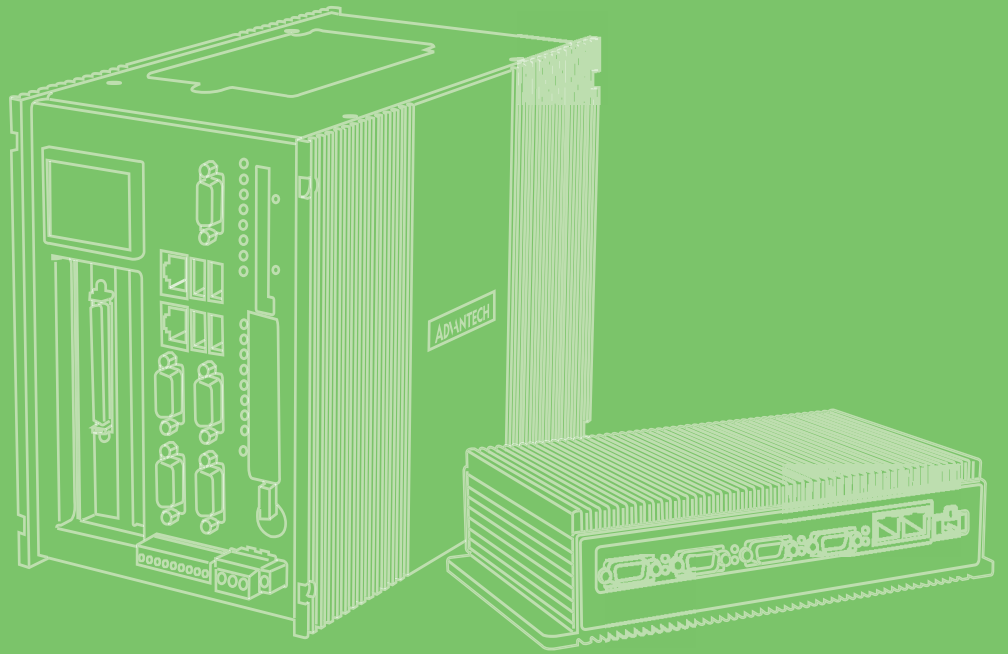


User Manual



UNO-2372G

電腦

Intel® Atom™/Celeron® Small-Sized Automation Computer with 2 x GbE, 2 x mPCIe, 1 x HDMI, 1 x DP, and 4 x COM

ADVANTECH

Enabling an Intelligent Planet

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限用物質含有情況標示聲明書

Declaration of the Presence Condition of the Restricted Substances Marking

設備名稱：電腦 Equipment name	型號（型式）： Type designation (Type)		UNO-2372G（系列型號請參見次頁說明書）			
單元 Unit	限用物質及其化學符號 Restricted substances and its 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 Polybromi- nateddiphenyl ethers (PBDE)
電路板	—	○	○	○	○	○
內外殼 （外殼、內部 框架 … 等）	○	○	○	○	○	○
其它固定組件 （螺絲）	—	○	○	○	○	○
配件（線材）	○	○	○	○	○	○
記憶卡	—	○	○	○	○	○
<p>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.</p> <p>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.</p> <p>備考 3. “—” 係指該項限用物質為排除項目。 Note 3: The “—” indicates that the restricted substance corresponds to the exemption.</p>						

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電路板	—	○	○	○	○	○
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其它固定組件 （螺絲）	—	○	○	○	○	○
配件（線材）	○	○	○	○	○	○
記憶卡	—	○	○	○	○	○
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This manual is applicable to the following product models:

UNO-2372G

UNO-2372G-E021AE, UNO-2372G-E022AE

UNO2372GE0211701-T, UNO2372GE0211702-T,
UNO2372GE0211703-T, UNO2372GE0211704-T,
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UNO2372GJ0222310-T

Product Warranty (2 years)

Advantech warrants the original purchaser that each of 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.

Because of Advantech's high quality-control standards and rigorous testing, most customers never need to use our repair service. If an Advantech product is defective, it will be repaired or replaced at no charge during the warranty period. For out-of-warranty repairs, customers are billed according to the cost of replacement materials, service time, and freight. Please consult your dealer for more details.

If you suspect that your product is defective product, follow the steps outlined below.

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 onscreen messages displayed when the problem occurs.
2. Call your dealer and describe the problem. Please have your manual, product, and any helpful 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 a 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 clearly on the outside of the packaging, and ship the package prepaid to your dealer.

Declaration of Conformity

CE

This product has passed the CE test for environmental specifications when shielded cables are used for external wiring. We recommend the use of shielded cables. This type of cable is available from Advantech. Please contact your local supplier for ordering information.

FCC Class A

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference. In such cases, users are required to correct the interference at their own expense.

警告使用者

這是甲類測試產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

Technical Support and Assistance

1. Visit the Advantech website at www.advantech.com/support 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 you call:
 - Product name and serial number
 - Description of your peripheral attachments
 - Description of your software (operating system, version, application software, etc.)
 - A complete description of the problem
 - The exact wording of any error messages

Safety Precaution - Static Electricity

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

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

Safety Instructions

1. Read these safety instructions carefully.
2. Retain this user manual for future reference.
3. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth for cleaning. Do not use liquid or spray detergents.
4. For pluggable equipment, the power outlet socket should be located near the equipment and easily accessible.
5. Protect the equipment from humidity.
6. Place the equipment on a reliable surface during installation. Dropping or letting the equipment fall may cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. Do not cover the openings.
8. Ensure that the voltage of the power source is correct before connecting the equipment to a power outlet.
9. Position the power cord away from high-traffic areas. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage from transient overvoltage.
12. Never pour liquid into an opening. This may cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
14. If one of the following occurs, have the equipment checked by service personnel:
 - The power cord or plug is damaged.
 - Liquid has penetrated the equipment.
 - The equipment has been exposed to moisture.
 - The equipment is malfunctioning or does not operate according to the user manual.
 - The equipment has been dropped and damaged.
 - The equipment shows obvious signs of breakage.
15. Do not leave this equipment in an environment with a storage temperature of below $-20\text{ }^{\circ}\text{C}$ ($-4\text{ }^{\circ}\text{F}$) or above $60\text{ }^{\circ}\text{C}$ ($140\text{ }^{\circ}\text{F}$).
16. Batteries that are incorrectly replaced are at risk of exploding. Replace only with the same or equivalent type recommend by the manufacturer. Discard used batteries according to the manufacturer's instructions.
17. Danger d'explosion si la batterie est mal remplacé. Remplacer uniquement par le meme type ou equivalent recommandé par le fabricant. Jeter les piles usagées selon les instructions du fabricant.
18. In accordance with IEC 704-1:1982 specifications, the sound pressure level at the operator's position does not exceed 70 dB (A).

DISCLAIMER: These instructions are provided according to the IEC 704-1. Advantech disclaims all responsibility for the accuracy of any statements contained herein.

安全指示

1. 請仔細閱讀此安全操作說明。
2. 請妥善保存此用戶手冊供日後參考。
3. 用濕抹布清洗設備前，請確認拔除電源線。請勿使用液體或去污噴霧劑清洗設備。
4. 對於使用電源線的設備，設備周圍必須有容易接觸到的電源插座。
5. 請勿在潮濕環境中試用設備。
6. 請在安裝前確保設備放置在可靠的平面上，意外摔落可能會導致設備損壞。
7. 設備機殼的開孔適用於空氣對流，從而防止設備過熱。請勿覆蓋開孔。
8. 當您連接設備到電源插座前，請確認電源插座的電壓符合要求。
9. 請將電源線佈置在人們不易絆倒的位置，請勿在電源線上覆蓋任何雜物。
10. 請注意設備上所有的警告標示。
11. 如果長時間不使用設備，請拔除與電源插座的連結，避免設備被超標的電壓波動損壞。
12. 請勿讓任何液體流入通風口，以免引起火災或短路。
13. 請勿自行打開設備。為了確保您的安全，請透過經認證的工程師來打開設備。
14. 如遇下列情況，請由專業人員維修：
 - 電源線或插頭損壞；
 - 設備內部有液體流入；
 - 設備曾暴露在過度潮濕環境中使用；
 - 設備無法正常工作，或您無法透過用戶手冊來正常工作；
 - 設備摔落或損壞；
 - 設備有明顯外觀損；
15. 請勿將設備放置在超出建議溫度範圍的環境，即不要低於 -20°C (-4°F) 或高於 60°C (140°F)，否則可能會造成設備損壞。
16. 注意：若電池更換不正確，將有爆炸危險。因此，只可以使用製造商推薦的同一種或者同等型號的電池進行替換。請按照製造商的指示處理舊電池。
17. 根據 IEC 704 - 1:1982 規定，操作員所在位置音量不可高於 70 分貝。
18. 限制區域：請勿將設備安裝於限制區域使用。
19. 免責聲明：請安全訓示符合 IEC 704 - 1 要求。研華公司對其內容之準確性不承擔任何法律責任。

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Chapter 1

Overview

This chapter provides an overview of the UNO-2372G specifications.

- Introduction
- Safety Precautions
- Accessories
- Hardware Specifications

1.1 Introduction

Advantech's new-generation UNO-2000 series of embedded automation computers are highly ruggedized modular, fanless systems. The incredible modularity of UNO-2372G offers numerous performance and cost-saving advantages, including the elimination of unnecessary features and expenses, accelerated production and delivery, rapid deployment and integration, reduced system downtime and maintenance costs, and support for future upgrades and expansion. The UNO-2372G is equipped with optimized I/O and an optional second expansion stack that supports Advantech's iDoor technology. This allows the platform functionalities to be easily extended and customized with the integration of various iDoor modules, including industrial Fieldbus, wireless communication, I/O, and peripheral modules, in order to provide purpose-built, future-proof solutions that satisfy specific application requirements.

1.2 Safety Precautions

Below are a few safety precautions for preventing injury when making connections. In most cases, users can use a standard cable for connection.

Warning! *Always disconnect the power cord from the chassis before manual handling. Do not connect the chassis while the system power is on. A sudden rush of power can damage sensitive electronic components. Only experienced electronics personnel should open the chassis.*



Warning! *Toujours à la terre pour éliminer toute charge d'électricité statique avant toucher UNO-2372G. Appareils électroniques modernes sont très sensibles à charges d'électricité statique. Utilisez un bracelet antistatique à tout moment. Placez tous composants électroniques sur une surface antistatique ou dans un statique-sac blindé.*



Caution! *Always ground yourself to remove any static electric charge before touching UNO-2372G. Modern electronic devices are very sensitive to static electric charges. Use a grounding wrist strap at all times. Place all electronic components on a static-dissipative surface or in a static shielded bag.*



Caution! *Toujours débrancher le cordon d'alimentation de votre boîtier lorsque vous êtes travailler. Ne branchez pas lorsque l'appareil est allumé. Un afflux soudain de puissance peut endommager les composants électroniques sensibles. Seulement connu personnel de l'électronique devraient ouvrir le châssis.*



1.3 Accessories

The accessory list is as follows:

- 1 x pin connector for power wiring (Advantech P/N: 1652002205)
- 1 x warranty card
- 1 x SATA cable (Advantech P/N:1700027329-11)
- 4 x screws for attaching HDD (Advantech P/N:1930001361)
- 2 x screws for attaching mPCIe module (Advantech P/N:1930000198)

If any of the above items are missing or damaged, contact your distributor or sales representative immediately.

1.4 Hardware Specifications

- **Operating Temperature:** -20 ~ 60 °C/-4 ~ 140 °F
- **Power Requirements:** 10 - 36 V_{DC}
- **Power Consumption:** 30 W (typical), 42 W (max.)
- **System Hardware:**
 - **CPU:**
 - UNO-2372G-E0 series: Intel® Atom™ E3845 (1.91 GHz)
 - UNO-2372G-J0 series: Intel® Celeron® J1900 (2.0 GHz)
 - **Memory:** 4 GB of DDR3L 1600 MHz (up to 8 GB)
 - **Graphics Engine:** Intel® HD Graphics
 - **Ethernet:** Intel® i210 GbE, 802.10av, IEEE1588/802.1AS, 803.3az
 - **COM:** 4 x RS232/422/485
 - **USB:** 4 x USB (3 x USB 2.0, 1 x USB 3.0)
 - **Storage:**
 - 1 x full-size mSATA slot (shared with 1 x mPCIe slot)
 - 1 x drive bay for SATA 2.5" HDD (compatible with an HDD height of 9.5 mm)
 - **Expansion:** 2 x full-size mPCIe slots (1 x mPCIe also supports mSATA)
 - **Display:** 1 x DP with 2560 x 1440 resolution @60 Hz and 1 x HDMI with 1920 x 1080 resolution @ 60 Hz
 - **Hardware Security:** TPM2.0 (UNO-2372G-J series only)

Because UNO-2372G features a modularized design, Advantech offers both single- and double-stack models.

* Single stack: UNO-2372G-E021AE/UNO-2372G-J021AE

* Double stack: UNO-2372G-E022AE/UNO-2372G-J022AE

The double-stack model combines a single-stack model with an extension kit for iDoor technology.

Chapter 2

Hardware Functionality

This chapter explains how to setup the UNO-2372G's hardware functions, including connecting peripherals and setting switches and indicators.

- Introduction
- UNO-2372G Interface
- LAN/Ethernet Connector
- Power Connector
- USB Connector
- RTC Battery
- Power Button/Power Management
- Reset Button
- PCI Express Mini Card Socket

2.1 Introduction

The UNO-2372G connectors are shown in Figures 2.1, 2.2, and 2.3. Additionally, a description of each peripheral is provided in the following sections.

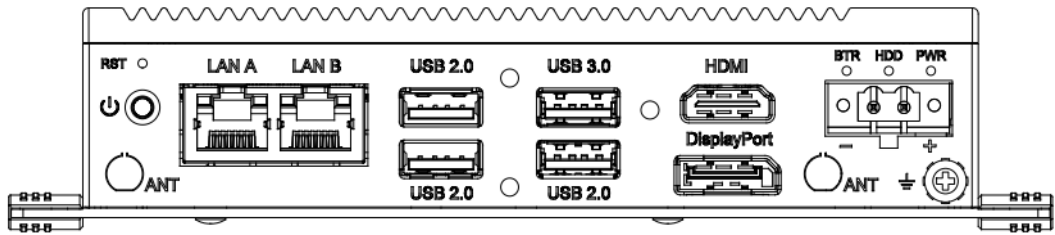


Figure 2.1 Front panel of the UNO-2372G single-stack model

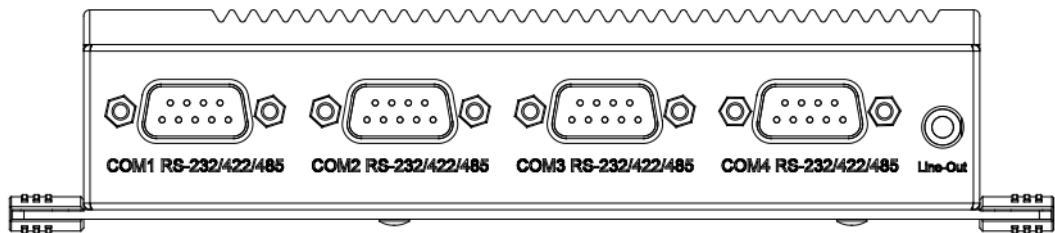


Figure 2.2 Rear panel of the UNO-2372G single-stack model

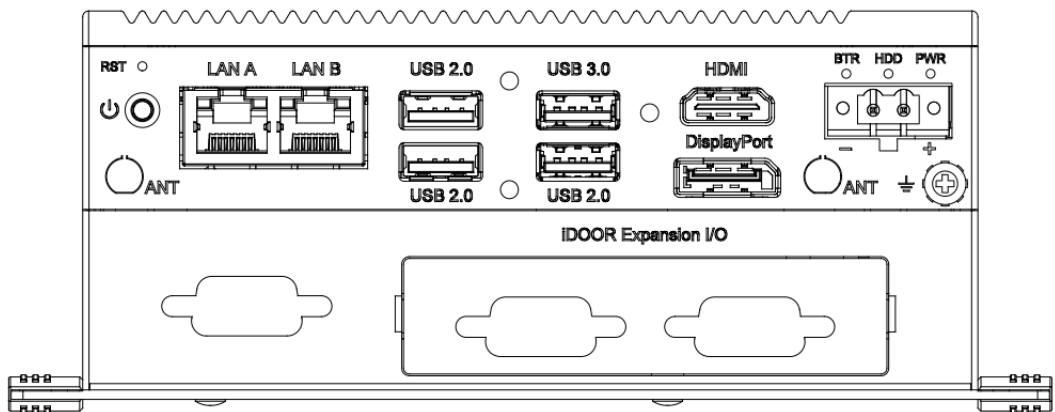


Figure 2.3 Front panel of the UNO-2372G double-stack model

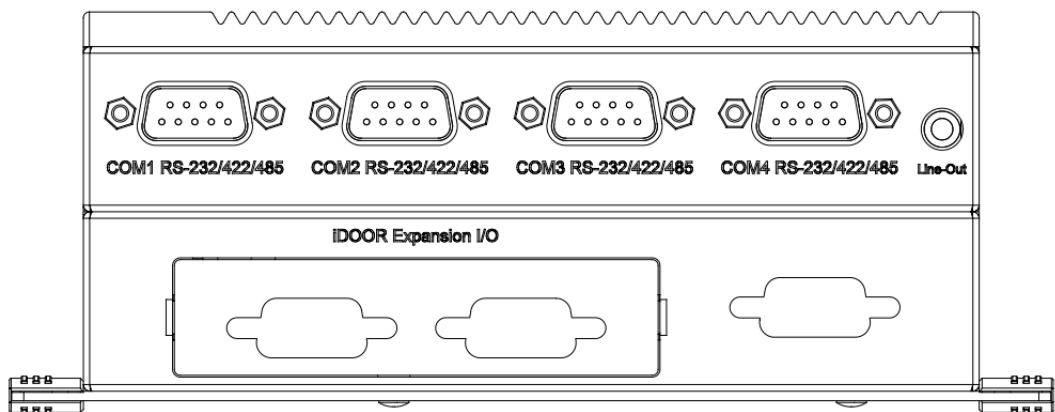


Figure 2.4 Rear panel of the UNO-2372G double-stack model

2.2 Serial Communication Ports

The UNO-2372G features four standard COM serial communication ports: COM1, COM2, COM3, and COM4.

2.2.1 COM Port Interfaces (COM1, COM2, COM3, COM4)

The UNO-2372G is also equipped with four RS-232/422/485 ports (DB9, 50 ~ 115.2 kbps). The default setting for COM1 ~ 4 is RS-232. These settings can be adjusted in the BIOS menu.

2.3 LAN: Ethernet Connector

UNO-2372G is equipped with two Gigabit LAN controllers. An Intel® i210 Ethernet controller that complies with IEEE 802.3u 10/100/1000 Base-T is used as the controller chip. The Ethernet port is a standard RJ-45 jack. Additionally, LED indicators are provided on the front of the device to indicate the system's Link (off/green/orange) and Active (green) status.

2.4 Power Connector

UNO-2372G features a Phoenix connector that is compatible with 10 ~ 36 V_{DC} external power. The inclusion of reversed wiring protection means that reversed wiring of the ground and power lines will not damage the system components. (Refer to Appendix A.3 for more information.)

2.5 USB Connector

The USB interface supports plug-and-play functionality, which enables users to connect or disconnect a device without turning off the computer. The UNO-2372G also features four USB connectors that support plug-and-play and hot-swapping functionality for external devices. The USB interface can be enabled/disabled in the BIOS menu. Furthermore, the UNO-2372G also features four USB ports that comply with USB EHCI, Rev. 3.0, specifications. (Refer to Appendix A.5 for pin assignments.)

2.6 RTC Battery

The UNO-2372G is equipped with an RTC battery to ensure that the system clock and BIOS settings are retained after power disconnections.

- **Type:** BR2032
- **Output Voltage:** 3 V_{DC}

2.7 Power Button/Power Management

Press the "PWR" button to power on/off the UNO-2372G (ATX type). The system can be configured to AT mode by adjusting the onboard switch to automatically turn the system on when there is power input. (Refer to Appendix A.2 for more information.)

2.8 Reset Button

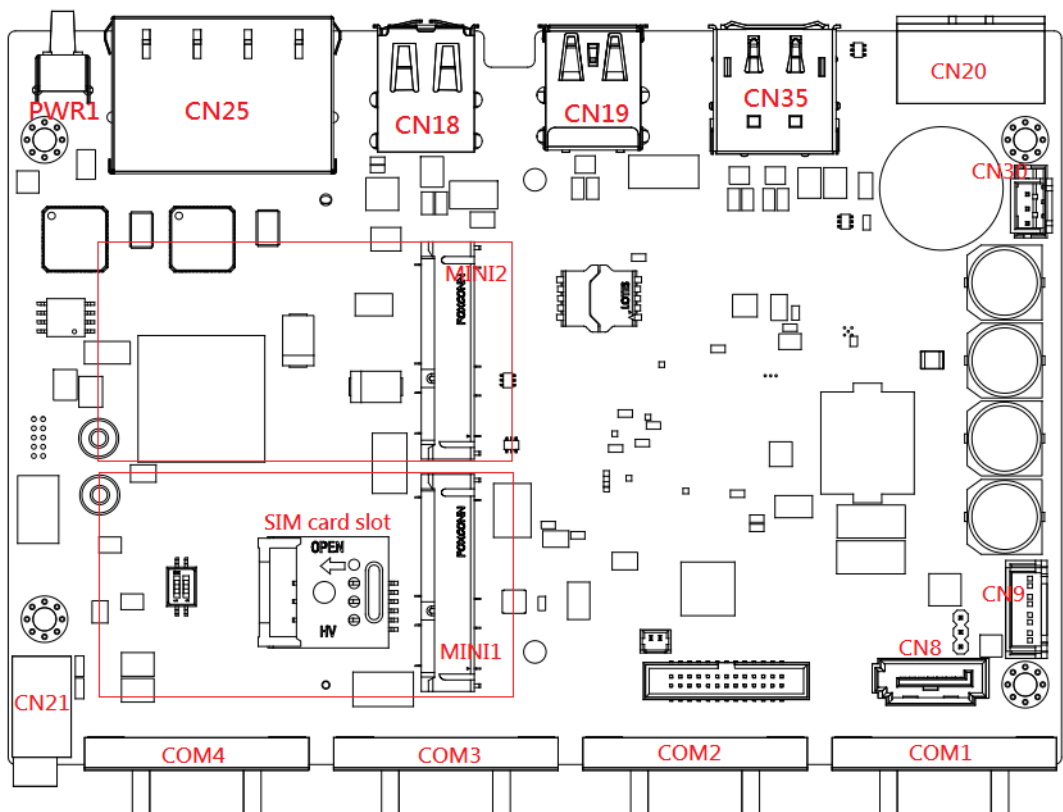
Press the "Reset" button to activate the hardware reset function.

2.9 PCI Express Mini Card Socket

The UNO-2372G supports two full-size PCI Express mini card sockets. The MINI1 interface is provided to support various extension modules, such as Wi-Fi, 3G, and LTE modules, for diverse applications. The UNO-2372G double-stack model also supports the integration of iDoor modules (e.g., DI/O, COM, industrial fieldbus, etc.) via the MINI1 interface.

The MINI2 interface supports both PCIe and mSATA signals and can automatically detect the device type in order to provide the required support.

Note! *In addition to the mini PCIe (MINI1) socket, the system features a micro SIM slot for supporting 3G/LTE function. However, users are required to install a 3G/LTE mini PCIe module to enable this functionality.*



Chapter 3

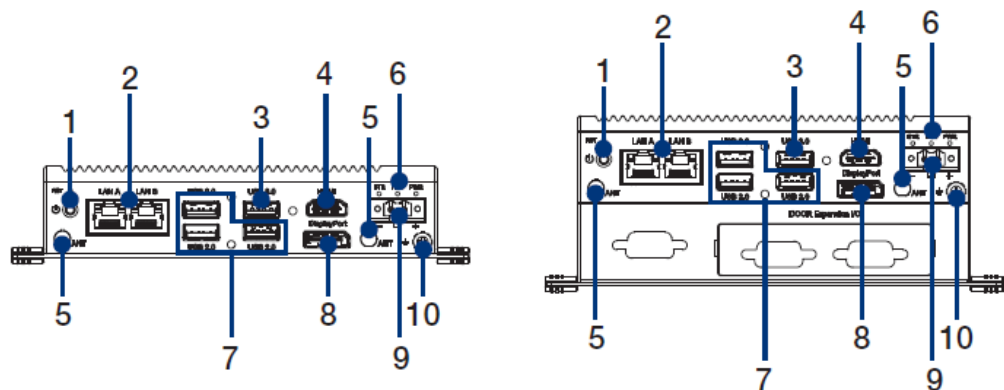
Initial Setup

This chapter explains how to configure the UNO-2372G system.

- Chassis Grounding
- Connecting Power
- Opening/Closing the Rear Cover
- Installing a Hard Disk
- Installing a Second Stack Extension Kit

3.1 Chassis Grounding

UNO-2372G provides excellent EMI protection and a stable grounding base, and features an easy-to-connect chassis grounding point.



1. Reset Button
2. RJ45 LAN
3. USB 3.0
4. HDMI
5. Reserved Antenna

6. BTR, HDD & PWR LED Lights
7. USB 2.0
8. DisplayPort
9. Power Connector
10. Chassis Grounding

Figure 3.1 Chassis grounding connection

3.2 Connecting Power

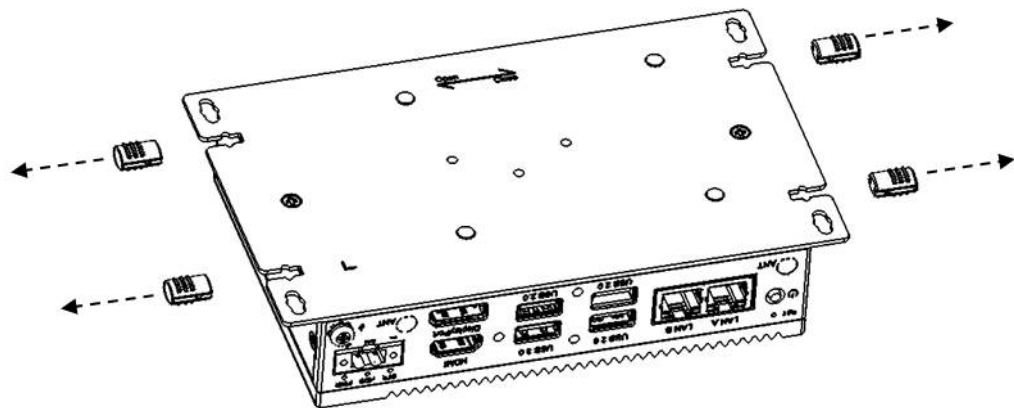
This product is intended to be supplied by an approved power adapter or DC power source rated 10 ~ 36 V_{DC}, 4A, and TMAX 60 °C. (Should you require additional assistance, please contact Advantech.)

3.3 Opening/Closing the Rear Cover

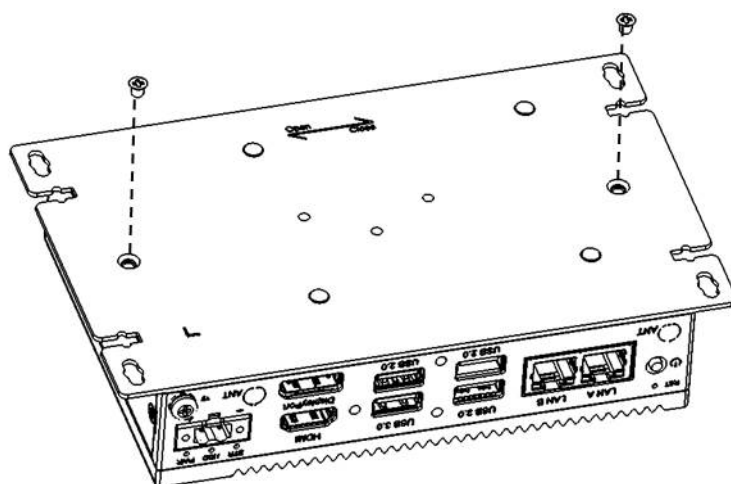
The rear cover can be opened in order to install a mPCIe module, mSATA SSD, and HDD, or to adjust the switch settings.

Opening the rear cover:

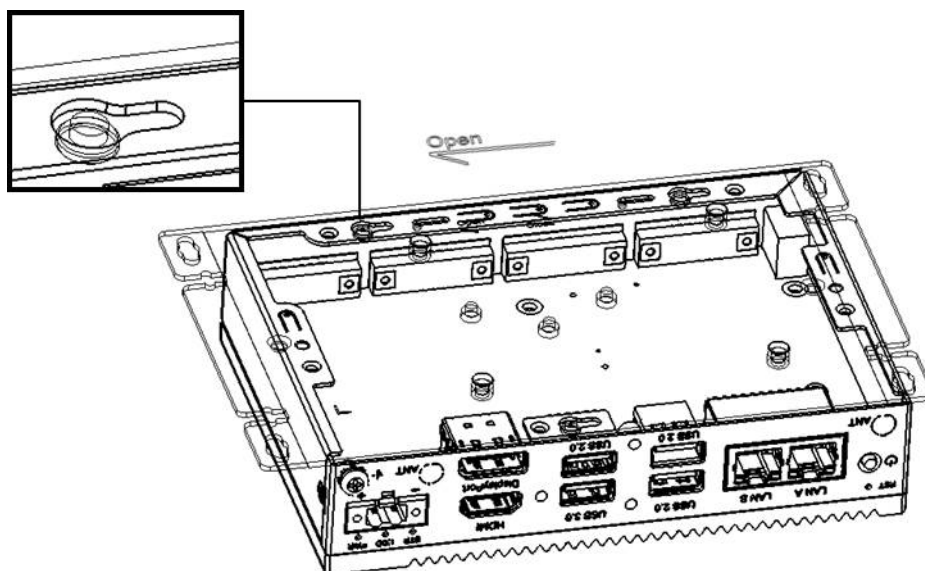
1. Remove the four rubber feet.



2. Remove the two screws of the rear cover.

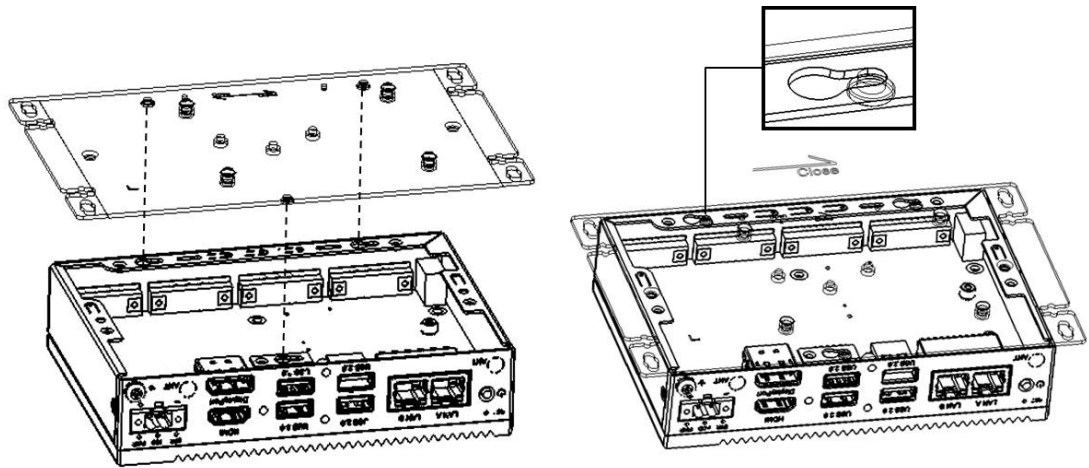


3. Slide the rear cover to the left to open the cover.

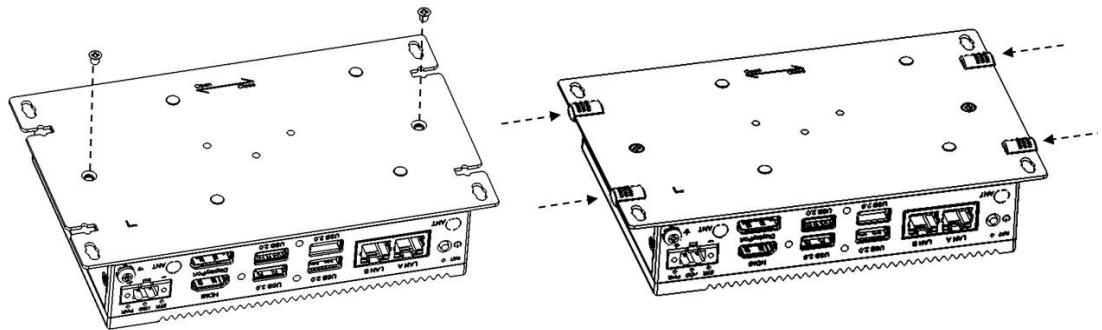


Closing the rear cover:

1. Align the guide pillars of the device with the brackets of the rear cover. Then slide the rear cover to the right to position in place.



2. Affix the rear cover in position using two screws. Then reattach the four rubber feet.

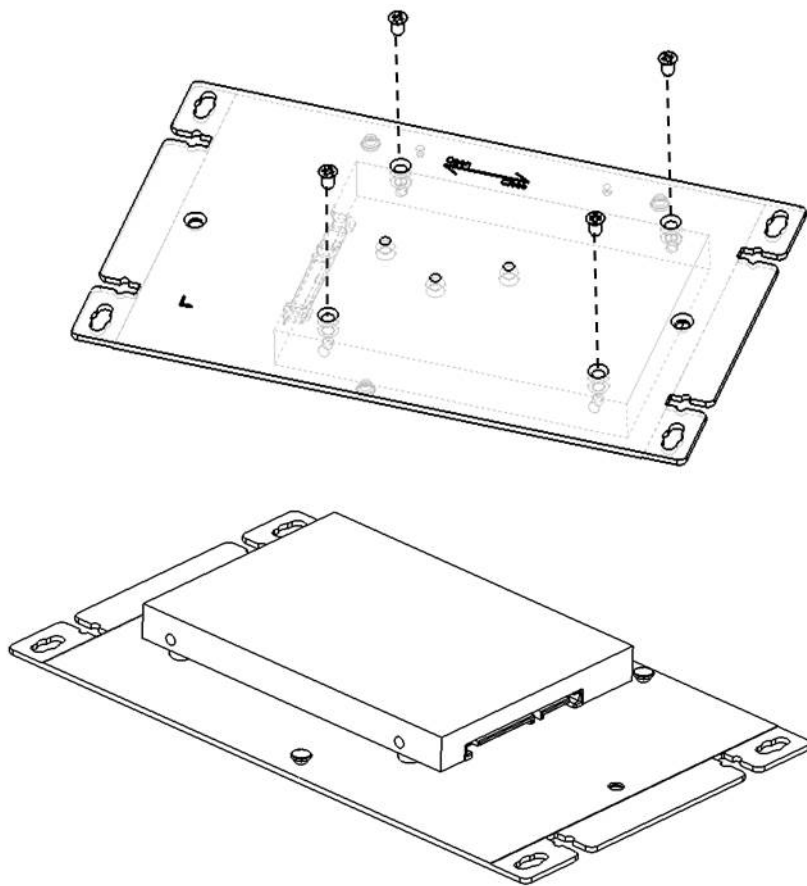


3.4 Installing a Hard Disk

Follow the steps outlined below to install a hard disk into the UNO-2372G.

Single-stack model:

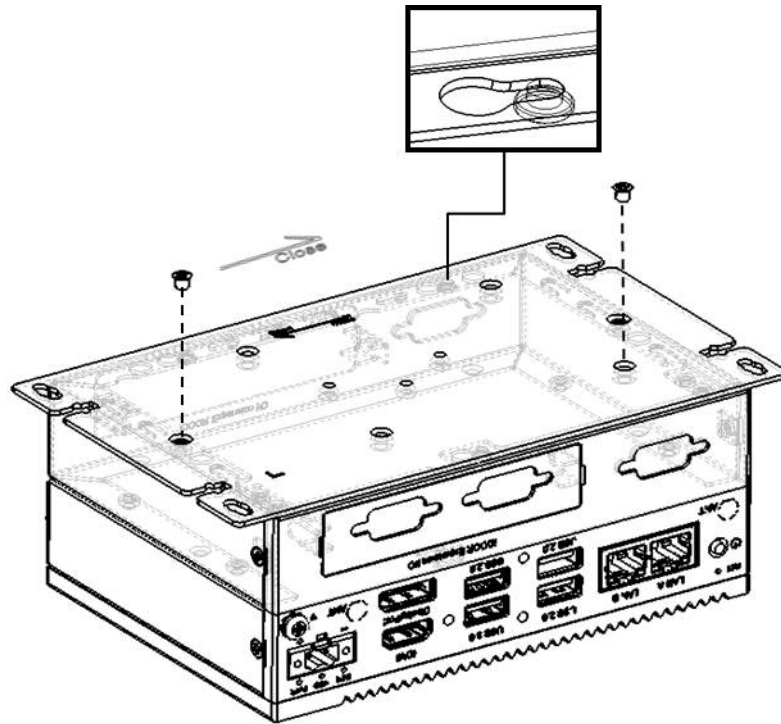
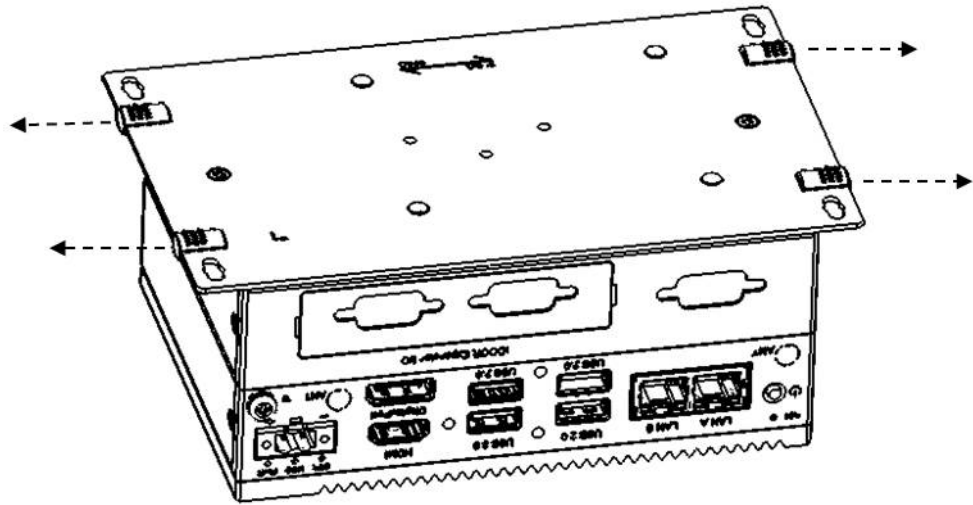
1. Disconnect the power cord.
2. Unscrew and remove the rear cover.
3. Screw the HDD to the rear cover.



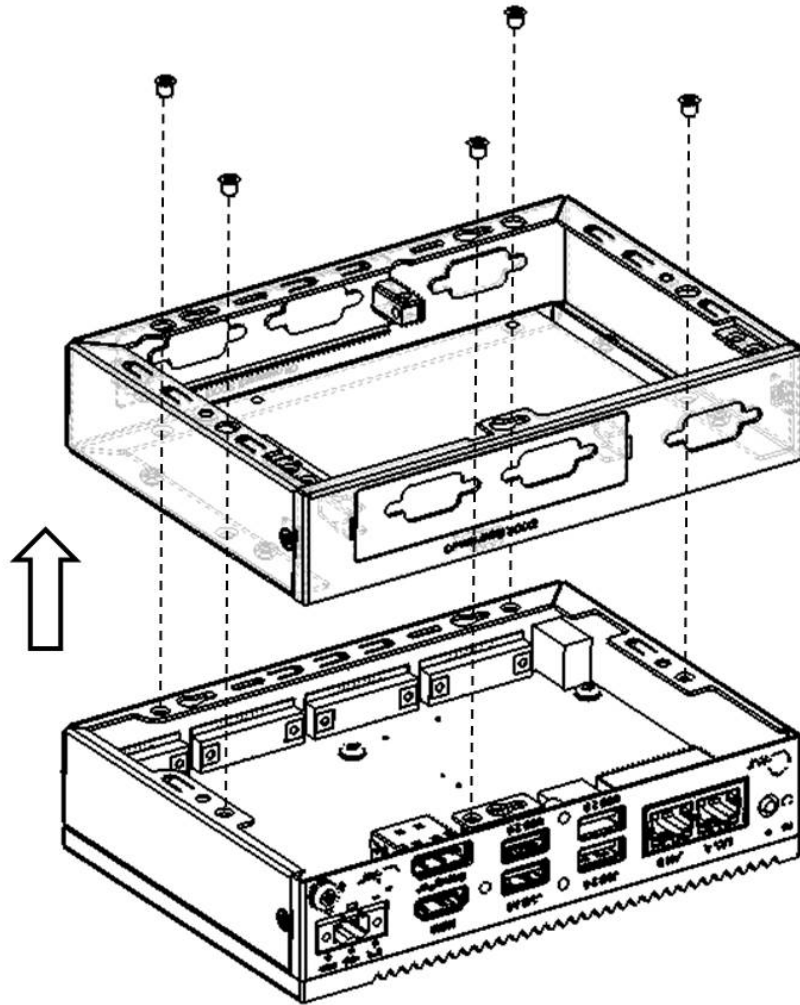
4. Connect a SATA cable to the HDD and motherboard. Then close the rear cover.

Double-stack model:

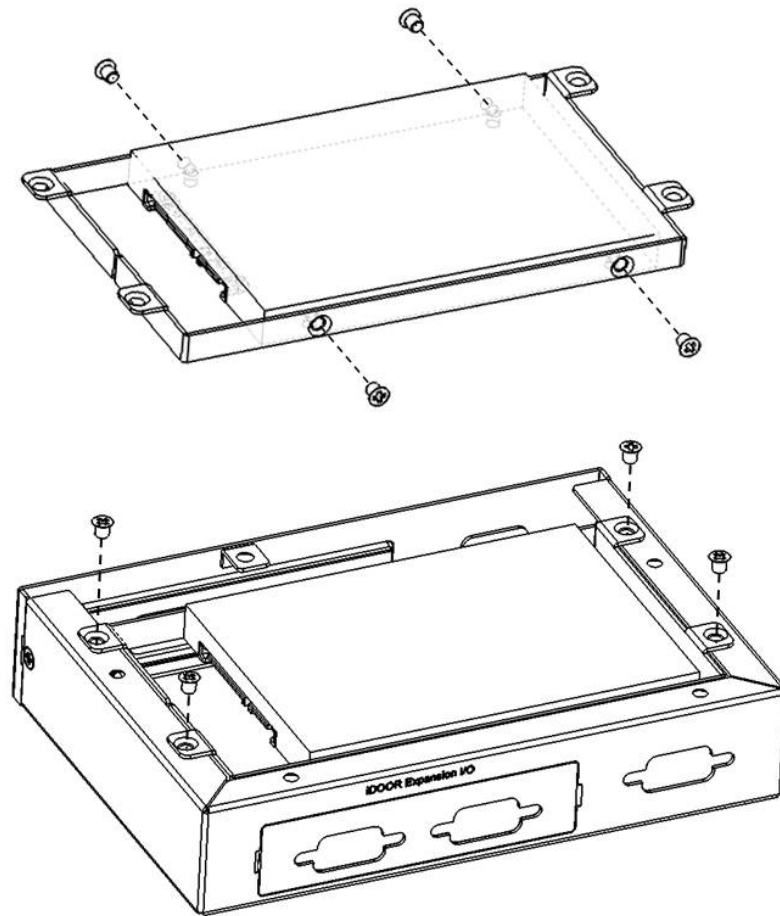
1. Disconnect the power cord.
2. Remove the rubber feet of the rear cover. Unscrew and remove the rear cover.



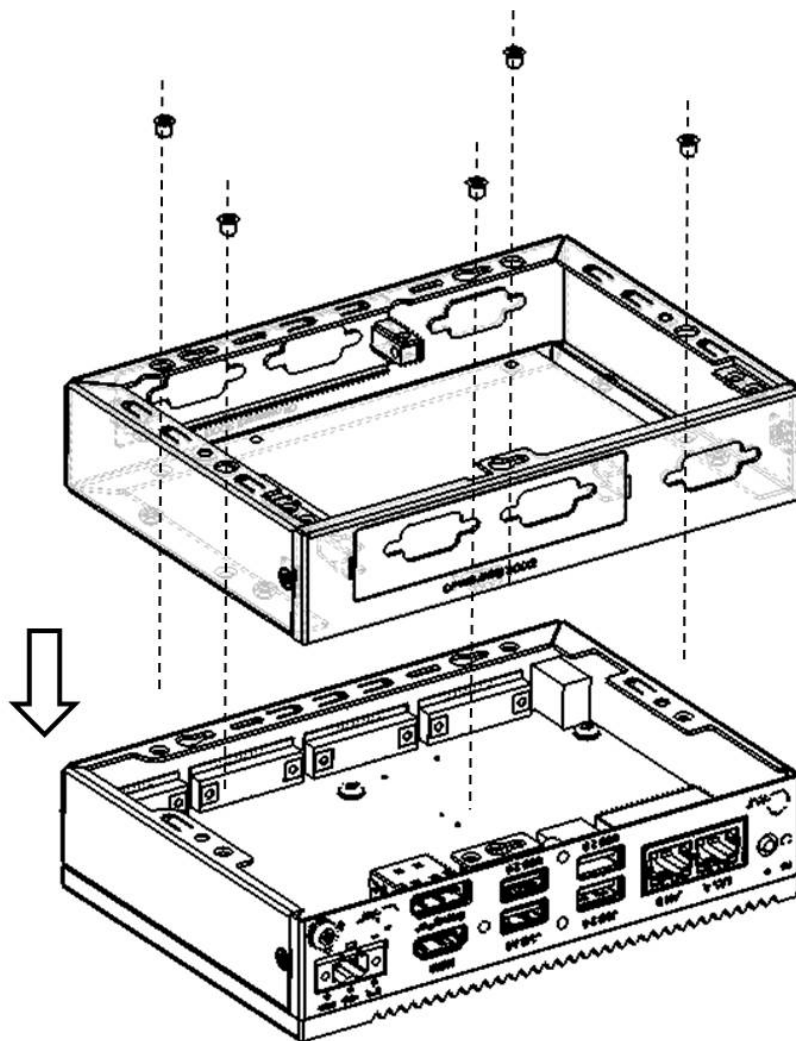
3. Remove the screws to detach the second stack from the first stack.



4. Remove the screws to detach the HDD bracket from the second stack. Affix the HDD to the HDD bracket. Then affix the HDD bracket back onto the second stack using the screws provided.
5. Connect a SATA cable to the HDD and motherboard.



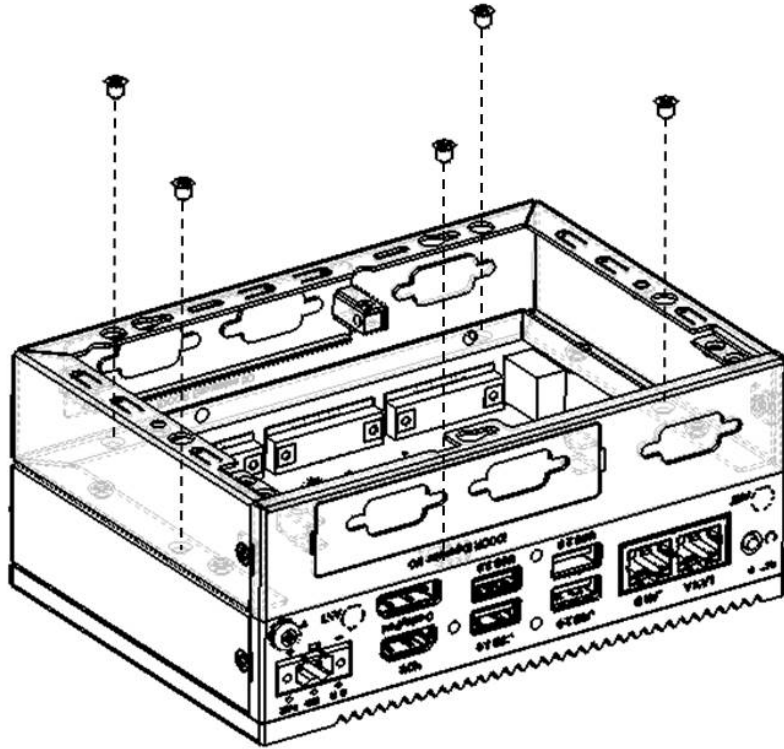
- Affix the second stack to the first stack using the screws provided.



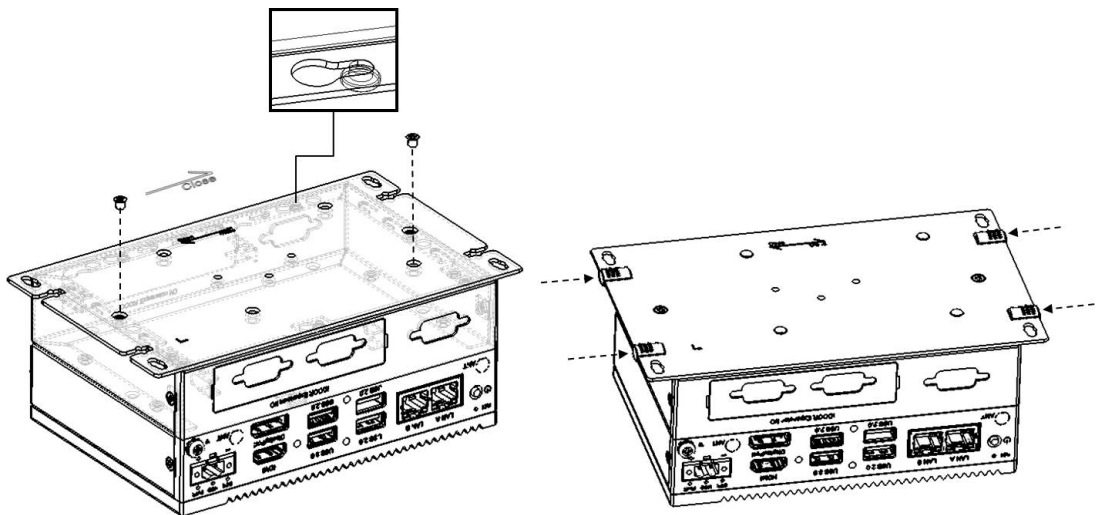
- Replace the rear cover and affix in place using the two screws. Then replace the four rubber feet.

3.5 Installing a Second Stack Extension Kit (UNO-2372G-EKAE)

1. Remove the rear cover.
2. Affix the second stack extension kit onto the first stack using four screws.



3. Replace the rear cover and affix in place using two screws. Then replace the four rubber feet.



Appendix **A**

System Settings/Pin
Assignments

A.1 CN10 Internal GPIO Pin Header

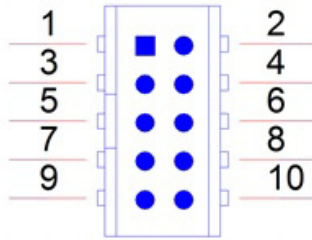


Table A.1: CN10 Internal GPIO Pin Header

Pin	Signal
1	+5 V
2	GPI0
3	GPO0
4	GPI1
5	GPO1
6	GPI2
7	GPO2
8	GPI3
9	GPO3
10	GND

A.2 Board Connectors and Switches

The UNO-2372G board features several connectors and jumpers. The following sections explain how to configure the UNO-2372G hardware.

Figure A.1 shows the locations of the UNO-2372G connectors and switches.

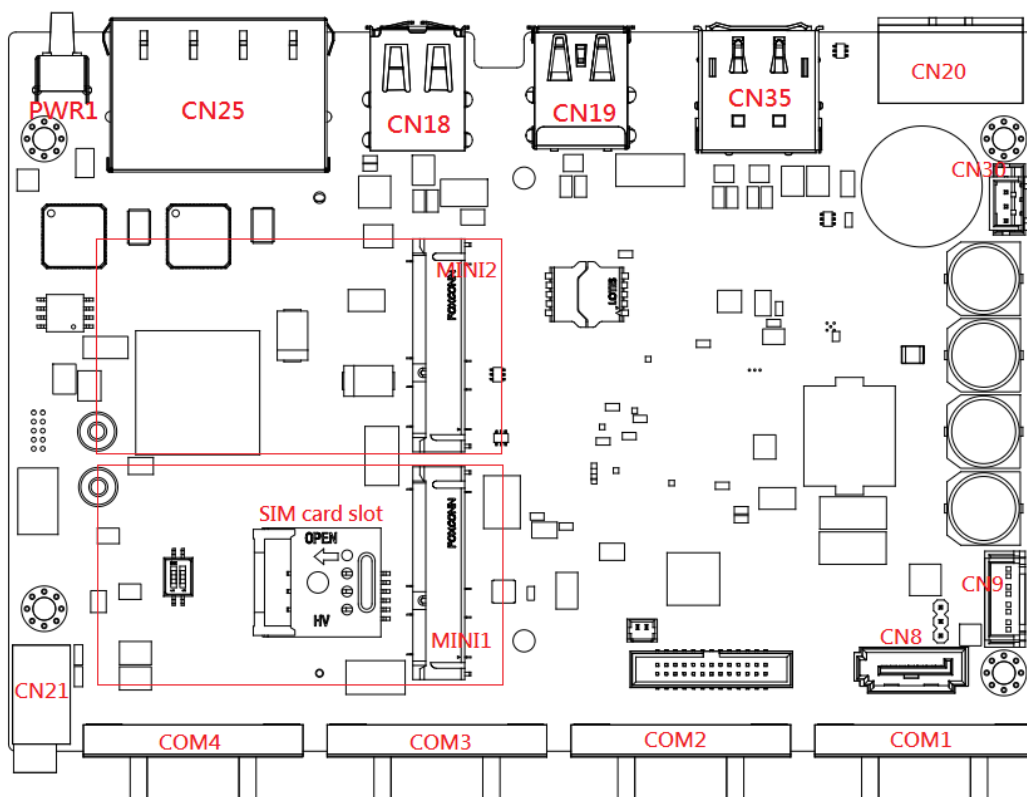


Figure A.1 Connector and jumper locations (front)

Table A.2: Connectors and Jumpers

Label	Function
CN20	Power input connector
CN35	HDMI connector
CN35	DisplayPort connector
CN18	2 x USB 2.0 connector
CN19	USB 3.0 and USB 2.0 connector
CN25	RJ45 connector
PWR1	Power button
RST1	Reset button
COM1 ~ 4	COM port connector
MINI1	PCI Express mini card socket (white connector)
MINI2	PCI Express mini card socket/mSATA (black connector)
CN8/CN9	SATA connector/SATA power connector
BH1	RTC battery connector
CN10	Internal GPIO pin header
CN21	Audio line-out
CN30	Internal power connector, voltage is the same as DCIN
SW1	AT/ATX mode switch. 1 OFF/ 2 ON -> ATX mode, 1 ON/ 2 OFF -> AT mode
CN36	Clear COMS switch; Pins 2 ~ 1 -> normal, Pins 2 ~ 3 -> Clear

A.3 Power Connector (PWR)

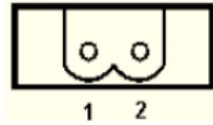


Table A.3: Power Connector Pin Assignments

Pin	Signal	Description
1	Power In V+	10 ~ 36 V _{DC}
2	Power In V- (GND)	

A.4 DP Connector

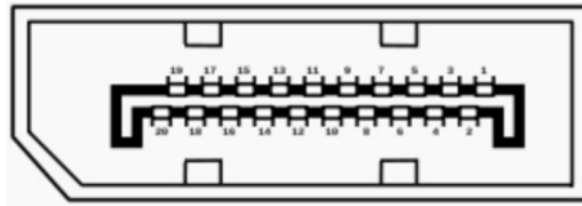


Table A.4: DisplayPort Adaptor Cable Pin Assignment

Pin	Signal Name
1	ML_Lane 0 (p)
2	GND
3	ML_Lane 0 (n)
4	ML_Lane 1 (p)
5	GND
6	ML_Lane 1 (n)
7	ML_Lane 2 (p)
8	GND
9	ML_Lane2 (2)
10	ML_Lane 3 (p)
11	GND
12	ML_Lane 3 (n)
13	CONFIG1
14	CONFIG2
15	AUX CH (p)
16	GND
17	AUX CH (n)
18	Hot plug
19	Return
20	DP_PWR

A.5 USB 3.0

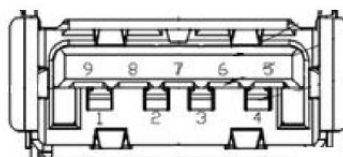


Table A.5: USB 3.0 Connector Pin Assignments

Pin	Signal Name	Description
1	VBUS	Power
2	D-	USB2.0 differential pair
3	D+	
4	GND	Ground for power return
5	StdA_SSRX-	SuperSpeed receiver differential pair
6	StdA_SSRX+	
7	GND_DRIAN	Ground for signal return
8	StdA_SSTX-	SuperSpeed transmitter differential pair
9	StdA_SSTX+	

A.6 HDMI Display Connector

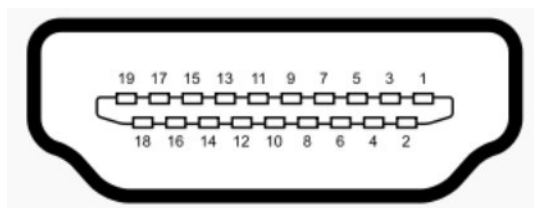
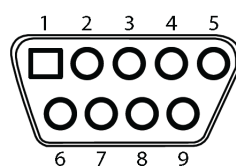


Table A.6: HDMI Display Connector

Pin	Signal	Pin	Signal
1	TMDS data2+	2	TMDS data2 shield
3	TMDS data2-	4	TMDS data1+
5	TMDS data1 shield	6	TMDS data1-
7	TMDS data0+	8	TMDS data0 shield
9	TMDS data0-	10	TMDS clock+
11	TMDS clock shield	12	TMDS clock-
13	CEC	14	Reserved
15	SCL	16	SDA
17	DDC/CEC/HEC ground	18	+5 V power (max. 50 mA)
19	Hot plug detect		

A.7 COM1/COM2/COM3/COM4 RS232/422/485 Connector

Pin	RS232	RS422	RS485
1	DCD	TX-	D-
2	RX	TX+	D+
3	TX	RX+	
4	DTR	RX-	
5	GND	GND	GND
6	DSR		
7	RTS		
8	CTS		
9	RI		



A.8 Mini PCIE Slot (MINI PCIE)

Supports PCI 1.1 and 1.2 power definition.

Pin	Signal	Description	Pin	Signal	Description
52	+3.3 V aux/ +3.3 V	PCI 1.1 was +3.3 V, PCI 1.2 was +3.3 V aux	51	Reserved	NC
50	GND		49	Reserved	NC
48	+1.5 V		47	Reserved	NC
46	NC	NC	45	Reserved	NC
44	NC	NC	43	PIN43_MPCIE_PWRSEL	Pin for selecting Pin 2; 52 power output for +3.3 V aux or +3.3 V (PCI 1.1 was reserved and PIC1.2 was GND)
42	NC	NC	41	+3.3Vaux	
40	GND		39	+3.3Vaux	
38	USB_D+	USB serial data interface compliant to the USB 2.0 specification	37	GND	
36	USB_D-		35	GND	
34	GND		33	PETp0	PCI Express differential transmit pair
32	SMB_DATA	SMBus data signal compliant to SMBus 2.0 specification	31	PETn0	
30	SMB_CLK		29	GND	
28	+1.5 V		27	GND	
26	GND		25	PERp0	PCI Express differential receive pair
24	+3.3 V aux		23	PERn0	
22	PERST#	Functional reset to the card	21	GND	
20	W_DISABLE#	Active low signal. This signal is used by the system to disable radio operation on add-in cards that implement radio frequency applications. When implemented, this signal requires a pull-up resistor on the card.	19	Reserved	NC
18	GND		17	Reserved	NC
	Key	Key		Key	Key
16	NC	NC	15	GND	
14	NC	NC	13	REFCLK+	
12	NC	NC	11	REFCLK-	
10	NC	NC	9	GND	
8	NC	NC	7	CLKREQ#	Reference clock request signal
6	1.5 V		5	NC	NC
4	GND		3	NC	NC
2	+3.3 V aux/ +3.3 V	PCI 1.1 was +3.3 V, PCI 1.2 was +3.3 V aux	1	WAKE#	Open drain active low signal. This signal is used to request that the system return from a sleep/suspended state to service a function-initiated wake event.

* +3.3 V aux was suspend power with power out to device +3.3 V/1.1A

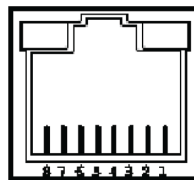
* +3.3 V was core power

* +1.5 V was core power with power out to device +1.5 V/0.5A

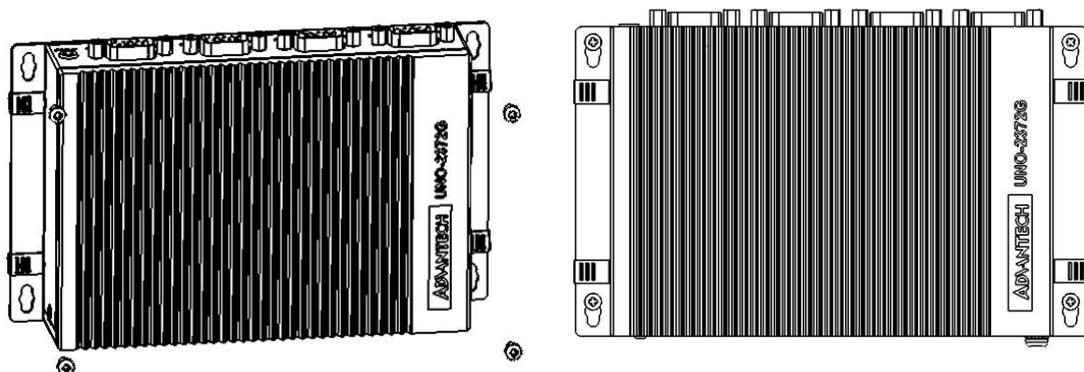
A.9 LAN RJ45 Connector

RJ45 Pin	Signal	Description
1	MDI0+	<ul style="list-style-type: none"> In BASE-T: Media-dependent interface[0]: 1000BASE-T: In MDI configuration, MDI[0]+/- corresponds to BI_DA+/- and in MDI-X configuration MDI[0]+/- corresponds to BI_DB+/-.
2	MDI0-	<ul style="list-style-type: none"> 10BASE-T and 100BASE-TX: In MDI configuration, MDI[0]+/- is used for the transmit pair. In MDI-X configuration, MDI[0]+/- is used for the receive pair.
3	MDI1+	<ul style="list-style-type: none"> In BASE-T: Media-dependent interface[1]: 1000BASE-T: In MDI configuration, MDI[1]+/- corresponds to BI_DB+. In MDI-X configuration, MDI[1]+/- corresponds to BI_DA+/-.
6	MDI1-	<ul style="list-style-type: none"> 10BASE-T and 100BASE-TX: In MDI configuration, MDI[1]+/- is used for the receive pair. In MDI-X configuration, MDI[1]+/- is used for the transmit pair.
4	MDI2+	<ul style="list-style-type: none"> In BASE-T: Media-dependent interface[3:2]: 1000BASE-T: In MDI and in MDI-X configuration, MDI[2]+/- corresponds to BI_DC+/- and MDI[3]+/- corresponds to BI_DD+/-. 100BASE-TX: Unused 10BASE-T: Unused
5	MDI2-	
7	MDI3+	
8	MDI3-	

Left LED		Right LED	
10 Link	100 Link	1000 Link	Active
Off	Orange	Green	Green



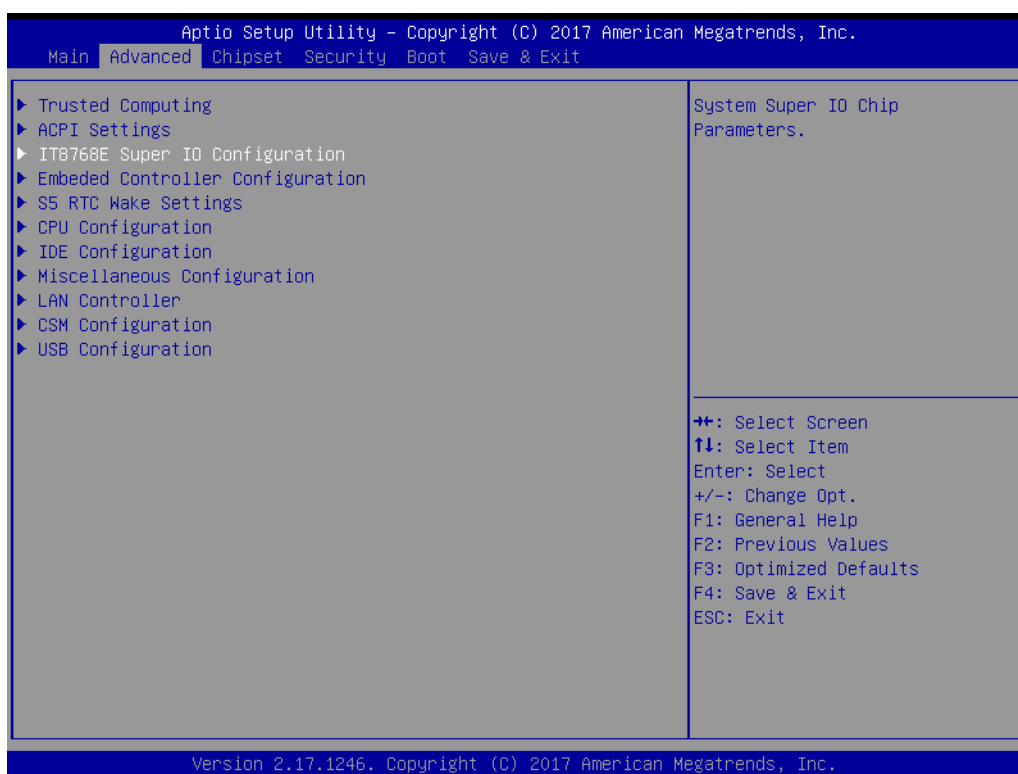
A.10 Screw Type and Quantity for Mount Module



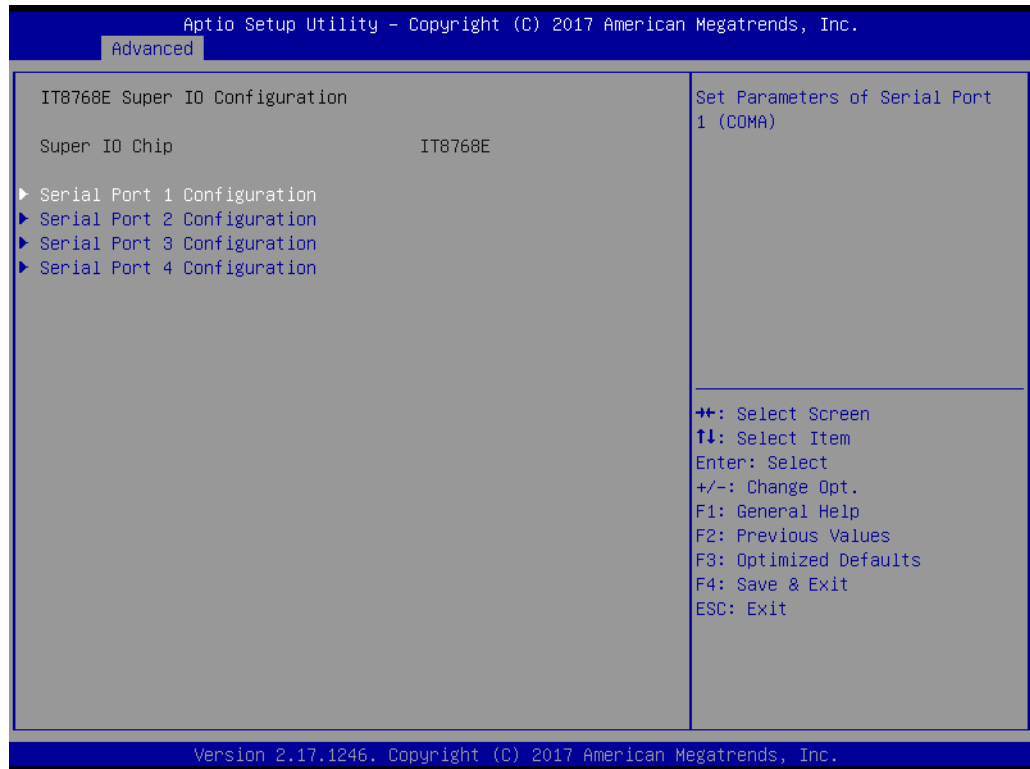
A.11 Modify Serial Port Mode

The default setting for the serial port is RS-232. This can be changed to RS-422 or RS-485 modes by following the instructions provided below.

1. Power on the UNO-2372G system and press “Delete” to enter the BIOS configuration menu.
2. On the “Advanced” tab, select the “IT8768E Super IO Configuration” option.



3. Select the serial port (e.g., select the “Serial Port 1 Configuration” option).



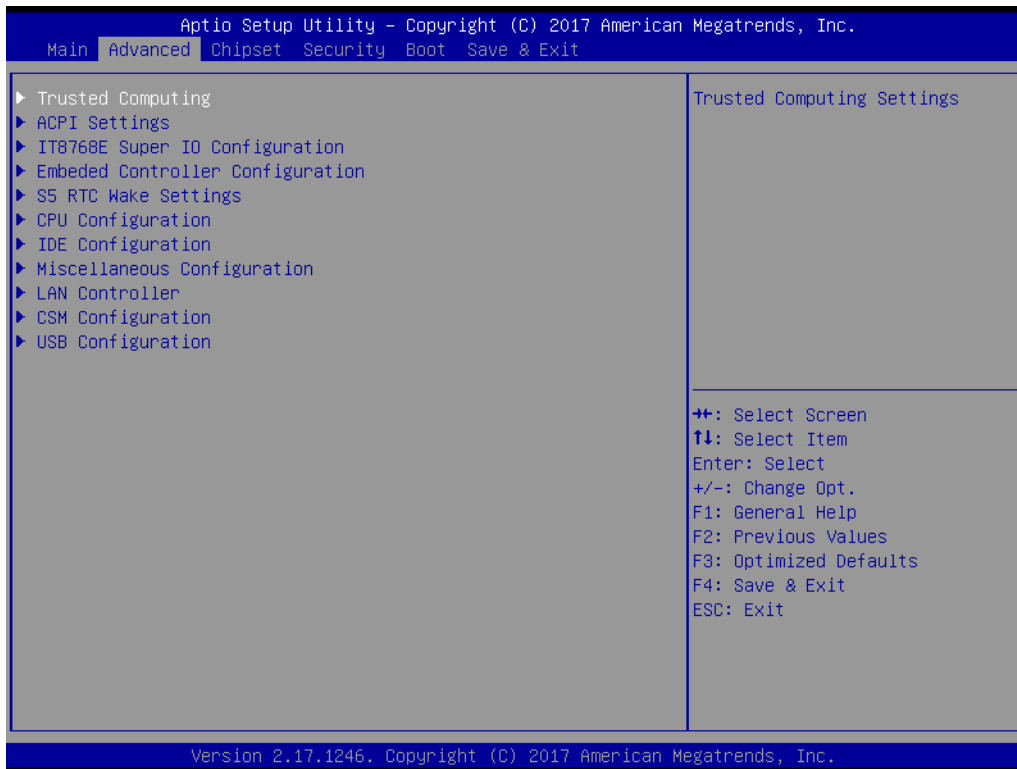
4. Select “COM1 mode” and choose from RS232, RS422, or RS485 modes.



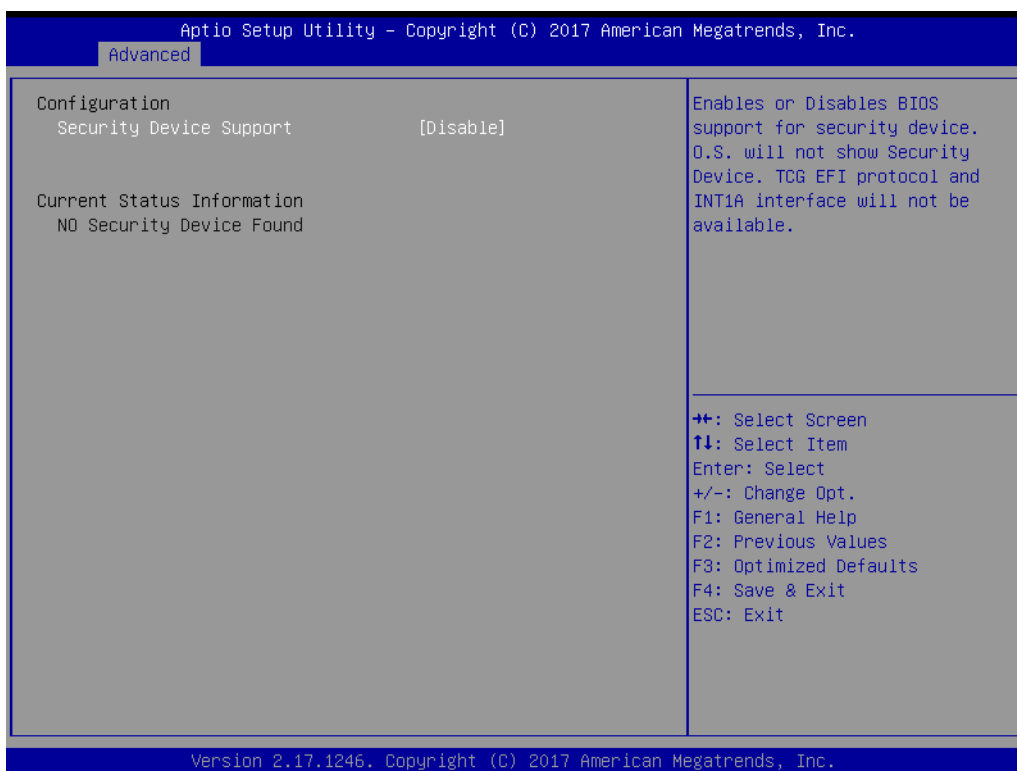
A.12 TPM2.0 BIOS Settings

The UNO-2372G systems support TPM2.0 functionality. This can be enabled or disabled in the BIOS menu by following the instructions provided below.

1. Power on the UNO-2372G system and press “Delete” to enter the BIOS configuration menu.
2. On the “Advanced” tab, select the “Trusted Computing” item.



3. Then select the “Security Device Support” item.
4. Choose “enable/disable” to enable or disable the TPM2.0 function.



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Please verify specifications before quoting. This guide is intended for reference purposes only.

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