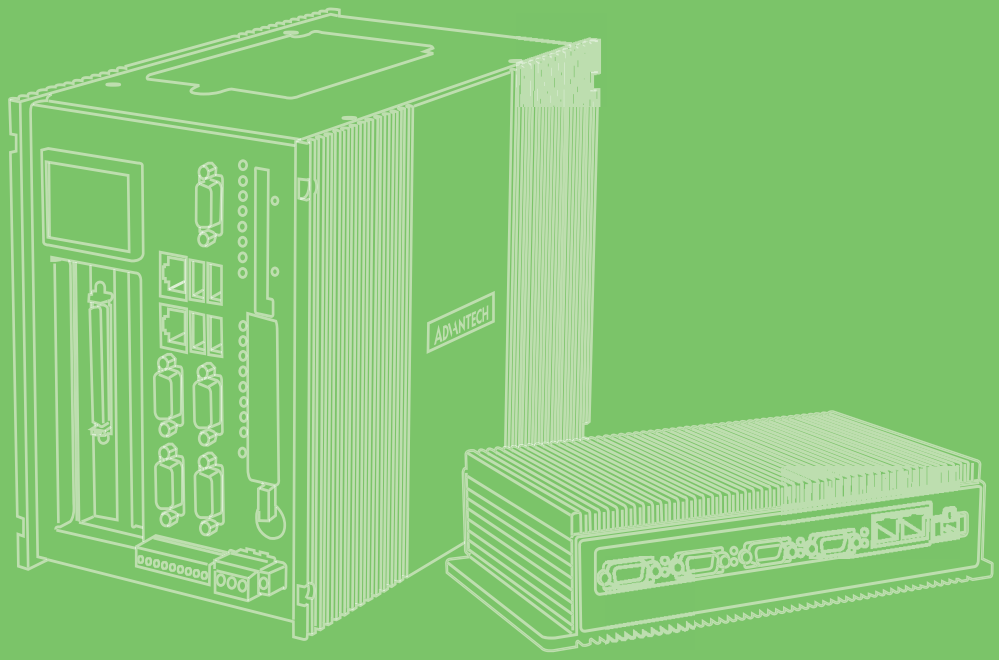
User Manual



UNO-2372G-J1

電腦

Intel® Celeron® J3455 Small Form Factor Modular Box Platform with 2x GbE, 4x USB, 4x COM, 2x mPCIe, HDMI, and DP

ADVANTECH

Enabling an Intelligent Planet

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Acknowledgments

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Part No. 2003237260 Edition 1

Printed in China September 2020

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）：UNO-2372G-J1（系列型號請參見次頁說明書） UNO2372GJ1 Type designation (Type)					
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 Polybrominated biphenyl ethers (PBDE)
電路板	—	O	O	O	O	O
內外殼（外殼、內部框架…等）	O	O	O	O	O	O
其它固定組件（螺絲）	—	O	O	O	O	O
配件 (SATA 線材)	O	O	O	O	O	O
記憶體	—	O	O	O	O	O

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: The “–” indicates that the restricted substance corresponds to the exemption.

This manual is applicable to the following product models:

UNO-2372G-J121AE

UNO2372GJ1212001-T, UNO2372GJ1212002-T, UNO2372GJ1212003-T,
UNO2372GJ1212004-T, UNO2372GJ1212101-T, UNO2372GJ1212102-T,
UNO2372GJ1212103-T, UNO2372GJ1212104-T, UNO2372GJ1212201-T,
UNO2372GJ1212202-T, UNO2372GJ1212203-T, UNO2372GJ1212204-T,
UNO2372GJ1212301-T, UNO2372GJ1212302-T, UNO2372GJ1212303-T,
UNO2372GJ1212304-T, UNO2372GJ1212401-T, UNO2372GJ1212402-T,
UNO2372GJ1212403-T, UNO2372GJ1212404-T, UNO2372GJ1212501-T,
UNO2372GJ1212502-T, UNO2372GJ1212503-T, UNO2372GJ1212504-T,
UNO2372GJ1212601-T, UNO2372GJ1212602-T, UNO2372GJ1212603-T,
UNO2372GJ1212604-T,

UNO-2372G-J122AE

UNO2372GJ1222001-T, UNO2372GJ1222002-T, UNO2372GJ1222003-T,
UNO2372GJ1222004-T, UNO2372GJ1222101-T, UNO2372GJ1222102-T,
UNO2372GJ1222103-T, UNO2372GJ1222104-T, UNO2372GJ1222201-T,
UNO2372GJ1222202-T, UNO2372GJ1222203-T, UNO2372GJ1222204-T,
UNO2372GJ1222301-T, UNO2372GJ1222302-T, UNO2372GJ1222303-T,
UNO2372GJ1222304-T, UNO2372GJ1222401-T, UNO2372GJ1222402-T,
UNO2372GJ1222403-T, UNO2372GJ1222404-T, UNO2372GJ1222501-T,
UNO2372GJ1222502-T, UNO2372GJ1222503-T, UNO2372GJ1222504-T,
UNO2372GJ1222601-T, UNO2372GJ1222602-T, UNO2372GJ1222603-T,
UNO2372GJ1222604-T,

UNO-2372G-E121AE

UNO2372GE1212001-T, UNO2372GE1212002-T, UNO2372GE1212003-T,
UNO2372GE1212004-T, UNO2372GE1212101-T, UNO2372GE1212102-T,
UNO2372GE1212103-T, UNO2372GE1212104-T, UNO2372GE1212201-T,
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UNO2372GE1222604-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, 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 on-screen 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 merchandize 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

警告使用者：此為甲類資訊技術設備， 於居住環境中使用時， 可能會造成射頻擾動，在此種情況下， 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 -40 °C (-40 °F) or above 85 °C (185 °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 remplace. 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，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，以免引起火灾或短路。
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 -40 ° C （-40 ° F）或高於 85 ° C （185 ° 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。
20. 本產品於國內裝置使用時，其電源僅限使用機架電源模組所提供直流電源輸入，不得使用交流電源及附加其他電源轉換裝置提供電源，其電源輸入電壓及電流請依說明書規定使用。

申請商：研華股份有限公司
地址：台北市內湖區瑞光路 26 巷 20 弄 1 號
電話：02-27927818

Contents

Chapter 1

Overview

This chapter provides an overview of the UNO-2372G-J1 specifications.

- Introduction
- Safety Precautions
- Accessories
- Hardware Specifications

1.1 Introduction

Advantech's next-generation UNO-2000 series of embedded automation computers feature highly ruggedized, modular, fanless designs. UNO-2372G-J1's excellent modularity provides numerous performance and cost-saving advantages, including the elimination of unnecessary features and expenses, accelerated UNO-2372G-J1 production and delivery, rapid deployment and integration, reduced system downtime and maintenance costs, and support for future upgrades and expansion. The UNO-2372G-J1 is equipped with optimized I/O and an optional second expansion stack that supports Advantech's iDoor technology. This enables easy extension and customization with the integration of various iDoor modules. These modules include industrial Fieldbus, wireless communication, I/O, and peripheral modules. This solution facillitates 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-J1. 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-J1. 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:** 18.36 W (typical), 50.38 W (max.)
- **System Hardware:**
  - **CPU:**
    Intel® Celeron® J3455 (1.50GHz, Max Turbo 2.30GHz)
  - **Memory:** 4 GB of DDR3L 1866MHz (up to 8 GB)
  - **Graphics Engine:** Intel® HD Graphics 500
  - **Ethernet:** Intel® i210 GbE, 802.1AS, 803.3az
  - **COM:** 4 x RS232/422/485
  - **USB:** 4 x USB 3.0
  - **Storage:**
    1 x full-size mSATA socket (shared with 1 x mPCIe)
    1 x drive bay for SATA 2.5" HDD/SSD (compatible with an HDD/SSD height of 9.5 mm)
  - **Expansion:** 2 x full-size mPCIe sockets (1 x mPCIe also supports mSATA)
  - **Display:** 1 x DP++ 1.2 with 3840 x 2160 resolution @60 Hz and 1 x HDMI 1.4b with 3840 x 2160 resolution @30Hz
  - **Hardware Security:** TPM2.0

Because UNO-2372G-J1 features a modularized design, Advantech offers both single-and double-stack models:

* Single stack: UNO-2372G-J121AE

* Double stack: UNO-2372G-J122AE

The double stack version is the combination of single stack version with an expansion module (UNO-2372G-EKBE).

Chapter 2

Hardware Functionality

This chapter explains how to setup the UNO-2372G-J1's hardware functions — including connecting peripherals, setting switches, and indicators.

- Introduction
- UNO-2372G-J1 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-J1 connectors are shown in Figures 2.1, 2.2, and 2.3. Additionally, a description of each peripheral is provided in the following sections.

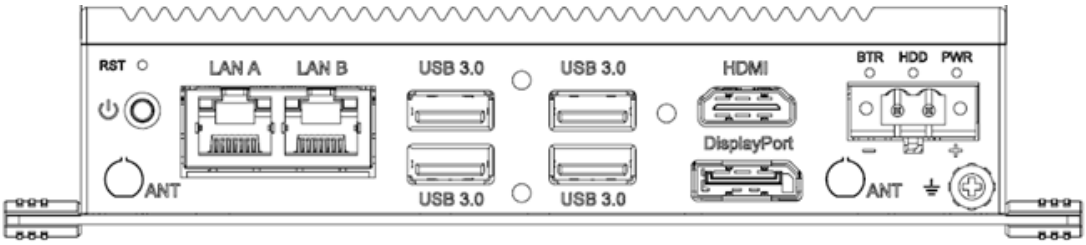


Figure 2.1 Front Panel of the UNO-2372G-J1 Single-Stack Model

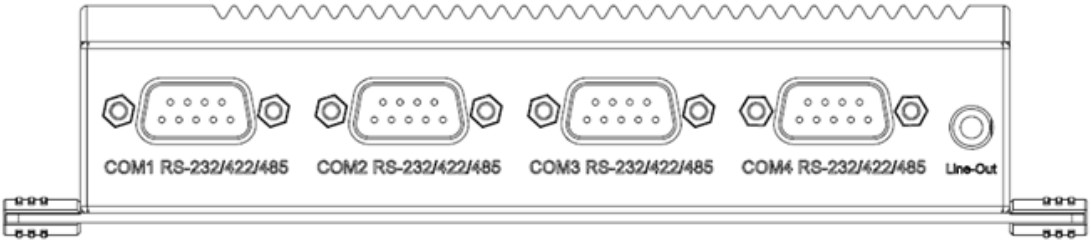


Figure 2.2 Rear Panel of the UNO-2372G-J1 Single-Stack Model

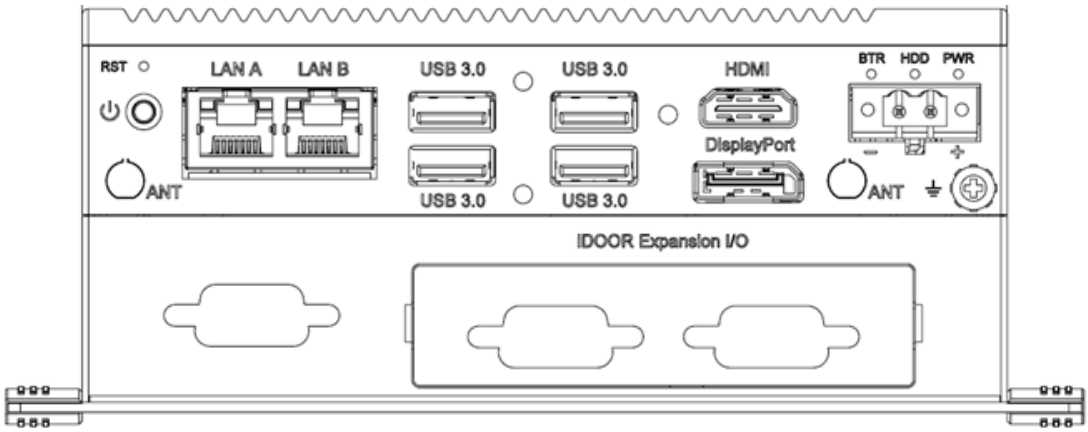


Figure 2.3 Front Panel of the UNO-2372G-J1 Double-Stack Model

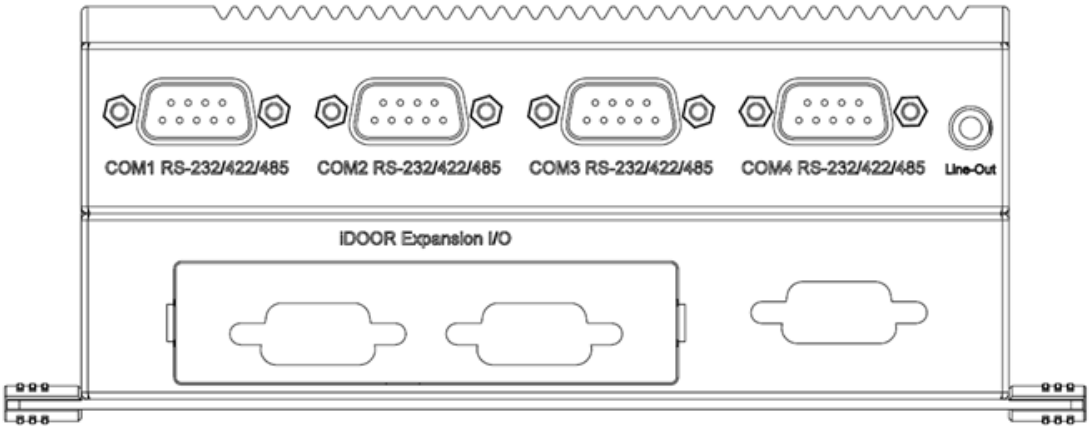


Figure 2.4 Rear Panel of the UNO-2372G-J1 Double-Stack Model

2.2 Serial Communication Ports

The UNO-2372G-J1 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-J1 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-J1 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/Speed (off/green/orange) and Active (green) status.

2.4 Power Connector

UNO-2372G-J1 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-J1 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-J1 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-J1 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-J1 (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-J1 supports two full-size PCI Express mini card sockets. The location MINI1 interface with PCIe and USB signal is provided to support various extension modules, such as Wi-Fi, 3G, and LTE modules, for diverse applications. The UNO-2372G-J1 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 SATA 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 (CN10 location) for supporting 3G/LTE function. However, users are required to install a 3G/LTE mini PCIe module to enable this functionality. The location of MINI1/ MINI2 can refer to* ***Figure A.1****.*

Chapter 3

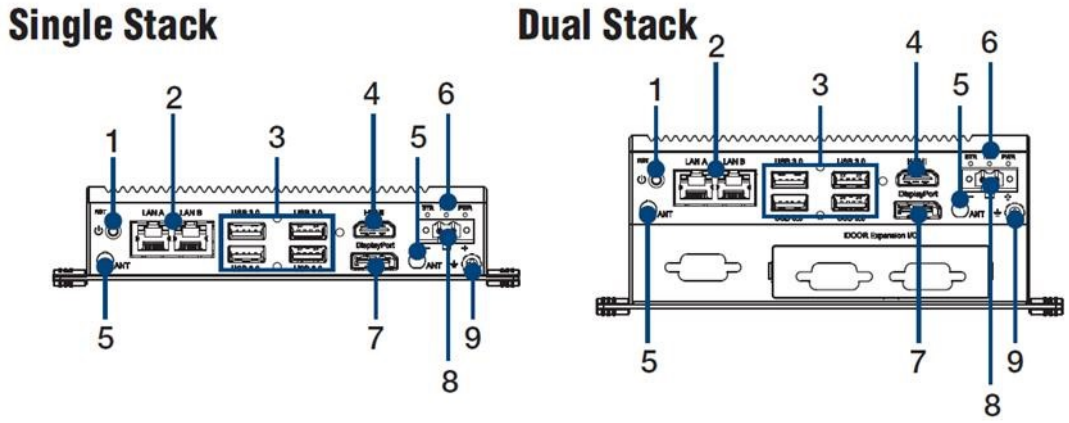
Initial Setup

This chapter details UNO-2372G-J1 system configuration setup.

- I/O View
- Connecting Power
- Opening/Closing the Rear Cover
- Installing a Hard Disk
- Installing a Second Stack Extension Kit

3.1 I/O View

UNO-2372G-J1 provides excellent EMC protection and a stable grounding base. It features an easy-to-connect chassis grounding point.



1. Power Button
2. RJ45 LAN
3. USB 3.0
4. HDMI
5. Reserved Antenna
6. BRT, HDD & PWR LED Lights
7. DisplayPort
8. Power Connector
9. Chassis Grounding

Figure 3.1 I/O View

3.2 Connecting the Power

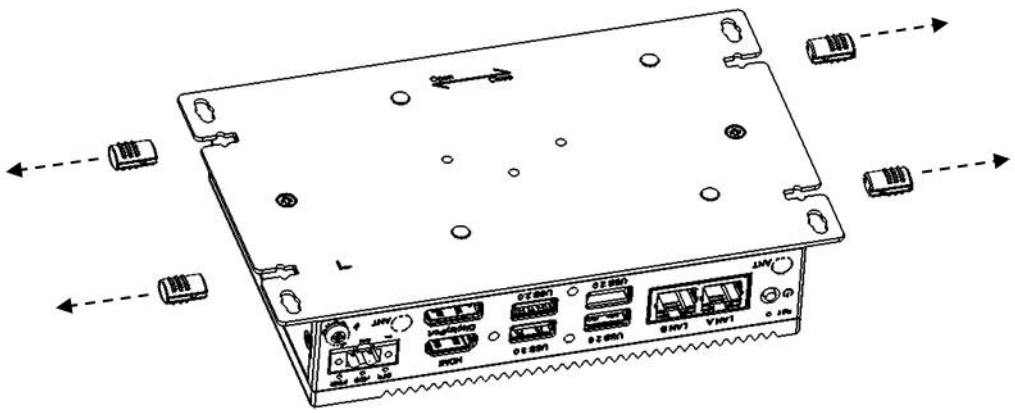
This product is intended to be supplied by an approved power adapter or DC power source rated 10 - 36 V_{DC}, 5.1-1.42A. (Please contact Advantech if you require additional assistance)

3.3 Opening/Closing the Rear Cover

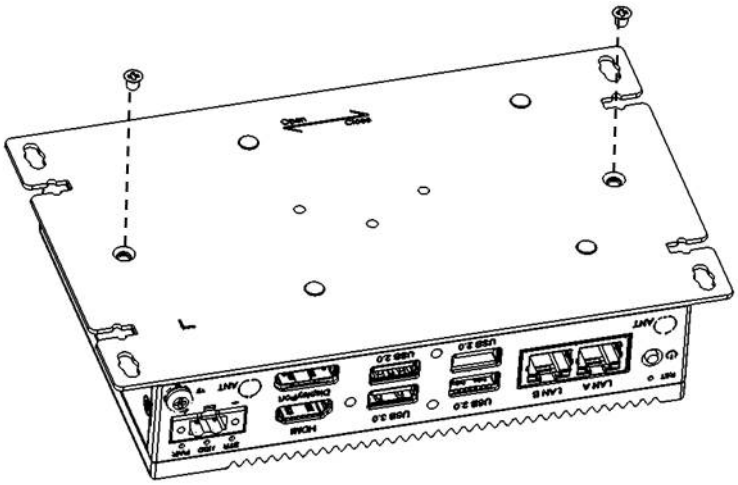
The rear cover can be opened in order to install a mPCIe module, mSATA SSD, and 2.5" HDD/SSD, or to adjust the switch settings.

Opening the rear cover:

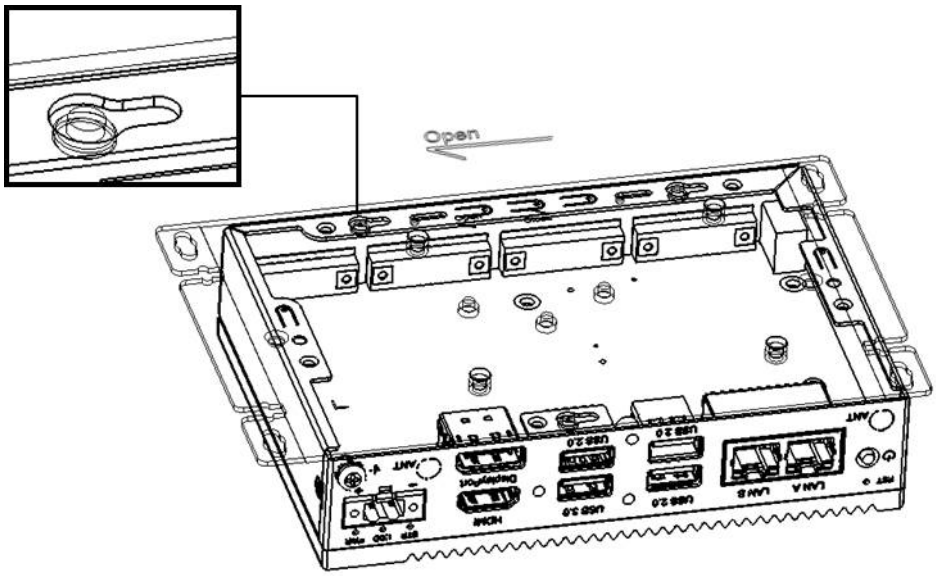
1. Remove the four rubber feet.



2. Remove the two screws from the rear cover.

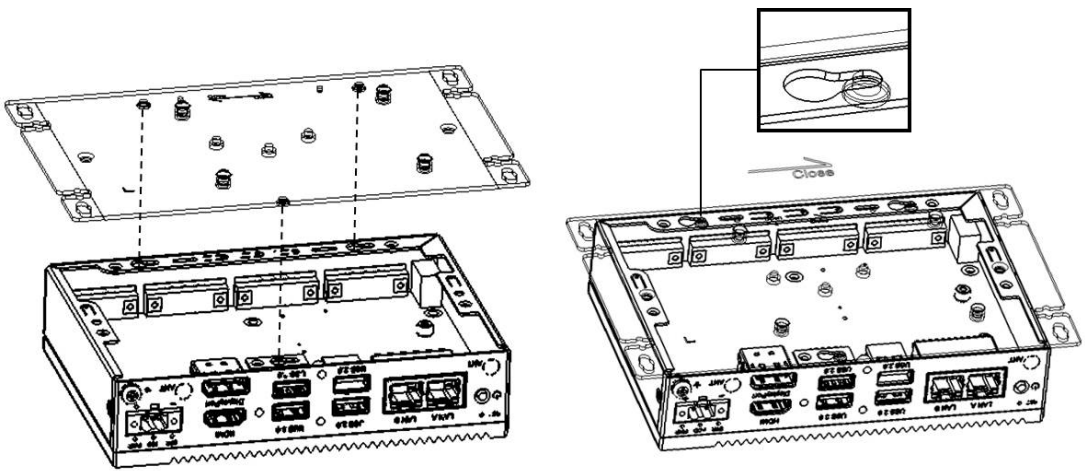


3. Slide the rear cover to the left to open the cover.

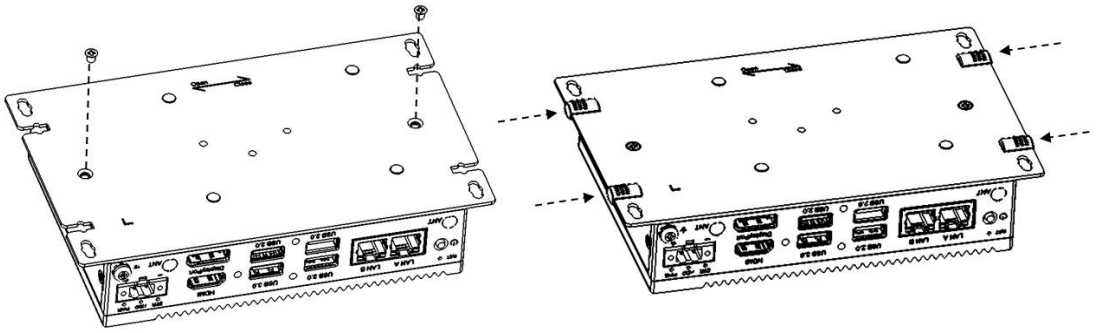


Closing the rear cover:

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. Secure e rear cover in position using two screws. Then reattach the four rubber feet.

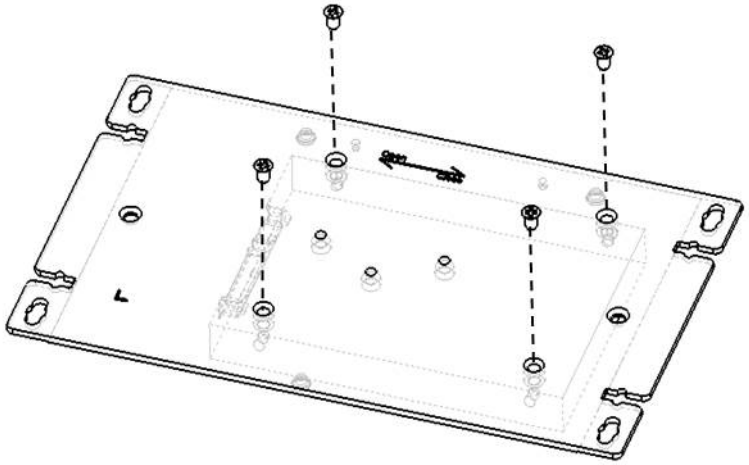


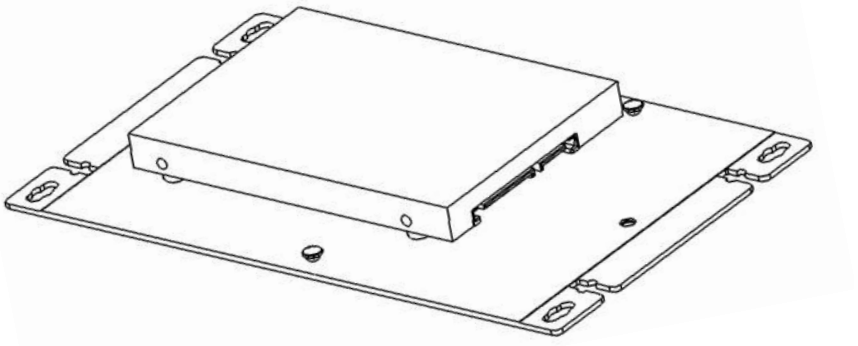
3.4 Installing a Hard Disk

Follow the steps outlined below to install a hard disk into the UNO-2372G-J1.

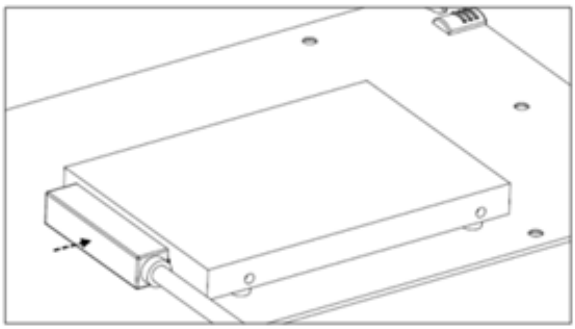
Single-stack model:

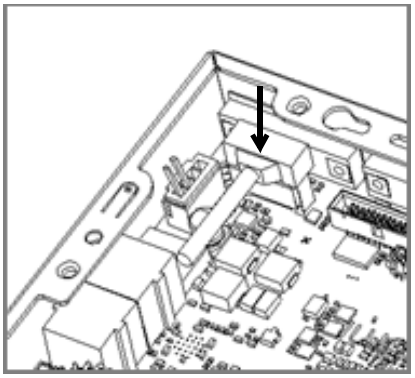
1. Disconnect the power cord.
2. Unscrew and remove the rear cover.
3. Screw the 2.5" HDD or SSD to the rear cover.





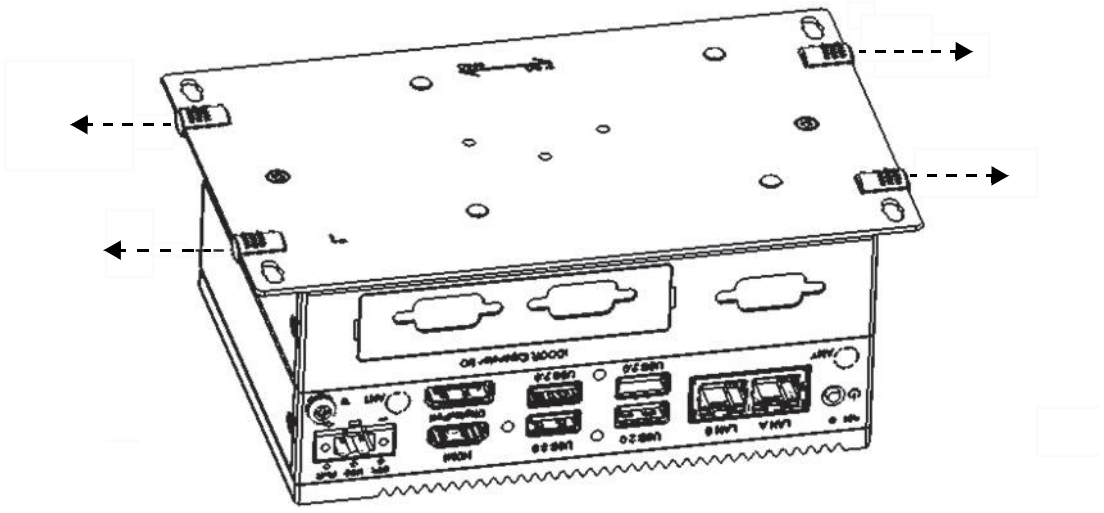
4. Connect a SATA cable to the HDD and motherboard. Then close the rear cover.

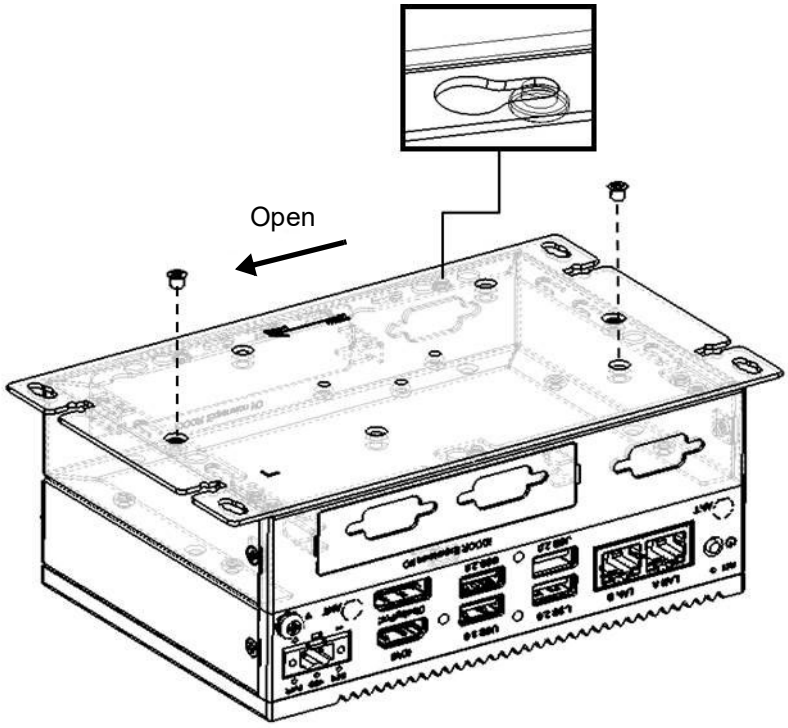




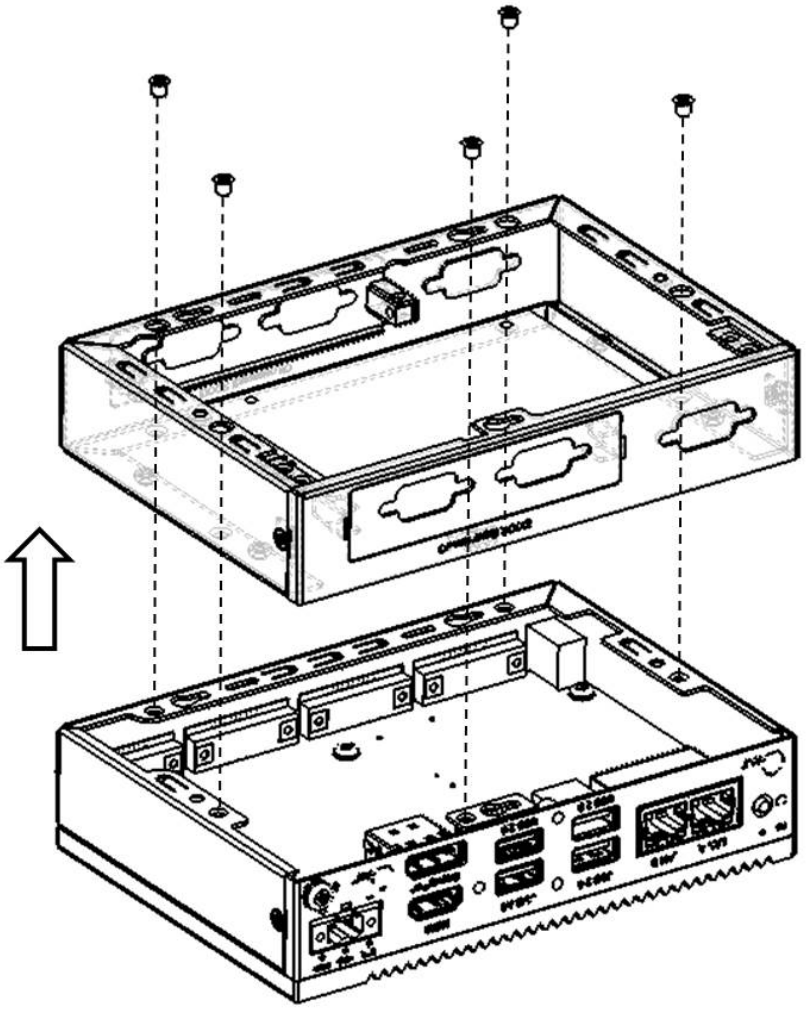
Double-stack model:

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

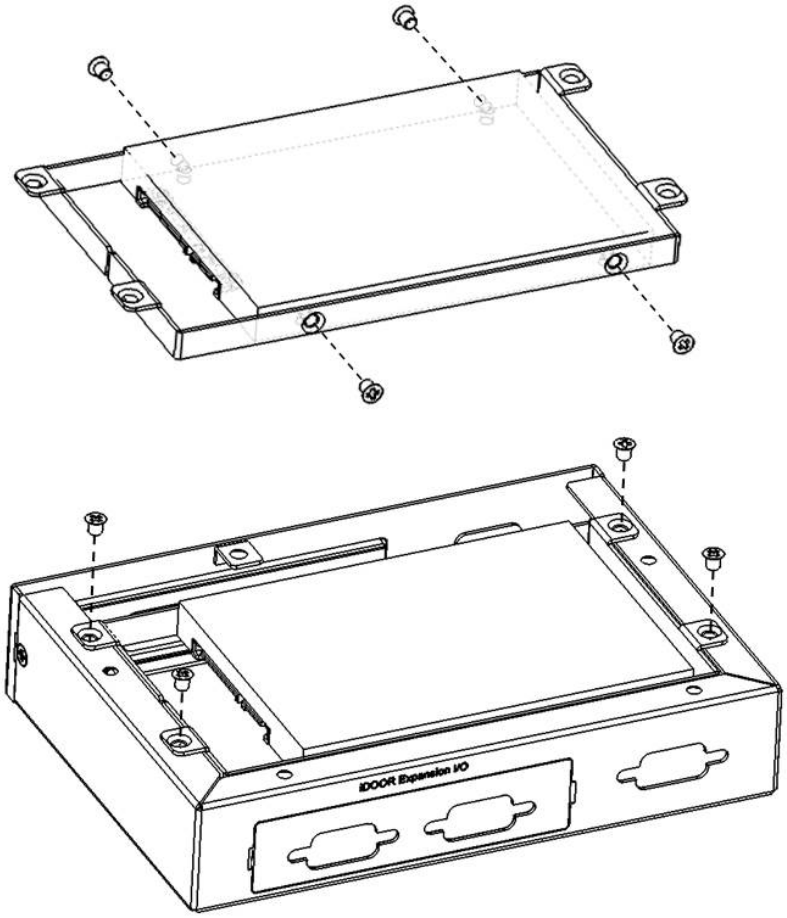




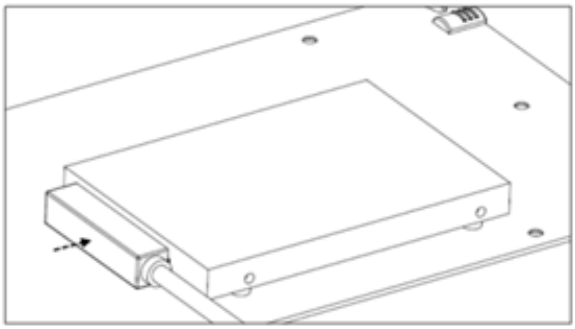
3. Remove the screws to detach the second stack from the first stack.

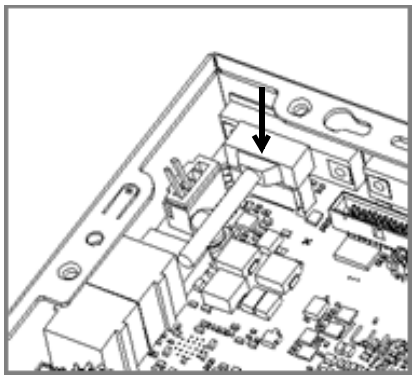


4. Remove the screws to detach the HDD bracket from the second stack. Affix the HDD to the HDD bracket. Then affix the HDD bracket back onto the second stack using the screws provided.

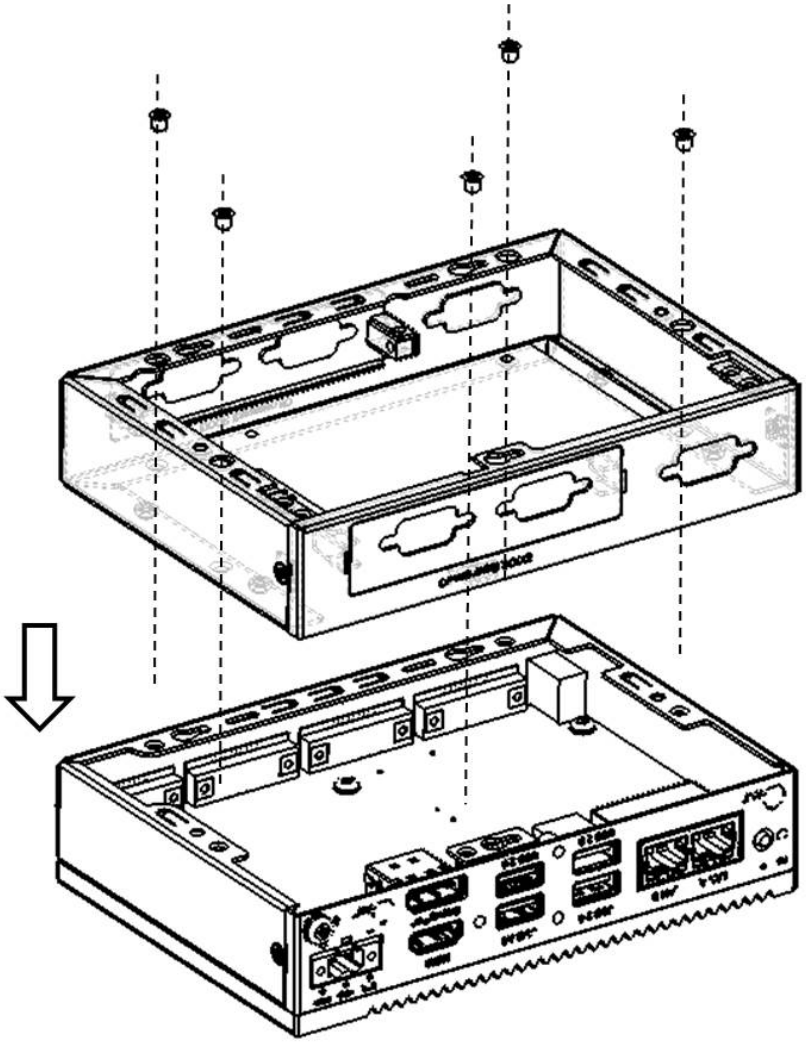


5. Connect a SATA cable to the HDD and motherboard.





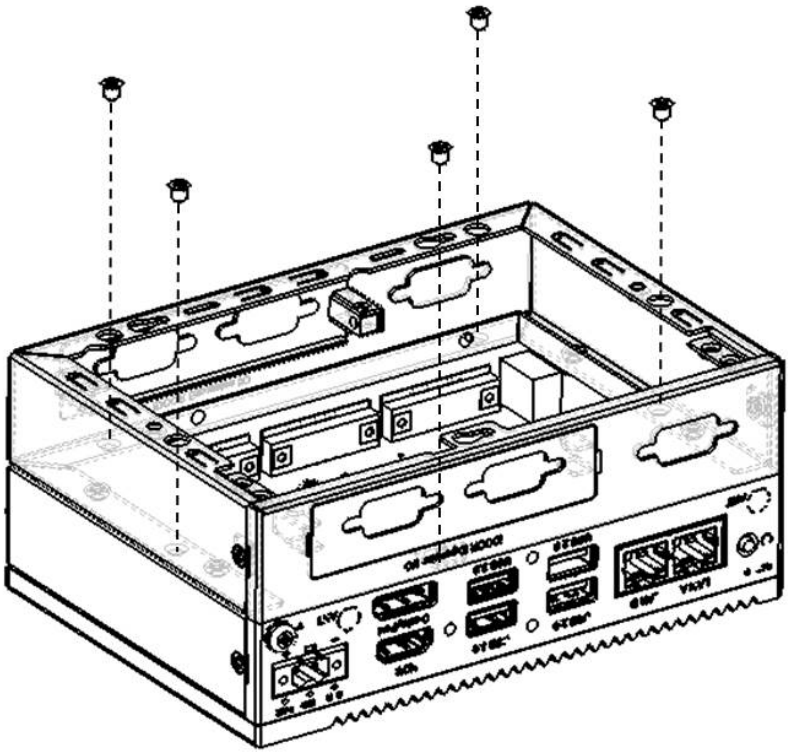
6. Affix the second stack to the first stack using the screws provided.



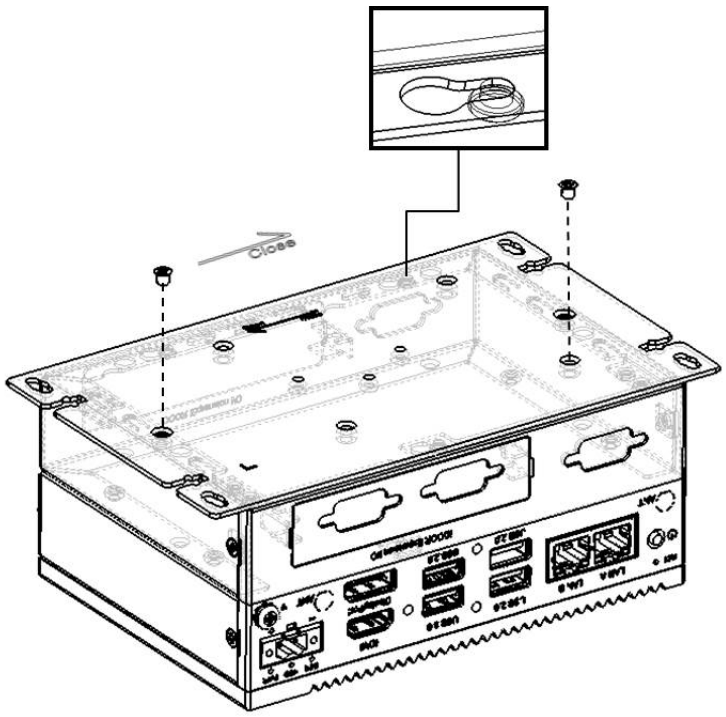
7. Replace the rear cover and affix in place using the two screws. Then replace the four rubber feet.

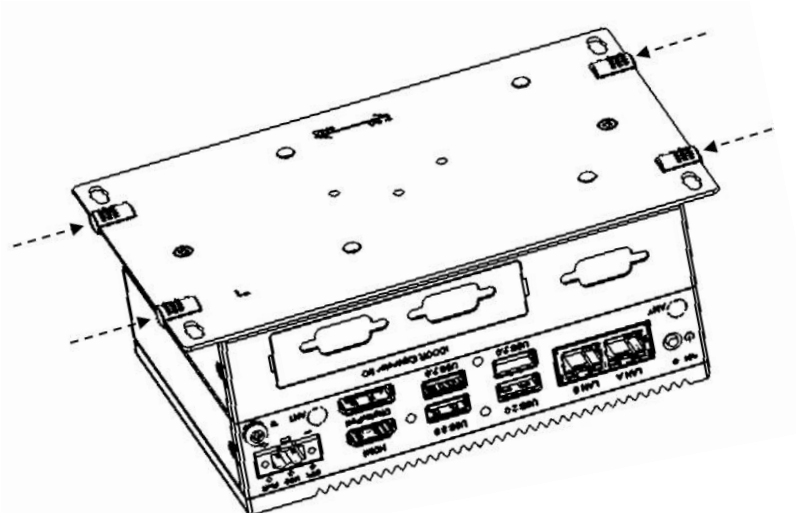
3.5 Installing a Second Stack Extension Kit (UNO-2372G-EKBE)

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 Board Connectors, Sockets, and Switches

The UNO-2372G-J1 board features several connectors, sockets, and switches. The following sections explain how to configure the UNO-2372G-J1 hardware. Figure A.1 and A.2 show the locations of the connectors, sockets, and switches.

TOP

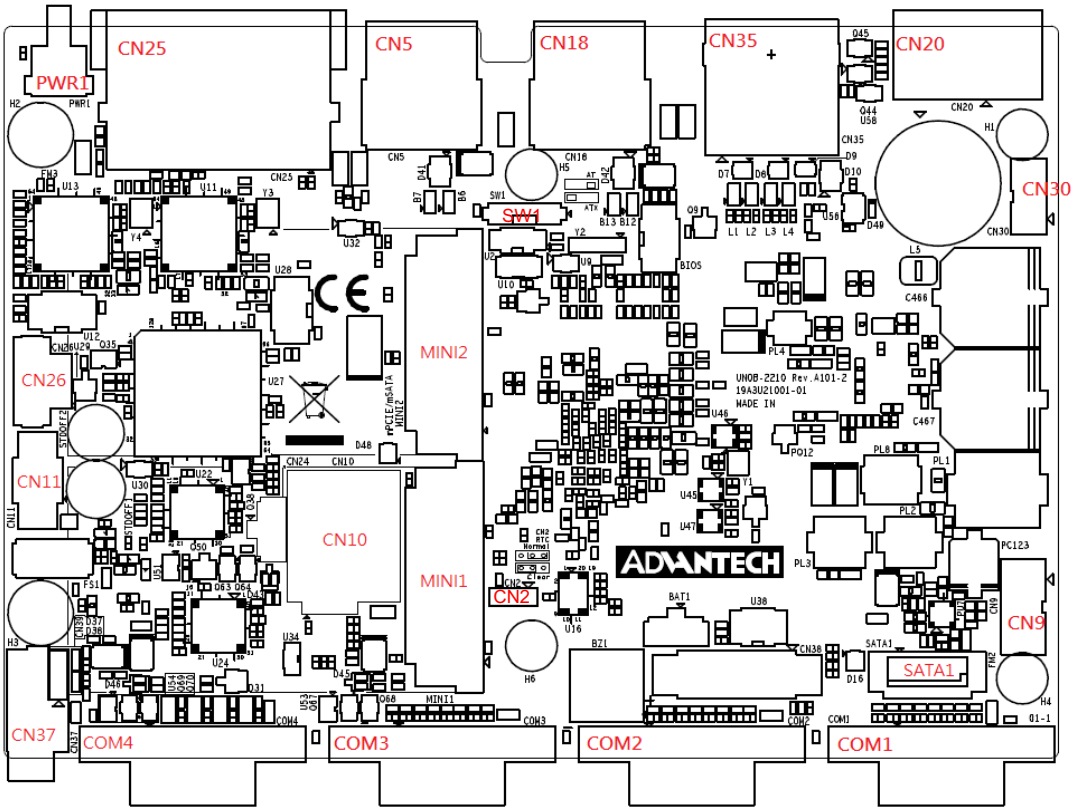


Figure A.1 Connector, Socket, and Switch Locations (Top Side)

BOT

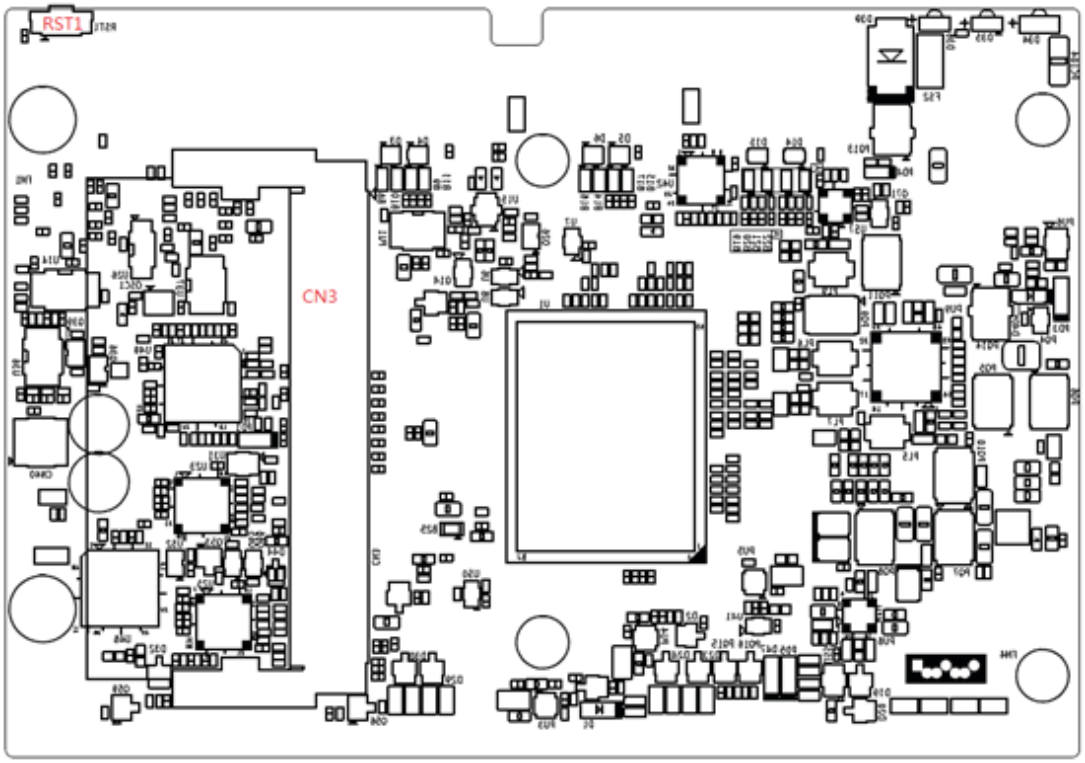


Figure A.2 Socket and Switch Locations (Bottom Side)

Table A.1: Connectors, Sockets, and Switches		
Category	**Label**	**Function**
External	CN5	USB 3.0 Standard-A Dual Stacked Connector
	CN18	USB 3.0 Standard-A Dual Stacked Connector
	CN20	Phoenix 5.08mm 2P Power Terminal Block
	CN25	10/100/1000 Base-T RJ45 1x2 Tab Down Connector
	CN35	DisplayPort and HDMI Combo Receptacle Connector
	CN37	Audio Line Out 3.5mm Phone Jack
	COM1	RS-232/422/485 COM Port 9P D-SUB Connector
	COM2	RS-232/422/485 COM Port 9P D-SUB Connector
	COM3	RS-232/422/485 COM Port 9P D-SUB Connector
	COM4	RS-232/422/485 COM Port 9P D-SUB Connector
	PWR1	Power Button
	RST1	Reset Button
Internal	CN2	Clear CMOS Jumper
	CN3	DDR3L SO-DIMM Memory Socket
	CN9	SATA Power 2.54mm 4P Wafer Box
	CN10	Micro SIM Card Connector
	CN11	GPIO 4DI/4DO 1.27mm 5x2P Box Header
	CN26	Optional Power and Reset 2.0mm 4P Wafer Box
	CN30	iDoor Power Connector
	MINI1	PCI Express Mini Card Socket (PCIe/ USB signal)
	MINI2	PCI Express Mini Card / mSATA Socket
	SATA1	SATA Signal Host Plug Connector
	SW1	AT and ATX Power Mode Switch

A.2 USB 3.0 Connector (CN5, CN18)

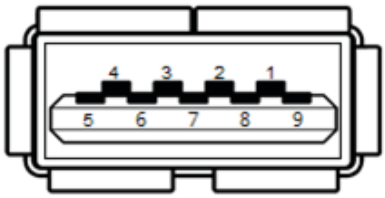


Table A.2: USB 3.0 Connector Pin Assignment				
Pin	**Signal**	**Type**	**Rail/Tolerance**	**Description**
1	VBUS	Power	5V Suspend / 5V	+5V Power Supply
2	D-	I/O USB	3.3V Suspend / 3.3V	USB 2.0, negative differential pair signal
3	D+	I/O USB	3.3V Suspend / 3.3V	USB 2.0, positive differential pair signal
4	GND			Ground for power return
5	StdA_SSRX-	I USB	AC coupled	SuperSpeed, receiver negative differential pair signal
6	StdA_SSRX+			SuperSpeed, receiver positive differential pair signal
7	GND_DRAIN			Ground for signal return
8	StdA_SSTX-	O USB	AC coupled	SuperSpeed, transmitter negative differential pair signal
9	StdA_SSTX+			SuperSpeed, transmitter positive differential pair signal

A.3 Phoenix 5.08 mm 2P Power Terminal Block (CN20)

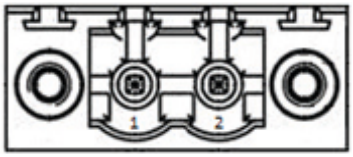


Table A.3: Phoenix Terminal Block Pin Assignment			
Pin	**Name**	**Type**	**Description**
1	Power In V+	Power	10 ~ 36 V_{DC}
2	Power In V- (GND)		Ground for power return

A.4 10/100/1000 Base-T RJ45 Connector (CN25)

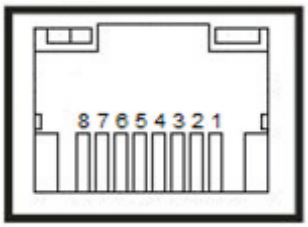


Table A.4: 10/100/1000 Base-T RJ45 Connector Pin Assignment

Pin	Name	Type	Description
1	MDI0+	Analog	Gigabit Ethernet Controller: Media Dependent Interface Differential Pairs 0,1,2,3. The MDI can operate in 1000, 100 and 10 Mbit / sec modes. Some pairs are not used in some modes, per the following: 1000BASE-T 100BASE-TX 10BASE-T MDI0+/- B1_DA+/- TX+/- TX+/- MDI1+/- B1_DB+/- RX+/- RX+/- MDI2+/- B1_DC+/- MDI3+/- B1_DD+/-
2	MDI0-	Analog	
3	MDI1+	Analog	
6	MDI1-	Analog	
4	MDI2+	Analog	
5	MDI2-	Analog	
7	MDI3+	Analog	
8	MDI3-	Analog	
Left LED			Right LED
10 Link	100 Link	1000 Link	Active
Off	Orange	Green	Green

A.5 DisplayPort Connector (CN35)

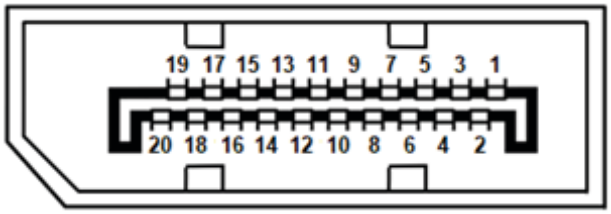


Table A.5: DisplayPort Connector Pin Assignment

Pin	Signal	Type	Rail	Description
1	ML_Lane 0 (p)	O DP	AC Coupled	'True' Signal – Main Link Lane 0
2	GND			High Speed Main Link Lane 0 Ground
3	ML_Lane 0 (n)	O DP	AC Coupled	'Complement' Signal – Main Link Lane 0
4	ML_Lane 1 (p)	O DP	AC Coupled	'True' Signal – Main Link Lane 1
5	GND			High Speed Main Link Lane 1 Ground
6	ML_Lane 1 (n)	O DP	AC Coupled	'Complement' Signal – Main Link Lane 1
7	ML_Lane 2 (p)	O DP	AC Coupled	'True' Signal – Main Link Lane 2
8	GND			High Speed Main Link Lane 2 Ground
9	ML_Lane 2 (n)	O DP	AC Coupled	'Complement' Signal – Main Link Lane 2
10	ML_Lane 3 (p)	O DP	AC Coupled	'True' Signal – Main Link Lane 3
11	GND			High Speed Main Link Lane 3 Ground
12	ML_Lane 3 (n)	O DP	AC Coupled	'Complement' Signal – Main Link Lane 3
13	CAD	I	3.3V	Cable Adaptor Detect (CAD)
14	N.C.			Not Connected
15	AUX CH (p)	I DP	AC Coupled	'True' Signal – Auxiliary channel
16	GND			High Speed Main Link Lane AUX Ground
17	AUX CH (n)	I DP	AC Coupled	'Complement' Signal – Auxiliary channel
18	Hot Plug Detect	I DP	3.3V	Hot Plug Detect
19	Return			Power Return (Ground)
20	DP_PWR	Power	3.3V	Display Power output

A.6 HDMI Connector (CN35)

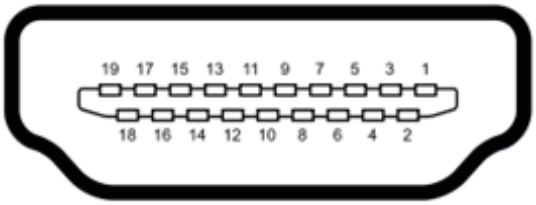


Table A.6: HDMI Connector Pin Assignment

Pin	Signal	Type	Rail	Description
1	TMDS Data 2+	O TMDS	AC Coupled	TMDS channel 2 differential pair
2	TMDS Data 2 Shield			Shield for TMDS channel 2
3	TMDS Data 2–	O TMDS	AC Coupled	TMDS channel 2 differential pair
4	TMDS Data 1+	O TMDS	AC Coupled	TMDS channel 1 differential pair
5	TMDS Data 1 Shield			Shield for TMDS channel 1
6	TMDS Data 1–	O TMDS	AC Coupled	TMDS channel 1 differential pair
7	TMDS Data 0+	O TMDS	AC Coupled	TMDS channel 0 differential pair
8	TMDS Data 0 Shield			Shield for TMDS channel 0
9	TMDS Data 0–	O TMDS	AC Coupled	TMDS channel 0 differential pair
10	TMDS Clock+	O TMDS	AC Coupled	TMDS clock differential pair
11	TMDS Clock Shield			Shield for TMDS clock differential pair
12	TMDS Clock–	O TMDS	AC Coupled	TMDS clock differential pair
13	N.C.			Not Connected
14	N.C.			Not Connected
15	SCL	O CMOS	5V	The clock line for the DDC interface
16	SDA	I/O OD CMOS	5V	The data line for the DDC interface
17	DDC/CEC Ground			Ground reference for DDC/CEC pin
18	+5 V	Power	5V	+5 volt signal provided by the system to enable the monitor to provide EDID data when the monitor circuitry is not powered
19	Hot Plug Detect	I CMOS	5V	Signal is driven by monitor to enable the system to identify the presence of a monitor

A.7 Audio Line Out Phone Jack (CN37)

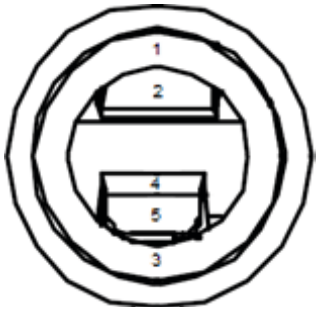


Table A.7: Audio Line Out Phone Jack Pin Assignment				
Pin	**Name**	**Type**	**Rail**	**Description**
1	GND			Ground for Line Output
2	Line Out (Left)	O	Analog	Line Output Left Channel
3	GND			Ground for Jack Detect
4	Line Out (Right)	O	Analog	Line Output Right Channel
5	Jack Detect	I	3.3V	Jack Detect for Line Output

A.8 RS-232/422/485 COM Port Connector (COM1/2/3/4)

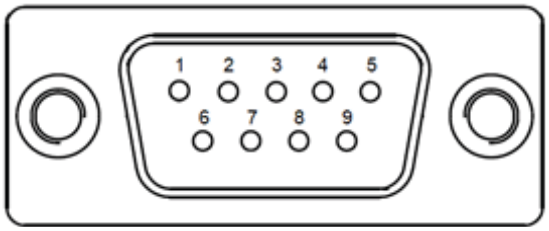


Table A.8: Audio Line Out Phone Jack Pin Assignment				
Pin	**Name**	**Type**	**Rail**	**Description**
1	DCD#	I	RS-232	Data carrier detect
2	RXD	I	RS-232	Receive data
3	TXD	O	RS-232	Transmit data
4	DTR#	O	RS-232	Data terminal ready
5	GND			Signal ground
6	DSR#	I	RS-232	Data set ready
7	RTS#	O	RS-232	Request to send
8	CTS#	I	RS-232	Clear to send
9	RI#	I	RS-232	Ring indicator

Table A.9: RS-485 COM Port Connector Pin Assignment				
Pin	**Name**	**Type**	**Rail**	**Description**
1	TX+	O	RS-422	Transmit positive differential pair signal
2	TX-	O	RS-422	Transmit negative differential pair signal
3	RX+	I	RS-422	Receiver positive differential pair signal
4	RX-	I	RS-422	Receive negative differential pair signal
5	GND			Signal ground

Table A.10: RS-485 COM Port Connector Pin Assignment				
Pin	**Name**	**Type**	**Rail**	**Description**
1	Data-	I/O	RS-485	Transmit/ Receiver negative differential pair signal
2	Data+	I/O	RS-485	Transmit/ Receiver positive differential pair signal
5	GND			Signal ground

A.9 Clear CMOS Jumper (CN2)

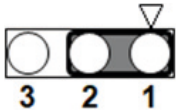
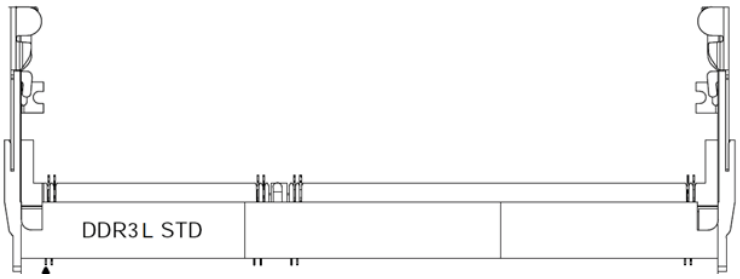


Table A.11: Clear CMOS Jumper		
Pin	**Function**	**Setting**
1-2	Normal Mode	Default
2-3	Clear CMOS	

A.10 DDR3L SO-DIMM Memory Socket (CN3)



A.11 SATA Power Wafer Box (CN9)

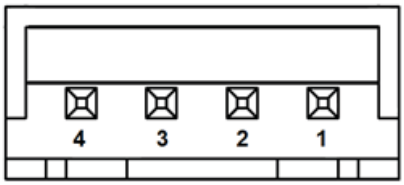


Table A.12: RS-485 COM Port Connector Pin Assignment				
Pin	**Name**	**Type**	**Rail**	**Description**
1	SATA Power	Power	5V	SATA Power Output
2	GND			Power Ground
3	GND			Power Ground
4	N.C.			Not Connected

A.12 Micro SIM Card Connector (CN10)

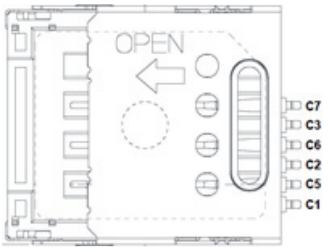


Table A.13: Micro SIM Card Connector Pin Assignment				
Pin	**Name**	**Type**	**Rail**	**Description**
C1	UIM_PWR	O CMOS	3.3V	Power source for the UIM. Compliant to the ISO/IEC 7816-3 specification (VCC).
C2	UIM_RESET	O CMOS	3.3V	UIM reset signal. Compliant to the ISO/IEC 7816-3 specification (RST).
C3	UIM_CLK	O CMOS	3.3V	UIM clock signal. Compliant to the ISO/IEC 7816-3 specification (CLK).
C5	GND			Return current path.
C6	UIM_VPP	O CMOS	3.3V	Variable supply voltage (e.g., programming voltage) for class A devices. Refer to ISO/IEC 7816-3 for operating class definitions. This signal is reserved for future use for devices of other classes. Compliant to the ISO/IEC 7816-3 specification (VPP).
C7	UIM_DATA	I/O CMOS	3.3V	UIM data signal. Compliant to the ISO/IEC 7816-3 specification (I/O).

A.13 GPIO 4DI/4DO Box Header (CN11)

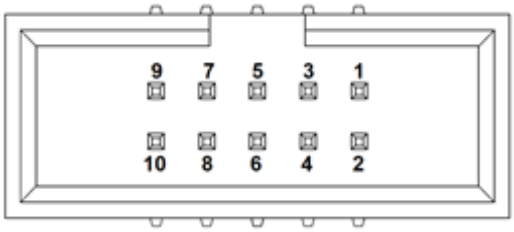


Table A.14: GPIO 4DI/4DO Box Header Pin Assignment				
Pin	**Name**	**Type**	**Rail**	**Description**
1	5V	Power	5V	DI/DO power output
2	DO0	O OD	3.3V / 5V	Digital Output 0
3	DI0	I	3.3V / 5V	Digital Input 0
4	DO1	O OD	3.3V / 5V	Digital Output 1
5	DI1	I	3.3V / 5V	Digital Input 1
6	DO2	O OD	3.3V / 5V	Digital Output 2
7	DI2	I	3.3V / 5V	Digital Input 2
8	DO3	O OD	3.3V / 5V	Digital Output 3
9	DI3	I	3.3V / 5V	Digital Input 3
10	GND			DI/DO power ground

Note: Internal pull-up 4.7KΩ to 5V for all DI/DO.

A.14 Optional Power and Reset Wafer Box (CN26)

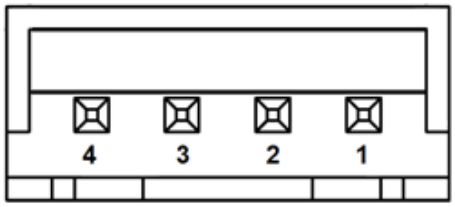


Table A.15: Optional Power and Reset Wafer Box Pin Assignment				
Pin	**Name**	**Type**	**Rail**	**Description**
1	PWRSW#	I	3.3VSB	Power Switch Input, Supplied by VSTBY, used to indicate the status of power switch
2	GND			Power Switch Ground
3	GND			Reset Button Ground
4	RSTBTN#	I	1.8V/3.3V	Reset Button, Reset button input signal

A.15 iDoor Power Connector (CN30)

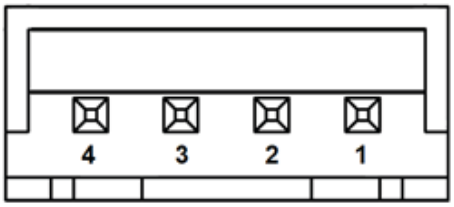


Table A.16: iDoor Power Connector Pin Assignment				
Pin	**Name**	**Type**	**Rail**	**Description**
1	VIN	Power	10 ~ 36V	iDoor PoE Power Output
2	VIN	Power	10 ~ 36V	iDoor PoE Power Output
3	GND			Power Ground
4	GND			Power Ground

A.16 PCI Express Mini Card Socket (MINI1)

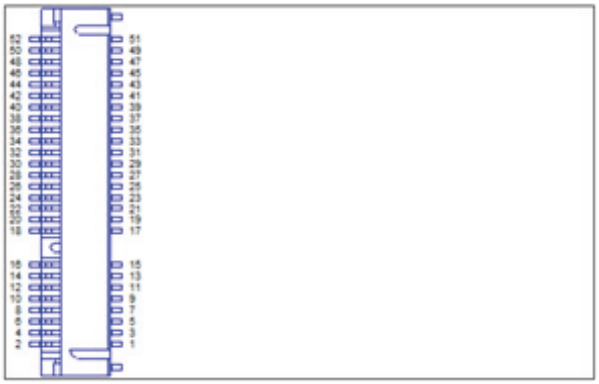


Table A.17: PCI Express Mini Card Socket Pin Assignment				
Pin	**Name**	**Type**	**Rail**	**Description**
			Side even	
52	+3.3Vaux	Power		3.3 V source
50	GND	Power		Return current path
48	+1.5V	Power		1.5V source
46	N.C.			Not Connected
44	N.C.			Not Connected
42	N.C.			Not Connected
40	GND			Return current path
38	USB_D+	I/O USB	3.3V Suspend	USB serial data interface compliant to the USB 2.0 specification
36	USB_D-	I/O USB	3.3V Suspend	
34	GND	Power		Return current path
32	N.C.			Not Connected
30	N.C.			Not Connected
28	+1.5V	Power		1.5V source
26	GND			Return current path

Table A.17: PCI Express Mini Card Socket Pin Assignment				
24	+3.3Vaux	Power		3.3 V source
22	PERST#	I CMOS	3.3V Suspend	Functional reset to the card
20	W_DISABLE#	I CMOS	3.3V	A pull-up resistor to +3.3Vaux
18	GND			Return current path
			Mechanical key	
16	UIM_VPP	O CMOS	3.3V	Connect to Micro SIM CN10 C6
14	UIM_RESET	O CMOS	3.3V	Connect to Micro SIM CN10 C2
12	UIM_CLK	O CMOS	3.3V	Connect to Micro SIM CN10 C3
10	UIM_DATA	I/O CMOS	3.3V	Connect to Micro SIM CN10 C7
8	UIM_PWR	O CMOS	3.3V	Connect to Micro SIM CN10 C1
6	+1.5V	Power		
4	GND			Return current path
2	+3.3Vaux	Power		3.3 V source
			Side odd	
51	Reserved			Reserved
49	Reserved			Reserved
47	Reserved			Reserved
45	Reserved			Reserved
43	PWRSEL	I CMOS		A pull-up resistor to +3.3Vaux
41	+3.3Vaux	Power		3.3 V source
39	+3.3Vaux	Power		3.3 V source
37	GND			Return current path
35	GND			Return current path
33	PETp0	I PCIe	AC coupled	PCI Express x1 data interface: one differential transmit pair.
31	PETn0	I PCIe	AC coupled	
29	GND			Return current path
27	GND			Return current path
25	PERp0	O PCIE	AC coupled	PCI Express x1 data interface: one differential receive pair.
23	PERn0	O PCIE	AC coupled	
21	N.C.			Not connected
19	N.C.			Not connected
17	N.C.			Not connected
			Mechanical key	
15	GND	Power		Return current path
13	REFCLK+	I PCIe	PCIe	PCI Express differential reference clock (100 MHz)
11	REFCLK-	I PCIe	PCIe	
9	GND			Return current path
7	CLKREQ#	O OD CMOS	3.3V Suspend	Reference clock request signal
5	N.C.			Not connected
3	N.C.			Not connected
1	WAKE#	O OD CMOS	3.3V Suspend	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.

A.17 PCI Express Mini Card / mSATA Socket (MINI2)

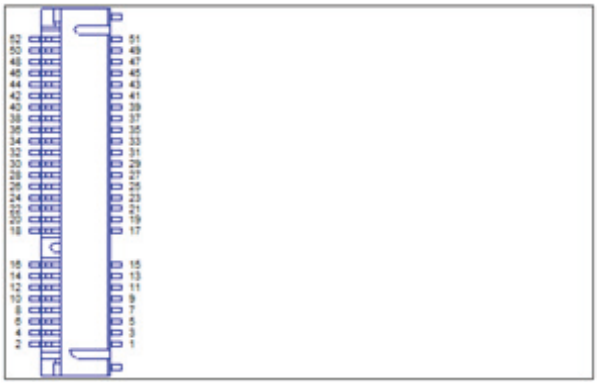


Table A.18: PCI Express Mini Card Socket Pin Assignment

Pin	Name	Type	Rail	Description
			Side even	
52	+3.3Vaux	Power		3.3 V source
50	GND			Return current path
48	+1.5V	Power		1.5V source
46	N.C.			Not connected
44	N.C.			Not connected
42	N.C.			Not connected
40	GND			Return current path
38	USB_D+	I/O USB	3.3V Suspend	USB serial data interface compliant to the USB 2.0 specification.
36	USB_D-	I/O USB	3.3V Suspend	
34	GND			Return current path
32	N.C.			Not Connected
30	N.C.			Not Connected
28	+1.5V	Power		1.5V source
26	GND			Return current path
24	+3.3Vaux	Power		3.3 V source
22	PERST#	I CMOS	3.3V Suspend	Functional reset to the card
20	W_DISABLE#	I CMOS	3.3V	A pull-up resistor to +3.3Vaux
18	GND			Return current path
			Mechanical key	
16	N.C.			Not connected
14	N.C.			Not connected
12	N.C.			Not connected
10	N.C.			Not connected
8	N.C.			Not connected
6	+1.5V	Power		
4	GND			Return current path
2	+3.3Vaux	Power		3.3 V source
			Side odd	
51	PCIESATASEL	I CMOS		PCIe mini card & mSATA selection
49	N.C.			Not connected
47	N.C.			Not connected

Table A.18: PCI Express Mini Card Socket Pin Assignment				
45	N.C.			Not connected
43	N.C.			Not connected
41	+3.3Vaux	Power		3.3 V source
39	+3.3Vaux	Power		3.3 V source
37	GND			Return current path
35	GND			Return current path
33	PETp0	I PCIe	AC coupled	PCI Express x1 data interface: one differential transmit pair.
31	PETn0	I PCIe	AC coupled	
29	GND			Return current path
27	GND			Return current path
25	PERp0	O PCIE	AC coupled	PCI Express x1 data interface: one differential receive pair.
23	PERn0	O PCIE	AC coupled	
21	PCIE_DET#	I CMOS		PCIe mini card detection
19	N.C.			Not connected
17	N.C.			Not connected
			Mechanical key	
15	GND			Return current path
13	REFCLK+	I PCIe	PCIe	PCI Express differential reference clock (100 MHz)
11	REFCLK-	I PCIe	PCIe	
9	GND			Return current path
7	CLKREQ#	O OD CMOS	3.3V Suspend	Reference clock request signal
5	N.C.			Not connected
3	N.C.			Not connected
1	WAKE#	O OD CMOS	3.3V Suspend	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.

Table A.19: mSATA Card Socket Pin Assignment				
Pin	**Name**	**Type**	**Rail**	**Description**
			Side even	
52	+3.3	Power		3.3 V source
50	GND			Return current path
48	+1.5V	Power		1.5V source
46	N.C.			Not connected
44	N.C.			Not connected
42	N.C.			Not connected
40	GND			Return current path
38	N.C.			Not connected
36	N.C.			Not connected
34	GND			Return current path
32	N.C.			Not connected
30	N.C.			Not connected
28	+1.5V	Power		1.5V source
26	GND			Return current path
24	+3.3V	Power		3.3 V source

Table A.19: mSATA Card Socket Pin Assignment				
22	N.C.			Not connected
20	N.C.			Not connected
18	GND			Return current path
			Mechanical key	
16	N.C.			Not connected
14	N.C.			Not connected
12	N.C.			Not connected
10	N.C.			Not connected
8	N.C.			Not connected
6	+1.5V	Power		
4	GND			Return current path
2	+3.3V	Power		3.3 V source
			Side odd	
51	SATA_DET#	I CMOS		mSATA card detection
49	N.C.			Not connected
47	N.C.			Not connected
45	N.C.			Not connected
43	N.C.			Not connected
41	+3.3V	Power		3.3 V source
39	+3.3V	Power		3.3 V source
37	GND			Return current path
35	GND			Return current path
33	TX+	O SATA	AC coupled	Transmitter differential pair positive signal
31	TX-	O SATA	AC coupled	Transmitter differential pair negative signal
29	GND			Return current path
27	GND			Return current path
25	RX-	I SATA	AC coupled	Receiver differential pair negative signal
23	RX+	I SATA	AC coupled	Receiver differential pair positive signal
21	GND			Return current path
19	N.C.			Not connected
17	N.C.			Not connected
			Mechanical key	
15	GND			Return current path
13	N.C.			Not connected
11	N.C.			Not connected
9	GND			Return current path
7	N.C.			Not connected
5	N.C.			Not connected
3	N.C.			Not connected
1	N.C.			Not connected

A.18 SATA Signal Host Plug Connector (SATA1)

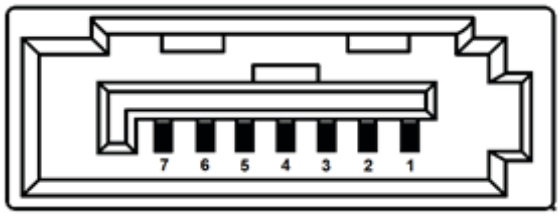
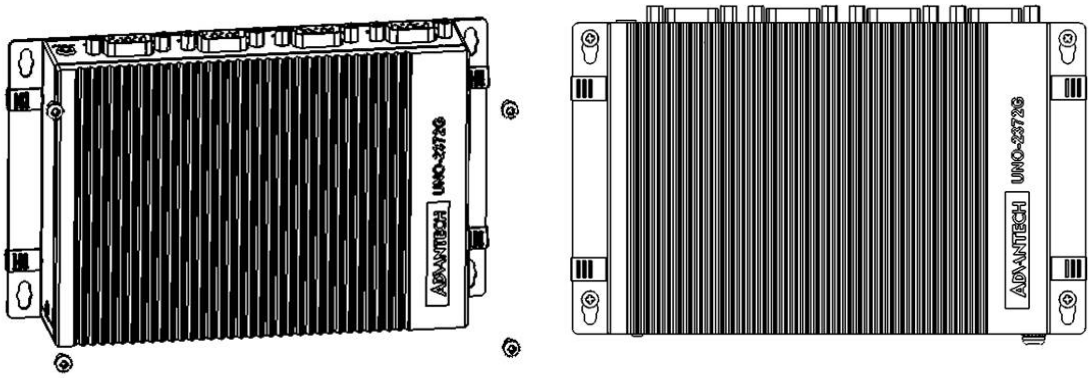


Table A.20: SATA Signal Host Plug Connector Pin Assignment				
Pin	**Name**	**Type**	**Rail**	**Description**
1	GND			Ground
2	TX+	O SATA	AC coupled	Transmitter differential pair positive signal
3	TX-	O SATA	AC coupled	Transmitter differential pair negative signal
4	GND			Ground
5	RX-	I SATA	AC coupled	Receiver differential pair negative signal
6	RX+	I SATA	AC coupled	Receiver differential pair positive signal
7	GND			Ground

A.19 AT and ATX Power Mode Switch (SW1)

Table A.21: AT and ATX Power Mode Switch		
Pin	**Function**	**Setting**
ON	AT Mode	
OFF	ATX Mode	Default

A.20 Screw Type and Quantity for Mount Module



A.21 AMI BIOS Setup

This section introduces how to set BIOS configuration data.

A.21.1 Introduction

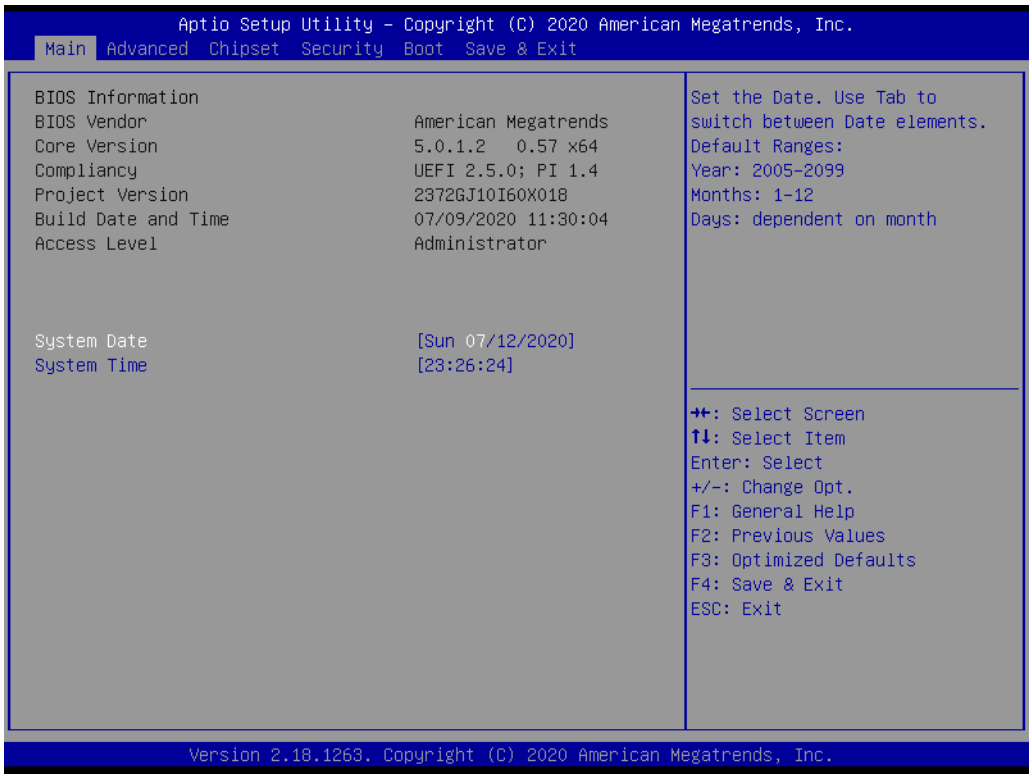
With the AMI BIOS Setup program, you can modify BIOS settings and control the specific features on your computer. The Setup program uses a number of menus for making changes and turning special features on or off. This chapter describes the basic navigation of the UNO-2372G-J1 setup screens.

A.21.2 Entering Setup

Press the “Del” or “Esc.” key during the Power On Self Test (POST) process to enter the BIOS setup screen, otherwise the system will continue the POST process.

A.21.2.1 Main Setup

When you first enter the BIOS Setup Utility, you will enter the Main setup screen. You can always return to the Main setup screen by selecting the Main tab. There are two Main Setup options. They are described in this section. The Main BIOS Setup screen is shown below.



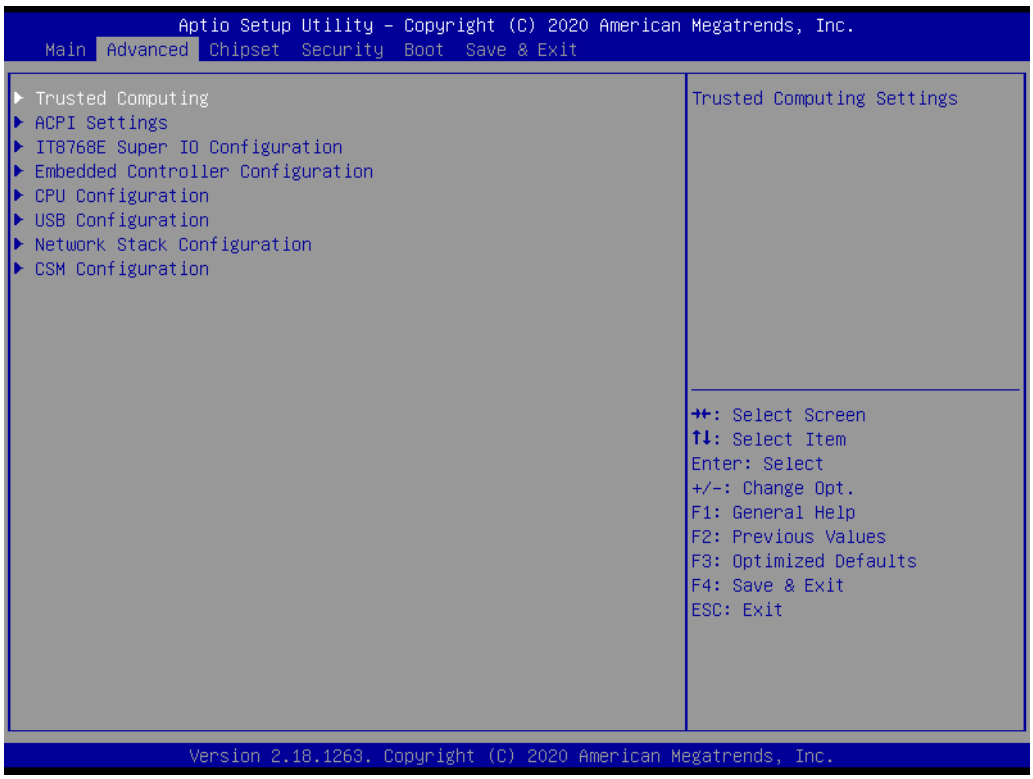
The Main BIOS setup screen has two main frames. The left frame displays all the options that can be configured. Grayed-out options cannot be configured; options in blue can. The right frame displays the key legend.

Above the key legend is an area reserved for a text message. When an option is selected in the left frame, it is highlighted in white. Often a text message will accompany it.

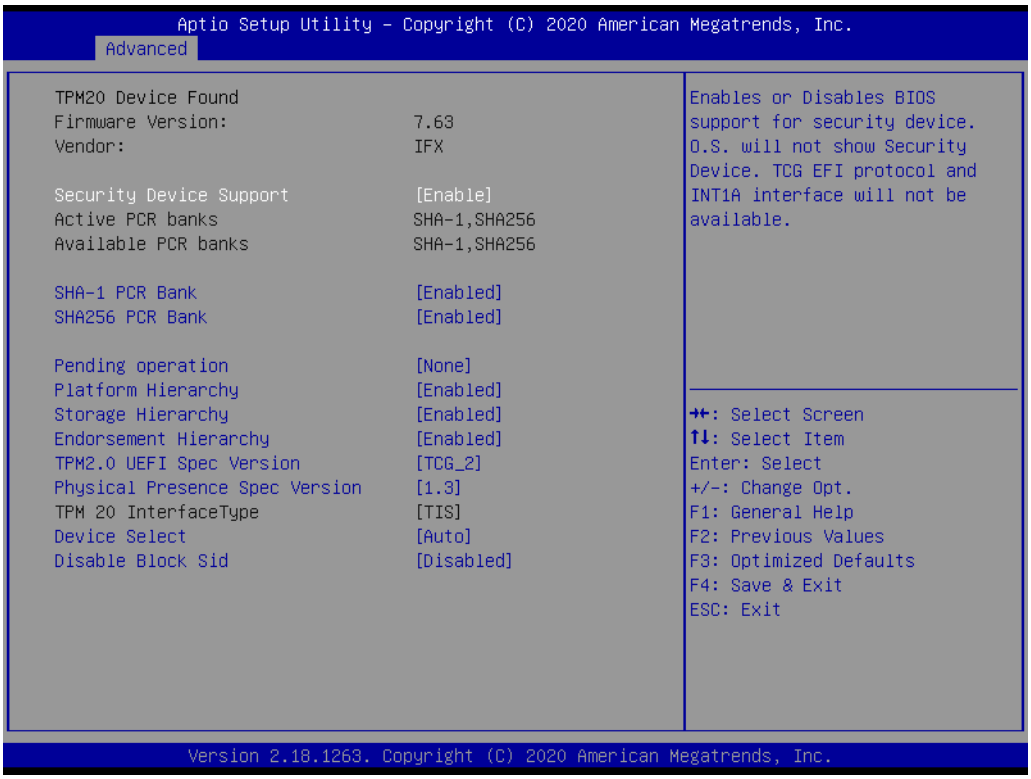
- **System Time / System Date**
  Use this option to change the system time and date. Highlight System Time or System Date using the <Arrow> keys. Enter new values through the keyboard.
  Press the <Tab> key or the <Arrow> keys to move between fields. The date must be entered in MM/DD/YY format. The time must be entered in HH:MM:SS format.

A.21.2.2 Advanced BIOS Features Setup

Select the Advanced tab from the UNO-2372G-J1 setup screen to enter the Advanced BIOS Setup screen. You can select any of the items in the left frame of the screen, such as “Trusted Computing” and hit <enter> to go to the sub menu for that item. You can display an Advanced BIOS Setup option by highlighting it using the <Arrow> keys. All Advanced BIOS Setup options are described in this section. The Advanced BIOS Setup screen is shown below. The sub menus are described on the following pages.



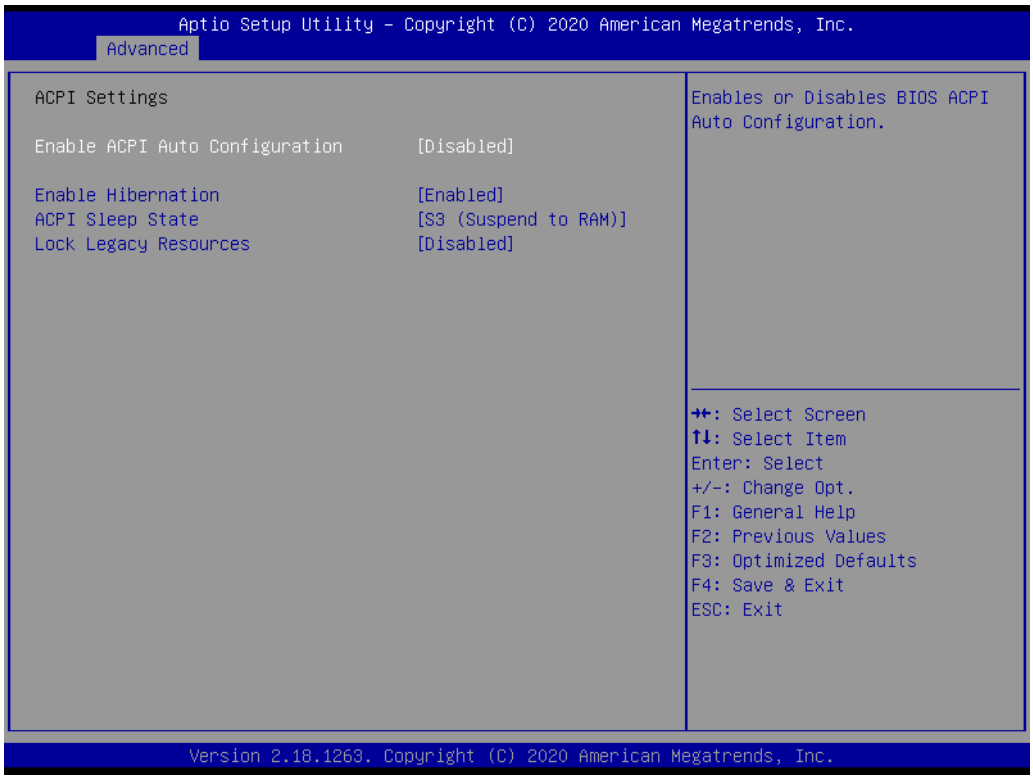
Trusted Computing



All security related options can be set from this page.

- **Security Device Support**
  This item allows users to enable or disable “Security Device Support”.

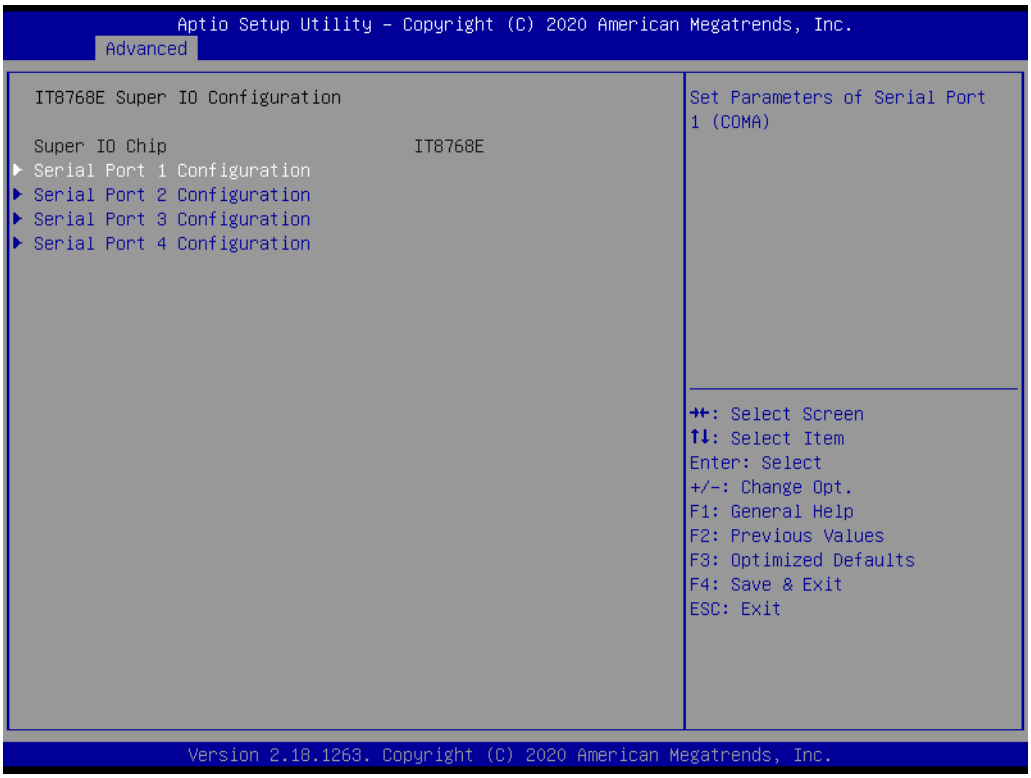
ACPI Settings



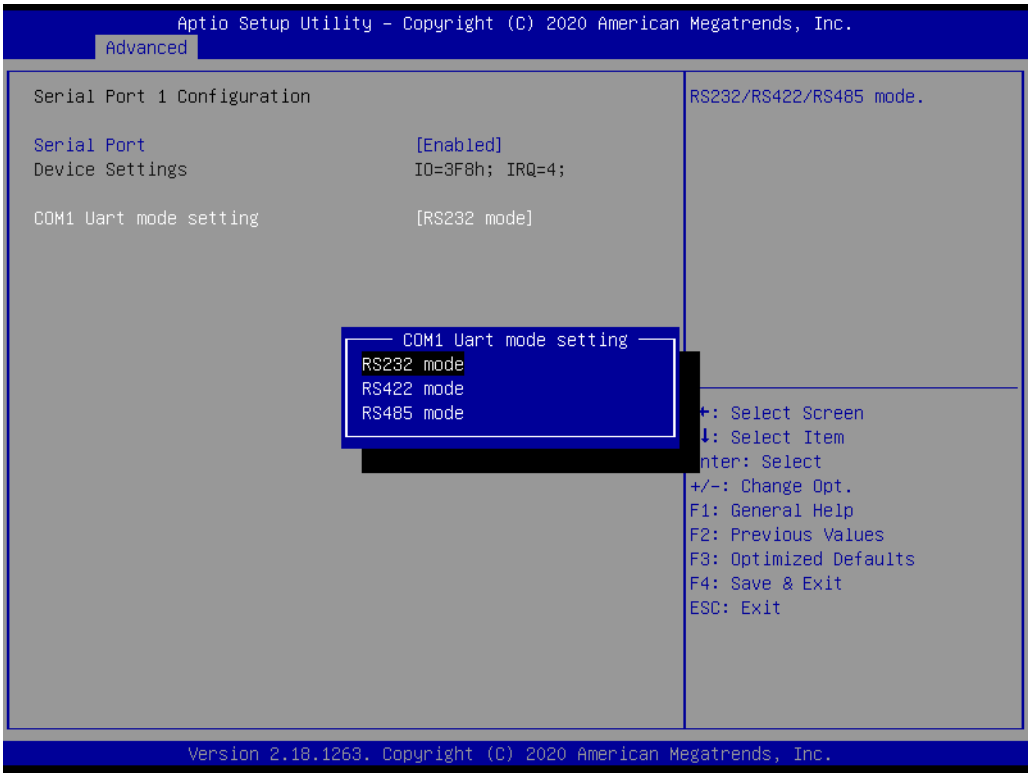
- **Enable ACPI Auto Configuration**
  This item allows users to enable or disable “ACPI Auto Configuration”.
- **Enable Hibernation**
  This item allows users to enable or disable “Hibernation”.
- **ACPI Sleep State**
  This item allows users to set ACPI mode S3 (Suspend to RAM) or to Disable “ACPI Sleep State”.
- **Lock Legacy Resource**
  This item allows users to enable or disable “Lock Legacy Resource”.

IT8768E Super IO Configuration

UNO-2372G-J1 supports 4 x RS-232/RS-422/RS-485.

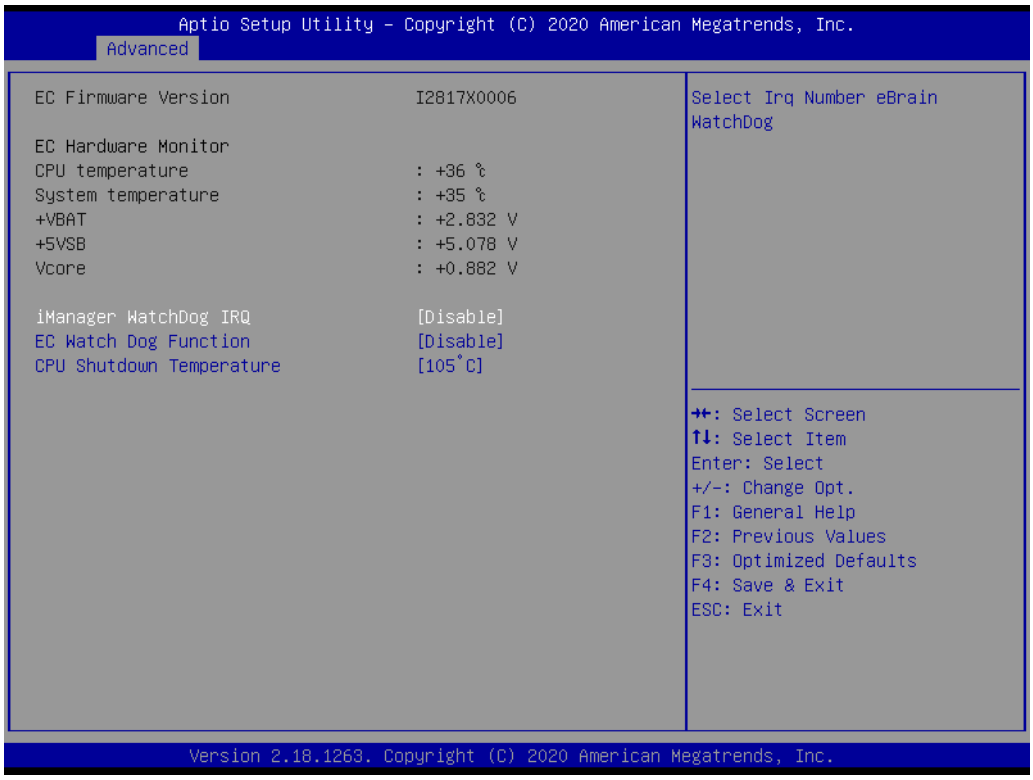


Each Serial Port can be enabled and disabled independently. The communication mode can be set to RS-232, RS-422 or RS-485 on demand.

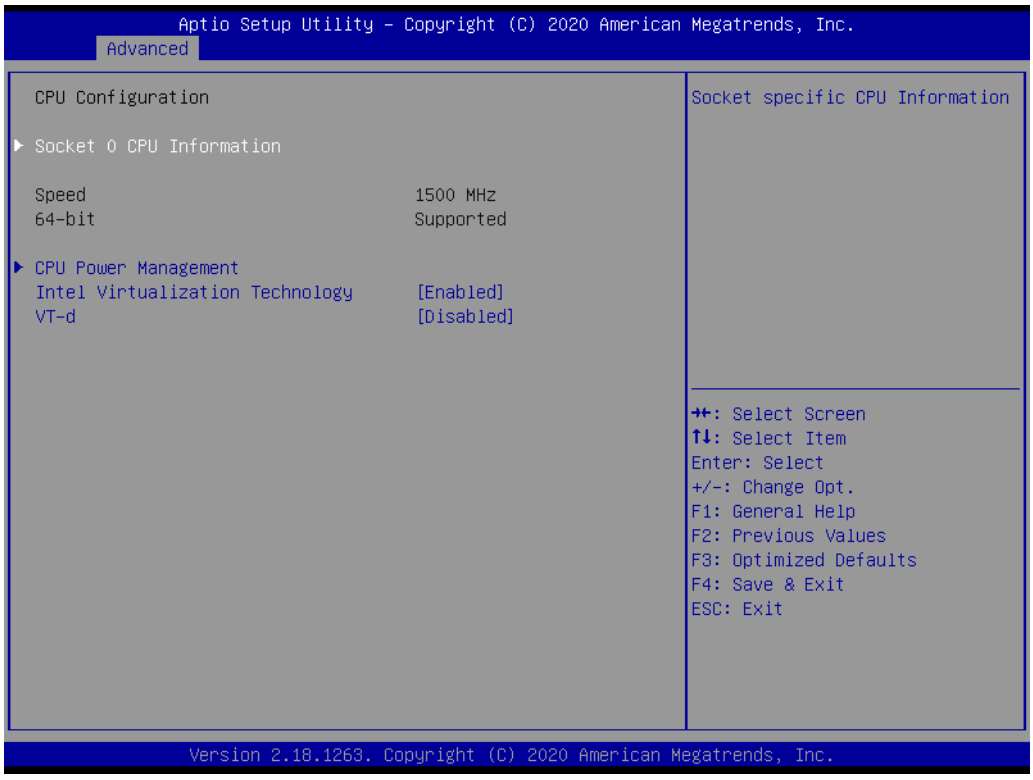


EC Configuration

This page shows EC firmware version and HW monitoring data.



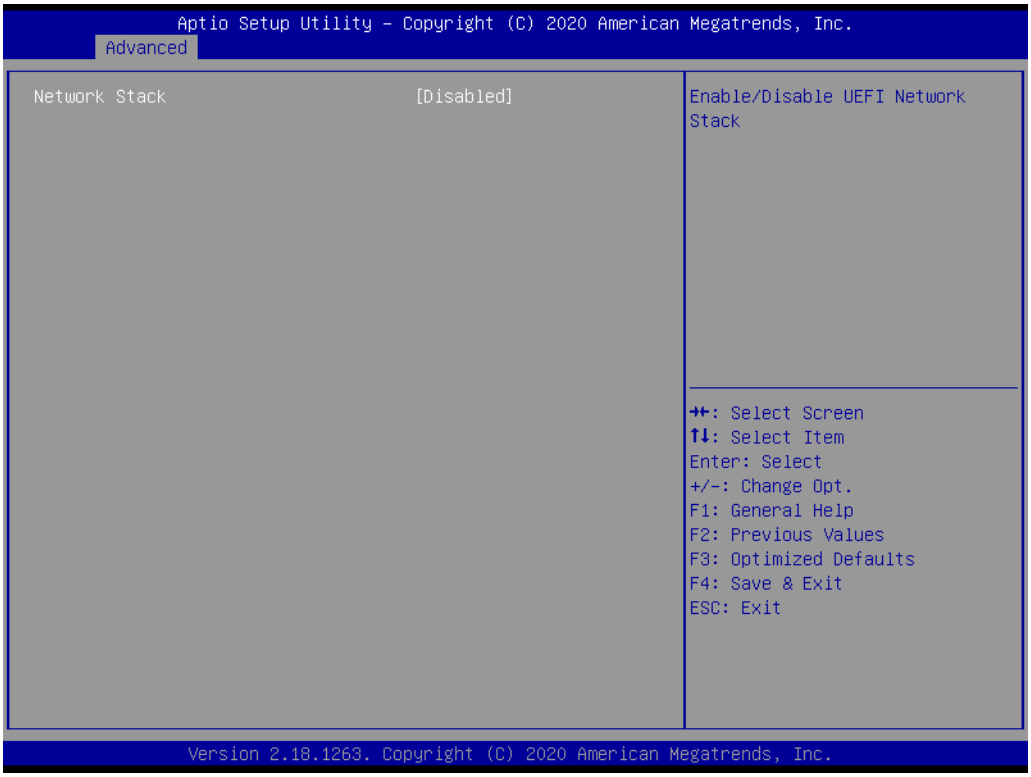
CPU Configuration



- **Socket 0 CPU Information**
  This item allows users to check complete CPU specifications.

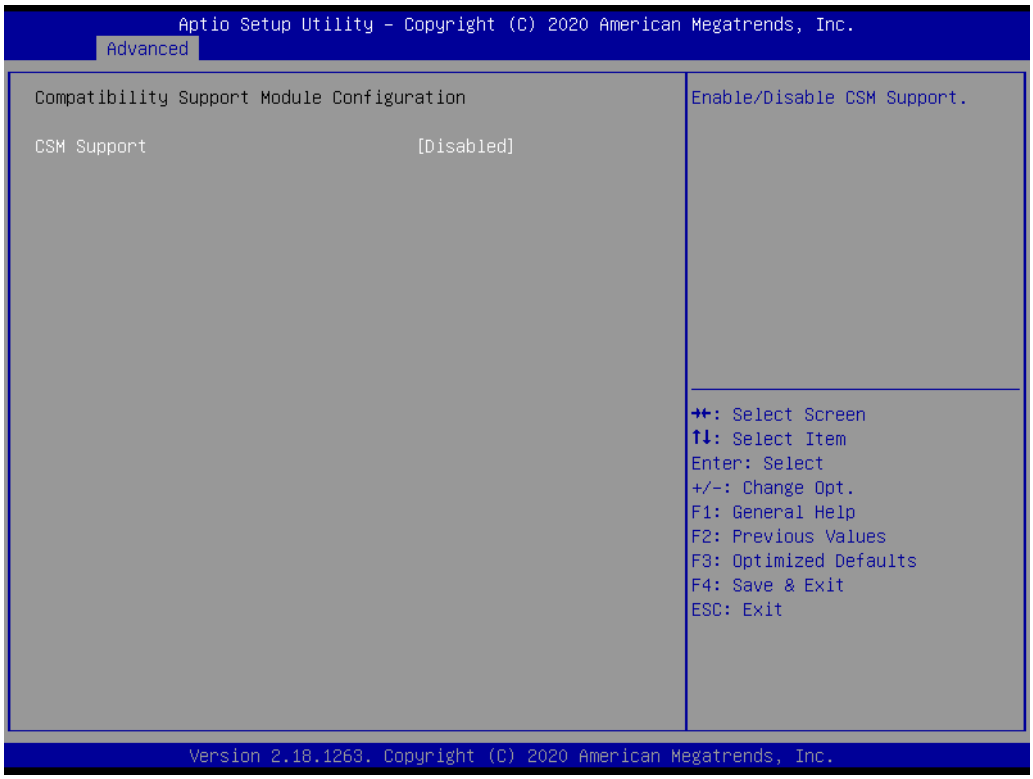
- **CPU Power Management**
  This item allows users to set CPU Power management including EIST, Turbo mode, and C-States.

Network Stack



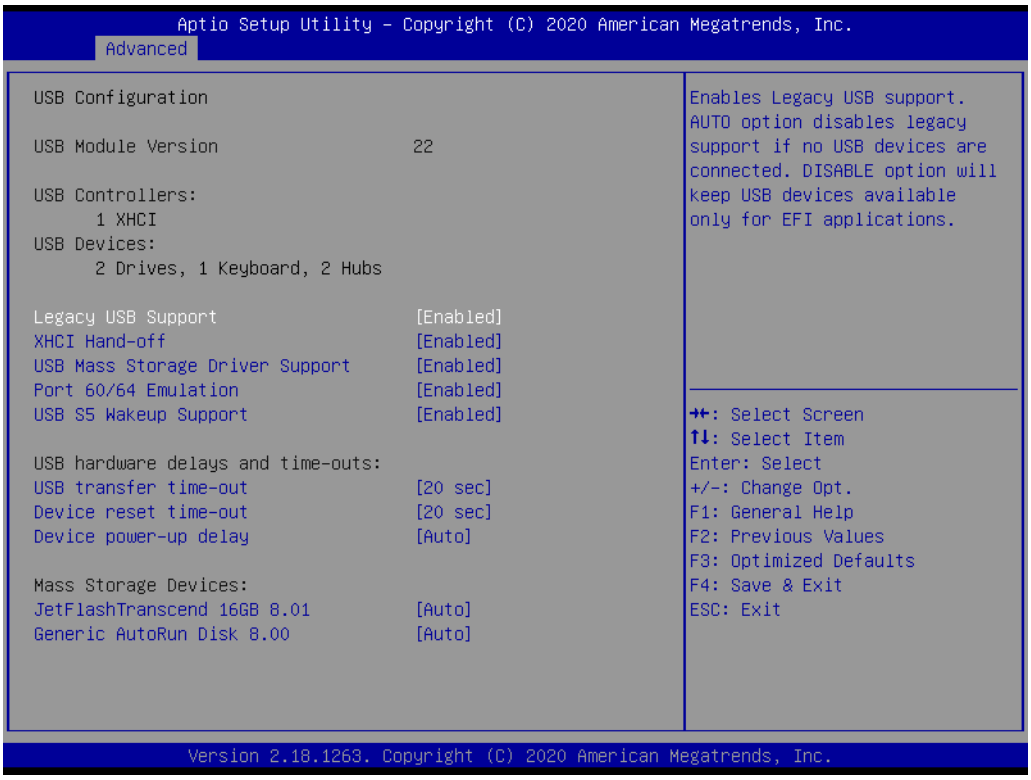
- **Network Stack**
  This item allows users to enable or disable for “Network Stack” (For using UEFI PXE function, please enable this item).

CSM Configuration



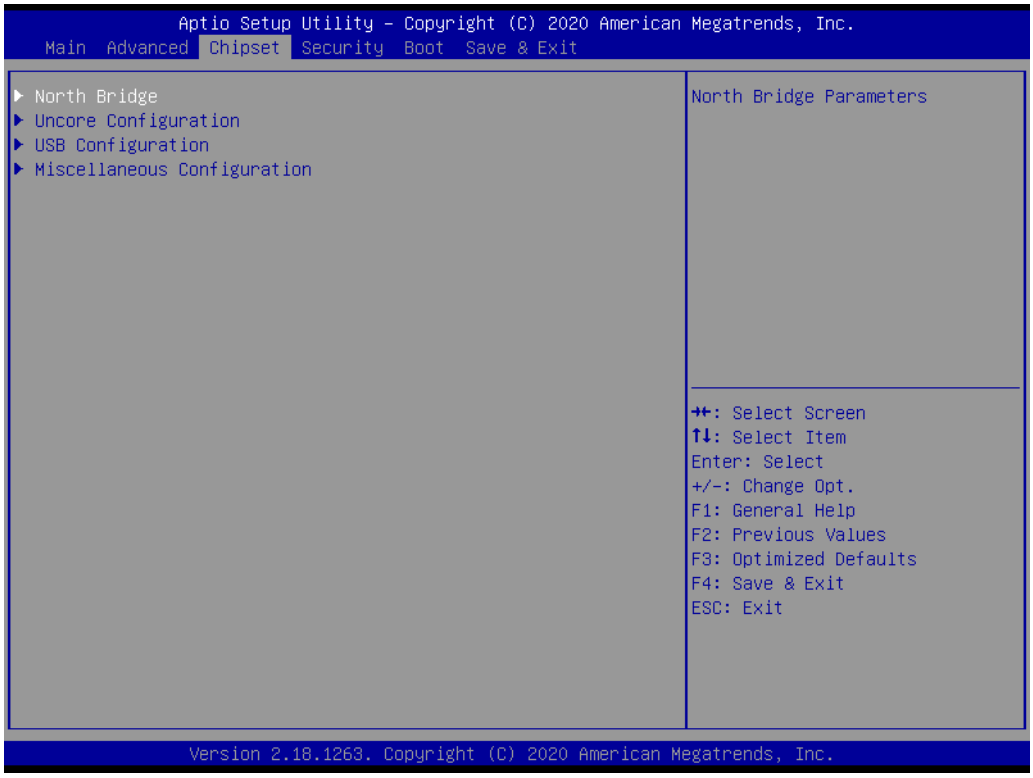
- **CSM Support**
  This item allows users to enable or disable for “CSM Support”. It is set to “disabled” by default for UNO-2372G-J1(Apollo-Lake platform).

USB Configuration



- **Legacy USB Support**
  This item allows users to enable or disable or set Auto for “Legacy USB Support”.
- **XHCI Hand-Off**
  This item allows users to enable or disable “XHCI Hand-off”.
- **USB Mass Storage Driver Support**
  This item allows users to enable or disable “USB Mass Storage Driver Support”.
- **Port 60/64 Emulation**
  This item allows users to enable or disable “Port 60/64 Emulation“.
- **USB S5 Wakeup Support**
  This item allows users to enable or disable “USB S5 Wakeup Support”.
- **USB Transfer Time-out**
  This item allows users to set different time modes for “USB transfer Time-out”.
- **Device Reset Time-out**
  This item allows users to set different time modes for “Device reset Time-out”.
- **Device Power-Up Delay**
  This item allows users to set different time mode for “Device power-up delay”.
- **Mass Storage Devices**
  This item allows users to set the external storage device as external flash disk, storage for operating system or other kinds of device.

A.21.2.3 Chipset



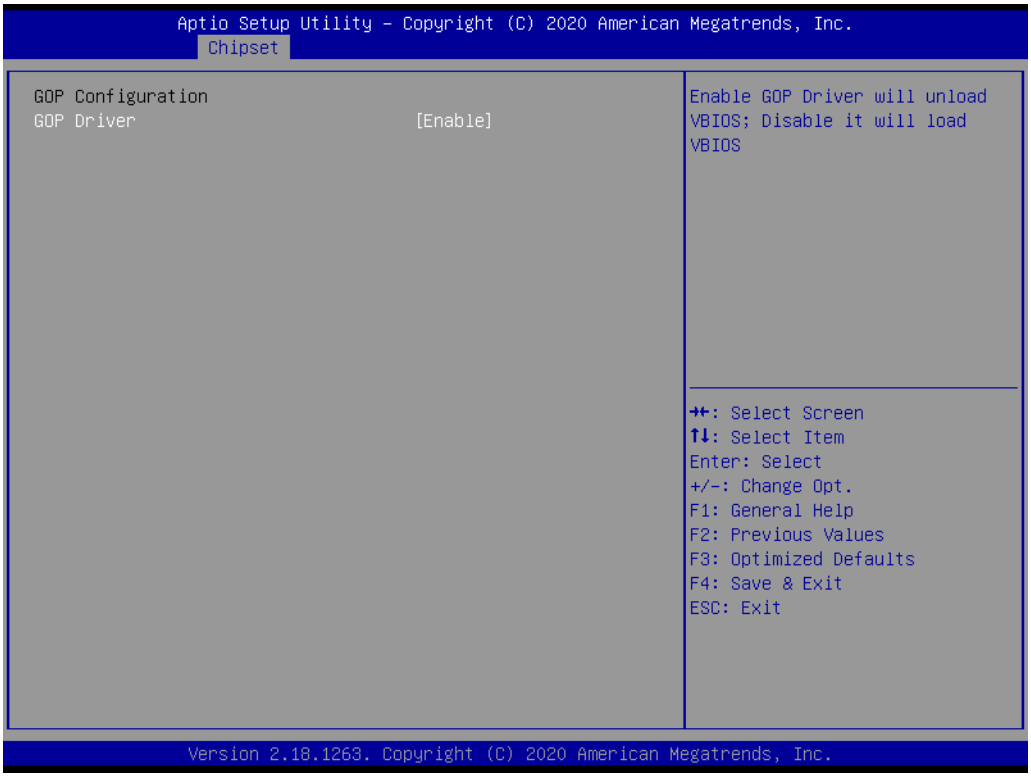
All chipset related items is shown at this page.

North Bridge

This page shows memory information and provides options as below.

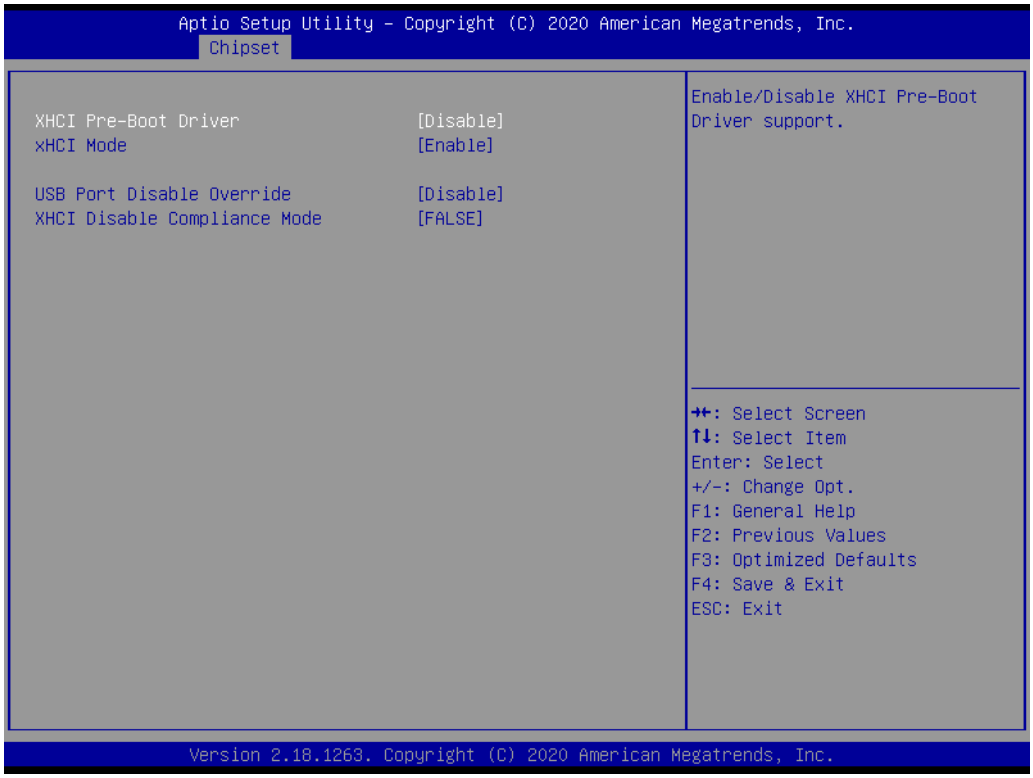
- **Max TOLUD**
  This item allows users to set maximum value of TOLUD (Top of Low Usable Dram).
- **Above 4GB MMIO BIOS assignment**
  This item allows users to enable or disable “above 4GB” setting.

USB Configuration

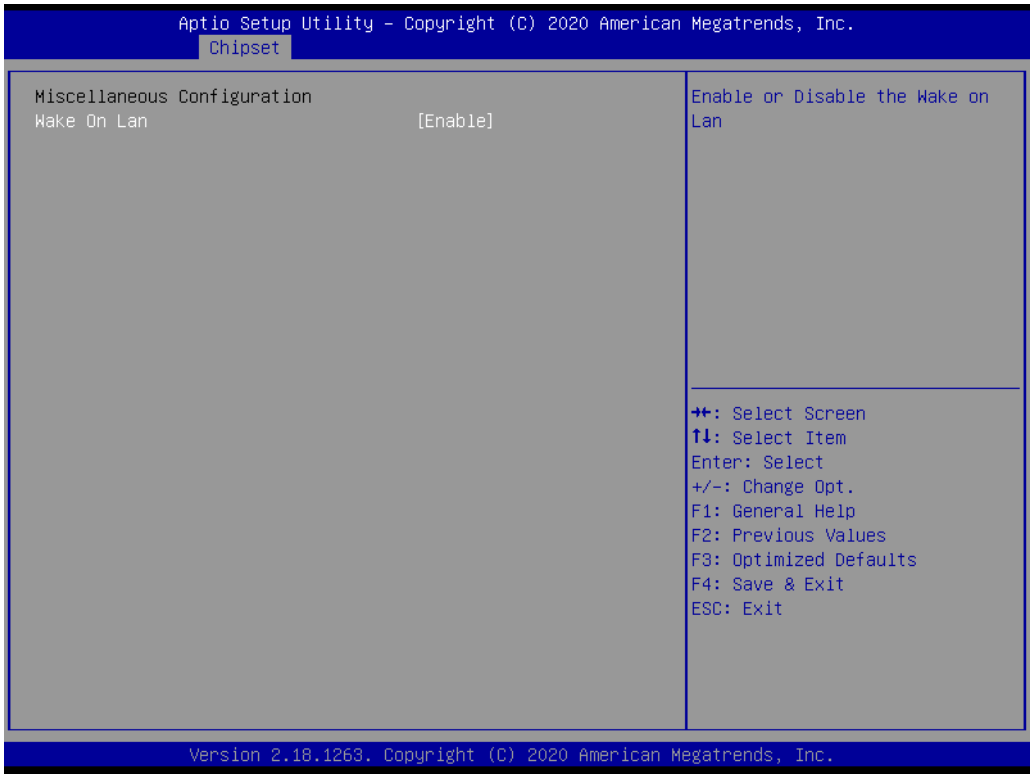


- **GOP driver**
  This item allows users to disable or enable “GOP driver”.

The Graphics Output Protocol (GOP) is enabled by UEFI driver to support graphic console output in the pre-OS phase. The ultimate goal of GOP is to replace legacy VGA BIOS and eliminate VGA HW functionality.

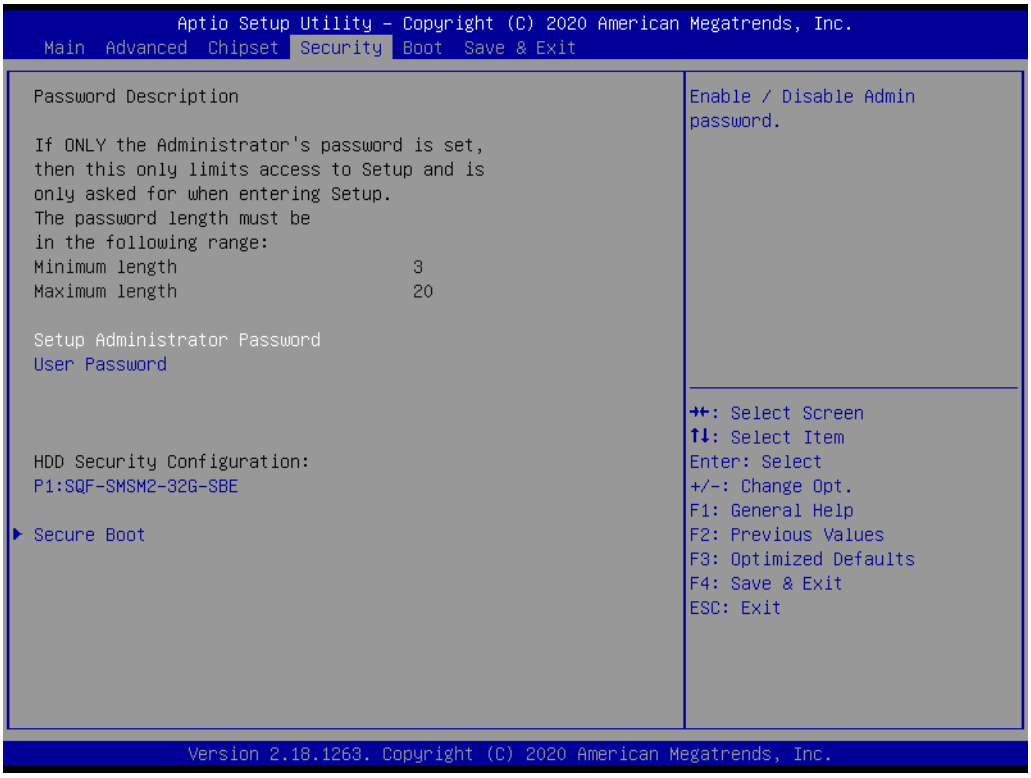


- **XHCI Mode**
  This item allows users to enable or disable “XHCI Mode”.

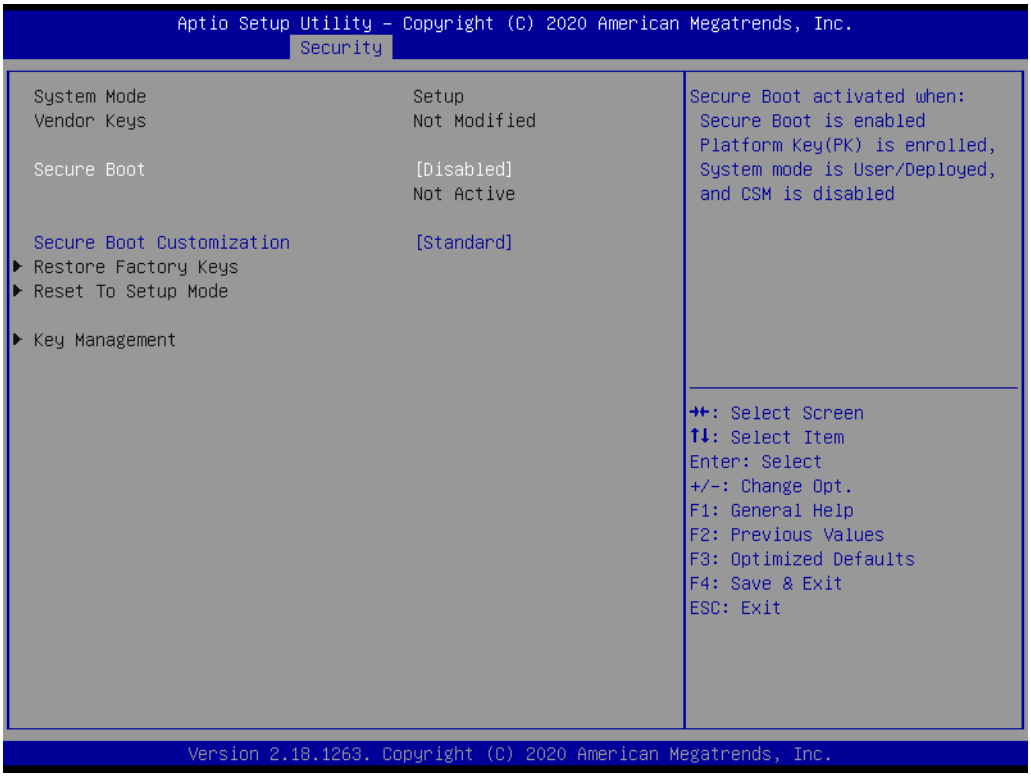


- **Wake on LAN**
  This item has been set to support “Wake on LAN” function by default.

A.21.2.4 Security

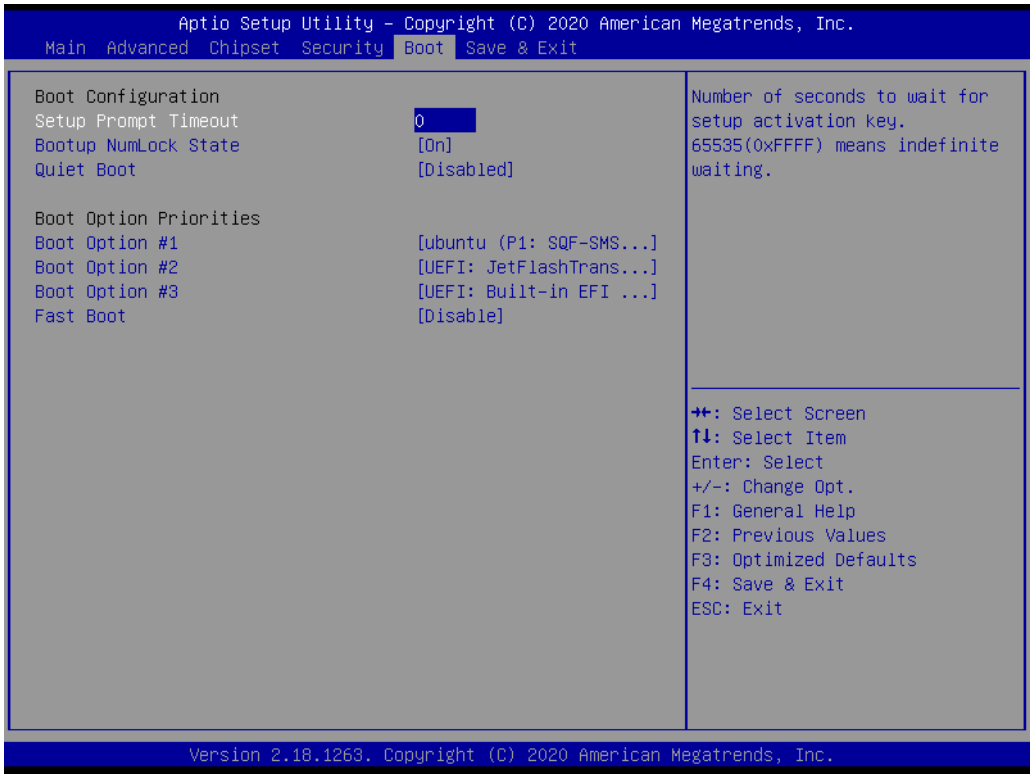


- **Set Admin Password**
  This item allows users to set “Administrator Password” if desired. The password will be required when entering BIOS setting page if it is set.
- **User Password**
  This item allows users to set “User Password” if desired. The password will be required when system boots if it is set.



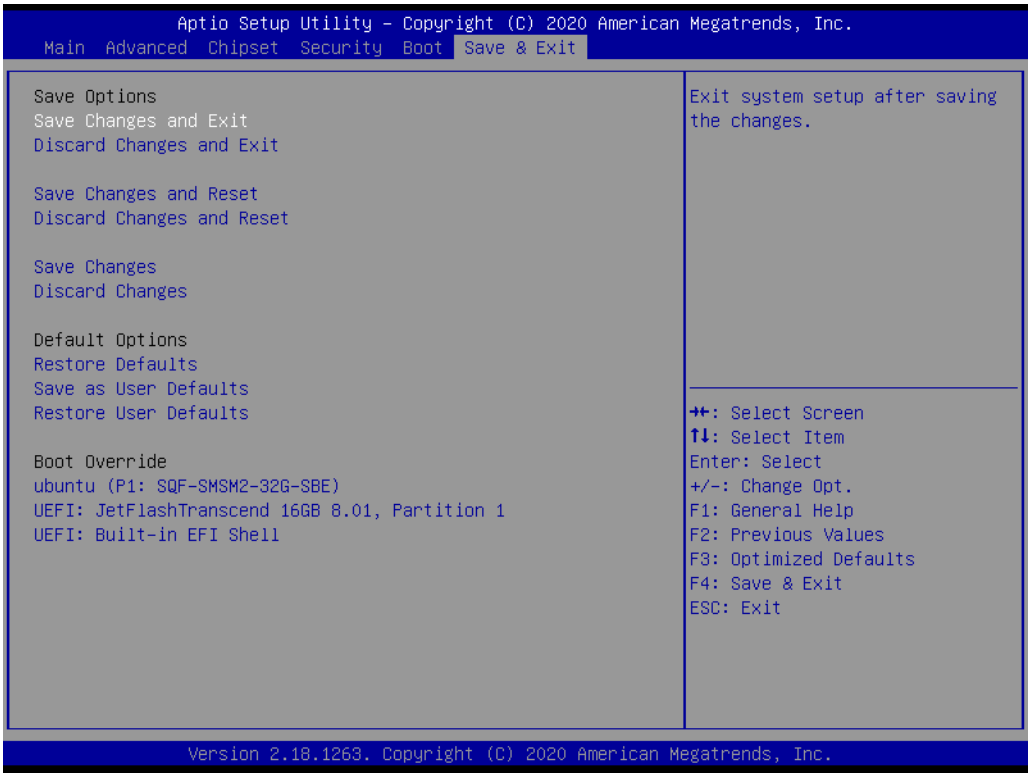
- **Secure Boot**
  This item allows users to enable or disable for "Secure Boot".

A.21.2.5 Boot



- **Setup Prompt Timeout**
  Number of Seconds to wait for showing period of Power On Self Test (POST). Extend the period to record BIOS version at POST screen if desired.
- **Bootup NumLock State**
  This item allows users to set “Bootup NumLock State” either On or Off.
- **Quiet Boot**
  This item allows users to disable or enable “Quiet Boot”. No model information will be shown if this option is enabled.
- **Boot Option Priorities**
  These items will display based on how many devices are attached.
  It allows users to set boot priority on demand.

A.21.2.6 Save & Exit



- **Save Changes and Exit**
  This item allows users to save changes and exit.
- **Discard Changes and Exit**
  This item allows users to discard changes and exit.
- **Save Changes and Reset**
  This item allows users to save changes and reset.
- **Discard Changes and Reset**
  This item allows users to discard changes and reset.
- **Save Changes**
  This item allows users to save changes.
- **Discard Changes**
  This item allows users to discard changes.
- **Restore Defaults**
  This item allows users to restore factory defaults.
- **Save as User Defaults**
  This item allows users to save as user defaults.
- **Restore User Defaults**
  This item allows users to restore user defaults.

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