Handheld Data Terminal

- EA500 -

User's Manual

Version 0.1

Revision History

Date	Change Description	Version

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.

Operation on the 5.15 - 5.25GHz frequency band is restricted to indoor use only. The FCC requires indoor use for the 5.15-5.25GHz band to reduce the potential for harmful interference to co-channel Mobile Satellite Systems. Therefore, it will only transmit on the 5.25-5.35 GHz, 5.47-5.725 GHz and 5.725 – 5.850 GHz band when associated with an access point (AP).

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 1.5 cm from the body.
Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

Canadian Compliance Statement

This Class B Digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numerique de la classe B respecte les exigences du Reglement sur le material broilleur du Canada.

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 R&TTE 1999/5/EC directive, the EMC 2004/108/EC directive and the Low Voltage 2006/95/EC directive.

The declaration of conformity is available for download at :
https://portal.unitech.eu/public/Safetyregulatorystatement

CE RF Exposure Compliance

This device meets EU requirements (1999/519/EC) on the limitation of exposure of the general public to electromagnetic fields by way of health protection.

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

This equipment complies with the requirements of Directive 1999/5/EC of the European Parliament and Commission from 9 March, 1999 governing Radio and Telecommunications Equipment and mutual recognition of conformity. The highest CE SAR values for the device are as follows :

W/kg @ 10g (Head)

W/kg @ 10g (Body)

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 EU directive 2002/96/EC and update 2003/108/EC 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

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。

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。

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。

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；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。

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 825-1. 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.
    - Keep the battery cool. Avoid hot vehicles. For prolonged storage, keep the battery at a 40% charge level.
    - 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.

4. Protect battery life by not over or under charging the battery.

5. Please do not leave battery unused for long time without charging it. Despite unitech's safety precautions, the battery pack may begin to change shape. 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.

6. 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.

7. 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.
- 如果更換不正確之電池行事會有爆炸的風險
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 and make the batteries unstable and dangerous. Please use a battery temperature detecting device for a charger to ensure a safe charging temperature range.

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

Zx.3 Warning

The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following:

- the symbol of Figure 1 with a minimum height of 5 mm; and

- the following wording, or similar :

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

Figure 1 – Warning label (IEC 60417-6044)

Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level.

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:**	+81-3-35232766
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:**	Kayabacho Nagaoka Building 8F.,1-5-19 Shinkawa, Chuo-Ku, Tokyo, 104-0033, 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:	17171 Park Row, Suite 210 Houston, TX 77084USA (Rep.)
Address:	4F., No. 236, ShinHu 2nd Rd., NeiHu Chiu, 114, Taipei,Taiwan	**Website:**	http://latin.ute.com
Website:	http://apac.ute.com / http://mideast.ute.com		
North America		**Please scan QR Code 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 EA500 gift box.
If something is missing or damaged, please contact your unitech representative.

The standard package contents

- EA500 Terminal
- Battery
- USB Cable
- Cradle and cradle adapter
- Quick Start Guide
- Regulatory Compliance Statements

1.2 Product Detail

EA500 Front View

EA500 Rare View

Flash

NFC

Battery Cover Clip

Loudspeaker

Rear Camera

Green Point

EA500 Side View

SIM/SD Slot

Scan button

Power Button

Volume Button

Scan button

Custom Button

Scanner

Earphone Port

POGO Pin

USB Port

1.3 Specifications

System Features	
CPU	1.4GHz, Qualcomm 8917 Quad core
Memory	2GB DDR RAM 16GB ROM
Expanded slot	Micro SD/TF x 1(maximum of 32 GB), Micro SIM x 2
OS	Android 7.1 Enhanced security by preventing 3rd party data collection (without GMS).
Languages support	English, Simplified Chinese, Traditional Chinese, Japanese, Spanish, German, French and multiple languages

Display
5.0 inch TFT-LCD HD (720 x 1280) color screen, Gorilla Glass 3.Ultra sensitive capacitive touch screen, compatible with gloves and supports wet resistance.

Indicator
LEDs, Vibrator

Fingerprint (Optional)
Only for specific models

Buttons
Side SCAN button x 2 (Left / Right), User-defined function button (programmable key), Volume switch button (+ / -), ON / OFF button.

Symbologies	
1D / 2D	All major 1D and 2D codes

Audio
Microphone, speaker and 3.5mm audio jack

Power Source	
Main battery	Rechargeable and Changeable (Non-swappable) 3.8 V, 3800mAh Polymer Li-ion battery built-in.
Operation time	10-12 hours (depending on the specific environment)
RTC battery	Real time clock battery

Regulatory Approvals

CE, R&TTE, NCC, CCC, VCCI	
Communication	
USB	Micro USB
OTG	Over Micro USB
POGO PIN	Charging via cradle and USB client
WLAN	802.11 a/b/g/n/ac
PAN	Bluetooth 4.1

WWAN	EU :
	
	    4G FDD-LTE(B1, B2, B3, B7, B8, B20, B28A, B28B)
	    3G UMTS/HSDPA/HSPA/HSPA+ (900, 1900,2100MHz)
	US:
	    4G FDD-LTE B1,B2,B4,B7,B5,B20,B28A,B28B
	    3G UMTS/HSDPA/HSPA/HSPA+ (850,1900, 2100MHz)
	    2G GSM/EDGE/GPRS(850,1900)
	CN:
	    4G FDD LTE B1,B3& TDD B38,39,40,41
	    3G UMTS/HSDPA/HSPA/HSPA+ (900,2100 MHz)
	      CDMA EV-DO Rev.A (800MHz), Band 34, 39

RFID/HF/NFC	Frequency 13.56Mhz Support: ISO14443A/B, ISO15693 standard, Supports NFC
Sensor	Proximity sensor, light sensor and G-sensor
Camera/Photos/Video	
2MP front camera 8MP rear camera with LED flash and auto-focus function	
Device supported MDM	
SOTI, 12Manage and MoboLink	
Enclosure	
Weight	210g
Dimension	158 mm (L) x 11.5mm (H) x 76.2mm (W)
Environmental	
Operating temperature	-10°C to +50°C
Storage temperature	-20°C to +70°C
Charging Temperature	0°C to 40°C
Relative Humidity	5% ~ 95% (non-condensing)

Drop test to Concrete	1.2m to concrete
Environmental Sealing	IP67

| Radio type / Description		Transmitter Frequency	Maximum Output Power
GSM	GSM900	880-915MHz	33dBm±2dB
	DCS 1800	1710-1785MHz	30dBm±2dB
UMTS	FDD 1	1920-1980MHz	24dBm+1.7dB/-3.7dB
	FDD 5	824-849MHz	24dBm+1.7dB/-3.7dB
	FDD 8	880-915MHz	24dBm+1.7dB/-3.7dB
CDMA	BC0	824-849MHz	24dBm+1.7dB/-3.7dB
FDD-LTE	FDD 1	1920-1980MHz	23dBm+2.7dB/-2.7dB
	FDD 3	1710-1785 MHz	23dBm+2.7dB/-2.7dB
TDD-LTE	TDD38	2570-2620 MHz	23dBm+2.7dB/-2.7dB
	TDD39	1880-1920 MHz	23dBm+2.7dB/-2.7dB
	TDD40	2300-2400 MHz	23dBm+2.7dB/-2.7dB
	TDD41	2555-2655 MHz	23dBm+2.7dB/-2.7dB
WLAN 2.4GHz	IEEE 802.11b	2400-2483.5MHz	15dBm
	IEEE 802.11g	2400-2483.5MHz	13dBm
	IEEE 802.11n	2400-2483.5MHz	11dBm
WLAN 5GHz	IEEE 802.11a	5150-5350MHz	12dBm
		5470-5725MHz	12dBm
	IEEE 802.11n	5150-5350MHz	10dBm
		5470-5725MHz	10dBm
	IEEE 802.11ac	5150-5350MHz	NC
		5470-5725MHz	NC
Bluetooth	Bluetooth	2400-2483.5MHz	10dBm
RFID	NFC	13.56MHz	-21.1dBuA@10m

1.4 Getting Started

1.4.1 Charging EA500

Before using the terminal for the first time, you need to charge it for about 24 hours. After that, you can charge the terminal for 4 hours to recharge the battery to full capacity. Charge the terminal using the USB charging cable or the cradle.

Connect the type C USB cable to the USB port on EA500 and the other end of the USB cable please connect to AC power adapter into the electrical outlet on the USB plug.

The charging LED indicator on EA500 is turning red when it is in charging state. The red light is off after the charger is fully charged.

USB Port
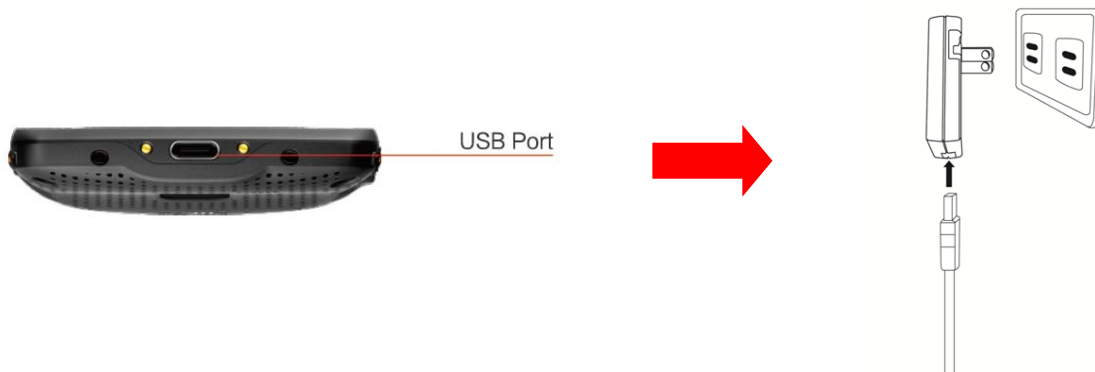
1.4.2 Turning on the terminal for the first time

After you have initially charged your device for about 24 hours, the device is ready to be used. You can now start up your device. You can then set up the languages, WiFi setting, and date and time.

Power-On Button

Power Button

Turn ON your device by pressing the power button。

1.4.3 Checking the LED status

1.4.3.1 EA500 LED Status

	Status	LED	Description
Terminal	Power	Solid Red light	Charging
		No LED light	Fully charged

1.4.4 Installing SIM/ SD Card

Press the thimble to remove the card holder, place the SIM card 1, card 2 and SD card correctly into the card slot. (as shown below) :

Note：

1、Please use standard SIM card.

2、Do not push too hard when SIM card、TF card、SD card are inserted into the slot.

3、To remove the cards, please press the thimble to jump out the card slot.

1.4.4.1 Connect WiFi or 4G on EA500

Please check the WiFi / 4G icon to see which internet access that EA500 uses.

■ Through WiFi

■ Through 4G

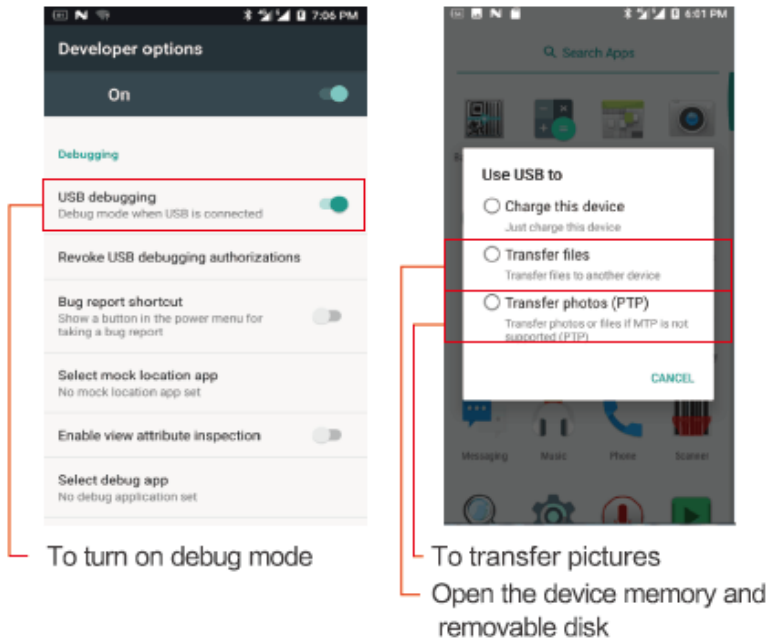■ Through both WiFi and 4G at the same time, WiFi takes priority over 4G .

Chapter 2 – Installation & Operation

2.1 Connecting to PC

After you install the Android driver or an Android smart phone assistant, you can connect the devices to your PC with USB cable provided. After device connected to your PC, the screen would display like this:

Tap the top of the screen, drag downwards and the USB setting interface will appear.

Click on this to go the next right interface

Click on this to go the next left interface

To turn on debug mode

To transfer pictures
Open the device memory and
removable disk
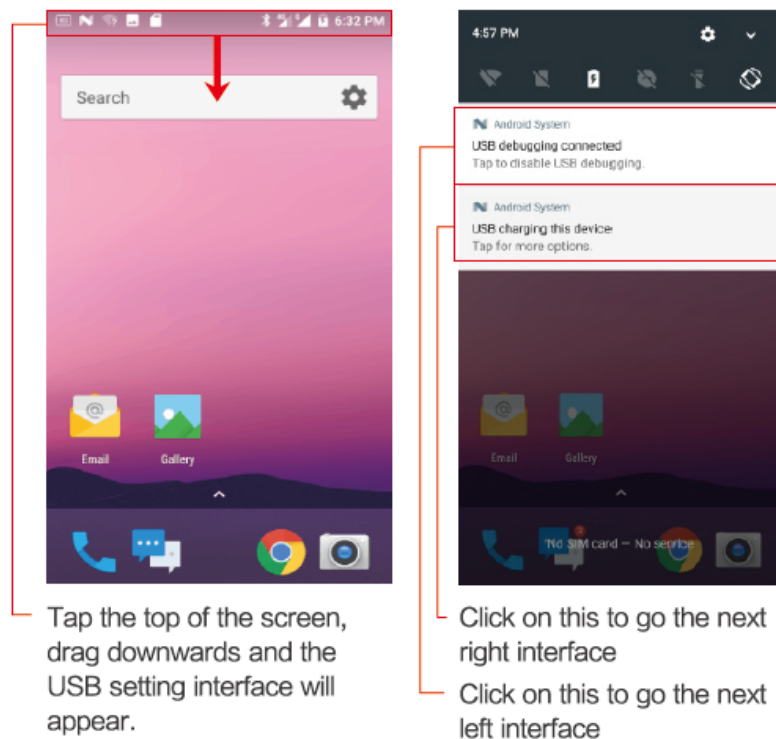
Open the system storage and removable disk at the same time in my computer, from there you can view, transfer and save data.

Note: ■ *You can insert a memory card on your device to use it as a removable disk.*

■ *If you do not insert a memory card, you will not see a removable disk on my computer.*

2.2 Turn on EA500

To turn on EA500 : hold power button until EA500 switches on.

To turn off EA500 : hold power button during operation until the screen shows a menu, and then tab "power off".

To turn off screen: press the power button.

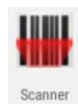To set idle time : Please go to "setting → Display →Sleep".

To wake up EA500 : press the power button lightly.

2.3 Scan Service

There are two types of scan apps on EA500. Please see the instrctions below.

2.3.1 Scanner via engine

Aim the barcode scan engine to the barcode and press one of two scan trigger buttons.

Tap Scanner and start the scanning process. The screen only shows three or four scanned data, please scroll up and down to check more scanned data.
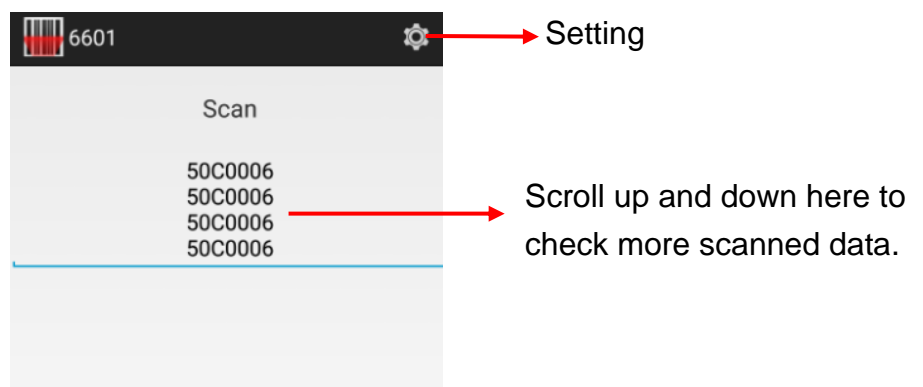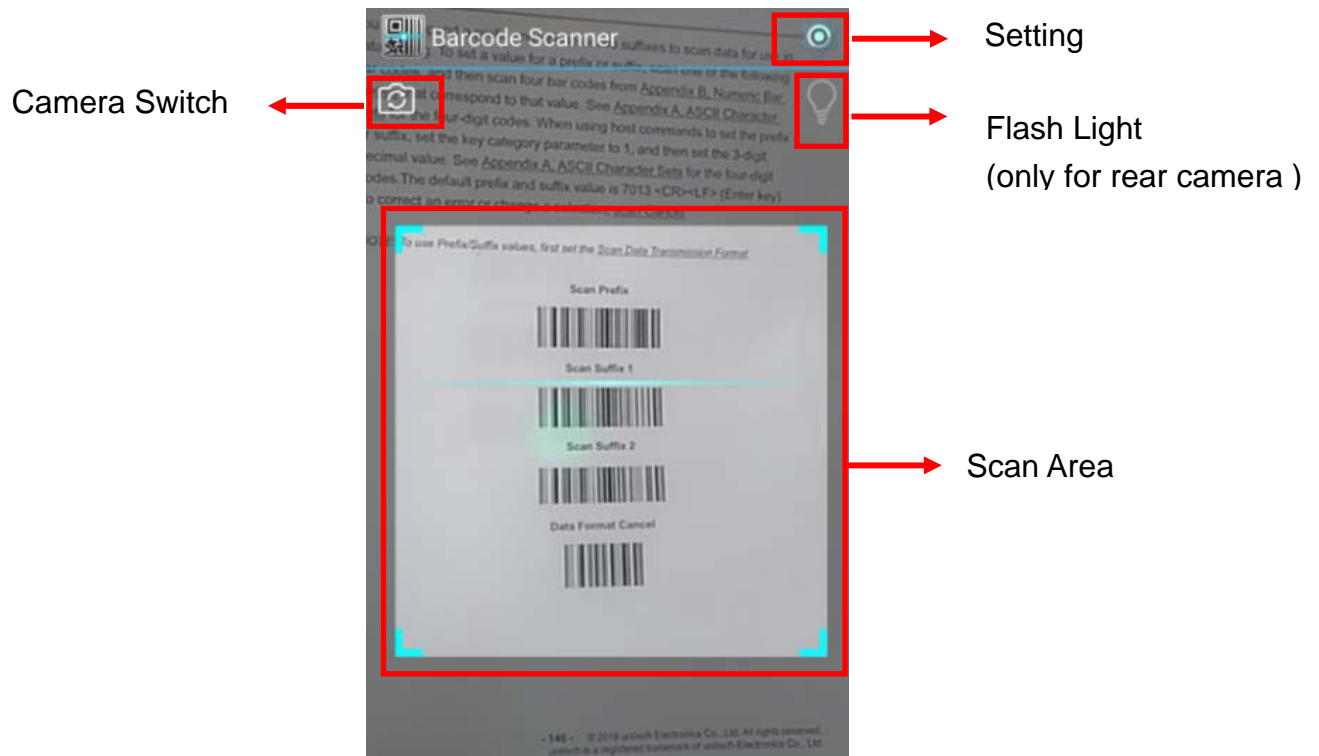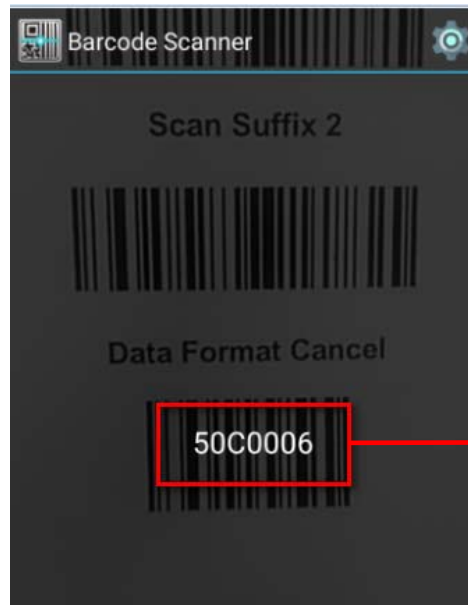
2.3.2 Barcode Scanner via camera

Barcode Scanner uses front / rear camera to capture the barcode image.

Tap Barcode Scanner and it will detect and capture barcode automatically when it is read by camera. One data at a time.

Setting

Camera Switch

Flash Light
(only for rear camera)

Scan Area

Scanned data information