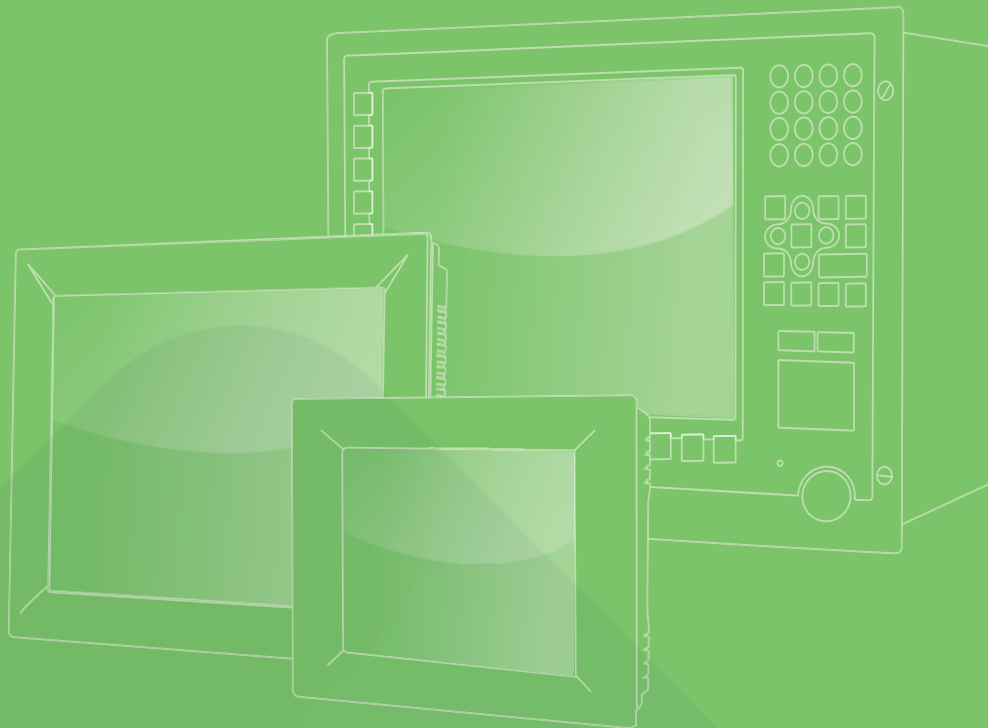




User Manual

PPC-306 EHL

6.5" Fanless Panel PC with Intel[®]
Celeron[®] N6210 Processor

ADVANTECH

Enabling an Intelligent Planet



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Product Warranty (2 years)

Advantech warrants the original purchaser that its products will be free from defects in materials and workmanship for two years from the date of purchase.

This warranty does not apply to any products that have been repaired or altered by persons other than repair personnel authorized by Advantech, or products that have been subject to misuse, abuse, accident, or improper installation. Advantech assumes no liability under the terms of this warranty as a consequence of such events.

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1. Collect all the information about the problem encountered. (For example, CPU speed, Advantech products used, other hardware and software used, etc.) Note anything abnormal and list any on-screen messages displayed when the problem occurs.
2. Call your dealer and describe the problem. Please have your manual, product, and any relevant information readily available.
3. If your product is diagnosed as defective, obtain a return merchandise authorization (RMA) number from your dealer. This allows us to process your return more quickly.
4. Carefully pack the defective product, a completed Repair and Replacement Order Card, and proof of purchase date (such as a photocopy of your sales receipt) into a shippable container. Products returned without a proof of purchase date are not eligible for warranty service.
5. Write the RMA number on the outside, and ship the package prepaid to your dealer.



Declaration of Conformity

CE

This product has passed the CE test for environmental specifications. Test conditions for passing included the equipment being operated within an industrial enclosure. In order to protect the product from damage resulting from electrostatic discharge (ESD) or electromagnetic interference (EMI) leakage, we strongly recommend using CE-compliant industrial enclosure products.

Technical Support and Assistance

1. Visit the Advantech website at <http://support.advantech.com> to obtain the latest product information.
2. Contact your distributor, sales representative, or Advantech's customer service center for technical support if you need additional assistance. Please have the following information ready before calling:
 - Product name and serial number
 - Description of your peripheral attachments
 - Description of your software (operating system, version, application software, etc.)
 - A complete description of the problem
 - The exact wording of any error messages

Safety Instructions

1. Read these safety instructions carefully.
Veuillez lire attentivement ce manuel d'instructions de sécurité.
2. Retain this startup manual for future reference.
Veuillez conserver ce manuel d'instructions pour référence ultérieure.
3. Disconnect the equipment from power outlets before cleaning. Use only a damp cloth for cleaning. Do not use liquid or spray detergents.
Débranchez l'appareil de toutes les prises de courant avant le nettoyage. Nettoyez-le uniquement à l'aide d'un chiffon humide. Ne pas utiliser de détergents liquides ou pulvérisateurs.
4. For pluggable equipment, the power outlet socket must be located near the equipment and easily accessible.
Pour les appareils enfichables, la prise de courant doit être placée près de l'appareil et facilement accessible.
5. Protect the equipment from humidity.
Protégez l'appareil contre l'humidité.
6. Place the equipment on a reliable surface during installation. Dropping or letting the equipment fall may cause damage.
Placez l'appareil sur une surface fiable pendant l'installation. L'abandon ou la chute de l'appareil pourrait causer des dommages.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. Do not cover the openings.
Les ouvertures du boîtier sont pour la convection d'air. Protégez l'appareil contre la surchauffe. Ne couvrez pas les ouvertures.
8. Warning: ensure that the voltage of the power source is correct before connecting the equipment to a power outlet. The power outlet socket should have a grounded connection.

Assurez-vous que la tension de la source d'alimentation est correcte avant de connecter l'appareil à une prise de courant. La prise de courant doit avoir une bonne connexion mise à la terre.

9. Position the power cord away from high-traffic areas. Do not place anything over the power cord.
Placez le cordon d'alimentation à l'écart des zones à fort trafic. Ne placez rien sur le cordon d'alimentation.
10. All cautions and warnings on the equipment should be noted.
Attention à toutes les précautions et avertissements indiqués sur l'appareil.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage from transient over-voltage.
Si l'appareil n'est pas utilisé pendant une longue période, déconnectez-le de la source d'alimentation pour éviter les dommages causés par une surtension transitoire.
12. Never pour liquid into an opening. This may cause fire or electrical shock.
Ne versez jamais de liquide dans une ouverture. Sinon, cela pourrait provoquer un incendie ou un choc électrique.
13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
N'ouvrez jamais l'appareil. Pour des raisons de sécurité, l'appareil ne doit être ouvert que par un technicien qualifié.
14. If one of the following occurs, have the equipment checked by service personnel:
Si l'un des cas suivants se produit, demandez aide à un technicien qualifié:
 - The power cord or plug is damaged.
Le cordon d'alimentation ou la fiche est endommagé.
 - Liquid has penetrated the equipment.
Le liquide a pénétré dans l'appareil.
 - The equipment has been exposed to moisture.
L'appareil a été exposé à l'humidité.
 - The equipment is malfunctioning or does not function according to the user manual.
L'appareil est défectueux ou ne fonctionne pas conformément aux instructions.
 - The equipment has been dropped or damaged.
L'appareil a été abandonné et endommagé.
 - The equipment shows obvious signs of breakage.
L'équipement montre des signes évidents de casse.
15. Do not leave the equipment in an environment with a storage temperature of below -20 °C (-4 °F) or above 60 °C (140 °F) as this may cause damage. The equipment should be kept in a controlled environment.
L'appareil montre des signes évidents de rupture. Ne laissez pas cet appareil dans un environnement dont la température de stockage est inférieure à -20°C (-4 °F) ou supérieure à 60 °C (140 °F), car cela pourrait causer des dommages. L'appareil doit être surveillé dans l'environnement.
16. CAUTION: Batteries are at risk of exploding if incorrectly replaced. Replace only with the same or equivalent type as recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.
ATTENTION: Il y a danger d'explosion s'il y a un remplacement incorrect de la pile. Remplacer uniquement avec une pile du même type ou d'un type équivalent recommandé par le constructeur.
17. In accordance with the IEC 704-1:1982 specifications, the sound pressure level at the operator's position should not exceed 70 dB (A).

Conformément aux spécifications de l'IEC 704-1:1982, le niveau de pression acoustique à la position de l'opérateur ne dépasse pas 70 dB (A).

18. Power to this equipment should be supplied by a UL-certified power adapter or DC power source with mating connector and an output rating of 12 ~ 24 V_{DC}, 5 ~ 2.5A, and an operating temperature tolerance of 50 °C / 122 °F. For further assistance, contact Advantech.
19. **DISCLAIMER:** These instructions are provided in accordance with IEC 704-1 standards. Advantech disclaims all responsibility for the accuracy of any statements contained herein.
AVERTISSEMENT: Ces instructions sont fournies conformément aux normes IEC 704-1. Advantech decline toute responsabilité quant à la précision de toute déclaration contenue dans le présent document.
20. Do not expose the equipment to direct sunlight, or install the equipment in an environment with direct sunlight, as this may cause damage.
21. The equipment shall only be installed with horizontal position and IO ports downward, if it is mounted.
Si l'appareil est installé, il ne peut être installé qu'horizontalement et le port d'E/S est en panne.

Safety Precautions - Static Electricity

Follow the simple precautions detailed below to protect yourself from harm and the products from damage.

- To avoid electrical shock, always disconnect the power from the PC chassis before manually handling the device. Do not touch any components on the CPU card or other cards while the equipment is powered on.
- Disconnect the power before executing any configuration changes. A sudden rush of power after connecting a jumper or installing a card may damage sensitive electronic components.

Battery Information

Batteries, battery packs, and accumulators should not be disposed of as unsorted household waste. Please use the public collection system to return, recycle, or treat them in compliance with local regulations.



Manual Conventions

Warning! Warnings indicate conditions that, if not observed, can cause personal injury!



Caution! Cautions are included to prevent hardware damage and data loss.



For example, “Batteries are at risk of exploding if replaced with an incorrect type. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer’s instructions.

Par exemple, “Si la batterie est remplacée par un modèle inapproprié, il y a un risque d’explosion. Remplacer les produits identiques ou équivalents recommandés par le fabricant. Traitement des piles usagées selon les instructions du fabricant.”

Note! Notes provide additional information.



Revision

Date	Version	Description/Change
September 2023	1.0	Initial



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Chapter 1

General Information

This chapter details general information regarding PPC-306 EHL.

- Introduction
- Specifications
- Dimensions

1.1 Introduction

Advantech's PPC-306 EHL is an all-in-one light panel PC with a wide format 6.5" TFT LCD screen. It is powered by an Intel® Celeron® N6210 processor, PPC-306 EHL to provide high performance, optimal memory, graphics, and peripheral I/O support in a compact, fanless, embedded system. With a high-durability design, PPC-306 EHL adopts a flat touchscreen with an IP66-rated front panel in a die-cast aluminum alloy enclosure. It is ideal for MES, processing, and general industrial equipment integration.

1.2 Key Features

- Industrial-grade 6.5" VGA TFT LCD with LED backlight
- Durable true-flat touchscreen with 5-wire resistive touch control
- Intel® Celeron® N6210 dual-core, 1.2 GHz, processor
- Up to 32 GB DDR4 SDRAM
- Compact, fanless design with IP66-rated front panel
- Supports expansion via M.2 slot
- Supports VESA 75 x 75 mounting holes

1.3 Front Panel

The PPC-306 EHL front panel is a true-flat color TFT LCD touchscreen with Projected Capacitive Multi-Touch. The front panel is IP66 rated for dust and water tolerance (Figure 1.1).



Figure 1.1 Front Panel

1.4 Rear Panel

The PPC-306 EHL rear panel features four VESA mount (75 x 75 mm /2.95 x 2.95 in) holes located on its bottom side, as demonstrated below:

VESA mount screws: 4 x M4 screws, screw depth: 8 mm (max.)



Figure 1.2 Rear Panel

1.5 Panel Bottoms

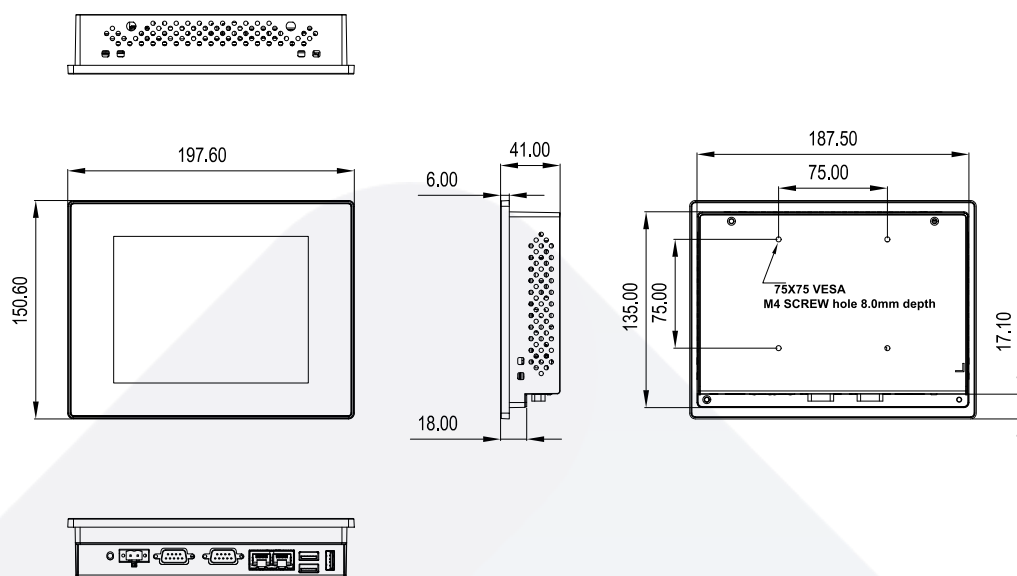
The system's I/O, located on the bottom of the device, (Figures 1.3) are listed below:

- 1 x Power input connector
- 1 x Power switch
- 1 x RS-232 connector (COM1)
- 1 x RS-232/422/485 connector (COM2)
- 2 x RJ-45 GbE
- 2 x USB 3.0
- 1 x USB 2.0



Figure 1.3 Panel PC Bottom

1.6 Dimensions



Panel Cutout Dimensions: 189X136.5mm (7.44X5.37 in)

Figure 1.4 PPC-306 EHL dimensions

Table 1.1: Specifications	
LCD Panel	6.5"
Display Type	FT LCD (with LED backlight)
Max. Resolution	640 x 480p
Brightness	800 cd/m2
Viewing Angle	89 (left), 89 (right), 89 (up), 89 (down)
Contrast	1000
Backlight Lifetime	70,000 hr (min.)
Touchscreen Type	ELO 5-wire resistive touch
Light Transmission	80±5% at 550 nm wavelength
Controller	USB interface
Durability (Touches)	Greater than 35 million touches in one location without failure
Enclosure	Aluminum
Processor	Intel® Celeron® N6210 dual core
Memory	1 x SO-DIMM DDR4 3200MHz (max. 32GB)
Storage	1 x M.2 slot: M-Key for storage (SATA only, 2242)
Network (LAN)	2 x 10/100/1000/2500 Mbps Ethernet (Intel I226-LM)
I/O Ports	2 x serial ports: 1 x RS-232, 1 x RS-232/422/485 (Adjustable through BIOS) 1 x USB 2.0, 2 x USB 3.0
Expansion	1 x M.2 slot : E-Key for wireless module (Type: 2230)
Watchdog Timer	255 timer levels, set up by software
OS Support	Microsoft® Win10(64-bit) IOT LTSC, Win10, Win11, Linux (Ubuntu), Android 12
Power Supply	12-24Vdc
Power Consumption	30W (burn-in test 8.1 in Windows 10, 64-bit)
Operating Temperature	-10 ~ 50°C (14 ~ 122°F)
Storage Temperature	-30 ~ 60°C (-22 ~ 140°F)
Relative Humidity	10 ~ 95% @40°C (non-condensing)
Shock Tolerance	Operating 10 G peak acceleration (11 ms duration), follow IEC 60068-2-27
Vibration Tolerance	Operating Random Vibration Test; 2Grms with M.2, follow IEC 60068-2-64
Safety and EMC	CB, UL, CCC, UKCA, CE, FCC Class B, BSMI, UKCA, VCCI, EN60601-1-2
Dimensions	197.6 x 150.6 x 41 mm (7.8 x 5.9 x 1.6 in)
Weight	1.5 kg (3.30 lb)

Note! The test conditions for the power consumption values provided above were as follows:



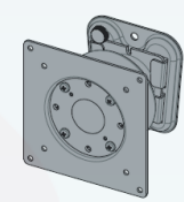
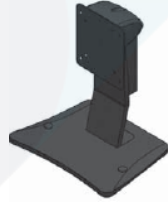
Memory: 16 GB DDR4 3200

M.2: 64G

OS: Windows 10 (64-bit)

Software: Burn-In Test 8.1

1.8 Ordering Information

Table 1.2: Ordering information		
Part Number	Description	Image
PPC-306-RN6A	Panel PC with Intel® Celeron® N6210	
96PSA-A90W19OT-3	Power adapter 100 ~ 240 V _{DC} , 90 W, 19V	
PPC-WLAN-D2	Wi-Fi module with antenna	
PPC-ARM-A03	Arm mount VESA standard	
PPC-174T-WL-MTE	Wall mount kit	
PPC-Stand-A1E	Stand kit	



Chapter 2

System Installation and Setup

- Quick System Tour
- Memory Card Installation
- M.2 Installation
- Wireless LAN Card Installation
- Mounting the System

2.1 Quick System Tour

Before setting up the panel PC, take a moment to identify the locations of the device controls, drives, connectors, and ports (as shown in Figure 2.3). When placed upright, the PPC-306 EHL front panel should appear as shown in Figure 2.1.



Figure 2.1 Panel PC Front View



1

Figure 2.2 Panel PC Rear View

1. GND screw

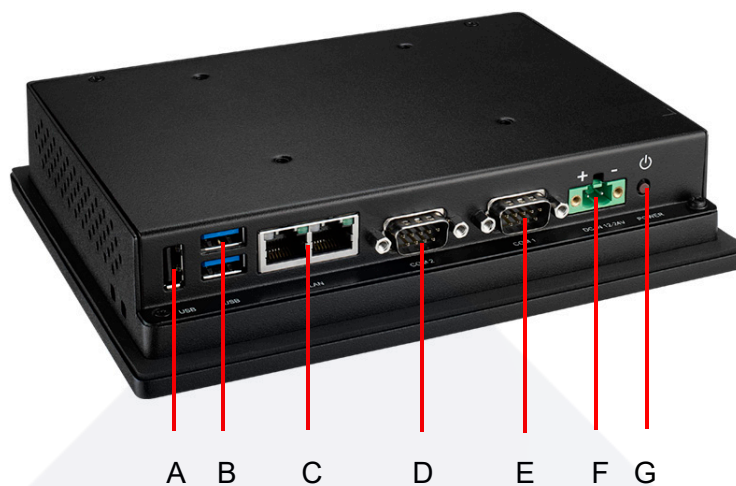


Figure 2.3 Panel PC Bottom with I/O

- A. USB 2.0
- B. 2 x USB 3.0
- C. 2 x RJ-45 LAN
- D. COM2 RS232/422/485
- E. COM1 RS232
- F. DC-In
- G. Power Switch

2.2 Installation Procedures

When installing system hardware, adhere to the following order:

1. Install the memory card.
2. Install M.2 storage.
3. Install SSD storage.
4. Install the Wi-Fi Module
5. Mount the panel PC.
6. Configure the system.

2.2.1 Memory Card Installation

1. Remove the 4 screws and 4 post shown in the circles, then remove the rear cover.



Figure 2.4 Retention Screws on the Rear Cover

2. Insert the memory card into the corresponding slot on the main board, then place the thermal pad provided in the accessory box on top of the memory card. Remember to remove the protective film before using the thermal pad.

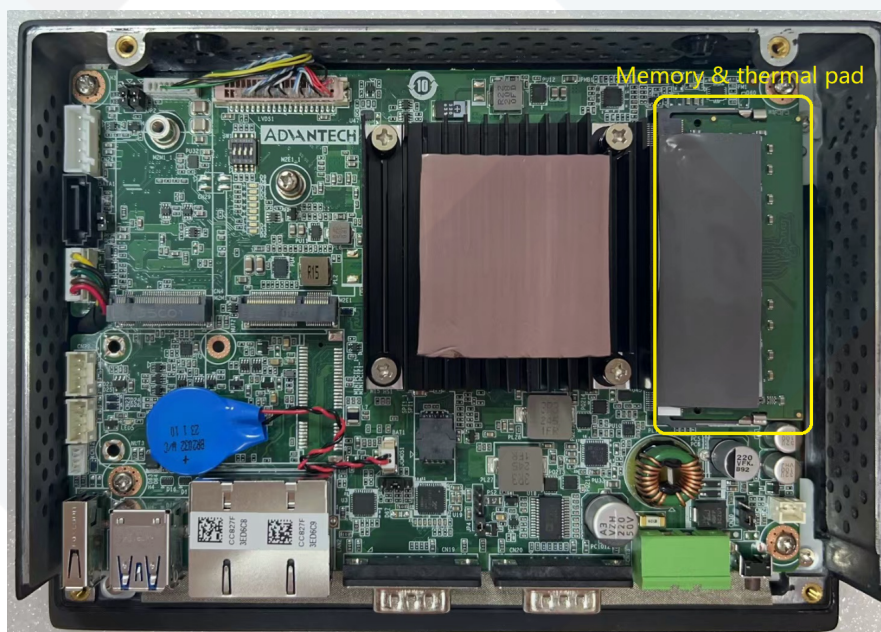


Figure 2.5 Memory Card Installation

2.2.2 M.2 Storage Installation

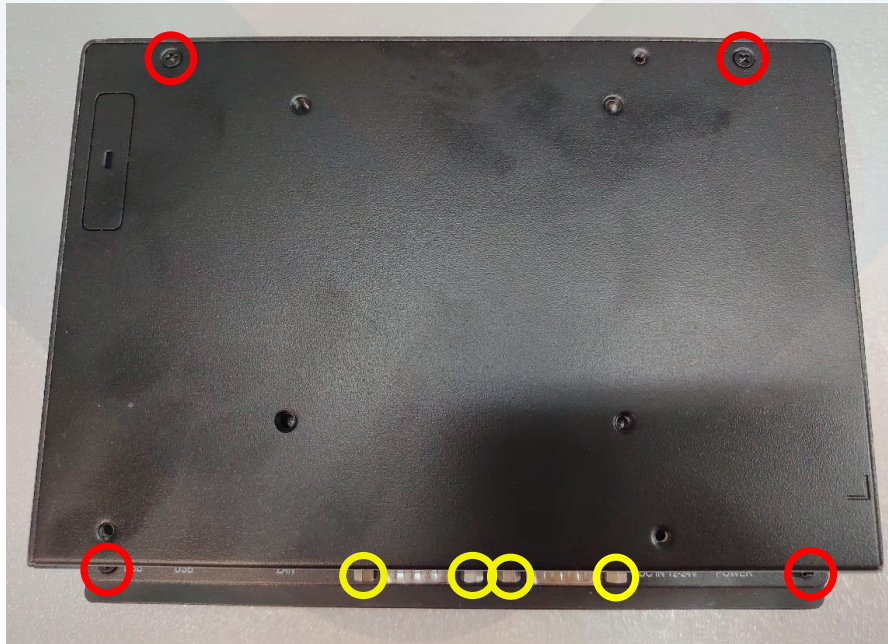
1. Insert the M.2 into the corresponding slot on the main board, then fix it by a screw and place the thermal pad provided in the accessory box. Remember to remove the protective film before using the thermal pad.



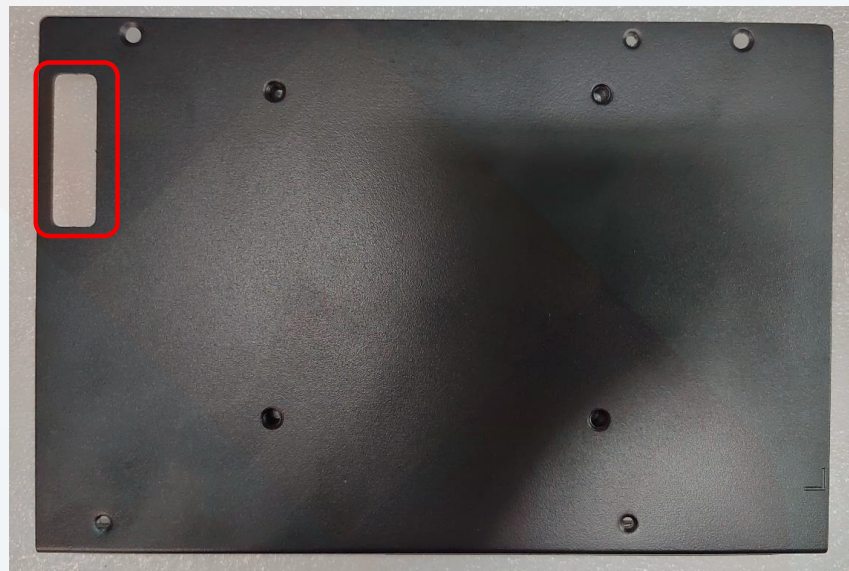
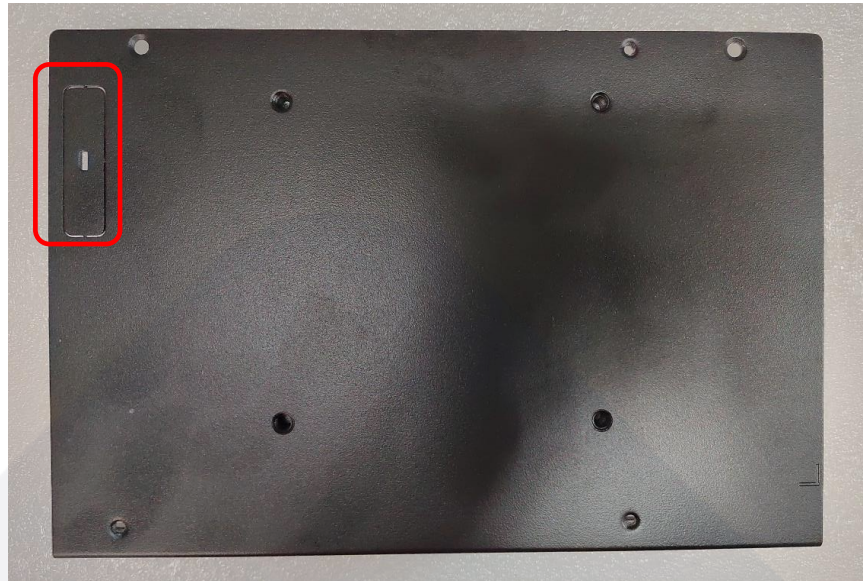
Figure 2.6 M.2 Installation

2.2.3 SSD Storage Installation

1. Remove the 4 screws and 4 post shown in the circles, then remove the rear cover.



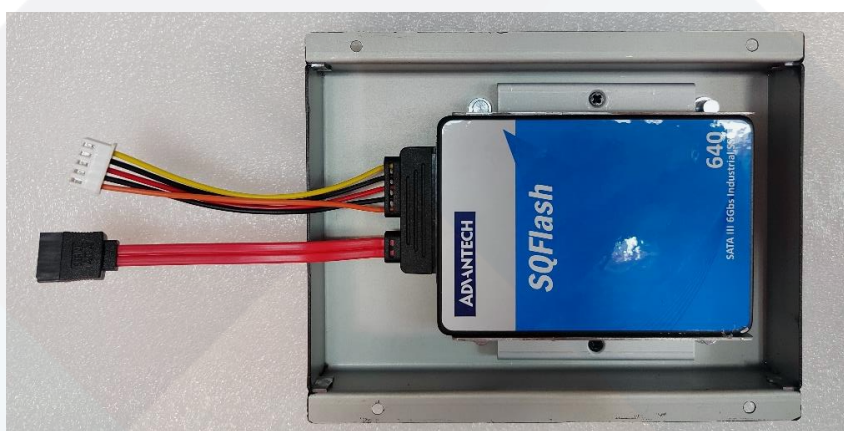
2. Remove the pre-punched baffle on the rear cover.



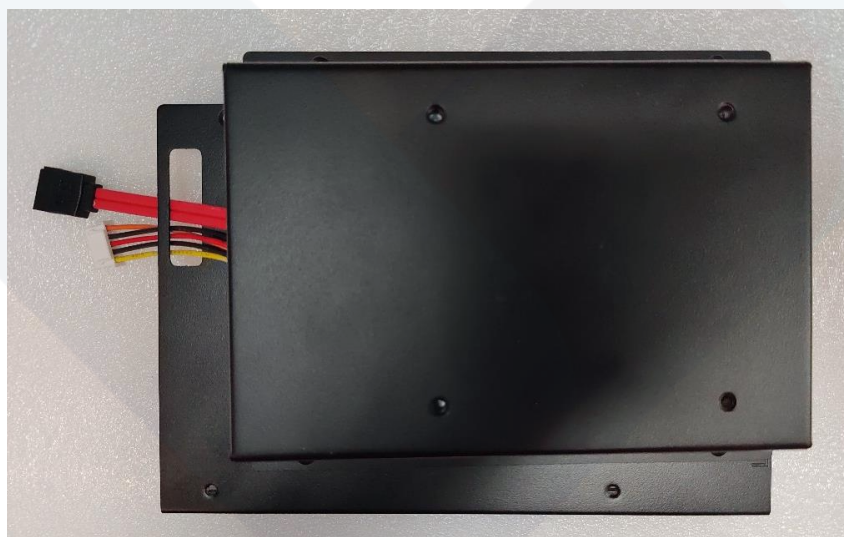
3. Get the SSD module (98R1P306000).



4. Insert the SSD into the module and plug in the SSD Cable.



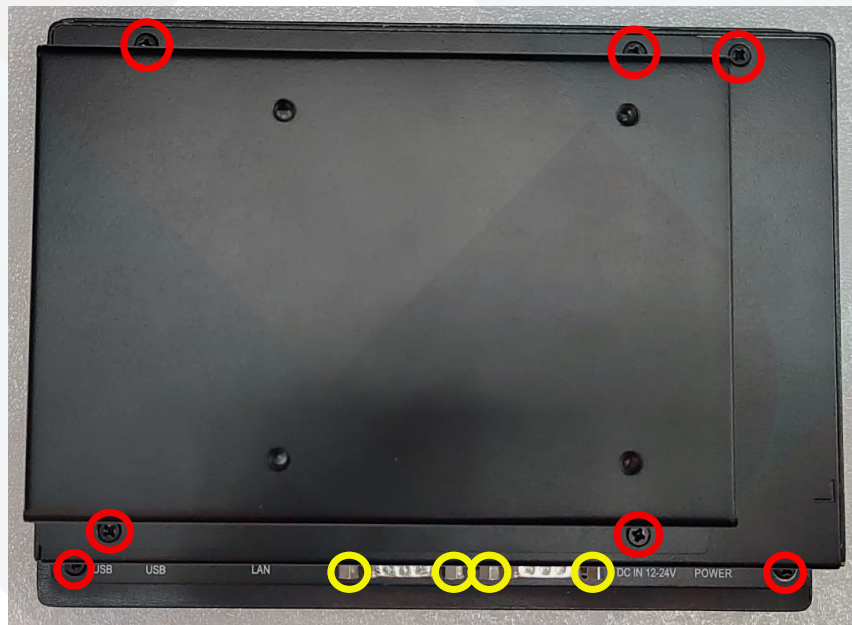
5. Insert the SSD cable through the hole in the rear cover.



6. Plug the SSD cable into the port on the motherboard.



7. Install the seven screws on the rear cover and the four screws on the COM port, and the SSD is now fully assembled.



2.2.4 Install the Wi-Fi Module

1. Remove the rear cover.
2. Assemble the Wi-Fi card.

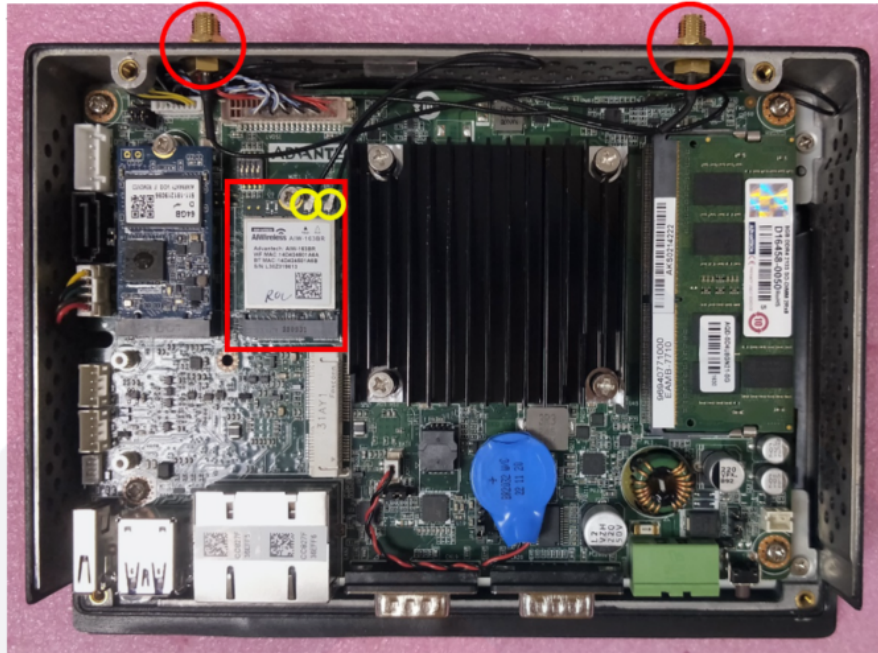


Figure 2.7 Assemble the Wi-Fi Card and Antenna Cable

3. Assemble the rear cover, and install the antenna.

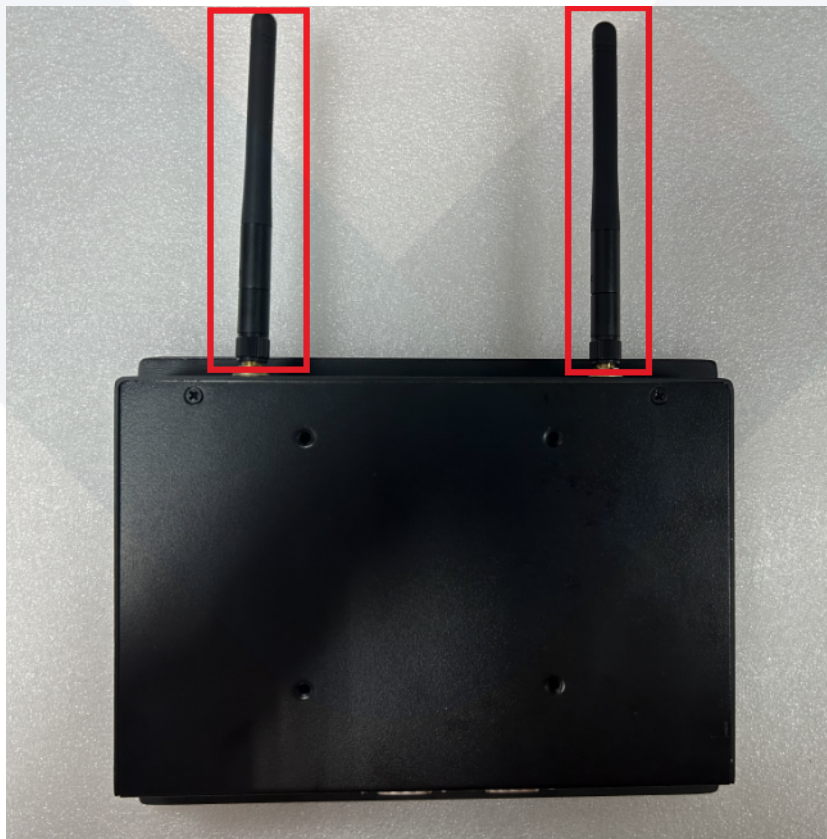
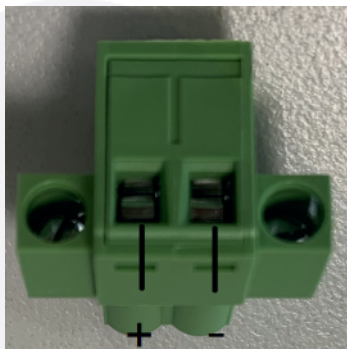


Figure 2.8 Assemble the Wi-Fi Antenna

2.2.5 System Power on

A 2-pin power connector is included in the accessory box. Connect the power connector to 12-30V_{DC} power lines and plug the power cables into the system power receptor. The DC power source shall comply with ES1 requirements, and the output rating is 12-30V_{DC}, 8-4 A, with a minimum operating temperature of 50°C. It has to be evaluated according to IEC/UL 60950-1 and/or IEC/UL 62368-1.



The terminal block is suitable for 16 AWG min., with a torque value 4.5 lb-in min. Use copper conductors only. It must be installed by a trained and skilled person.

2.3 Mounting the System

Warning! When mounting the panel PC, more than one person should perform the installation to prevent accidental damage to the panel or personal injury.



Le comité constate qu'el-nasr mounting, Plus d'une personne installation to prevent the cadre accidental damage to the personal injury.

The panel PC supports various mounting options, as listed below:

- Wall mounting
- Panel mounting
- Arm mounting
- Stand mounting

2.3.1 Wall Mounting

To mount the panel PC onto a wall, follow the instructions below (see Figure 2.20 for additional reference).

1. Select the location on the wall for the wall mount plate.
2. Mark the locations of the two plate screw holes on the wall.
3. Drill two pilot holes at the marked locations on the wall.
4. Align the wall mount plate screw holes with the pilot holes.
5. Secure the mount plate to the wall by inserting screws into the two pilot holes and tightening them.



Figure 2.9 Wall Mount Plate

6. Insert four M4 screws into the holes on the panel PC and tighten them to secure the bracket to the rear panel.

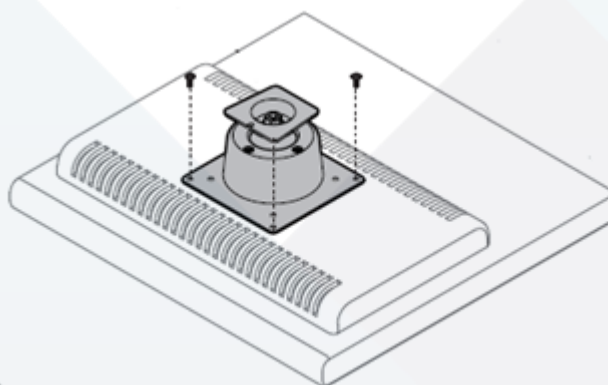
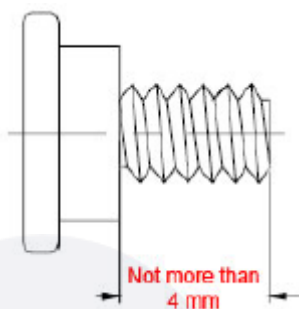


Figure 2.10 Rear Panel Screw Locations

Warning! Ensure that the thread depth of the screws on the rear panel does not exceed 4 mm (0.15 in).



Assurez-vous que la profondeur du filetage des vis sur le panneau arrière ne dépasse pas 4 mm.



7. To mount the panel PC on the wall, align the wall mount bracket attached to the panel PC with the wall mount plate on the wall and slide the panel PC downward to hang the bracket on the mount plate.

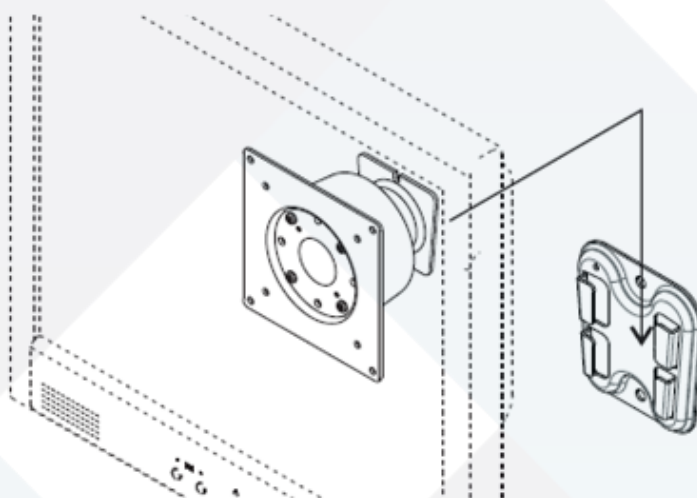


Figure 2.11 Mounting the Panel PC on a Wall

8. Secure the panel PC in place by tightening the screws into the wall mount bracket.

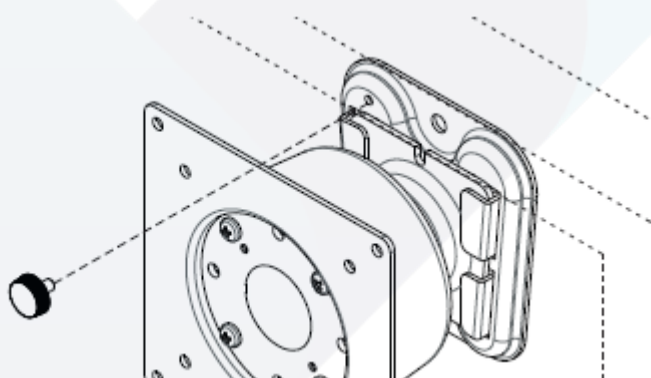


Figure 2.12 Securing the Panel PC

2.3.2 Panel Mounting

To mount the flat bezel panel PC onto a panel, follow the steps below.

1. Prepare a panel cutout according to the Panel PC dimensions. Panel cutout dimensions:
PPC-306: 189 x 136.5 mm / 7.44 x 5.37 in
2. Insert the panel PC into the cutout. Retrieve the hook brackets and M6 x 21L screws from the accessory box.
Veuillez installer le panneau PC dans la découpe. Récupérez les crochets et les vis M6 x 21L de la boîte à accessoires.

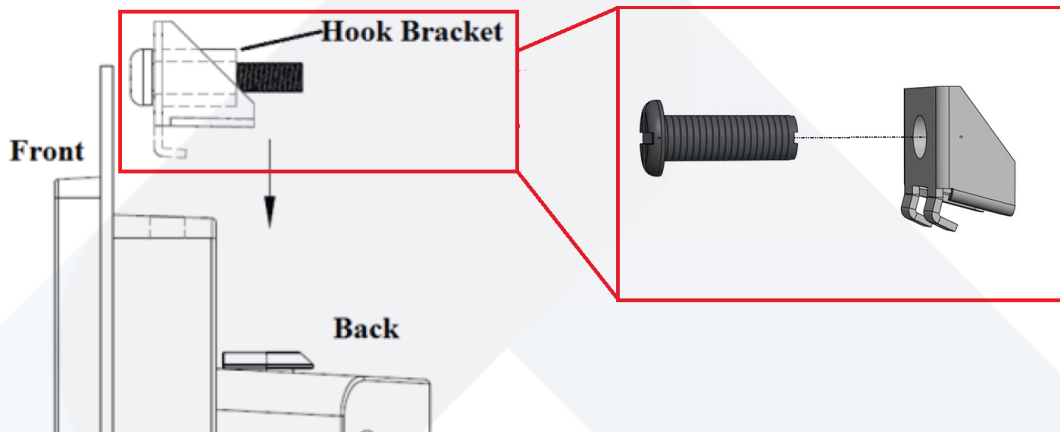


Figure 2.13 Hook Brackets for Panel Mounting

3. Insert the hook brackets into the holes following the direction of the arrows shown in Figure 2.25 and hang the panel PC.

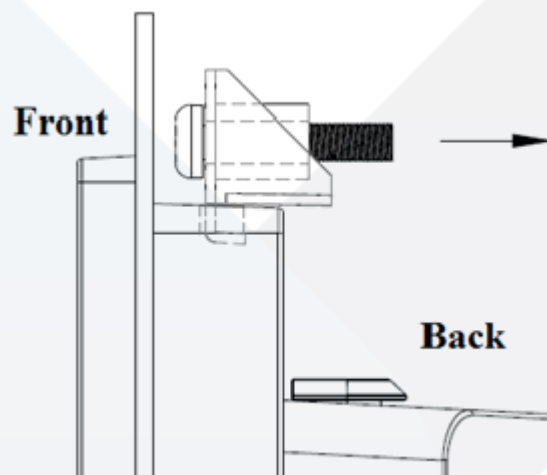


Figure 2.14 Locations of Hook Brackets

4. Tighten the screws to secure the panel PC in place (Figure 2.26).

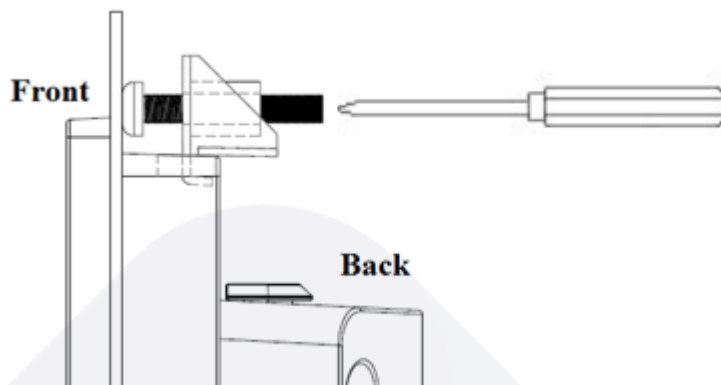


Figure 2.15 Fasten the Hook Bracket

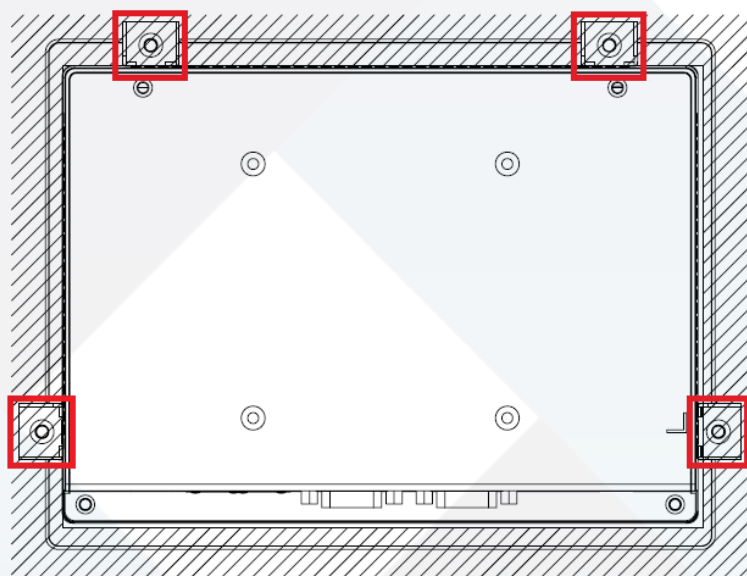


Figure 2.16 Panel Mount Rear View

2.3.3 Arm Mounting

The PPC-306 can be mounted on a VESA-compliant arm mount with a 100 mm (3.93 in) interface pad. To affix the panel PC to an arm mount, follow the steps below.

1. Refer to the installation instructions for the mounting arm to correctly mount the arm onto the surface of the base.
2. Align the retention screw holes on the mounting arm interface with VESA holes on the panel PC, and secure the panel PC with the four M4 retention screws.



Figure 2.17 Arm Mount for the Panel PC

Warning! Ensure that the thread depth of the screws on the rear panel does not exceed 4 mm (0.15 in).



2.3.4 Stand Mount

Before assembling the stand mount, check that the product was shipped with the following items:

No.	Name	Qty.	Pic.	No.	Name	Qty.	Pic.
A	Screw (M4x8L)	12 (4 x spare)		B	Screw (M4x6L)	6 (2 x spare)	
C	Screw (M4x5L)	2 (1 x spare)		1	Hinge	1	
2	VESA Bracket	1		3	Hinge Cover	1	
4	Base Plate	1					

To mount the panel PC onto the stand, follow the steps below:

1. Use four M4 x 8L screws to affix the VESA bracket to the panel PC. Users can choose a 100 x 100 mm (3.93 x 3.93 in) VESA mount according to their requirements.

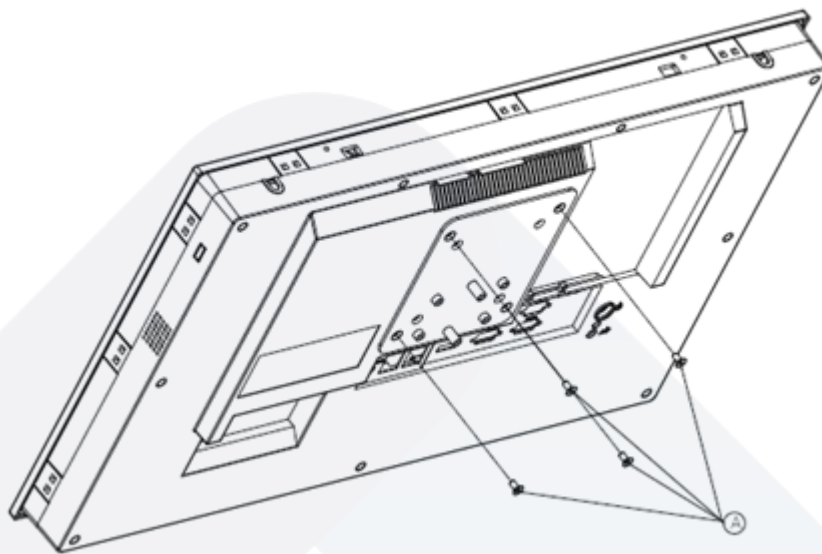


Figure 2.18 VESA Mount Screw Holes

2. Use the four M4 x 8L screws to secure the base plate to the mount stand.

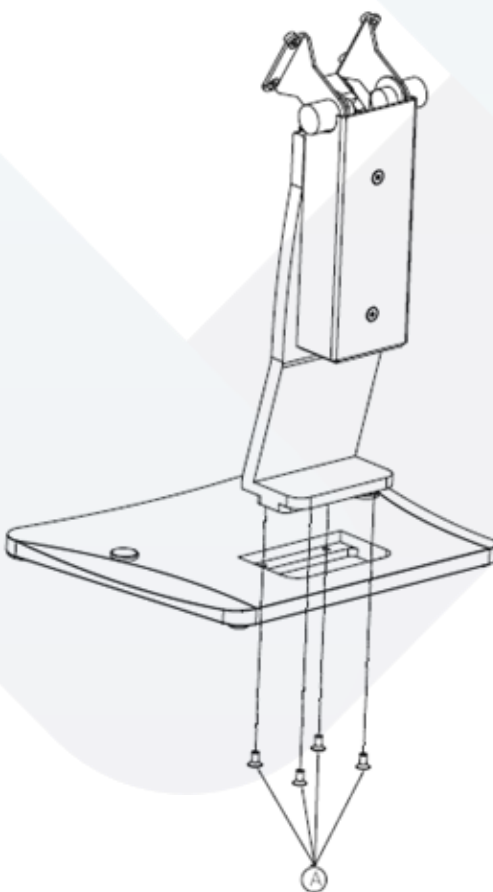


Figure 2.19 Securing the VESA Mount Base

3. Use four M4 x 6L screws to secure the mount stand to the VESA mount bracket.

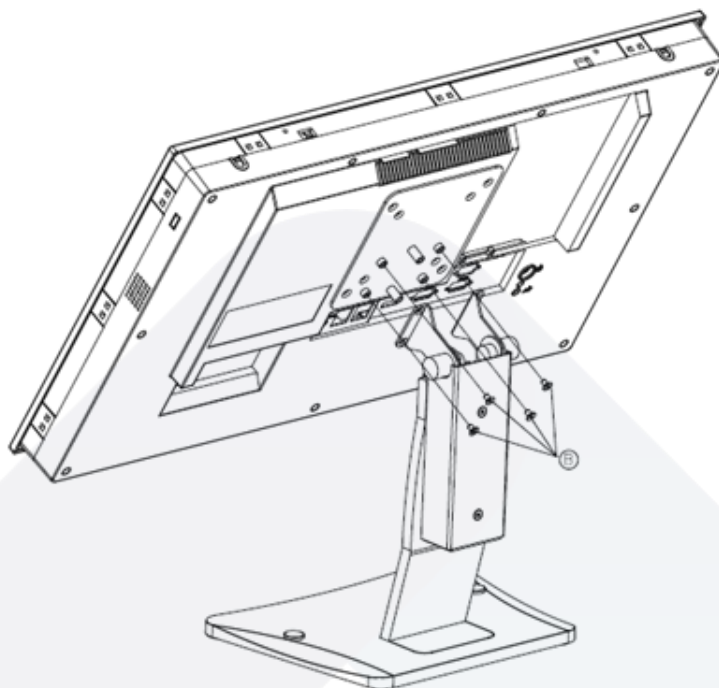


Figure 2.20 Securing the VESA Mount Bracket

4. Use one M4 x 5L screw to secure the stand mount hinge cover.

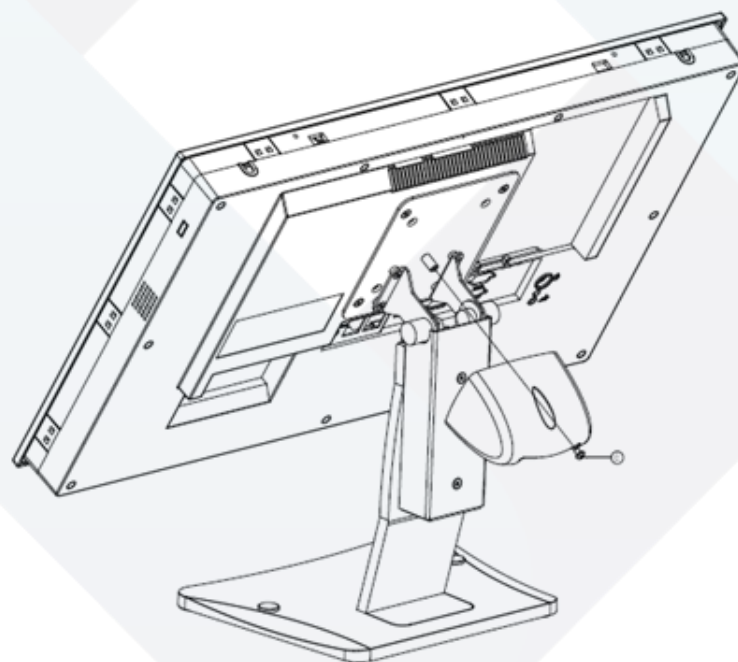


Figure 2.21 Securing the Stand Mount Hinge Cover

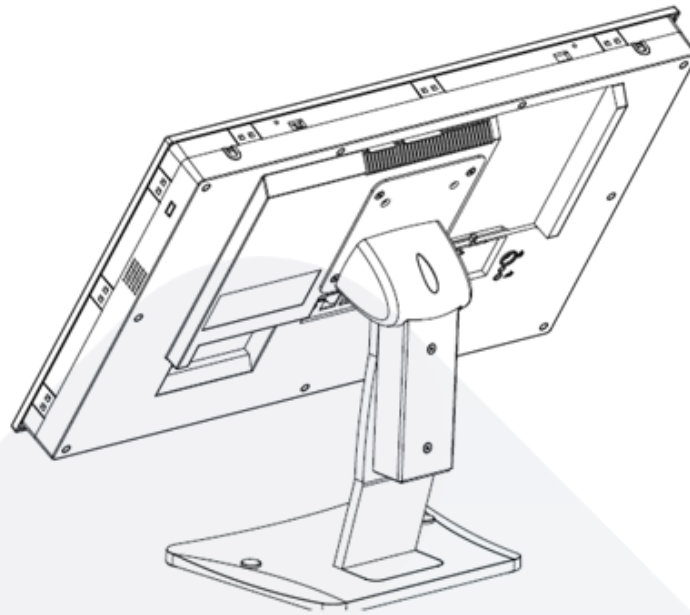


Figure 2.22 Completed Stand Mount

2.3.5 Cabinet Installation and Grounding

Follow these instructions to install the PPC system, and pay attention to the ground pin, which should be connected to the earth/ground. The PPC system should give the best performance for optimal EMI immunity, ESD immunity, surge immunity, and system isolation. If the PPC system is embedded in the cabinet, the PPC system's ground, and the cabinet's ground, and the earth/ground should be connected together.

1. Install the PPC system into the cabinet.

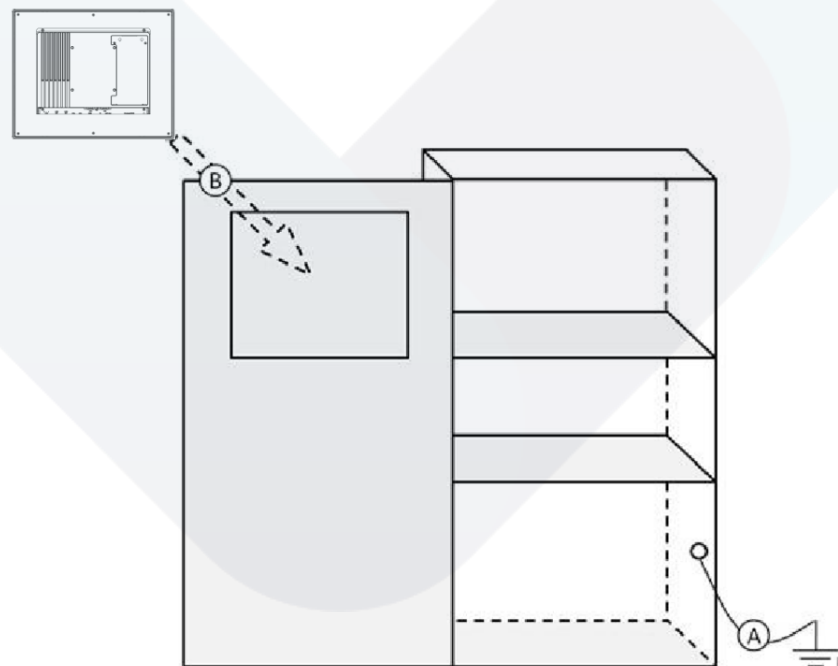


Figure 2.23 Install the PPC System into the Cabinet

Step A: Connect the cabinet to the earth/ground.

Step B: Embed the null PPC system into the cabinet without any I/O or power cables.

2. System wiring.

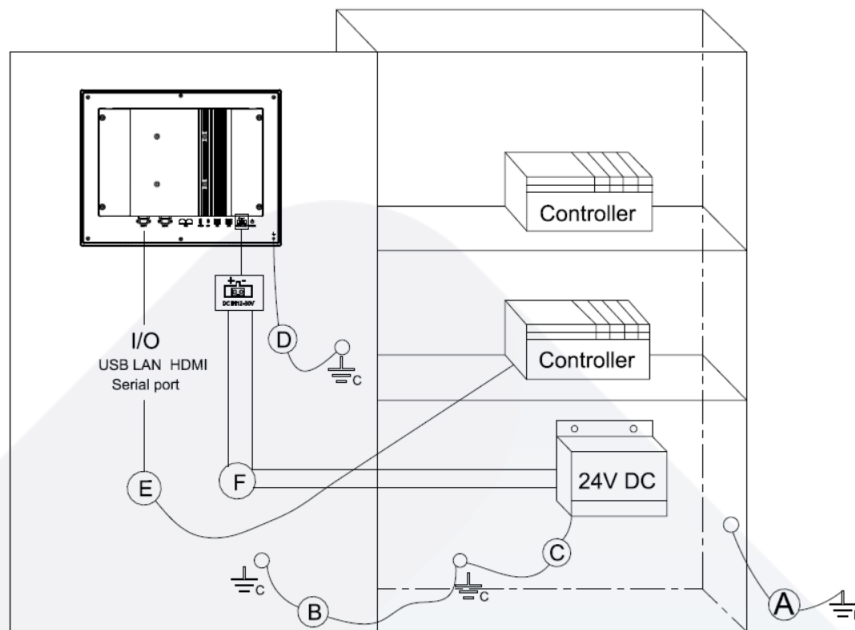


Figure 2.24 System Wiring Cabinet

Step A: Connect the cabinet to the earth/ground.

Step B: Ensure that all cabinets have been grounded together.

Step C: Connect the ground of the power supply to the cabinet.

Step D: Connect the ground pin of the PPC system to the cabinet.

Step E: Connect the I/O to the controller if needed.

Step F: Connect the V+ and V- of the power supply to the PPC system.

Note!



The wire of the protective earthing conductor shall be green-and-yellow, xx AWG / 0.75 mm² and connected to the earth of the building.

Ensure that the voltage of the power source is correct before connecting the equipment to a power outlet by means of a power cord connected to a socket outlet with an earthing connection.



Chapter 3

Jumper Settings

- Jumpers and Connectors
- External COM Ports and Pin Definitions

3.1 Motherboard Jumpers and Connectors

The motherboard connectors are shown below (Figure 3.1). The internal peripheral connectors are accessible when the motherboard is outside of the chassis.

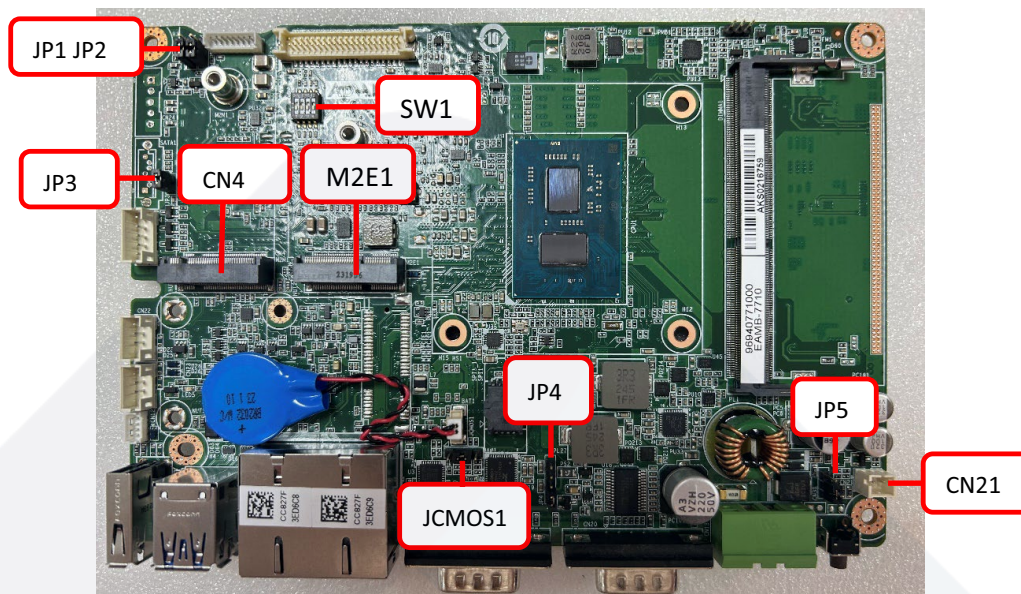


Figure 3.1 Motherboard

The internal jumpers and connectors on the motherboard and their pinouts are listed in the table below.

Table 3.1: Motherboard jumpers and connectors

Connector	Function
CN4	M.2 M-Key 2242
M2E1	M.2 E-Key 2230
JCMOS1	RTC Select
JP3	Resistance Touch Power Select
JP4	Pin 9 power selection (COM 1)
JP5	ATX/AT Select
CN21	Power button connection
SW1	Resolution setting
JP1, JP2	BKLT_EN setting, BRIGHT setting

3.1.1 COM1 Pin 9 Power Select

Table 3.2: COM1 Pin 9 power selection

JP4	Function
1-2 pin	COM1 RI (Default*)
2-3 pin	COM1 Pin9 5V
4-5 pin	COM1 Pin9 12V

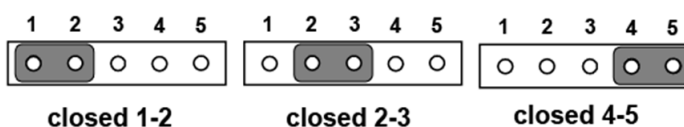
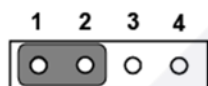


Table 3.3: RTC selection

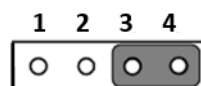
JCMOS1	Function
1-2 pin	CLR RTC Register
2-3 pin	Normal (Default*)
3-4 pin	Clear CMOS



closed 1-2



closed 2-3

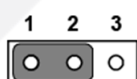


closed 3-4

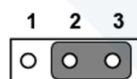
3.1.3 ATX/AT Selection

Table 3.4: ATX/AT selection

JP5	Function
2-3 pin	ATX power (default*)
1-2 pin	AT power



closed 1-2



closed 2-3

3.1.4 Touch Power Selection

Table 3.5: Touch Power Selection

JP3	Function
Open	PCT
Closed	RES



open



closed

Note! The resistive touch model needs a JP3 jumper added. The projected capacitive touch model should have the JP3 jumper removed.



3.1.5 Power Button Connection

Table 3.6: Power button connection

CN21	Function
Power button	Can be used as an external extension cord switch



3.2 External COM Ports and Pin Definitions

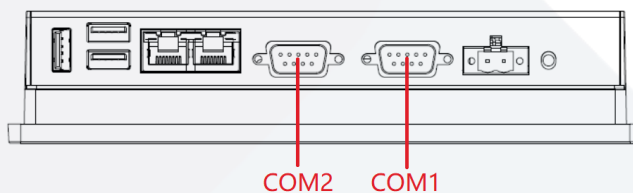


Figure 3.2 Location of COM1 and COM2 Ports

COM1: RS-232

COM1 Pin 9 is set as “RI” by default. This setting can be changed to 5V or 12V output using a jumper.

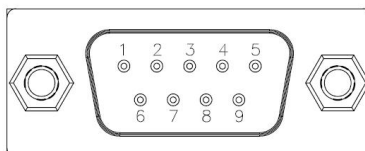
COM2: RS-232/422/485

Note! COM2 does not support a ring function.



Table 3.7: External COM ports and pin definitions

Pin	COM1	COM2		
	RS-232	RS-232	RS-422	RS-485
1	DCD	DCD	TX-	DATA-
2	RXD	RXD	TX+	DATA+
3	TXD	TXD	RX+	NC
4	DTR	DTR	RX-	NC
5	GND	GND	GND	GND
6	DSR	DSR	NC	NC
7	RTS	RTS	NC	NC
8	CTS	CTS	NC	NC
9	Ring or 5V/12V output	RING	NC	NC





Chapter 4

Software Setup

- Installing Drivers
- BIOS Setup Program

4.1 Installing Drivers

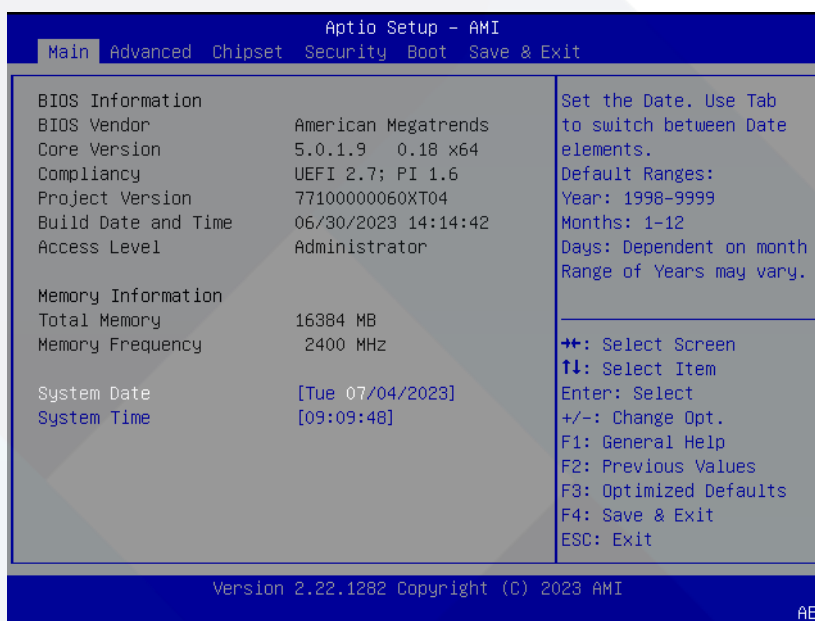
When you install the system for the first time, please install the corresponding drivers in advance to make sure all the functions run normally. Please select the drivers to be installed based on the OS you use. Please go to the Advantech.

4.2 BIOS Setup Utility

4.2.1 Entering BIOS Setup

You can enter BIOS setup utility by pressing "Delete".

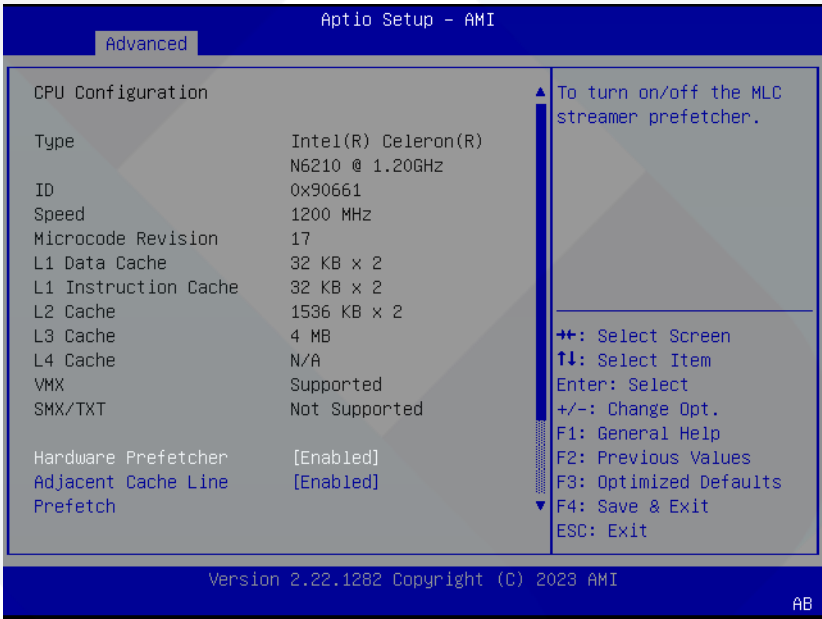
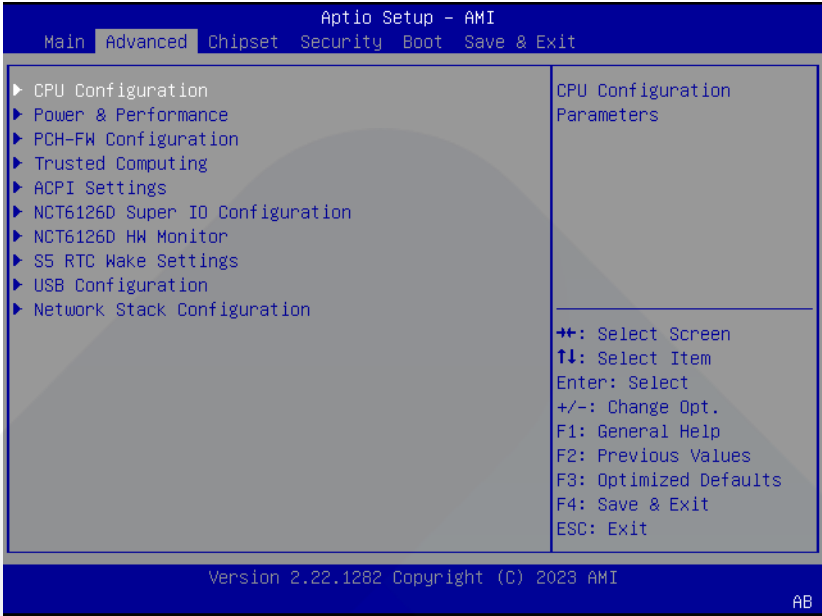
You should always press "F4" to save the settings you have made and exit the setup utility, otherwise those settings will not be saved in BIOS.





4.2.2 Advanced BIOS Features Setup

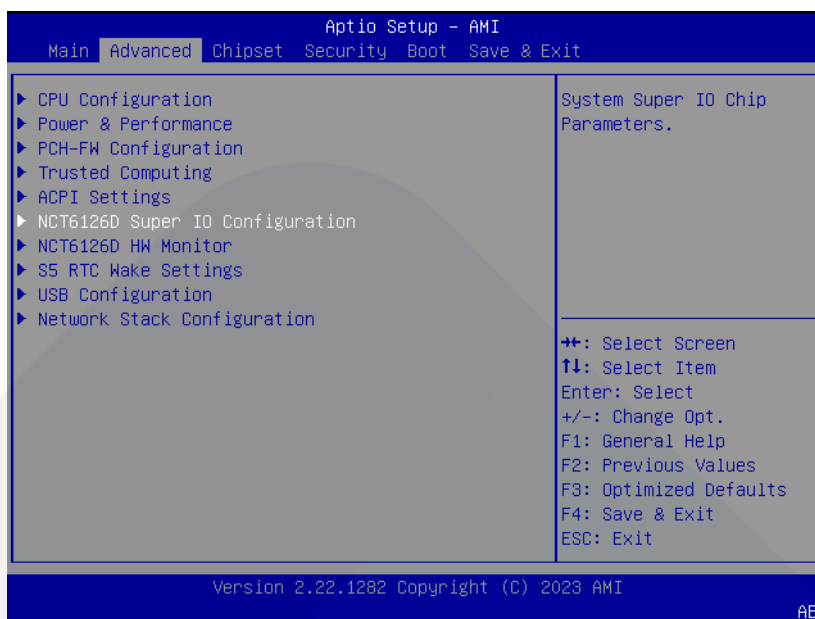
4.2.2.1 CPU Configuration



- **CPU Configuration**
View CPU model and frequency.

4.2.2.2 COM2 Mode Selection (RS232/RS422/RS485)

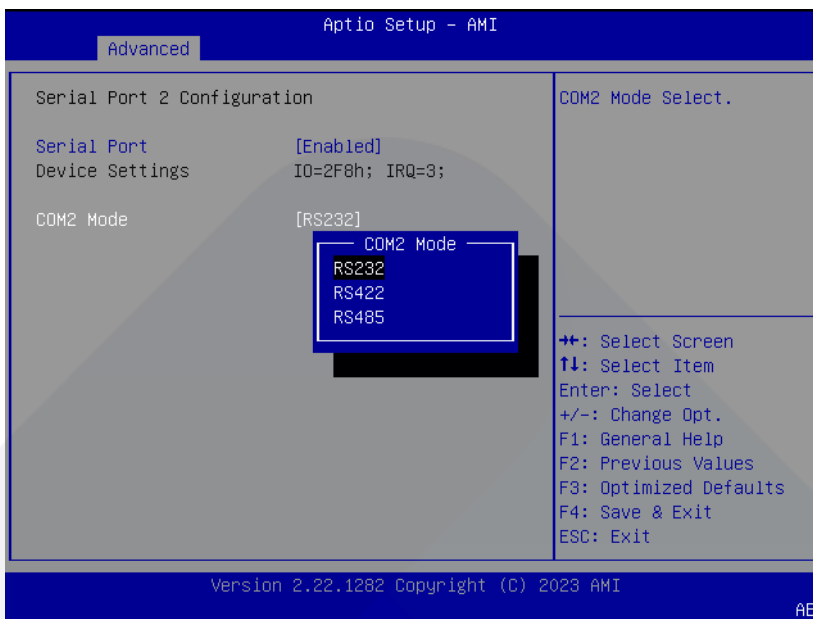
1. Select NCT6126D Super IO Configuration in the Advanced tab.



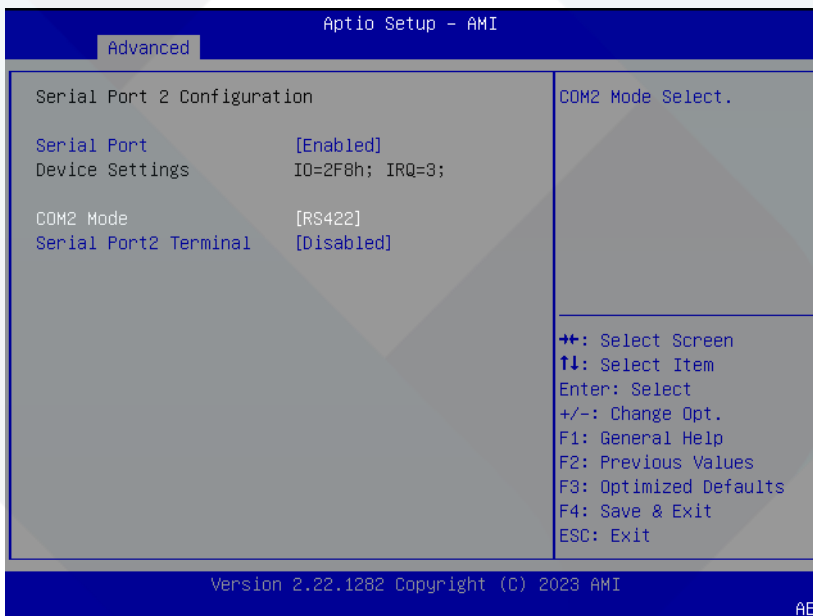
2. Select Serial Port 2 Configuration option.



3. Select Serial Port 2 Mode option to set the COM2 operation mode as RS232, RS422, or RS485.
1) Setting RS232

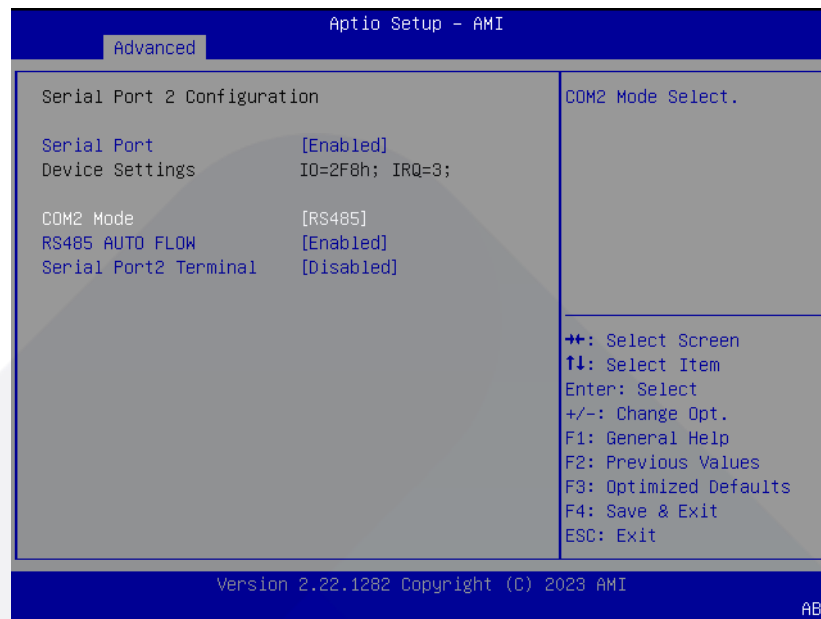


- 2) Setting RS422

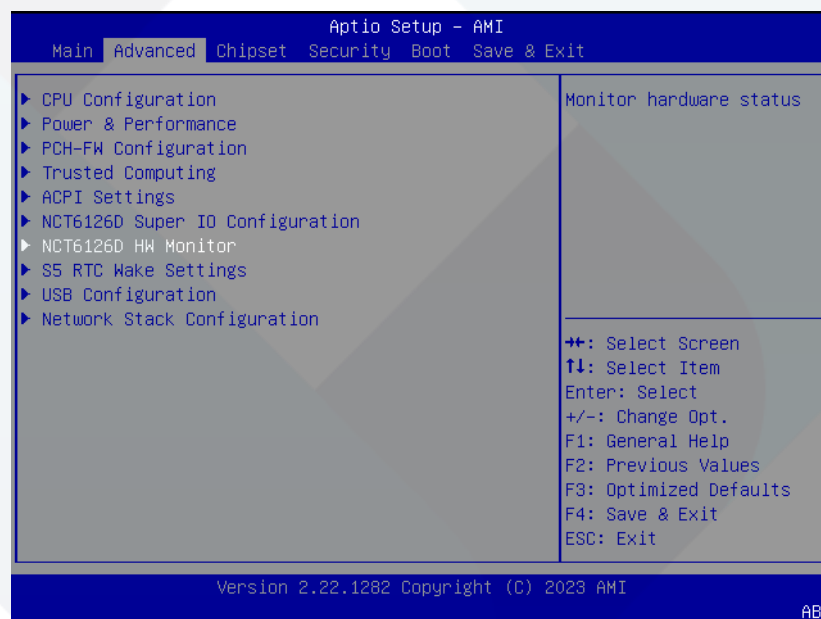


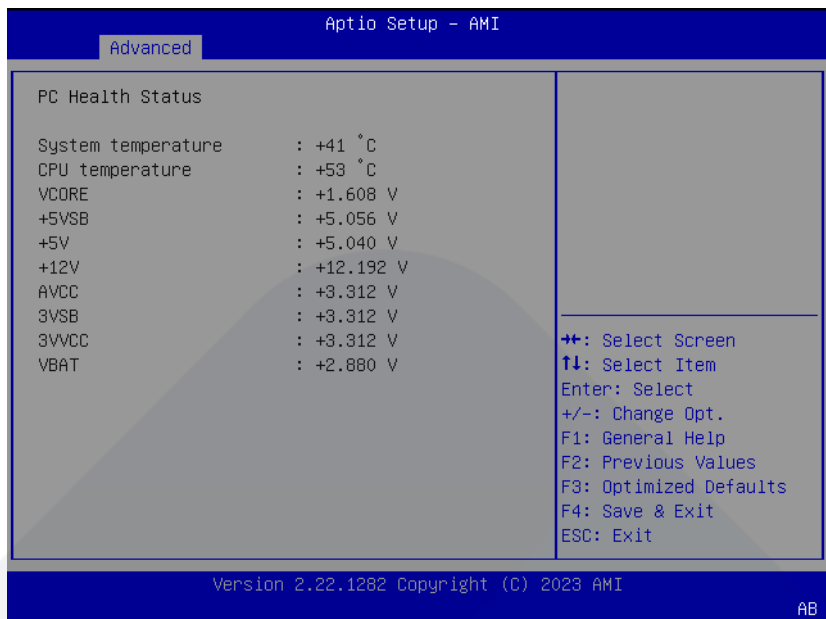
3) Setting RS485

If COM2 mode is set as RS485, the RS485 Auto Flow control option can be Enabled or Disabled.



4.2.2.3 Hardware Monitor

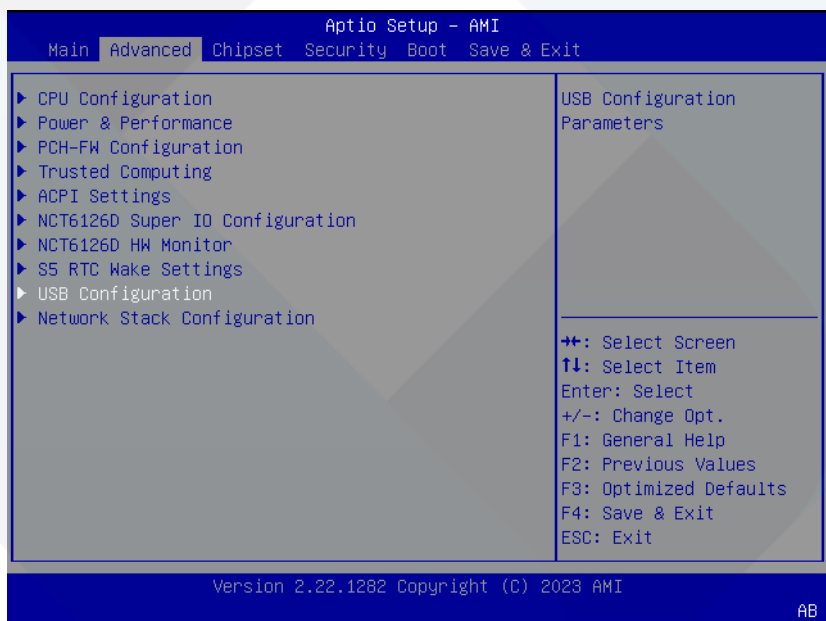


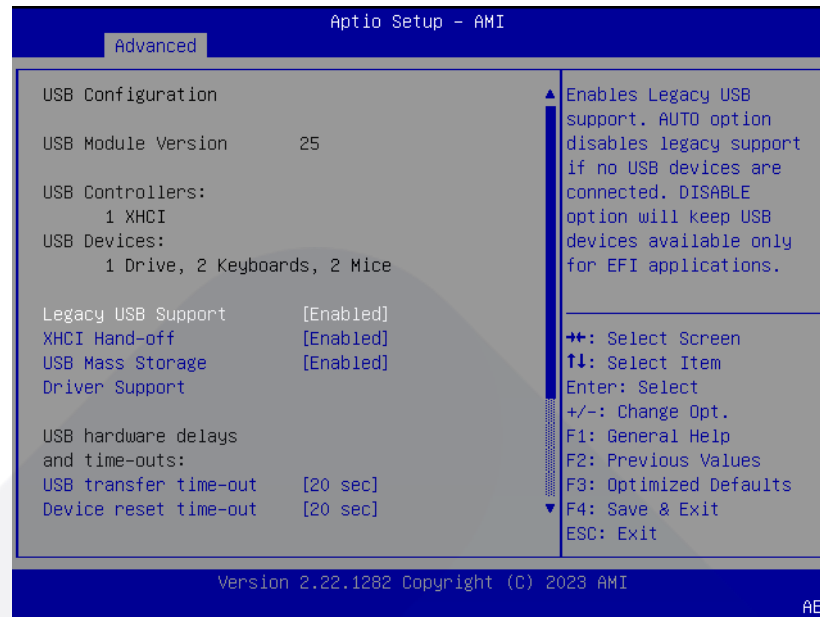


■ EC Hardware monitor

This page displays all information about system Temperature/Voltage/Current.

4.2.2.4 USB Configuration





- **Legacy USB Support**
Enable/Disable USB Mass Storage Driver Support

4.2.3 Chipset Configuration

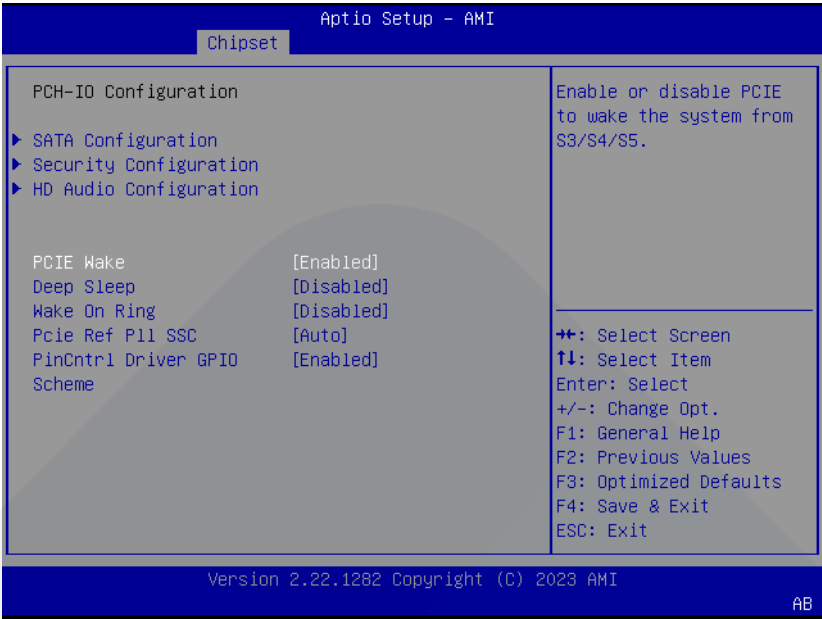
4.2.3.1 Wake-on-LAN

1. Select PCH-IO Configuration option in the Chipset tab.



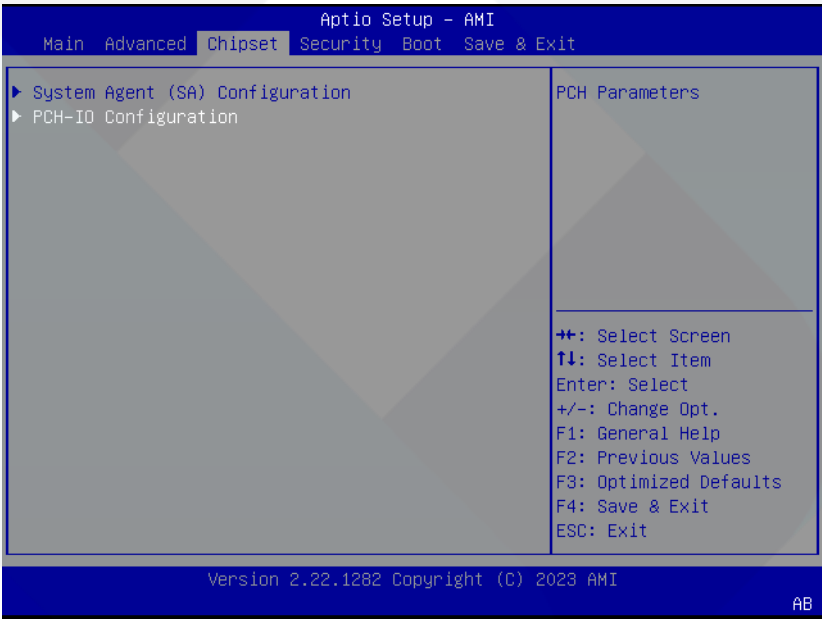


2. Set the Wake On By option to Enabled.

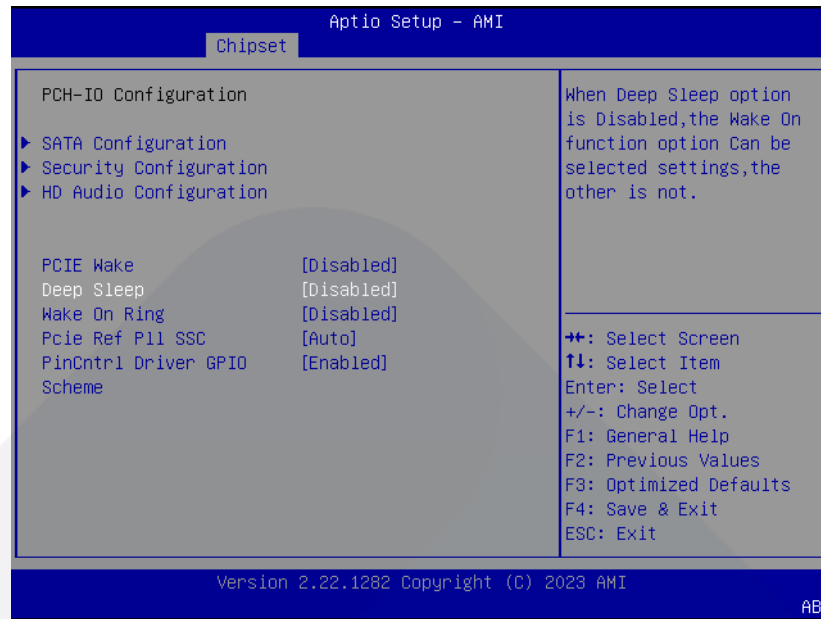


4.2.3.2 Deep Sleep

1. Select PCH-IO Configuration option in the Chipset tab.



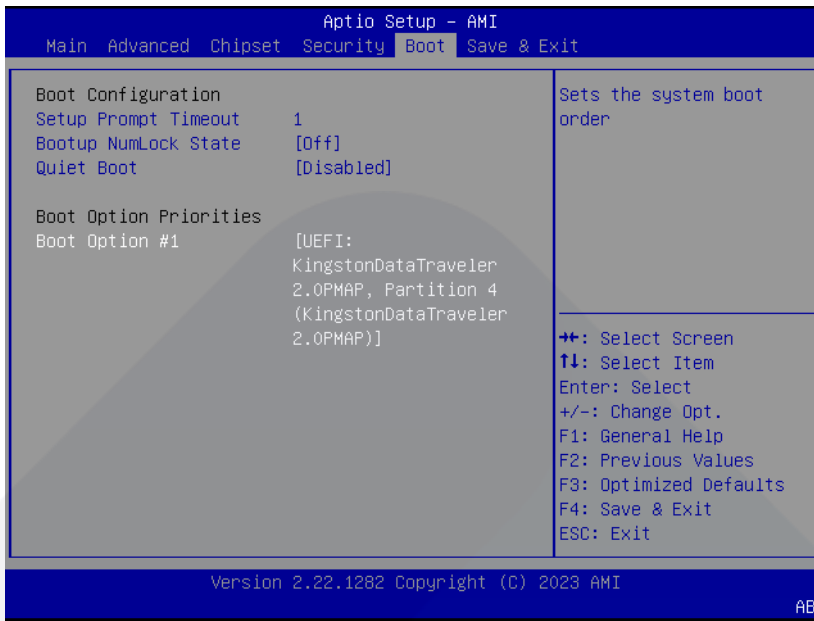
2. Set the Deep Sleep by option to Enabled/Disabled for ERP



4.2.4 Security

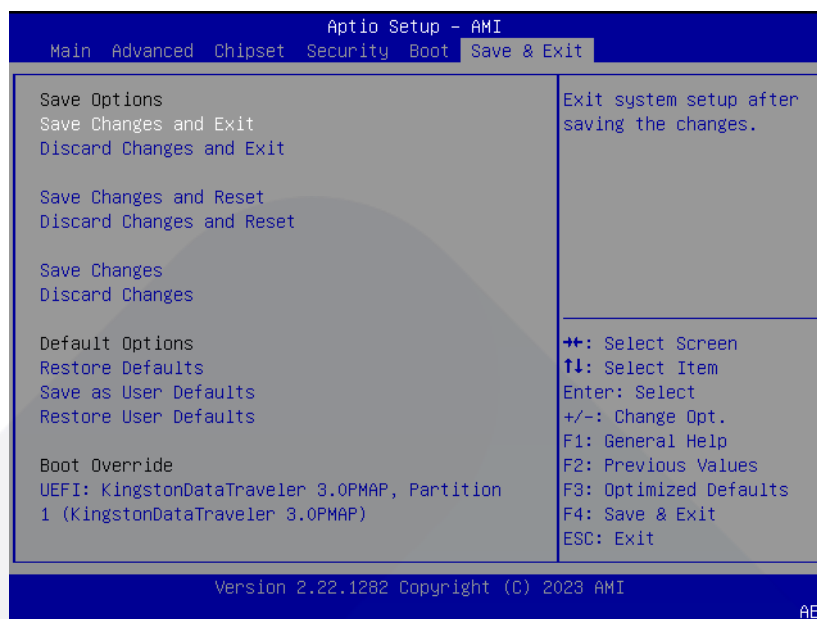


- **Administrator password**
Set administrator password.



- **Setup prompt timeout**
Number of seconds that the firmware will wait before initiating the original default boot selection. A value of 0 indicates that the default boot selection is to be initiated immediately on boot. A value of 65535(0xFFFF) indicates that firmware will wait for user input before booting. This means the default boot selection is not automatically started by the firmware.
- **Bootup NumLock state**
Select the keyboard NumLock state.
- **Quiet boot**
Enables or disables Quiet Boot option.
- **Boot option #1**
Sets the system boot order.

4.2.6 Save & Exit



- **Save changes and exit**
This item allows users to exit the system setup after saving changes.
- **Discard changes and exit**
This item allows users to exit the system setup without saving changes.
- **Save changes and reset**
This item allows users to reset the system after saving changes.
- **Discard changes and reset**
This item allows users to reset the system without saving changes.
- **Save changes**
This item allows users to save any changes to the setup options.
- **Discard changes**
This item allows users to discard any changes to the setup options.
- **Restore defaults**
This item allows users to restore/load default values for all setup options.
- **Save as user defaults**
This item allows users to save all current settings as user defaults.
- **Restore user defaults**
This item allows users to restore all setup options to the user default values.



Appendix **A**

BSMI RoHS

A.1 BSMI RoHS

設備名稱：電腦		型號（型式）：PPC-306 EHL series（型號參考次頁）				
Equipment name		Type designation (Type)				
單元 Unit	限用物質及其化學符號 Restricted substances and their chemical symbols					
	鉛 Lead (Pb)	汞 Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr ⁺⁶)	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
液晶面板	—	○	○	○	○	○
電路板	—	○	○	○	○	○
配件（電源 供應器）	—	○	○	○	○	○
其它固定組件 （螺絲）	—	○	○	○	○	○
內外殼（外 殼、按鍵、支 架 … 等）	—	○	○	○	○	○

備考 1. “超出 0.1 wt %” 及 “超出 0.01 wt %” 係指限用物質之百分比含量超出百分比含量基準值。
 Note 1. “Exceeding 0.1 wt %” and “exceeding 0.01 wt %” indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.

備考 2. “○” 係指該項限用物質之百分比含量未超出百分比含量基準值。
 Note 2. “○” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.

備考 3. “—” 係指該項限用物質為排除項目。
 Note 3. “-” indicates that the restricted substance corresponds to the exemption.

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電話：02-27927818

Manufacturer: ADVANTECH Co., Ltd.

Address: No. 1 Alley 20 Lane 26, Ruiguang Rd., Neihu District, Taipei City

Telephone: 02-27927818



Appendix **B**

BSMI Series Models

BSMI Series Models

PPC-306 產品附錄型號

PPC-306-RN6A, PPC-306-RN6B, PPC-306-RN6C, PPC-306-RN6D

PPC-306-PN6A, PPC-306-PN6B, PPC-306-PN6C, PPC-306-PN6D

PPC-306-RN6AU, PPC-306-RN6BU, PPC-306-PN6AU, PPC-306-PN6BU

PPC306RN2301-T, PPC306RN2302-T, PPC306RN2303-T

PPC306RN2304-T, PPC306RN2305-T, PPC306RN2306-T

PPC306RN2401-T, PPC306RN2402-T, PPC306RN2403-T

PPC306RN2404-T, PPC306RN2405-T, PPC306RN2406-T

PPC306RN2501-T, PPC306RN2502-T, PPC306RN2503-T

PPC306RN2504-T, PPC306RN2505-T, PPC306RN2506-T

PPC306RN2601-T, PPC306RN2602-T, PPC306RN2603-T

PPC306RN2604-T, PPC306RN2605-T, PPC306RN2606-T

PPC306RN2701-T, PPC306RN2702-T, PPC306RN2703-T

PPC306RN2704-T, PPC306RN2705-T, PPC306RN2706-T

PPC306RN2801-T, PPC306RN2802-T, PPC306RN2803-T

PPC306RN2804-T, PPC306RN2805-T, PPC306RN2806-T

PPC306RN2901-T, PPC306RN2902-T, PPC306RN2903-T

PPC306RN2904-T, PPC306RN2905-T, PPC306RN2906-T





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