IEI Integration Corp.

MODEL:

POCm-W22/24C-RPL

Medical Panel PC with 13th Gen. Intel® Core™ i5/ i7 Processor, DDR5, Wi-Fi 802.11ax, P-CAP Touchscreen, USB Type-C Three Battery Bays, 8-Megapixel Camera and Microphone

User Manual

Rev. 1.00 - June 25, 2024

RoHS Lead Free

Revision

Date	Version	Changes
June 25, 2024	1.00	Initial release

Copyright

COPYRIGHT NOTICE

The information in this document is subject to change without prior notice in order to improve reliability, design and function and does not represent a commitment on the part of the manufacturer.

In no event will the manufacturer be liable for direct, indirect, special, incidental, or consequential damages arising out of the use or inability to use the product or documentation, even if advised of the possibility of such damages.

TRADEMARKS

All registered trademarks and product names mentioned herein are used for identification purposes only and may be trademarks and/or registered trademarks of their respective owners. The terms HDMI, HDMI High-Definition Multimedia Interface, HDMI trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

CONTACT INFORMATION

Manufactured by:
IEI Integration Corp.

Address: No. 29, Zongxing Rd., Xizhi Dist.,
New Taipei City 221, Taiwan

Phone: +886-2-8691-6798

Fax: +886-2-6616-0028

Web Site: www.ieiworld.com

Sales Email: sales@ieiworld.com.tw

Manual Conventions

WARNING

Warnings appear where overlooked details may cause damage to the equipment or result in personal injury. Warnings should be taken seriously.

CAUTION

Cautionary messages should be heeded to help reduce the chance of losing data or damaging the product.

NOTE

These messages inform the reader of essential but non-critical information. These messages should be read carefully as any directions or instructions contained therein can help avoid making mistakes.

Table of Contents

List of Figures

List of Tables

List of BIOS Menus

Chapter

1

Introduction

1.1 Overview

Figure 1-1: POCm-W22/24C-RPL Medical Panel PC

The POCm-W22/24C-RPL is a 13th generation Intel® Core™ i5/ i7 processor (Raptor Lake-P) processor powered medical-grade panel PC with a rich variety of functions and peripherals. All POCm-W22/24C-RPL models are designed for easy and simplified integration into point-of-care (POC) applications. The system support a maximum of 64 GB DDR5 memory ensuring smooth data throughputs with reduced bottlenecks and fast system access.

One RS-232 serial ports, one USB Type-C port, four USB 3.2 Gen 2 ports and two USB 2.0 ports provide simplified connectivity to a variety of external peripheral devices. Wi-Fi 802.11ax high-speed wireless and two RJ-45 2.5GbE connectors allow for smooth connection of the system to an external LAN. Three hot-swappable battery bays allow installation of three batteries to provide continuous power.

NOTE:

The POCm-W22/24C-RPL medical panel PC is intended to be used to display general purpose medical images. The device shall not be used for diagnosis purpose or life supporting system.

1.2 Model Variations

There are several models in the POCm-W22/24C-RPL series. The model numbers and model variations are listed below.

Model	CPU	Size	Brightness	CR
POCm-W22C-RPL-i5/PC	Intel® Core™ i5-1340PE	21.5"	350 cd/m^2	1000:1
POCm-W22C-RPL-i7/PC	Intel® Core™ i7-1370PE	21.5"	350 cd/m^2	1000:1
POCm-W22CR-RPL-i5/PC	Intel® Core™ i5-1340PE	21.5"	250 cd/m^2	3000:1
POCm-W22CR-RPL-i7/PC	Intel® Core™ i7-1370PE	21.5"	250 cd/m^2	3000:1
POCm-W24C-RPL-i5/PC	Intel® Core™ i5-1340PE	23.8"	350 cd/m^2	1000:1
POCm-W24C-RPL-i7/PC	Intel® Core™ i7-1370PE	23.8"	350 cd/m^2	1000:1
POCm-W24CR-RPL-i5/PC	Intel® Core™ i5-1340PE	23.8"	250 cd/m^2	3000:1
POCm-W24CR-RPL-i7/PC	Intel® Core™ i7-1370PE	23.8"	250 cd/m^2	3000:1

Table 1-1: Model Variations

1.3 Features

The POCm-W22/24C-RPL features are listed below:

- Fanless medical-grade panel PC with anti-bacteria housing
- Projected capacitive type touchscreen allows multi-touch, multi-layer gloves and water-on-screen operation
- 13th Gen Intel® Core™ i5/ i7 processor (Raptor Lake-P)
- Support 4800MT/s DDR5 memory (system max. 64 GB)
- One HDMI™ ports support additional display
- Two 2.5GbE RJ-45 connectors and Wi-Fi 802.11ax high speed wireless
- Two internal 2 W speakers
- Four USB 3.2 Gen 2 (10Gb/s) ports, one USB Type-C port and two USB 2.0 ports
- One RS-232 DB-9 connector
- Support three hot-swappable batteries ideal for non-powered medical cart use

1.4 Front Panel

The front side of the POCm-W22/24C-RPL is a flat-bezel panel with a TFT LCD screen surrounded by a PC+ABS plastic frame (**Figure 1-2**).

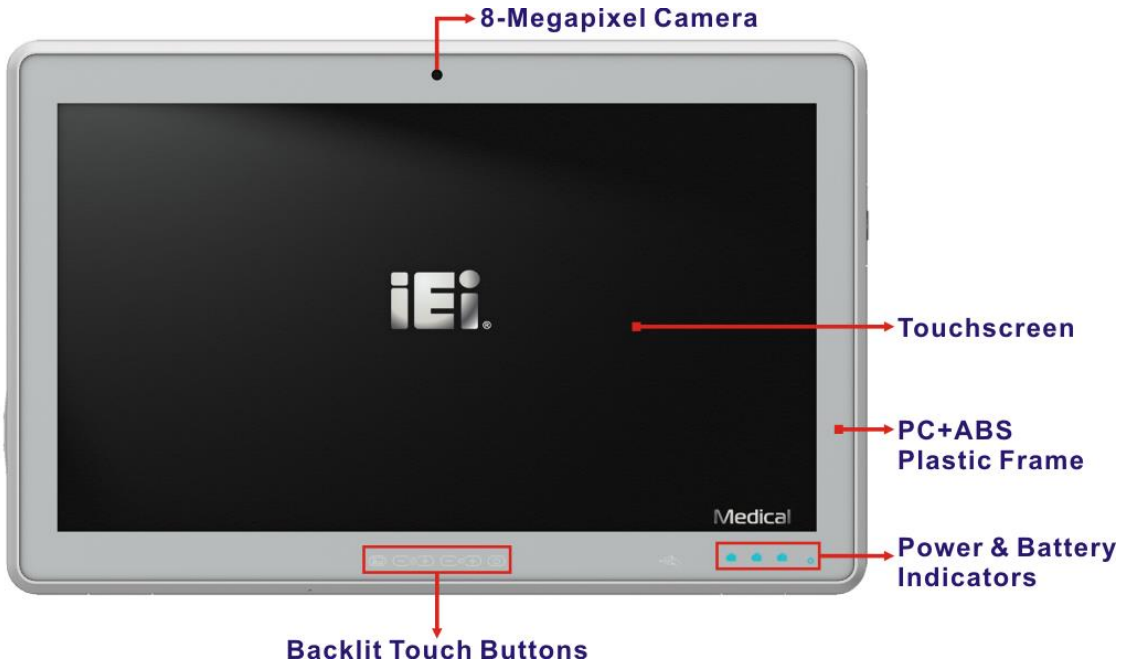


Figure 1-2: Front View

1.4.1 Backlit Touch Buttons

The front panel of the POCm-W22/24C-RPL contains several backlit touch buttons that control audio volume, LCD brightness and some other system components.

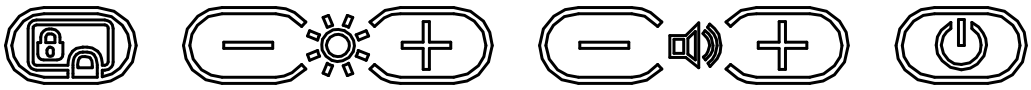


Figure 1-3: Backlit Touch Buttons

The following table describes the function of each button.

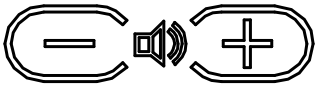
Button	Function
	Power on/off: press and hold for 2 seconds.
	–: Volume down +: Volume up
	–: Brightness down (minimum brightness: 5%) +: Brightness up (maximum brightness: 100%)
	LCD & touch lock on/off: Press and hold for over 2 seconds to switch the LCD and the touch function on or off. When the LCD is off and the touch function is locked, the keypad touch buttons will blink.
Note: Press the touch button for at least one second to activate it.	

Table 1-2: Touch Button Functions

1.4.2 LED Indicators

The LED indicators on the front panel of the POCm-W22/24C-RPL are shown below.

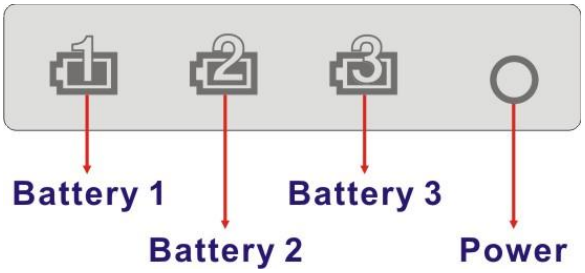


Figure 1-4: LED Indicators

The descriptions of each LED indicator are listed below.

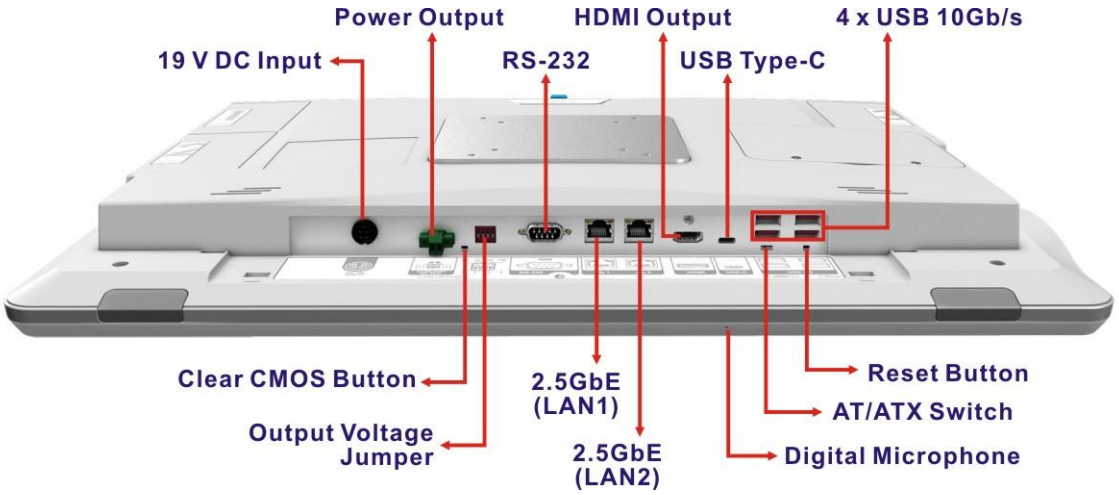
LED Indicator	Description
Power	**Solid Blue:** Power on **Solid Orange:** Standby
Battery	**Solid Blue:** Battery capacity is above 25% (non-AC mode); Or battery is fully charged (AC mode) **Solid Orange:** Battery capacity is 25%-10% **Blinking Orange:** Battery capacity is less than 10% **Blinking Blue:** Battery is charging

Table 1-3: LED Indicators

1.5 I/O Panel

The POCm-W22/24C-RPL has the following connectors and switches (**Figure 1-5**).

POCm-W22C-RPL



POCm-W24C-RPL

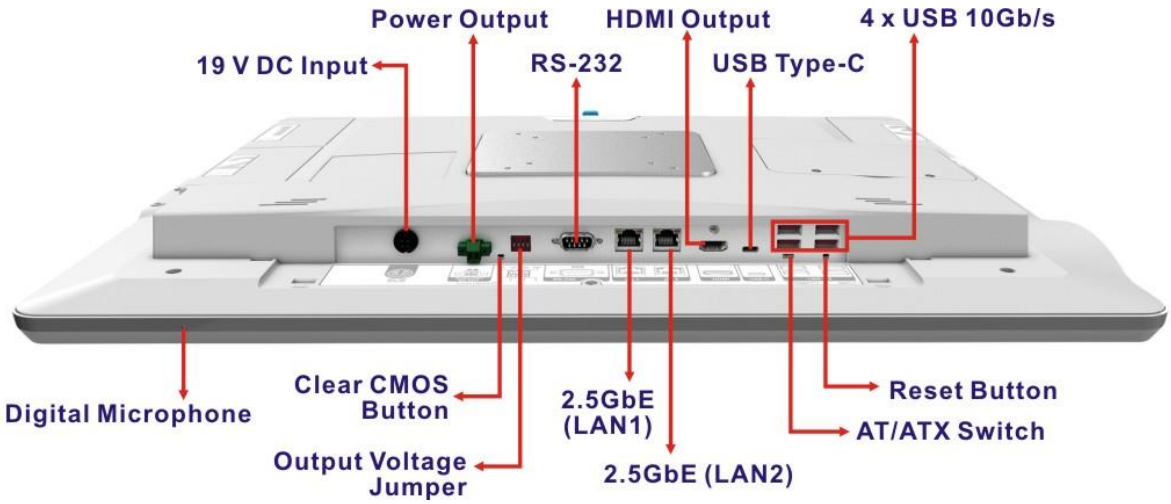


Figure 1-5: I/O Panel

1.6 Side Panels

The side panels have several I/O interfaces which are protected by waterproof covers.

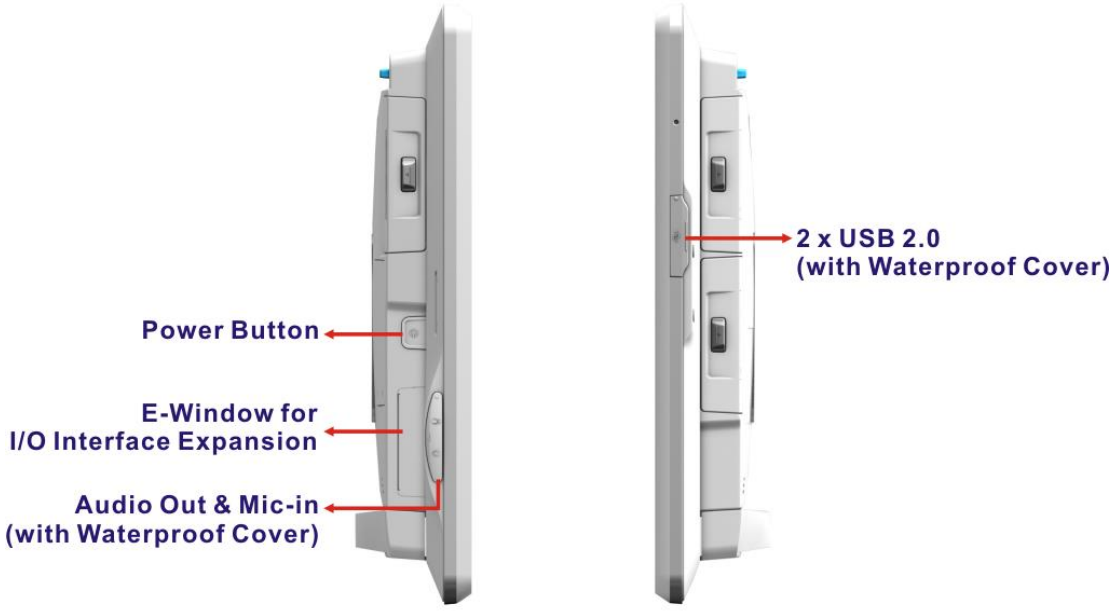


Figure 1-6: Side Views

1.7 Rear Panel

The rear panel contains three battery bays, two 2 W speakers, the camera cover on/off switch and the retention screw holes that support VESA 75/100 mounting (**Figure 1-7**). HDD and M.2 modules can also be installed by removing the HDD cover located on the rear panel.

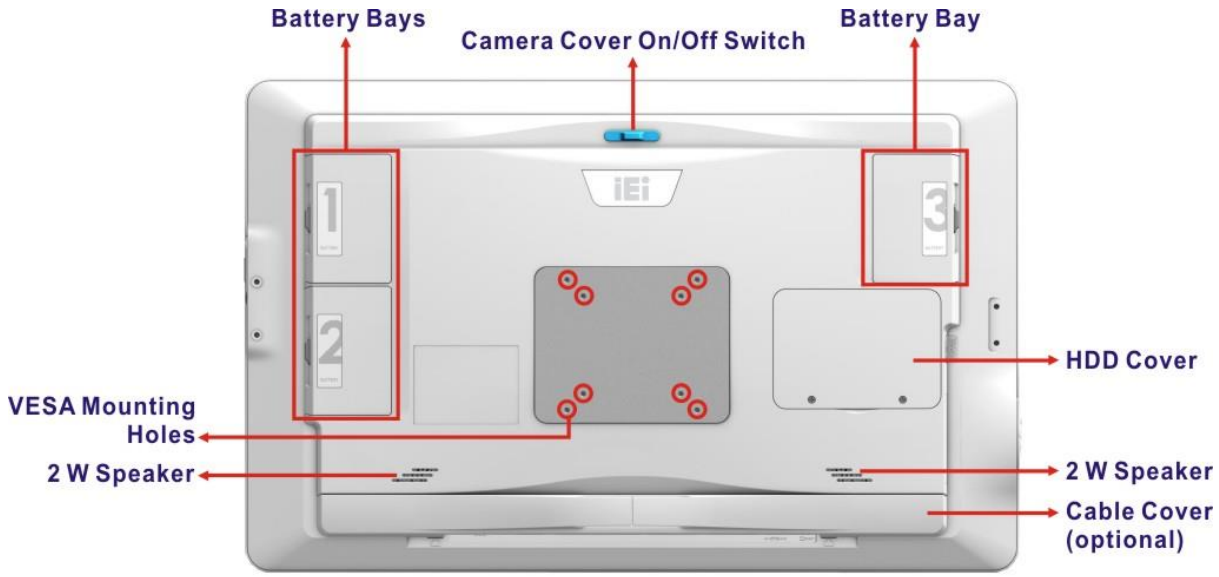


Figure 1-7: Rear View

1.8 Classification

- Power by Class I power supply
- No Applied Part.
- Mode of operation: Continuous Operation
- The equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide: Not AP or APG Category.

1.9 System Specifications

The technical specifications for the POCm-W22/24C-RPL systems are listed below.

	POCm-W22C-RPL	POCm-W24C-RPL
LCD and Touchscreen		
LCD Size	21.5" (16:9)	23.8" (16:9)
Max. Resolution	1920 (W) x 1080 (H)	1920 (W) x 1080 (H)
Brightness (cd/m^2)	350	350
Contrast Ratio	1000:1	1000:1
LCD Color	16.7M (RGB 6-bit)	16.7M (RGB 6-bit)
Pixel Pitch (mm)	0.24795 (H) x 0. 24795 (V)	0.2745 (H) x 0. 2745 (V)
Viewing Angle (H-V)	178°/178°	178°/178°
Backlight MTBF	50,000 hrs (LED backlight)	30,000 hrs (LED backlight)
Touchscreen	Projected capacitive type with 10-point multi-touch	
Touch Controller	EETI	
Surface Hardness	6H	
System		
CPU	13th Gen Intel® Core™ i5-1340PE/ i7-1370PE (Raptor Lake-P)	
Memory	Two 262-pin 4800MT/s dual-channel DDR5 SO-DIMM slots (system max. 64 GB)	
GbE Controller	Two Intel® I225 Ethernet controllers	
I/O Ports	1 x DC input jack 1 x DC output (12V/19V/24V, 20-watt) 1 x HDMI™ output connector 2 x 2.5GbE LAN (RJ-45 connector) 1 x RS-232/422/485 serial port (DB-9 connector) 4 x USB 3.2 Gen 2 (10Gb/s, 5V/0.9A) connectors 1 x USB Type-C connector (DP + USB 5V/0.9A) 2 x USB 2.0 connectors (5V/0.5A, side panel) 1 x Audio out (side panel) 1 x Mic-in (side panel)	

	1 x Digital microphone	
Storage	1 x 2.5" accessible SATA HDD bay 2 x M.2 2280 M key (PCIe) with RAID	
Audio	Two 2 W speakers	
Webcam	8-megapixel CMOS front-facing camera	
Expansion Interface	1 x PCIe Mini (PCIe, loaded 4.95W) 1 x M.2 2230 A-E key (PCIe+USB) 2 x M.2 2260/80 B-M key (PCIe, loaded 9.9W)	
TPM	TPM 2.0 (optional)	
Other Features		
Function Keys	1 x Power on/off 1 x Brightness up 1 x Brightness down 1 x Volume up 1 x Volume down 1 x Touch lock (clean mode) or LCD on/off	
LED Indicators	3 x Battery indicator 1 x Power indicator	
Cooling Method	Fanless	
Connectivity		
Wi-Fi and Bluetooth	Wi-Fi & Bluetooth IEEE 802.11ax 2T2R module (Wi-Fi 6E) with BT v5.2 (M.2 2230 A-E key)	
LAN	Two 2.5GbE LAN connectors	
Physical		
Construction Material	PC+ABS plastic with anti-bacterial material	
Mounting	Wall mount VESA 75 mm x 75 mm or 100 mm x 100 mm	
Dimensions (W x H x D)	543 x 350 x 71 (mm)	594.6 x 379.6 x 71 (mm)

Net Weight	7.07 kg (without battery) 8.43 kg (with 3 batteries)		8.18 kg (without battery) 9.53 kg (with 3 batteries)
Environment			
Storage/Transportation	**Temperature**	-20ºC ~ 60ºC	
	Humidity	10% ~ 90% (non-condensing)	
	Pressure	700 hPa ~ 1060 hPa	
Operating	**Temperature**	0ºC ~ 40ºC	
	Humidity	10% ~ 90% (non-condensing)	
	Pressure	700 hPa ~ 1060 hPa	
Vibration	1G		
Shock	Operating Shock: 5G peak acceleration (11ms duration) Non-Operating Shock: 10G peak acceleration (11ms duration)		
IP Level	IPX0		
Power			
Power Input	19 V DC		
Power Adapter	150 W FSP FSP150M-ABA medical-grade power adapter (**P/N**: 63040-010150-400-RS)		
	Input: 100 V AC ~ 240 V AC, 50 Hz ~ 60 Hz, 2 A ~ 0.85 A		
	Output: 19 V ⎓ 7.89 A		
Battery	3 slots for Li-ion battery packs (IEI Integration Corp. / TC-202GA)		
EMC & Safety	CE, FCC Class B Part18 EN 60601-1: 2006/A1:2013 (Edition 3.1) EN 60601-1-2: 2015 (Edition 4.0)		

Table 1-4: System Specifications

1.10 Dimensions

The POCm-W22C-RPL dimensions are shown below.

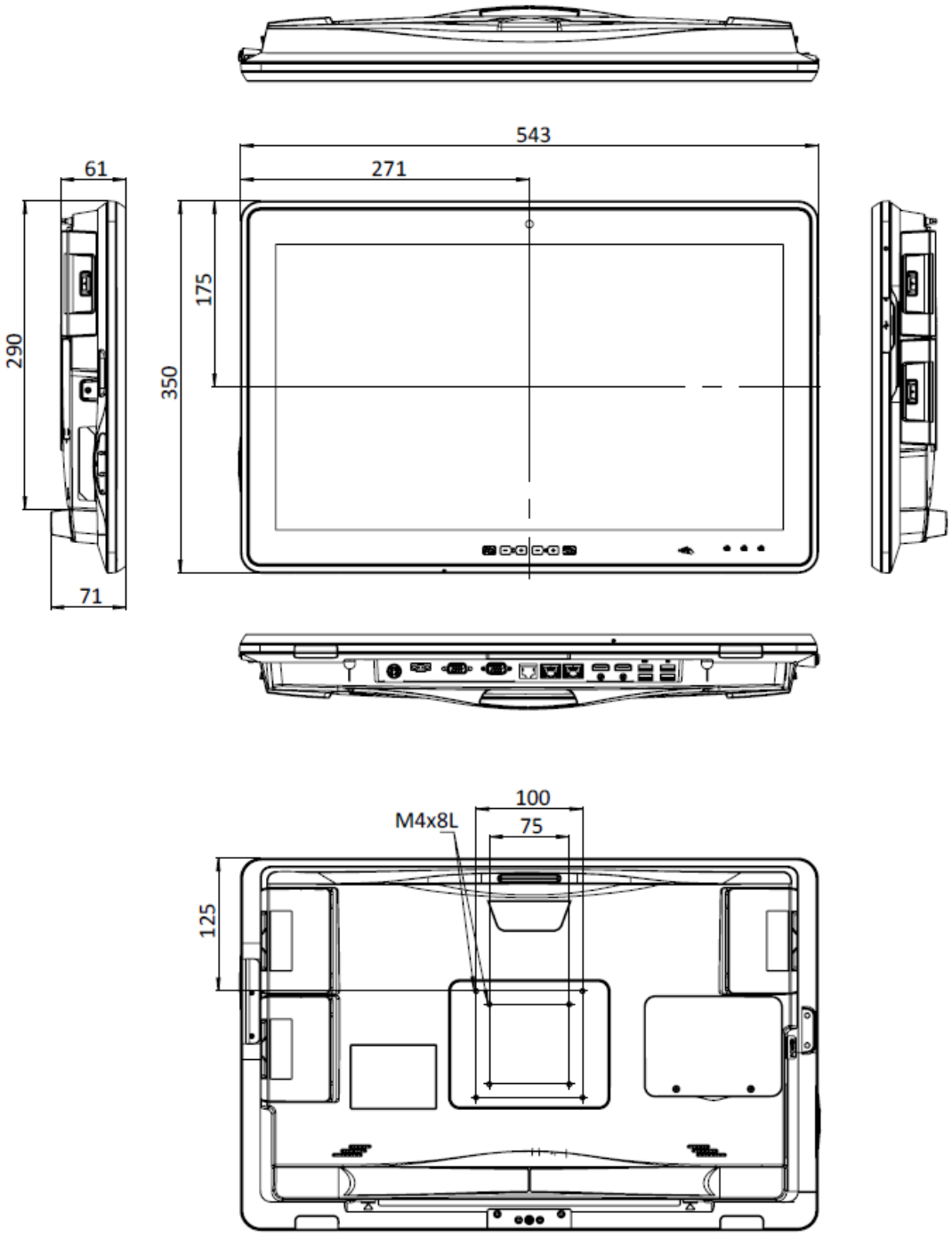


Figure 1-8: POCm-W22C-RPL Dimensions (mm)

The POCm-W24C-RPL dimensions are shown below.

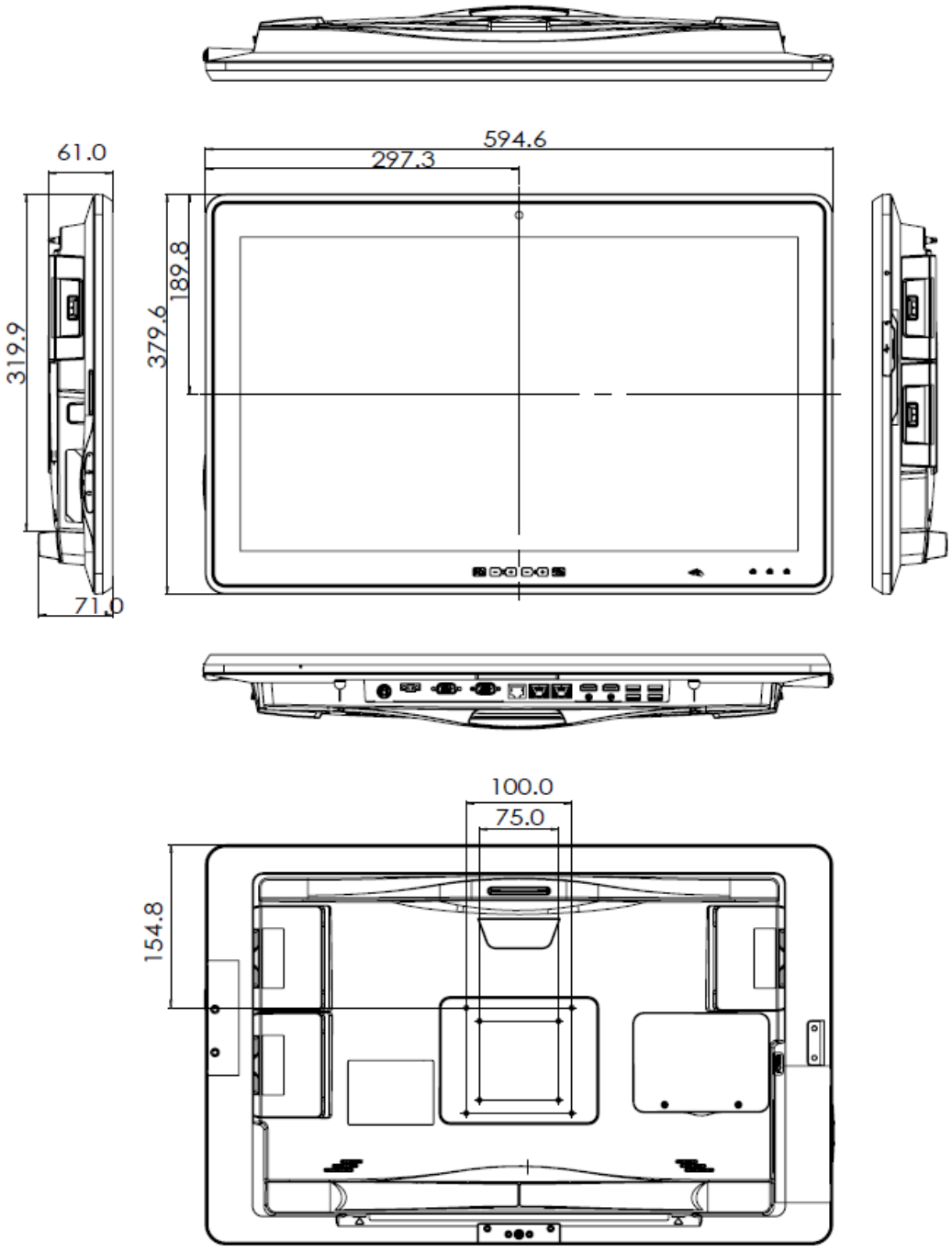


Figure 1-9: POCm-W24C-RPL Dimensions (mm)

Chapter

2

Unpacking

2.1 Unpacking

To unpack the medical panel PC, follow the steps below:

WARNING!

The front side LCD screen has a protective plastic cover stuck to the screen. Only remove the plastic cover after the medical panel PC has been properly installed. This ensures the screen is protected during the installation process.

L'écran LCD avant a un couvercle en plastique de protection collé à l'écran. Retirez le couvercle en plastique uniquement une fois que le Panel PC médical a été correctement installé. Cela garantit que l'écran est protégé pendant le processus d'installation.

Step 1: Use box cutters, a knife or a sharp pair of scissors that seals the top side of the external (second) box.

Step 2: Open the external (second) box.

Step 3: Use box cutters, a knife or a sharp pair of scissors that seals the top side of the internal (first) box.

Step 4: Lift the panel PC out of the boxes.

Step 5: Remove both polystyrene ends, one from each side.

Step 6: Pull the plastic cover off the medical panel PC.

Step 7: Make sure all the components listed in the packing list are present.

2.2 Packing List

NOTE:

If any of the components listed in the checklist below are missing, do not proceed with the installation. Contact the IEI reseller or vendor the POCm-W22/24C-RPL was purchased from or contact an IEI sales representative directly by sending an email to sales@ieiworld.com.

The POCm-W22/24C-RPL medical panel PC is shipped with the following components:

Quantity	Item	Image
1	POCm-W22/24C-RPL medical panel PC	
1	150 W FSP FSP150M-ABA medical-grade power adapter	
1	Power cord (EU)	
4	Round-head screw (M3*3) for HDD installation	

2.3 Optional Items

The following are optional components which may be separately purchased:

Item and Part Number	Image
Li-ion battery pack, 3S3P, 10.8V, 9000 mAh (**P/N**: 31603-000106-RS)	
Cable cover (**P/N**: 43106-0272Q7-00-RS)	
RFID module, 13.56MHz/125KHz (**P/N**: 19XS0Z768-0006301-000-RS)	(assemble-to-order)

Chapter

3

Installation

3.1 Safety Precautions

Please ensure the following safety precautions are adhered to at all times.

- External equipment intended for connection to signal input /output or other connectors, shall comply with relevant UL /IEC standard (e.g. IEC60950 -1/IEC62368 -1 for IT equipment and ANSI/AAMI ES60601-1 (2005)+AMD (2012) AND CAN/CSA- C22.2 No. 60601-1:14/IEC 60601 series for systems– shall comply with the standard IEC 60601-1, Safety requirements for medical electrical systems. Equipment not complying with UL 60601-1 shall be kept outside the patient environment, as defined in the standard.
- 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. 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. 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.
- ***Remove the Power cord form A.C. MAINS if it will not to be used for a long time.***
- ***To prevent the risk of electric shock, make sure power cord is unplugged from wall socket.*** To fully disengage the power to the unit, please disconnect the power cord from the ac outlet. Refer servicing to qualified service personnel. The AC outlet shall be readily available and accessible.
- ***Users must not allow SIP/SOPs and the patient to come into contact at the same time.***
- ***Make sure user shall not touch the device and the patient at the same time.***
- ***Equipment can only be touched / operate by the operator.***

- ***Grounding reliability*** can only be achieved when the equipment is connected to an equivalent receptacle marked “Hospital Only” or “Hospital Grade”.
- ***Follow the electrostatic precautions*** outlined below whenever the POCm-W22/24C-RPL is opened.
- ***Make sure the power is turned off and the power cord is disconnected*** whenever the POCm-W22/24C-RPL is being installed, moved or modified.
- ***Do not apply voltage levels that exceed the specified voltage range***. Doing so may cause fire and/or an electrical shock. 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.
- ***Electric shocks can occur*** if the POCm-W22/24C-RPL chassis is opened when the POCm-W22/24C-RPL is running. To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth.
- **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). IT MAY DAMAGE THE EQUIPMENT.**
- ***Do not drop or insert any objects*** into the ventilation openings of the POCm-W22/24C-RPL.
- ***If considerable amounts of dust, water, or fluids enter the POCm-W22/24C-RPL***, turn off the power supply immediately, unplug the power cord, and contact the POCm-W22/24C-RPL vendor.
- ***Never replace or repair any components on your own.*** If the components of the POCm-W22/24C-RPL fails or malfunctions it must be shipped back to IEI to be repaired. Please contact the system vendor, reseller or an IEI sales person directly.
- **DO NOT**:
  - Drop the POCm-W22/24C-RPL against a hard surface.
  - Strike or exert excessive force onto the LCD panel.
  - Touch any of the LCD panels with a sharp object
  - In a site where the ambient temperature exceeds the rated temperature

3.2 Anti-static Precautions

WARNING:

Failure to take ESD precautions during the maintenance of the POCm-W22/24C-RPL may result in permanent damage to the POCm-W22/24C-RPL and severe injury to the user.

Le fait de ne pas prendre des précautions contre les décharges électrostatiques pendant la maintenance du POCm-W22/24C-RPL peut entraîner des dommages permanents au POCm-W22/24C-RPL et des blessures graves pour l'utilisateur.

Electrostatic discharge (ESD) can cause serious damage to electronic components, including the POCm-W22/24C-RPL. Dry climates are especially susceptible to ESD. It is therefore critical that whenever the POCm-W22/24C-RPL is accessed internally, or any other electrical component is handled, the following anti-static precautions are strictly adhered to.

- ***Wear an anti-static wristband***: Wearing a simple anti-static wristband can help to prevent ESD from damaging the board.
- ***Self-grounding***: Before handling the board, touch any grounded conducting material. During the time the board is handled, frequently touch any conducting materials that are connected to the ground.
- ***Use an anti-static pad***: When configuring the POCm-W22/24C-RPL, place it on an anti-static pad. This reduces the possibility of ESD damaging the POCm-W22/24C-RPL.

3.3 Installation Precautions

When installing the medical panel PC, please follow the precautions listed below:

- **Manufacturer authorization**: Do not modify this equipment without authorization of manufacturer.
- **Certified Engineers**: Only certified engineers should install and modify the hardware settings.
- **Power turned off**: When installing the medical panel PC, make sure the power is off. Failing to turn off the power may cause severe injury to the body and/or damage to the system.
- **Anti-static Discharge**: If a user open the rear panel of the medical panel PC, to configure the jumpers or plug in added peripheral devices, ground themselves first and wear an anti-static wristband.
- **AC power plug**: AC plug is used as a means and device to be separated from the mains, and must be installed in a location where it can be easily unplugged

WARNING:

DO NOT power up the POCm-W22/24C-RPL while the front panel is facing down on a sheet of conductive foam. Doing so may cause the touch panel to malfunction due to the large surface area of contact between the conductive form and the touch panel.

NE mettez PAS le POCm-W22/24C-RPL sous tension lorsque le panneau avant est orienté vers le bas sur une feuille de mousse conductrice. Cela pourrait entraîner un dysfonctionnement de l'écran tactile en raison de la grande surface de contact entre la forme conductrice et l'écran tactile.

WARNING / AVERTISSEMENT

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

Cet équipement doit être installé et utilisé conformément aux instructions fournies et la ou les antennes utilisées pour cet émetteur doivent être installées pour fournir une distance de séparation d'au moins 20 cm de toutes les personnes et ne doivent pas être co-localisées ou fonctionner en conjonction avec toute autre antenne ou émetteur. Les utilisateurs finaux et les installateurs doivent recevoir les instructions d'installation de l'antenne et les conditions de fonctionnement de l'émetteur pour satisfaire à la conformité d'exposition RF.

3.4 Installation and Configuration Steps

The following installation steps must be followed.

Step 1: Unpack the medical panel PC.

Step 2: Install an HDD/SSD.

Step 3: Configure the system.

Step 4: Connect peripheral devices to the medical panel PC.

Step 5: Mount the medical panel PC.

3.5 HDD Installation

To install the HDD into the system, please follow the steps below:

Step 1: Remove the two HDD cover retention screws on the rear panel (**Figure 3-1**).

Figure 3-1: HDD Cover Retention Screws

Step 2: Remove the HDD cover.

Step 3: Remove the two HDD bracket retention screws (**Figure 3-2**) and pull the HDD bracket out.

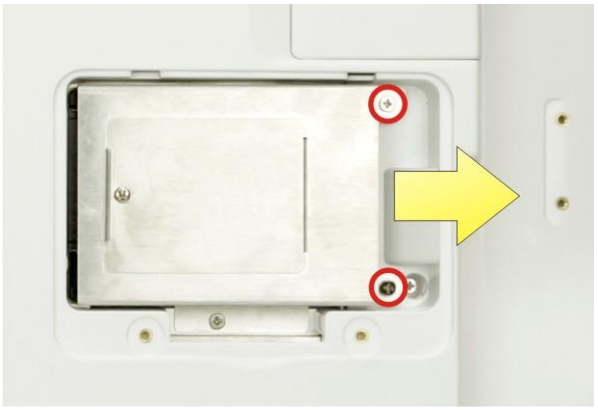


Figure 3-2: HDD Bracket Retention Screws

Step 4: Insert an HDD into the HDD bracket, aligning the four retention screw holes on the bottom of the HDD bracket with the retention screw holes on the bottom of the HDD (**Figure 3-3**).

Step 5: Insert four retention screws (M3*3) into the bracket (**Figure 3-3**).

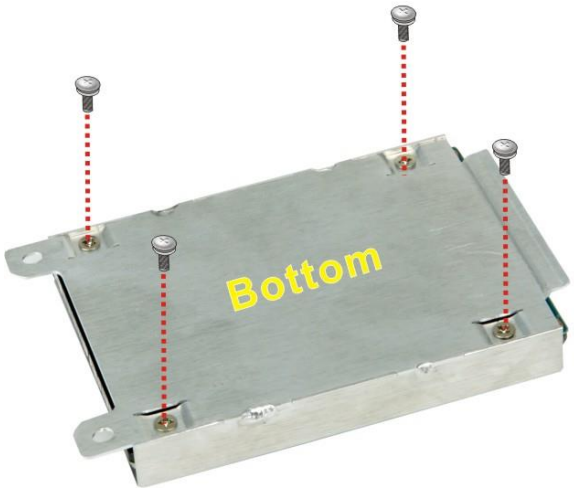


Figure 3-3: Secure HDD

Step 6: Place the HDD and slide it to securely connect to the SATA connector of the POCm-W22/24C-RPL (**Figure 3-4**).

Step 7: Secure the HDD bracket by fastening the two retention screws previously removed (**Figure 3-4**).

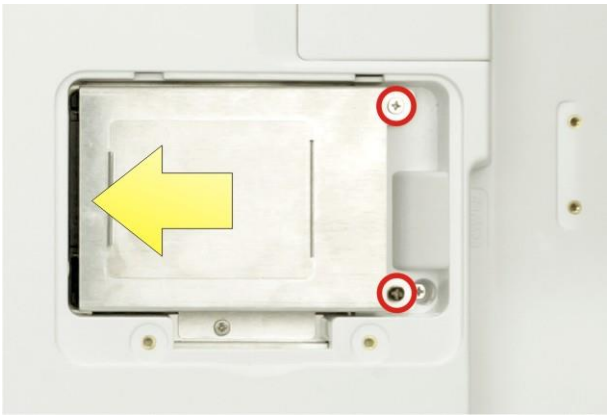


Figure 3-4: HDD Installation

Step 8: Re-install the HDD cover.

3.6 M.2 M-Key Module Installation

To install M.2 modules into the system, please follow the steps below:

Step 1: Follow the **Step 1 ~ Step 3** instruction described in **Section 3.5** to remove HDD cover and HDD bracket.

Step 2: Remove the three screws shown below to lift the bracket off the panel PC.

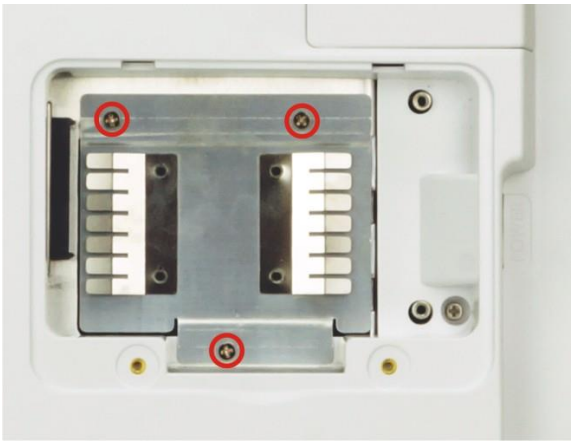


Figure 3-5: Bracket Retention Screws

Step 3: Locate the M.2 M-key slots. Each slot has a screw on the side for installation. Remove and save the screw. See **Figure 3-6**.

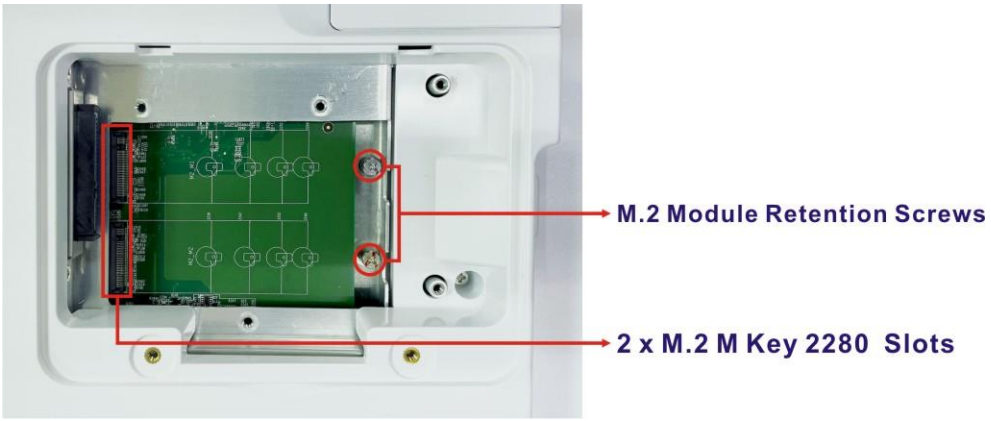


Figure 3-6: M.2 Slots and Screws

Step 4: Line up the notch on the M.2 module with the notch on the slot. Slide the M.2 module into the socket at an angle of about 20º.

Step 5: Secure the M.2 module with the previously removed retention screw. Attach a thermal pad onto the M.2 module (**Figure 3-7**).

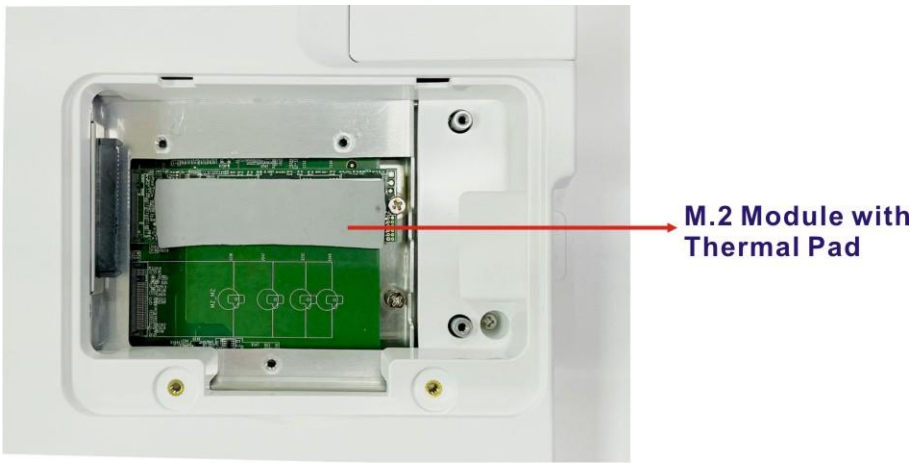


Figure 3-7: Securing the M.2 Module

Step 6: Re-install the brackets and the HDD cover.

3.7 Battery Installation (Optional)

WARNING:

- Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.
  Risque d'explosion si la batterie n'est pas remplacée correctement. Remplacez uniquement par le même type ou un type équivalent recommandé par le fabricant.
- Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion.
  Mise au rebut d'une batterie au feu ou dans un four chaud, ou écrasement ou coupure mécanique d'une batterie, pouvant entraîner une explosion.
- Leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas.
  Laisser une batterie dans un environnement environnant à température extrêmement élevée qui peut entraîner une explosion ou une fuite de liquide ou de gaz inflammable.
- A battery subjected to extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas.
  Une batterie soumise à une pression d'air extrêmement basse pouvant entraîner une explosion ou une fuite de liquide ou de gaz inflammable.

NOTE:

To ensure optimal performance, install all three battery packs into the system.

The POCm-W22/24C-RPL has three battery bays for Li-ion battery pack installation. To install battery, please follow the steps below.

Step 1: Press the battery door button to release the latch and open the battery door.

Figure 3-8: Battery Cover Button

Step 2: Insert a battery in the direction shown below and push it to the bottom.

Figure 3-9: Battery Installation

Step 3: Fold the battery strap inwards and close the battery door.

3.7.1 Battery Pack Specifications

The followings are some of the specifications of the optional Li-ion battery pack (IEI Integration Corp. / TC-202GA).

- Capacity: 9000 mAh
- Normal voltage: 10.8 V
- Charge voltage: 12.6 V
- Continuous charge current: 4.0 A
- Continuous discharge current: 5.0 A (max.)
- Storage temperature: -20ºC ~ 40ºC

Each battery pack provides four LED indicators, allowing the user to get an indication of battery capacity by pushing the button below the indicators. The LED level meanings are listed below:

- 1 LED: 1~25% capacity level
- 2 LEDs: 26~50% capacity level
- 3 LEDs: 51~75% capacity level
- 4 LEDs: 76~100% capacity level

3.8 RS-232 Serial Port Connection

The bottom panel of the POCm-W22/24C-RPL has one DB-9 male connector for RS-232 connection. The pinouts of the DB-9 connector are listed below.

Pin	RS-232
1	DCD
2	RX
3	TX
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI

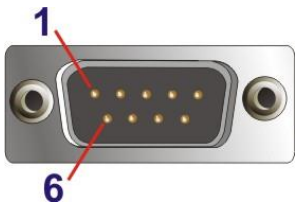


Table 3-1: RS-232 Serial Port Pinouts

3.9 Power Output Connection

The bottom panel has one power output terminal block for providing power to other peripherals. It can provide 12V, 19V or 24V DC power, which can be set through the **Power Output Voltage Select** jumper. The pinouts of the terminal block and the jumper settings are listed below.

Output Voltage	Pin 1	Pin 2	Pin 3	Pin 4
0V	On	Off	Off	Off
12V	On	On	Off	Off
19V	On	Off	On	Off
24V	On	Off	Off	On

NOTE: The connector will only output voltage if you use the provided settings. Any other combination will result in zero voltage.

Table 3-2: Power Output Terminal Block Pinouts and Jumper Settings

3.10 AT/ATX Mode Selection

AT or ATX power mode can be used on the POCm-W22/24C-RPL. The selection is made through an AT/ATX switch located on the bottom panel (**Figure 3-10**).

Figure 3-10: AT/ATX Switch Location

AT Power Mode:

With the AT mode selected, the power is controlled by a central power unit rather than a power switch. The POCm-W22/24C-RPL panel PC turns on automatically when the power is connected.

ATX Power Mode:

With the ATX mode selected, the POCm-W22/24C-RPL panel PC goes in a standby mode when it is turned off. The panel PC can be easily turned on via network or a power switch in standby mode.

3.11 Cable Cover Installation (Optional)

An optional cable cover can be installed on the POCm-W22/24C-RPL for the user to easily manage cables. To install the cable cover, please follow the instruction below.

Step 1: Align the two tabs on cable cover with the slots on the bottom panel of the POCm-W22/24C-RPL (**Figure 3-11**). Then, insert the tabs into the slots.

Step 2: Push the cable cover down to clip the cover into place (**Figure 3-11**).

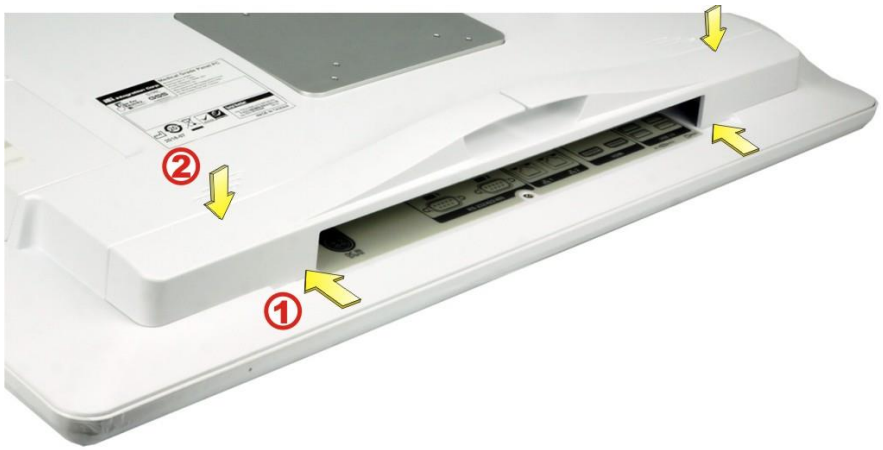


Figure 3-11: Cable Cover Installation

Step 3: To remove the cable cover, push the two tabs inwards to release the cover (**Figure 3-12**), and lift the cover from the POCm-W22/24C-RPL.

Figure 3-12: Cable Cover Removal

3.12 Mounting the System

The POCm-W22/24C-RPL is VESA (4 screws: M4 type, 8 mm length min.) compliant and can be mounted on a mounting device with a 75 mm or a 100 mm interface pad. The POCm-W22/24C-RPL VESA mount retention screw holes are shown below. Refer to the installation guide that came with the mounting device to mount the POCm-W22/24C-RPL.

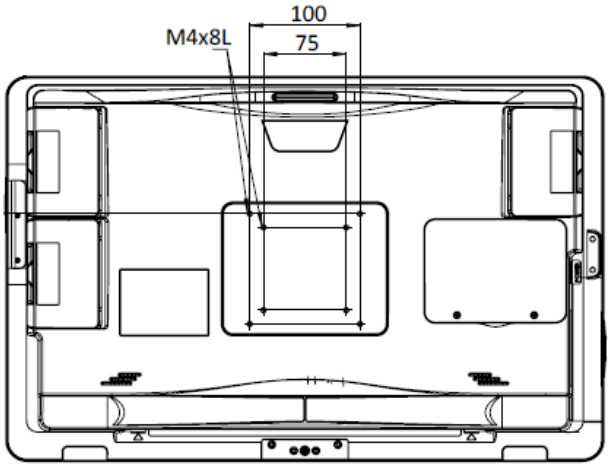


Figure 3-13: VESA Mounting Retention Screw Holes

WARNING:

1. When mounting the POCm-W22/24C-RPL flat panel PC, it is better to have more than one person to help with the installation to make sure the POCm-W22/24C-RPL does not fall down and get damaged.
Lors du montage du PC à écran plat POCm-W22/24C-RPL, il est préférable d'avoir plus d'une personne pour aider à l'installation pour s'assurer que le POCm-W22/24C-RPL ne tombe pas et ne soit pas endommagé.

2. Use suitable mounting apparatus and be sure to secure the screws of the mounting apparatus tightly to avoid risk of injury.
Utilisez un appareil de montage approprié et assurez-vous de bien fixer les vis de l'appareil de montage pour éviter tout risque de blessure.

3.13 Powering On the System

WARNING:

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

Pour éviter tout risque d'électrocution, cet équipement ne doit être connecté qu'au secteur avec mise à la terre de protection.

To power on the system, follow the steps below:

Step 1: Connect the power cord to the power adapter. Connect the other end of the power cord to a power source. Connect the power adapter to the power connector of the POCm-W22/24C-RPL. **NOTE:** The FSP FSP150M-ABA power adapter came with the POCm-W22/24C-RPL is a forming part of the medical device.

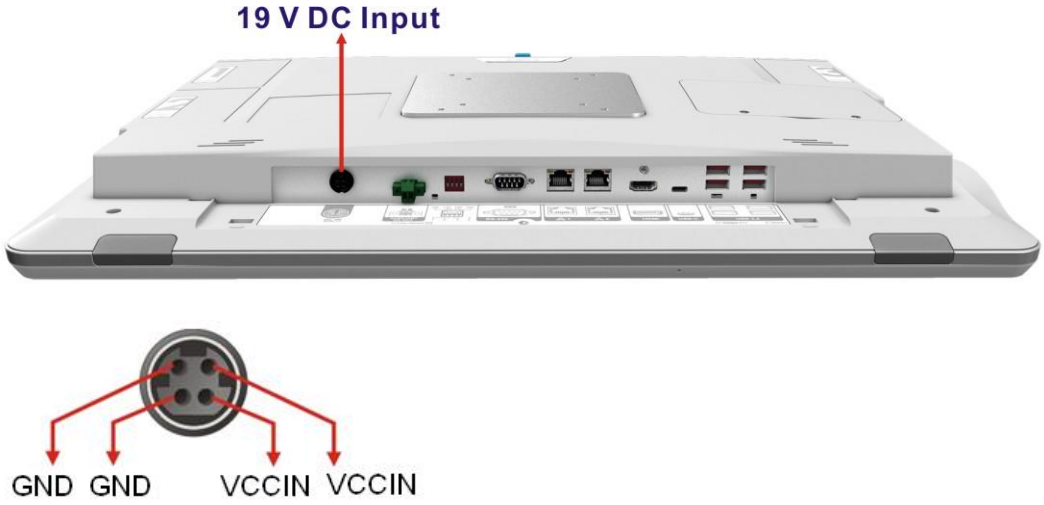


Figure 3-14: Power Input Connector

Step 2: Locate the power button on the right panel (**Figure 1-6**).

Step 3: Short press the power button to turn on the POCm-W22/24C-RPL.

NOTE:

The user can also long-press the touch button on the front panel for 2 seconds to power on the system (please refer to **Table 1-2**).

3.14 Reset the System

The reset button enables user to reboot the system when the system is turned on. The reset button location is shown in **Figure 3-15**. Press the reset button to reboot the system.

Figure 3-15: Reset Button Location

Chapter

4

BIOS Setup

4.1 Introduction

A licensed copy of the BIOS is preprogrammed into the ROM BIOS. The BIOS setup program allows users to modify the basic system configuration. This chapter describes how to access the BIOS setup program and the configuration options that may be changed.

NOTE:

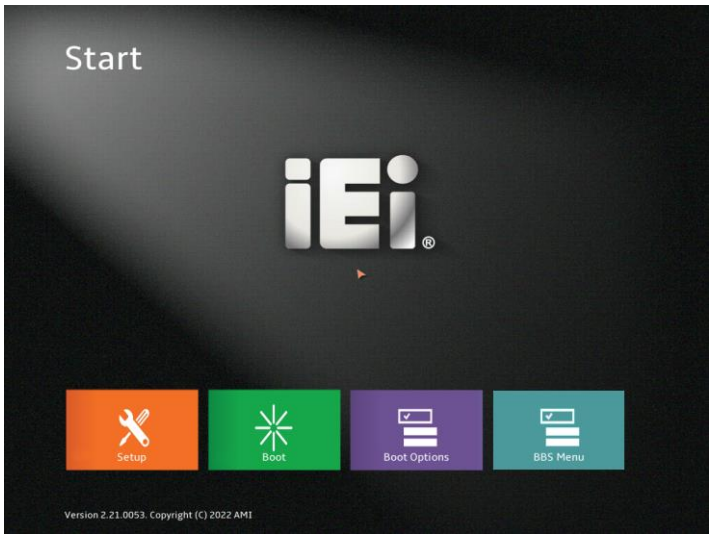
Some of the BIOS options may vary throughout the life cycle of the product and are subject to change without prior notice.

4.1.1 Starting Setup

The UEFI BIOS is activated when the computer is turned on. The setup program can be activated in one of two ways.

1. **Using keyboard**: Press the **DEL** or **F2** as soon as the system is turned on.
2. **Using touchscreen**: Press the **Setup** button on the upper right corner of the BIOS Starting Menu.

If the message disappears before the **DEL or F2** key is pressed, restart the computer and try again, then the BIOS Starting Menu will appear. Select "Setup" and press Enter to get into the BIOS Setup.



4.1.2 Using Setup

The BIOS Setup menu can be navigated by using a keyboard or a touchscreen.

4.1.2.1 Keyboard Navigation

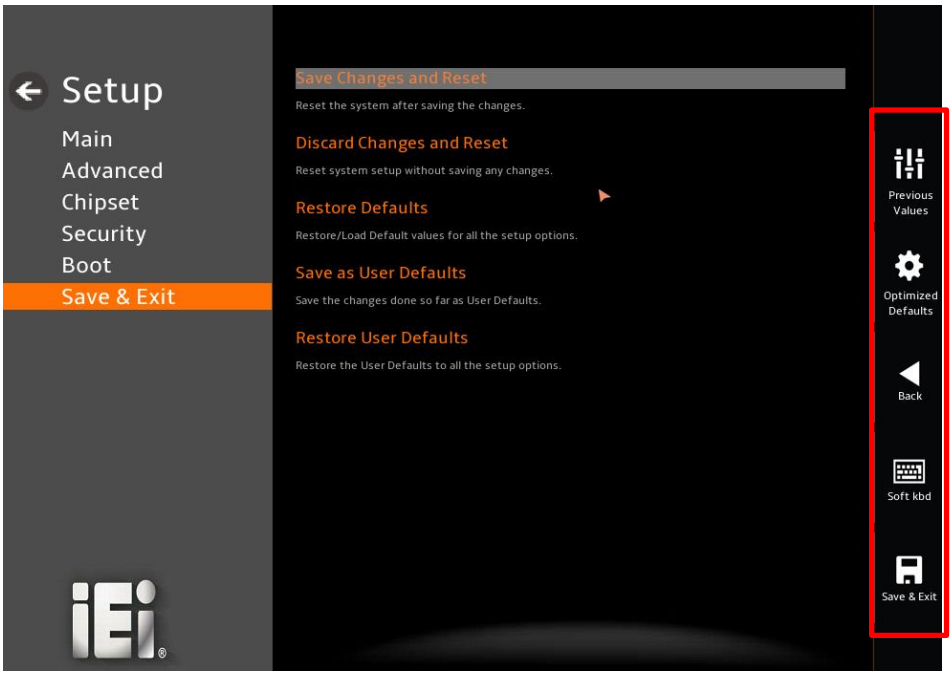
For keyboard navigation, use the navigation keys shown in **Table 4-1**.

Key	Function
Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item on the left hand side
Right arrow	Move to the item on the right hand side
+	Increase the numeric value or make changes
-	Decrease the numeric value or make changes
Page Up	Move to the previous page
Page Dn	Move to the next page
Esc	Main Menu – Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu -- Exit current page and return to Main Menu
F1	General help, only for Status Page Setup Menu and Option Page Setup Menu
F2	Load previous values
F3	Load optimized defaults
F4	Save changes and Exit BIOS
<K>	Scroll help area upwards
<M>	Scroll help area downwards

Table 4-1: BIOS Navigation Keys

4.1.2.2 Touch Navigation

For touchscreen navigation, use the on-screen navigation keys shown below.



On-screen Button	Function
Previous Values	Load the last value you set.
Optimized Defaults	Load the factory default values in order to achieve the best performance.
Back	Return to the previous menu.
Soft kbd	Display the on-screen keyboard.
Save & Exit	Save the changes made to the BIOS options and reset the system.

Table 4-2: BIOS On-screen Navigation Keys

4.1.3 Getting Help

When **F1** is pressed a small help window describing the appropriate keys to use and the possible selections for the highlighted item appears. To exit the Help Window press **Esc** or the **F1** key again.

4.1.4 Unable to Reboot after Configuration Changes

If the computer cannot boot after changes to the system configuration are made, CMOS defaults.

4.1.5 BIOS Menu Bar

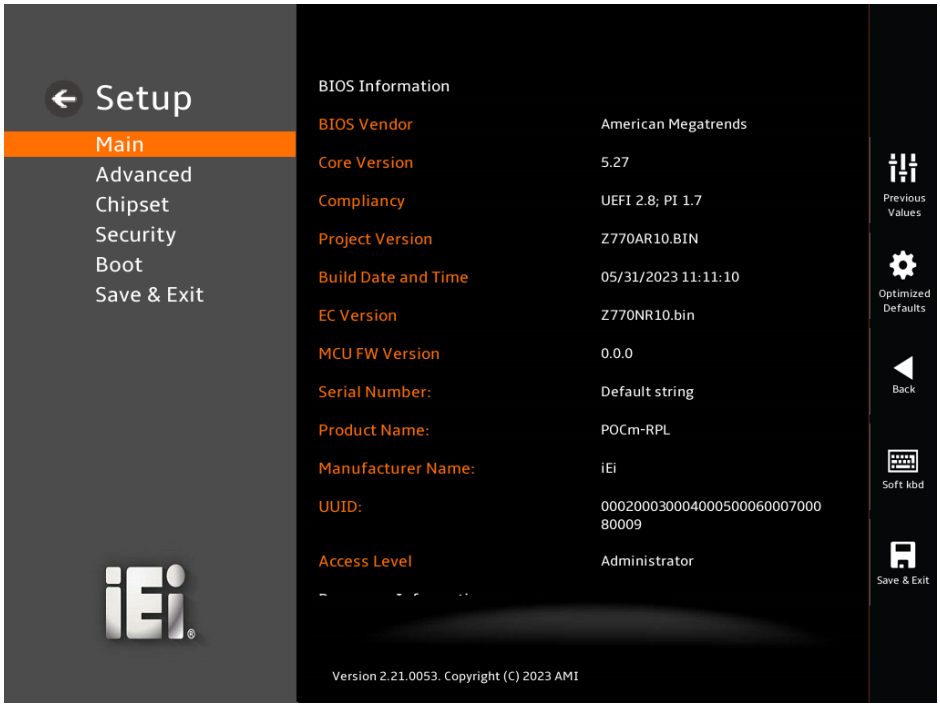
The **menu bar** on top of the BIOS screen has the following main items:

- Main – Changes the basic system configuration.
- Advanced – Changes the advanced system settings.
- Chipset – Changes the chipset settings.
- Boot – Changes the system boot configuration.
- Security – Sets User and Supervisor Passwords.
- Save & Exit – Selects exit options and loads default settings

The following sections completely describe the configuration options found in the menu items at the top of the BIOS screen and listed above.

4.2 Main

The **Main** BIOS menu (**BIOS Menu 1**) appears when the **BIOS Setup** program is entered. The **Main** menu gives an overview of the basic system information.



BIOS Menu 1: Main

➔ **System Date [xx/xx/xx]**

Use the **System Date** option to set the system date. Manually enter the day, month and year.

➔ **System Time [xx:xx:xx]**

Use the **System Time** option to set the system time. Manually enter the hours, minutes and seconds.

4.3 Advanced

Use the **Advanced** menu (**BIOS Menu 2**) to configure the CPU and peripheral devices through the following sub-menus:

WARNING:

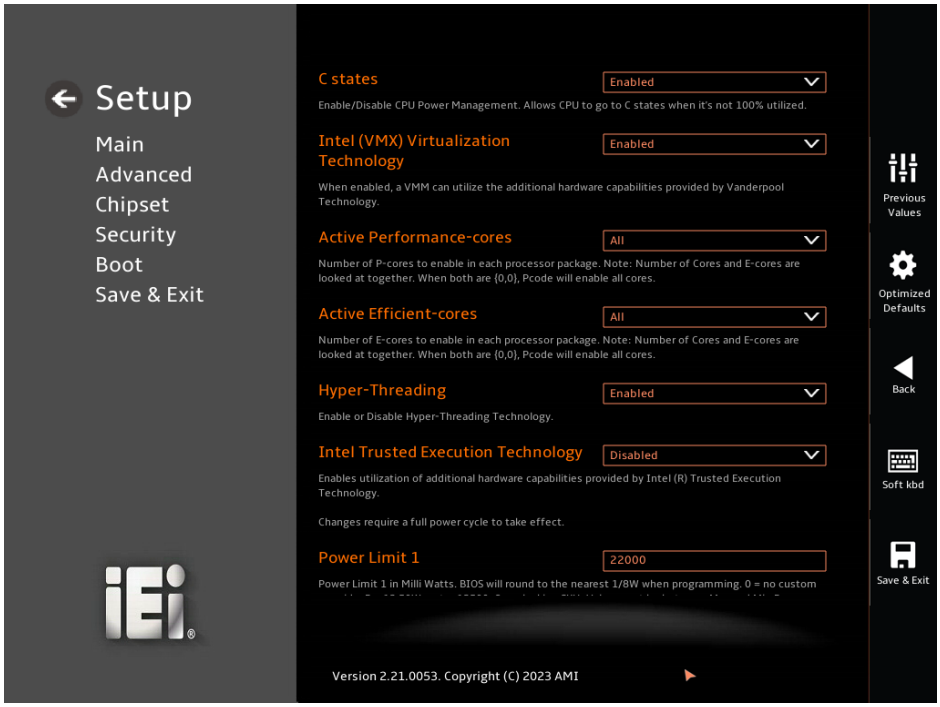
Setting the wrong values in the sections below may cause the system to malfunction. Make sure that the settings made are compatible with the hardware.

La définition de valeurs erronées dans les sections ci-dessous peut entraîner un dysfonctionnement du système. Assurez-vous que les paramètres définis sont compatibles avec le matériel.

BIOS Menu 2: Advanced

4.3.1 CPU Configuration

Use the **CPU Configuration** (**BIOS Menu 3**) to view detailed CPU specifications and configure the CPU.



BIOS Menu 3: CPU Configuration

➔ **Intel® SpeedStep(tm) [Enabled]**

Use the **Intel® SpeedStep™** option to enable or disable the Intel® SpeedStep Technology.

➔ **Disabled**		Disables the Intel® SpeedStep Technology.
➔ **Enabled**	**DEFAULT**	Enables the Intel® SpeedStep Technology.

➔ **C States [Enabled]**

Use the **C States** option to enable or disable CPU C state.

➔	**Disabled**		Disables CPU C state.
➔	**Enabled**	**DEFAULT**	Enables CPU C state.

➔ **Intel (VMX) Virtualization Technology [Enabled]**

Use the **Intel (VMX) Virtualization Technology** option to enable or disable virtualization on the system. When combined with third party software, Intel® Virtualization technology allows several OSs to run on the same system at the same time.

➔	**Disabled**		Disables Intel Virtualization Technology.
➔	**Enabled**	**DEFAULT**	Enables Intel Virtualization Technology.

➔ **Active Performance-cores [All]**

Use the **Active Performance-cores** BIOS option to enable numbers of P-cores in the processor package.

➔	**All**	**DEFAULT**	Enable all cores in the processor package.
➔	**3**		Enable 3 P-cores in the processor package.
➔	**2**		Enable 2 P-cores in the processor package.
➔	**1**		Enable 1 P-core in the processor package.

➔ **Active Efficient-cores [All]**

Use the **Active Efficient-cores** BIOS option to enable numbers of E-cores in the processor package.

➔	**All**	**DEFAULT**	Enable all cores in the processor package.
➔	**7**		Enable 7 E-cores in the processor package.
➔	**6**		Enable 6 E-cores in the processor package.
➔	**5**		Enable 5 E-cores in the processor package.

➔ **4**		Enable 4 E-cores in the processor package.
➔ **3**		Enable 3 E-cores in the processor package.
➔ **2**		Enable 2 E-cores in the processor package.
➔ **1**		Enable 1 E-core in the processor package.
➔ **0**		Disable all E-cores in the processor package.

➔ **Hyper-Threading [Enabled]**

Use the **Hyper-Threading** option to enable or disable the Intel® Hyper-Threading Technology.

➔ **Disabled**		Disable Intel® Hyper-Threading Technology
➔ **Enabled**	**DEFAULT**	Enable Intel® Hyper-Threading Technology

➔ **Intel Trusted Execution Technology [Disabled]**

Use the **Intel Trusted Execution Technology** option to enable or disable utilization of additional hardware capabilities provided by Intel® Trusted Execution Technology.

➔ **Disabled**	**DEFAULT**	Disable Intel® Trusted Execution Technology
➔ **Enabled**		Enable Intel® Trusted Execution Technology

➔ **Power Limit 1**

Use the Power Limit 1 to set Power Limit in Milli Watts. BIOS will round to the nearest 1/8W when programming. 0 = no custom override. For 12.50W, enter 12500. Overclocking SKU: Value must be between Max and Min Power Limits. Other SKUs: This value must be between Min Power limit and TDP Limit. If value is 0, BIOS will program TDP value.

➔ **Power Limit 2**

Use the Power Limit 2 to set Power Limit in Milli Watts. BIOS will round to the nearest 1/8W when programming. If the value is 0, BIOS will program this value as 1.25*TDP. For 12.50W, enter 12500. Processor applies control policies such that the package power does not exceed this limit.

➔ **Power Limit 1 Time Window**

Power Limit 1 Time Window value in second. The value may vary from 0 to 128.0, 0 = default value (28 sec for mobile and 8 sec for desktop). Defines time window which TDP value should be maintained.

4.3.2 PCH-FW Configuration

The **PCH-FW Configuration** menu (**BIOS Menu 4**) allows Intel® Active Management Technology (AMT) options to be configured.

BIOS Menu 4: PCH-FW Configuration

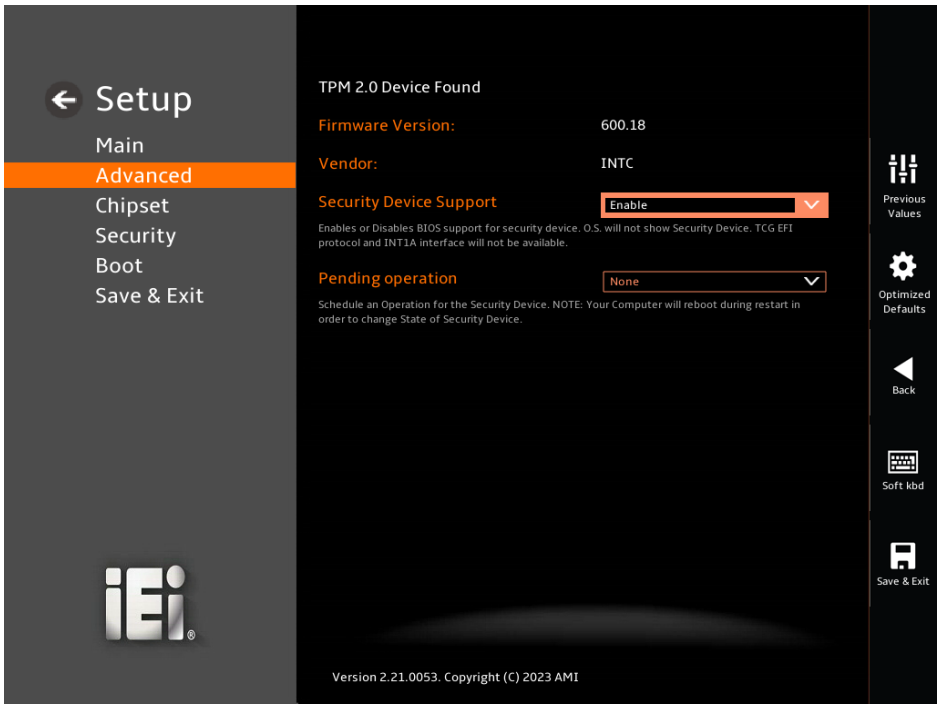
➔ **TPM Device Selection [PTT]**

Use the **TPM Device Selection** option to configure support for the TPM.

➔ **dTPM**		Disable PTT in SkuMgr.
➔ **PTT**	**DEFAULT**	Enable PTT in SkuMgr

4.3.3 Trusted Computing

Use the **Trusted Computing** menu (**BIOS Menu 5**) to configure settings related to the Trusted Computing Group (TCG) Trusted Platform Module (TPM).



BIOS Menu 5: Trusted Computing

➔ **Security Device Support [Enable]**

Use the **Security Device Support** option to configure support for the security devices.

➔ **Disable** Security device support is disabled.

➔ **Enable** **DEFAULT** Security device support is enabled.

➔ **Pending Operation [None]**

Use the **Pending Operation** option to specify a TPM operation which will be performed during the next boot process.

➔ **None** **DEFAULT** No TPM operation will be performed.

➔ **TPM Clear** TPM is reset to the factory setting. All data in the TPM will be deleted.

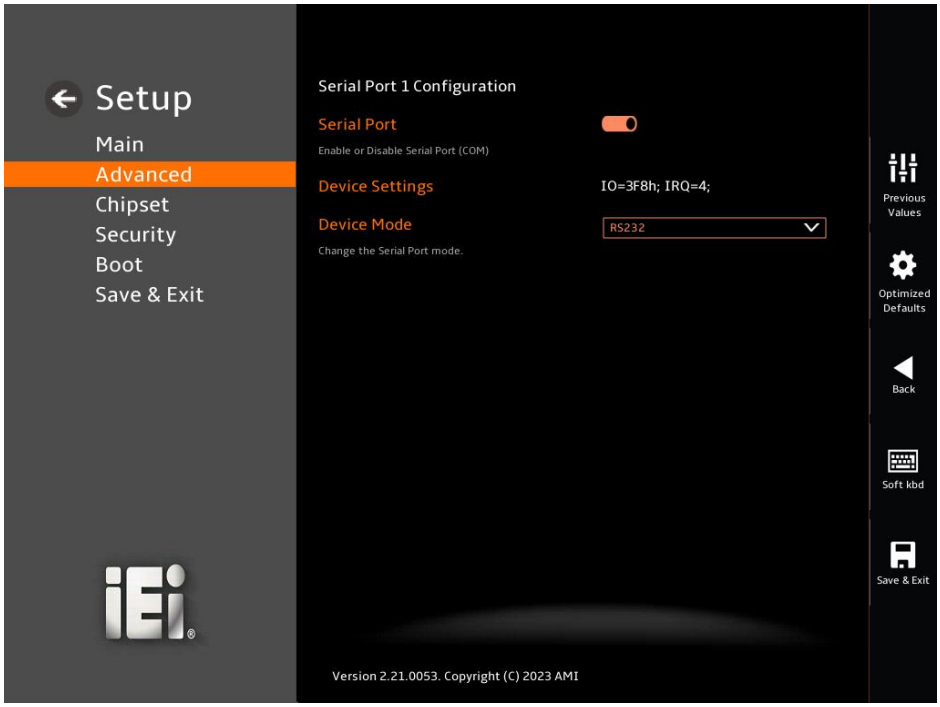
4.3.4 F81804 Super IO Configuration

Use the **F81804 Super IO Configuration** menu (**BIOS Menu 6**) to set or change the configurations for the serial ports.

BIOS Menu 6: F81804 Super IO Configuration

4.3.4.1 Serial Port 1 Configuration

Use the **Serial Port 1 Configuration** menu (**BIOS Menu 7**) to configure the serial port 1.



BIOS Menu 7: Serial Port n Configuration Menu

➔ **Serial Port [Enabled]**

Use the **Serial Port** option to enable or disable the serial port.

➔ **Disabled** Disable the serial port

➔ **Enabled** **DEFAULT** Enable the serial port

➔ **Change Settings [Auto]**

The Device Settings option shows the serial port IO port address and interrupt address.

➔ **IO=3F8h; IRQ=4** Serial Port I/O port address is 3F8h and the interrupt address is IRQ4

➔ **Device Mode [RS232]**

Use the **Device Mode** option to set the Serial Port 1 signaling mode.

➔	**RS232**	**DEFAULT**	Configure Serial Port 1 as RS-232
➔	**RS422**		Configure Serial Port 1 as RS-422
➔	**RS485**		Configure Serial Port 1 as RS-485

4.3.5 KB9068 H/W Monitor

The **KB9068 H/W Monitor** menu (**BIOS Menu 8**) shows the operating temperatures and voltages.

BIOS Menu 8: KB9068 H/W Monitor

➔ **PC Health Status**

The following system parameters and values are shown. The system parameters that are monitored are:

- Temperature:
  - CPU Temperature
  - System Temperature
- Voltages:
  - CPU_CORE
  - +5V
  - +12V
  - DDR
  - +3.3V

4.3.6 RTC Wake Settings

The **RTC Wake Settings** menu (**BIOS Menu 9**) configures RTC wake event.

BIOS Menu 9: RTC Wake Settings

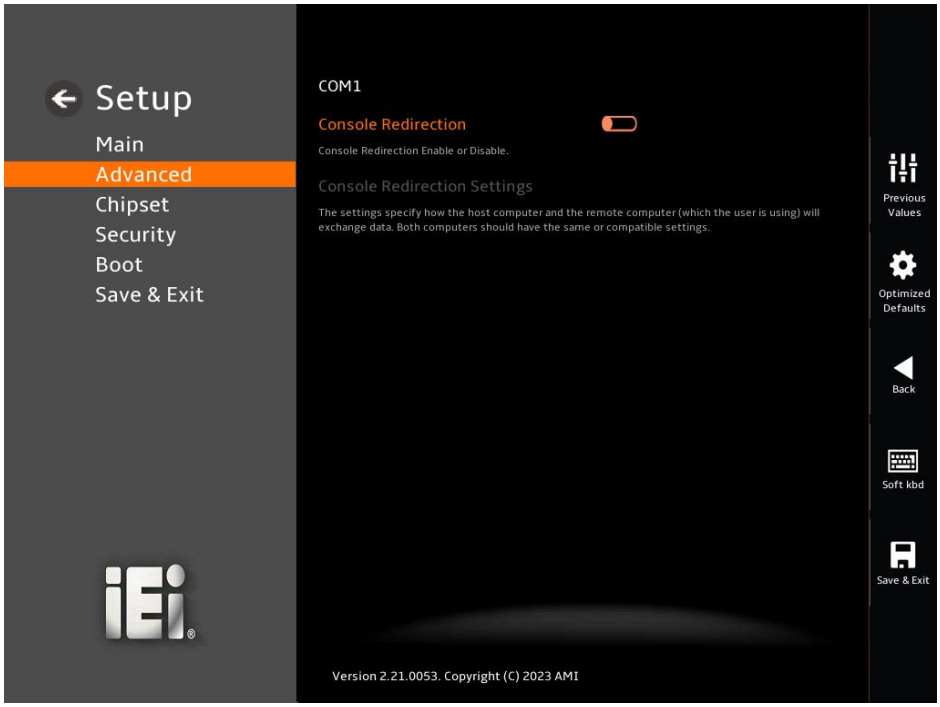
➔ **Wake System with Fixed Time [Disabled]**

Use the **Wake System with Fixed Time** option to specify the time the system should be roused from a suspended state.

➔ **Disabled**	**DEFAULT**	The real time clock (RTC) cannot generate a wake event
➔ **Enabled**		If selected, the following appears with values that can be selected: *Wake up every day *Wake up date *Wake up hour *Wake up minute *Wake up second After setting the alarm, the computer turns itself on from a suspend state when the alarm goes off.

4.3.7 Serial Port Console Redirection

The **Serial Port Console Redirection** menu (**BIOS Menu 10**) allows the console redirection options to be configured. Console redirection allows users to maintain a system remotely by re-directing keyboard input and text output through the serial port.



BIOS Menu 10: Serial Port Console Redirection

➔ **Console Redirection [Disabled]**

Use **Console Redirection** option to enable or disable the console redirection function.

➔	**Disabled**	**DEFAULT**	Disabled the console redirection function
➔	**Enabled**		Enabled the console redirection function

4.3.8 Network Stack Configuration

Use the **Network Stack Configuration** menu (**BIOS Menu 11**) to configure network stack settings.

BIOS Menu 11: Network Stack Configuration

➔ **Network Stack [Disabled]**

Use the **Network Stack** BIOS option to enable or disable UEFI network stack.

➔	**Disabled**	**DEFAULT**	UEFI network stack disabled
➔	**Enabled**		UEFI network stack enabled

4.3.9 NVMe Configuration

Use the **NVMe Configuration** (**BIOS Menu 12**) menu to display the NVMe controller and device information.

BIOS Menu 12: NVMe Configuration

4.4 Chipset

Use the **Chipset** menu (**BIOS Menu 13**) to configure the system chipset.

BIOS Menu 13: Chipset

4.4.1 System Agent (SA) Configuration

Use the **System Agent (SA) Configuration** menu (**BIOS Menu 14**) to configure the System Agent (SA) parameters.

BIOS Menu 14: System Agent (SA) Configuration

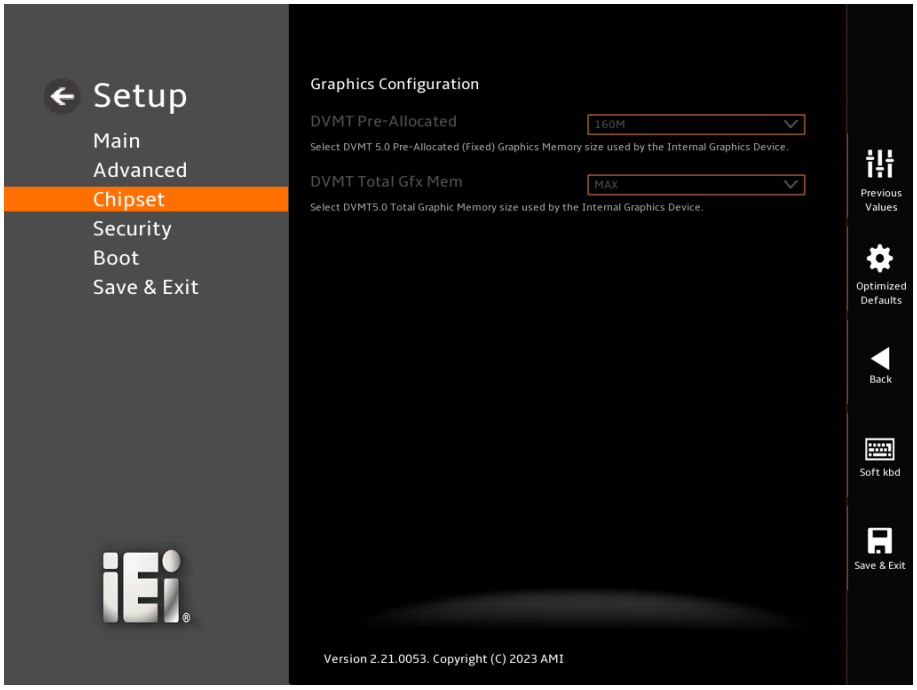
4.4.1.1 Memory Configuration

Use the **Memory Configuration** submenu (**BIOS Menu 15**) to display the memory information.

BIOS Menu 15: Memory Configuration

4.4.1.2 Graphics Configuration

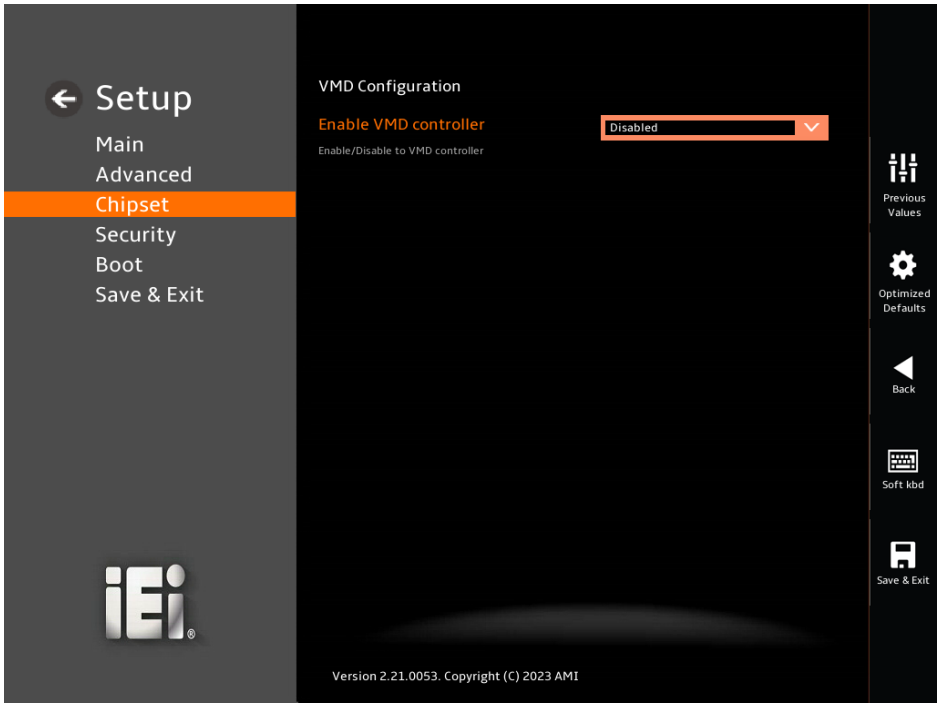
Use the **Graphics Configuration** menu (**BIOS Menu 16**) to view the graphics settings.



BIOS Menu 16: Graphics Configuration

4.4.1.3 VMD Setup Menu

Use the **VMD Setup Menu** (**BIOS Menu 17**) to configure VMD settings.



BIOS Menu 17: VMD Setup Menu

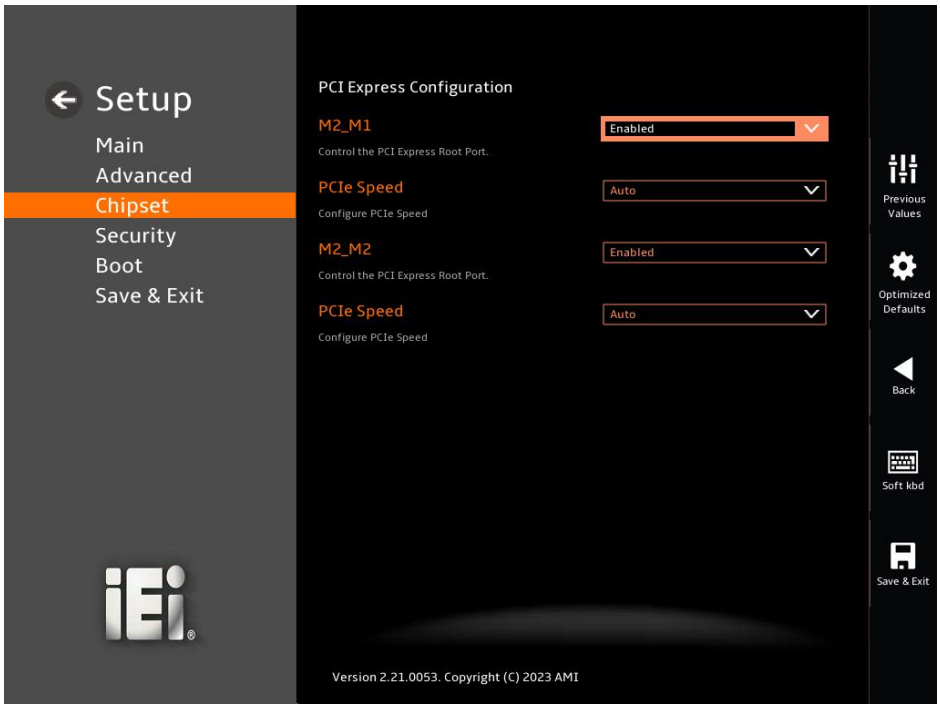
➔ **Enable VMD Controller [Disabled]**

Enable/Disable to VMD controller.

➔	**Disabled**	**DEFAULT**	Disable the VMD controller
➔	**Enabled**		Enable the VMD controller

4.4.1.4 PCI Express Configuration

Use the **PCI Express Configuration** submenu (**BIOS Menu 18**) to configure the PCI Express slots.



BIOS Menu 18: PCI Express Configuration

➔ **M2_M1 / M2_M2 [Enabled]**

Use the **M2_M1** or the **M2_M2** option to enable or disable the M.2 M key slot.

➔	**Disabled**		Disable the M.2 M key slot
➔	**Enabled**	**DEFAULT**	Enable the M.2 M key slot

➔ **PCIe Speed [Auto]**

Use the **PCIe Speed** option to configure the PCIe interface speed.

- Auto **DEFAULT**
- Gen 1
- Gen 2
- Gen 3
- Gen 4

4.4.2 PCH-IO Configuration

Use the **PCH-IO Configuration** menu (**BIOS Menu 19**) to configure the PCH-IO chipset.

BIOS Menu 19: PCH-IO Configuration

➔ **Restore on AC Power Loss [Last State]**

Use the **Restore on AC Power Loss** BIOS option to specify what state the system returns to if there is a sudden loss of power to the system.

➔ **Power Off**		The system remains turned off
➔ **Power On**		The system turns on
➔ **Last State**	**DEFAULT**	The system returns to its previous state. If it was on, it turns itself on. If it was off, it remains off.

➔ **Power Saving Function(ERP) [Disabled]**

Use the **Power Saving Function(ERP)** BIOS option to enable or reduce power consumption in the S5 state. When enabled, the system can only be powered-up using the power button.

➔ **Disabled**	**DEFAULT**	Power Saving Function support disabled
➔ **Enabled**		Power Saving Function support enabled

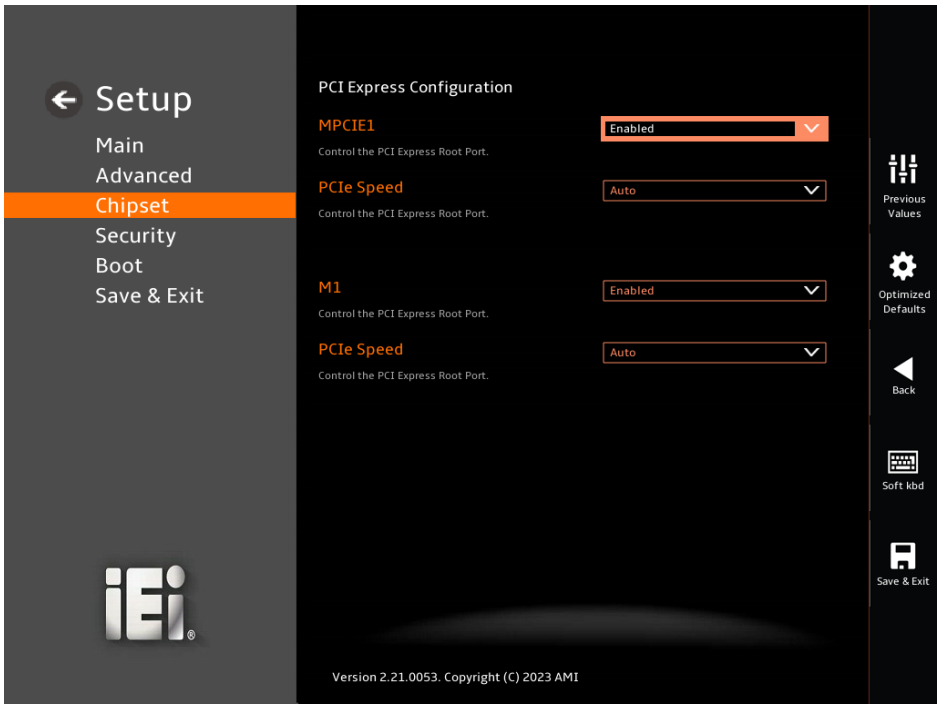
➔ **USB Power SW1 [+5V]**

Use the **USB Power SW1** BIOS option to configure the USB power source for all of the USB 3.2 Gen 2 and USB 2.0 connectors of the panel PC.

➔ **+5V**	**DEFAULT**	Set the USB power source to +5V
➔ **+5V DUAL**		Set the USB power source to +5V dual

4.4.2.1 PCI Express Configuration

Use the **PCI Express Configuration** submenu (**BIOS Menu 20**) to configure the PCI Express slots.



BIOS Menu 20: PCI Express Configuration

➔ **MPCIE1 / M1 [Enabled]**

Use the **MPCIE1** or the **M1** option to enable or disable the PCI Express root port.

➔ **Disabled** Disable the PCI Express root port

➔ **Enabled** **DEFAULT** Enable the PCI Express root port

➔ **PCIe Speed [Auto]**

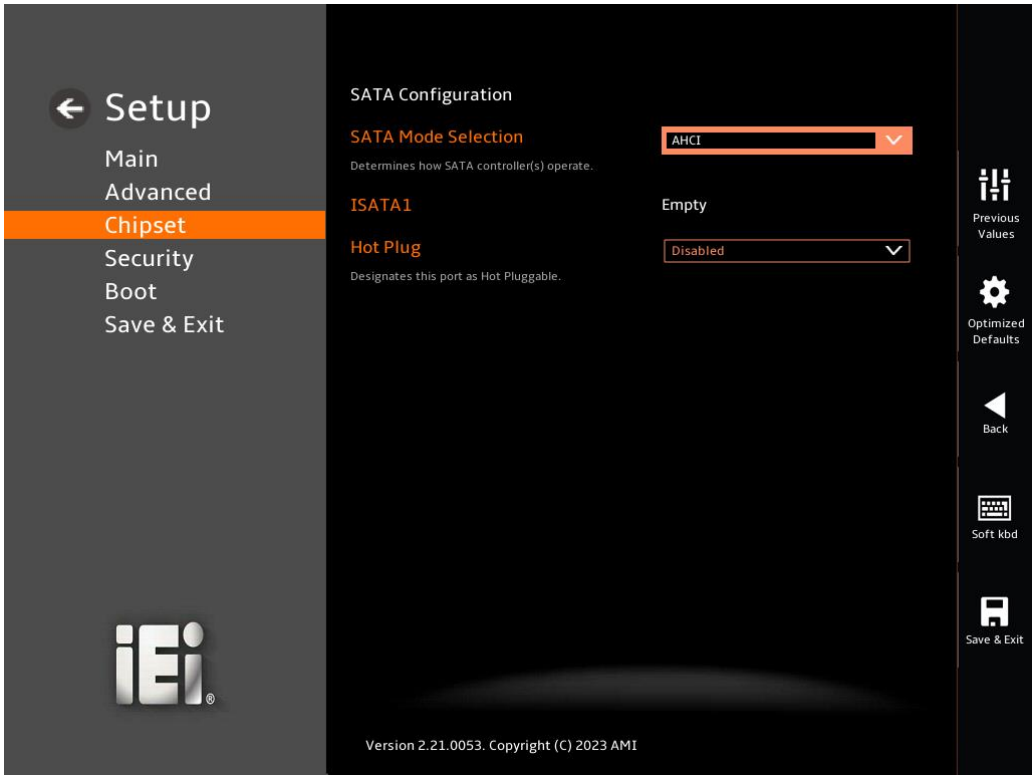
Use the **PCIe Speed** option to configure the PCIe interface speed.

- Auto **DEFAULT**
- Gen 1
- Gen 2

- Gen 3

4.4.2.2 SATA Configuration

Use the **SATA Configuration** menu (**BIOS Menu 21**) to change and/or set the configuration of the SATA devices installed in the system.



BIOS Menu 21: SATA Configuration

➔ **SATA Mode Selection [AHCI]**

Use the **SATA Mode Selection** option to determine how SATA devices operate.

➔ **AHCI** **DEFAULT** Configures SATA devices as AHCI device.

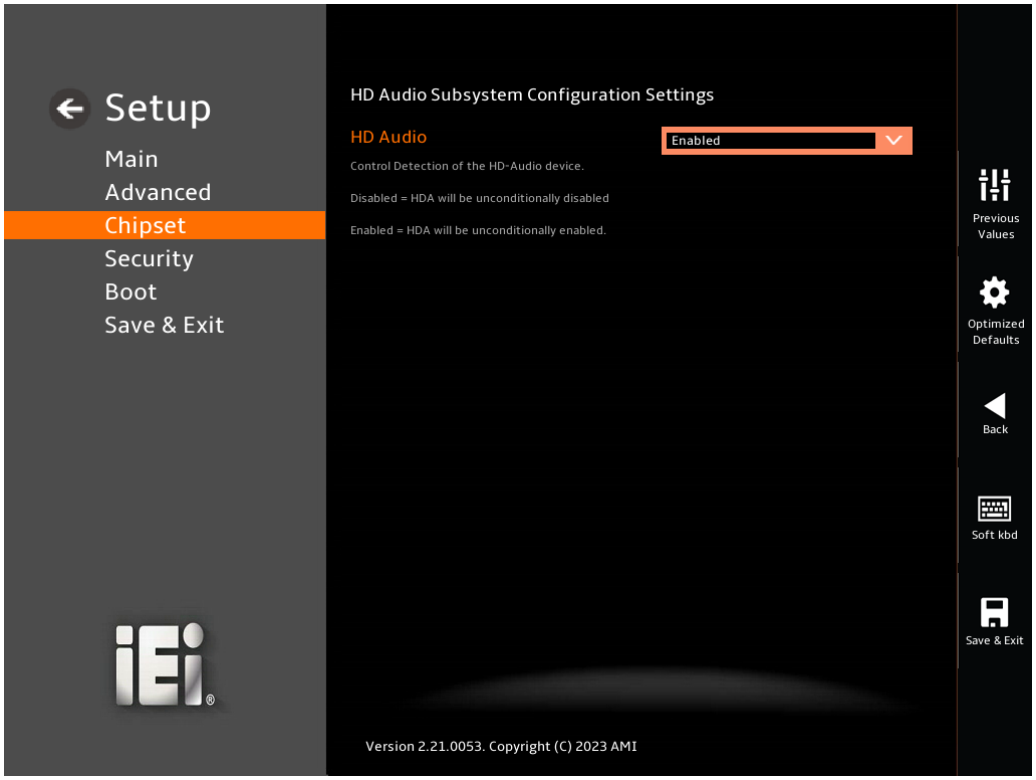
➔ **Hot Plug [Disabled]**

Use the **Hot Plug** option to enable or disable the SATA device hot plug.

➔ **Disabled**	**DEFAULT**	Disables the SATA device hot plug.
➔ **Enabled**		Enables the SATA device hot plug

4.4.2.3 HD Audio Configuration

Use the **HD Audio Configuration** submenu (**BIOS Menu 22**) to configure the High Definition Audio codec.



BIOS Menu 22: HD Audio Configuration

➔ **HD Audio [Enabled]**

Use the **HD Audio** BIOS option to enable or disable the High Definition Audio controller.

➔	**Disabled**		The High Definition Audio controller is disabled.
➔	**Enabled**	**DEFAULT**	The High Definition Audio controller is enabled.

4.5 Security

Use the **Security** menu (**BIOS Menu 23**) to set system and user passwords.

BIOS Menu 23: Security

➔ **Administrator Password**

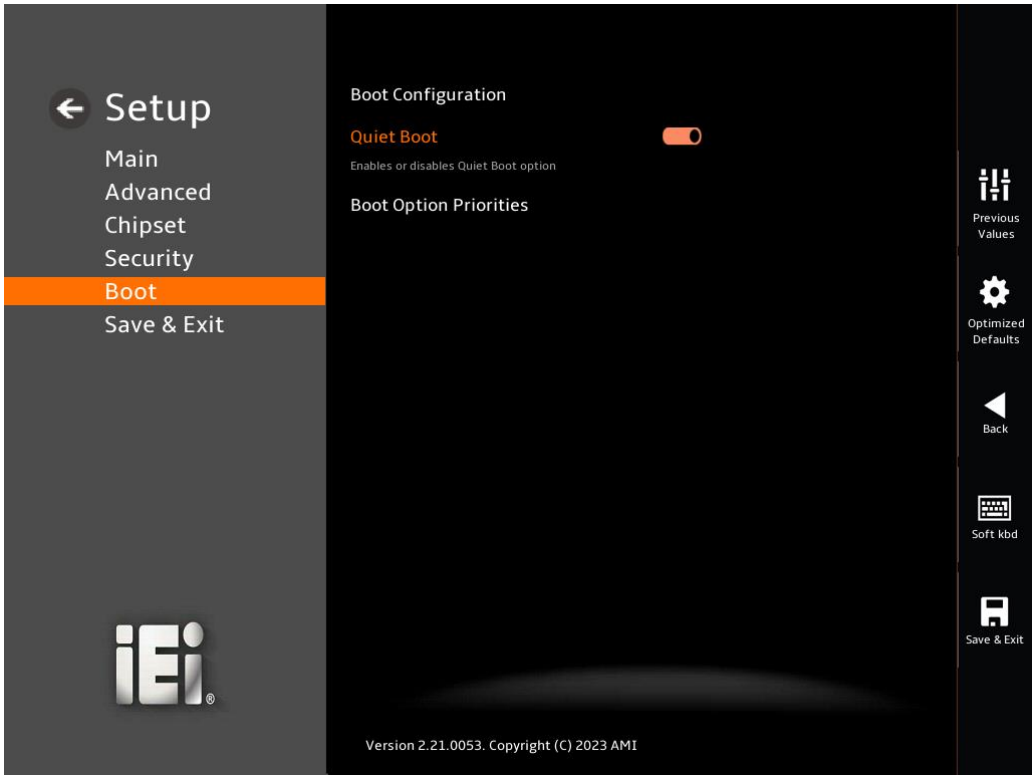
Use the **Administrator Password** field to set or change an administrator password.

➔ **User Password**

Use the **User Password** field to set or change a user password.

4.6 Boot

Use the **Boot** menu (**BIOS Menu 24**) to configure system boot options.



BIOS Menu 24: Boot

➔ **Quiet Boot [Enabled]**

Use the **Quiet Boot** BIOS option to select the screen display when the system boots.

➔ **Disabled**		Normal POST messages displayed
➔ **Enabled**	**DEFAULT**	OEM Logo displayed instead of POST messages

➔ **Boot Option Priorities**

Use the Boot Option # N to choose the system boots from the peripherals you selected.

4.7 Save & Exit

Use the **Save & Exit** menu (**BIOS Menu 25**) to load default BIOS values, optimal failsafe values and to save configuration changes.

BIOS Menu 25: Save & Exit

➔ Save Changes and Reset

Use the **Save Changes and Reset** option to save the changes made to the BIOS options and reset the system.

➔ Discard Changes and Reset

Use the **Discard Changes and Reset** option to exit the system without saving the changes made to the BIOS configuration setup program.

➔ Restore Defaults

Use the **Restore Defaults** option to load the optimal default values for each of the parameters on the Setup menus. **F3 key can be used for this operation.**

➔ **Save as User Defaults**

Use the **Save as User Defaults** option to save the changes done so far as user defaults.

➔ **Restore User Defaults**

Use the **Restore User Defaults** option to restore the user defaults to all the setup options.

Chapter

5

Driver Installation

5.1 Available Drivers

All the drivers for the POCm-W22/24C-RPL are available on IEI Resource Download Center (https://download.ieiworld.com). Type POCm-W22C-RPL or POCm-W24C-RPL, and press Enter to find all the relevant software, utilities, and documentation.

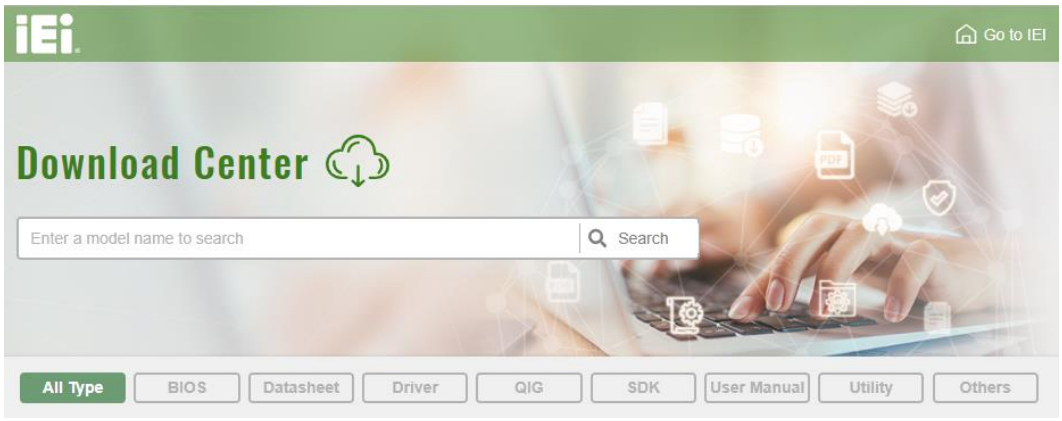
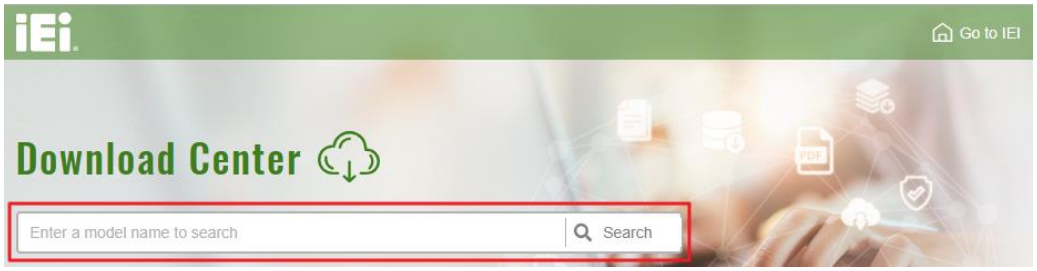


Figure 5-1: IEI Resource Download Center

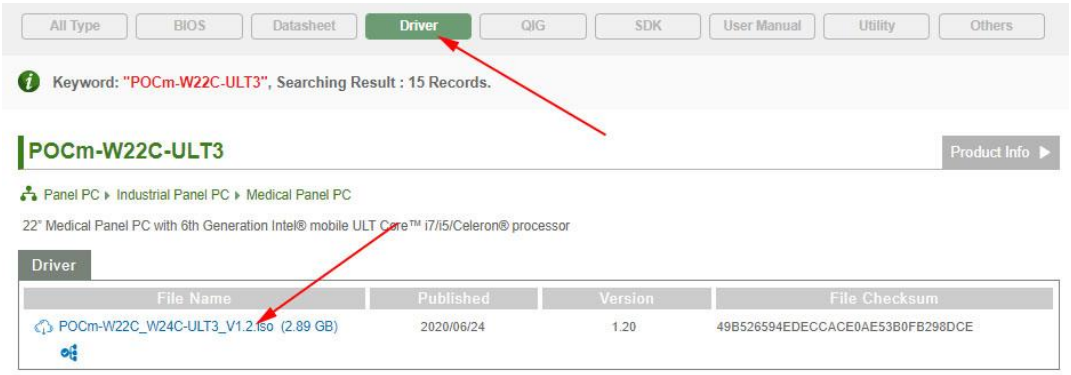
5.2 Driver Download

To download drivers from IEI Resource Download Center, follow the steps below.

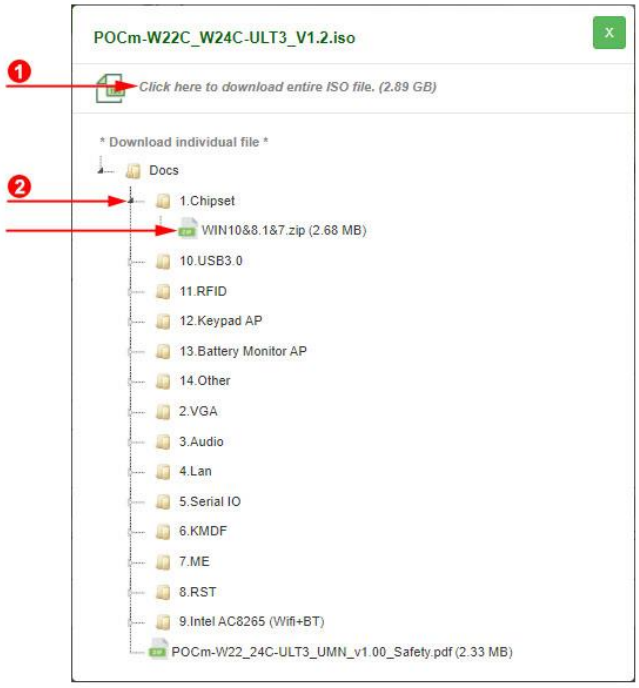
Step 1: Go to https://download.ieiworld.com. Type POCm-W22C-RPL or POCm-W24C-RPL, and press Enter.



Step 2: All product-related software, utilities, and documentation will be listed. You can choose **Driver** to filter the result.



Step 3: Click the driver file name on the page and you will be prompted with the following window. You can download the entire ISO file (❶), or click the small arrow to find an individual driver and click the file name to download (❷).



NOTE:

To install software from the downloaded ISO image file in Windows 8, 8.1 or 10, double-click the ISO file to mount it as a virtual drive to view its content.

Appendix

A

Regulatory Compliance

DECLARATION OF CONFORMITY

CE

This equipment is in conformity with the following EU directives:

- EMC Directive (2004/108/EC, 2014/30/EU)
- Low-Voltage Directive (2006/95/EC, 2014/35/EU)
- RoHS II Directive (2011/65/EU, 2015/863/EU)
- Medical Device Directive 93/42/EEC: EN 60601-1

If the user modifies and/or install other devices in the equipment, the CE conformity declaration may no longer apply.

Hereby, declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. Full text of EU declaration of conformity is available at https://download.ieiworld.com/?model=POCm-W24C-RPL

The Wi-Fi operating in the band 5150-5350 MHz shall be restricted to indoor use for countries listed in the table below:

	AT	BE	BG	CH	CY	CZ	DE
	DK	EE	EL	ES	FI	FR	HR
	HU	IE	IS	IT	LI	LT	LU
	LV	MT	NL	NO	PL	PT	RO
	SE	SI	SK	TR	UK (NI)		

a. Low Power Indoor (LPI) Wi-Fi 6E devices:

   The device is restricted to indoor use only when operating in the 5945 to 6425 MHz frequency range in Belgium (BE), Bulgaria (BG), Cyprus (CY), Czech Republic (CZ), Estonia (EE), France (FR), Iceland (IS), Ireland (IE), Lithuania (LT), Germany (DE), Netherlands (NL), Spain (ES).

b. Very Low Power (VLP) Wi-Fi 6E devices (portable devices):

   The device is not permitted to be used on Unmanned Aircraft Systems (UAS) when operating in the 5945 to 6425 MHz frequency range in Belgium (BE), Bulgaria (BG), Cyprus (CY), Czech Republic (CZ), Estonia (EE), France (FR), Iceland (IS), Ireland (IE), Lithuania (LT), Germany (DE), Netherlands (NL), Spain (ES).

The table below furnishes details regarding the frequency bands utilized and the maximum RF transmit power of the product intended for sale within the European Union, as stipulated by Article 10.8(a) and 10.8(b) of the Radio Equipment Directive (RED).

	Frequency (MHz)	Emission Level (EIRP) (dBm)
BT-1M	-	12.32
BLE-1M	2402	8.61
WLAN-2.4G (802.11ax-40)	2462	19.1
5G (U-NII-1) (802.11ax-80)	5210	20.65
5G (U-NII-2A) (802.11n-40)	5310	21
5G (U-NII-2C) (802.11ax-80)	5610	20.85
5G (U-NII-3) (802.11ax40)	5835	12.29
5G (U-NII-4) (802.11a)	5865	7.13
6E (U-NII-5) (802.11ax-160)	6025	20.5

FCC WARNING

This equipment complies with part 18 of the FCC Rules.

This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

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 commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference

at his own expense.

- 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.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

ROHS STATEMENT

The label on the product indicates this product conforms to European (EU) Restriction of Hazardous Substances (RoHS) that set maximum concentration limits on hazardous materials used in electrical and electronic equipment.

CHINA ROHS

The label on the product indicates the estimated “Environmentally Friendly Use Period” (EFUP). This is an estimate of the number of years that these substances would “not leak out or undergo abrupt change.” This product may contain replaceable sub-assemblies/components which have a shorter EFUP such as batteries and lamps. These components will be separately marked.

Appendix

B

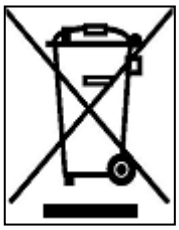
Product Disposal

CAUTION:

Risk of explosion if battery is replaced by an incorrect type. Only certified engineers should replace the on-board battery.

Dispose of used batteries according to instructions and local regulations.

- Outside the European Union - If you wish to dispose of used electrical and electronic products outside the European Union, please contact your local authority so as to comply with the correct disposal method.
- Within the European Union–The device that produces less waste and is easier to recycle is classified as electronic device in terms of the European Directive 2012/19/EU (WEEE), and must not be disposed of as domestic garbage.



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

Please follow the national guidelines for electrical and electronic product disposal.

Appendix

C

Maintenance and Cleaning Precautions

When maintaining or cleaning the POCm-W22/24C-RPL, please follow the guidelines below.

WARNING / AVERTISSEMENT

If you dropped any material or liquid such as water onto the panel PC when cleaning, unplug the power cable immediately and contact your dealer or the nearest service center. Always make sure your hands are dry when unplugging the power cable.

Si vous avez fait tomber du matériel ou du liquide tel que de l'eau sur le Panel PC lors du nettoyage, débranchez immédiatement le câble d'alimentation et contactez votre revendeur ou le centre de service le plus proche. Assurez-vous toujours que vos mains sont sèches lorsque vous débranchez le câble d'alimentation.

CAUTION / ATTENTION

- For safety reasons, turn-off the power switch and unplug the panel PC before cleaning.
  Pour des raisons de sécurité, éteignez l'interrupteur d'alimentation et débranchez le Panel PC avant de le nettoyer.
- Do not scratch or rub the screen with a hard object.
  Ne rayez pas et ne frottez pas l'écran avec un objet dur.
- Never use any of the following solvents on the medical panel PC. Harsh chemicals may cause damage to the cabinet and the touch sensor.
  N'utilisez jamais l'un des solvants suivants sur le Panel PC médical. Les produits chimiques agressifs peuvent endommager le boîtier et le capteur tactile.
  Thinner Spray-type cleaner, Benzene, Wax, Abrasive cleaner, Acid or Alkaline solvent.
  Diluant nettoyant de type spray, benzène, cire, nettoyant abrasif, solvant acide ou alcalin.

C.1.1 Maintenance and Cleaning

Prior to cleaning any part or component of the POCm-W22/24C-RPL, please read the details below.

- To clean the POCm-W22/24C-RPL,
  - remove dirt with a lightly moistened cloth. Then wipe the external chassis with a soft dry cloth.
  - use 75% ethanol alcohol to clean the external chassis.
- Cleaning frequency: follow the cleaning method guidelines of the hospital.
- Except for the LCD panel, never spray or squirt liquids directly onto any other components.
- The interior of the POCm-W22/24C-RPL does not require cleaning. Keep fluids away from the POCm-W22/24C-RPL interior.
- Never drop any objects or liquids through the openings of the POCm-W22/24C-RPL.

C.1.2 Cleaning Tools

Some components in the POCm-W22/24C-RPL may only be cleaned using a product specifically designed for the purpose. In such case, the product will be explicitly mentioned in the cleaning tips. Below is a list of items to use when cleaning the POCm-W22/24C-RPL.

- ***Cloth*** – Although paper towels or tissues can be used, a soft, clean piece of cloth is recommended when cleaning the POCm-W22/24C-RPL.
- ***Water/Ethanol alcohol*** – A cloth moistened with water or 75% ethanol alcohol can be used to clean the POCm-W22/24C-RPL.
- ***Using solvents*** – The use of solvents is not recommended when cleaning the POCm-W22/24C-RPL as they may damage the plastic parts.
- ***Cotton swabs*** - Cotton swaps moistened with water are excellent tools for wiping hard to reach areas.
- ***Foam swabs*** - Whenever possible, it is best to use lint free swabs such as foam swabs for cleaning.

Appendix

D

Symbol Definitions

The following symbols appear on the product, its labeling, or the product packing. Each symbol carries a special definition, as defined below:

	Direct current		Fragile, handle with care
	AC current		Keep dry
	Protective earth (ground)		This side up
	Date of manufacture		Indicates the manufacturer
	Stand-by		Refer to instruction manual
	Indicates proof of conformity to applicable European Economic Community Council directives and to harmonized standards published in the official journal of the European Communities.		
	Tested to comply with FCC Class B standard.		
	This symbol indicates that the waste of electronic equipment must not be disposed as unsorted municipal waste and must be collected separately. Please contact the manufacturer or other authorized disposal company to decommission your equipment.		
	This product is recyclable.		

Appendix

E

BIOS Menu Options

Appendix

F

Watchdog Timer

NOTE:

The following discussion applies to DOS. Contact IEI support or visit the IEI website for drivers for other operating systems.

The Watchdog Timer is a hardware-based timer that attempts to restart the system when it stops working. The system may stop working because of external EMI or software bugs. The Watchdog Timer ensures that standalone systems like ATMs will automatically attempt to restart in the case of system problems.

A BIOS function call (INT 15H) is used to control the Watchdog Timer.

INT 15H:

AH – 6FH Sub-function:	
AL – 2:	Sets the Watchdog Timer's period.
BL:	Time-out value (Its unit-second is dependent on the item "Watchdog Timer unit select" in CMOS setup).

Table F-1: AH-6FH Sub-function

Call sub-function 2 to set the time-out period of Watchdog Timer first. If the time-out value is not zero, the Watchdog Timer starts counting down. When the timer value reaches zero, the system resets. To ensure that this reset condition does not occur, calling sub-function 2 must periodically refresh the Watchdog Timer. However, the watchdog timer is disabled if the time-out value is set to zero.

A tolerance of at least 10% must be maintained to avoid unknown routines within the operating system (DOS), such as disk I/O that can be very time-consuming.

NOTE:

The Watchdog Timer is activated through software. The software application that activates the Watchdog Timer must also deactivate it when closed. If the Watchdog Timer is not deactivated, the system will automatically restart after the Timer has finished its countdown.

EXAMPLE PROGRAM:

```
; INITIAL TIMER PERIOD COUNTER

;
W_LOOP:
;

        MOV     AX, 6F02H       ;setting the time-out value
        MOV     BL, 30          ;time-out value is 48 seconds
        INT     15H

;
; ADD THE APPLICATION PROGRAM HERE
;

        CMP     EXIT_AP, 1      ;is the application over?
        JNE     W_LOOP          ;No, restart the application

        MOV     AX, 6F02H       ;disable Watchdog Timer
        MOV     BL, 0           ;
        INT     15H

;
; EXIT ;
```

Appendix

G

Hazardous Materials Disclosure

The details provided in this appendix are to ensure that the product is compliant with the Peoples Republic of China (China) RoHS standards. The table below acknowledges the presences of small quantities of certain materials in the product, and is applicable to China RoHS only.

A label will be placed on each product to indicate the estimated "Environmentally Friendly Use Period" (EFUP). This is an estimate of the number of years that these substances would "not leak out or undergo abrupt change." This product may contain replaceable sub-assemblies/components which have a shorter EFUP such as batteries and lamps. These components will be separately marked.

Please refer to the following table.

Part Name	Toxic or Hazardous Substances and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (CR(VI))	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)
Housing	O	O	O	O	O	O
Display	O	O	O	O	O	O
Printed Circuit Board	O	O	O	O	O	O
Metal Fasteners	O	O	O	O	O	O
Cable Assembly	O	O	O	O	O	O
Fan Assembly	O	O	O	O	O	O
Power Supply Assemblies	O	O	O	O	O	O
Battery	O	O	O	O	O	O

O: This toxic or hazardous substance is contained in all of the homogeneous materials for the part is below the limit requirement in SJ/T11363-2006 (now replaced by GB/T 26572-2011).

X: This toxic or hazardous substance is contained in at least one of the homogeneous materials for this part is above the limit requirement in SJ/T11363-2006 (now replaced by GB/T 26572-2011).

此附件旨在确保本产品符合中国 RoHS 标准。以下表格标示此产品中某有毒物质的含量符合中国 RoHS 标准规定的限量要求。

本产品上会附有"环境友好使用期限"的标签，此期限是估算这些物质"不会有泄漏或突变"的年限。本产品可能包含有较短的环境友好使用期限的可替换元件，像是电池或灯管，这些元件将会单独标示出来。

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (CR(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
壳体	O	O	O	O	O	O
显示	O	O	O	O	O	O
印刷电路板	O	O	O	O	O	O
金属螺帽	O	O	O	O	O	O
电缆组装	O	O	O	O	O	O
风扇组装	O	O	O	O	O	O
电力供应组装	O	O	O	O	O	O
电池	O	O	O	O	O	O

O: 表示该有毒有害物质在该部件所有物质材料中的含量均在 SJ/T 11363-2006 (现由 GB/T 26572-2011 取代) 标准规定的限量要求以下。

X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T 11363-2006 (现由 GB/T 26572-2011 取代) 标准规定的限量要求。

Appendix

H

EMC Test Summary

Guidance and manufacturer's declaration – electromagnetic emissions		
The model POCm-W22/24C-RPL is intended for use in the electromagnetic environment specified below. The customer or the user of the model POCm-W22/24C-RPL should assure that it is used in such an environment.		
Emissions test	**Compliance**	**Electromagnetic environment – guidance**
RF emissions CISPR 11	Class B Group 1	The model POCm-W22/24C-RPL 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 Group 1	The model POCm-W22/24C-RPL 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	Complies	

Recommended separation distances between portable and mobile RF communications equipment and the model POCm-W22/24C-RPL

The model POCm-W22/24C-RPL is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the model POCm-W22/24C-RPL can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the model POCm-W22/24C-RPL 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 meters (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			
The model POCm-W22/24C-RPL is intended for use in the electromagnetic environment specified below. The customer or the user of the model POCm-W22/24C-RPL should assure that it is used in such an environment.			
Immunity test	**IEC 60601-1-2 test level**	**Compliance level**	**Electromagnetic environment – guidance**
Electrostatic discharge (ESD) IEC 61000-4-2	±8 kV contact ±15 kV air	±8 kV contact ±15 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 power supply 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	0% UT (100 % dip in UT) for 0.5 cycle 0 % UT (100 % dip in UT) for 1 cycles 70 % UT (30 % dip in UT) for 25 cycles 0 % UT (100 % dip in UT) for 250 cycles	0 % UT (100 % dip in UT) for 0.5 cycle 0 % UT (100 % dip in UT) for 1 cycles 70 % UT (30 % dip in UT) for 25 cycles 0 % UT (100 % dip in UT) for 250 cycles	Mains power quality should be that of a typical commercial or hospital environment. If the user of the model POCm-W22/24C-RPL requires continued operation during power mains interruptions, it is recommended that the model POCm-W22/24C-RPL be powered from an uninterruptible power supply or a battery.

Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE: *U*T is the a.c. mains voltage prior to application of the test level.			

Guidance and manufacturer's declaration – electromagnetic immunity			
The model POCm-W22/24C-RPL is intended for use in the electromagnetic environment specified below. The customer or the user of the model POCm-W22/24C-RPL should assure that it is used in such an environment.			
Immunity test	**IEC 60601-1-2 test level**	**Compliance level**	**Electromagnetic environment – guidance**
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	Vrms	Portable and mobile RF communications equipment should be used no closer to any part of the model POCm-W22/24C-RPL, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance** $d = 1,2\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2,5 GHz	V/m	$d = 1,2\sqrt{P}$ 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: 

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 POCm-W22/24C-RPL is used exceeds the applicable RF compliance level above, the model POCm-W22/24C-RPL should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the model POCm-W22/24C-RPL.

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