

MAXER-2100

2U Rackmount AI Inference Server

User's Manual 1st Ed

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Packing List

Before setting up your product, please make sure the following items have been shipped:

Item	Quantity
● MAXER-2100	1

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

About this Document

This User's Manual contains all the essential information, such as detailed descriptions and explanations on the product's hardware and software features (if any), its specifications, dimensions, jumper/connector settings/definitions, and driver installation instructions (if any), to facilitate users in setting up their product.

Users may refer to the product page at AAEON.com for the latest version of this document.

Safety Precautions

Please read the following safety instructions carefully. It is advised that you keep this manual for future references

1. All cautions and warnings on the device should be noted.
2. All cables and adapters supplied by AAEON are certified and in accordance with the material safety laws and regulations of the country of sale. Do not use any cables or adapters not supplied by AAEON to prevent system malfunction or fires.
3. Make sure the power source matches the power rating of the device.
4. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
5. Always completely disconnect the power before working on the system's hardware.
6. No connections should be made when the system is powered as a sudden rush of power may damage sensitive electronic components.
7. If the device is not to be used for a long time, disconnect it from the power supply to avoid damage by transient over-voltage.
8. Always disconnect this device from any power supply before cleaning.
9. While cleaning, use a damp cloth instead of liquid or spray detergents.
10. Make sure the device is installed near a power outlet and is easily accessible.
11. Keep this device away from humidity.
12. Place the device on a solid surface during installation to prevent falls
13. Do not cover the openings on the device to ensure optimal heat dissipation.
14. Watch out for high temperatures when the system is running.
15. Do not touch the heat sink or heat spreader when the system is running
16. Never pour any liquid into the openings. This could cause fire or electric shock.

17. As most electronic components are sensitive to static electrical charge, be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and contain all electronic components in any static-shielded containers.
18. If any of the following situations arises, please the contact our service personnel:
 - i. Damaged power cord or plug
 - ii. Liquid intrusion to the device
 - iii. Exposure to moisture
 - iv. Device is not working as expected or in a manner as described in this manual
 - v. The device is dropped or damaged
 - vi. Any obvious signs of damage displayed on the device
19. **DO NOT LEAVE THIS DEVICE IN AN UNCONTROLLED ENVIRONMENT WITH TEMPERATURES BEYOND THE DEVICE'S PERMITTED STORAGE TEMPERATURES (SEE CHAPTER 1) TO PREVENT DAMAGE.**

Warning!



This device complies with Part 15 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.

Caution:

There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions and your local government's recycling or disposal directives.

Attention:

Il y a un risque d'explosion si la batterie est remplacée de façon incorrecte. Ne la remplacer qu'avec le même modèle ou équivalent recommandé par le constructeur. Recycler les batteries usées en accord avec les instructions du fabricant et les directives gouvernementales de recyclage.

产品中有毒有害物质或元素名称及含量

AAEON System

QO4-381 Rev.A0

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯 醚(PBDE)
印刷电路板 及其电子组件	×	○	○	○	○	○
外部信号 连接器及线材	×	○	○	○	○	○
外壳	○	○	○	○	○	○
中央处理器 与内存	×	○	○	○	○	○
硬盘	×	○	○	○	○	○
液晶模块	×	×	○	○	○	○
光驱	×	○	○	○	○	○
触控模块	×	○	○	○	○	○
电源	×	○	○	○	○	○
电池	×	○	○	○	○	○

本表格依据 SJ/T 11364 的规定编制。

○：表示该有毒有害物质在该部件所有均质材料中的含量均在 GB/T 26572 标准规定的限量要求以下。

×：表示该有害物质的某一均质材料超出了 GB/T 26572 的限量要求，然而该部件

仍符合欧盟指令 2011/65/EU 的规范。

备注：

一、此产品所标示之环保使用期限，系指在一般正常使用状况下。

二、上述部件物质中央处理器、内存、硬盘、光驱、电源为选购品。

三、上述部件物质液晶模块、触控模块仅一体机产品适用。

Hazardous and Toxic Materials List

AAEON System

QO4-381 Rev.A0

Component Name	Hazardous or Toxic Materials or Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated biphenyls (PBBS)	Polybrominated ethers (PBDES)
PCB and Components	X	O	O	O	O	O
Wires & Connectors for Ext.Connections	X	O	O	O	O	O
Chassis	O	O	O	O	O	O
CPU & RAM	X	O	O	O	O	O
HDD Drive	X	O	O	O	O	O
LCD Module	X	X	O	O	O	O
Optical Drive	X	O	O	O	O	O
Touch Control Module	X	O	O	O	O	O
PSU	X	O	O	O	O	O
Battery	X	O	O	O	O	O

This form is prepared in compliance with the provisions of SJ/T 11364.
 O: The level of toxic or hazardous materials present in this component and its parts is below the limit specified by GB/T 26572.

X: The level of toxic of hazardous materials present in the component exceed the limits specified by GB/T 26572, but is still in compliance with EU Directive 2011/65/EU (RoHS 2).

Notes:

1. The Environment Friendly Use Period indicated by labelling on this product is applicable only to use under normal conditions.
2. Individual components including the CPU, RAM/memory, HDD, optical drive, and PSU are optional.
3. LCD Module and Touch Control Module only applies to certain products which feature these components.

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Chapter 1

Product Specifications

1.1 Specifications

System

CPU	12/13th Generation Intel® Core™ LGA1700 Socket Processors, TDP Max 125W Built-in Default CPU: Intel® Core™ i9-13900 Processor
GPU	NVIDIA® GeForce RTX™ 4080 SUPER (Optional support NVIDIA® GeForce Graphic or AI Computing Card) If GPU EOL, it will be replaced with a GPU with equivalent performance.
Chipset	Intel® Q670 Chipset
System Memory	DDR5 4000MHz Dual-Channel DIMM x 4, Up to 128GB Non-ECC, Un-buffered Memory
Display Interface	HDMI 2.0 x 1 DP 1.4 x 1 VGA x 1
Storage Device	2.5" SATA 6Gb/s Drive Bay x 2 (Swappable, RAID 0, 1) M.2 2280 M-Key x 1 (NVMe)
Ethernet	RJ-45 GbE LAN x 1 (supports Intel® AMT 12.0) RJ-45 GbE LAN x 1 RJ-45 2.5GbE LAN x 2
USB	USB 3.2 Gen 2 x 4 (10Gbps)
Serial Port	DB-9 x 1 for RS-232/422/485
Audio	Audio (Mic-in/Line-out/Line-In)
Expansion	PCIe [x16] x 1 for NVIDIA® GeForce RTX™ 4080 SUPER M.2 3042/3052 B-Key x 1 + Micro SIM Slot M.2 2230 E-Key x 1
TPM	TPM 2.0 Onboard

System

Indicator	System LED x 1 HDD Activity x 1
OS Support	Windows® 10 IoT Enterprise 64-bit Windows® 11 Pro 64-bit Linux Ubuntu 22.04.3 above
Drive Bay	2.5" SATA 6Gb/s Drive Bay x 2 (Swappable, RAID 0, 1)
Front Control	Power On/Off System Reset

Power Supply

Power Requirement	Built-in 1000W Power Supply
--------------------------	-----------------------------

Mechanical

Mounting	Rack Mount
Dimensions (W x H x D)	17" x 3.46" x 17.6" (431.8mm x 88mm x 448mm)
Gross Weight	31.52 lb. (14.3Kg)
Net Weight	24.25 lb. (11Kg)

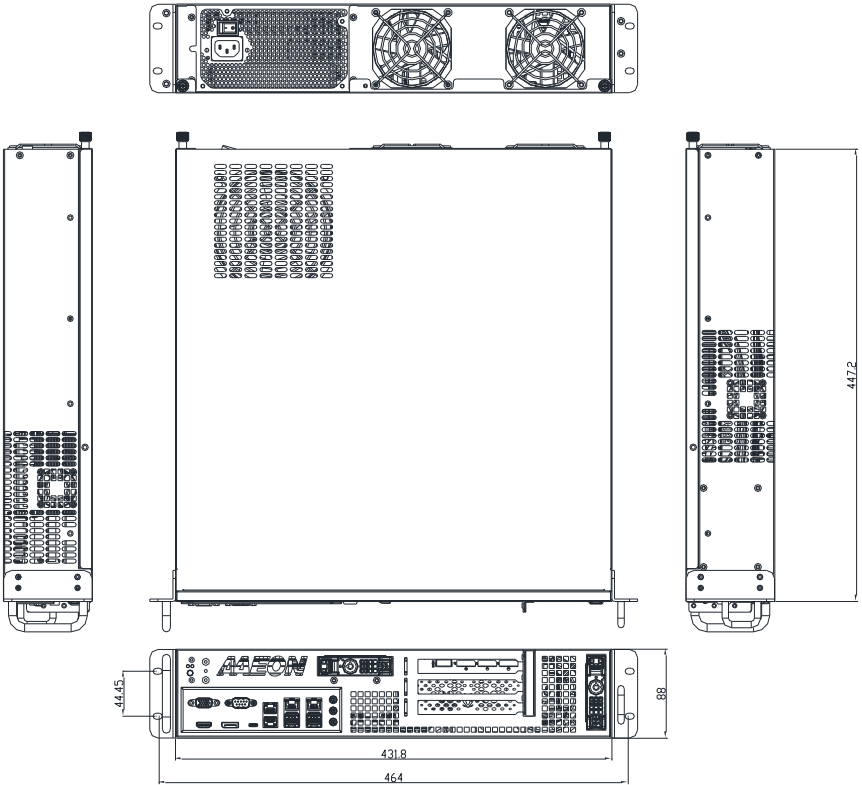
Environmental

Operating Temperature	32°F ~ 104°F (0°C ~ 40°C), according to IEC68-2 with 0.5 m/s AirFlow
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Certification	CE/FCC class A

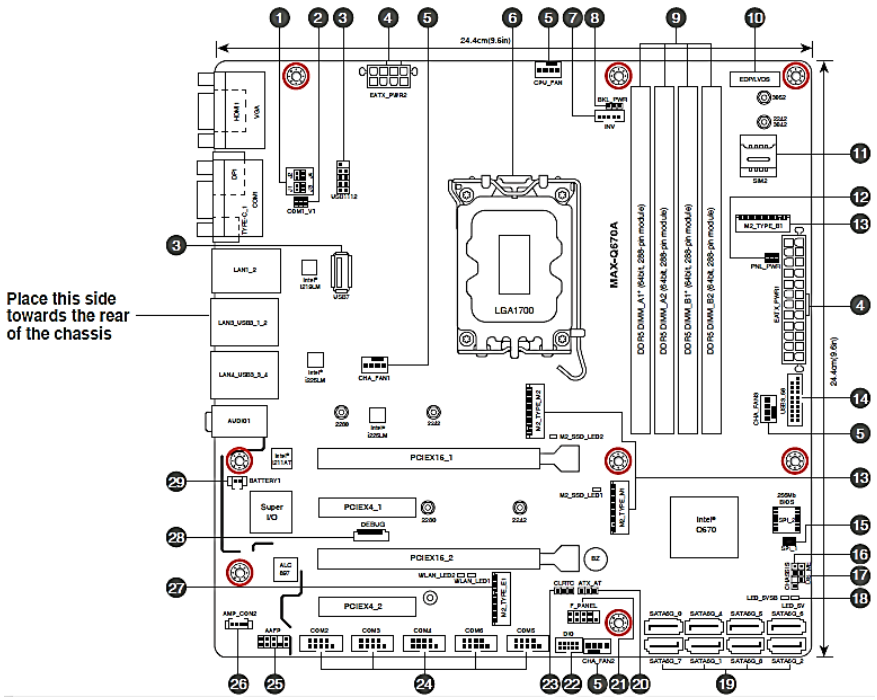
Chapter 2

Hardware Information

2.1 Dimensions



2.2 Jumpers and Connectors



Note: The connectors listed on the PCB may not all be supported at the MAXER-2100 system-level product. For available interfaces, please follow section 2.4.

2.3 List of Jumpers

The system has a number of jumpers that allow you to configure your system to suit your application.

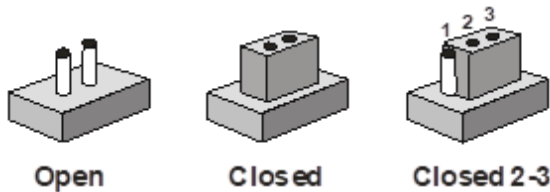
The table below shows the function of each of the system's jumpers

Label	Function
CLRTC	Clear RTC RAM
J1~4	COM 1 RS-422/485 Terminator
ATX_AT	AT/ATX Mode Selection Jumper
CHASSIS	Chassis Intrusion Header
COM1_V1	COM 1 Ring/+5V/+12V Selection Jumper
DIS_ME	Intel® ME Jumper

2.3.1 Setting Jumpers

You configure your card to match the needs of your application by setting jumpers. A jumper is the simplest kind of electric switch. It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To "close" a jumper you connect the pins with the clip.

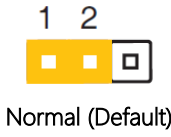
To "open" a jumper you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2 and 3. In this case you would connect either pins 1 and 2 or 2 and 3.



A pair of needle-nose pliers may be helpful when working with jumpers. If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any change.

Generally, you simply need a standard cable to make most connections.

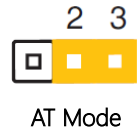
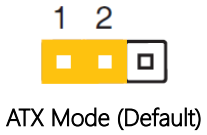
2.3.2 Clear CMOS (CLRTC)



2.3.3 COM 1 RS-422/485 Terminator (J1~4)



2.3.4 AT/ATX Mode Selection Jumper (ATX_AT)



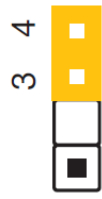
Pins	Mode
1-2 (Default)	ATX mode
2-3	AT mode

Note: Jumper setting of ATX_AT should be consistent with the setting of Power Mode in BIOS.

2.3.5 Chassis Intrusion Header (CHASSIS)



Enable (Default)



Disable

2.3.6 COM 1 Ring/+5V/+12V Selection Jumper (COM1_V1)



+12V



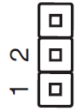
+5V



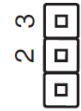
Ring (Default)

Pins	Mode
+12V	1-2
+5V	3-4
Ring (Default)	5-6

2.3.7 Intel® ME Jumper (DIS_ME)



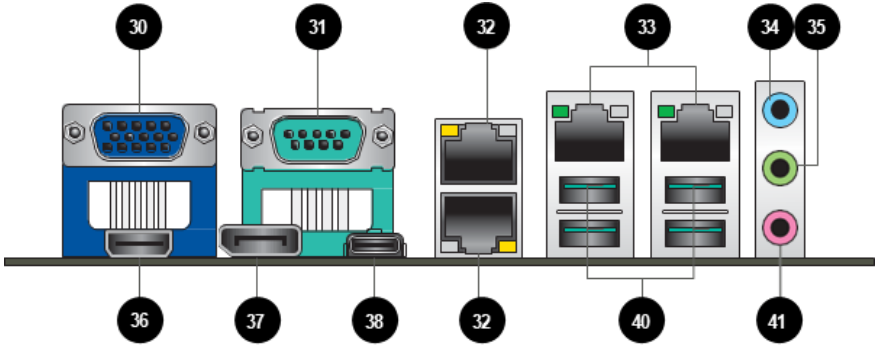
Enable (Default)



Disable

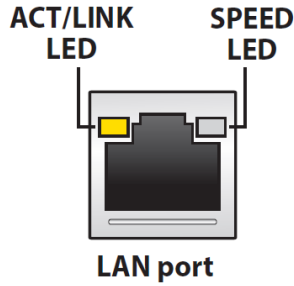
2.4 List of Ports & Connectors

Rear Panel Connectors



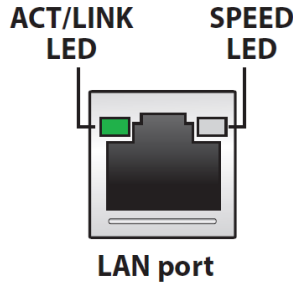
Label	Function
30	VGA
31	Serial Port
32	RJ-45 LAN Port 1/Port 2
33	RJ-45 LAN Port 3/Port 4
34/35/41	Line In/Line Out/Mic
36	HDMI 2.0 Port
37	DP 1.4
38	USB 3.2 Gen 2 x 2 (Type-C)
40	USB 3.2 Gen 2 (Port 1-4)

2.4.1 RJ-45 LAN Port 1/Port 2 (32)



ACT/LINK LED		SPEED LED	
Status	Description	Status	Description
OFF	No link	OFF	10 Mbps connection
YELLOW	Linked	ORANGE	100 Mbps connection
BLINKING	Data activity	GREEN	1 Gbps connection
YELLOW (Blinking then steady)	Ready to wake up from S5 mode		

2.4.2 RJ-45 LAN Port 1/Port 2 (33)

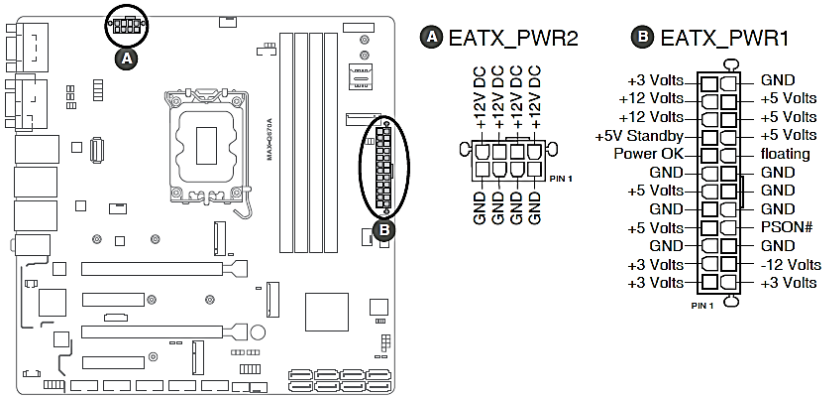


ACT/LINK LED		SPEED LED	
Status	Description	Status	Description
OFF	No link	OFF	10 Mbps connection
GREEN	Linked	OFF	100 Mbps connection
BLINKING	Data activity	ORANGE	1 Gbps connection
GREEN (Blinking then steady)	Ready to wake up from S5 mode	GREEN	2.5 Gbps connection

Internal Connectors

Label	Function
1	COM 1 RS-422/485 Terminator
2	COM 1 Ring/+5V/+12V Selection Header
3	USB 2.0 Header
4	ATX Power Connectors
5	CPU and Chassis Fan Headers
6	LGA 1700 CPU Socket
9	DDR5 DIMM Slots
11	Micro SIM Card Socket
13	M.2 M-Key/B-Key Slots
14	USB 3.2 Gen 1 Header
15	BIOS Programmable Header
16	Chassis Intrusion Header
17	Intel® ME Jumper
18	Standby Power LEDs
19	SATA
20	AT/ATX Mode Selection Jumper
21	System Panel Header
22	Digital I/O Header
23	Clear RTC RAM
24	Serial Port Headers
25	Front Panel Audio Header
26	Audio Amplifier Connector
27	Debug Card Connector
28	M.2 E-Key Slot
29	Battery Connector

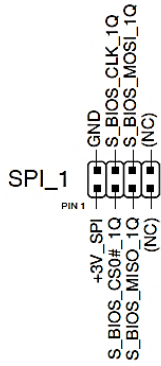
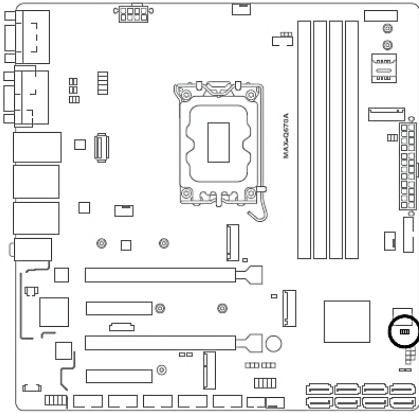
2.4.3 ATX Power Connectors



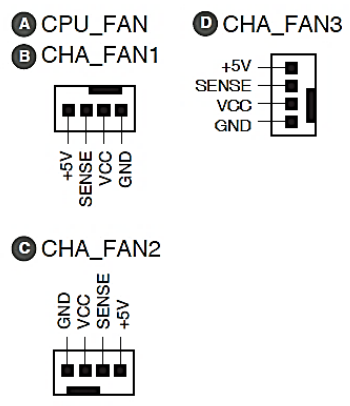
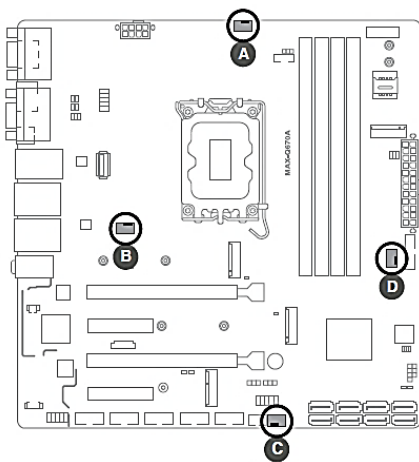
Note: For a fully configured system, we recommend that you use a power supply unit (PSU) that complies with ATX 12 V Specification 2.0 (or later version) and provides a minimum power of 330W.

Note: We recommend that you use a PSU with higher power output when configuring a system with more power-consuming devices. The system may become unstable or may not boot up if the power is inadequate.

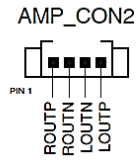
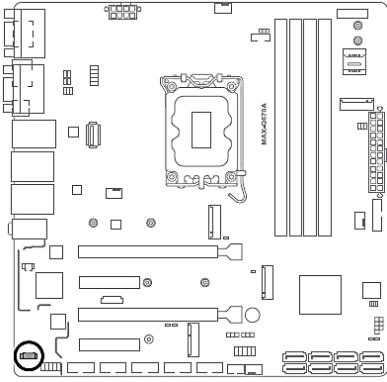
2.4.4 BIOS Programmable Header



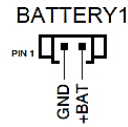
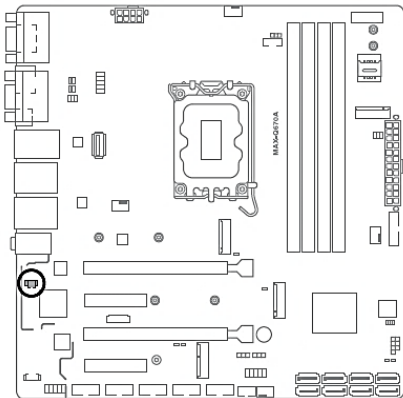
2.4.5 CPU and Chassis Fan Headers



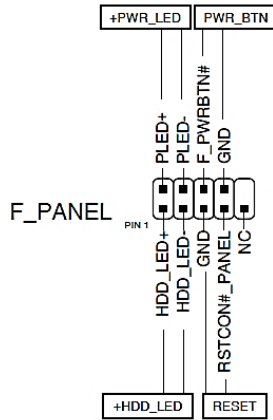
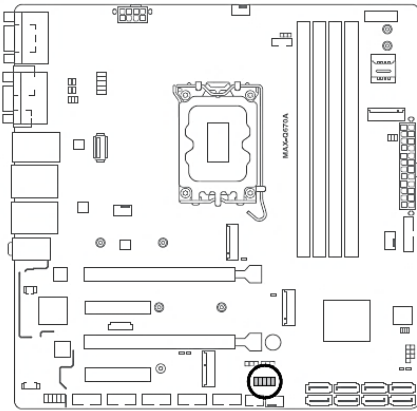
2.4.6 Audio Amplifier Connector



2.4.7 Battery Connector



2.4.8 System Panel Header



- **System Power LED header (2-pin +PWR_LED)**

The 2-pin and/or 3-1 pin headers allow you to connect the System Power LED. The System Power LED lights up when the system is connected to a power source, or when you turn on the system power, and blinks when the system is in sleep mode.

- **Storage Device Activity LED header (2-pin +HDD_LED)**

The 2-pin header allows you to connect the Storage Device Activity LED. The Storage Device Activity LED lights up or blinks when data is read from or written to the storage device or storage device add-on card.

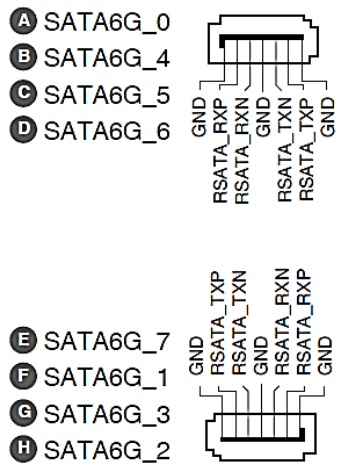
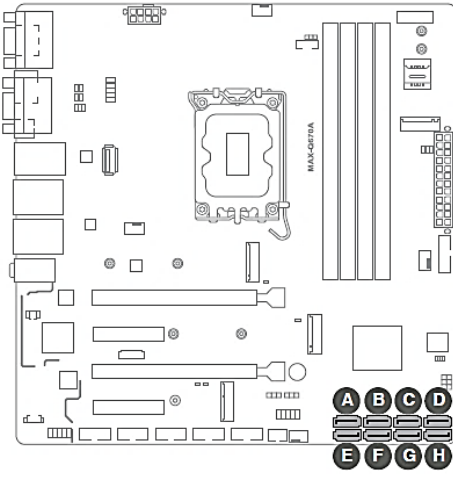
- **Power Button/Soft-off Button header (2-pin PWR_BTN)**

The 2-pin header allows you to connect the system power button. Press the power button to power up the system, or put the system into sleep or soft-off mode (depending on the operating system settings).

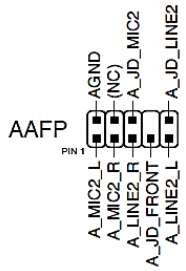
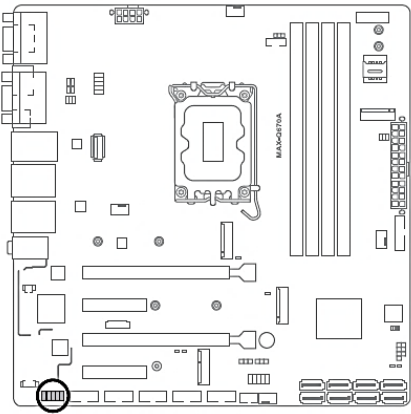
- **Reset button header (2-pin RESET)**

The 2-pin header allows you to connect the chassis-mounted reset button. Press the reset button to reboot the system.

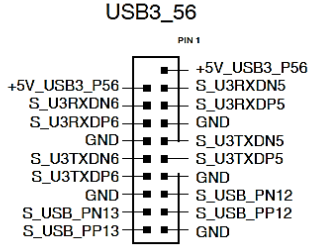
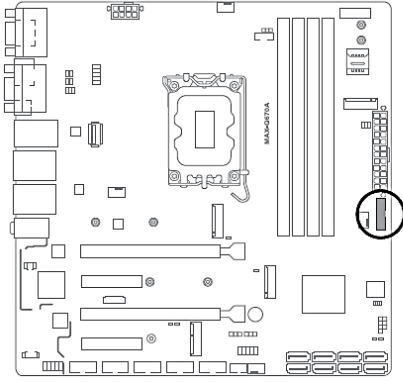
2.4.9 SATA



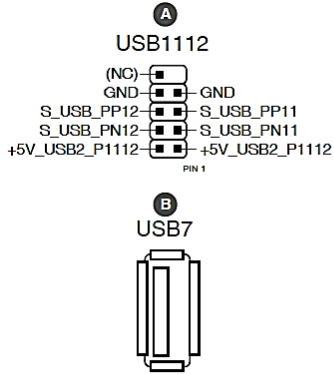
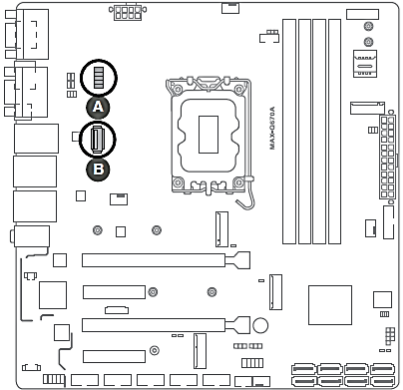
2.4.10 Front Panel Audio Header



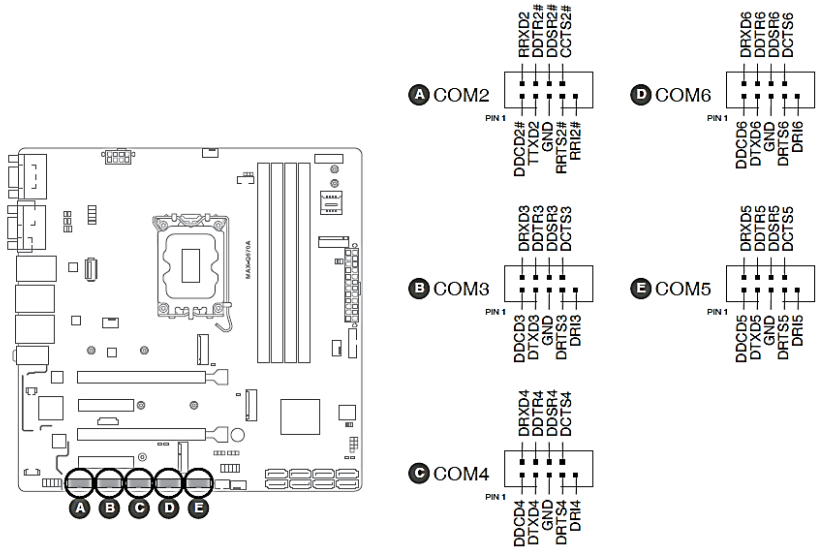
2.4.11 USB 3.2 Gen 1 Header



2.4.12 USB 2.0 Header

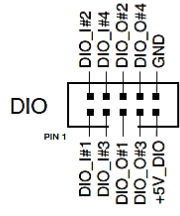
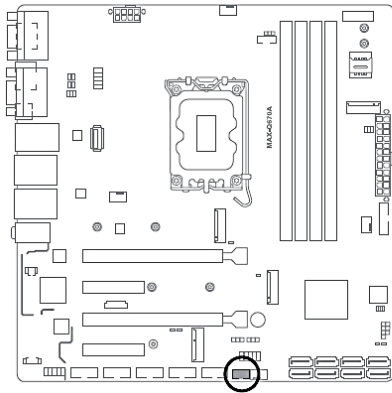


2.4.13 Serial Port Headers

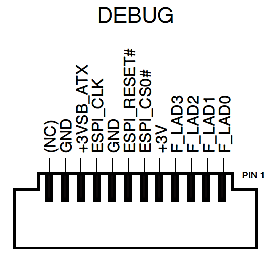
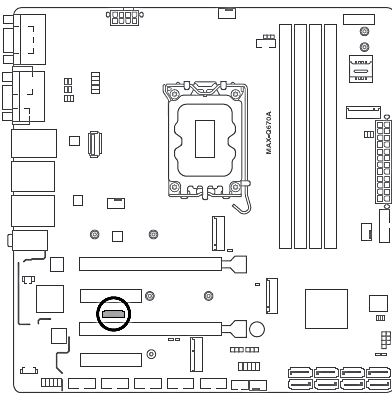


Pin	Function	Pin	Function
1	DCD# (422TXD-/485DATA-)	2	RXD (422TXD+/485DATA+)
3	TXD (422RXD+)	4	DTR# (422RXD-)
5	GND	6	DSR#
7	RTS#	8	CTS#
9	RI/+5V/+12V	10	N.C.

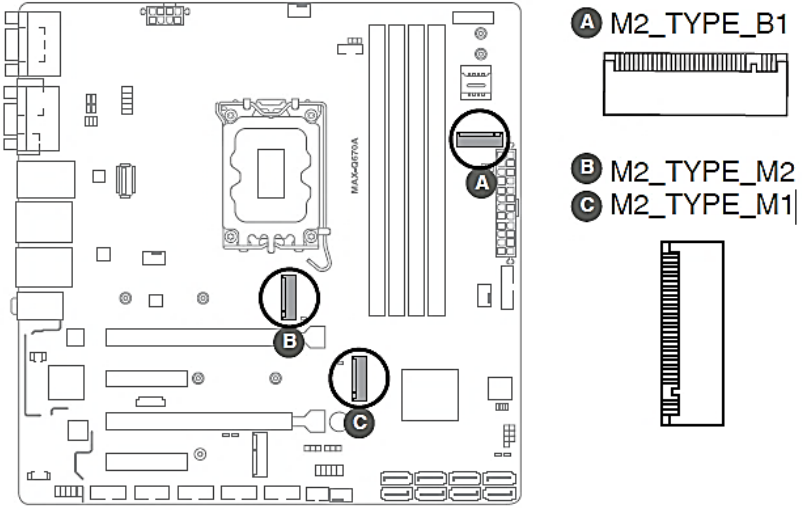
2.4.14 Digital I/O Header



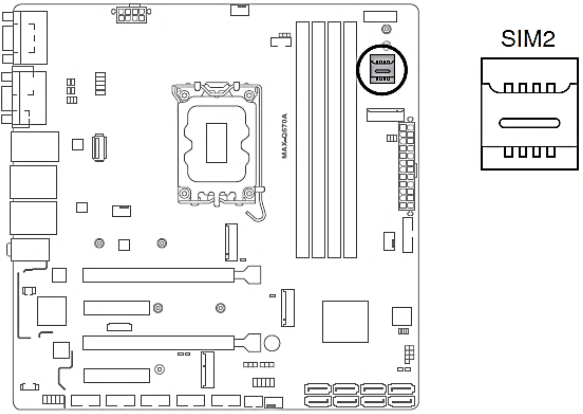
2.4.15 Debug Card Connector



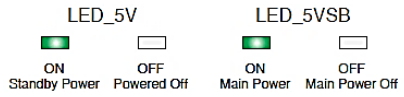
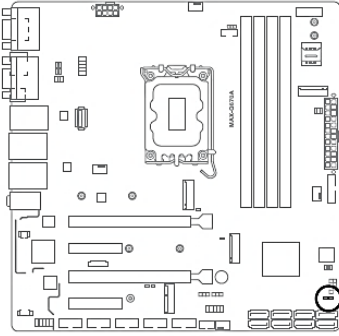
2.4.16 M.2 Key Slots



2.4.17 Micro SIM Card Socket



2.4.18 Standby Power LEDs



System State	LED Indication
S0 state	LED_5V & LED_5VSB keep lighting
S5 state	Only LED_5VSB keep lighting

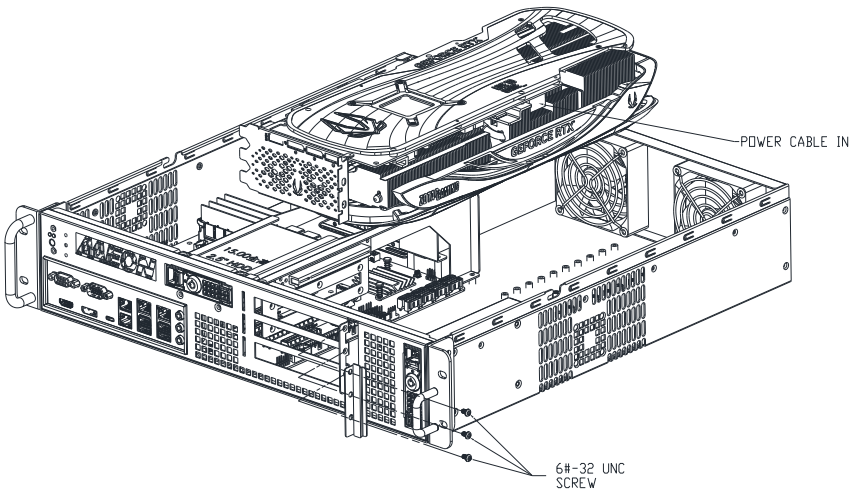
2.5 Hardware Assembly

This section details the steps needed to install various hardware components for the MAXER-2100.

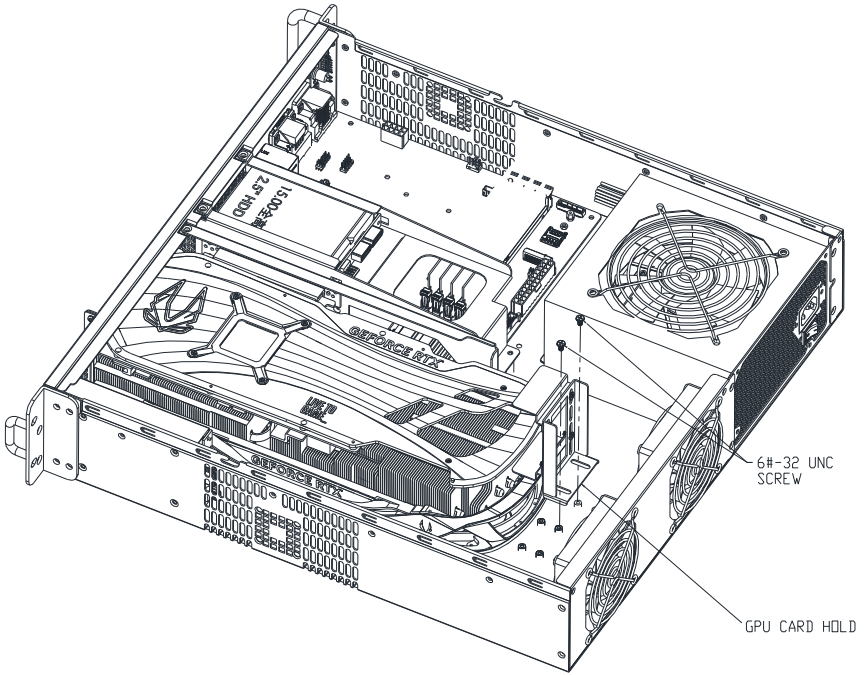
2.5.1 GPU Installation

To install the GPU, please follow the steps shown in the following diagram.

Step 1:

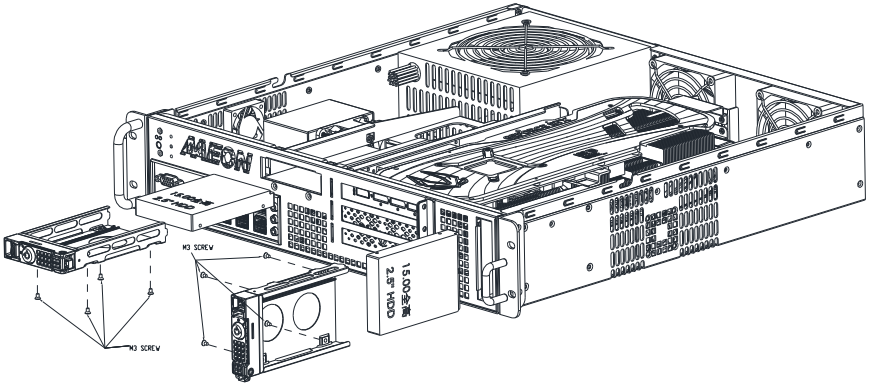


Step 2:



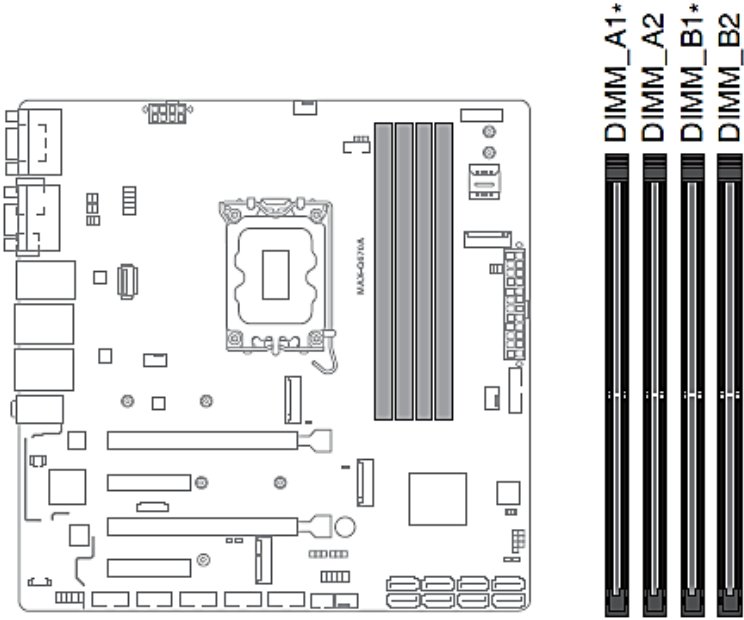
2.5.2 2.5" HDD or SSD Installation

The system's 2.5" HDD or SSD drive bays can be accessed for drive installation via side panel trays, as shown in the following diagram.

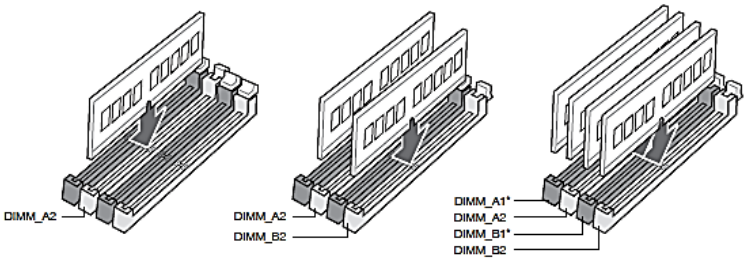


2.5.3 U-DIMM Installation

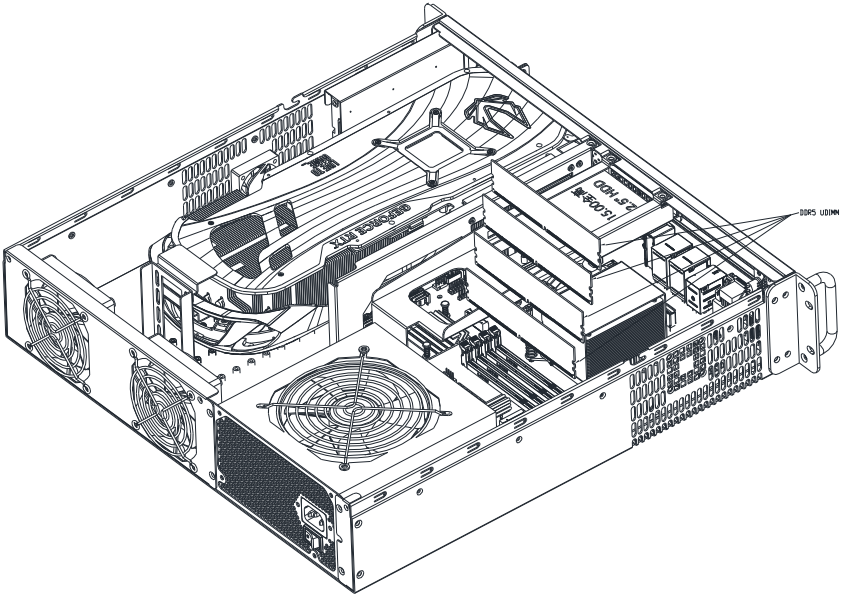
Always install identical DDR5 DIMM pairs with the same brand, speed, size, and chip type for the dual-channel configuration.



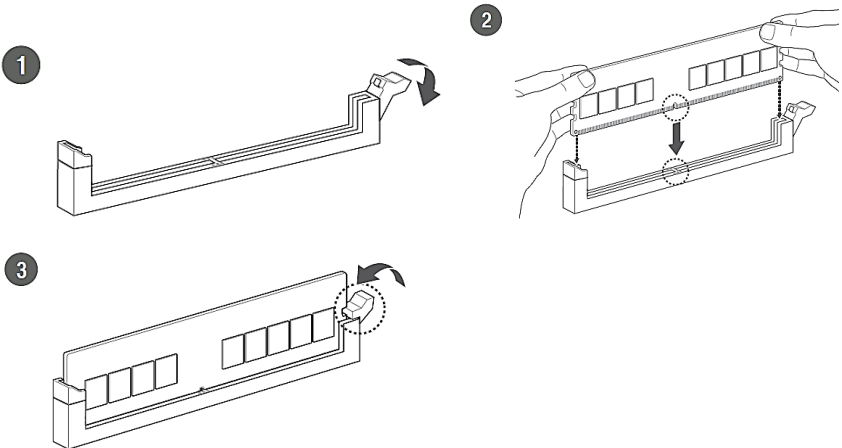
Recommended memory configurations



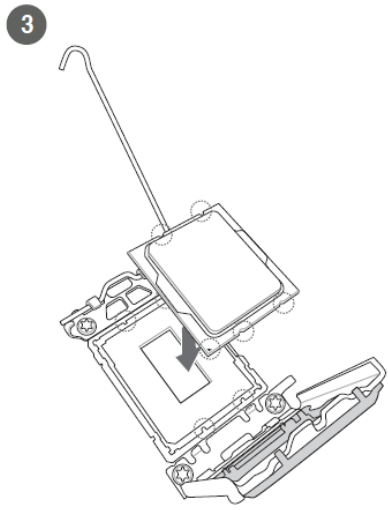
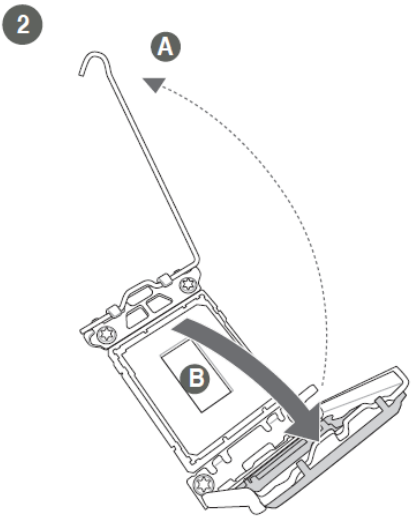
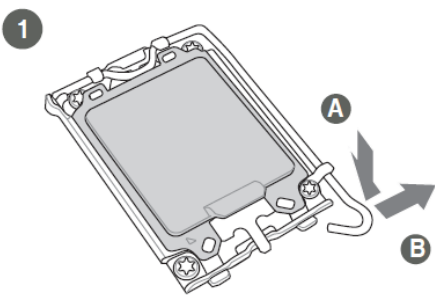
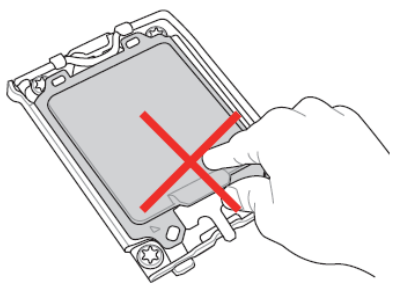
Please see the diagram below for U-DIMM slot location.

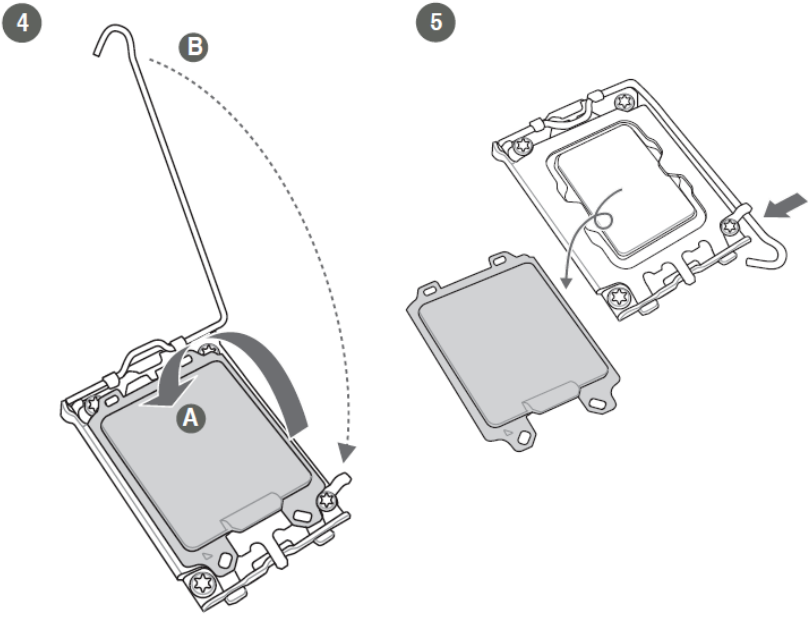


Follow standard U-DIMM installation process, as shown below.



For CPU installation, follow the below steps.





Chapter 3

AMI BIOS Setup

3.1 BIOS Setup Program

Use the BIOS Setup program to configure its parameters. The BIOS screens include navigation keys and brief online help to guide you in using the BIOS Setup program.

Entering BIOS Setup at startup

To enter BIOS Setup at startup:

Press <Delete> during the Power-On Self Test (POST). If you do not press <Delete>, POST continues with its routine.

Entering BIOS Setup after POST

To enter BIOS Setup after POST:

- Press <Ctrl>+<Alt>+ simultaneously.
- Press the reset button on the system chassis.
- Press the power button to turn the system off then back on. Do this option only if you failed to enter BIOS Setup using the first two options.

CAUTION! Using the power button, reset button, or the <Ctrl>+<Alt>+ keys to reboot a running operating system can cause damage to your data or system. Always shut down the system properly from the operating system.

IMPORTANT:

- The default BIOS settings for this motherboard apply to most working conditions and ensures optimal performance. If the system becomes unstable after changing any BIOS settings, load the default settings to regain system stability. Select the option Restore Defaults under the Save & Exit Menu. See section 3.7 Save & Exit.
- The BIOS setup screens shown in this section are for reference purposes only, and may not exactly match what you see on your screen.

3.2 AMI BIOS Setup

AMI BIOS ROM has a built-in Setup program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM and BIOS NVRAM so that it retains the Setup information when the power is turned off.

Entering Setup

Power on the computer and press or <ESC> immediately. This will allow you to enter Setup.

Main

Set the date, use tab to switch between date elements.

Advanced

Enable/disable boot option for legacy network devices.

Chipset

Host bridge parameters.

Security

Set setup administrator password.

Boot

Enables/disables quiet boot option.

Save & Exit

Exit system setup after saving the changes.

Intel® AMT Configuration

Configure user content preferences.

3.3 Setup Submenu: Main

The Main menu provides you an overview of the basic system information, and allows you to set the system date, time, language, and security settings.

System Date [Day MM/DD/YYYY]

Allows you to set the system date.

System Time [HH:MM:SS]

Allows you to set the system time.

3.4 Setup Submenu: Advanced

The Advanced menu items allow you to change the settings for the CPU and other system devices.

Case Open Warning [Disabled]

Allows you to enable or disable the case open detecting function. Configuration options: [Disabled] [Enabled] [Clear]

3.4.1 CPU Configuration

The items in this menu shows CPU-related information the BIOS automatically detects.

Note: The items shown in the submenu may be different depending on the type of CPU installed.

Performance-core Information

The item displays the P-Core information.

Hyper-threading [Enabled]

The Intel Hyper-Threading Technology allows a hyper-threading processor to appear as two logical processors to the operating system, allowing the operating system to schedule two threads or processes simultaneously.

[Enabled] Two threads per activated core are enabled.

[Disabled] Only one thread per activated core is enabled.

Intel (VMX) Virtualization Technology [Enabled]

[Enabled] Allows a hardware platform to run multiple operating systems separately and simultaneously, enabling one system to virtually function as several systems.

[Disabled] Disables this function.

3.4.2 Trusted Computing

Security Device Support [Enable]

Allows you to enable or disable BIOS support for security devices. Configuration options: [Disable] [Enable]

SHA256 PCR Bank [Enabled]

Allows you to enable or disable SHA256 PCR Bank. Configuration options: [Disabled] [Enabled]

SHA384 PCR Bank [Disabled]

Allows you to enable or disable SHA384 PCR Bank. Configuration options: [Disabled] [Enabled]

Pending operation [None]

Allows you to schedule an operation for the Security Device. Configuration options: [None] [TPM Clear]

Platform Hierarchy [Enabled]

Allows you to enable or disable Platform Hierarchy. Configuration options: [Enabled] [Disabled]

Storage Hierarchy [Enabled]

Allows you to enable or disable Storage Hierarchy. Configuration options: [Enabled] [Disabled]

Endorsement Hierarchy [Enabled]

Allows you to enable or disable Endorsement Hierarchy. Configuration options: [Enabled] [Disabled]

Physical Presence Spec Version [1.3]

Selects to tell operating system to support PPI Spec Version 1.2 or 1.3. Some HCK tests might not support 1.3. Configuration options: [1.2] [1.3]

Device Select [Auto]

Allows you to select the TPM device. Configuration options: [Auto] [TPM1.2] [TPM2.0]

3.4.3 PTT Configuration

This item allows you to set the PTT configuration.

TPM Device Selection [dTPM]

Allows you to select TPM device.
[PTT] Enables PTT in SkuMgr.
[dTPM] Disables PTT in SkuMgr

3.4.4 SATA Configuration

SATA Controller(s) [Enabled]

Allows you to enable or disable SATA devices. Configuration options: [Enabled] [Disabled].

Enable VMD controller [Disabled]

This item allows you to disable or enable VMD controller. Configuration options: [Disabled] [Enabled]

SATA6G_0/1/2/3/4/5/6/7

Port 0/1/2/3/4/5/6/7 [Enabled]

Allows you to enable / disable the SATA port(s). Configuration options: [Disabled] [Enabled]

Hot Plug [Disabled]

Allows you to enable / disable the SATA Hot Plug Support. Configuration options: [Disabled] [Enabled]

3.4.5 USB Configuration

USB Mass Storage Driver Support [Enabled]

Allows you to enable or disable USB Mass Storage Driver Support. Configuration options: [Disabled] [Enabled]

3.4.6 Hardware Monitor

The items in this menu allow you to configure the smart fan.

DC FAN Control [Enable]

Allows you to enable or disable DC FAN. Configuration options: [Disabled] [Enabled]

Smart Fan Function

System Smart Fan1/2 and CPU Smart Fan Setting

Fan Mode [Smart Fan IV]

Allows you to select the FAN mode. Configuration options: [Manual Mode] [Thermal Cruise] [Smart Fan IV] [Speed Cruise]

Note: The following item appears only when you set Fan Mode to [Manual Mode].

Manual PWM [128]

Allows you to set the Manual PWM value.

Note: The fan will work with this Manual PWM Value (0~255 for 10% ~100%).

Note: The following items appear only when you set Fan Control Mode to [Thermal Cruise Mode].

Critical temperature [60]

Input value range: [0~255]

Enable critical duty [Disabled]

Configuration options: [Disabled] [Enabled]

Critical duty value [10]

Input value range: [0~127]

Fan target temperature [40]

Input value range: [0~127]

Tolerance value [0]

Input value range: [0~7]

Stop duty [Disabled]

Configuration options: [Disabled] [Enabled]

Stop value [10]

Input value range: [0~127]

Startup value [1]

Input value range: [0~127]

Stop time [60]

Input value range: [0~127]

Note: The following items appear only when you set **Fan Mode** to [Speed Cruise].

Fan step up value [1]

Input value range: [0~15]

Fan step down value [1]

Input value range: [0~15]

Target speed count [2000]

Input value range: [0~4095]

Tolerance value [0]

Input value range: [0~63]

Note: The following items appear only when you set **Fan Mode** to [Smart Fan IV].

Temperature 1 [25] / Temperature 2 [35] / Temperature 3 [45] /

Temperature 4 [55]

Determines the temperature value for the Smart Fan IV mode. Input value range: [0~255]

FD/RPM 1 [140] / FD/RPM 2 [170] / FD/RPM 3 [200] / FD/RPM 4 [230]

Determines the Fan Duty / RPM value. Input value range: [0~255]

Critical temperature [60]

Input value range: [0~255]

Critical tolerance [0]

Input value range: [0~7]

Enable critical duty [Disabled]

Configuration options: [Disabled] [Enabled]

Tolerance value [0]

Input value range: [0~7]

RPM Mode [Disabled]

Allows you to enable or disable Smart Fan IV Close Loop Fan Control RPM Mode.

Configuration options: [Disabled] [Enabled]

3.4.7 SIO Configuration

The items in this menu allow you to configure Super IO settings.

[*Active*] Serial Port 1

Use this device [Enabled]

Allows you to enable or disable this logical device. Configuration options: [Enabled] [Disabled]

NOTE: The following two items appear only when you set **Use this device** to [Enabled].

Possible [Use Automatic Settings]

Allows you to select an optimal setting for Super I/O devices. Configuration options: [Use Automatic Settings] [IO=3F8h; IRQ=4;] [IO=2F8h; IRQ=3]

Mode [RS232]

Allows you to select the Serial Port mode. Configuration options: [RS232] [RS422] [RS485]

[*Active*] Serial Port 2**Use this device [Enabled]**

Allows you to enable or disable this logical device. Configuration options: [Enabled] [Disabled]

Possible [Use Automatic Settings]

This item appears only when you set **Use this device** to [Enabled] and allows you to select an optimal setting for Super I/O devices. Configuration options: [Use Automatic Settings] [IO=2F8h; IRQ=3] [IO=3F8h; IRQ=4;]

[*Active*] Serial Port 3**Use this device [Enabled]**

Allows you to enable or disable this logical device. Configuration options: [Enabled] [Disabled]

Possible [Use Automatic Settings]

This item appears only when you set **Use this device** to [Enabled] and allows you to select an optimal setting for Super I/O devices. Configuration options: [Use Automatic Settings] [IO=3E8h; IRQ=6;] [IO=2E8h; IRQ=10;]

[*Active*] Serial Port 4**Use this device [Enabled]**

Allows you to enable or disable this logical device. Configuration options: [Enabled] [Disabled]

Possible [Use Automatic Settings]

This item appears only when you set **Use this device** to [Enabled] and allows you to select an optimal setting for Super I/O devices. Configuration options: [Use Automatic Settings] [IO=2E8h; IRQ=10;] [IO=3E8h; IRQ=6;]

[*Active*] Serial Port 5

Use this device [Enabled]

Allows you to enable or disable this logical device. Configuration options: [Enabled] [Disabled]

Possible [Use Automatic Settings]

This item appears only when you set **Use this device** to [Enabled] and allows you to select an optimal setting for Super I/O devices. Configuration options: [Use Automatic Settings] [IO=2F0h; IRQ=11;] [IO=2E0h; IRQ=5;]

[*Active*] Serial Port 6**Use this device [Enabled]**

Allows you to enable or disable this logical device. Configuration options: [Enabled] [Disabled]

Possible [Use Automatic Settings]

Allows you to select an optimal setting for Super I/O devices. Configuration options: [Use Automatic Settings] [IO=2E0h; IRQ=5;] [IO=2F0h; IRQ=11;]

3.4.8 AMT Configuration

AMT BIOS Features [Enabled]

When disabled, you are not able to access the MEBx setup. Configuration options: [Enabled] [Disabled]

3.4.9 PCH-FW Configuration

The items listed in this screen display firmware related information.

Firmware Update Configuration**Me FW Image Re-Flash [Disabled]**

Allows you to enable or disable Me firmware Image Re-Flash function. Configuration options: [Disabled] [Enabled]

FW Update [Disabled]

Allows you to enable or disable ME FW Update function. Configuration options: [Disabled] [Enabled]

3.4.10 NVMe Configuration

The NVMe Configuration menu displays the NVMe controller and drive information of the devices connected and allows you to configure NVMe device options settings.

3.4.11 Power Management

Power Mode [ATX Type]

Select power supply mode. Configuration options: [ATX Type] [AT Type]

Note: The following items appear when you set Power Mode to [ATX Type].

Restore AC Power Loss [Always Off]

[Last State] The system goes into either off or on state, whatever the system state was.

[Always On] The system goes into on state after an AC power loss. [Always Off] The system goes into off state after an AC power loss.

RI Wake Event [Disabled]

Enable or disable system to wake up from RI#. Configuration options: [Enabled] [Disabled]

RTC Wake system from S5 [Disabled]

[Disabled] Disables system wake up from S5.

[Fixed Time] The system will wake up at the specified hr::min::sec. [Dynamic Time] The system will wake up at the current time plus a specified

3.4.12 Digital I/O Port Configuration

The items listed in this screen configure Digital IO settings.

DIO Port1~DIO Port4 [Output]

Configuration options: [Input] [Output]

Note: The following item appears only when you set DIO Port1/2/3/4 to [Output].

Output Level [High]

Configuration options: [High] [Low] DIO Port5~DIO Port8 [Input] Configuration options: [Input] [Output]

3.5 Setup Submenu: Chipset

The Chipset menu items allow you to change the settings for the chipset.

3.5.1 System Agent (SA) Configuration

Primary Display [Auto]

Allows you to decide which graphics controller to use as the primary boot device. Configuration options: [Auto] [IGFX] [PEG Slot] [PCH PCI]

PCIEX16_1 Gen Speed [Auto]

Allows you to select the PCI Express port speed. Configuration options: [Auto] [Gen1] [Gen2] [Gen 3] [Gen 4] [Gen 5]

PCIEX16_2 Gen Speed [Auto]

Allows you to select the PCI Express port speed. Configuration options: [Auto] [Gen1] [Gen2] [Gen 3] [Gen 4] [Gen 5]

3.5.2 PCH-IO Configuration

HD Audio [Enabled]

This item controls the detection of HD Audio devices. Configuration options: [Disabled] [Enabled]

PCIEX4_1 Gen Speed [Auto]

Configures the speed of PCI Express slot. Configuration options: [Auto] [Gen1] [Gen2] [Gen 3]

PCIEX4_2 Gen Speed [Auto]

Configures the speed of PCI Express slot. Configuration options: [Auto] [Gen1] [Gen2] [Gen3] [Gen 4]

3.6 Setup Submenu: Security

If you have set an administrator password, we recommend that you enter the administrator password for accessing the system. Otherwise, you might be able to see or change only selected fields in the BIOS setup program.

To set an administrator password:

1. Select the **Administrator Password** item and press <Enter>.
2. From the **Create New Password** box, key in a password, then press <Enter>.
3. Confirm the password when prompted.

To change an administrator password:

1. Select the **Administrator Password** item and press <Enter>.
2. From the **Enter Current Password** box, key in the current password, then press <Enter>.
3. From the **Create New Password** box, key in a new password, then press <Enter>.
4. Confirm the password when prompted.

To clear the administrator password, follow the same steps as in changing an administrator password, but press <Enter> when prompted to create/confirm the password. After you clear the password, the **Administrator Password** item on top of the screen shows **Not Installed**.

3.6.1 User Password

If you have set a user password, you must enter the user password for accessing the system. The User Password item on top of the screen shows the default Not Installed. After you set a password, this item shows Installed.

To set a user password:

1. Select the **User Password** item and press <Enter>.
2. From the **Create New Password** box, key in a password, then press <Enter>.
3. Confirm the password when prompted to change a user password:

To change a user password:

1. Select the **User Password** item and press <Enter>.
2. From the **Enter Current Password** box, key in the current password, then press <Enter>.
3. From the **Create New Password** box, key in a new password, then press <Enter>.
4. Confirm the password when prompted.

To clear the user password, follow the same steps as in changing a user password, but press <Enter> when prompted to create/confirm the password. After you clear the password, the **User Password** item on top of the screen shows **Not Installed**.

3.6.2 Secure Boot

Secure Boot feature is active when Secure Boot is set to [Enabled], Platform Key (PK) is enrolled and the system is running in User mode. Changing the mode requires platform reset. Configuration options: [Disabled] [Enabled]

Secure Boot Mode

Allows you to select Secure Boot Mode. When set to [Custom], Secure Boot Policy variables can be configured by a physically present user without full authentication. Configuration options: [Standard] [Custom]

Restore Factory Keys

Allows you to install factory default secure boot key databases.

Reset to Setup mode

Allows you to delete all secure boot key databases from NVRAM.

Key Management

Allows you to modify Secure Boot Policy variables without full authentication.

Factory Key Provision

Allows you to install factory default Secure Boot keys when the system is in Setup mode.

Configuration options: [Enabled] [Disabled]

Enroll Efi Image

Allows you to enroll SHA256 Hash certificate of a PE image into Authorized Signature database (db).

Export Secure Boot variables

Allows you to save NVRAM content of Secure boot variable to a file.

Platform Key (PK)

Configuration options: [Details] [Export] [Update] [Delete]

Key Exchange Keys / Authorized Signatures / Forbidden Signatures

Configuration options: [Details] [Export] [Update] [Append] [Delete]

Authorized TimeStamps / OsRecovery Signatures

Configuration options: [Update] [Append]

OsRecovery Signatures

Configuration options: [Update] [Append]

3.7 Setup Submenu: Boot

The Boot menu items allow you to change the system boot options.

3.7.1 Boot Configuration

Quiet Boot [Enabled]

This item enables/disables Quiet Boot. Configuration options: [Disabled] [Enabled]

Network Stack [Disabled]

This item allows user to disable or enable the UEFI network stack. Configuration options: [Disabled] [Enabled]

3.7.2 Fixed Boot Order Priorities

Boot Option #1~#10

This item allows you to set the system boot order. Configuration options: [USB Key] [USB Hard Disk] [Hard Disk] [NVME] [Network] [USB Lan] [CD/DVD] [USB CD/DVD] [USB Floppy] [SD] [Disabled]

3.8 Setup Submenu: Save & Exit

Save Changes and Reset

Once you are finished making your selections, choose this option from the Save & Exit menu to ensure the values you selected are saved. When you select this option, a confirmation window appears. Select Yes to save changes and reset.

Discard Changes and Exit

This option allows you to exit the Setup program without saving your changes. When you select this option or if you press <Esc>, a confirmation window appears. Select Yes to discard changes and exit.

Restore Defaults

Save or restore User Defaults to all setup options.

3.9 Setup Submenu: MEBx

The MEBx menu items allow you to view and change MEBx configurations.

Intel® ME Password

The default password is admin. The IT administrator must change the default password when entering the Intel® MEBx configuration menu for the first time so that any feature can be used.

Chapter 4

Drivers Installation

4.1 Drivers Download and Installation

Drivers for the MAXER-2100 can be downloaded from the product page on the AAEON website by following this link: <https://www.aaeon.com/en/>

Download the driver(s) you need and follow the steps below to install them.

Install Chipset Driver

1. Open the **Chipset** folder
2. Run the **SetupChipset.exe** file in the folder
3. Follow the instructions
4. Drivers will be installed automatically

Install Graphics Driver

1. Open the **Graphics** folder
2. Run the **Installer.exe** file in the folder
3. Follow the instructions
4. Drivers will be installed automatically

Install LAN Driver

1. Open the **LAN** folder
2. Run the **Autorun.exe** file in the folder
3. Follow the instructions
4. Drivers will be installed automatically

Install Audio Driver

1. Open the **Audio** folder
2. Run the **Setup.exe** file in the folder
3. Follow the instructions
4. Driver will be installed automatically

Install ME Driver

1. Open the **ME** folder
2. Run the **SetupME.exe** file in the folder
3. Follow the instructions
4. Drivers will be installed automatically

Install Serial IO Driver

1. Open the **Serial IO Driver** folder
2. Run the **SetupSerialIO.exe** file in the folder
3. Follow the instructions
4. Drivers will be installed automatically

Install UART Driver

1. Open the **UART Driver** folder
2. Run the **NuvSerial_Setup_1.2.1107.exe** file in the folder
3. Follow the instructions
4. Drivers will be installed automatically

Install RAID Driver

1. Open the **RAID Driver** folder
2. Run the **SetupRST.exe** file in the folder
3. Follow the instructions
4. Drivers will be installed automatically

Install GPU Driver

1. Open the **GPU Driver** folder
2. Run the **551.86-desktop-win10-win11-64bit-international-dch-whql.exe** file in the folder
3. Follow the instructions
4. Drivers will be installed automatically

Appendix A

Notices

A.1 Notices

Federal Communications Commission Statement

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

- This device may not cause harmful interference.
- This device must accept any interference received including interference that may cause undesired operation.

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 in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING! The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

DO NOT throw the motherboard in municipal waste. This product has been designed to enable proper reuse of parts and recycling. This symbol of the crossed out wheeled bin indicates that the product (electrical and electronic equipment) should not be placed in municipal waste. Check local regulations for disposal of electronic products.

DO NOT throw the mercury-containing button cell battery in municipal waste. This symbol of the crossed out wheeled bin indicates that the battery should not be placed in municipal waste.



電子信息產品污染控制標示：圖中之數字為產品之環保使用期限。

僅指電子信息產品中含有的有毒有害物質或元素不致發生外洩或突變從而對環境造成污染或對人身、財產造成嚴重損害的期限。

有毒有害物質或元素的名稱及含量說明標示：

部件名稱	有害物質或元素					
	鉛 (Pb)	汞 (Hg)	鎘 (Cd)	六價鉻 (Cr(VI))	多溴聯苯 (PBB)	多溴二苯醚 (PBDE)
印刷電路板及其電子組件	×	○	○	○	○	○
外部信號連接頭及線材	×	○	○	○	○	○

○：表示該有毒有害物質在該部件所有均質材料中的含量均在 SJ/T 11363-2006 標準規定的限量要求以下。

×：表示該有毒有害物質至少在該部件的某一均質材料中的含量超出 SJ/T 11363-2006 標準規定的限量要求，然該部件仍符合歐盟指令 2002/95/ EC 的規範。

備註：此產品所標示之環保使用期限，係指在一般正常使用狀況下