

# Rugged Handheld Computer

- TB128 -



## User's Manual

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Version 1.0

## 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

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### 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 not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

## **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**

This product meets applicable national SAR limits of 1.6W/kg.  
This specific maximum SAR values can be found in the section of this user guide.  
Note that the product may be transmitting even if you are not Surfing Internet.  
Body SAR: 0.77 W/kg

## **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 brouilleur 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 2014/30/EU directive and the Low Voltage 2014/35/EU directive.

The declaration of conformity is available for download at :

<https://portal.unitech.eu/public/Safetyregulatorystatement>

## 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>

## Laser Information

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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, will increase eye damage. This does not include eyeglasses worn by the user.

## LED Information

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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

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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.
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## **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

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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

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## 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:

<p><b>Taipei, Taiwan – Headquarters</b></p> <p><b>Tel:</b> +886-2-89121122</p> <p><b>E-mail:</b> info@hq.ute.com</p> <p><b>Address:</b> 5F, No. 136, Lane 235, Baoqiao Road, Xindian District, New Taipei City 231, Taiwan (R.O.C.)</p> <p><b>Website:</b> <a href="http://www.ute.com">http://www.ute.com</a></p>	<p><b>Europe</b></p> <p><b>Tel:</b> +31-13-4609292</p> <p><b>E-mail:</b> info@eu.ute.com</p> <p><b>Address:</b> Kapitein Hatterasstraat 19, 5015 BB, Tilburg, the Netherlands</p> <p><b>Website:</b> <a href="http://eu.ute.com">http://eu.ute.com</a></p>
<p><b>China</b></p> <p><b>Tel:</b> +86-59-2310-9966</p> <p><b>E-mail:</b> info@cn.ute.com</p> <p><b>Address:</b> Room401C, 4F, RIHUA International Mansion, Xinfeng 3rd Road, Huoju Hi-tech District, Xiamen, Fujan , China</p> <p><b>Website:</b> <a href="http://cn.ute.com">http://cn.ute.com</a></p>	<p><b>Japan</b></p> <p><b>Tel:</b> +81-3-35232766</p> <p><b>E-mail:</b> info@jp.ute.com</p> <p><b>Address:</b> Kayabacho Nagaoka Building 8F.,1-5-19 Shinkawa, Chuo-Ku, Tokyo, 104-0033, Japan</p> <p><b>Website:</b> <a href="http://jp.ute.com">http://jp.ute.com</a></p>
<p><b>Asia &amp; Pacific / Middle East</b></p> <p><b>Tel:</b> +886-2-27911556</p> <p><b>E-mail:</b> info@apac.ute.com info@india.ute.com info@mideast.ute.com</p> <p><b>Address:</b> 4F., No. 236, ShinHu 2nd Rd., NeiHu Chiu, 114, Taipei,Taiwan</p> <p><b>Website:</b> <a href="http://apac.ute.com">http://apac.ute.com</a> / <a href="http://mideast.ute.com">http://mideast.ute.com</a></p>	<p><b>Latin America</b></p> <p><b>Tel:</b> +52-55-5171-0528</p> <p><b>E-mail:</b> info@latin.ute.com</p> <p><b>Address:</b> 17171 Park Row, Suite 210 Houston, TX 77084USA (Rep.)</p> <p><b>Website:</b> <a href="http://latin.ute.com">http://latin.ute.com</a></p>
<p><b>North America</b></p> <p><b>Tel:</b> +1-714-8916400</p> <p><b>E-mail:</b> info@us.ute.com / info@can.ute.com</p> <p><b>Address:</b> 6182 Katella Ave, Cypress, CA 90630, USA</p> <p><b>Website:</b> <a href="http://us.ute.com">http://us.ute.com</a></p>	<p><b>Please scan QR Code to visit us :</b></p> 

## Warranty Policy

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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.

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# Overview

## 1.1 Package

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Please make sure the following contents are in the TB128 gift box. If something is missing or damaged, please contact your unitech representative.

### The standard package contents

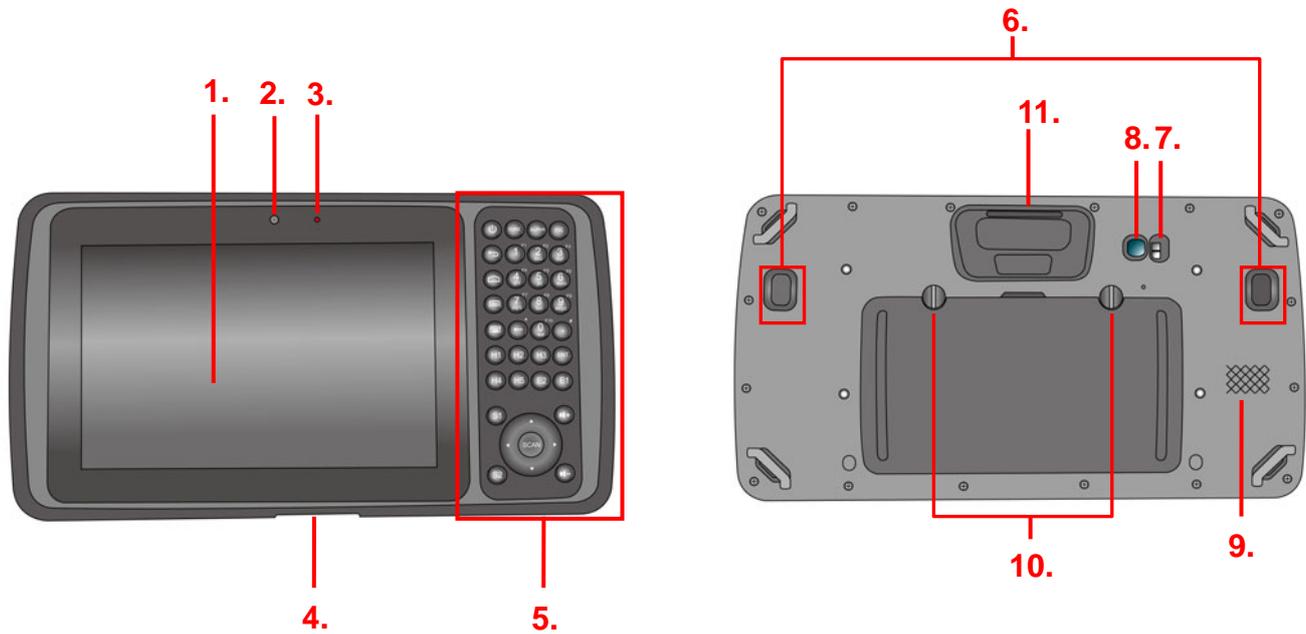
- TB128
- Battery
- Hand Strap
- USB cable (Standard USB to Micro USB)
- Power Adapter
- Regulatory Compliance Statements
- Quick start Guide
- QR code card

### Optional accessories

- Desk Dock Cradle

## 1.2 Product Detail

### TB128 Overview

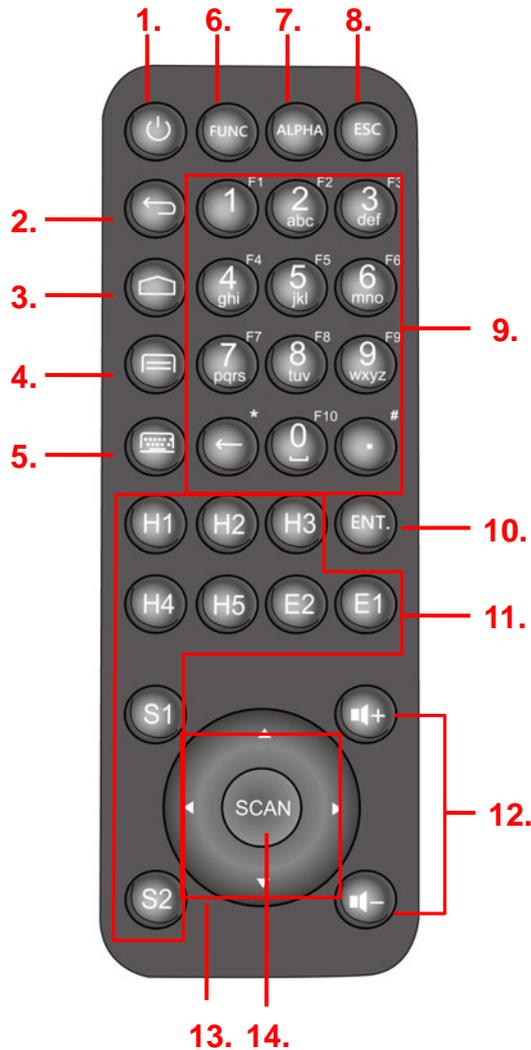


1. 7" LCD touchscreen	6. Trigger button
2. 2M pixels front camera	7. LED flashlight
3. LED indicator	8. 5M pixels rear camera with AF
4. Cradle connector	9. Speaker
5. Physical keyboard (37 keys)	10. Mounting screw for battery cover
11. Bar code Scan Engine	



12. Micro USB port	13. DC-IN port
14. Earphone jack	15. Cradle connector

### Physical keyboard overview



1. Power on/off key	8. Escape key
2. Android BACK key	9. Alpha/Numeric keys
3. Android HOME key	10. Enter key
4. Android APP List key	11. H.E.S. keys (programmable)
5. Soft keypad on/off key	12. Volume up/down keys
6. Function keys to enter F1-F10	13. 4 directional keys
7. Alpha key	14. Scan key

## 1.3 Specifications

<b>System Features</b>	
CPU	MTK MT8735 1.3Ghz Quad Core Processor
Memory	3GB Mobile DDR RAM 16GB eMMC NAND Flash
OS	Android 6.0
Languages support	English, Simplified Chinese, Traditional Chinese, Japanese, Spanish, German, French and multiple languages
<b>Display</b>	
Gorilla Glass II with capacitive touch panel 7" Color Transmissive TFT IPS LCD	
720x1280 dots LCD	
<b>Keypad</b>	
37 physical keys. Numeric and functionable keys	
1 x LED indicate charge/Message/ Scan	
<b>Symbologies</b>	
<b>1D (SE655)</b>	<ul style="list-style-type: none"> <li>■ UPC/EAN               <ul style="list-style-type: none"> <li>◆ UPC-A</li> <li>◆ UPC-E</li> <li>◆ UPC-E1</li> <li>◆ EAN-8</li> <li>◆ EAN-13</li> <li>◆ Booklan EAN</li> <li>◆ Bookland ISBN Format</li> <li>◆ Decode UPC/EAN/JAN Supplementals</li> <li>◆ Transmit UPC-A Check Digit</li> <li>◆ Transmit UPC-E Check Digit</li> <li>◆ Transmit UPC-E1 Check Digit</li> <li>◆ UPC-A Preamble</li> <li>◆ UPC-E Preamble</li> <li>◆ UPC-E1 Preamble</li> <li>◆ Convert UPC-E to A</li> <li>◆ Convert UPC-E1 to A</li> <li>◆ EAN-8/JAN-8 Extend</li> <li>◆ UCC Coupon Extended Code</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>◆ ISSN EAN</li> <li>■ Code 128</li> <li>■ Code 39</li> <li>■ Code 93</li> <li>■ Code 11</li> <li>■ Interleaved 2 of 5</li> <li>■ Discrete 2 of 5</li> <li>■ Codabar</li> <li>■ MSI</li> <li>■ Chinese 2 of 5</li> <li>■ Matrix 2 of 5</li> <li>■ GS1 DataBar(RSS)</li> </ul>	
<p><b>2D (SE4750)</b> <i>(2D is only available when the 2D imager is on your device )</i></p>	<ul style="list-style-type: none"> <li>■ <b>2D symbologies</b> <ul style="list-style-type: none"> <li>◆ PDF417</li> <li>◆ MicroPDF417</li> <li>◆ Code128Emulation</li> <li>◆ DataMatrix</li> <li>◆ DataMatrixInverse</li> <li>◆ Maxicode</li> <li>◆ QRcode</li> <li>◆ MicroQR</li> <li>◆ Aztec</li> <li>◆ Aztec Inverse</li> <li>◆ Han Xin</li> <li>◆ Han Xin Inverse</li> </ul> </li> <li>■ <b>1D symbologies</b> <ul style="list-style-type: none"> <li>■ UPC/EAN                             <ul style="list-style-type: none"> <li>◆ UPC-A</li> <li>◆ UPC-E</li> <li>◆ UPC-E1</li> <li>◆ EAN-8</li> <li>◆ EAN-13</li> <li>◆ Booklan EAN</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Code 128</li> <li>■ Code 39</li> <li>■ Code 93</li> <li>■ Code 11</li> <li>■ Interleaved 2 of 5</li> <li>■ Discrete 2 of 5</li> <li>■ Codabar</li> <li>■ MSI</li> <li>■ Chinese 2 of 5</li> <li>■ Matrix 2 of 5</li> <li>■ Postal Codes                             <ul style="list-style-type: none"> <li>◆ US Postnet</li> <li>◆ US Planet</li> <li>◆ Transmit US Postal Check Digit</li> <li>◆ UK Postal</li> <li>◆ Transmit UK Postal Check Digit</li> <li>◆ Japan Postal</li> <li>◆ Australian</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>◆ Bookland ISBN Format</li> <li>◆ Decode UPC/EAN/JAN Supplementals</li> <li>◆ Transmit UPC-A Check Digit</li> <li>◆ Transmit UPC-E Check Digit</li> <li>◆ Transmit UPC-E1 Check Digit</li> <li>◆ UPC-A Preamble</li> <li>◆ UPC-E Preamble</li> <li>◆ UPC-E1 Preamble</li> <li>◆ Convert UPC-E to A</li> <li>◆ Convert UPC-E1 to A</li> <li>◆ EAN-8/JAN-8 Extend</li> <li>◆ UCC Coupon Extended Code</li> <li>◆ ISSN EAN</li> </ul>	<ul style="list-style-type: none"> <li>Postal</li> <li>◆ Netherlands KIX Code</li> <li>◆ USPS 4CB/One Code/Intelligent Mail</li> <li>◆ UPU FICS Postal</li> <li>■ GS1 DataBar (RSS)</li> <li>■ Composite <ul style="list-style-type: none"> <li>◆ Composite CC-C</li> <li>◆ Composite CC-A/B</li> <li>◆ Composite TLC-39</li> </ul> </li> </ul>
<b>Engines</b>		
<b>1D</b>	<p>SE655 :</p> <p>Illumination/AIMER : LED 630 ± 30 nm</p> <p>Optical Resolution : 5 mil (minimum readable bar code module size)</p> <p>Scan Repetition Rate : Nominally 50 scans/second</p> <p>Print Contrast : 20% (minimum print contrast)</p> <p>Ambient Light Immunity Light Source: 4845(lux) ± 5%</p>	

<b>2D</b>	SE4750SR ( LASER AIMER ) : Sensor Resolution: 1280 x 960 pixels Field of View: Horizontal: 48°, Vertical: 36.7° Aiming : 655 nm Laser Illumination Element: 2 x Warm white LED Minimum Bar Code Print Contrast : 20% Ambient Light: Max 107,639 lux (direct sunlight)
<b>Regulatory Approvals</b>	
CE, NCC, FCC, RoHS compliance, CB	
<b>Certificate</b>	
Microsoft Azure IOT	
<b>Communication</b>	
Camera and Flash Light	2M Pixels Front Camera 8M Pixels Rear Camera CMOS Sensor Camera with Auto focus, 2x LED flash light
External storage	Support MicroSD memory card up to 64GB
USB	USB 2.0
WLAN	IEEE 802.11 a/b/g/n
Bluetooth	Bluetooth 4.1
Other Sensors	eCompass Light sensor G-sensor
RFID	Frequency: 902.75MHz~927.25MHz Tag Support: ISO15693, ISO14443A , ISO14443B Support NFC Frequency: 13.56MHz
<b>Power Source</b>	
Main Battery	3.7V Li-Polymer battery pack , Support hot swap.
Weight	735g with 2D SE4750 Engine version (with Battery)
Dimension	264.5x143.7x18.8 (mm)

Environmental	
Operating temperature	14°F to 122°F (-10°C to 50°C)
Storage temperature	-4°F to 140°F (-20°C to 60°C)
Relative Humidity	5% ~ 95% ( non-condensing )
Drop test to Concrete	1.2 meter
Environmental Sealing	IP65
Vibration and Shock test	MIL-STD-810G
Mobile Device Management Software and Service	
MoboLink®	

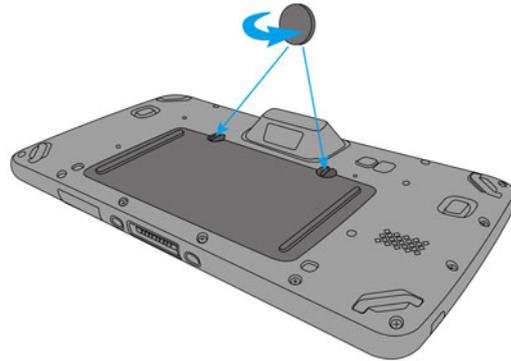
FCC ID HLETB128BTNF

## 1.4 Getting Started

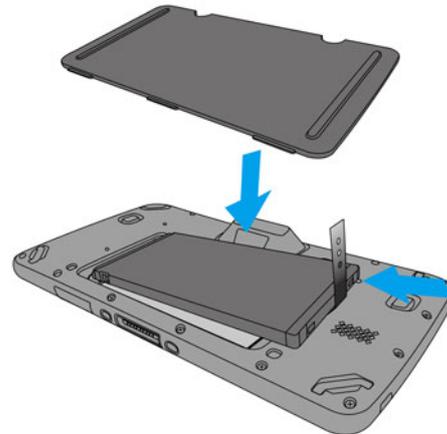
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### 1.4.1 Installing the Battery

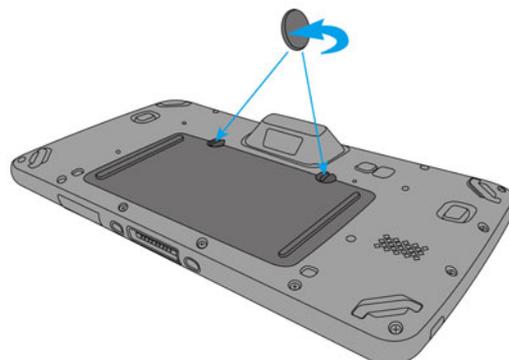
1. Using a proper tool (ex. a coin) to loosen the two screws on the battery cover by turning anticlockwise.



2. Put battery into battery compartment and put back cover.



3. Lock the two screws on the battery cover by turning clockwise.



**NOTE:** After installing the battery, make sure the battery cover is securely closed, or you may be unable to turn ON the terminal.

**WARNING!** There is a risk of fire and burns if the battery pack 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 pack. Dispose of used batteries according to local recycling guidelines in your area.

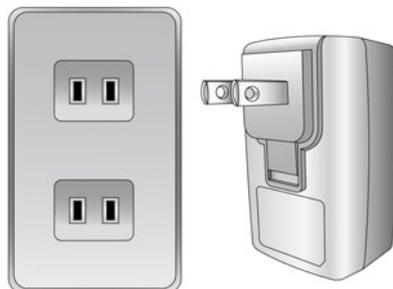
## 1.4.2 Charging the Battery

Connect TB128 to the charger, it will be charged automatically.

1. Plug the power adapter into the DC-IN port at the bottom.



2. Plug the power adapter into a wall outlet. If needed, attach a plug converter onto the power adapter.



### 1.4.3 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

Turn ON your device by pressing the power button  on the physical keyboard.

### 1.4.4 Checking the LED status

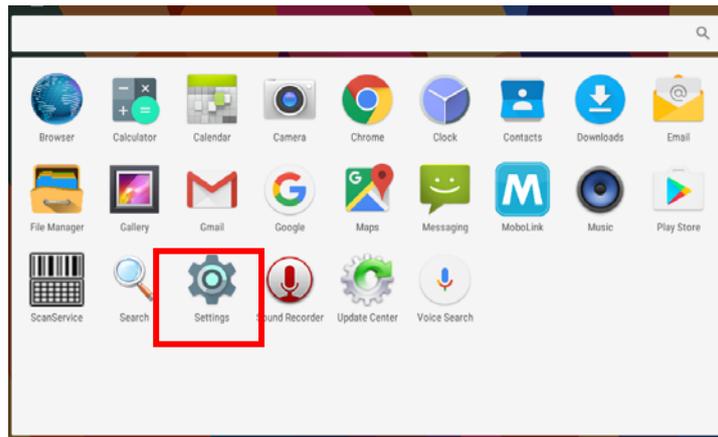


Status	LED	Description
Message	Blue light blinks	Message received
Power	Lights Red	The battery is charging. The battery level is between low and full
	Solid Green light	Fully charged
		Good Read

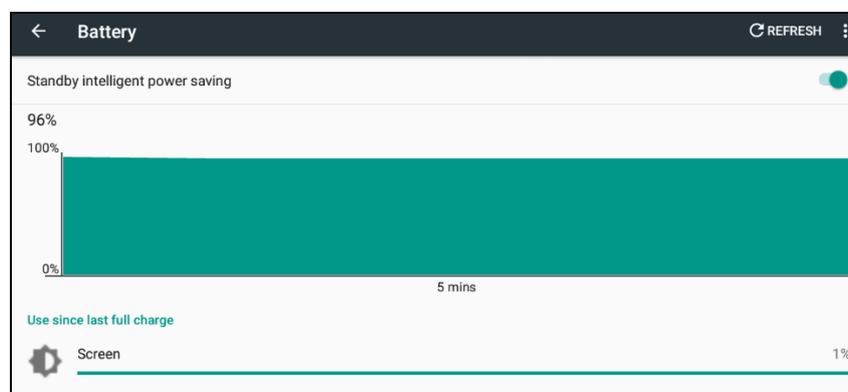
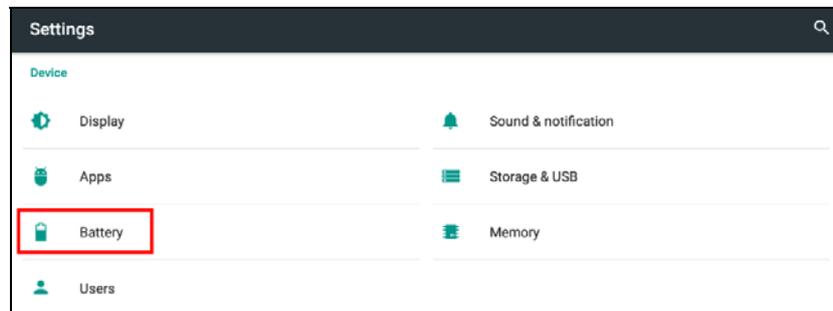
## Checking the Battery Status

To check the battery level and to access the battery usage menu

1. From your Home screen, tap .
2. Find and tap Settings.



3. Find and tap  Battery.

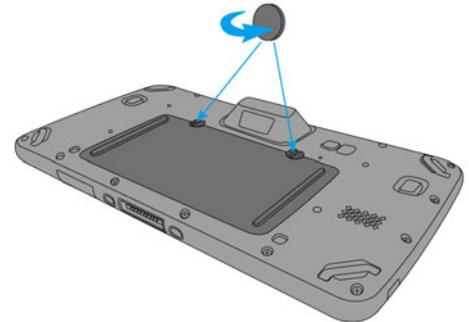


## 1.4.5 Using the SD/SIM Card

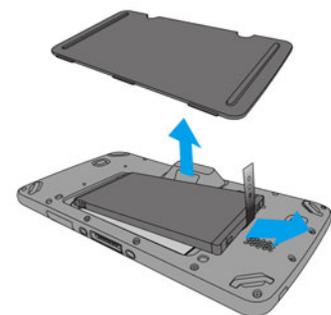
The TB128 has SD/SIM card slots inside the battery compartment.

### Inserting a SD/SIM Card

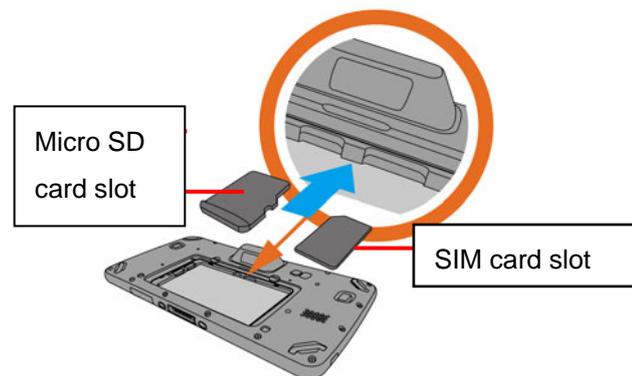
1. Using a proper tool (ex. a coin) to loosen the two screws on the battery cover by turning anticlockwise.



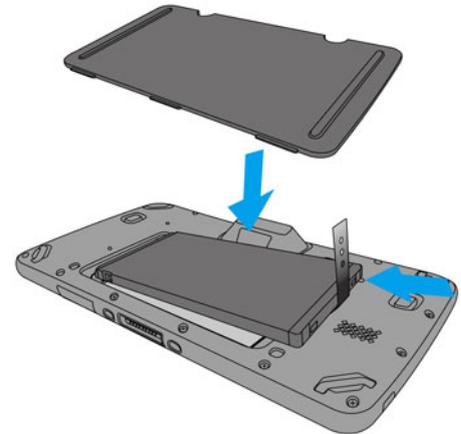
2. Remove the back cover and pull the battery out.



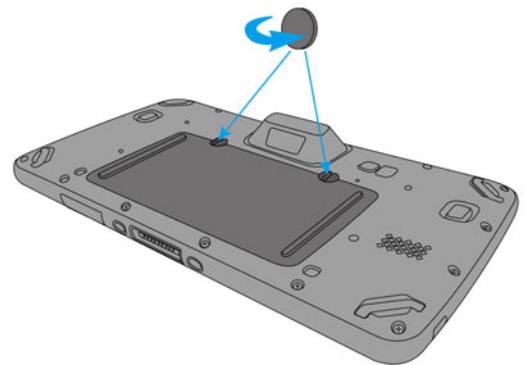
3. Now you can access the micro SD card slot and SIM card slot.



4. Put battery into battery compartment and put back cover.



5. Using a proper tool (ex. a coin) to Lock the two screws on the battery cover by turning clockwise.



## Removing the SD/SIM Card

1. Using a proper tool (ex. a coin) to loosen the two screws on the battery cover by turning counterclockwise.
2. Remove the battery cover and the main battery.
3. Press the card in and release. The card pops out.
4. Remove the card from the slot.
5. Put the battery back into the battery cover.
6. Replace the battery cover.
7. To tighten the two screws on the battery cover by turning clockwise.