

ECS mPAD-12-CHT4-I

12" Multi-Function PAD

User Manual

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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.

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

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.

RF Exposure Information (SAR)

This device meets the government's requirements for exposure to radio waves.

This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

The exposure standard employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg. Tests for SAR are conducted using standard operating positions accepted by the FCC with the EUT transmitting at the specified power level in different channels.

The FCC has granted an Equipment Authorization for this device with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this device is on file with the FCC and can be found under the Display Grant section of www.fcc.gov/eot/ea/fccid after searching on FCC ID: WL6TC12A-W

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.

- mPAD-12-CHT4 x1
- Strap x1
- DC Charge Cable x1
- HDMI Docking cable x1
- USB3.0 Docking cable x1
- Docking x1
- MSR Module x1
- SCR Module x1
- Barcode scanner Module x1
- USB Ethernet Module x1



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 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 12 VDC, 3 A*
2. *Use a 3.7 V @ 12600 mA Lithium-ion battery (Model No. LWN705462)*
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 12 VDC, 3 A*
2. *Utiliser un V @ 12600 mA Batterie Lithium-ion (modèle n °LWN705462) 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, Tiding Blvd., Neihu District, 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


mPAD-12-CHT4 is a Intel Cherry Trail Z8500 Base computer that is designed to serve as a Multi Function PAD(mPAD). It is a PC-based system with 12" TFT LCD display and a stereo audio controller. mPAD-12-CHT4 is a simple, complete and highly integrated mobile multimedia system which allows system integrators to easily build a Multi Function PAD 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. mPAD-12-CHT4 is a reliable, cost-effective solution to meet an application's processing requirements.

1.2 Cleaning/Disinfecting


During normal use mPAD-12-CHT4 may become soiled and should, therefore, be cleaned regularly
Steps :

1. Wipe mPAD-12-CHT4 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 mPAD-12-CHT4 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 mPAD-12-CHT4 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 mPAD-12-CHT4 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 TB71A-W-SI 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.

Chapter 2 mPAD-12-CHT4 Tablet Specification

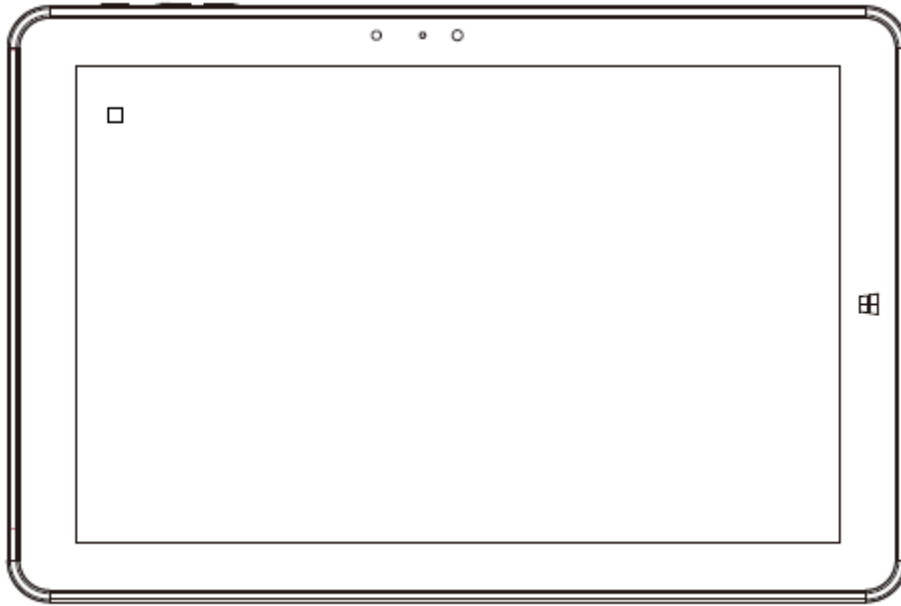
2.1 Specifications

mPAD-12-CHT4 TABLET		
Dimensions		311 * 206 *15 mm , Weight: 1054g
CPU	Processor	Intel Cherry Trail-T MSP Type4 Z8550
		Quad core (4C/4T), SoC
		Core Frequency 1.8GHz, Burst up to 2.56GHz
Memory	On Board RAM	LPDDR3 1600MHz
		Default 4G, (2-8GB)
Display	Display	Intel HD Graphics , Gen8-LP 16EU up to 650MHz
		Max display resolution up to 2560 x 1600
		7" LCD, Mipi ,1280 x 800 pixels
	12" LCD , eDP, 1920 x 1200 pixels	
	Touch Module	Support 10-points multi-touch(Capacitive)
Storage	eMMC	Single eMMC 4.5 (define)
		32GB (define) / 64GB
Camera	Camera	Front Camera : 2.0M
		Rear Camera: 8.0M
Wireless Communication	WLAN+BT	Wi-Fi 802.11 a/b/g/n/ac
		Bluetooth 4.0
	GPS	GPS&GLONASS
	NFC	NXP NPC100
ISO14443 Type A, Type B, PC/SC (windows driver support)		
	Antennas	802.11a/b/g/n/ac , BT: 2.4GHz; GPS, NFC
Sensor	E-compass	Yes
	G-sensor	Yes
	Gyro	Yes
	Ambient Light sensor	Yes
Power	Battery	Li-polymer
		12600mAh / 46.62Wh
Peripheral Interfaces	I/O Port	1 x Mic/Head phone jack combo
		1 x Micro SD card slot
		1 x Docking Port (with AC-IN, HDMI, USB)
		1 x USB3.0 micro type B
	Button	Power On/ Off
		Audio up/down
	Speaker&Mic	Speaker : ALC5645
		Build-in 2 Speakers, 1W x 8 Ohm
Mic : Digital * 1		
Accessory	Accessory	1 x DC Chrger Cable

		1x HDMI Cable
		1 x Active Stylus Pen
		1 * Strap
	Option Module	1D/2D Barcode scanner (button on module)
		Smart Card Reader (contact)
		MSR
		Ethernet giga LAN RJ45 Port
	Option Accessory Docking	Front : SCR
		1 * DC-IN
		1 * HDMI
		1 * RJ45 Ethernet LAN
		1 * USB30 , 1*USB2.0
1 * Adapter 12V / 3A , 100 – 240V		
Certification		FCC Part 15 Class B, CE, CB60950, IEC60601, RoHS , WEEE (Documents ready only), BSMI, NCC
		Battery Pack: UL2054, IEC62133, UN38.3
Environment Condition		IP54
		Drop : 0.9m / 2.7ft. Drop to steel surface, 1drops per 6 sides
		Vibration : 4Gs peak, 5Hz to 2kHz, 1 hour duration per axis
		Operating Temp : 0 °C to 40°C
		Storage Temp : -20° C ~ +60° C
		Humidity : 95% non-condensing

2.2 Dimensions

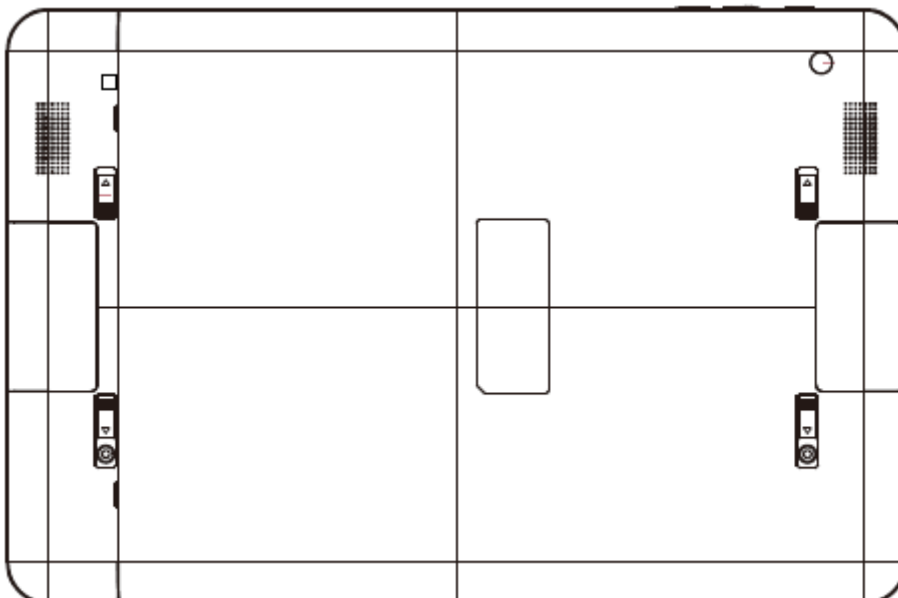
2.2.1 TABLET



Front View

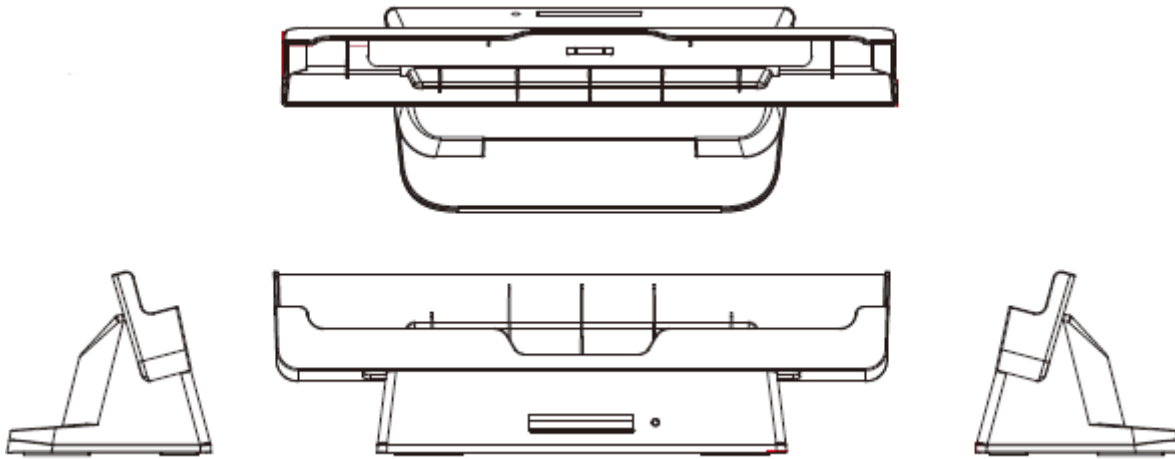


Bottom View

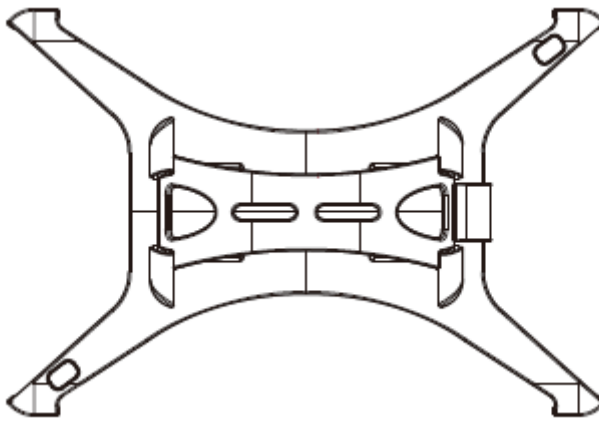


Back View

2.2.1 Docking

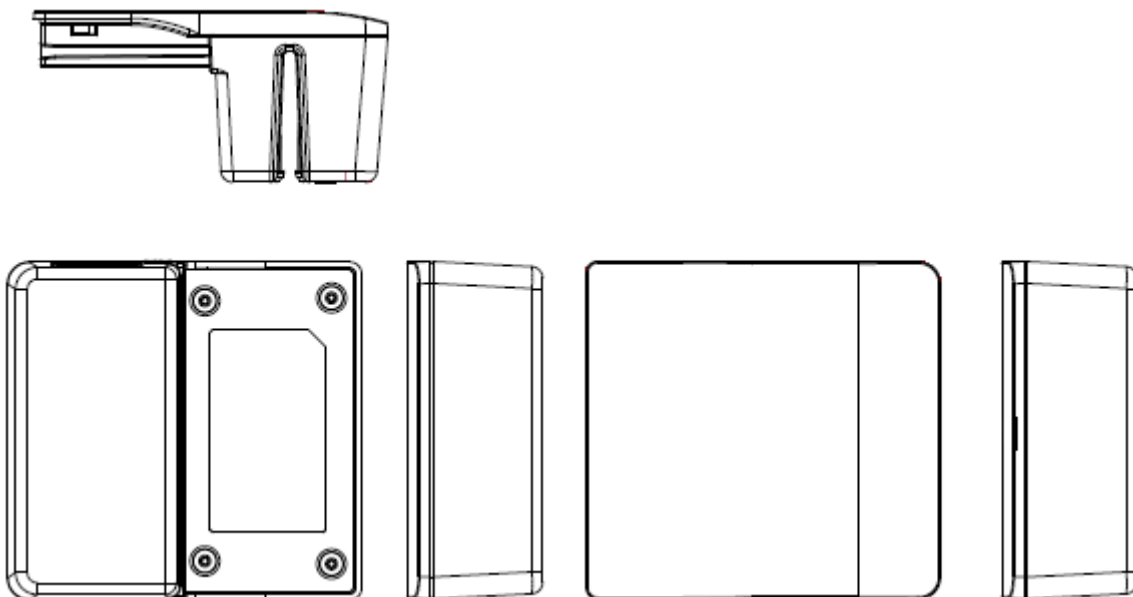


2.2.3 Strap

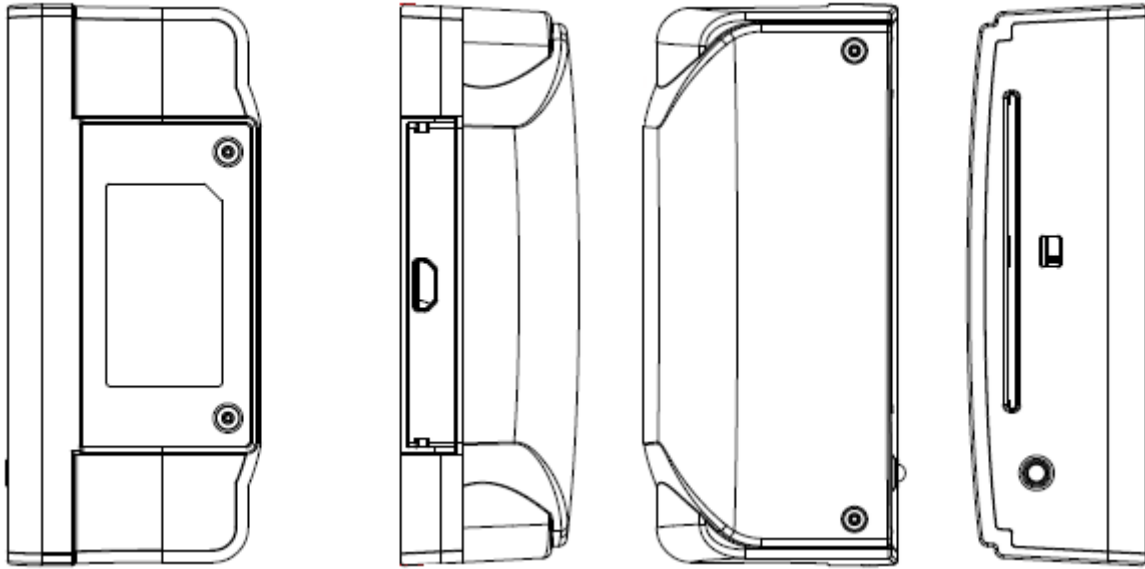


2.2.4 USB MODULE

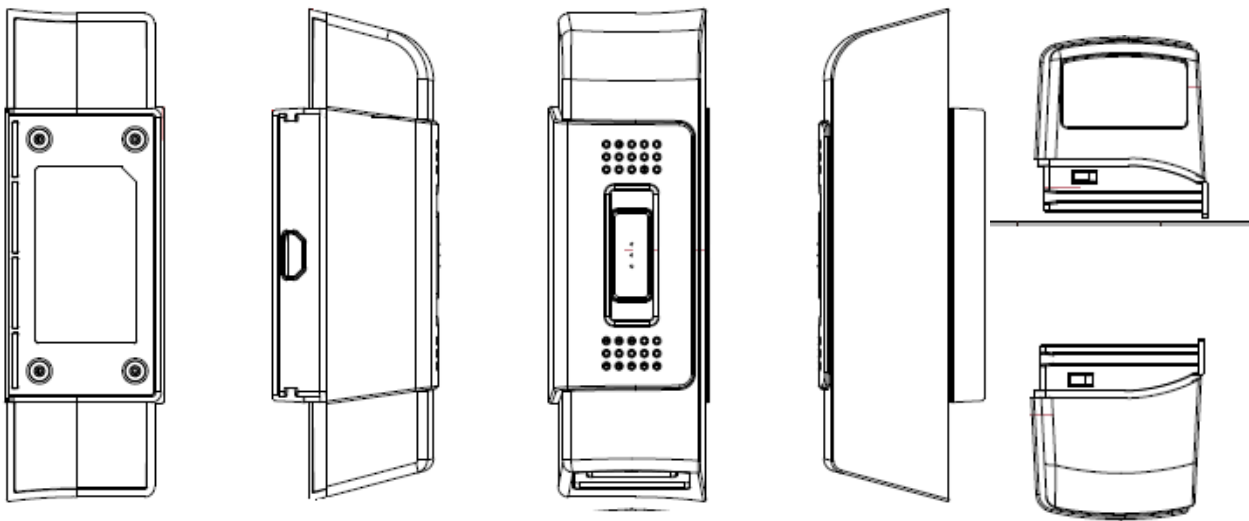
2.2.4.1 MSR



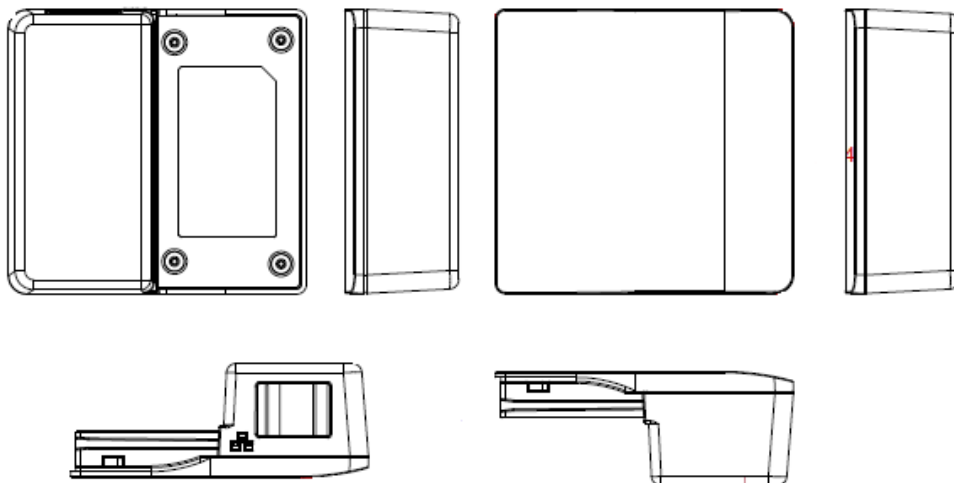
2.2.4.2 SCR



2.2.4.3 Barcode Scanner Module



2.2.4.4 USB Ethernet Module



Chapter 3 Getting Started

3.1 A Quick Tour of TABLET

Before you start to set up mPAD-12-CHT4, 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-SI front panel appears as shown in Figure 2.1

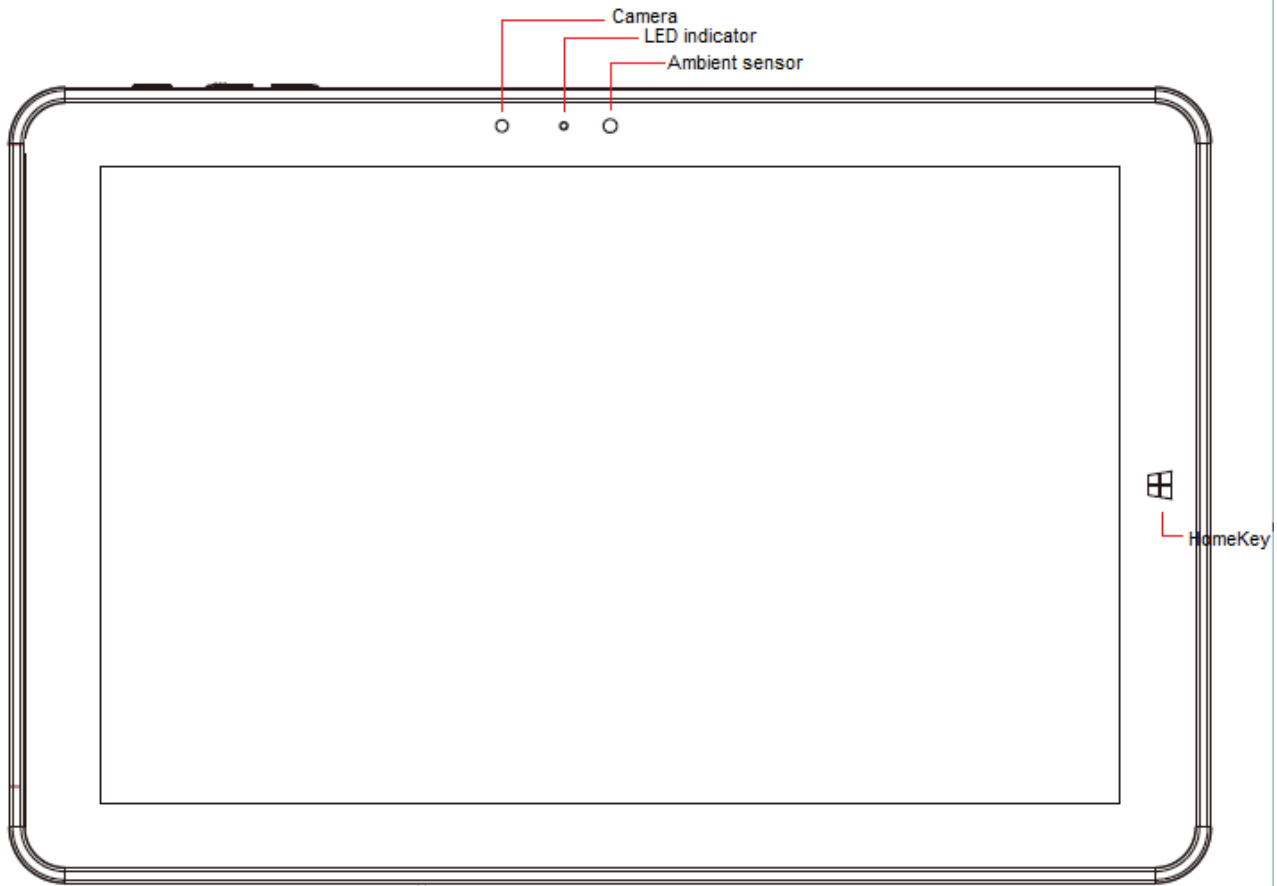


Figure 2-1

The Button side of the tablet PC contains SD Card, USB3.0 Micro-typeB, Docking Connector.

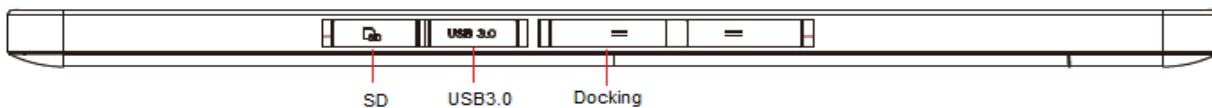


Figure 2-2

The Top side of the tablet PC contains power button, volume control button .



Figure 2-3

3.2 A Quick Tour of Docking (Optional)

When you place the docking station on the desktop, its front panel appears as shown in Figure 2.4



SMART CARD READER

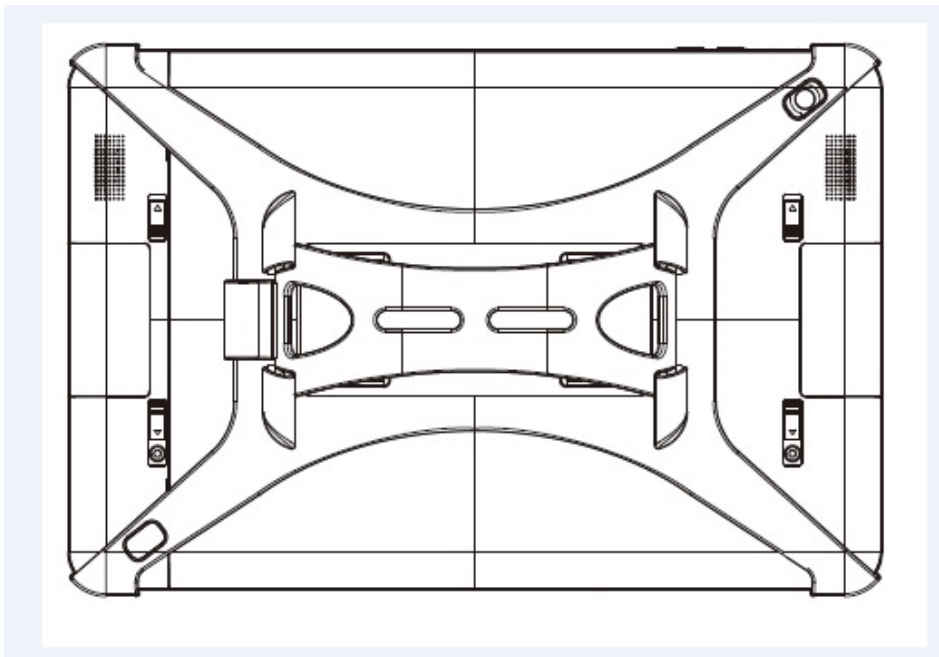
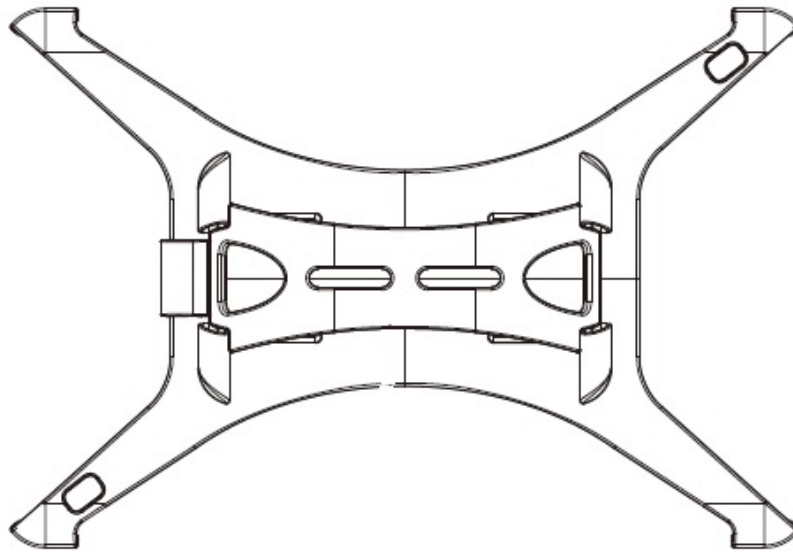


USB 3.0 USB 2.0 HDMI RJ45 LAN DC Jack

Figure 2-4

3.3 Installation Procedures

3.3.1 Install the Strap



3.3.2 Insert the mPAD-12-CHT4 TBALET into the Docking Station (Optional)



Open and secure the protective cover



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



3.3.3 Insert the USB Module into the mPAD-12-CHT4 TBALET (Optional)

