SB-244-111XXX Series

SB-244-11115G4
SB-244-11135G7

Industrial Fanless PC w/ Intel®
Tiger Lake Core™ i5/i3 Processors

User's Manual

Version 1.0

2024.04

Revision History

Version	Date	Description
1.0	2024.04	Initial release

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Copyright Notice

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Declaration of Conformity

CE

The CE symbol on your product indicates that it is in compliance with the directives of the Union European (EU). A Certificate of Compliance is available by contacting Technical Support.

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 kind of cable is available from ARBOR. Please contact your local supplier for ordering information.

Warning

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

FCC Class A

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

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

NOTE:

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 which case the user will be required to correct the interference at his own expense.

RoHS

ARBOR Technology Corp. certifies that all components in its products are in compliance and conform to the European Union's Restriction of Use of Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directive 2002/95/EC.

The above mentioned directive was published on 2/13/2003. The main purpose of the directive is to prohibit the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), and polybrominated diphenyl ethers (PBDE) in electrical and electronic products. Member states of the EU are to enforce by 7/1/2006.

ARBOR Technology Corp. hereby states that the listed products do not contain unintentional additions of lead, mercury, hex chrome, PBB or PBDB that exceed a maximum concentration value of 0.1% by weight or for cadmium exceed 0.01% by weight, per homogenous material. Homogenous material is defined as a substance or mixture of substances with uniform composition (such as solders, resins, plating, etc.). Lead-free solder is used for all terminations (Sn(96-96.5%), Ag(3.0-3.5%) and Cu(0.5%)).

SVHC / REACH

To minimize the environmental impact and take more responsibility to the earth we live, Arbor hereby confirms all products comply with the restriction of SVHC (Substances of Very High Concern) in (EC) 1907/2006 (REACH --Registration, Evaluation, Authorization, and Restriction of Chemicals) regulated by the European Union.

All substances listed in SVHC < 0.1 % by weight (1000 ppm)

Important Safety Instructions

Read these safety instructions carefully

1. Read all cautions and warnings on the equipment.
2. Place this equipment on a reliable surface when installing. Dropping it or letting it fall may cause damage
3. Make sure the correct voltage is connected to the equipment.
4. For pluggable equipment, the socket outlet should be near the equipment and should be easily accessible.
5. Keep this equipment away from humidity.
6. The openings on the enclosure are for air convection and protect the equipment from overheating. DO NOT COVER THE OPENINGS.
7. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
8. Never pour any liquid into opening. This may cause fire or electrical shock.
9. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
10. If one of the following situations arises, get the equipment checked by service personnel:
    a. The power cord or plug is damaged.
    b. Liquid has penetrated into the equipment.
    c. The equipment has been exposed to moisture.
    d. The equipment does not work well, or you cannot get it to work according to the user's manual.
    e. The equipment has been dropped or damaged.
    f. The equipment has obvious signs of breakage.
11. Keep this User's Manual for later reference.

Warning

The Box PC and its components contain very delicately Integrated Circuits (IC). To protect the Box PC and its components against damage caused by static electricity, you should always follow the precautions below when handling it:

1. Disconnect your Box PC from the power source when you want to work on the inside.
2. Use a grounded wrist strap when handling computer components.
3. Place components on a grounded antistatic pad or on the bag that came with the Box PC, whenever components are separated from the system.

Lithium Battery Replacement

Incorrect replacement of the lithium battery may lead to a risk of explosion.

The lithium battery must be replaced with an identical battery or a battery type recommended by the manufacturer.

Do not throw lithium batteries into the trash can. It must be disposed of in accordance with local regulations concerning special waste.

Technical Support

If you have any technical difficulties, please consult the user's manual first at: https://www.arbor-technology.com

Please do not hesitate to call or e-mail our customer service when you still cannot find out the answer.

https://www.arbor-technology.com

E-mail: info@arbor.com.tw

Warranty

This product is warranted to be in good working order for a period of two year from the date of purchase. Should this product fail to be in good working order at any time during this period, we will, at our option, replace or repair it at no additional charge except as set forth in the following terms. This warranty does not apply to products damaged by misuse, modifications, accident or disaster.

Vendor assumes no liability for any damages, lost profits, lost savings or any other incidental or consequential damage resulting from the use, misuse of, or inability to use this product. Vendor will not be liable for any claim made by any other related party.

Vendors disclaim all other warranties, either expressed or implied, including but not limited to implied warranties of merchantability and fitness for a particular purpose, with respect to the hardware, the accompanying product's manual(s) and written materials, and any accompanying hardware. This limited warranty gives you specific legal rights.

Return authorization must be obtained from the vendor before returned merchandise will be accepted. Authorization can be obtained by calling or faxing the vendor and requesting a Return Merchandise Authorization (RMA) number. Returned goods should always be accompanied by a clear problem description.

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Chapter 1

Introduction

1.1. Features

- Intel® Tiger Lake Core™ i5/i3 Processors
- 1 x SDRAM DDR4 3200 MHz (max. 32G)
- Support 4 Gigabit LAN
- Support DP/HDMI 3 independent video outputs

1.2. About this Manual

This manual is meant for the experienced users and integrators with hardware knowledge of personal computers. If you are not sure about the description in this manual, consult your vendor before further handling.

We recommend that you keep one copy of this manual for the quick reference for any necessary Maintenance in the future. Thank you for choosing ARBOR products.

1.3. Specifications

System	
CPU	Intel® Tiger Lake i3-1115G4 3.0G (6M Cache, up to 4.0GHz) (SB-244-11115G4) Intel® Tiger Lake i5-1135G7 2.4G (8M Cache, up to 4.2GHz) (SB-244-11135G7)
Memory	1 x SDRAM DDR4 3200 MHz (max. 32G) 4GB WT DDR4 SO-DIMM pre-installed*(CTOS)
Graphics	Intel® Iris® Xe graphics, up to 96 graphics execution units (EU)
LAN Chipset	1 x Intel i219LM GbE PHY 3 x Intel i210AT GbE controllers (Colay i211GbE)
Watchdog Timer	Programmable 255 levels timer interval, from 1~255 sec/min
Storage Audio	
Device	1 x SATA 3.1 (2.5" HD) 1 x M.2 2242 (SATA3.0) 128GB M.2 WT SSD pre-installed*(CTOS)
External I/O	
Serial Ports	1 x E-Key M.2 2230 slot (PCIe X1 / USB2.0 signal supported) 1 x mPCIe (PCIe/ USB2.0/USB 3.0 signal supported)
USB Ports	3 x USB3.2 Gen. 2 3 x USB2.0
SIM Card	1 x SIM Card socket for 3G/4G module
LAN	4 x RJ45
Video Ports	2 x HDMI up to 4K x 2K x 24bpp @ 24 Hz
	1 x DP up to 4096 x 2304 x 36bpp @ 60 Hz
Remote	1 x SW
Internal I/O	
Expansion Slot	1 x E-Key M.2 2230 slot (PCIe X1 / USB2.0 signal supported) 1 x mPCIe (PCIe/ USB2.0/USB 3.0 signal supported)
SIM Card	1 x SIM Card socket for 3G/4G module
USB 2.0 Ports	2 x USB2.0 by Pinhead
COM Ports	2 x COM232 by Pinhead
GPIO	1 x 8 bit programmable GPIO pin header(3.3 | 5V Jump adjustable)

Audio	
Type	1 x Audio(Line-out & Mic-in) Chip 888S/897
Mechanical	
Button	1 x Power button W/Led
Chassis	Aluminum Alloy
Mounting	Desk-Mount, Wall-Mount, DIN-Rail(optional) VESA-mount (75x75mm, 100x100mm optional)
Dimension (W x H x D)	224 x 140 x 49.2 mm
Weight (Net)	1.6kg
Environmental	
Operating Temp.	-20 ~ 60°C (-4 ~ 140°F)
Storage Temp.	-40 ~ 85°C (-40 ~ 185°F)
Operating Humidity	5% ~ 95% (non-condensing)
Random Vibration	5~500Hz, 2Grms operation
Shock	Operation: 10G@11ms Non-operation: 30G@11ms
Qualification	
Certification	CE, FCC
Power System	
Power Input	10-36VDC, 2-pin phoenix connector
OS Support	
Windows 10 Ubuntu 20.04	

1.4. Inside the Package

Upon opening the package, carefully inspect the contents. If any of the items is missing or appears damaged, contact your local dealer or distributor. The package should contain the following items:

1 x SB-244-111XXX Series

- User's manual

- 1 x 2-pin Terminal Block
- 1 x Thermal Pad

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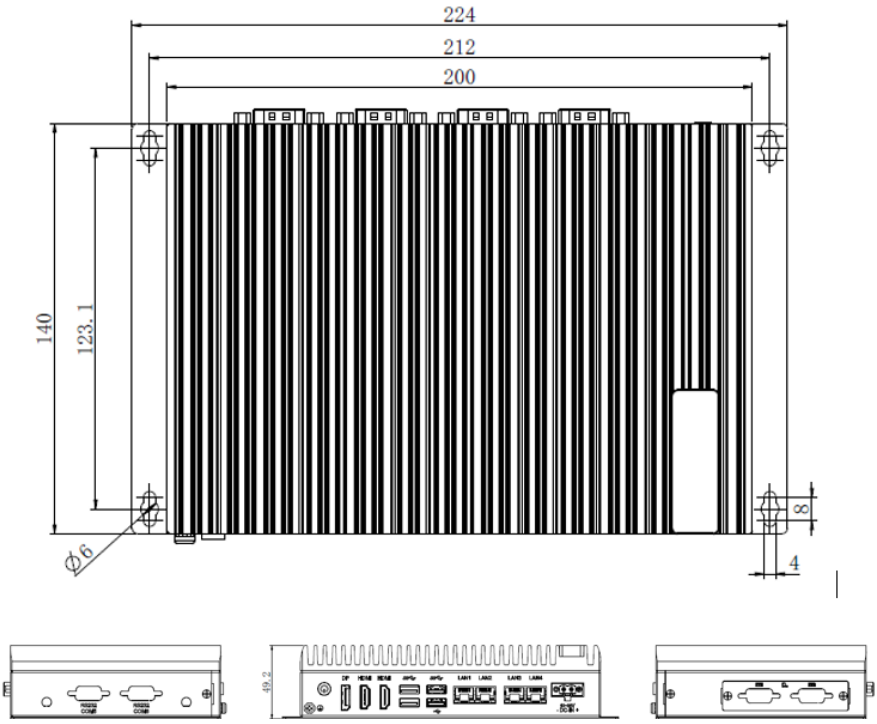
Chapter 2

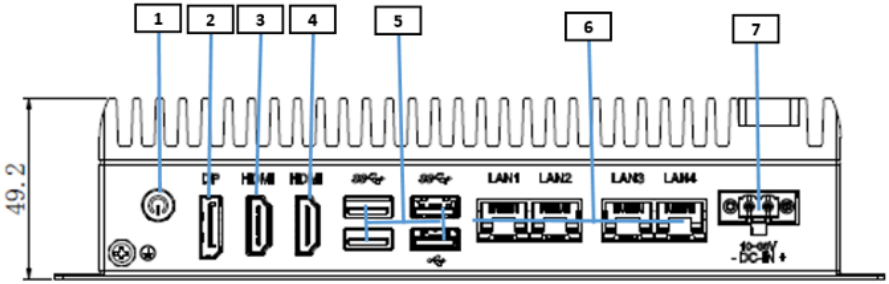
Getting Started

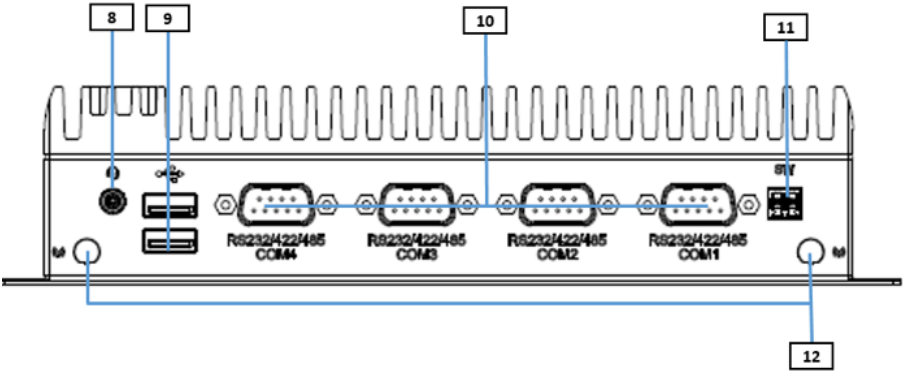
2.1. Dimensions



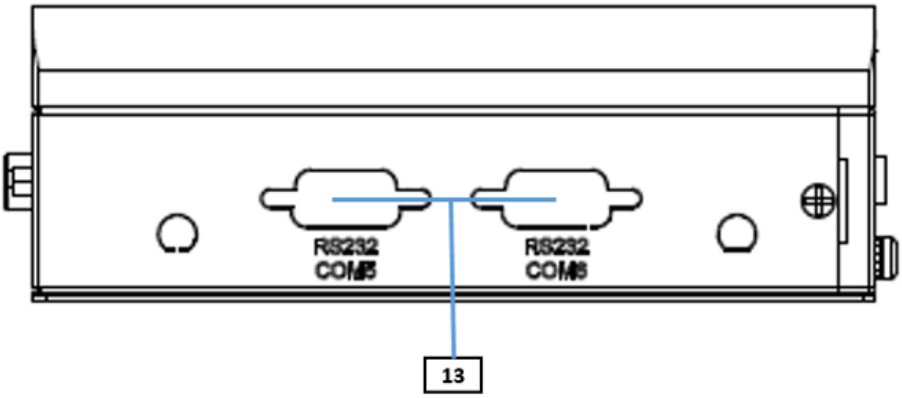
2.2. Overview

2.2.1. Front side

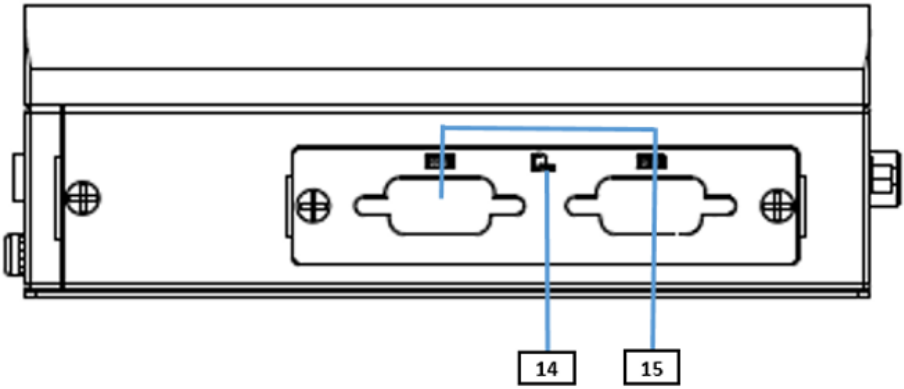




Back Side View



Left Side View



No.	Item	No.	Item
1	Power button	2	DP Port
3	HDMI port	4	HDMI
5	3x USB3.2 Gen. 2 1 x USB2.0	6	LAN
7	DC-IN	8	Audio
9	USB2.0	10	RS485/422/232
11	Remote control	12	Antenna
13	RS232 Pre-holes	14	SIM card
15	2 x DB9 oDoor module	16	/

2.2.2 Power Button

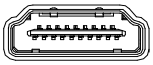
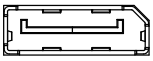
Function: Power Button

Power LED Status
Off: Power off or system is in hibernate mode
Green LED permanently: System is working
Green Twinkling: S3 Hibernate mode

2.2.2 DC-IN Power Input

Pin	Pin Definition	Pin	Pin Definition
1	GND	2	+10~36V

2.2.3 HDMI/DP Input

Description	Status	Figure
HDMI	4Kx2Kx24bpp@24Hz	
DP	4096x2304x36bpp@60Hz	

2.2.4 USB Ports

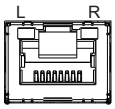
Function: USB 3.2/2.0 Stacked Connectors
Connector Type: USB 3.0/2.0 type A connectors
Pin Assignment: The pin assignments conform to the industry standard.

USB Ver.	Max Speed	Speed name	Max V/I
USB2.0	480Mbps(60MB/S)	High-Speed	5V/500mA
USB 3.2 Gen2	10Gbps(1024MB/S)	Super-Speed USB	5V/900mA

2.2.5 LAN Port

The SB-244-111XXX Series device is equipped with 4 Gigabit network ports. The network chip adopts Intel i219LM&Intel i210(i210AT), Co-lay design. The network speed supports 10/100/1000 Mbps and can support the network wake-up function.

Function: RJ-45 port for Giga Lan
Connector Type: 4 x RJ-45 connectors that support 10/100/1000Mbps fast Ethernet
Pin Assignment: The pin assignments conform to the industry standard.

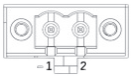


2.2.6 DC-IN Power Connector

The SB-244-111XXX Series device features a Phoenix connector and supports a wide range of voltage inputs, ranging from 10-36VDC. Additionally, it comes with reverse wiring protection, which ensures that the system will not be damaged even if the ground and power lines are connected in reverse.

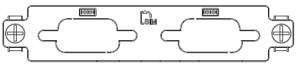
Function: DC-IN Power Connector
Connector Type: 2-pin phoenix connector
Pin Assignment: The pin assignments conform to the industry standard.

Pin	Desc.
1	GND
2	+10~36V



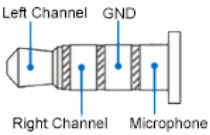
2.2.7 oDoor Expansion Connector

Choose the module interface based on functional requirements, which can be expanded to include 8bit GPIO, 2 x CAN, 2 x COM, etc.



2.2.8 Audio Connector

Function: For external microphone, headphones or speakers.
Connector Type: 3.5mm audio port interface
Pin Assignment: Support a 2-in-1 audio I/O interface with a 3.5mm hole diameter for external microphones, headphones, or speakers on a 4-segment iPhone version devices.



Note: As the microphone pins of Android and iPhone version devices are opposite, they cannot be used the same audio input/output ports.

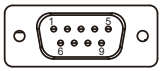
2.2.9 Serial Port Connector RS-232/RS-422/RS-485 (COM1 ~ COM4)

COM1, COM2

Function: RS-232/RS-422/RS-485 Selectable Serial Port

Connector Type: External 9-pin D-sub male connector

Pin Assignment: COM1~4 RS485/RS-422/RS-232 connector



Pin	RS-232	RS-422	RS-485
1	DCD	TX-	Data-
2	RXD	TX+	Data+
3	TXD	RX+	NC
4	DTR	RX-	NC
5	GND	GND	GND
6	DSR		
7	RTS		
8	CTS		
9	RI		

COM 5~6 RS232 connector

Pin	RS-232	Pin	RS-232
1	-	6	-
2	RXD	7	-
3	TXD	8	-
4	-	9	-
5	GND		

Note1: COM 1~4 can be set as selection mode through BIOS mode and support RS-485/RS-422/RS-232 auto-flow.

NOTE:2 COM 5~6 support RS232 mode.

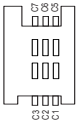
2.2.10 3G/4G/5G Pre-Antenna Hole

2.2.11 SIM Card Socket

Function: 3G/4G/SIM card Socket

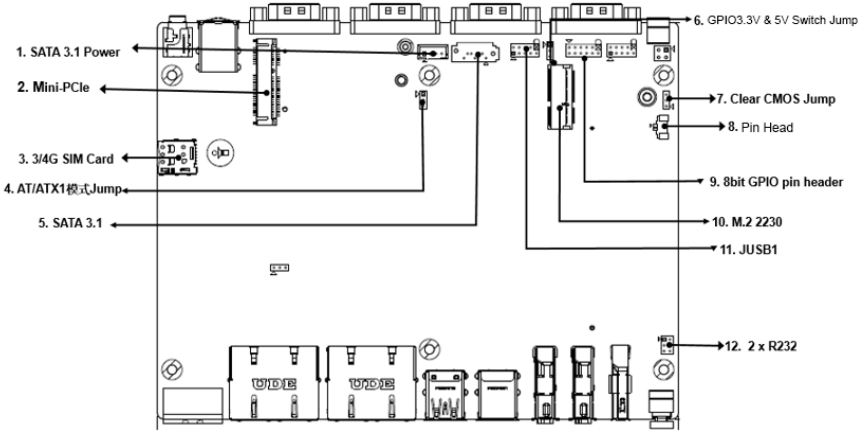
Connector Type: SIM Card Socket

Pin Assignment: The pin assignments conform to the industry standard.



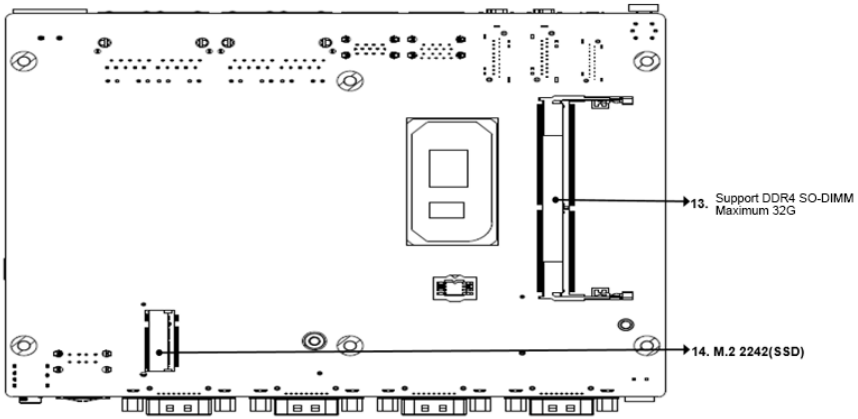
2.3 Internal Connector / Jumper

Top Side:



Pin	Pin Definition	Printing
1	SATA Power connector	JSATAPWR1
2	Mini-PCIe slot(WIFI/CAN/mSATA/4G module)	MINI_PCIE1
3	3G/4G SIM card	JSIM1
4	AT/ATX Jumper	ATX_AT
5	SATA 3.1 connector	SATA1
6	GPIO Jumper	JGPIO_PWR1
7	Clear CMOS	CMOS1
8	Battery connector	JBAT1
9	GPIO PIN connector	JGPIO1
10	M.2 2230 connector	2230
11	Internal USB pin head connector	JUSB1
12	2 x RS232(PIN head) com connector	JCMO5_1

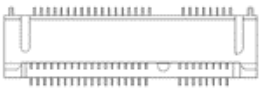
Bottom Side:



Pin	Pin Definition	Printing
13	DDR4 SO-DIMM slot	DIMM1
14	M.2 2242 slot	M2_SSD1

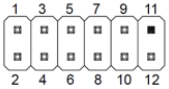
2.3.1 Mini-PCIE Slot

Function: Mini PCI-e Socket support WIFI/CAN/4G module
Connector Type: Mini PCI-e 52-pin Socket
Pin Assignment: The pin assignments conform to the industry standard.



Note: M_PCIE1 support WIFI/CAN/4G module expansion(8/10/12/14/16 no PCIE signal)

2.3.2 8bit internal GPIO pin



Pin	Pin Definition	Pin	Pin Definition
1	VCC_GPIO	2	VCC_GPIO
3	JPIO1	4	JPIO5
5	JPIO2	6	JPIO6
7	JPIO3	8	JPIO7
9	JPIO4	10	JPIO8
11	x	12	GND

2.3.3 8bit GPIO power and jumper

Function: JGPIO_PWR1 jumper
Setting:

Pin	Description	
Short 1-2 (Default)	5V	
Short 2-3	3.3V	

2.3.4 AT/ATX Selection Jumper

This jumper supports two power-on modes: AT mode and ATX mode.
When AT mode is selected, the system will automatically turn on after being connected to the power supply; When ATX mode is selected, the system needs to press the power-on button after the system is connected to the power supply.
AT/ATX mode can be set through jumpers or BIOS options. For jumper settings, please refer to the settings below:

Function: AT/ATX selection mode (AT_ATX1)
Setting:

Pin	Description	
Short 1-2 (Default)	ATX Mode	
Short 2-3	AT Mode	

2.3.5 Clear CMOS

CMOS is a readable and writable RAM chip on the computer motherboard. Because of its readable and writable characteristics, it is used on the computer motherboard to save the data after the BIOS has set the computer hardware parameters. This chip is only used to store data.

Function: Clears/keeps CMOS
Jumper Type: 2.00 mm pitch 1x2-pin header
Setting:

Pin	Description	
Short	Keeps CMOS (default)	
Open	Clears CMOS	

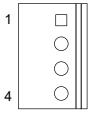
2.3.6 SATA Power Connector

Function: SATA Power Connector

Connector Type: 2.54mm pitch 4-pin Wafer

Pin Assignment:

Pin	Description
1	VCC5
2	GND
3	GND
4	+12V



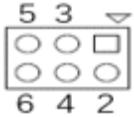
2.3.7 COM5/6 Pin

Function: COM5/6 Pin

Connector Type: 2.54mm pitch 6-pin

Pin Assignment:

Pin	Description
1	COM5_SOUT
2	COM6_SOUT
3	COM5_SIN
4	COM6_SIN
5	GND
6	GND



Chapter 3

Installation & Maintenance

3.1. Installation and Maintenance

1. Remove 6 screws from the bottom cover, as shown in 3.1-1.

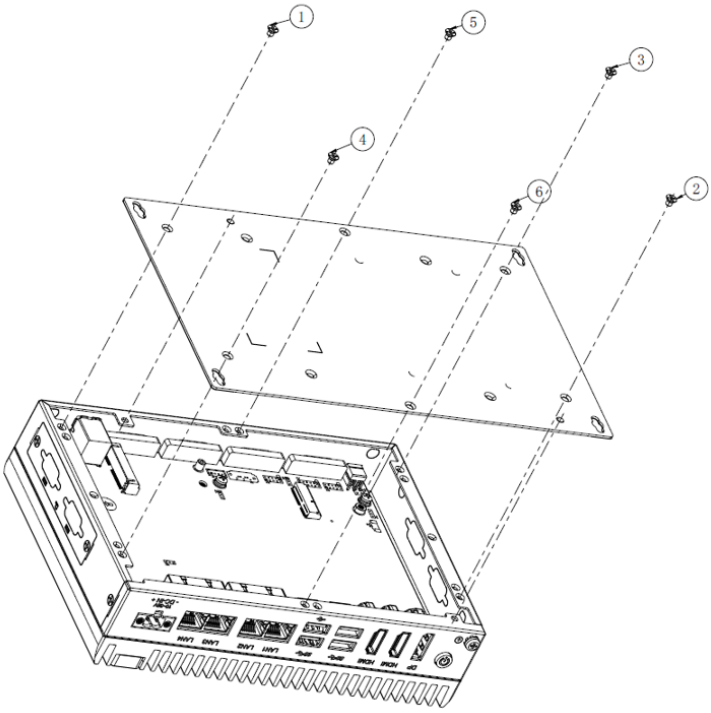


Figure 3.1-1 Installation and Maintenance

2. Remove four M3x4 screws of the corner, disassembly schematic diagram as 3.1-2

3. Remove the two M3x6 spring screws in the middle of the motherboard and remove the aluminum extrusion.

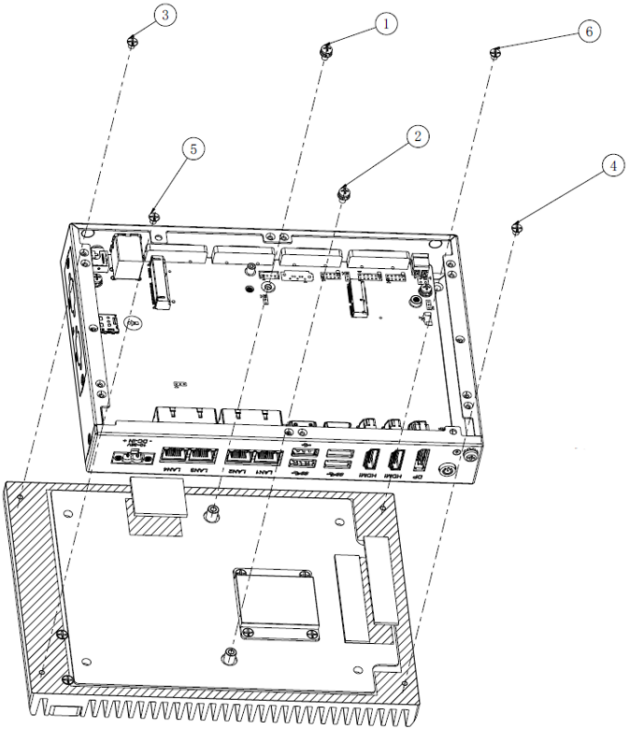


Figure 3.1-2 Disassembly Schematic Diagram

3.2 Key Parts installation and removal

1. Remove the memory module and M.2 2242 module then remove 1 pan-head M3x3 screw, as shown in Figure 3.2-1.

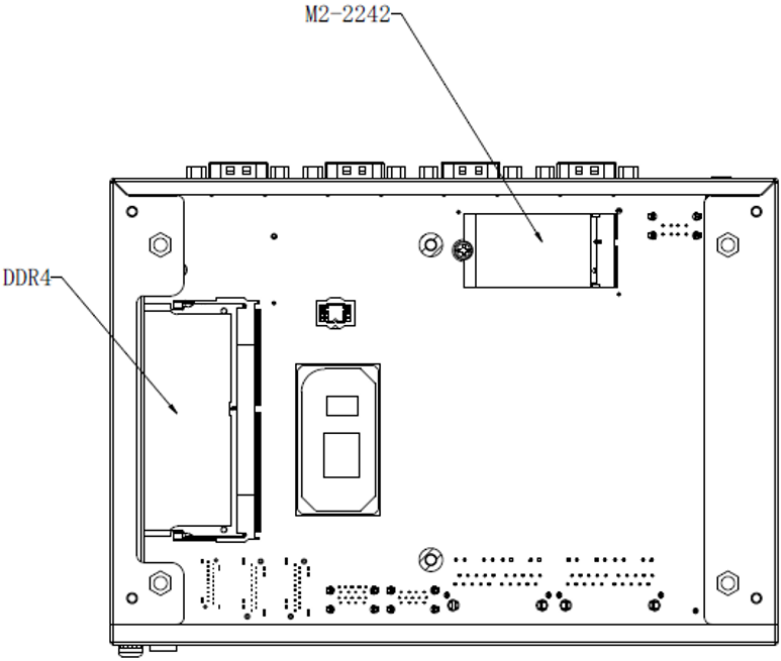


Figure 3.2-1 Install and Remove key parts

3. Remove the Mini-PCIE module: Remove 1 flat-head M2x3 screw and remove the M2-2230 WiFi module, as shown in Figure 3.2-2.

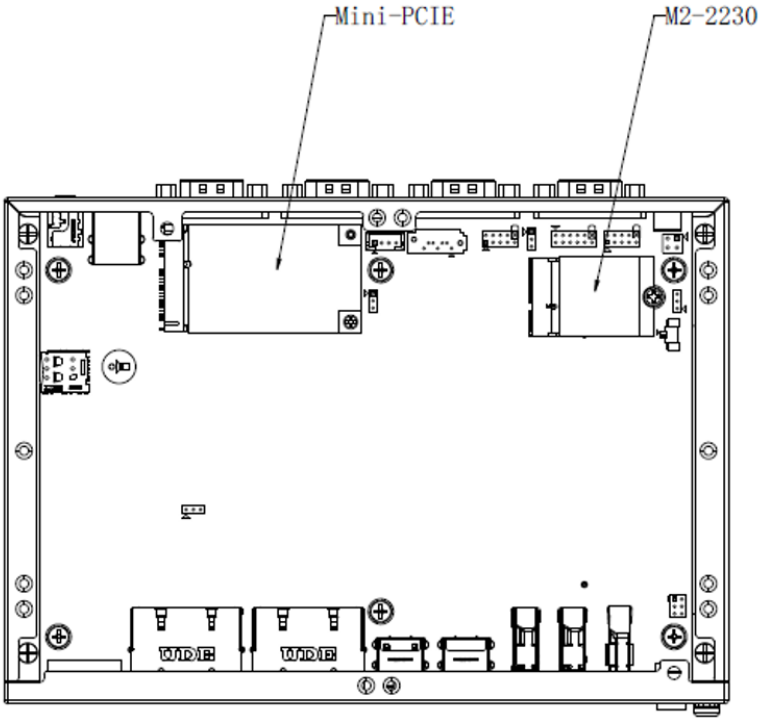


Figure 3.2-2 Install and Remove key parts

4. Attach the CPU PAD to the CPU chip or remove it from the CPU chip; Figure: 3.2-3

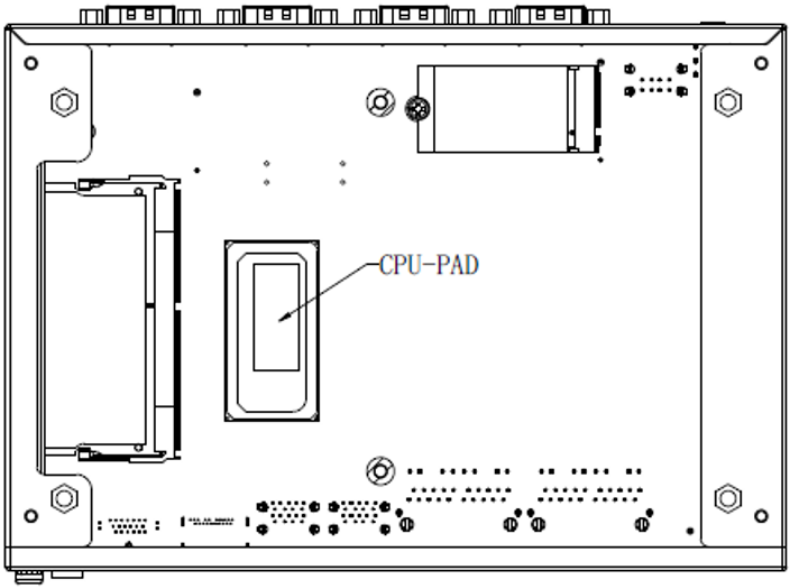


Figure 3.2-3 Install and Remove CPU PAD

5. Apply the memory thermal PAD and M.2 thermal PAD to the chassis. / Remove the chassis from the aluminum extrusion as shown in 3.2-4.

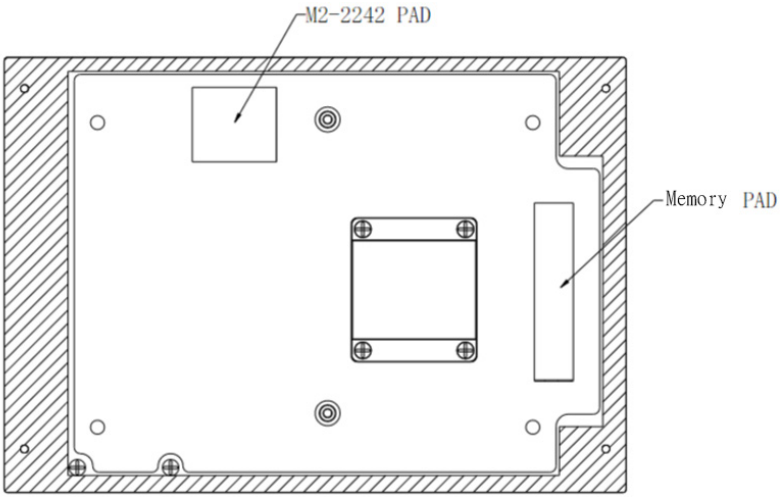


Figure 3.2-4 Install and Remove Memory/M.2 PAD

3.3 Install/Remove HDD

1. Remove six M3x4 screws and the bottom cover;
2. Place the HDD and bracket in the direction as shown in the figure, and secure them with four I-head M3*4 screws on the sides;
3. Insert four pieces of rubber into the groove of the bracket, and place the module on the bottom cover studs;
4. Use four screws to lock the module in sequence and fix it to the bottom cover studs;
5. Connect the HDD cable and the other end to the corresponding interface on the motherboard;
6. Install the bottom cover and lock it with 6 countersunk head M3x4 screws.

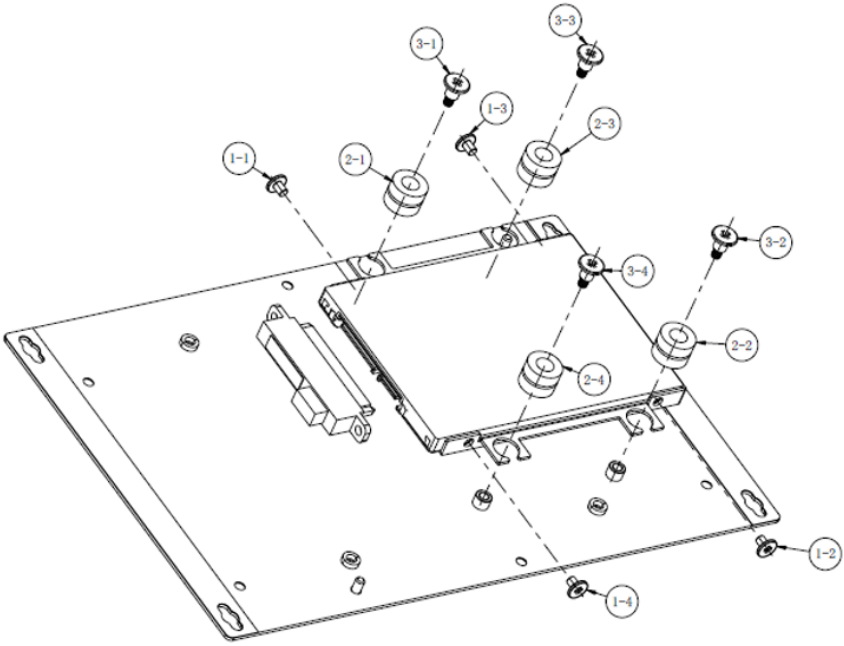


Figure 3.3-1 Install and Remove HDD

3.4 Install/Remove SIM card

1. Remove the two M3*4 screws and remove the side cover;
2. Push/remove the SIM card into the card slot and lock the cover back, as shown in Figure 3.4-1.

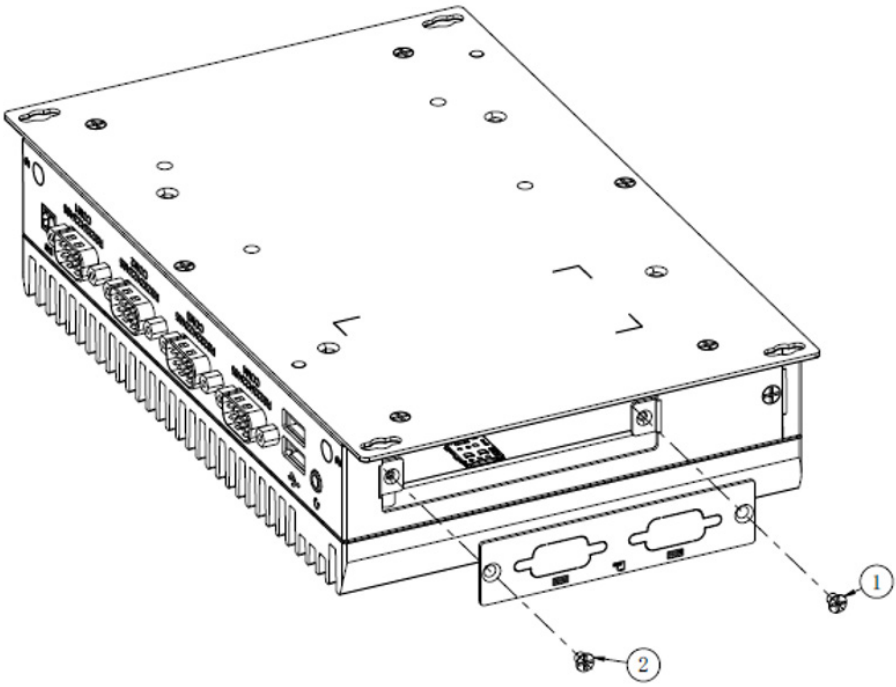


Figure 3.4-1 Install and Remove SIM card

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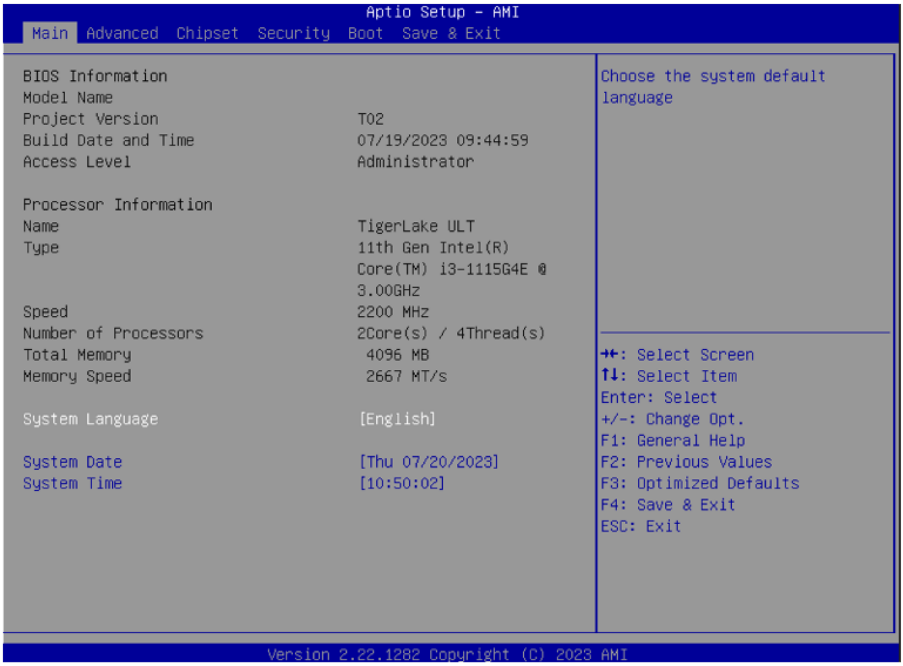
Chapter 4

BIOS

The BIOS Setup utility is to configure the system settings stored in the system's BIOS ROM. The BIOS is activated once the computer powers on. When the computer is off, the battery on the main board supplies power to BIOS RAM.

To enter the BIOS Setup utility, keep hitting the "Delete" key upon powering on the computer.



Note: Actual model name and board information varies according to your model.

Key Commands

The BIOS Setup utility relies on a keyboard to receive user's instructions. Hit the following keys to navigate within the utility and use the utility.

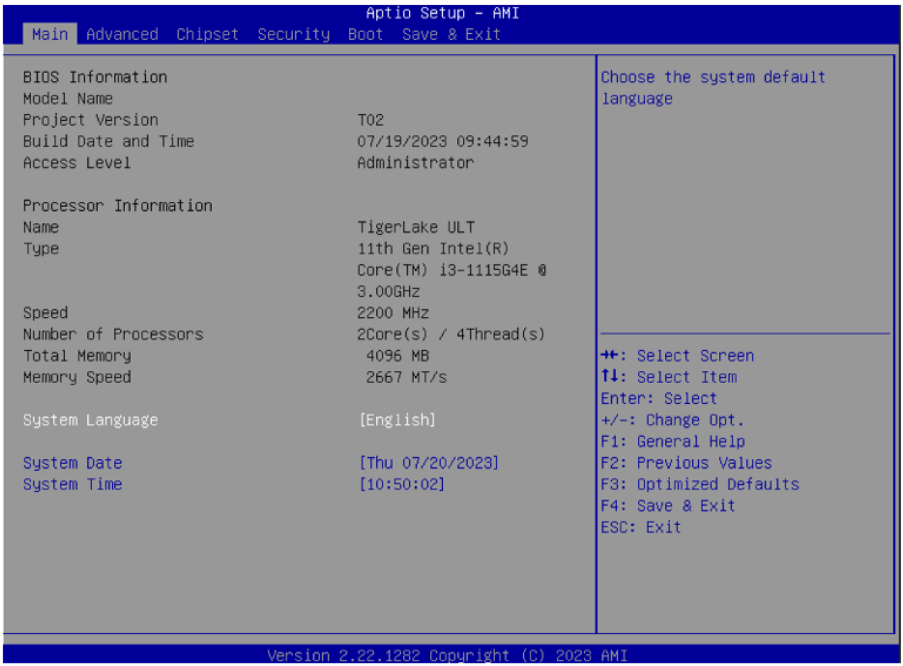
Hot-Key	Function	Description
<Del>	Enter BIOS mode	**After System Open**
<F7>	Enter the boot up sequence menu	
<Ctrl>+<Alt>+<Del>	Restart the system	
← →	Moves left/right between the top menus.	**In the BIOS system**
↓ ↑	Moves up/down between highlight items.	
Enter	Selects an highlighted item/field.	
<F3>	Load defaults	
<F4>	Exits the utility saving the changes that have been made.	
Esc	Exit BIOS mode	

Note: Pay attention to the "WARNING" that shows at the left pane onscreen when making any change to the BIOS settings.

This BIOS Setup utility is updated from time to time to improve system performance and hence the screenshots hereinafter may not fully comply with what you actually have onscreen.

4.1. Main - Sets system Time & Date.

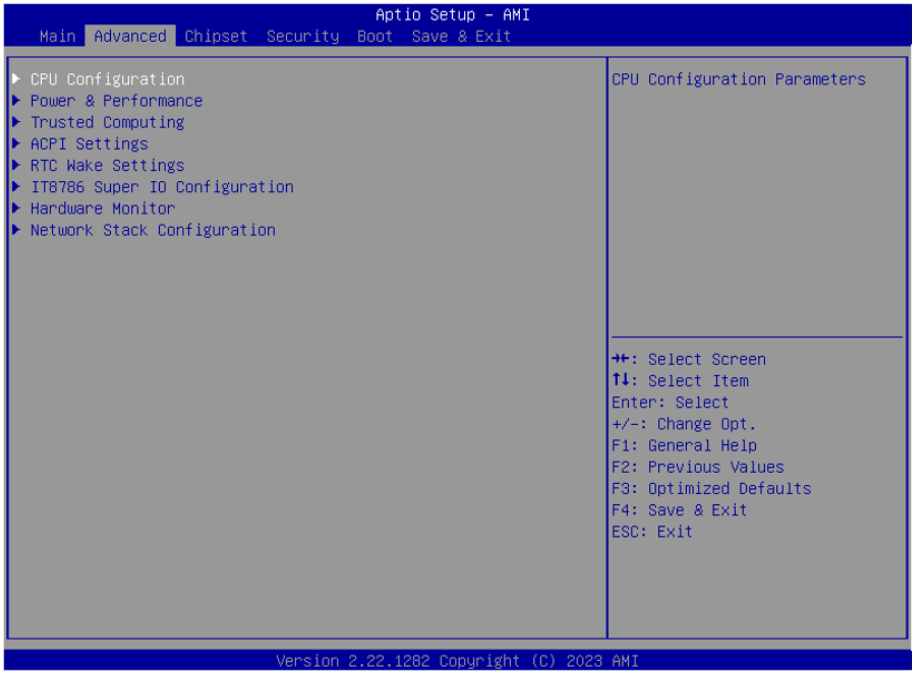
The **Main** menu features the settings of **System Date** and **System Time** and displays some BIOS info.



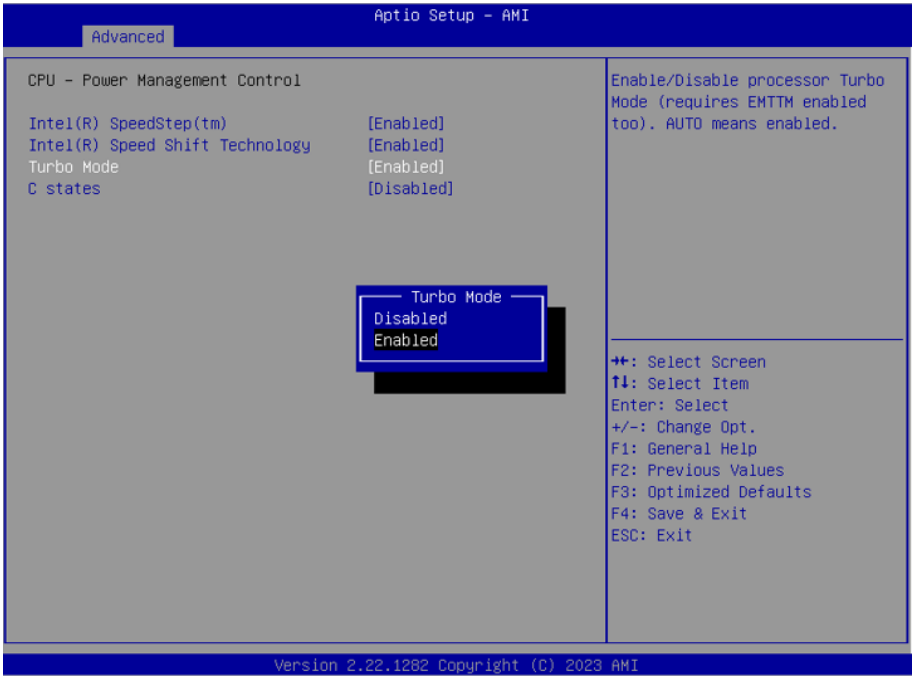
Note: Actual model name and board information varies according to your model.

Setting	Description
System Date	Sets system date.
System Time	Sets system time.

4.2. Advanced

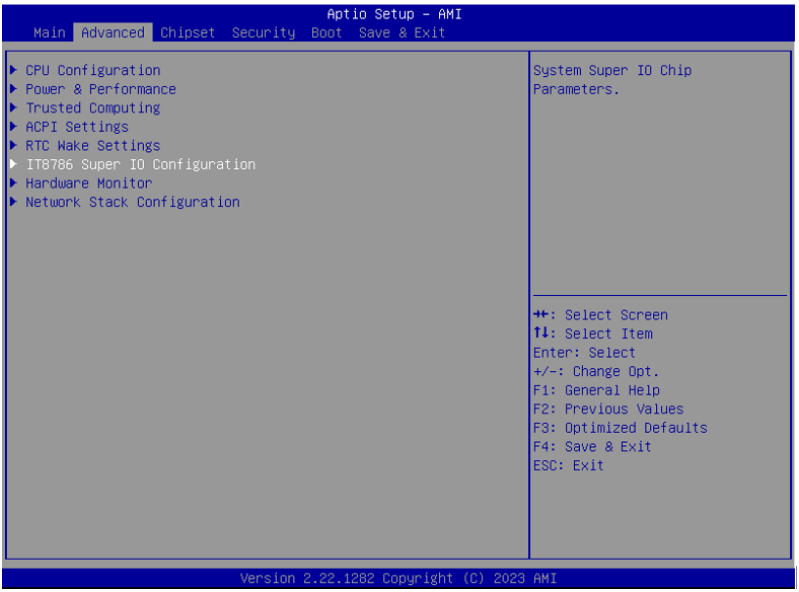

Aptio Setup – AMI
Main Advanced Chipset Security Boot Save & Exit
CPU Configuration
Power & Performance
Trusted Computing
ACPI Settings
RTC Wake Settings
IT8786 Super IO Configuration
Hardware Monitor
Network Stack Configuration
CPU Configuration Parameters
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
Version 2.22.1282 Copyright (C) 2023 AMI

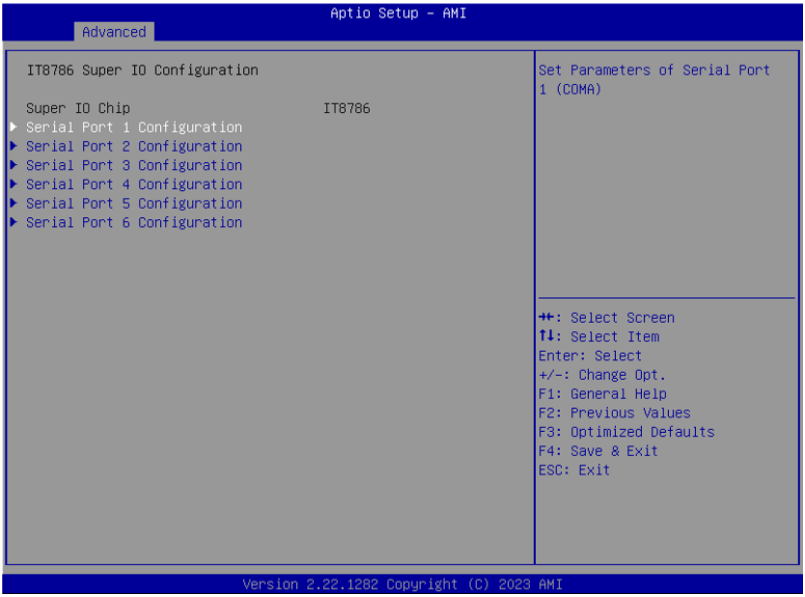
4.2.1. Turbo Mode Setting

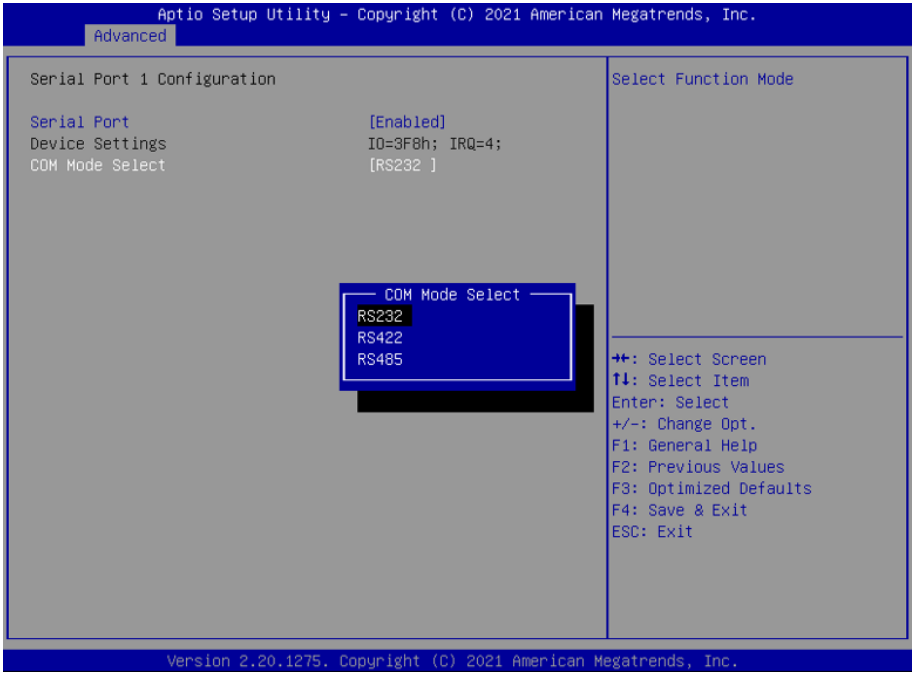


Enter Advanced menu, select "**Power & Performance**" -> "**CPU-Power Management Control**" -> "**Turbo Mode**". After that users can choose Enabled/ Disabled. After setting, press F4 to save and exit, the system will take effect after reboot.

4.2.2. COM Mode Setting







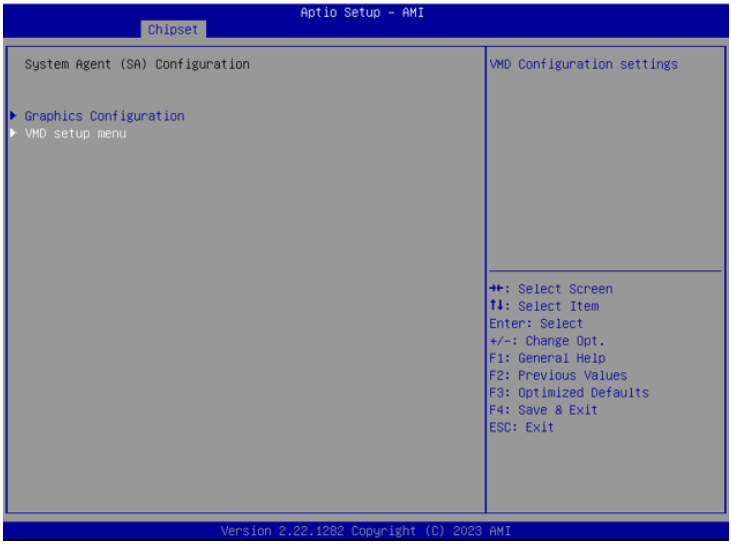
Under the **Advanced** menu, select "**IT8786 Super IO Configuration**" -> "**Serial Port X Configuration**" -> "**COM Mode Select**". Users can select RS232, RS422 and RS485 for COM mode setting. After setting, press F4 to save and exit, the system will take effect after reboot.

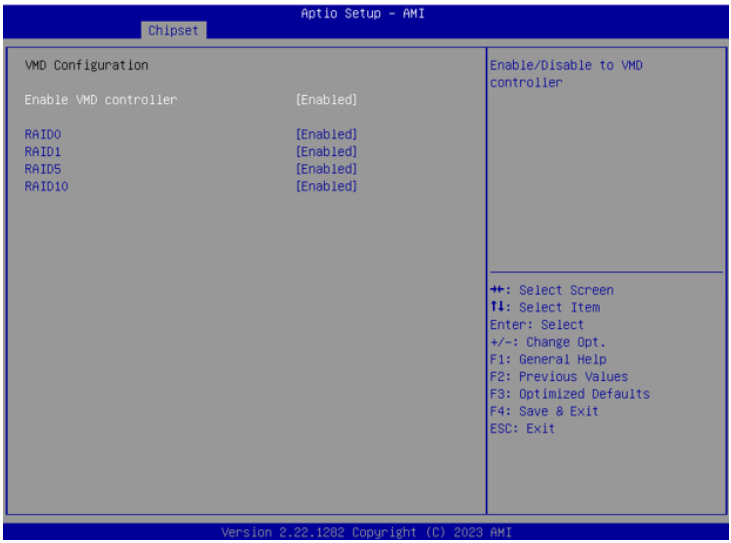
4.3 Chipset Menu

Use the arrow keys on the keyboard to move to the Chipset option. The submenu is detailed as shown.

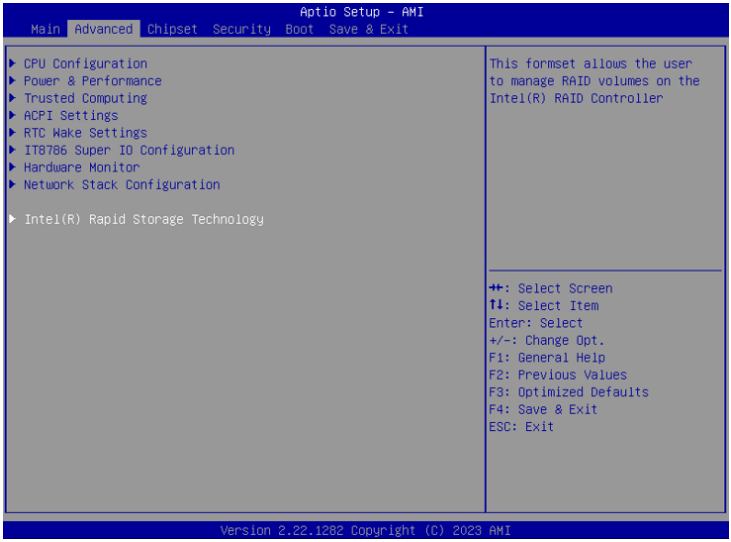
4.4. Raid Setting

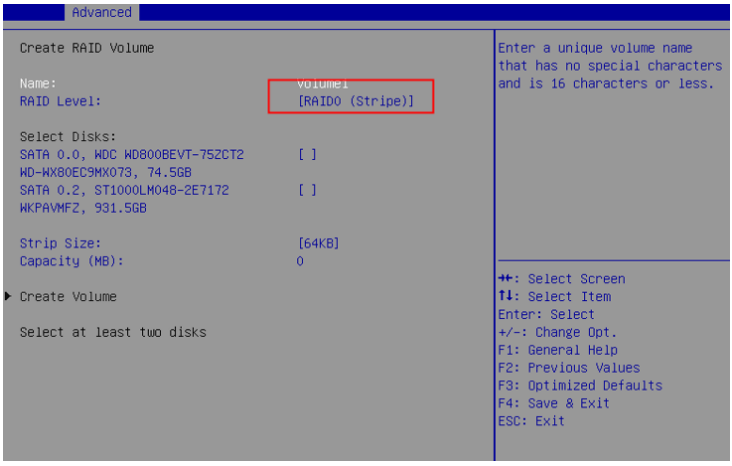
1. Enter the **Chipset** interface and select **System Agent Configuration**> **VMD setup menu** -> **Enable VMD controller**. You can set the Raid function to be turned on and off. After the settings are completed, press **F4** to save and exit. It will take effect after the system restarts.

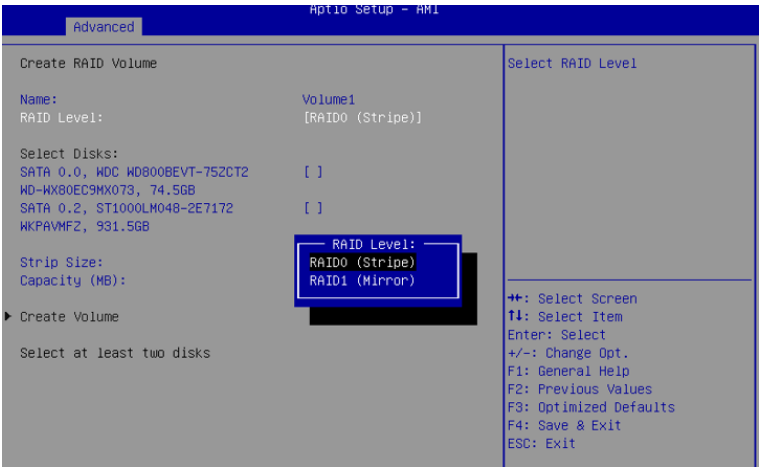


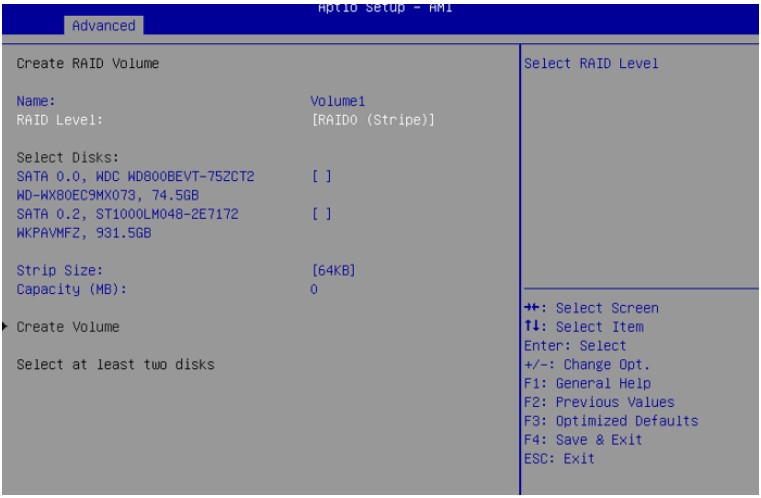


2. After enabling **VMD**, press **F4** to save and restart. Press **Delete** to enter the **BIOS interface and select Advanced->Intel(R) Rapid Storage Technology->Create RAID Volume**. The RAID Level option can select the required RAID level.

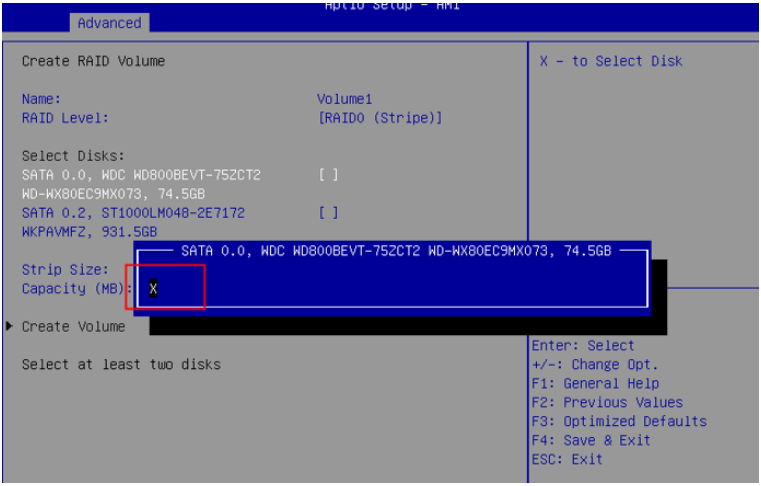

Aptio Setup – AMI
Main Advanced Chipset Security Boot Save & Exit
CPU Configuration
Power & Performance
Trusted Computing
ACPI Settings
RTC Wake Settings
IT8786 Super IO Configuration
Hardware Monitor
Network Stack Configuration
Intel(R) Rapid Storage Technology
This formset allows the user to manage RAID volumes on the Intel(R) RAID Controller
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
Version 2.22.1282 Copyright (C) 2023 AMI

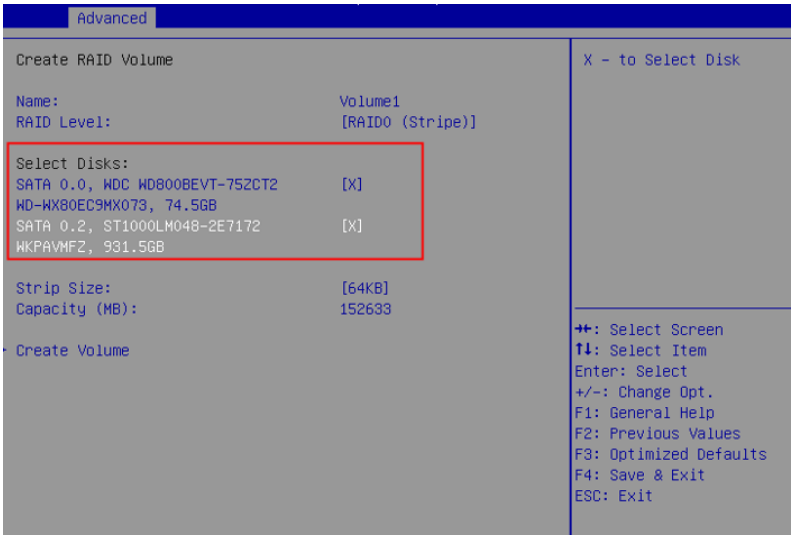

Advanced
Create RAID Volume
Name: Volume1
RAID Level: [RAID0 (Stripe)]
Select Disks:
SATA 0.0, WDC WD800BEVT-75ZCT2 WD-WX80EC9MX073, 74.5GB [ ]
SATA 0.2, ST1000LM048-2E7172 WKPAVMFZ, 931.5GB [ ]
Strip Size: [64KB]
Capacity (MB): 0
Create Volume
Select at least two disks
Enter a unique volume name that has no special characters and is 16 characters or less.
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit



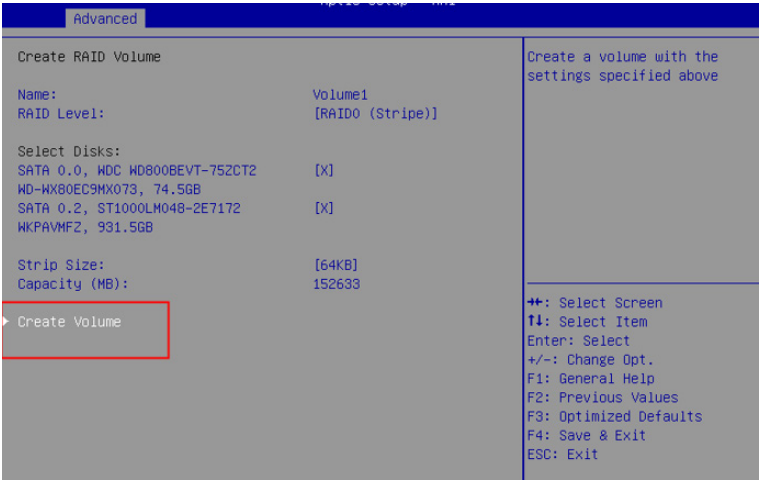


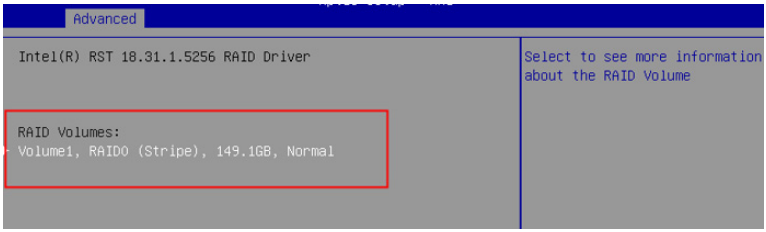
3. Under the Select Disks option, select the disks to be grouped into RAID, where "x" means selected, and "space" means unselected.


Advanced
Create RAID Volume
Name: Volume1
RAID Level: [RAID0 (Stripe)]
Select Disks:
SATA 0.0, WDC WD800BEVT-75ZCT2 [ ]
WD-WX80EC9MX073, 74.5GB
SATA 0.2, ST1000LM048-2E7172 [ ]
WKPAVMFZ, 931.5GB
SATA 0.0, WDC WD800BEVT-75ZCT2 WD-WX80EC9MX073, 74.5GB
Strip Size:
Capacity (MB): X
Create Volume
Select at least two disks
X - to Select Disk
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit

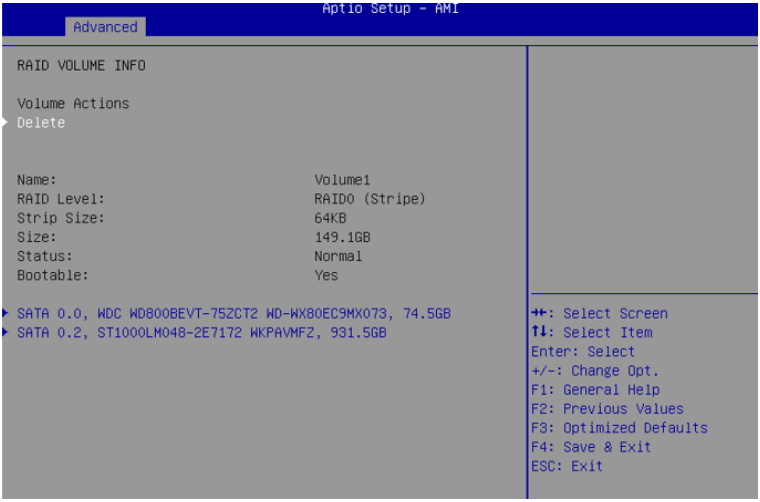

Advanced
Create RAID Volume
Name: Volume1
RAID Level: [RAID0 (Stripe)]
Select Disks:
SATA 0.0, WDC WD800BEVT-75ZCT2 [X]
WD-WX80EC9MX073, 74.5GB
SATA 0.2, ST1000LM048-2E7172 [X]
WKPAVMFZ, 931.5GB
Strip Size: [64KB]
Capacity (MB): 152633
Create Volume
X - to Select Disk
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit

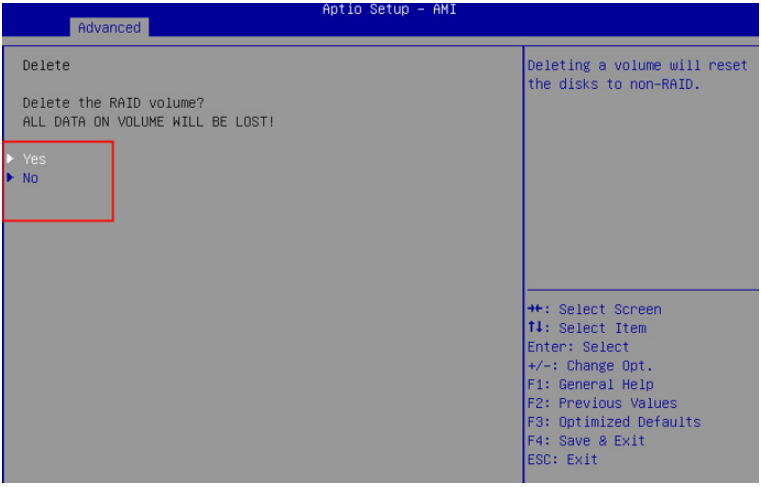
4. After selecting the disk, select "**Create Volume**" to complete the RAID configuration.



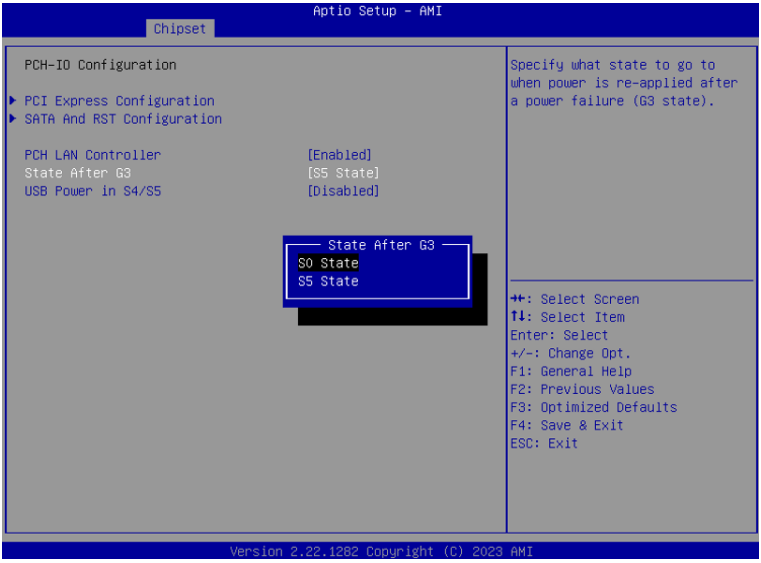


5. If you need to delete the Raid function, select **Delete**





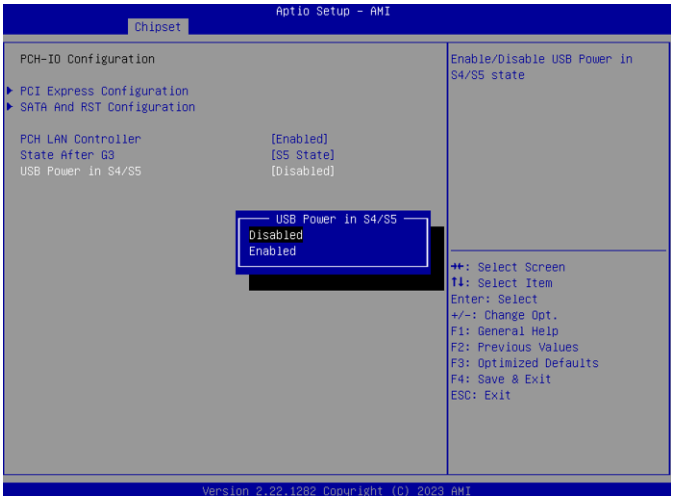
4.5. Auto TURN-ON (AT/ATX)



Enter "**Chipset**" menu, and select "**Chipset**"->"**PCH-IO Configuration**"->"**State After G3**" in order. Users can select "**S0 State/S5 State**" for power mode on the system. "**S0 State**" is AT mode, it will power on the system automatically after connecting the power supply, and S5 State is ATX mode.Users need to press the power button to turn on the system after connecting the power supply. **S5 State** is ATX mode. After connecting the power supply, you need to press the power button to power up the device. After setting, press F4 to save and exit, the system will take effect after reboot.

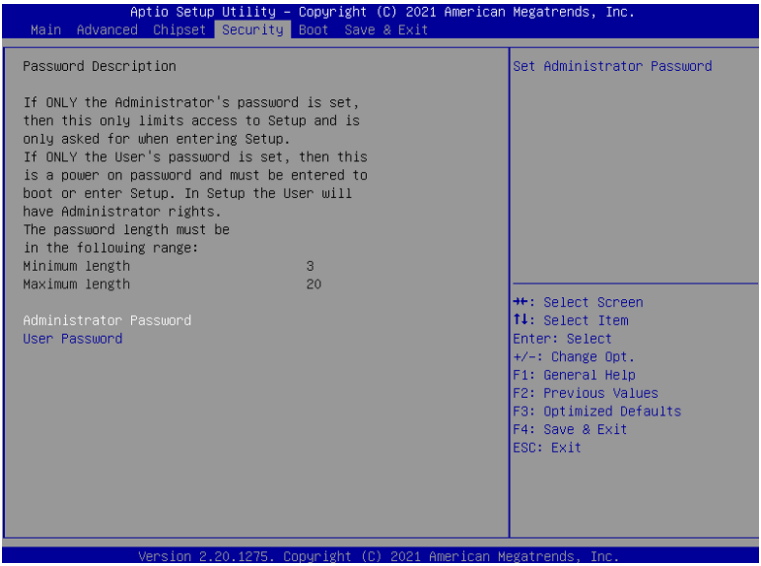
4.6. USB Power in S4/S5

Set whether the USB port is powered during sleep or shutdown.



Enable: USB port with power in S4/S5

4.7. Security

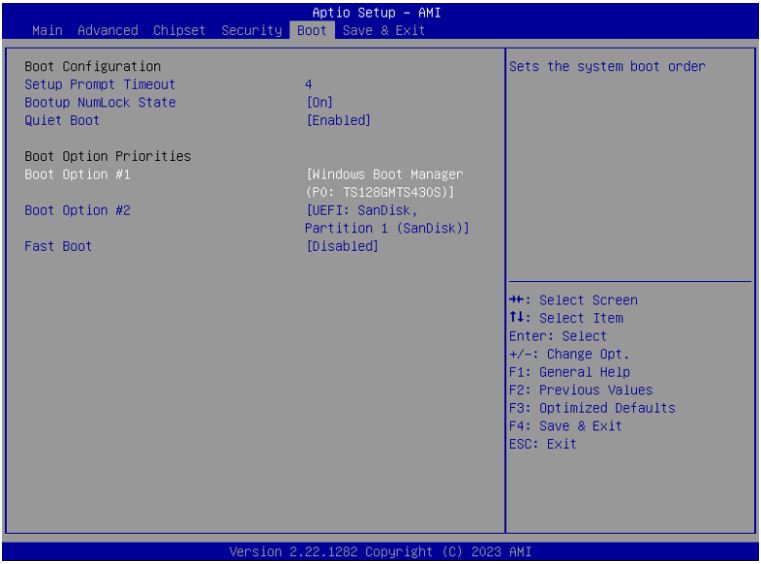


Use the arrow keys on the keyboard to move to the **Security option**. The submenu has detailed option descriptions, including security settings. Administrator and user passwords can be set to protect the computer from infringement.

Setting	Description
Administration Password	To set up an administrator password: 1. Select **Administrator Password**. 2. An **Create New Password** dialog then pops up onscreen. 3. Enter your desired password that is no less than 3 characters and no more than 20 characters. 4. Hit [Enter] key to submit.
User Password	To set up an administrator password: 1. Select **User Password**. 2. An **Create New Password** dialog then pops up onscreen. 3. Enter your desired password that is no less than 3 characters and no more than 20 characters. 4. Hit [Enter] key to submit.

Note: Users can select Administrator Password and User Password to set the administrator password and user password respectively, the minimum length is 3 digits, the maximum length is 20 digits.

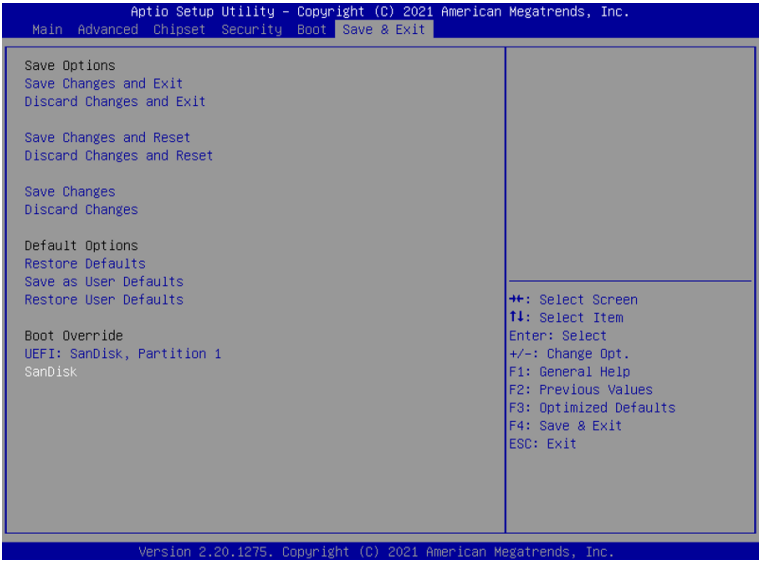
4.8. Boot



"**Boot**" menu contains the boot settings above. Users can set the boot logo or select the bootup devices, etc.

Setting	Description
Bootup NumLock State	▶ Set NumLock on or off when booting.
Quiet Boot	▶ **Enabled:** Logo will be displayed at boot up. ▶ **Disabled:** Boot up the system and display the self-test screen, no logo, white label interface.
Boot Option Priorities	▶ Users can set the order in which devices are started at startup **Boot Option #1** is the first priority startup item, **Boot Option #2** is the second startup item, and so on. Press F4 to save and exit, the system will take effect after reboot.

4.9. Save & Exit



The Save & Exit menu displays the way to exit the BIOS setup utility. When users have completed the setup, users must save and exit for the changes to take effect.

Setting	Description
Save Changes and Exit	Saves the changes and quits the BIOS Setup utility.