



# MACHINIST MR9A-PRO-MAX Computer Motherboards User Manual

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## MACHINIST MR9A-PRO-MAX Computer Motherboards User Manual



## Product Information

## Specifications

**Processor:** Compatible with Intel 5th/6th generation Core i7 processors and XEON E5 V3/V4 series processors, not compatible with LGA 2011 CPUs.

- **Southbridge:** C612 Chipset
- **RAM:** 4 Channel DDR4, Maximum Capacity of 256GB (32GB\*8), 8 \* DDR4 Memory Slot
- **Rear I/O:** Green: mouse, Purple: keyboard, None: PS/2, Display Interface, 4 \* USB 2.0, 4 \* USB 3.0, 2 \* Gigabit LAN, Audio (Mic-in, Line-out, Line-in, Spoif out, Rear, C/sub), 1 \* 4PIN CFAN, 2 \* 3PIN SFAN
- **Internal connector:** ATXPWR Interface, USB2.0(front), USB3.0(front), 1 \* 8PIN Power Socket, 1 \* 24PIN Power Socket, M.2 (1 \* NVME M.2; 1 \* SATA M.2; 1 \* WiFi M.2), SATA Interface (10 \* SATA3.0), JAUDIO(front), JIR, JCOM, JLPC, JCMOS Port PCIe SWITCH
- **Environment:** Working Temperature Range, Storage Temperature Range
- **Physical Size:** 244mm x303mm

### Install CPU & Fan

Please install the CPU into the CPU socket as shown below.

#### Important:

1. Open the CPU socket cover.
2. Align the notches on the CPU with the notches on the socket.
3. Place the CPU into the socket and gently press it down.
4. Close the CPU socket cover to secure the CPU.

### Install Memory

The motherboard provides 8 DDR4 ECC DIMM slots with a maximum capacity of 256GB.

1. Wrench the latches on both sides of the memory slot outwards.
2. Insert the memory into the slot by aligning it with the notch in the slot.
3. Flip the latches on both sides of the slot to lock the memory.

**Important:** Server memory and desktop memory cannot be used together.

### Install Expansion Card

The motherboard provides 2 PCI Express 3.0 X16 expansion slots, 1 PCI Express 3.0 X4 expansion slot, and 2 PCI Express 3.0 X1 expansion slots.

1. Choose an available PCI Express slot for your expansion card.
2. Align the card's connector with the slot and firmly press it down until it is fully inserted.

**Important:** Make sure the card is securely installed and the bracket is properly aligned with the rear I/O panel.

### Back Panel Connectors

- **USB 2.0 Port:** The USB port supports the USB 2.0 specification. Use this port for USB devices.

- **USB 3.0 Port:** The USB 3.0 supports the USB 3.0 specification and is compatible with the USB 2.0 specification. Use this port for USB devices.
- **RJ45 LAN Port:** The Gigabit Ethernet LAN port provides Internet connection at up to 1000Mbps/s data rate.
- **Audio Port:**
- **Mic-in Port:** The Mic in jack.
- **Line-out Port:** The line out jack.
- **Line-in Port:** The line in jack. Use this audio jack for line in devices such as an optical drive, walkman, etc.
- **SPOIF OUT:** Side surround speaker interface, required when using more than 8 channels.
- **REAR:** Surround back speaker connector, required when using more than four channels.
- **C/SUB:** Center/subwoofer internal speaker connector, required when using more than six channels.

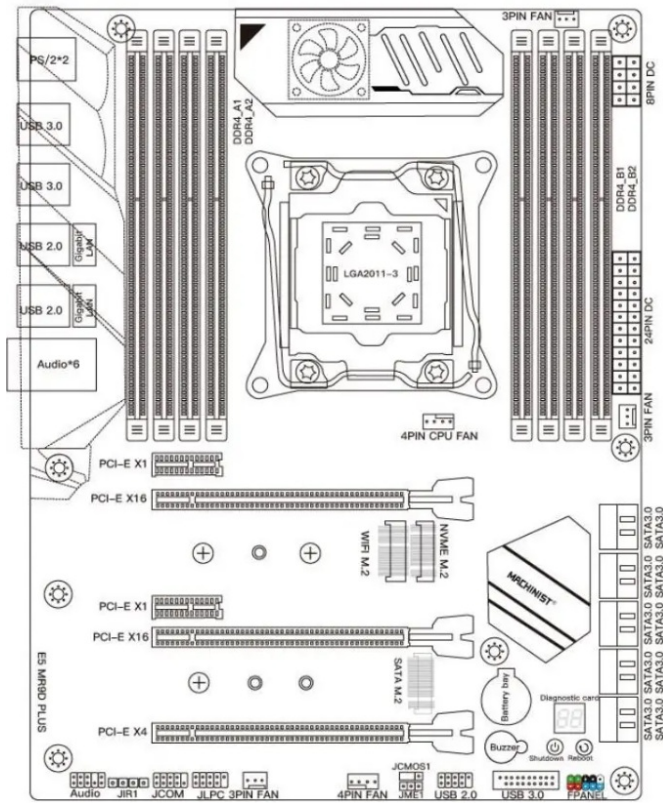
## **FAQ**

- **Q:** What processors are compatible with the X99-MR9D-PLUS motherboard?
- **A:** The X99-MR9D-PLUS motherboard is compatible with Intel 5th/6th generation Core i7 processors and XEON E5 V3/V4 series processors, but not compatible with LGA 2011 CPUs.
- **Q:** What is the maximum capacity of RAM supported by the motherboard?
- **A:** The motherboard supports a maximum capacity of 256GB of DDR4 RAM.
- **Q:** Can server memory and desktop memory be used together?
- **A:** No, server memory and desktop memory cannot be used together.

## **Specifications**

X99-MR9D-PLUS			
Processor	Compatible with Intel 5th/6th generation Core i7 processors and XEONE5 V3/V4 series processors, not compatible with LGA 2011 CPUs.		
Southbridge	C612 Chipset		
RAM	Technology	4 Channel DDR4	
	MaximumCapacity	256GB (32GB*8)	
	Memory Slot	8 * DDR4	
Rear I/O	PS/2	Green: mouse. Purple: keyboard	
	Display Interface	None	
	USB	4 * USB 2.0 4 * USB 3.0	
	Ethernet	2 * Gigabit LAN	
	AUDIO	1 (Mic-in, Line-out, Line-in, Spoif out, Rear, C/sub)	
Internal connector	CFAN	1 * 4PIN	
	SFAN	2 * 3PIN, 1 * 4PIN	
	ATXPWR Interface	1 * 8PIN Power Socket 1 * 24PIN Power Socket	
	USB2.0(front)	1	
	USB3.0(front)	1	
	M.2	1 * NVME M.2; 1 * SATA M.2; 1 * WiFi M.2	
	SATA Interface	10 * SATA3.0	
	JAUDIO(front)	1	
	JIR	1	
	JCOM	1	
	JLPC	1	
	JCMOS Port	1	
	PCIe	2 * PCIe x16; 1 * PCIe x4; 2 * PCIe x1	
	SWITCH	1 * One key switch; 1 * One key restart	
Environment	Temperature Range	Working Environment	Storage Environment
		Temperature 0 50°C Humidity 5 %~95%	Temperature: -20~70°C Humidity: 5%~95%
Physical Size	Size	244mm x303mm	

## Overview of Components

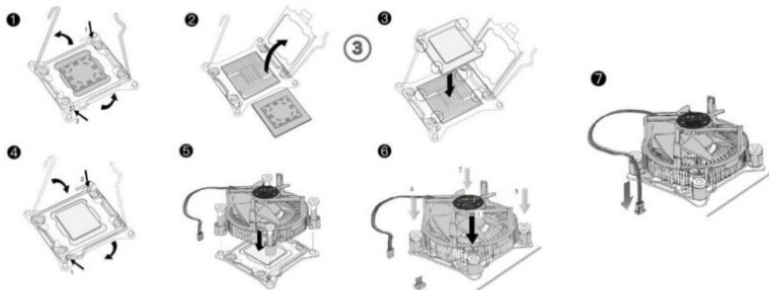


### Package List:

- X99-MR9D-PLUS Motherboard \* 1
- SATA Cable \* 1
- I/O Blocking \* 1
- CPU fan bracket \* 1
- DC-Fan \* 1

### Install CPU & Fan

Please install the CPU into the CPU socket as shown below.



### Important

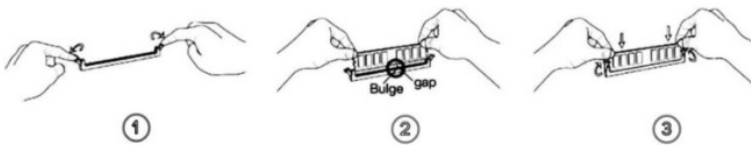
- Make sure that the motherboard supports the CPU.
- Always unplug the power cord from the power outlet before installing or removing the CPU to prevent hardware damage.
- Please retain the CPU protective cap after installing the processor.

- Do not turn on the computer if the CPU cooler is not installed, otherwise overheating and damage to the CPU may occur.
- Confirm that the CPU heatsink has formed a tight seal with the CPU before booting your system.
- Apply an even layer of thermal paste (or thermal tape) between the CPU and the heatsink to enhance heat dissipation.
- Whenever the CPU is not installed, always protect the CPU socket pins by covering the socket with a plastic cap.
- Locate the pin one of the CPU socket and the CPU. Once the CPU is positioned into its socket, place one finger down on the middle of the CPU, lowering the locking lever and latching it into the fully locked position.
- Do not force the CPU into the CPU socket before the CPU socket locking lever is lifted up, or damage to the CPU and CPU socket may occur.
- Connect the CPU heatsink's 4pin fan power connector to the 4pin CPU fan header on the motherboard.

## Install Memory

The motherboard provides 8 DDR4 ECC DIMM slots with a maximum capacity of 256GB.

1. Wrench the latches on both sides of the memory slot outwards.
2. Insert the memory into the slot by aligning it with the notch in the slot.
3. Flip the latches on both sides of the slot to lock the memory.



## Important

- Make sure that the motherboard supports the memory. It is recommended that memory of the same capacity, brand, speed, and chips be used.
- Always turn off the computer and unplug the power cord from the power outlet before installing the memory to prevent hardware damage.
- Memory modules have a foolproof design. A memory module can be installed in only one direction. If you are unable to insert the memory, switch the direction.
- The stability and compatibility of the installed memory module depend on the installed CPU and devices when overclocking.
- This motherboard provides 8 memory sockets and supports 4 Channel Technology.

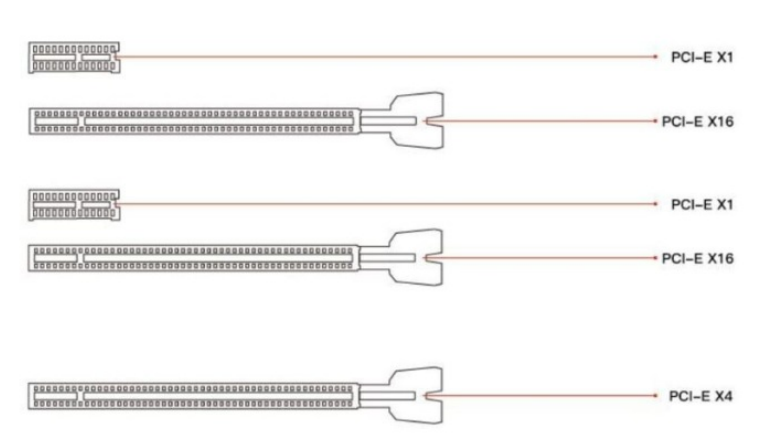
4-Channel mode cannot be enabled if only one memory module is installed.

(**Note:** Server memory and desktop memory cannot be used together.)

## Install Expansion Card

The motherboard provides 2 PCI Express 3.0 X16 expansion slots, 1 PCI Express 3.0 X4 expansion slot and 2

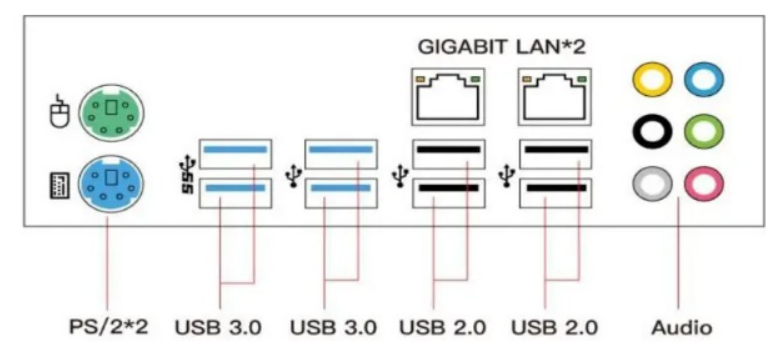
PCI Express 3.0 X1 expansion slot. Place the expansion card in an available PCI Express slot and press the expansion card until it is fully inserted into the slot.




**Important**

- When adding or removing expansion cards, always turn off the power supply and unplug the power supply power cable from the power outlet to prevent hardware damage.
- If the expansion card is not installed correctly, it may cause a short circuit throughout the metal pins, which could burn out the expansion card or the motherboard.

**Back Panel Connectors**



- **USB 2.0 Port**  
The USB port supports the USB 2.0 specification. Use this port for USB devices.
- **USB 3.0 Port**  
The USB 3.0 supports the USB 3.0 specification and is compatible to the USB 2.0 specification. Use this port for USB devices.
- **RJ45 LAN Port**  
The Gigabit Ethernet LAN port provides Internet connection at up to 1000Mbps/s data rate. The following describes the states of the LAN port LEDs.

Link/Activity LED			Speed LED	
Status	Description		Status	Description
Off	No Link		Off	10 Mbps connection
Yellow	Linked		Green	100/1000 Mbps connection

## Audio Port

- **Line-in Port**

The line in jack. Use this audio jack for line in devices such as an optical drive, walkman, etc.

- **Line-out Port**

The line out jack.

- **Mic-in Port**

The Mic in jack.

- **SPOIF OUT**

Side surround speaker interface, required when using more than 8 channels.

- **REAR**

Surround back speaker connector, required when using more than four channels.

- **C/SUB**

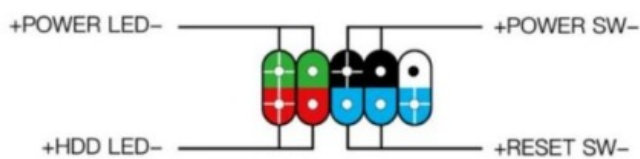
Center/subwoofer internal speaker connector, required when using more than six channels.

- **PS/2 Port**

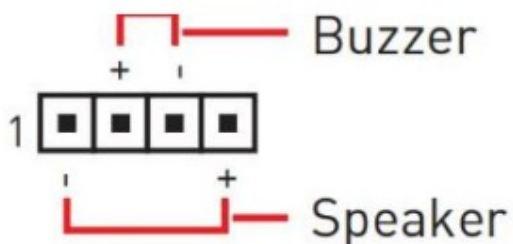
This PS/2 port can be connected to a keyboard or mouse. Green: mouse. Purple: keyboard.

## Internal Connectors

### F\_PANEL1 Connector

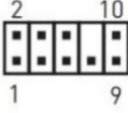


### SPEAK1 Connector



### JAUDIO1 Connector

This connector allows you to connect audio jacks on the front panel.

	1	MIC L	2	Ground
	3	MIC R	4	NC
	5	Head Phone R	6	MIC Detection
	7	SENSE_SEND	8	No Pin
	9	Head Phone L	10	Head Phone Detection

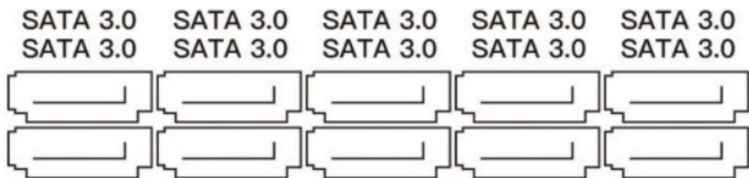


**Important**

An incorrect connection between the module connector and the motherboard header will make the device unable to work or even damage it.

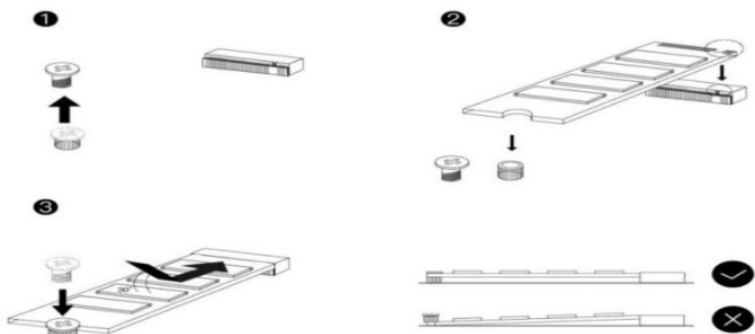
**10\* SATA 3.0 Connectors**

These SATA 3.0 connectors are SATA 6Gb/s interface ports. Each SATA connector supports a single SATA device.



**M.2 Slot**

Insert your M.2 SSD into the M.2 slot at a 30-degree angle. Secure the M.2 SSD in place with the screw.



**JCMOS1: CMOS Discharge**



1.JCOMS1(Initial state)  
The initial state covers "1" and "2".  
If you want to discharge, please go to the next step.



2.JCOMS1(Discharge)  
Pull out the cap to cover "2" and "3", and wait for about 3 minutes for the discharge to complete.



3.JCOMS1(restitute)  
After the discharge is completed, restore the initial state of the first step

**Important**

Always turn off the computer and unplug the power cord from the power outlet before discharging.

**JCOM1: Serial Port Connector**

The COM connector can provide one serial port via an optional COM port cable.

	1	DCD	2	SIN
	3	SOUT	4	DTR
	5	Ground	6	DSR
	7	RST	8	CTS
	9	RI	10	NC

**ATXPWR1, JATXPWR1:**


**Power Connectors**

With the use of the power connector, the power supply can provide enough stable power to all the components on the motherboard. Before connecting the power connector, make sure the power supply is turned off and all devices are properly installed.

**Important**



It is recommended that a power supply that can withstand high power consumption be used (at least 500W). If a power supply is used that does not provide the required power, the result can lead to an unstable or unbootable system.

 ATXPWR1	1	+3.3V	13	+3.3V
	2	+3.3V	14	-12V
	3	Ground	15	Ground
	4	+5V	16	PS-ON
	5	Ground	17	Ground
	6	+5V	18	Ground
	7	Ground	19	Ground
	8	Power OK	20	NC
	9	5VSB	21	+5V
	10	+12V	22	+5V
	11	+12V	23	+5V
	12	+3.3V	24	Ground

 JATXPWR1	1	Ground	5	+12V
	2	Ground	6	+12V
	3	Ground	7	+12V
	4	Ground	8	+12V

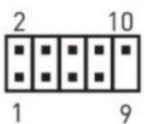
**CPU\_FAN1, SYS\_FAN1~3: Fan Connectors**

- CPU\_FAN is a interface for CPU radiator. The 4pin fan has PWM intelligent speed regulation function, which can intelligently control the fan speed based on load and temperature changes.
- SYS\_FAN is the system cooling fan interface, which is generally connected to the case fan. The 3pin fan has no PWM adjustment capability.

 CPU_FAN	1	Ground	 SYS_FAN	1	Ground
	2	+12V		2	+12V
	3	Sense		3	Sense
	4	Speed Control			

**JUSB2, JUSB4: USB 2.0 Connectors**

The headers conform to USB 2.0 specification. This connector allows you to connect USB 2.0 ports on the front panel.

	1	VCC	2	VCC
	3	USB0-	4	USB1-
	5	USB0+	6	USB1+
	7	Ground	8	Ground
	9	No Pin	10	NC

### FUSB3: USB 3.0 Connector

The header conforms to USB 3.0 and USB 2.0 specification. This connector allows you to connect USB 3.0 ports on the front panel.

	1	VBUS	11	D2+
	2	SSRX1-	12	D2-
	3	SSRX1+	13	Ground
	4	Ground	14	SSTX2+
	5	SSTX1-	15	SSTX2-
	6	SSTX1+	16	Ground
	7	Ground	17	SST2+
	8	D-	18	SST2-
	9	D+	19	VBUS
	10	NC	20	No Pin

## BIOS Setup

BIOS (Basic Input and Output System) records hardware parameters of the system in the CMOS on the motherboard. BIOS identifies, configures, tests and connects computer hardware to the OS immediately after a computer is turned on.

Its major functions include conducting the Power-On Self-Test (POST) during system startup, saving system parameters and loading the operating system, etc. BIOS includes a BIOS Setup program that allows the user to modify basic system configuration settings or to activate certain system features.

When the power is turned off, the battery on the motherboard supplies the necessary power to the CMOS to keep the configuration values in the CMOS.

### Important

Because BIOS flashing is potentially risky if you do not encounter problems using the current version of BIOS, it is recommended that you not flash the BIOS. To flash the BIOS, do it with caution. Inadequate BIOS flashing may result in system malfunction.

### BIOS Setup

The default settings offer the optimal performance for system stability in normal conditions. It is recommended that you not alter the default settings (unless you need to) to prevent system instability or other unexpected results. Inadequately altering the settings may result in the system's failure to boot.

### Important

BIOS items are regularly updated for better system performance. The items may be slightly different from the latest BIOS; therefore, the description is for reference only.

## Enter BIOS Setup

### Entering BIOS Setup

1. When the computer starts up, BIOS enters the self-test process. When the self-test is completed, the following

- message is displayed: Press DEL key to enter Setup Menu. At this time, Press <Delete> key to enter the BIOS setup.
2. If this message disappears before you press <DEL> key, you can turn it off and then turn on your computer or press <Reset> on the case to restart your computer. You can also press <Ctrl>+<Alt>+<Delete> at the same time to restart your computer.
  3. It is recommended to repeatedly press the “Del” key immediately after starting the computer to ensure that the computer can enter BIOS mode.

### Important

Functions may vary depending on the product you have.

### Reset BIOS

When you need to restore the default BIOS settings to resolve certain issues, there are several ways to reset the BIOS:

- Go to BIOS and press F6 to load optimized defaults.
- Short the Clear CMOS jumper on the motherboard.

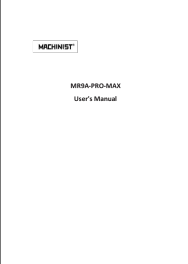
### Important

Be sure the computer is off before clearing CMOS data. Please refer to the Clear CMOS jumper section for resetting BIOS.

### *Read More About This Manual & Download PDF:*

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## Documents / Resources

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## References

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