

# User Manual

## **TB71A-W**

**7" Intel Atom based Pocketable  
pads**

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## Declaration of Conformity

### FCC Class B

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### FCC Label Compliance 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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**Warning!**

*Any changes or modifications made to the equipment which are not expressly approved by the relevant standards authority could void your authority to operate the equipment.*

**Attention!**

*Toute modification apportée à l'équipement qui n'est pas expressément approuvée par l'autorité des normes pertinentes peuvent annuler votre droit à faire fonctionner l'équipement.*

**Caution!**

*Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions*

**Attention!**

*Danger d'explosion si la pile est remplacée de façon incorrecte. Remplacez-la uniquement avec le même type ou équivalent recommandé par le fabricant. Jetez les piles usagées selon les instructions du fabricant*

The available scientific evidence does not show that any health problems are associated with using low power wireless devices. There is no proof, however, that these low power wireless devices are absolutely safe. Low power Wireless devices emit low levels of radio frequency energy (RF) in the microwave range while being used. Whereas high levels of RF can produce health effects (by heating tissue), exposure to low level RF that does not produce heating effects causes no known adverse health effects. Many studies of low level RF exposures have not found any biological effects. Some studies have suggested that some biological effects might occur, but such findings have not been confirmed by additional research. This device have been tested and found to comply with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65 and RSS-102 of the IC radio frequency (RF) Exposure rules.

## Packing List

Before setting up the system, check that the items listed below are included and in good condition. If any items are missing, please contact your dealer immediately.

- TB71A-W x1
- Strap x1
- Stylus pen x1
- USB Charger
- USB Charge Docking Cable x1
- HDMI Docking cable x1
- USB3.0 Docking cable x1
- Docking Holder x1
- Docking Power adapter x1
- Software CD (Drivers and Utility, Manual)

**Warning!**



*To prevent electric shock, Do not remove cover.*

*No user serviceable parts inside, refer servicing to qualified personnel.*

**Attention!**



*Pour éviter un choc électrique, ne pas retirer le couvercle.*

*Aucune pièce réparable par l'utilisateur, voir l'entretien à du personnel qualifié.*

## Additional Information and Assistance

1. Visit the ECS websites at [www.ecs.com.tw](http://www.ecs.com.tw) where you can find the latest information about the product.
2. Contact your distributor, sales representative, or ECS's customer service center for technical support if you need additional assistance. Please have the following information ready before you call:
  - Product name and serial number
  - Description of your peripheral attachments
  - Description of your software (operating system, version, application software, etc.)
  - A complete description of the problem
  - The exact wording of any error messages
  - This equipment is a source of electromagnetic waves. Before use, please make sure that there are not EMI sensitive devices in its surrounding which may malfunction therefore

**Warning!**



*1. Input voltage rated 100-240 VAC, 50-60 Hz, 1.5 A, Output Voltage rated 5 VDC, 2 A*

*2. Use a 3.7 V @ 4100 mA Lithium-ion battery (Model No. LWN436789)*

*3. Maintenance: to properly maintain and clean the surfaces, use only approved products or clean with a dry applicator*

**Attention!**



*1. Tension de sortie Tension d'entrée nominale 100-240 VAC, 50-60 Hz, 1,5 A, la note de 5 VDC, 2 A*

*2. Utiliser un V @ 4100 mA Batterie Lithium-ion (modèle n ° LWN436789) 3.7*

*3. Entretien: bien entretenir et nettoyer les surfaces, utiliser uniquement des produits approuvés ou nettoyer avec un applicateur sec*

## Safety Instructions

1. Read these safety instructions carefully.
2. Keep this User Manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
12. Never pour any liquid into an opening. This may cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
14. If one of the following situations arises, get the equipment checked by service personnel:
  - a. The power cord or plug is damaged.
  - b. Liquid has penetrated into the equipment.
  - c. The equipment has been exposed to moisture.
  - d. The equipment does not work well, or you cannot get it to work according to the user's manual.
  - e. The equipment has been dropped and damaged.
  - f. The equipment has obvious signs of breakage.
15. **DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THE STORAGE TEMPERATURE MAY GO BELOW -20° C (-4° F) OR ABOVE 60°C (140° F). THIS COULD DAMAGE THE EQUIPMENT. THE EQUIPMENT SHOULD BE IN A CONTROLLED ENVIRONMENT.**
16. If your computer is losing time significantly or the BIOS configuration resets itself to the default, the battery may have no power.

### **Caution!**



1. Do not replace battery yourself. Please contact a qualified technician or your retail provider.
2. The computer is provided with a battery-powered real-time clock circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

### **Attention!**

1. Ne pas remplacer la batterie vous-même. S'il vous plaît contacter un technicien qualifié ou votre fournisseur de détail.
2. L'ordinateur est muni d'un circuit en temps réel de l'horloge alimentée par batterie. Il ya un danger d'explosion si la pile est remplacée de façon incorrecte. Remplacez uniquement par un type identique ou équivalent recommandé par le fabricant. Jetez les piles usagées selon les instructions du fabricant.

17. **IMPROPER INSTALLATION OF VESA MOUNTING CAN RESULT IN SERIOUS PERSONAL INJURY!** VESA mount installation should be performed by a professional technician; please contact the service technician or your retailer if you need this service.
  18. **CLASSIFICATION:**  
Supply Class I adapter  
No applied part  
IP54  
Continuous Operation  
Not AP or APG category
  19. Disconnect device: Appliance inlet.
  20. Follow national, state or local requirements to dispose of unit.
  21. Maintenance: to properly maintain and clean the surfaces, use only the approved products or clean with a dry applicator.
  22. Contact information:  
No.239, Sec. 2, Ti Ding Blvd., Taipei City 11493, Taiwan (R.O.C.)  
TEL: +886-2-2162-1177
  23. This equipment shall not be used as a life support system.
  24. Accessory equipment connected to the analog and digital interfaces must be in compliance with the respective nationally harmonized IEC standards (i.e. IEC 60950 for data processing equipment, IEC 60065 for video equipment, IEC 61010-1 for laboratory equipment, and IEC 60601-1 for medical equipment.) Furthermore all configurations shall comply with the system standard IEC 60601-1-1. Anyone who connects additional equipment to the signal input part or signal output part is configuring a medical system, and is therefore, responsible that the system complies with the requirements of the system standard IEC 60601-1-1. The unit is for exclusive interconnection with IEC 60601-1 certified equipment in the patient environment and IEC 60XXX certified equipment out- side of the patient environment. If in doubt, consult the technical services department or your local representative.
  25. Users must not allow SIP/SOPs to come into contact with the patient at the same time.
  26. The sound pressure level at the operator's position according to IEC 704-1:1982 is no more than 70dB (A).
- DISCLAIMER:** This set of instructions is given according to IEC 704-1. ECS disclaims all responsibility for the accuracy of any statements contained herein.



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# Chapter 1

General Information

## 1.1 Introduction

MICA is a multimedia Atom Mobile processor-based computer that is designed to serve as a Mobile Clinical Assistant (MCA). It is a PC-based system with 7" TFT LCD display and a stereo audio controller. MICA is a simple, complete and highly integrated mobile multimedia system which allows system integrators to easily build a Mobile Clinical Assistant Terminal into their applications.

Common industrial applications include factory automation systems, precision machinery, and production process control. It is also suitable for many non-industrial applications, including interactive kiosk systems, entertainment management, and car park automation. MICA is a reliable, cost-effective solution to meet an application's processing requirements.

## 1.2 Specifications

**Table 1.1: TB71A-W Specification**

Item	Description
Dimensions (WpDpH)	121 mm x 200 mm x 14.5 / 24 mm (bottom / top)
Weight	400g
CPU and Chipset	Intel® Atom Processor Bay Trail - T Z3770 - 22 nm system-on-a-chip (SoC) - 2M Cache, up to 2.39 GHz
Memory	LPDDR3 4G
Graphics	Intel® Integrated HD Graphics
Audio	Realtek ALC5642 Internal Speaker x1, Internal microphone x 2, Receiver x1
I/O Ports	Docking port x 1 SD card slot x 1 SIM card slot (Optional) x 1 Line out x 1
Display	7" TFT LCD Panel
Touch Panel	5-point P-cap touch panel
Max. Resolution	800 x 1280
Stylus Pen	Capacitive stylus pen
Storage	EMMC 32G
Communication	WiFi- 802.11 a/b/g/n WLAN (5 G/2.4 G) Bluetooth V2.0+EDR / Bluetooth 4.0 LE 3G 850/900/1900/2100 Support HSPA+ (Optional) GPS 850/900/1900/2100 Support HSPA+ (Optional) NFC Support ISO14443, 1.0inch
Ingress Protection	IP54-rated, Alcohol resistant for cleaning purposes
Thermal Solution	Fanless Design
Operating System	Windows 8.1 Industry Pro 64Bits
Barcode Scanner	1D/2D Barcode scanner
Camera	8.0 Mega pixel camera with LED light Auto-focus supported

Web Camera	2.0 Mega pixel VGA camera
Control Button	Power button: On the top side of MICA
	Barcode scanner buttons: Two orange buttons
	Volume control button
	Home Key button
Indicated LED	Programmable button (Default setting):
	- P1 for S3 mode
	- P2 for WiFi on/off
Power Adapter	Power LED & Battery status LED
	<ul style="list-style-type: none"> <li>■ Full → Blue</li> <li>■ Charging → Orange</li> </ul>
USB Charger	APD WA-20A05FU INPUT: 100 ~ 240 V, 0.6 A Max., 50/60 Hz OUTPUT: 5 V, 4 A
Battery	Chicony W12-010N3A INPUT: 100 ~ 240 V, 0.5 A Max., 50/60 Hz OUTPUT: 5 V, 2 A Max.
Operating Temperature	Model: MICA-071 Lithium-ion battery (3.7 V @ 4100 mAh) 4 Hr charging time
Operating Humidity	0° C ~ 40° C
Storage Temperature	10% ~ 90% @ 40° C, non-condensing
Storage Humidity	-20° C ~ 60° C
Transportation Temperature	10% ~ 95%, non-condensing
Humidity	-20° C ~ 60° C Transportation
<b>Certifications</b>	
Safety	10% ~ 95%, non-condensing
	FCC Part 15 Class B, UL, CE, CB60950, RoHS

## 1.3 Cleaning/Disinfecting

During normal use TB71A-W may become soiled and should, therefore, be cleaned regularly.

Steps:

1. Wipe TB71A-W with a clean cloth that has been moistened in the cleaning solution.
2. Prepare agent per manufacturer's instructions or hospital protocol.
3. Wipe thoroughly with a clean cloth.

**Caution!** *Do not immerse or rinse TB71A-W or its peripherals. If you accidentally spill liquid on the device, disconnect the unit from the power source. Contact your Biomed personnel regarding the continued safety of the unit before placing it back in operation.*



*Do not spray cleaning agent on the chassis.*

*Do not use disinfectants that contain phenol.*

*Do not autoclave or clean TB71A-W or its peripherals with strong aromatic, chlorinated, ketone, ether, or other solvents, sharp tools or abrasives. Never immerse electrical connectors in water or other liquids.*

**Attention!** *Ne pas immerger ou rincer TB71A-W ou ses périphériques. Si vous renversez par accident un liquide sur l'appareil, débranchez l'appareil de la source d'alimentation. Contactez votre Biomed concernant la sécurité continue de l'unité avant de la remettre en service.*



*Ne pas pulvériser l'agent de nettoyage sur le châssis.*

*Ne pas utiliser de désinfectants contenant du phénol.*

*Ne pas passer à l'autoclave ou MICA propre ou ses périphériques avec fortes, cétone, éther, ou d'autres solvants, des outils tranchants ou abrasifs aromatiques chlorés. Ne jamais plonger connecteurs électriques dans l'eau ou d'autres liquides.*

## 1.4 Dimensions

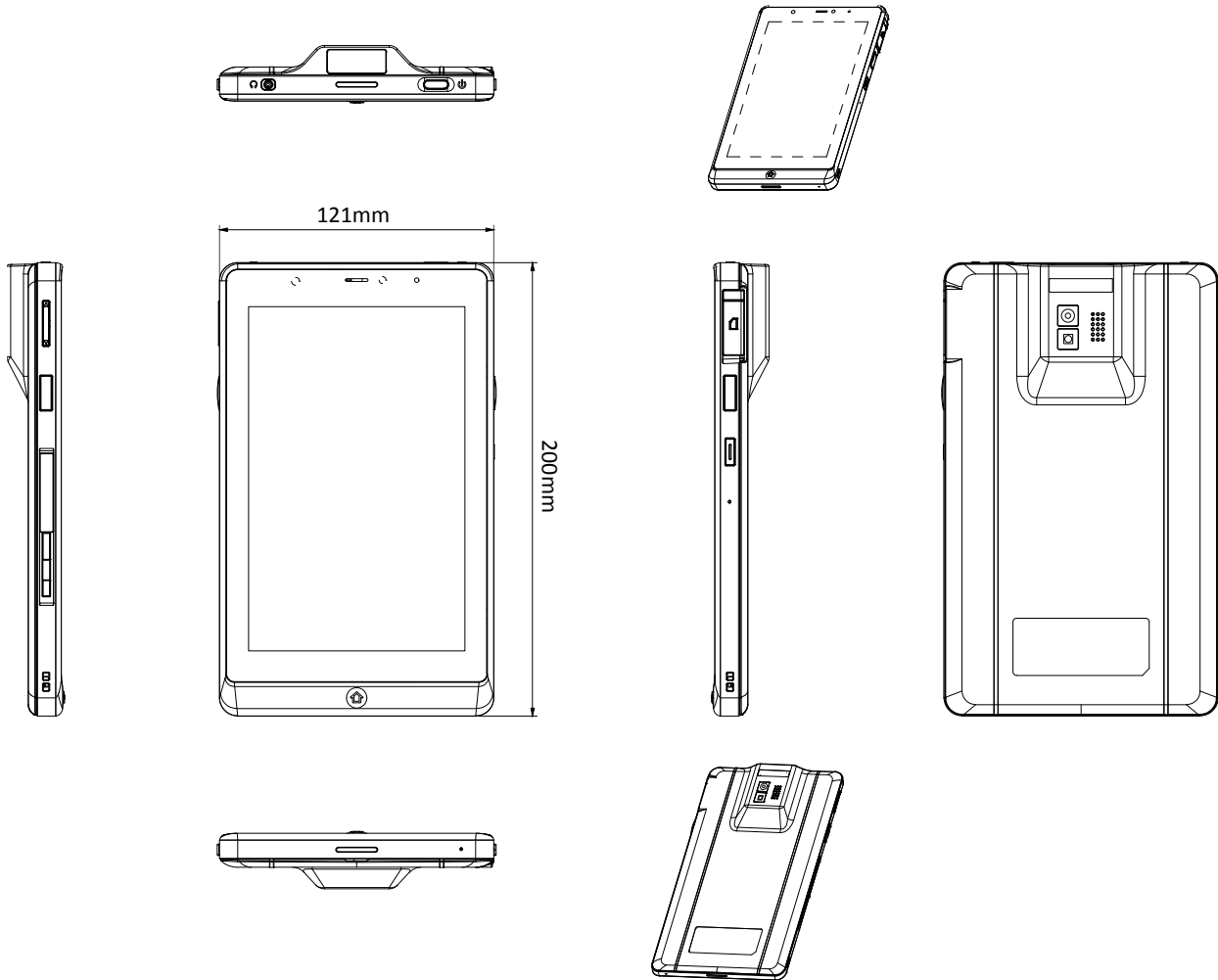


Figure 1.1 TB71A-W Dimensions



# Chapter 2

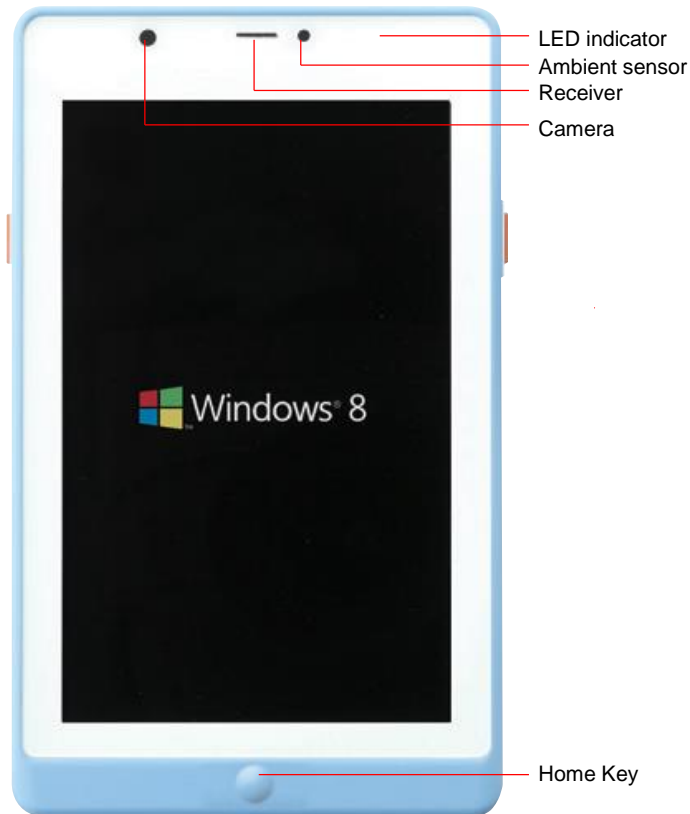
Getting Started



## 2.1 A Quick Tour of MICA

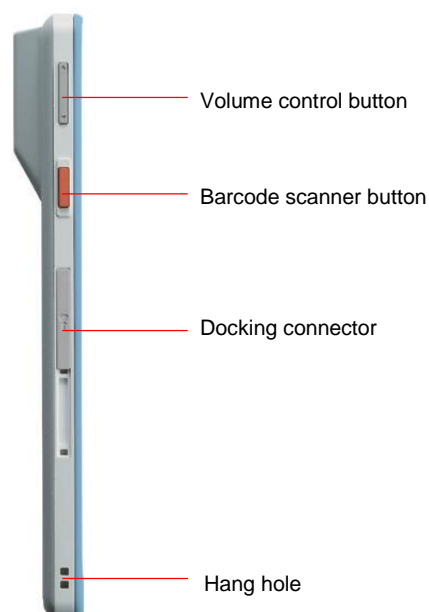
Before you start to set up TB71A-W, take a moment to become familiar with the locations and purposes of the controls, drives, connections and ports, which are illustrated in the figures below.

When placed upright on the desktop, the TB71A-W front panel appears as shown in Figure 2.1.



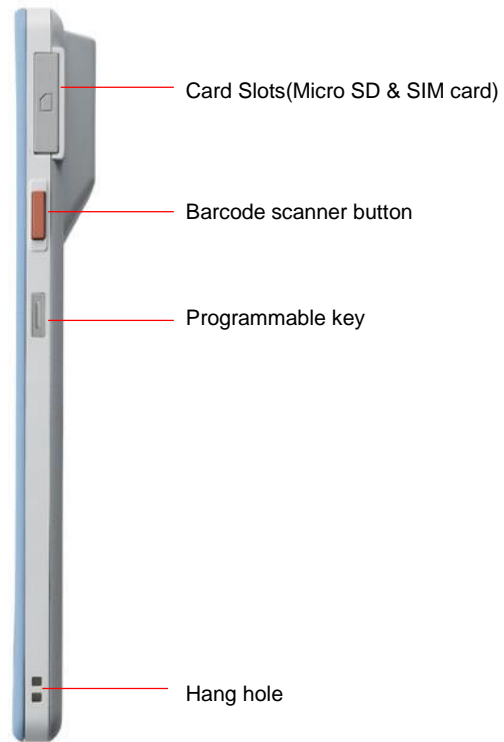
**Figure 2.1 Front View**

The volume control button, barcode scanner button and docking connector are on the left side of the tablet PC.



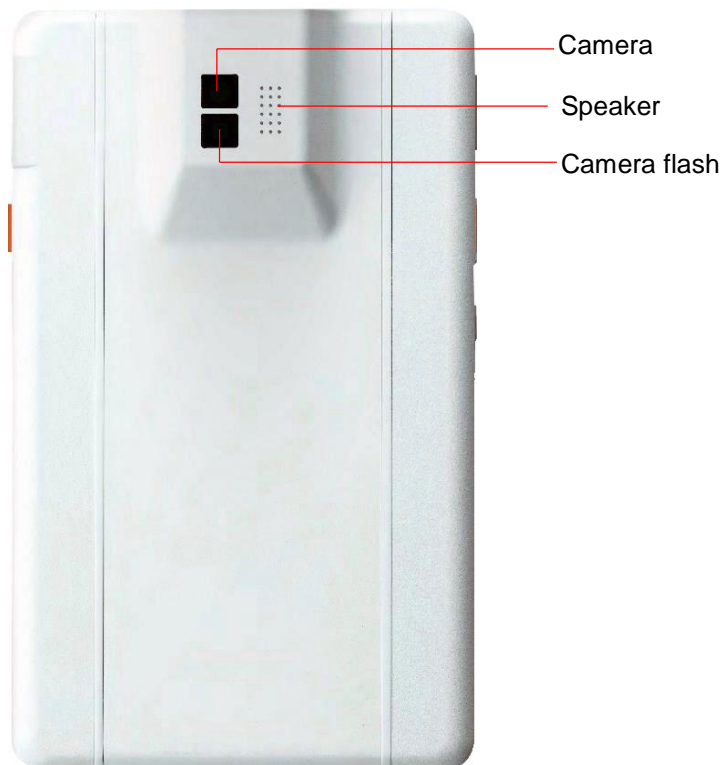
**Figure 2.2 Left Side View**

The card slots, barcode scanner button and programmable buttons are on the right side of the tablet PC.



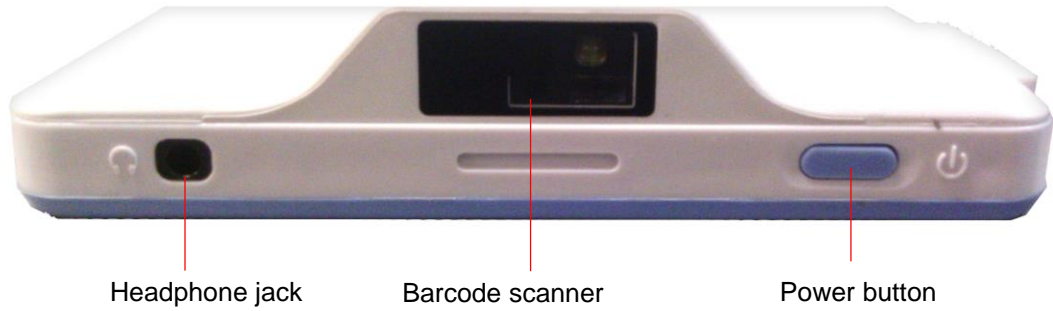
**Figure 2.3 Right Side View**

The rear view of the tablet PC is depicted in Figure 2.4.



**Figure 2.4 Rear View**

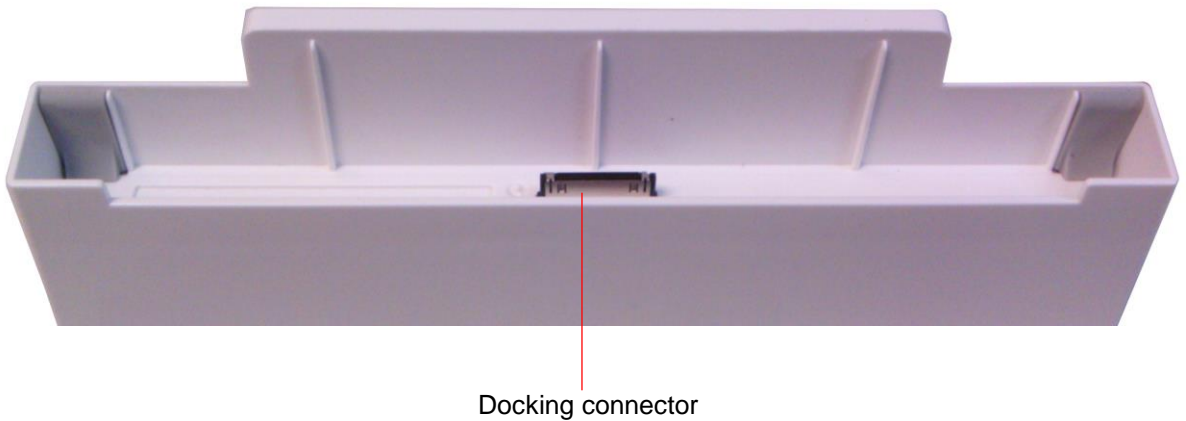
The top side of the tablet PC contains power button, barcode scanner and headphone jack.



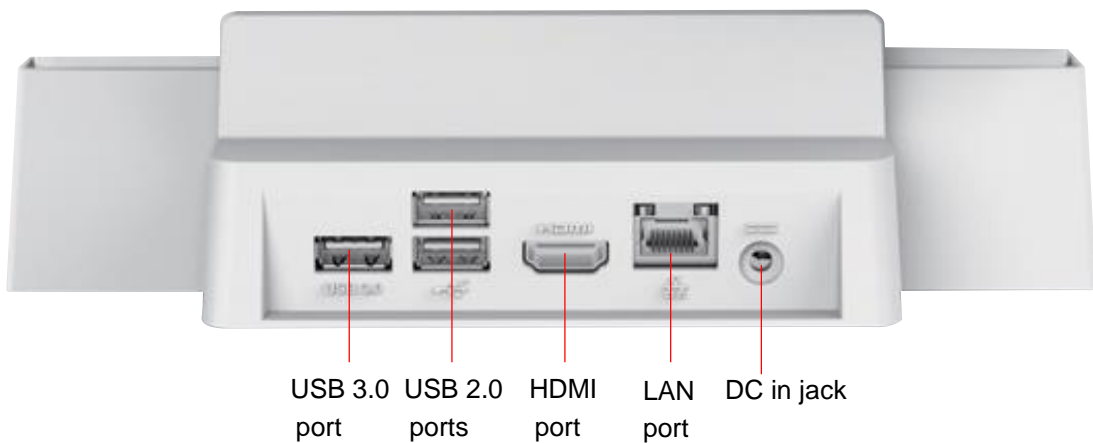
**Figure 2.5 Top View**

## 2.2 A Quick Tour of TB71A-W Docking Holder (Optional)

When you place the docking station on the desktop, its front panel appears as shown in Figure



**Figure 2.6 Front View**



**Figure 2.7 Rear View of Docking Station**

## 2.3 Installation Procedures

### 2.3.1 Install the Strap (Optional)

This strap is designed for the TB71A-W, which make the tablet convenient to hold.



Figure 2.8 Strap

- Aim the triangle mark on the strap to the home key to slightly insert the bottom side of the tablet into the strap.
- Press to insert the top side of tablet into the strap.



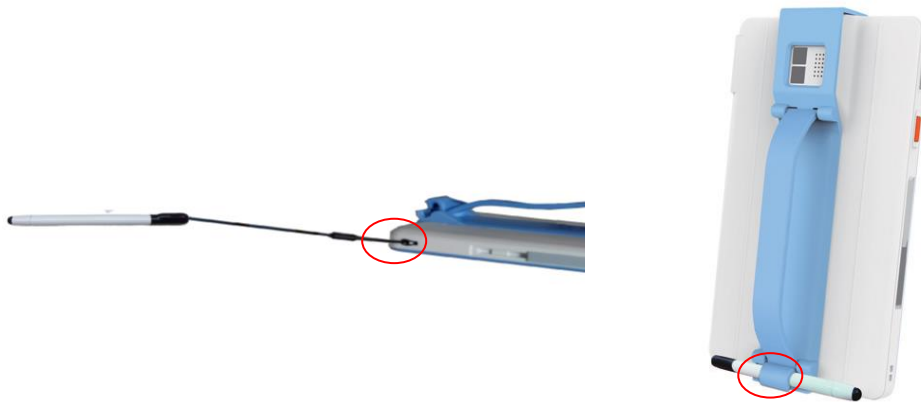
Figure 2.9 Install the Strap

### 2.3.2 Insert / Hang the Stylus (Optional)



Figure 2.10 Stylus

- a. Hang and secure the stylus through the hang hole of the TB71A-W.
- b. Insert and secure the stylus onto the strap.



**Figure 2.11 Secure the stylus**

### 2.3.3 Insert the MICA into the Docking Station (Optional)

1. Open and turn the protective cover of the docking port to the opposite side and press to lock it into its reserved slot.



**Figure 2.12 Open and secure the protective cover**

2. Align the docking port to the docking connector to insert the tablet into the docking station and press it right into position.



**Figure 2.13 TB71A-W in Docking Station**

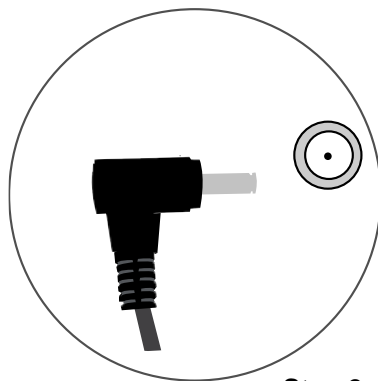
**Note!** Before placing the tablet into the docking station, please make sure that the protective cover of docking port is placed right into its reserved slot.



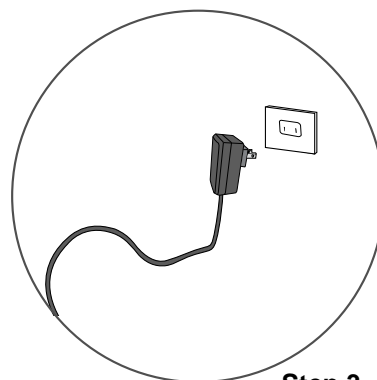
## 2.3.4 Connecting the Power Cord for the Docking Station

Be sure to always handle the power cords by holding the plug ends only. Follow these procedures in order:

1. Insert the TB71A-W into the docking station as previous section 2.3.3.(See Figure 2.13).
2. Connect the female end of the power cord to the DC-in jack of the docking station.
3. Connect the 2-pin male plug of the power cord to an electrical outlet.



Step 2



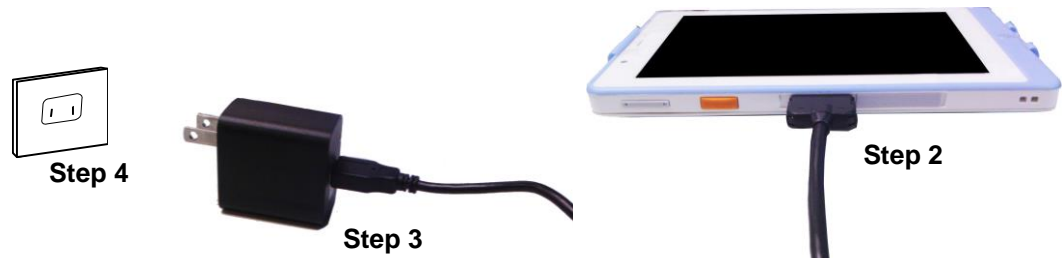
Step 3

**Figure 2.14 Connecting the AC Adapter Power Supplier to the Docking Station**

### 2.3.5 Connecting the USB Charger to MICA

Please follow these procedures in order:

1. Open and turn the protective cover of the docking port to the opposite side and press to lock it into its reserved slot. (See Figure 2.12)
2. Connect the docking end of the USB charge cable to the docking port of MICA (See Figure 2.14).
3. Connect the USB end of the USB charge cable to the USB charger.
4. Insert the 2-pin plug into an electrical outlet.



**Figure 2.15 Connecting the AC Adapter Power Supplier to the Docking Station**



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