User Manual

POC-W242

Point-of-Care Terminal with
Intel® Core™ i7 or i5 Processor
and a 23.8" Full HD IPS LCD

ADVANTECH

Enabling an Intelligent Planet

Instructions for the User

The document combines text and illustrations, providing a comprehensive overview of the system. The information is presented as a sequential steps of actions, allowing the user to learn directly how to use the device.

The text provides explanations and instructs the user step-by-step in the practical use of the product, with short, clear instructions in an easy-to-follow sequence.

Definitions

Warning! *A WARNING statement provides important information about a potentially hazardous situation which, if not avoided, could result in death or serious injury.*

Caution! *A CAUTION statement provides important information about a potentially hazardous situation which, if not avoided, may result in minor or moderate injury to the user or patient or in damage to the equipment or other property.*

Note! *A NOTE provides additional information intended to avoid inconveniences during operation.*

Safety Instructions

1. Strictly follow these Instructions for Use, please read these safety instructions carefully.
2. Remind to keep this User's Manual for later reference, and any use of the product requires full understanding and strict observation of all portions of these instructions. Observe all WARNINGS and CAUTIONS as rendered throughout this manual and on labels on the equipment.
3. Repair of the device may also only be carried out by trained service personnel. Advantech recommends that a service contract be obtained with Advantech Service and that all repairs also be carried out by them. Otherwise the correct functioning of the device may be compromised.

Warning! *Because of the danger of electric shock, never remove the cover of a device while it is in operation or connected to a power outlet.*

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4. If one of the following situations arises, get the equipment checked by service personnel:
   - The power cord or plug is damaged.
   - Liquid has penetrated into the equipment.
   - The equipment has been exposed to moisture.
   - The equipment does not work well, or you cannot get it to work according to the user's manual.
   - The equipment has been dropped and damaged.
   - The equipment has obvious signs of breakage.

5. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning and keep this equipment away from humidity.

Caution! *To avoid short-circuiting and otherwise damaging the device, do not allow fluids to come in contact with the device. If fluids are accidentally spilled on the equipment, remove the affected unit from service as soon as possible and contact the service personnel to verify that patient safety is not compromised.*

6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.

Caution! *To prevent overheating, do not cover the openings and place the device in direct sunlight or near radiant heaters.*

7. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet. Position the power cord so that people cannot step on it. Do not place anything over the power cord. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over voltage.

Caution! *Do not leave this equipment in an uncontrolled environment where the storage temperature is below -20° C (-4° F) or above 60° C (140° F). this may damage the equipment.*

8. If your computer is losing dramatic time or the BIOS configuration reset to default, the battery has no power.

Caution! *Do not replace battery yourself. Please contact a qualified technician or your retail.*
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 manufacture. Discard used batteries according to the manufacturer's instructions

Caution! *The battery charging indicator is not included with this device. It will be added to the finished system assembly and be shown with the completed system.*

9. Improper installation of VESA mounting can result in serious personal injury! VESA mount installation should be operated by professional technician, please contact the service technician or your retail if you need this service. The detail operating procedure specified on Appendix A.

10. CLASSIFICATION:
    1). Supply Class I adapter
    2). No applied part
    3). IP54
    4). Continuous Operation
    5). Not AP or APG category

Warning! *This device is not suitable for use in the presence of flammable anesthetic mixture with air, oxygen, nitrous oxide, or for life support system.*

11. Environmental protection: follow national requirements to dispose of unit.

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

Caution! *When servicing the device, always use replacement parts that are qualified to Advantech standards. Advantech Medical cannot warrant or endorse the safe performance of third-party replacement parts for use with our medical device.*

13. Make sure the user not to contact SIP/SOPs and the patient at the same time.

14. When networking with electrical devices, the operator is responsible for ensuring that the resulting system meets the requirements set forth by the following standards:
    – EN 60601-1 (IEC 60601-1)
      Medical electrical equipment
      Part 1: General requirements for safety
    – EN 60601-1-1 (IEC 60601-1-1)
      Medical electrical equipment
      Part 1-1: General requirements for safety
      Collateral standard: Safety requirements for Medical electrical systems
    – EN 60601-1-2 (IEC 60601-1-2)
      Medical electrical equipment
      Part 1-2: General requirements for safety
      Collateral standard: Electromagnetic compatibility; Requirements and tests

Medical Equipment
With Respect to Electric Shock, Fire, and Mechanical Hazards Only, In Accordance with UL 60601-1, CAN/CSA C22.2 No. 601.1, and IEC 60601-1

15. 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. Everybody who connects additional equipment to the signal input part or signal output part configures 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 outside of the patient environment. If in doubt, consult the technical services department or your local representative.

Caution! *Use suitable mounting apparatus to avoid risk of injury.*

16. Grounding reliability can only be achieved when the equipment is connected to an equivalent receptacle marked "Hospital Only" or "Hospital Grade".
17. Use a power cord that matches the voltage of the power outlet, which has been approved and complies with the safety standard of your particular country.

Note! *Environmental protection*

Follow national requirements to dispose of unit.

Warning! *Do not modify this equipment without authorization of the manufacturer.*

Warning! *To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth.*

Caution! *This adapter Sinpro HPU101-107 is a forming part of the medical device.*

Explanation of Graphical Symbols

IEC 60878 and ISO 3864-B.3.6 : Warning: dangerous voltage

ISO 7000-0434 : Caution, consult ACCOMPANYING DOCUMENTS.

ISO 7000-1641 : Follow operating instructions or Consult instructions for use.

IEC 60417 -5009 : STAND-BY.

IEC 60417-5031 : Direct current.

IEC 60417-5021 : Equipotentiality.

Disposing of your old product

Within the European Union

EU-wide legislation, as implemented in each Member State, requires that waste electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste. This includes monitors and electrical accessories, such as signal cables or power cords. When you need to dispose of your display products, please follow the guidance of your local authority, or ask the shop where you purchased the product, or if applicable, follow any agreements made between yourself.

The mark on electrical and electronic products only applies to the current European Union Member States.

FCC Class B

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 when the equipment is operated in a residential environment. This equipment generates uses and can radiate radio frequency energy. If not installed and used in accordance with this user's manual, it may cause harmful interference to radio communications.

Note that even when this equipment is installed and used in accordance with this user's manual, there is still no guarantee that interference will not occur. If this equipment is believed to be causing harmful interference to radio or television reception, this can be determined by turning the equipment on and off. If interference is occurring, 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 the receiver
- Connect the equipment to a power 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.*

List of Accessories

Before installing your Point of Care Terminal, ensure that the following materials have been received:

- POC-W242 series Point-of-Care Terminal
- Accessories for POC-W242
- CD-ROM disc-"Drivers, User's manual and Utilities"
- Mounting kits and packet of screws.
- VESA mounting note x1
- China RoHS note x1

Warning! *No user serviceable parts inside, refer servicing to qualified personnel. Only the accessories indicated on the list of accessories above have been tested and approved to be used with the device. Accordingly it is strongly recommended that only these accessories be used in conjunction with the specific device. Otherwise the correct functioning of the device may be compromised.*

Additional Information and Assistance

Contact your distributor, sales representative, or Advantech'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.

Environmental protection

- Follow national requirements to dispose of unit.

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Contents

Chapter 1

General Information

1.1 Introduction

The POC-W242 is a multimedia Intel® Core™ i7 or i5 processor series designed for mobile computing as a Point-of-Care terminal (POC.) It is a PC-based system with 23.8" wide screen TFT LCD display, single VGA Port, HDMI out, dual on-board 10/100/1000 PCI-E Ethernet controllers, and LAN ports. It supports the Intel AMT8.0 function, has some COM ports, USB 2.0 and 3.0 ports and a 24-bit stereo audio controller. With the 2.5" SATA interface, the POC-W242 is a user-friendly computer. For system integrators, this highly integrated multimedia system lets you easily build a Point-of-Care Terminal into your applications. The POC-W242 makes it an ideal and safe point-of-care solution for patients and hospital practitioners.

The POC-W242 is specially designed to resist spills and water damage, and ensures dust resistance with its protected LCD and sealed ports. The POC-W242 is a reliable solution to your application's processing requirements.

Intended use - The POC-W242 is intended to serve as a Point-of-Care terminal (POC) for integration with hospital systems. POC-W242 is designed for general purpose medical computing in the hospital environment, for data collection and for displaying information. It should not be used as a life-support system. The latest version of this user manual is available for download from

http://support.advantech.com.tw/support/

1.2 Specifications

	CPU	Intel R Core i7 4650U, 1.7 GHz (up to 3.30 GHz) Processor, Haswell Intel R Core i5 4300U, 1.8 GHz (up to 2.90 GHz) Processor, Haswell
	Memory	Up to 16GB DDR3L 1600/1333MHz SDRAM
	Graphics Controller	Integrated Intel® HD Graphics
	Operating System	WIN7, WIN8
	Input Ratings	18Vdc, 5.5A
Display	Display Size	23.8'' wide TFT color LCD (16:9)
	Max. Resolution	1920(H) x 1080(V)
	Max. Colors	16.7M colors (RGB 8bits)
	Pixel Pitch (mm)	248.25x248.25
	Viewing Angle	178º/178 º
	Luminance	250 cd/m^2
	Backlight	LED
	LCD MTBF	30,000 Hours
	Contrast Ratio	1000:1
Expansion Slot	Mini PCIe	2 x Mini PCI-E slot
	PCIe /PCI	1 x PCIe (x4) slot
Storage	HDD	1 x 2.5" SATA
	Serial Ports	2 x RS-232 (isolated) and 1 x RS-232/422/485 (isolated) serial port;
	USB 3.0 Port	2

I/O Ports (Rear)	VGA/DVI Ports	1 x VGA port
	Speakers (1W)	2
	LAN	2 x Gigabit Ethernet (isolated) interface (RJ-45)
	HDMI	1 x HDMI out
I/O Ports (Front)	Audio	1 x MIC-in and Speaker-out
	USB 2.0 Ports	2
Power Supply	DC Model	AC/DC adapter (Sinpro Model no.HPU101-107)
	Input Voltage	100-240V AC, 47-63Hz, 1.2-0.5A
	Output Voltage	+18 VDC,5.55 A.
Optional Functions	Battery	3S2P 4200mAH, supports 0.5 hr. backup operation
	Smart Card Reader	Complies with ISO7816-1,2,3,T=1 and T=0 protocols
	WLAN	802.11a/b/g/n wire LAN mini-PCIe module & Internal antenna
	RFID	13.56 MHz with ISO-15693 & ISO-14443°/B and active tag function
	Bluetooth	Integrated Bluetooth v4.0
Optional Touch screen (I)	Type	Analog Resistive
	Resolution	Continuous
	Light Transmission	80%
	Controller	USB interface
	Durability	35 million touches
Optional Touch screen (II)	Type	Projected Capacitive 10-points (AR)
	Resolution	Continuous
	Light Transmission	90%
	Controller	USB interface
	Durability	>100 million touches
Certifications	UL/CB, ANSI/AAMI UL60601-1/EN60601-1/IEC60601-1, CE & FCC Class B certified	
Environment	Temperature	0 ~ 40°C (32 ~ 104°F) (Operating)
		-20 ~ 60°C (Storage)
		-20 ~ 60°C (Transportation)
	Humidity	10 ~ 90% @ 40°C (non-condensing)
		5 ~ 90% (non condensing) (Storage)
		5 ~ 90% (Transportation)
	Pressure	700-1013 hPa (Operation)
		375 mmHg to 760 mmHg (Storage)
		375 mmHg to 760 mmHg (Transportation)
	Water/dust Resistance	IP54 compliant IP65 front panel
	Shock Resistance	20G peak acceleration (11ms duration)
Physical Characteristics	Dimensions (W x H x D)	583.38 x 386.75 x 69.42 mm(22.96" x 15.22" x 2.73")
	Weight	7 kg (15.24 lb.)
Platform & utility		Windows 8, Windows 7

1.3 Dimensions

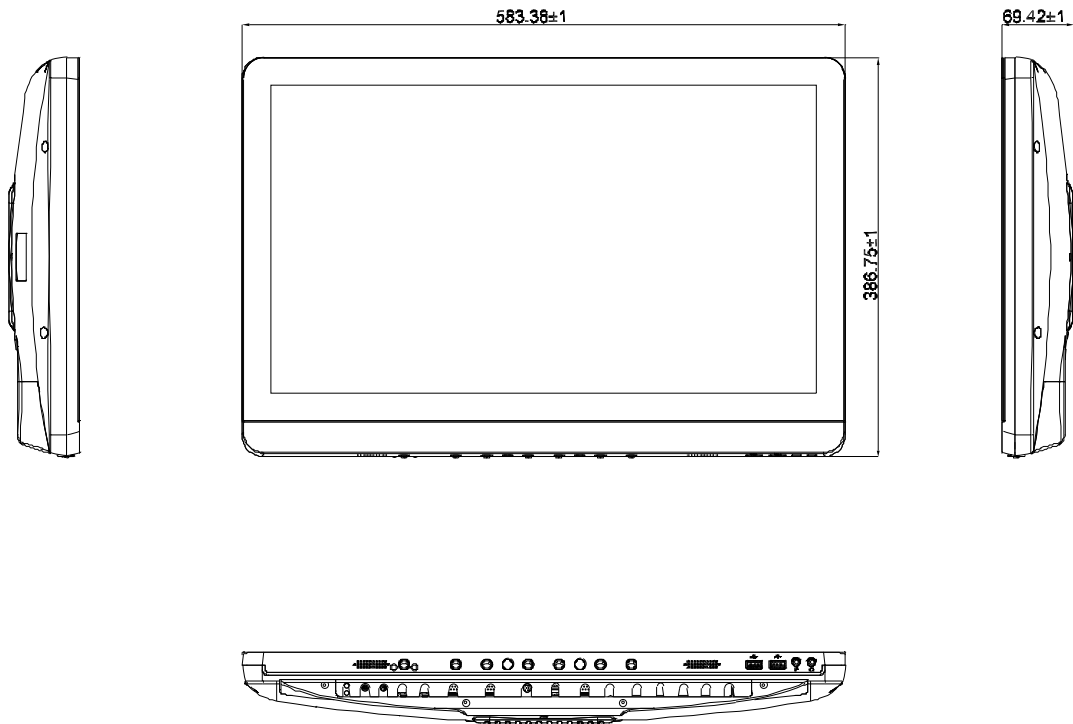Dimensions: 583.38 x 386.75 x 69.42 mm (Unit: mm)

Figure 1.1 Dimensions of the POC-W242
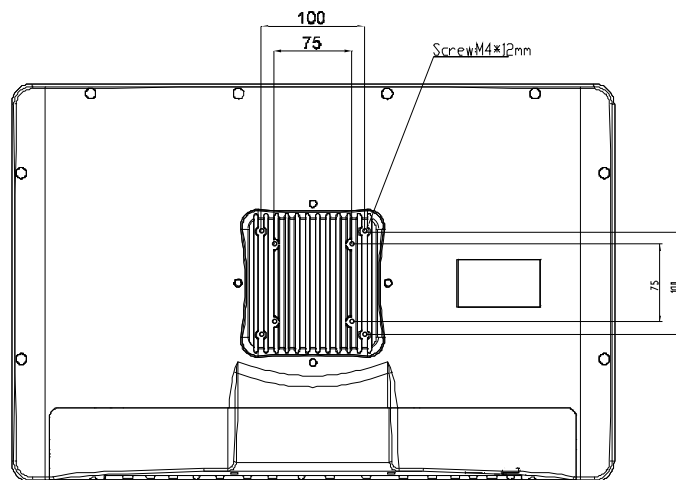
VESA Mounting: 75 x 75 mm; 100 x 100 mm

Figure 1.2 VESA Mounting of the POC-W242

Warning! *Use suitable mounting apparatus to avoid risk of injury.*

Figure 1.3 POC-W242 Front Panel

(1) Power

(2) Volume Up /Down

(3) Touchscreen Status Control
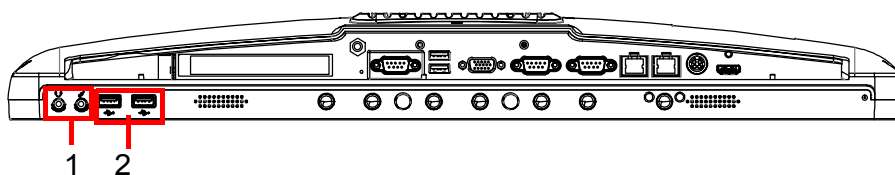
(4) Read Light Control

(5) Brightness Increase/Decrease

Figure 1.4 POC-W242 Front Functions
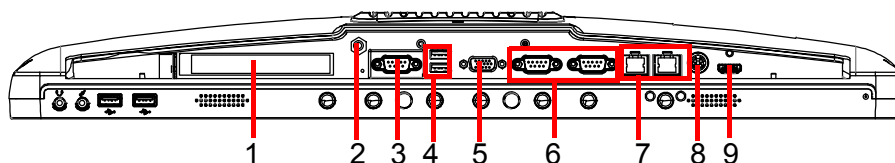
(1) MIC-in and Speaker-out

(2) 2 x USB 2.0 ports

Figure 1.5 POC-W242 Rear

(1) PCIe (x4) card slot

(2) Equipotential Terminal Pin

(3) 1 x RS-232/422/485 (isolated) serial port

(4) 2 x USB 3.0 ports

(5) VGA port

(6) 2 x RS-232 (isolated) and

(7) 2 x Gigabit Ethernet interfaces (RJ-45)

(8) Power DC-IN

(9) HDMI out port

1.3.1 Optional modules

Memory: 4GB, 8GB DDR3 1600/1333 MHz SDRAM

SSD/HDD: 2.5" SATA interface

Touch screen: Analog resistive / Projected Capacitive

1.4 Point-of-Care Terminal Cleaning and Disinfecting

During normal use of the POC (Point-of-Care Terminal) the device may become dirty and should be regularly cleaned.

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

Cleaning agent list: chemical disinfectants which have been tested on the POC

No	Cleaning Agents
1	Cidex
2	Isopropyl alcohol
3	Green tinctured soap
4	Windex
5	Alcohol
6	Alcohol 70%
7	Chloride 1000PPM
8	Incidin plus
9	Incidin liquid
10	Mikrozid liquid

Caution!

■ *Do not immerse or rinse the POC or its peripherals. If you accidentally spill liquid on the device, disconnect the unit from the power source. Contact your Biomed Department 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 the POC or its peripherals with strong aromatic, chlorinated, ketone, ether, or Esther solvents, sharp tools or abrasives. Never immerse electrical connectors in water or other liquids.*

Chapter 2

System Setup

2.1 A Quick Tour of the POC-W242

Before you start to set up the POC-W242, 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 you place the POC-W242 upright on the desktop, its front panel appears as shown in Figure 2.1.
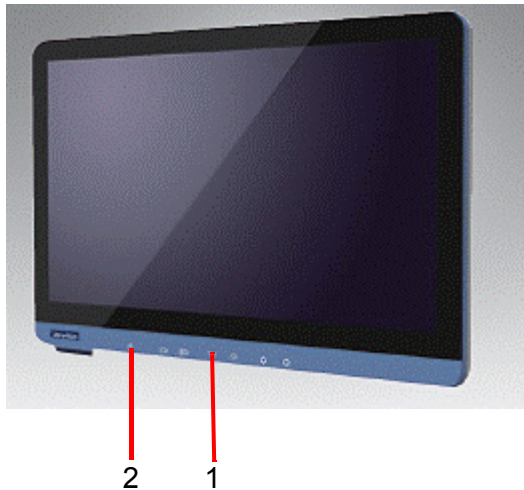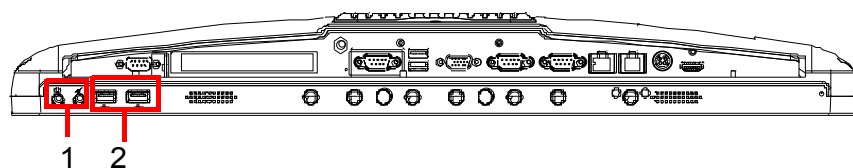
2.1.1 Front view

Figure 2.1 Front View of the Point of Care Terminal

Front Bezel view

(1)   LCD panel with Touch Screen option (Touch Screen Enable: Green light)

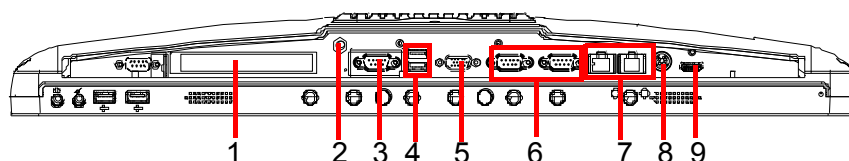(2)   Power symbol w/ indicator light(Power on: Green light)

2.1.2 Bottom view

(1) MIC-in and Speaker-out

(2) 2 x USB 2.0 ports

2.1.3 Rear view

When you turn the Point-of-Care Terminal around and look at its rear cover, the sunken I/O section is at the bottom of the panel PC, as shown below.

(1) PCIe (x4) card slot

(2) Equipotential Terminal Pin

(3) 1 x RS-232/422/485 (isolated) serial port

(4) 2 x USB 3.0 ports

(5) VGA port

(6) 2 x RS-232 (isolated) and

(7) 2 x Gigabit Ethernet interfaces (RJ-45)

(8) Power DC-IN

(9) HDMI out port

> *Note!* *Equipotential terminal needs to be linked to the hospital ground/earth system before booting the system to protect both operator and system.*

2.2 Installation Procedures

2.2.1 Connecting the power cord

The POC-W242 could only be powered by a DC power adapter (SINPRO Model no.HPU101-107). Be sure to always handle the power cords by holding the plug ends only.

Follow these procedures in order:

1. Connect the female end of the power adapter to the DC jack of the panel PC. (See Figure 2.2.)
2. Connect the female end of the power cord to the DC power adapter.
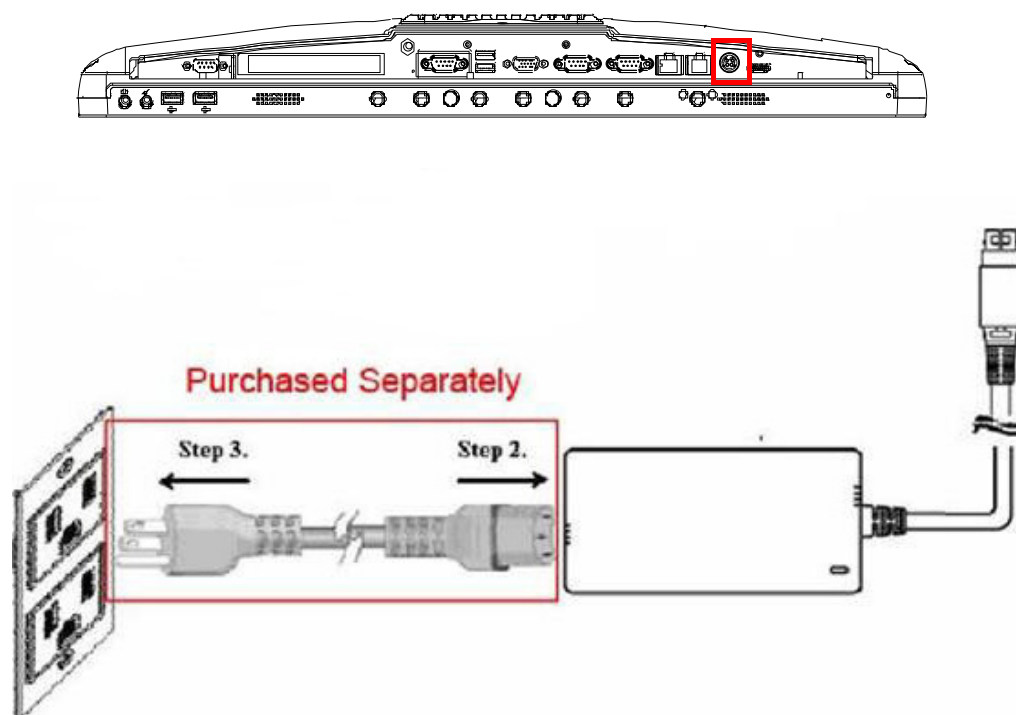3. Connect the 3-pin male plug of the power cord to an electrical outlet.

Figure 2.2 Connecting the power

Warning! *The POC-W242 is supplied by a 100 Watt power supply and a special adapter as depicted for the above model.*

If a medical adaptor is connected to the POC-W242, the customer must ensure legal and regulatory compliance and that the device meets the law and standards compliance requirements of this hardware.

Switching on the power

Push down the power button on the front panel for POC-W242. (The color of the indication is green)

2.2.2 Connecting the Ground pin

1.   1.With system ready, find the equiotential terminal on the rear side of the POC. An equipotential terminal is provided to optionally connect to a hospital ground/earth system.
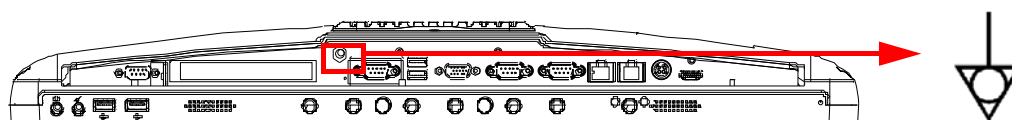

Figure 2.3 POC-W242 Equipotential Terminal Pin

2. Prepare the grounding cable and the other terminal links to the hospital ground/ earth system.

Figure 2.4 Grounding cable with connector

3. Grounding cable plug with Equipotential Terminal

2.3 Running the BIOS Setup Program

Your POC-W242 is likely to have been properly set up and configured by your dealer prior to delivery. You may still find it necessary to use the BIOS (Basic Input-Output System) setup program to change system configuration information, such as the current date and time or your type of hard drive. The setup program is stored in read-only memory. It can be accessed either when you turn on or reset the panel PC, by pressing the " F2 or Del " key on your keyboard immediately after powering on the computer.

The settings you specify with the setup program are recorded in a special area of memory called CMOS RAM. This memory is backed up by a battery so that it will not be erased when you turn off or reset the system. Whenever you turn on the power, the system reads the settings stored in CMOS RAM and compares them to the equipment check conducted during the power on self-test (POST). If an error occurs, an error message will be displayed on screen, and you will be prompted to run the setup program.

2.4 Installing System Software

Recent releases of operating systems from major vendors include setup programs which load automatically and guide you through hard disk preparation and operating system installation. The guidelines below will help you determine the steps necessary to install your operating system on the panel PC hard drive.

> *Note!* Some distributors and system integrators may have already pre-installed system software prior to shipment of your panel PC.

If required, insert your operating system's installation or setup diskette into the external diskette drive until the release button pops out.

The BIOS supports system boot-up directly from the CD-ROM drive. You may also insert your system installation CD-ROM disk into your external CD-ROM drive.

Power on or reset the system by pressing the "F2 or Del" key into BIOS menu.

And adjust the boot device sequence.

Or you can press F12 key when booting, a bootable device popup menu will appear, you can then select the bootable device that you want. The Point of Care Terminal will automatically load the operating system from the diskette or CD-ROM.

If you are presented with the opening screen of a setup or installation program, follow the instructions on screen. The setup program will guide you through preparation of your hard drive, and installation of the operating system.

2.5 Trouble Shooting

If the system runs abnormal, such as:
1. Fail to power on
2. Fail to power off
3. Power LED ON but no DC power output
4. AC power in and all switches ON, but system doesn't power on

Contact your distributor, sales representative, or Advantech'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
- Symptom photo or video if available.

Guidance and manufacturer's declaration – electromagnetic emissions		
The model POC-W242 is intended for use in the electromagnetic environment specified below. The customer or the user of the model POC-W242 should assure that it is used in such an environment.		
Emissions test	**Compliance**	**Electromagnetic environment – guidance**
RF emissions CISPR 11	Group 1	The model POC-W242 uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The model POC-W242 is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Not applicable	

**Recommended separation distances between
portable and mobile RF communications equipment and the model POC-W242**

The model POC-W242 is intended for use in an electromagnetic environment in which radi-
ated RF disturbances are controlled. The customer or the user of the model POC-W242
can help prevent electromagnetic interference by maintaining a minimum distance between
portable and mobile RF communications equipment (transmitters) and the model POC-
W242 as recommended below, according to the maximum output power of the communi-
cations equipment.

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d = 1{,}2\sqrt{P}$	**80 MHz to 800 MHz** $d = 1{,}2\sqrt{P}$	**800 MHz to 2,5 GHz** $d = 2{,}3\sqrt{P}$
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended sep-
aration distance *d* in metres (m) can be estimated using the equation applicable to the fre-
quency of the transmitter, where *P* is the maximum output power rating of the transmitter in
watts (W) according to the transmitter manufacturer.
NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range
applies.
NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is
affected by absorption and reflection from structures, objects and people.

Guidance and manufacturer's declaration – electromagnetic immunity

The model POC-W242 is intended for use in the electromagnetic environment specified below. The customer or the user of the model POC-W242 should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment –guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±6 kV contact ±8 kV air	±6 kV contact ±8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines ±1 kV for input/output lines	±2 kV for powersupply lines ±1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV line(s) to line(s) ±2 kV line(s) to earth	±1 kV line(s) to line(s) ±2 kV line(s) to earth	Mains power quality should be that of a typical commercial or hospital environment.
Interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5 % UT (>95 % dip in UT) for 0,5 cycle 40 % UT (60 % dip in UT) for 5 cycles 70 % UT (30 % dip in UT) for 25 cycles <5 % UT (>95 % dip in UT) for 5 sec	<5 % UT (>95 % dip in UT) for 0,5 cycle 40 % UT (60 % dip in UT) for 5 cycles 70 % UT (30 % dip in UT) for 25 cycles <5 % UT (>95 % dip in UT) for 5 sec	Mains power quality should be that of a typical commercial or hospital environment. If the user of the model POC-W242 requires continued operation during power mains interruptions, it is recommended that the model POC-W242 be powered from an uninterrupted power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

NOTE UT is the a.c. mains voltage prior to application of the test level.

Guidance and manufacturer's declaration – electromagnetic immunity			
The model POC-W242 is intended for use in the electromagnetic environment specified below. The customer or the user of the model POC-W242 should assure that it is used in such an environment.			
Immunity test	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment – guidance**
Conducted RF IEC 61000-4-6 Radiated RF IEC 61000-4-3	3 Vrms 150 kHz to 80 MHz 3 V/m 80 MHz to 2,5 GHz	Vrms V/m	Portable and mobile RF communications equipment should be used no closer to any part of the model POC-W242, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance** $d = 1,2\sqrt{P}$ $d = 1,2\sqrt{P}$ 80 MHz to 800 MHz $d = 2,3\sqrt{P}$ 800 MHz to 2,5 GHz where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range. [b] Interference may occur in the vicinity of equipment marked with the following symbol: $\left(\left(\left(\cdot\right)\right)\right)$
NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies. NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			

Chapter   3

Driver installation

3.1 Introduction

The POC-W242 supports "one key" driver installation. User can just click one button to install all drivers.

Warning! *Please use clean OS to install this auto installation, otherwise, it might cause un-expect error.*

Windows Driver List:

Please follow your OS version (WIN7 32 bits, WIN7 64 bits, WIN8) to install proper driver.

These drivers located on driver CD\Driver\ folder

Please follow below sequence to install driver.

Install sequence	Folder Name	Note
1	Chipset	Please install chipset driver first.
2	Graphics	
3	Audio	
4	LAN	
5	Touch	Option Resistive Touch only. Please install this driver when you use resistive touch. Install at USB interface option. PCAP touch use Windows internal driver. No need extra driver.
6	Wireless	Option
7	Smart Card	Option
8	RFID	Option
9	Bluetooth 4.0	Option
10	AMT	
11	USB3.0	

3.2 Automatically driver installation

1. Double Click "InstallAll.exe" in D:\Driver\ folder. The Install dialog will appear.
2. Please follow the instruction to install the driver

Chapter   4

Operation and Safety Information

4.1   General Safety Guide

For your own safety and that of your equipment, always take the following precautions.

Disconnect the power plug (by pulling the plug, not the cord), from your computer if any of the following conditions exists:

- The power cord or plug becomes frayed or otherwise damaged
- You spill something into the case
- Your computer has been dropped or the case has been otherwise damaged
- You suspect that your computer needs service or repair
- You want to clean the computer or screen
- You want to remove/install any parts

4.2   Thermal

The vent hole of the POC-W242 rear cover functions as a cooling air flow inlet and outlet. These air inlet and outlet transfer heat from inside the computer to the cooler air outside. Do not block these holes/vents by any soft material.

When using your POC-W242 system, it is normal for the rear metal heatsink to get warm. The rear metal heatsink of the POC-W242 functions as a cooling surface that transfers heat from inside the computer to the cooler air outside. Do not block this heatsink by any soft material.

Warning! *Do not place your POC-W242 system on a pillow or other soft material when it is on, as the material may block the airflow and cause the computer to overheat.*

4.3   Disconnect the power

The only way to disconnect power completely is to unplug the adapter power cord. Make sure at least one end of the power cord is within easy reach so that you can unplug the computer when you need to.

Warning! *Your AC cord came equipped with a three-wire grounding plug (a plug that has a third grounding pin). This plug will fit only a grounded AC outlet. If you are unable to insert the plug into an outlet because the outlet is not grounded, contact a licensed electrician to replace the outlet with a properly grounded outlet. Do not defeat the purpose of the grounding plug.*

Warning! *Never push objects of any kind into this product through the openings in the case. Doing so may be dangerous and result in fire or a dangerous electric shock.*

Never place anything on system case before turn off computer.

Never turn on your computer unless all of its internal and external parts are in place.

Operating the computer when it is open or missing parts can be dangerous and can damage your computer.

4.4 Proper Handling

Handle your POC-W242 with care. It is made of metal, glass, and plastic and has sensitive electronic components inside.

Don't use a damaged POC-W242, such as one with a cracked screen, as it may cause injury.

Setup POC-W242 on a stable work surface.

Do not push objects into the ventilation openings.

To lift or move your system, hold its sides.

When you move your system, do not hit the surface of the glass.

4.5 Build-in Battery

Do not remove the battery from your system. The battery should be replaced only by Advantech Service. Discontinue use of your system if it's dropped or appears crushed, bent, deformed, or damaged. Do not expose your system to extreme heat sources, such as radiators or fireplaces.

Chapter 5

PCM-8715 Connector
Map & Table

5.1 MB TOP Side
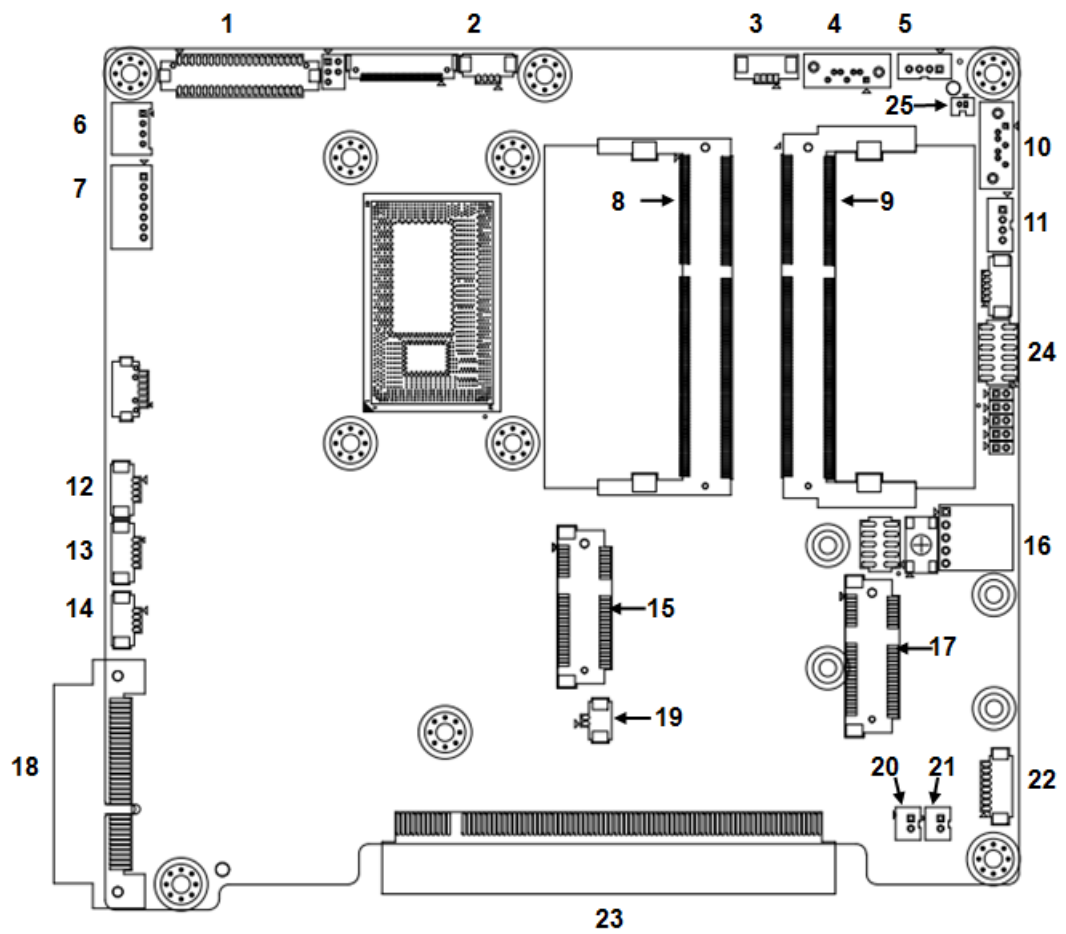
5.2   MB Bottom Side
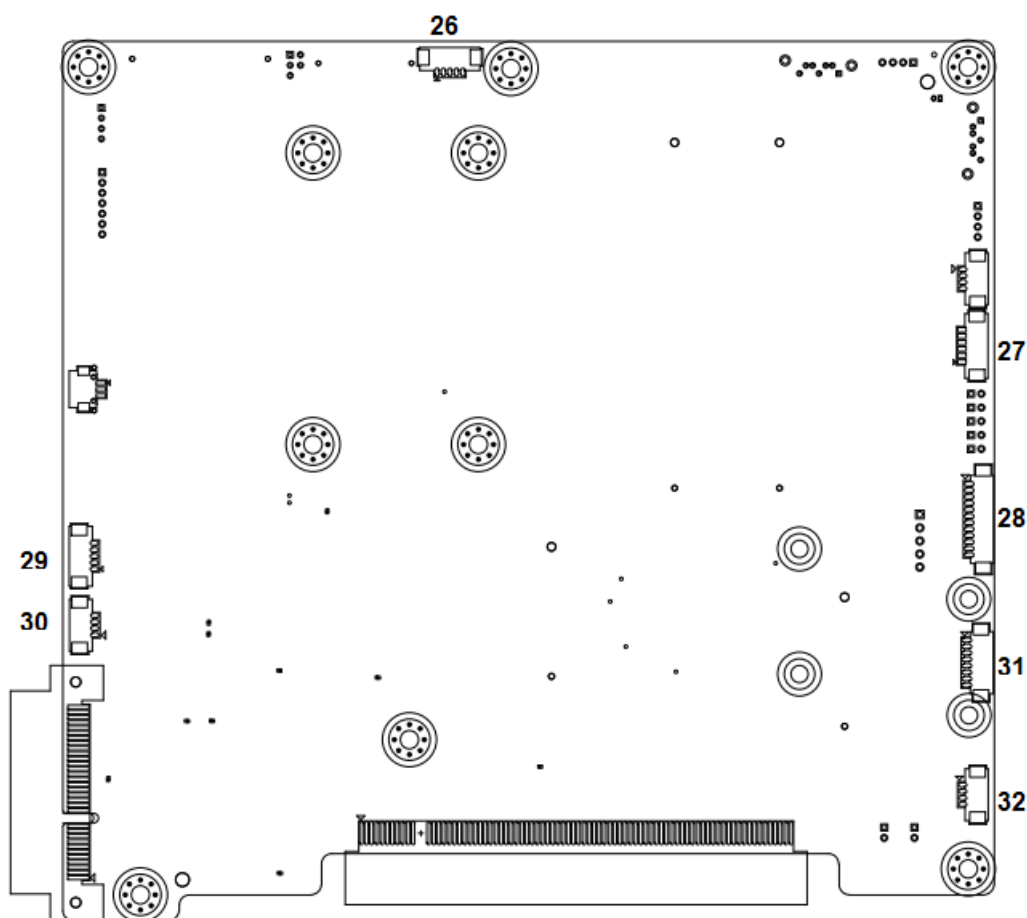
No.	Description
Table 5.1: MB Connector Table	
No.	Description
1	LVDS Connector
2	Camera/USB (5V) Connector
3	FAN2 (Reserved)
4	SATA 0 Connector
5	SATA 0 Power Connector
6	FAN1 (Reserved)
7	LED Driver/Inverter Connector
8	DDR3L SODIMM 2 Socket
9	DDR3L SODIMM 1 Socket
10	SATA 1 Connector
11	SATA 1 Power Connector or
12	PCAP Touch USB Connector
13	Camera/USB (12V and 3.3V) Connector
14	USB (5V) Connector
15	Mini PCIe (Half Size) Socket
16	5 wires resistive Touch Connect
17	Mini PCIe (Full Size) Socket

Table 5.1: MB Connector Table	
18	PCIex4 Slot
19	RTC Battery Connector
20	Left Speaker Connector
21	Right Speaker Connector
22	Audio Connector
23	IO Board Slot
24	Port 80 (LPC) Debug port (Reserved)
25	EC Debug port (Reserved)
26	EC SMBUS Connector
27	Power Button Connector (Reserved)
28	Front Button Connector
29	PCH SMBUS Connector
30	RFID/USB (5V) Connector
31	Bluetooth/USB (3.3V) Connector
32	Audio (Reserved) Connector

5.3 IO Board
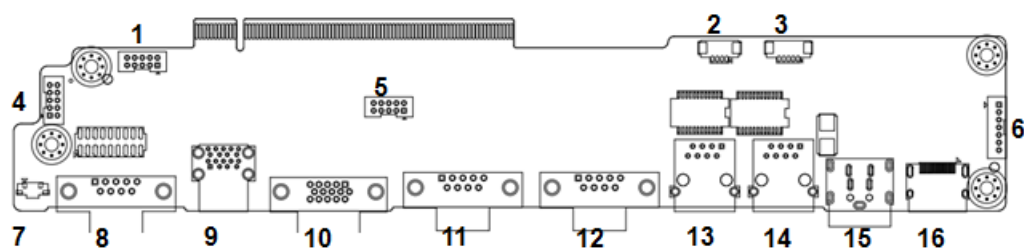
* All connector located at Top side

Table 5.2: IO Connector Table	
No.	Description
1	USB Connector (5V, Reserved)
2	Smart Card/USB (5V) Connector
3	USB ISO/USB (12V/5V) Connector
4	USB Connector (5V)
5	COM4 (RS232, Reserved)
6	Internal Backup Battery Connector
7	Reset EC button
8	COM1 (RS232/422/485)
9	USB3.0
10	VGA
11	COM2 (RS232)
12	COM3 (RS232)
13	LAN1 (iAMT)
14	LAN2
15	DCIN Connector
16	HDMI

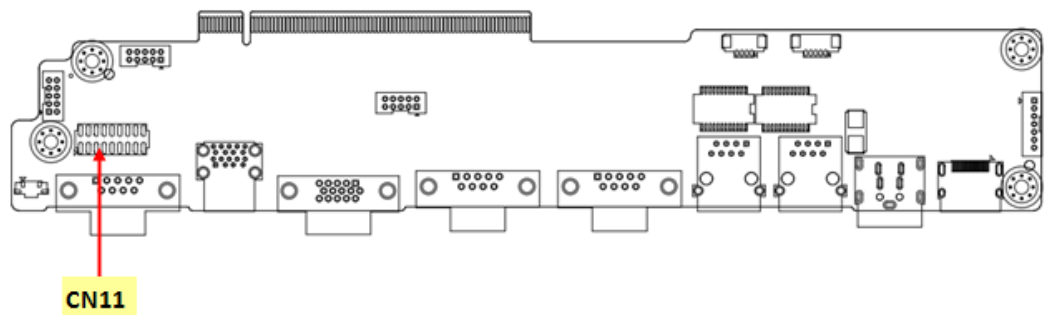Chapter 6

PCM-8715 Jumper
Setting List

6.1 Motherboard
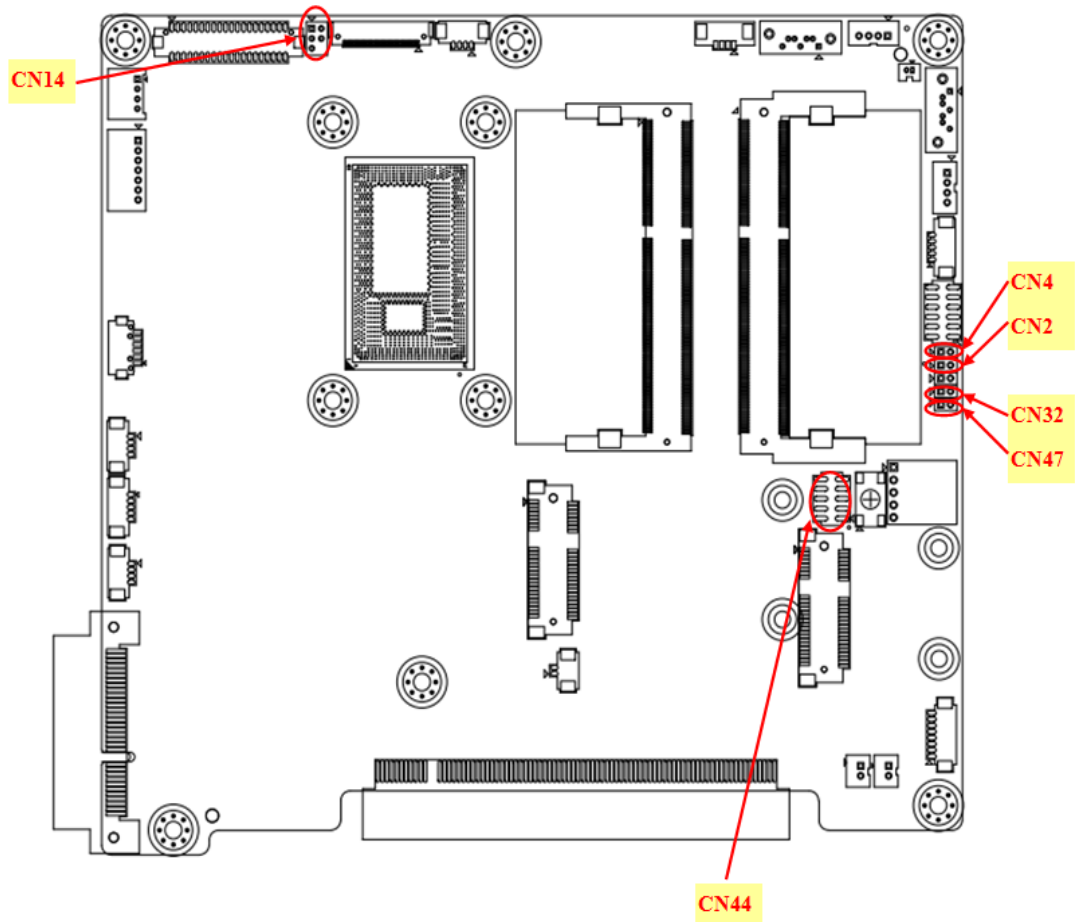
* All Jumpers are located on the Top side

**Figure 6.1 PCM-8715 MB Top side**

6.2 IO Board

* All Jumpers located at Top side

Figure 6.2 PCM-8715 IO Top side

Table 6.1: Jumper Setting:

MB:

CN2	Clear CMOS
CN4	ME Manufacturing Mode
CN14	LVDS Voltage
CN32	Touch Always On
CN44	Panel Setup/Board Setup
CN47	Resistive Touch Controller power
IO:	
CN11	COM1 RS232/422/485 output type setting

CN2	**Clear CMOS**
Description	Clear CMOS Setup
Setting	Function
(1-2)	Clear CMOS Setup
(No Connect)	Normal Operation (Default)
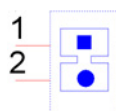
CN4	**ME Manufacturing Mode**
Description	ME Manufacturing Mode
Setting	Function
(1-2)	ME Manufacturing Mode
(No Connect)	Normal Operation (Default)
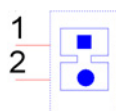
CN14	**LVDS Voltage Setup**
Description	Select panel LVDS voltage setting
Setting	Function
(1-3)	Panel LVDS voltage 5V (Default)
(2-4)	Panel LVDS voltage 12V
(3-5)	Panel LVDS voltage 3.3V
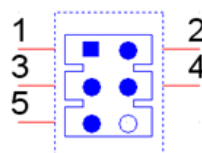
| CN32	Touch always on Mode
Description	Force the touch function always enable
Setting	Function
(1-2)	Touch always enable
(No Connect)	Normal Operation (Default)
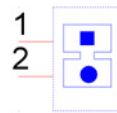
| CN44	Panel Setup
Description	Select different Panel setting
Setting	Function
(3-4)(5-6)	Panel Resolution: 24 bits single channel 1024x768
(1-2)(5-6)	Panel Resolution: 24 bits dual channel 1280x1024
(1-2)(3-4)(5-6)	Panel Resolution: 24 bits dual channel 1680x1050
(5-6)	Panel Resolution: Manual setting
(3-4)	Panel Resolution: 24 bits dual channel 1920x1080 (Default)
(1-2)	Panel Resolution: 24 bits single channel 1366x768
(1-2)(3-4)	Panel Resolution: 24 bits single channel 1920x1200
(No Connect)	Reserved

CN44	Board Setup
Description	Select different board setting
Setting	Function
(7-8) (9-10)	Reserved
(7-8)	Reserved
(9-10)	Reserved
(No Connect)	Default
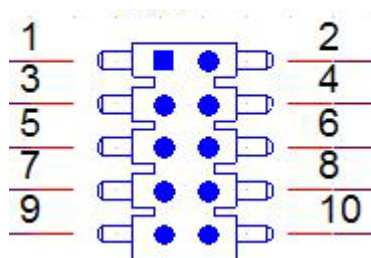
CN47	On board resistive touch controller power
Description	Enable or Disable the on board resistive touch controller power
Setting	Function
(1-2)	Resistive Touch Controller power enable
(No Connect)	Resistive Touch Controller power disable, Windows Device Manager will not show this device. (Default)
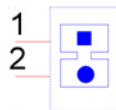
CN11 (IO)	COM1 RS232/422/485 output type setting
Description	COM1 RS232/422/485 output type setting
Setting	Function
(5-6), (7-9), (8-10), (13-15), (14-16)	RS232 (Default)
(3-4), (9-11) (10-12), (15-17) (16-18)	RS422
(1-2), (9-11) (10-12), (15-17) (16-18)	RS485

COM-1 Jumper setting

RS232   RS422   RS485
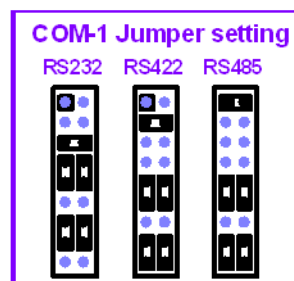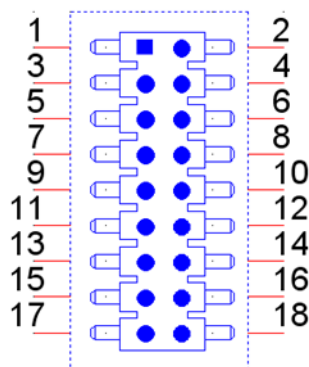
RS485: 2 Wires type
RS422: 4 Wires type

Chapter 7

Front Bezel Button

7.1 Introduction

The POC-W242 front button function description

7.1.1 Front button map

⏻   (▷   ((▷   (((ꞁ))   -ᯱ-   ✿   ☼

Button description:

Power button ⏻	Press this button to power on/off system. When system ON, this icon will become Green color. And LED off when system off.
Reduce volume (▷	Press this button to reduce speaker and headphone volume.
Increase Volume ((▷	Press this button to increase speaker and headphone volume.
Touch disable (((ꞁ))	Press this button to disable/enable touch function. When touch function enable, this icon will become Green color. When touch function disable, this LED off.
Read light -ᯱ-	Press this button to enable/disable Read light.
Reduce brightness ✿	Press this button to reduce LCD backlight brightness.
Increase brightness ☼	Press this button to increase LCD backlight brightness.

Combination button:

A special function is the backlight off function. When you press both reduce brightness and increase brightness buttons for half second, the LCD backlight will be turned off. And by pressing both buttons for half a second again; the LCD backlight will be turned on again. When the backlight is off, POC-W242 system is still running, and does not impact any program operating. This backlight off function can be used in a hospital environment. If an operator needs to check the X-Ray photo in a dark room environment, the operator can turn off the backlight quickly to prevent interference in the dark room environment. Operators can also turn off the backlight at night to prevent it interfering with patients' sleep.

Chapter 8

POC-W242 Advanced BIOS

8.1 Introduction

Introduce the advanced functions in POC-W242 BIOS menu.

1. Power Button Function Enable/Disable
    You can enable/disable the power button function in the BIOS menu.
    If you disable the power button in S0 (System ON) status, the power button will not work. So the user cannot turn off the system by the power button. Users need to use software to turn off the system. This function can prevent mis-touching the power button and shutting down a system by mistake.

    BIOS Menu location:

    BIOS Menu - Advanced - Embedded Controller Configuration - Power Button Function

    Enable: Power button function work when system in S0 (System ON) status. (Default)

    Disable: Power button function not work when system in S0 (System ON) status.

    Users need to press power button 5 seconds or more to trigger power button.

2. Brightness Button Control
    You can enable/disable LCD Backlight button function in the BIOS menu.

    If you disable the LCD Backlight button, this button will not work. So the user cannot adjust LCD backlight luminance with this button. This function can prevent mis-touching the LCD backlight button to adjust the LCD backlight luminance.

    BIOS Menu location:

    BIOS Menu - Advanced - Embedded Controller Configuration - Brightness Button Control

    Enable: Front bezel LCD Backlight adjust button control function work. (Default)

    Disable: Front bezel LCD Backlight adjust button control function not work.

3. Volume Button Control
    You can enable/disable Front volume button function in BIOS menu.

    If you disable the Front volume button, this button will not work. So the user cannot adjust the speaker volume by this button. This function can prevent mis-touching the front volume button to adjust the speaker volume.

    BIOS Menu location:

    BIOS Menu - Advanced - Embedded Controller Configuration - Volume Button Control

    Enable: Front bezel volume adjust button control function work. (Default)

    Disable: Front bezel volume adjust button control function not work.

4. EC Beep Function

You can enable/disable EC beep function in the BIOS menu.

If you disable the EC beep function, EC will not generate a beep sound when you press the front bezel button.

BIOS Menu location:

BIOS Menu - Advanced - Embedded Controller Configuration - EC Beep Function

Enable: Beep sound when front bezel button pressed. (Default)

Disable: No beep sound when front bezel button pressed.

5. SETUP POPUP MENU F12

You can enable/disable F12 key Setup popup menu in BIOS menu.

When you press F12 key in bootup, BIOS will display a bootable device menu and you can select proper boot device that you want.

BIOS Menu location:

BIOS Menu - Boot - SETUP POPUP MENU F12

Enable: Pressing F12 key at bootup can display the popup menu (Default)

Disable: Pressing F12 key at bootup cannot display the popup menu

Appendix A

POC-W242 VESA
Mounting

A.1 Install VESA Mounting

The POC-W242 also provides standard VESA mounting to help system integrators conveniently integrate the panel PC into their system.

Never use mounting brackets except as provided by Advantech to prevent unreliable mounting of the POC-W242. VESA mount installation should be carried out by a professional technician; please contact a service technician or your retailer if you need this service.

Installation instructions follow:

1. First attach the wall-mounting to the heat-sink of the POC-W242, securing it in place with four of the Phillips-head screws provided.
2. Mount the on the wall, stand or other flat surface.

Warning! *Be sure to secure the screws of the mounting bracket tightly. A loose joint between the POC-W242 and mounting bracket may create danger of injury.*
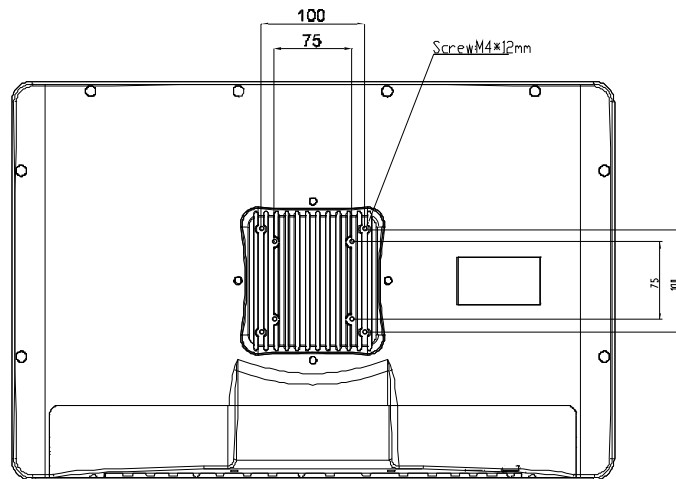

Figure A.1 Install VESA Mounting

Appendix B

ENERGY STAR

An ENERGY STAR qualified computer delivers substantial savings over a conventional computer. Desktop, integrated desktop, and notebook (laptop) computers, workstations, small-scale servers, and thin clients are all eligible to earn the ENERGY STAR, and those that do are now more efficient than ever.

It is an honor for Advantech to provide you such products.

B.1 What is ENERGY STAR?

ENERGY STAR is a U.S. Environmental Protection Agency (EPA) voluntary program that helps businesses and individuals save money and protect our climate through superior energy efficiency.

The ENERGY STAR program was established by EPA in 1992, under the authority of the Clean Air Act Section 103(g). Section103(g) of the Clean Air Act directs the Administrator to "conduct a basic engineering research and technology program to develop, evaluate, and demonstrate non–regulatory strategies and technologies for reducing air pollution."

In 2005, Congress enacted the Energy Policy Act. Section 131 of the Act amends Section 324 (42 USC 6294) of the Energy Policy and Conservation Act, and "established at the Department of Energy and the Environmental Protection Agency a voluntary program to identify and promote energy–efficient products and buildings in order to reduce energy consumption, improve energy security, and reduce pollution through voluntary labeling of or other forms of communication about products and buildings that meet the highest energy efficiency standards."

For more information, please visit www.energystar.gov

The product is to enter display sleep mode after 10 minutes and computer sleep mode after 30 minutes, to wake it from sleep mode, simply press any keyboard keys or move the mouse, while under sleep mode it allows the device to save 80% or more energy.

B.2 Power Management System

Default mode is on balanced, after idle for 10 minutes, it will automatically shuts its monitor and enter sleep mode if idle for more than 25 minutes.

Lists of power management systems:

Balanced (Default)	Idle 10 min. closes screen, 25 min. enters sleep mode.
Power Saver	Idle 5 min. closes screen, 15 min. enters sleep mode.
High performance	Never idle and never enters sleep mode

ADVANTECH

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