JBL PRO Z690 A WIFI DDR4 Motherboard Datasheet

Contents

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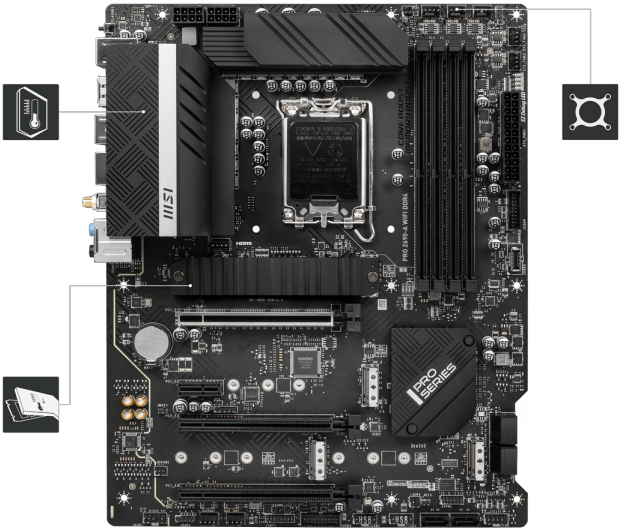


Specifications

- CPU: Processor socket LGA1700
- Chipset: [Insert chipset information]
- Memory:
  - 4x DDR4 memory slots, support up to 128GB*
  - Supports 2133/ 2666/ 3200 MHz (by JEDEC & POR)
  - Max overclocking frequency: [Insert max overclocking frequency]
- Expansion Slots:
  - 3x PCIe x16 slots
    - PCI_E1 (From CPU): Support PCIe 5.0 x16
    - PCI_E3 & PCI_E4 (From Z690 chipset): Support PCIe 3.0 x4 & 3.0 x1
  - 1x PCIe 3.0 x1 slot (From Z690 chipset)
- Audio: [Insert audio information]
- Multi-GPU: Supports AMD CrossFireTM Technology
- Onboard Graphics:
  - 1x HDMI 2.1 with HDR port, supports a maximum resolution of 4K 60Hz */**
  - 1x DisplayPort 1.4 port, supports a maximum resolution of 4K 60Hz */**
  - Available only on processors featuring integrated graphics.
  - Graphics specifications may vary depending on the CPU installed.
- Storage:
  - RAID:
    - 6x SATA 6Gb/s ports (From Z690 chipset)
    - 4x M.2 slots (Key M)
      - M2_1 slot (From CPU): Supports PCIe 4.0 x4, Supports 2242/ 2260/ 2280/ 22110 storage devices
      - M2_2 slot (From Z690 chipset): Supports PCIe 4.0 x4, Supports 2242/ 2260/ 2280 storage devices
      - M2_3 slot (From Z690 chipset): Supports PCIe 3.0×4, Supports SATA 6Gb/s, Supports 2242/ 2260/ 2280 storage devices
      - M2_4 slot (From Z690 chipset): Supports PCIe 4.0×4, Supports SATA 6Gb/s, Supports 2242/

2260/ 2280 storage devices
    - Supports RAID 0, RAID 1, RAID 5, and RAID 10 for SATA storage devices
    - Supports RAID 0, RAID 1, and RAID 5 for M.2 NVMe storage devices
- USB: [Insert USB information]
- Internal Connectors:
    - LED Features:
        - 1x 4-pin RGB LED connector
        - 2x 3-pin RAINBOW LED connectors
        - 4x EZ Debug LED
- Back Panel Connectors: [Insert back panel connector information]
- I/O Controller: NUVOTON NCT6687D-W Controller Chip
- Hardware Monitor: [Insert hardware monitor information]
- Form Factor: [Insert form factor information]
- BIOS Features: [Insert BIOS features information]
- Software:
    - MSI Center Features:
        - Mystic Light
        - LAN Manager
        - User Scenario
        - Hardware Monitor
        - Frozr AI Cooling
        - True Color
        - Live Update
        - Speed Up
        - Super Charger

Product Usage Instructions

- **Safety Information**

  [Insert safety information]
- **Rear I/O Panel**

  [Insert rear I/O panel details]
- **LAN Port LED Status Table**

  [Insert LAN Port LED status table]
- **Audio Ports Configuration**

  [Insert audio ports configuration details]

FAQ

How much memory does the product support?
The product supports up to 128GB of DDR4 memory.

What RAID configurations are supported for SATA and M.2 NVMe storage devices?
The product supports RAID 0, RAID 1, RAID 5, and RAID 10 for SATA storage devices. It supports RAID 0, RAID 1, and RAID 5 for M.2 NVMe storage devices.

What are the available USB ports on the product?
[Insert USB port information]

What is the form factor of the product?
[Insert form factor information]

What is the software included with the product?
The product includes MSI Center features such as Mystic Light, LAN Manager, User Scenario, Hardware Monitor, Frozr AI Cooling, True Color, Live Update, Speed Up, and Super Charger.

Thank you for purchasing the MSI® PRO Z690-A WIFI DDR4/ PRO Z690-A DDR4 motherboard. This User Guide gives information about board layout, component overview, BIOS setup, and software installation.

Safety Information

- The components included in this package are prone to damage from electrostatic discharge (ESD). Please adhere to the following instructions to ensure successful computer assembly.
- Ensure that all components are securely connected. Loose connections may cause the computer to not recognize a component or fail to start.
- Hold the motherboard by the edges to avoid touching sensitive components.
- It is recommended to wear an electrostatic discharge (ESD) wrist strap when handling the motherboard to prevent electrostatic damage. If an ESD wrist strap is not available, discharge yourself of static electricity by touching another metal object before handling the motherboard.
- Store the motherboard in an electrostatic shielding container or on an anti-static pad whenever the motherboard is not installed.
- Before turning on the computer, ensure that there are no loose screws or metal components on the motherboard or anywhere within the computer case.
- Do not boot the computer before installation is completed. This could cause permanent damage to the components as well as injury to the user.
- If you need help during any installation step, please consult a certified computer technician.
- Always turn off the power supply and unplug the power cord from the power outlet before installing or removing any computer component.
- Keep this user guide for future reference.
- Keep this motherboard away from humidity.
- Make sure that your electrical outlet provides the same voltage as is indicated on the PSU, before connecting the PSU to the electrical outlet.
- Place the power cord in such a way that people can not step on it. Do not place anything over the power cord.
- All cautions and warnings on the motherboard should be noted.
- If any of the following situations, get the motherboard checked by service personnel:
    - Liquid has penetrated the computer.
    - The motherboard has been exposed to moisture.
    - The motherboard does not work well or you can not get it to work according to the user guide.
    - The motherboard has been dropped and damaged.
    - The motherboard has obvious signs of breakage.
- Do not leave this motherboard in an environment above 60°C (140°F), it may damage the motherboard.

Specifications

CPU	· Supports 12th Gen Intel® Core™ Processors · Processor socket LGA1700 * Please go to msi.com to get the newest support status as new processors are relea sed.
Chipset	Intel® Z690 chipset
Memory	· 4x DDR4 memory slots, support up to 128GB* · Supports 2133/ 2666/ 3200 MHz (by JEDEC & POR) · Max overclocking frequency: ▪ 1DPC 1R Max speed up to 5200+ MHz ▪ 1DPC 2R Max speed up to 4800+ MHz ▪ 2DPC 1R Max speed up to 4400+ MHz ▪ 2DPC 2R Max speed up to 4000+ MHz · Supports Dual-Channel mode · Supports non-ECC, un-buffered memory · Supports Intel® Extreme Memory Profile (XMP) *Please refer to msi.com for more information on compatible memory
Expansion Slots	· 3x PCIe x16 slots ▪ PCI_E1 (From CPU) ▫ Support PCIe 5.0 x16 ▪ PCI_E3 & PCI_E4 (From Z690 chipset) ▫ Support PCIe 3.0 x4 & 3.0 x1 · 1x PCIe 3.0 x1 slot (Fom Z690 chipset)

Audio	Realtek® ALC897/ ALC892 Codec · 7.1-Channel High Definition Audio
Multi-GPU	· Supports AMD CrossFire™ Technology
Onboard Graphics	· 1x HDMI 2.1 with HDR port, supports a maximum resolution of 4K 60Hz */** · 1x DisplayPort 1.4 port, supports a maximum resolution of 4K 60Hz */** * Available only on processors featuring integrated graphics. ** Graphics specifications may vary depending on the CPU installed.

LAN	1x Intel® I225V 2.5Gbps LAN controller
Wireless LAN & Bluetooth®	Intel® Wi-Fi 6 (Only for PRO Z690-A WIFI DDR4) · The Wireless module is pre-installed in the M.2 (Key-E) slot · Supports MU-MIMO TX/RX, 2.4GHz/ 5GHz (160MHz) up to 2.4Gbps · Supports 802.11 a/ b/ g/ n/ ac/ ax · Supports Bluetooth® 5.2

Storage	· 6x SATA 6Gb/s ports (From Z690 chipset) · 4x M.2 slots (Key M) ▪ M2_1 slot (From CPU) ▫ Supports PCIe 4.0 x4 ▫ Supports 2242/ 2260/ 2280/ 22110 storage devices ▪ M2_2 slot (From Z690 chipset) ▫ Supports PCIe 4.0 x4 ▫ Supports 2242/ 2260/ 2280 storage devices ▪ M2_3 slot (From Z690 chipset) ▫ Supports PCIe 3.0×4 ▫ Supports SATA 6Gb/s ▫ Supports 2242/ 2260/ 2280 storage devices ▪ M2_4 slot (From Z690 chipset) ▫ Supports PCIe 4.0×4 ▫ Supports SATA 6Gb/s ▫ Supports 2242/ 2260/ 2280 storage devices ▪ Intel® Optane™ Memory Ready for M.2 slots that are from Z690 Chipset · Support Intel® Smart Response Technology for Intel Core™ processors
RAID	· Supports RAID 0, RAID 1, RAID,5, and RAID 10 for SATA storage devices · Supports RAID 0, RAID 1, and RAID 5 for M.2 NVMe storage devices

USB	· Intel® Z690 Chipset ▪ 1x USB 3.2 Gen 2×2 20Gbps Type-C port on the back panel ▪ 2x USB 3.2 Gen 2 10Gbps ports (1 Type-C internal connector and 1 Type-A port on the back panel) ▪ 6x USB 3.2 Gen 1 5Gbps ports (2 Type-A ports on the back pane, and 4 ports are a vailable through the internal USB connectors) ▪ 4x USB 2.0 Type-A ports on the back panel · USB Hub GL850G ▪ 4x USB 2.0 ports are available through the internal USB connectors
Internal Connectors	· 1x 24-pin ATX main power connector · 2x 8-pin ATX 12V power connector · 6x SATA 6Gb/s connectors · 4x M.2 slots (M-Key) · 1x USB 3.2 Gen 2 10Gbps Type-C port · 2x USB 3.2 Gen 1 5Gbps connectors (supports additional 4 USB 3.2 Gen 1 5Gbps p orts) · 2x USB 2.0 connectors (supports additional 4 USB 2.0 ports) · 1x 4-pin CPU fan connector · 1x 4-pin water pump fan connector · 6x 4-pin system fan connectors · 1x Front panel audio connector · 2x System panel connectors · 1x Chassis Intrusion connector · 1x Clear CMOS jumper · 1x TPM module connector · 1x Tuning controller connector · 1x TBT connector (Supports RTD3)

LED Features	· 1x 4-pin RGB LED connector · 2x 3-pin RAINBOW LED connectors · 4x EZ Debug LED

Back Panel Connectors	· 1x Flash BIOS Button · 1x PS/2 keyboard/ mouse combo port · 4x USB 2.0 Type-A ports · 1x DisplayPort · 1x HDMI 2.1 port · 1x LAN (RJ45) port · 2x USB 3.2 Gen 1 5Gbps Type-A ports · 1x USB 3.2 Gen 2 10Gbps Type-A port · 1x USB 3.2 Gen 2×2 20Gbps Type-C port · 2x Wi-Fi Antenna connectors (Only for PRO Z690-A WIFI DDR4) · 6x audio jacks
I/O Controller	NUVOTON NCT6687D-W Controller Chip
Hardware Monitor	· CPU/ System/ Chipset temperature detection · CPU/ System/ Pump fan speed detection · CPU/ System/ Pump fan speed control
Form Factor	· ATX Form Factor · 12 in. x 9.6 in. (30.5 cm x 24.4 cm)
BIOS Features	· 1x 256 Mb flash · UEFI AMI BIOS · ACPI 6.4, SMBIOS 3.4 · Multi-language

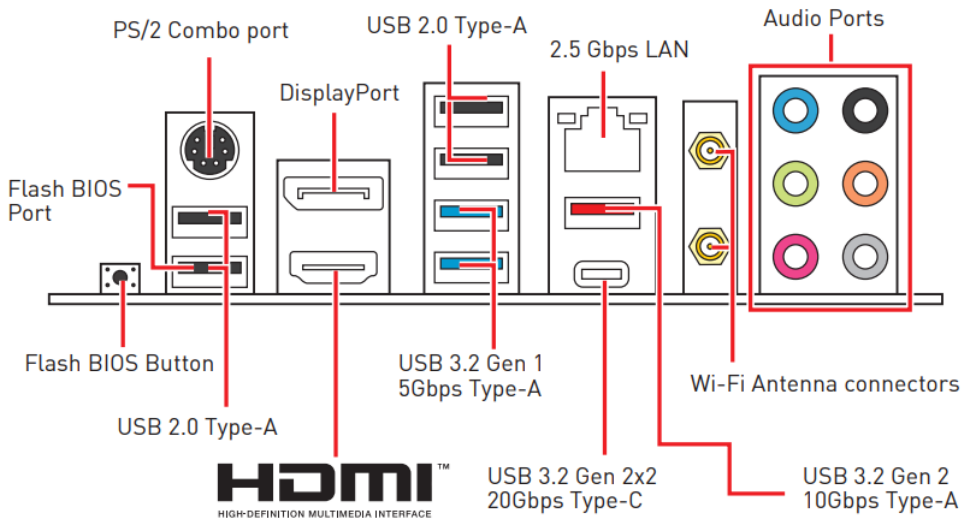
Software	· Drivers · MSI Center · Intel® Extreme Tuning Utility · CPU-Z MSI GAMING · Google Chrome™, Google Toolbar, Google Drive · Norton™ Internet Security Solution

MSI Center Features	· Mystic Light · LAN Manager · User Scenario · Hardware Monitor · Frozr AI Cooling · True Color · Live Update · Speed Up · Super Charger
Special Features	· Audio ▪ Audio Boost · Network ▪ 2.5G LAN ▪ LAN Manager ▪ Intel WiFi (Only for PRO Z690-A WIFI DDR4) · Cooling ▪ M.2 Shield Frozr ▪ Pump Fan ▪ Smart Fan Control · LED ▪ Mystic Light Extension (RAINBOW/RGB) ▪ Mystic Light SYNC ▪ EZ LED Control ▪ EZ DEBUG LED

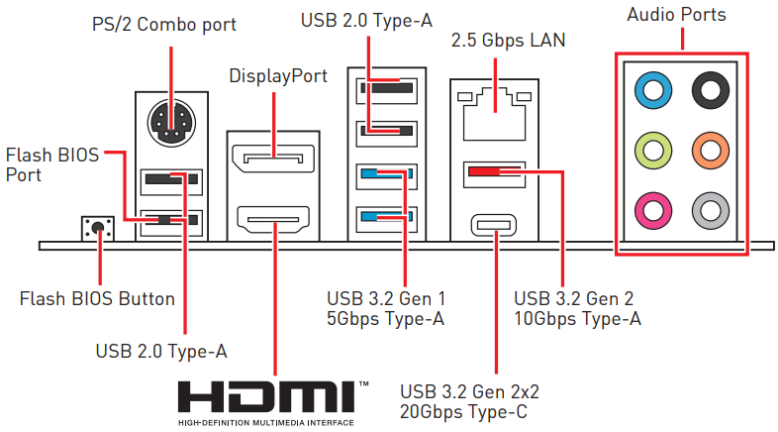
Special Features	· Performance ▪ Multi GPU-CrossFire Technology ▪ DDR4 Boost ▪ Core Boost ▪ USB 3.2 Gen 2×2 20G ▪ USB 3.2 Gen 2 10G ▪ USB with Type A+C ▪ Front USB Type-C · Protection ▪ PCI-E Steel Armor · Experience ▪ MSI Center ▪ Frozr AI Cooling ▪ Click BIOS 5 ▪ Flash BIOS Button

Rear I/O Panel

PRO Z690-A WIFI DDR4



PRO Z690-A DDR4

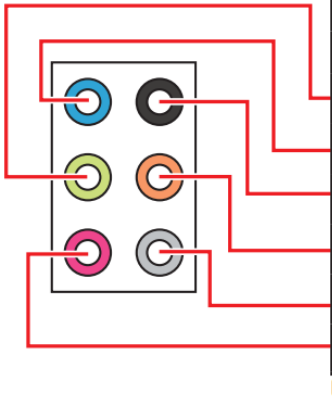


LAN Port LED Status Table

Link/ Activity LED	
Status	**Description**
Off	No link
Yellow	Linked
Blinking	Data activity

Speed LED	
Status	**Description**
Off	10 Mbps connection
Green	100/ 1000 Mbps connection
Orange	2.5 Gbps connection

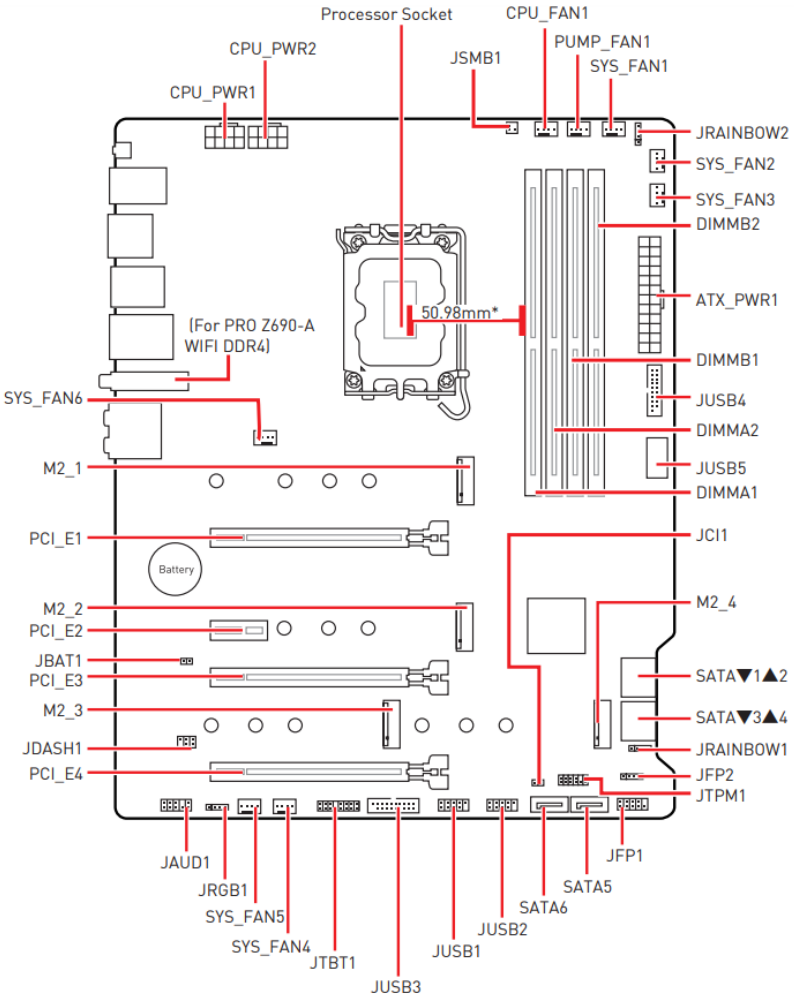
Audio Ports Configuration



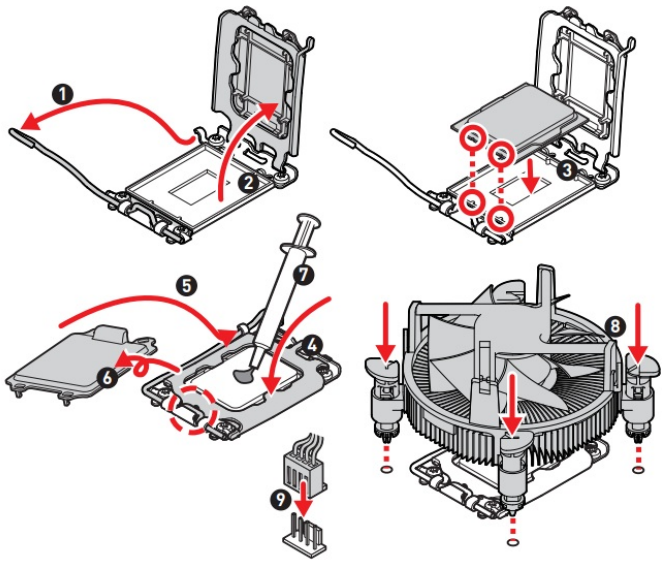
Audio Ports	Channel			
	2	4	6	8
Line-Out/ Front Specker Out				
Line-In	●	●	●	●
Rear Speaker Out		●	●	●
Center/ Subwoofer Out			●	●
Side Speaker Out				●
Mic In				

(●: connected, **Blank**: empty)

Overview of Components



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



Important

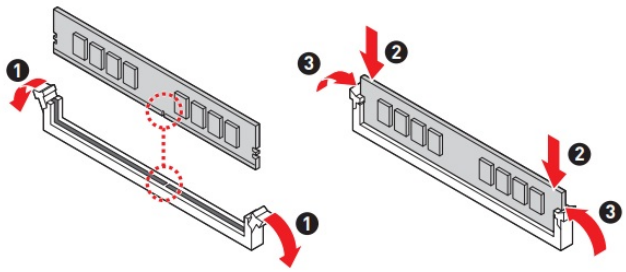
- Always unplug the power cord from the power outlet before installing or removing the CPU.
- Please retain the CPU protective cap after installing the processor. MSI will deal with Return Merchandise Authorization (RMA) requests if only the motherboard comes with the protective cap on the CPU socket.
- When installing a CPU, always remember to install a CPU heatsink. A CPU heatsink is necessary to prevent

overheating and maintain system stability.

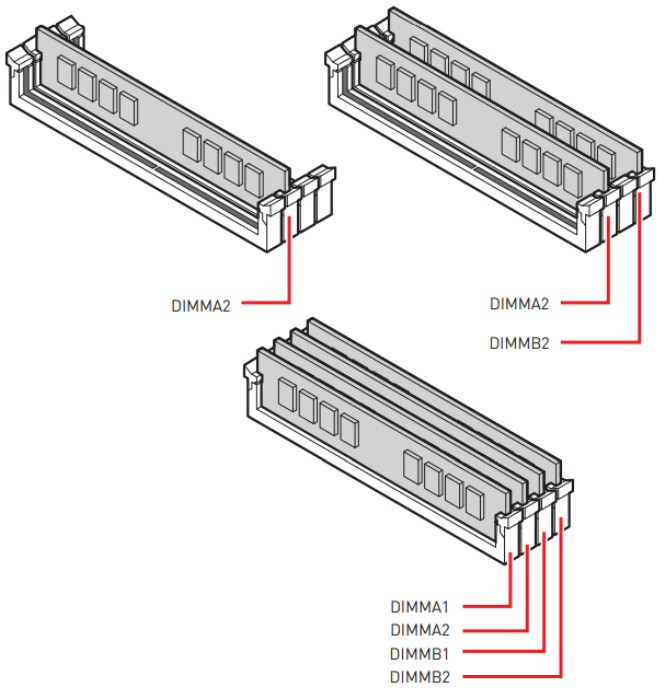
- Confirm that the CPU heatsink has formed a tight seal with the CPU before booting your system.
- Overheating can seriously damage the CPU and motherboard. Always make sure the cooling fans work properly to protect the CPU from overheating. Be sure to apply an even layer of thermal paste (or thermal 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.
- If you purchased a separate CPU and heatsink/ cooler, Please refer to the documentation in the heatsink/ cooler package for more details about installation.

DIMM Slots

Please install the memory module into the DIMM slot as shown below. Please install the memory module into the DIMM slot as shown below.



Memory module installation recommendation



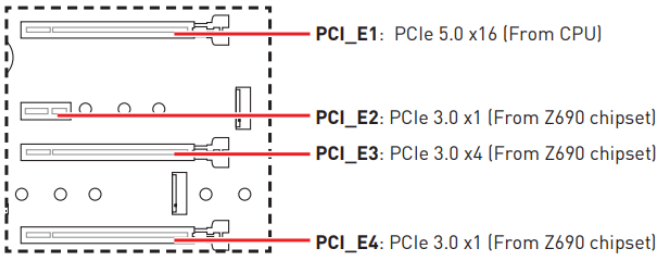
Important

- Always insert memory modules in the DIMMA2 slot first.
- To ensure system stability for Dual channel mode, memory modules must be of the same type, number, and density.
- Some memory modules may operate at a lower frequency than the marked value when overclocking due to the

memory frequency operations dependent on its Serial Presence Detect (SPD). Go to BIOS and find the DRAM Frequency to set the memory frequency if you want to operate the memory at the market or a higher frequency.

- It is recommended to use a more efficient memory cooling system for full DIMM installation or overclocking.
- The stability and compatibility of the installed memory module depend on the installed CPU and devices when overclocking.
- Please refer to **msi.com** for more information on compatible memory.

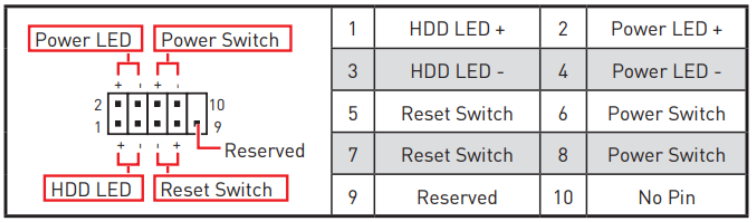
PCI_E1~4: PCIe Expansion Slots



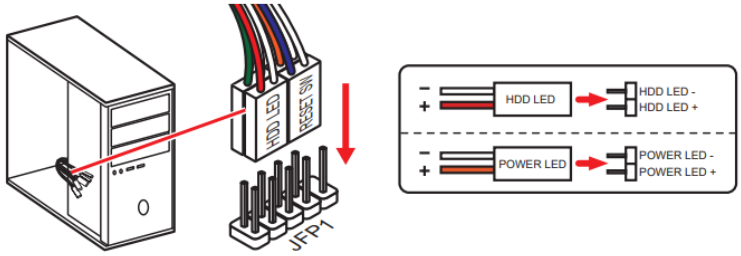
Important

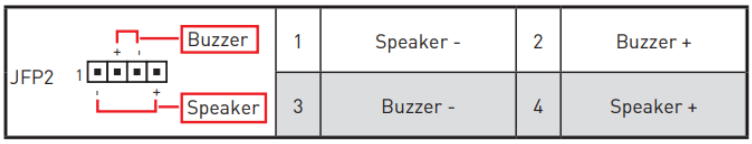
- When adding or removing expansion cards, always turn off the power supply and unplug the power supply power cable from the power outlet. Read the expansion card's documentation to check for any necessary additional hardware or software changes.
- If you install a large and heavy graphics card, you need to use a tool such as MSI Gaming Series Graphics Card Bolster to support its weight to prevent deformation of the slot.
- For a single PCIe x16 expansion card installation with optimum performance, using the PCI_E1 slot is recommended.

JFP1, JFP2: Front Panel Connectors
These connectors connect to the switches and LEDs on the front panel.



1	HDD LED +	2	Power LED +
3	HDD LED -	4	Power LED -
5	Reset Switch	6	Power Switch
7	Reset Switch	8	Power Switch
9	Reserved	10	No Pin

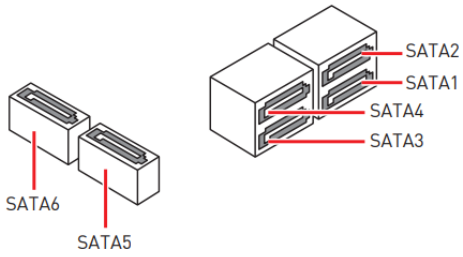




1	Speaker -	2	Buzzer +
3	Buzzer -	4	Speaker +

SATA1~6: SATA 6Gb/s Connectors

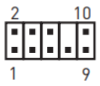
These connectors are SATA 6Gb/s interface ports. Each connector can connect to one SATA device.



Important

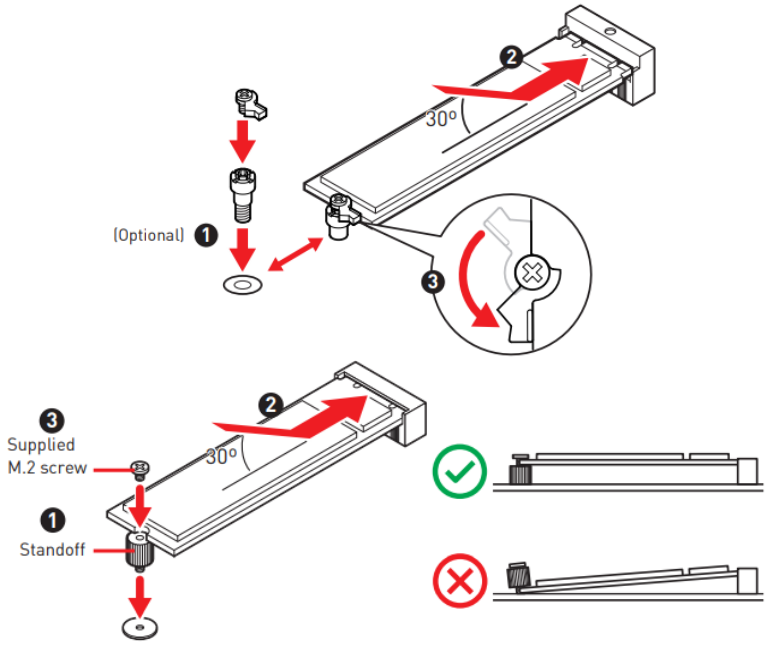
- Please do not fold the SATA cable at a 90-degree angle. Data loss may result during transmission otherwise.
- SATA cables have identical plugs on either side of the cable. However, it is recommended that the flat connector be connected to the motherboard for space-saving purposes.

JAUD1: Front Audio Connector
This connector allows you to connect audio jacks on the front panel.

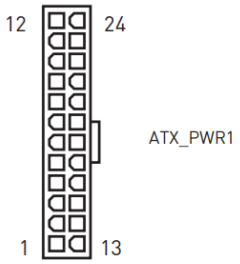


	1	MIC L	2	Ground
	3	MIC R	4	NC
	5	Head Phone R	6	MIC Detection
	7	SENSE_SEND	8	No Pin
	9	Head Phone L	10	Head Phone Detection

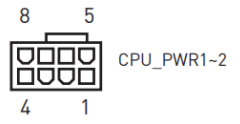
M2_1~4: M.2 Slot (Key M)
Please install the M.2 solid-state drive (SSD) into the M.2 slot as shown below.



ATX_PWR1, CPU_PWR1~2: Power Connectors
These connectors allow you to connect an ATX power supply.



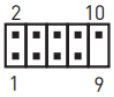
1	+3.3V	13	+3.3V
2	+3.3V	14	-12V
3	Ground	15	Ground
4	+5V	16	PS-ON#
5	Ground	17	Ground
6	+5V	18	Ground
7	Ground	19	Ground
8	PWR OK	20	Res
9	5VSB	21	+5V
10	+12V	22	+5V
11	+12V	23	+5V
12	+3.3V	24	Ground



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

Important: Make sure that all the power cables are securely connected to a proper ATX power supply to ensure stable operation of the motherboard.

JUSB1~2: USB 2.0 Connectors
These connectors allow you to connect USB 2.0 ports on the front panel.

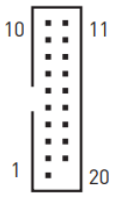


1	VCC	2	VCC
3	USB0-	4	USB1-
5	USB0+	6	USB1+
7	Ground	8	Ground
9	No Pin	10	NC

Important

- Note that the VCC and Ground pins must be connected correctly to avoid possible damage.
- To recharge your iPad,iPhone, and iPod through USB ports, please install the MSI Center utility.

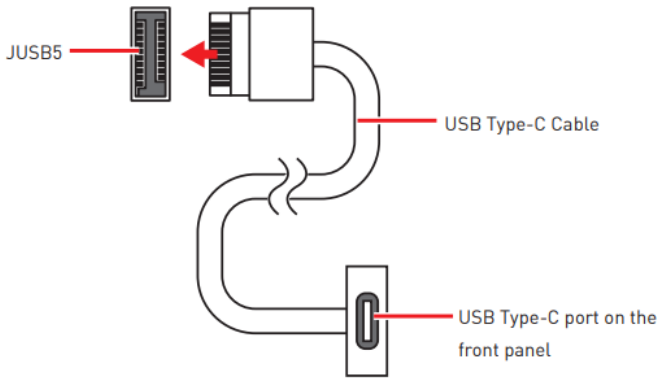
JUSB3~4: USB 3.2 Gen 1 5Gbps Connector
This connector allows you to connect USB 3.2 Gen 1 5Gbps ports on the front panel.



1	Power	11	USB2.0+
2	USB3_RX_DN	12	USB2.0-
3	USB3_RX_DP	13	Ground
4	Ground	14	USB3_TX_C_DP
5	USB3_TX_C_DN	15	USB3_TX_C_DN
6	USB3_TX_C_DP	16	Ground
7	Ground	17	USB3_RX_DP
8	USB2.0-	18	USB3_RX_DN
9	USB2.0+	19	Power
10	Ground	20	No Pin

Important: Note that the Power and Ground pins must be connected correctly to avoid possible damage.

JUSB5: USB 3.2 Gen 2 Type-C Connector
This connector allows you to connect a USB 3.2 Gen 2 10 Gbps Type-C connector on the front panel. The connector possesses a foolproof design. When you connect the cable, be sure to connect it with the corresponding orientation.

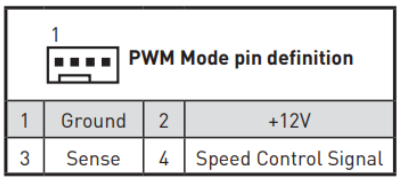


JTBT1: Thunderbolt Add-on Card Connector
This connector allows you to connect the add-on Thunderbolt I/O card.

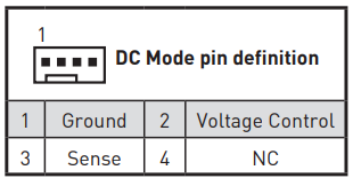
1	TBT_Force_PWR	2	TBT_S0IX_Entry_REQ
3	TBT_CIO_Plug_Event#	4	TBT_S0IX_Entry_ACK
5	SLP_S3#_TBT	6	TBT_PSON_Override_N
7	SLP_S5#_TBT	8	Net Name
9	Ground	10	SMBCLK_VSB
11	DG_PEWake	12	SMBDATA_VSB
13	TBT_RTD3_PWR_EN	14	Ground
15	TBT_Card_DET_R#	16	PD_IRQ#

CPU_FAN1, PUMP_FAN1, SYS_FAN1~6: Fan Connectors
Fan connectors can be classified as PWM (Pulse Width Modulation) Mode or DC Mode. PWM Mode fan connectors provide constant 12V output and adjust fan speed with the speed control signal. DC Mode fan connectors control the fan speed by changing voltage.

Connector	Default fan mode	Max. current	Max. power
CPU_FAN1	PWM mode	2A	24W
PUMP_FAN1	PWM mode	3A	36W
SYS_FAN1~6	DC mode	1A	12W



1	Ground	2	+12V
3	Sense	4	Speed Control Signal



1	Ground	2	Voltage Control
3	Sense	4	NC

Important

You can adjust the fan speed in BIOS > HARDWARE MONITOR.

JTPM1: TPM Module Connector
This connector is for TPM (Trusted Platform Module). Please refer to the TPM security platform manual for more details and usages.

1	SPI Power	2	SPI Chip Select
3	Master In Slave Out (SPI Data)	4	Master Out Slave In (SPI Data)
5	Reserved	6	SPI Clock
7	Ground	8	SPI Reset
9	Reserved	10	No Pin
11	Reserved	12	Interrupt Request

JCI1: Chassis Intrusion Connector
This connector allows you to connect the chassis intrusion switch cable.

Normal (default)

Trigger the chassis intrusion event

Using a chassis intrusion detector

1. Connect the JCI1 connector to the chassis intrusion switch/ sensor on the chassis.
2. Close the chassis cover.
3. Go to BIOS > SETTINGS > Security > Chassis Intrusion Configuration.
4. Set Chassis Intrusion to Enabled.
5. Press F10 to save and exit and then press the Enter key to select Yes.
6. Once the chassis cover is opened again, a warning message will be displayed on the screen when the computer is turned on.

Resetting the chassis intrusion warning

1. Go to BIOS > SETTINGS > Security > Chassis Intrusion Configuration.
2. Set Chassis Intrusion to Reset.
3. Press F10 to save and exit and then press the Enter key to select Yes.

JDASH1: Tuning controller Connector
This connector is used to connect an optional Tuning Controller module.

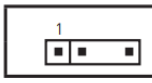
1	No pin	2	NC
3	MCU_SMB_SCL_M	4	MCU_SMB_SDA_M
5	VCC5	6	Ground

JBAT1: Clear CMOS (Reset BIOS) Jumper
There is CMOS memory onboard that is external powered from a battery located on the motherboard to save system configuration data. If you want to clear the system configuration, set the jumpers to clear the CMOS memory.

Resetting BIOS to default values

1. Power off the computer and unplug the power cord.
2. Use a jumper cap to short JBAT1 for about 5-10 seconds.
3. Remove the jumper cap from JBAT1.
4. Plug the power cord and power on the computer.

JRAINBOW1~2: Addressable RGB LED connectors
The JRAINBOW connectors allow you to connect the WS2812B Individually Addressable RGB LED strips 5V.



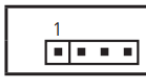
1	+5V	2	Data
3	No Pin	4	Ground

CAUTION: Do not connect the wrong type of LED strips. The JRGB connector and the JRAINBOW connector provide different voltages, and connecting the 5V LED strip to the JRGB connector will result in damage to the LED strip.

Important

- The JRAINBOW connector supports up to 75 LEDs WS2812B Individually Address-able RGB LED strips (5V/Data/Ground) with the maximum power rating of 3A (5V). In the case of 20% brightness, the connector supports up to 200 LEDs.
- Always turn off the power supply and unplug the power cord from the power outlet before installing or removing the RGB LED strip.
- Please use MSI's software to control the extended LED strip.

JRGB1: RGB LED connector
The JRGB connector allows you to connect the 5050 RGB LED strips 12V.



1	+12V	2	G
3	R	4	B

Important

- The JRGB connector supports up to 2 meters of continuous 5050 RGB LED strips (12V/G/R/B) with a maximum power rating of 3A (12V).
- Always turn off the power supply and unplug the power cord from the power outlet before installing or removing the RGB LED strip.
- Please use MSI's software to control the extended LED strip.

EZ Debug LED
These LEDs indicate the status of the motherboard.

- CPU – indicates CPU is not detected or fails.
- DRAM – indicates DRAM is not detected or fails.
- VGA – indicates GPU is not detected or failed.
- BOOT – indicates the booting device is not detected or fails.

Installing OS, Drivers & MSI Center
Please download and update the latest utilities and drivers at www.msi.com Installing Windows® 10

1. Power on the computer.
2. Insert the Windows® 10 installation disc/USB into your computer.
3. Press the Restart button on the computer case.

4. Press the F11 key during the computer POST (Power-On Self Test) to get into the Boot Menu.
5. Select the Windows® 10 installation disc/USB from the Boot Menu.
6. Press any key when the screen shows Press any key to boot from CD or DVD… message.
7. Follow the instructions on the screen to install Windows® 10.

Installing Drivers

1. Start up your computer in Windows® 10.
2. Insert MSI® Drive disc/ USB Driver into the optical drive/ USB port.
3. Click the Select to choose what happens with this disc pop-up notification, then select Run DVDSetup.exe to open the installer. If you turn off the AutoPlay feature from the Windows Control Panel, you can still manually execute the DVDSetup.exe from the root path of the MSI Drive disc.
4. The installer will find and list all necessary drivers in the Drivers/Software tab.
5. Click the Install button in the lower-right corner of the window.
6. The driver's installation will then be in progress, after it has finished it will prompt you to restart.
7. Click the OK button to finish.
8. Restart your computer.

MSI Center
MSI Center is an application that helps you easily optimize game settings and smoothly use content creation software. It also allows you to control and synchronize LED light effects on PCs and other MSI products. With MSI Center, you can customize ideal modes, monitor system performance, and adjust fan speed.

MSI Center User Guide
If you would like to know more information about MSI Center, please refer to **http://download.msi.com/manual/mb/MSICENTER.pdf** or scan the QR code to access it.

Important: Functions may vary depending on the product you have.

UEFI BIOS
MSI UEFI BIOS is compatible with UEFI (Unified Extensible Firmware Interface) architecture. UEFI has many new functions and advantages that traditional BIOS cannot achieve, and it will completely replace BIOS in the future. The MSI UEFI BIOS uses UEFI as the default boot mode to take full advantage of the new chipset's capabilities.

Important
The term BIOS in this user guide refers to UEFI BIOS unless otherwise noted.

UEFI advantages

- Fast booting – UEFI can directly boot the operating system and save the BIOS self-test process. And also eliminates the time to switch to CSM mode during POST.
- Supports for hard drive partitions larger than 2 TB.

- Supports more than 4 primary partitions with a GUID Partition Table (GPT).
- Supports an unlimited number of partitions.
- Supports full capabilities of new devices – new devices may not provide backward compatibility.
- Supports secure startup – UEFI can check the validity of the operating system to ensure that no malware tampers with the startup process.

Incompatible UEFI cases

- 32-bit Windows operating system – this motherboard supports only 64-bit Windows 10/ Windows 11 operating system.
- Older graphics card – the system will detect your graphics card. When displaying a warning message, There is no GOP (Graphics Output protocol) support detected in this graphics card.

Important
We recommend that you replace it with a GOP/UEFI-compatible graphics card or use integrated graphics from the CPU for normal function.

How to check the BIOS mode?

1. Power on your computer.
2. Press the Delete key, when the Press DEL key to enter the Setup Menu, F11 to enter the Boot Menu message appears on the screen during the boot process.
3. After entering the BIOS, you can check the BIOS Mode at the top of the screen.

BIOS Setup
The default settings offer the optimal performance for system stability in normal conditions. You should always keep the default settings to avoid possible system damage or failure booting unless you are familiar with BIOS.

Important

- BIOS items are continuously updated for better system performance. Therefore, the description may be slightly different from the latest BIOS and should be for reference only. You could also refer to the HELP information panel for the BIOS item description.
- The BIOS screens, options, and settings will vary depending on your system.

Entering BIOS Setup
Press the Delete key, when the Press DEL key is to enter the Setup Menu, F11 to enter the Boot Menu message appears on the screen during the boot process.

Function key

- F1: General Help
- F2: Add/ Remove a favorite item
- F3: Enter the Favorites menu
- F4: Enter CPU Specifications menu

- F5: Enter Memory-Z menu
- F6: Load optimized defaults
- F7: Switch between Advanced mode and EZ mode
- F8: Load Overclocking Profile
- F9: Save Overclocking Profile
- F10: Save Change and Reset*
- F12: Take a screenshot and save it to a USB flash drive (FAT/ FAT32 format only). Ctrl+F: Enter the Search page

When you press F10, a confirmation window appears and it provides the modification information. Select between Yes or No to confirm your choice.

BIOS User Guide
If you'd like to know more instructions on setting up the BIOS, please refer to **http://download.msi.com/manual/mb/Intel600BIOS.pdf** or scan the QR code to access it.

Resetting BIOS
You might need to restore the default BIOS setting to solve certain problems. There are several ways to reset 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.

Updating BIOS
Updating BIOS with M-FLASH

Before updating:
Please download the latest BIOS file that matches your motherboard model from the MSI website. And then save the BIOS file into the USB flash drive.

Updating BIOS:

1. Insert the USB flash drive that contains the update file into the USB port.
2. Please refer to the following methods to enter flash mode.
    - Reboot and press the Ctrl + F5 key during POST and click on Yes to reboot the system.
    - Reboot and press the Del key during POST to enter BIOS. Click the M-FLASH button and click on Yes to reboot the system.
3. Select a BIOS file to perform the BIOS update process.
4. When prompted click on Yes to start recovering BIOS.
5. After the flashing process is 100% completed, the system will reboot automatically.

Updating the BIOS with MSI Center

Before updating:

- Make sure the LAN driver is already installed and the internet connection is set properly.
- Please close all other application software before updating the BIOS.

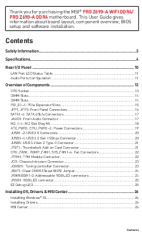
To update BIOS:

1. Install and launch MSI Center and go to the Support page.
2. Select Live Update and click on the Advance button.
3. Select the BIOS file and click on the Install button.
4. The installation reminder will appear, then click the Install button on it.
5. The system will automatically restart to update BIOS.
6. After the flashing process is 100% completed, the system will restart automatically.

Updating BIOS with Flash BIOS Button

1. Please download the latest BIOS file that matches your motherboard model from the MSI® website.
2. Rename the BIOS file to MSI.ROM, and save it to the root of your USB flash drive.
3. Connect the power supply to CPU_PWR1 and ATX_PWR1. (No need to install CPU and memory.)
4. Plug the USB flash drive that contains the MSI.ROM file into the Flash BIOS Port on the rear I/O panel.
5. Press the Flash BIOS Button to flash BIOS, and the LED starts flashing.
6. The LED will be turned off when the process is completed.

Documents / Resources

	JBL PRO Z690 A WIFI DDR4 Motherboard [pdf] Datasheet PRO Z690 A WIFI DDR4 Motherboard, PRO Z690, A WIFI DDR4 Motherboard, DDR4 Motherboard, Motherboard

References

- MSI - Redirect
- MSI - Redirect
- User Manual