unitech
because we care

10.1” Rugged Tablet Computer

- TB160 -



User's Manual

Version 1.0

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

unitech
because we care

Revision History

Date	Change Description	Version
2017/8/10	first published version	1.0

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

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:

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

–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.

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

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 RED 2014/53/EU 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

CE RF Exposure Compliance

This device meets EU requirements (2014/53/EU) 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

CE

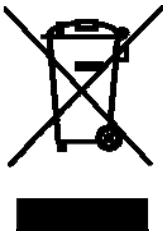
This equipment complies with the requirements of Directive 2014/53/EU of the European Parliament and Commission from 24 May, 2014 governing Radio and Telecommunications Equipment and mutual recognition of conformity.
The highest CE SAR values for the device are as follows : 1.21 W/kg @ 10g

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

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

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

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。
前項合法通信，指依電信法規定作業之無線電通信。
低功率射頻電機需忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

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。

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

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.

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

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.

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

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 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.

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

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.*

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

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.

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

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:	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 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		

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

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.

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

Table of Contents

Preface i

Regulatory Compliance Statements i
Laser Information vi
LED Information vi
Battery Notice vii
Adapter Notice ix
Hearing Damage Warning x
Worldwide Support x
Warranty Policy xii

Chapter 1 - Overview 1

1.1 Package 1
1.2 Product Detail 2
1.3 Specifications 7
1.4 Getting Started 10

Chapter 2 – Installation & Operation 20

2.1 Opening the I/O Compartment Cover 20
2.2 Closing the I/O Compartment Cover 21
2.3 Connecting to External Cabling 22
2.3 Installing the standard Battery 25
2.4 Removing the standard Battery 26
2.5 Connecting to a Wireless Network 27
2.6 Handstrap, Carrying Handle and Shoulder Strap 28
2.7 Barcode Scan 32
2.8 GPS Function Demo 33
2.9 NFC Test Guide 36
2.10 TB160 Recovery 37

Chapter 3 – Introduction to Applications 39

3.1 When to use the BIOS Setup 39

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

3.2 Accessing the BIOS Setup Utility.....40
3.3 EC and BIOS.....44
3.4 DashOn Utility device.....49
3.5 CamOn Setting.....52

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

Chapter 1 - Overview

1.1 Package

Please make sure the following contents are in the TB160 gift box.
If something is missing or damaged, please contact your unitech representative.

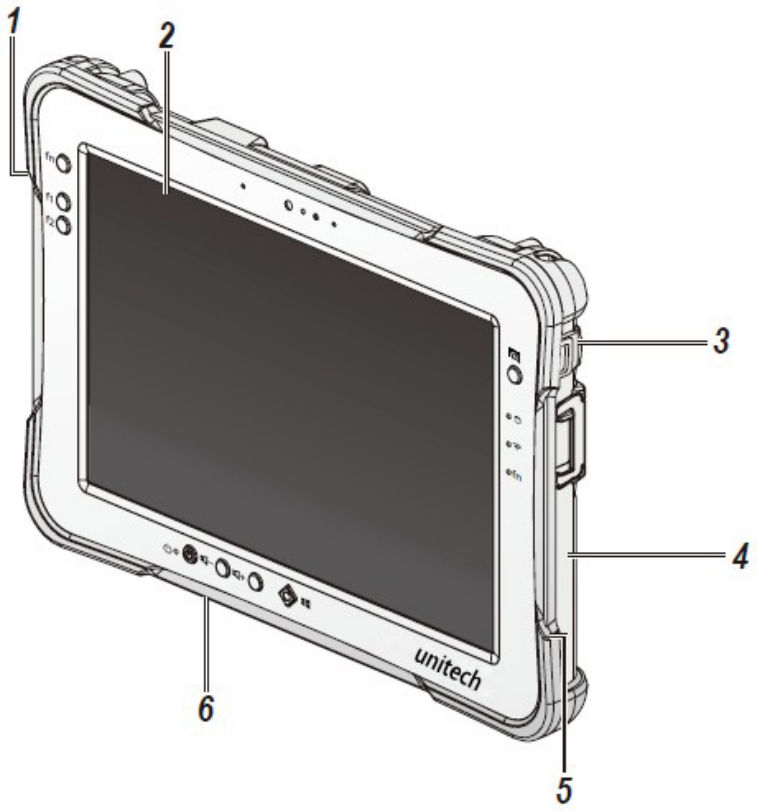
The standard package contents

- TB160
- Power Adapter
- Stylus
- 2-Point Carrying Handle
- 2-Point Shoulder Strap
- 4-Point Handstrap
- Hitch D-rings (Attaching straps)
- Regulatory Compliance Statements
- Quick start Guide
- QR code card

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

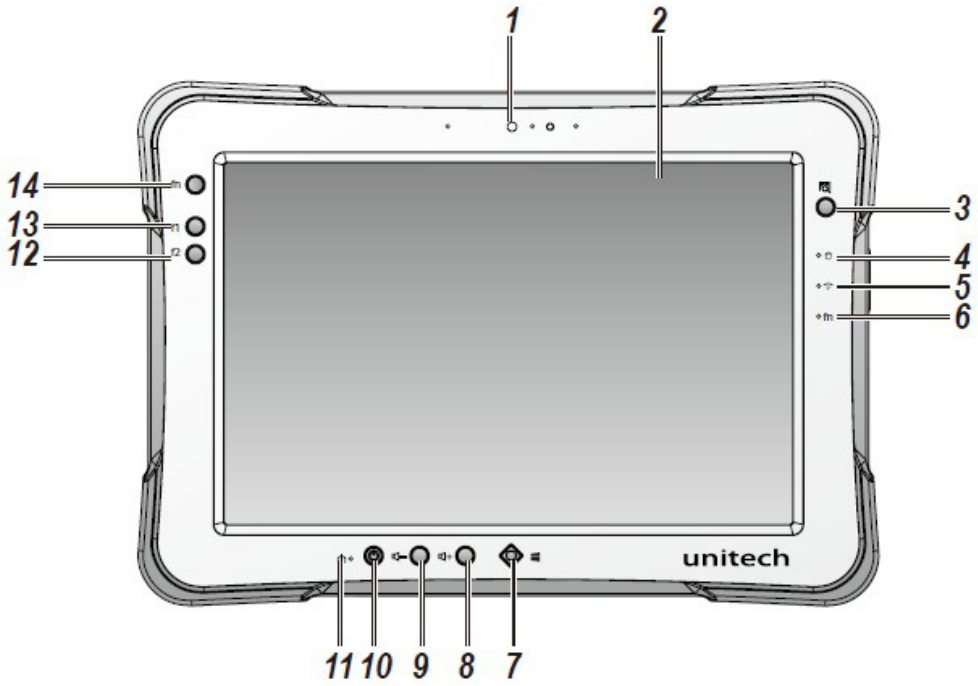
1.2 Product Detail

TB160 Front View



1	Left view
2	Front view
3	Rear view
4	Right view
5	Rubber bumpers
6	Bottom view

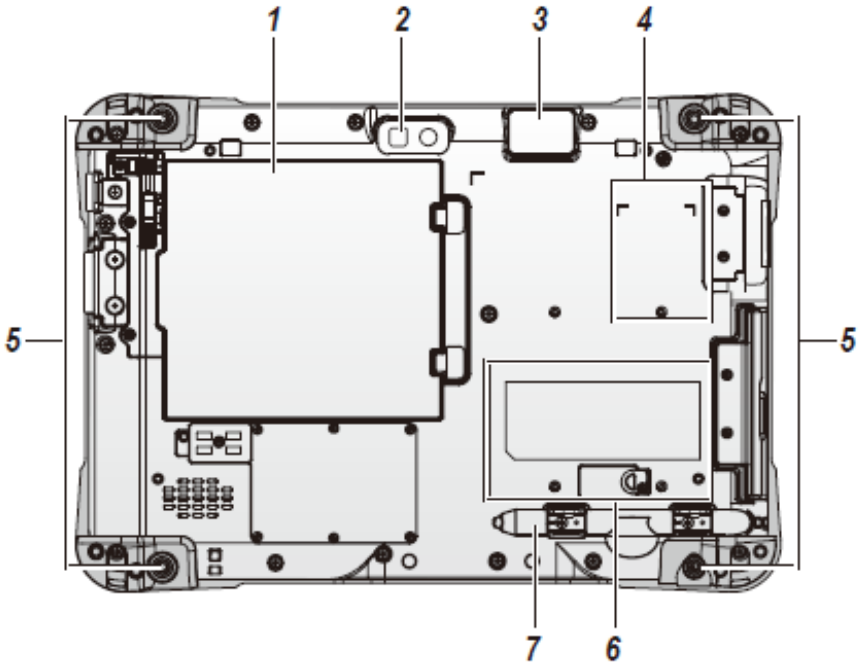
© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.



1	Front camera	8	Volume +
2	Touch screen	9	Volume -
3	Barcode trigger	10	Power key
4	Battery LED	11	Power LED
5	Wi-Fi LED	12	F2 key (Programmable function key)
6	FN LED	13	F1 key (Programmable function key)
7	Home key	14	FN key (Programmable function key)

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

TB160 Rear View

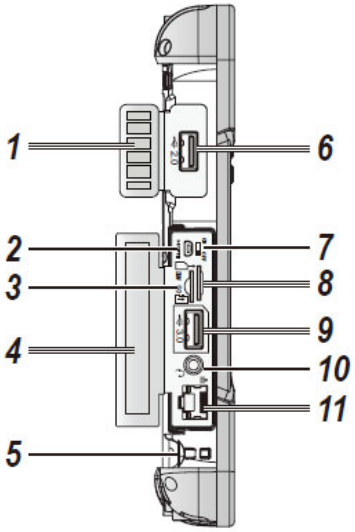


1	Battery
2	Rear camera
3	Barcode reader
4	NFC sensing area
5	Securing holes
6	Expansion bay
7	Stylus holder

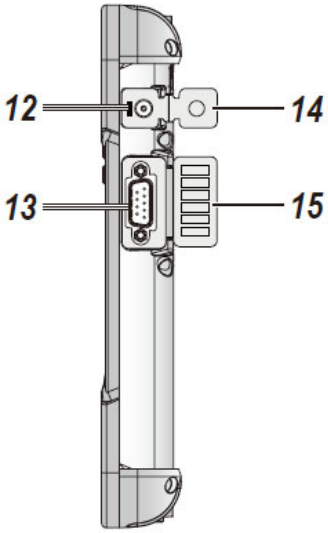
© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

TB160 Side and Bottom View

Left view

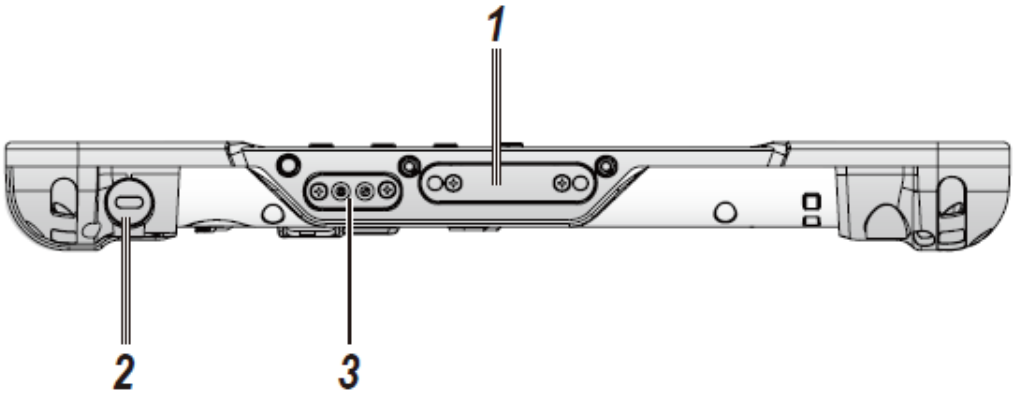


Right view



1	Left I/O compartment cover (USB 2.0 port)	9	USB 3.0
2	Micro HDMI	10	Audio jack
3	MicroSD slot	11	Ethernet
4	Left I/O compartment cover	12	DC-IN Jack
5	Tether hole	13	RS-232
6	USB 2.0	14	DC-IN cover
7	Battery switch	15	Right I/O compartment cover
8	Micro SIM slot		

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.



1	Docking connector
2	Kensington lock
3	Pass-through

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

1.3 Specifications

System Features	
CPU	Intel Dual Core Atom E3827 1.75 GHz (Bay Trail)
Touch screen	10-point capacitive touch screen
Brightness	1000 nits
Operating System	Windows® 10 IoT
RAM	DDR3L@1333 MHz 4 GB RAM
Display	
10.1-inch LED Backlight, 1920 (W) x 1200 (H) WUXGA	
Docking Connector	
12-pin	
TPM	
TPM 1.2	
GNSS	
Yes	
Communication	
WLAN	Wi-Fi IEEE 802.11 a/b/g/n/ac
PAN	Bluetooth 4.0
WWAN (Optional)	Optional for 3.5G or 4G LTE
Camera and Flash Light	
■ Front: 2.0 Mega-Pixels camera ■ Rear: 5.0 Mega-Pixels camera with LED auxiliary light and Auto-focus	
Storage	
mSATA SSD 120 GB	
Sensors	
Gyroscope, G sensor, E-compass, Light sensor	
Power Source	
Power Supply	AC 100V ~ 240V, 50~60Hz input; 19VDC@3.42A, 65W
Battery	■ Standard hot swappable battery: 10.8V, 4500mAh, Li-polymer ■ Extended hot swappable battery: 10.8V, 9000mAh, Li-polymer (Optional)

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

Enclosure	
Weight	1.33 kg (2.93 lbs)
Dimension (W x H x L)	280 mm (11") x 23 mm (0.9") x 195 mm (7.7")
Environmental	
Operating temperature	-4°F to 122°F (-20°C to 50°C)
Storage temperature	-22°F to 158°F (-30°C to 70°C)
Relative Humidity	5% ~ 95% (non-condensing)
Drop	153 cm (5 feet), 26 drops on plywood
Environmental Sealing	IP65
MIL-STD-810G	■ Vibration (MIL-STD-810G Method 514.6 Category 4, Fig 514.6C-1, Fig 514.6C-2, Fig 514.6C-3) ■ Drop (MIL-STD-810G Method 516.6 Procedure IV) ■ Mechanical shock (MIL-STD-810G Method 516.6 Procedure I, Procedure V) ■ Operation and storage temperature (MIL-STD-810G Method 501.5 and 502.5) ■ Humidity MIL-STD-810G Method 507.5 Humidity Procedure II Aggravated Cycles (Fig 507.5-7)

Radio Type / Description		Transmitter Frequency	Maximum Output Power
GSM	GSM900	880-915MHz	27dBm
	DCS 1800	1710-1785MHz	29dBm
UMTS	FDD 1	1920-1980MHz	23dBm
LTE	FDD 1	1920-1980MHz	23dBm
	FDD 3	1710-1785 MHz	23dBm
WLAN 2.4GHz	IEEE 802.11b	2400-2483.5MHz	14dBm
	IEEE 802.11g	2400-2483.5MHz	14dBm
	IEEE 802.11n	2400-2483.5MHz	14dBm
WLAN 5GHz	IEEE 802.11a	5150-5350MHz	14.5dBm
		5470-5725MHz	15dBm
	IEEE 802.11n	5150-5350MHz	14.5dBm
		5470-5725MHz	15dBm
	IEEE 802.11ac	5150-5350MHz	14.5dBm

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

		5470-5725MHz	15dBm
Bluetooth	Bluetooth	2400-2483.5MHz	6dBm
RFID	NFC	13.56MHz	200mW

NOTE:

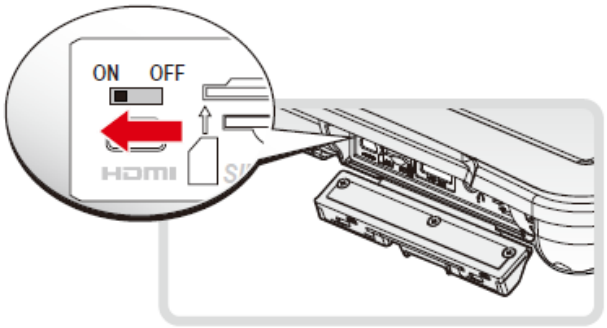
Requirements in AT/BE/BG/CZ/DK/EE/FR/DE/IS/IE/IT/EL/ES/CY/LV/LI/LT/LU/HU/MT/NL/NO/PL/PT/RO/SI/SK/TR/FI/SE/CH/UK/HR. 5150MHz~5350MHz is for indoor use only.

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

1.4 Getting Started

1.4.1 First Time Use

1. Open the left I/O compartment cover.
2. Switch the switch to the ON position.
3. Close the left I/O compartment cover.



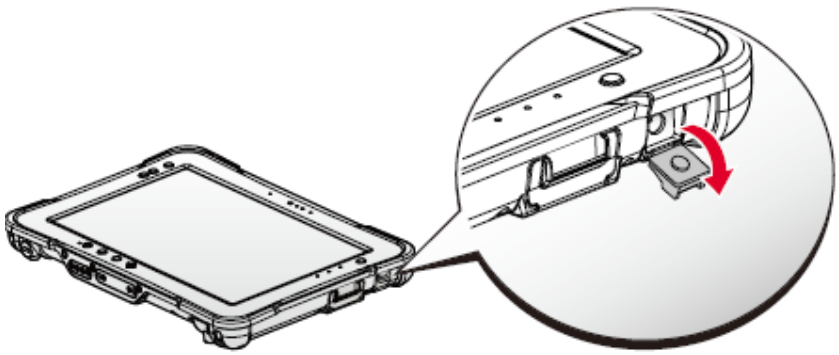
1.4.2 Charging the Battery

When you use the AC adapter to connect your TB160 to a power outlet, the standard and external (optional) battery will automatically begin to recharge.

While the battery is charging, the battery LED will be activated. When the battery is fully charged, the battery LED is solid green.

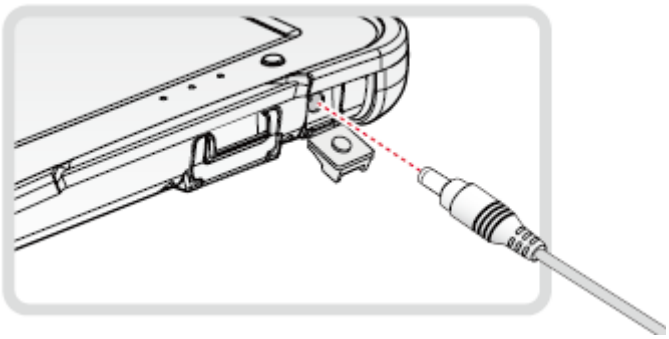
Note: Before charging the battery, please make sure that battery cover is secured properly.

1. Flip open the DC-IN cover to expose the DC-IN jack.



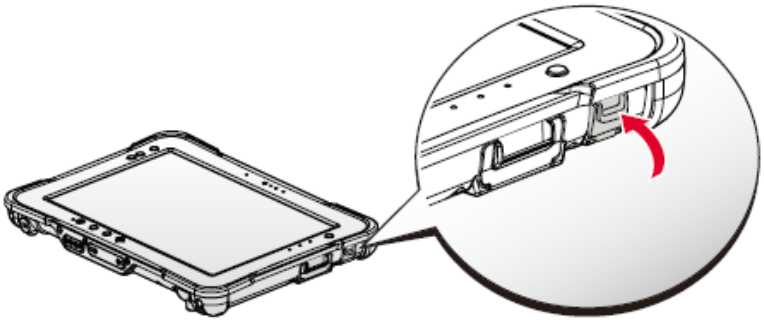
© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

2. Connect the AC adapter to the DC-IN port.



After charging the battery, disconnect the AC adapter and close the DC-IN cover.

1. Insert one end of the cover first and angle the cover to seat it in place.
2. Push in the cover to seal the DC-IN compartment.



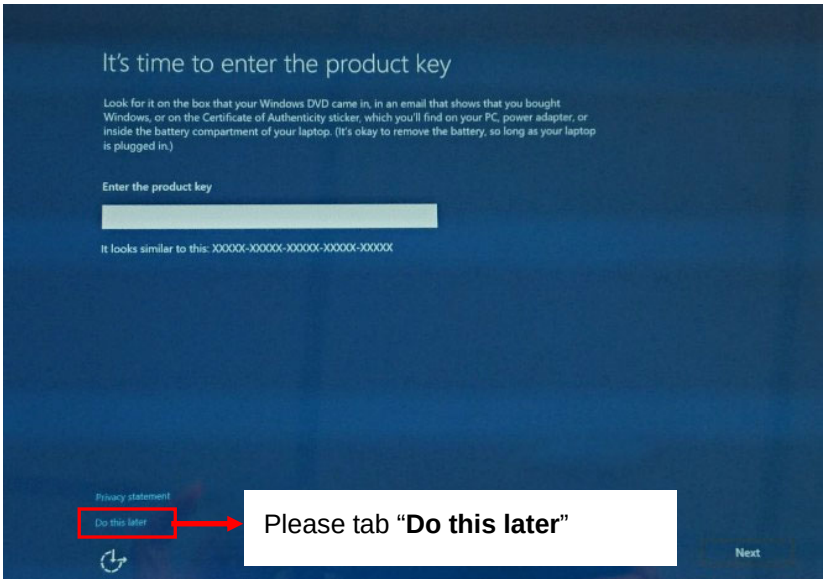
Caution ! The DC-IN cover must be inserted correctly to prevent internal damage to the device.

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

1.4.3 Turning on the terminal for the first time

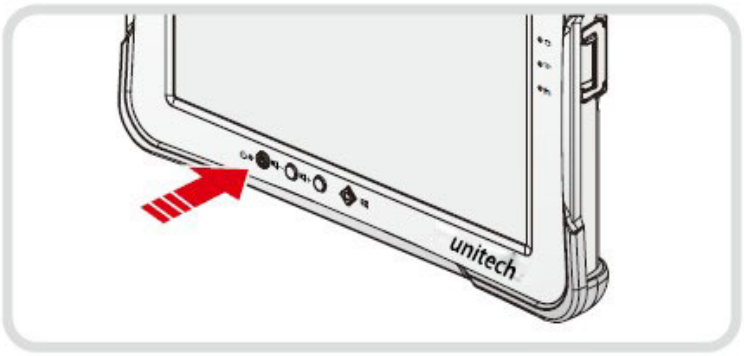
Only power on the TB160 after connecting all of the peripherals and cabling.

Note: While installing windows 10 IoT, please skip this step when users are asked to enter product key.



Power-On Button

Press and hold the power button until the screen lights. The device runs through the start up sequence and powers up.



© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

Powering Off the Device

- **Start screen**: Tap > Shut down.
- **Desktop screen:**
  1. Tap and hold at the bottom left corner of the Desktop screen.
  2. Tap **Shut down** or **sign out > Shut down.**
- **Both Start screen and Desktop screen:**
  1. Display charm bar and tap Settings.
  2. Tap **Power > Shut down.**

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

1.4.4 Checking the LED status

Item	Status	Description
Power	Green light	Power on
	Off	Power off
Battery	Green light	Fully charged
	Amber light	Charging
	Amber blinking	Low power < 15 %
	Off	Not charging / no battery
FN	Blue light	FN function switch on
	Off	FN function switch off
Wi-Fi	Blue light	Wi-Fi on
	Off	Wi-Fi off

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

1.4.5 Using the Micro SD/ Micro SIM Card

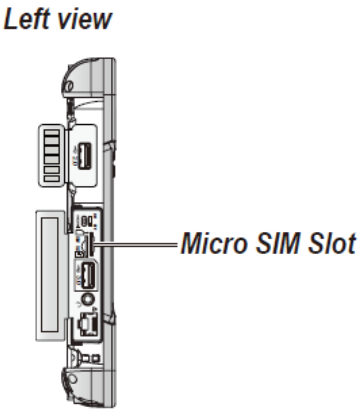
The device includes a micro SIM card slot for cellular and wireless connection. Only a micro SIM card is supported in the slot. Check with your network or cellular service provider for availability and cost rates.

Inserting a Micro SIM Card

1. Power off the TB160.

2. Open the left I/O compartment cover.

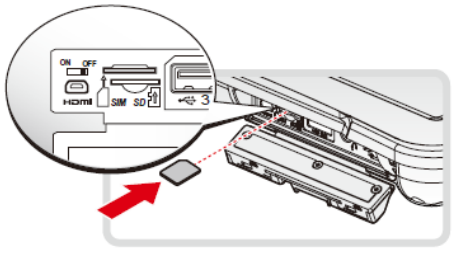
3. Locate the micro SIM slot in the left I/O parts.



4. Take the micro SIM card from its packaging.

5. The micro SIM card has a corner missing. Align the SIM card with the slot making sure that the corners match.

6. Insert the micro SIM card and press it in until an audible click sounds.



7. Close the left I/O compartment cover.

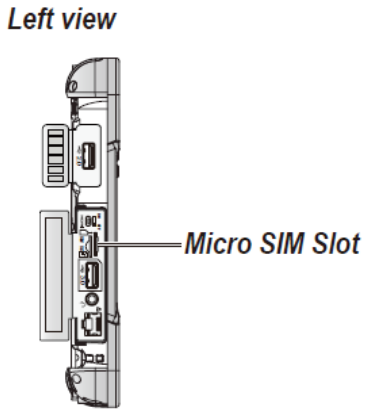
© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

Removing the Micro SIM Card

1. Power off the TB160.

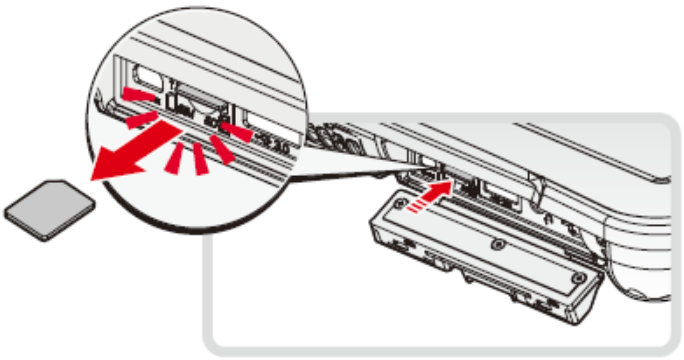
2. Open the left I/O compartment cover.

3. Locate the micro SIM slot in the left I/O parts.



4. Press the micro SIM card in and release it. The card springs out.

5. Grasp the micro SIM card and remove it from the slot.



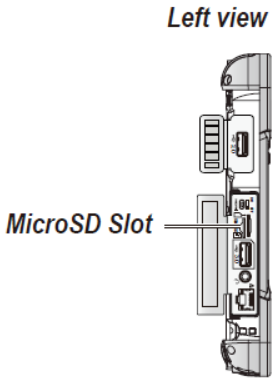
6. Close the left I/O compartment cover.

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

Inserting a MicroSD Card

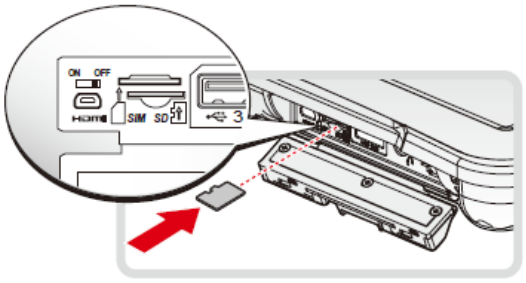
The device supports microSD card for easier data storage.

1. Open the left I/O compartment cover.
2. Locate the microSD slot in the left I/O parts.



3. The microSD card has a beveled edge. Align the microSD card with the slot making sure that the corners match.

4. Insert the microSD card and press it in until an audible click sounds.
5. Close the left I/O compartment cover.

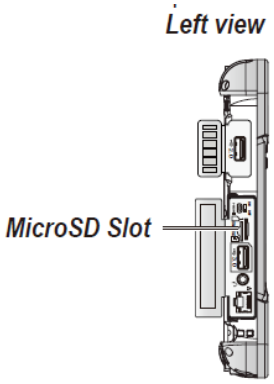


© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

Removing the MicroSD Card

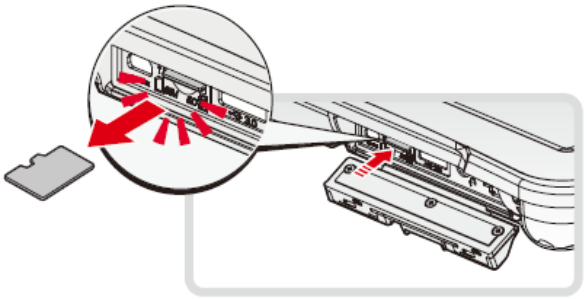
1. Open the left I/O compartment cover.

2. Locate the microSD slot in the left I/O parts.



3. Press the microSD card in and release it. The card springs out.

4. Grasp the microSD card and remove it from the slot.



5. Close the left I/O compartment cover.

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

1.4.6 Using the Stylus

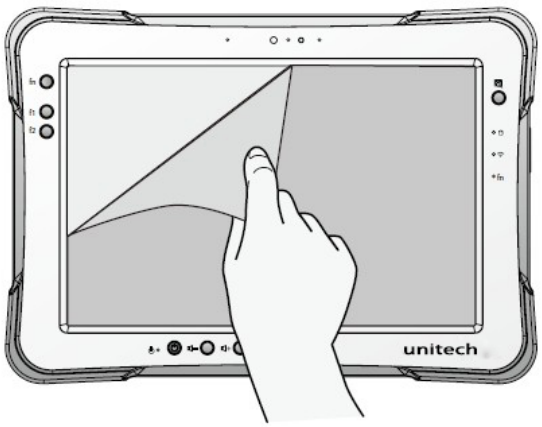
Following the information below when using a stylus:

- Use only the included stylus to touch the screen. Do not place any objects on its surface and do not press down strongly with sharp-pointed or hard objects that may leave marks (e.g., nails, pencils and ball point pens).
- Use the stylus only for touching the screen. Using it for any other purpose may damage the stylus and result in scratches on the screen.
- The pointer cannot follow the stylus movement if you move the stylus too quickly.

To make a selection, tap the screen once with the stylus. To double-click, tap twice without pausing. To do a right-click, tap the screen once and hold the tip of the stylus on the screen, the right-click icon appears.

1.4.7 Removing the Protective Film from the Display

The front display of the TB160 is protected during transport by a transparent film. This film should remain on the front display during assembly to avoid damage to the front display surface.
Only remove the film once all of the assembly work has been completed.



© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

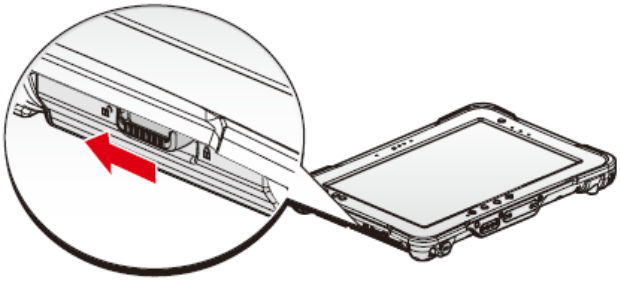
Chapter 2 – Installation & Operation

2.1 Opening the I/O Compartment Cover

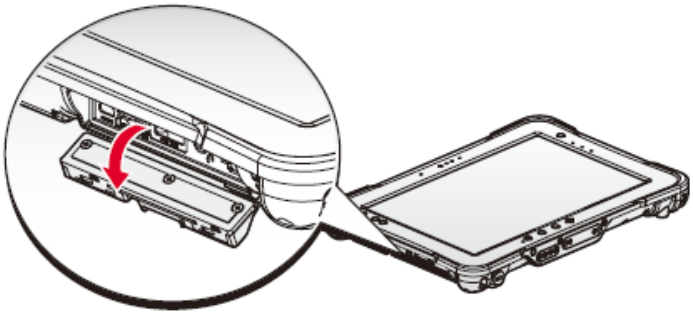
1. Place the device display side down on a clean work surface.
2. Locate the I/O compartment cover.



3. Unlock the latch. (Only available for the left I/O compartment cover)



4. Pull out the I/O compartment cover.



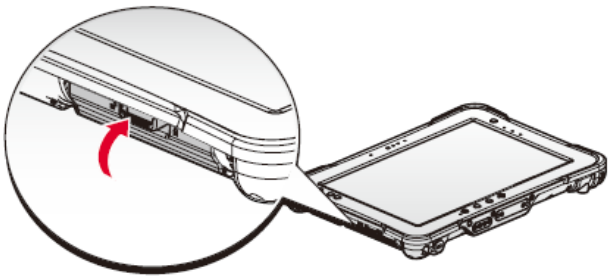
© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

2.2 Closing the I/O Compartment Cover

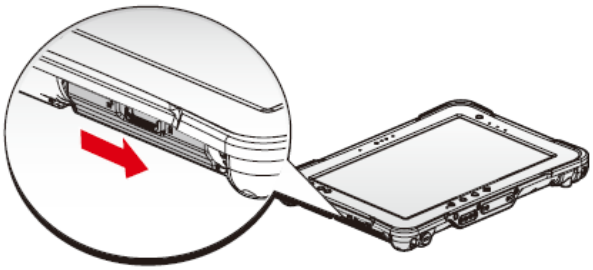
1. Place the device display side down on a clean work surface.
2. Locate the I/O compartment cover.



3. Flip the I/O compartment cover and install.



4. Lock the latch. (Only available for the left I/O compartment cover)



WARNING! The I/O compartment cover must be inserted correctly to prevent internal damage to the device.

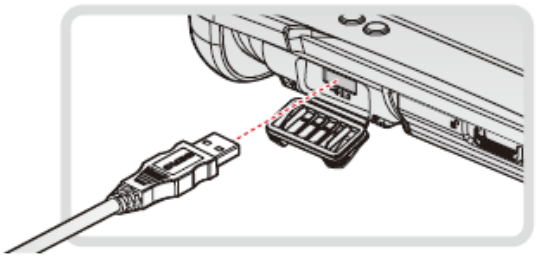
© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

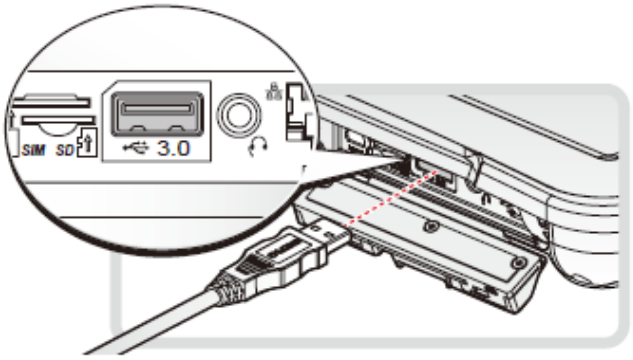
2.3 Connecting to External Cabling

Connect USB Cabling

The TB160 has one USB 3.0 and one USB 2.0 ports for connecting USB devices, such as a digital camera, scanner, printer, modem, and mouse. The USB ports support USB 2.0 or USB 3.0 devices.

1. Open the left I/O compartment cover.
2. Connect to USB device via USB cable.



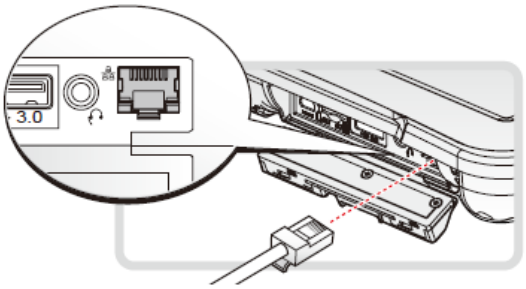


© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

Connect Ethernet Cabling

The TB160 has an Ethernet port for connecting Ethernet.
Use a shielded cable is required to maintain emissions and susceptibility compliance.

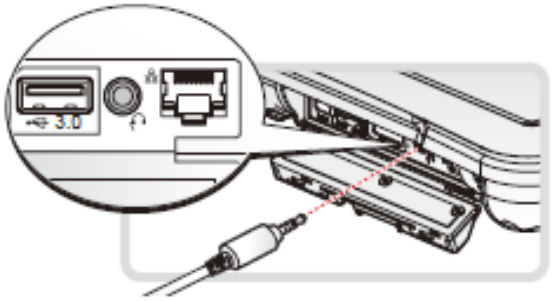
1. Open the left I/O compartment cover.
2. Connect LAN cable to Ethernet port on the TB160.



Connect Audio Cabling

For higher audio quality, you can send sound through external audio devices such as speakers, headphones, or earphone using audio connector.

1. Open the left I/O compartment cover.
2. Connect the audio cable.

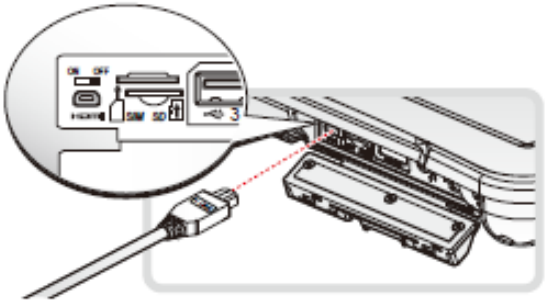


© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

Connect Micro HDMI Cabling

Connect to HDMI devices via micro HDMI cable.

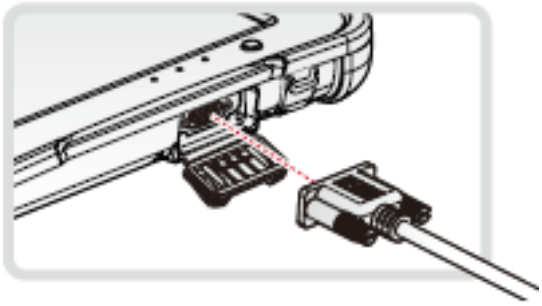
1. Open the left I/O compartment cover.
2. Connect micro HDMI cable to micro HDMI port on TB160.



Connect RS-232 Cabling

Connect to RS-232 devices via RS-232 cable.

1. Open the right I/O compartment cover.
2. Align the RS-232 cable with the port in the device and connect it.
3. Turn the locking screws on the cable to secure it to the device.

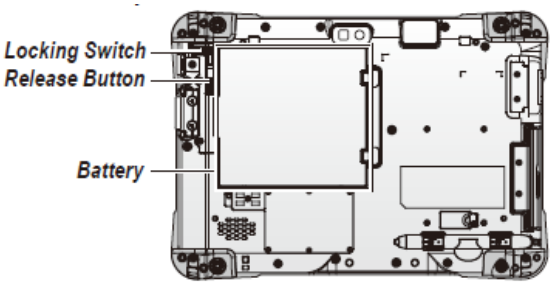


© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

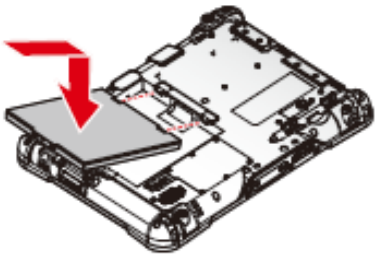
2.3 Installing the standard Battery

The following instructions are for both standard and external batteries. The external battery is an optional component. Only use components specifically designed for this device. Contact your local representative for ordering information.

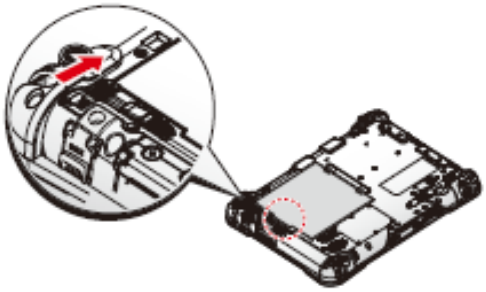
1. Place the device display side down on a clean work surface.
2. Locate the battery.



3. Align the tabs on the battery with the slots on the chassis.
4. Angle the battery in place and set the tabs in the chassis slots.
5. Lower the raised end of the battery and press in place until an audible click is heard.



6. Slide the locking switch on the top-left side to lock the battery.

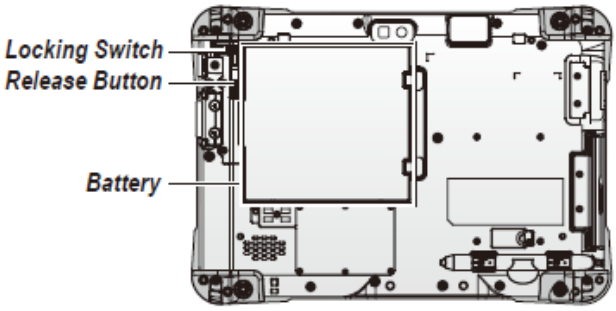


NOTE : *Make sure the latch is securely locked to prevent the battery from falling.*

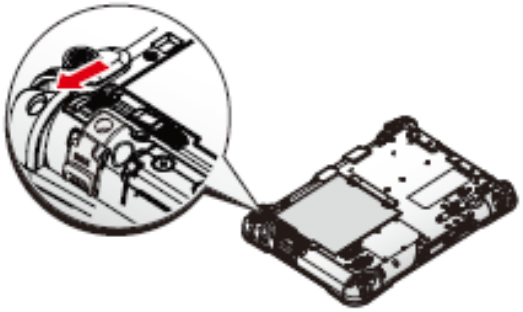
© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

2.4 Removing the standard Battery

1. Place the device display side down on a clean work surface.
2. Locate the battery.

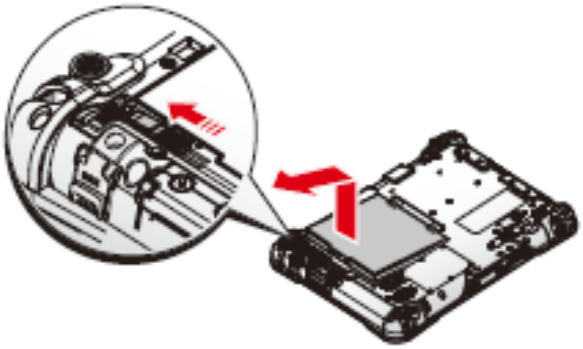


3. Slide the locking switch on the top-left side to the unlock position.



4. Press and hold the release button as shown in the image to release the battery.

5. Hold the battery and angle the left side up to remove.



© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

2.5 Connecting to a Wireless Network

Before you can make use of the TB160 wireless functions, you need to connect to a network. The following is a set of procedures for connecting to a wireless network.

1. Before beginning, make sure your Wi-Fi setting is enabled and you are within range of a wireless network. If your Wi-Fi setting is disabled, proceed to step 2.

   - Look at the Network icon located at the right side of the taskbar. If the icon displays an X in a red circle, you are not within range of a wireless network. Move to a different spot until the Wi-Fi icon changes status indicating availability to a wireless network.

2. From any screen, open the Charms bar by sliding your finger inward from the screen's right edge. The Charms bar displays along the screen's right side.

3. In the Charms bar, tap Settings to open the Settings menu.

4. In **Settings**, tap the Network icon to display the Networks connection settings.

5. The Wi-Fi menu displays. By default, the Wi-Fi menu is set to Off. Tap the bar next to Off to toggle Wi-Fi to On. This enables the Wi-Fi option.

6. Once W-Fi is enabled a listing of all available wireless networks displays. The wireless networks with the strongest signal are atop the list.

7. Select the network you want to connect to, and tap the Connect button. You can tap the Connect Automatically check box if you connect to this network frequently. If you connect to the network, you are finished with the process. The network is considered an Open unsecured network, no password is required.

8. If a password is required, type the password in the Enter the network security key field. Alternatively, you can also push the WPS button on your router to begin the security handshake.

9. Tap **Next** to finish the connection process.
   You have successfully connected to a wireless network.

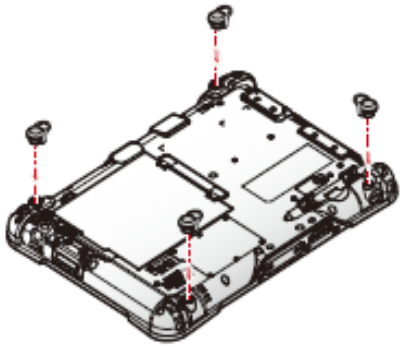
© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

2.6 Handstrap, Carrying Handle and Shoulder Strap

The TB160 is equipped with a handstrap, a carrying handle and a shoulder strap for convenience and choice. Select the accessory that is right for your needs. The handstrap can be installed with either the shoulder strap or the carrying handle. However, the handle and shoulder strap can not be installed together due to space constraints.

Connecting the Handstrap

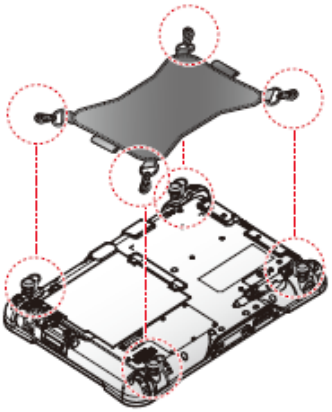
1. Install the D-rings
   NOTE: Make sure the D-rings are tightly secured before installing the handstrap.



© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

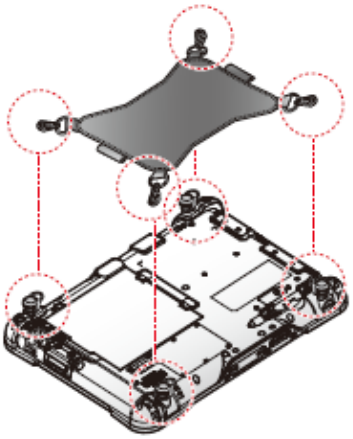
2. Connect the handstrap on the D-rings.

NOTE: When the handstrap is installed, the stylus can be placed under the strap.

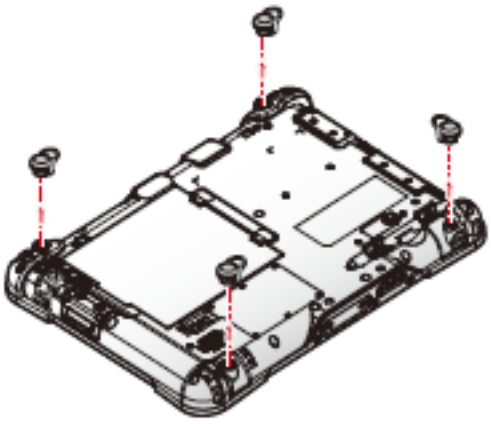


Connecting the Handstrap

1. Unlock the handstrap from the D-rings.

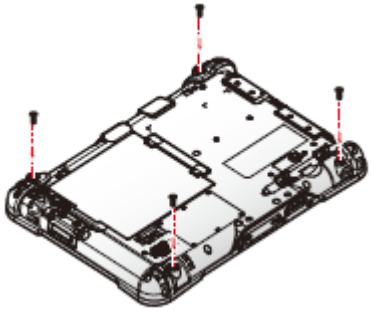


2. Remove the D-rings.



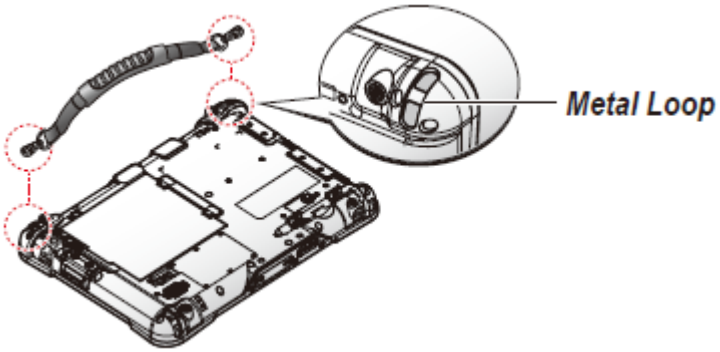
© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

3. Secure the bumper and the TB160 with screws.



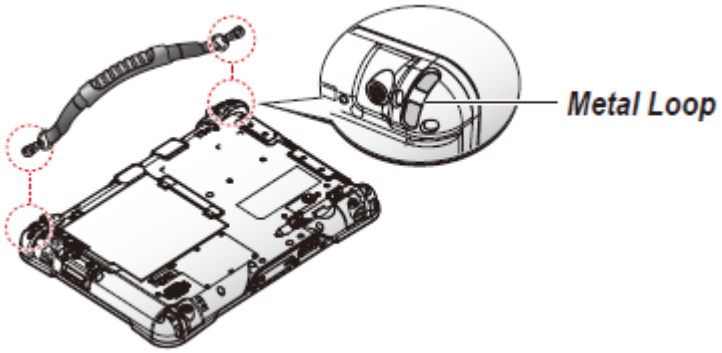
Connecting the Carrying Handle

1. Attach the clips to the metal loop on the bumper.



Removing the Carrying Handle

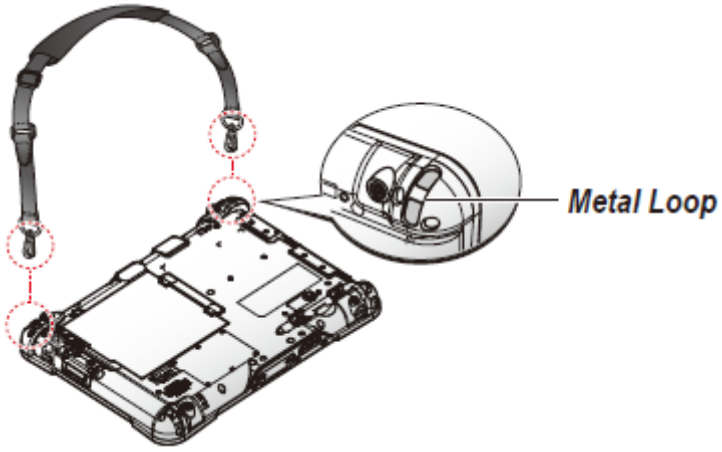
1. Press in the clips to release them from the metal loop.
2. Remove the clips.



© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

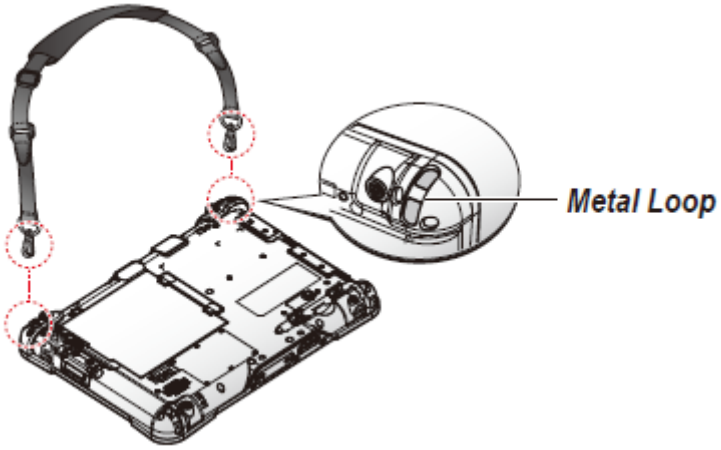
Connecting the Shoulder Strap

1. Attach the clips to the metal loop on the bumper.



Removing the Shoulder Strap

1. Press in the clips to release them from the metal loop.
2. Press in the clips to release them from the metal loop.



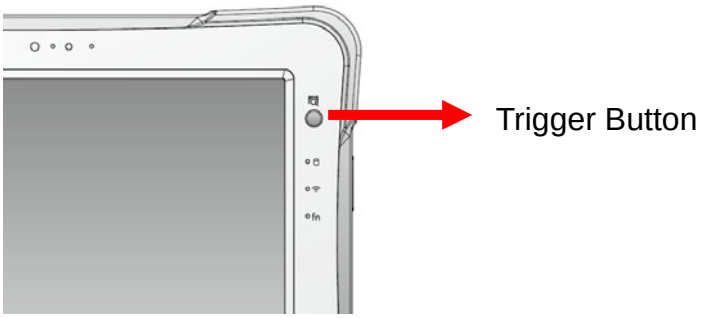
© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

2.7 Barcode Scan

Please follow the instructions below for a complete setup of specific symbologies.

Note : *It only applies to the device which supports barcode scan.*

1. Please use the trigger button to set up your 2D barcode scanner in a basic configuration by scanning configuration barcodes.



2. Open a word processing program such as Microsoft Word or Notepad on your host.

3. Factory Default

Reset factory defaults

4. Select interface

Select interface

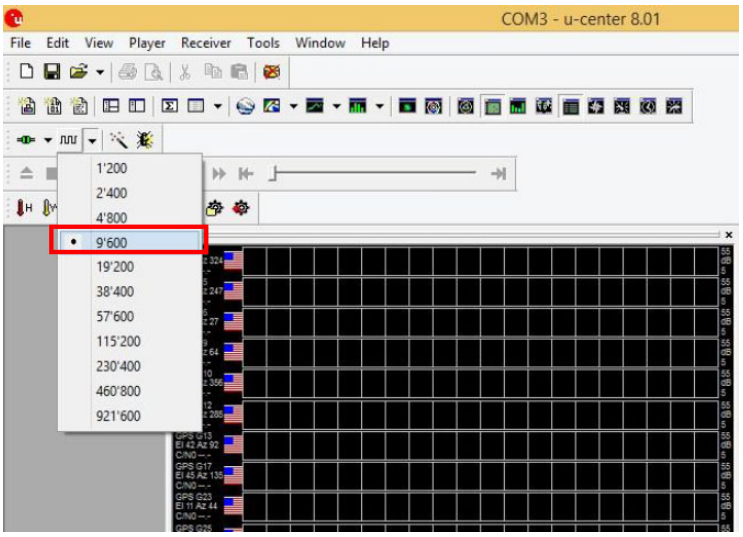
USB - USB cable mode - Keyboard HID

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

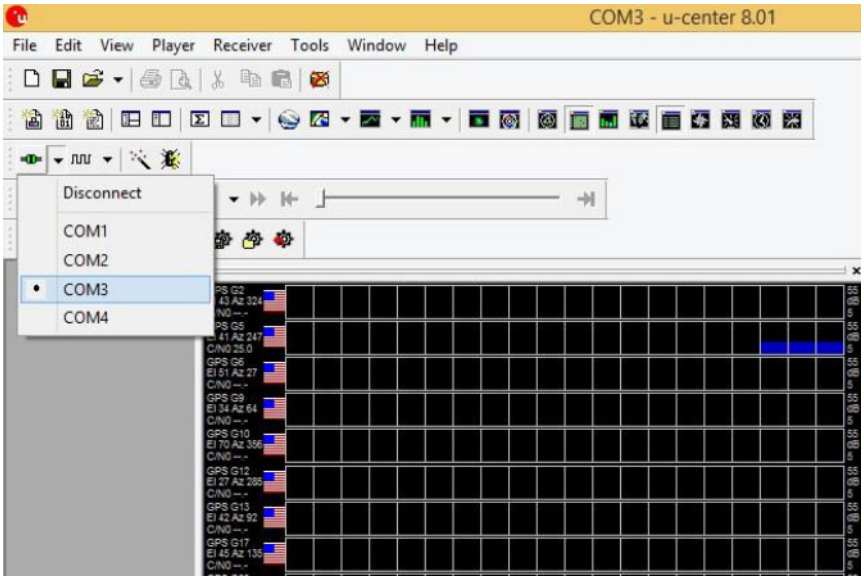
2.8 GPS Function Demo

Please download u-center GPS evaluation software to test GPS module :
http://www.u-blox.com/en/evaluation-tools-a-software/u-center/u-center.html

1. Set baud rate to 9600bps

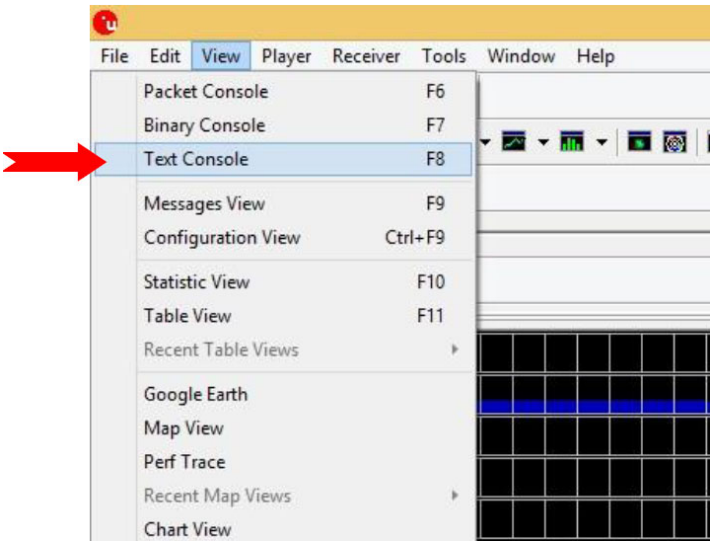


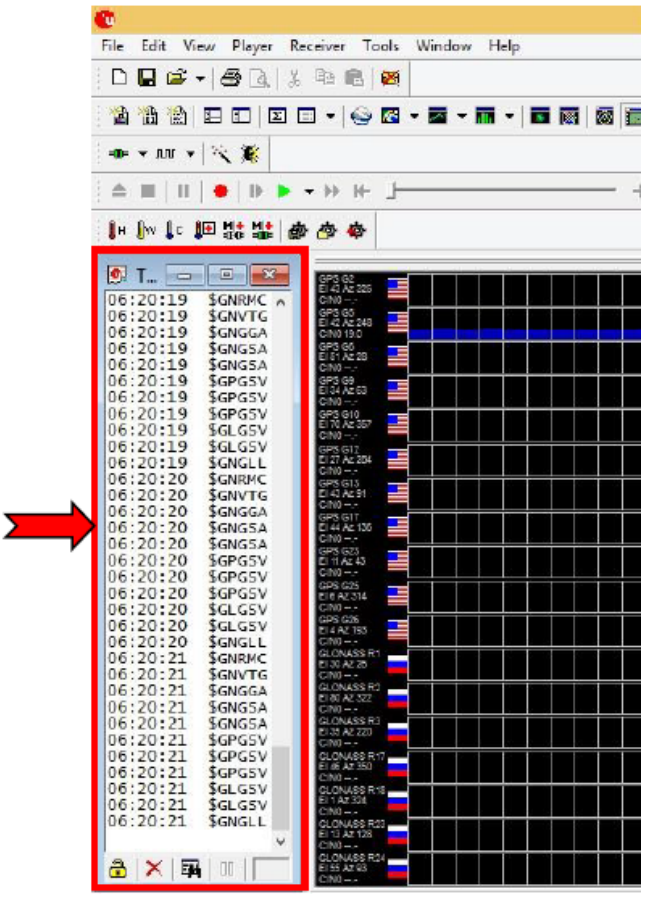
2. Connect to GPS module via appropriate serial port#



© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

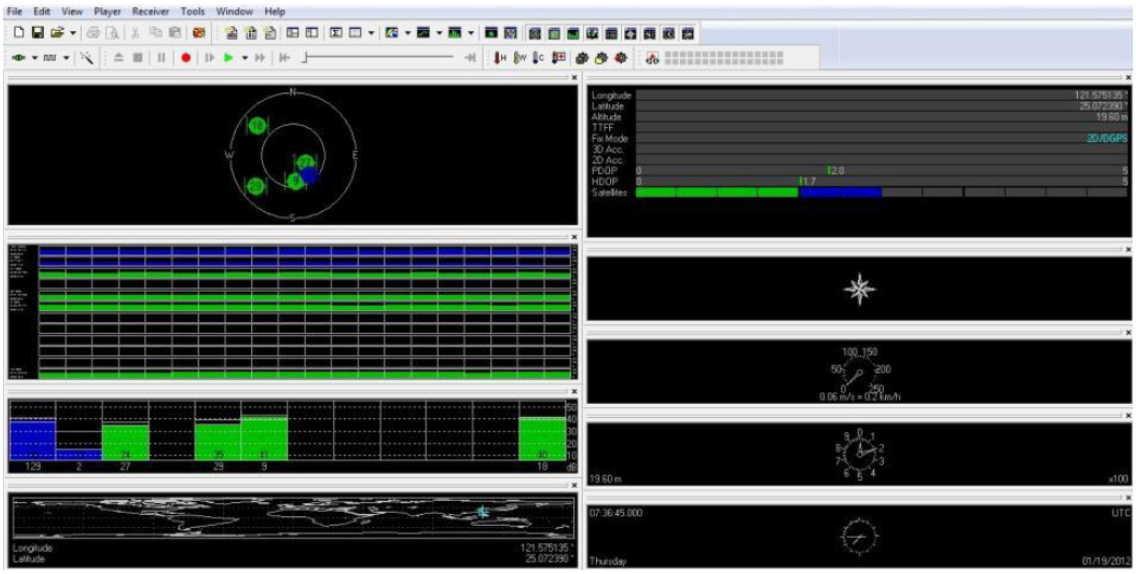
3. If your demonstration is indoor to not receive the GPS signal well, you can open the **Text Consol** to see whether the NMEA code is constantly displaying or not.





© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

- REAL Outdoor GPS Working Situation:



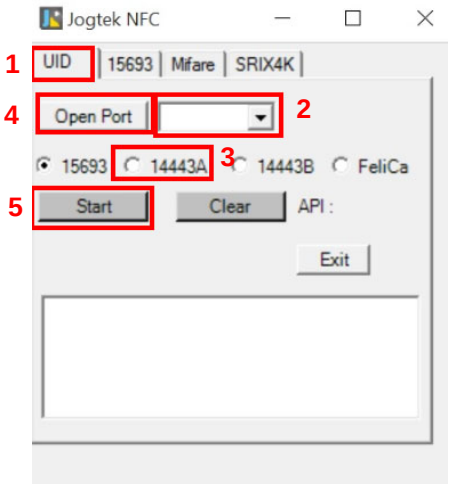
© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

2.9 NFC Test Guide

1.Please find the test utility in C:\Drivers, extract the file of NFC_UTILITY_V1.0.0.0.

2.Executing "Sample".

3.Follow and setup item 1, 2, 3, 4, 5.



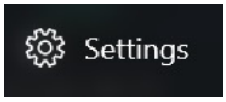
4. Put your RFID tag card to tablet's detection portion (on the back of TB160) in mm range.

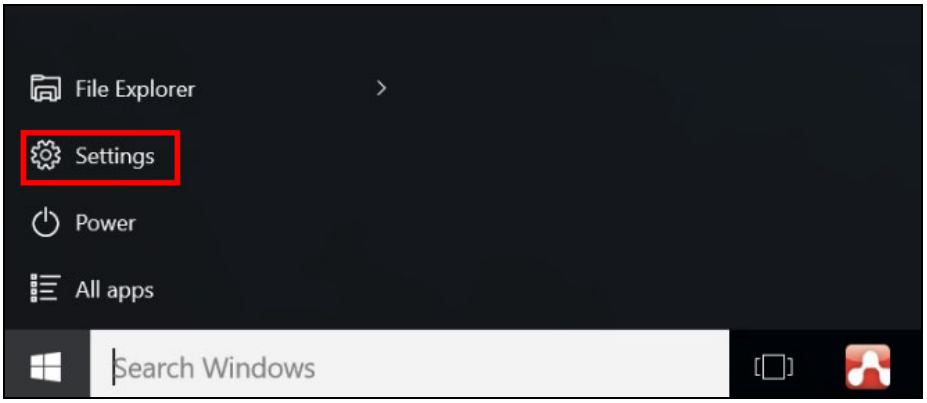
Note : *It only applies to the device which supports NFC.*

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

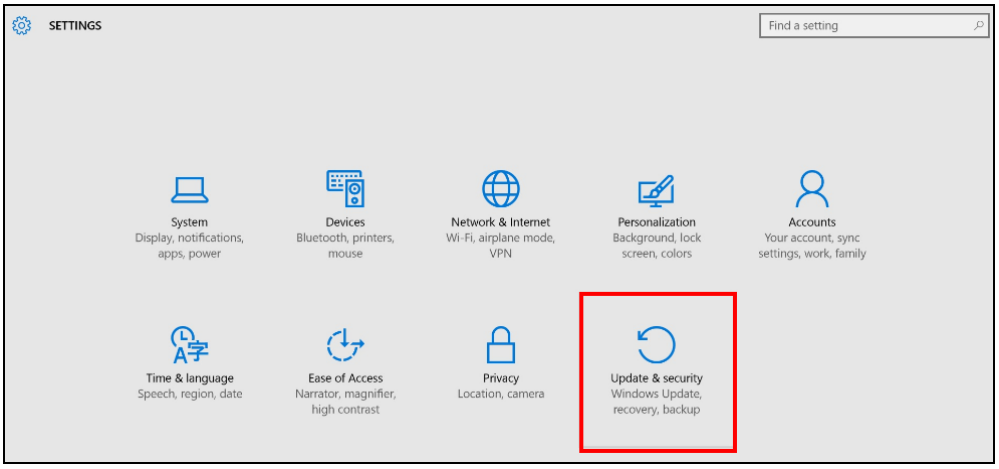
2.10 TB160 Recovery

Please follow the instructions below for the recovery setting.

1. Tap  , and choose  **Settings.**



2. Choose **Update & security**

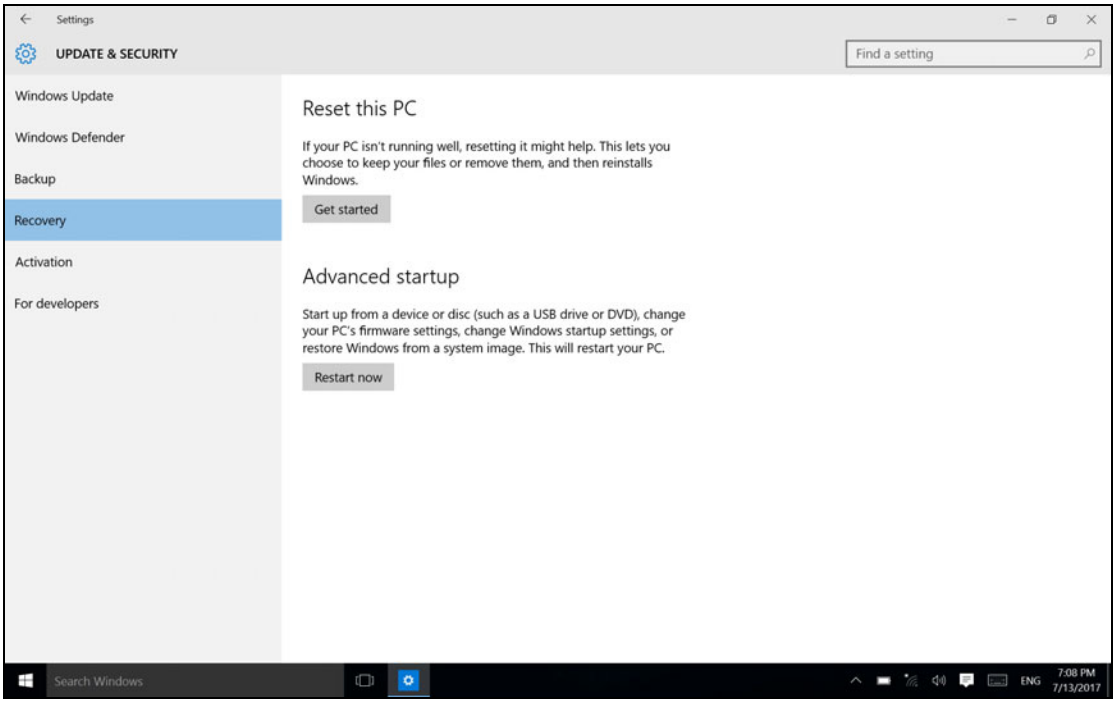


© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

3. Choose **Recovery** and here are two options:

   - **Reset this PC----** This lets you choose to keep your files or remove all, and then reinstalls Windows.

   - **Advanced startup----**This will change firmware settings, change Windows startup settings, or restore Windows from a system image.



© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

Chapter 3 – Introduction to Applications

3.1 When to use the BIOS Setup

Your ruggedized tablet has a BIOS setup utility which allows you to configure important system settings, including settings for the Boot and AP menus as well as the device's basic settings--the system reads the basic settings during initialization in order to boot correctly.

You need to run the BIOS Setup utility when:

- Restoring to BIOS settings to factory default
- Modifying specific hardware settings
- Modifying specific settings to optimize system performance
- Installing Windows 10 IoT operating system

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

3.2 Accessing the BIOS Setup Utility

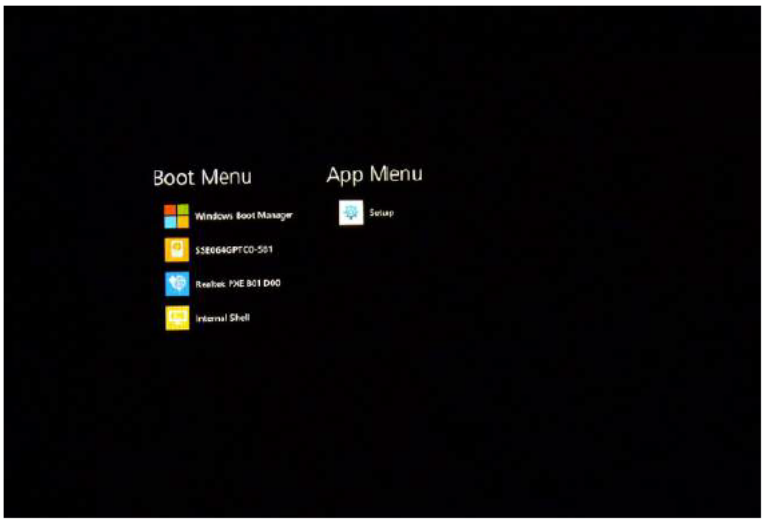
The BIOS Setup Utility screens shown in this chapter are for your reference only. The actual images or settings on your tablet computer may differ.
The BIOS Setup Utility program may have been updated after the publication of this manual.
To run the BIOS Setup Utility, use the following procedures:

1. Perform one of the following:

- If the TB160 is powered off Press the Power button to start up the device. The power LED lights. Quickly press and hold the Windows Home key until the BIOS Post screen displays.
- If the TB160 is powered on Press the Power button to shut down the device. Quickly press and hold the Windows Home Key until the BIOS Post screen displays.

The BIOS POST screen appears as shown.

2. From the BIOS POST screen select **App Menu** to open the BIOS Setup Utility.



© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

Due to the device's fast boot up and boot down time, there is only a small time frame of a few seconds between the release of the Power button and the opportunity to press the Windows Home key.
The App Menu displays.



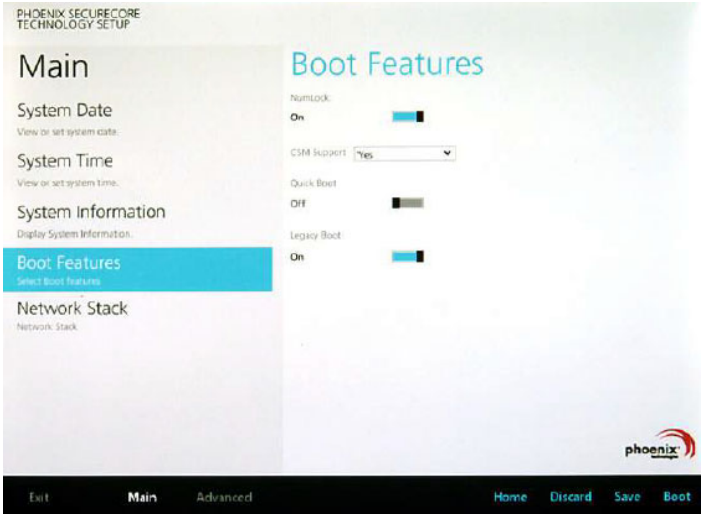
Installation an Operating System

Setting Up a Windows 10 IoT Installation Environment

There are several settings in BIOS that must be modified before you can install a Windows 10 IoT operating system.
Use the following guidelines to prepare the BIOS environment:

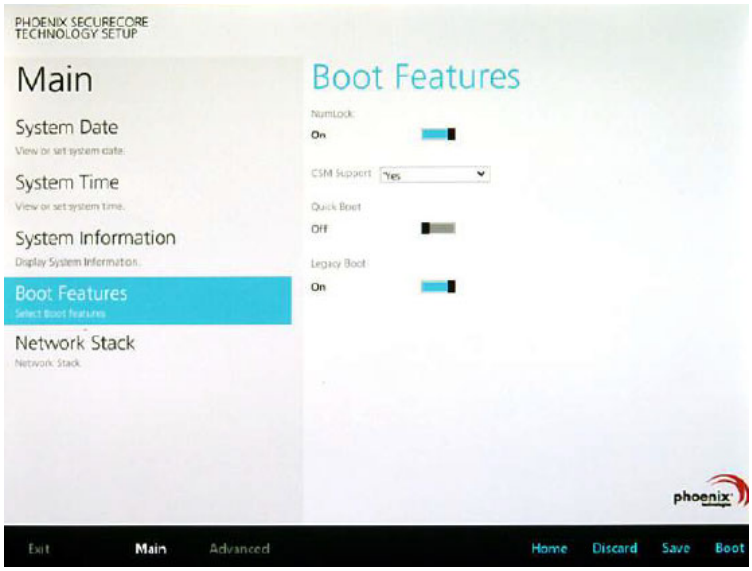
- Step 1: Enable CSM Support
  1. Access the BIOS Setup Utility, see "Accessing the BIOS Setup Utility"
  2. Navigate to **APP Menu > Main > Boot Features**.
  3. Locate the **CSM Support** setting and tap the drop-down menu to display the options.

3. Tap **Yes** to enable CSM support.

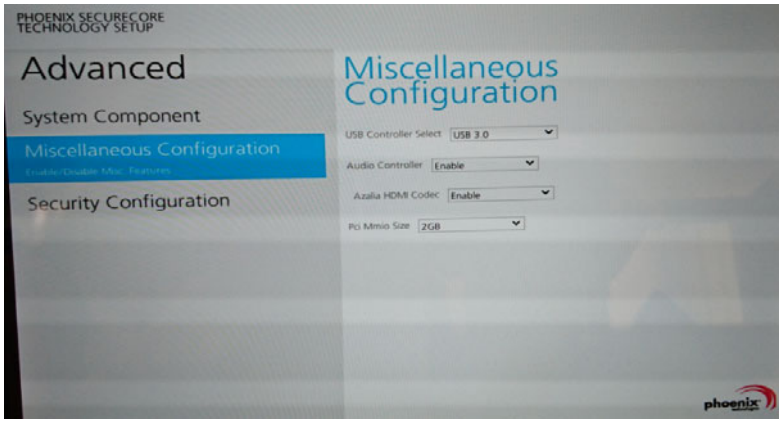


© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

- Step 2: Enable Legacy Boot
  1. Access the BIOS Setup Utility, see "Accessing the BIOS Setup Utility"
  2. Navigate to **APP Menu > Main > Boot Features**.
  3. Locate the **Legacy Boot** setting and tap on the menu to select On enable legacy boot.



- Step 3: Enable USB 2.0 Support
  1. Access the BIOS Setup Utility, see "Accessing the BIOS Setup Utility"
  2. Navigate to **APP Menu >Advanced > Miscellaneous Configuration.**
  3. Locate the **USB Controller Select** drop-down menu and tap on it.
  4. Tap **USB 2.0** from the menu list. USB 2.0 is now enabled for the device.

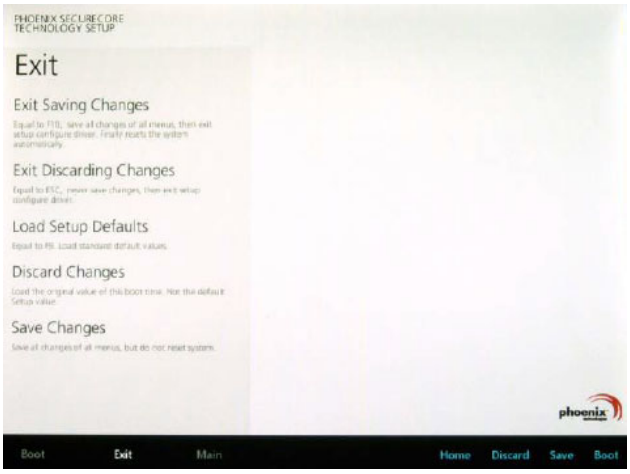


- Step 4: Advanced > Miscellaneous Configuration
- Save the Settings

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

After you configure BIOS, you will need to save the settings.

1. Navigate to **APP Menu > Exit and tap Exit Saving Changes.**



2. A prompt display, tap **Yes** to save the configuration.

The BIOS settings are configured and the Windows 10 IoT operating system can be installed.

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

3.3 EC and BIOS

Updating BIOS

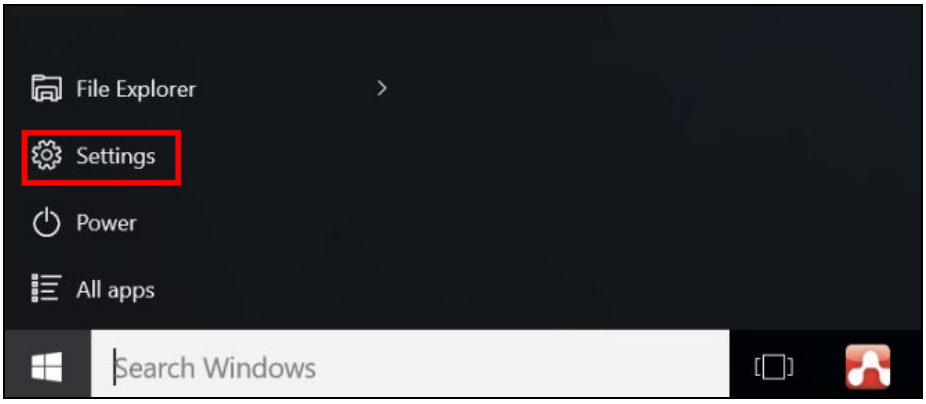
This procedure allows you to update and reflash the system BIOS. Both procedures follow the same steps as described in the following.

CAUTION! Make sure to protect your device from power loss during the BIOS update procedure to prevent irreparable damage to your system's mainboard.

NOTE: A USB keyboard is required for entering command.

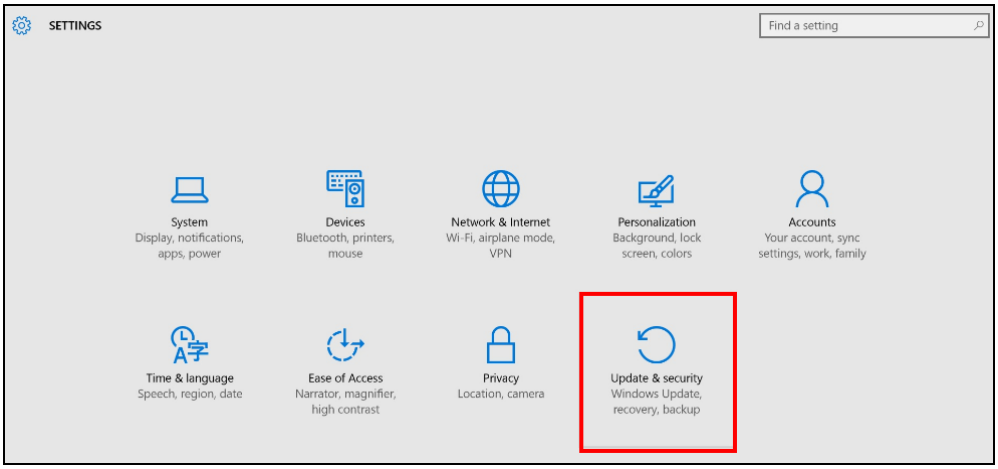
For this procedure, it is highly recommended to connect the device to the AC adapter to prevent a sudden loss of power during the BIOS updating process.

1. Contact your technical sales or technical representative to obtain the correct BIOS file.
2. Copy the BIOS file on to the USB device.
3. Connect the USB device to one of the device's USB ports and power on the TB160.
4. Once the device is on and the Windows 10 IoT Home screen displays, open the Charms bar by sliding your finger inward from the screen's right edge. The Charms bar displays.
5. Tap **Settings** from the displayed menus.

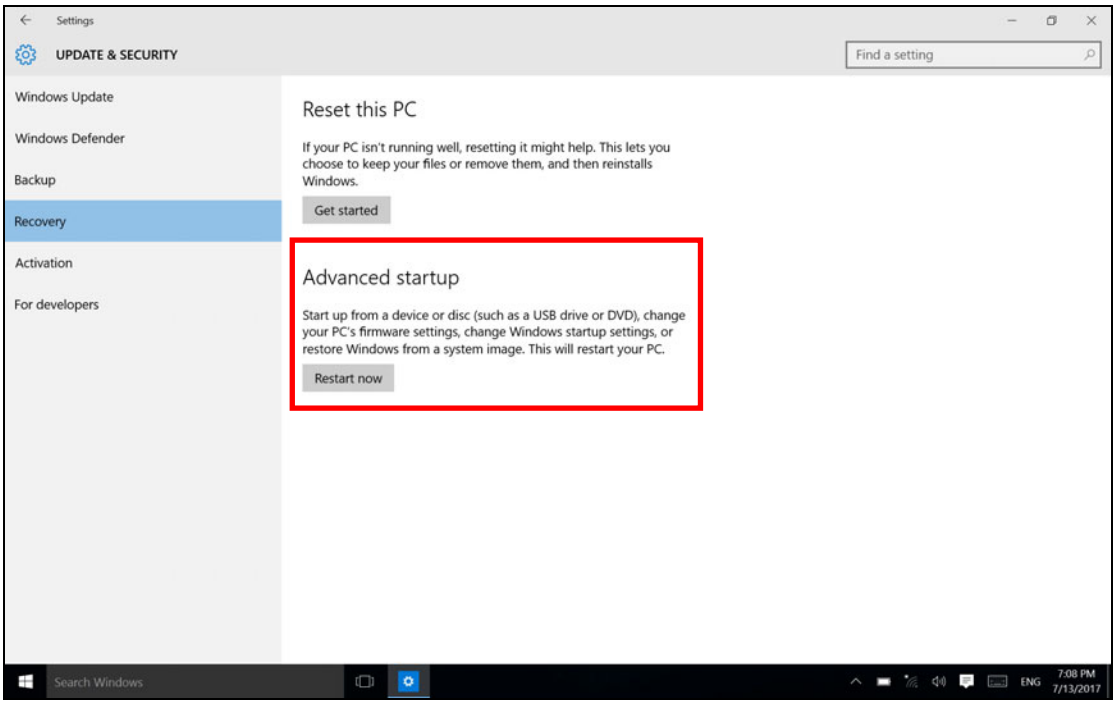


© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

6. Choose **Update & security**

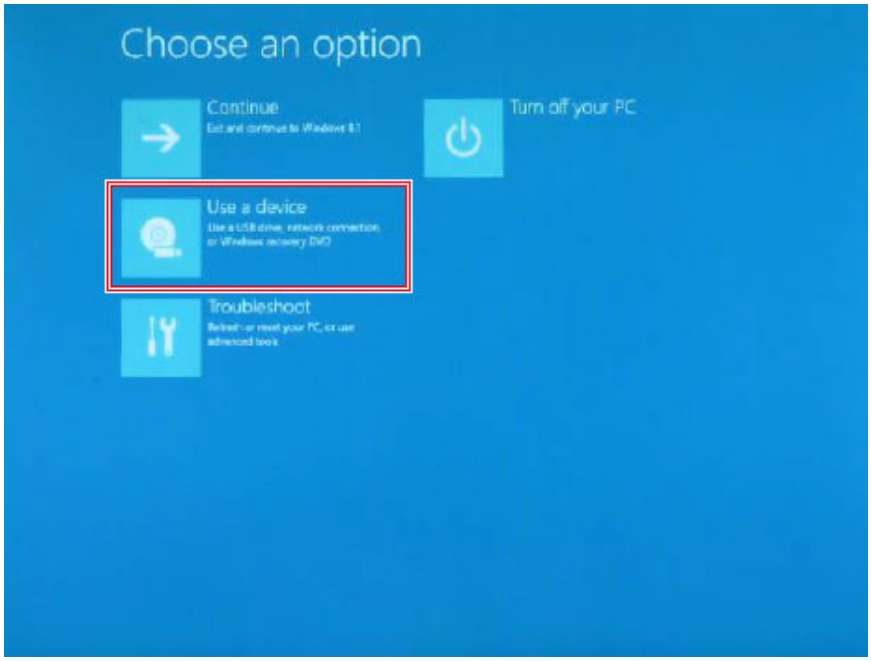


7. From the **Update and security** screen, tap **Recovery**.
   The **Advanced startup** option displays.
   Under **Advanced startup**, tap **Restart now**.



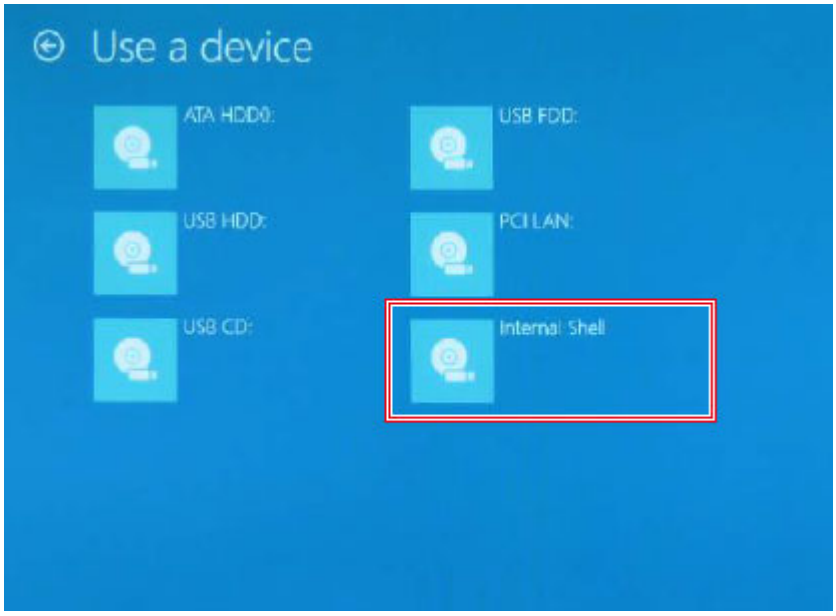
© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

8. Tap **Use a device** to select a boot up preference.



9. From the **Use a device** menu, tap **Internal Shell** to open the command screen.

NOTE: Make sure connect the TB160 to the AC adapter to prevent a sudden loss of power.



© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

10. In the command screen, enter fs1: to select the USB device already connected to the device. The command directs you to the USB device's root menu.



11. If the BIOS file is in a folder and not in the root directory, navigate to the target folder.
12. Type wf (.nsh) and tap Enter. wf is the designated BIOS file. Do not turn off your device or interfere with the reflash process until the process is complete.
13. Reboot the TB160.

The BIOS is now updated.

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

Updating EC

NOTE: Connect the TB160 to the AC adapter to prevent a sudden loss of power.

1. Updating EC requires the use of the Internal Shell Command menu, refer to steps 1 to 12 of "Updating BIOS".
2. Enter the EC source file folder.
3. In the source folder, enter f.
4. Do not turn off your device or interfere with the reflash process until the process is complete.

The system reboots once the process is completed.

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

3.4 DashOn Utility device

The DashON resident program is designed to provide near-instant access to your device's settings and configuration within a single, easy to use interface. The following information illustrates and describes the various settings available for configuration through the DashON menus.

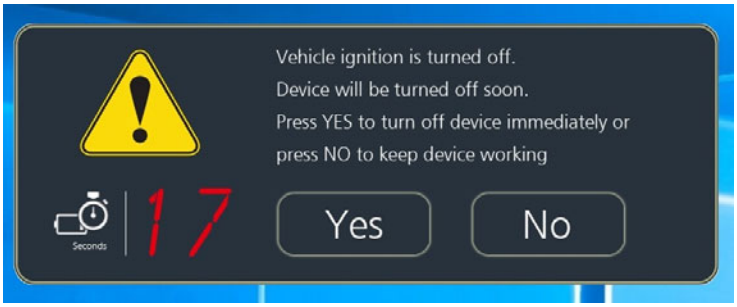
Note: ■ Do not terminate or remove the DashON program manually or the ambient light sensor and the function buttons will be malfunction.

■ Available functions are dependent on tablet model and operating system.



Function	Description
Exit	Minimize DashON and return to the desktop.
Button Lock	Lock or unlock all the physical buttons except Power button.
Screen Auto Rotate	Disable or enable screen auto rotate function.
Airplane	Turn on or off the airplane mode.
Battery	Shows the battery level or charging status.
Brightness	Adjust brightness level and enable or disable auto brightness function.
Volume Control	Adjust volume level and enable or disable mute function.
GNSS	Disable or enable GNSS function.
Wi-Fi	Disable or enable Wi-Fi function.
Bluetooth	Disable or enable Bluetooth function.
Mobile Broadband	Disable or enable mobile broadband function.
Touch Screen Lock	Lock or unlock the touch screen.

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

<table>
<tr><td>ECO Mode</td><td>Disable or enable ECO mode to save battery life when using the device.</td></tr>
<tr><td>Power Plan</td><td>Manage how your tablet uses power.</td></tr>
<tr><td>Info Viewer</td><td>View system specifications. The menu is for display only.</td></tr>
<tr><td>Display Switch</td><td>Choose a display mode when connect to another output device.</td></tr>
<tr><td>Ignition Monitor</td><td>When mounting TB160 with VM160 (car kit), if the ignition monitor sets on, it will notify users with a pop up screen when the vehicle ignition is turned off. As shown below:


<table>
<tr><th>DashON Setting</th><th>Vehicle ignition on</th><th>Vehicle ignition off</th></tr>
<tr><td>ON</td><td>Tablet stays on.</td><td>Pop up notification to notify users.</td></tr>
<tr><td>OFF</td><td>Tablet stays on.</td><td>Tablet stays on, but no pop-up notification.</td></tr>
</table></td></tr>
<tr><td>Button Setting</td><td>Pre-defined functions settings. Supports function button customizing.</td></tr>
<tr><td>Camera</td><td>Camera Setting</td></tr>
</table>

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

3.4.1 Button Setting (programmable key)

The physical function buttons are configured with pre-defined commands. However, the buttons can be configured to open any number of executable commands. In combination with the **Fn** key, the function buttons can trigger more commands. **Fn** key depends on your tablet.

Select the function key to define and tap the drop-down menu to choose from a pre-defined list of commands.

Alternatively, tap **Other** to select a specific executable file to attach to the function key. Additional shortcuts can be created by enabling the Fn + button. This allows the creation of a second set of short cuts available by pressing **Fn** + Function Button.



© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

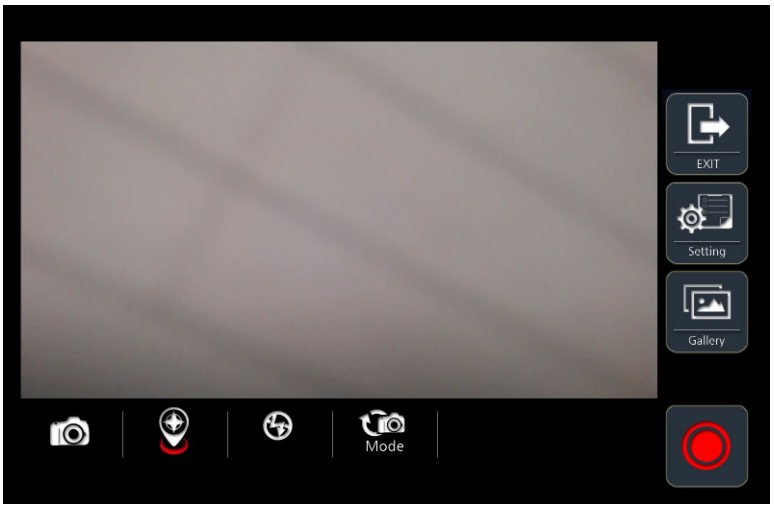
3.5 CamOn Setting

Please follow the instructions below for the camera setting.

1. Please locate **CamOn** icon 

on the main screen.

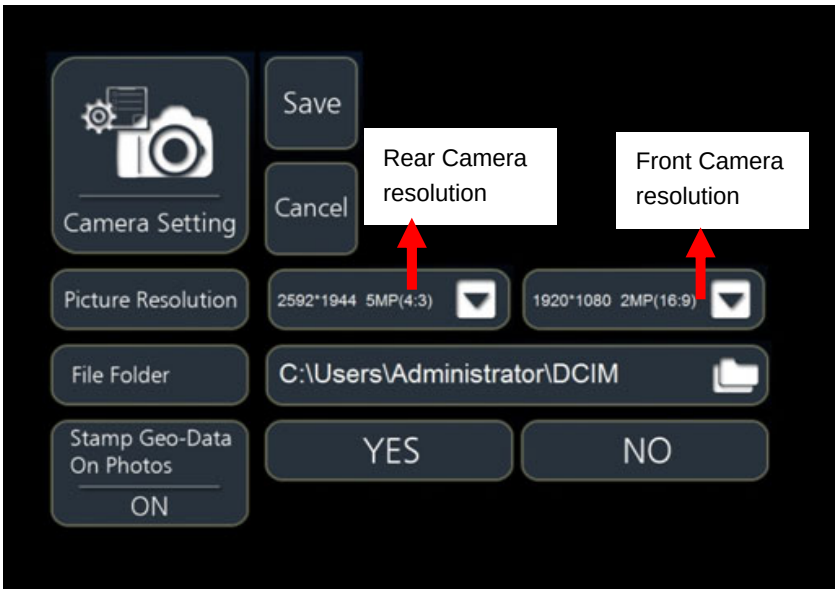
2. The following are the introduction of the camera interface.



	Record / Camera		Exit
	Geo-Data ON/OFF		Camera Setting
	Flash Mode		Gallery
	Camera switch		Camera Button

© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.

3. Camera Setting



© 2017 unitech Electronics Co., Ltd. All rights reserved.
unitech is a registered trademark of unitech Electronics Co., Ltd.