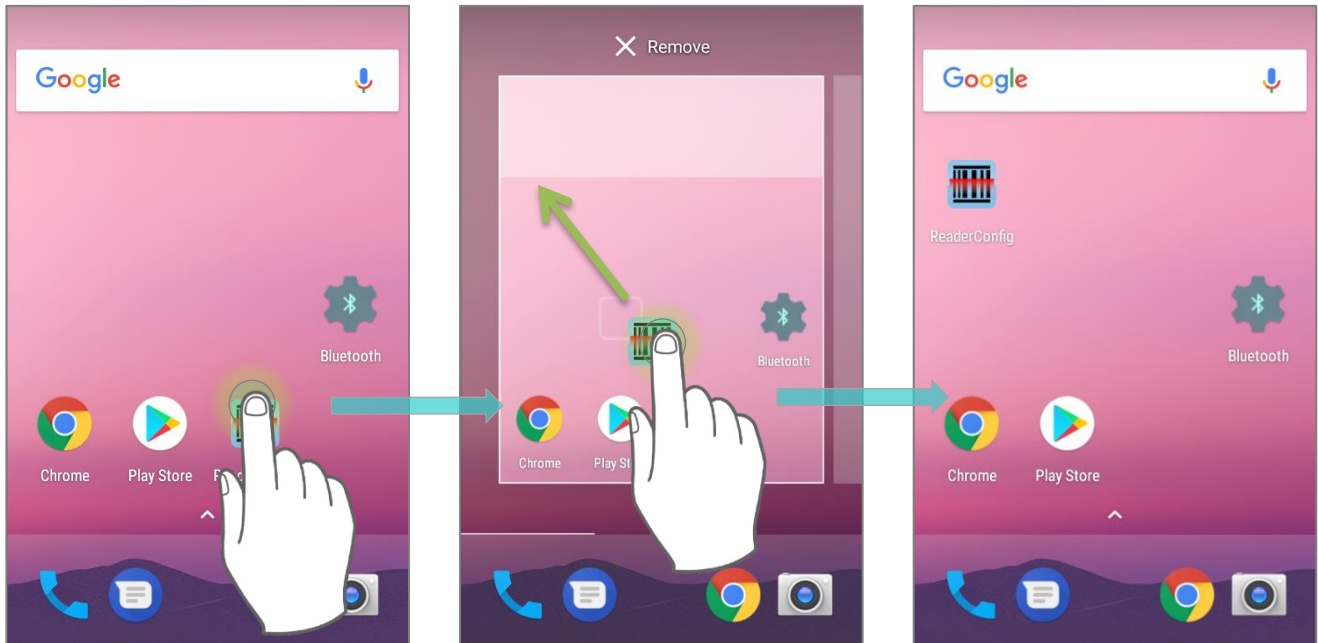


- 3) In the widget selection list, scroll to locate your desired widget.
- 4) Tap and hold the widget until the home screen layout appears. Drag the widget to your preferred position and release to have it placed. For a setting shortcut, you will have to select a specific setting from the shortcuts list.

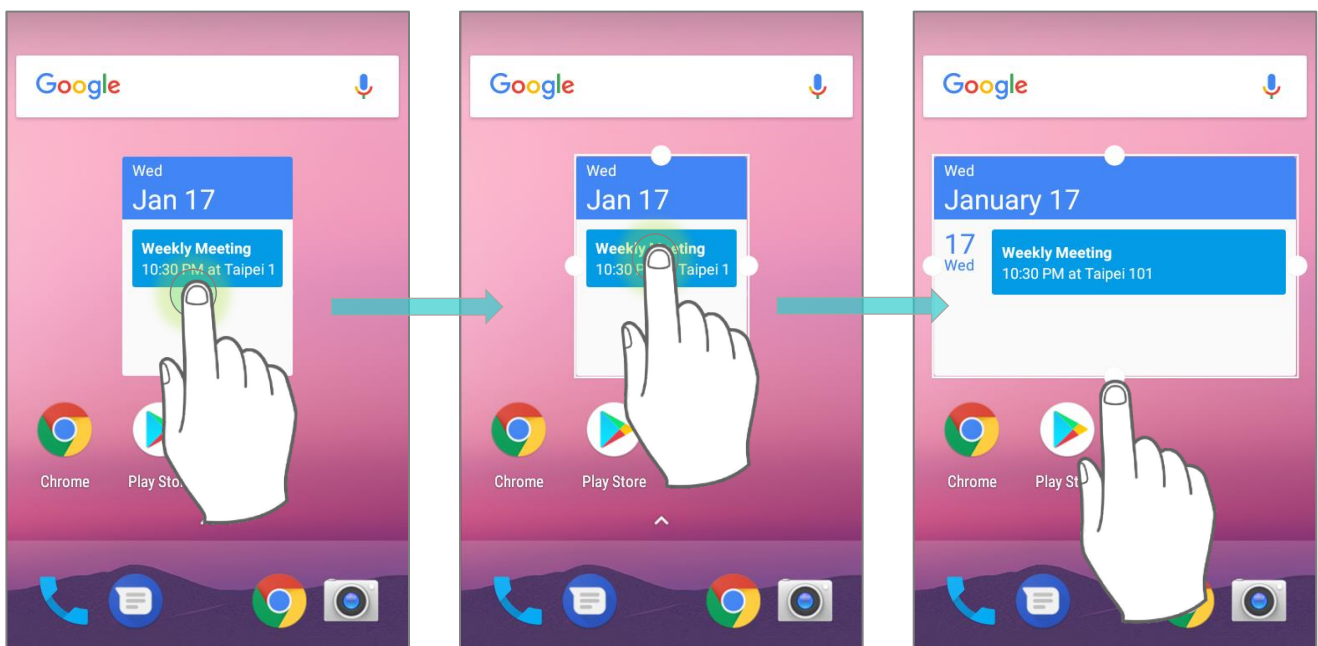


## ARRANGE THE SHORTCUTS AND WIDGETS ON HOME SCREEN

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.

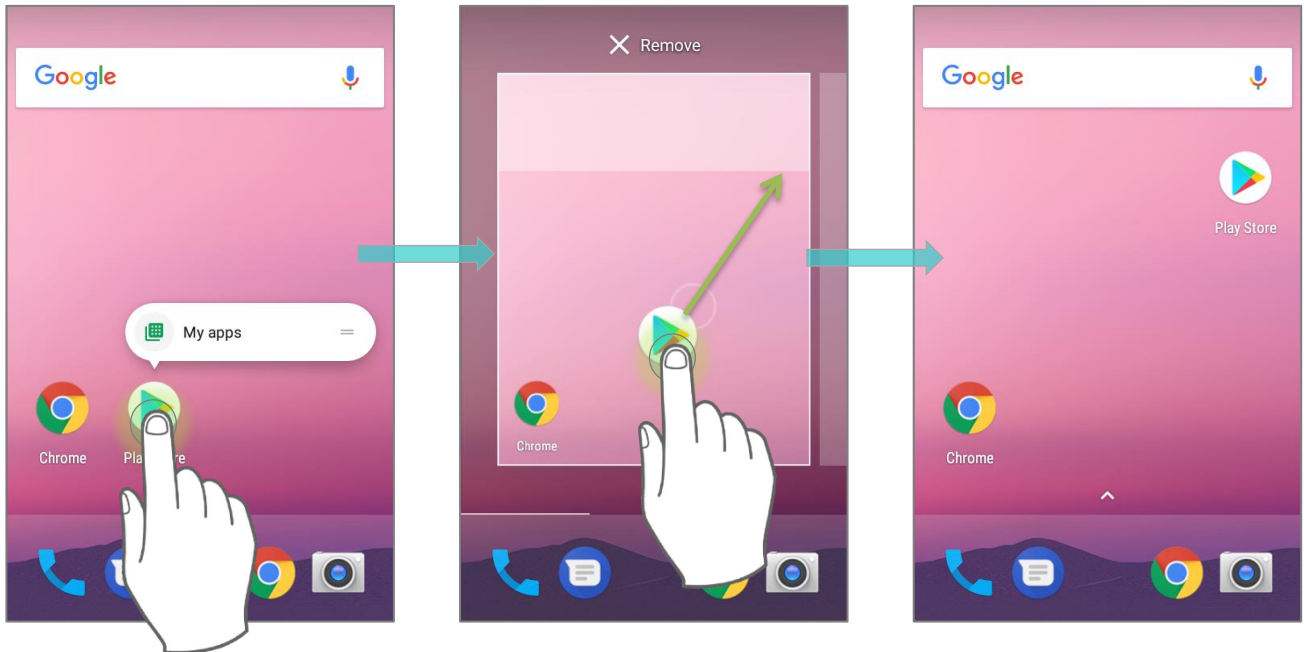


To resize a widget, tap and hold it until a white frame appears. Tap and drag a white dot to re-scale the widget.



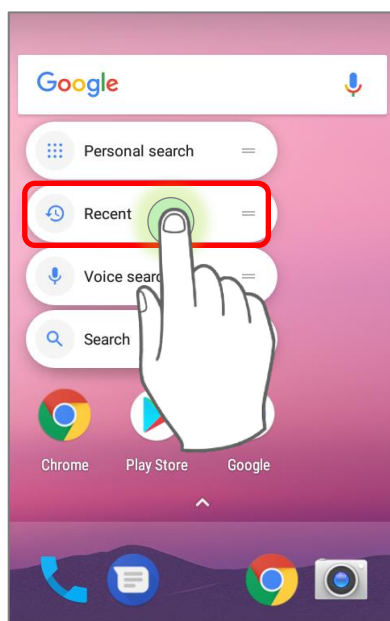
## ARRANGE THE APPLICATIONS WITH APP SHORTCUTS ON HOME SCREEN

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.

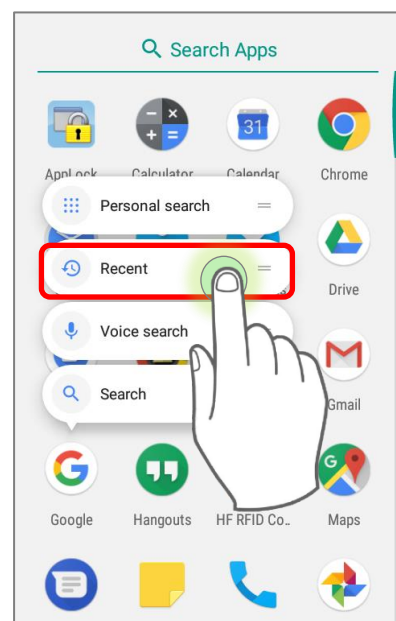


To create an **Action** icon from the **app shortcuts** to Home screen, please:

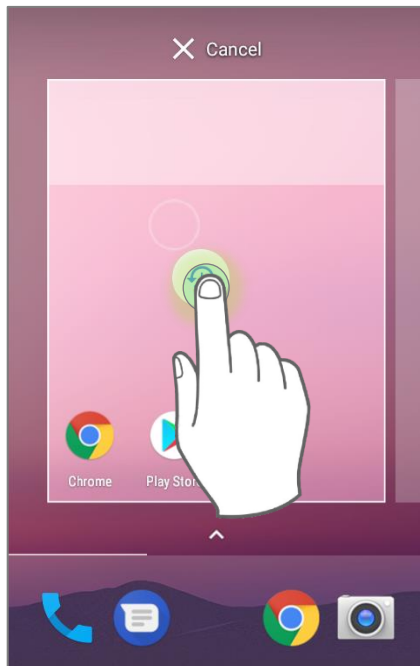
- 1) Long press an application icon (no matter on the **Home** screen or the **App Drawer**) to unfold its **app shortcuts**.



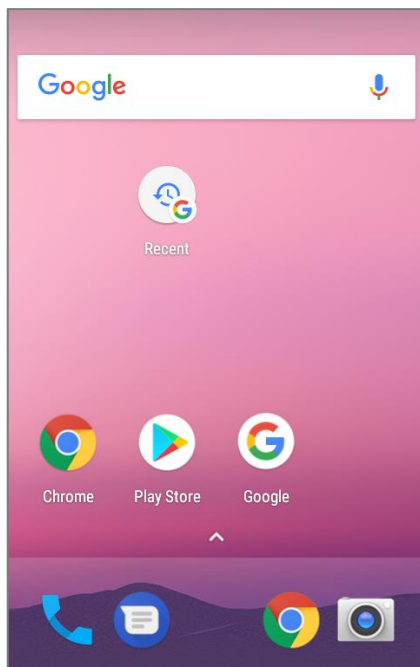
OR



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



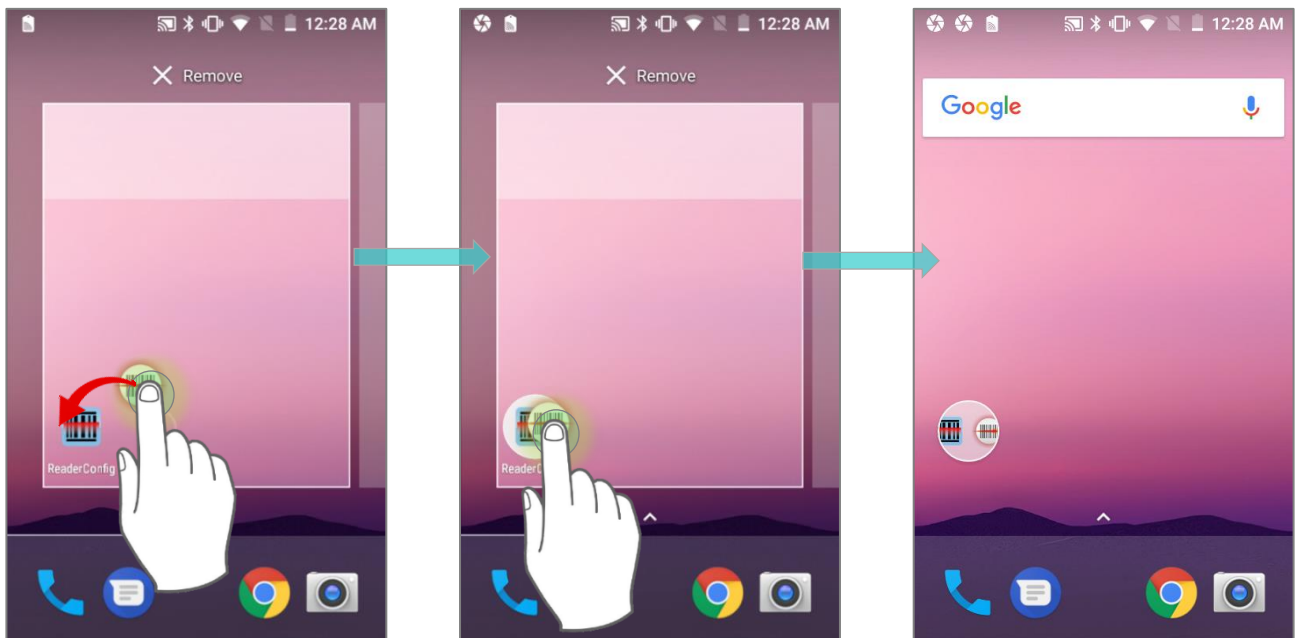
- 3) Release the **Action** icon to have it placed.



#### 4.1.2. FOLDER ON HOME SCREEN

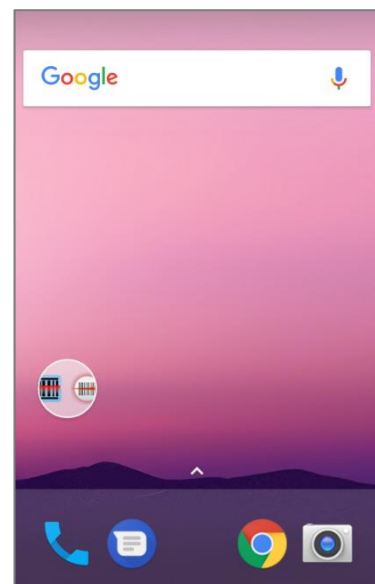
##### CREATE FOLDER

- 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.

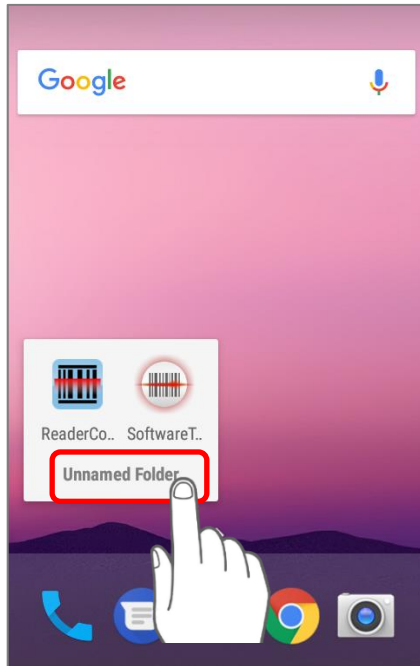


##### NAME A FOLDER

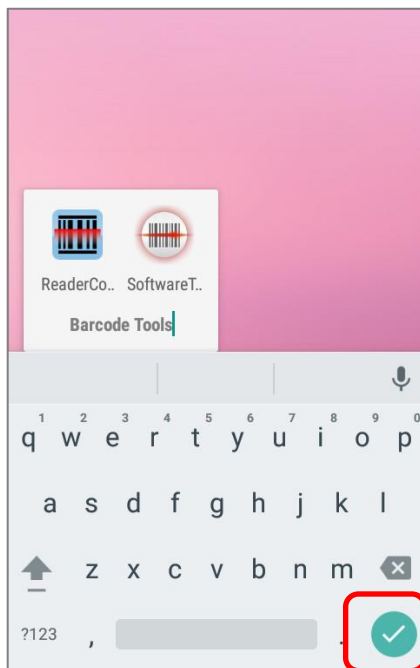
- 1) Tap the folder you would like to name.



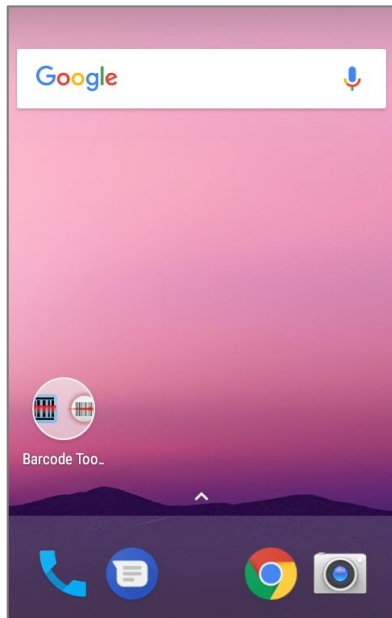
- 2) The folder will expand from a small circle to a full rectangle to show all the shortcuts in it. Tap "**Unnamed Folder**" and edit the folder name.



- 3) Tap **Done** ✓ on the on-screen keyboard.

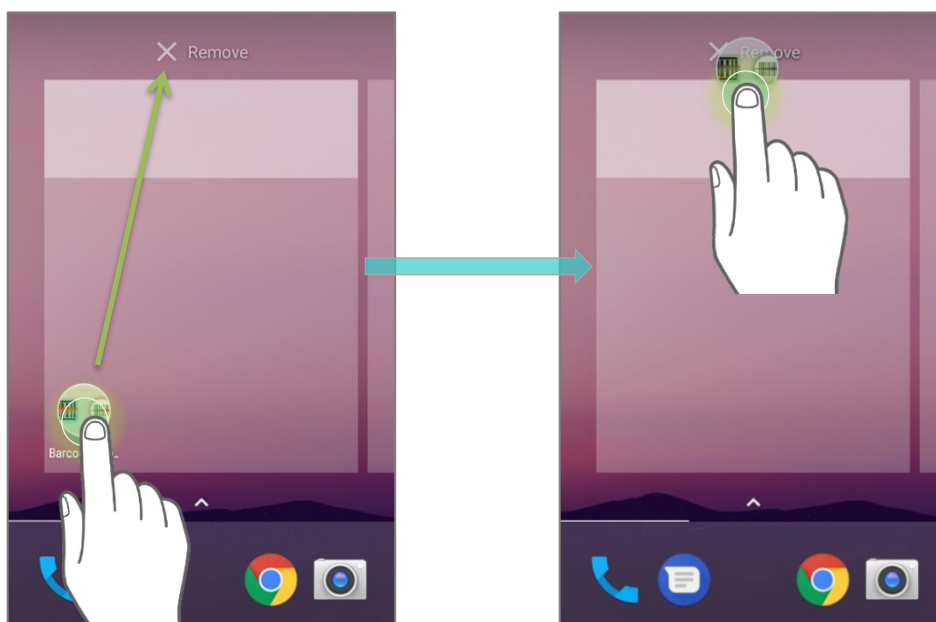


- 4) Tap elsewhere on the screen, the folder will shrink to a small circle with its new name.



## 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.

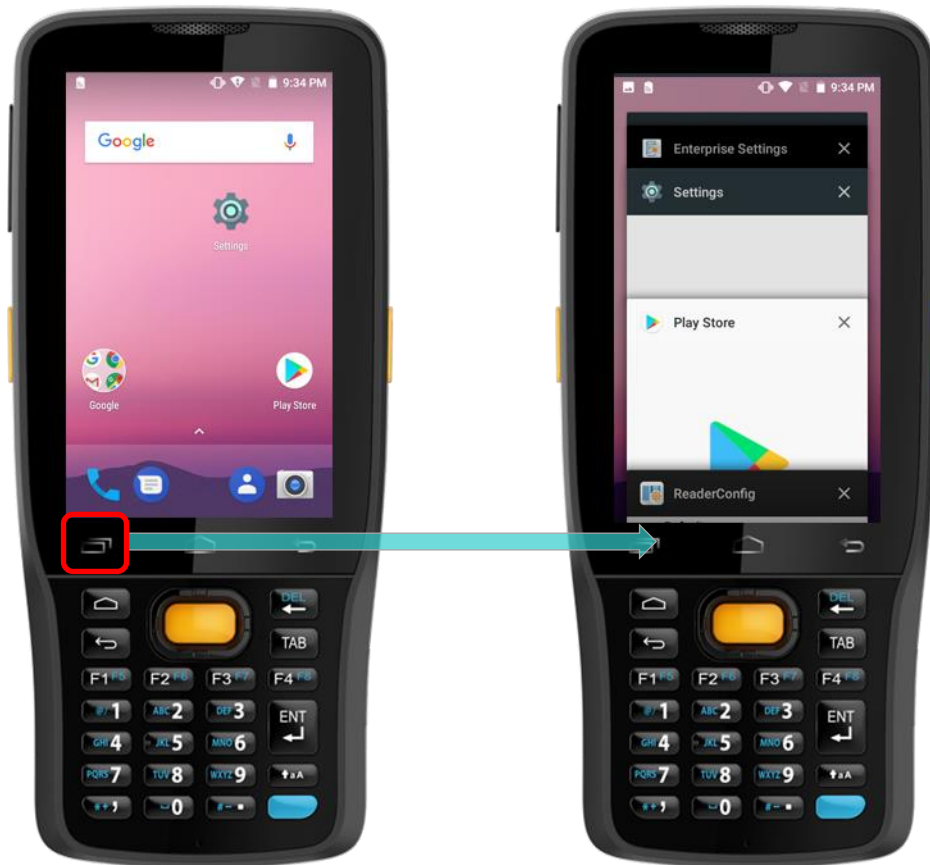


### Note:

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

### 4.1.3. 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

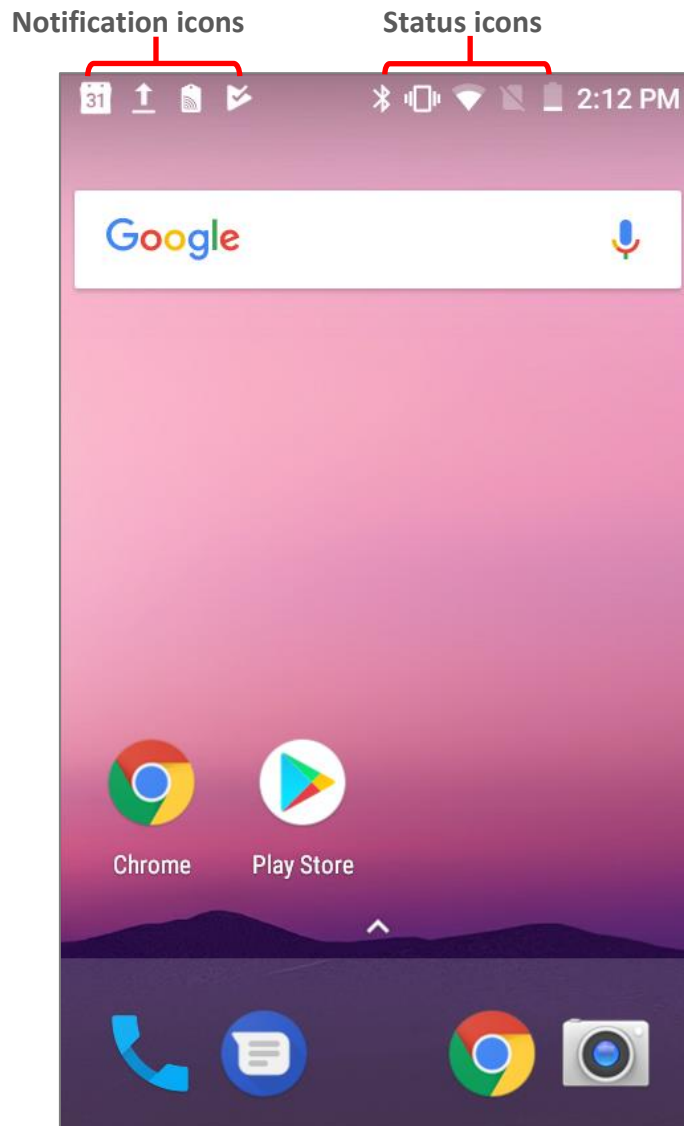
Slide an application to the left or right, or tap the **X** on top right to close it.

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

















## 4.2. STATUS BAR

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



















### 4.2.1. 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.
	No mobile network signal
	The device is currently connected to a 4G network. A symbol will be shown on the left to indicate the cellular data connection type (e.g. 3G).
	Full mobile network signal
	Airplane mode is active, which means all radios are inactive now.
	Alarm is active.
	No SIM card is inserted
	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

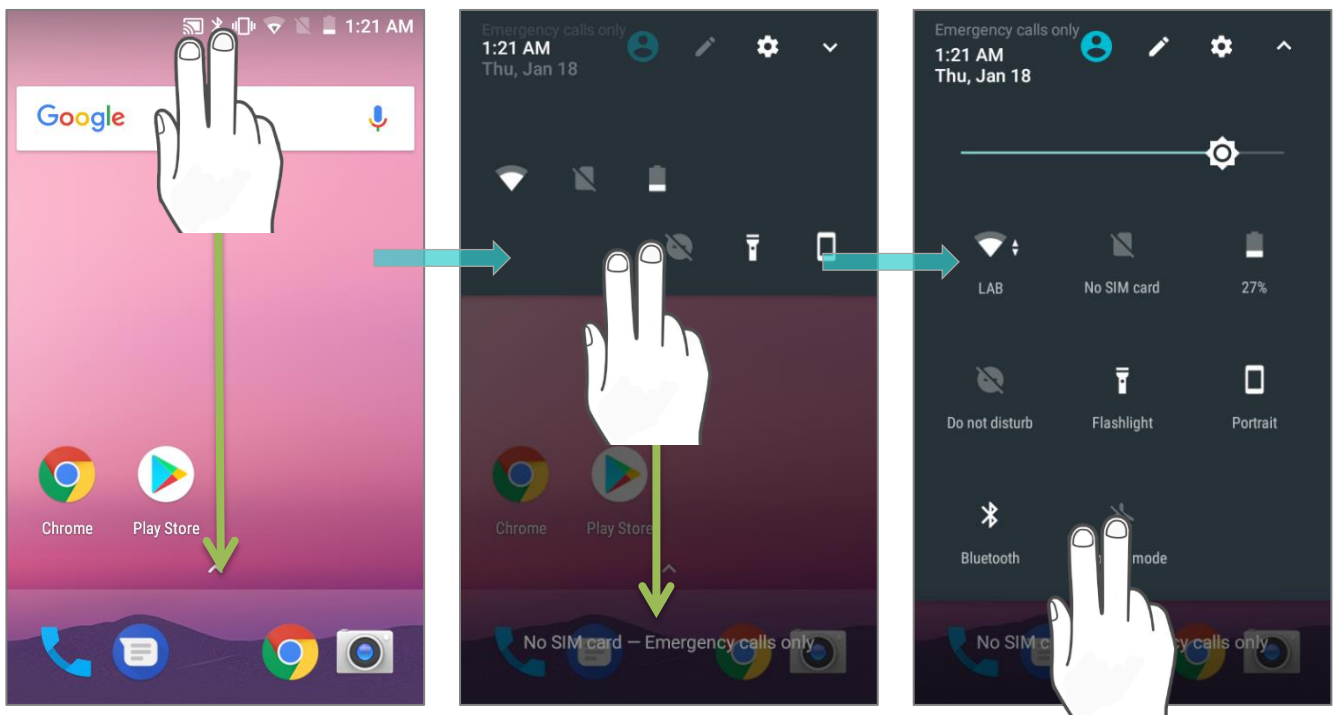
Icon	Description
	USB debugging mode is enabled on this device
	The device is performing data synchronization.
	There is an upcoming event.
	The device is downloading data.
	The device is uploading data.
	An open Wi-Fi network is available.
	A memory card has been inserted.
	A new SIM card is detected.
	There has been a problem. Open <a href="#">Notifications Drawer</a> for more details. For example: No SIM card detected in either of the two SIM card slots
	The headset has been inserted.
	The phone call is connected.
	There has (have) been missed call(s).
	The current phone call has been paused.
	Wi-Fi hotspot is active.
	Bluetooth tethering is active.
	USB tethering is active.

#### 4.2.2. 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.

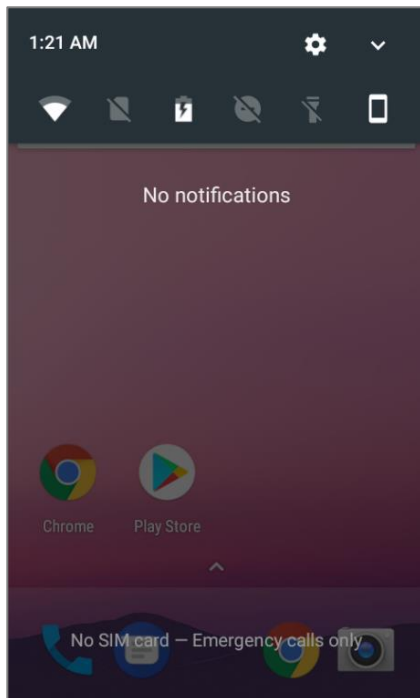
##### OPEN BY SWIPING FROM STATUS BAR


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.

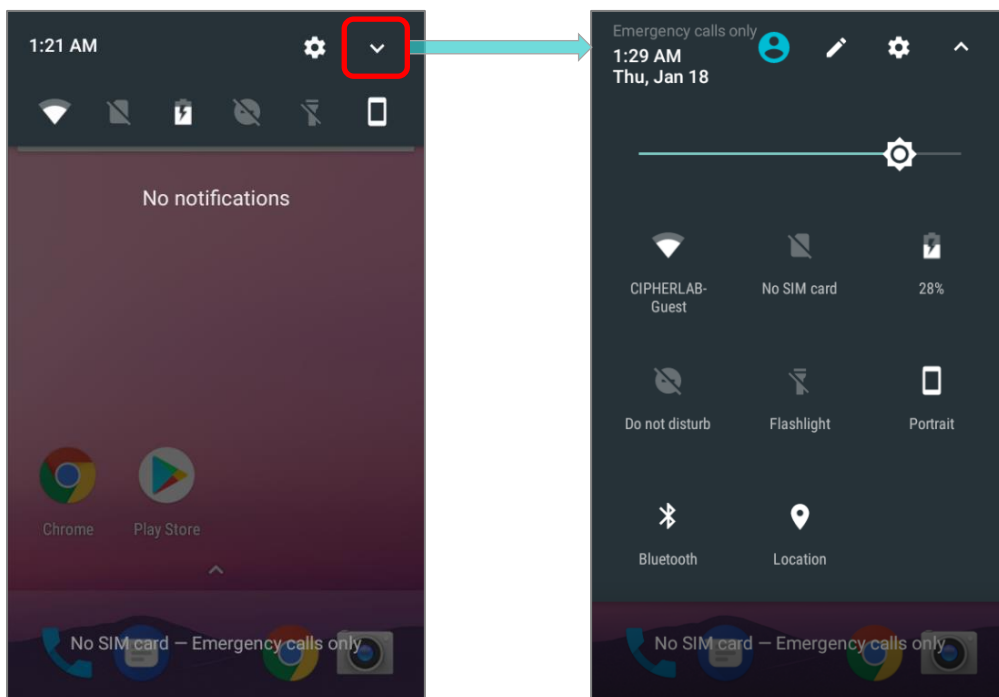


## OPEN FROM NOTIFICATION DRAWER

Swipe down from the status bar by one finger to open [Notifications Drawer](#).



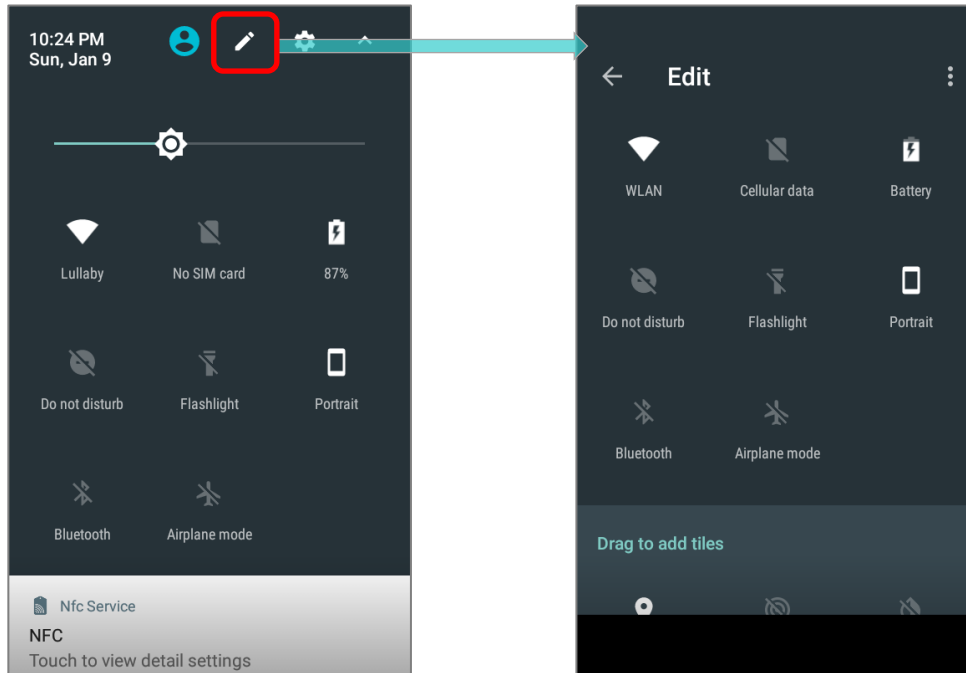
Click  icon to open **Quick Setting** Menu.



## EDIT QUICK SETTING MENU

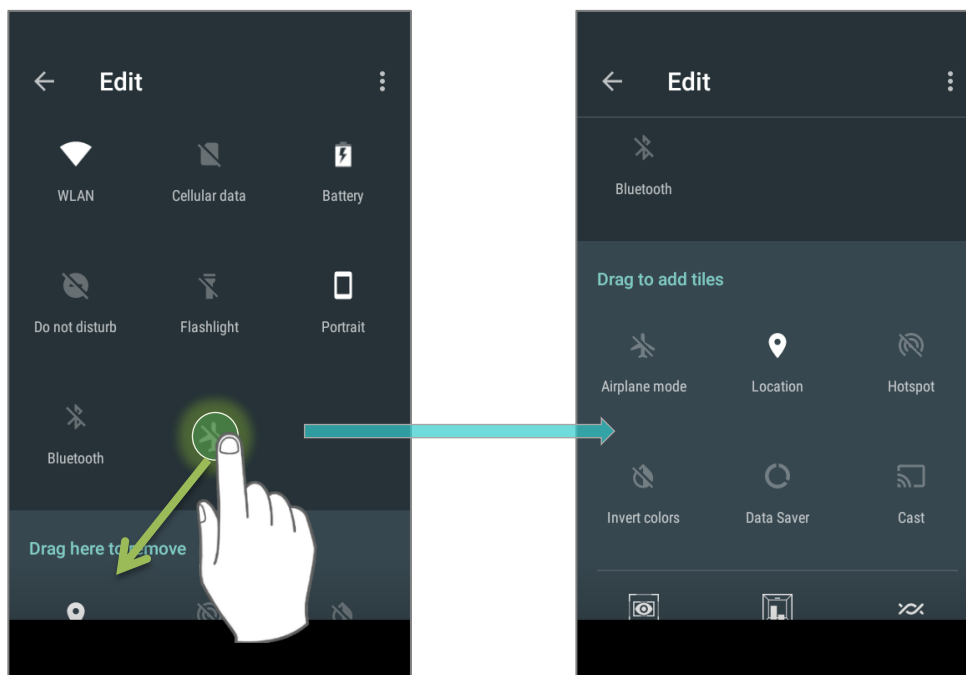
To customize **Quick Setting** Menu, please:

- 1) Click "**EDIT**" to get into **Edit** page.



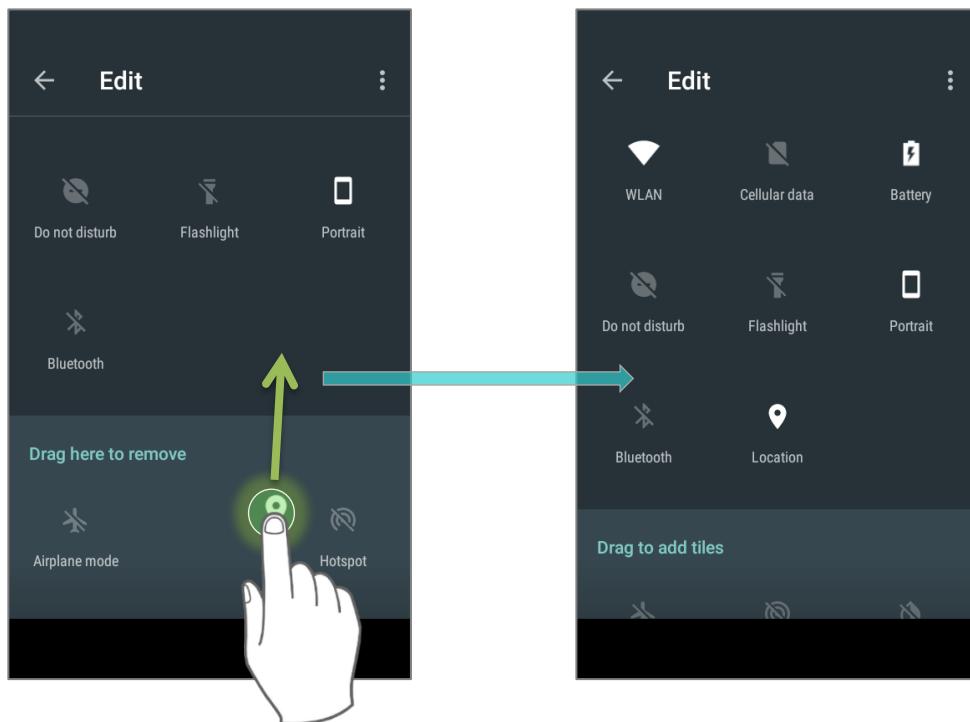
- 2) **Remove:**

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.

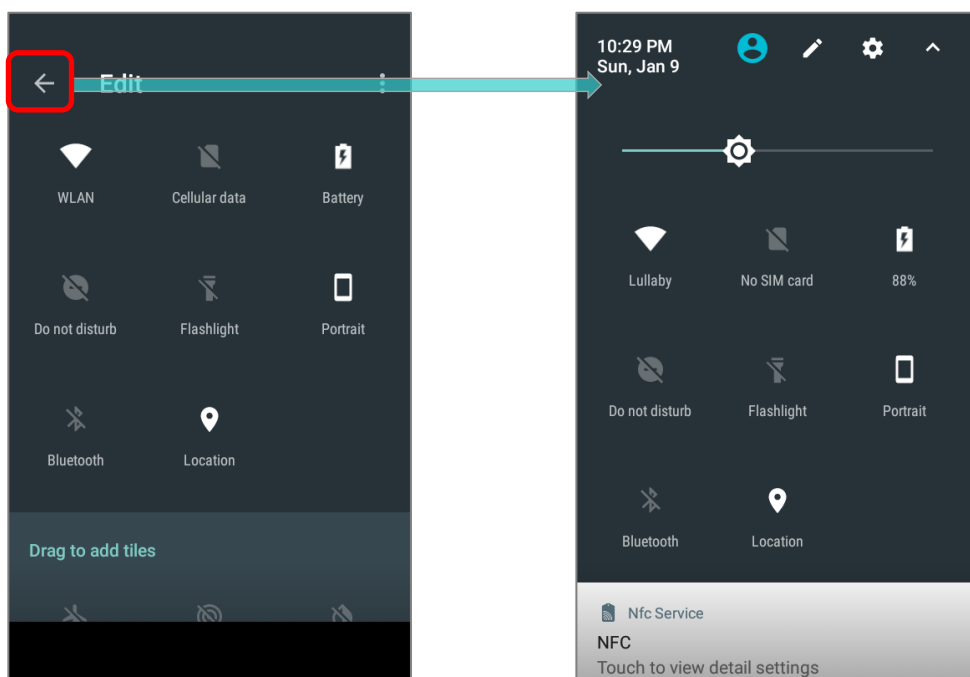


### 3) Add:



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.

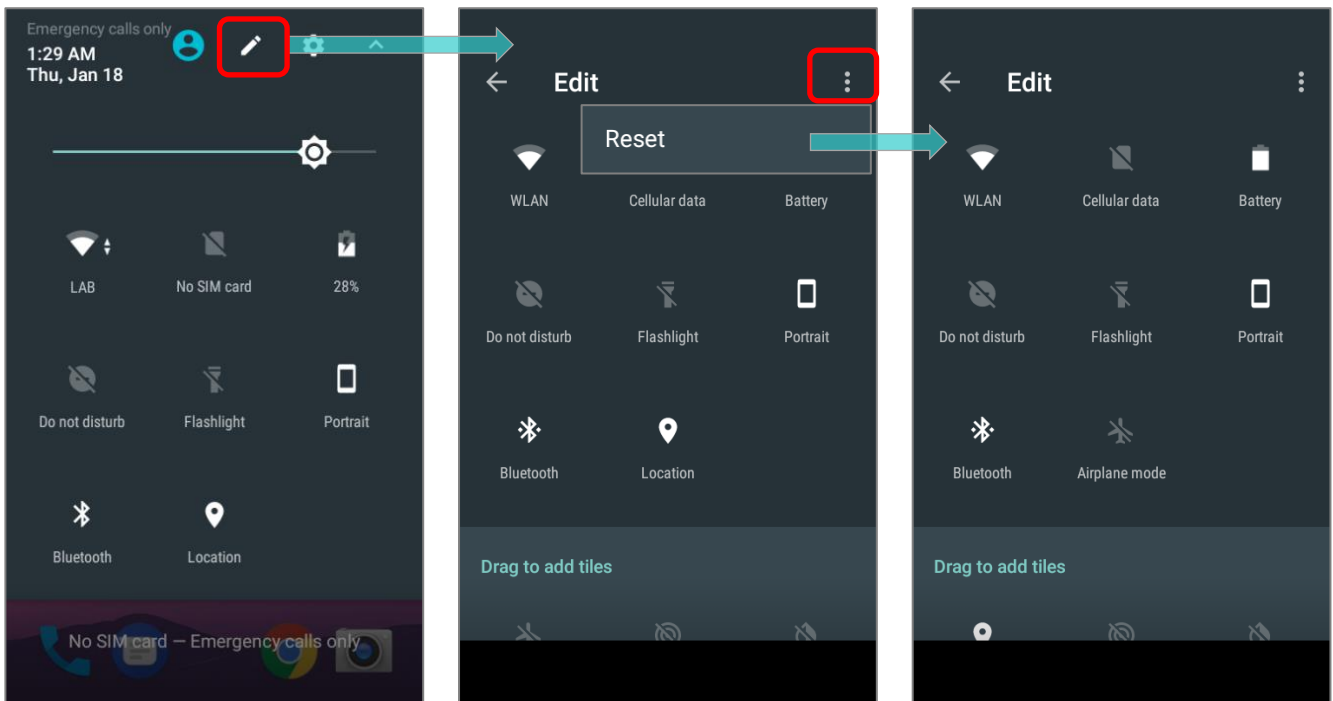


### 4) Return to the **Quick Settings** menu, all the settings are done.



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**".



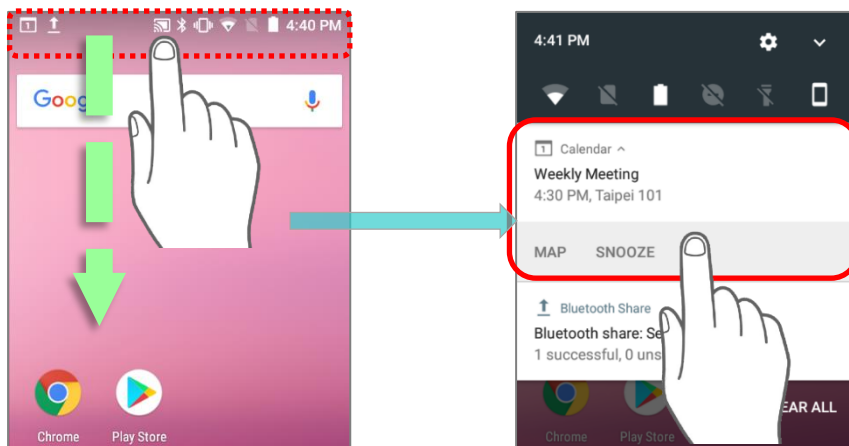


### 4.2.3. OPEN NOTIFICATIONS DRAWER

The **notifications icons** on status bar inform you of the new events such as incoming calls, messages or USB connection.

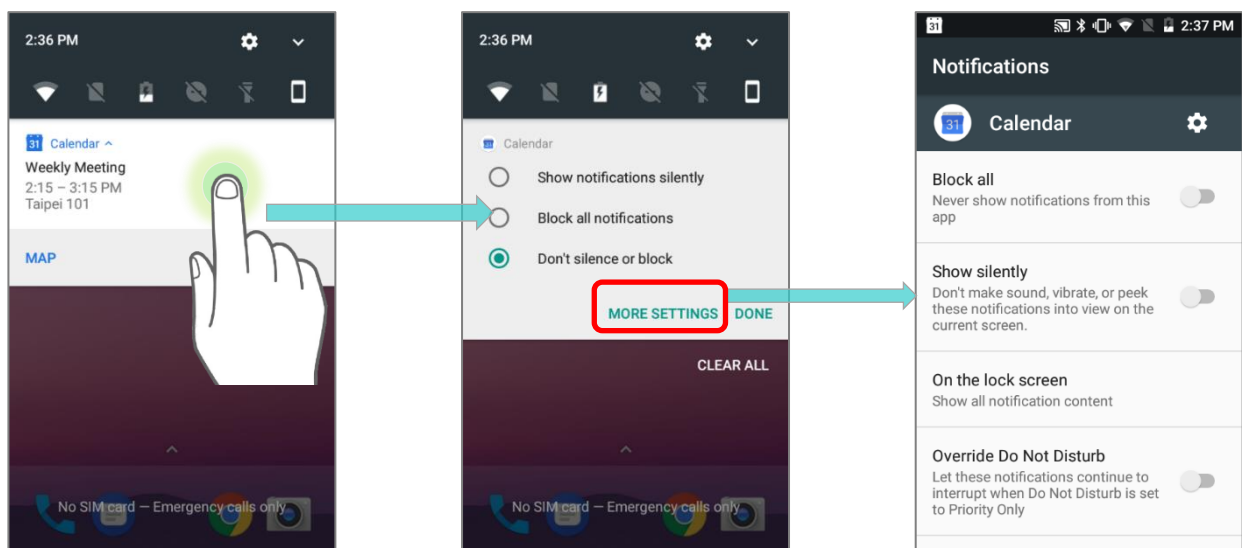
#### CHECK OUT NOTIFICATION

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.



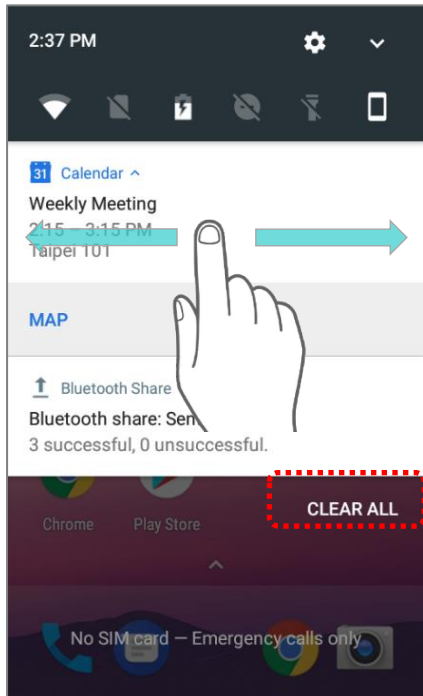
#### DISABLE NOTIFICATION

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.



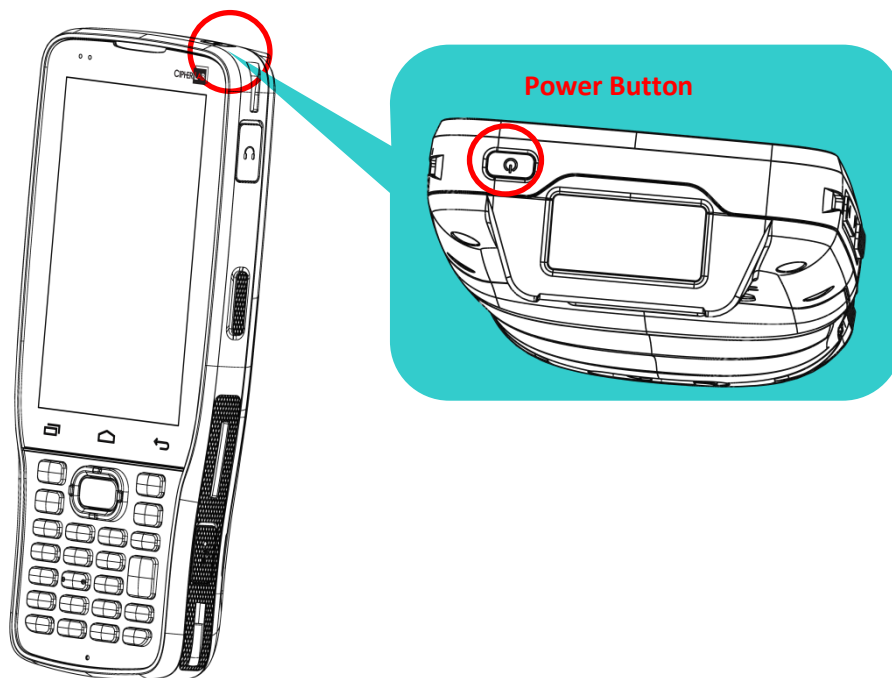
## 4.3. SUSPEND & LOCK

### 4.3.1. 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 RK25

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.

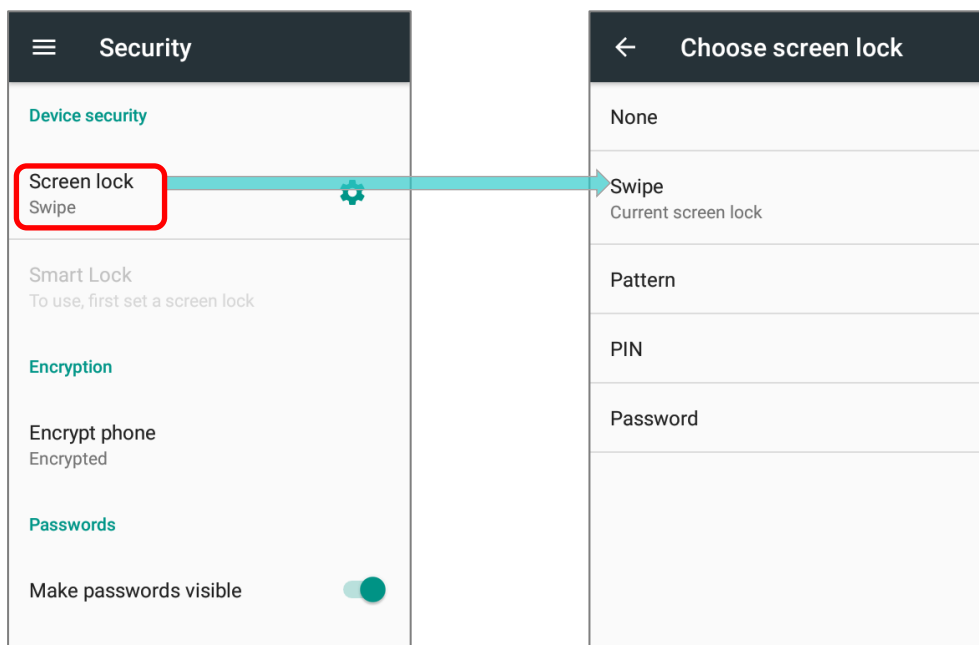


### 4.3.2. LOCK DEVICE

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 RK25

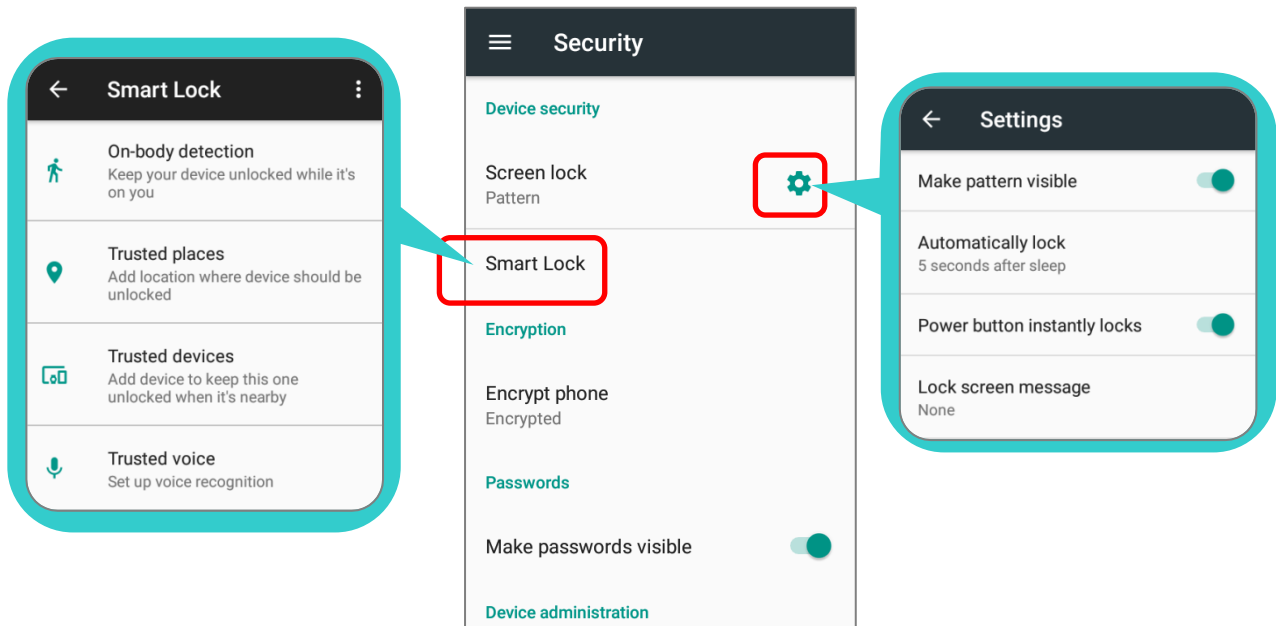
Go to [App Drawer](#) | **Settings**  | **Security**  | **Screen lock** to change the lock method.



The lock methods are:

Item	Description
None	Disable screen lock.
Swipe	Default slide gesture.
Pattern	Enter a pattern to unlock.
PIN	Uses the PIN code to unlock.
Password	Enter a password of at least 4 characters to unlock.

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.

## 4.4. 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.

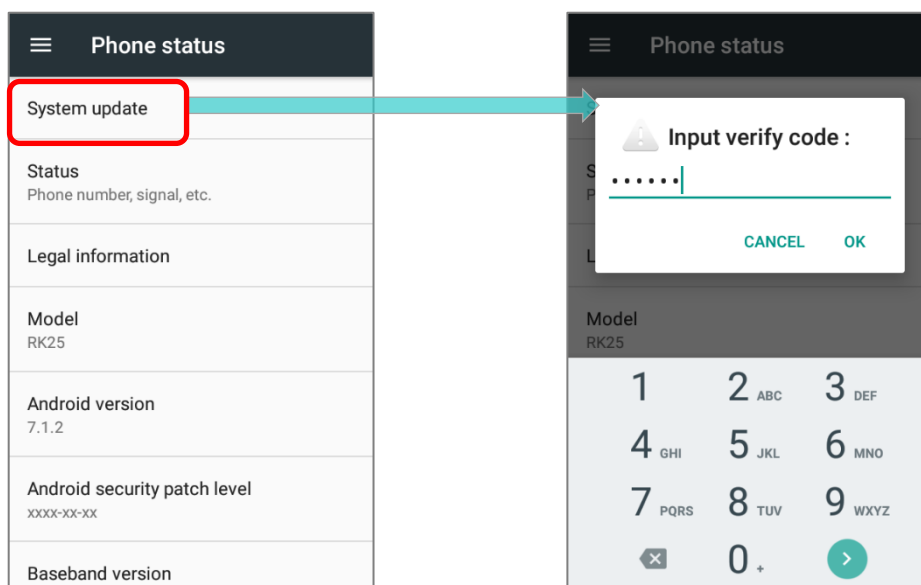
### 4.4.1. NETWORK UPDATE

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](mailto: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.

#### 4.4.2. 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.

---

## 4.5. BACK UP YOUR DATA

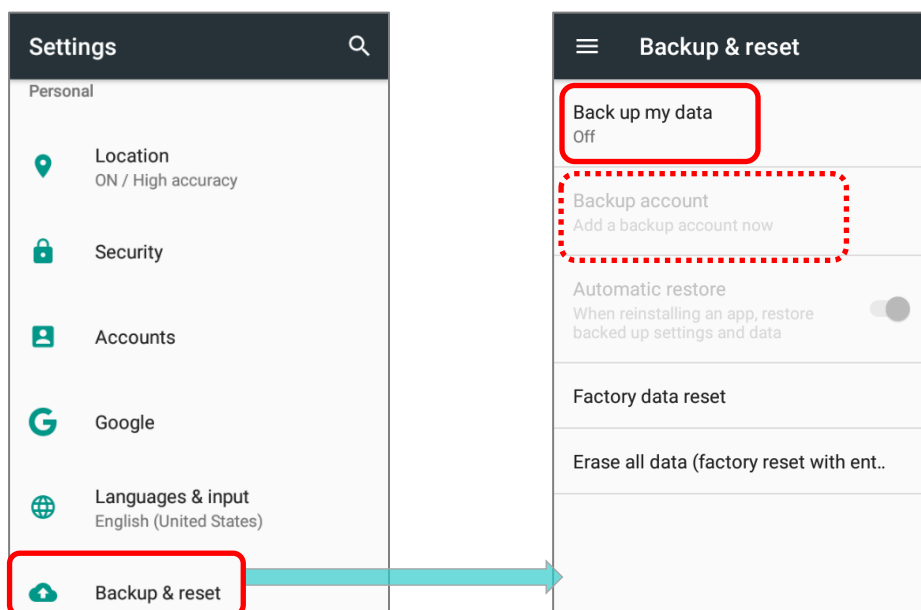
With **Android Backup Service**, you can have your personal data (Google calendar settings, Google contacts, Chrome browser data and Gmail settings) and certain system settings under your Google account backed up (over network connection) on the cloud. This allows you to easily restore the settings on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



## 4.6. 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.

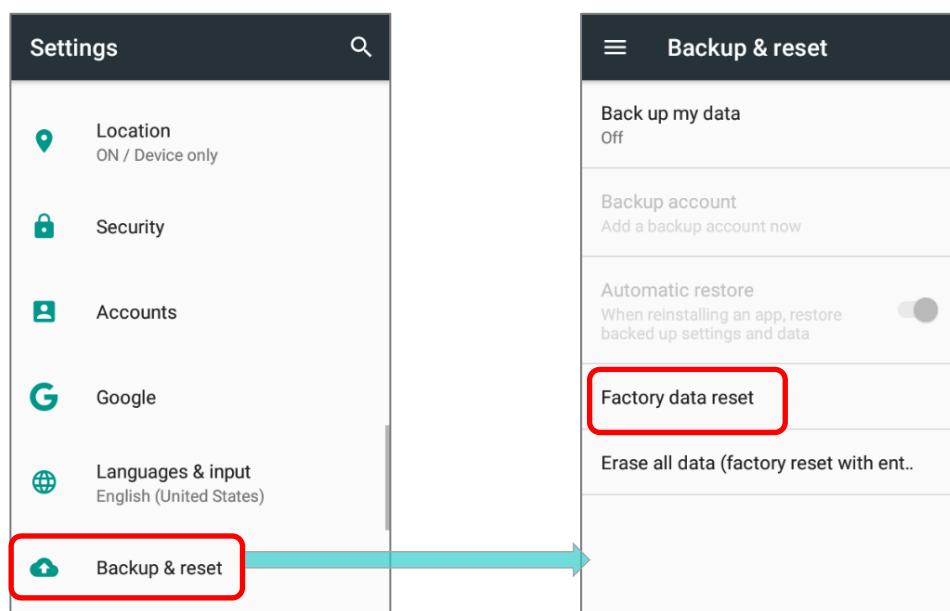
When setting your RK25 mobile computer by ADC (Android Deployment Configurator), the settings will automatically backup to "enterprise partition" of your RK25 mobile computer, and the settings saved in enterprise partition will not be erased by proceeding "Factory data reset". To erase all the settings,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

### 4.6.1. FACTORY DATA RESET

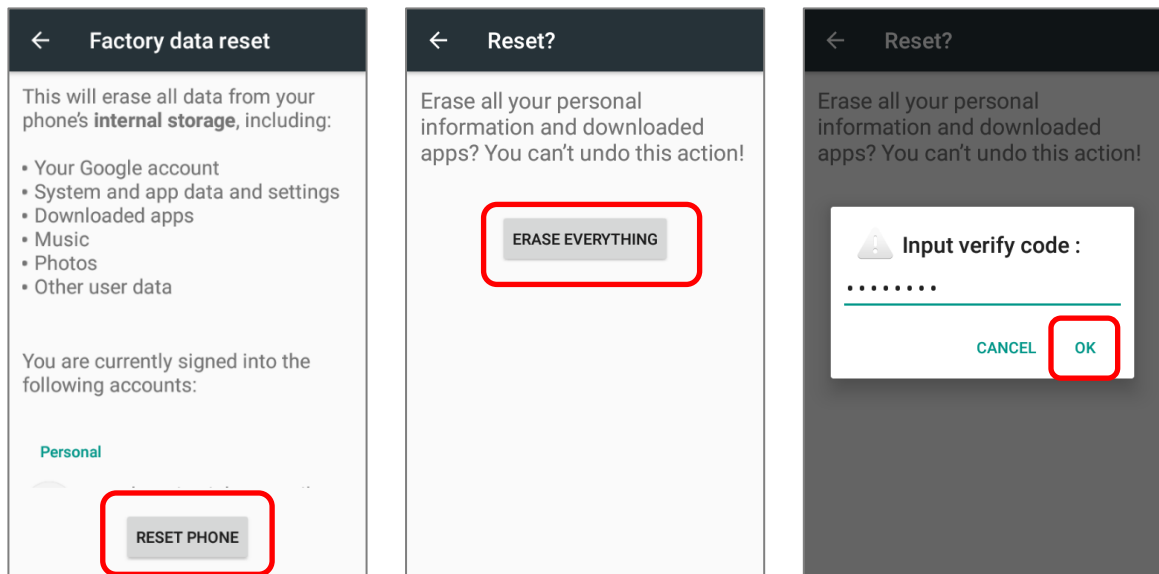
"**Factory data reset**" will erase all the data except of the settings backed up in enterprise partition by ADC (Android Deployment Configurator).

To start:

- 1) Go to [App Drawer](#) | **Settings**  | **Backup & reset**  and **Factory data reset**.



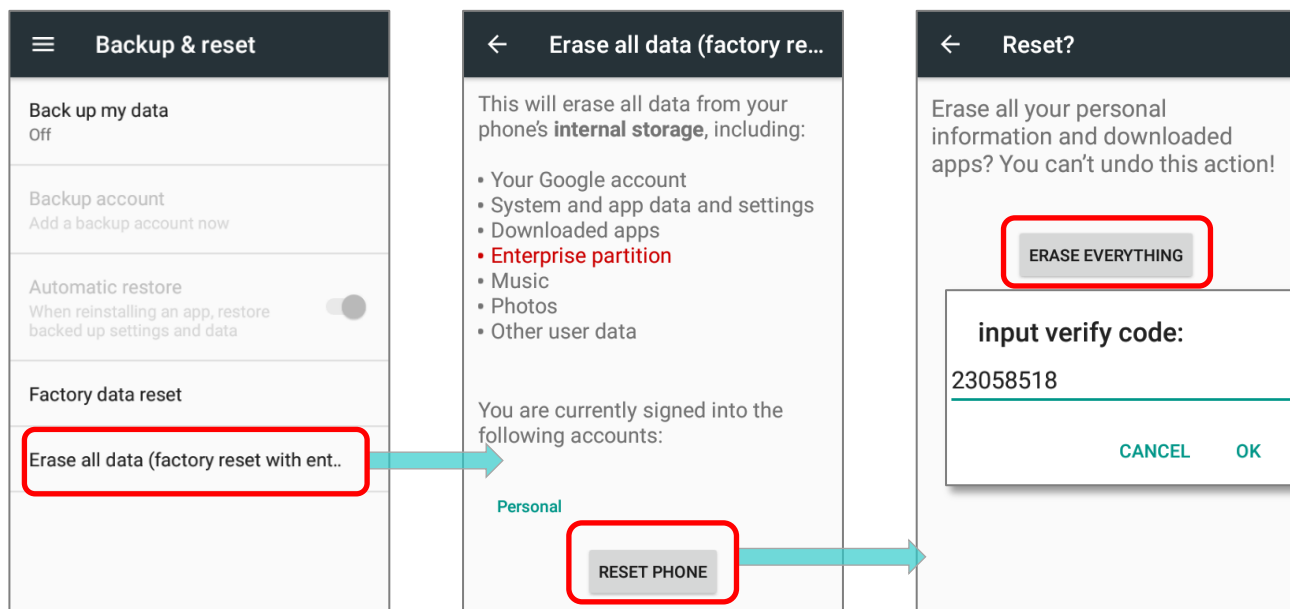
- 2) Confirm the action by tapping on the buttons and input the verification code (Please contact with [support@cipherlab.com.tw](mailto:support@cipherlab.com.tw) to obtain your verification code). Finally, tap **OK** to perform a factory reset.




#### 4.6.2. ERASE ALL DATA (FACTORY RESET WITH ENTERPRISE)

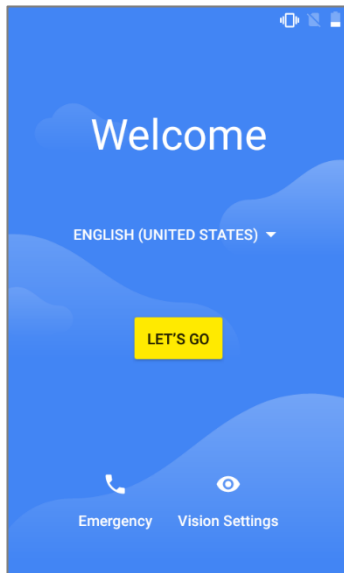
Go to [App Drawer](#) | **Settings**  | **Backup & reset**  | **Erase all data (factory reset with enterprise)**.

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



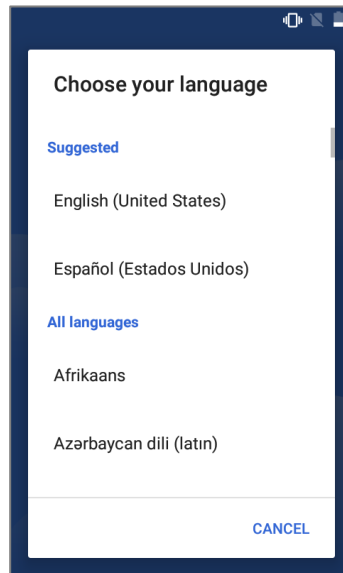
### 4.6.3. WELCOME WIZARD

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**.



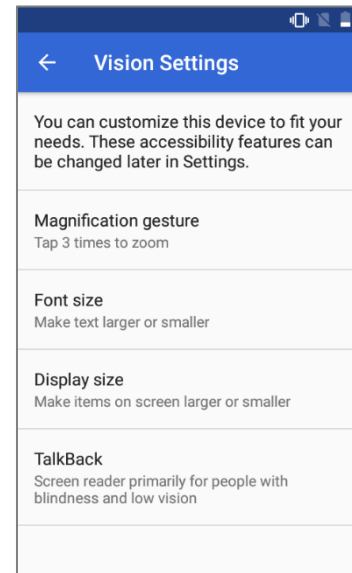
#### Step 1-1:

Tap “**LES’S GO**” to proceed, or tap to enter “**Choose your language**” page/ “**Vision Settings**” page.



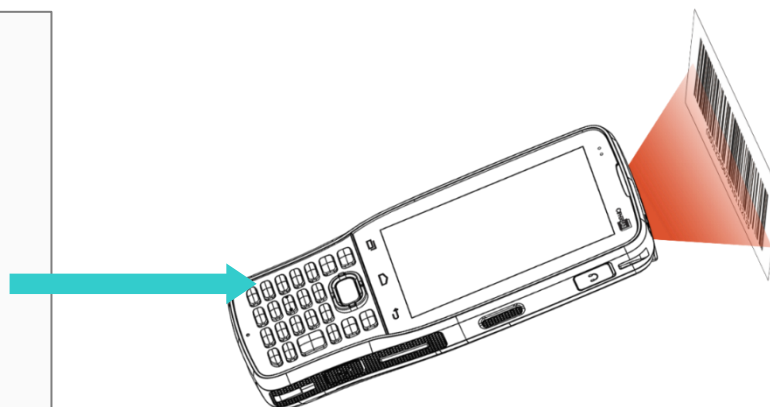
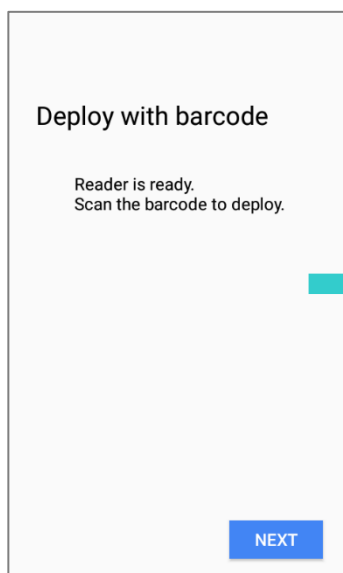
#### Step 1-2:

Select your system language.



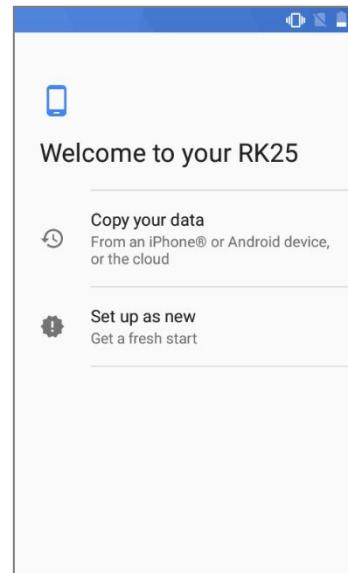
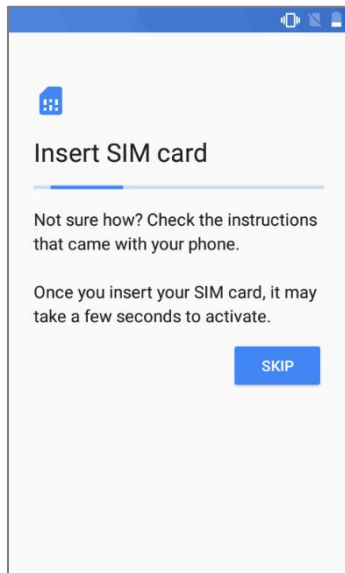
#### Step 1-3:

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.

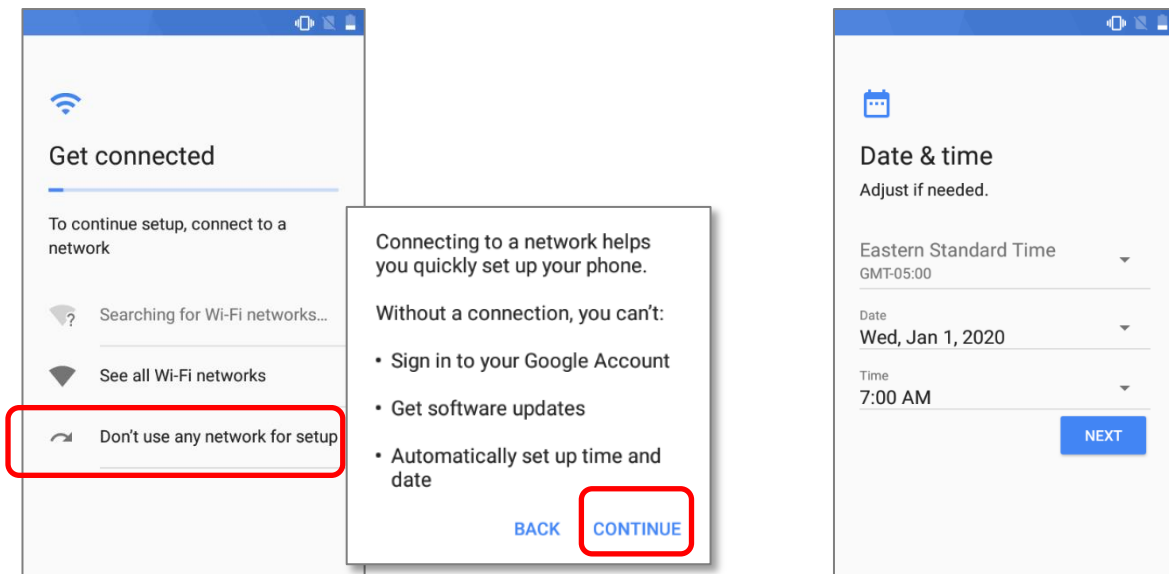


### Step 3:

Tap **"SKIP"** to continue if SIM card is not inserted in your RK25 mobile computer.

### Step 4:

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

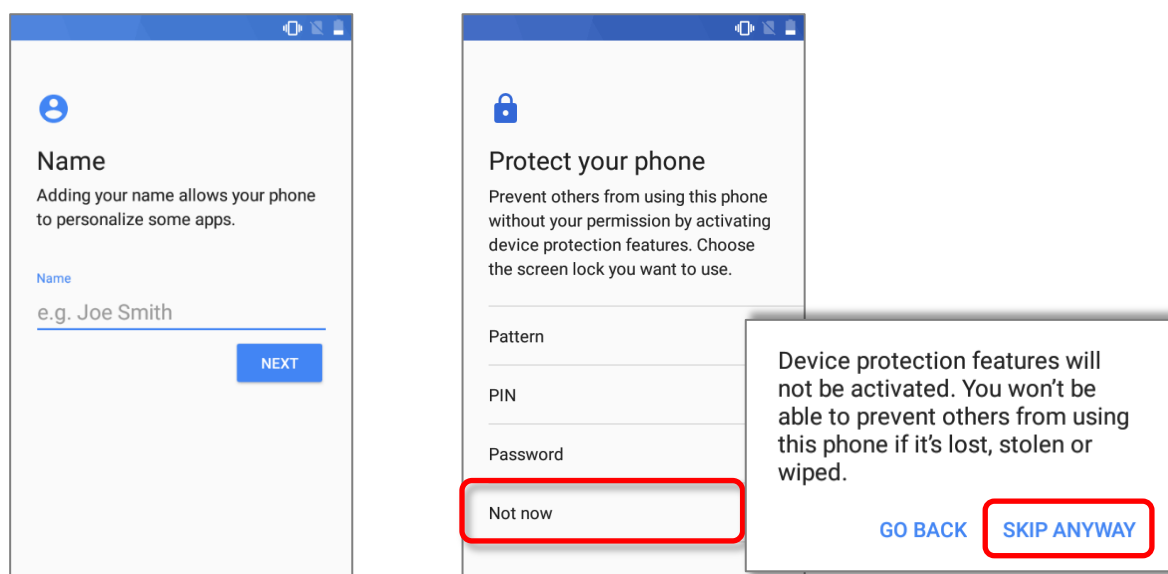


### Step 5:

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

### Step 6:

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

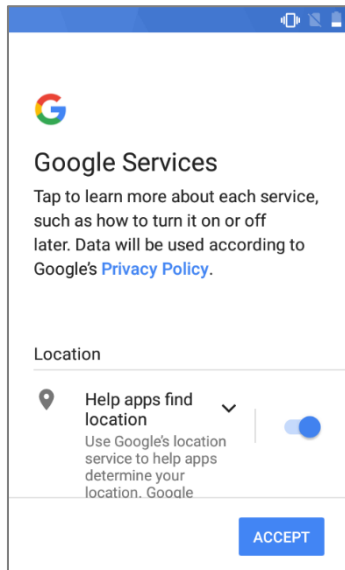


### Step 7:

### Step 8:

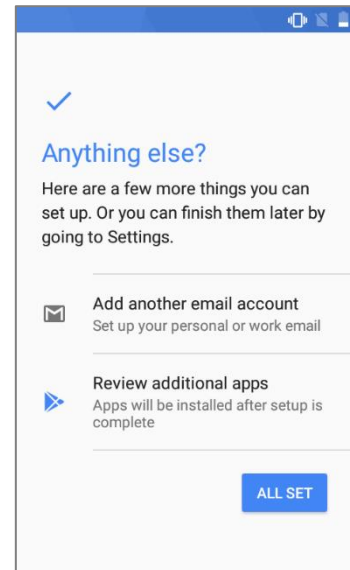
Input your name, or merely skip this step by tapping “NEXT”.

Set up the protection methods to protect this device.  
Select “Not now” to skip.



**Step 9:**

Choose Google services that you want to be enabled, and tap “ACCEPT” to proceed.



**Step 10:**

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 5

### WIRELESS RADIOS

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

#### IN THIS CHAPTER


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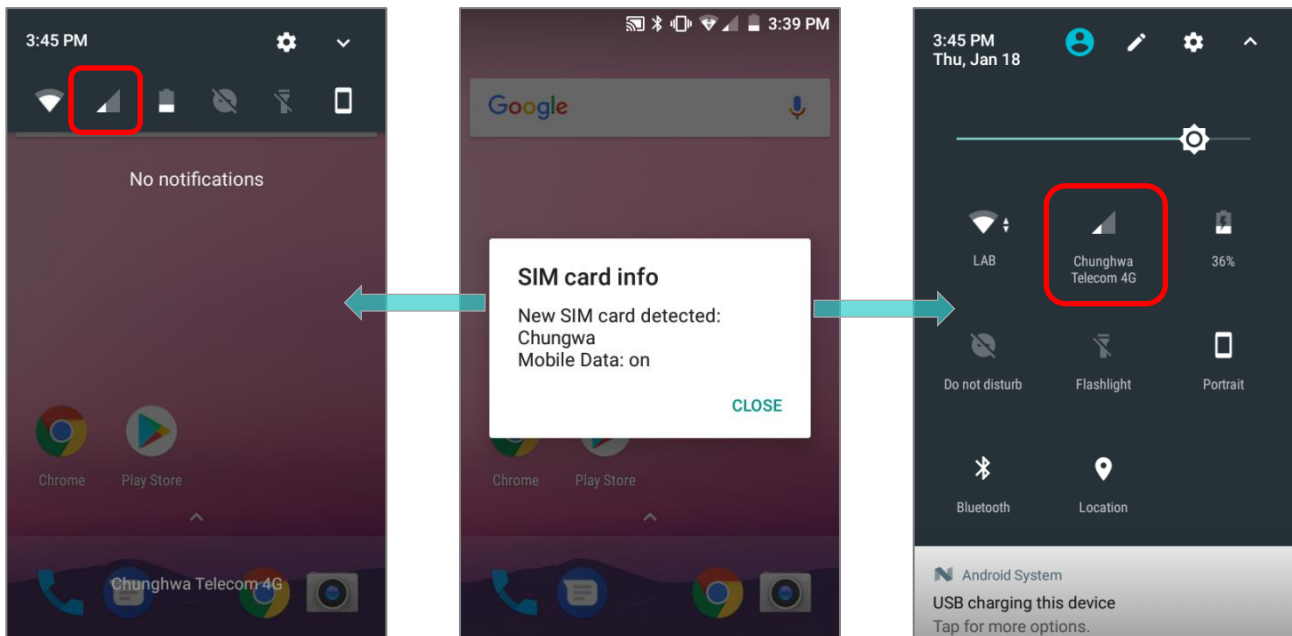
5.1 Use Wireless Wide Area Network .....	171
5.2 Use Wireless Local Area Network (Wi-Fi) .....	182
5.3 Use Bluetooth .....	192
5.4 Use Near Field Communications .....	197



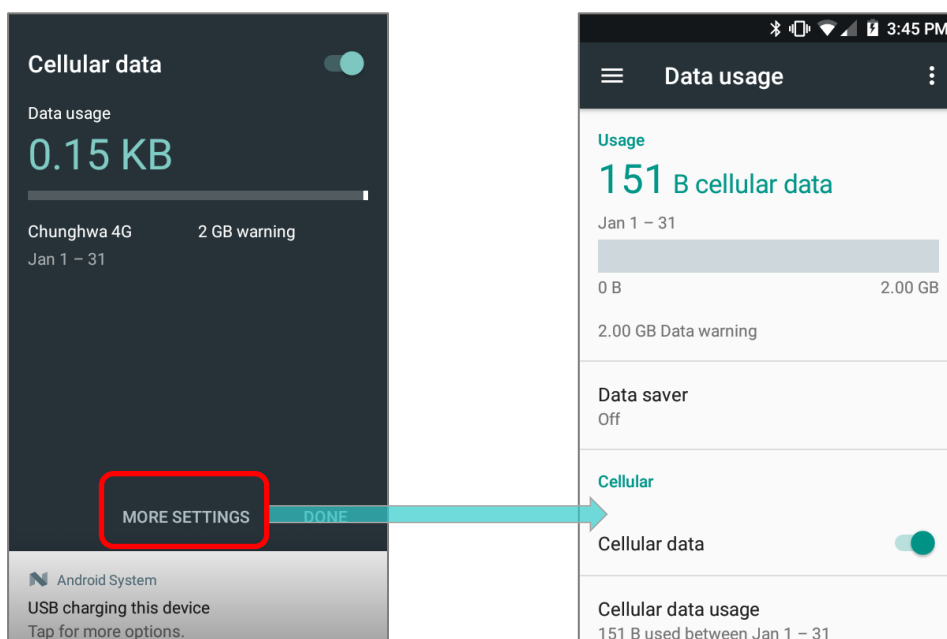
## 5.1. USE WIRELESS WIDE AREA NETWORK

The mobile computer will be automatically configured to connect to your wireless service provider's network when you insert a SIM card and turn on data connection for the first time.

When a SIM card is inserted, a dialog will appear confirming the mobile carrier detected. Swipe down from the status bar to open **Notifications Drawer** or **Quick Settings Menu**, and tap Cellular Data icon  to check the details.







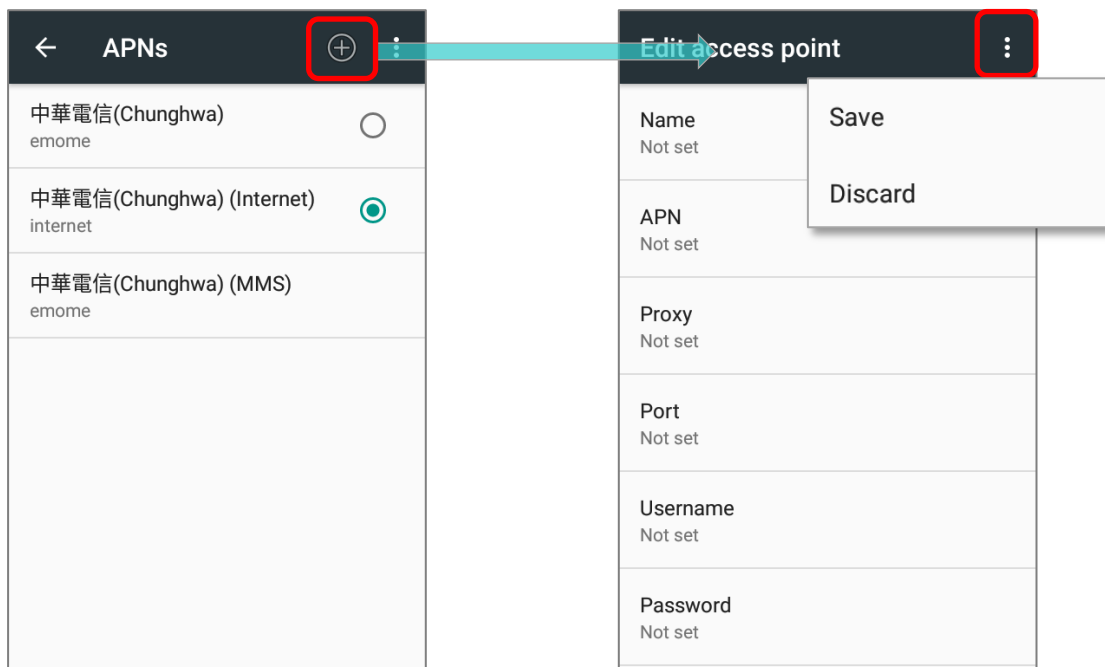
Tap **"MORE SETTINGS"** to enter **"Data usage"** page.



## EDIT ACCESS POINT NAME

You may need to change the access point name according to the information obtained from your mobile carrier.

- 1) Go to [App Drawer](#) | **Settings**  | **More**  | **Cellular networks** | **Access Point Names**.
- 2) Tap the button , and tap each field to input the **APN** name and settings obtained from your mobile carrier.
- 3) When finished, tap the settings button  and tap **Save**.
- 4) Back to **APNs** page, Tap the radio button next to the APN you would like to apply.






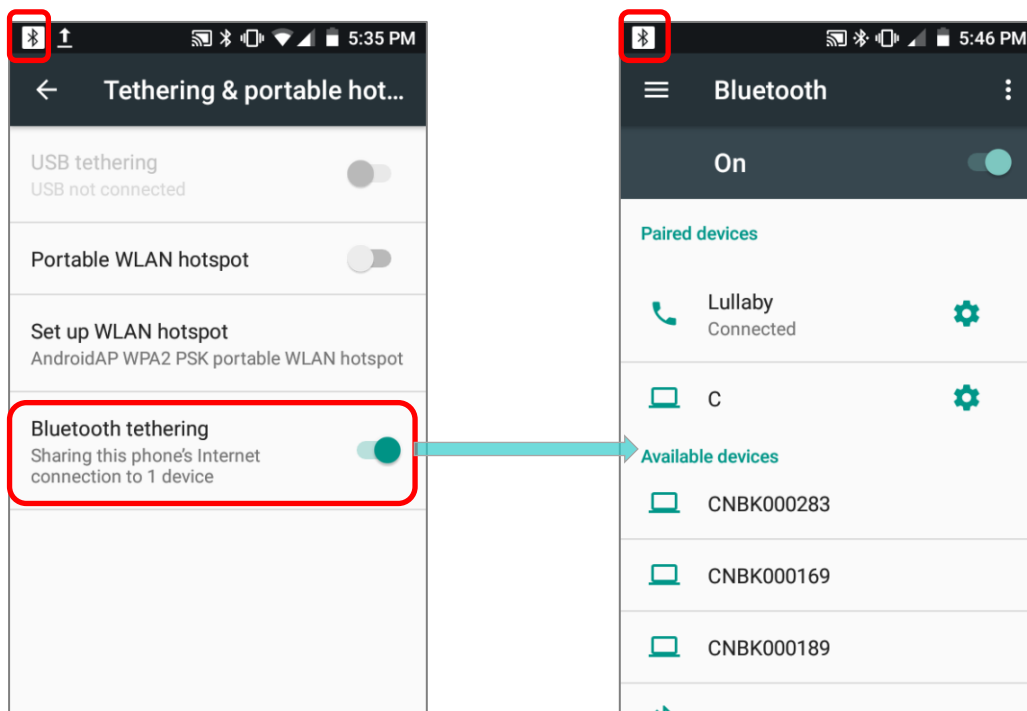
### 5.1.1. SHARE WWAN DATA

The WWAN connection on the mobile computer can be shared to other devices. You may share internet connection with a computer or device through USB or Bluetooth tethering, or share with a maximum of eight devices by turning the mobile computer into a Wi-Fi hotspot.

#### BLUETOOTH TETHERING



To share data connection through Bluetooth tethering:

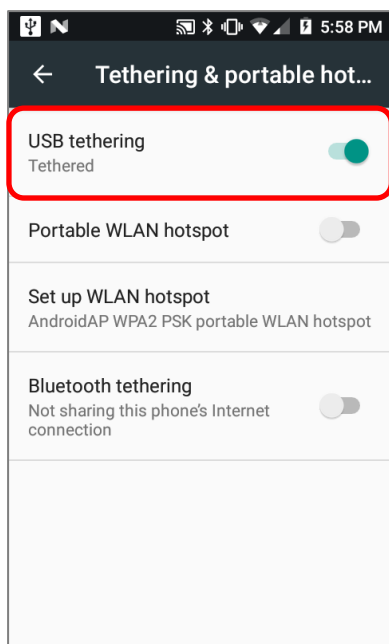
- 1) Pair the mobile computer with the device of interest.
- 2) Go to [App Drawer](#) | **Settings**  | **More**  | **Tethering & portable hotspot**.
- 3) Tap **Bluetooth tethering**. The mobile computer will share its WWAN network with Bluetooth-connected devices through Bluetooth sharing.
- 4) Once the sharing is successful, the icon  will appear on the top left of the screen.



## USB TETHERING



To share data connection through USB tethering:

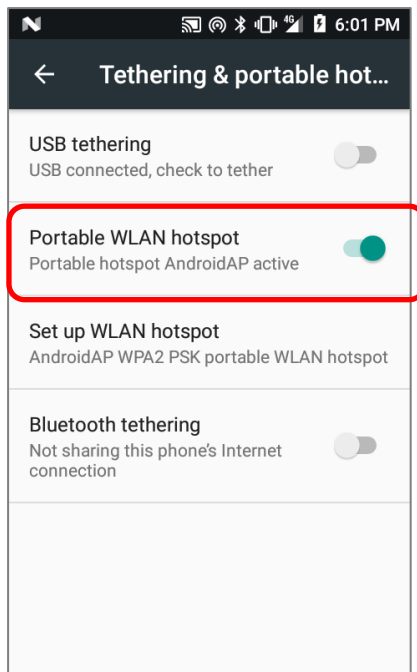
- 1) Connect the mobile computer with a USB cable. A USB icon will appear at the top of the screen, and in the [Notifications Drawer](#), a description "**Connected as USB Storage**" will appear.
- 2) Go to [App Drawer](#) | **Settings**  | **More**  | **Tethering & portable hotspot**.
- 3) Tap **USB tethering**. The mobile computer will share its WWAN network with the connected host computer.



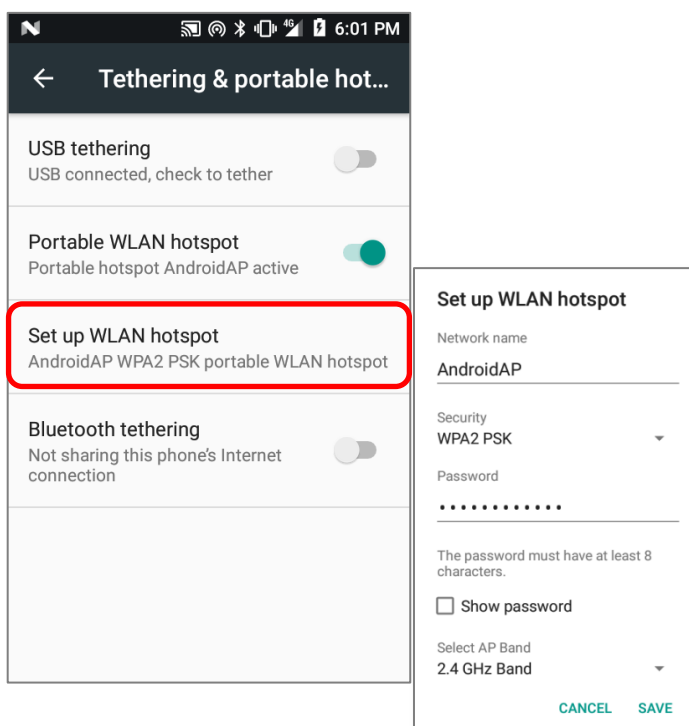
## WI-FI HOTSPOT

To share data connection in the form of a Wi-Fi hotspot:

- 1) Go to **App Drawer** | **Settings**  | **More**  | **Tethering & portable hotspot**.
- 2) Tap **Portable Wi-Fi hotspot** switch to enable data sharing through Wi-Fi. The mobile computer will start broadcasting its SSID for other devices to connect.



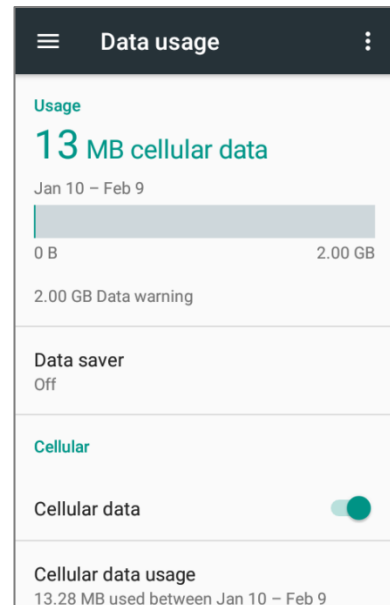
- 3) Tap **Set up WLAN hotspot** label to manage Wi-Fi hotspot settings.



## DATA USAGE

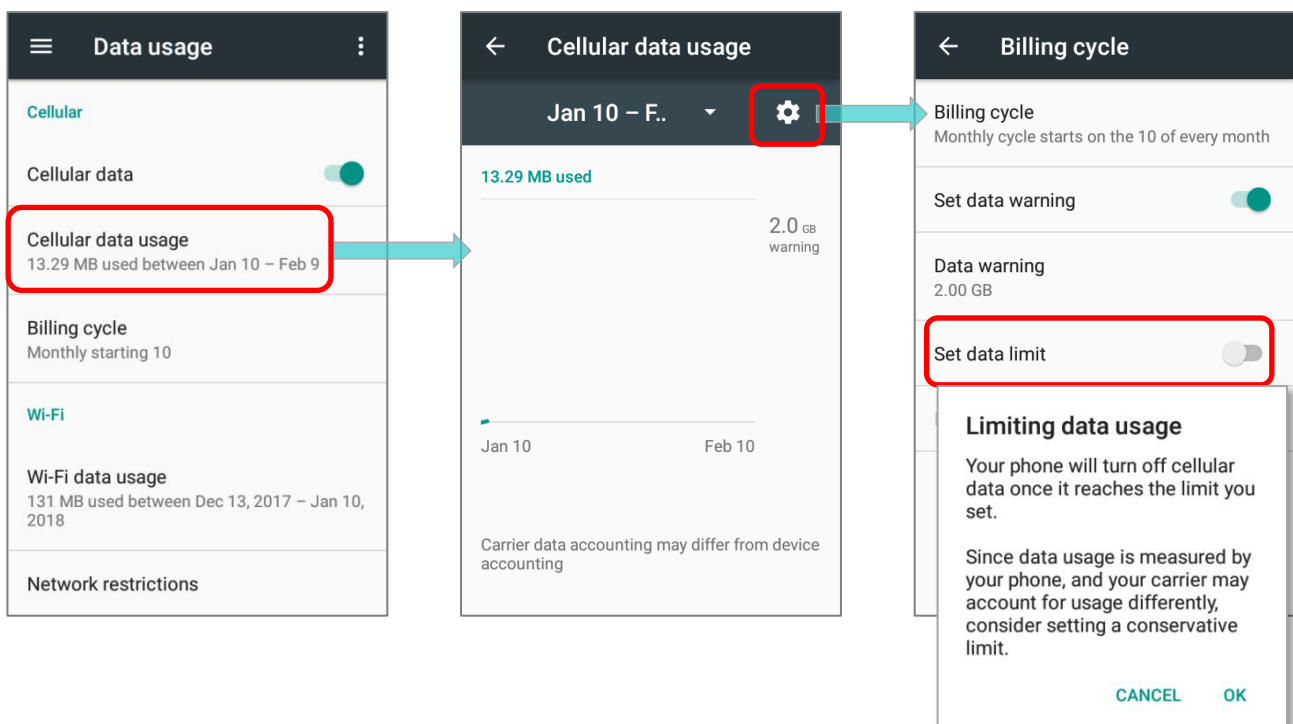
Data usage is the amount of data uploaded or downloaded on the mobile computer. Managing the data usage amount within a certain period of time is a recommended task, as an excess amount of data usage might incur additional fees from your service provider.

To check wireless data usage, please go to [App Drawer](#) | **Settings**  | **Data usage** 

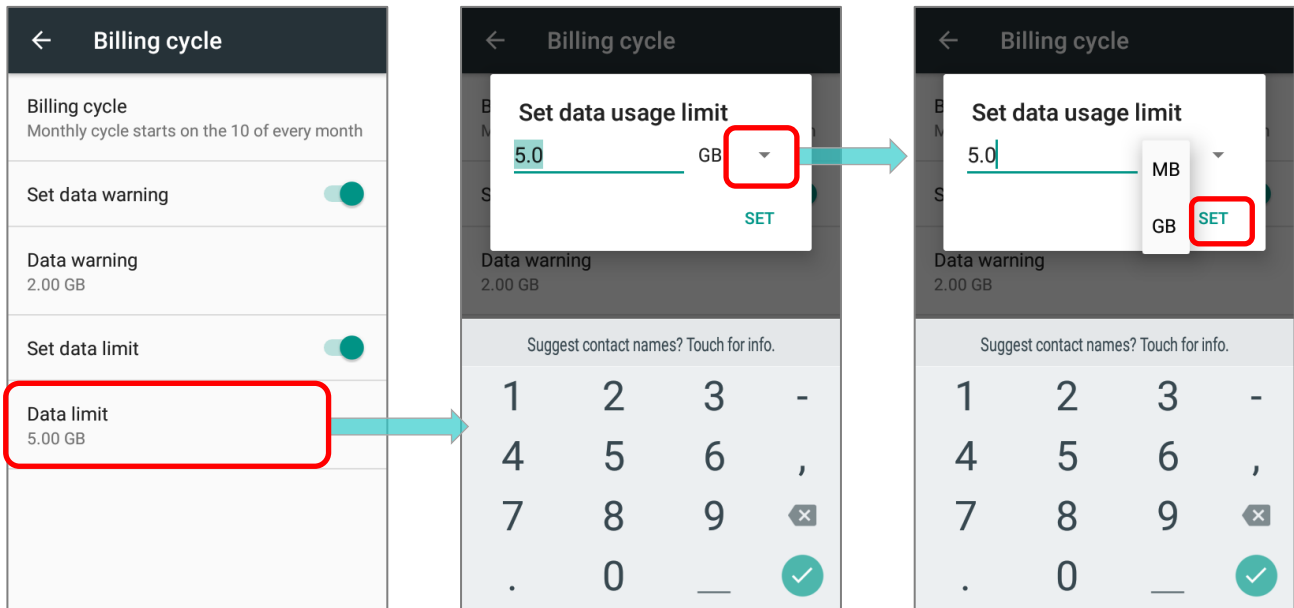


## SET DATA USAGE LIMIT


1) Tap "Cellular data usage" → **Setting**  → switch on "Set data limit".

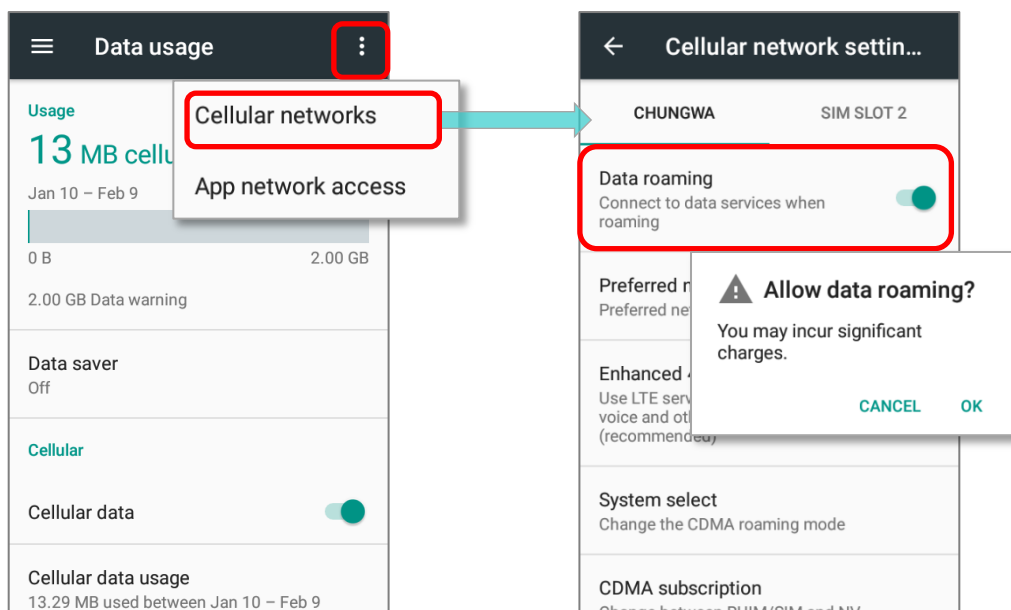


- 2) Tap **"Data limit"**, and input your required limit in **"Set data usage limit"** window, and tap **"SET"**.



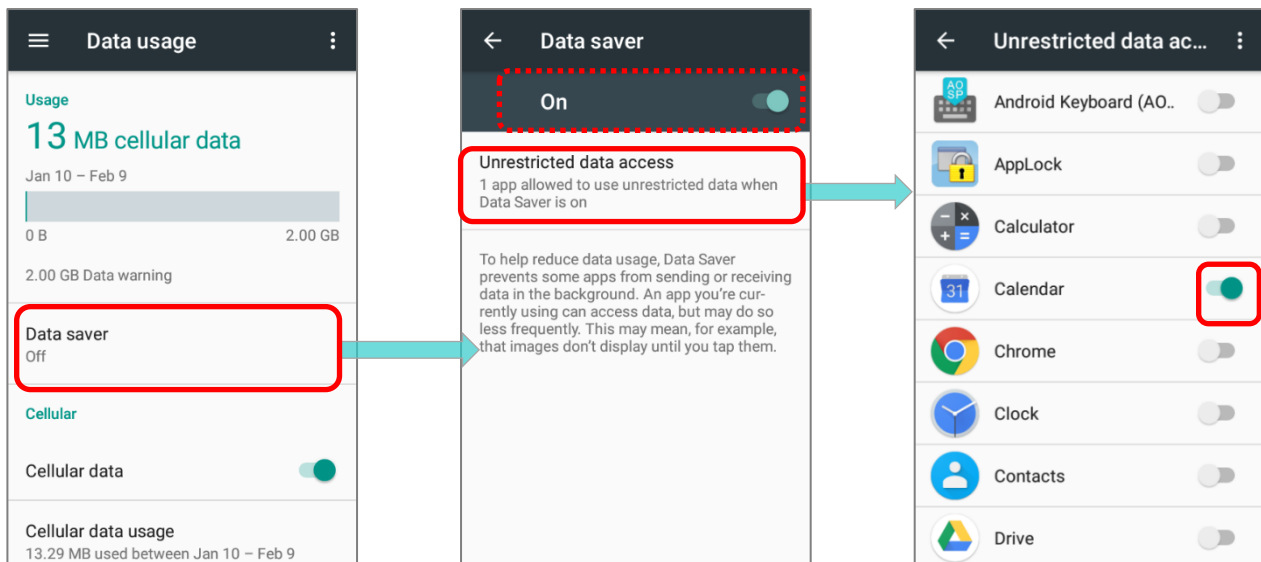
## ENABLE DATA USAGE DURING ROAMING

- 1) On the data usage tab page for your mobile carrier, tap **More** .
- 2) Select **Cellular networks**, and enable **Data roaming** for your mobile carrier. A dialog box appears confirming whether you would like to enable data roaming. Tap **OK** to confirm.

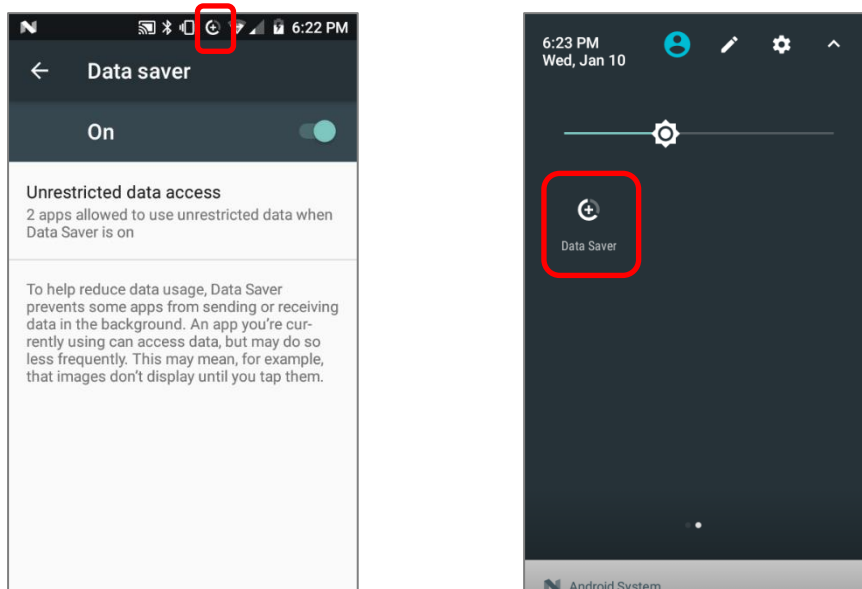


## RESTRICT BACKGROUND DATA

- 1) Tap "**Data saver**" and switch data saver to **On**, to restrict background data.
- 2) If there's any applications you would like to keep them activated on background when "**Data saver**" is on, tap "**Unrestrict data access**" to switch them on.



Once "**Data saver**" is on, an status icon  will be shown in the status bar as well as in the Quick Setting menu.





**Note:** The mobile computer conserves data usage by restricting background mobile data. Certain applications and services will be disabled unless the mobile computer is connected to a Wi-Fi network.

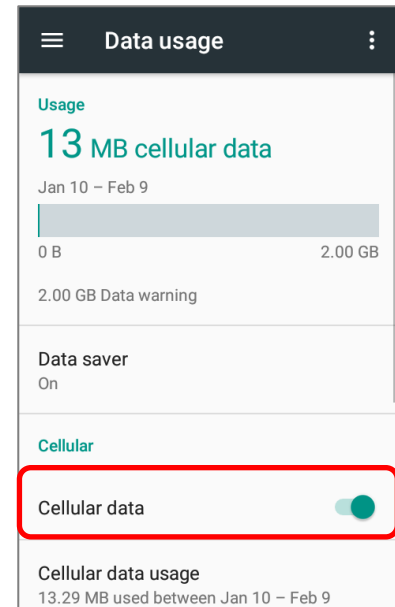


## 5.1.2. DATA CONNECTION SETTINGS






### TURN ON/OFF DATA CONNECTION

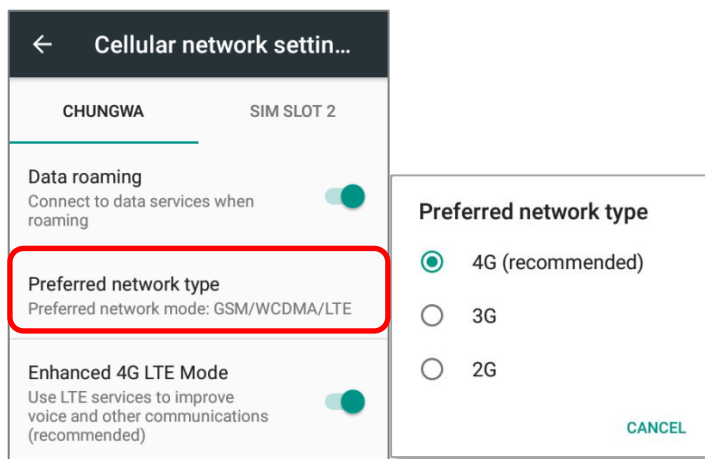
To manually turn on/off mobile data connection:

- 1) Go to [App Drawer](#) | **Settings**  | **Data usage** 
- 2) To turn on/off data connection, switch the **Cellular data** to the corresponding position.



### SELECT DATA CONNECTION TYPE



- 1) Go to [App Drawer](#) | **Settings**  | **More**  | **Cellular network**,  
**OR** [App Drawer](#) | **Settings**  | **Data usage**  | **More**  | **Cellular network**
- 2) Tap the mobile carrier tab page (if you have 2 SIM cards).
- 3) Tap **Preferred network type** to select the setting.

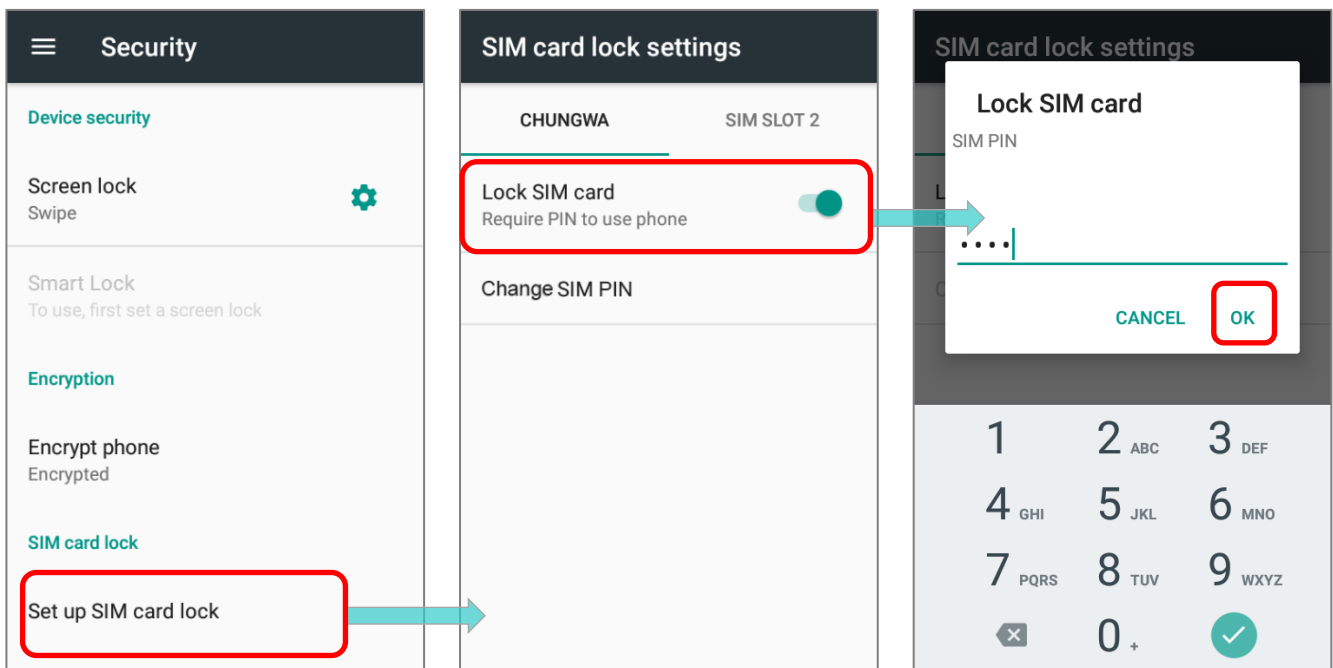


### 5.1.3. SIM CARD SETTINGS

#### LOCK SIM CARD

To lock the SIM card:



- 1) Go to [App Drawer](#) | **Settings**  | **Security** , tap **Set up SIM card lock**.
- 2) Enable **Lock SIM card**.
- 3) Enter the PIN to enable SIM card lock. Once enabled, you are required to enter the PIN code in order to use the phone.

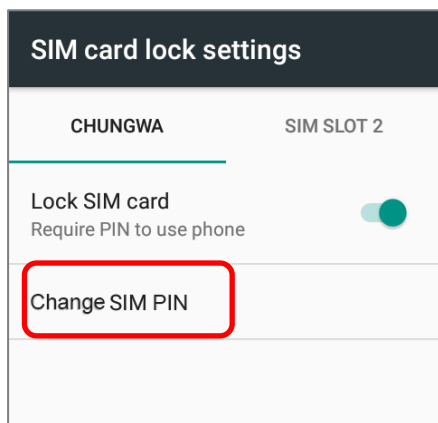


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## CHANGE PIN CODE

To change the PIN code:

- 1) Go to [App Drawer](#) | **Settings**  | **Security** , tap **Set up SIM card lock**.
- 2) Tap **Change SIM PIN**.
- 3) Enter your old PIN code to confirm your identity, and then input a new PIN code.



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### Note:

[10° tilted reader model](#) is equipped with 1 SIM slot & 1 optional SIM/SAM slot, while [70° tilted reader model](#) is equipped with dual SIM slot.

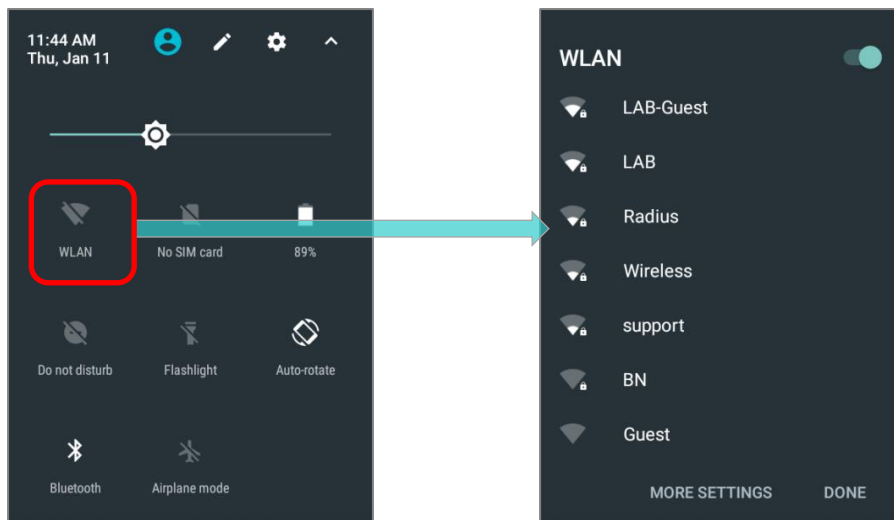
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## 5.2. USE WIRELESS LOCAL AREA NETWORK (WI-FI)

### 5.2.1. CONNECT TO WI-FI NETWORK

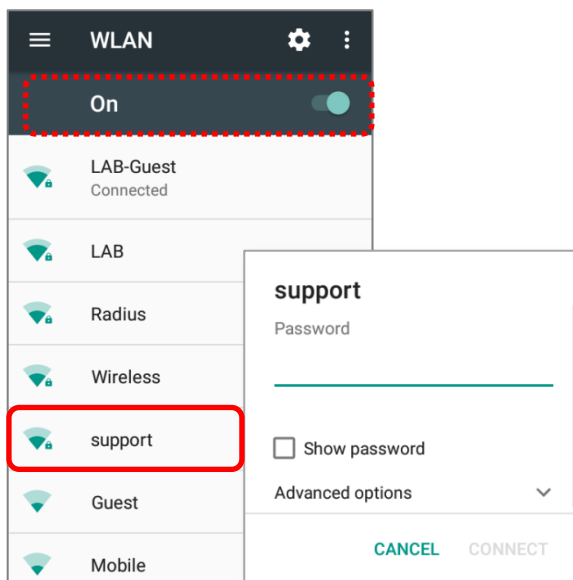
To power on Wi-Fi:

- 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.



## 5.2.2. 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

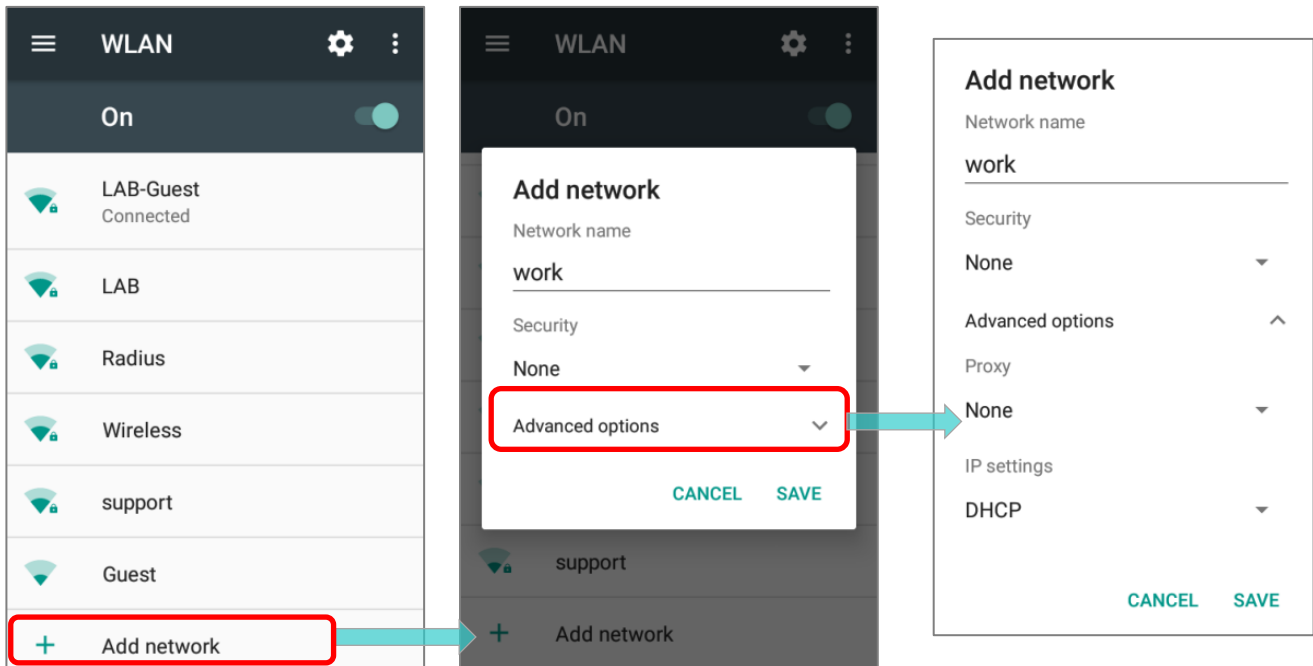
[App Drawer](#) | **Settings**  | **WLAN**  | **More**  | **Advanced** | **Install certificates.**)

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
<b>Description</b>	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.
<b>How to install</b>	change the extension to .crt or .cer.	Change the extension to .p12 or .pfx.

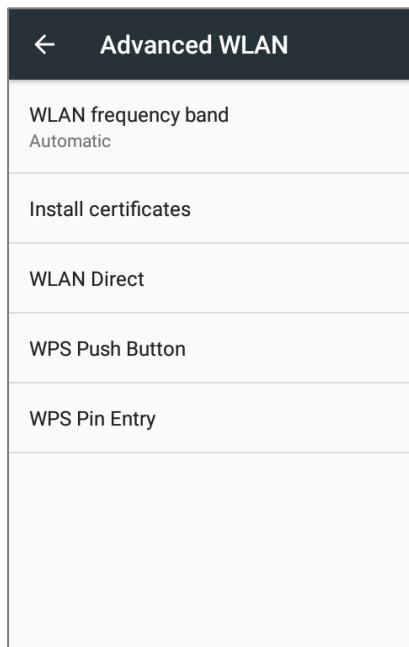
- 4) If necessary, select the **Proxy** server and **IPv4** settings. By default, no proxy is set and IP settings are set to **DHCP**.



### 5.2.3. ADVANCED WI-FI SETTINGS

To access advanced Wi-Fi settings:

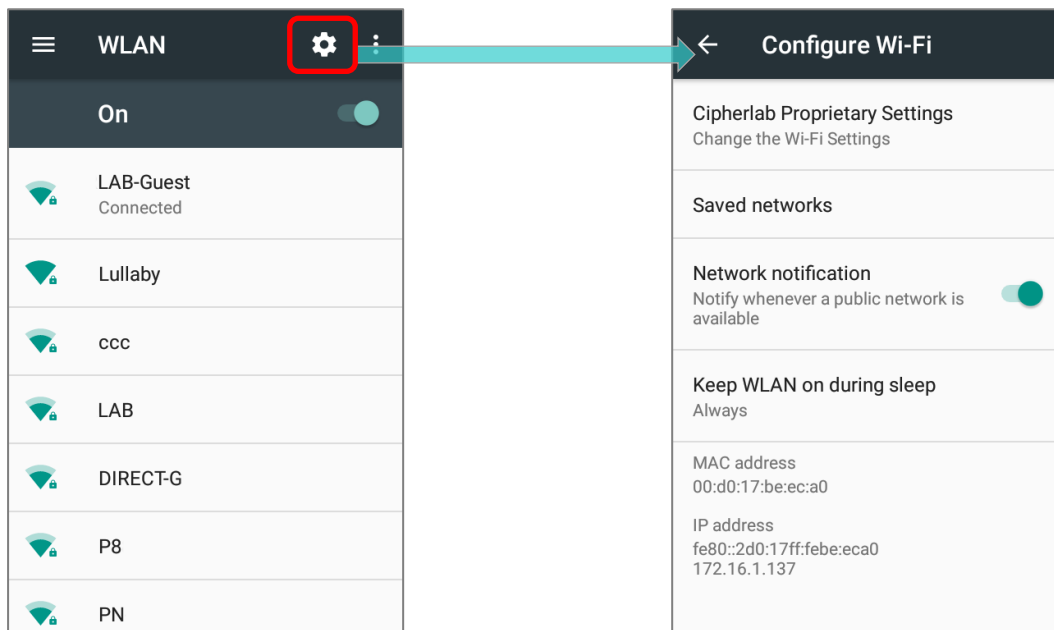
- 1) On the **WLAN**  screen, tap **More** .
- 2) Select **Advanced** in the pop-up menu. Available settings are as below:



Item	Description
<b>WLAN frequency band</b>	Select <b>Automatic</b> , <b>5 GHz</b> , or <b>2.4 GHz</b> for your Wi-Fi frequency band. The default setting is <b>Automatic</b> .
<b>Install certificates</b>	Installs certificates recently downloaded or placed on the internal storage.
<b>WLAN Direct</b>	Enables your device to connect with a Wi-Fi Direct-capable device.
<b>WPS Push Button</b>	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.
<b>WPS in Entry</b>	Enter the personal identification number (PIN) for Wi-Fi protected setup (WPS) process.

## 5.2.4. CONFIGURE WI-FI

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



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



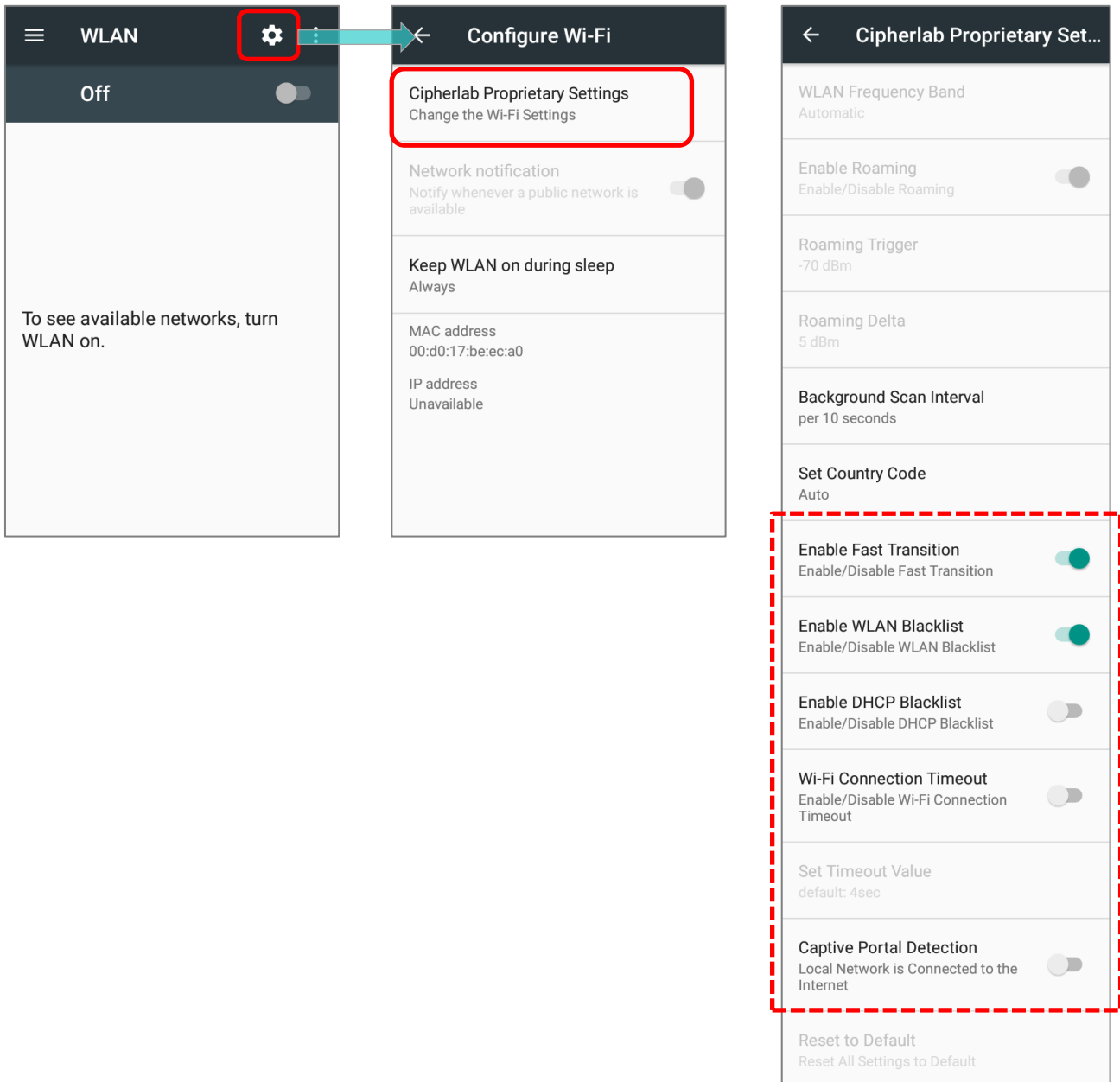
## CIPHERLAB PROPRIETARY SETTINGS

Cipherlab Proprietary Set...

WLAN Frequency Band Automatic
Enable Roaming Enable/Disable Roaming <input checked="" type="checkbox"/>
Roaming Trigger -70 dBm
Roaming Delta 5 dBm
Background Scan Interval per 10 seconds
Set Country Code Auto
Enable Fast Transition Enable/Disable Fast Transition <input type="checkbox"/>
Enable WLAN Blacklist Enable/Disable WLAN Blacklist <input type="checkbox"/>
Enable DHCP Blacklist Enable/Disable DHCP Blacklist <input type="checkbox"/>
Wi-Fi Connection Timeout Enable/Disable Wi-Fi Connection Timeout <input type="checkbox"/>
Set Timeout Value default: 4sec
Captive Portal Detection Local Network is Connected to the Internet <input type="checkbox"/>
Reset to Default Reset All Settings to Default

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



### 5.2.5. 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**.


### 5.2.6. USE STATIC IP ADDRESS

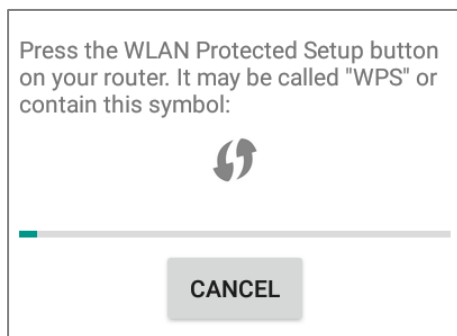
By default, the device uses DHCP to assign an IP address when connecting to a wireless network. You may set for the device to connect to a network using a static IP address.

- 1) 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**.

### 5.2.7. 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.

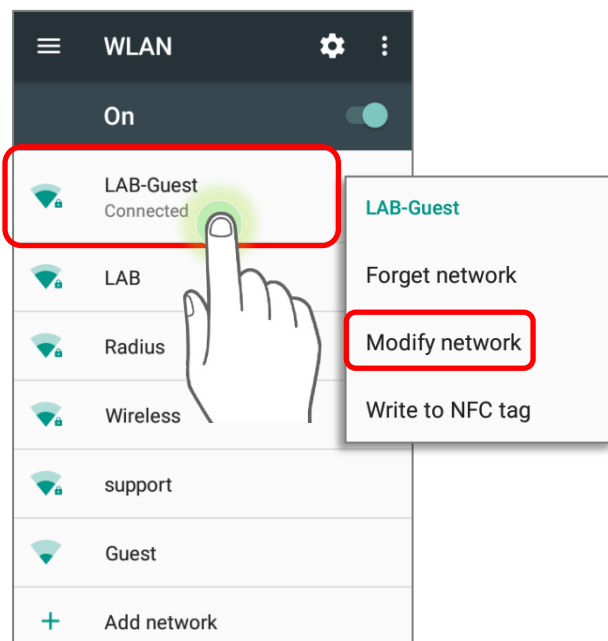


- 3) On your wireless router, press the WPS button. The device will connect to your router.

### 5.2.8. 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**.



### 5.2.9. 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.

### 5.3. USE BLUETOOTH

The RK25 mobile computer lets you configure Bluetooth settings and manage Bluetooth services provided on remote devices.

#### 5.3.1. BLUETOOTH PROFILES

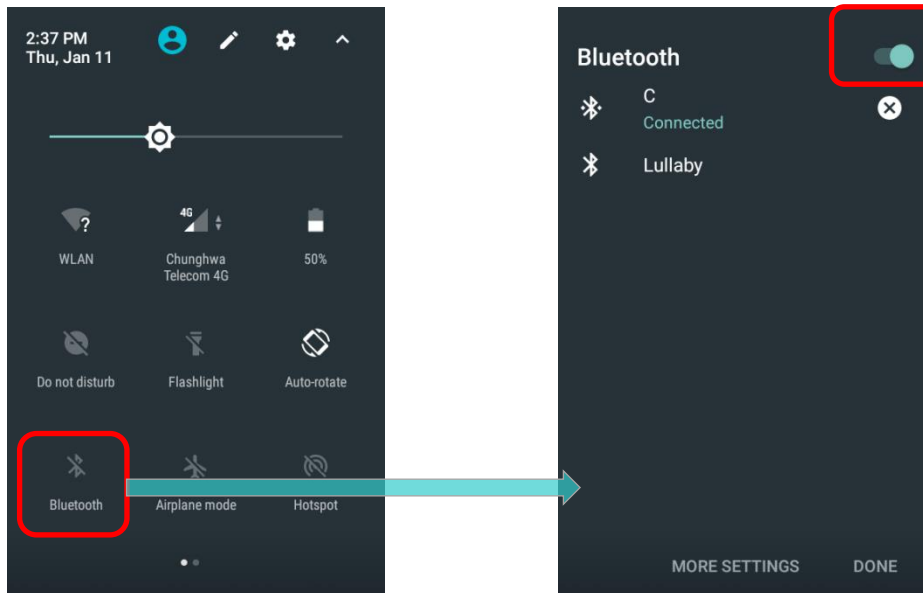
##### Bluetooth Profiles Supported

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.

### 5.3.2. TURN ON BLUETOOTH

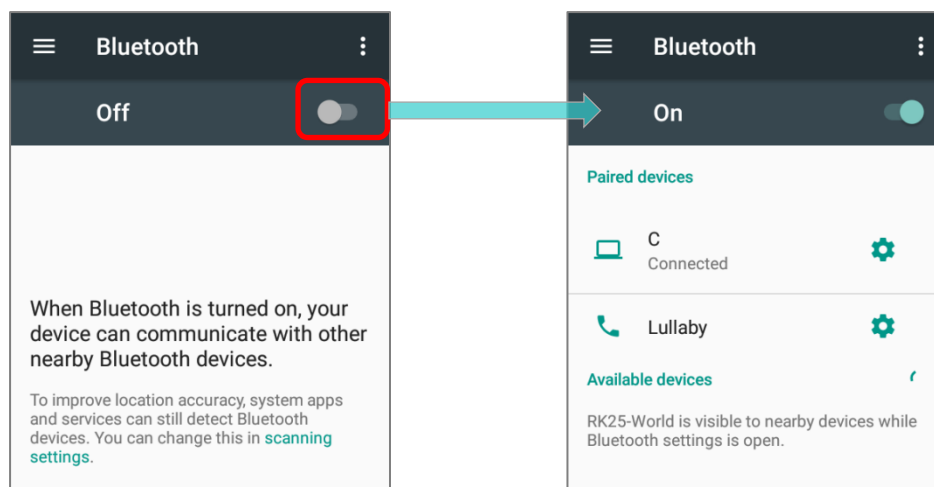
By default, Bluetooth is turned off, to turn it on:

- 1) Swipe down from the top of the screen to open **Quick Settings Menu**.
- 2) Tap **Bluetooth** ▼ to turn on this function while enabling the device Bluetooth visibility.



OR


- 1) Go to [App Drawer](#) | **Settings** ⚙️ | **Bluetooth** 📶.
- 2) Tap the switch to turn on this function while enabling the device Bluetooth visibility.

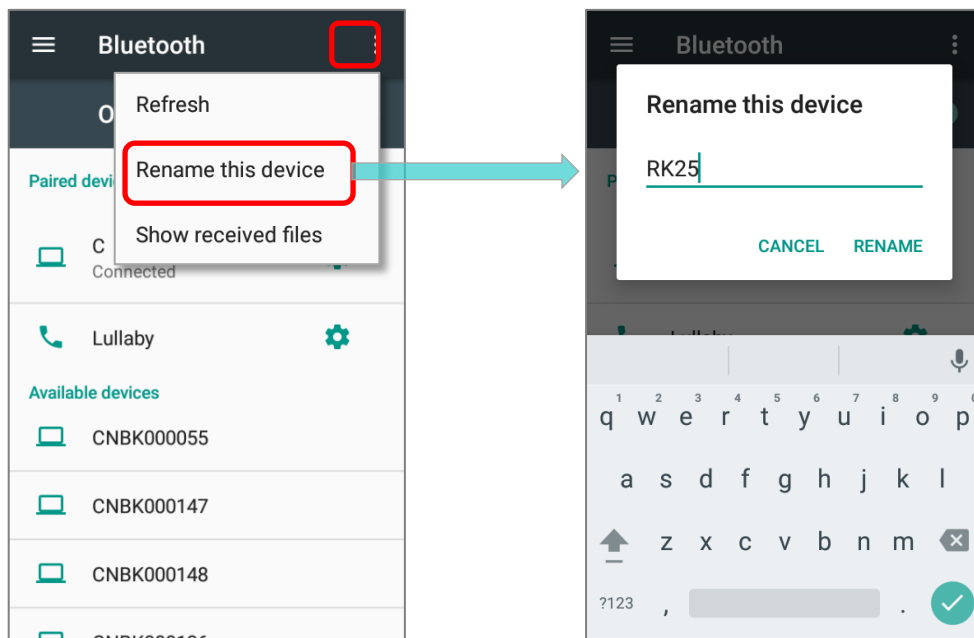


**Note:** Having been turned on, Bluetooth is active even when the mobile computer is suspended. However, if the power mode is switched to Airplane Mode, Bluetooth power will be turned off regardless of the settings.

### 5.3.3. CHANGE BLUETOOTH NAME



To change the Bluetooth name of this mobile computer:

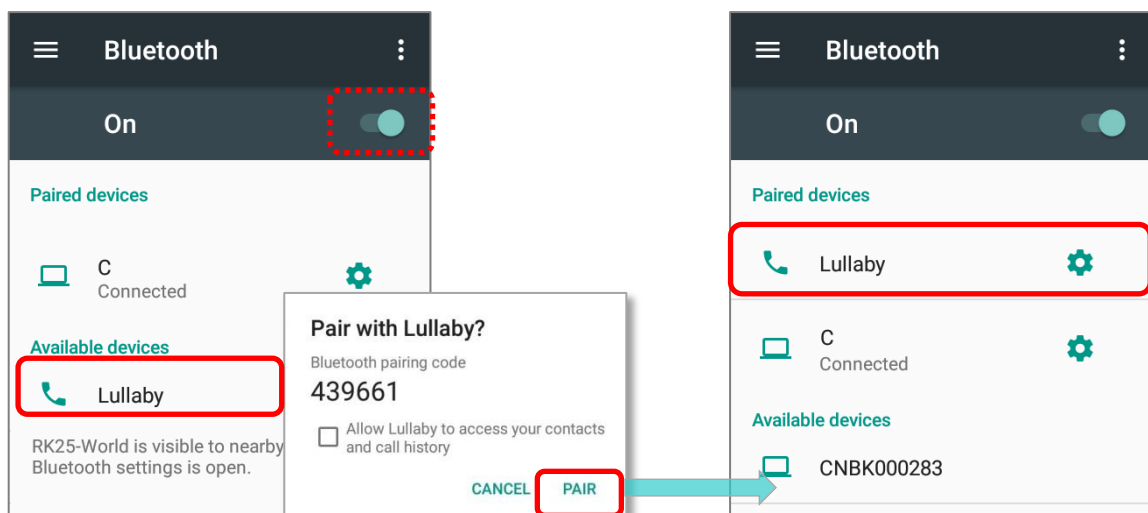
- 1) On the available Bluetooth devices screen, tap **More**  and select **Rename this device** in the pop-up menu.
- 2) Type a new name in the field and tap **RENAME**.





### 5.3.4. 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.

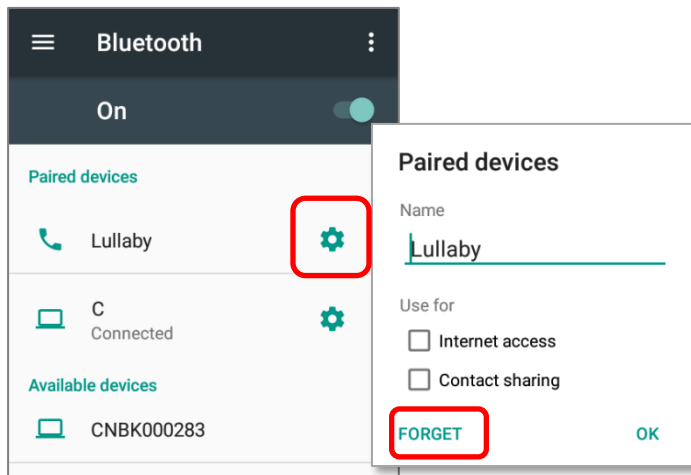
**Note:**

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

### 5.3.5. UNPAIR BLUETOOTH DEVICE

To unpair a paired device:

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



## 5.4. USE NEAR FIELD COMMUNICATIONS

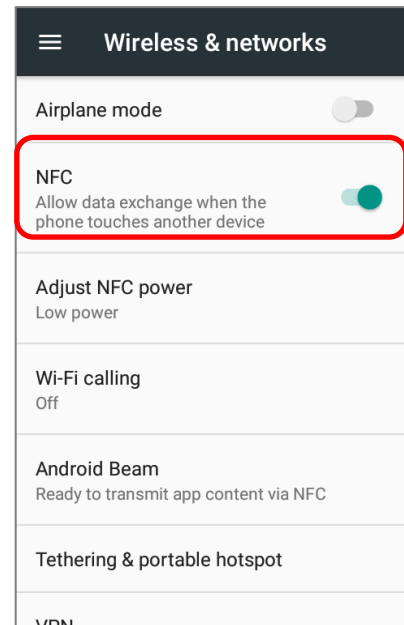
Near field communications (NFC) uses close proximity (4 cm or less) to establish radio communication through electromagnetic fields. With NFC enabled, the mobile computer can collect information from NFC tags, exchange information with other NFC supported devices, and even change information on the NFC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

Before starting to communicate through NFC, perform the following:

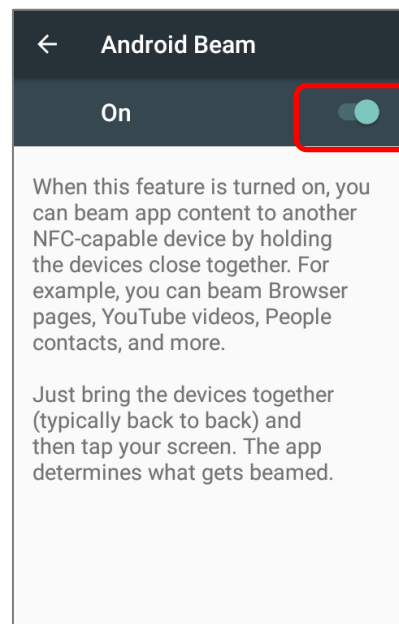
- 1) On the mobile computer, go to [App Drawer](#) |

**Settings**  | **More** 

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



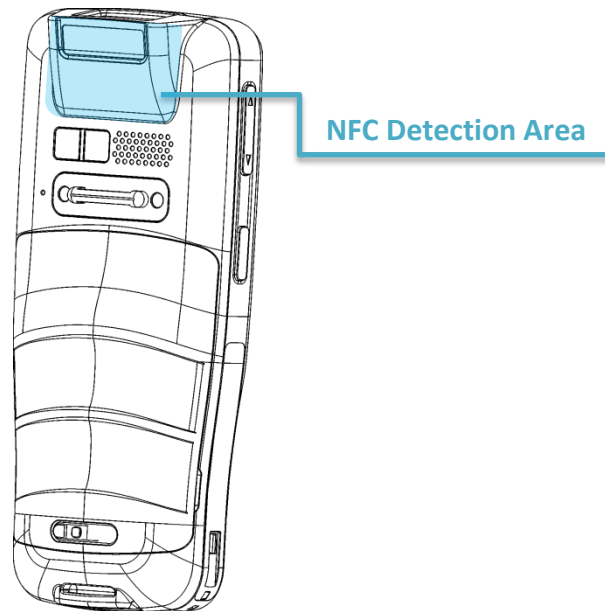
- 3) Tap **Android Beam** and enable it.



**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:

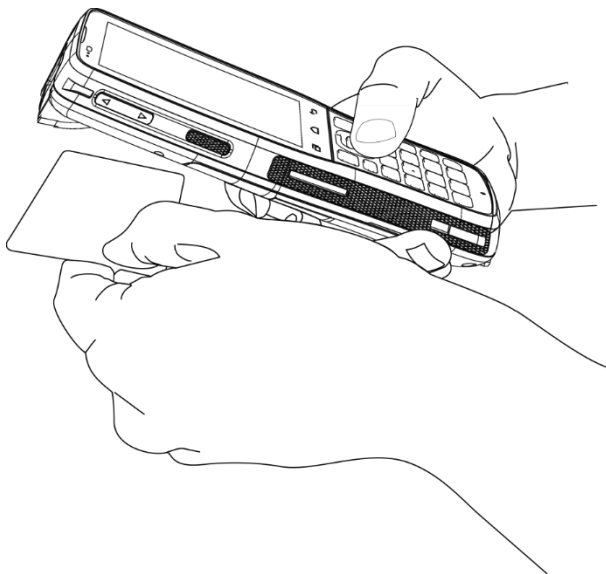
Once the data begins to transfer, the two devices only need to be held within a 10 m (32.8 ft.) range; they no longer have to be held within close range in order to transfer successfully.

---

---

### 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 6

### USING THE PHONE

---

The RK25 mobile computer allows making phone calls and connecting to the network over Wideband Code Division Multiple Access (WCDMA). Insert the SIM card before turning on the power. Refer to [Installing SIM Card, SAM Card and Memory Card](#).

---

**Note:**

- (1) If the SIM card is not in position, you may make emergency calls if the service is supported.
  - (2) [10° tilted reader model](#) is equipped with 1 SIM slot & 1 optional SIM/SAM slot, while [70° tilted reader model](#) is equipped with dual SIM slot.
- 

#### IN THIS CHAPTER

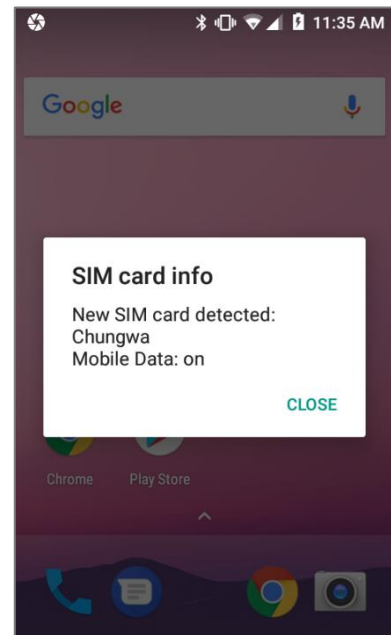
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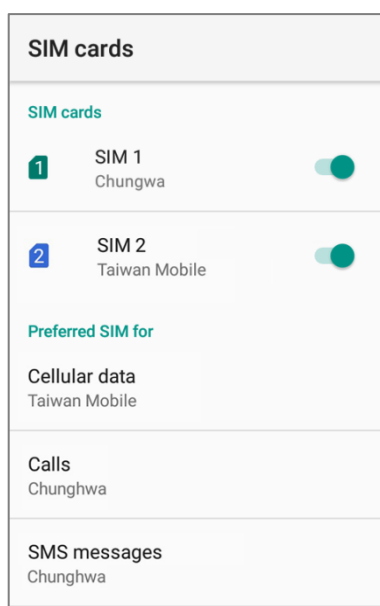
## 6.1. SIM CARD MANAGEMENT

The mobile computer accommodates two SIM cards and supports dual standby of two different networks. Both networks will be monitored at the same time, and the phone will dynamically switch between the two networks during usage. Calls will be placed with either one of the networks; you cannot switch networks in the middle of a received call or placed call, or receive or place calls with both networks at the same time.

When a SIM card is installed for the first time, the phone is enable automatically when the mobile computer is powered on. A dialog box pops-up when the mobile computer is powered on notifying that a SIM card is detected.



- 1) To open the SIM card management screen, please go to [App Drawer](#) | **Settings**  | **SIM cards** 
- 2) If you already have both SIM1 and SIM2 cards inserted, enable these cards on SIM cards screen and respectively select the Preferred SIM for Cellular data, Calls and SMS messages.



**Note:**

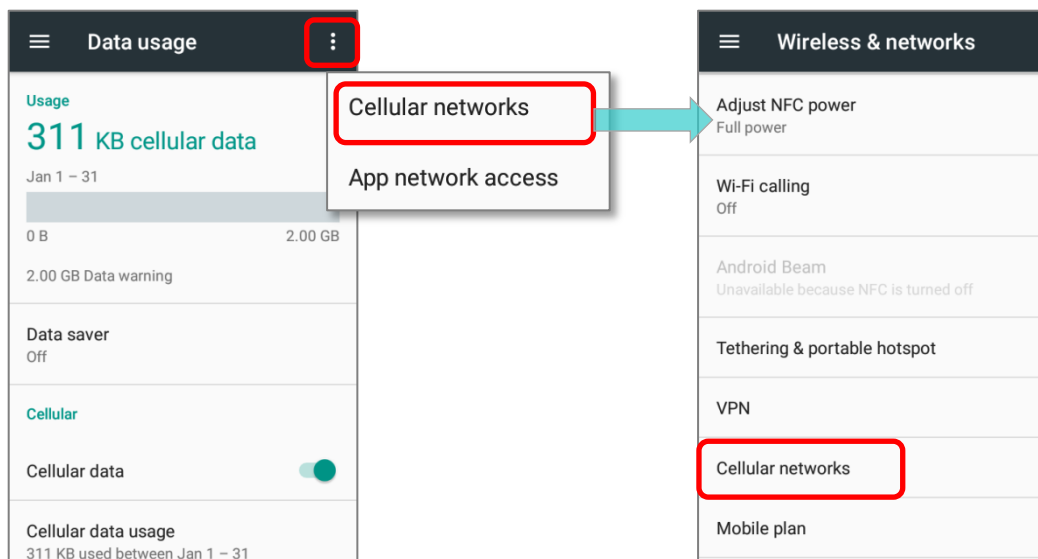
- (1) When both SIM cards are both inserted and enables, they are both active and ready to receive an incoming call but not able to be connected at the same time.
- (2) [10° tilted reader model](#) is equipped with 1 SIM slot & 1 optional SIM/SAM slot, while [70° tilted reader model](#) is equipped with dual SIM slot.

**CELLULAR NETWORKS SETTINGS**

- 1) Go to [App Drawer](#) | **Settings**  | **Data usage** , and tap  to select “**Cellular networks**” from the menu.

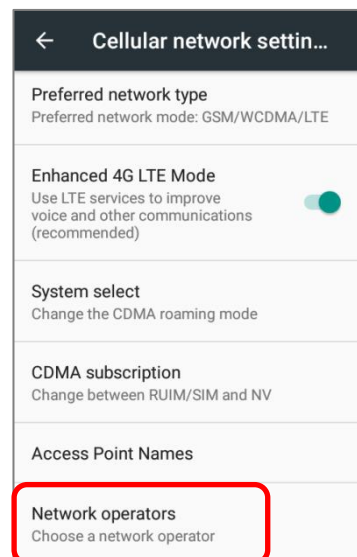
**OR**

Go to [App Drawer](#) | **Settings**  | **More** , and tap “**Cellular networks**”.



- 2) Swipe to the bottom of **Cellular network settings** page, and tap “**Network operators**”.

Available networks will be listed after searching.

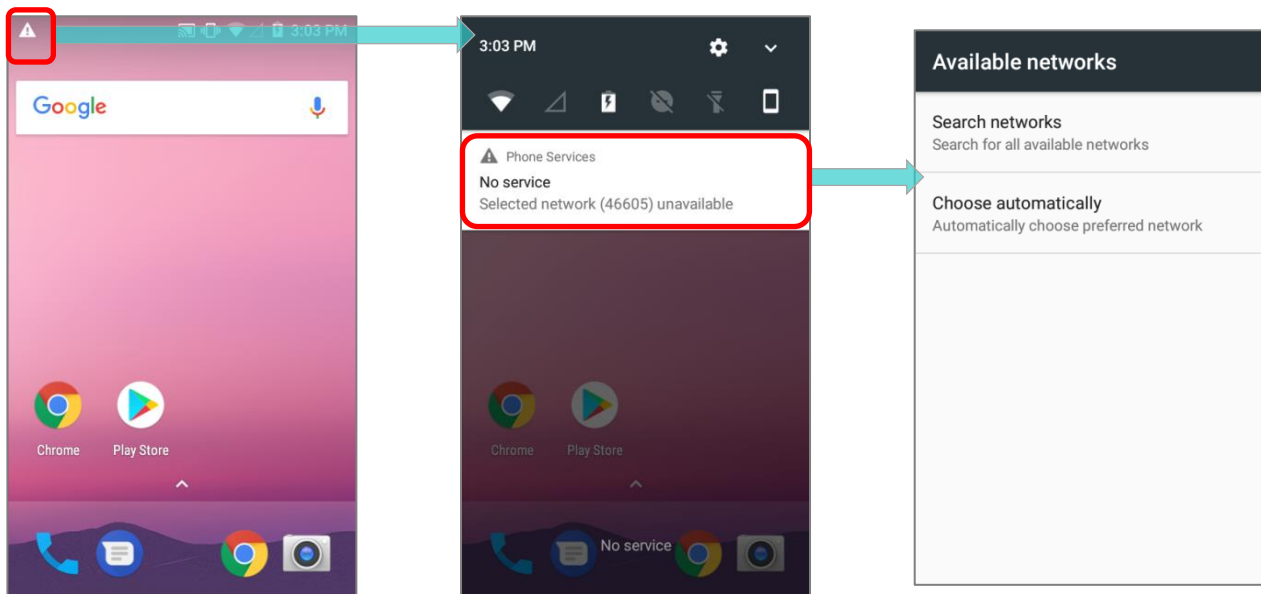




- 3) Select your preferred network from the list, or remain it as the default setting **"Choose automatically"**.

Available netw... SEARCH NETWORKS
Choose automatically Automatically choose preferred network
AVAILABLE NETWORKS
Chunghwa Telecom 3G
Chunghwa Telecom 4G
46605 2G(Forbidden)
TW Mobile 4G(Forbidden)
46605 4G(Forbidden)
T Star 3G(Forbidden)

- 4) A notification appears if the selected network is unavailable. Tap it to select the network again.



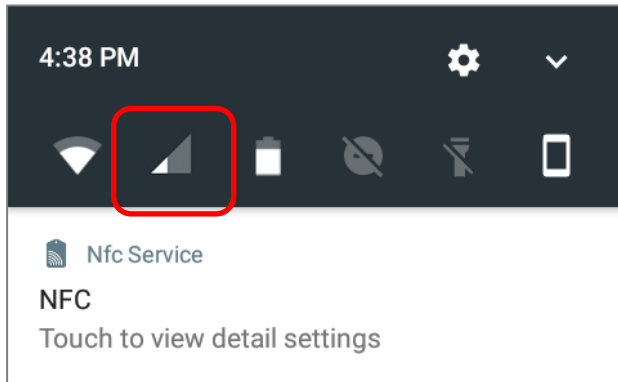
## EMERGENCY CALLS




Depending on your service provider, the mobile computer might support making emergency phone call when the SIM card is locked, or even when no SIM card is inserted. Emergency phone numbers will vary by country.

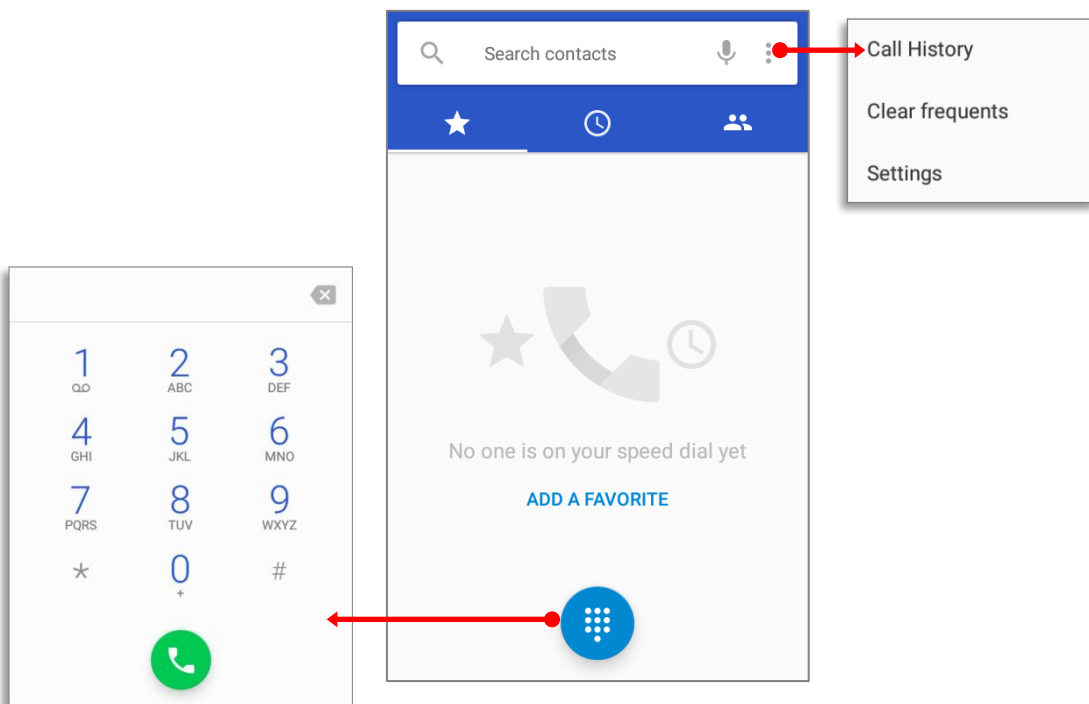
## 6.2. PHONE APPLICATION

### 6.2.1. PHONE INTERFACE

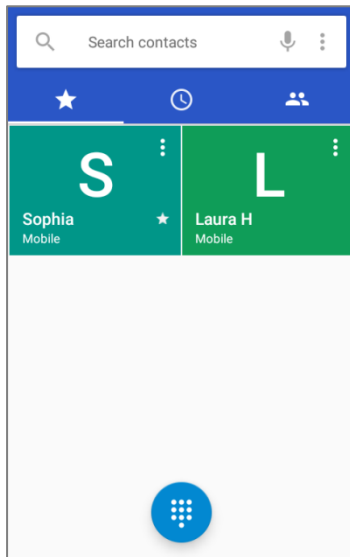
When a SIM card is installed on the mobile computer, a signal icon appears on the status bar. The white part of the signal icon indicates the strength of the connection.




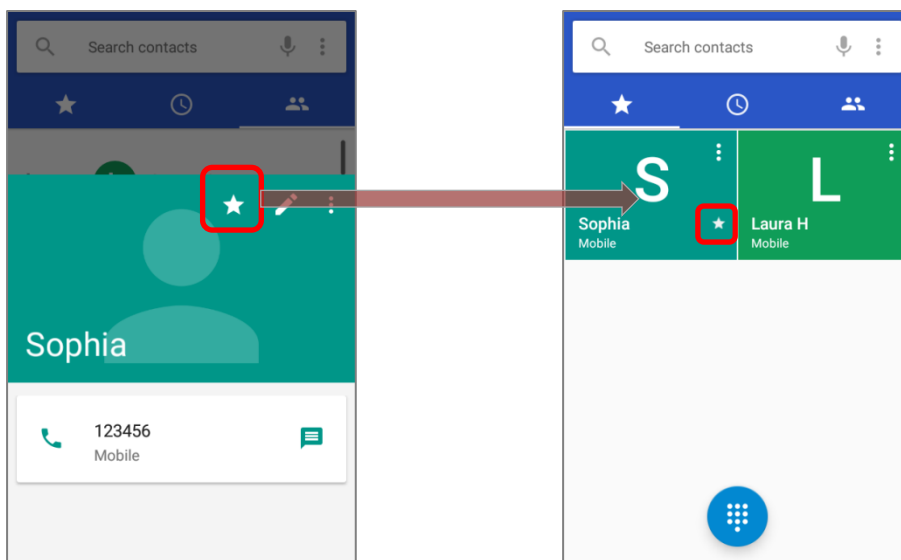
- 1) Go to [App Drawer](#) | **Phone** . The Phone application opens.
- 2) Tap the settings button  to open the phone settings menu for adding a new contact, and then opening the contact application.
- 3) Tap  to open the dial pad.



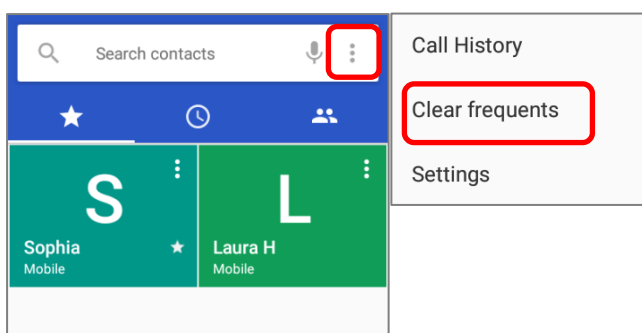
In  tab page, it displays your **Favorite** contacts & your frequent calls:




To add a favorite contact, please tap the contact in  tab page and tap the star mark to add.




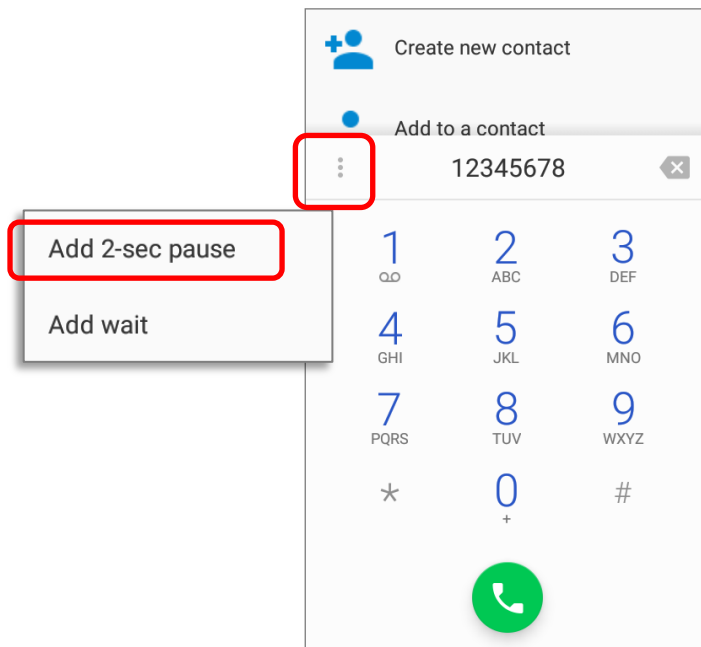
To clear the frequent calls, please tap and select "**Clear frequents**"



## 6.2.2. PLACE CALL

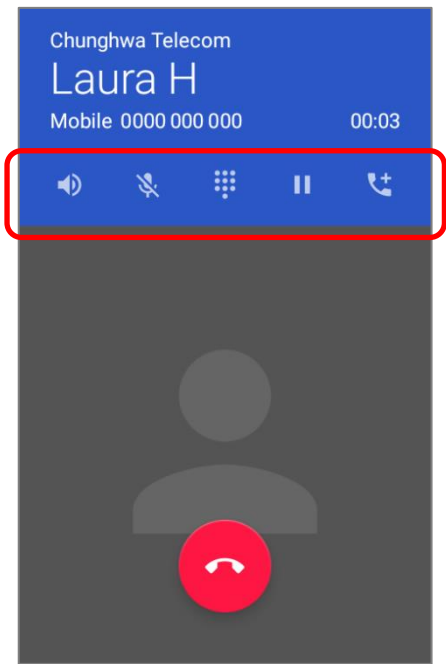
Enter the phone number in the dial pad and tap  to initiate the call.






If you need to frequently make calls to an interactive voice system, you may tap  next to the number and select **Add 2-sec pause** for soft pause (a pause of 2 seconds to the buttons) or a hard pause (a pause that will wait for your confirmation to send the following digits).



6.2.3. DURING A CALL


When a call is connected, the phone keypad features the following buttons:

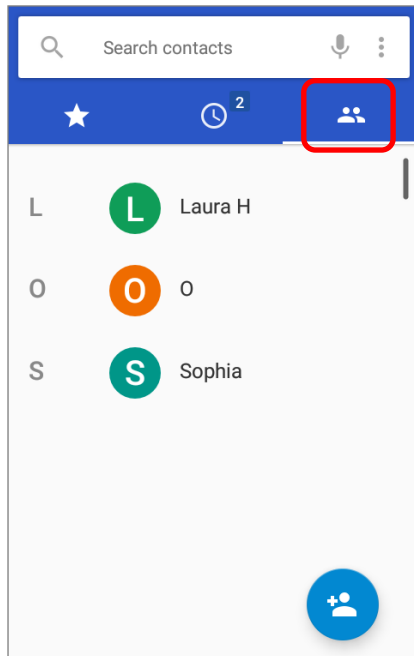


Button		Description
	Speaker	Turn on the speaker.
	Mute	Mute the call.
	Keypad	Open the numeric keypad.
	Hold	Place the call on hold.
	Add call	Add another person to the call.

## PLACE CALL USING CONTACTS

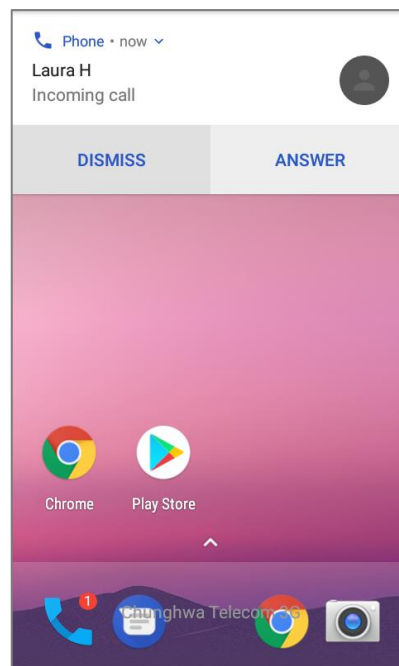
To make a call using contacts:

- 1) In the phone application page, tap .
- 2) Tap a contact to initiate a call.



## 6.2.4. RECEIVE INCOMING CALL


When a call is incoming on the mobile computer, tap ANSWER to pick it up.



Incoming calls will be logged in the **Phone** application; in the case of a missed call, a notification will be displayed. See [Check Missed Calls](#).

To mute the ringtone of an incoming call, press the volume down button.

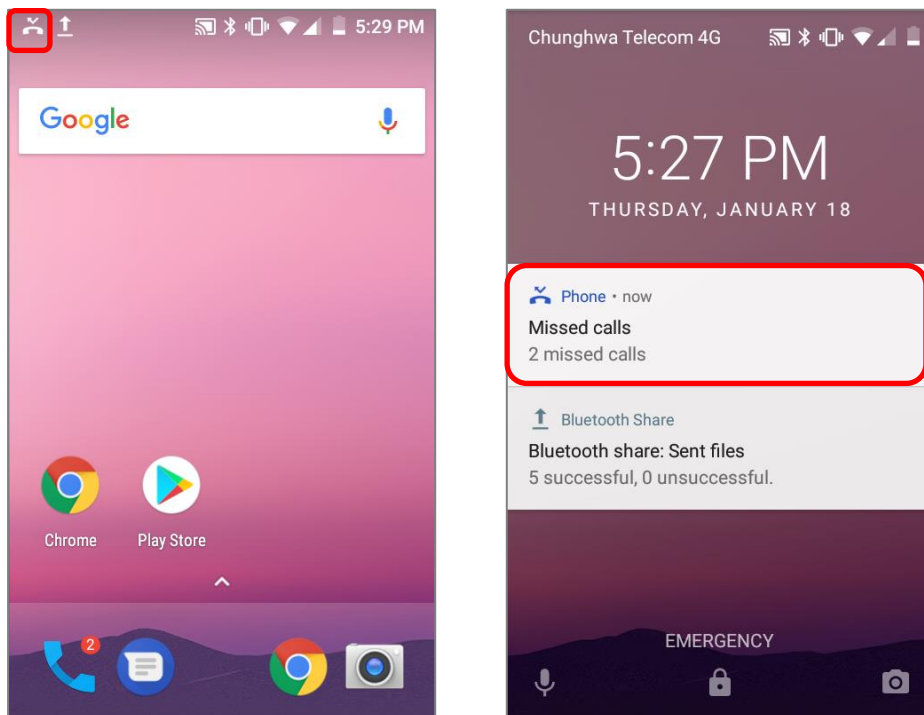
## 6.2.5. CHECK MISSED CALLS

If you have a missed call, a notification icon  will appear on the status bar. The number of missed calls will also be displayed on:

1) The **Phone** app icon

2) The **Lock Screen**



(Turning on/off this function on [App Drawer](#) | **Settings**  | **Notifications**  | **Settings**  | **On the lock screen**)

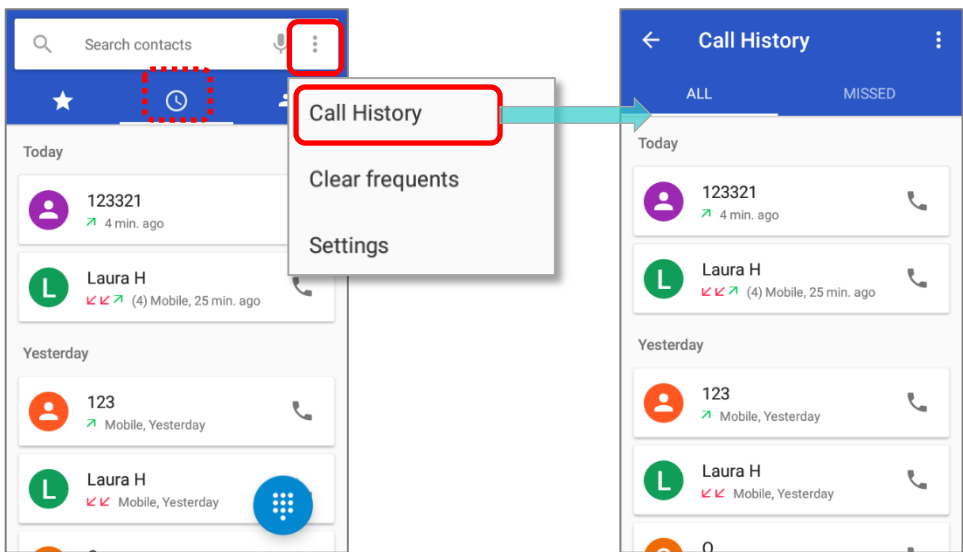




Unlock the screen and use the [Notifications Drawer](#) to manage the missed call.




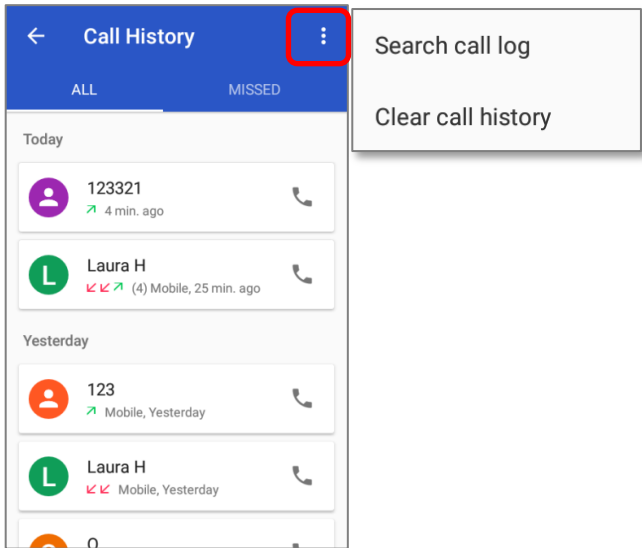
6.2.6. CALL HISTORY

- 1) On the Phone application page, tap the **History** button  to open a list of history calls. Or you can tap settings button  and then **Call History**.



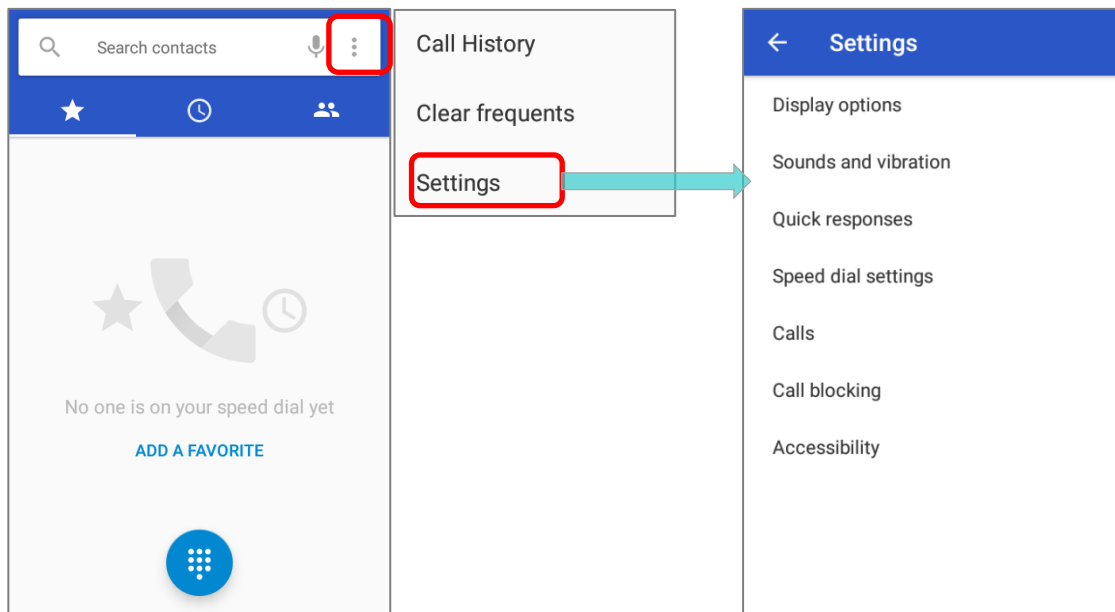
Item	Description
	Connected calls.
	Missed calls.

- 2) Tap the phone icon  next to a call record to place back the call.



## 6.2.7. CALL SETTINGS











Tap  and select "**Settings**" to enter the settings page:



Tap each setting for more setting options.

## 6.2.8. MAKE MULTI-PARTY CALLS

To make multi-party conference calls:

- 1) On the Phone application page, enter the 1<sup>st</sup> number to call and tap  to initiate the call.
  - 2) After the call has begun, tap **Add call**  to add another member. The 1<sup>st</sup> call will be put on hold.
  - 3) Select the 2<sup>nd</sup> member from call log or contacts to call directly, or tap the dial pad  to input the phone number to call and tap  to initiate the call.
  - 4) When the 2<sup>nd</sup> call is connected, the first call will continue to be on hold. Tap the merge call button  to add the 1<sup>st</sup> call to the conversation. A three-party conference call is initiated.
- ▶ To add a 4<sup>th</sup> member, please tap . The three-party call will be put on hold. Follow the step similar to step 3 to initiate the call. When the call is connected, the three-party call will continue to be on hold. Tap the merge call button  to add the three-party call to the conversation. A four-party conference call is then initiated.
  - ▶ Tap **Manage Conference Call** to view all members of the call.
  - ▶ To remove a member, tap  next to the member.
  - ▶ To speak with a member in private, tap  next to the member, and the conference call will be put on hold. Tap  to return back to the conference call.

## 6.3. AUDIO MODES

The mobile computer offers three different audio modes for phone calls:

---

### HANDSET MODE

This is the default audio mode which uses the receiver above the touchscreen for audio output during calls.

---

### SPEAKER MODE

This mode uses the built-in speaker for audio output during calls.

---

### HEADSET MODE

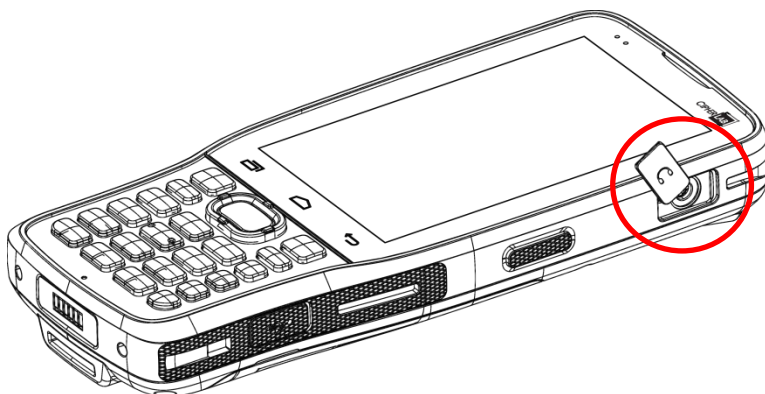
Connect a Bluetooth headset or a wired headset to the mobile computer for audio output during calls.

#### USE BLUETOOTH HEADSET

See [Pair Bluetooth Devices](#) to connect the mobile computer to a Bluetooth device. The speaker phone becomes muted when a Bluetooth headset is connected.

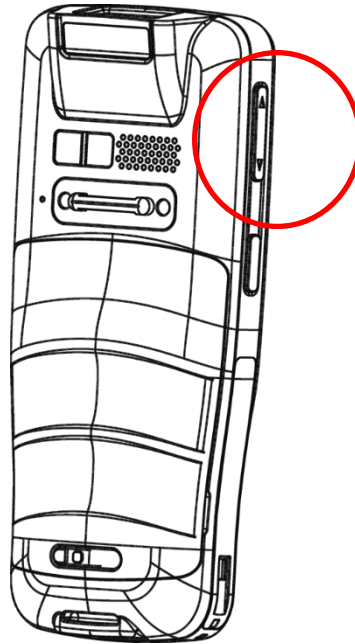
#### USE WIRED HEADSET

Insert a wired headset in the Headset Jack. The speaker phone becomes muted when a wired headset is connected.



## 6.4. IN-CALL VOLUME

Use the Volume Buttons to adjust the ringer volume and system sound level. When in the middle of a call, use the volume buttons to adjust in-call conversation volume.



## Chapter 7

### CIPHERLAB UTILITIES

---

This chapter gives the introduction about the built-in applications developed by CipherLab

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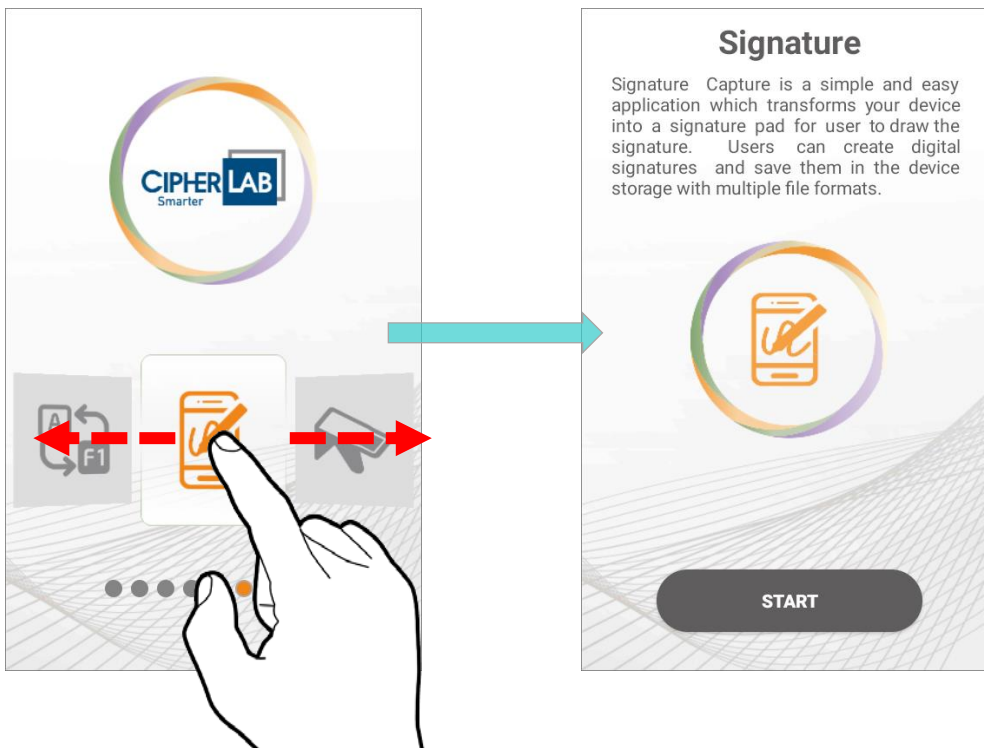
## 7.1. A-DEMO



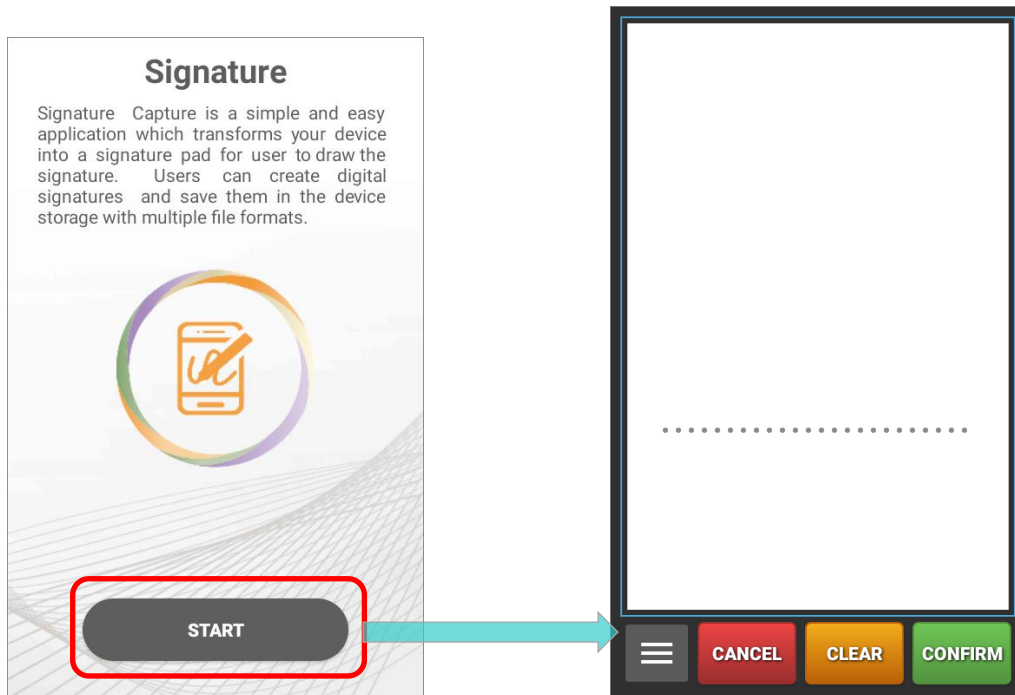
**"A-Demo"** is an application which gives the brief introduction about all the built-in applications developed by CipherLab.



Enter the main screen and swipe left or right to select the item to get the function introduction.



Users can launch those apps by tapping “**START**” on the app’s introduction page.





## 7.2. APPLOCK



**AppLock** controls the interface provided to users. It dominates over the O.S. and limits the system resources made available to users. Properly tuned, AppLock gives way to ordinary working applications while locking out those that are not so productive.

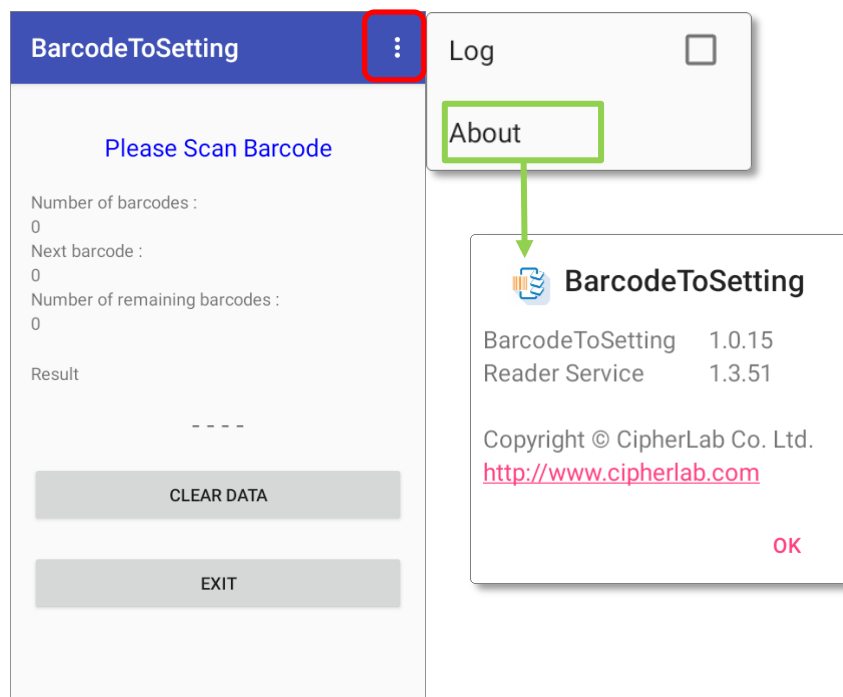
If you have a collection of mobile computers, you can apply a uniform user environment to the entire group without the need of great time and effort. This can be done easily by reduplicating a copy of master settings to your entire set of mobile computers.

For the operation instruction of **AppLock**, please refer to [AppLock User Guide for Android](#).

### 7.3. BARCODE TO SETTING



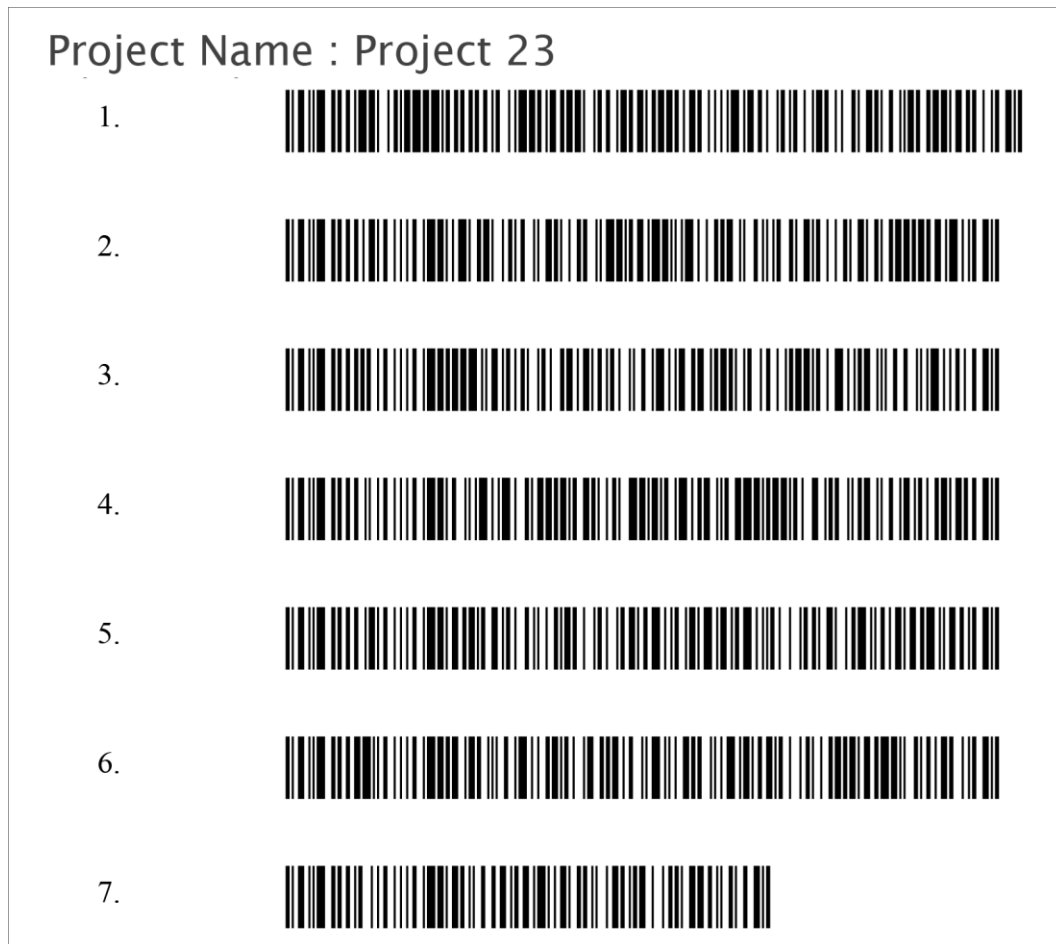
“BarcodeToSettings” is to read the setting barcodes generated by **ADC** (Android Deployment Configurator) to apply the configuration. Launch “BarcodeToSettings” and the main screen shows as below:



Item	Description
<b>Number of barcodes</b>	The total amount of the barcodes to be scanned.
<b>Next barcode</b>	The item number of the next barcode to be scanned.
<b>Number of remaining barcodes</b>	The amount of the remaining barcodes to be scanned.
<b>Result</b>	The setting result will be “ <b>Success</b> ” or “ <b>FAIL</b> ”
<b>CLEAR DATA</b>	Clear the data of the barcode(s) you just scanned.
<b>EXIT</b>	Close and leave the application “BarcodeToSettings”.
<b>Log</b>	Select whether to save the log in the internal storage.
<b>About</b>	The current version information of “BarcodeToSettings”.

The setting barcode(s) you generated by **ADC** might be 1D or 2D as the example figures shows:

- 1D barcodes:

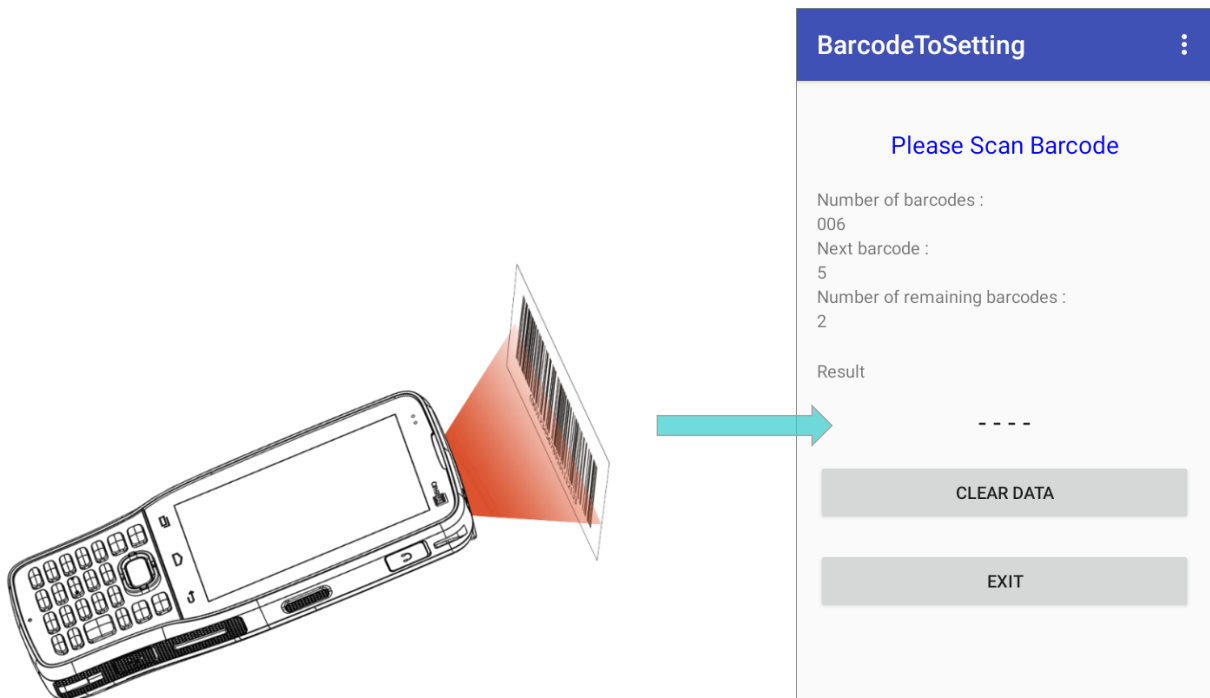


- 2D barcode:

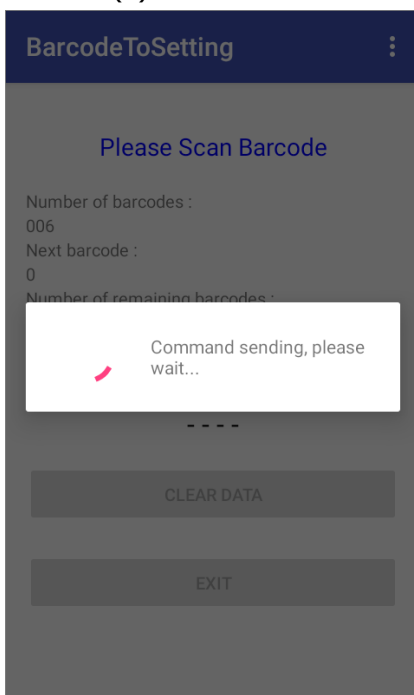


## HOW TO APPLY THE SETTINGS BY SCANNING BARCODE(S)

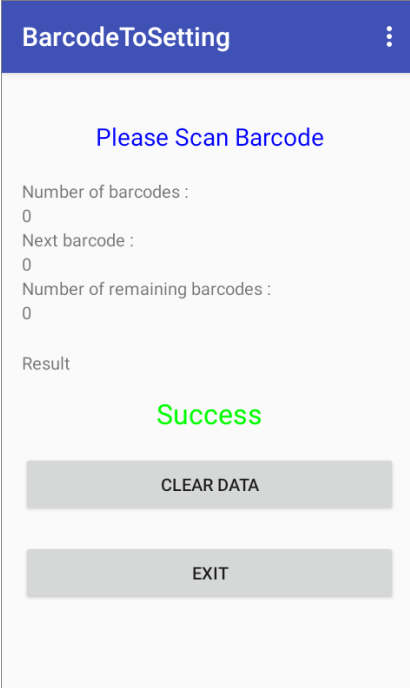
Simply aim the scanning window at the barcode to read and press any of the side trigger. The scanning light beams to read the printed barcodes.



It takes few seconds for your device to apply the configuration after scanning the setting barcode(s) is done.



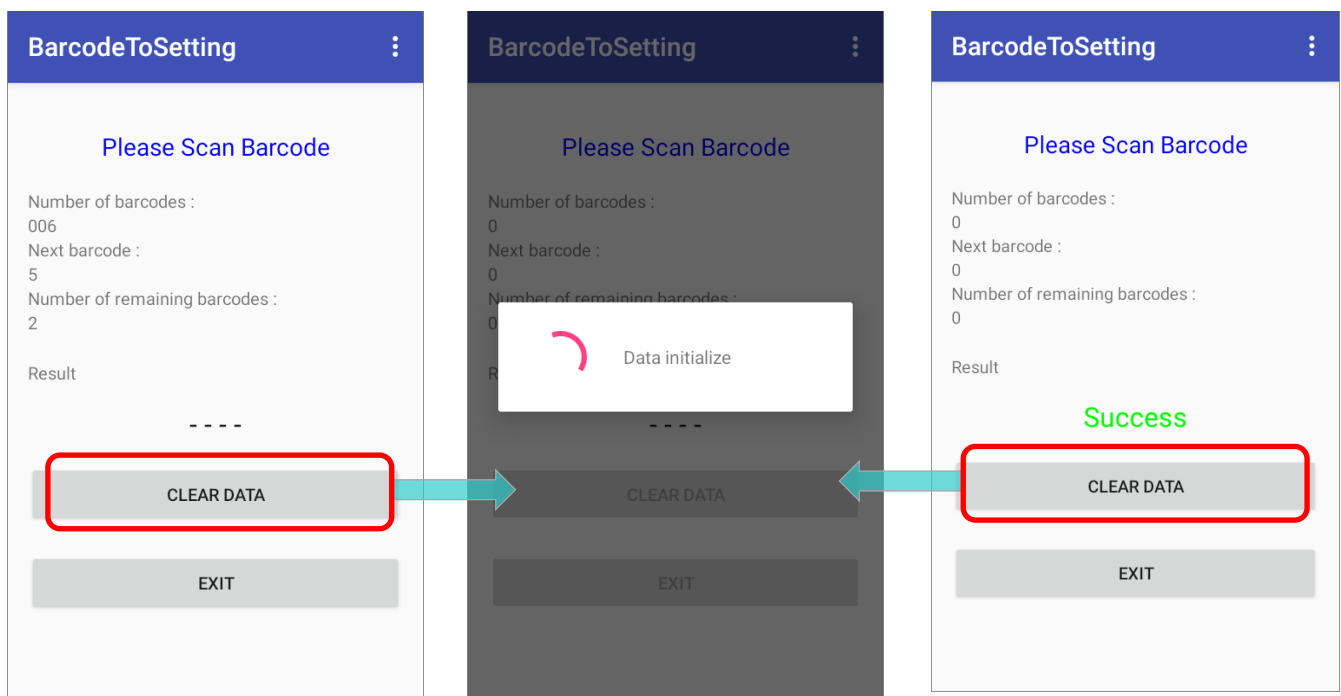
Configuration is complete.



The screenshot shows the BarcodeToSetting app interface. At the top, there's a blue header with the title 'BarcodeToSetting' and a menu icon. Below the header, the text 'Please Scan Barcode' is displayed in blue. The interface shows the following data: 'Number of barcodes : 0', 'Next barcode : 0', and 'Number of remaining barcodes : 0'. Under the 'Result' section, the word 'Success' is displayed in green. At the bottom, there are two buttons: 'CLEAR DATA' and 'EXIT'.

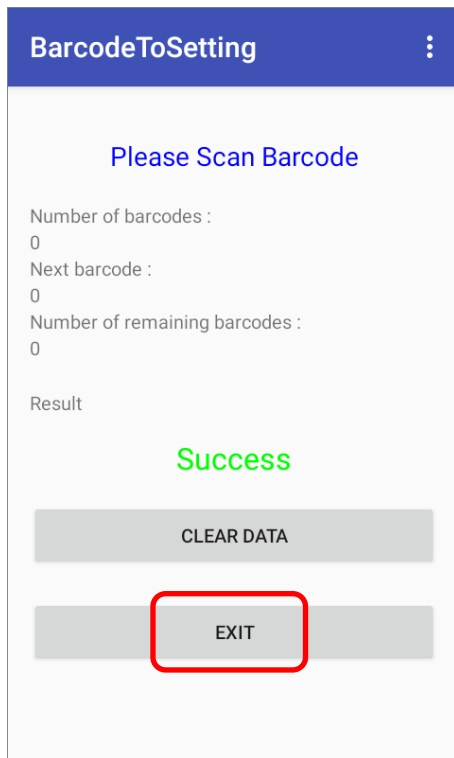
## CLEAR DATA

You may carry out “**CLEAR DATA**” during the scanning procedure (before it starts to apply the configuration) to start over. Or you may tap on “**CLEAR DATA**” button after completing configuration so that you can scan other barcodes you generated to apply other settings.



## EXIT

Tap on the button "EXIT" to quit "BarcodeToSettings".



## 7.4. BT PRINTER MATE



**BT Printer Mate** is an application which provides user interface to pair with Bluetooth printers.

## 7.5. BUTTON ASSIGNMENT



**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.

Users can change key behavior of the device with keypad by the application “**Button Assignment**” while changing the key behavior of device without keypad by “**Programmable Keys**” in settings.

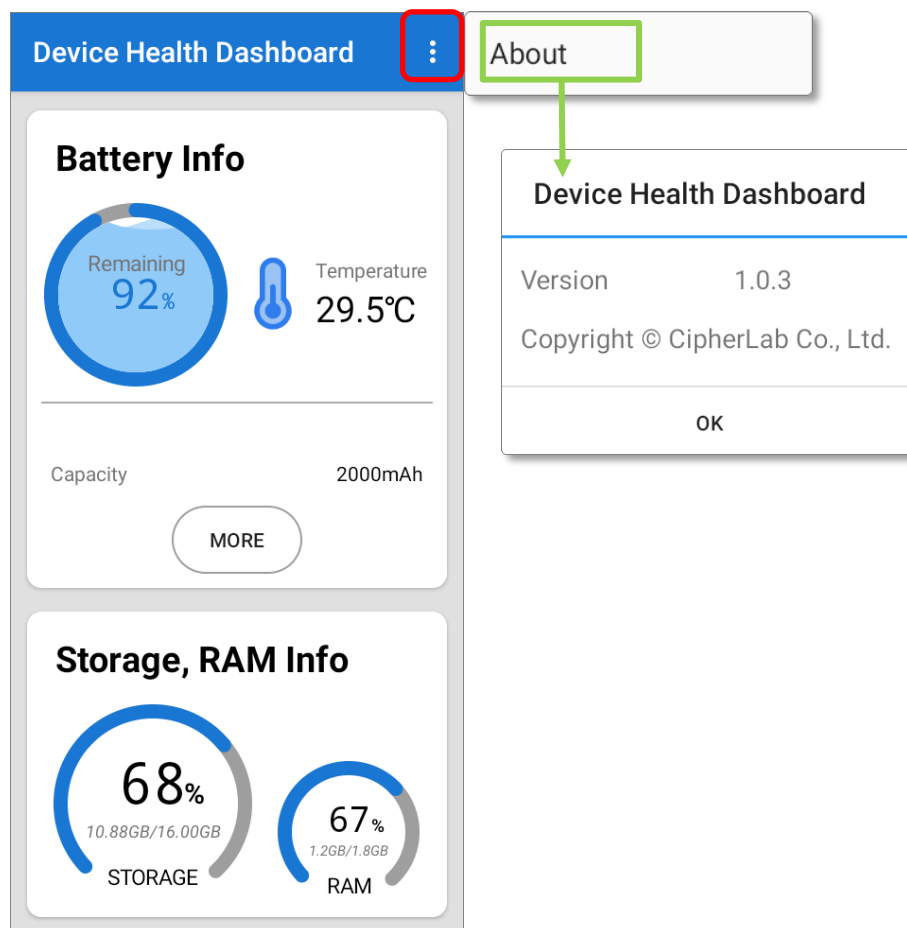
Please refer to [Button Assignment User Guide for Android](#).


## 7.6. DEVICE HEALTH DASHBOARD



“**Device Health Dashboard**” is for detecting the battery health status and showing the storage & RAM information of the device.

Please go to [App Drawer \(All Apps\)](#) and tap on the app “**Device Helth**” to enter its main page, and here you can check “**Battery Info**” and “**Storage, RAM Info**”.

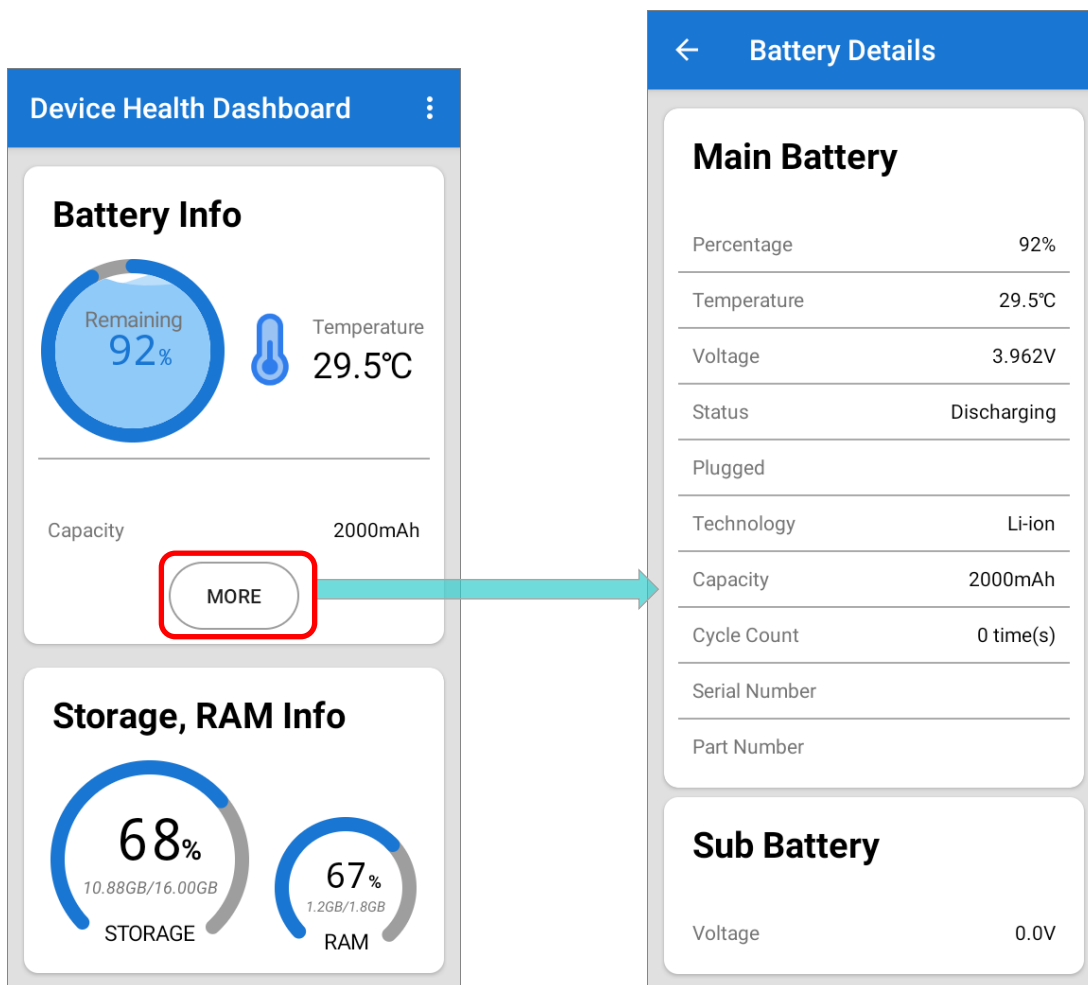


To check the app version information, please tap on the more button  on the action bar, and then “**About**”.



## CHECK THE BATTERY INFORMATION

To check the battery details, please tap on “**More**” button of “**Battery Info**”.



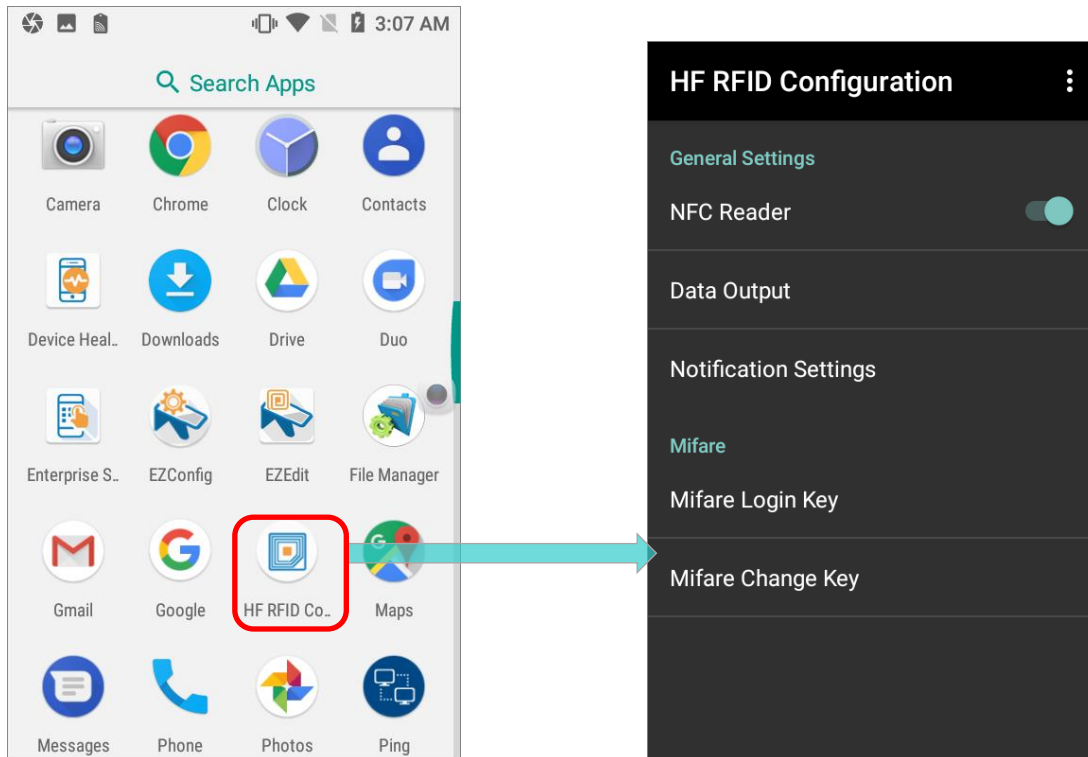
## 7.7. ENTERPRISE SETTINGS

For the details about  **Enterprise Settings** in RK25 mobile computer, please refer to [Enterprise Settings](#).

## 7.8. HF RFID CONFIGURATION



**HF RFID Configuration** is a NFC application which is for reading and writing NFC tags and RFID compatible chips by putting the NFC tag/ RFID chip close to the NFC detecting area of your device. User can control how the NFC reader works by settings in HF RFID Configuration and enabling it.

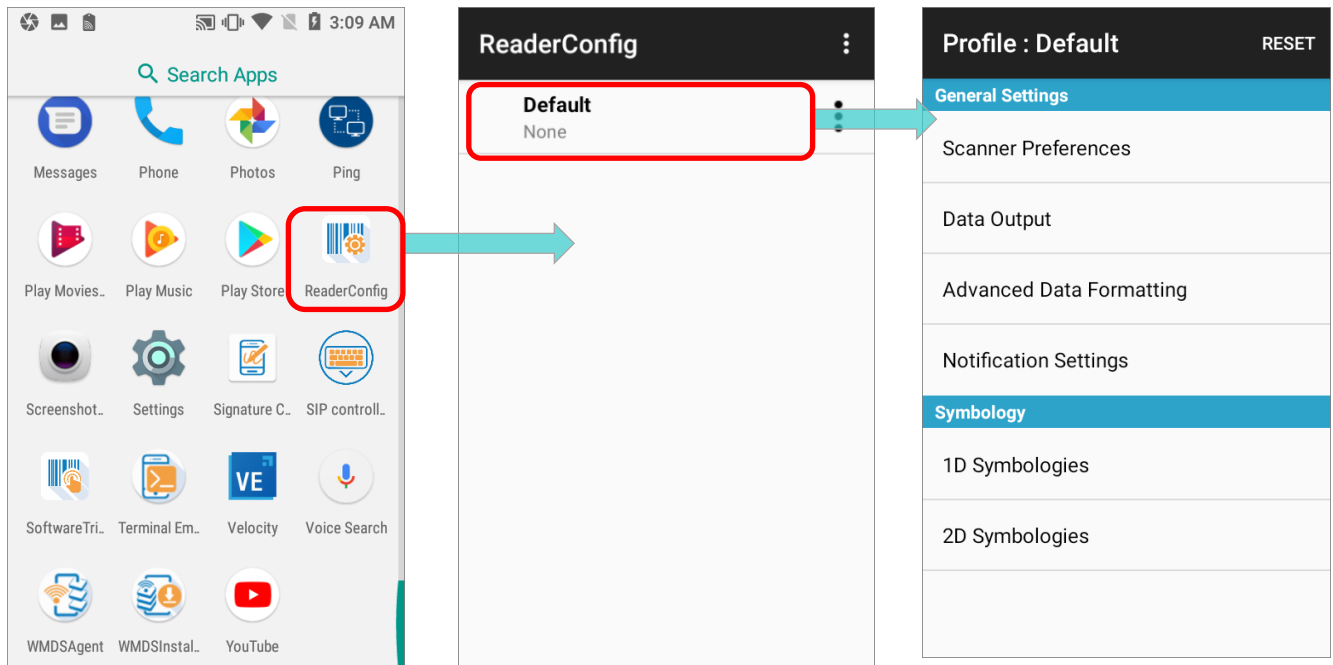


Please refer to [HF RFID Configuration User Guide for Android](#).

## 7.9. READER CONFIG



**ReaderConfig**, a built-in app for configuring the scan engine inside the mobile computer, allows users to set their scanner preferences and the way to output decoded data. Symbology and scanner settings can be saved and exported as a profile for importing again or implementing identical ReaderConfig settings on multiple devices.

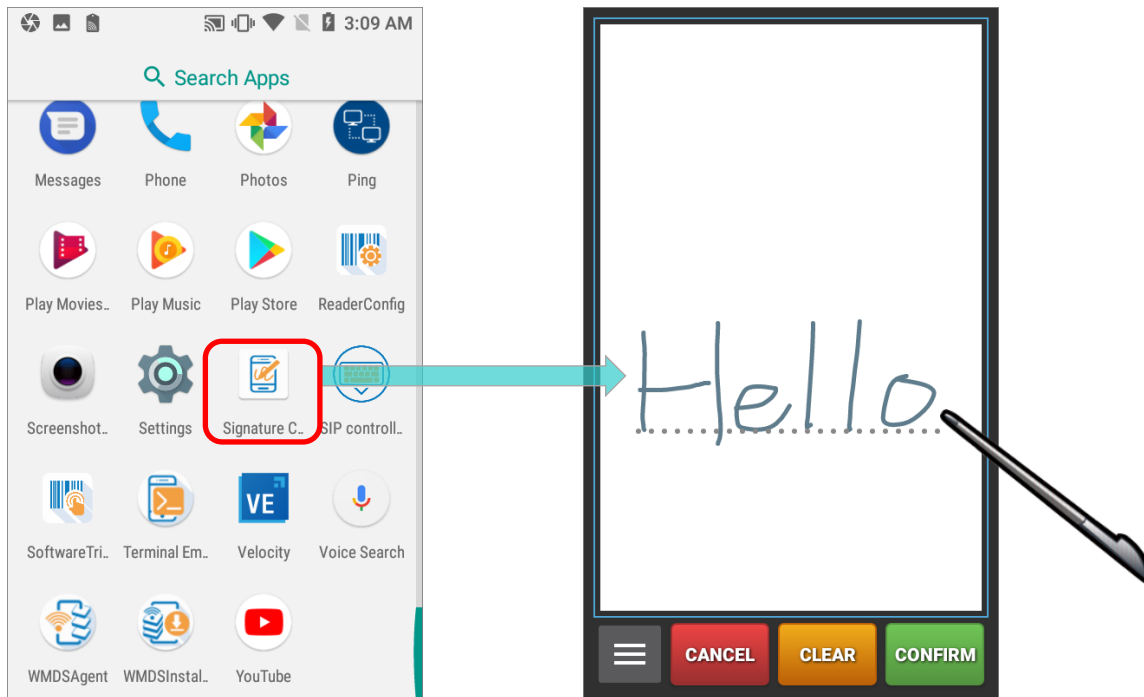


Please refer to [ReaderConfig User Guide for Android](#).

## 7.10. SIGNATURE CAPTURE



**Signature Capture** is a simple and easy application which transforms your device into a signature pad for user to draw the signature. Users can create digital signatures and save them in the device storage with multiple file formats.

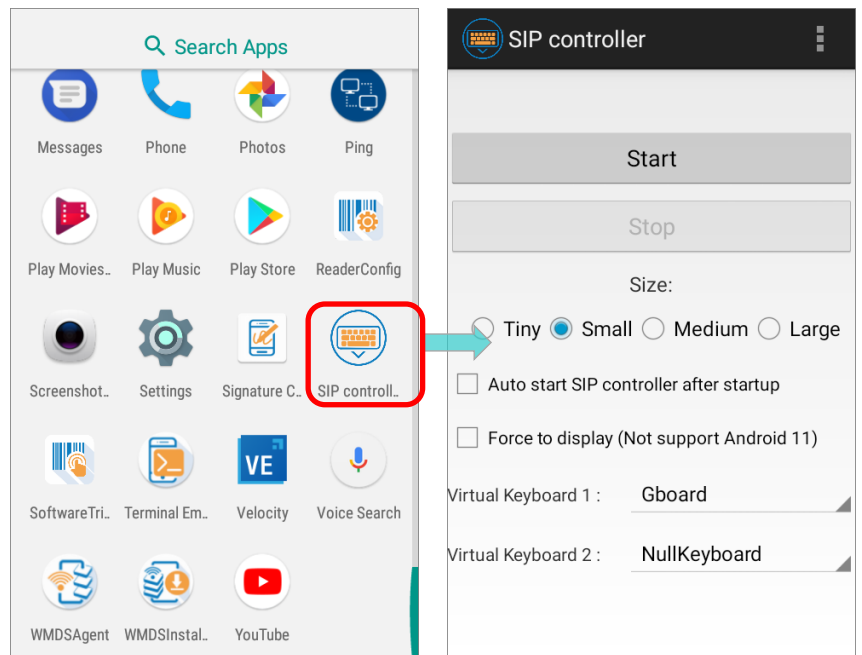


Please refer to [Signature Capture User Guide for Android](#).

## 7.11. SIP CONTROLLER




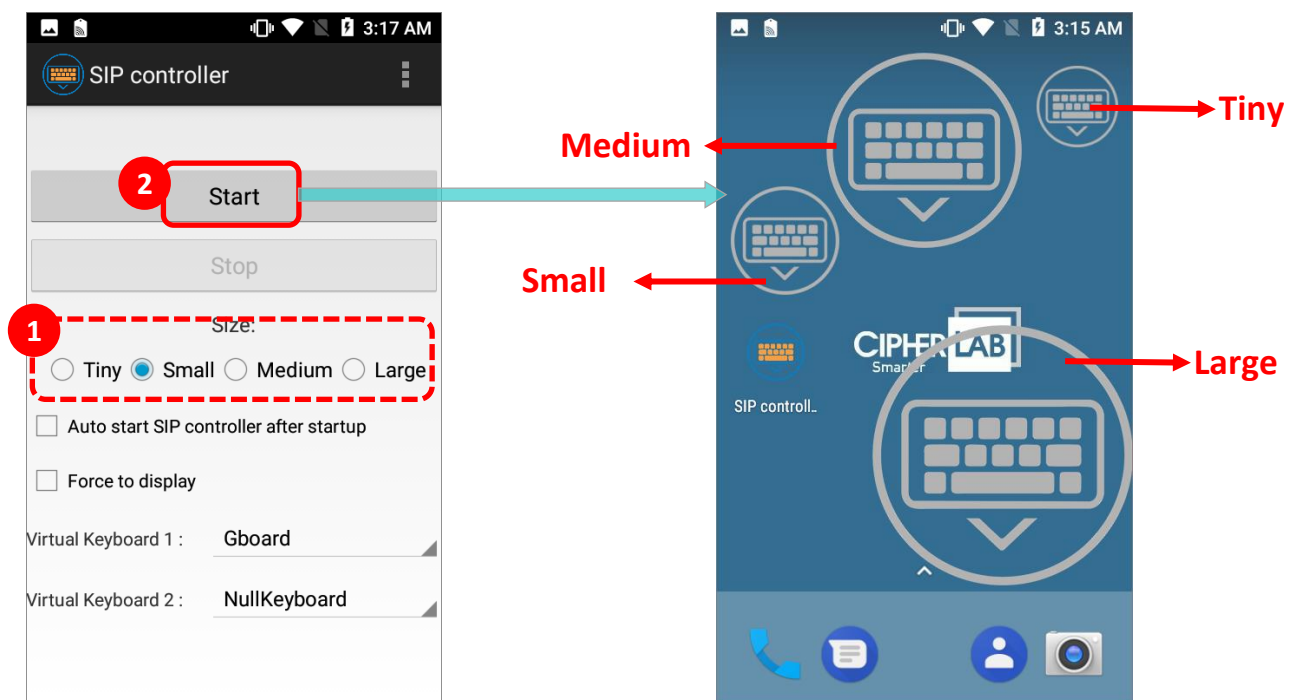
**SIP Controller**, a built-in application for quickly open or close virtual keyboard by tapping on the floating button.




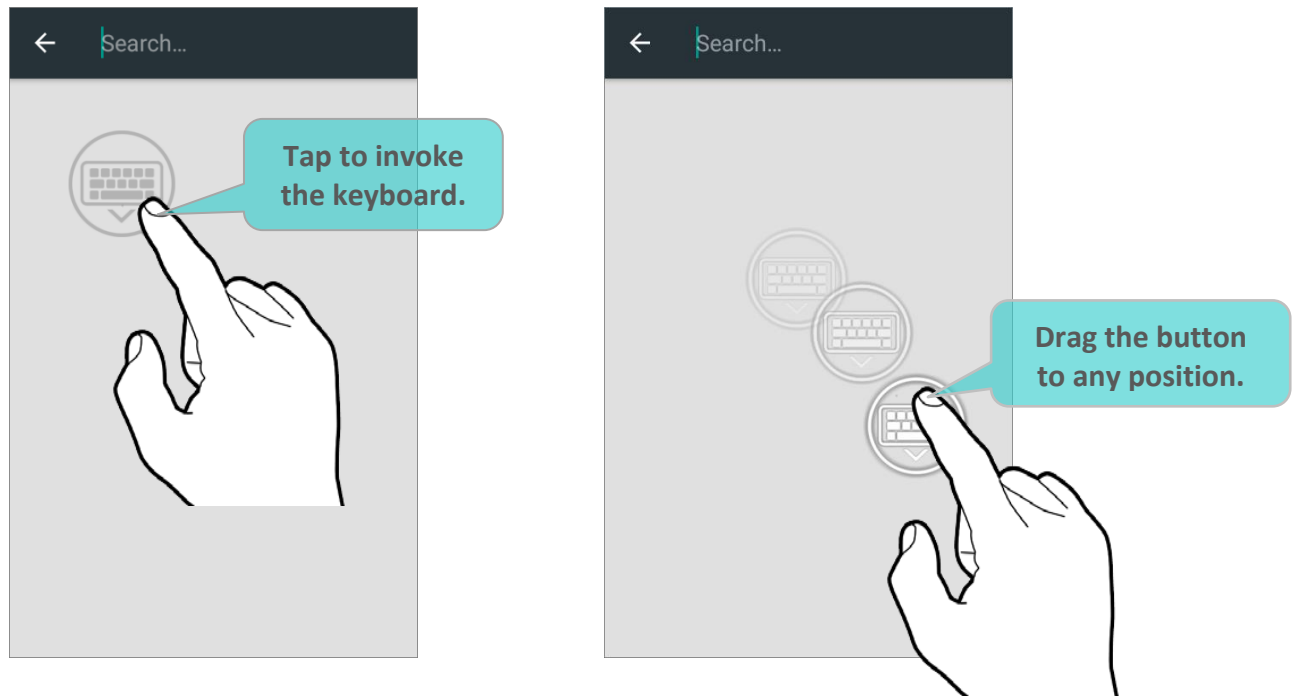
### LAUNCH SIP CONTROLLER

To launch SIP Controller:

- 1) On [App Drawer](#) screen, tap on "SIP Controller"  to enter the main screen.
- 2) Select the button size, and then tap on "Start".

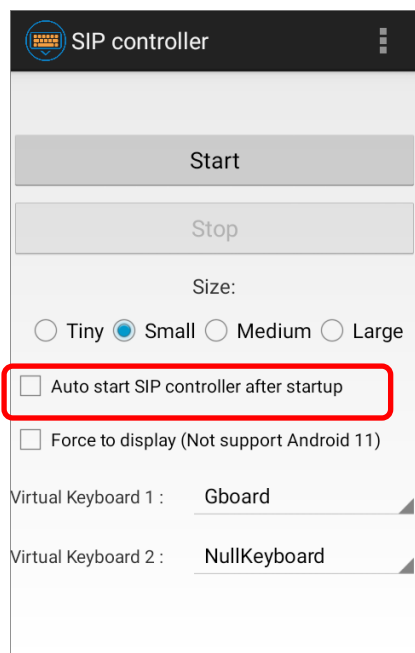


- 3) Now the **"SIP Controller"** button  appears on screen, and you can invoke the virtual keyboard by tapping on it. You can drag this button to any position on the screen.



## AUTO START

By enabling **"Auto start SIP controller after startup"**, **SIP Controller** will automatically start up on device boot up. Simply check the checkbox to enable this function.

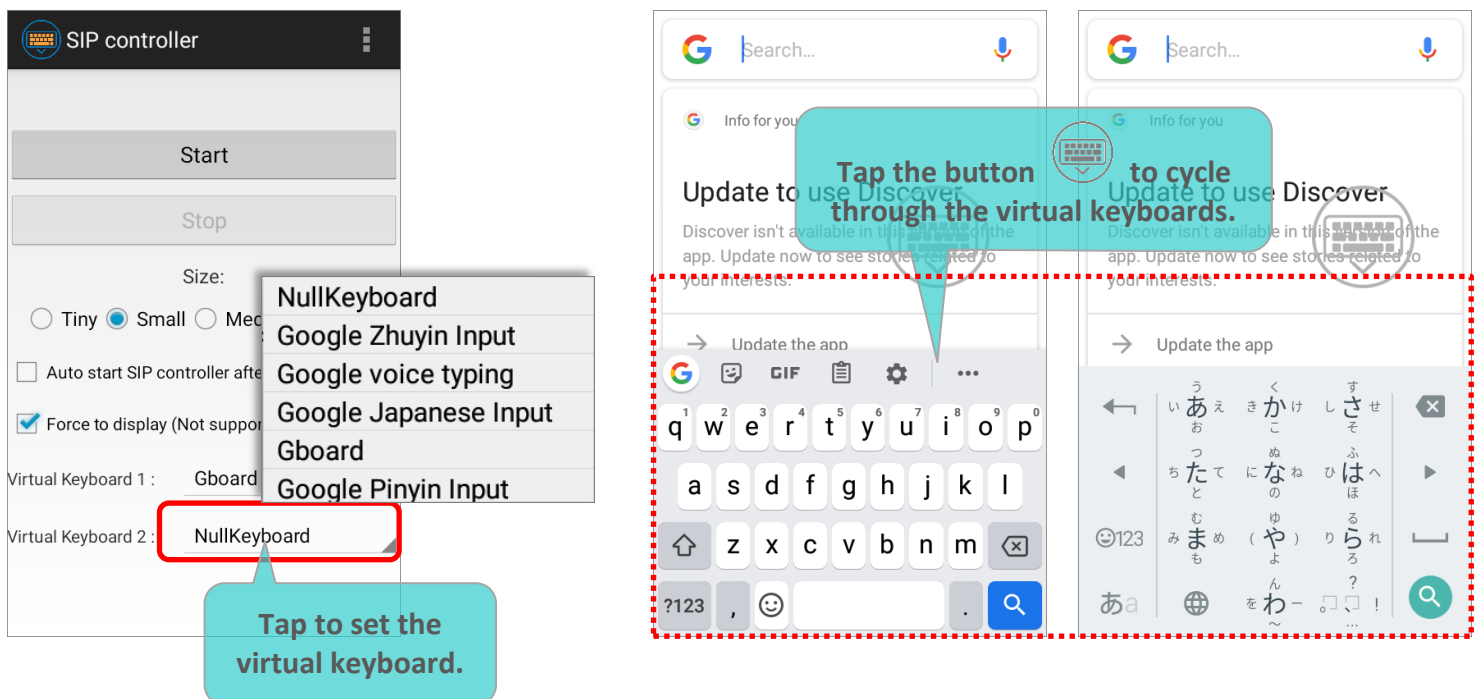


## FORCE TO DISPLAY

“**Force to display**” is to invoke the virtual keyboard even without the input field.

## SWITCH VIRTUAL KEYBOARD

You can set “**Virtual Keyboard 1**” and “**Virtual Keyboard 2**” to be the keyboard invoked by **SIP Controller**. Tap on the button to cycle through “**Virtual Keyboard 1**” and “**Virtual Keyboard 2**” you set.



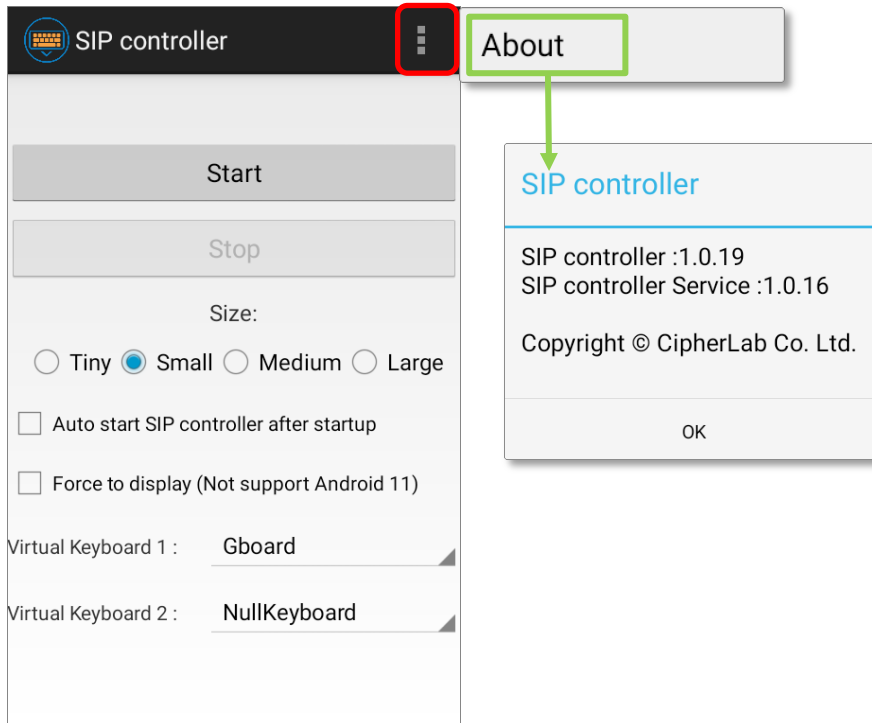
As to the keyboard to be selected on the drop-down menu, please refer to [On-screen Keyboard](#) for how to enable the keyboard.

## EXIT SIP CONTROLLER

Tap on “**Stop**” to disable **SIP Controller** on-screen button.

## VERSION INFORMATION

Tap on the more button on the action bar and select “**About**” to check the current version of **SIP Controller**.





## 7.12. SOFTWARE TRIGGER



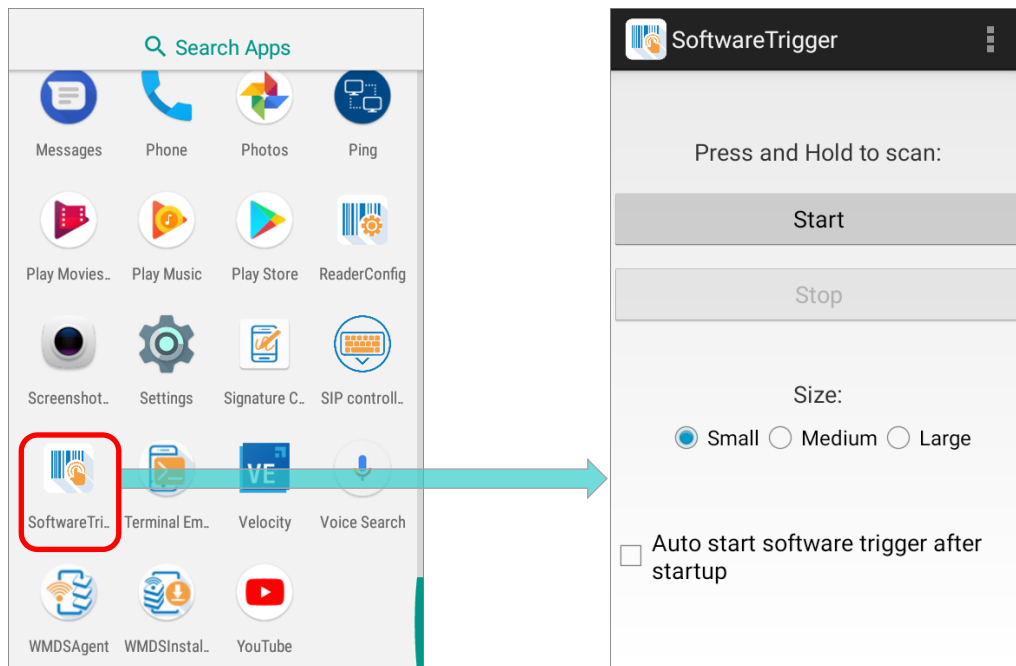
**Software Trigger** is an application running on mobile device. Serving as a real trigger key, it always floats on top of all other programs for convenient trigger control of the barcode scanner; by tapping and holding this virtual button, the device will keep casting a red beam to scan the code.



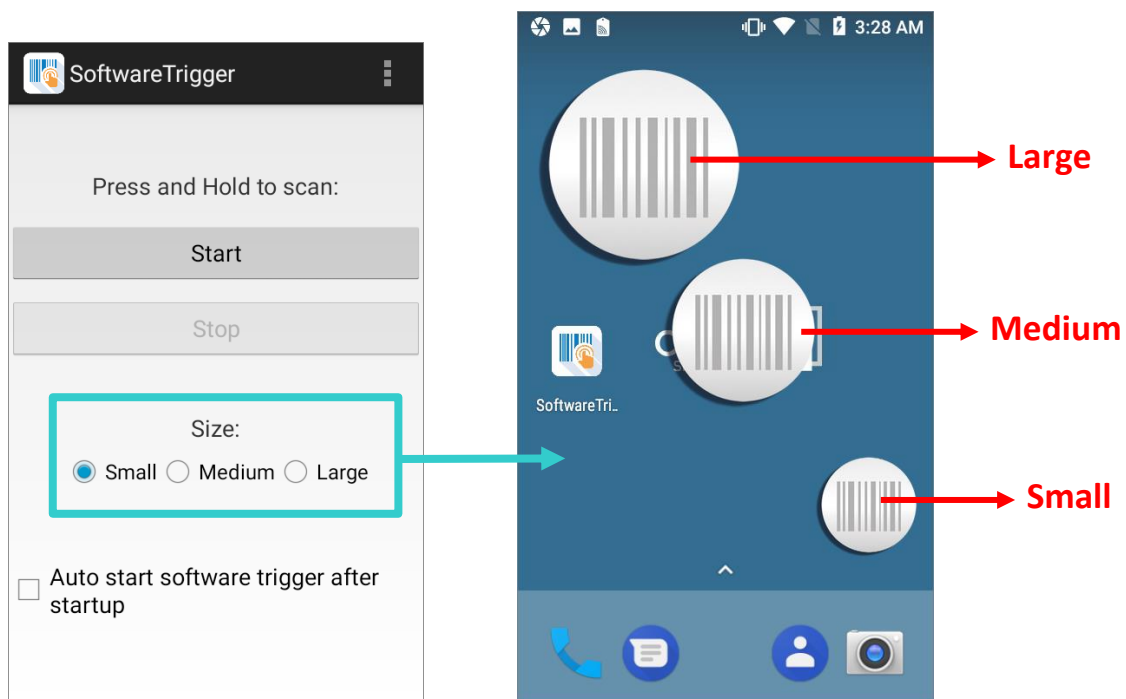
## LAUNCH SOFTWARE TRIGGER

Please follow the steps below to launch **Software Trigger**:

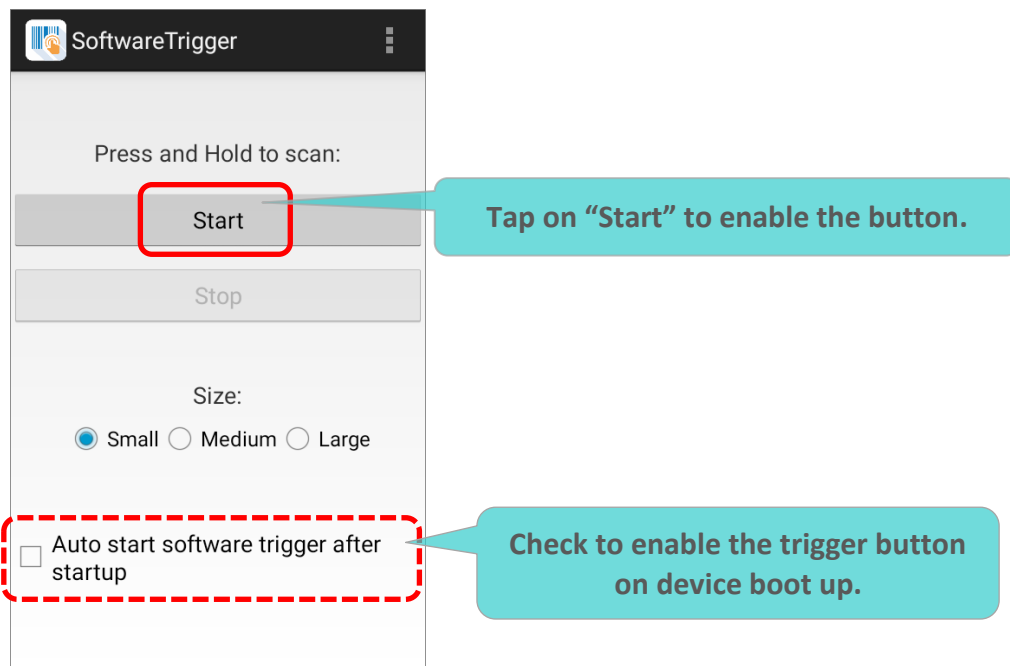
- 1) Go to [App Drawer](#) and tap on the app “**Software Trigger**”  to enter the main screen.



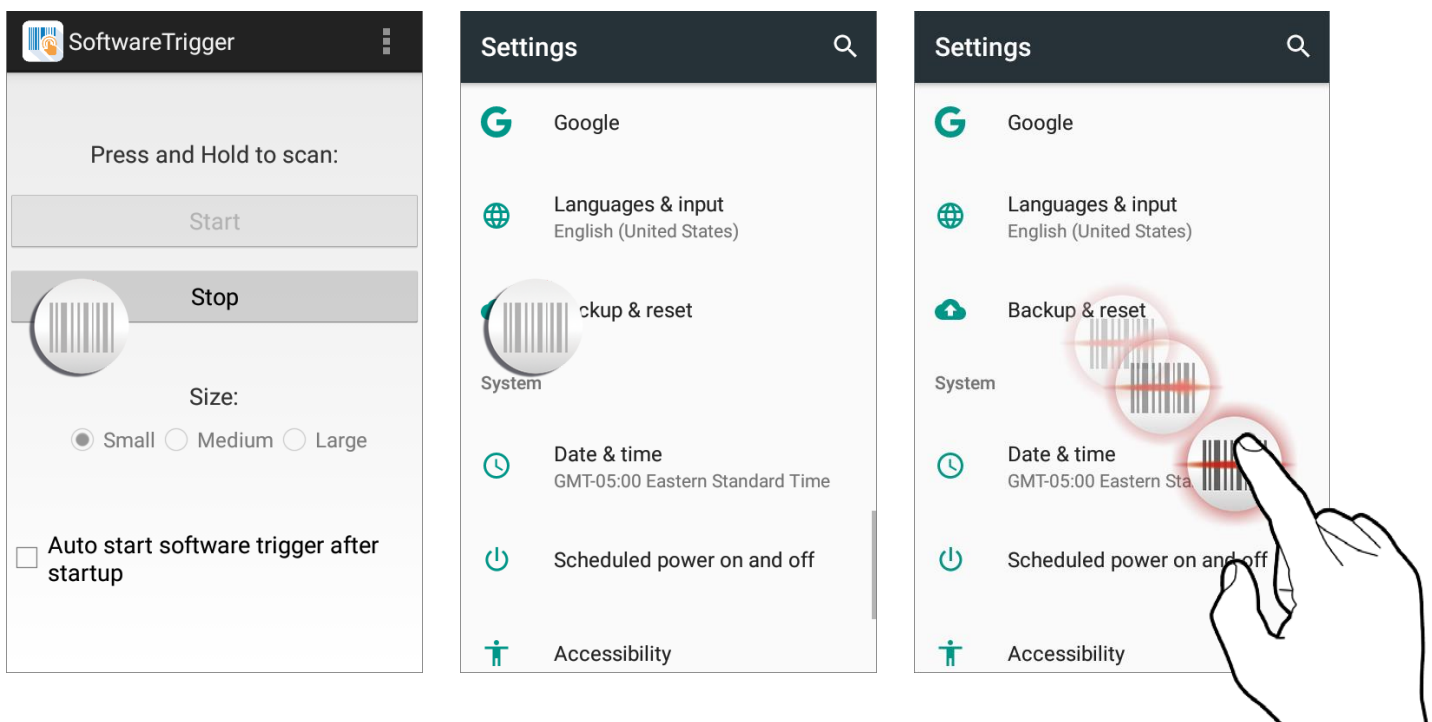
- 2) Select the size of the virtual trigger button:



- 3) Tap **"Start"** to enable the button. You can check **"Auto start software trigger after startup"** to have this application automatically launch right after the device starts up.

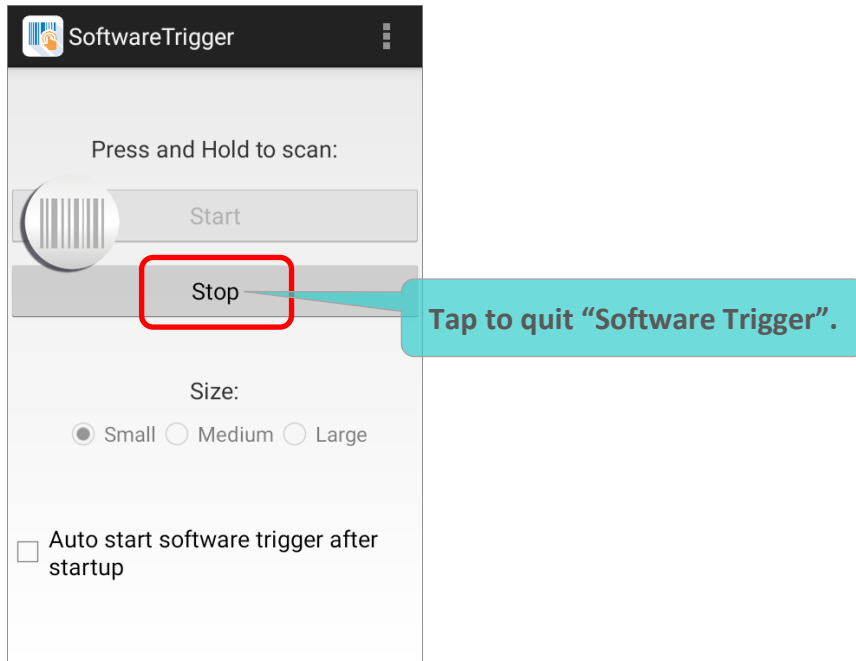


- 4) An always-accessible software keys will appear on your screen. This trigger button can be dragged to the position on the screen where you feel easy to control the trigger.



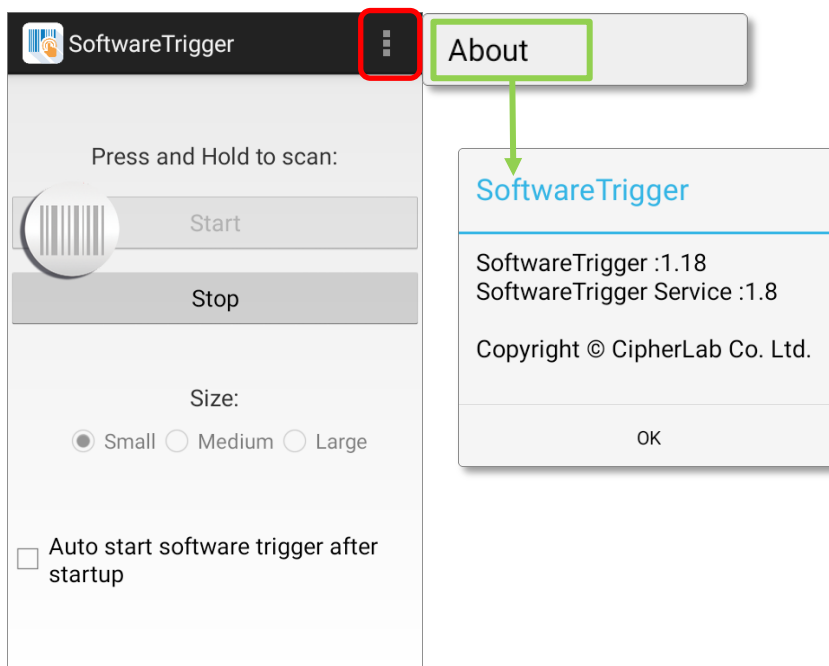
## EXIT SOFTWARE TRIGGER

To disable this virtual trigger button, enter **Software Trigger** application screen, and tap **Stop**.



## VERSION INFORMATION

To check the current version of **Software Trigger**, please tap on the more button on the action bar and select **About**.



### 7.13. TERMINAL EMULATION



**Terminal Emulation** is brought to support mobile devices, which are high performance products powered by the Android platform. 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.

MIRROR VT/5250 Terminal Emulation is a telnet client with extended ability to launch and configure reader module(s). It links to available reader module(s) when a physical scan button is pressed, to collect decoded data and submit data to the host afar.

Please refer to [Terminal Emulation User Guide \(Android\)](#).

### 7.14. WMDS AGENT & WMDS INSTALLER

**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.



The preloaded application “**WMDSInstaller**” is for fetching the latest WMDS Agent version over the Internet and then perform auto-installation while the application



“**WMDSAgent**” makes this mobile computer become an enrolled device once it is successfully connected to WMDS server.

Please refer to [WMDS User Guide for Android](#) for details.

## SPECIFICATIONS

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### PLATFORM, PROCESSOR & MEMORY

#### Operating System & CPU

OS Version	Android 11 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 10° tilted reader model: Micro SIM socket x1, Micro SAM socketx1

## 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 <b><u>Frequency band</u></b> 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 <ul style="list-style-type: none"> <li>Supports NFC (Peer-to-Peer, Card Reader, Card Emulation)</li> </ul>

## ELECTRICAL CHARACTERISTICS

Li-Polymer	
Main Battery Pack	<p>Rechargeable Li-polymer battery: 3.8V, 4000 mAh</p> <p>Charging temperature: 0-45°C</p> <p>Minimum charging time: 4 hours @25°C</p> <p>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°C to 45°C. It is recommended to charge the battery at room temperature (18°C to 25°C) for optimal performance.</p> <p>Please note that battery charging stops when ambient temperature drops below 0°C or exceeds 45°C.</p>
Backup Battery	<p>Rechargeable Li-Polymer battery: 3.7V, 60 mAh</p> <p>Data retention for 30 minutes</p> <p>Charging time: 4 hours</p>

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 4000mAh battery pack and SE4750 reader) ±5g

## ENVIRONMENTAL CHARACTERISTICS

Temperature	
Operating	-20°C to 50°C
Storage	-30°C to 70°C
Charging	0°C to 45°C

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

### APPLICATION MENU

Icon	Name	Description
	<b>A-Demo</b>	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.
	<b>Airlock Browser</b>	Airlock Browser is a modern, feature rich, highly configurable web browser that allows mobile workers to be more productive.
	<b>AppLock</b>	An application used to limit the system resources made available to users.
	<b>BarcodeToSettings</b>	An application for reading the setting barcodes generated by ADC (Android Deployment Configurator) to apply the configuration.
	<b>BT Printer Mate</b>	An application for providing user interface to pair with Bluetooth printers.
	<b>Button Assignment</b>	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.
	<b>Calculator</b>	Performs mathematical calculations.
	<b>Camera</b>	Takes pictures and shoots videos.
	<b>Calendar</b>	Creates and manages events, meetings and appointments.
	<b>Chrome</b>	An Android built-in browser application developed by Google.
	<b>Clock</b>	Sets date, time, time zone according to your locale, and sets and manages alarms.

Icon	Name	Description
	<b>Contacts</b>	Manages contact information, and shares or exports/imports the information to other devices or SD card.
	<b>Download</b>	List all files downloaded on the mobile computer.
	<b>Drive</b>	An Android built-in application for a file storage and synchronization service created by Google.
	<b>Duo</b>	A one-to-one video call application developed by Google.
	<b>Enterprise Settings</b>	An application to control how the physical keypad works.
	<b>EZConfig</b>	A UHF RFID application for RK25 mobile computer to works with RK25 UHF RFID Reader to read RFID tags.
	<b>EZEdit</b>	An application to work with the RK25 UHF RFID Reader for reading from and writing onto a Gen2 RFID tag.
	<b>File Manager</b>	Browses and manages files on the local storage and storage card.
	<b>Gmail</b>	An Android built-in application for Gmail, a free email service provided by Google.
	<b>Google</b>	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.
	<b>HF RFID Configuration</b>	An application for the configuration of RFID & NFC.
	<b>Maps</b>	An Android built-in app developed by Google.
	<b>Messages</b>	Sends SMS and MMS messages.
	<b>Phone</b>	Places and receives calls, accesses voicemail, views call history, manages phone contacts, and adjusts phone settings.

Icon	Name	Description
	<b>Photos</b>	An Android built-in application for a photo and video sharing and storage service developed by Google.
	<b>Google Movies &amp; TV</b>	An Android built-in application for an online video on demand service operated by Google.
	<b>Play Music</b>	An Android built-in application for a music streaming service and online music locker operated by Google.
	<b>Play Store</b>	An Android built-in application providing access to a digital distribution service, including a digital media store, Play Store operated and developed by Google.
	<b>Reader Config</b>	Sets scanner preferences, data output format and destination, symbology settings, and reads barcodes.
	<b>Settings</b>	Opens settings to configure the mobile computer.
	<b>Signature Capture</b>	A simple and easy application which transforms your device into a signature pad.
	<b>SIP Controller</b>	An application for quickly open or close virtual keyboard by tapping on the floating button.
	<b>Software Trigger</b>	An application serving as a real trigger key, floating on top of all other programs for convenient trigger control of the barcode scanner.
	<b>Terminal Emulation</b>	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.
	<b>Voice Search</b>	An Android built-in Google product allowing users to use Google Search by speaking on a mobile phone.
	<b>WMDS</b>	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.
	<b>WMDSInstaller</b>	The WMDSInstaller will fetch the latest WMDS Agent version over the Internet and then perform auto-installation

Icon	Name	Description
	<b>YouTube</b>	An Android built-in application for a video-sharing service.





## APPENDIX II

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### OPEN SOURCE LICENSE

The Reader Config involves the android-serialport-api project of Apache License Version 2.0, January 2004.

<http://www.apache.org/licenses/>

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