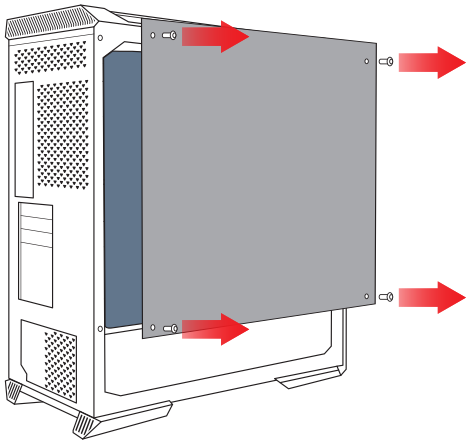
IMPORTANT

PLEASE READ BEFORE TURNING ON THE DESKTOP

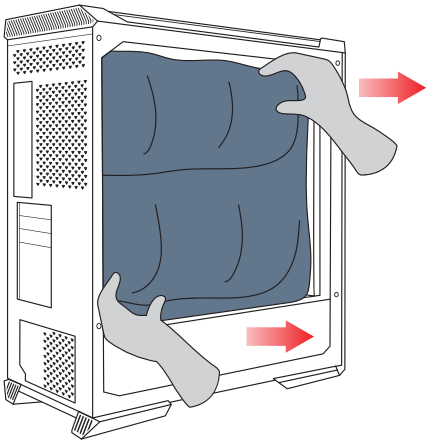
Scan for setup video guides

If you have any further questions regarding your new computer, please do not hesitate to contact us either through the online customer service site **https://us.msi.com/support** or by contacting our customer support at **1-626-271-1004**, Monday to Friday from 9:00 a.m. to 6:00 p.m. Pacific Standard Time. You can also contact technical support by calling **1-888-447-6564**, Monday to Friday open 24 hours (Weekend and Public Holiday closed). We will reply to you as soon as possible.



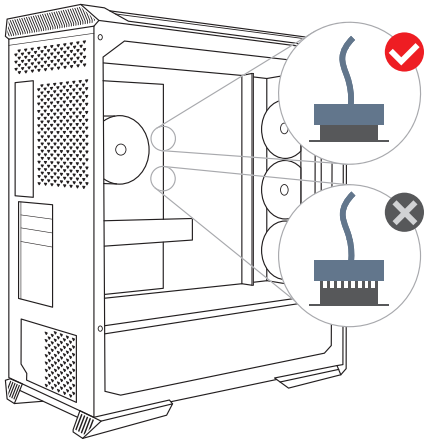
Step 1 REMOVE THE TEMPERED GLASS SIDE PANEL

Remove the four thumbscrews on the tempered glass side panel. And gently remove the tempered glass panel away from the case and place it in a safe area.



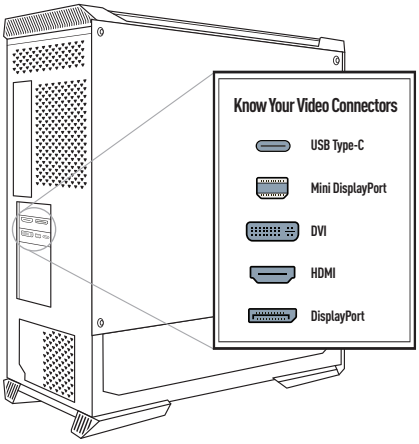
Step 2 REMOVE THE FOAM PACKAGING

Carefully pull the foam packaging out the system. It should come out easily without having to apply any force.



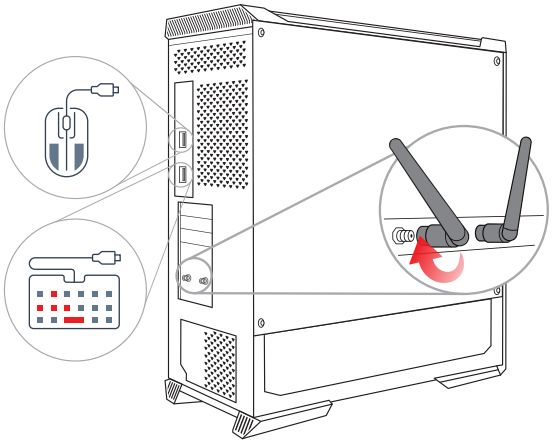
Step 3 INSPECT YOUR PC

Make sure all components and cables are seated firmly. Now, you can replace the tempered glass side panel and secure with thumbscrews.



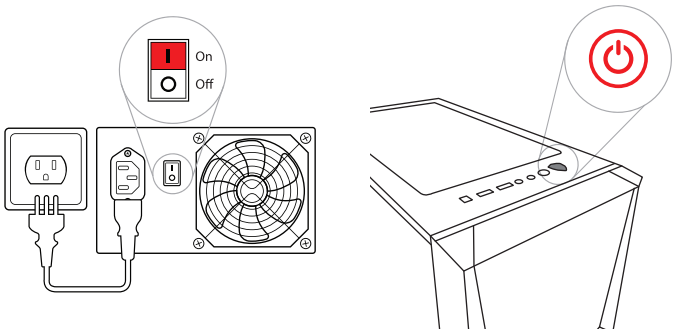
Step 4 CONNECT YOUR MONTIOR

Connect your monitor to either display ports or HDMI ports on the graphics cards.



Step 5 CONNECT WIFI ANTENNAE, KEYBOARD & MOUSE

Screw the Wi-Fi Antennae to the gold contact points on the rear of the case. Plug the mouse and the keyboard into any of the USB ports.



Step 6 POWER ON YOUR DESKTOP

Plug the power cable into the power cable socket and plug the other end of the power cable into a power outlet. Turn the power supply switch on by having the "I" symbol on the switch pressed down. Press the power button.

Thank you for purchasing the MSI® CODEX R Desktop. This User Guide gives information about board layout, component overview, BIOS setup and software installation.

Contents

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 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 arises, get the motherboard checked by service personnel:

  ▪ Liquid has penetrated into the computer.

  ▪ The motherboard has been exposed to moisture.

  ▪ The motherboard does not work well or you can not get it work according to user guide.

  ▪ The motherboard has been dropped and damaged.

  ▪ The motherboard has obvious sign 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 www.msi.com to get the newest support status as new processors are released.
Chipset	Intel® B660 chipset
Memory	• 4x DDR5 memory slots, support up to 128GB* • Supports 1R 4800 MHz (by JEDEC & POR) • Max overclocking frequency: ▪ 1DPC 1R Max speed up to 6200+ MHz ▪ 1DPC 2R Max speed up to 5200+ MHz ▪ 2DPC 1R Max speed up to 4000+ MHz ▪ 2DPC 2R Max speed up to 4000+ MHz • Supports Intel® XMP 3.0 OC • Supports Dual Controller Dual-Channel mode • Supports non-ECC, un-buffered memory *Please go to www.msi.com for more information on compatible memory
Expansion Slots	• 4x PCIe x16 slots ▪ PCI_E1 (From CPU) ▫ Support PCIe 4.0 x16 ▪ PCI_E2 ~4 (From B660 chipset) ▫ Support PCIe 3.0 x1
Onboard Graphics	• 1x HDMI 2.1 with HDR port, supports a maximum resolution of 4K 60Hz */** * Available only on processors featuring integrated graphics. ** Graphics specifications may vary depending on the CPU installed.
Audio	Realtek® ALC897 Codec • 7.1-Channel High Definition Audio
LAN	1x Realtek® 8125BG 2.5Gbps LAN controller

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Wireless LAN & Bluetooth®	Intel® Wi-Fi 6 • 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	• 4x SATA 6Gb/s ports (SATA5~8, from B660 Chipset)* • 2x SATA 6Gb/s ports (SATA_A1 & SATA_B1, from Asmedia ASM1061) • 2x M.2 slots (Key M) ▪ M2_1 slot (From CPU) ▫ Supports PCIe 4.0 x4 ▫ Supports 2242/ 2260/ 2280 storage devices ▪ M2_2 slot (From B660 chipset)* ▫ Supports PCIe 4.0x4 ▫ Supports SATA 6Gb/s ▫ Supports 2242/ 2260/ 2280 storage devices ▫ Intel® Optane™ Memory Ready for M2_2 slot • Support Intel® Smart Response Technology for Intel Core™ processors * SATA7 will be unavailable when installing M.2 SATA SSD in the M2_2 slot.
RAID	• Supports RAID 0, RAID 1, RAID 5 and RAID 10 for SATA storage devices* *SATA_A1 & SATA_B1 do not support RAID function.
USB	• Intel® B660 Chipset ▪ 2x USB 3.2 Gen 2 10Gbps (Type-A+Type-C) ports on the back panel ▪ 3x USB 3.2 Gen 1 5Gbps ports (2 Type-A ports and 1 Type-C port available through the internal USB connectors) ▪ 6x USB 2.0 ports (2 Type-A ports on the back panel and 4 ports available through the internal USB connectors) • Asmedia ASM1074 ▪ 4x USB 3.2 Gen 1 5Gbps Type-A ports on the back panel

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Internal Connectors	• 1x 24-pin ATX main power connector • 1x 8-pin ATX 12V power connector • 1x 4-pin ATX 12V power connector • 6x SATA 6Gb/s connectors • 2x M.2 slots (M-Key) • 1x USB 3.2 Gen 1 5Gbps Type-C port • 1x USB 3.2 Gen 1 5Gbps connectors (supports additional 2 USB 3.2 Gen 1 5Gbps ports) • 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 • 2x 4-pin system fan connectors • 1x Front panel audio connector • 2x System panel connectors • 1x Parallel port connector • 1x Serial port connector • 1x Chassis Intrusion connector • 1x Clear CMOS jumper • 1x TPM module connector • 1x Tuning controller connector
LED Features	• 1x 4-pin RGB LED connector • 2x 3-pin RAINBOW LED connectors • 4x EZ Debug LED
Back Panel Connectors	• 1x PS/2 keyboard/ mouse combo port • 2x USB 2.0 Type-A ports • 1x HDMI port • 4x USB 3.2 Gen 1 5Gbps Type-A ports • 1x LAN (RJ45) port • 1x USB 3.2 Gen 2 10Gbps Type-A port • 1x USB 3.2 Gen 2 10Gbps Type-C port • 2x Wi-Fi Antenna connectors • 3x audio jacks

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I/O Controller	NUVOTON NCT6687D Controller Chip
Hardware Monitor	• CPU/ System/ Chipset temperature detection • CPU/ System/ Pump fan speed detection • CPU/ System/ Pump fan speed control
Form Factor	• Micro-ATX Form Factor • 9.6 in. x 9.6 in. (24.4 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	• LAN Manager • Mystic Light • Ambient Devices • Frozr AI Cooling • User Scenario • True Color • Live Update • Hardware Monitoring • Super Charger • Speed Up • Smart Image Finder • MSI Companion

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Special Features	• Audio ▪ Audio Boost • Network ▪ 2.5G LAN ▪ LAN Manager ▪ Intel WiFi • Cooling ▪ M.2 Shield Frozr ▪ 7W/mK MOSFET thermal pad ▪ Pump Fan ▪ Smart Fan Control • LED ▪ Mystic Light ▪ Mystic Light Extension(RGB) ▪ Mystic Light Extension(RAINBOW) ▪ Mystic Light Extension ▪ Ambient Devices Support

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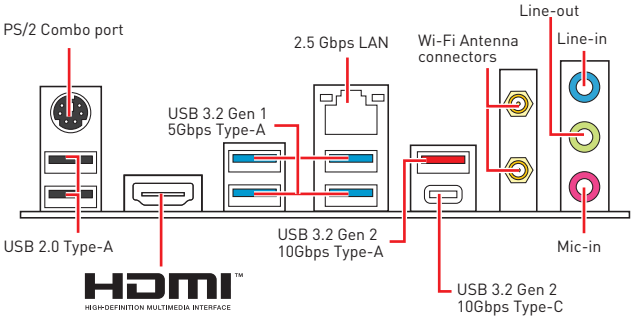
Special Features	• Performance ▪ Lightning Gen 4 PCI-E Slot ▪ Lightning Gen 4 M.2 ▪ Memory Boost ▪ Core Boost ▪ Game Boost ▪ USB 3.2 Gen 2 10G ▪ USB with Type A+C ▪ Front USB Type-C ▪ Dual CPU Power ▪ 2oz Copper thickened PCB • Protection ▪ PCI-E Steel Armor • Experience ▪ MSI Center ▪ Click BIOS 5 ▪ EZ M.2 Clip ▪ Forzr AI Cooling ▪ CPU Cooler Tuning ▪ EZ DEBUG LED ▪ App Player ▪ Tile

Rear I/O Panel



LAN Port LED Status Table

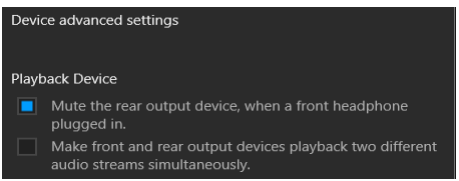
Link/ Activity LED	
Status	**Description**
Off	No link
Yellow	Linked
Blinking	Data activity

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

Audio 7.1-channel Configuration

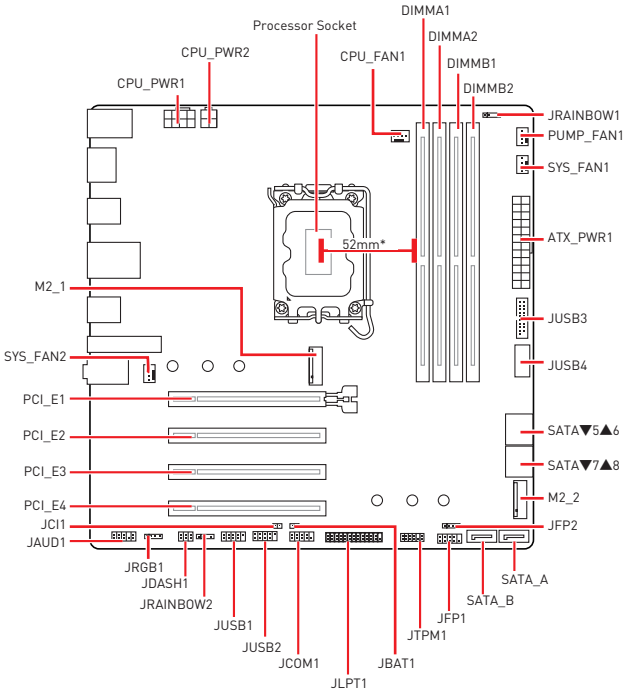
To configure 7.1-channel audio, you have to connect front audio I/O module to JAUD1 connector and follow the below steps.

1. Click on the Realtek HD Audio Manager > Advanced Settings to open the dialog below.



2. Select Mute the rear output device, when a front headphone plugged in.
3. Plug your speakers to audio jacks on rear and front I/O panel. When you plug into a device at an audio jack, a dialogue window will pop up asking you which device is current connected.

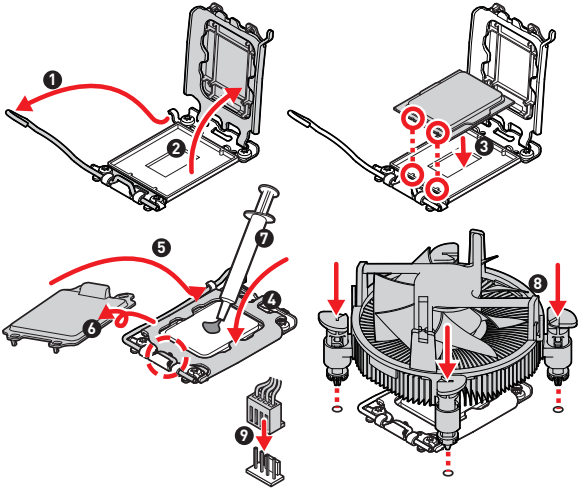
Overview of Components



** Distance from the center of the CPU to the nearest DIMM slot.*

CPU Socket

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

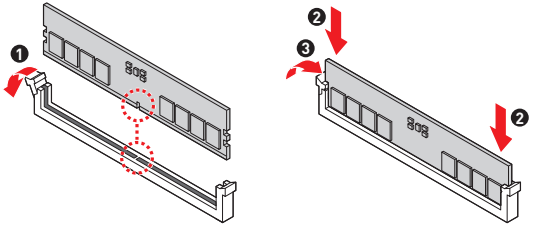


Important

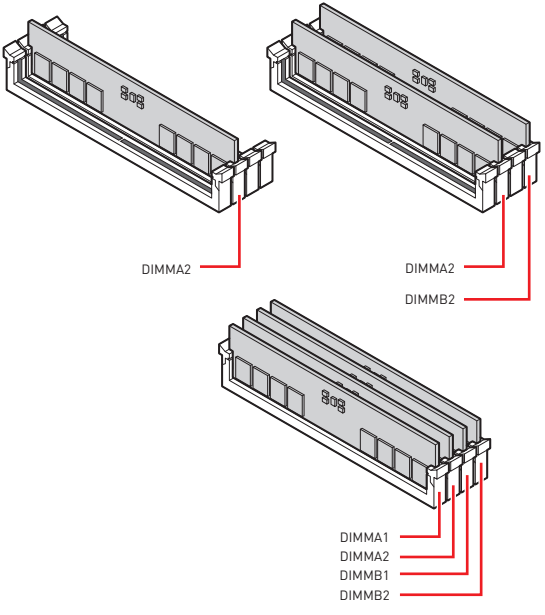
- *Always unplug the power cord from the power outlet before installing or removing the CPU.*
- *Please retain the CPU protective cap after installing the processor. MSI will deal with Return Merchandise Authorization (RMA) requests if only the motherboard comes with the protective cap on the CPU socket.*
- *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 the 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.



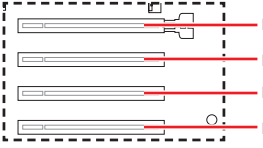
Memory module installation recommendation



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

PCI_E1~4: PCIe Expansion Slots



PCI_E1: PCIe 4.0 x16 (From CPU)

PCI_E2: PCIe 3.0 x1 (From B660 chipset)

PCI_E3: PCIe 3.0 x1 (From B660 chipset)

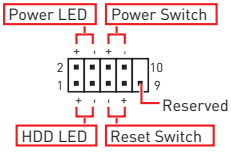
PCI_E4: PCIe 3.0 x1 (From B660 chipset)

Important

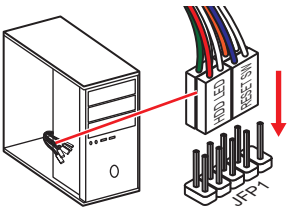
- *When adding or removing expansion cards, always turn off the power supply and unplug the power supply power cable from the power outlet. Read the expansion card's documentation to check for any necessary additional hardware or software changes.*
- *If you install a large and heavy graphics card, you 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.*

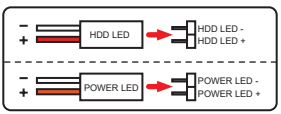
JFP1, JFP2: Front Panel Connectors

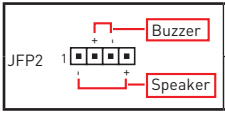
These connectors connect to the switches and LEDs on the front panel.



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 +

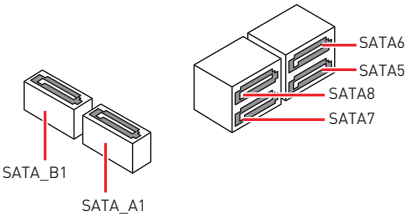
JAUD1: Front Audio Connector

This connector allow 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

SATA5~8, SATA_A1& SATA_B1: SATA 6Gb/s Connectors

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

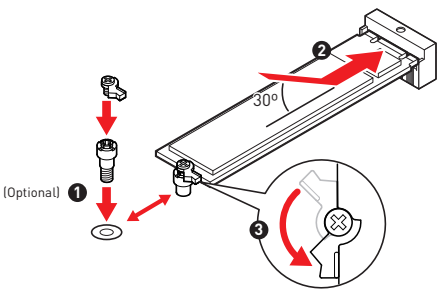


Important

- *SATA7 will be unavailable when installing M.2 SATA SSD in the M2_2 slot.*
- *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 sides of the cable. However, it is recommended that the flat connector be connected to the motherboard for space saving purposes.*

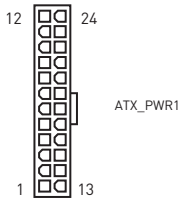
M2_1~2: M.2 Slot (Key M)

Please install the M.2 solid-state drive (SSD) into the M.2 slot as shown below.

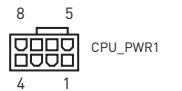


ATX_PWR1, CPU_PWR1~2: Power Connectors

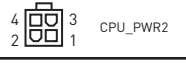
These connectors allow you to connect an ATX power supply.



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



1	Ground	3	+12V
2	Ground	4	+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.

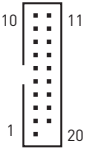
1	VCC	2	VCC
3	USB0-	4	USB1-
5	USB0+	6	USB1+
7	Ground	8	Ground
9	No Pin	10	NC

Important

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

JUSB3: USB 3.2 Gen 1 Connector

This connector allows you to connect USB 3.2 Gen 1 5Gbps ports on the front panel.



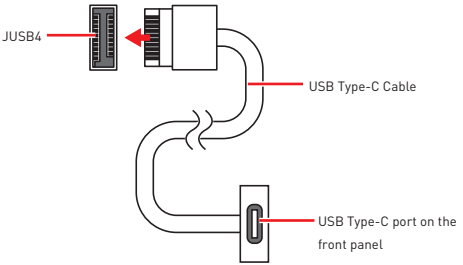
1	Power	11	USB2.0+
2	USB3_RX_DN	12	USB2.0-
3	USB3_RX_DP	13	Ground
4	Ground	14	USB3_TX_C_DP
5	USB3_TX_C_DN	15	USB3_TX_C_DN
6	USB3_TX_C_DP	16	Ground
7	Ground	17	USB3_RX_DP
8	USB2.0-	18	USB3_RX_DN
9	USB2.0+	19	Power
10	Ground	20	No Pin

Important

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

JUSB4: USB 3.2 Gen 1 Type-C Connector

This connector allows you to connect USB 3.2 Gen 1 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.



JLPT1: Parallel Port Connector

This connector allows you to connect the optional parallel port with bracket.

1	RSTB#	2	AFD#	3	PRND0
4	ERR#	5	PRND1	6	PINIT#
7	PRND2	8	LPT_SLIN#	9	PRND3
10	Ground	11	PRND4	12	Ground
13	PRND5	14	Ground	15	PRND6
16	Ground	17	PRND7	18	Ground
19	ACK#	20	Ground	21	BUSY
22	Ground	23	PE	24	Ground
25	SLCT	26	No Pin		

CPU_FAN1, PUMP_FAN1, SYS_FAN1~2: 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 speed control signal. DC Mode fan connectors control 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_FAN1~2	DC mode	1A	12W

PWM Mode pin definition

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

DC Mode pin definition

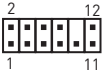
1	Ground	2	Voltage Control
3	Sense	4	NC

Important

*You can adjust 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 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 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.

Keep Data
(default)

Clear CMOS/
Reset BIOS

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.

JCOM1: Serial Port Connector

This connector allows you to connect the optional serial port with bracket.

1	DCD	2	SIN
3	SOUT	4	DTR
5	Ground	6	DSR
7	RTS	8	CTS
9	RI	10	No Pin

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 continuous 5050 RGB LED strips (12V/G/R/B) with the 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.*

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 Addressable 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.*

EZ Debug LED

These LEDs indicate the status of the motherboard.

CPU - indicates CPU is not detected or fail.

DRAM - indicates DRAM is not detected or fail.

VGA - indicates GPU is not detected or fail.

BOOT - indicates booting device is not detected or fail.

Installing OS, Drivers & MSI Center

Please download and update the latest utilities and drivers at www.msi.com

Installing Windows 10/ Windows 11

1. Power on the computer.
2. Insert the Windows 10/ Windows 11 installation disc/USB into your computer.
3. Press the **Restart** button on the computer case.
4. Press **F11** key during the computer POST (Power-On Self Test) to get into Boot Menu.
5. Select the Windows 10/ Windows 11 installation disc/USB from the Boot Menu.
6. Press any key if screen shows **Press any key to boot from CD or DVD...** message. If not, please skip this step.
7. Follow the instructions on the screen to install Windows 10/ Windows 11.

Installing Drivers

1. Start up your computer in Windows 10/ Windows 11.
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 drivers installation will then be in progress, after it has finished it will prompt you to restart.
7. Click **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 softwares. 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.

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 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 display a warning message **There is no GOP (Graphics Output protocol) support detected in this graphics card.**

Important

We recommend that you to replace with a GOP/UEFI compatible graphics card or using integrated graphics from CPU for having normal function.

How to check the BIOS mode?

1. Power on your computer.
2. Press **Delete** key, when the **Press DEL key to enter Setup Menu, F11 to enter 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 update 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 BIOS item description.*
- *The BIOS screens, options and settings will vary depending on your system.*

Entering BIOS Setup

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

Function key

F1: General Help

F2: Add/ Remove a favorite item

F3: Enter 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 USB flash drive (FAT/ FAT32 format only).

Ctrl+F: Enter 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.

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 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 the following methods to enter flash mode.
   - Reboot and press **Ctrl + F5** key during POST and click on **Yes** to reboot the system.
   - Reboot and press **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:

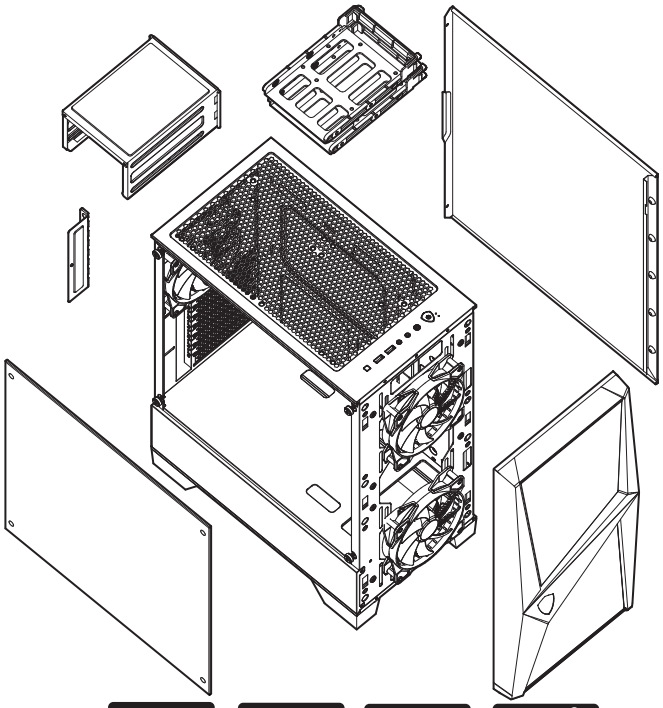
1. Install and launch MSI Center and go to **Support** page.
2. Select **Live Update** and click on **Advance** button.
3. Select the BIOS file and click on **Install** button.
4. The installation reminder will appear, then click the **Install** button on it.
5. The system will automatically restart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

MAG FORGE 100M

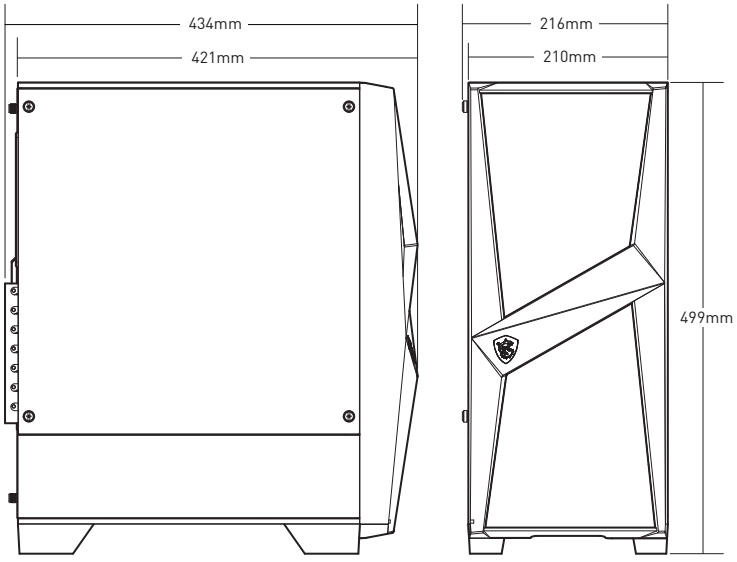
MAG FORGE 101M

MAG FORGE 100R

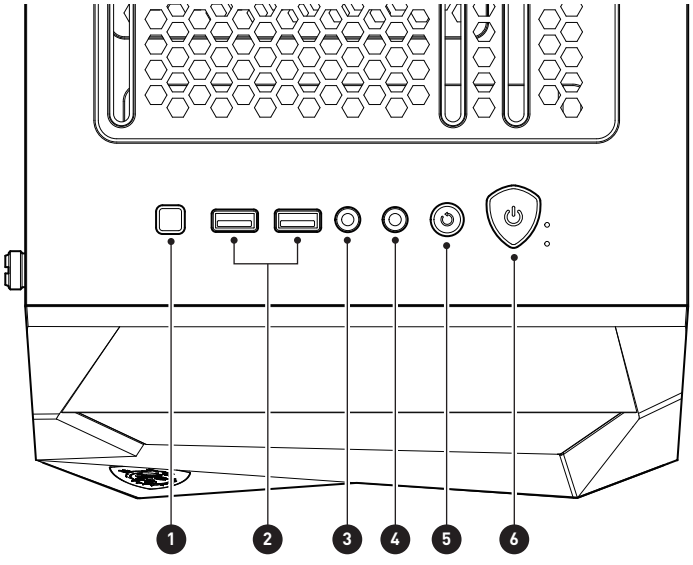
Case Features / 機殼特色



Side & Front View/ 側面和前面

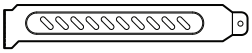


IO Panel / IO面板



1. LED switch button / LED切換按鈕
2. USB 3.2 Gen1 Type A
3. Mic in / 音訊輸入
4. Audio out / 音訊輸出
5. Reset button / 重新開機按鈕
6. Power button / 電源按鈕

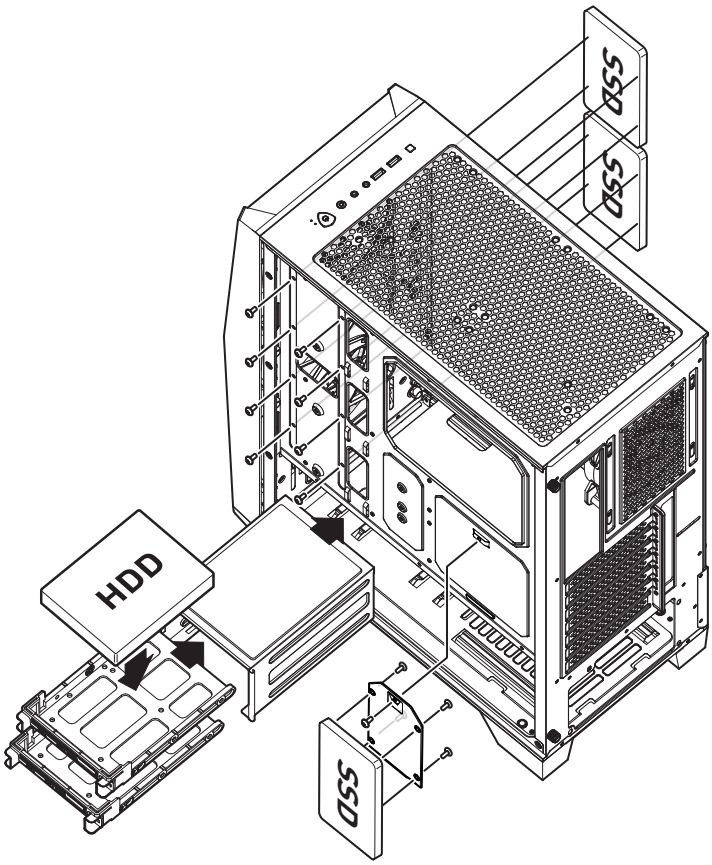
Accessories / 配件

Item 項目	Name 名稱 / Q'ty 數量	Used for 用途
	Cable ties 束綫帶 x5	Cable management 整線
	PCI slot cover PCI 插槽擋片 x2	PCI slot protection 保護PCI插槽
	Screw #6-32 10mm 手轉螺絲 x2	Securing drive tray 固定硬碟托架
	Screw #6-32 6.5mm x4	Motherboard Stud 主機板螺柱
	Screw M3 5mm x20	Motherboard / SSD 主機板 / SSD
	Screw #6-32 6mm 六角螺絲 x6	PSU / PCIe Card 電源供應器 / PCIe卡
	Screw #6-32 5mm 圓頭螺絲 x4	3.5" HDD 3.5" 硬碟

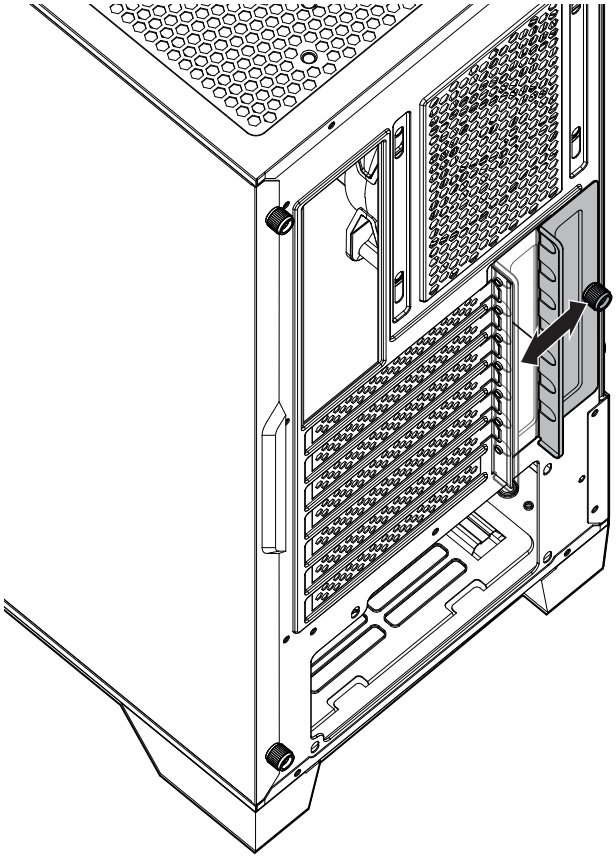
Specification / 產品規格

	MAG FORGE 100M	MAG FORGE 101M	MAG FORGE 100R
Fan LED Controller	1 to 6 RGB (4pin) Control Board	1 to 6 RGB (4pin) Control Board	1 to 6 ARGB (3pin) Control Board
Pre-installed	Front: 2x 120 mm RGB fans Rear: 1x 120 mm black fan	Front: 3x 120 mm RGB fans Rear: 1x 120 mm RGB fan	Front: 2x 120 mm ARGB fans Rear: 1x 120 mm black fan
Case Dimensions (mm)	434(D) x 216(W) x 499(H)		
Motherboard Support	ATX / Micro-ATX / Mini-ITX		
Drive Bays	2x 3.5" Inclued (Max 2, compatible with 2.5") 3x 2.5" Inclued (Max 3)		
IO Panel	1x LED switch button 2x USB 3.2 Gen1 Type A ports 1x Mic in jack 1x Audio out jack 1x Reset button 1x Power button		
Clearance	CPU Cooler Hight: max 160 mm Graphics Card Length: max 330 mm PSU Length: Standard ATX 160 mm, max to 200 mm (without 3.5" HDD case installed)		
Fan Support	Front: Up to 3x 120 mm or 2x 140 mm Top: Up to 2x 120 mm or 2x 140 mm Rear: Up to 1x 120 mm		
Radiator Support	Front: Up to 240 mm Top: Up to 240 mm Rear: Up to 120mm		
Material	Left Side: Tempered Glass Right Side: Metel Front: Mesh Top: Metel		

SSD & HDD Installation/ SSD和硬碟安裝方式



PCIe Card Installation/ PCIe卡安裝方式



Specifications are subject to change without notice.
規格若有變更，恕不另行通知。