



4X4-V2000

# User Manual

Version 1.0

Published September 24, 2021

Copyright©2021 ASRockind INC. All rights reserved.

---

Version 1.0

Published September 24, 2021

Copyright©2021 ASRockkind INC. All rights reserved.

### Copyright Notice:

No part of this documentation may be reproduced, transcribed, transmitted, or translated in any language, in any form or by any means, except duplication of documentation by the purchaser for backup purpose, without written consent of ASRockkind Inc.

Products and corporate names appearing in this documentation may or may not be registered trademarks or copyrights of their respective companies, and are used only for identification or explanation and to the owners' benefit, without intent to infringe.

### Disclaimer:

Specifications and information contained in this documentation are furnished for informational use only and subject to change without notice, and should not be constructed as a commitment by ASRockkind. ASRockkind assumes no responsibility for any errors or omissions that may appear in this documentation.

With respect to the contents of this documentation, ASRockkind does not provide warranty of any kind, either expressed or implied, including but not limited to the implied warranties or conditions of merchantability or fitness for a particular purpose.

In no event shall ASRockkind, its directors, officers, employees, or agents be liable for any indirect, special, incidental, or consequential damages (including damages for loss of profits, loss of business, loss of data, interruption of business and the like), even if ASRockkind has been advised of the possibility of such damages arising from any defect or error in the documentation or product.



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.

### CALIFORNIA, USA ONLY

The Lithium battery adopted on this motherboard contains Perchlorate, a toxic substance controlled in Perchlorate Best Management Practices (BMP) regulations passed by the California Legislature. When you discard the Lithium battery in California, USA, please follow the related regulations in advance.

“Perchlorate Material-special handling may apply, see [www.dtsc.ca.gov/hazardouswaste/perchlorate](http://www.dtsc.ca.gov/hazardouswaste/perchlorate)”

**ASRockkind Website:** <http://www.asrockind.com>

---

The terms HDMI<sup>®</sup> and HDMI High-Definition Multimedia Interface, and the HDMI logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.



**CAUTION:**

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.  
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

---

# Contents

<b>1 Introduction .....</b>	<b>5</b>
1.1 Package Contents .....	5
1.2 Specifications.....	6
1.3 Motherboard Layout.....	8
1.4 I/O Panel.....	9
<b>2 Installation .....</b>	<b>10</b>
2.1 Screw Holes.....	10
2.2 Pre-installation Precautions .....	10
2.3 Installation of Memory Modules (SO-DIMM).....	11
2.4 Expansion Slots .....	12
2.5 Jumpers Setup.....	13
2.6 Onboard Headers and Connectors.....	14
<b>3 UEFI SETUP UTILITY.....</b>	<b>17</b>
3.1 Introduction .....	17
3.1.1 UEFI Menu Bar .....	17
3.1.2 Navigation Keys .....	18
3.2 Main Screen.....	18
3.3 Advanced Screen.....	19
3.3.1 CPU Configuration .....	20
3.3.2 Chipset Configuration.....	21
3.3.3 Storage Configuration .....	22
3.3.4 Super IO Configuration .....	23
3.3.5 ACPI Configuration.....	24
3.3.6 USB Configuration .....	25
3.3.7 Trusted Computing.....	26
3.4 Hardware Health Event Monitoring Screen .....	27
3.5 Security Screen .....	28
3.6 Boot Screen .....	29
3.7 Exit Screen .....	31
<b>4 Software Support .....</b>	<b>32</b>
4.1 Install Operating System.....	32
4.2 Support CD Information .....	32
4.2.1 Running Support CD.....	32
4.2.2 Drivers Menu.....	32
4.2.3 Utilities Menu.....	32
4.2.4 Contact Information.....	32

---

# Chapter 1: Introduction

Thank you for purchasing ASRockind **4X4-V2000** motherboard, a reliable motherboard produced under ASRockind's consistently stringent quality control. It delivers excellent performance with robust design conforming to ASRockind's commitment to quality and endurance.

In this manual, chapter 1 and 2 contain introduction of the motherboard and step-by-step guide to the hardware installation. Chapter 3 and 4 contain the configuration guide to BIOS setup and information of the Support CD.



Because the motherboard specifications and the BIOS software might be updated, the content of this manual will be subject to change without notice. In case any modifications of this manual occur, the updated version will be available on ASRockind website without further notice. You may find the latest CPU support lists on ASRockind website as well.

ASRockind website <https://www.asrockind.com/>

If you require technical support related to this motherboard, please visit our website for specific information about the model you are using.

<https://www.asrockind.com/support/index.asp>

## 1.1 Package Contents

ASRockind **4X4-V2000** Motherboard

(NUC 4.09" x 4.02" (104 x 102mm))

ASRockind **4X4-V2000** Driver CD

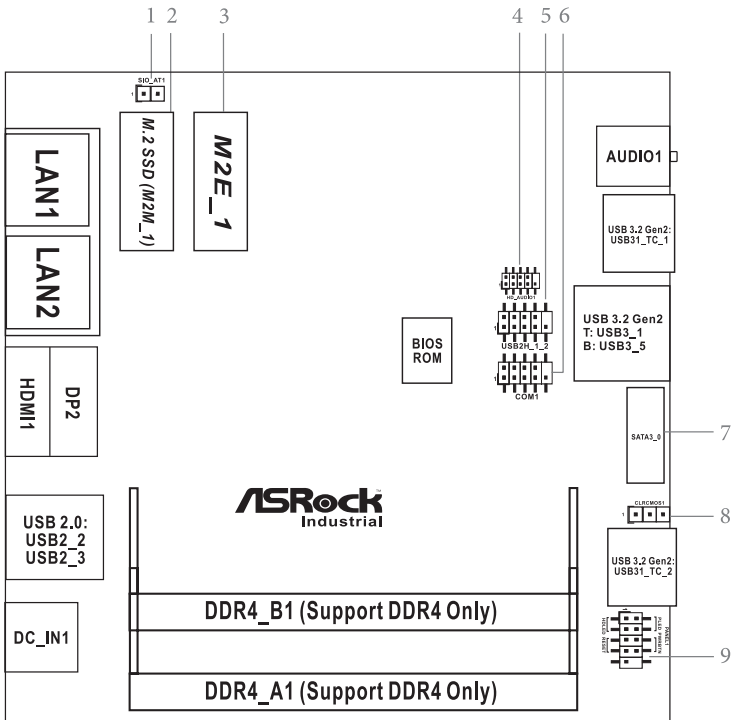
ASRockind **4X4-V2000** Jumper setting instruction

## 1.2 Specifications

<b>Form Factor</b>	Dimensions	NUC 4.09" x 4.02" (104 x 102mm)
<b>Processor System</b>	CPU	4X4-V2000M (V2718, 8C, Max Speed up to 4.15GHz) 4X4-V2000V (V2516, 6C, Max Speed up to 3.95GHz)
	Chipset	SoC
	BIOS	AMI SPI 128 Mbit
<b>Expansion Slot</b>	M.2	1 x M.2 (Key E, 2230) with PCIe x1, USB 2.0 and CNVio for Wireless
<b>Memory</b>	Technology	Dual Channel DDR4 3200 MHz
	Capacity	64GB (32 GB per DIMM)
	Socket	2 x 260-pin SO-DIMM
<b>Graphics</b>	Controller	AMD Radeon™ Graphics
	HDMI	HDMI 2.0a Max resolution up to 4096x2160@60Hz
	DisplayPort	DisplayPort 1.2a, DP++ Max resolution up to 4096x2160@60Hz
	Multi Display	Max 4 display (Included 2 outputs from type C)
<b>Audio</b>	Interface	Realtek ALC233, High Definition Audio.
<b>Ethernet</b>	Controller/ Speed	LAN1: 1 x Realtek RTL8125BG with 10/100/1000/2500 Mbps LAN2: 1 x Realtek R8111EPV (Dash) with 10/100/1000 Mbps
	Connector	2 x RJ-45
<b>Front I/O</b>	USB	2 x USB 3.2 Gen2 (Type A) 2 x USB 3.2 Gen2 (Type C) (Supports DP1.2a display output)
	Audio	1 (headphone & microphone jack)
<b>Rear I/O</b>	HDMI	1 x HDMI 2.0a
	DisplayPort	1 x DP1.2a
	Ethernet	2 x 1 Gigabit LAN
	USB	2 x USB 2.0
	DC Jack	1

<b>Internal Connector</b>	USB	USB (1x2.0 pitch header)
	COM	1 x COM (RS-232/422/485)
	TPM	Infinion SLB9670VQ2.0
	eDP	1
<b>Storage</b>	M.2	1 x M.2 (KEY M, 2242/2260/2280) with PCIe x4 and SATA3 for SSD *M.2 Key M 2280 (Supported by bracket)
	SATA	1 x SATA3.0 (6.0 Gb/s)
<b>Watchdog Timer</b>	Output	From Super I/O to drag RESETCON#
	Interval	256 segments, 0,1,2...255sec
<b>Power Requirements</b>	Input PWR	12V~19V DC-In Jack
	Power On	AT/ATX Supported AT: Directly PWR on as Power input ready Environment ATX: Press Button to PWR on after Power input ready
<b>Environment</b>	Operating Temp	0°C ~ 60°C
	Storage Temp	-40°C ~ 85°C
	Operating Humidity	5% ~ 90%
	Storage Humidity	5% ~ 90%

### 1.3 Motherboard Layout



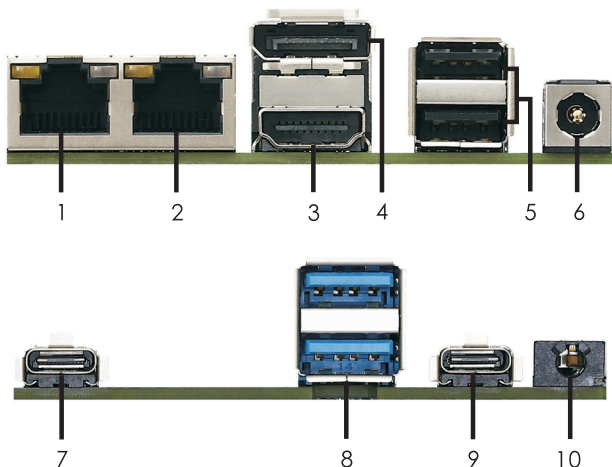
- 1 : SIO\_AT1
- 2 : M.2 Key-M Socket (M2M\_1)
- 3 : M.2 Key-E Socket (M2E\_1)
- 4 : Front Panel Audio Header
- 5 : USB2.0 Connector (USB2H\_1\_2)
- 6 : COM Port Header (RS232/422/485)
- 7 : SATA3 Port (SATA3\_0)
- 8 : Clear CMOS Header (CLRCMOS1)
- 9 : System Panel Header (PANEL1)

#### Back Side :

- Power Button (PWR\_BTN3)
- Fan Connector (FAN1)
- Battery Connector (BAT1)
- LPC Connector (LPC1)




## 1.4 I/O Panel



- |                            |   |
|----------------------------|---|
| 1 LAN RJ-45 Port (LAN1)*   | 6 DC-In Jack (DC_IN1)                   |
| 2 LAN RJ-45 Port (LAN2)**  | 7 USB 3.2 Gen2 Type-C Port (USB31_TC_2) |
| 3 HDMI Port (HDMI1)        | 8 USB 3.2 Gen2 Ports (USB3_1_5)         |
| 4 DisplayPort (DP2)        | 9 USB 3.2 Gen2 Type-C Port (USB31_TC_1) |
| 5 USB 2.0 Ports (USB2_2_3) | 10 Audio Jack (AUDIO1)                  |


\* There are two LED next to the LAN port. Please refer to the table below for the LAN port LED indications.

### LAN Port LED Indications

Activity/Link LED		SPEED LED		ACT/LINK LED	SPEED LED
Status	Description	Status	Description		LAN Port
Off	No Link	Off	10Mbps connection		
Blinking	Data Activity	Orange	100Mbps/1Gbps connection		
On	Link	Green	2.5Gbps connection		

\*\* There are two LED next to the LAN port. Please refer to the table below for the LAN port LED indications.

### LAN Port LED Indications

Activity/Link LED		SPEED LED		ACT/LINK LED	SPEED LED
Status	Description	Status	Description		LAN Port
Off	No Link	Off	10Mbps connection		
Blinking	Data Activity	Orange	100Mbps connection		
On	Link	Green	1Gbps connection		

---

## Chapter 2: Installation

Before you install the motherboard, study the configuration of your chassis to ensure that the motherboard fits into it.



Make sure to unplug the power cord before installing or removing the motherboard. Failure to do so may cause physical injuries to you and damages to motherboard components.

### 2.1 Screw Holes

Place screws into the holes to secure the motherboard to the chassis.



Do not over-tighten the screws! Doing so may damage the motherboard.

### 2.2 Pre-installation Precautions

Take note of the following precautions before you install motherboard components or change any motherboard settings.

1. Unplug the power cord from the wall socket before touching any component.
2. To avoid damaging the motherboard components due to static electricity, NEVER place your motherboard directly on the carpet or the like. Also remember to use a grounded wrist strap or touch a safety grounded object before you handle components.
3. Hold components by the edges and do not touch the ICs.
4. Whenever you uninstall any component, place it on a grounded antistatic pad or in the bag that comes with the component.



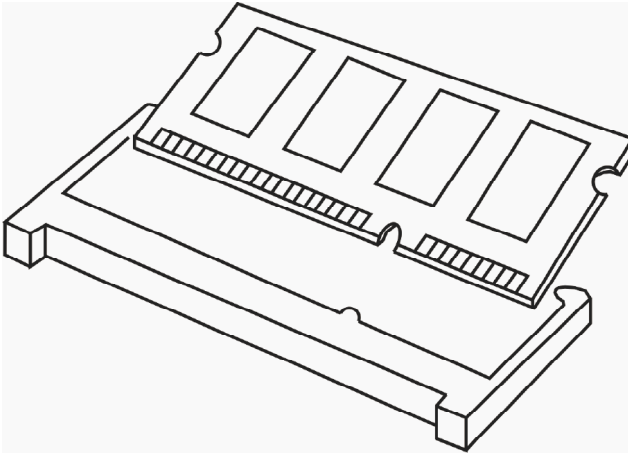
Before you install or remove any component, ensure that the power is switched off or the power cord is detached from the power supply. Failure to do so may cause severe damage to the motherboard, peripherals, and/or components.

---

## 2.3 Installation of Memory Modules (SO-DIMM)

This motherboard provides two 204-pin DDR4 (Double Data Rate 4) SO-DIMM slots.

- Step 1. Align a SO-DIMM on the slot such that the notch on the SO-DIMM matches the break on the slot.



1. The SO-DIMM only fits in one correct orientation. It will cause permanent damage to the motherboard and the SO-DIMM if you force the SO-DIMM into the slot at incorrect orientation.
2. Please do not intermix different voltage SO-DIMMs on this motherboard.

- Step 2. Firmly insert the SO-DIMM into the slot until the retaining clips at both ends fully snap back in place and the SO-DIMM is properly seated.

## 2.4 Expansion Slots (M.2 Slots)

There are 2 M.2 slots on this motherboard.

**M.2 for SSD:** 1 x M.2 (KEY M, 2242/2260/2280) with PCIe x4 and SATA3 for SSD.

\* M.2 Key M 2280 (Supported by bracket)

**M.2 for Wi-Fi:** 1 x M.2 (Key E, 2230) with PCIe x1, USB 2.0 and CNVio for Wireless.

### M.2 Key-M Socket (M2M\_1)

PIN	Signal Name	PIN	Signal Name
1	GND	2	+3.3V
3	GND	4	+3.3V
5	PERp3	6	USB_D+
7	PERp3	8	USB_D-
9	GND	10	SATA_LED
11	PETn3	12	+3.3V
13	PETp3	14	+3.3V
15	GND	16	+3.3V
17	PERn2	18	+3.3V
19	PERp2	20	NA
21	GND	22	NA
23	PETn2	24	NA
25	PETp2	26	NA
27	GND	28	NA
29	PERn1	30	NA
31	PERp1	32	NA
33	GND	34	NA
35	PETn1	36	NA
37	PETp1	38	DRVSLP
39	GND	40	SMB_CLK
41	PERn0/ SATA-B+	42	SMB_DATA
43	PERp0/ SATA-B-	44	NA
45	GND	46	NA
47	PETn0/ SATA-A-	48	NA
49	PETp0/ SATA-A+	50	PERST#
51	GND	52	CLKREQ#
53	PEFCLKn	54	WAKE#
55	PEFCLKp	56	NA
57	GND	58	NA
67	NA	68	NA
69	PEDET	70	+3.3V
71	GND	72	+3.3V
73	GND	74	+3.3V
75	GND		

### M.2 Key-E Socket (M2E\_1)

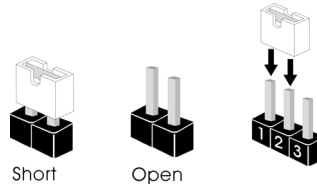
PIN	Signal Name	PIN	Signal Name
1	GND	2	+3.3V
3	USB_D+	4	+3.3V
5	USB_D-	6	NA
7	GND	8	NA
9	NA	10	NA
11	NA	12	NA
13	NA	14	NA
15	NA	16	NA
17	NA	18	GND
19	NA	20	NA
21	NA	22	NA
23	NA		
33	GND	32	NA
35	PETp	34	NA
37	PETn	36	NA
39	GND	38	NA
41	PERp	40	NA
43	PERn	42	NA
45	GND	44	NA
47	PEFCLKp	46	NA
49	PEFCLKn	48	NA
51	GND	50	SUSCLK
53	CLKREQ#	52	PERST0#
55	WAKE#	54	W_DISABLE1#
57	GND	56	W_DISABLE2#
59	NA	58	SMB_DATA
61	NA	60	SMB_CLK
63	GND	62	NA
65	NA	64	NA
67	NA	66	NA
69	GND	68	NA
71	NA	70	NA
73	NA	72	+3.3V
75	GND	74	+3.3V

\* Pin6 and Pin8 are defined as USB2.0 signal to support Key-M to Key-B extension card.

---

## 2.5 Jumpers Setup

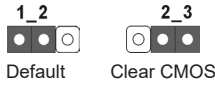
The illustration shows how jumpers are setup. When the jumper cap is placed on pins, the jumper is “Short”. If no jumper cap is placed on pins, the jumper is “Open”. The illustration shows a 3-pin jumper whose pin1 and pin2 are “Short” when jumper cap is placed on these 2 pins.



---

### Clear CMOS Jumper

(3-pin CLRMOS1)  
(see p.8, No. 8)



Note: CLRMOS1 allows you to clear the data in CMOS. To clear and reset the system parameters to default setup, please turn off the computer and unplug the power cord from the power supply. After waiting for 15 seconds, use a jumper cap to short pin2 and pin3 on CLRMOS1 for 5 seconds. However, please do not clear the CMOS right after you update the BIOS. If you need to clear the CMOS when you just finish updating the BIOS, you must boot up the system first, and then shut it down before you do the clear-CMOS action. Please be noted that the password, date, time, user default profile and MAC address will be cleared only if the CMOS battery is removed.

---

### ATX/AT Mode Jumper

(2-pin SIO\_AT1)  
(see p.8, No. 1)



Open : ATX Mode  
Short : AT Mode

## 2.6 Onboard Headers and Connectors

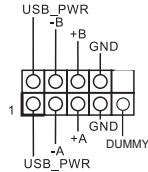


Onboard headers and connectors are NOT jumpers. Do NOT place jumper caps over these headers and connectors. Placing jumper caps over the headers and connectors will cause permanent damage of the motherboard!

### USB 2.0 Connector

(9-pin USB2H\_1\_2)

(see p.8 No. 5)

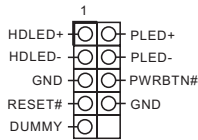


There is one USB 2.0 connector on this motherboard.

### System Panel Header

(9-pin PANEL1)

(see p.8 No. 5)



This header accommodates several system front panel functions.



Connect the power switch, reset switch and system status indicator on the chassis to this header according to the pin assignments below. Note the positive and negative pins before connecting the cables.

#### **PWRBTN (Power Switch):**

Connect to the power switch on the chassis front panel. You may configure the way to turn off your system using the power switch.

#### **RESET (Reset Switch):**

Connect to the reset switch on the chassis front panel. Press the reset switch to restart the computer if the computer freezes and fails to perform a normal restart.

#### **PLED (System Power LED):**

Connect to the power status indicator on the chassis front panel. The LED is on when the system is operating. The LED keeps blinking when the system is in S1 sleep state. The LED is off when the system is in S3/S4 sleep state or powered off (S5).

#### **HDLED (Hard Drive Activity LED):**

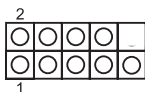
Connect to the hard drive activity LED on the chassis front panel. The LED is on when the hard drive is reading or writing data.

The front panel design may differ by chassis. A front panel module mainly consists of power switch, reset switch, power LED, hard drive activity LED, speaker and etc. When connecting your chassis front panel module to this header, make sure the wire assignments and the pin assignments are matched correctly.

## Front Panel Audio Header

(9-pin HD\_AUDIO1)

(see p.8 No. 4)



This is an interface for front panel audio cable that allows convenient connection and control of audio devices.

PIN	Signal Name	PIN	Signal Name	PIN	Signal Name	PIN	Signal Name	PIN	Signal Name
2	AGND	4	NC	6	LIN1_JD	8	LIN2_JD	10	NC
1	LIN1_L_IN	3	LIN1_R_IN	5	LIN2_R_OUT	7	AGND	9	LIN2_L_OUT

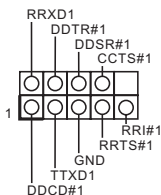


1. High Definition Audio supports Jack Sensing, but the panel wire on the chassis must support HDA to function correctly. Please follow the instruction in our manual and chassis manual to install your system.
2. If you use AC'97 audio panel, please install it to the front panel audio header as below:
  - A. Connect Mic\_IN (MIC) to MIC2\_L.
  - B. Connect Audio\_R (RIN) to OUT2\_R and Audio\_L (LIN) to OUT2\_L.
  - C. Connect Ground (GND) to Ground (GND).
  - D. MIC\_RET and OUT\_RET are for HD audio panel only. You don't need to connect them for AC'97 audio panel.
  - E. To activate the front mic.
 

Go to the "FrontMic" Tab in the Realtek Control panel. Adjust "Recording Volume".

## COM Port Header (RS232/422/485)

(9-pin COM1: see p.8, No. 6)



\* This motherboard supports RS232/422/485 on COM1 port. Please refer to below table for the pin definition. In addition, COM1 port (RS232/422/485) can be adjusted in BIOS setup utility > Advanced Screen > Super IO Configuration. You may refer to page 23 for details.

### COM1 Port Pin Definition

PIN	RS232	RS422	RS485
1	DCD, Data Carrier Detect	TX-	RTX-
2	RXD, Receive Data	TX+	RTX+
3	TXD, Transmit Data	RX+	N/A
4	DTR, Data Terminal Ready	RX-	N/A
5	GND	GND	GND
6	DSR, Data Set Ready	N/A	N/A
7	RTS, Request To Send	N/A	N/A
8	CTS, Clear To Send	N/A	N/A
9	N/A	N/A	N/A

---

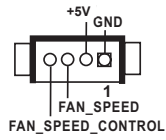
**Back Side:**

Power Button Header  
(PWR\_BTN3)



---

Fan Connector  
(FAN1)





---

# Chapter 3: UEFI SETUP UTILITY

## 3.1 Introduction

This section explains how to use the UEFI SETUP UTILITY to configure your system. The UEFI chip on the motherboard stores the UEFI SETUP UTILITY. You may run the UEFI SETUP UTILITY when you start up the computer. Please press <F2> or <Del> during the Power-On-Self-Test (POST) to enter the UEFI SETUP UTILITY, otherwise, POST will continue with its test routines.

If you wish to enter the UEFI SETUP UTILITY after POST, restart the system by pressing <Ctl> + <Alt> + <Delete>, or by pressing the reset button on the system chassis. You may also restart by turning the system off and then back on.



Because the UEFI software is constantly being updated, the following UEFI setup screens and descriptions are for reference purpose only, and they may not exactly match what you see on your screen.

### 3.1.1 UEFI Menu Bar

The top of the screen has a menu bar with the following selections:

<b>Main</b>	To set up the system time/date information
<b>Advanced</b>	To set up the advanced UEFI features
<b>H/W Monitor</b>	To display current hardware status
<b>Security</b>	To set up the security features
<b>Boot</b>	To set up the default system device to locate and load the Operating System
<b>Exit</b>	To exit the current screen or the UEFI SETUP UTILITY

Use <←> key or <→> key to choose among the selections on the menu bar, and then press <Enter> to get into the sub screen. You can also use the mouse to click your required item.

---

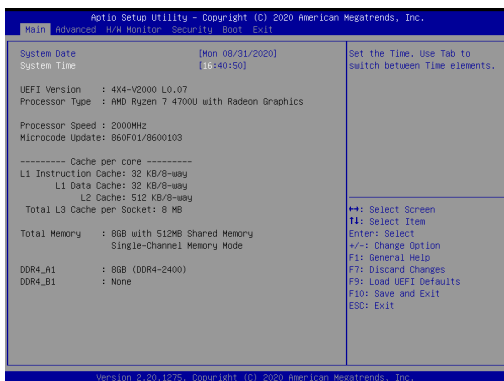
## 3.1.2 Navigation Keys

Please check the following table for the function description of each navigation key.

Navigation Key(s)	Function Description
← / →	Moves cursor left or right to select Screens
↑ / ↓	Moves cursor up or down to select items
+ / -	To change option for the selected items
<Enter>	To bring up the selected screen
<F1>	To display the General Help Screen
<F7>	Discard changes
<F9>	To load optimal default values for all the settings
<F10>	To save changes and exit the UEFI SETUP UTILITY
<F12>	Print screen
<ESC>	To jump to the Exit Screen or exit the current screen

## 3.2 Main Screen

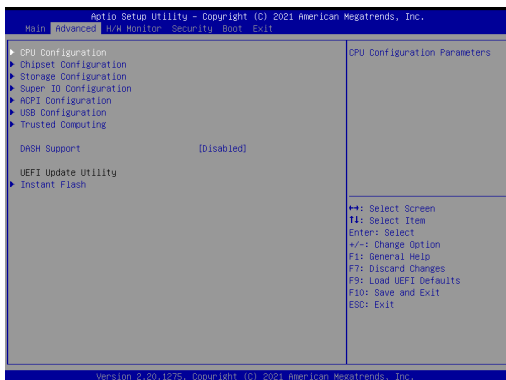
When you enter the UEFI SETUP UTILITY, the Main screen will appear and display the system overview.



---

### 3.3 Advanced Screen

In this section, you may set the configurations for the following items: CPU Configuration, Chipset Configuration, Storage Configuration, Super IO Configuration, ACPI Configuration, USB Configuration, Trusted Computing, MCTP Configuration and Serial Port Console Redirection.



Setting wrong values in this section may cause the system to malfunction.

#### DASH Support

Enable or disable Realtek Lan DASH Function.

#### Instant Flash

Instant Flash is a UEFI flash utility embedded in Flash ROM. This convenient UEFI update tool allows you to update system UEFI without entering operating systems first like MS-DOS or Windows®. Just launch this tool and save the new UEFI file to your USB flash drive, floppy disk or hard drive, then you can update your UEFI only in a few clicks without preparing an additional floppy diskette or other complicated flash utility. Please be noted that the USB flash drive or hard drive must use FAT32/16/12 file system. If you execute Instant Flash utility, the utility will show the UEFI files and their respective information. Select the proper UEFI file to update your UEFI, and reboot your system after UEFI update process completes.

---

### 3.3.1 CPU Configuration



#### Cool 'n' Quiet

Use this item to enable or disable AMD's Cool 'n' Quiet™ technology. The default value is [Enabled]. Configuration options: [Enabled] and [Disabled]. If you install Windows® OS and want to enable this function, please set this item to [Enabled]. Please note that enabling this function may reduce CPU voltage and memory frequency, and lead to system stability or compatibility issue with some memory modules or power supplies. Please set this item to [Disable] if above issue occurs.

#### Core Performance Boost

Core Performance Boost controls whether the processor transitions to a higher frequency than the processor's rated speed if the processor has available power and is within temperature specifications. The default value is [Enabled].

#### SVM Mode

When this is set to [Enabled], a VMM (Virtual Machine Architecture) can utilize the additional hardware capabilities provided by AMD-V. The default value is [Enabled]. Configuration options: [Enabled] and [Disabled].

---

## 3.3.2 Chipset Configuration



### Share Memory

Configure the size of memory that is allocated to the integrated graphics processor when the system boots up.

### Onboard HD Audio

Select [Enabled] or [Disabled] for the onboard HD Audio feature.

### Verb Table Select

The default value is [Combo Jack].

### Onboard LAN 1

This allows you to enable or disable the Onboard LAN 1.

### Onboard LAN 2

This allows you to enable or disable the Onboard LAN 2.

### Restore on AC/Power Loss

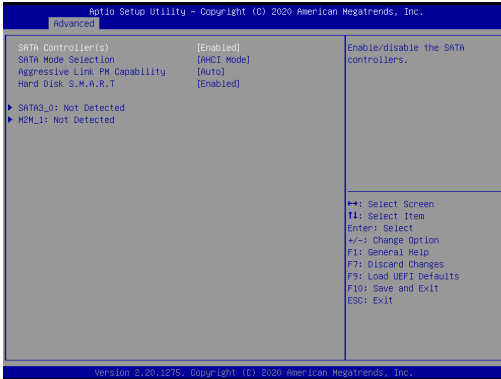
Select the power state after a power failure. If [Power Off] is selected, the power will remain off when the power recovers. If [Power On] is selected, the system will start to boot up when the power recovers.

### Deep S5

[Auto] will disable the deep S5 configuration if RTC/LAN/USB device power on settings are enabled. The default value is [Disabled].

---

### 3.3.3 Storage Configuration



#### SATA Controller(s)

Use this item to enable or disable the SATA Controller feature.

#### SATA Mode Selection

Use this to select SATA mode. The default value is [AHCI Mode].



AHCI (Advanced Host Controller Interface) supports NCQ and other new features that will improve SATA disk performance but IDE mode does not have these advantages.

#### Aggressive Link Power Management

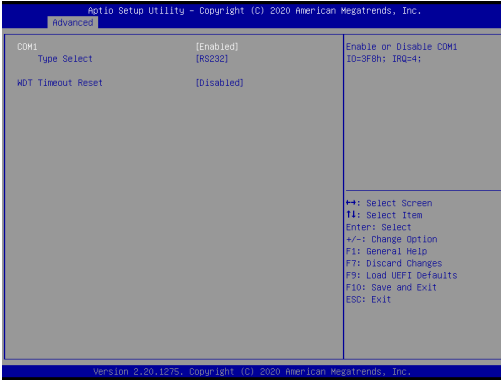
Use this item to configure SATA Aggressive Link Power Management.

#### Hard Disk S.M.A.R.T.

Use this item to enable or disable the S.M.A.R.T. (Self-Monitoring, Analysis, and Reporting Technology) feature. Configuration options: [Disabled] and [Enabled].

---

## 3.3.4 Super IO Configuration



### COM1 Configuration

Use this to set parameters of COM1.

#### Type Select

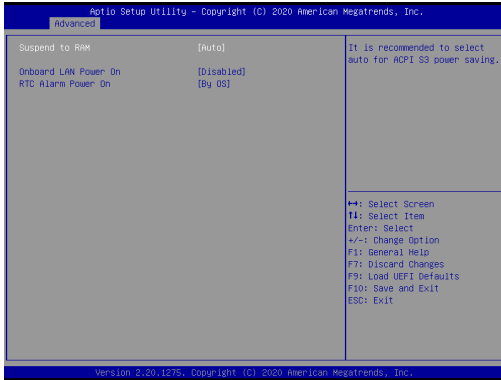
Use this to select COM1 port type: [RS232], [RS422] or [RS485].

#### WDT Timeout Reset

Use this to set the Watch Dog Timer.

---

### 3.3.5 ACPI Configuration



#### Suspend to RAM

Use this item to select whether to auto-detect or disable the Suspend-to-RAM feature. Select [Auto] will enable this feature if the OS supports it.

#### Onboard LAN Power On

Use this item to enable or disable onboard LAN to turn on the system from the power-soft-off mode.

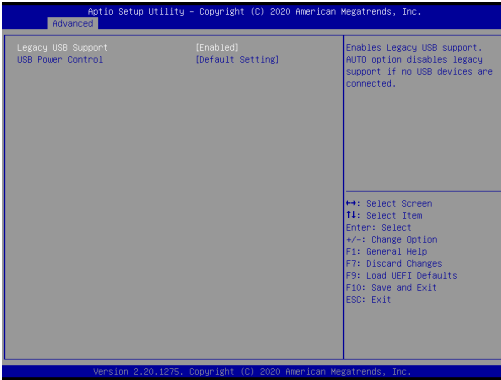
#### RTC Alarm Power On

Use this item to enable or disable RTC (Real Time Clock) to power on the system.



---

### 3.3.6 USB Configuration



#### Legacy USB Support

Use this option to select legacy support for USB devices. There are two configuration options: **[Enabled]** and **[UEFI Setup Only]**. The default value is **[Enabled]**. Please refer to below descriptions for the details of these two options:

**[Enabled]** - Enables support for legacy USB.

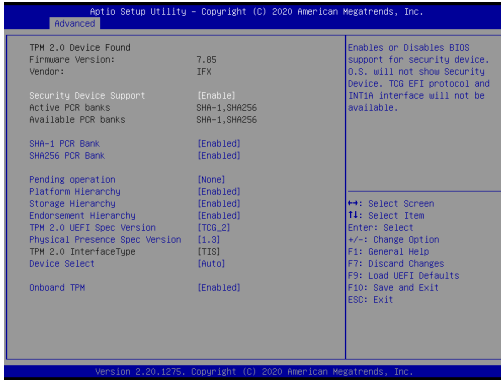
**[UEFI Setup Only]** - USB devices are allowed to use only under UEFI setup and Windows / Linux OS.

#### USB Power Control

Use this to control USB power. The default value is **[Default Setting]**.

---

### 3.3.7 Trusted Computing



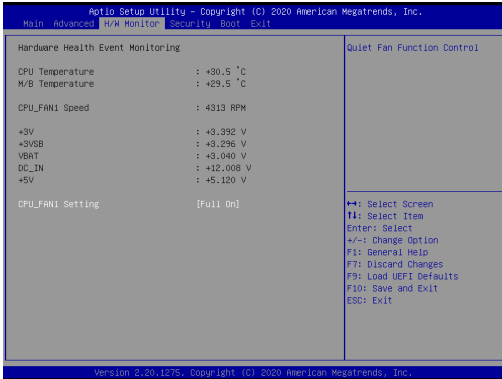
#### Security Device Support

Enable or disable BIOS support for security device.

---

### 3.4 Hardware Health Event Monitoring Screen

In this section, it allows you to monitor the status of the hardware on your system, including the parameters of the CPU temperature, motherboard temperature, CPU fan speed, chassis fan speed, and the critical voltage.



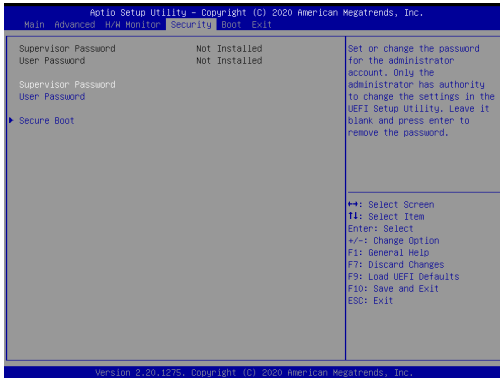
#### CPU\_FAN1 Setting

This allows you to set CPU\_FAN1's speed. Configuration options: [Full On], [Manual] and [Automatic Mode]. The default value is [Automatic Mode].

---

## 3.5 Security Screen

In this section, you may set, change or clear the supervisor/user password for the system.



### Supervisor Password

Set or change the password for the administrator account. Only the administrator has authority to change the settings in the UEFI Setup Utility. Leave it blank and press enter to remove the password.

### User Password

Set or change the password for the user account. Users are unable to change the settings in the UEFI Setup Utility. Leave it blank and press enter to remove the password.

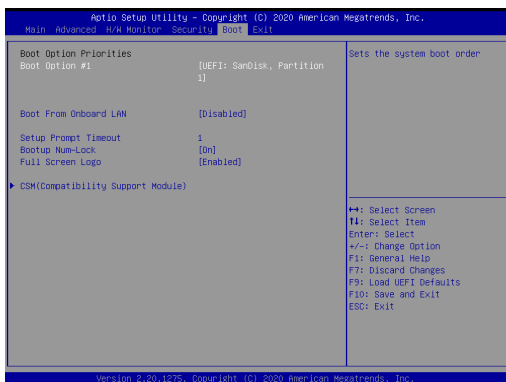
### Secure Boot

Enable to support Windows 8.1 / 8 Secure Boot.

---

## 3.6 Boot Screen

In this section, it will display the available devices on your system for you to configure the boot settings and the boot priority.



### Boot From Onboard LAN

Use this item to enable or disable the Boot From Onboard LAN feature.

### Setup Prompt Timeout

This shows the number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.

### Bootup Num-Lock

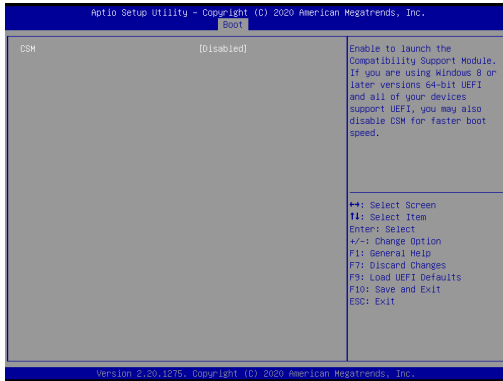
If this item is set to [On], it will automatically activate the Numeric Lock function after boot-up.

### Full Screen Logo

Use this item to enable or disable OEM Logo. The default value is [Enabled].

---

## CSM (Compatibility Support Module)



### CSM

Enable to launch the Compatibility Support Module. Please do not disable unless you're running a WHCK test. If you are using Windows 8.1 64-bit and all of your devices support UEFI, you may also disable CSM for faster boot speed.

### Launch PXE OpROM Policy

Select UEFI only to run those that support UEFI option ROM only. Select Legacy only to run those that support legacy option ROM only. Select Do not launch to not execute both legacy and UEFI option ROM.

### Launch Storage OpROM Policy

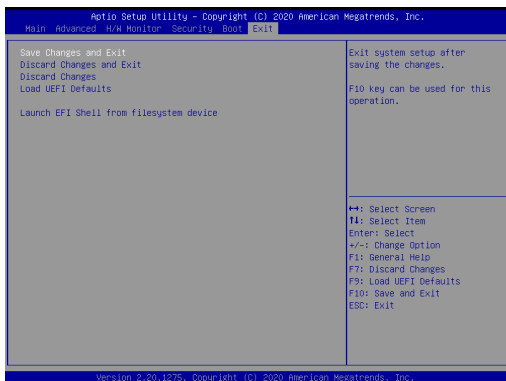
Select UEFI only to run those that support UEFI option ROM only. Select Legacy only to run those that support legacy option ROM only. Select Do not launch to not execute both legacy and UEFI option ROM.

### Launch Video OpROM Policy

Select UEFI only to run those that support UEFI option ROM only. Select Legacy only to run those that support legacy option ROM only. Select Do not launch to not execute both legacy and UEFI option ROM.

---

## 3.7 Exit Screen



### Save Changes and Exit

When you select this option, it will pop-out the following message, "Save configuration changes and exit setup?" Select [OK] to save the changes and exit the UEFI SETUP UTILITY.

### Discard Changes and Exit

When you select this option, it will pop-out the following message, "Discard changes and exit setup?" Select [OK] to exit the UEFI SETUP UTILITY without saving any changes.

### Discard Changes

When you select this option, it will pop-out the following message, "Discard changes?" Select [OK] to discard all changes.

### Load UEFI Defaults

Load UEFI default values for all the setup questions. F9 key can be used for this operation.

### Launch EFI Shell from filesystem device

Attempts to Launch EFI Shell application (Shell64.efi) from one of the available filesystem devices.

---

## **Chapter 4: Software Support**

### **4.1 Install Operating System**

This motherboard supports various Microsoft® Windows® operating systems: 10 64-bit. Because motherboard settings and hardware options vary, use the setup procedures in this chapter for general reference only. Refer your OS documentation for more information.

### **4.2 Support CD Information**

The Support CD that came with the motherboard contains necessary drivers and useful utilities that enhance the motherboard's features.

#### **4.2.1 Running The Support CD**

To begin using the support CD, insert the CD into your CD-ROM drive. The CD automatically displays the Main Menu if "AUTORUN" is enabled in your computer. If the Main Menu did not appear automatically, locate and double click on the file "ASRSETUP.EXE" from the BIN folder in the Support CD to display the menus.

#### **4.2.2 Drivers Menu**

The Drivers Menu shows the available device's drivers if the system detects installed devices. Please install the necessary drivers to activate the devices.

#### **4.2.3 Utilities Menu**

The Utilities Menu shows the application software that the motherboard supports. Click on a specific item then follow the installation wizard to install it.

#### **4.2.4 Contact Information**

If you need to contact ASRockind or want to know more about ASRockind, you're welcome to visit ASRockind's website at <http://www.asrockind.com>; or you may contact your dealer for further information.