User Manual

POC-WP24 Series

Point-of-Care Terminal with Intel® Core™ i7/i5/i3 and Celeron Processor, and a 23.8" TFT LCD

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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.*

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 In this device, and It shall be added In the end system assembly and be shown In the end 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). Class I internal powered
   2). No applied part
   3). Continuous Operation
   4). 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.

18. "WARNING - Do not modify this equipment without authorization of the manufacturer."
19. "WARNING - To avoid risk of electric shock, this equipment must only be   connected to a supply mains with protective earth.

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.

  ISO 7010-M002: Follow instructions for use

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-WP24 SERIES series Point-of-Care Terminal
- Accessories for POC-WP24 SERIES
- CD-ROM disc-Drivers 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.

Manufacturer

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Contents

Chapter 1

General Information

1.1 Introduction

The POC-WP24 SERIES 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 21.5" wide screen TFT LCD display, single VGA port, HDMI out, dual on-board 10/ 100/1000 PCI-E Ethernet controllers, and one LAN port. It supports the Intel AMT9.5 function, has dual COM ports, quad USB 2.0 ports and a 24-bit stereo audio controller. With an optional 2.5" SATA drive, the POC-WP24 SERIES 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-WP24 SERIES makes it an ideal and safe point-of-care solution for patients and hospital practitioners. The POC-WP24 SERIES is specially designed to resist spills and water damage, and ensures dust resistance with its protected LCD and sealed ports. The POC-WP24 SERIES is a reliable solution to your application's processing require-ments.

Intended use - The POC-WP24 SERIES is intended to serve as a Point-of-Care ter-minal (POC) for integration with hospital systems. POC-WP24 SERIES is designed for general pur- pose medical computing in the hospital environment, for data collec-tion and for dis- playing 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

Computing System	CPU	Intel® Core™ i7-6600U Processor (4M Cache, up to 3.40 GHz) Intel® Core™ i5-6300U Processor (3M Cache, up to 3.00 GHz) Intel® Core™ i3-6100U Processor (3M Cache, 2.30 GHz) Intel® Celeron® Processor 3955U (2M Cache, 2.00 GHz)
	Memory	DDR4-1866/2133 SODIMM (up to 32GB)
	Graphics Controller	Intel HD Graphics 520/510
Display	Display Size	21.5" wide TFT color LCD (16:9)
	Type	IPS
	Max. Resolution	1920 x 1080 (H x V)
	Max. Colors	16.7 M colors (6-bits+A-FRC)
	Pixel Pitch (um)	247.5 x 247.5
	Viewing Angle	178/178°
	Luminance	250 cd/m2
	Backlight	LED
	LCD MTBF	30,000 Hours
	Contrast Ratio	1000 : 1
Expansion Slot	Mini PCIe	2 (1 x full-size, 1 half-size)
	PCIe	1 x PCIe (x4)

I/O Ports	Serial Ports	2 x RS-232/422/485 (isolated) serial port
	USB Ports	2 x USB 3.0, 2 x USB 2.0
	Audio	2 (1.5W)
	LAN	2 x Gigabit Ethernet (isolated) interfaces (RJ-45)
	HDMI	1 x HDMI out
	Displayport	1 x Displayport out
Power Supply	Input Voltage	100V ac - 240V ac, 47Hz to 63Hz, Maximum output power 150W
	Output Voltage	12.0 V ± 2%, 0A to 8.30A (at convection)
Certification		EN 60601-1 complied, CE/FCC, RoHS
Environment	Temperature	Operating: 0°C ~ +40°C, Storage: -20°C ~ +60°C
	Humidity	Operating: 10% ~ 90%@40°C non-condensed, Storage: 5% ~ 95%@40°C non-condensed,
	Shock Resistance	20G peak acceleration (11ms duration)
	Pressure	700-1013 hPa (Operation) 700-1013 hPa (Storage) 700-1013 hPa (Transportation)
Physical Characteristics	Dimensions(W x D x H)	583.38 x 386.75 x 69.4 mm
	Weight (Bare system)	6.9 kg (15.2 lb)
	VESA Mount	100x100, 75x75
Optional Configuratoin	Operating System	Windows 7/Windows 8.1 Industry Pro/Windows 10 IoT
	Memory	Up to 32GB DDR4 SODIMM x 2
	Storage	2.5" SATA HDD(65 degree)/SSD, mini-PCIe mSATA
	WLAN	Dual-band (2.4/5GHz) 802.11n 2Tx/2Rx WiFi
	Bluetooth	4.0
	RFID	13.56MHz, ISO-15693, ISO-14443A, ISO-14443B
	PCIe Card	Dual LAN, Firewire, RS-232
	Battery	Li-ion 1750mAh 10.8V/7A 3S1P
	Touch Panel	23.8" Projected Capacitive

1.3 Dimensions

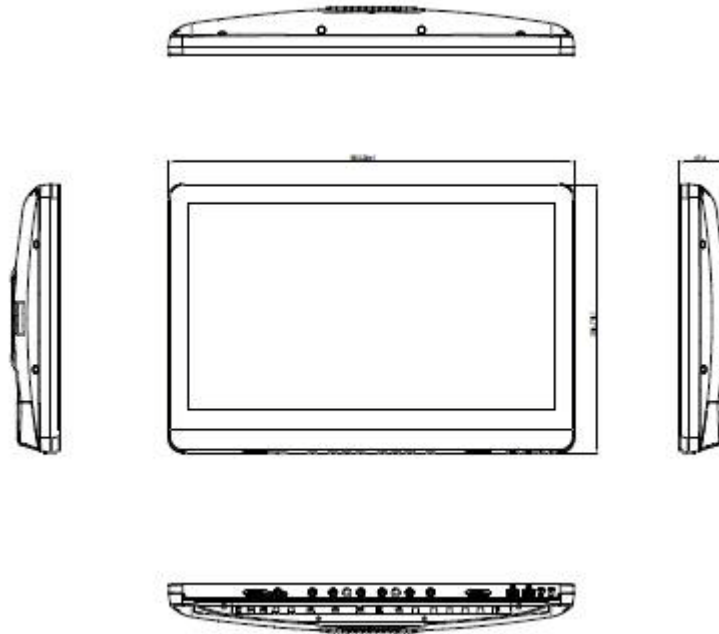Dimensions: 583.38 x 386.75 x 69.4 mm (Unit: mm)

Figure 1.1 Dimensions of the POC-WP24 SERIES

VESA Mounting: 75 x 75 mm; 100 x 100 mm
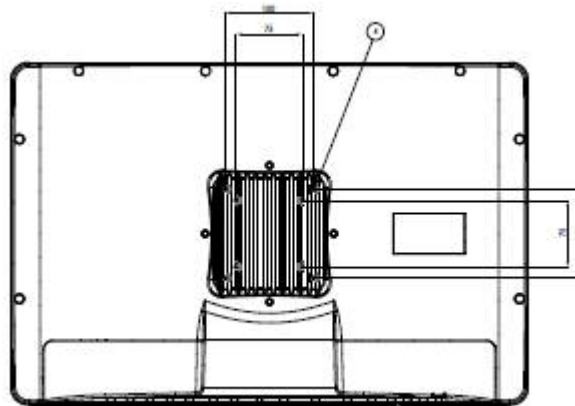Please use M4x12L (Maximum) screw.

Figure 1.2 VESA Mounting of the POC-WP24 Series

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

Figure 1.3 POC-WP24 Series Front Panel

(1)   Power

(2)   Volume Down/Up

(3)   Touchscreen Status Control

(4)   Read Light Control

(5)   Brightness Decrease / Increase

1.3.1 Optional modules

- Memory: Up to 32GB DDR4 SODIMM x 2
          2.5" SATA HDD(65 degree)/SSD, mini-PCIe mSATA
- Touchscreen: Projected Capacitive
- Dual-band (2.4/5GHz) 802.11n 2Tx/2Rx WiFi
- Blutooth 4.0
- RFID 13.56MHz, ISO-15693, ISO-14443A, ISO-14443B
- PCIe Card: Dual LAN, Firewire, RS-232

1.3.2 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 water.
2.   Wipe the POC with a clean cloth that has been moistened in the cleaning solution.
3.   Wipe thoroughly with a clean cloth.

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 IT support 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, either, or ether solvents, sharp tools or abrasives. Never immerse electrical connectors in water or other liquids.*

1.4 Operating Principle

The device provides input through touch panel, hard keys located at the bottom of it, accessories through USB ports or its LAN/WLAN connections. The device computes the input data with its processing unit and then output the generated data to LCD panel, accessories or other devices through its I/O ports or through its LAN/WLAN connections. The device is able to store data in its storage, and when the device is turned off, still maintain the data in the memory units of the storage.

1.5 Intended User Profile

Intend user profile:

- Age: 18 to 65
- Weight: not relevant
- Health: not relevant
- Nationality: Global
- Patient state: patient will not be the operator.
- Part of the body or type of tissue applied to or interacted with: hands and fingers, expected contact time shall be less than 1 min.
- Education level: at least 8 years intensive reading experience (school)
- Knowledge:
  Minimum – read and understand "westernized Arabic" numerals when written in Arial font
  - can distinguish: every parts of body as described in user manual
  - trained and authorized by manufacturer only.
- To be considered as trained and authorized, they must complete the training course of the manufacturer; see document number xxxxx for qualification method, when considered necessary by the manufacturer, technician shall be called back for retraining and annual training is also considered necessary.
- Language understanding: English, whenever other languages are required, professional translation company shall translate and review by the manufacturer, see SOP document number: XXXXX
- Experience: Mentally and physical competent, specific medical training to understand basic knowledge for symbols.
- Permissible impairments:
  - Mild reading vision impairment or vision corrected to log MAR 0,2 (6/10 or 20/32)
  - One arm / hand system capable of guiding and holding device
  - Average degree of aging-related short term memory impairment
  - impaired by 40 % resulting in 60 % of normal hearing at 500 Hz to 2 kHz

Chapter 2

System Setup

2.1 A Quick Tour of the POC-WP24 Series

Before you start to set up the POC-WP24 SERIES, 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-WP24 SERIES upright on the desktop, its front panel appears as shown in Figure 2.1.
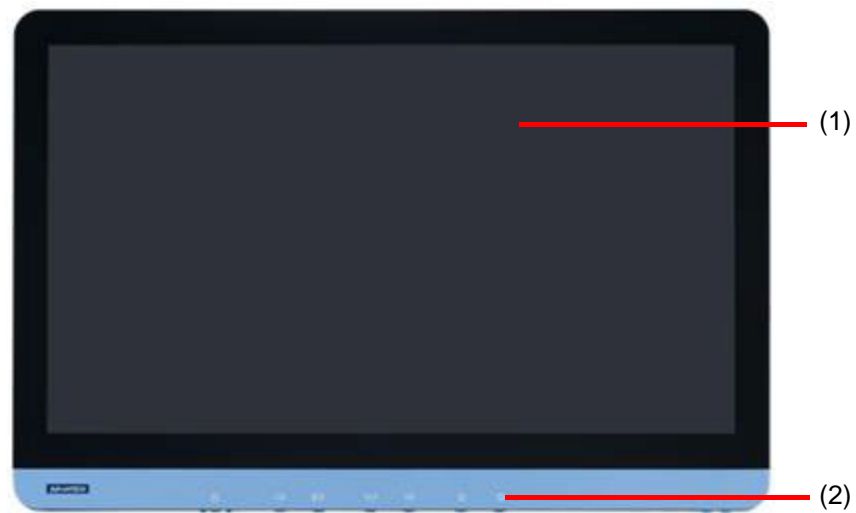
2.1.1 Front view

Figure 2.1 Front View of the Point-of-Care Terminal

Front Bezel view

(1)   LCD panel with Touch Screen module

(2)   Power symbol w/ indicator light

2.1.2 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 in Figure 2-2 and zoom in Figure 2-3. (The I/O section includes various I/O ports, including serial ports, VGA port, the Ethernet port, USB ports and so on.)
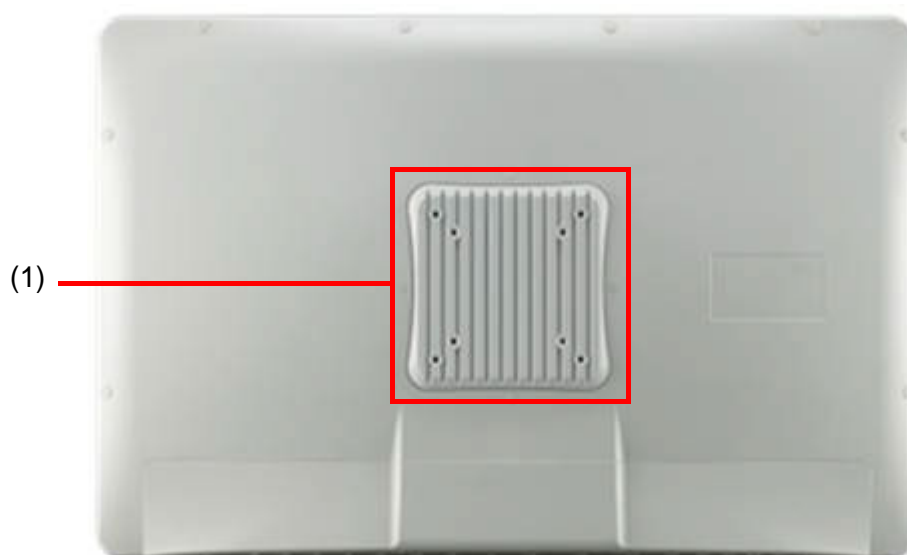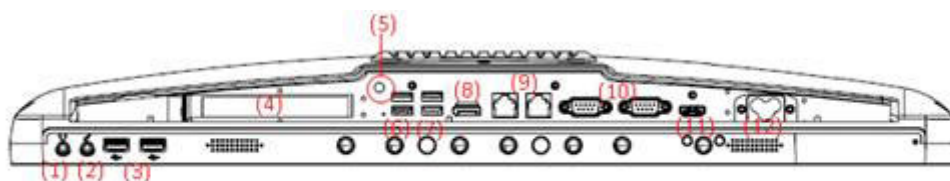

Figure 2.2 Rear view of the Point of Care Terminal

(1) Speaker Out
(2) MIC-in
(3) USB 2.0 x 2
(4) PCIe (x4) card slot
(5) Equipotential Temrinal Pin
(6) USB 2.0 x 2
(7) USB 3.0 x 2

(8) Displayport x 1
(9) 2 x Gigabit Ethernet interfaces (RJ-45)
(10) 2 x RS-232/422/485 (isolated) serial Port
(11) HDMI out port
(12) AC-in

Figure 2.3 Rear view of Multi I/O ports

Note! *Equipotential terminal need link to hospital ground/earth system before system boot to protect operator and system.*

2.2 Installation Procedures

2.2.1 Connecting the power cord

The POC-WP24 SERIES can only be powered by AC in. 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 cord to the system.
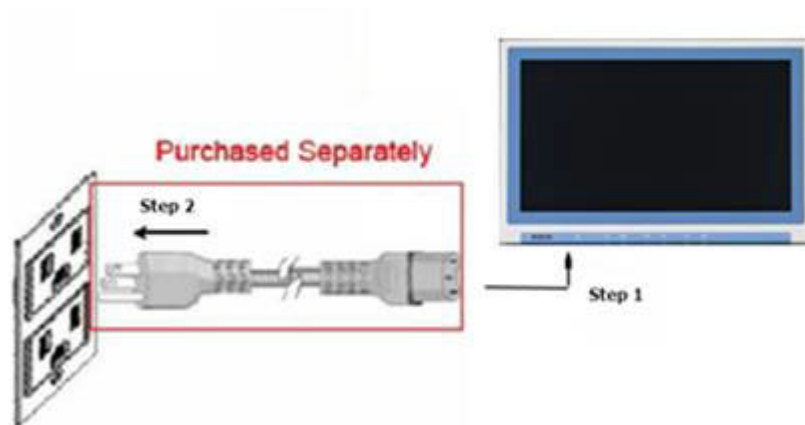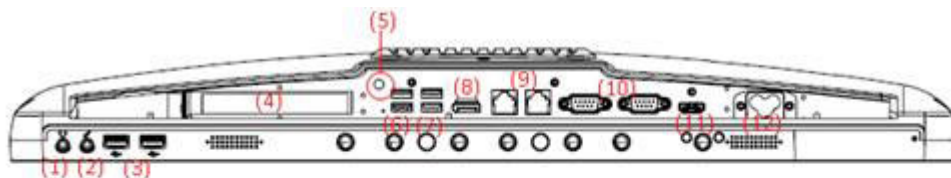2. Connect the 3-pin male plug of the power cord to an electrical outlet.

Figure 2.4 Connecting the power cord

2.2.2 Connecting the Ground pin

1. System ready and find the Equipotential Terminal on rear side of POC.
    An Equipotential Terminal is provide to optionally connect to a hospital ground/ earth system

(1) Speaker Out	(8) Displayport x 1
(2) MIC-in	(9) 2 x Gigabit Ethernet interfaces (RJ-45)
(3) USB 2.0 x 2	(10) 2 x RS-232/422/485 (isolated) serial Port
(4) PCIe (x4) card slot	(11) HDMI out port
(5) Equipotential Temrinal Pin	(12) AC-in
(6) USB 2.0 x 2	
(7) USB 3.0 x 2	

Figure 2.5 POC-WP24 Series Equipotential Terminal Pin

2.   Prepare the Grounding cable and the other terminal link to hospital ground/earth system.

Figure 2.6 Grounding cable with connector

3.   Grounding cable plug with POC-WP24 SERIES Equipotential Terminal (See Figure 2.8)

2.3   Running the BIOS Setup Program

Your POC-WP24 SERIES was probably 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 boots 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 to boot into BIOS menu and adjust the boot device sequence.

You can also press F12 key when booting; a bootable device popup menu will appear, you can select 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 Installing the Drivers

After installing your system software, you will be able to set up the Chipset, Graphics, Ethernet, Audio, and Touchscreen functions from your own external CD-ROM drive. All the drivers except the CD-ROM drive driver are stored in a CD-ROM disc entitled "Drivers and Utilities."

The standard automatic installation procedures for installing the Chipset, Graphics, Audio, Ethernet, TXE and Touch drivers are described in Chapter 3.

The various drivers and utilities in the CD-ROM disc have their own text files which help users install the drivers and understand their functions. These files are a very useful supplement to the information in this manual.

Troubleshooting

When system behaves abnormally, such as:

1. Failure to power on
2. Failure 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
- Symptoms, photo or video if available.

Guidance and manufacturer's declaration – electromagnetic emissions		
The model POC-WP24 SERIES is intended for use in an electromagnetic environment as specified below. The customer or the user of the POC-WP24 SERIES 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-WP24 SERIES 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-WP24 SERIES 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 POC-WP24 SERIES			
POC-WP24 SERIES is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the model POC -W152C can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the model POC-WP24 SERIES as recommended below, according to the maximum output power of the communications 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 separation distance d in metres (m) can be estimated using the equation applicable to the frequency 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			
POC-WP24 SERIES is intended for use in the electromagnetic environment specified below. The customer or the user of the model POC-WP24 SERIES 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	Main 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	Main 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	Main power quality should be that of a typical commercial or hospital environment. If the user of the model POC-WP24 Series requires continued operation during power mains interruptions, it is recommended that the model POC-WP24 Series be powered from an uninterruptible 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-WP24 SERIES is intended for use in the electromagnetic environment specified below. The customer or the user of the model POC-WP24 SERIES 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-WP24 Series, 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.			

a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the model POC-WP24 Series is used exceeds the applicable RF compliance level above, the model POC-WP24 Series should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the model POC-WP24 Series.

b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Chapter   3

Operation and Safety

3.1 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

3.2 Protecting Your Optical Drive

To keep your optical drive working properly:

- Position your computer so that the drive tray doesn't bump into
- anything when it opens.
- Close the drive when you're not using it.
- Do not put anything on the drive tray when it is open.
- Do not touch the optical drive lens with your fingers. Do not wipe the lens with a paper towel or other abrasive surface.

3.3 Thermal

The vent hole of the POC-WP24 SERIES rear cover functions as a cooling air flow inlet and outlet. These air inlets and outlets transfer heat from inside the computer to the cooler air outside. Do not block these holes/vents with any soft material.

When using your POC-WP24 SERIES system, it is normal for the rear metal heatsink to get warm. The rear metal heatsink of the POC-WP24 SERIES functions as a cooling surface that transfers heat from inside the computer to the cooler air outside. Do not block this heatsink with any soft material.

> ***Warning!*** *Do not place your POC-WP24 Series 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.*

3.4 Disconnect the Power

The only way to disconnect power completely is to unplug the 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 turning off the 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

Appendix A

POC-WP24 Series
VESA Mounting

A.1 Install VESA Mounting

The POC-WP24 SERIES 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-WP24 SERIES. 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 wall-mounting to the Heat-sink of the POC-WP24 Series, securing it in place with four of the philips-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-WP24 Series and mounting bracket may create danger of injury.*

Figure A.1 VESA mounting

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