IEI Integration Corp.

MODEL:

POCm-W22/24C-ULT3

Medical Panel PC with 6th Gen. Intel® Core™ / Celeron® CPU, 4 GB DDR4 RAM, Wi-Fi 802.11a/b/g/n/ac, P-CAP Touchscreen, Three Battery Bays, 5-Megapixel Camera and Microphone

User Manual

Rev. 1.10 - March 5, 2021

RoHS Lead Free

Revision

Date	Version	Changes
March 5, 2021	1.10	Updated Section 2.3: Optional Items
August 17, 2018	1.00	Initial release

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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.

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1

Introduction

1.1 Overview

Figure 1-1: POCm-W22/24C-ULT3 Medical Panel PC

The POCm-W22/24C-ULT3 is a 6th generation Intel® Core™ i5-6300U processor powered medical-grade panel PC with a rich variety of functions and peripherals. All POCm-W22/24C-ULT3 models are designed for easy and simplified integration into point-of-care (POC) applications. The system comes with 4 GB of preinstalled DDR4 memory and supports a maximum of 32 GB ensuring smooth data throughputs with reduced bottlenecks and fast system access.

Two RS-232/422/485 serial ports, four USB 3.0 ports and two USB 2.0 ports provide simplified connectivity to a variety of external peripheral devices. Wi-Fi 802.11a/b/g/n/ac high speed wireless and two RJ-45 GbE 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 for 8~16 hours.

NOTE:

The POCm-W22/24C-ULT3 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 six models in the POCm-W22/24C-ULT3 series. All models are preinstalled with one 4 GB DDR4 memory module and an 802.11a/b/g/n/ac Wi-Fi module. The model numbers and model variations are listed below.

Model	CPU	Size
POCm-W22C-ULT3-C/PC/4G	Intel® Celeron® 3855U	21.5"
POCm-W22C-ULT3-i5/PC/4G	Intel® Core™ i5-6300U	21.5"
POCm-W22C-ULT3-i7/PC/4G	Intel® Core™ i7-6600U	21.5"
POCm-W24C-ULT3-C/PC/4G	Intel® Celeron® 3855U	23.8"
POCm-W24C-ULT3-i5/PC/4G	Intel® Core™ i5-6300U	23.8"
POCm-W24C-ULT3-i7/PC/4G	Intel® Core™ i7-6600U	23.8"

Table 1-1: Model Variations

1.3 Features

The POCm-W22/24C-ULT3 features are listed below:

- Fanless medical-grade panel PC with anti-bacteria cover
- Projected capacitive type touchscreen allows 10-point multi-touch, multi-layer gloves and water-on-screen operation
- Intel® Celeron® 3855U / Core™ i5-6300U / Core™ i7-6600U processor
- Preinstalled with 4 GB of DDR4 memory (system max. 32 GB)
- Two HDMI ports support additional displays
- Two GbE RJ-45 connectors and Wi-Fi 802.11a/b/g/n/ac high speed wireless
- Two internal 3 W speakers
- Four USB 3.0 ports and two USB 2.0 ports
- Two RS-232/422/485 DB-9 connector
- Support three hot-swappable batteries ideal for non-powered medical cart use
- IP 65 compliant front panel

1.4 Front Panel

The front side of the POCm-W22/24C-ULT3 is a flat-bezel panel with a TFT LCD screen surrounded by a PC+ABS plastic frame (**Figure 1-2**).

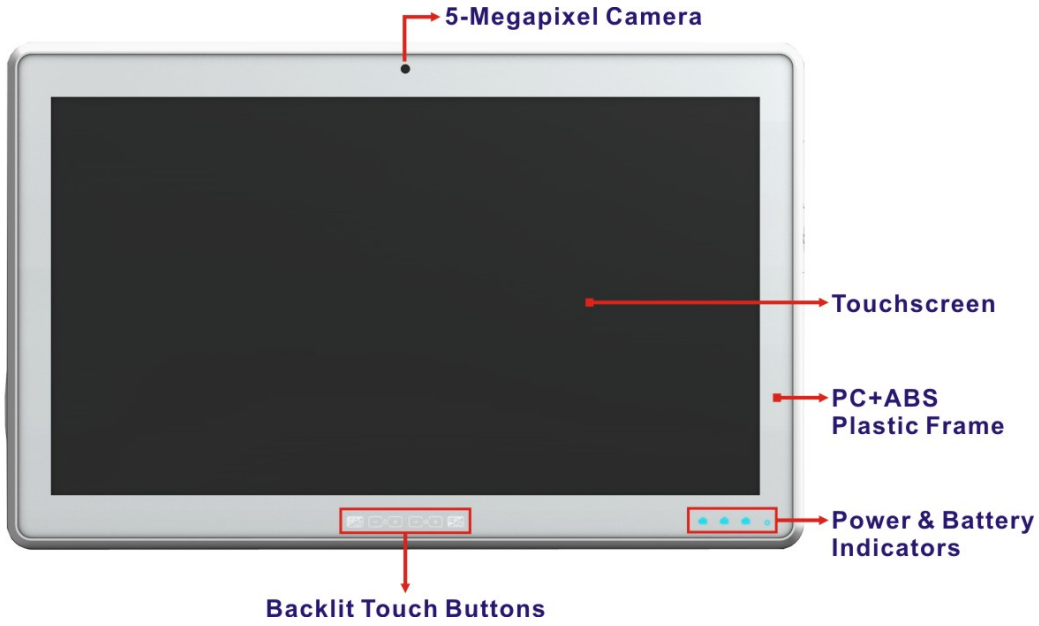


Figure 1-2: Front View

1.4.1 Backlit Touch Buttons

The front panel of the POCm-W22/24C-ULT3 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: long-press for 5 seconds.
	–: Brightness down (minimum brightness: 30%) +: Brightness up (maximum brightness: 100%)
	–: Volume down +: Volume up
	Touch lock for cleaning: long-press for 3 seconds to lock or unlock the touch function of the screen. The touch buttons blink when the touch function is locked. The lock will be automatically released after 60 seconds. LCD on/off: long-press for 5 seconds
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-ULT3 are shown below.

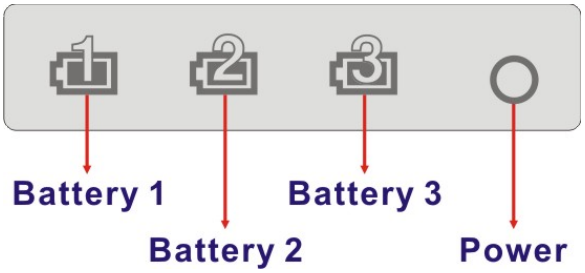


Figure 1-4: LED Indicators

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 Bottom Panel

The bottom panel of the POCm-W22/24C-ULT3 has the following connectors and switches (**Figure 1-5**):

- 1 x DC input jack
- 2 x HDMI output connector
- 2 x GbE LAN (RJ-45 connector)
- 2 x RS-232/422/485 serial port (DB-9 connector)
- 4 x USB 3.0 connectors
- 1 x AT/ATX switch
- 1 x Reset button
- 1 x Digital microphone

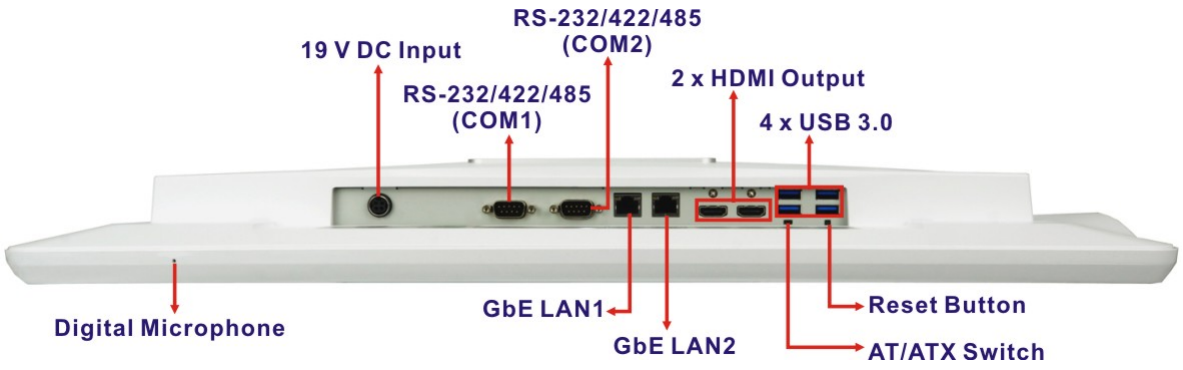


Figure 1-5: Bottom Panel

1.6 Side Panels

The side panels have several I/O interfaces which are protected by waterproof covers. The E-Window for I/O interface allows expansion by installing a PCIe Mini card.

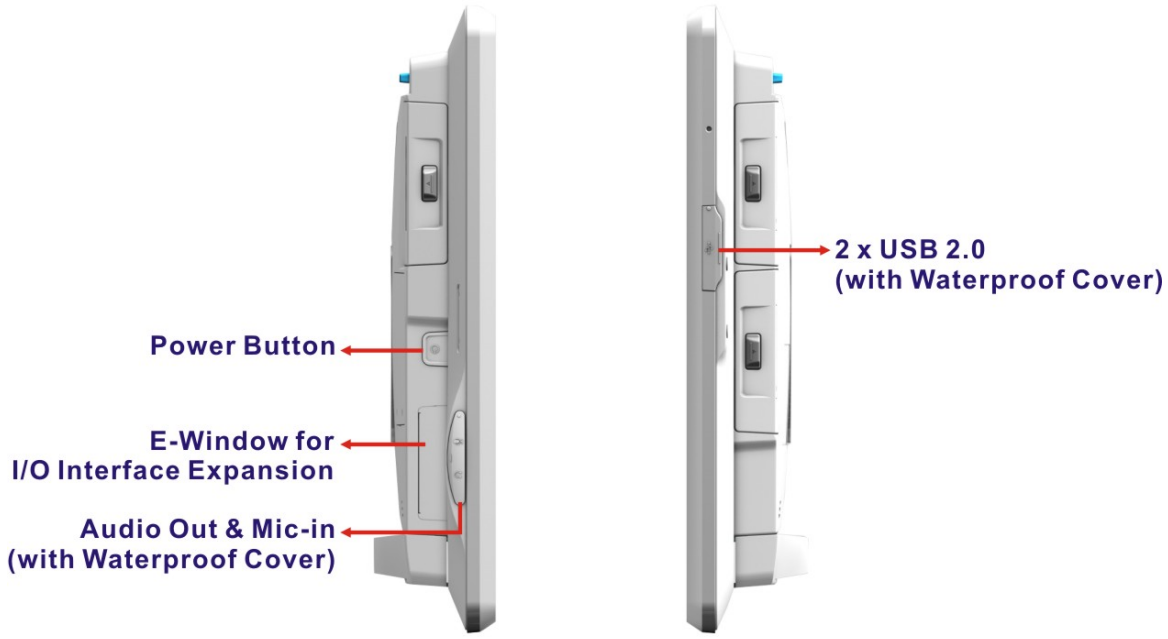


Figure 1-6: Side Views

1.7 Rear Panel

The rear panel contains three battery bays, two 3 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.

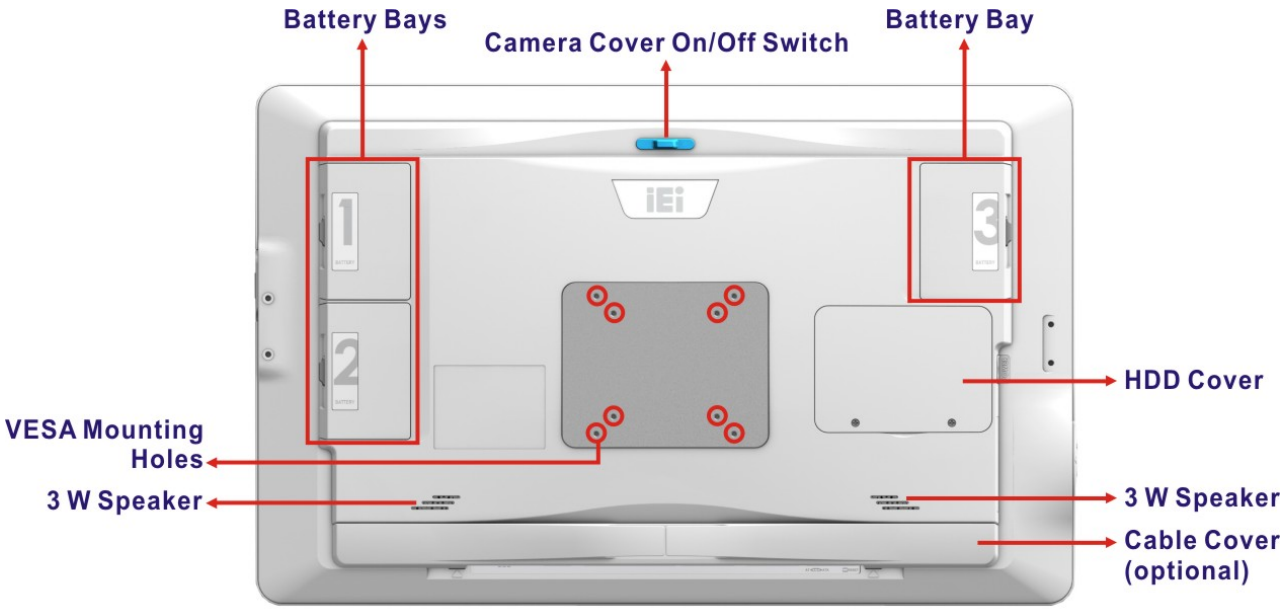


Figure 1-7: Rear View

1.8 System Specifications

The technical specifications for the POCm-W22/24C-ULT3 systems are listed below.

	POCm-W22C-ULT3	POCm-W24C-ULT3
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)	250	250
Contrast Ratio	1000:1	1000:1
LCD Color	16.7M (RGB 6-bit)	16.7M (RGB 6-bit + Hi-FRC)
Pixel Pitch (mm)	0.24825 (H) x 0. 24825 (V)	0.2745 (H) x 0. 2745 (V)
Viewing Angle (H-V)	170°/160°	178°/178°
Backlight MTBF	30,000 hrs (LED backlight)	30,000 hrs (LED backlight)
Touchscreen	Projected capacitive type with USB interface	
Multi-touch	10-point touch	
Touch Controller	EETI	
Surface Hardness	6H	
System		
CPU	Intel® Celeron® 3855U / Intel® Core™ i5-6300U / Intel® Core™ i7-6600U	
Memory	Two 260-pin 2133/1866 MHz dual-channel non-ECC unbuffered DDR4 SO-DIMMs supported (system max. 32 GB) Preinstalled with 4 GB memory	
GbE Controller	LAN1: Intel I211 Ethernet controller LAN2: Intel® I219 Ethernet controller	
I/O Ports	1 x DC input jack 2 x HDMI output connector 2 x GbE LAN (RJ-45 connector) 2 x RS-232/422/485 serial port (DB-9 connector)	

	4 x USB 3.0 connectors 2 x USB 2.0 connectors (side panel) 1 x Audio out (side panel) 1 x Mic-in (side panel) 1 x Digital microphone
Storage	One 2.5” SATA 6Gb/s HDD bay
Audio	Two 3 W speakers
Webcam & Microphone	5-megapixel CMOS front-facing camera with auto focus and digital microphone
Expansion Interface	2 x M.2 M-key 2242/2260/2280 slot (PCIe + SATA) with RAID 1 x M.2 A-/E-key 2242 slot (PCIe + USB) 1 x Full-size/Half-size PCIe Mini (PCIe + USB)
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	802.11a/b/g/n/ac dual band, Bluetooth v4.2 (M.2 2230 module, Intel® 8265)
LAN	Two GbE LAN connectors

Physical			
Construction Material	PC+ABS plastic with anti-bacterial material		
Mounting	Wall and stand mounting 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	8.18 kg	
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	IP 65 compliant front panel		
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 x Hot-swappable battery bay		

Table 1-4: System Specifications

1.9 Dimensions

The POCm-W22C-ULT3 dimensions are shown below.

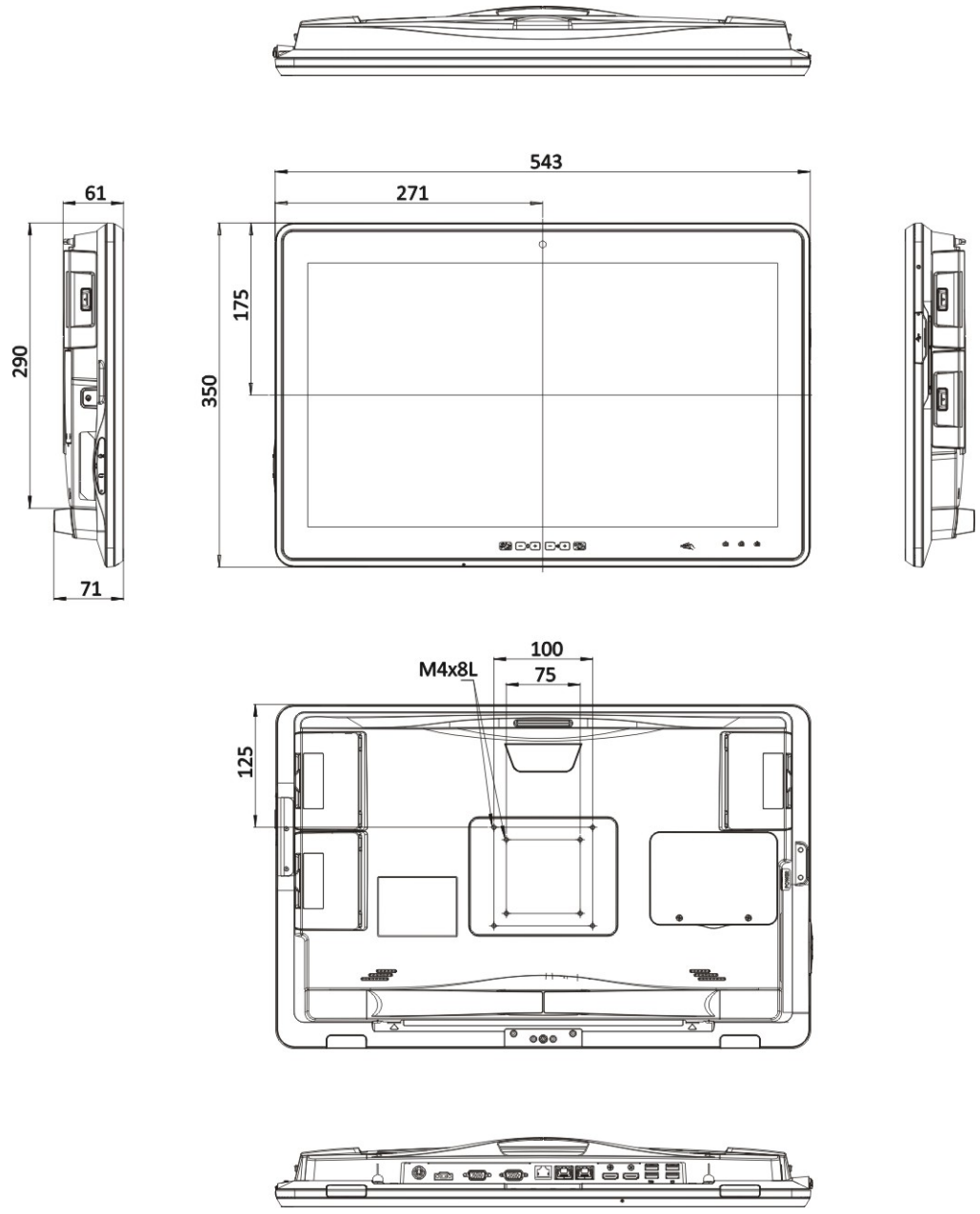


Figure 1-8: POCm-W22C-ULT3 Dimensions (mm)

The POCm-W24C-ULT3 dimensions are shown below.

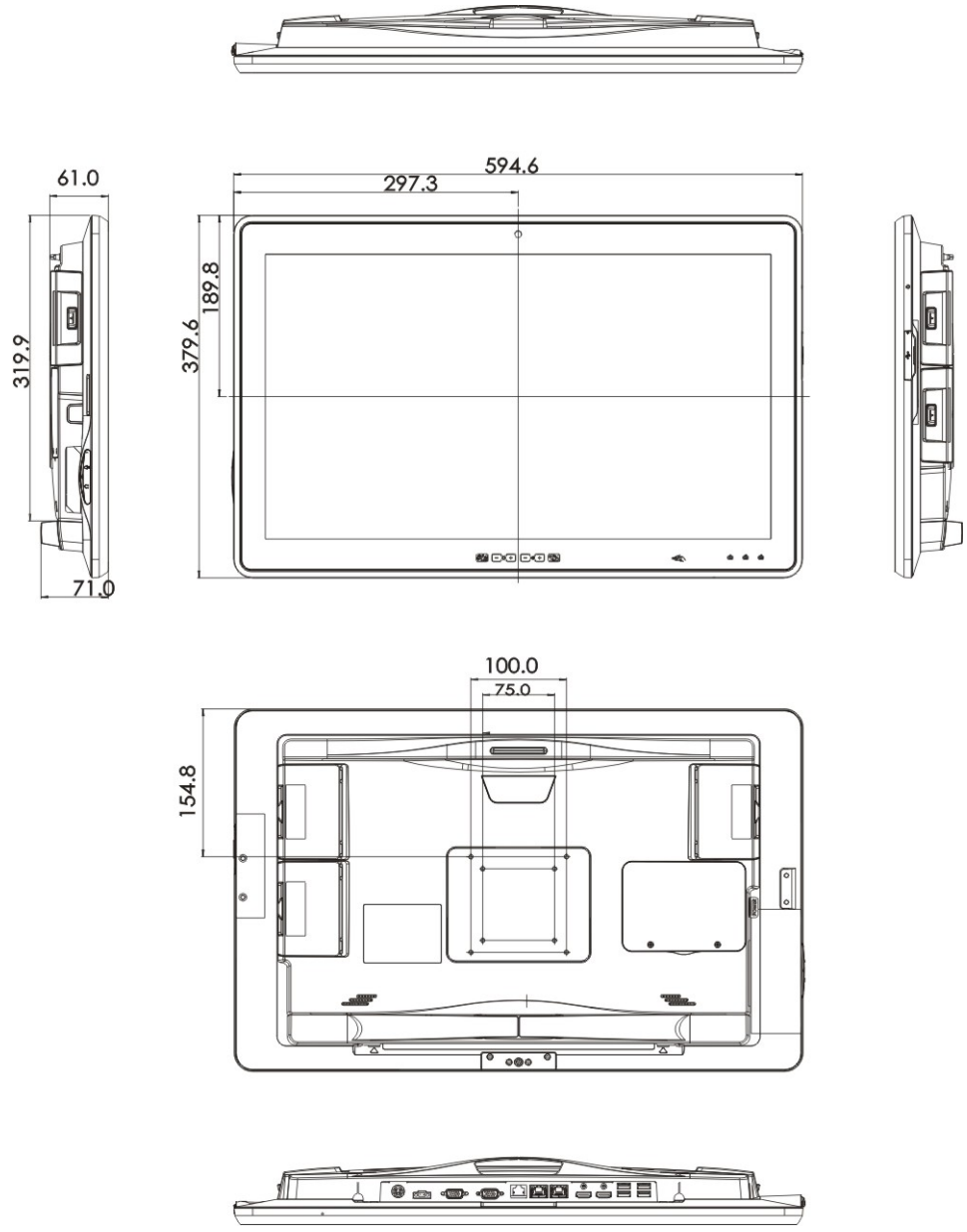


Figure 1-9: POCm-W24C-ULT3 Dimensions (mm)

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.

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-ULT3 was purchased from or contact an IEI sales representative directly by sending an email to sales@ieiworld.com.

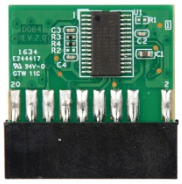
The POCm-W22/24C-ULT3 medical panel PC is shipped with the following components:

Quantity	Item	Image
1	POCm-W22/24C-ULT3 medical panel PC	
1	150 W FSP FSP150M-ABA medical-grade power adapter (**P/N**: 63040-010150-400-RS)	
1	Power cord (EU) (**P/N**: 32702-000200-100-RS)	
4	Round-head screw (M3*3) for HDD installation (**P/N**: 44003-030032-RS)	

2.3 Optional Items

The following are optional components which may be separately purchased:

Item and Part Number	Image
Li-ion battery pack, 3S3P, 7800 mAh (**P/N**: MEDP-HSBAT-R10)	
Cable cover (**P/N**: 43106-0272Q7-00-RS)	
VESA 100 wall mount kit (four M3*6 screws included) (**P/N**: AFLWK-19B)	
Arm (**P/N**: ARM-31-RS)	
Stand (**P/N**: STAND-A21-R10)	

Item and Part Number	Image
Mifare RFID reader compliant with ISO 14443A, ISO 14443B and ISO 15693 protocols (assemble-to-order) (**P/N**: MEDP-MF-RFID-R10)	
20-pin Infineon TPM 2.0 module, software management tool, firmware v5.5 (assemble-to-order) (**P/N**: TPM-IN02-R20)	
6-slot charging station dock, 300 W (**P/N**: POCm-DOCKING-6BAY-R10)	

Chapter

3

Installation

3.1 Safety Precautions

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

- ***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.***
- ***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-ULT3 is opened.
- ***Make sure the power is turned off and the power cord is disconnected*** whenever the POCm-W22/24C-ULT3 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-ULT3 chassis is opened when the POCm-W22/24C-ULT3 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-ULT3.
- ***If considerable amounts of dust, water, or fluids enter the POCm-W22/24C-ULT3***, turn off the power supply immediately, unplug the power cord, and contact the POCm-W22/24C-ULT3 vendor.

- **DO NOT**:
  - Drop the POCm-W22/24C-ULT3 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-ULT3 may result in permanent damage to the POCm-W22/24C-ULT3 and severe injury to the user.

Electrostatic discharge (ESD) can cause serious damage to electronic components, including the POCm-W22/24C-ULT3. Dry climates are especially susceptible to ESD. It is therefore critical that whenever the POCm-W22/24C-ULT3 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-ULT3, place it on an anti-static pad. This reduces the possibility of ESD damaging the POCm-W22/24C-ULT3.
- ***Only handle the edges of the PCB***: When handling the PCB, hold the PCB by the edges.

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.

WARNING:

DO NOT power up the POCm-W22/24C-ULT3 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.

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.

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 lift the HDD bracket off the panel PC.

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**).

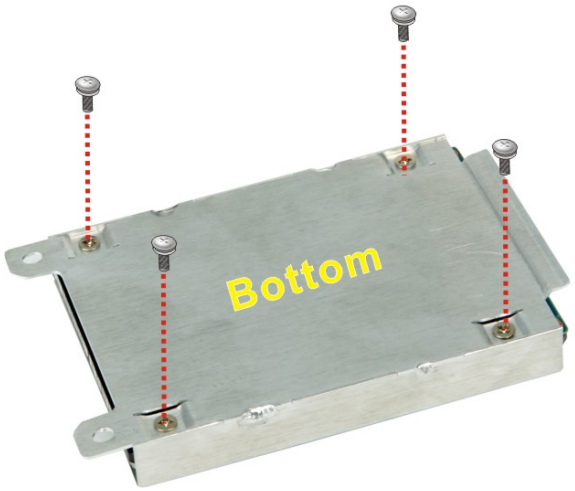


Figure 3-3: Secure HDD

Step 6: Place the HDD and slide it to securely connect to the SATA connector of the POCm-W22/24C-ULT3 (**Figure 3-4**).

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

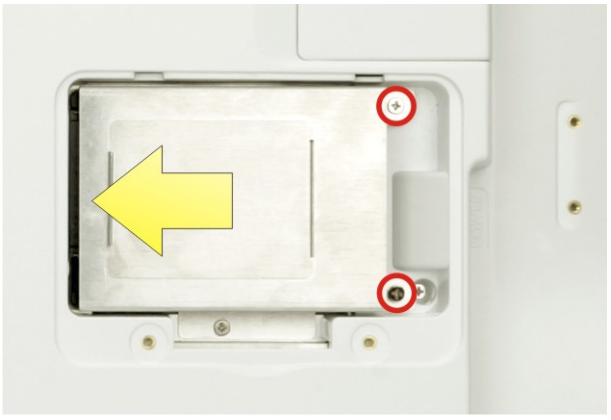


Figure 3-4: HDD Installation

Step 8: Re-install the HDD cover.

3.6 M.2 M-Key Module Installation

NOTE:

The two M.2 M-key slots are both set to PCIe mode by default. Configure the M.2 slots as mSATA interface in BIOS before installing mSATA modules (please refer to **Section 4.4.2.1**). Please be noted that the C SKUs do not support M.2 mSATA modules due to Intel® Celeron® 3855U CPU limitation.

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 retention screws shown below to lift the bracket off the panel PC.

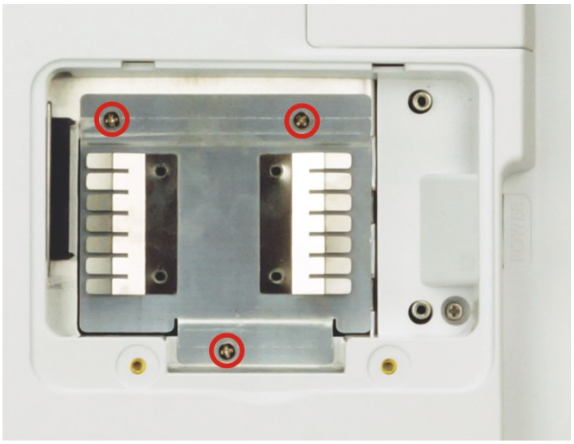


Figure 3-5: Bracket Retention Screws

Step 3: Locate the M.2 M-key slots. Each slot has its brass standoff on the side for installation.

Step 4: Remove the screw on the brass standoff first, and then remove the standoff.

Install the standoff into the corresponding screw hole based on the size of the M.2 module to be installed. See **Figure 3-6**.

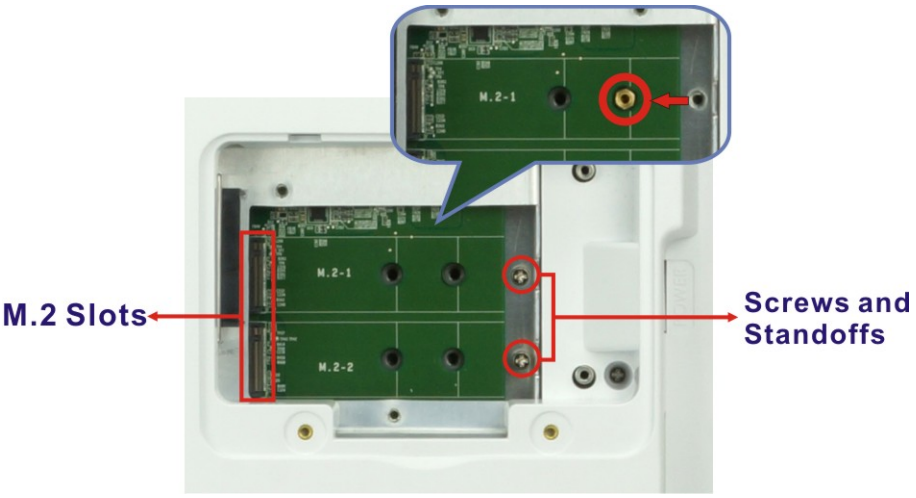


Figure 3-6: M.2 Slots and Standoffs

Step 5: 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 (**Figure 3-7**).

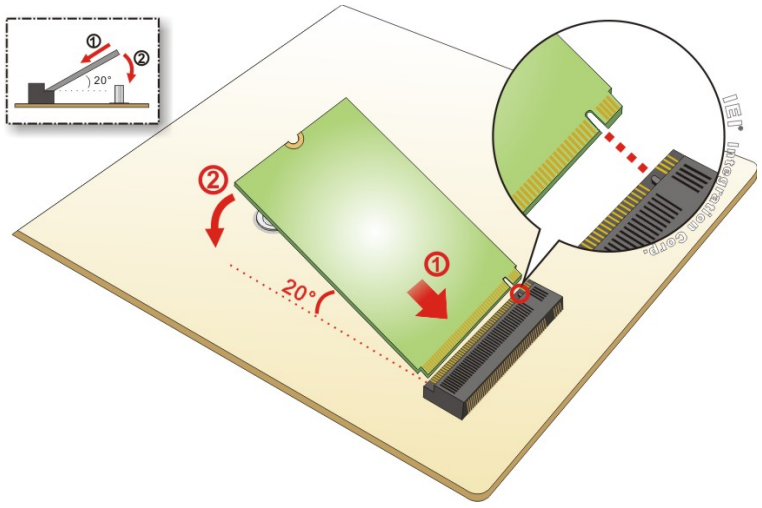


Figure 3-7: Inserting the M.2 Module into the Slot at an Angle

Step 6: Secure the M.2 module with the previously removed retention screw (**Figure 3-8**).

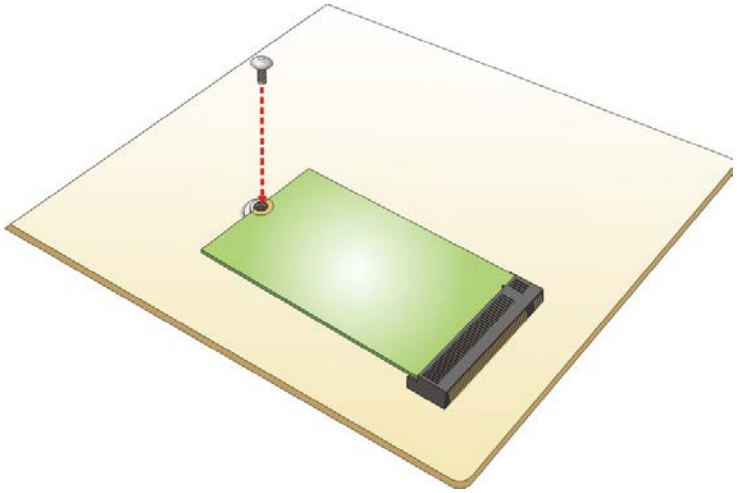


Figure 3-8: Securing the M.2 Module

Step 7: 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.
- Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an 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.
- A battery subjected to extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas.

The POCm-W22/24C-ULT3 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 3-9: Battery Cover Button

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

Figure 3-10: 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.

- Capacity: 7800 mAh
- Normal voltage: 11.1V
- Charge voltage: 12.6 V
- Continuous charge current: 2.6 A
- Continuous discharge current: 5 A
- Storage temperature: 0ºC ~ 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 Using RFID Reader (Optional)

The POCm-W22/24C-ULT3 may come with an optional RFID reader pre-installed inside the bottom of the front panel. To use the RFID reader, follow the steps below.

Step 1: Install the RFID driver (refer to **Section 5.10**).

Step 1: Locate the **IRFR-100.exe** file in the following driver directory: \11.RFID\D490.

Copy the **IRFR-100.exe** program to the desktop.

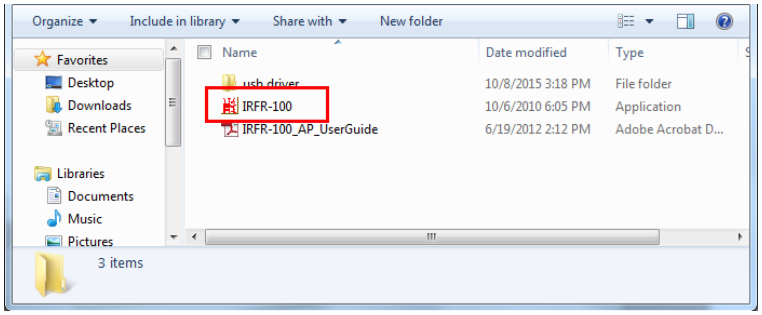


Figure 3-11: RFID Program Location

Step 2: Double click the **IRFR-100** icon on the desktop.

Figure 3-12: IRFR-100 Icon

Step 3: The IRFR-100 window appears (**Figure 3-13**).

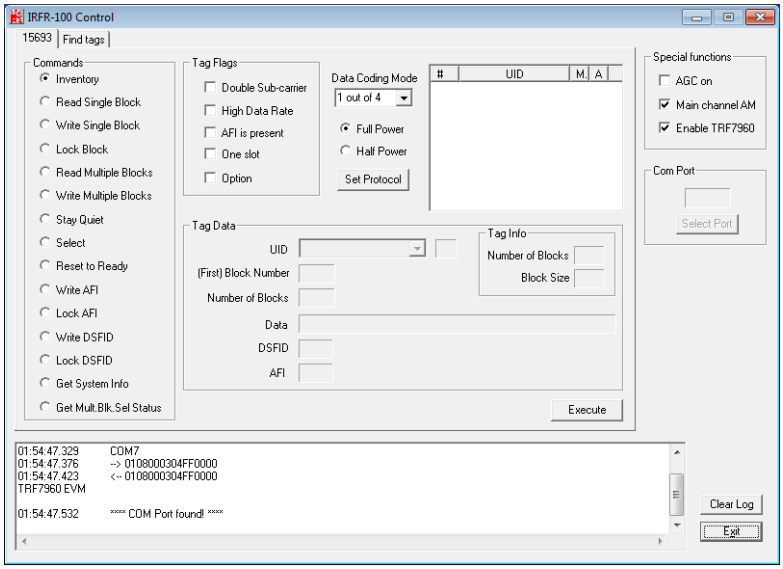


Figure 3-13: IRFR Screen

Step 4: Select the **Find tags** tab and click the **Run** button to enable the RFID reader (**Figure 3-14**).

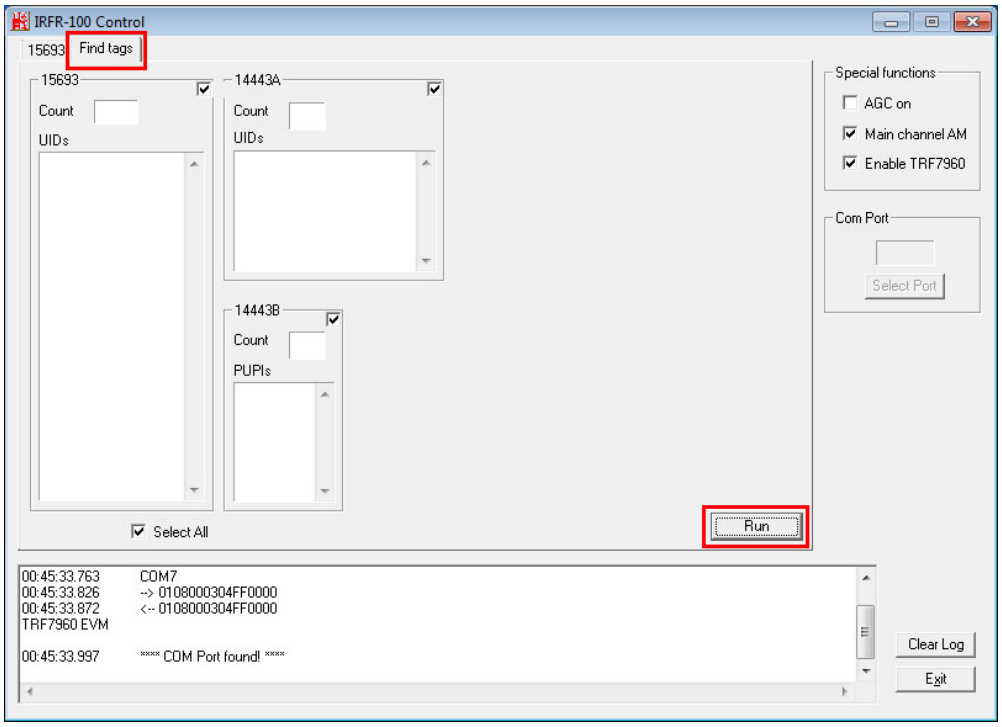


Figure 3-14: IRFR – Find Tags

Step 5: Place an RFID card near the RFID reader on the bottom of the front panel (**Figure 1-2**) then remove it. The card number will be shown in the UIDs column (**Figure 3-15**).

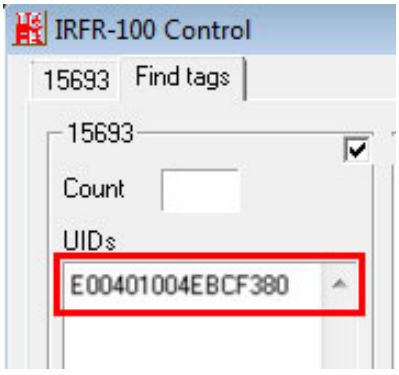


Figure 3-15: IRFR – UIDs

NOTE:

Please refer to the IRFR-100 user guide in the driver folder (IRFR-100_AP_UserGuide.pdf) for detailed instruction on how to use the IRFR-100.

3.9 RS-232/422/485 Serial Port Connection

The bottom panel of the POCm-W22/24C-ULT3 has two DB-9 male connectors for RS-232/422/485 connection. The serial communication mode selection can be made through the BIOS options. Please refer to **Section 4.3.5.1** for detailed information. The pinouts of the DB-9 connector are listed below.

Pin	RS-232	RS-422	RS-485
1	DCD	TXD422-	TXD485-
2	RX	TXD422+	TXD485+
3	TX	RXD422+	
4	DTR	RXD422-	
5	GND		
6	DSR		
7	RTS		
8	CTS		
9	RI		

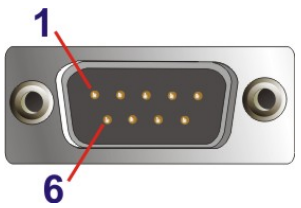


Table 3-1: RS-232/422/485 Serial Port Pinouts

3.10 AT/ATX Mode Selection

AT or ATX power mode can be used on the POCm-W22/24C-ULT3. The selection is made through an AT/ATX switch located on the bottom panel (**Figure 3-16**).

Figure 3-16: AT/ATX Switch Location

3.10.1 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-ULT3 panel PC turns on automatically when the power is connected.

3.10.2 ATX Power Mode

With the ATX mode selected, the POCm-W22/24C-ULT3 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-ULT3 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-ULT3 (**Figure 3-17**). Then, insert the tabs into the slots.

Step 2: Push the cable cover down to clip the cover into place (**Figure 3-17**).

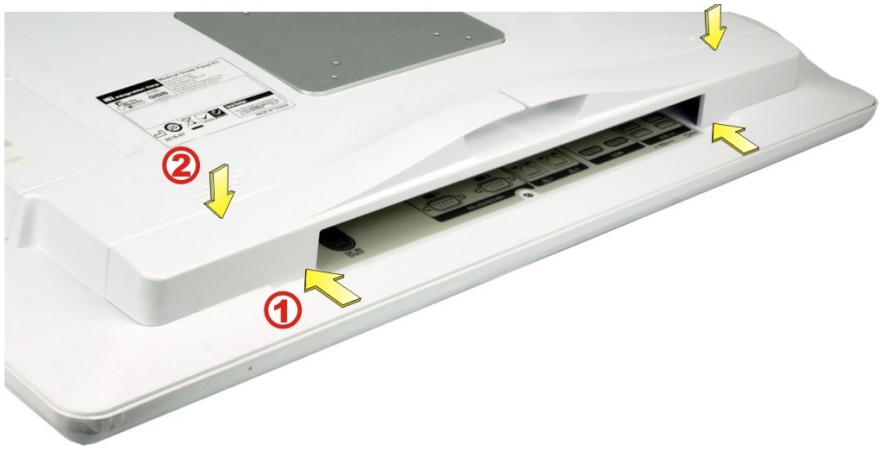


Figure 3-17: Cable Cover Installation

Step 3: To remove the cable cover, push the two tabs inwards to release the cover (**Figure 3-18**), and lift the cover from the POCm-W22/24C-ULT3.

Figure 3-18: Cable Cover Removal

3.12 Mounting the System

The methods of mounting the POCm-W22/24C-ULT3 are listed below.

- Wall mounting
- Arm mounting

The mounting methods are described below.

WARNING:

1. When mounting the POCm-W22/24C-ULT3 flat panel PC, it is better to have more than one person to help with the installation to make sure the POCm-W22/24C-ULT3 does not fall down and get damaged.

2. Use suitable mounting apparatus and be sure to secure the screws of the mounting apparatus tightly to avoid risk of injury.

3.12.1 Wall Mounting

To mount the medical panel PC onto the wall, please follow the steps below.

Step 1: Select the location on the wall for the wall-mounting bracket.

Step 2: Carefully mark the locations of the four screw holes in the bracket on the wall.

Step 3: Drill four pilot holes at the marked locations on the wall for the bracket retention screws.

Step 4: Align the wall-mounting bracket screw holes with the pilot holes.

Step 5: Secure the mounting-bracket to the wall by inserting the retention screws into the four pilot holes and tightening them (**Figure 3-19**).

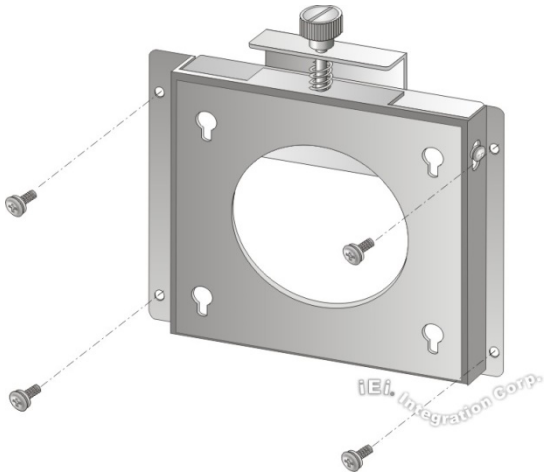
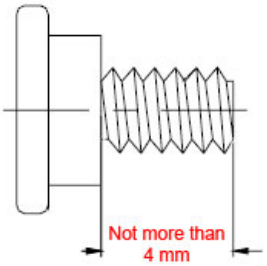


Figure 3-19: Wall-mounting Bracket

Step 6: Insert the four mounting screws provided in the wall mount kit into the four screw holes on the real panel of the medical panel PC and tighten until the screw shank is secured against the rear panel (**Figure 3-20**).

WARNING:

Please use the M4 screws provided in the wall mount kit for the rear panel. If the screw is missing, the thread depth of the replacement screw should be not more than 4 mm.



Step 7: Align the mounting screws on the rear panel with the mounting holes on the bracket.

Step 8: Carefully insert the screws through the holes and gently pull the panel PC downwards until the panel PC rests securely in the slotted holes (**Figure 3-20**).

Ensure that all four of the mounting screws fit snugly into their respective slotted holes.

NOTE:

In the diagram below the bracket is already installed on the wall.

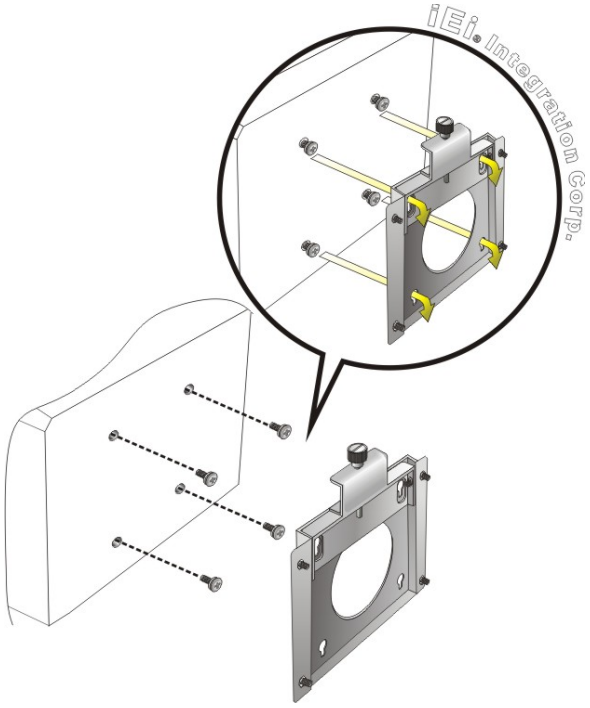


Figure 3-20: Chassis Support Screws

Step 9: Secure the panel PC by fastening the retention screw of the wall-mounting bracket (**Figure 3-21**).

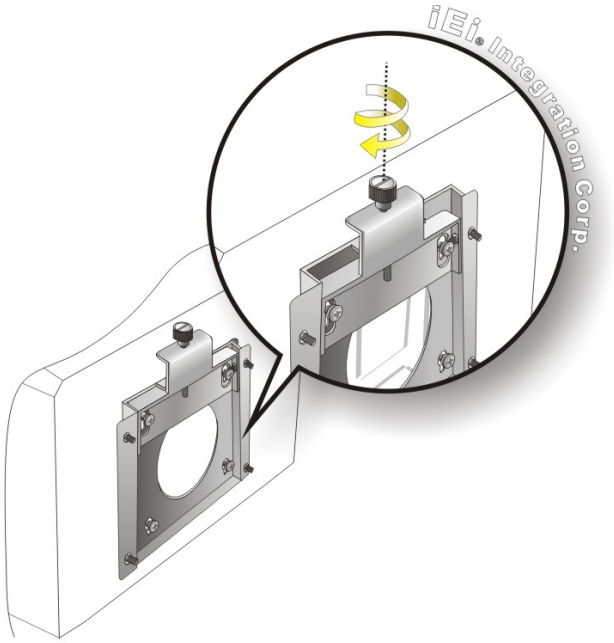


Figure 3-21: Secure the Panel PC

3.12.2 Arm Mounting

The POCm-W22/24C-ULT3 is VESA (Video Electronics Standards Association) compliant and can be mounted on an arm with a 75 mm or 100 mm interface pad. To mount the POCm-W22/24C-ULT3 on an arm, please follow the steps below.

Step 1: The arm is a separately purchased item. Please correctly mount the arm onto the surface it uses as a base. To do this, refer to the installation documentation that came with the mounting arm.

NOTE:

When purchasing the arm please ensure that it is VESA compliant and that the arm has a 75 mm or 100 mm interface pad. If the mounting arm is not VESA compliant it cannot be used to support the POCm-W22/24C-ULT3 medical panel PC.

Step 2: Once the mounting arm has been firmly attached to the surface, lift the panel PC onto the interface pad of the mounting arm.

Step 3: Align the retention screw holes on the mounting arm interface with those in the panel PC (**Figure 3-22**).

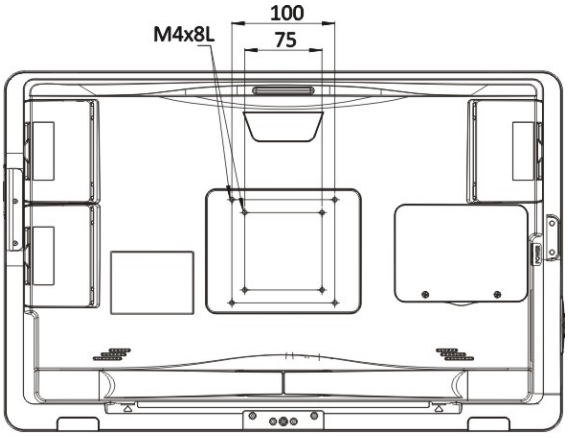


Figure 3-22: Arm Mounting Retention Screw Holes

Step 4: Secure the POCm-W22/24C-ULT3 to the interface pad by inserting four retention screws through the mounting arm interface pad and into the POCm-W22/24C-ULT3.

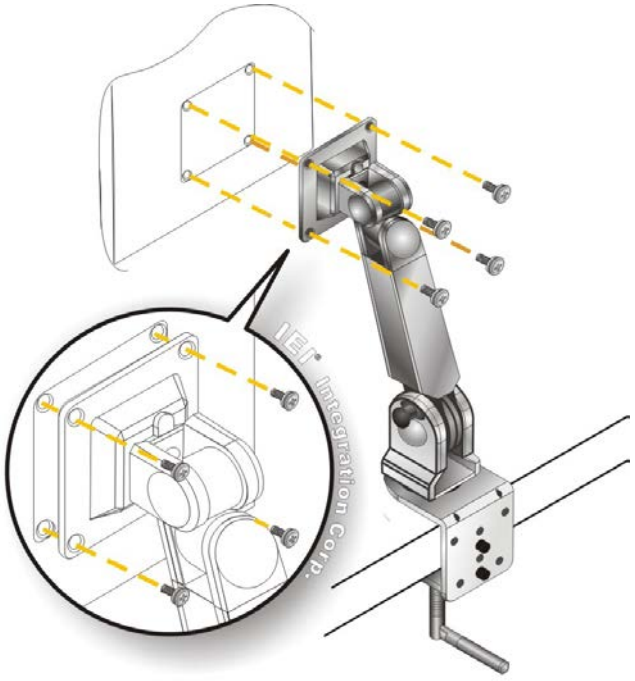


Figure 3-23: Arm Mounting

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.

CAUTION:

The FSP FSP150M-ABA power adapter came with the POCm-W22/24C-ULT3 is a forming part of the medical device.

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.

Step 2: Connect the power adapter to the power connector of the POCm-W22/24C-ULT3.

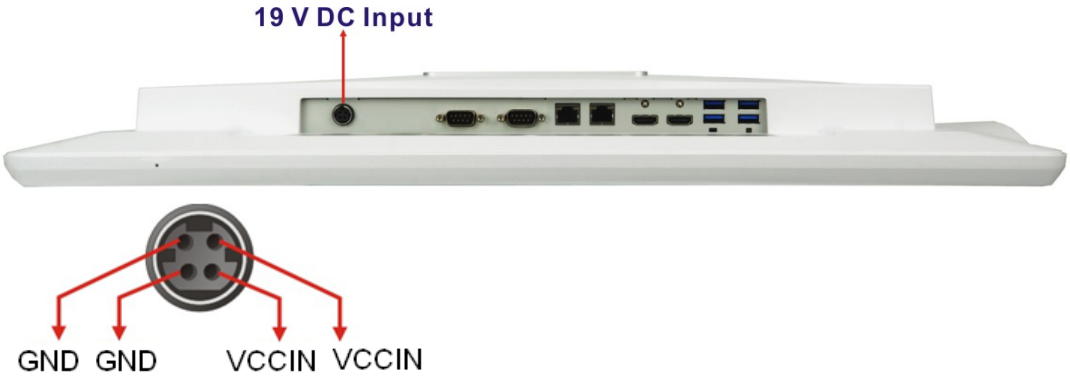


Figure 3-24: Power Input Connector

Step 3: Locate the power button on the right panel (**Figure 1-6**).

Step 4: Short press the power button to turn on the POCm-W22/24C-ULT3.

NOTE:

1. The user can also long-press the touch button 

on the front panel for 5 seconds to power on the system (please refer to **Table 1-2**).

2. Long-press the power button for 10 seconds to force shutdown the panel PC.

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 3-25**. Press the reset button to reboot the system.

Figure 3-25: Reset Button Location

Chapter

4

BIOS Setup

4.1 Introduction

The BIOS is programmed onto the BIOS chip. The BIOS setup program allows changes to certain system settings. This chapter outlines the options that can 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. Press the **DEL** key as soon as the system is turned on or
2. Press the **DEL** key when the "**Press DEL to enter SETUP**" message appears on the screen.

If the message disappears before the **DEL** key is pressed, restart the computer and try again.

4.1.2 Using Setup

Use the arrow keys to highlight items, press **ENTER** to select, use the PageUp and PageDown keys to change entries, press **F1** for help and press **ESC** to quit. Navigation keys are shown in the following table.

Key	Function
Up arrow	Move to the item above
Down arrow	Move to the item below
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
F1 key	General help, only for Status Page Setup Menu and Option Page Setup Menu
F2 key	Load previous values.
F3 key	Load optimized defaults
F4 key	Save changes and Exit BIOS
Esc key	Main Menu – Quit and do not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu -- Exit current page and return to Main Menu

Table 4-1: BIOS 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 BIOS Menu Bar

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

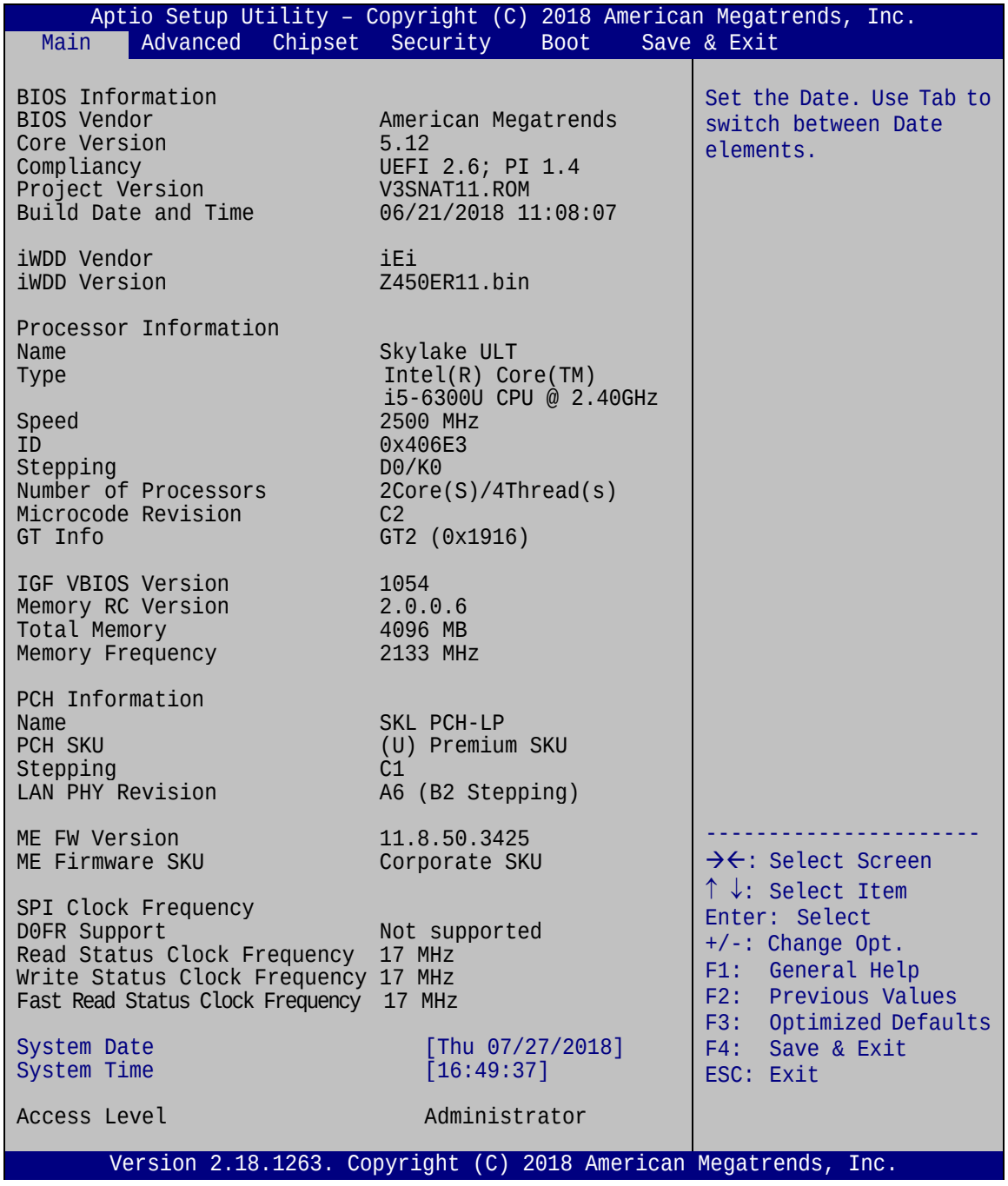
- Main – Changes the basic system configuration.
- Advanced – Changes the advanced system settings.
- Chipset – Changes the chipset settings.
- Security – Sets User and Supervisor Passwords.
- Boot – Changes the system boot configuration.
- Save & Exit – Selects exit options and loads default settings

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.

```
      Aptio Setup Utility – Copyright (C) 2018 American Megatrends, Inc.
  Main    Advanced  Chipset  Security    Boot    Save & Exit

> CPU Configuration                          Trusted Computing
> PCH-FW Configuration                       Settings
> Trusted Computing
> ACPI Settings
> F81866 Super IO Configuration
> iWDD H/M Monitor                           ----------------------
> RTC Wake Settings                          →←: Select Screen
> Serial Port Console Redirection            ↑ ↓: Select Item
> USB Configuration                          Enter: Select
> iEi Feature                                +/-: Change Opt.
                                             F1:  General Help
                                             F2:  Previous Values
                                             F3:  Optimized Defaults
                                             F4:  Save & Exit
                                             ESC: Exit
       Version 2.18.1263. Copyright (C) 2018 American Megatrends, Inc.
```

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.

```
Aptio Setup Utility – Copyright (C) 2018 American Megatrends, Inc.
        Advanced

CPU Configuration                                  When enabled, a VMM can
                                                   utilize the additional
Type                          Intel(R) Core(TM)    hardware capabilities
                              i5-6300U CPU @ 2.40GHz provided by Vanderpool
ID                            0x406E3              Technology.
Speed                         2500 MHz
L1 Data Cache                 32 kB x 2
L1 Instruction Cache          32 kB x 2
L2 Cache                      256 kB x 2           ----------------------
L3 Cache                      3 MB                 →←: Select Screen
L4 Cache                      N/A                  ↑ ↓: Select Item
VTX                           Supported            Enter: Select
SMX/TXT                       Supported            +/-: Change Opt.
                                                   F1:  General Help
Intel (VMX) Virtualization    [Disabled]           F2:  Previous Values
Technology                                         F3:  Optimized Defaults
Active Processor Cores        [All]                F4:  Save & Exit
Hyper-Threading               [Enabled]            ESC: Exit
Intel Trusted Execution Technology[Disabled]
Intel(R) SpeedStep(tm)        [Enabled]
CPU C states                  [Disabled]

        Version 2.18.1263. Copyright (C) 2018 American Megatrends, Inc.
```

BIOS Menu 3: CPU Configuration

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

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

➔ **Active Processor Cores [All]**

Use the **Active Processor Cores** BIOS option to enable numbers of cores in the processor package.

➔ **All** **DEFAULT** Enable all cores in the processor package.

➔ **1** Enable one core 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® 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.

➔ **CPU C State [Disabled]**

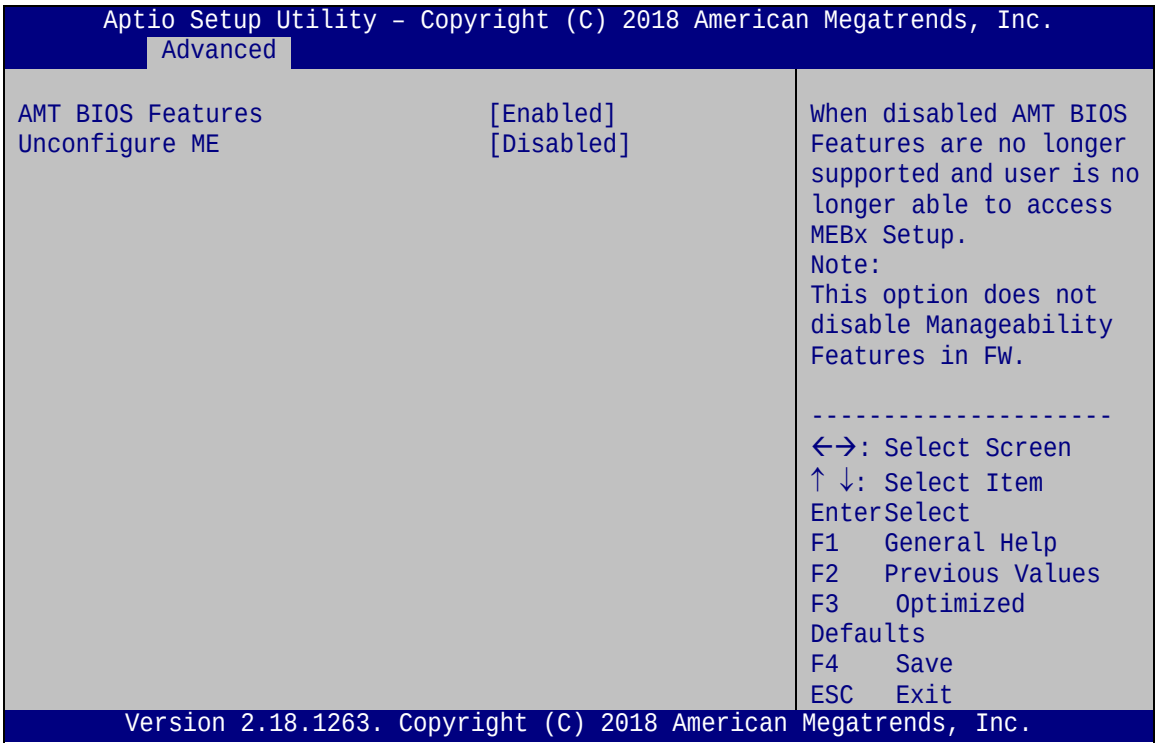
Use the **CPU C State** option to enable or disable CPU C state.

➔ **Enabled** Enables CPU C state.

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

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

➔ **AMT BIOS Features [Enabled]**

Use **AMT BIOS Features** option to enable or disable the access to MEBx Setup.

➔	**Disabled**		Unable to access MEBx Setup
➔	**Enabled**	**DEFAULT**	Allow access to MEBx Setup

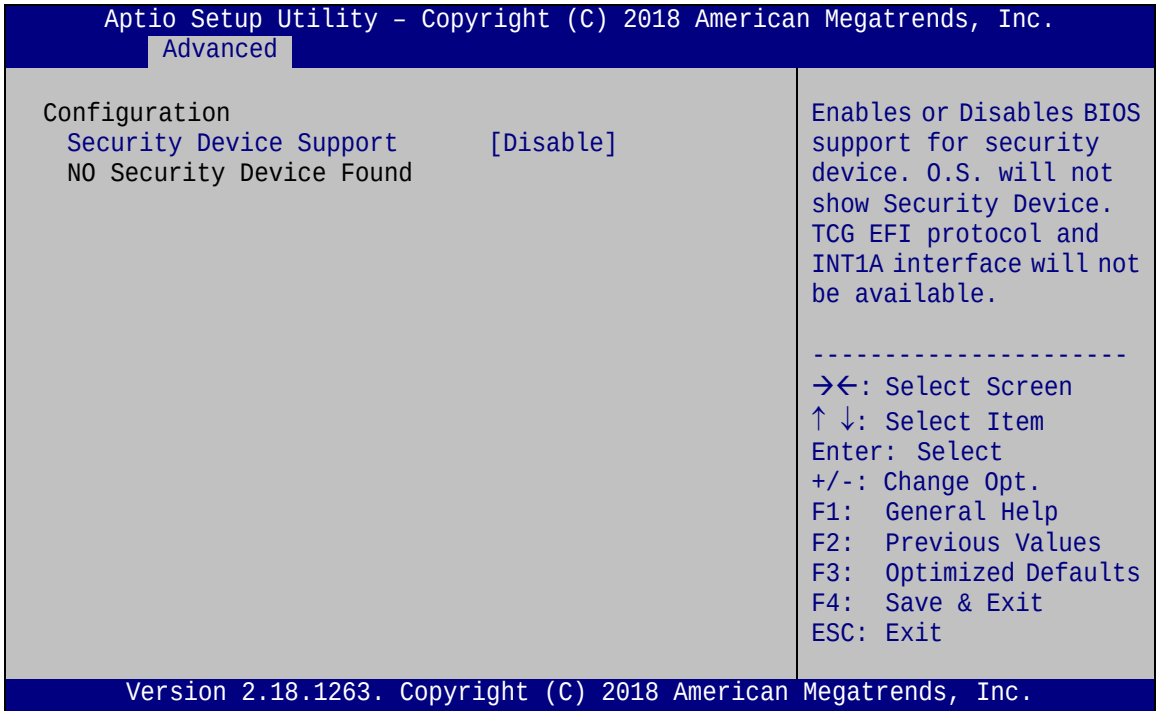
➔ **Unconfigure ME [Disabled]**

Use the **Unconfigure ME** option to perform ME unconfigure without password operation.

➔	**Disabled**	**DEFAULT**	Not perform AMT/ME unconfigure
➔	**Enabled**		To perform AMT/ME unconfigure

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 [Disable]**

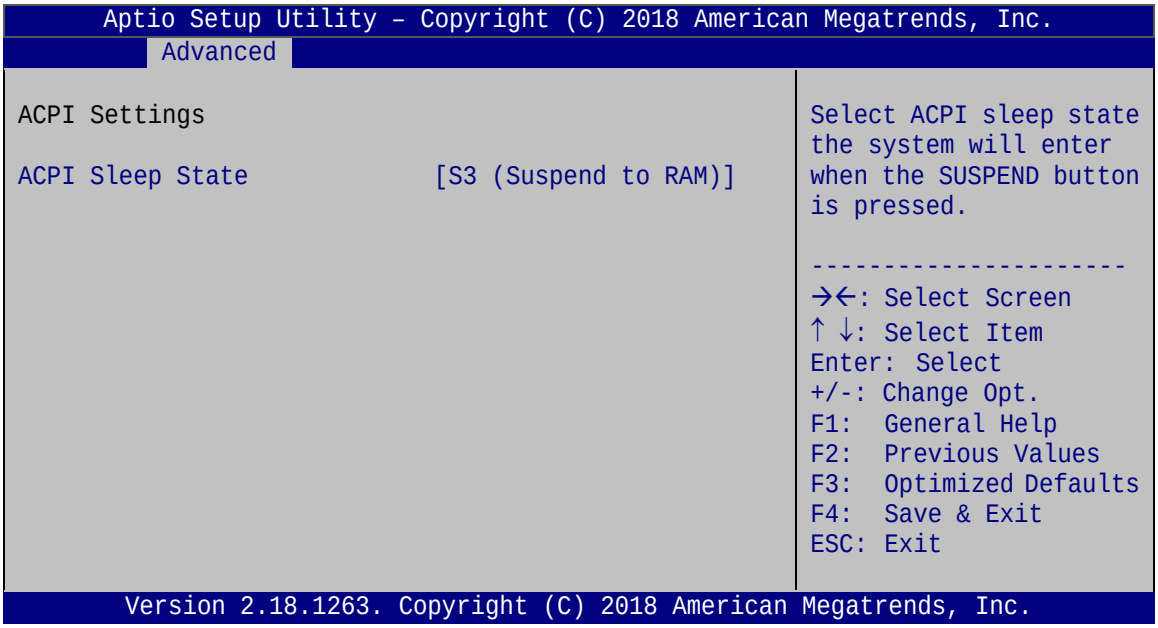
Use the **Security Device Support** option to configure support for the security devices.

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

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

4.3.4 ACPI Settings

The **ACPI Settings** menu (**BIOS Menu 6**) configures the Advanced Configuration and Power Interface (ACPI) options.



BIOS Menu 6: ACPI Settings

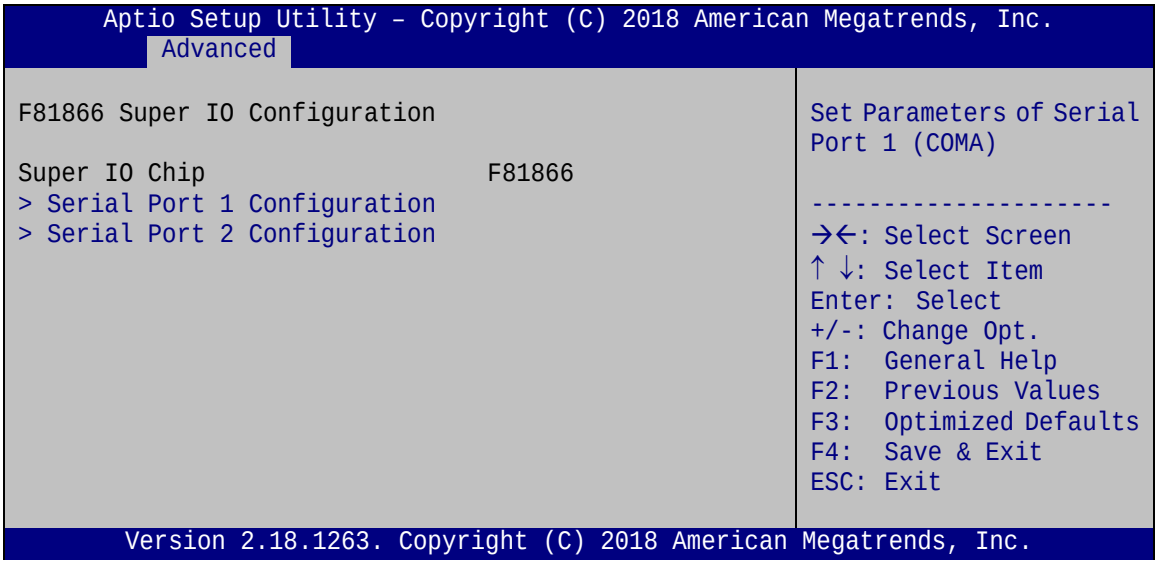
➔ **ACPI Sleep State [S3 (Suspend to RAM)]**

Use the **ACPI Sleep State** option to specify the sleep state the system enters when it is not being used.

➔ **S3 (Suspend to RAM)** **DEFAULT** The caches are flushed and the CPU is powered off. Power to the RAM is maintained. The computer returns slower to a working state, but more power is saved.

4.3.5 F81866 Super IO Configuration

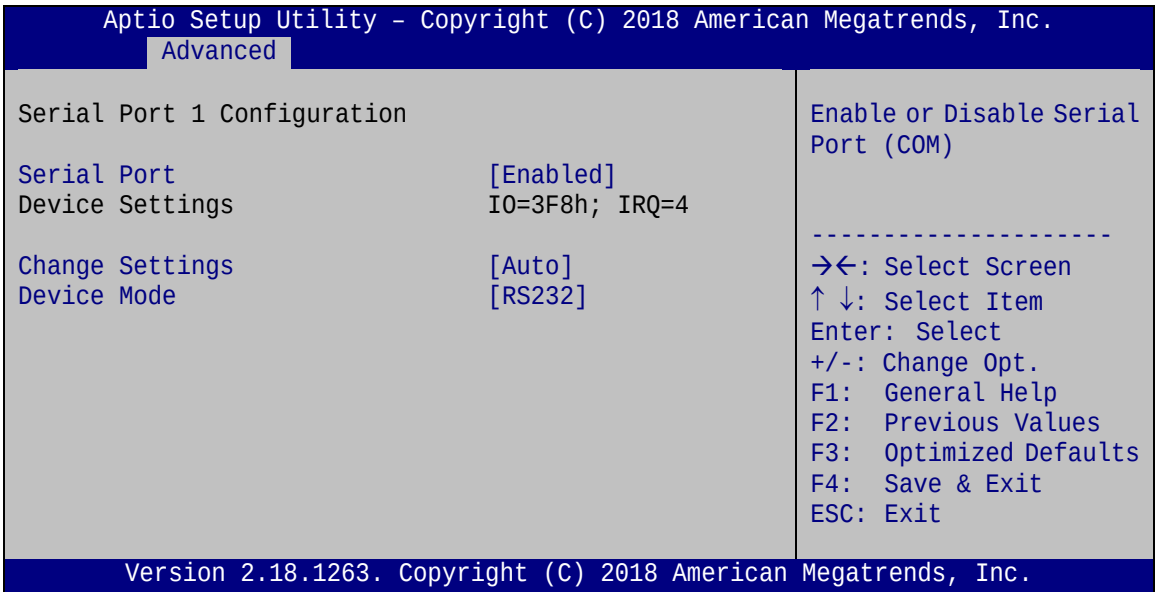
Use the **F81866 Super IO Configuration** menu (**BIOS Menu 7**) to set or change the configurations for the serial ports.



BIOS Menu 7: F81866 Super IO Configuration

4.3.5.1 Serial Port n Configuration

Use the **Serial Port n Configuration** menu (**BIOS Menu 8**) to configure the serial port n.



BIOS Menu 8: Serial Port n Configuration Menu

4.3.5.1.1 Serial Port 1 Configuration

➔ **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]**

Use the **Change Settings** option to change the serial port IO port address and interrupt address.

➔ **Auto**	**DEFAULT**	The serial port IO port address and interrupt address are automatically detected.
➔ **IO=3F8h; IRQ=4**		Serial Port I/O port address is 3F8h and the interrupt address is IRQ4
➔ **IO=3F8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12**		Serial Port I/O port address is 3F8h and the interrupt address is IRQ3, 4, 5, 6, 7, 9, 10, 11, 12
➔ **IO=2F8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12**		Serial Port I/O port address is 2F8h and the interrupt address is IRQ3, 4, 5, 6, 7, 9, 10, 11, 12
➔ **IO=3E8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12**		Serial Port I/O port address is 3E8h and the interrupt address is IRQ3, 4, 5, 6, 7, 9, 10, 11, 12
➔ **IO=2E8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12**		Serial Port I/O port address is 2E8h and the interrupt address is IRQ3, 4, 5, 6, 7, 9, 10, 11, 12

➔ **Device Mode [RS232]**

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

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

4.3.5.1.2 Serial Port 2 Configuration

➔ **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]**

Use the **Change Settings** option to change the serial port IO port address and interrupt address.

➔ **Auto**	**DEFAULT**	The serial port IO port address and interrupt address are automatically detected.
➔ **IO=2F8h; IRQ=3**		Serial Port I/O port address is 2F8h and the interrupt address is IRQ3
➔ **IO=3F8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12**		Serial Port I/O port address is 3F8h and the interrupt address is IRQ3, 4, 5, 6, 7, 9, 10, 11, 12
➔ **IO=2F8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12**		Serial Port I/O port address is 2F8h and the interrupt address is IRQ3, 4, 5, 6, 7, 9, 10, 11, 12
➔ **IO=3E8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12**		Serial Port I/O port address is 3E8h and the interrupt address is IRQ3, 4, 5, 6, 7, 9, 10, 11, 12
➔ **IO=2E8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12**		Serial Port I/O port address is 2E8h and the interrupt address is IRQ3, 4, 5, 6, 7, 9, 10, 11, 12

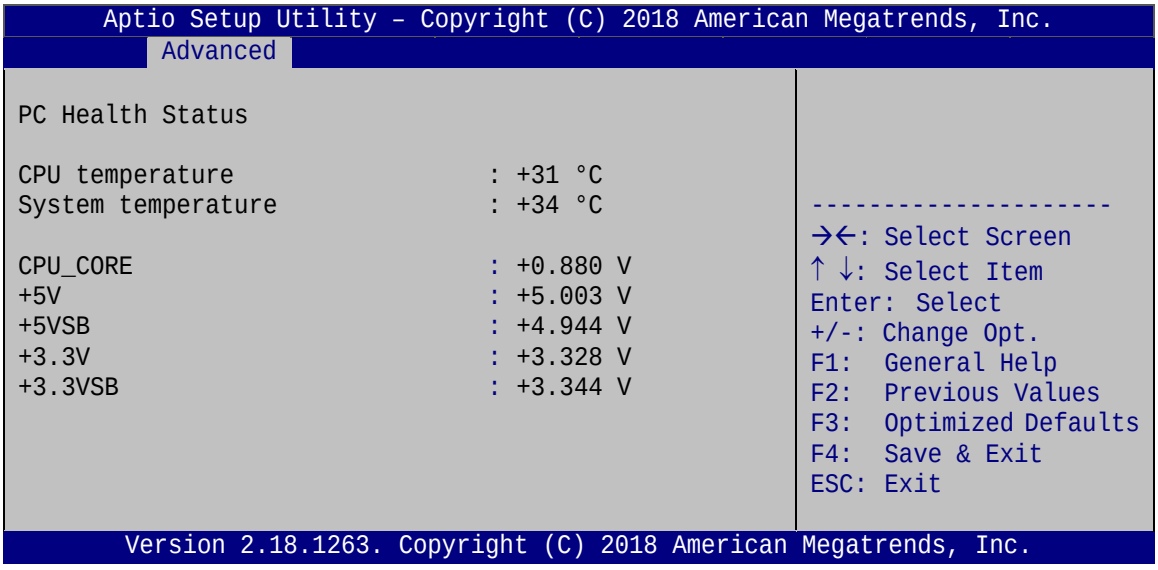
➔ **Device Mode [RS232]**

Use the **Device Mode** option to set the Serial Port 2 signaling mode.

➔	**RS422**		Configure Serial Port 2 as RS-422
➔	**RS232**	**DEFAULT**	Configure Serial Port 2 as RS-232
➔	**RS485**		Configure Serial Port 2 as RS-485

4.3.6 iWDD H/W Monitor

The **iWDD H/W Monitor** menu (**BIOS Menu 9**) shows the operating temperatures and voltages.



BIOS Menu 9: iWDD H/W Monitor

➔ **PC Health Status**

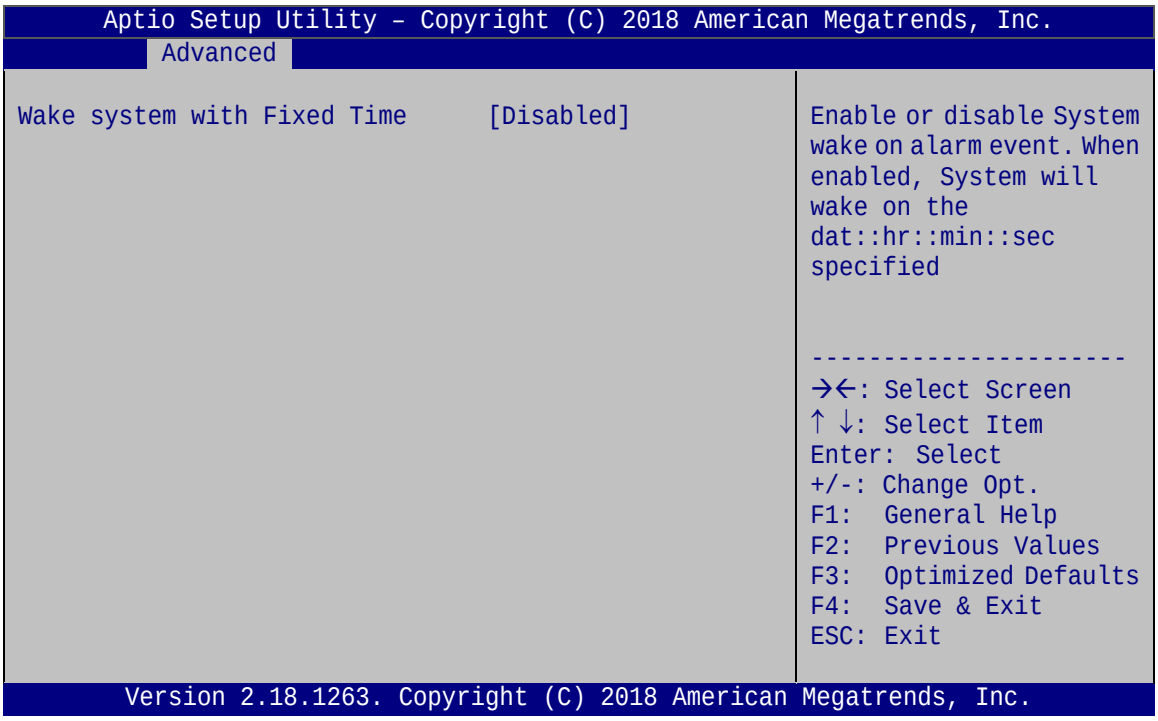
The following system parameters and values are shown. The system parameters that are monitored are:

- Temperature:
  - CPU Temperature
  - System Temperature
- Voltages:
  - CPU_CORE

- +5V
- +5VSB
- +3.3V
- +3.3VSB

4.3.7 RTC Wake Settings

The **RTC Wake Settings** menu (**BIOS Menu 10**) configures RTC wake event.



BIOS Menu 10: 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

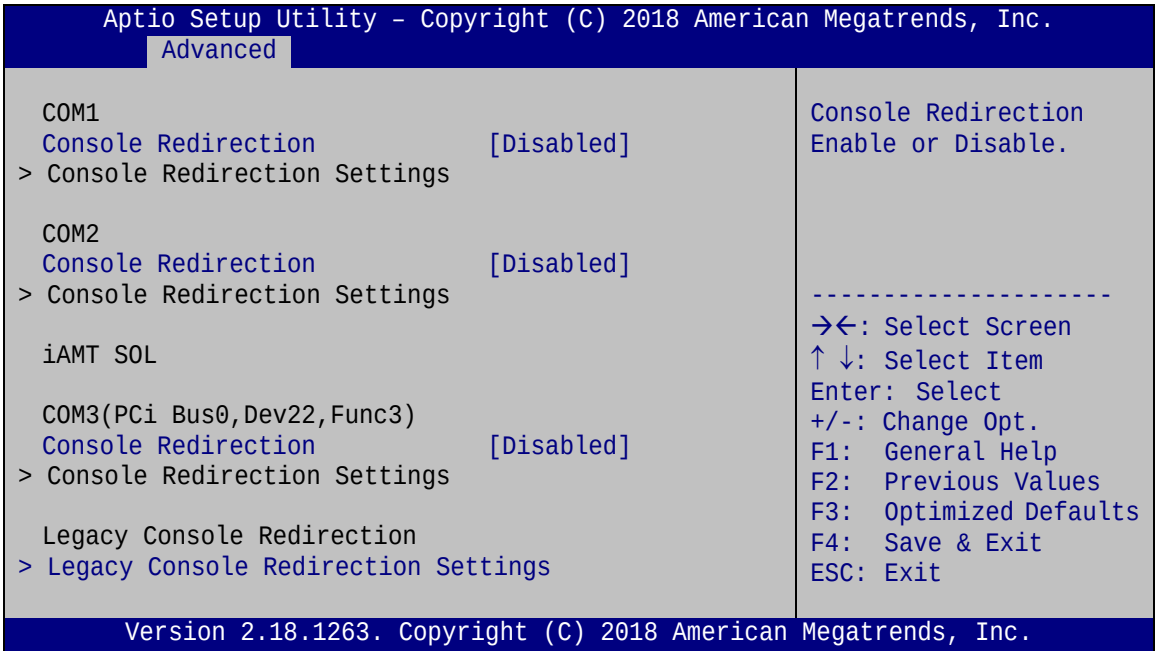
*Wake up minute

*Wake up second

After setting the alarm, the computer turns itself on from a suspend state when the alarm goes off.

4.3.8 Serial Port Console Redirection

The **Serial Port Console Redirection** menu (**BIOS Menu 11**) 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 11: 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

4.3.8.1 Console Redirection Settings

Use the **Console Redirection Settings** menu (**BIOS Menu 12**) to configure console redirection settings of the specified serial port. This menu appears only when the **Console Redirection** option is enabled.

```
        Aptio Setup Utility – Copyright (C) 2012 American Megatrends, Inc.
           Advanced
 COM1                                                  Emulation: ANSI: Extended
 Console Redirection Settings                          ASCII char set. VT100:
                                                       ASCII char set. VT100+:
 Terminal Type                  [ANSI]                 Extends VT100 to support
 Bits per second                [115200]               color, function keys, etc.
 Data Bits                      [8]                    VT-UTF8: Uses UTF8
 Parity                         [None]                 encoding to map Unicode
 Stop Bits                      [1]                    chars onto 1 or more bytes.


                                                       ----------------------
                                                       →←: Select Screen
                                                       ↑ ↓: Select Item
                                                       Enter: Select
                                                       +/-: Change Opt.
                                                       F1: General Help
                                                       F2: Previous Values
                                                       F3: Optimized Defaults
                                                       F4: Save & Exit
                                                       ESC: Exit
        Version 2.15.1236. Copyright (C) 2012 American Megatrends, Inc.
```

BIOS Menu 12: Console Redirection Settings

➔ **Terminal Type [ANSI]**

Use the **Terminal Type** option to specify the remote terminal type.

➔	**VT100**	The target terminal type is VT100
➔	**VT100+**	The target terminal type is VT100+

- ➔ **VT-UTF8** The target terminal type is VT-UTF8
- ➔ **ANSI** **DEFAULT** The target terminal type is ANSI

➔ **Bits per second [115200]**

Use the **Bits per second** option to specify the serial port transmission speed. The speed must match the other side. Long or noisy lines may require lower speeds.

- ➔ **9600** Sets the serial port transmission speed at 9600.
- ➔ **19200** Sets the serial port transmission speed at 19200.
- ➔ **57600** Sets the serial port transmission speed at 57600.
- ➔ **115200** **DEFAULT** Sets the serial port transmission speed at 115200.

➔ **Data Bits [8]**

Use the **Data Bits** option to specify the number of data bits.

- ➔ **7** Sets the data bits at 7.
- ➔ **8** **DEFAULT** Sets the data bits at 8.

➔ **Parity [None]**

Use the **Parity** option to specify the parity bit that can be sent with the data bits for detecting the transmission errors.

- ➔ **None** **DEFAULT** No parity bit is sent with the data bits.
- ➔ **Even** The parity bit is 0 if the number of ones in the data bits is even.
- ➔ **Odd** The parity bit is 0 if the number of ones in the data bits is odd.
- ➔ **Mark** The parity bit is always 1. This option does not provide error detection.
- ➔ **Space** The parity bit is always 0. This option does not provide error detection.

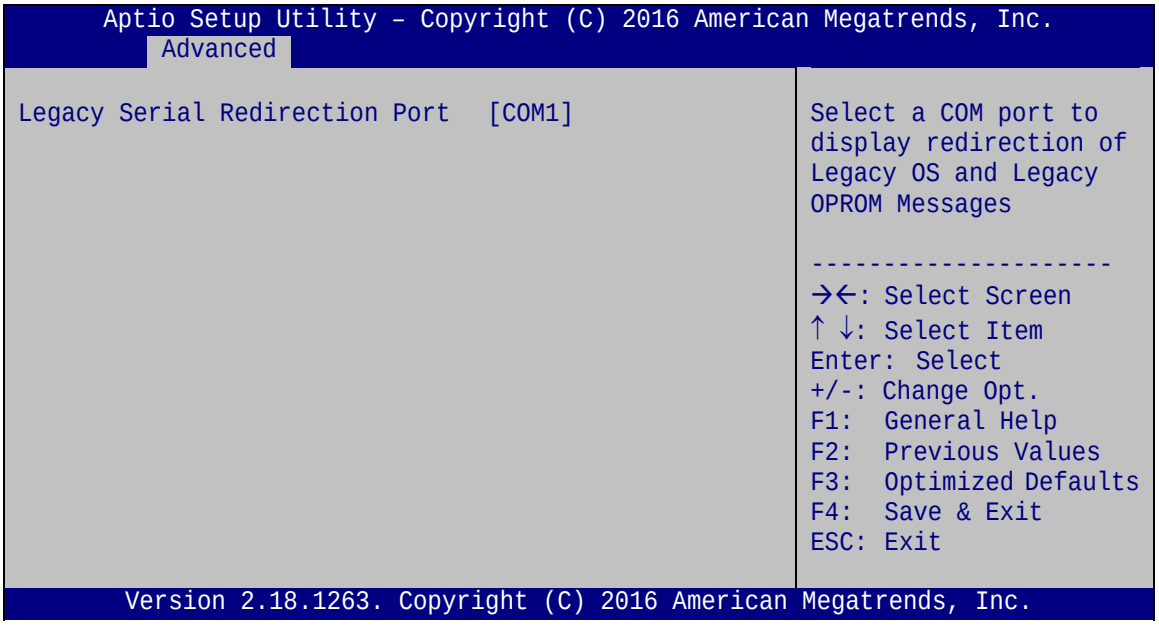
➔ **Stop Bits [1]**

Use the **Stop Bits** option to specify the number of stop bits used to indicate the end of a serial data packet. Communication with slow devices may require more than 1 stop bit.

➔	**1**	**DEFAULT**	Sets the number of stop bits at 1.
➔	**2**		Sets the number of stop bits at 2.

4.3.8.2 Legacy Console Redirection Settings

The **Legacy Console Redirection Settings** menu (**BIOS Menu 13**) allows the legacy console redirection options to be configured.



BIOS Menu 13: Legacy Console Redirection Settings

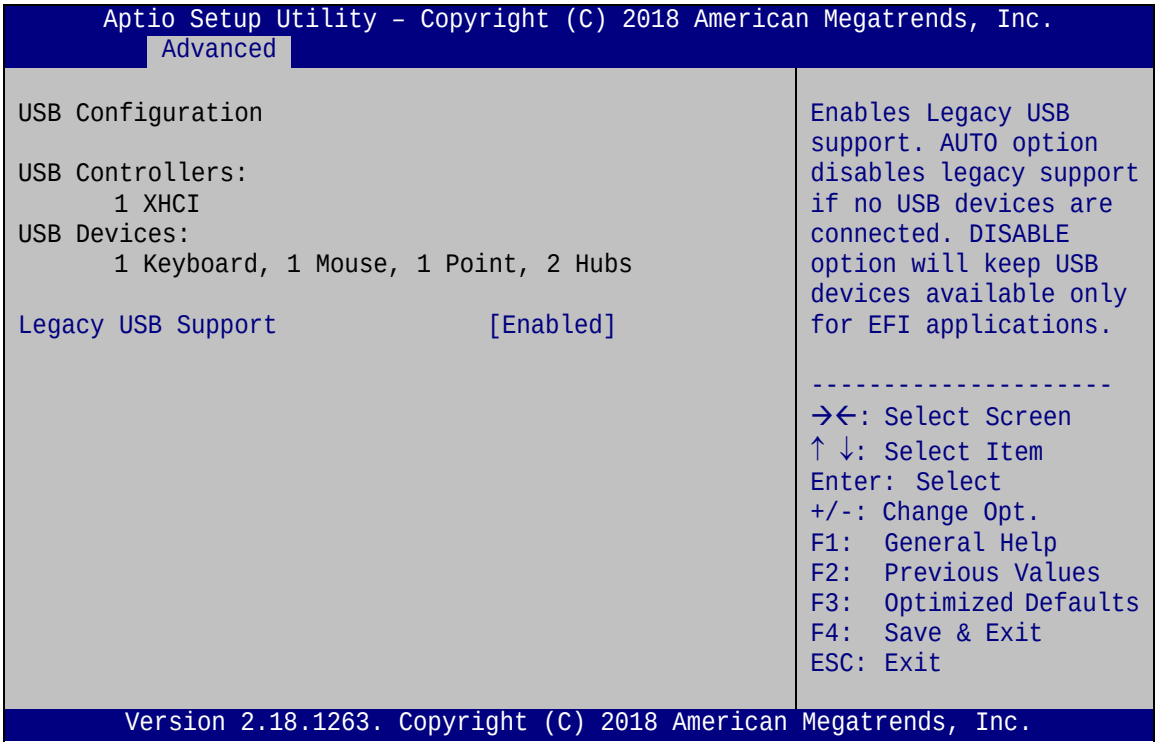
➔ **Legacy Serial Redirection Port [COM1]**

Use the **Legacy Serial Redirection Port** option to specify a COM port to display redirection of legacy OS and legacy OPROM messages. The options include:

- COM1 **DEFAULT**
- COM2
- COM3 (Pci Bus0, Dev0, Func0) (Disabled)

4.3.9 USB Configuration

Use the **USB Configuration** menu (**BIOS Menu 14**) to read USB configuration information and configure the USB settings.



BIOS Menu 14: USB Configuration

➔ **USB Devices**

The **USB Devices Enabled** field lists the USB devices that are enabled on the system

➔ **Legacy USB Support [Enabled]**

Use the **Legacy USB Support** BIOS option to enable USB mouse and USB keyboard support. Normally if this option is not enabled, any attached USB mouse or USB keyboard does not become available until a USB compatible operating system is fully booted with all USB drivers loaded. When this option is enabled, any attached USB mouse or USB keyboard can control the system even when there is no USB driver loaded onto the system.

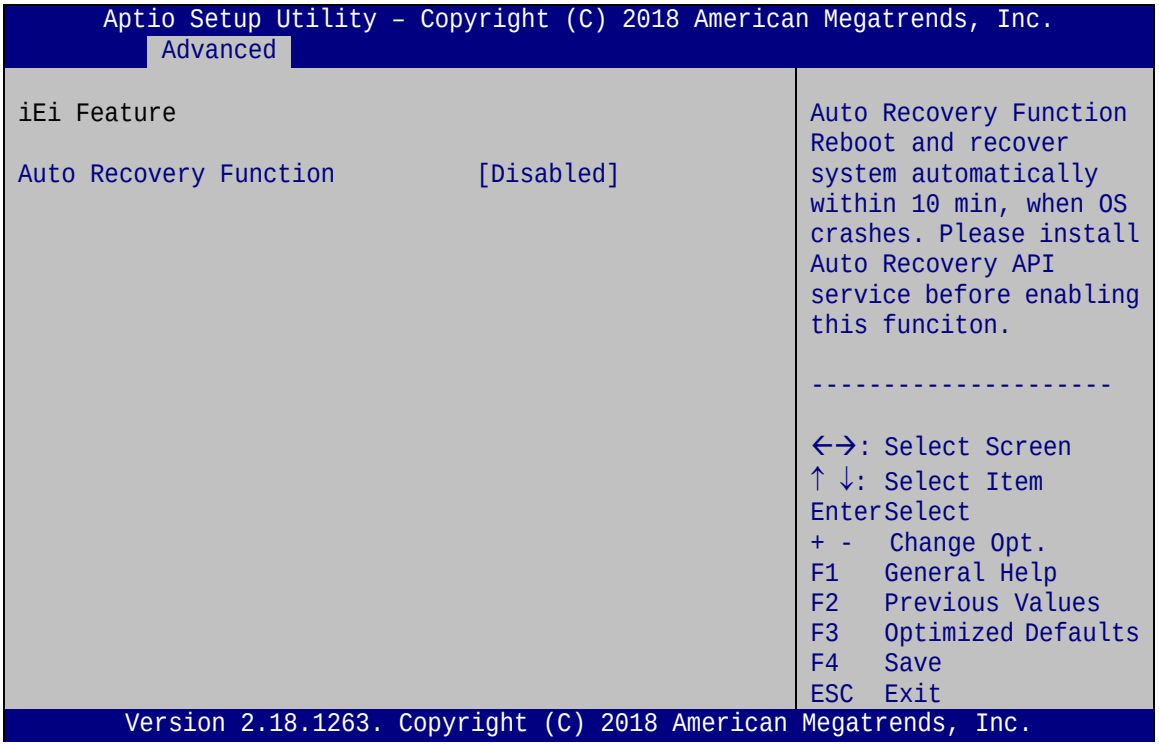
➔ **Enabled** **DEFAULT** Legacy USB support enabled

➔ **Disabled** Legacy USB support disabled

➔ **Auto** Legacy USB support disabled if no USB devices are connected

4.3.10 IEI Feature

Use the **IEI Feature** menu (**BIOS Menu 15**) to configure One Key Recovery function.



BIOS Menu 15: IEI Feature

➔ **Auto Recovery Function [Disabled]**

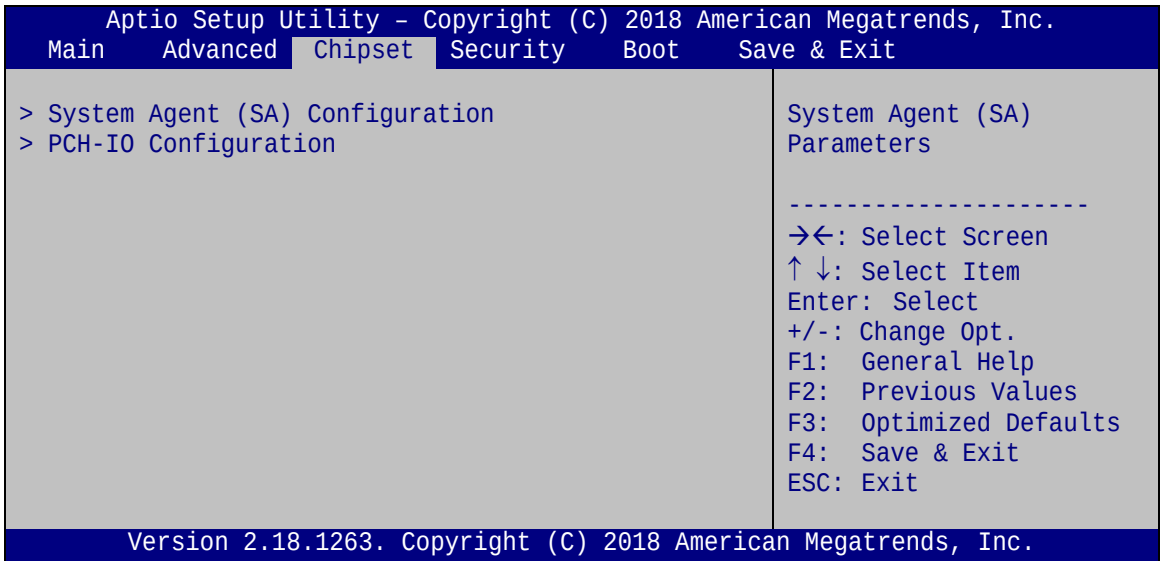
Use the **Auto Recovery Function** BIOS option to enable or disable the auto recovery function of the IEI One Key Recovery.

➔ **Disabled** **DEFAULT** Auto recovery function disabled

➔ **Enabled** Auto recovery function enabled

4.4 Chipset

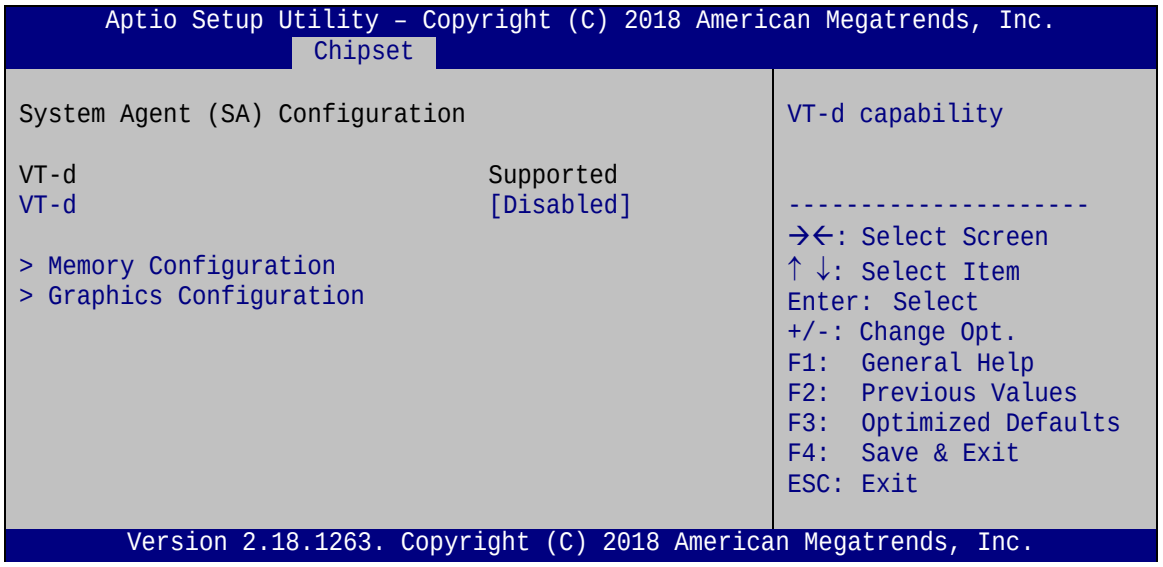
Use the **Chipset** menu (**BIOS Menu 16**) to configure the system chipset.



BIOS Menu 16: Chipset

4.4.1 System Agent (SA) Configuration

Use the **System Agent (SA) Configuration** menu (**BIOS Menu 17**) to configure the System Agent (SA) parameters.



BIOS Menu 17: System Agent (SA) Configuration

➔ **VT-d [Disabled]**

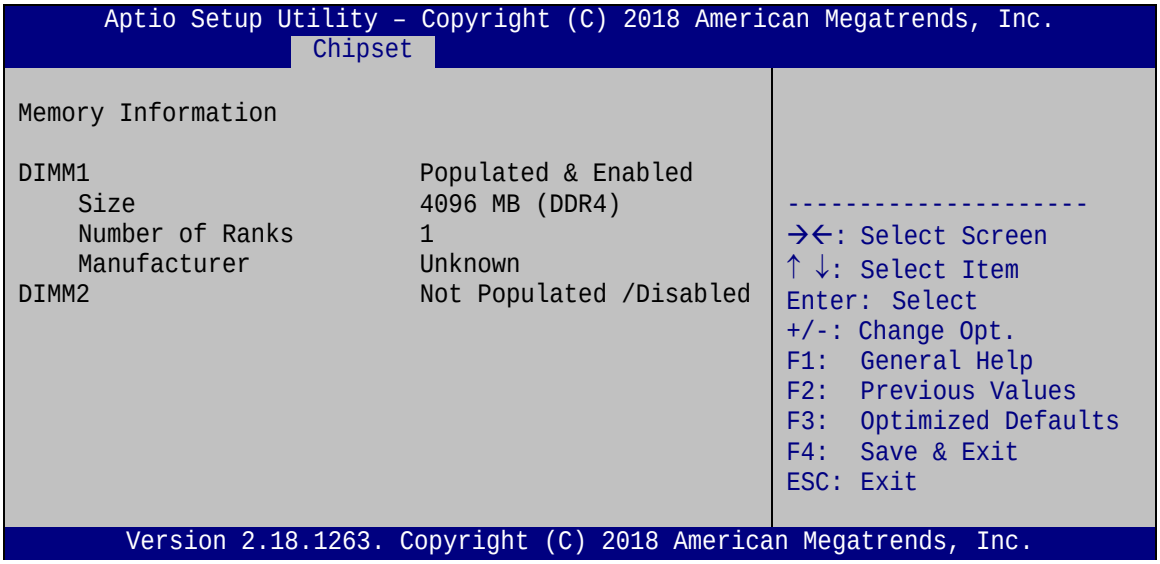
Use the **VT-d** option to enable or disable VT-d support.

➔ **Disabled** **DEFAULT** Disable VT-d support.

➔ **Enabled** Enable VT-d support.

4.4.1.1 Memory Configuration

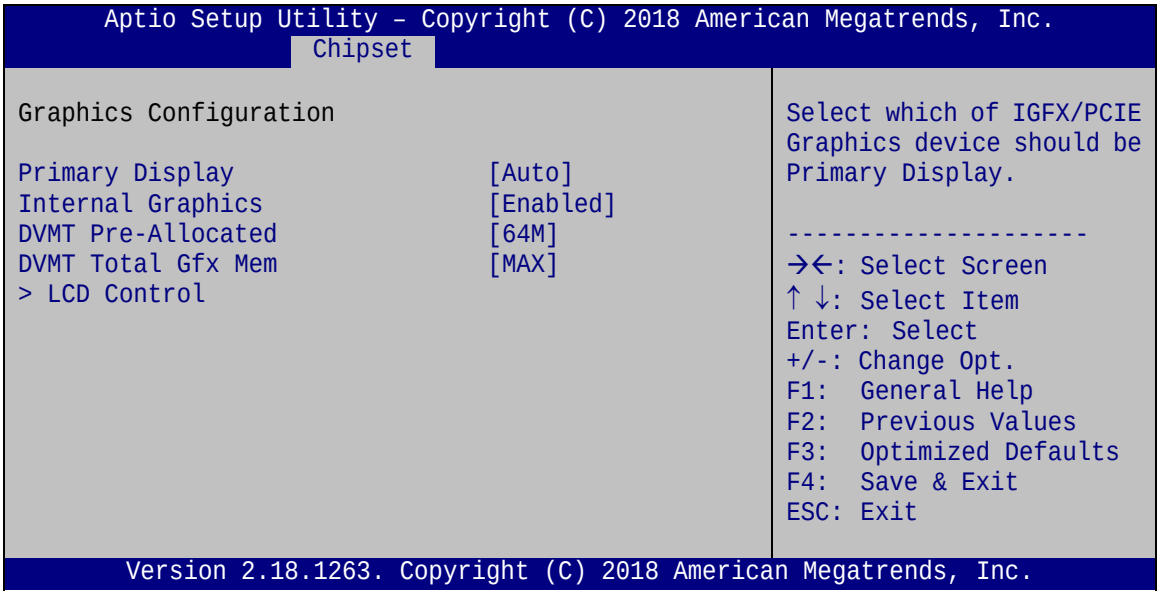
Use the **Memory Configuration** submenu (**BIOS Menu 18**) to display the memory information.



BIOS Menu 18: Memory Configuration

4.4.1.2 Graphics Configuration

Use the **Graphics Configuration** menu (**BIOS Menu 19**) to configure the graphics settings.



BIOS Menu 19: Graphics Configuration

➔ **Primary Display [Auto]**

Use the **Primary Display** option to select the graphics controller used as the primary boot device. Configuration options are listed below:

- Auto **DEFAULT**
- IGFX

➔ **Internal Graphics [Enabled]**

Use the **Internal Graphics** option to enable or disable the internal graphics device.

➔ **Auto** The internal graphics device is automatically detected and enabled.

➔ **Disabled** Disable the internal graphics device.

➔ **Enabled** **DEFAULT** Enable the internal graphics device. The following options/submenu appear with values that can be selected:

DVMT Pre-Allocated

DVMT Total Gfx Mem

LCD Control

➔ **DVMT Pre-Allocated [256M]**

Use the **DVMT Pre-Allocated** option to set the amount of system memory allocated to the integrated graphics processor when the system boots. The system memory allocated can then only be used as graphics memory, and is no longer available to applications or the operating system. Configuration options are listed below:

- 32M
- 64M **DEFAULT**

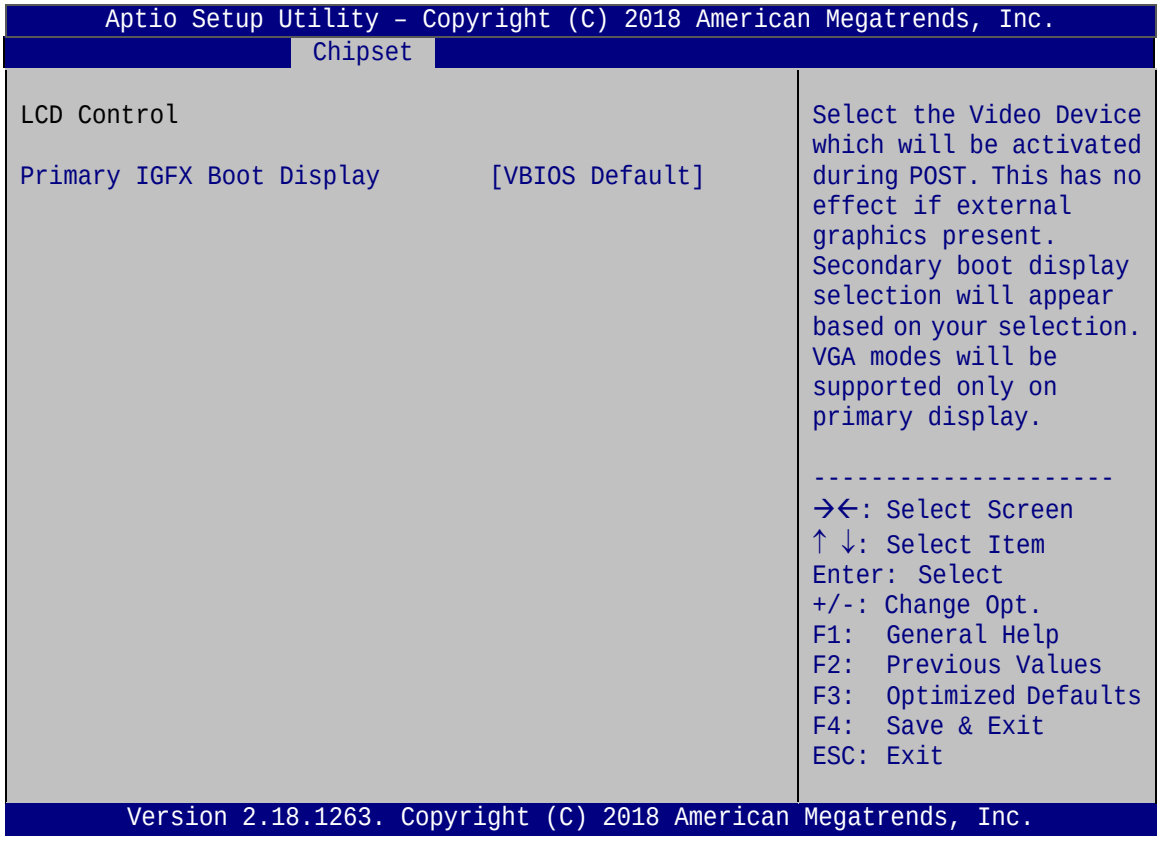
➔ **DVMT Total Gfx Mem [MAX]**

Use the **DVMT Total Gfx Mem** option to select DVMT5.0 total graphic memory size used by the internal graphic device. The following options are available:

- 256M
- 128M
- MAX **DEFAULT**

4.4.1.2.1 LCD Control

Use the **LCD Control** submenu (**BIOS Menu 20**) to select a display device which will be activated during POST.



BIOS Menu 20: LCD Control

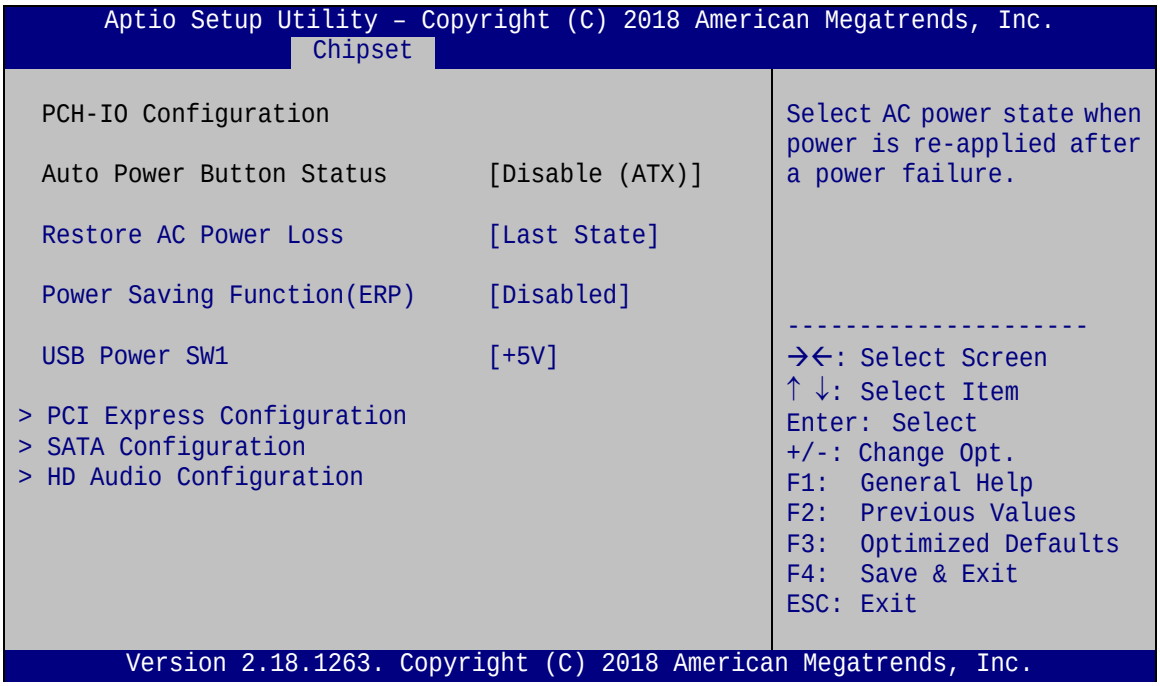
➔ **Primary IGFX Boot Display [VBIOS Default]**

Use the **Primary IGFX Boot Display** option to select the display device used by the system when it boots.

- VBIOS Default **DEFAULT**
- HDMI1
- LVDS
- HDMI2

4.4.2 PCH-IO Configuration

Use the **PCH-IO Configuration** menu (**BIOS Menu 21**) to configure the PCH-IO chipset.



BIOS Menu 21: 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 3.0 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 22**) to configure the PCI Express slots.

```
Aptio Setup Utility – Copyright (C) 2018 American Megatrends, Inc.
                    Chipset
PCI Express Configuration                    | M2_M1 Card Selection
                                             | Settings.
M2_M1 Card Selection            [PCIE]       |
M2_M2 Card Selection            [PCIE]       |
                                             | ---------------------
> M2_M1                                      | →←: Select Screen
> M2_M2                                      | ↑ ↓: Select Item
> M1                                         | Enter: Select
> CN2                                        | +/-: Change Opt.
                                             | F1:  General Help
                                             | F2:  Previous Values
                                             | F3:  Optimized Defaults
                                             | F4:  Save & Exit
                                             | ESC: Exit
Version 2.18.1263. Copyright (C) 2018 American Megatrends, Inc.
```

BIOS Menu 22: PCI Express Configuration

➔ **M2_M1 Card Selection / M2_M2 Card Selection [PCIE]**

Use the **M2_M1 Card Selection / M2_M2 Card Selection** option to configure M.2 device mode.

➔ **mSATA**		Configures M.2 slot as mSATA interface.
➔ **PCIE**	**DEFAULT**	Configures M.2 slot as PCIe interface.

The **M2_M1**, **M2_M2**, **M1** and **CN2** indicate the slots on the motherboard listed below:

- **M2_M1:** M.2 M-key 2242/2260/2280 slot (PCIe + SATA) with RAID
- **M2_M2:** M.2 M-key 2242/2260/2280 slot (PCIe + SATA) with RAID
- **M2:** M.2 A-/E-key 2242 slot (PCIe + USB)
- **CN2:** Full-size/Half-size PCIe Mini slot (PCIe + USB)

All submenus contain the following options:

➔ **PCIe Speed [Auto]**

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

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

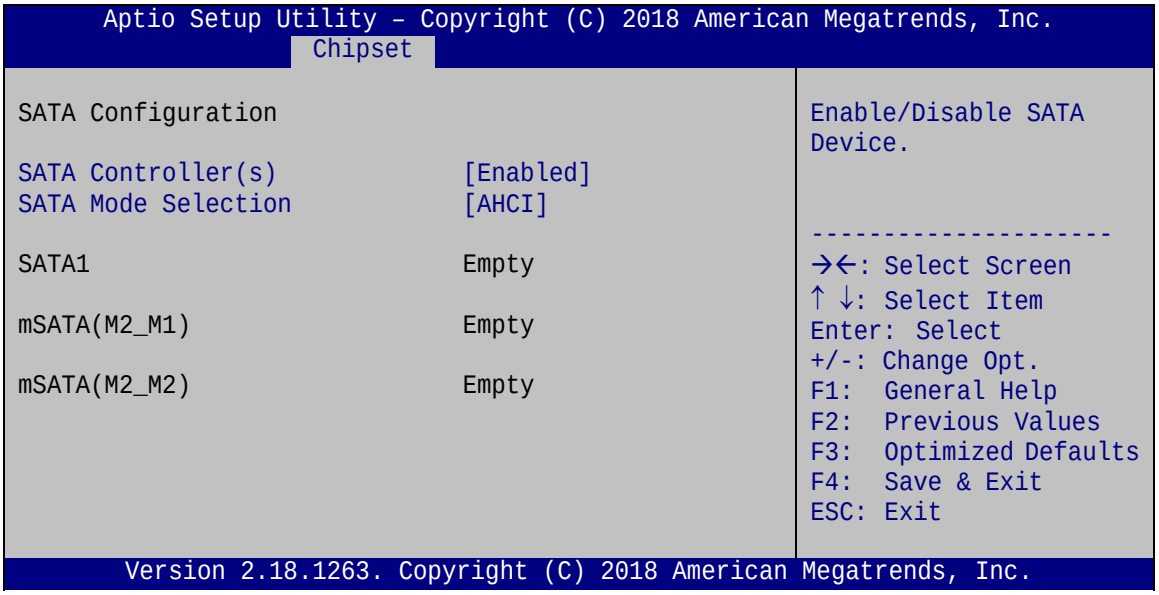
➔ **Detect Non-Compliance Device [Disabled]**

Use the **Detect Non-Compliance Device** option to enable or disable detecting if a non-compliance PCI Express device is connected to the PCI Express slot.

➔ **Disabled**	**DEFAULT**	Disables to detect if a non-compliance PCI Express device is connected to the PCI Express slot.
➔ **Enabled**		Enables to detect if a non-compliance PCI Express device is connected to the PCI Express slot.

4.4.2.2 SATA Configuration

Use the **SATA Configuration** menu (**BIOS Menu 23**) to change and/or set the configuration of the SATA devices installed in the system.



BIOS Menu 23: SATA Configuration

➔ **SATA Controller(s) [Enabled]**

Use the **SATA Controller(s)** option to configure the SATA controller(s).

- ➔ **Enabled** **DEFAULT** Enable the on-board SATA controller(s).
- ➔ **Disabled** Disable the on-board SATA controller(s).

➔ **SATA Mode Selection [AHCI]**

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

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

NOTE:

Before accessing the RAID configuration utility, ensure to set the **Option ROM Messages** BIOS option in the **Boot** menu to **Force BIOS**. This is to allow the “Press <CTRL+I> to enter Configuration Utility……” message to appear during POST. Press Ctrl+I when prompted to enter the RAID configuration utility.

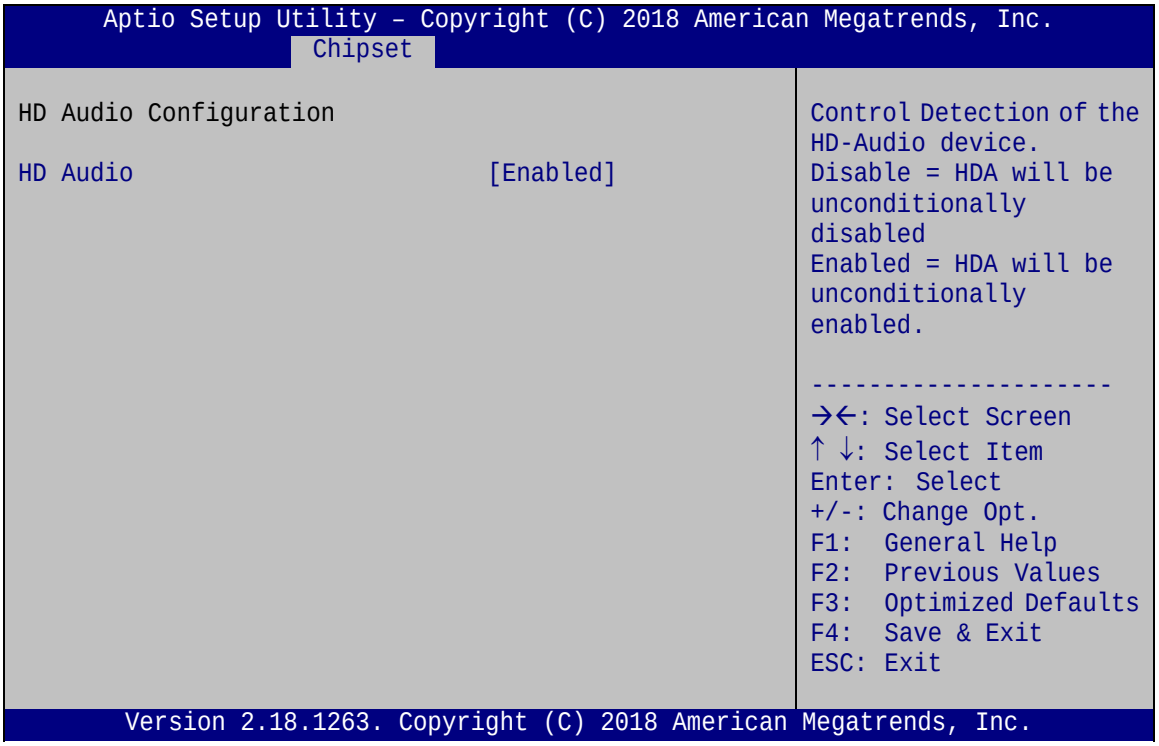
NOTE:

1. For the Windows 7 user, please install the Intel® RAID driver.

2. In case of the need of RAID surveillance function, please complete the .Net Framework 4.5 installation and download the Intel® RAID management software from the Intel® website: https://downloadcenter.intel.com/zh-tw/product/55005/Intel-Intel-RST-.

4.4.2.3 HD Audio Configuration

Use the **HD Audio Configuration** submenu (**BIOS Menu 24**) to configure the High Definition Audio codec.



BIOS Menu 24: HD Audio Configuration

➔ **HD Audio [Enabled]**

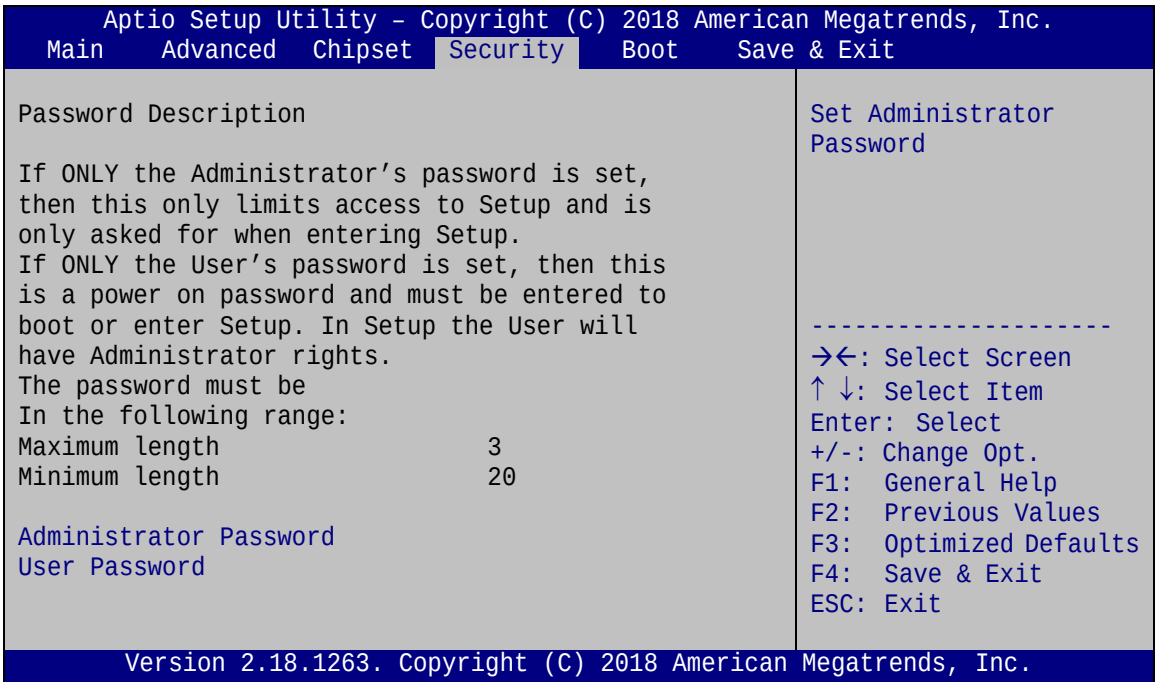
Use the **HD Audio** BIOS option to enable or disable the High Definition Audio controller.

➔ **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 25**) to set system and user passwords.



BIOS Menu 25: Security

➔ **Administrator Password**

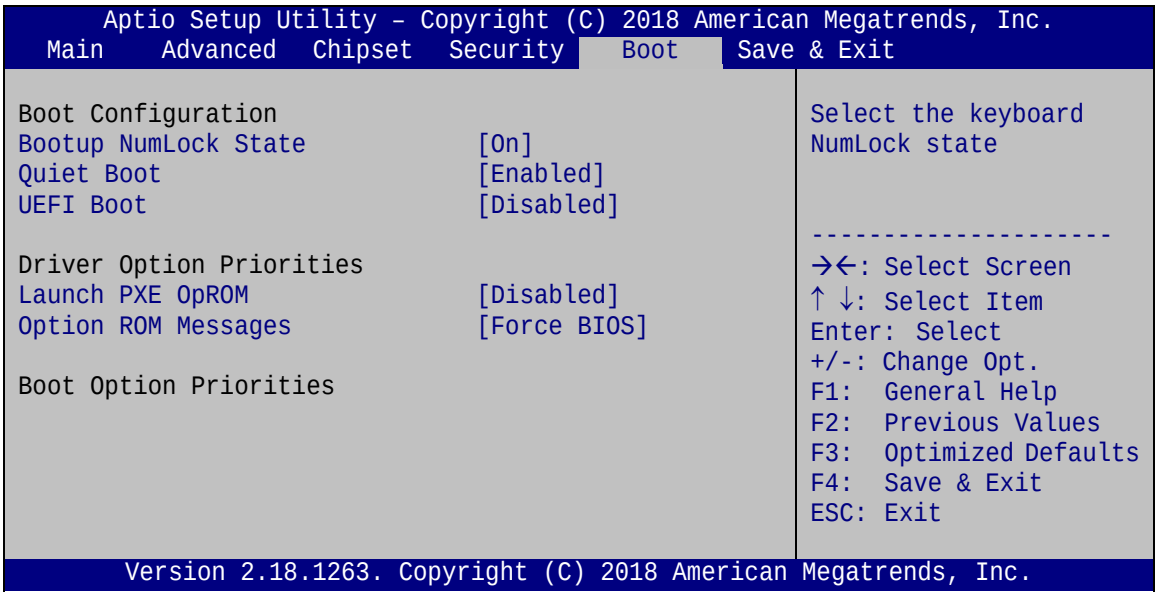
Use the **Administrator Password** field to set or change an administrator password.

➔ **User Password**

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

4.6 Boot

Use the **Boot** menu (**BIOS Menu 26**) to configure system boot options.



BIOS Menu 26: Boot

➔ **Bootup NumLock State [On]**

Use the **Bootup NumLock State** BIOS option to specify if the number lock setting must be modified during boot up.

➔ **On** **DEFAULT** Allows the Number Lock on the keyboard to be enabled automatically when the computer system boots up. This allows the immediate use of the 10-key numeric keypad located on the right side of the keyboard. To confirm this, the Number Lock LED light on the keyboard is lit.

➔ **Off** Does not enable the keyboard Number Lock automatically. To use the 10-keys on the keyboard, press the Number Lock key located on the upper left-hand corner of the 10-key pad. The Number Lock LED on the keyboard lights up when the Number Lock is engaged.

➔ **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

➔ **UEFI Boot [Disabled]**

Use the **UEFI Boot** BIOS option to enable or disable UEFI boot.

➔ **Enabled**		Enable UEFI boot if the 1st boot device is a GPT HDD.
➔ **Disabled**	**DEFAULT**	Disable UEFI boot.

➔ **Launch PXE OpROM [Disabled]**

Use the **Launch PXE OpROM** option to enable or disable boot option for legacy network devices.

➔ **Disabled**	**DEFAULT**	Ignore all PXE Option ROMs
➔ **Enabled**		Load PXE Option ROMs

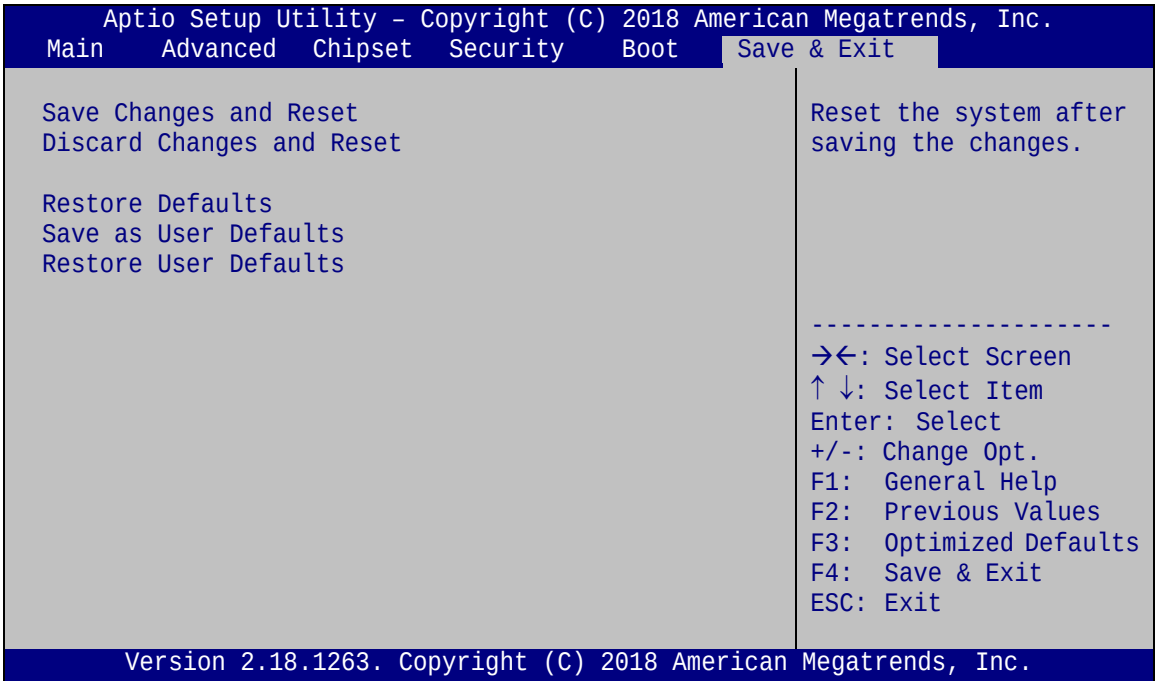
➔ **Option ROM Messages [Force BIOS]**

Use the **Option ROM Messages** option to set the Option ROM display mode.

➔ **Force BIOS**	**DEFAULT**	Sets display mode to force BIOS.
➔ **Keep Current**		Sets display mode to current.

4.7 Save & Exit

Use the **Save & Exit** menu (**BIOS Menu 27**) to load default BIOS values, optimal failsafe values and to save configuration changes.



BIOS Menu 27: 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-ULT3 are available on IEI Resource Download Center (https://download.ieiworld.com). Type POCm-W22C-ULT3 or POCm-W24C-ULT3, and press Enter to find all the relevant software, utilities, and documentation.

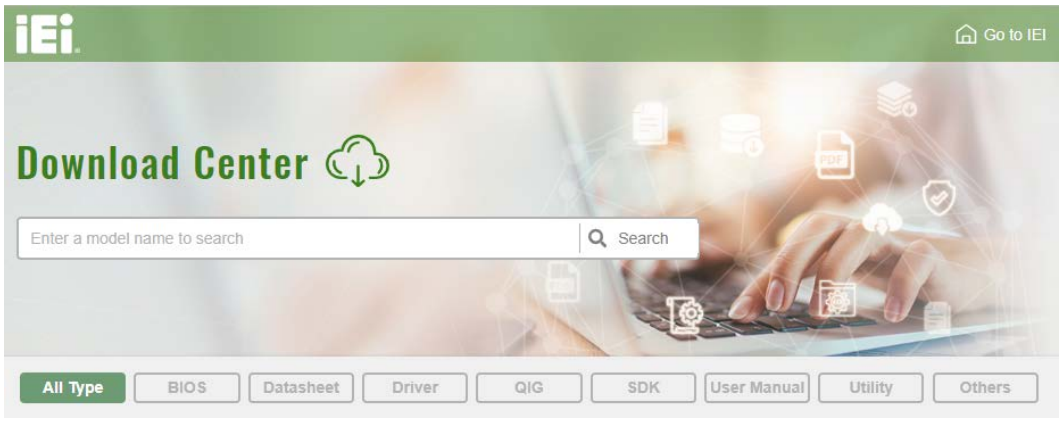
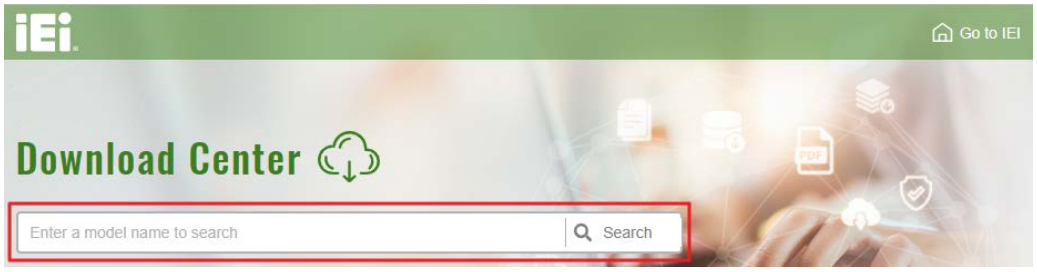


Figure 5-1: IEI Resource Download Center

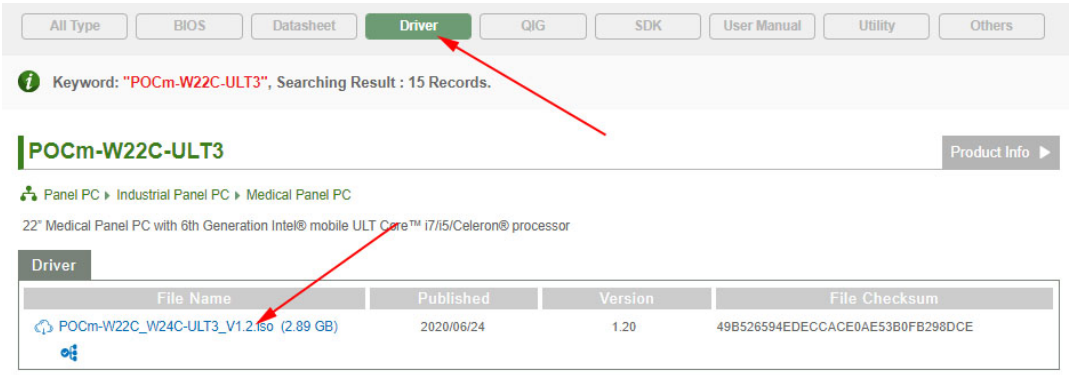
5.2 Driver Download

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

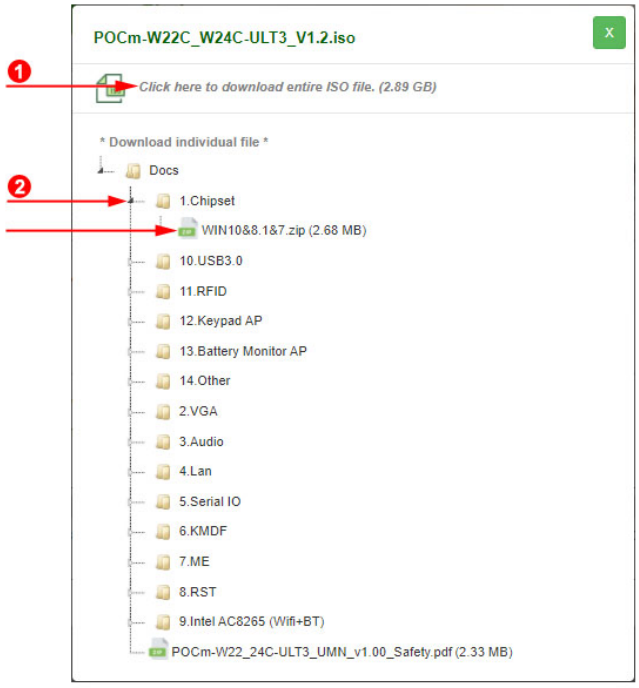
Step 1: Go to https://download.ieiworld.com. Type POCm-W22C-ULT3 or POCm-W24C-ULT3, and press Enter.



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. On Windows 7 system, an additional tool (such as Virtual CD-ROM Control Panel from Microsoft) is needed to mount the file.

5.3 Intel® Chipset Driver

To install the chipset driver, please follow the steps below.

Step 1: Navigate to the **Chipset** folder downloaded from IEI website.

Step 2: Double click the setup file in the folder. The Intel® Chipset Device Software installation wizard appears.

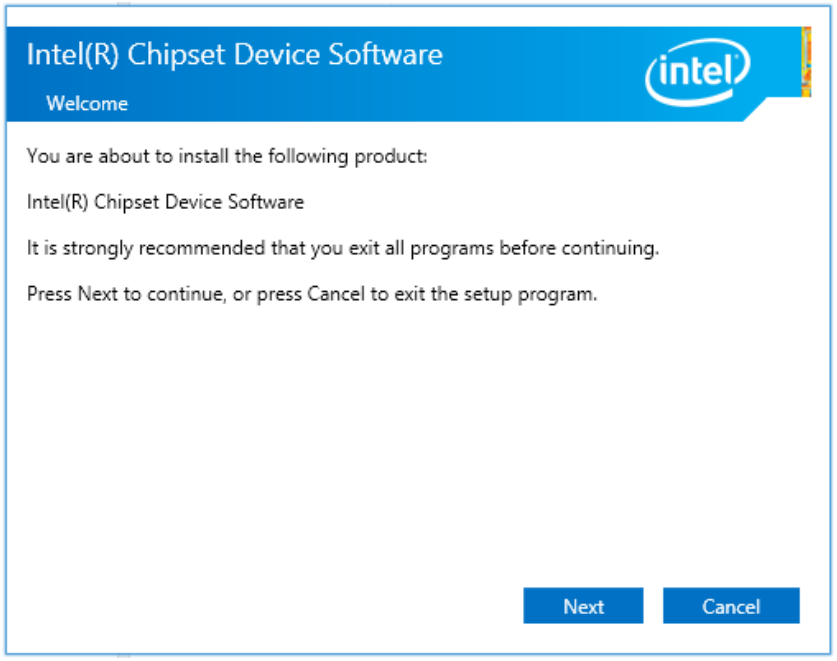


Figure 5-2: Intel® Chipset Device Software Installation Wizard

Step 3: Follow the step-by-step instruction of the installation wizard to install the driver.

5.4 Intel® Graphics Driver

To install the graphics driver, please follow the steps below.

Step 1: Navigate to the **VGA** folder downloaded from IEI website. Locate the driver setup file for the corresponding operating system.

Step 2: Double click the setup file in the folder. The **Intel® Graphics Driver** installation wizard appears (**Figure 5-3**).

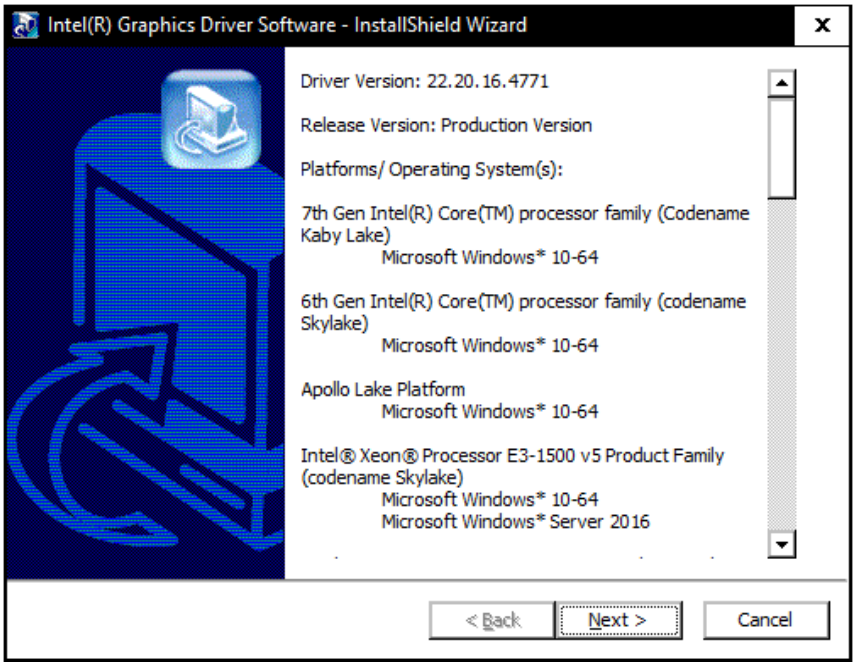


Figure 5-3: Intel® Graphics Driver Installation Wizard

Step 3: Follow the step-by-step instruction of the installation wizard to install the graphics driver.

5.5 Audio Driver

To install the driver for the speaker and the microphone, please follow the steps below.

Step 1: Navigate to the **Audio** folder downloaded from IEI website.

Step 2: Double click the setup file in the folder. The **InstallShield Wizard** screen appears (**Figure 5-4**).

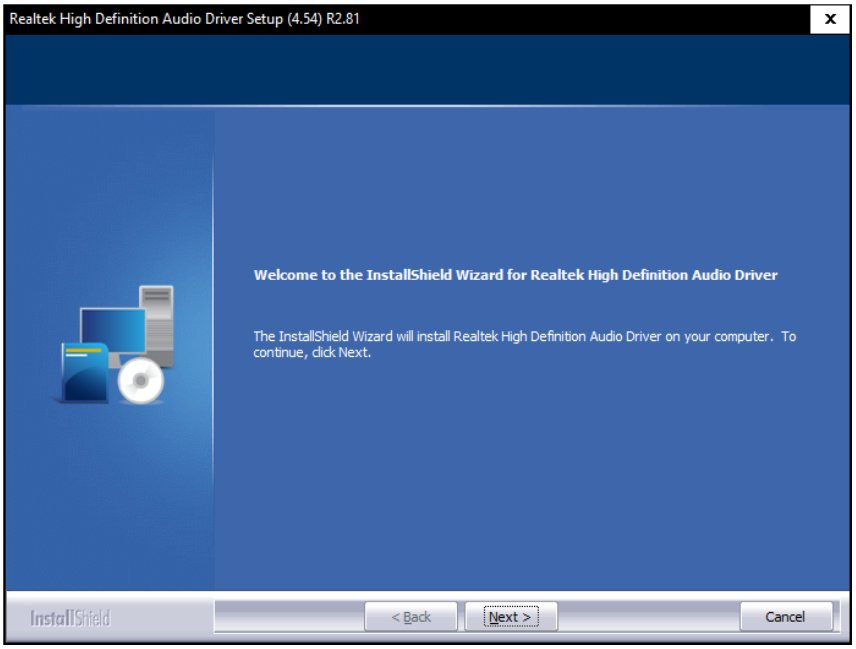


Figure 5-4: Realtek HD Audio Driver InstallShield Wizard

Step 3: Follow the step-by-step instruction of the installation wizard to install the HD Audio driver.

5.6 LAN Driver

To install the LAN driver, please follow the steps below.

Step 1: Select **Lan** from the list of the driver menu. Locate the driver setup file for the corresponding operating system.

Step 2: Double click the setup file in the folder. The **Install Wizard** screen appears (**Figure 5-4**).

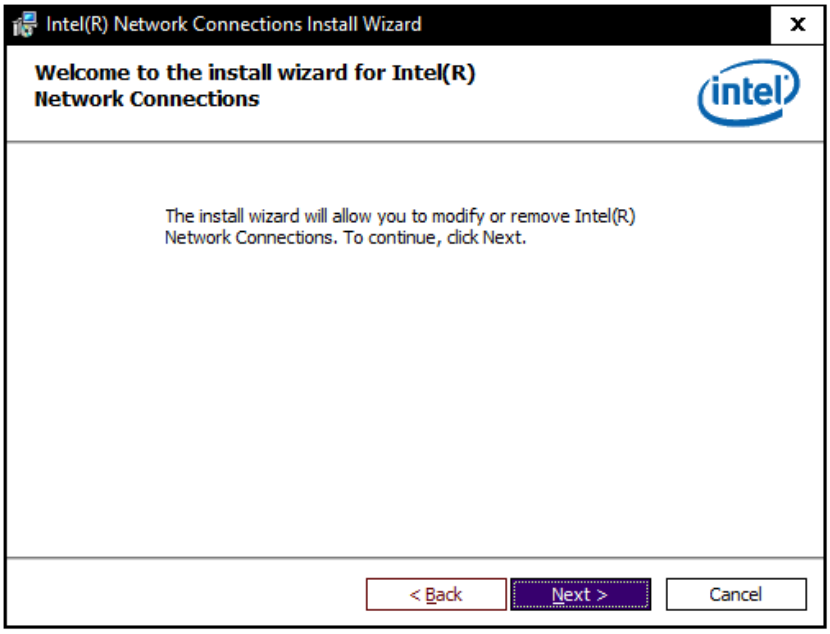


Figure 5-5: LAN Driver Installation Wizard

Step 3: Follow the step-by-step instruction of the installation wizard to install the Intel® Network Connection driver.

5.7 Intel® Management Engine

To install the Intel® Management Engine Components, please follow the steps below.

Step 1: Navigate to the **ME** folder downloaded from IEI website. Locate the driver setup file.

Step 2: Double click the setup file. The installation wizard window appears (**Figure 5-3**).

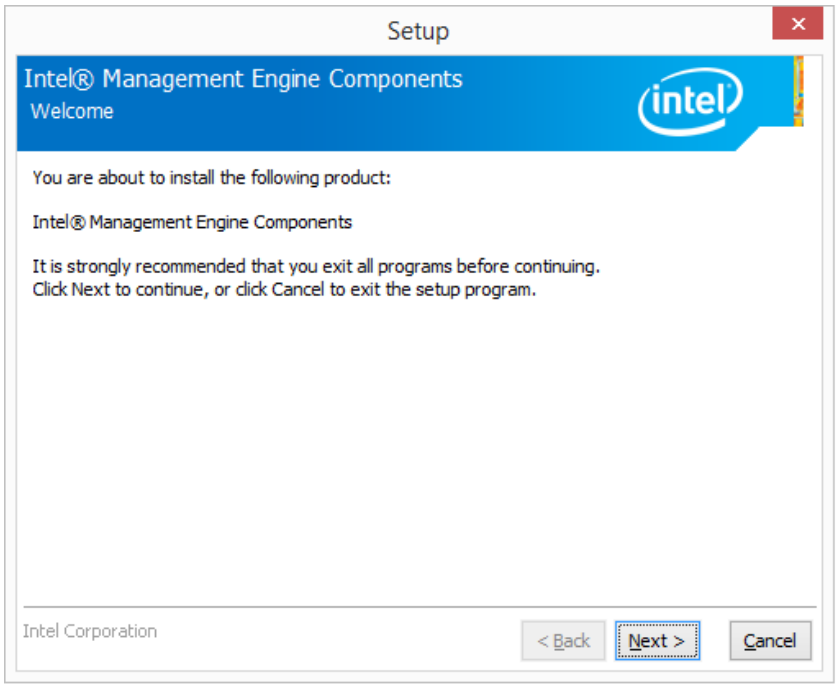


Figure 5-6: Intel® ME Components Installation Wizard

Step 3: Follow the step-by-step instruction of the installation wizard to install the Intel® Management Engine Components.

5.8 Wireless LAN Driver

To install the wireless LAN driver, please follow the steps below.

Step 1: Navigate to the **Intel AC8265 (Wifi+BT)** folder downloaded from IEI website. Locate the driver setup file for the corresponding operating system in the **Wifi driver** folder.

Step 2: Double click the setup file in the folder, and then select the language for the installation. The InstallShield Wizard screen appears (**Figure 5-7**).

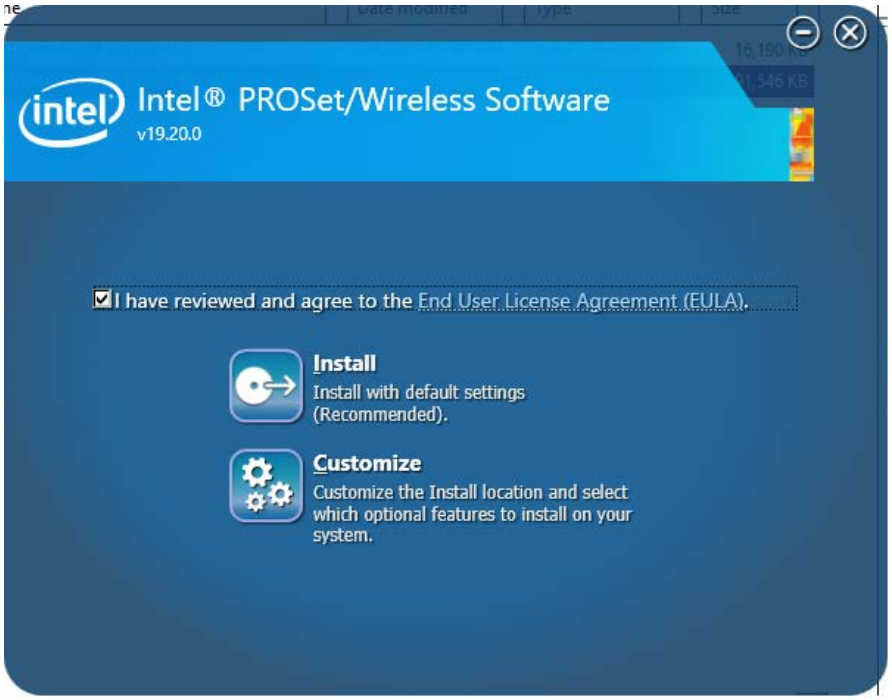


Figure 5-7: Wireless LAN InstallShield Wizard

Step 3: Check to agree the End User License Agreement and click **Install**. Follow the step-by-step instruction of the installation wizard to install the Wireless LAN driver.

5.9 Bluetooth Driver

To install the Bluetooth driver, please follow the steps below.

Step 1: Navigate to the **Intel AC8265 (Wifi+BT)** folder downloaded from IEI website. Locate the BT driver setup file for the corresponding operating system in the **BT driver** folder.

Step 2: Double click the setup file in the folder. The InstallShield Wizard screen appears (**Figure 5-8**).

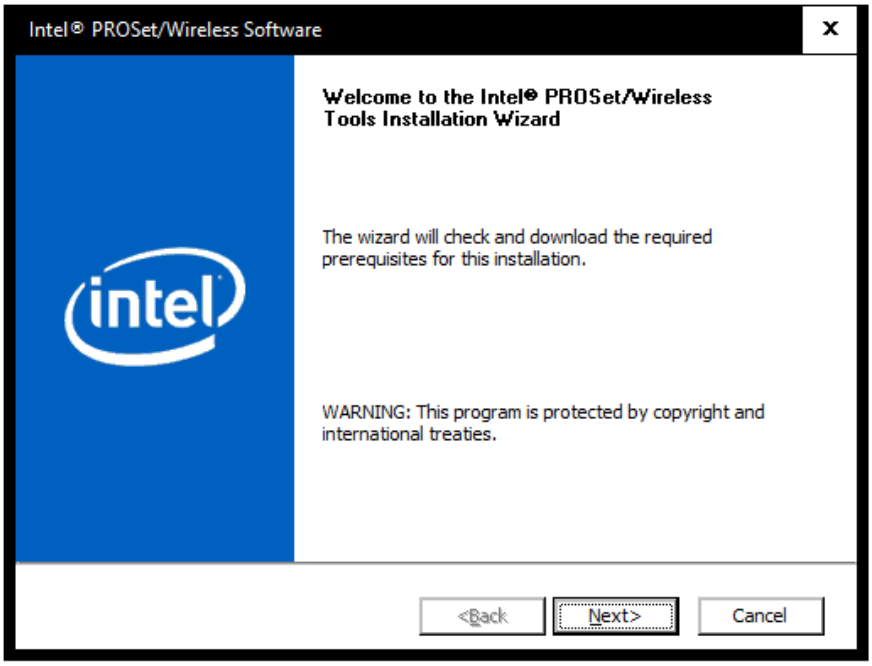


Figure 5-8: Bluetooth Driver InstallShield Wizard

Step 3: Follow the step-by-step instruction of the installation wizard to install the Bluetooth driver.

5.10 RFID Driver (Optional)

To install the RFID driver, please follow the steps below.

Step 1: Open the Device Manager window. Long press or right click **USB <-> Serial**. Select **Update Driver Software** from the pop-up window.

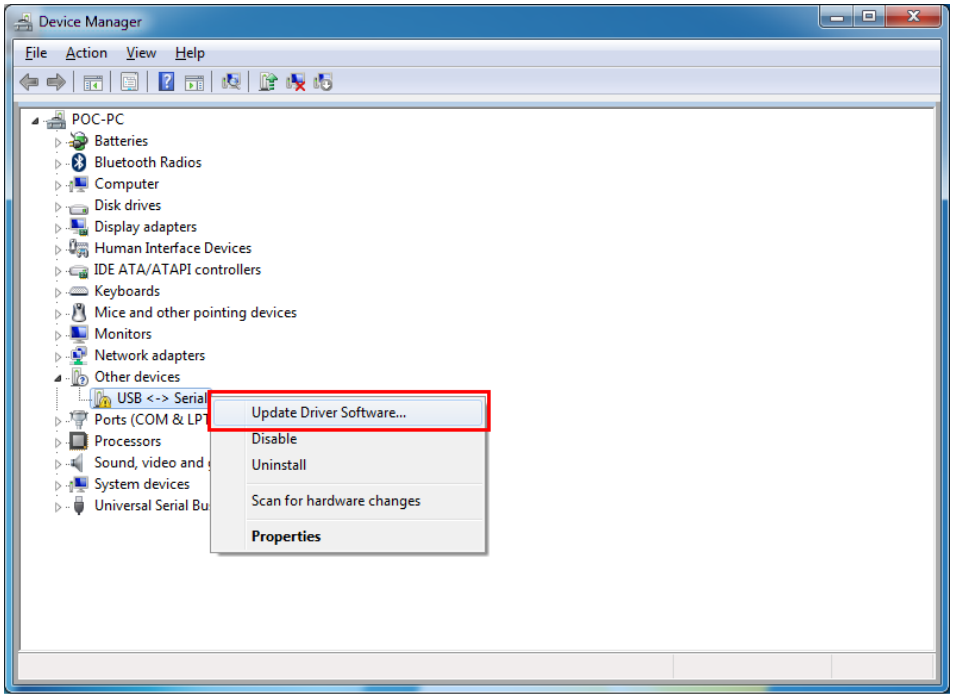


Figure 5-9: Device Manager - Update Driver Software

Step 2: The **Update Driver Software** window appears. Select **Browse my computer for driver software**.

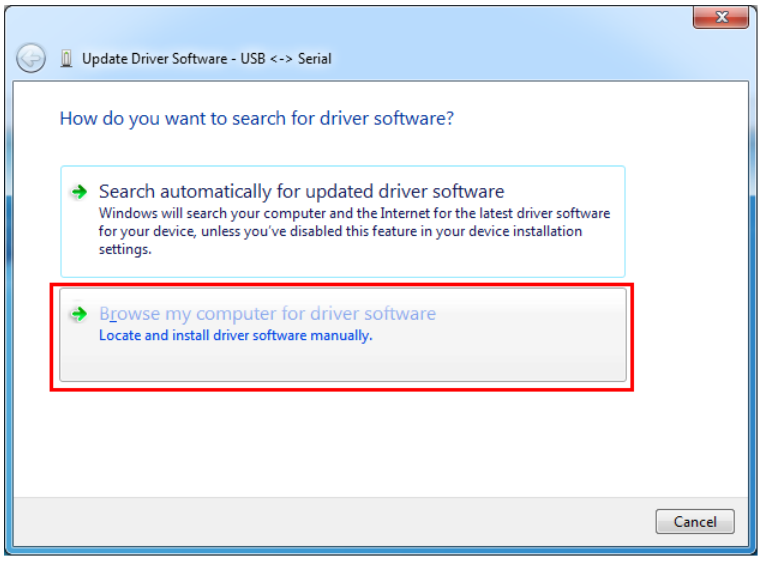


Figure 5-10: Update Driver Software Window

Step 3: The following window appears. Press/Click the **Browse** button to specify the RFID driver directory (\11.RFID\D490). Then, press/click the **Next** button.

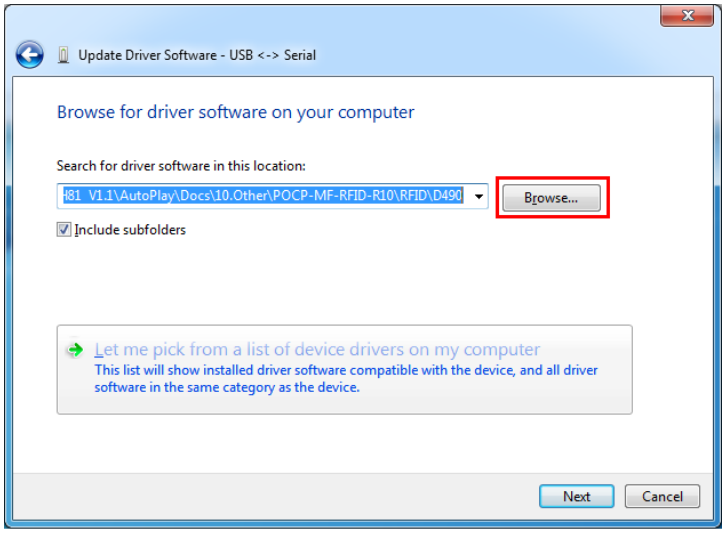


Figure 5-11: Browse for Driver Software Window

Step 4: The system starts installing the RFID driver.

Step 5: After the driver installation process is complete, a confirmation screen appears. Click **Close** to exit the program.

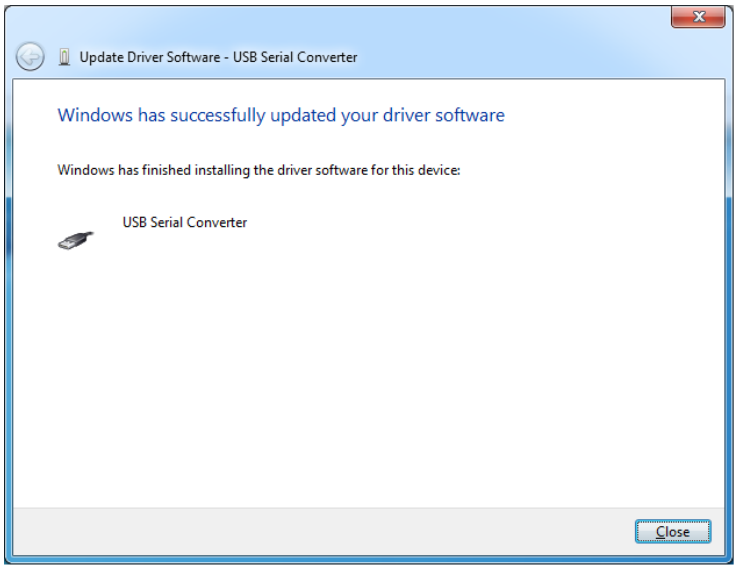


Figure 5-12: Driver Installation Complete Window

Step 6: Repeat **Step 1 ~ Step 5** to install the RFID driver again.

Step 7: The **Device Manager Window** now shows the installed RFID devices.

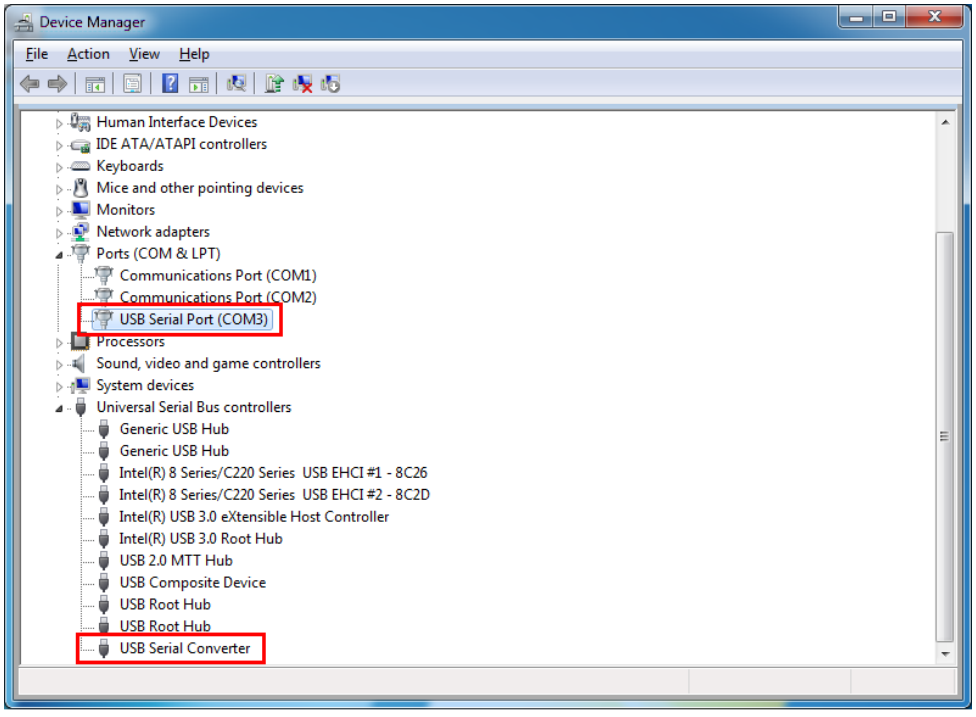


Figure 5-13: Device Manager Window – RFID Devices

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.

If this equipment has telecommunications functionality, it also complies with the requirements of the Radio Equipment Directive 2014/53/EU.

English IEI Integration Corp declares that this equipment is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.
Български [Bulgarian] IEI Integration Corp. декларира, че този оборудване е в съответствие със съществените изисквания и другите приложими правила на Директива 2014/53/EU.
Česky [Czech] IEI Integration Corp tímto prohlašuje, že tento zařízení je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 2014/53/EU.
Dansk [Danish] IEI Integration Corp erklærer herved, at følgende udstyr overholder de væsentlige krav o øvrige relevante krav i direktiv 2014/53/EU.
Deutsch [German] IEI Integration Co□p, erklärt dieses Gerät entspricht den grundlegenden Anforderungen und den weiteren entsprechenden Vorgaben der Richtlinie 2014/53/EU.
Eesti [Estonian] IEI Integration Corp deklareerib seadme seadme vastavust direktiivi 2014/53/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.

Español [Spanish] IEI Integration Corp declara que el equipo cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 2014/53/EU.
Ελληνική [Greek] IEI Integration Corp ΔΗΛΩΝΕΙ ΟΤΙ ΕΞΟΠΛΙΣΜΟΣ ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 2014/53/EU.
Français [French] IEI Integration Corp déclare que l'appareil est conforme aux exigences □ssentielles et aux autres dispositions pertinentes de la directive 2014/53/EU.
Italiano [Italian] IEI Integration Corp dichiara che questo apparecchio è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 2014/53/EU.
Latviski [Latvian] IEI Integration Corp deklarē, ka iekārta atbilst būtiskajām prasībām un citiem ar to saistītajiem noteikumiem Direktīvas 2014/53/EU.
Lietuvių [Lithuanian] IEI Integration Corp deklaruoja, kad šis įranga atitinka esminius reikalavimus ir kitas 2014/53/EU Direktyvos nuostatas.
Nederlands [Dutch] IEI Integr□tion Corp dat het toestel toestel in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 2014/53/EU.
Malti [Maltese] IEI Integration Corp jiddikjara li dan prodott jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 2014/53/EU.
Magyar [Hungarian] IEI Integration Corp nyilatkozom, hogy a berendezés megfelel a vonatkozó alapvetõ követelményeknek és az 2014/53/EU irányel□egyéb elõírásainak.
Polski [Polish] IEI Integration Corp oświadcza, że wyrobu jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 2014/53/EU.
Português [Portuguese] IEI Integration Corp declara que este equipamento está conforme com os requisitos essenciais e outras□disposições da Directiva 2014/53/EU.

Româna [Romanian] IEI Integration Corp declară că acest echipament este in conformitate cu cerinţele esenţiale şi cu celelalte prevederi relevante ale Directivei 2014/53/EU.
Slovensko [Slovenian] IEI Integration Corp izjavlja, da je ta opreme v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 2014/53/EU.
Slovensky [Slovak] IEI Integration Corp týmto vyhlasuje, že zariadenia spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 2014/53/EU.
Suomi [Finnish] IEI Integration Corp vakuuttaa täten että laitteet on direktiivin 2014/53/EU oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish] IEI Integration Corp förklarar att denna utrustnin□styp står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 2014/53/EU.

FCC WARNING

This equipment complies with part 18 of the FCC Rules.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

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

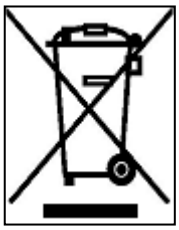
Product Disposal

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-ULT3, please follow the guidelines below.

WARNING:

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.

CAUTION:

- For safety reasons, turn-off the power switch and unplug the panel PC before cleaning.
- Do not scratch or rub the screen with a hard object.
- Never use any of the following solvents on the medical panel PC. Harsh chemicals may cause damage to the cabinet and the touch sensor.

  Thinner Spray-type cleaner, Benzene, Wax, Abrasive cleaner, Acid or Alkaline solvent.

C.1.1 Maintenance and Cleaning

Prior to cleaning any part or component of the POCm-W22/24C-ULT3, please read the details below.

- To clean the POCm-W22/24C-ULT3,
  - 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-ULT3 does not require cleaning. Keep fluids away from the POCm-W22/24C-ULT3 interior.

- Never drop any objects or liquids through the openings of the POCm-W22/24C-ULT3.

C.1.2 Cleaning Tools

Some components in the POCm-W22/24C-ULT3 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-ULT3.

- ***Cloth*** – Although paper towels or tissues can be used, a soft, clean piece of cloth is recommended when cleaning the POCm-W22/24C-ULT3.
- ***Water/Ethanol alcohol*** – A cloth moistened with water or 75% ethanol alcohol can be used to clean the POCm-W22/24C-ULT3.
- ***Using solvents*** – The use of solvents is not recommended when cleaning the POCm-W22/24C-ULT3 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
	This side up		Keep dry
	Consult the operating instructions		Refer to instruction manual
	Indicates the manufacturer		
	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。