Rugged Handheld Computer

- EA660 -

User's Manual

Version 1.1

Revision History

Date	Change Description	Version
20240304	First Published Version	V1.0
20240306	Update Product View	V1.1

Preface

About This Manual

Thank you for purchasing the Unitech product.
This manual explains how to install, operate and maintain our product.
No part of this publication may be reproduced or used in any form, or by any electrical or mechanical means, such as photocopying, recording, or information storage and retrieval systems, without permission in writing from the manufacturer. The material in this manual is subject to change without notice.

Regulatory Compliance Statements

FCC Warning Statement

This device 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 with radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference with 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.

1. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This device complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. To maintain compliance with FCC RF exposure requirements, avoid direct contact to the transmitting antenna during transmitting.
3. Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.
4. Operation of transmitters in the 5.925-7.125 GHz band is prohibited for control of or communications with unmanned aircraft systems.

FCC Label Statement

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.
2. This device must accept any interference received, including interference that may cause undesired operation.

RF Radiation Exposure Statement

For body contact during operation, this device has been tested and meets FCC RF exposure guidelines when used with an accessory that contains no metal and that positions the handset a minimum of 1.0 cm from the body.

Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

IC Statements

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) This device may not cause interference, and

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radioexempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) l'appareil ne doit pas produire de brouillage, et

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

(i) The device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;

(i) Les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.

Devices shall not be used for control of or communications with unmanned aircraft systems

Les dispositifs ne doivent pas être utilisés pour commander des systèmes d'aéronef sans pilote ni pour communiquer avec de tels systèmes.

IC Radiation Exposure Statement

This EUT is compliance with SAR for general population / uncontrolled exposure limits in IC RSS-102 and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528 and IEC 62209. This equipment should be installed and operated with minimum distance 10 mm between the radiator and your body. This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet appareil est conforme aux limites d'exposition DAS incontrôlée pour la population générale de la norme CNR-102 d'Industrie Canada et a été testé en conformité avec les méthodes de mesure et procédures spécifiées dans IEEE 1528 et IEC 62209. Cet appareil doit être installé et utilisé avec une distance minimale de 10mm entre l'émetteur et votre corps. Cet appareil et sa ou ses antennes ne doivent pas être co-localisés ou fonctionner en conjonction avec tout autre antenne ou transmetteur.

European Conformity Statement

Unitech Electronics co., Ltd herewith declares that the Unitech product is in compliance with the essential requirements and all other provisions of the RED 2014/53/EU directive.
The declaration of conformity is available for download at:
https://portal.Unitech.eu/public/Safetyregulatorystatement

UK Declaration of Conformity (DoC)

Hereby, Unitech Electronics co., Ltd. declares that the radio equipment type Rugged Handheld Computer is in compliance with UK Radio Equipment Regulations 2017(RER 2017 (SI 2017/1206)).
The full text of the UK declaration of conformity is available at the following internet address: https://www.ute.com

UKCA Mark Warning

UK
CA

CE RF Exposure Compliance

For body-worn operation, this device has been tested and meets the ICNIRP guidelines and the European Standard EN 62209-2, for use with dedicated accessories, SAR is measured with this device at a separation of 0.5 cm to the body, while transmitting at the highest certified output power level in all frequency bands of this device. Use of other accessories which contain metals may not ensure compliance with ICNIRP exposure guidelines.

CE Mark Warning

CE

RoHS Statement

This device conforms to RoHS (Restriction Of Hazardous Substances) European Union regulations that set maximum concentration limits on hazardous materials used in electrical and electronic equipment.

Waste electrical and electronic equipment (WEEE)

Unitech has set up a policy and process to meet the 2012/19/EU concerning electronic waste disposal.

For more detailed information of the electronic waste disposal of the products you have purchased from Unitech directly or via Unitech's resellers, you shall either contact your local supplier or visit us at:
https://portal.Unitech.eu/public/WEEE

Taiwan NCC Warning Statement

低功率電波輻射性電機管理辦法

取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。低功率射頻器材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。前述合法通信，指依電信管理法規定作業之無線電通信。低功率射頻器材須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。應避免影響附近雷達系統之操作。高增益指向性天線只得應用於固定式點對點系統。

SAR標準值2.0 W/KG, 送測產品實測值為: 0.395 (W/KG)

注意事項:

1. 使用過度恐傷害視力。
2. 使用30分鐘請休息10分鐘；未滿2歲以下幼兒不看螢幕，2歲以上每天看螢幕不要超過1小時。
3. 減少電磁波影響，請妥適使用。

Note:

Within the 5.25-5.35 GHz band, U-NII devices will be restricted to indoor operations to reduce any potential for harmful interference to co-channel MSS operations.

Devices shall not be used for control of or communications with unmanned aircraft systems.

Laser Information

The Unitech product is certified in the U.S. to conform to the requirements of DHHS/CDRH 21CFR Subchapter J and to the requirements of IEC 60825-1. Class II and Class 2 products are not considered to be hazardous. The Unitech product contains internally a Visible Laser Diode (VLD) whose emissions do not exceed the maximum limits as set forth in the above regulations. The scanner is designed so that there is no human access to harmful laser light during normal operation, user maintenance or prescribed service operations.

The laser safety warning label required by the DHHS/IEC for the Unitech product's optional laser scanner module is located on the memory compartment cover, on the back of the unit.

* Laser information only applies to the products with laser components.

CAUTION! Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous laser light. Use of optical instruments with the scanner, including binoculars, microscopes, and magnifying glasses, with will increase eye damage. This does not include eyeglasses worn by the user.

LED Information

The Unitech product contains LED indicator(s) or LED ring whose luminance is not harmful to human eyes during normal operation, user maintenance or prescribed service operations.

*LED information only applies to the products with LED components.

Battery Notice

1. To guarantee optimal performance, it is recommended that rechargeable batteries be replaced every year, or after 500 charging cycles are completed. It is normal for the battery to balloon or expand after one year or 500 cycles. Although it does not cause damage, it cannot be used again and must be disposed of according to the location's safe battery disposal procedures.
2. If a battery performance decreases more than 20%, the battery is at the end of its life cycle. Stop use and ensure the battery is disposed of properly.
3. The length of time that a battery lasts depends on the battery type and how the device is used. Conserve the battery life by doing the following:
   - Avoid fully uncharging the battery because this places additional strain on it. Several partial uncharges with frequent charges are better than a fully uncharged battery. Charging a partially charged battery does not cause harm to the unit.
   - DO NOT leave the battery pack or in the device in a hot condition such as in the car with closed door on a hot day or similar environment, and/or under direct sunlight for an extended period of time. High-temperature conditions might cause the battery damaged for further safe usage. Keep the device with the battery within acceptable operating temperatures (please refer to the “specification” section for further details).
   - For long-term storage, it is recommended to charge the battery to at least 50% every six months to ensure optimal performance and longevity. Do not leave the battery uncharged and unused for an extended period of time, the battery will wear out and the longevity of the battery will be at least half of one with frequent charges. Despite Unitech’s safety precautions, the battery pack may experience changes in shape or swelling. If so, stop using it immediately. Please check to see if you are using a proper power adapter to charge the battery or contact your service provider for service.

4. If you cannot charge the battery after it has been idle for an extended period of time and it begins to heat up, please do not try to charge it. It may not be functional anymore.
5. Please only use the original battery from Unitech. Using a third party battery can damage our products. Please note that when such damage occurs, it is not covered by Unitech's warranty policy.

CAUTION!

- RISK OF EXPLOSION IF BATTERY IS REPLACED INCORRECTLY.
  DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.
- 電池若未正確更換，可能會爆炸。請用原廠建議之同款或同等級的電池來更換。請依原廠指示處理廢電池。
  請依製造商說明書處理用過之電池
- 如果更换不正确之电池行事会有爆炸的风险
  请依制造商说明书处理用过之电池

Battery Charge Notice

It is important to consider temperature when the battery pack is charging. Charging is most efficient at normal room temperature or in a slightly cooler environment. It is essential that batteries are charged within the stated range of 0˚C to 40˚C. Charging batteries outside of the specified range could damage the batteries and shorten their life cycle.

CAUTION! Do not charge batteries at a temperature lower than 0°C. This will make the batteries unstable and dangerous. Please use a battery temperature detecting device for a charger to ensure a safe charging temperature range.

CAUTION! To ensure the unit working properly, please keep all connectors away from the contaminants staying inside of them such as dust, grease, mud, and water. The negligence may cause the unit with no communication, short circuited, overheated and so on.

CAUTION! If the connector is damaged, please ensure the connector is being fully repaired before use the unit to avoid causing short circuited.

Storage and Safety Notice

Although charged batteries may be left unused for several months, their capacity may be depleted due to build up of internal resistance. If this happens, they will require recharging prior to use. Batteries may be stored at temperatures between -20°C to 60°C, however they may deplete more rapidly at higher temperatures. It is recommended to store batteries at room temperature.

** The message above only applies to the usage of the removable batteries.*
For the products with non-removable batteries / without batteries, please refer to the specification of each product.

Product Operation and Storage Notice

The Unitech product has applicable operation and storage temperature conditions. Please follow the limitation of suggested temperature conditions to avoid failure, damage or malfunction.

**For applicable temperature conditions, please refer to the specification of each product.*

Adapter Notice

1. Please do not leave the power adapter in the socket when it is not connected to your Unitech product for charging.
2. Please remove the power adapter when the battery is fully recharged.
3. The bundled power adapter that comes with your Unitech product is not meant to be used outdoors. An adapter exposed to water or rain, or a very humid environment can cause damage to both the adapter and the product.
4. Please only use the bundled power adapter or same specification of adapter to charge your Unitech product. Using the wrong power adapter can damage your Unitech product.

** The message above only applies to the product connected to the adapter.*
For the products without using the adapters, please refer to the specification of each product.

Hearing Damage Warning

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

Figure 1 – Warning label (IEC 60417-6044)

Worldwide Support

Unitech's professional support team is available to quickly answer questions or assist with technical-related issues. Should an equipment problem occur, please contact the nearest Unitech regional service representative.
For complete contact information please visit the Web sites listed below:

Taipei, Taiwan – Headquarters		Europe	
Tel:	+886-2-89121122	**Tel:**	+31-13-4609292
E-mail:	info@hq.ute.com	**E-mail:**	info@eu.ute.com
Address:	5F, No. 136, Lane 235, Baoqiao Road, Xindian District, New Taipei City 231, Taiwan (R.O.C.)	**Address:**	Kapitein Hatterasstraat 19, 5015 BB, Tilburg, the Netherlands
Website:	http://www.ute.com	**Website:**	http://eu.ute.com
China		**Japan**	
Tel:	+86-59-2310-9966	**Tel:**	+81-3-62310896
E-mail:	info@cn.ute.com	**E-mail:**	info@jp.ute.com
Address:	Room401C, 4F, RIHUA International Mansion, Xinfeng 3nd Road, Huoju Hi-tech District, Xiamen, Fujan, China	**Address:**	Tosei Building 3F.,18-10 Nihonbashi-Hakozakicho, Cyuouku, Tokyo, 103-0015, Japan
Website:	http://cn.ute.com	**Website:**	http://jp.ute.com
Asia & Pacific / Middle East		**Latin America**	
Tel:	+886-2-27911556	**Tel:**	+52-55-5171-0528
E-mail:	info@apac.ute.com info@india.ute.com info@mideast.ute.com	**E-mail:**	info@latin.ute.com
Address:	4F., No. 236, ShinHu 2nd Rd., NeiHu Chiu, 114, Taipei,Taiwan	**Address:**	17171 Park Row, Suite 210 Houston, TX 77084USA (Rep.)
Website:	http://apac.ute.com / http://mideast.ute.com	**Website:**	http://latin.ute.com
North America		**Please scan QRCode to visit us:**	
Tel:	+1-714-8916400		
E-mail:	info@us.ute.com / info@can.ute.com		
Address:	6182 Katella Ave, Cypress, CA 90630, USA		
Website:	http://us.ute.com		

Warranty Policy

The following items covered under the Unitech Limited Warranty are free from defects during normal use:

The warranty period is varied from each country. Please consult with your supplier or Unitech local office for actual length of warranty period to your purchased product.

Warranty becomes void if equipment is modified, improperly installed or used, damaged by accident or neglect, or if any parts are improperly installed or replaced by the user.

Table of Contents

Chapter 1 - Overview

1.1 Package

Please make sure the following contents are in the EA660 gift box.
If something is missing or damaged, please contact your Unitech representative.

The Package Contents

- EA660 Rugged Handheld Computer
- Battery
- USB-C Cable
- Quick Start Guide

Optional Accessories

- QC 3.0 Adapter (US)/(EU)
- Stylus (5.5mm)
- Hand Strap
- Coiled Strap
- Boot Case
- 9H Glass Screen Protector
- Standard Gun Grip
- Battery 3.87V 5000mAh
- Single Slot Charging Cradle
- Single Slot USB Cradle
- Single Slot Ethernet Cradle

1.2 Product Detail

Product View

Top View

Left View

Right View

1. Barcode Scanner Window
2. Receiver
3. Front Camera
4. LED Indicator
5. Volume Key
6. Scanner Triger Key
7. Power Button
8. Programmable Key
9. Microphone (main)
10. Speaker

Rear View

Note:

Please remove the black film while using gun grip.

Bottom View

11. Rear Camera
12. Hand Strap Holes
13. NFC
14. Microphone (sub)
15. Pogo Pin for Gun Grip
16. Battery Cover Latch
17. Battery Cover
18. USB-C Hole
19. Pogo Pin for Cradle

1.3 Specifications

System Features	
CPU	Qualcomm® Snapdragon™ 4490, 64bits Octa-core Processor, up to 2.4 GHz
Memory	6GB RAM / 128 GB Flash, UFS
OS	Android 13 (upgradable to A17) with GMS & AER certified
Languages support	Multiple languages
Display	
Screen Size	6", 18:9 FHD+ (2160 x 1080) color screen, Backlight 630 nits
Touch Panel	Gorilla® Glass 7 Glass (Victus), Multi-Touch User Interface with Capacitive, stylus (5.5mm), glove mode, wet-finger Compatibility
Keypad	
5 keys- Programmable function button; Dual dedicated scan buttons; Volume up/down buttons; on/off button	
Camera	
5MP front camera, 16 MP Rear with auto-focus function and Flash Light	
Indicator Type	
LEDs, Vibrator, Speaker	
Symbologies	
Support all major 1D & 2D barcodes	
RFID	
HF	Support HF/NFC Frequency 13.56Mhz Support: ISO14443A/B, ISO15693, Mifare, Felica (ISO/IEC18092) compliance
Power Source	
Main Battery	3.87V, 5000mAH Li-ion battery Support warm swap
Adapter	5Vdc 3A, 9Vc 2A, 12Vdc 1.5A
Regulatory Approvals	
CE, UKCA, FCC, IC, NCC, VCCI, TELEC, CCC, SRRC, RoHS, CEC, BQB, N-Mark	

Communication	
Bluetooth®	Bluetooth® 5.2
WLAN	Wi-Fi 6E, 2.4GHz & 5GHz & 6Ghz IEEE 802.11a/b/e/g/n/ac/d/h/i/k/r/v/ac/ax (MIMO 2X2, Support DBS & Fast roaming) Security WPA3, WPA2, WPA & WEP
WWAN	5G NR: n1, n2, n3, n5, n7, n8, n12, n20, n28, n34, n38, n39, n40, n41, n48, n66, n77, n78, n79 4G LTE (FDD): B1, B2, B3, B4, B5, B7, B8, B12, B13,B14, B17, B19, B20, B28, B66 LTE (TDD): B34, B38, B39, B40, B41, B48 3G WCDMA/UMTS/HSPA+: B1(2100MHz), B2(1900MHz), B4(1700MHz), B5(850MHz), B8(900MHz) 2G GSM/GPRS/EDGE: B2(PCS1900), B3(DCS1800), B5(GSM850), B8(GSM900) Support Data, SMS and Voice capabilities *n48 & B48 for CBRS
GPS	GPS/GLONASS/Gallileo/BeiDou (L1+L5)
Sensors	G-sensor(Accelerometer), Proximity + Light Sensor, E-Compass, Gyroscope sensor
I/O Interfaces	
USB	USB 3.1 (Type-C) support USB OTG Support Ethernet/USB-Host via cradle
OTG	Yes, over USB Type-C
POGO PIN	PogoPin backside: Support Gun-grip, UHF reader PogoPin bottom: Charging via cradle
SIM Slot	Dual nano SIM Slot
Expansion slot	MicroSD, up to 1TB
Audio	One speaker (95±3dB @ 10cm), One receiver, Dual noise-cancelling microphones, Smart PA
Enclosure	
Dimensions	162.9 mm x 77 mm x 14.9 mm
Weight	270g ± 1.5% (with battery)* *The weight will vary depending on the configuration.

Environmental	
Operating Temperature	-20°C to 55°C
Storage Temperature	-40°C to 70°C (without battery)
Charging Temperature	0°C to 45°C
Relative Humidity	5% ~ 95% (Non-Condensing)
Drop Test to Concrete	1.5 meter, 1.8 meter with boot case
Environmental Sealing	IP65 & IP67
Vibration/Tumble test	MIL-STD 810G
Software	
MDM Software	SOTI, VMware and MoboLink
Accessories	
■ Stylus (5.5mm) ■ Coiled Strap ■ Hand Strap ■ Boot Case ■ 9H Glass Screen Protector ■ Standard Gun Grip	■ Single Slot USB Cradle ■ Single Slot Charging Cradle ■ Single Slot Ethernet Cradle ■ Battery 3.87V 5000mAh ■ QC 3.0 Adapter (US)/(EU)

Android is a trademark of Google LLC.

Note:

The device is restricted to indoor use only when operating in the 5250-5350 MHz / 5945 to 6425MHz (for LPI) frequency range.

	AT	BE	BG	HR	CY	CZ	DK
	EE	FI	FR	DE	EL	HU	IE
	IT	LV	LT	LU	MT	NL	PL
	PT	RO	SK	SI	ES	SE	UK(NI)
	IS	LI	NO	CH	TR		

Radio type / Description		Maximum Power
GSM	GSM900	32.5dBm
	DCS 1800	30.5dBm
UMTS	FDD 1	25dBm
	FDD 5	25dBm
	FDD 8	25dBm
LTE	FDD 1	24dBm
	FDD 3	24dBm
	FDD 5	25dBm
	FDD 7	24dBm
	FDD 8	25dBm
	FDD 20	25dBm
	FDD 28	25dBm
	FDD 34	24dBm
	TDD 38	24dBm
	TDD 40	25dBm
	TDD 41	24dBm
5G NR	NR n1	24dBm
	NR n3	24dBm
	NR n5	24dBm
	NR n7	24dBm
	NR n8	24dBm
	NR n20	24dBm
	NR n28	24dBm
	NR n34	24dBm
	NR n38	24dBm
	NR n40	24dBm
	NR n41	26dBm
	NR n77	27dBm
	NR n78	26dBm
WLAN 2.4GHz	2400-2483.5 MHz	18.82dBm (EIRP)
WLAN 5GHz	5150-5250 MHz	18.11dBm (EIRP)
	5250-5350 MHz	18.11dBm (EIRP)

	5470-5725 MHz	17.79dBm (EIRP)
	5725-5850 MHz	12.93dBm (EIRP)
WLAN 6GHz	5945-6425 MHz	LPI: 15.89dBm (EIRP) VLP: 12.95dBm (EIRP)
Bluetooth	Bluetooth	5.62dBm (EIRP)
RFID	NFC	-17dBuA/m at 10m

1.4 Getting Started

1.4.1 Remove the Battery Cover

1. Push the battery cover latch all the way to the right (unlock) then release, the battery cover will pop up.

2. Grab the battery cover from the groove and remove it upwards.

WARNING! *There is a risk of fire and burns if the battery is handled improperly.*

DO NOT disassemble, crush, puncture, short external contacts, or dispose the battery pack in fire or water.

DO NOT attempt to open or service the battery. Dispose of used batteries according to local recycling guidelines in your area.

1.4.2 Install the Battery Cover

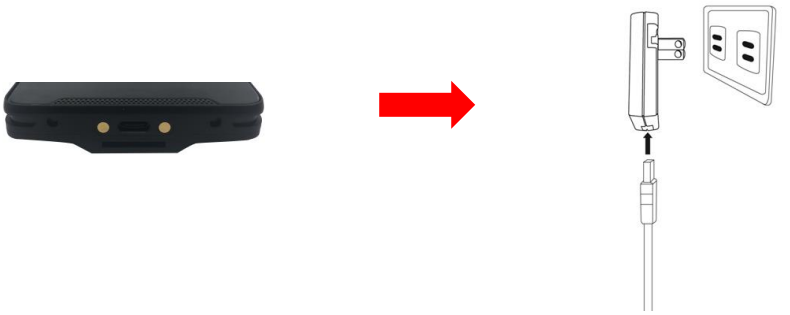
Align the battery cover with the battery slot and install from the bottom, then press down until you hear a "CLICK" sound. Then, push the battery cover latch to the left to lock the battery cover.

1.4.3 Charging the Battery

For the regular use, you can charge the terminal to full capacity within 4 hours using a QC (quick charge) USB-C cable and a QC adapter, or a cradle.

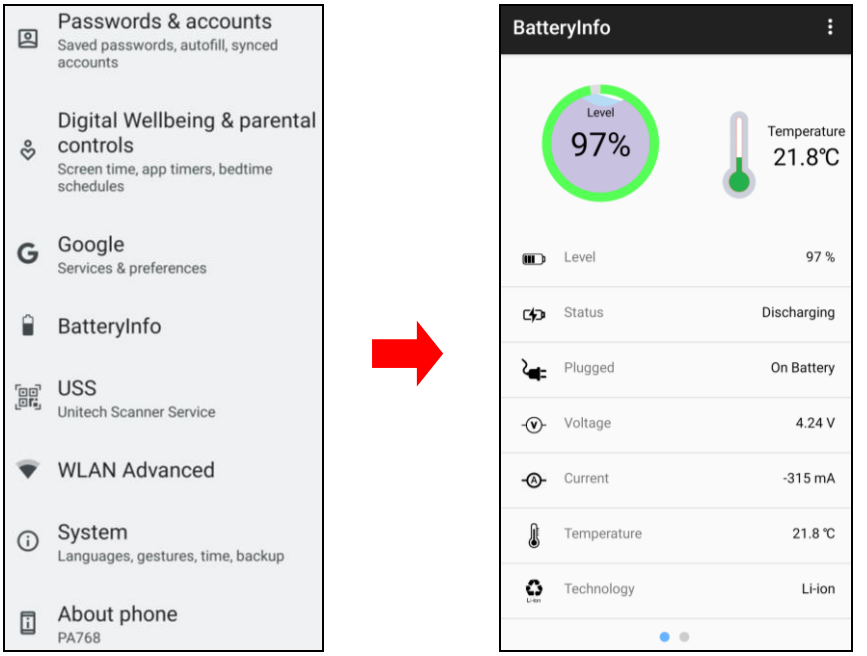
Connect the USB-C cable to the USB port on the EA660, and plug the other end of the USB cable into the AC power adapter. Then, insert the AC power adapter into the electrical outlet.

When the EA660 is charging, the LED indicator will turn red. Once the battery is fully charged, the LED indicator will turn green.



1.4.4 Battery Info

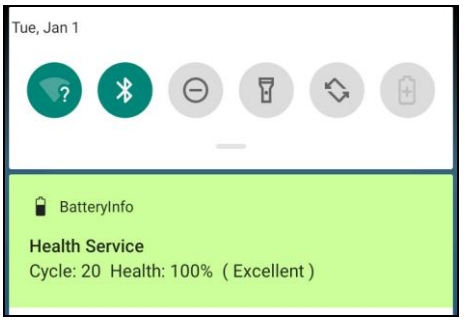
Please go to **Settings** → **BatteryInfo** for more detailed battery information.



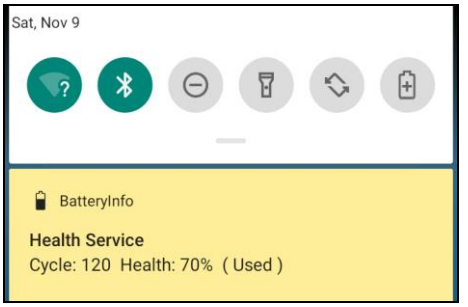
1.4.4.1 BatteryInfo Health Service

BatteryInfo health service information will display on both EA660 lock screen and the notification bar.

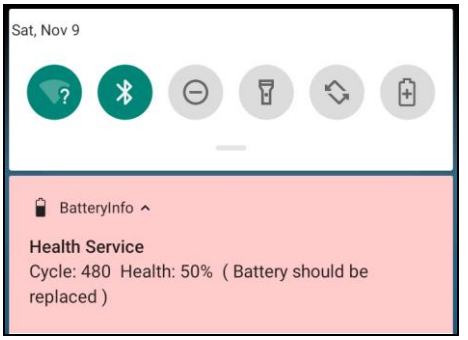
■ When the battery health is higher than 80% :



- When the battery health is higher than 60%:



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



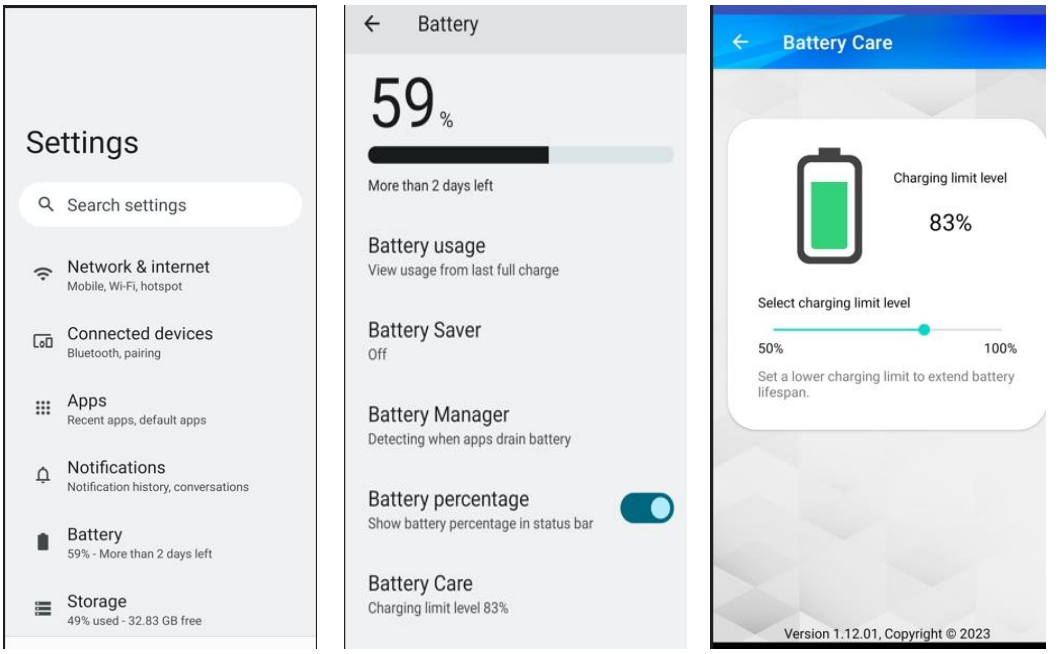
Note:

If the battery is stored for the long term, it might result in accelerated battery health lower. Please try to charge and discharge your batteries several times and check the battery health is at a steady rate. If the battery health is still lower than 60%, the battery should be replaced.

1.4.4.2 Charging Limit Function

To protect the battery, Battery Care enables you to set the maximum power level.

Set a lower charging limit to extend the lifespan of your battery. You can access this feature in **Settings** → **Battery** → **Battery Care**, as shown below to configure the charging limit.



Here's how it works:

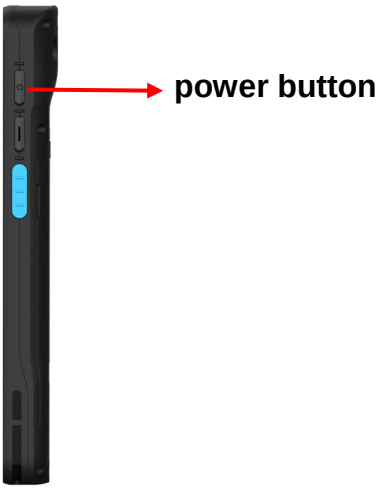
1. By default, the charging limit is set to 100%.
2. Avoid full charge cycles (0-100%) and overnight charging.
3. Limiting your PDA's maximum charge to 20-80% is better for the battery's health than topping up to completely full every time.
4. Opting for the 80% Limit will ensure your PDA charges up to approximately 80% and then ceases charging.
5. When frequent charging is necessary, enabling the 50% Limit permits charging up to 50%, effectively extending your battery's lifecycle.
6. Additionally, if you plan to hold your PDA in long-term storage, it's best not to leave it at 100% charge. Instead, recommends that you store batteries at 50% state of charge if you're planning to store them long-term.

1.4.5 Turning on Terminal for the First Time

You can charge the terminal to full capacity within 4 hours. You can now start up your device to set up the languages, Wi-Fi setting, date and time.

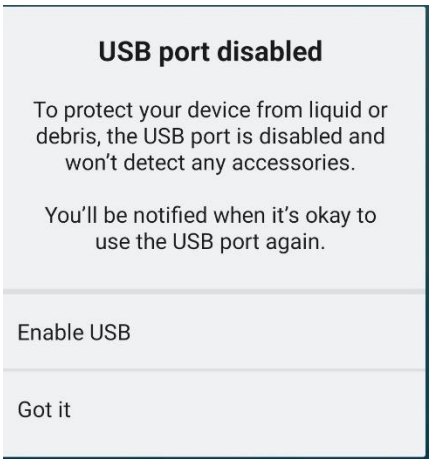
Power Button

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



***Note**:*

To protect your device, the USB port will be disabled once it detects contaminants. You will see the following popup window:



1.4.6 Checking LED Status

LED	Description
Red Light	■ Battery Charging ■ Battery Low when Flashing (less than 15%)
Green Light	■ Battery Fully charged ■ Barcode Scan Good Read
Blue Light	Message
When the Scanner App is running, the LED is controlled by the app. There will be no LED display (neither Red nor Green) when the battery is depleted, even when connected to AC power.	

Checking Battery Status

If the battery power becomes low during normal use, a status icon will appear on the device screen indicating a low or very low battery status. In either case, please back up your data and recharge your device as soon as possible.

CAUTION! To ensure the unit working properly, please keep all connectors away from the contaminants such as dust, grease, mud, and water.
Negligence may cause the unit to lose communication, short circuit, or overheated. If the connector is damaged, please ensure the connector is fully repaired before using the unit to avoid short circuit.

1.4.7 Inserting the Micro SD/Nano SIM Card

1. Install the Micro SD/Nano SIM card holder.

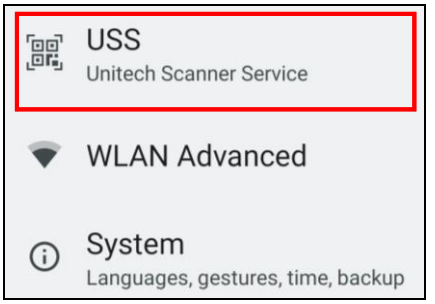
2. You can put in 2 SIM cards and 1 SD card at a time.

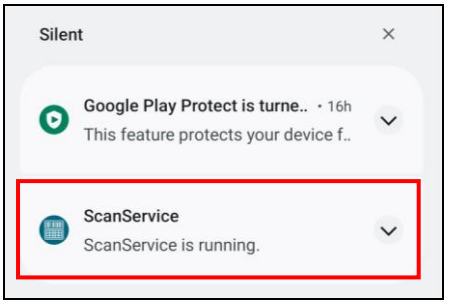
Chapter 2 – Installation & Operation

2.1 Barcode Setting

1. On the main screen, scroll up the screen to reach the APPs, and tap **Settings** 

and then tap **USS** (Unitech Scan Service).
Or from the notification bar to tap **ScanService**.

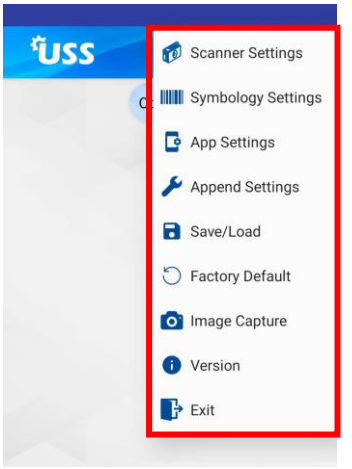


or


2. You now enter the Unitech Scan Service application.

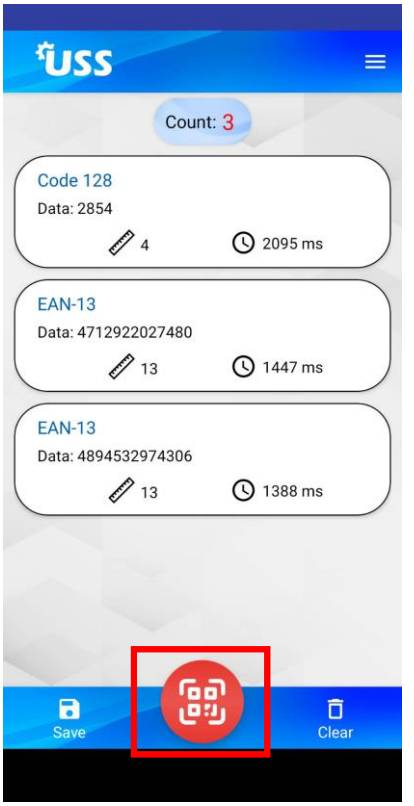
2.1.1 Settings

After you enter the Unitech Scan Service application, please tap  on the screen to see all the settings of **USS**.

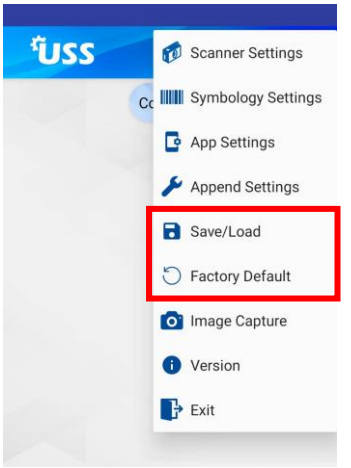


2.1.2 Barcode Scan

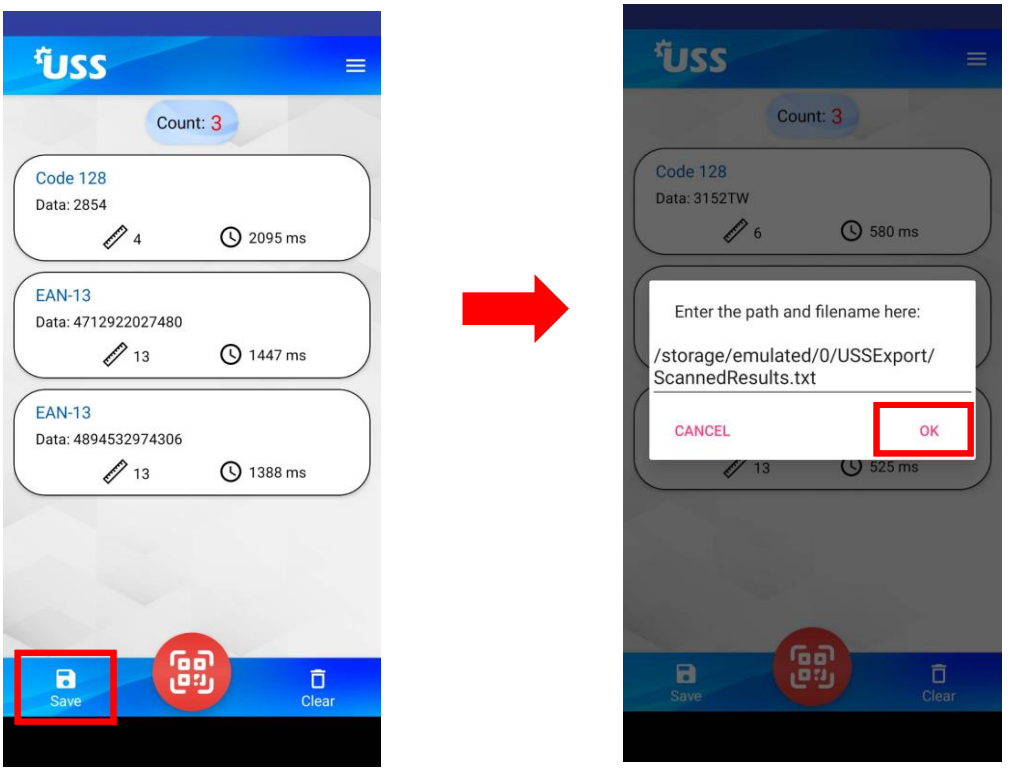
1. Please tap **Barcode icon** to get ready for barcodes scan service.



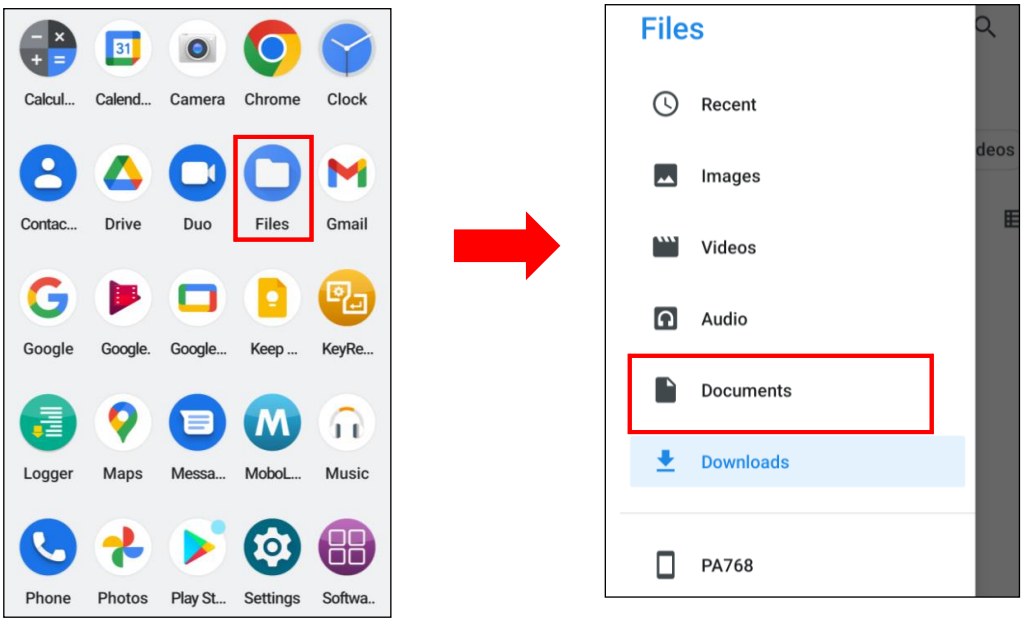
2. For **Save / Load,** and **Factory Default,** Please tap  and to select **Save / Load,** and **Factory Default.**



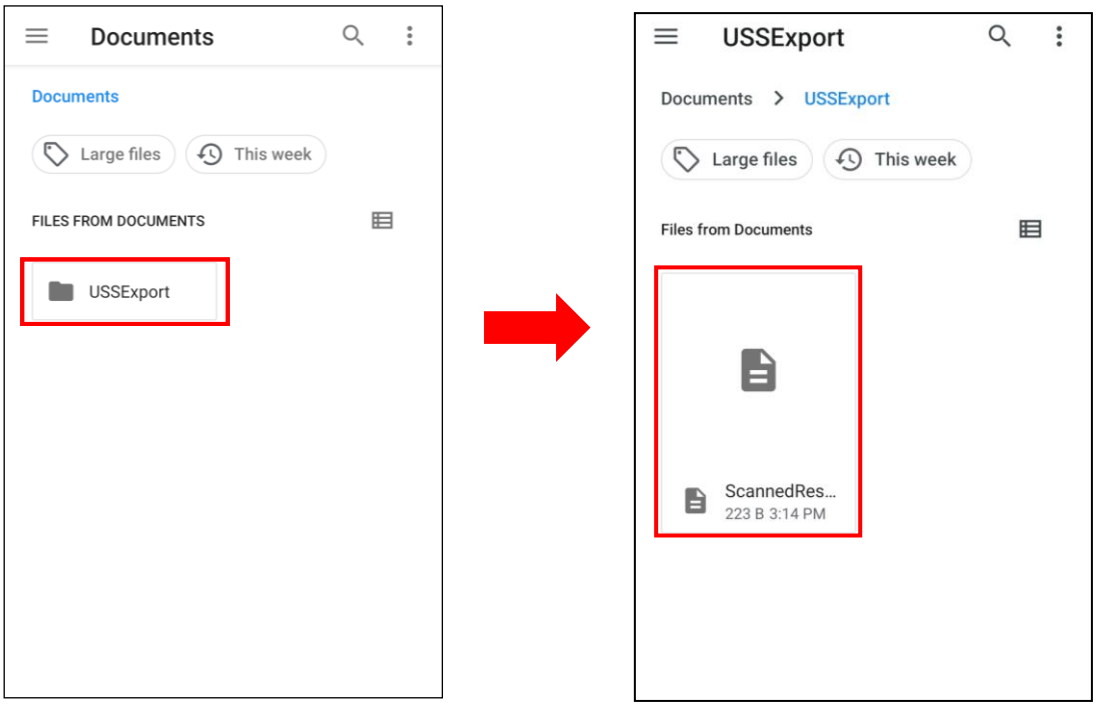
3. To save settings, you can also tap **Save** on the screen and input path then tap **OK**.



The saved data is stored in Files →Documents



USSExport → ScannedResults.txt.



Note:

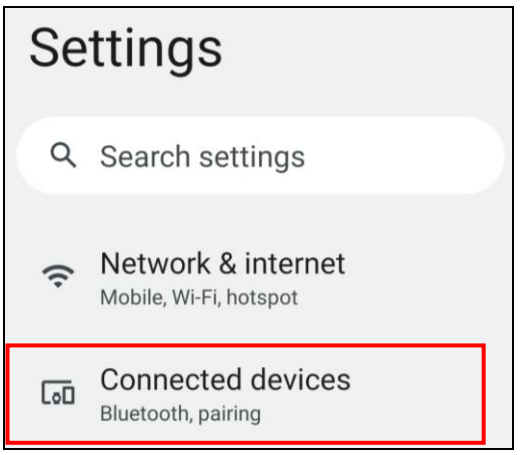
For more information, please refer to 3.2 USS (Unitech Scan Service)

2.2 HF Setting

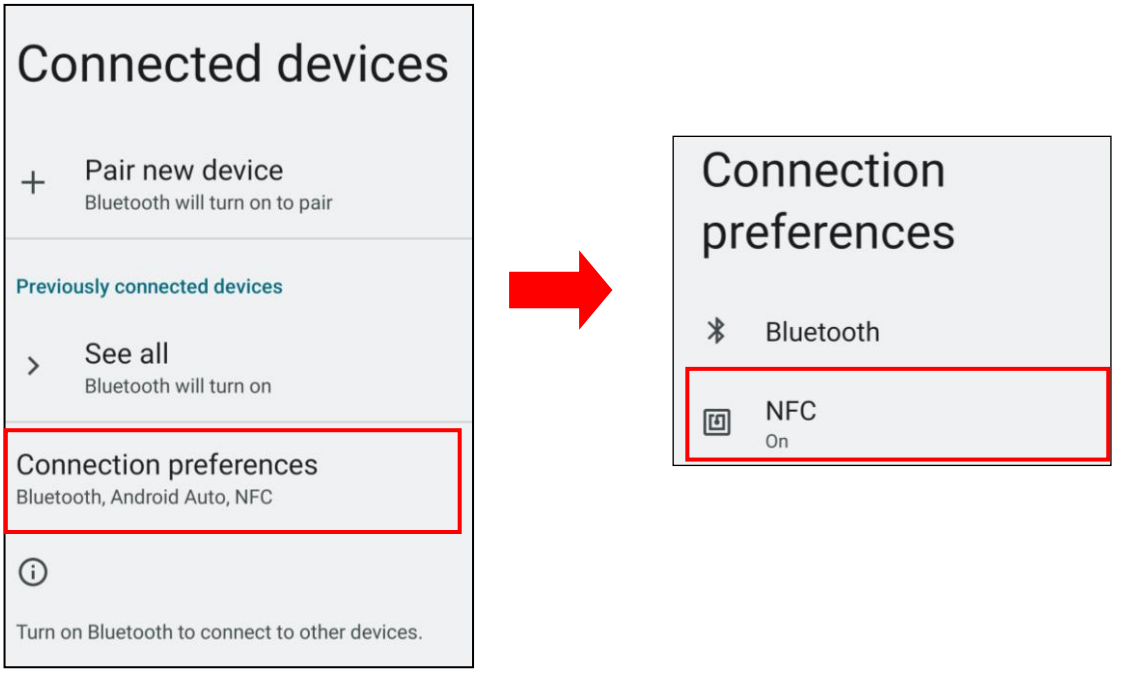
2.2.1 HF Setting

1.On the main screen, scroll the screen from bottom to top to reach the APPS, and tap **Settings** 

then **Connected devices**.

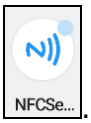


2.Tap **Connection Preferences** to enable **NFC**

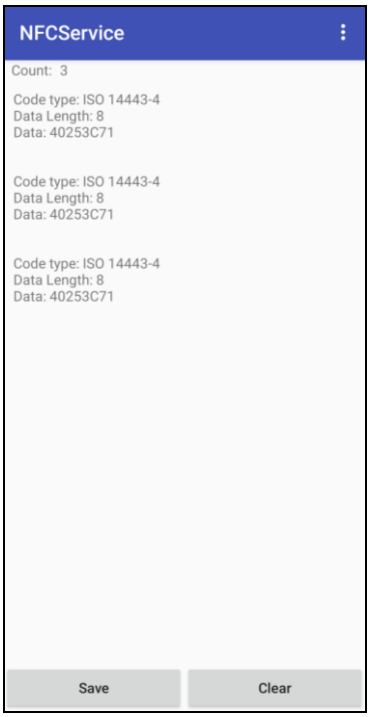


4. Make sure that both devices are unlocked and have NFC turned on.
   Also make sure that the NFC antenna area of EA660 and the other phone's NFC area are close to one another. Slightly moving the phones until a connection is made. Tap the screen.

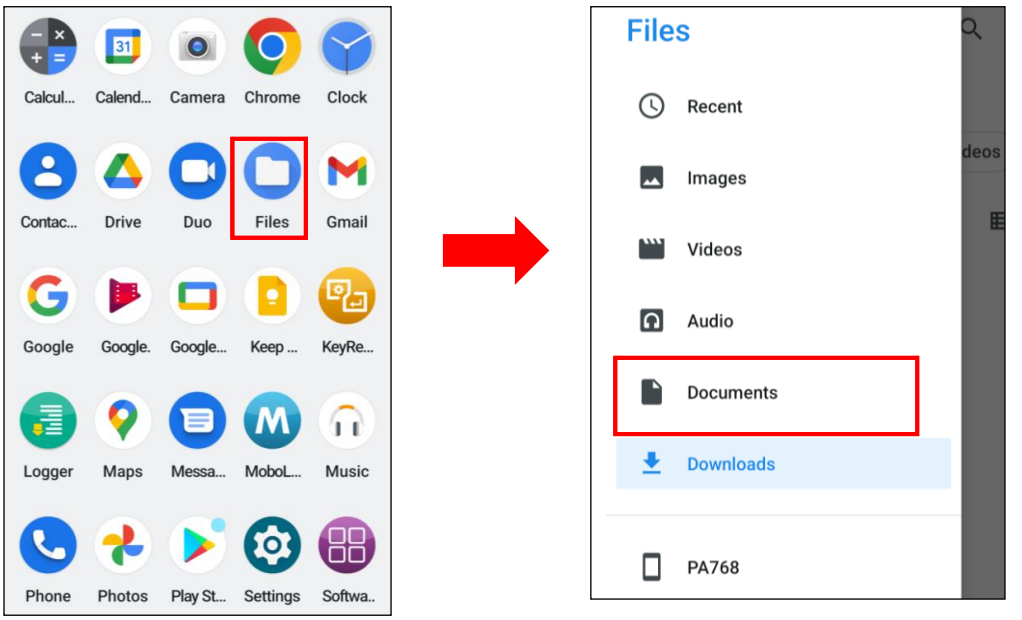
2.2.2 NFCService

On the main screen, scroll the screen from bottom to top to reach the APPS, and tap **NFCService** 

.



The saved data is stored in Files →Documents



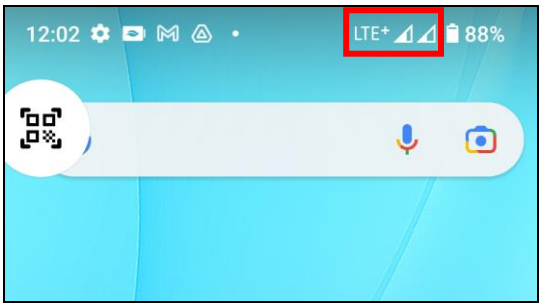
2.3 WWAN Setting

1. Turn off the EA660 to insert the SIM card.

   Note:

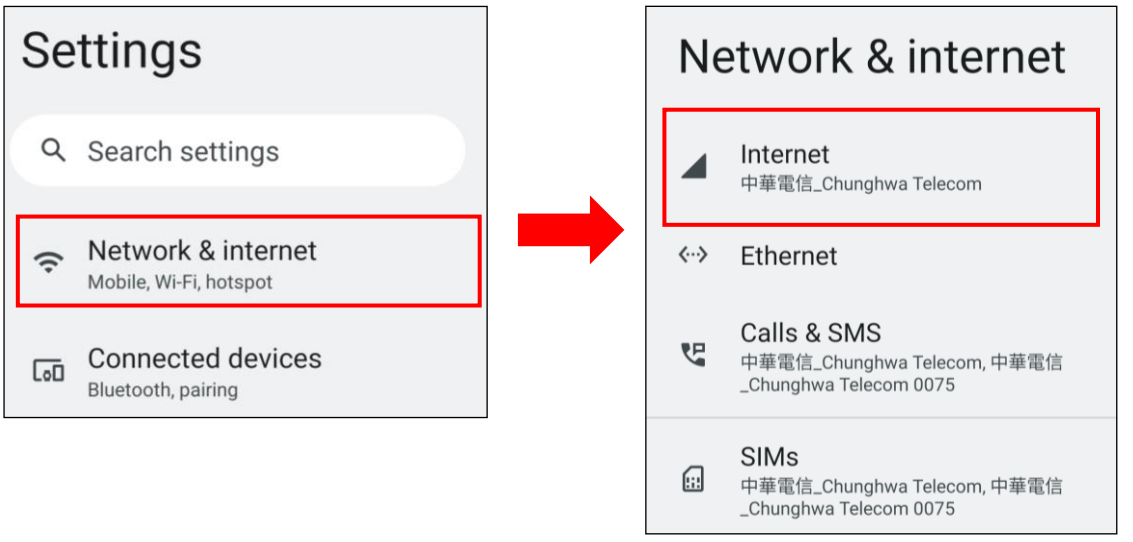
   For the instruction, please refer to 1.4.7 Inserting the Micro SD/Nano SIM Card

2. Turn on the EA660, LTE signal will show at the top of the screen.

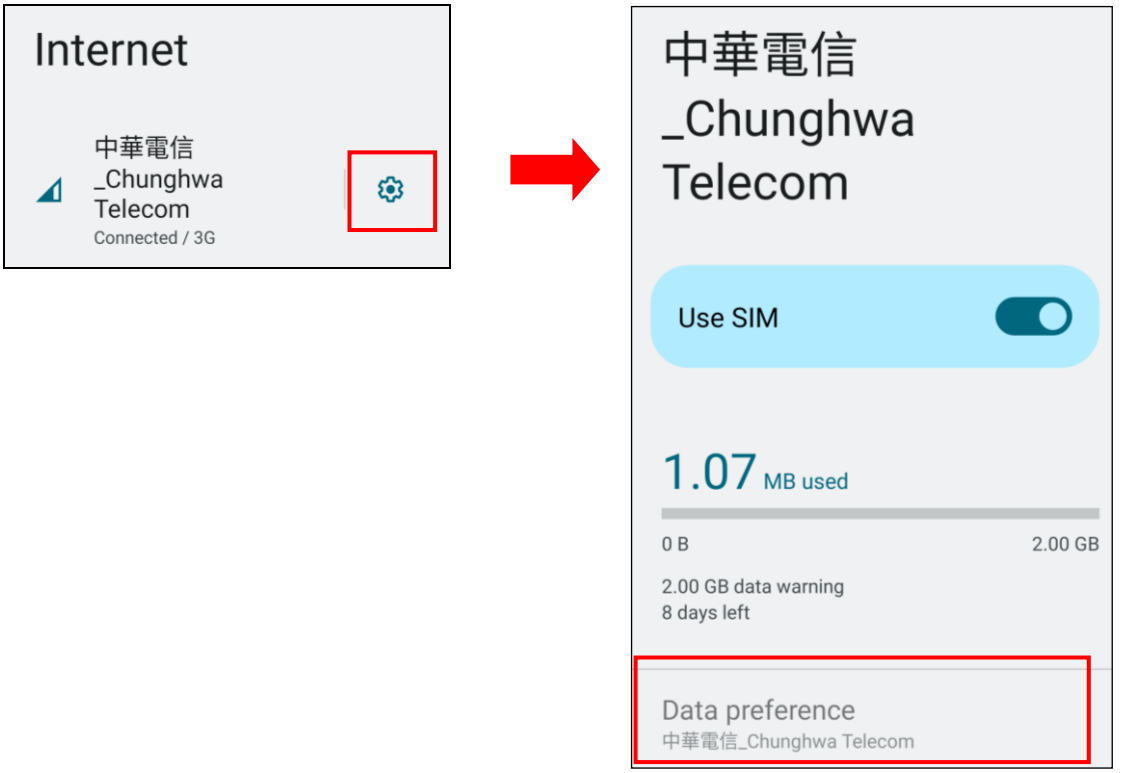


2.3.1 Mobile Network Settings

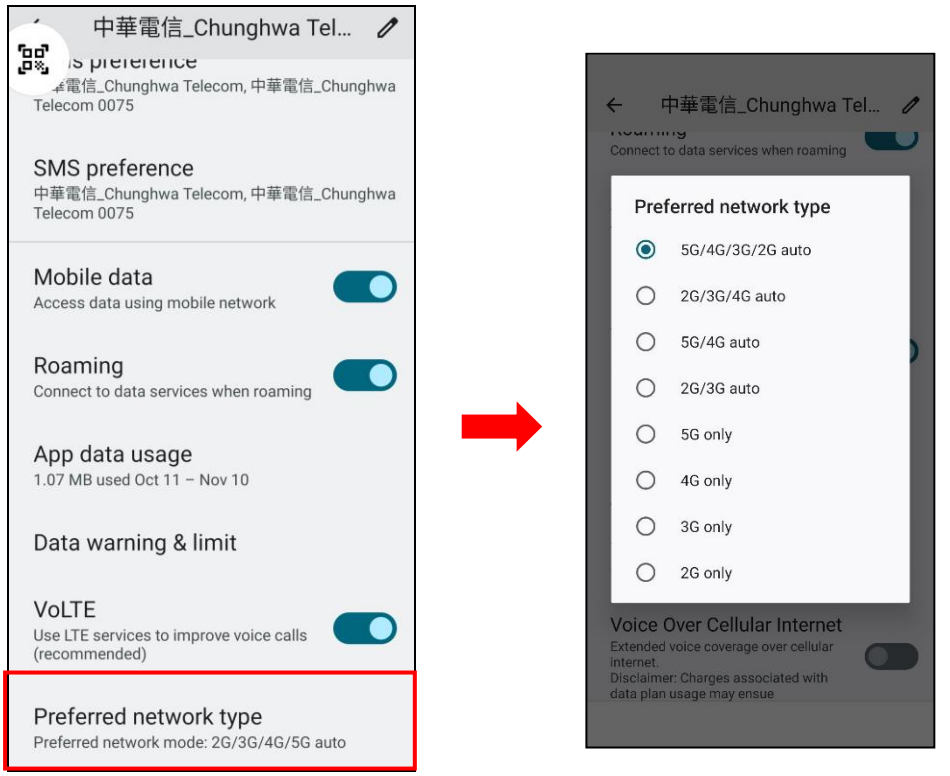
1. On the main screen, scroll the screen from bottom to top to reach the APPS, and tap Settings **Settings** and then tap **Network & internet.**



2. Tap on the settings icon for more network settings.
   To switch between 2 SIMs, tap on data preference.



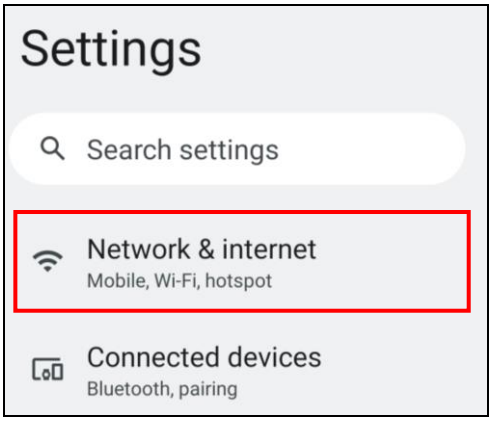
3. To choose different network type, please tap **Preferred network type.**



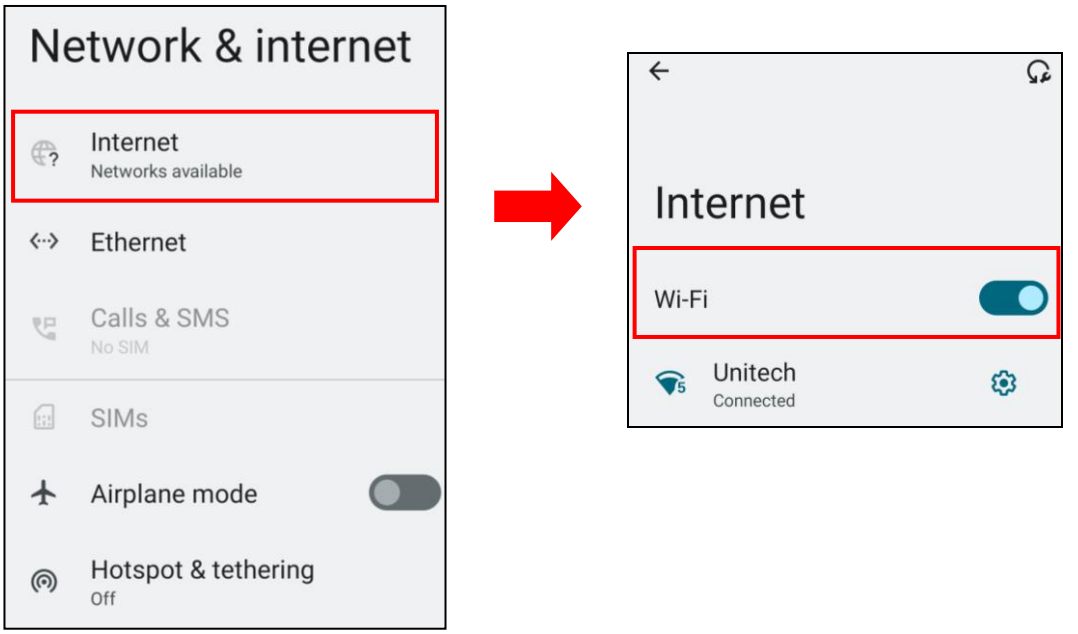
2.4 WLAN Setting

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

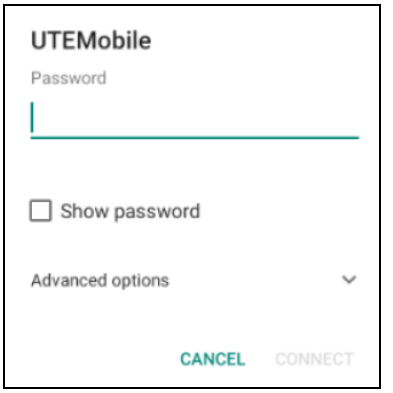
Settings and then tap **Network & internet.**



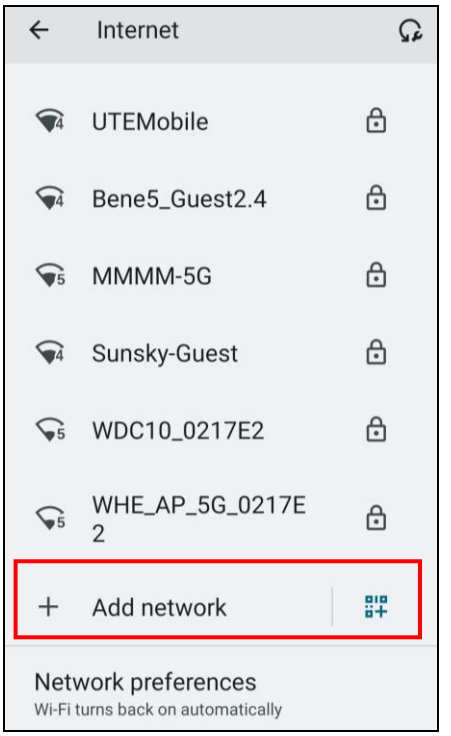
2. Tap Internet and turn WLAN **ON** to see available networks. Tap to choose available networks.



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



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

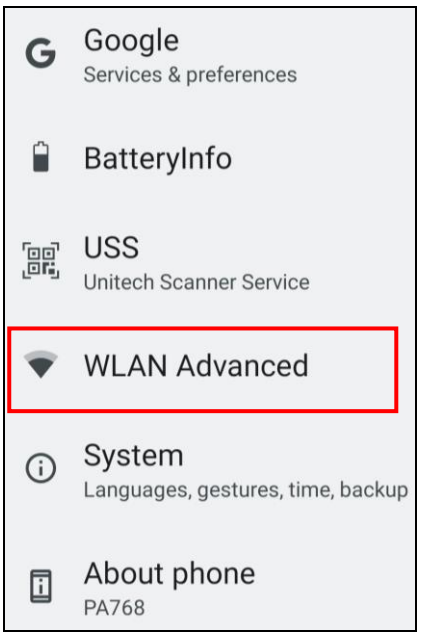


5. When enabled, the icon  is displayed on the status bar.

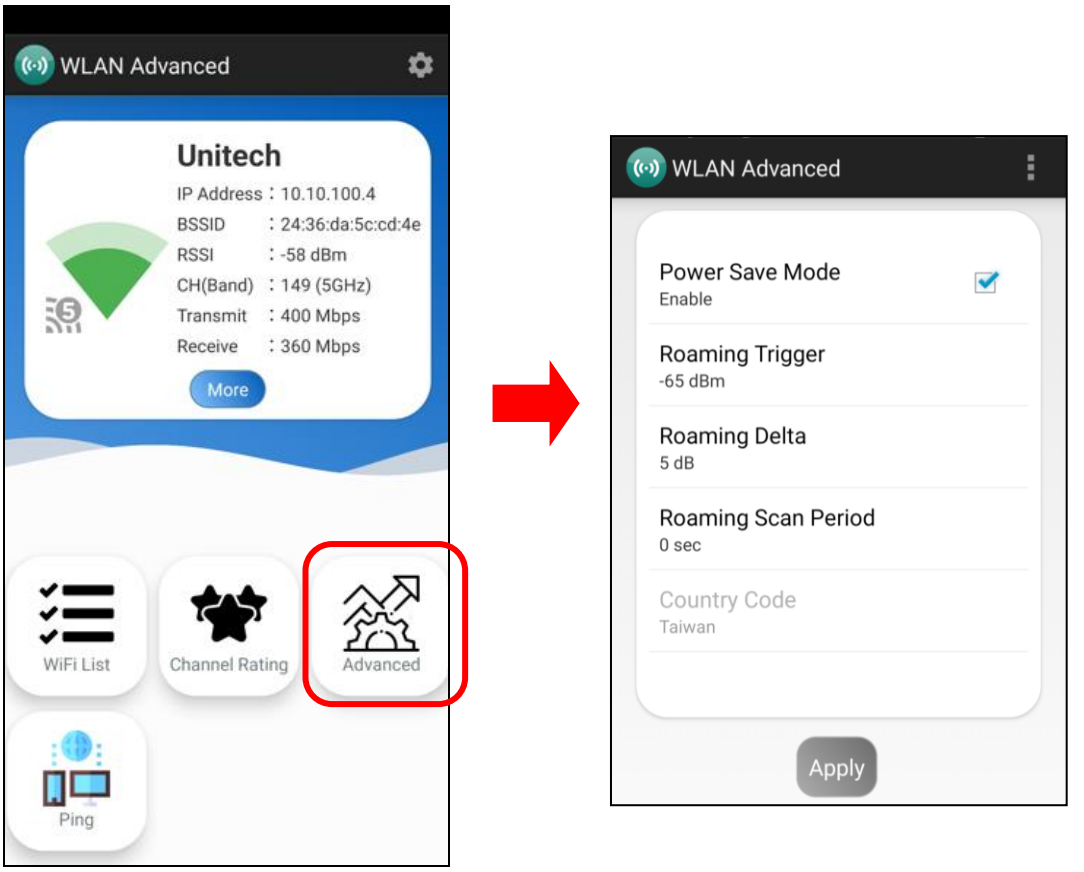
2.4.1 WLAN Advanced

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

1. On the main screen, scroll the screen from down to top to reach the APPS, and tap **Settings** then **WLAN Advanced.**



2. Tap on **Advanced**.

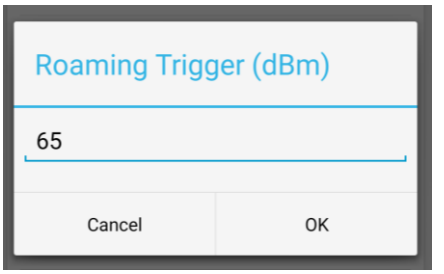


Power Save Mode

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

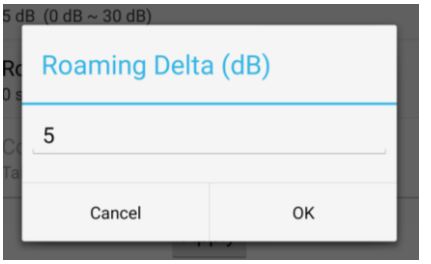
- **Roaming Trigger (Default: -65 dBm, Range: -10 dBm ~ - 120 dBm)**

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



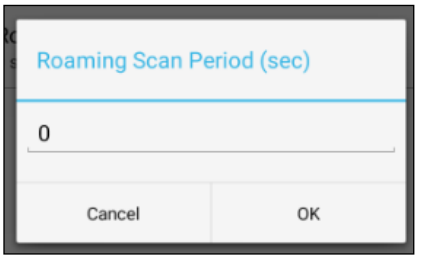
- **Roaming Delta (Default: 5 dB, Range: 0 dB ~ 30 dB)**

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



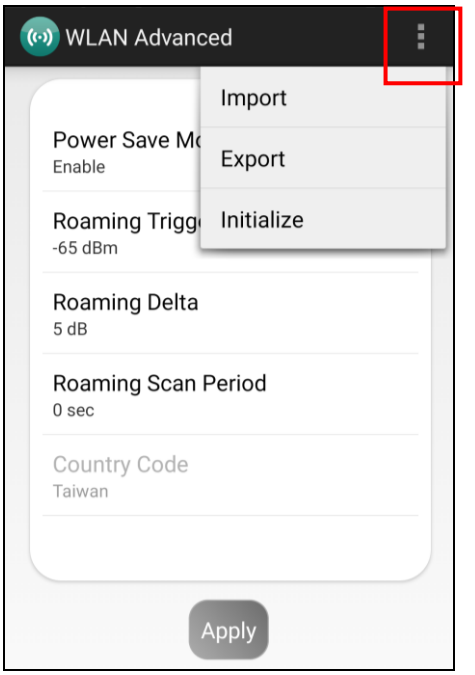
- **Roaming Scan Period (Default: 0 ms, Range: 0 ms ~ 60 sec)**

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



2.4.1.1 Other options

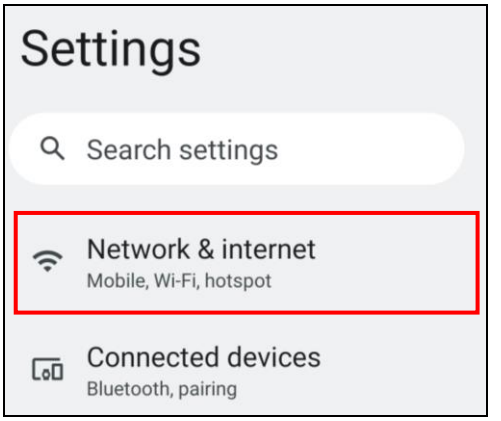
Tap  for more options to import / export the current data from the device. **Initialize** is able to restore the default settings.



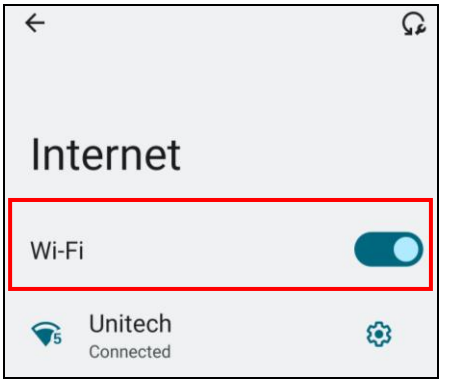
2.4.2 Share Wi-Fi

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

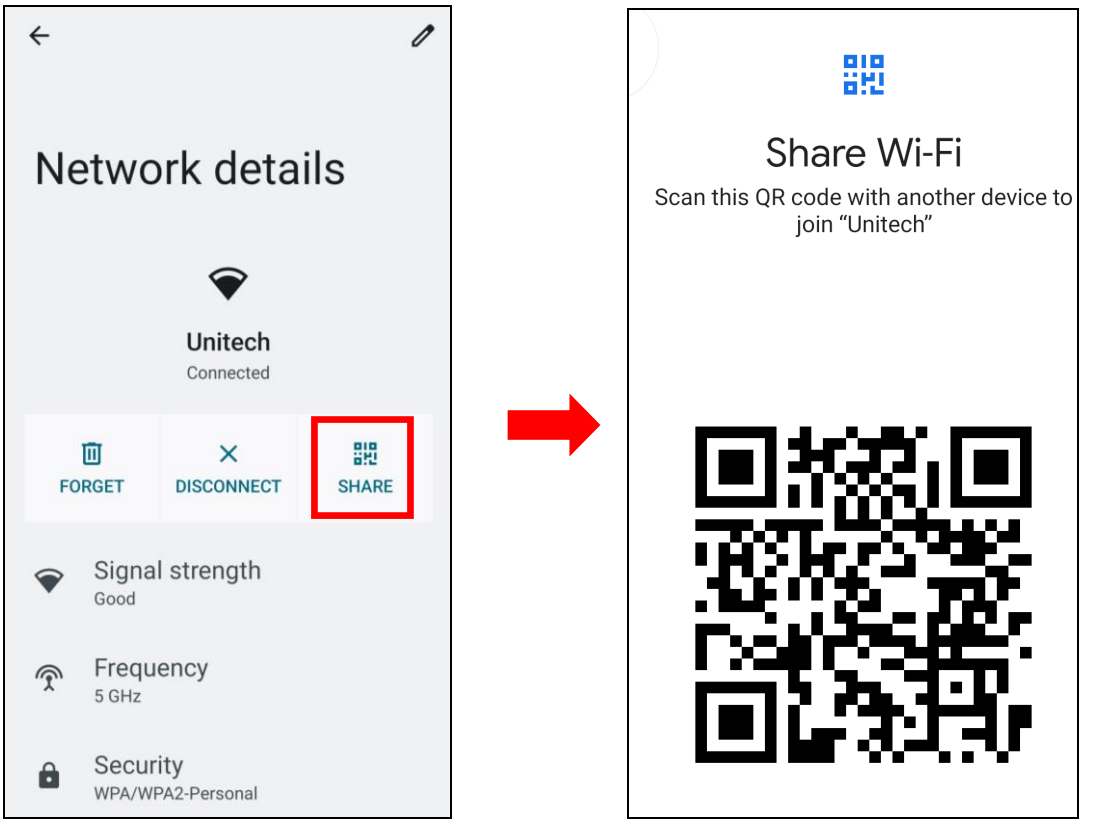
Settings and then tap **Network & internet.**



2. Tap Internet and turn WLAN **ON** to see available networks, then tap to choose the available networks.



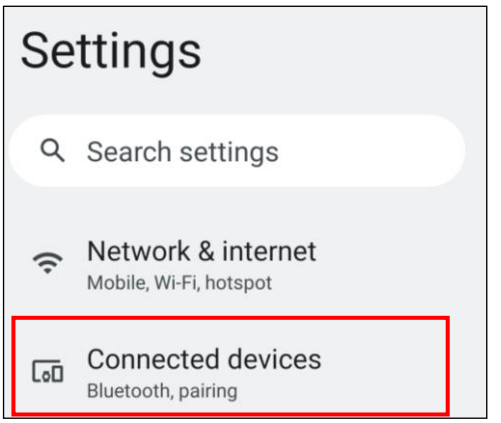
3. When Wi-Fi is connected, tap "**Share**" icon to show QR code.



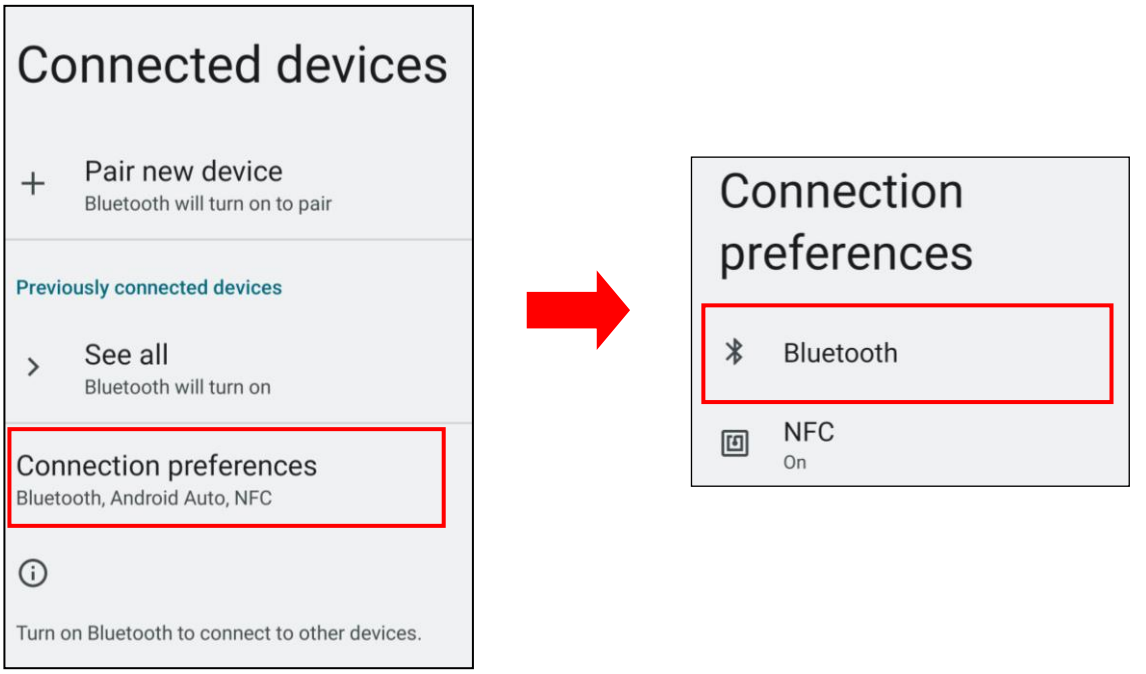
2.5 PAN Setting

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

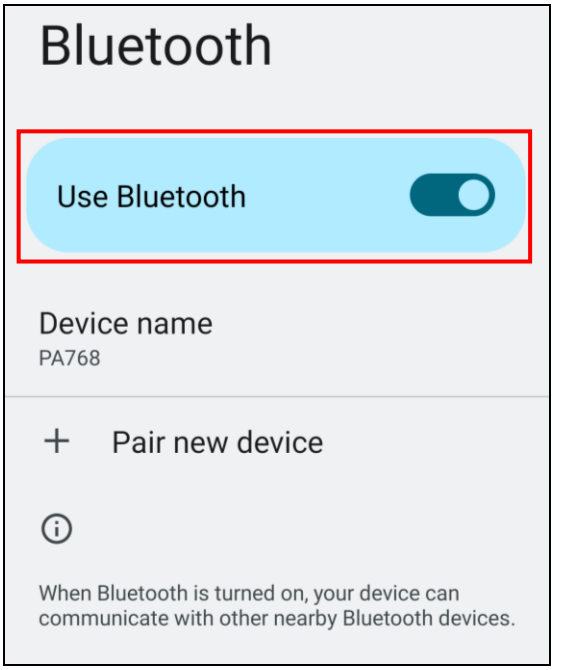
Settings and then tap **Connected devices**.



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



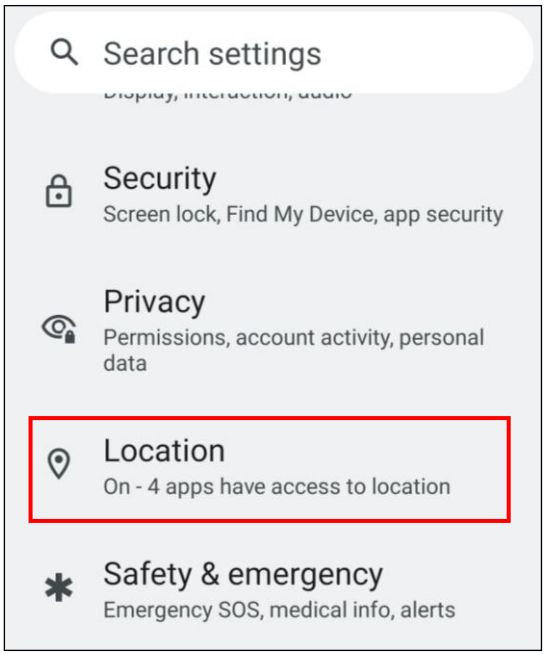
3. Tap **ON / OFF** to enable / disable Bluetooth®.
   To pair the available device, turn Bluetooth® **ON** to choose the available device.



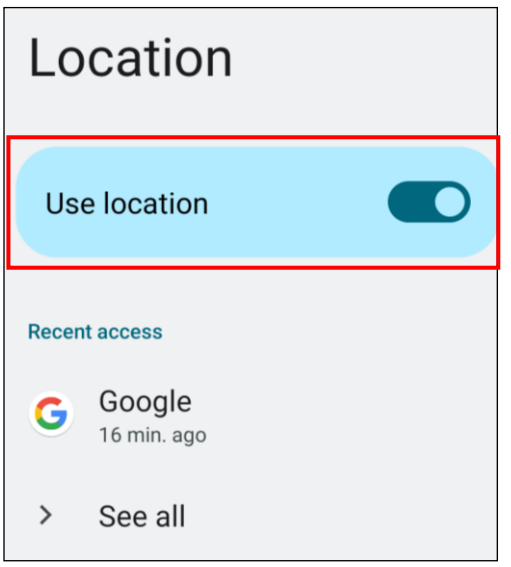
2.6 GPS Setting

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

Settings and then tap **Location.**



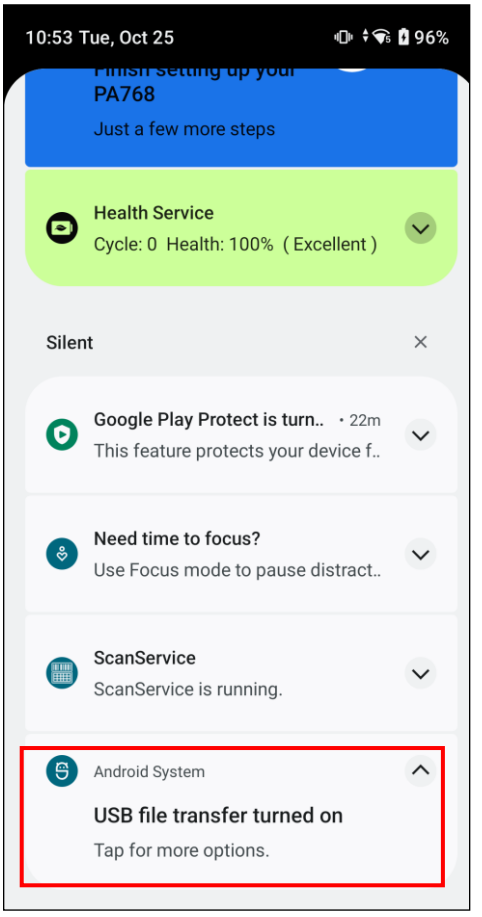
2. Tap **ON/OFF** for the permission to use your location information.



2.7 PC Setting

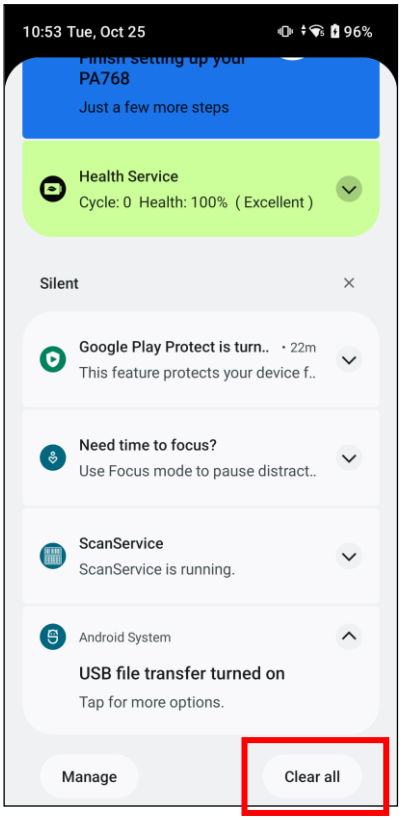
1. Connect EA660 to your computer with the USB Type C cable. Your computer will recognize it is USB charging.

2. Slide down from top, the system will show as follow picture, then you can tap on **Android System Charging this device via USB**.

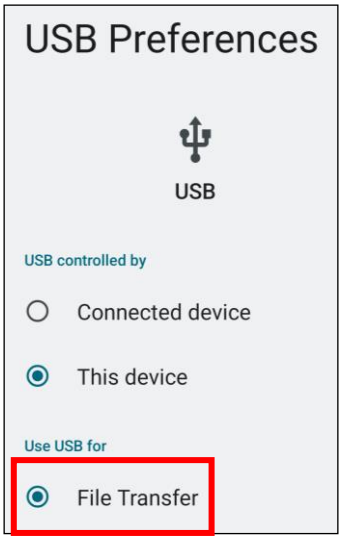


Note:

*If you cannot find the **Android System Charging this device via USB** notification in step 2, click on **CLEAR ALL** and try again.*

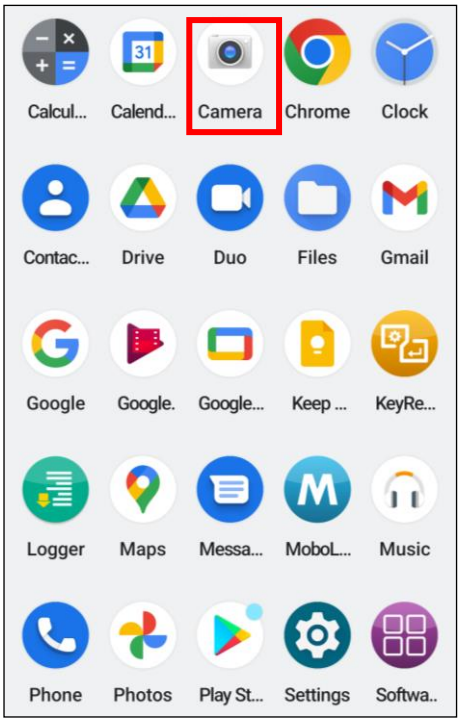


3. Then you can select File Transfer.



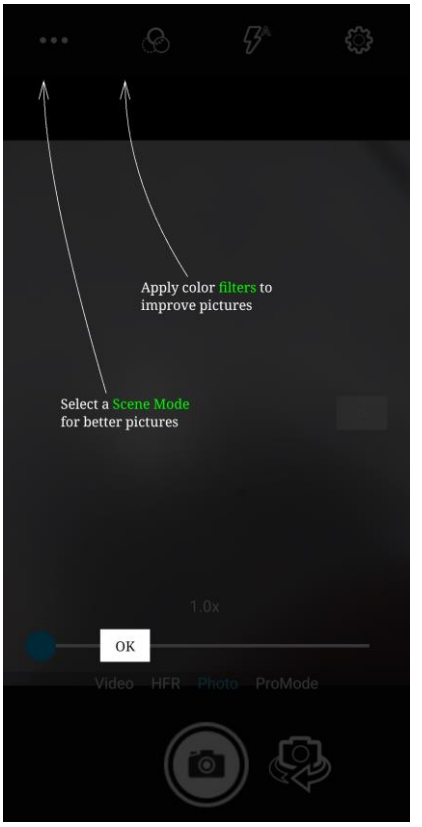
2.8 Camera Setting

1. Scroll the screen from down to top to reach the APPS, and tap **Camera**.



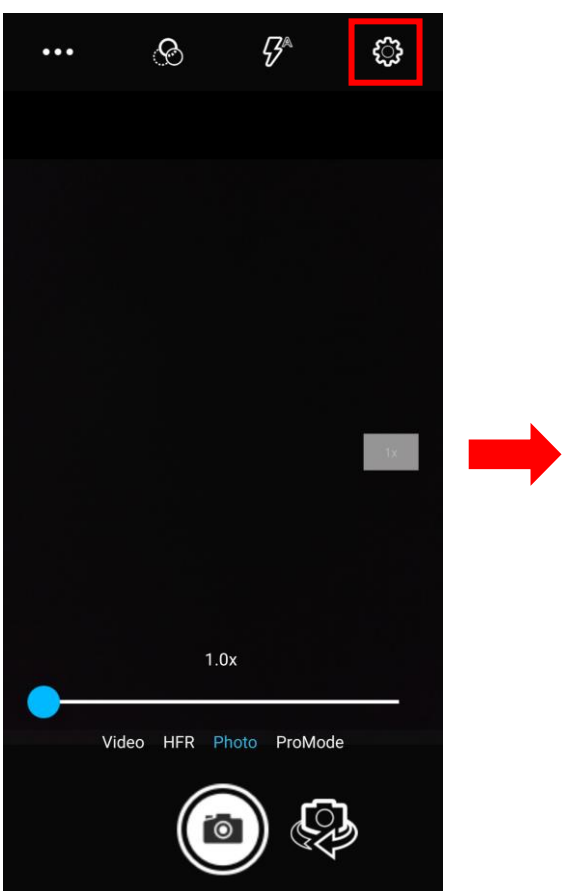
2.8.1 Introduction

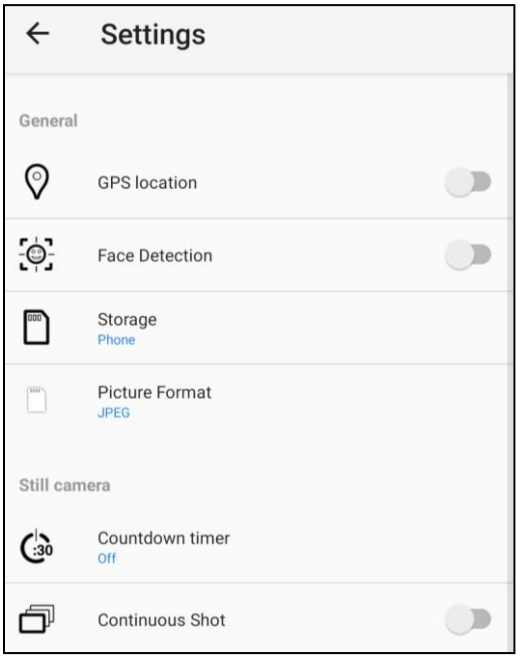
For the first time turn on, the screen will show a brief introduction about camera settings.



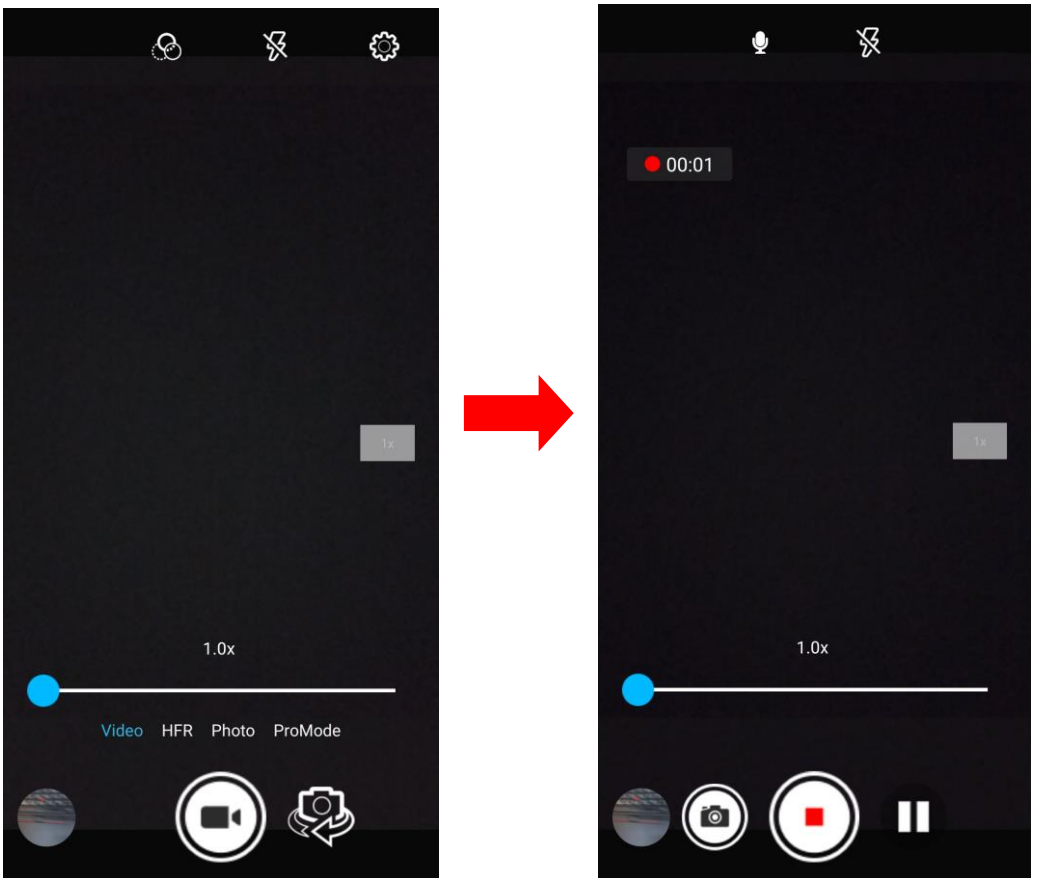
2.8.2 Settings

Please tap  to enter the settings section.



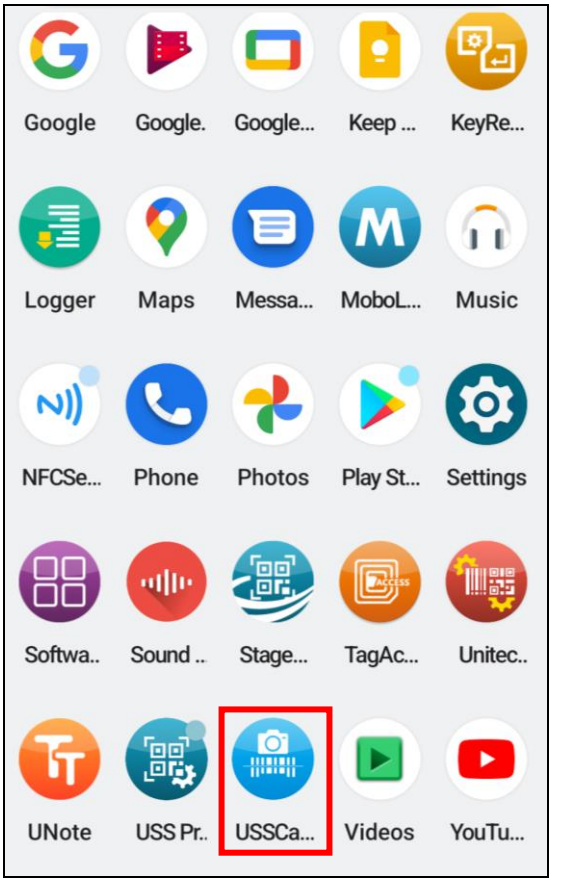


3. Once tap the record button, it will start recording.

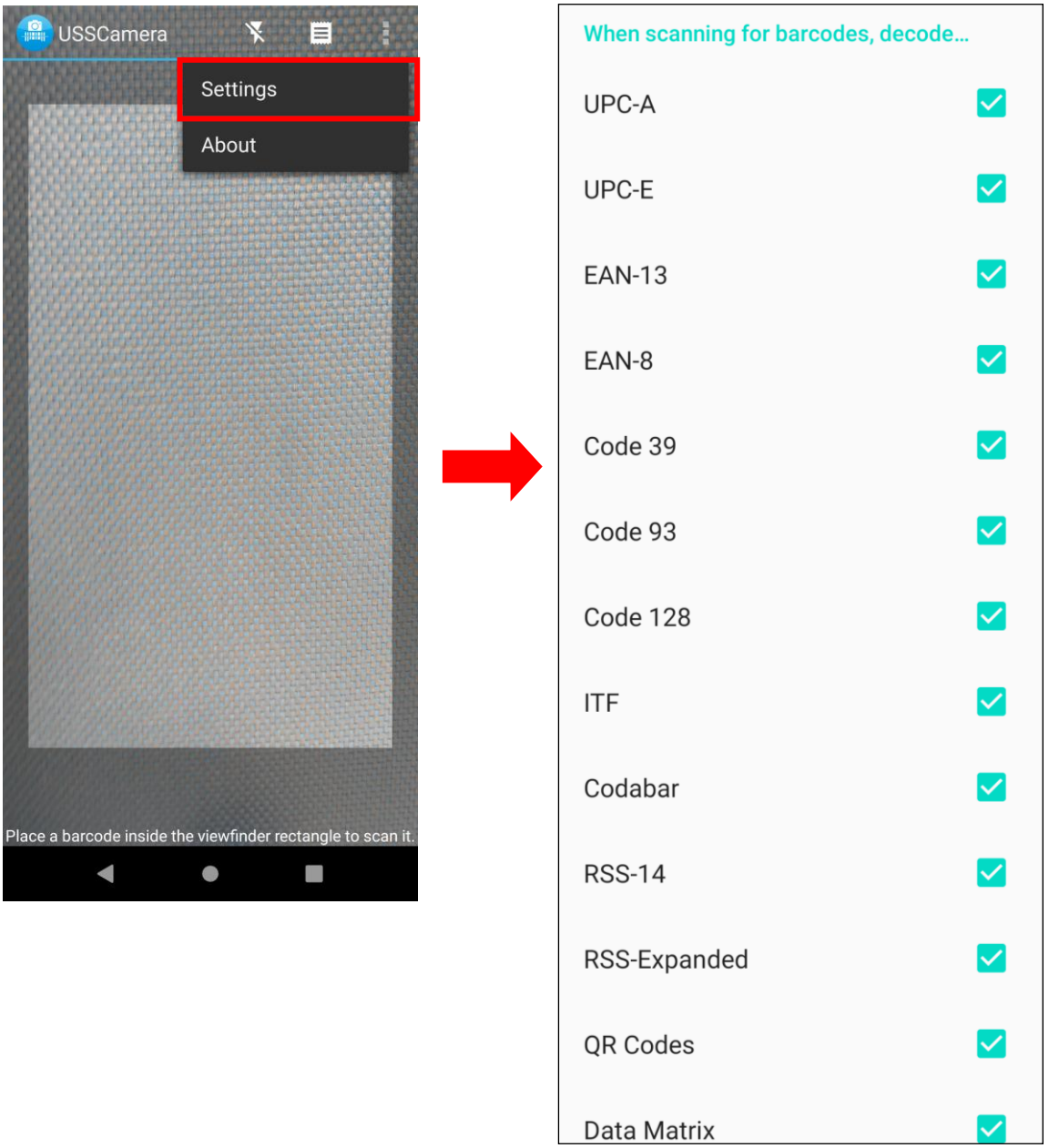


2.9 USS Camera

1. Scroll the screen from down to top to reach the APPS, and tap **USSCamera**.

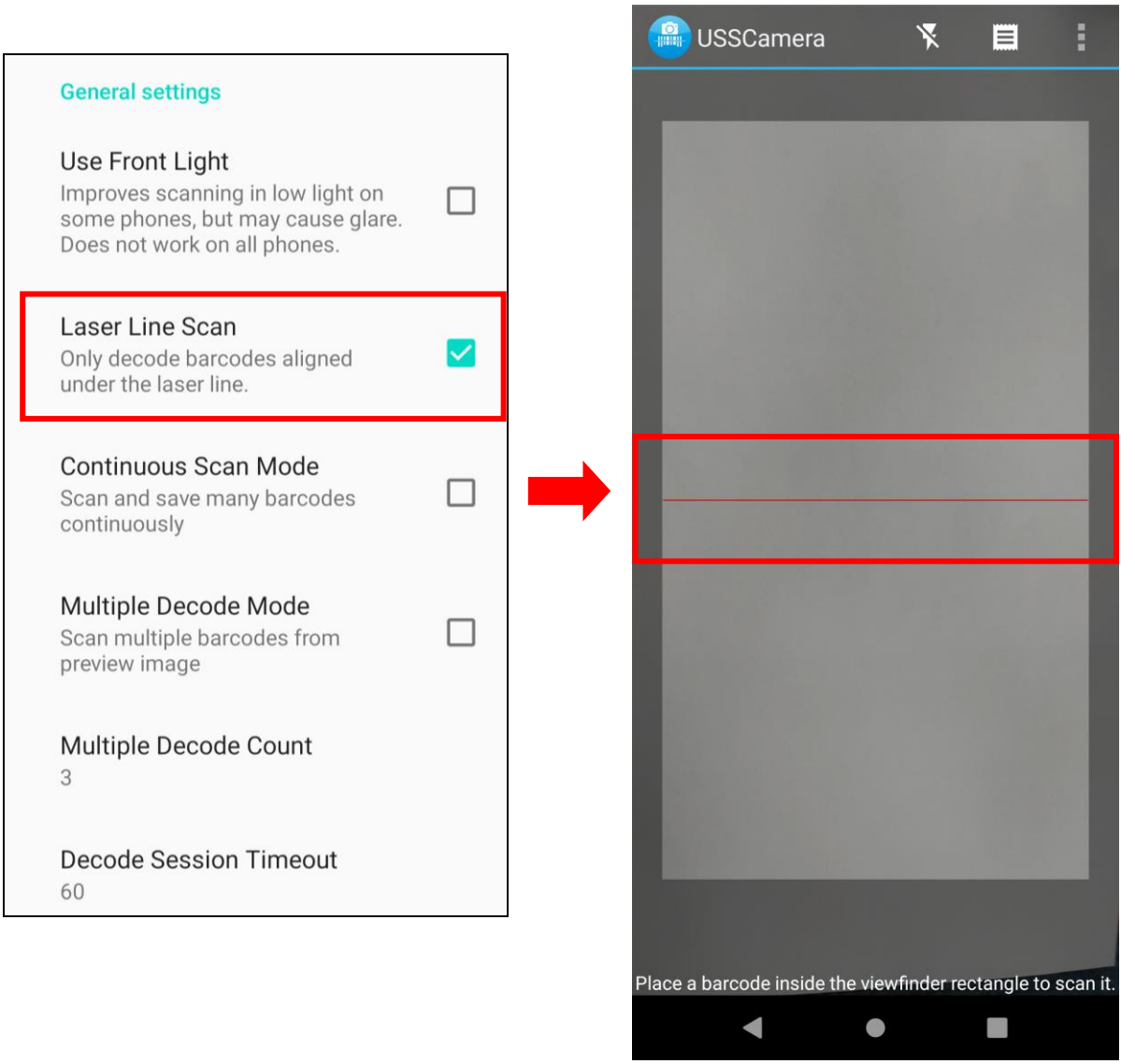


2. Select the types of barcodes from the settings.



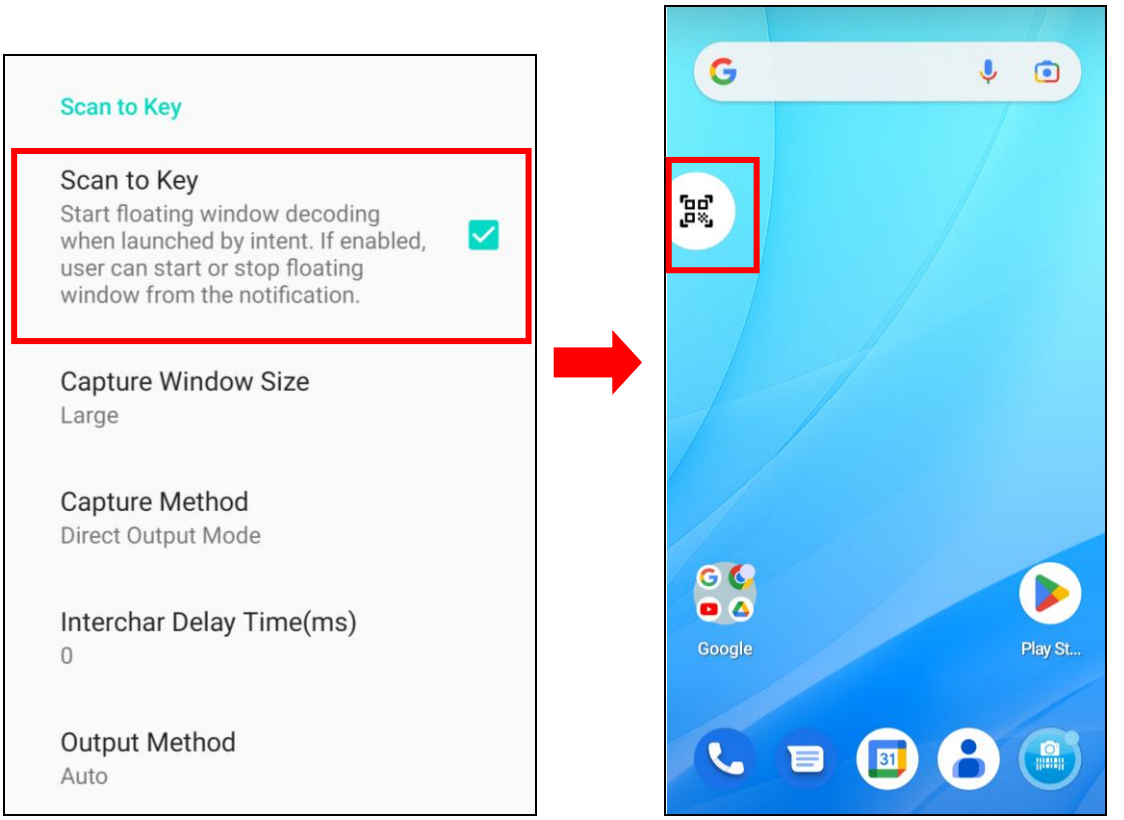
2.9.1 Laser Line Scan

When you select **Laser Line Scan**, it means only barcodes aligned under the laser line will be decoded.



2.9.2 Scan to Key (floating window)

By selecting Scan to Key, start floating window decoding when launched by intent. If enabled, user can start or stop floating window from the notification. The icon will appear on the main screen.



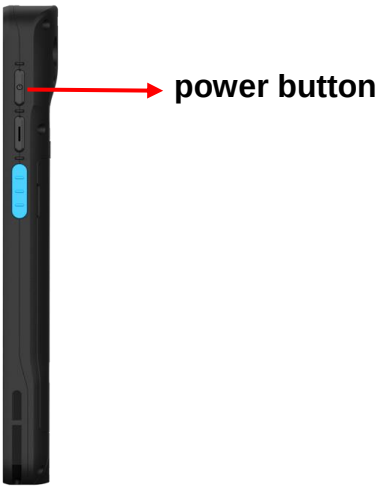
3. The floating window will appear on the main screen.

Note:

To close the floating window, simply by not selecting the Scan to Key.

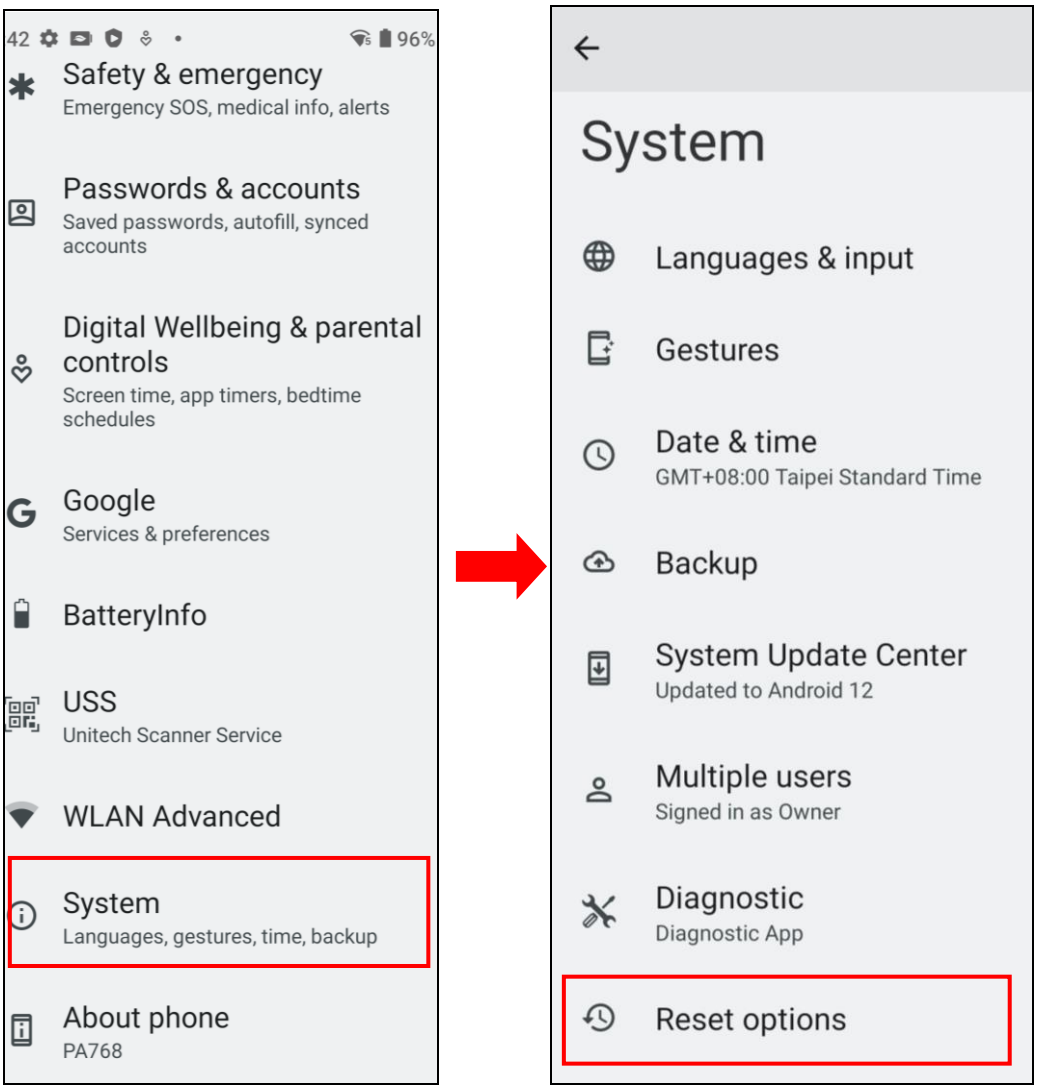
2.10 Performing A Hardware Reset

You may have to perform a reset if the device freezes (i.e., the EA660 no longer responds to the buttons or tapping on the screen). Long press and hold the **Power button** around 10 seconds to restart the device.



2.11 Performing Factory data reset

1. On the main screen, scroll the screen from bottom to top to reach the APPS, and tap **Settings** → **System,** then select **Reset options**.



***Note**:*

*When you select **Erase all data (factory reset)** in the **Reset Options**, it will erase all folders.*

2.12 KeyRemap

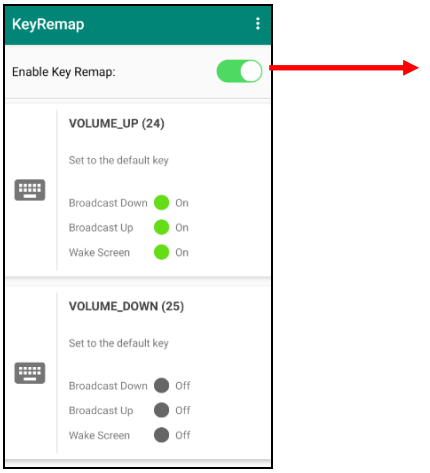
The EA660's keys can be programmed for users to be able to perform different functions or applications.

Four options to use key remap functions: Volume_Up/Down, Programmable Key, Scanner Triger Key Left and Scanner Triger Key Right.

2.12.1 Remap a key

On the main screen, scroll the screen from bottom to top to reach the APPS, and tap **KeyRemap** 

. Select the keys to remap and enable key.

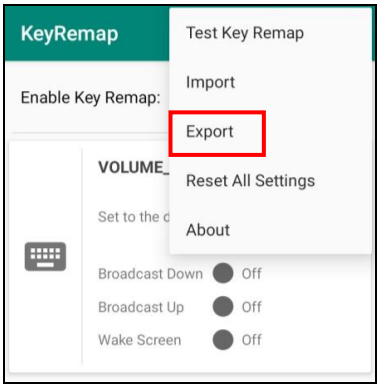


After remapping the key, remember to enable the key remap.

2.12.2 Export / Import A Remap Key Configuration File

■ Export file

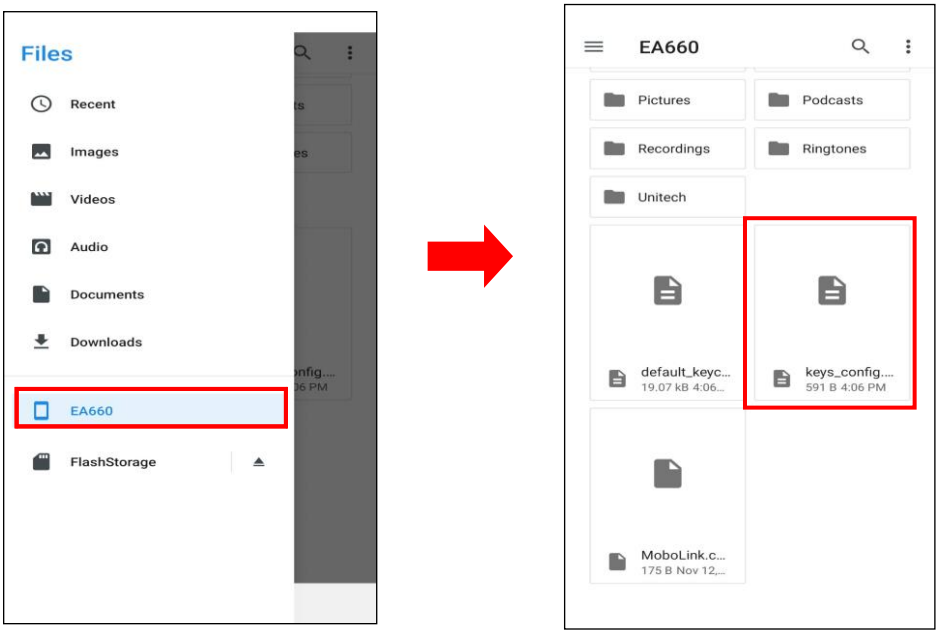
1. Tap 
2. Select **Export**



The remap Key configuration can be exported to a text file or imported into EA660.

Note:

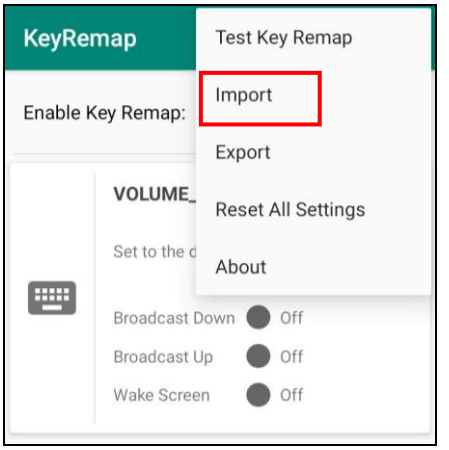
The configuration file (keys_config.txt) is saved in Files.



■ Import file

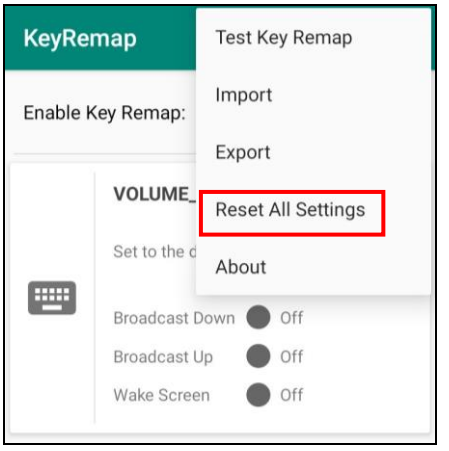
Before importing the file, please make sure the configuration file (keys_config.txt) is in the Files.

1. Tap 
2. Select **Import**



■ Reset all settings

1. Tap 
2. Select **Reset all settings**

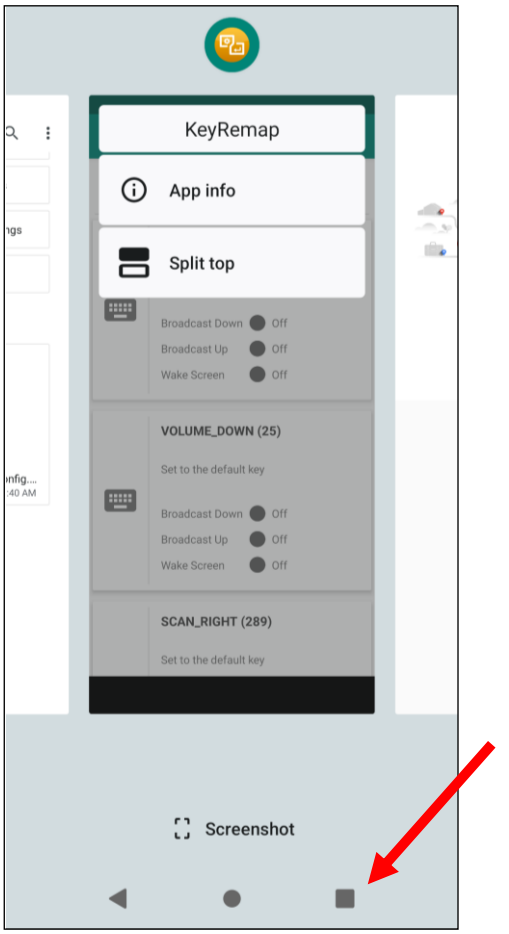


2.13 Split Screen

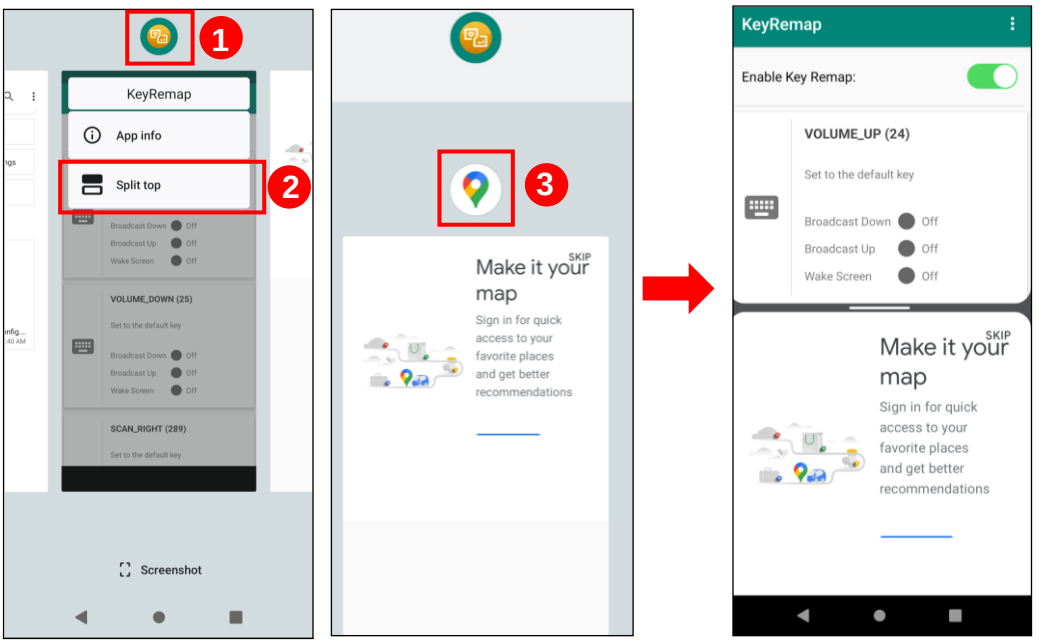
Split screen function allows you to have two apps work side by side on the same screen. Please follow the steps to enable split screen multitasking.

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

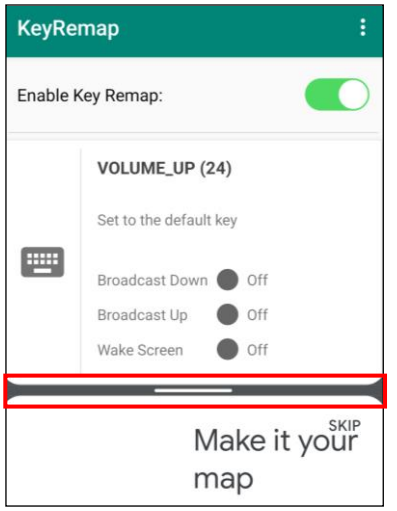
1. Tap **Background APP button** until you see those background apps on the screen.



2. Tap and hold the icon which appears above the APP thumbnail and then select "**Split top**." The first APP you chose to "**Split top**" will be on top of the screen. For another APP to show on the bottom half of the screen, simply tap on the APP thumbnail.



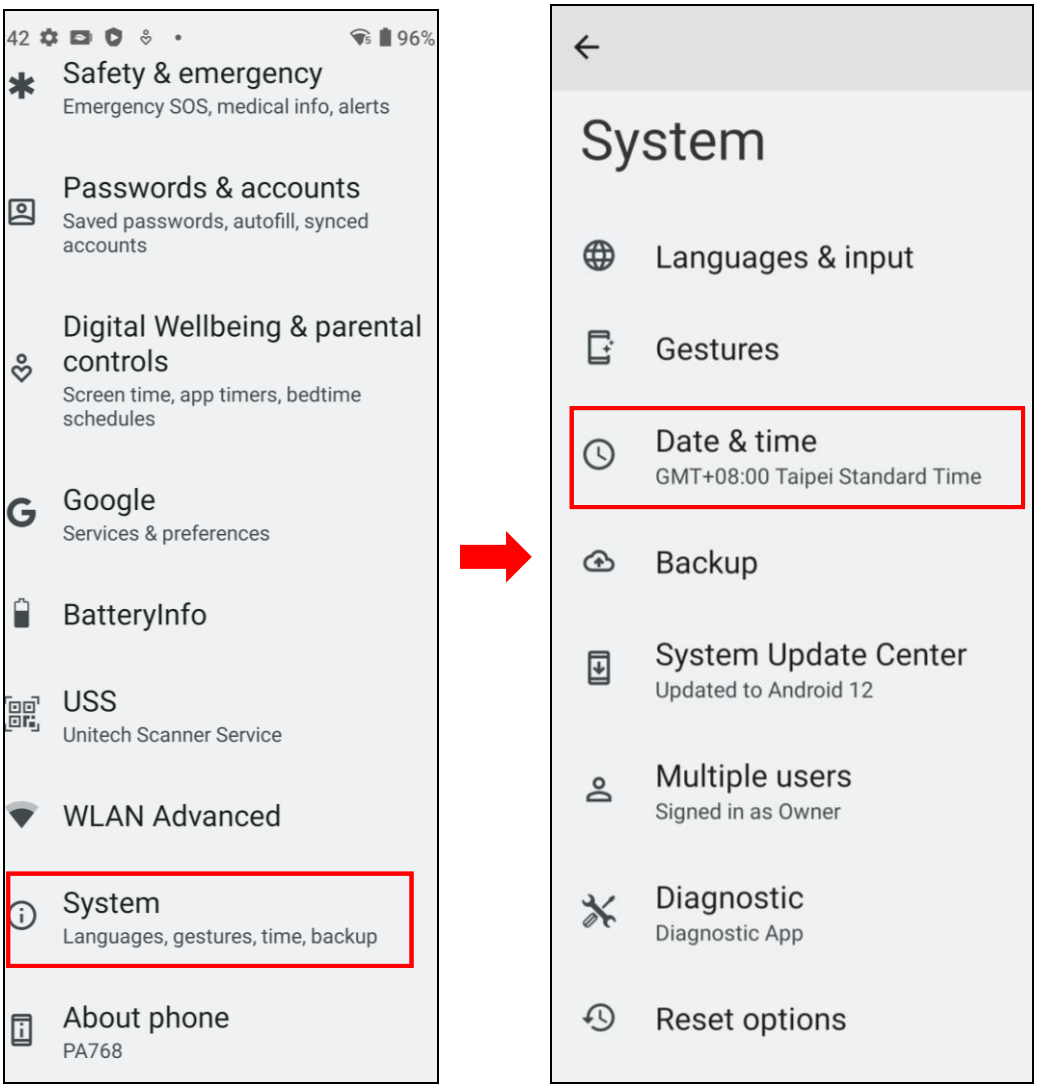
3. To cancel split screen, simply drag up or down the black bar in the middle of two APPs to expand the app that you would like to keep in full screen.



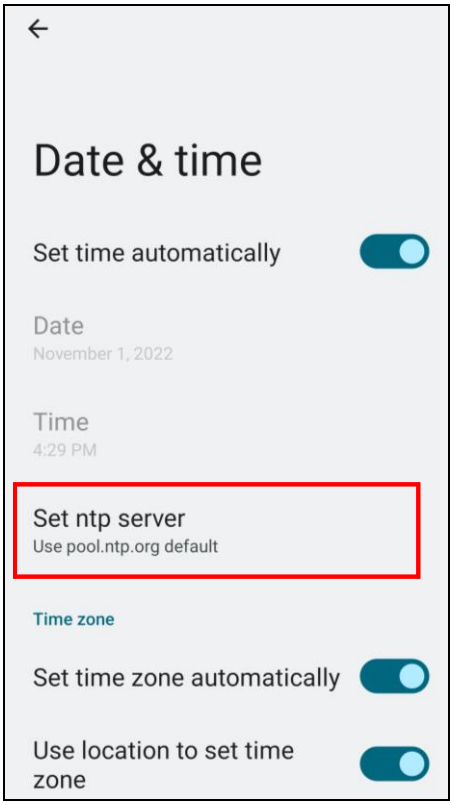
2.14 Network Time Protocol (NTP) Server

The Network Time Protocol is used to synchronize the clocks over the Internet. Allow the users to set the clock by using NTP Server.

1. On the main screen, scroll the screen from bottom to top to reach the APPS, go to **Settings** → **System** → **Data & time**.

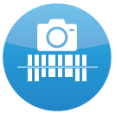


2. Tap **set ntp (Network Time Protocol) Server**.



Chapter 3 Introduction to Applications

3.1 Unitech SW Solutions (Overview)

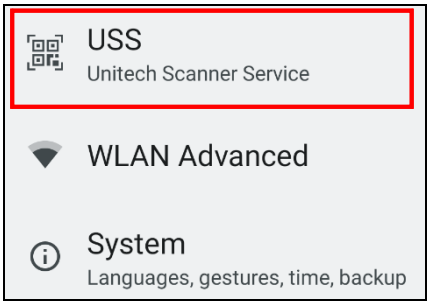
Solution	Introduction
 **USS Camera**	USS Camera capture barcode data using the device camera and send the data to your applications as keyboard inputs. ***Note:*** *For more details, please refer to 2.9 USS Camera.*
 **Enterprise Keyboard**	Enterprise Keyboard gives various methods for user to input data to enhance efficiency and productivity.
 **Key Remap**	Key Remap reprogram physical buttons to act as another key or to launch an app.
 **Logger**	Logger provides an easy and fast way to get logs from a device.
 **MoboLink**	MoboLink can be your best MDM, MAM and MCM companions. You will be able to monitor and manage in real-time the device health of your devices, the locations, non-compliance event reports, online status, as well as manage the application & file deployments, or schedule to run StageGO configuration scripts remotely.
 **Software Update**	The Software Update app keeps all your installed Unitech software up-to-date. You can choose to automatically update all apps at once, or select only the ones you wish to update. When new apps are available for this device, you will also be able to install them in just a few taps.

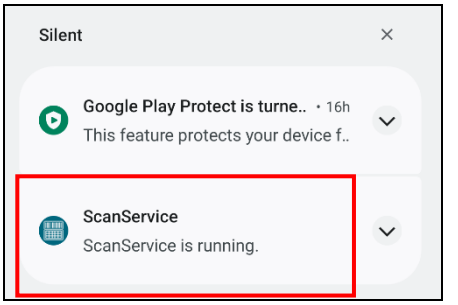
Solution	Introduction
 **StageGO**	StageGO is a barcode-based device staging solution from Unitech that helps IT admins to swiftly set up a device by just a few barcode scans.
 **TagAccess**	For versatile functions of RFID command via integrating with Unitech RFID Readers.
 **Unitech Scanner Utility**	Unitech Scanner Utility is an Android application which helps users connect, configure and use a supported Unitech Bluetooth scanner.
 **UNote**	UNote is a simple text editor. You can use UNote to save scanned barcodes, open and view log files for troubleshooting, and much more.

3.2 USS (Unitech Scan Service)

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

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

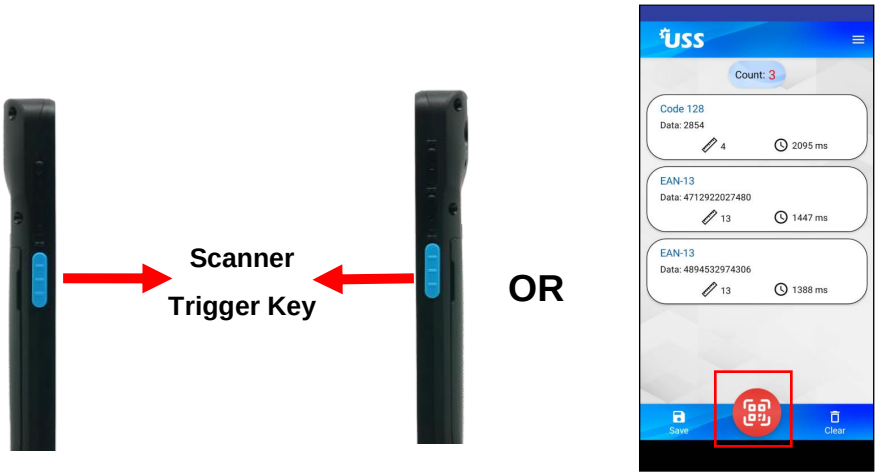


or


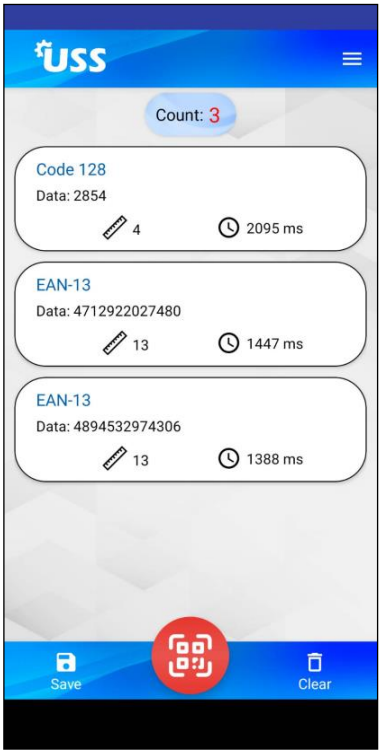
2. You now enter the Unitech scan service application.

3.2.1 How to scan

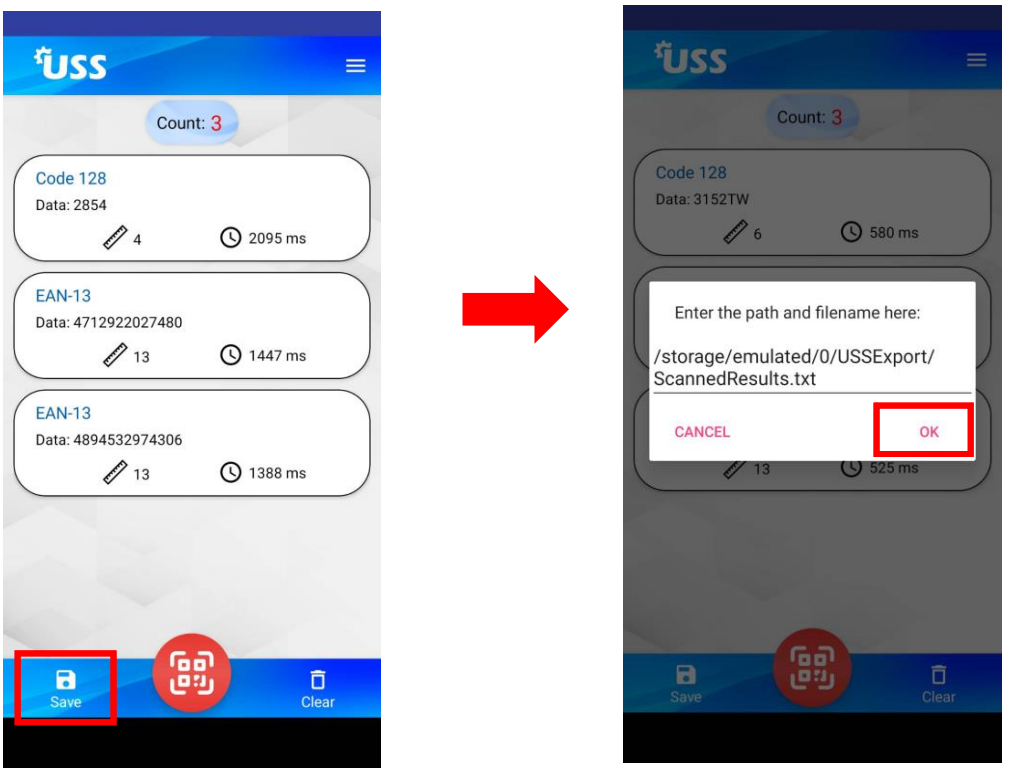
1. Aim the Barcode Scan Engine to the barcode and press one of two scan trigger keys or tap **Barcode icon**.



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

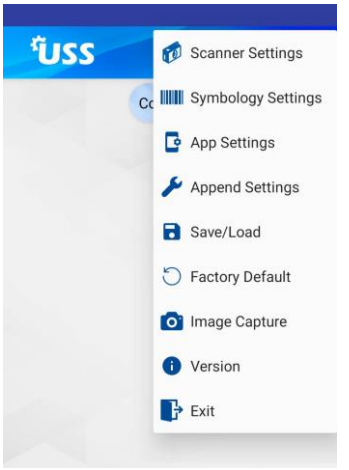


3. To save the scanned data, tap **Save** and enter the path and filename, then tap **OK.**



4. More Options

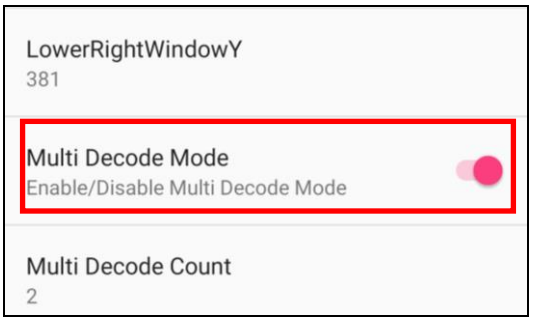
For more options and settings, please tap 



3.2.2 Multi Decode Scan Mode

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

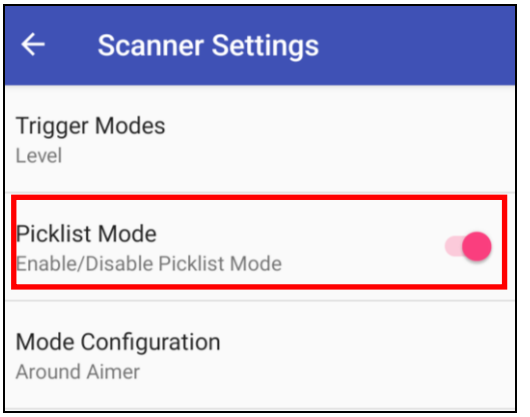
1. Tap , Choose **Scanner Settings**
2. Enable **Multi Decode Mode**, and input the barcode decode count (up to 10 counts) and start multi decode scan.



3.2.3 Picklist Mode

Picklist mode enables EA660 to decode only barcodes that are aligned under the laser crosshair or LED aiming dot.
For picklist mode demonstration, please click on our Youtube channel for more information : https://www.youtube.com/watch?v=QjT2E6hxD_k

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



3.2.4 More Information about USS

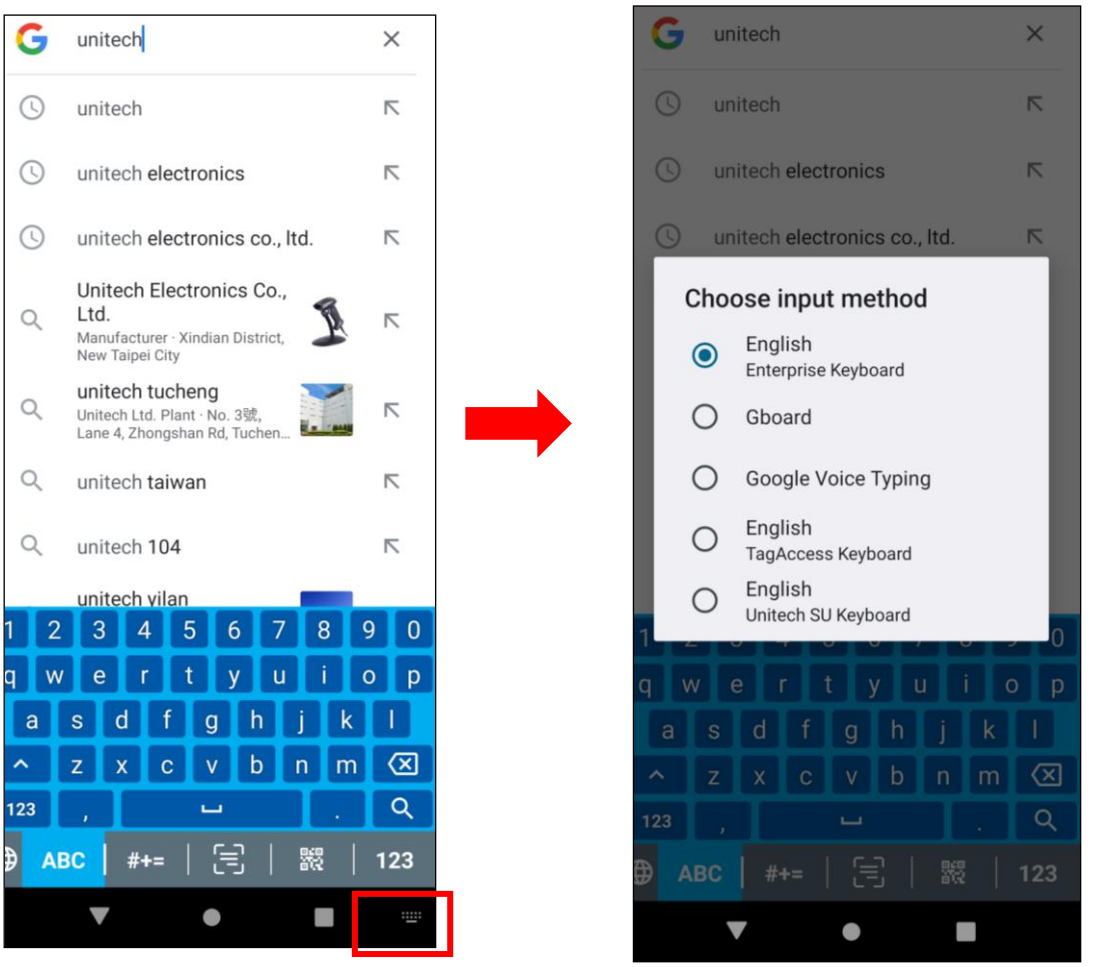
For more information about USS, please download the document from the below link:
http://w3.tw.ute.com/pub/cs/manual/uss/USS-RA-1-MANUAL_en20210326.pdf

3.3 Enterprise Keyboard

Introduction

Enterprise Keyboard is an AI-assisted virtual keyboard that offers both the traditional typing experience as well as the enterprise-focused typing experiences such as a dedicated number pad, dedicated symbol pad, and a tightly integrated keyboard wedge for collecting barcode and RFID inventory data. The Enterprise Keyboard also uses AI-assisted text recognition technology to enable users to extract text out of the camera image and then type them into an app.

When typing, you can select different input method.
For example, type in the searching bar first, then tap on the keyboard icon on the bottom right to select different input method.

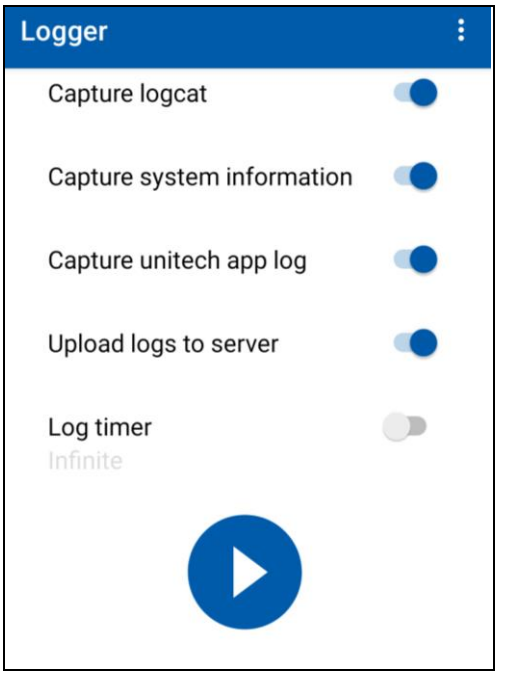


3.4 Logger

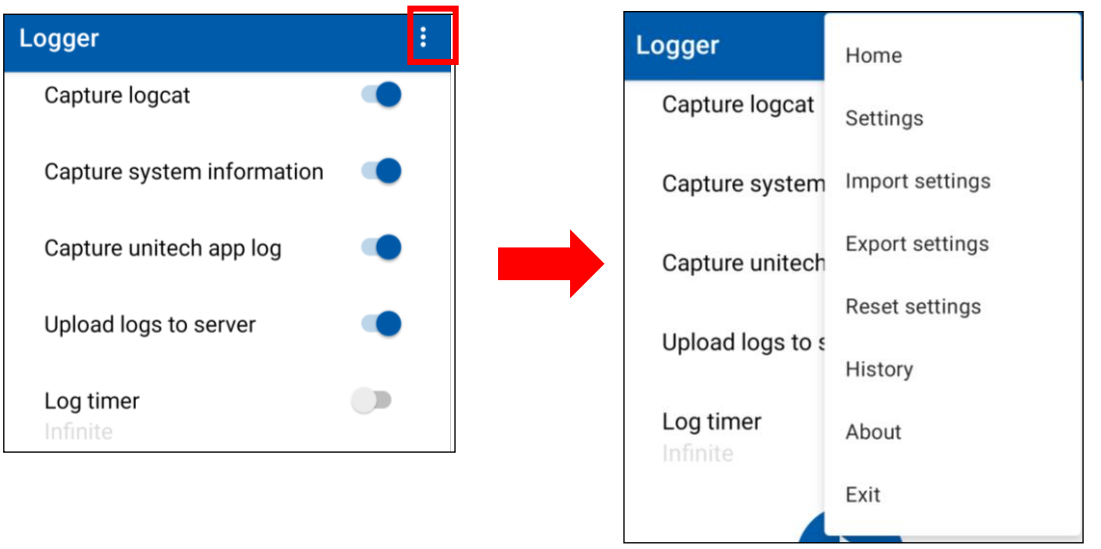
Introduction

The Logger app offers an intuitive way to collect error logs from a device for troubleshooting. No technical skills required. Simply use the Start-Stop buttons to start recording vital system and app logs as one snapshot or as a time-lapse, and then the logs can be automatically submitted to the unitech support team for analysis.

1. Scroll the screen from down to top to reach the APPS, and tap **Logger** 
   You will see the page below.



3. Tap on settings to view more.



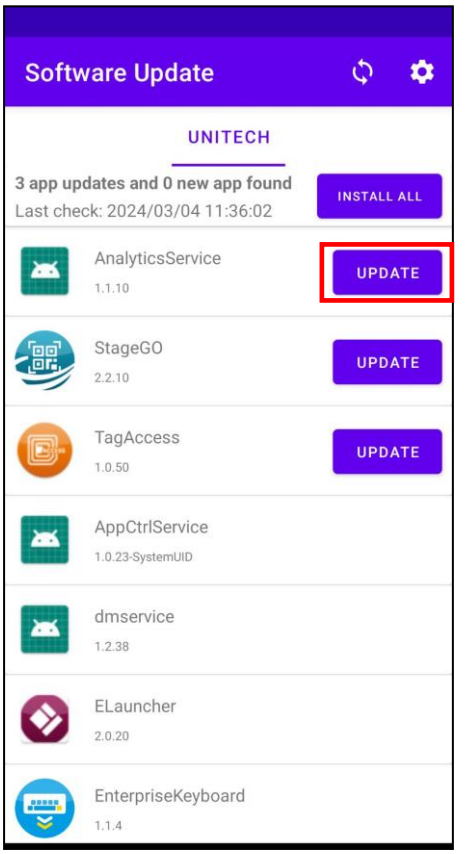
3.5 Software Update

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

Software Update

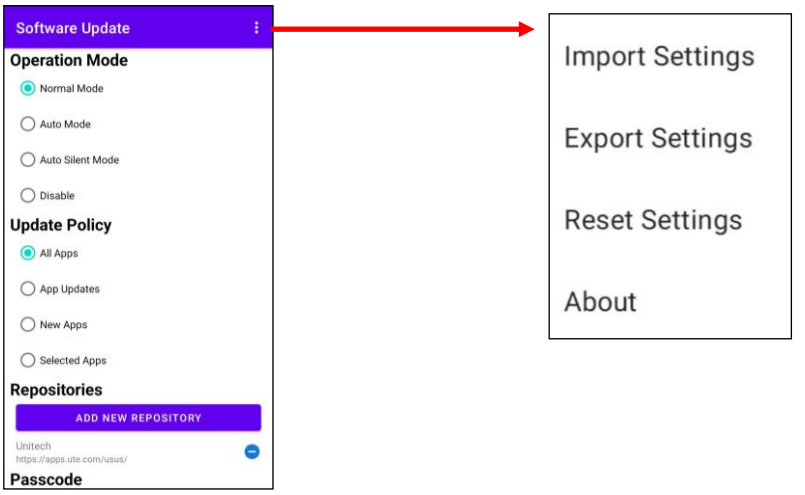
.

2. To update or check the latest version of each application, please tap **UPDATE**.



3.5.1 Software Update Settings

Tap  for more settings on Software Update.



- **Operation Mode**
  - Normal Mode → User can manually select apps to update
  - Auto Mode → Apps are automatically checked and updated each time Software Update is run.
  - Silent Mode →Similar to Auto Mode, but the GUI is hidden when updating (Software Update is run in the background).

- **Update Policy**
  - App Updates → Configure whether all or only the selected apps are updated, or turn off App Updates altogether.
  - New App → Configure whether new apps are being installed when they become available for your device.

- **Passcode**

  Configure a password to access the Software Update Settings menu.

- **Import / Export / Reset Settings**

  Import or Export settings to a file, or Reset all settings to factory default. You can find the exported settings file in the Internal Storage: /Unitech/usus/usus_config.stxt

3.6 StageGO

StageGO is a barcode-based device staging solution from Unitech.
StageGO helps IT admins to swiftly set up a device by just a few barcode scans.

Features

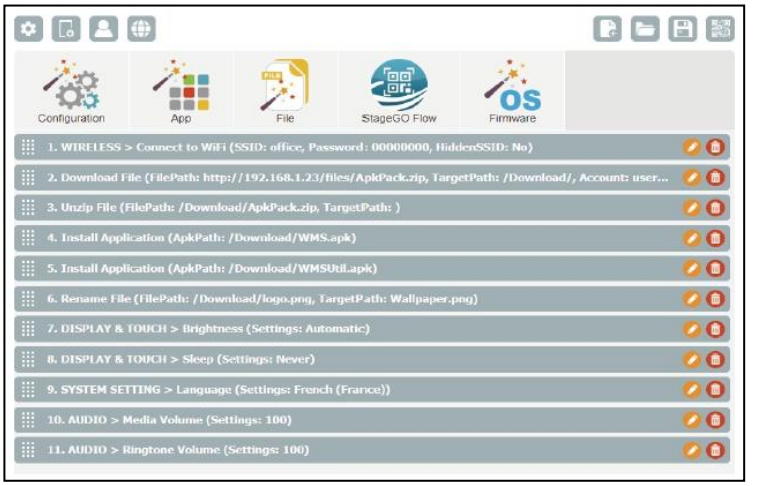
- Swift and effortless device staging for Unitech Android Mobile Devices.
- Device staging becomes more accessible, time-efficient, and secure.
- Complete device control at your fingertips.
- Data Compression.
- Security and Privacy.
- No installation required.

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

Step1: Create Script

Create Script

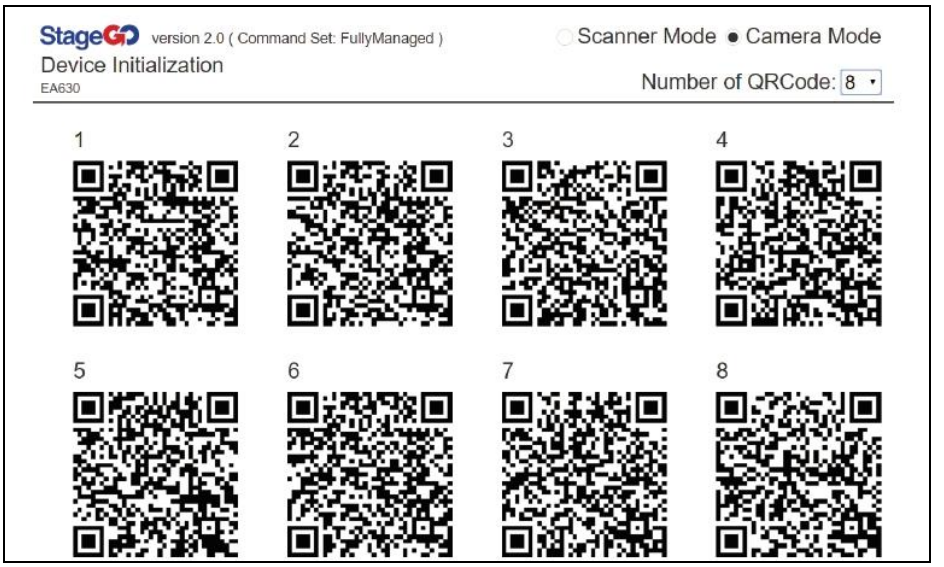
It all begins with IT staff creating a StageGO Script on the easy-to-use and secure web-based Script Editor. A StageGO script can contain one or more staging commands such as change system settings, connect to WiFi, download files, install apps, or set restrictions, etc.



Step2: Print QRCode

Print QRCode

This is when the script is ready to be transformed into QRCodes and get printed out for distribution to the fields. The QRCodes are always encrypted so that sensitive information such as username and passwords will stay hidden. You can also choose to save your script as an ecnrypted file and share it with a colleague.



Step 3. Scan QRCode:

Scan QRCode

The device user scans all the QRCodes into the StageGO app, or alternatively load script from file. The script will then automatically start to execute. Users will be informed of the progress of the execution, and should any execution errors occur, the execution report can be shared to IT admins for investigation.