# ROG STRIX B460-H GAMING

Motherboard

E16494
First Edition
March 2020

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# Safety information

## Electrical safety

- To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system.
- When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.
- Before connecting or removing signal cables from the motherboard, ensure that all power cables are unplugged.
- Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit.
- Ensure that your power supply is set to the correct voltage in your area. If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.

## Operation safety

- Before installing the motherboard and adding devices on it, carefully read all the manuals that came with the package.
- Before using the product, ensure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet.
- Place the product on a stable surface.
- If you encounter technical problems with the product, contact a qualified service technician or your retailer.
- Your motherboard should only be used in environments with ambient temperatures between 0°C and 40°C.

# About this guide

This user guide contains the information you need when installing and configuring the motherboard.

## How this guide is organized

This guide contains the following parts:

- **Chapter 1: Product Introduction**

  This chapter describes the features of the motherboard and the new technology it supports. It includes description of the switches, jumpers, and connectors on the motherboard.

- **Chapter 2: Basic Installation**

  This chapter lists the hardware setup procedures that you have to perform when installing system components.

- **Chapter 3: BIOS and RAID Support**

  This chapter tells how to boot into the BIOS, upgrade BIOS using the EZ Flash Utility and support on RAID.

## Where to find more information

Refer to the following sources for additional information and for product and software updates.

1. **ASUS website**

   The ASUS website (www.asus.com) provides updated information on ASUS hardware and software products.

2. **Optional documentation**

   Your product package may include optional documentation, such as warranty flyers, that may have been added by your dealer. These documents are not part of the standard package.

## Conventions used in this guide

To ensure that you perform certain tasks properly, take note of the following symbols used throughout this manual.



**CAUTION:** Information to prevent damage to the components and injuries to yourself when trying to complete a task.



**IMPORTANT:** Instructions that you MUST follow to complete a task.



**NOTE:** Tips and additional information to help you complete a task.

# ROG STRIX B460-H GAMING specifications summary

| | |
|---|---|
| **CPU** | Intel® Socket LGA1200 for 10th Gen Intel® Core™, Pentium® Gold and Celeron® processors*<br>Supports Intel® 14 nm CPU<br>Supports Intel ® Turbo Boost Technology 2.0 and Intel® Turbo Boost Max Technology 3.0**<br>*** Refer to www.asus.com for CPU support list.**<br>**** Intel® Turbo Boost Max Technology 3.0 support depends on the CPU types.** |
| **Chipset** | Intel® B460 Chipset |
| **Memory** | 4 x DIMM, Max. 128GB, DDR4 2933/2800/2666/2400/2133 MHz Non-ECC, Un-buffered Memory*<br>Dual Channel Memory Architecture<br>Supports Intel® Extreme Memory Profile (XMP)<br>OptiMem<br>*** For 10th Gen Intel® processors, only Core™ i9/i7 CPUs support 2933/2800/2666/2400/2133 natively, others will run at the maximum transfer rate of DDR4 2666 MHz.**<br>**** Refer to www.asus.com for the Memory QVL (Qualified Vendors Lists).** |
| **Graphics** | 1 x DisplayPort 1.4**<br>1 x HDMI™ 1.4b<br>*** Graphics specifications may vary between CPU types.**<br>**** Support DisplayPort 1.4 with max. resolution of 4096 x 2304 @60Hz. Please refer to www.intel.com for any update.** |
| **Expansion Slots** | **Intel® 10th Gen Processors**<br>1 x PCIe 3.0 x16 slot<br>**Intel® B460 Chipset**<br>1 x PCIe 3.0 x16 slot (supports x4 mode)*<br>3 x PCIe 3.0 x1 slots**<br>*** The PCIEX16_2 shares bandwidth with the PCIEX1_1 and PCIEX1_3. When PCIEX16_2 runs x4 mode, PCIEX1_1 and PCIEX1_3 will be disabled. The PCIEX16_2 will run x2 mode when PCIEX1_1 or PCIEX1_3 is occupied.**<br>**** The PCIEX1_1 and PCIEX1_3 share bandwidth with PCIEX16_2. The PCIEX1_2 shares bandwidth with M.2 slot (Key E).** |
| **Multi-GPU Support** | Supports AMD 2-Way CrossFireX™ Technology |
| **Storage** | **Total supports 2 x M.2 slots and 6 x SATA 6Gb/s ports**<br>**Intel® B460 Chipset**<br>M.2_1 slot (Key M), type 2242/2260/2280 (supports PCIe 3.0 x4 & SATA modes)<br>M.2_2 slot (Key M), type 2242/2260/2280/22110 (supports PCIe 3.0 x4 mode)*<br>6 x SATA 6Gb/s ports<br>Intel® Rapid Storage Technology supports Raid 0,1,5,10<br>Intel® Optane™ Memory Ready<br>*** When M.2_1 is operating in SATA mode, SATA6G_1 will be disabled.** |
| **Ethernet** | 1 x Intel® I219V 1Gb Ethernet<br>ASUS LANGuard |
| **Wireless & Bluetooth** | M.2 slot only (Key E ) (Supports PCIe interface)*<br>*** Wi-Fi module is sold separately.** |

*(continued on the next page)*

# ROG STRIX B460-H GAMING specifications summary

| | |
|---|---|
| **USB** | **Rear USB (Total 7 ports)**<br>1 x USB 3.2 Gen 2x2 port (1 x USB Type-C®)*<br>6 x USB 3.2 Gen 1 ports (6 x Type-A)<br>**Front USB (Total 6 ports)**<br>1 x USB 3.2 Gen 1 header supports additional 2 USB 3.2 Gen 1 ports<br>2 x USB 2.0 headers support additional 4 USB 2.0 ports<br>*** Works at PCIe 3.0 x2 speeds.** |
| **Audio** | **ROG SupremeFX 7.1-Channel High Definition Audio CODEC S1220A**<br>- Impedance sense for front and rear headphone outputs<br>- Jack-detection, Multi-streaming, Front Panel Jack-retasking<br>- High quality 120 dB SNR stereo playback output and 113 dB SNR recording input<br>- Supports up to 32-Bit/192kHz playback*<br>**Audio Features:**<br>- SupremeFX Shielding Technology<br>- Dual OP Amplifiers<br>- Rear optical S/PDIF out port<br>- Premium Japanese audio capacitors<br>- Audio cover<br>*** Due to limitations in HDA bandwidth, 32-Bit/192kHz is not supported for 7.1-Channel audio.** |
| **Back Panel I/O Ports** | 1 x USB 3.2 Gen 2x2 port (1 x USB Type-C®)<br>6 x USB 3.2 Gen 1 ports (6 x Type-A)<br>1 x DisplayPort<br>1 x HDMI™ port<br>1 x Intel® I219-V 1Gb Ethernet port<br>1 x Optical S/PDIF out<br>5 x Audio jacks |
| **Internal I/O connectors** | **Fan and cooling related**<br>1 x 4-pin CPU Fan header<br>1 x 4-pin CPU OPT Fan header<br>1 x 4-pin AIO Pump header<br>2 x 4-pin Chassis Fan headers<br>**Power related**<br>1 x 24-pin Main Power connector<br>1 x 8-pin +12V Power connector<br>**Storage related**<br>2 x M.2 slots (Key M)<br>6 x SATA 6Gb/s ports<br>**USB**<br>1 x USB 3.2 Gen 1 header supports additional 2 USB 3.2 Gen 1 ports<br>2 x USB 2.0 headers support additional 4 USB 2.0 ports |

*(continued on the next page)*

# ROG STRIX B460-H GAMING specifications summary

| | |
|---|---|
| **Internal I/O connectors** | **Miscellaneous**<br>1 x AURA Addressable Gen 2 header<br>1 x AURA RGB header<br>1 x Clear CMOS header<br>1 x Front Panel Audio header (AAFP)<br>1 x M.2 slot (Key E)<br>1 x 20-5 pin System Panel header<br>1 x Thunderbolt header |
| **Special Features** | **Extreme Engine Digi+**<br>- 5K Black Metallic Capacitors<br>**ASUS Q-Design**<br>- ASUS Q-DIMM<br>- ASUS Q-LED (CPU [red], DRAM [yellow], VGA [white], Boot Device [yellow green])<br>- ASUS Q-Slot<br>**ASUS Thermal Solution**<br>- Aluminum M.2 heatsink<br>**ASUS EZ DIY**<br>- Procool<br>- Pre-mounted I/O shield<br>- SafeSlot<br>**AURA Sync**<br>- Standard RGB header<br>- Addressable Gen 2 RGB header |
| **Software Features** | **ROG Exclusive Software**<br>- RAMCache III<br>- ROG CPU-Z<br>- GameFirst VI<br>- Sonic Studio III + Sonic Studio Virtual Mixer<br>- Sonic Radar III<br>- DTS® Sound Unbound<br>- Overwolf<br>- Anti-virus software<br>**ASUS Exclusive Software**<br>Armoury Crate<br>- Aura Creator<br>- Aura Sync<br>AI Suite 3:<br>- Performance And Power Saving Utility<br>TurboV EVO<br>EPU<br>Digi+ VRM<br>Fan Xpert 4<br>- EZ update |

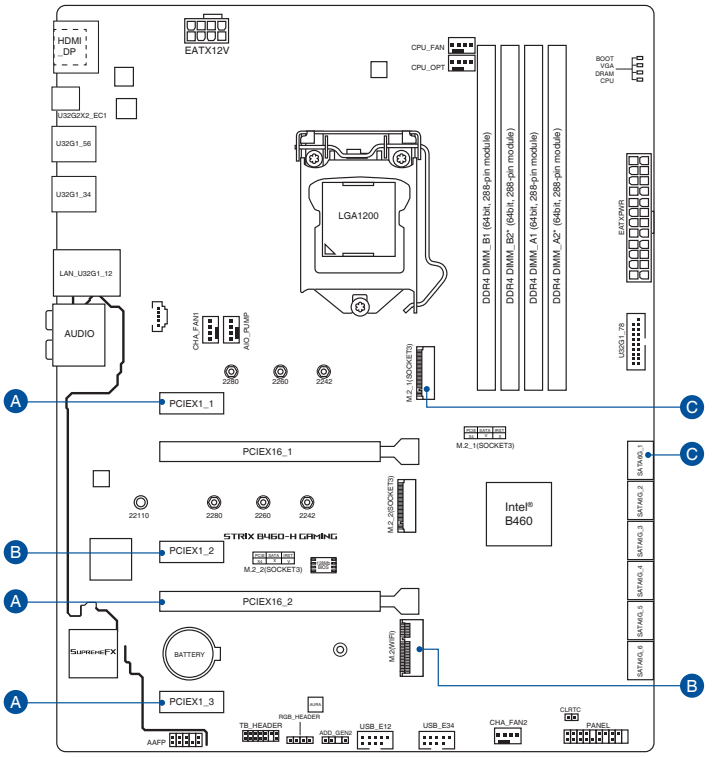
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## ROG STRIX B460-H GAMING specifications summary

| | |
|---|---|
| **Software Features** | ASUS CPU-Z<br>DAEMON Tools<br>WinRAR<br>**UEFI BIOS**<br>ASUS EZ DIY<br>- ASUS CrashFree BIOS 3<br>- ASUS EZ Flash 3<br>- ASUS UEFI BIOS EZ Mode<br>FlexKey |
| **BIOS** | 128 Mb Flash ROM, UEFI AMI BIOS |
| **Manageability** | WOL by PME, PXE |
| **Operating System** | Windows® 10 - 64 bit |
| **Form Factor** | ATX Form Factor<br>12 inch x 9.6 inch ( 30.5 cm x 24.4 cm) |

Specifications are subject to change without notice. Please refer to the ASUS website for the latest specifications.

# Connectors with shared bandwidth




| Configuration | | 1 | 2 |
|---|---|---|---|
| A | PCIEX16_2 | x4 | x2 |
| | PCIEX1_1 | - | x1 |
| | PCIEX1_3 | - | x1 |
| **Configuration** | | **1** | |
| B | PCIEX1_2 | x1 | - |
| | M.2 (Key E) | - | v |
| **Configuration** | | **1** | **2** |
| C | M.2_1 | PCIe 3.0 x4 | SATA |
| | SATA6G_1 | v | - |

- The PCIEX16_2 shares bandwidth with the PCIEX1_1 and PCIEX1_3. When PCIEX16_2 runs x4 mode, PCIEX1_1 and PCIEX1_3 will be disabled. The PCIEX16_2 will run x2 mode when PCIEX1_1 or PCIEX1_3 is occupied.
- The PCIEX1_1 and PCIEX1_3 share bandwidth with PCIEX16_2. The PCIEX1_2 shares bandwidth with M.2 slot (Key E).
- When M.2_1 is operating in SATA mode, SATA6G_1 will be disabled.

## Package contents

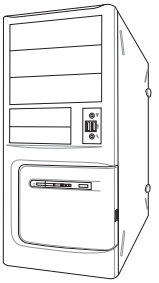
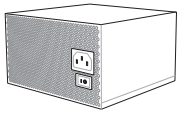
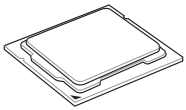
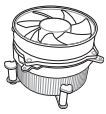
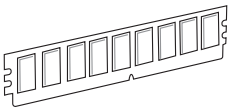
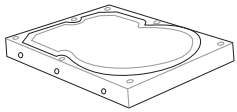
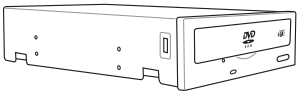
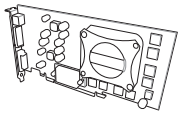
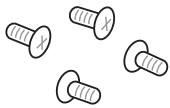
Check your motherboard package for the following items.

| | |
|---|---|
| Motherboard | 1 x ROG STRIX B460-H GAMING motherboard |
| Cables | 1 x Addressable RGB extension cable<br>4 x SATA 6Gb/s cables |
| Miscellaneous | 1 x Cable ties pack<br>1 x M.2 Rubber package<br>1 x M.2 SSD screw package<br>1 x M.2 Key E screw package<br>1 x ROG Strix stickers<br>1 x ROG Strix thank you card |
| Installation Media | 1 x Support DVD |
| Documentation | 1 x User manual |



If any of the above items is damaged or missing, contact your retailer.

# Installation tools and components

| | |
|---|---|
|  |  |
| | Phillips (cross) screwdriver |
| |  |
| PC chassis | Power supply unit |
|  |  |
| Intel® LGA 1200 CPU | Intel® LGA 1200 compatible CPU Fan |
|  |  |
| DDR4 DIMM | SATA hard disk drive |
|  |  |
| SATA optical disc drive (optional) | Graphics card (optional) |
|  |  |
| M.2 SSD module (optional) | 1 Bag of screws |

The tools and components in the table above are not included in the motherboard package.

# Product Introduction

1

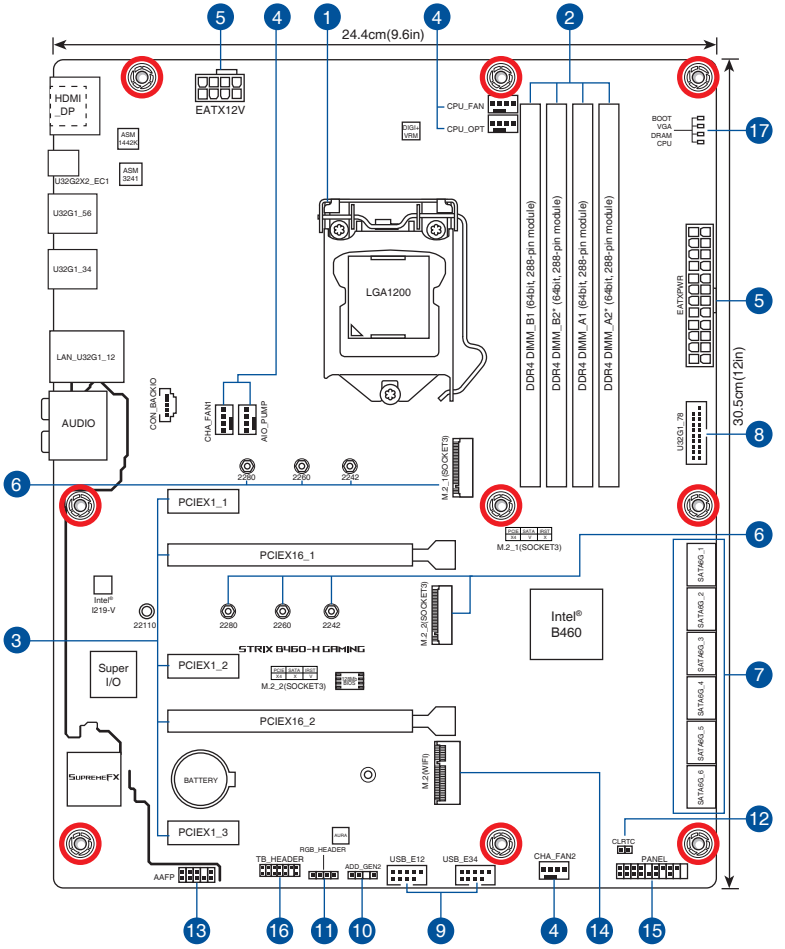
## 1.1 Before you proceed

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



- Unplug the power cord from the wall socket before touching any component.
- Before handling components, use a grounded wrist strap or touch a safely grounded object or a metal object, such as the power supply case, to avoid damaging them due to static electricity.
- Hold components by the edges to avoid touching the ICs on them.
- Whenever you uninstall any component, place it on a grounded antistatic pad or in the bag that came with the component.
- Before you install or remove any component, ensure that the ATX power supply is switched off or the power cord is detached from the power supply. Failure to do so may cause severe damage to the motherboard, peripherals, or components.

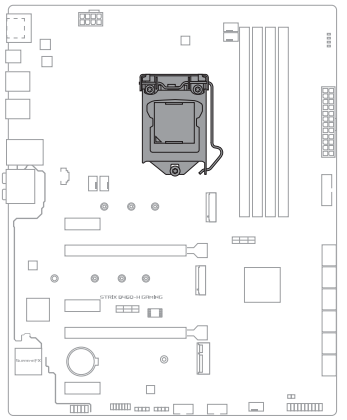
## 1.2 Motherboard layout

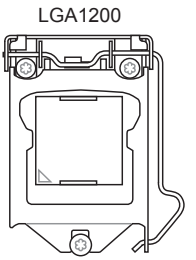


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### 1. CPU socket

The motherboard comes with a LGA1200 socket designed for 10th Gen Intel® Core™, Pentium® Gold and Celeron® processors.



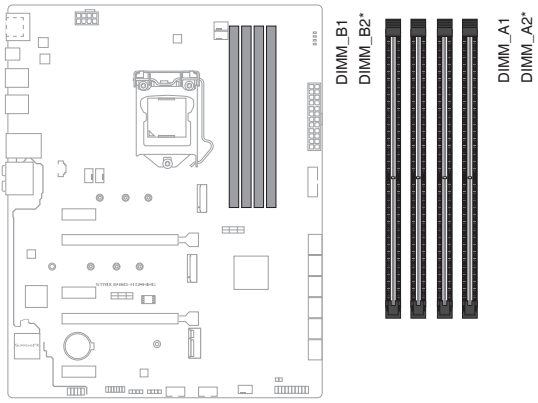



- Ensure that you install the correct CPU designed for LGA1200 socket only. DO NOT install a CPU designed for other sockets on the LGA1200 socket.
- The CPU fits in only one correct orientation. DO NOT force the CPU into the socket to prevent bending the connectors on the socket and damaging the CPU.
- Ensure that all power cables are unplugged before installing the CPU.
- Upon purchase of the motherboard, ensure that the PnP cap is on the socket and the socket contacts are not bent. Contact your retailer immediately if the PnP cap is missing, or if you see any damage to the PnP cap/socket contacts/motherboard components. ASUS will shoulder the cost of repair only if the damage is shipment/transit-related.
- Keep the cap after installing the motherboard. ASUS will process Return Merchandise Authorization (RMA) requests only if the motherboard comes with the cap on the LGA1200 socket.
- The product warranty does not cover damage to the socket contacts resulting from incorrect CPU installation/removal, or misplacement/loss/incorrect removal of the PnP cap.

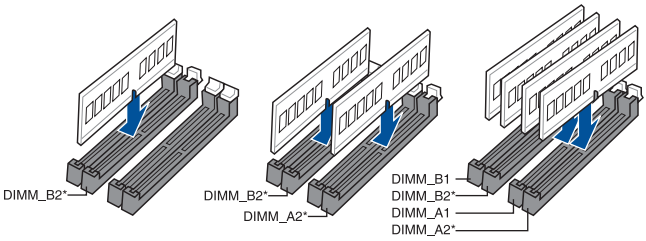
### 2. DIMM slots

The motherboard comes with Dual Inline Memory Modules (DIMM) slots designed for DDR4 (Double Data Rate 4) memory modules.

A DDR4 memory module is notched differently from a DDR, DDR2, or DDR3 module. DO NOT install a DDR, DDR2, or DDR3 memory module to the DDR4 slot.




### Recommended memory configurations



### Memory configurations

You may install 4 GB, 8 GB, 16 GB, and 32 GB unbuffered and non-ECC DDR4 DIMMs into the DIMM sockets.



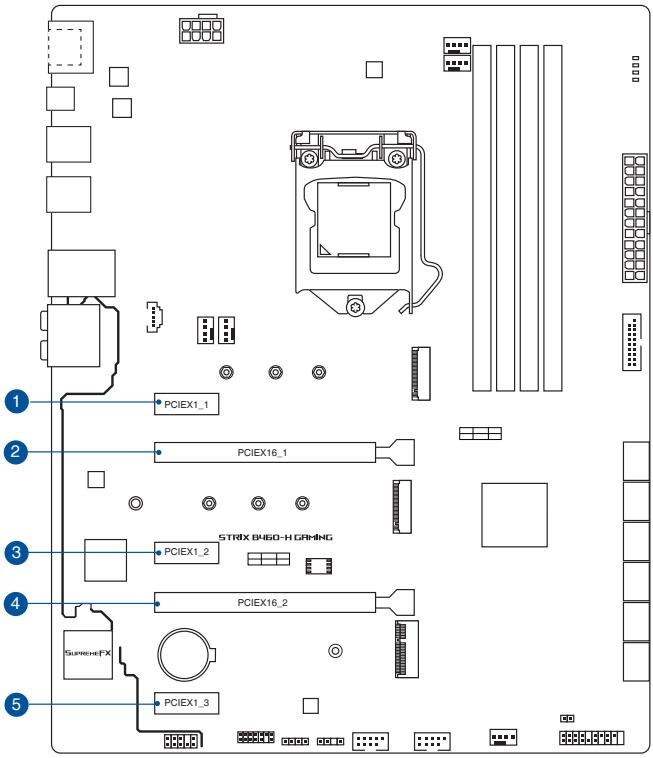
You may install varying memory sizes in Channel A and Channel B. The system maps the total size of the lower-sized channel for the dual-channel configuration. Any excess memory from the higher-sized channel is then mapped for single-channel operation.



- The default memory operation frequency is dependent on its Serial Presence Detect (SPD), which is the standard way of accessing information from a memory module. Under the default state, some memory modules for overclocking may operate at a lower frequency than the vendor-marked value.
- For system stability, use a more efficient memory cooling system to support a full memory load or overclocking condition.
- Always install the DIMMS with the same CAS Latency. For an optimum compatibility, we recommend that you install memory modules of the same version or data code (D/C) from the same vendor. Check with the vendor to get the correct memory modules.
- Visit the ASUS website for the latest QVL.

### 3. Expansion slots

Unplug the power cord before adding or removing expansion cards. Failure to do so may cause you physical injury and damage motherboard components.




Please refer to the following table for the recommended VGA configuration.

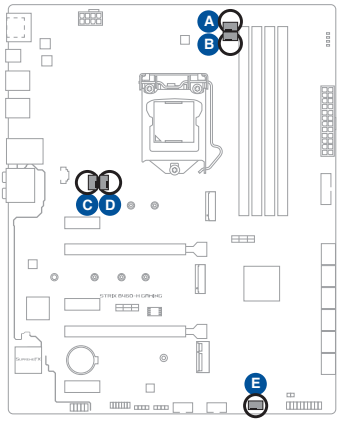
### Recommended VGA configuration

| Slot | Description | Single VGA | Dual VGA |
|---|---|---|---|
| 2. | PCIe 3.0 x16_1 | x16 | x16 |
| 4. | PCIe 3.0 x16_2 | - | x4 |

- We recommend that you provide sufficient power when running CrossFireX™ mode.
- Ensure to connect the 8-pin power plug when running CrossFireX™ mode.
- Connect a chassis fan to the chassis fan connectors when using multiple graphics cards for better thermal environment.

### 4. Fan and Pump headers

The Fan and Pump headers allow you to connect fans or pumps to cool the system.




A CPU_FAN
B CPU_OPT
E CHA_FAN2




C CHA_FAN1
D AIO_PUMP



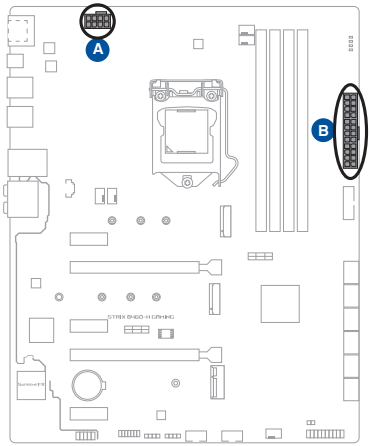

- DO NOT forget to connect the fan cables to the fan headers. Insufficient air flow inside the system may damage the motherboard components. These are not jumpers! Do not place jumper caps on the fan headers!
- Ensure the cable is fully inserted into the header.

For water cooling kits, connect the pump connector to the **AIO_PUMP** header.

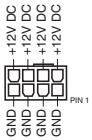
| Header | Max. Current | Max. Power | Default Speed | Shared Control |
|---|---|---|---|---|
| CPU_FAN | 1A | 12W | Q-Fan Controlled | A |
| CPU_OPT | 1A | 12W | Q-Fan Controlled | A |
| CHA_FAN1 | 1A | 12W | Q-Fan Controlled | - |
| CHA_FAN2 | 1A | 12W | Q-Fan Controlled | - |
| AIO_PUMP | 1A | 12W | Full-Speed | - |

**5. Power connectors**

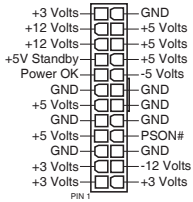
These Power connectors allow you to connect your motherboard to a power supply. The power supply plugs are designed to fit in only one orientation, find the proper orientation and push down firmly until the power supply plugs are fully inserted.




**A** EATX12V




**B** EATXPWR

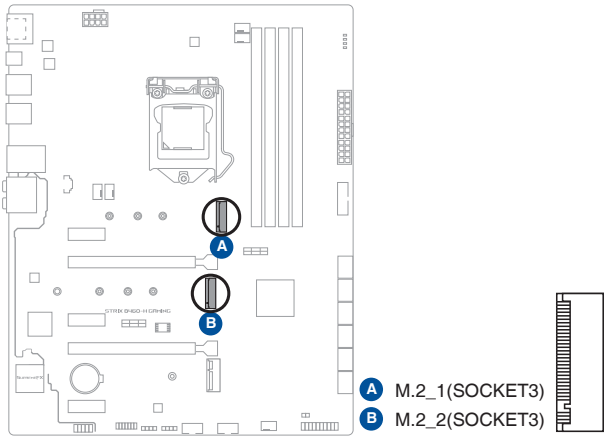



Ensure to connect the 8-pin power plug.

- For a fully configured system, we recommend that you use a power supply unit (PSU) that complies with ATX 12V Specification 2.0 (or later version) and provides a minimum power of 350 W.
- We recommend that you use a PSU with a 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.
- If you want to use two or more high-end PCI Express x16 cards, use a PSU with 1000W power or above to ensure the system stability.

**6. M.2 slot**

The M.2 slot allows you to install M.2 SSD modules.

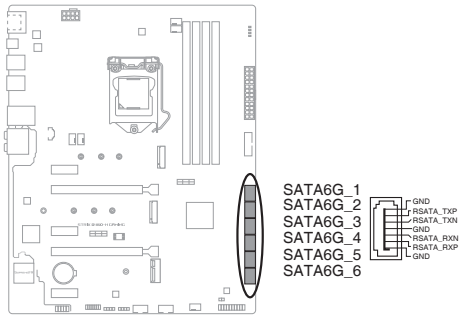


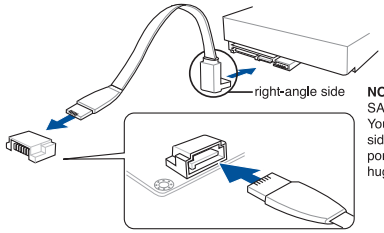

- M.2_1 slot supports PCIe 3.0 x4 and SATA mode Key M design and type 2242 / 2260 / 2280 storage devices.
- M.2_2 slot supports PCIe 3.0 x4 mode Key M design and type 2242 / 2260 / 2280 / 22110 storage devices.
- M.2_2 slot supports IRST (Intel® Rapid Storage Technology).

The M.2 SSD module is purchased separately.

### 7. SATA 6Gb/s ports

The SATA 6Gb/s ports allows you to connect SATA devices such as optical disc drives and hard disk drives via a SATA cable.



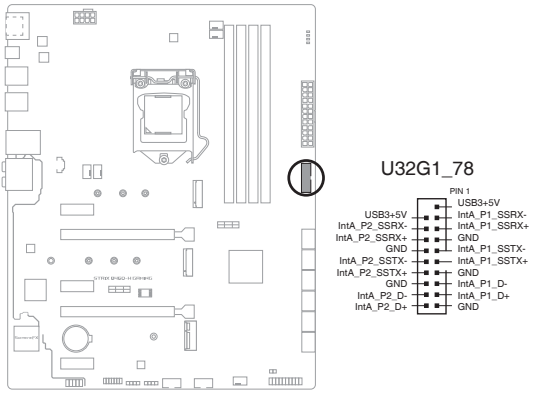

**NOTE:** Connect the right-angle side of SATA signal cable to SATA device. You may also connect the right-angle side of SATA cable to the onboard SATA port to avoid mechanical conflict with huge graphics cards.

If you installed SATA storage devices, you can create a RAID 0, 1, 5, and 10 configuration with the Intel® Rapid Storage Technology through the onboard Intel® B460 chipset.

- The slots are set to **[AHCI]** by default. If you intend to create a SATA RAID set using these connectors, set the SATA Mode item in the BIOS to **[Intel RST Premium with Intel Optane System Acceleration (RAID)]**.
- Before creating a RAID set, refer to the **RAID Configuration Guide**. You can download the **RAID Configuration Guide** from the ASUS website.

### 8. USB 3.2 Gen 1 header

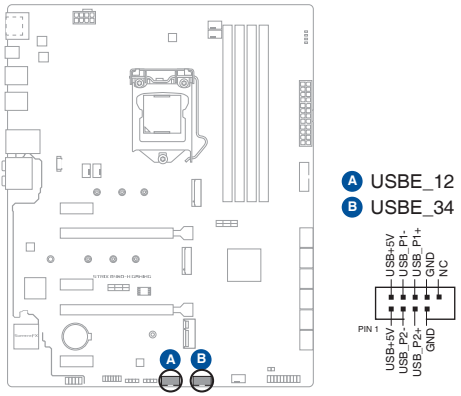
The USB 3.2 Gen 1 header allows you to connect a USB 3.2 Gen 1 module for additional USB 3.2 Gen 1 ports. The USB 3.2 Gen 1 header provides data transfer speeds of up to 5 Gb/s.




The USB 3.2 Gen 1 module is purchased separately.

### 9. USB 2.0 header

The USB 2.0 header allows you to connect a USB module for additional USB 2.0 ports. The USB 2.0 header provides data transfer speeds of up to 480 Mb/s.

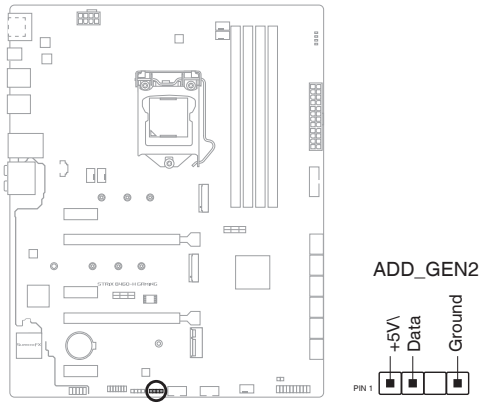



DO NOT connect a 1394 cable to the USB connectors. Doing so will damage the motherboard!

The USB 2.0 module is purchased separately.

**10. AURA Addressable Gen2 header**

The Addressable Gen2 header allows you to connect individually addressable RGB WS2812B LED strips or WS2812B based LED strips.



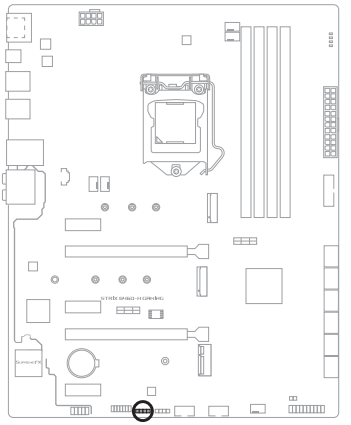

The Addressable Gen2 header supports WS2812B addressable RGB LED strips (5V/Data/Ground), with a maximum power rating of 3A (5V), and the addressable headers on this board can handle a combined maximum of 500 LEDs.

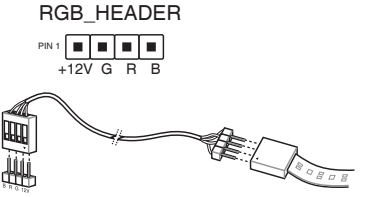
Before you install or remove any component, ensure that the power supply is switched off or the power cord is detached from the power supply. Failure to do so may cause severe damage to the motherboard, peripherals, or components.

- Actual lighting and color will vary with LED strip.
- If your LED strip does not light up, check if the addressable RGB LED strip is connected in the correct orientation, and the 5V connector is aligned with the 5V header on the motherboard.
- The addressable RGB LED strip will only light up when the system is powered on.
- The addressable RGB LED strip is purchased separately.

**11. AURA RGB header**

The AURA RGB header allows you to connect RGB LED strips.





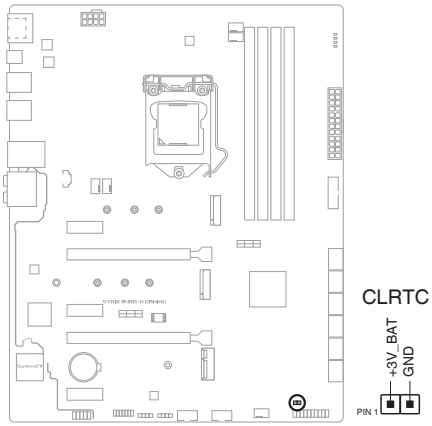

The AURA RGB header supports 5050 RGB multi-color LED strips (12V/G/R/B), with a maximum power rating of 3A (12V).

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

- Actual lighting and color will vary with LED strip.
- If your LED strip does not light up, check if the RGB LED extension cable and the RGB LED strip is connected in the correct orientation, and the 12V connector is aligned with the 12V header on the motherboard.
- The LED strip will only light up when the system is powered on.
- The LED strip is purchased separately.

**12. Clear CMOS header**

The Clear CMOS header allows you to clear the Real Time Clock (RTC) RAM in the CMOS, which contains the date, time, system passwords, and system setup parameters.




To erase the RTC RAM:

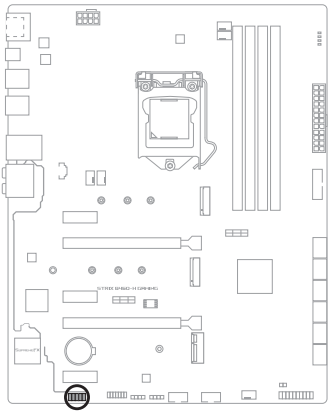
1. Turn OFF the computer and unplug the power cord.
2. Short-circuit pin 1-2 with a metal object or jumper cap for about 5-10 seconds.
3. Plug the power cord and turn ON the computer.
4. Hold down the <Del> key during the boot process and enter BIOS setup to re-enter data.

DO NOT short-circuit the pins except when clearing the RTC RAM. Short-circuiting or placing a jumper cap will cause system boot failure!

If the steps above do not help, remove the onboard button cell battery and move the jumper again to clear the CMOS RTC RAM data. After clearing the CMOS, reinstall the button cell battery.

### 13. Front Panel Audio header

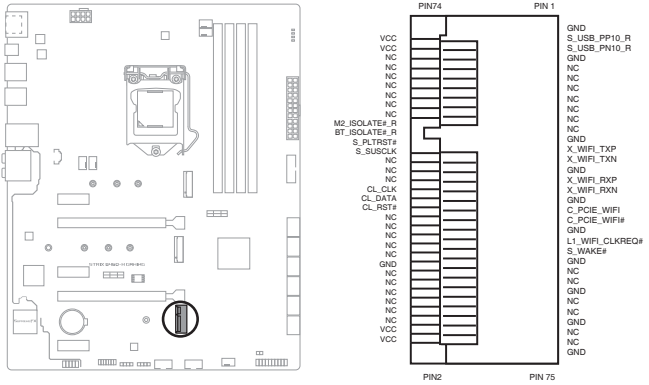
The front panel audio header is for a chassis-mounted front panel audio I/O module that supports HD Audio. Connect one end of the front panel audio I/O module cable to this header.




We recommend that you connect a high-definition front panel audio module to this connector to avail of the motherboard's high-definition audio capability.

### 14. M.2 slot (Key E)

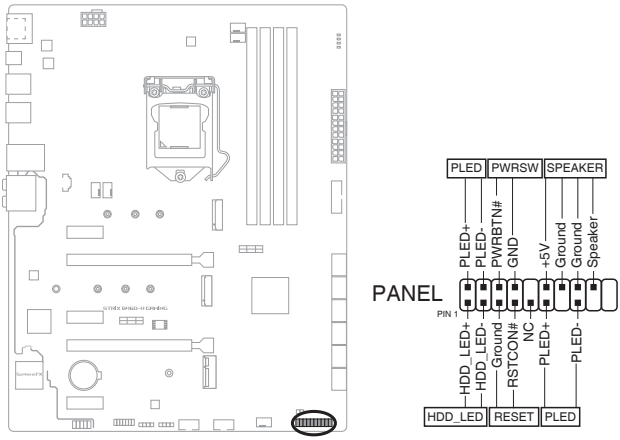
The M.2 Wi-Fi slot allows you to install an M.2 Wi-Fi module (E-key, type 2230; PCIe interface).




The M.2 Wi-Fi module is purchased separately.

**15. System Panel header**

The System Panel header supports several chassis-mounted functions.




- **System power LED (2-pin PLED)**

  This 2-pin header is for the system power LED. Connect the chassis power LED cable to this header. The system power LED lights up when you turn on the system power, and blinks when the system is in sleep mode.

- **Hard disk drive activity LED (2-pin HDD_LED)**

  This 2-pin header is for the HDD Activity LED. Connect the HDD Activity LED cable to this header. The HDD LED lights up or flashes when data is read from or written to the HDD.

- **System warning speaker (4-pin SPEAKER)**

  This 4-pin header is for the chassis-mounted system warning speaker. The speaker allows you to hear system beeps and warnings.

- **ATX power button/soft-off button (2-pin PWRSW)**

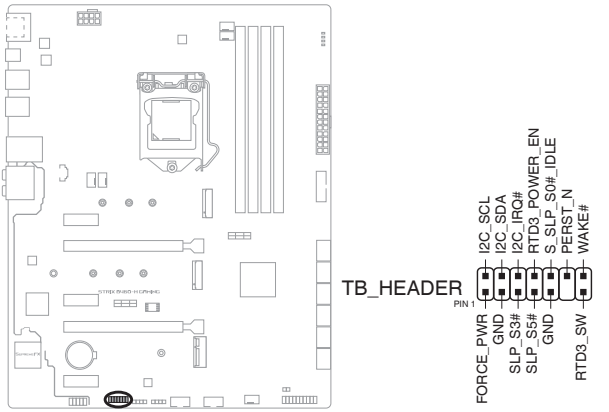
  This header is for the system power button. Pressing the power button turns the system on or puts the system in sleep or soft-off mode depending on the operating system settings. Pressing the power switch for more than four seconds while the system is ON turns the system OFF.

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

  This 2-pin header is for the chassis-mounted reset button for system reboot without turning off the system power.

**16. Thunderbolt header**

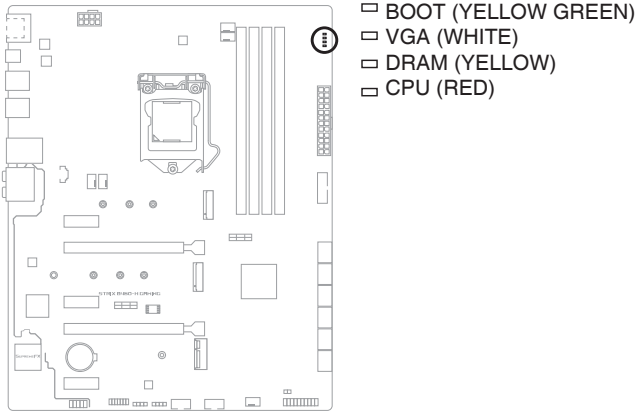
The Thunderbolt header allows you to connect an add-on Thunderbolt I/O card that supports Intel's Thunderbolt Technology, allowing you to connect up to six Thunderbolt-enabled devices and a DisplayPort-enabled display in a daisy-chain configuration.




- The add-on Thunderbolt I/O card and Thunderbolt cables are purchased separately.
- Ensure to install the Thunderbolt card in M2_2 slot.

**17. Q-LEDs**

The Q-LEDs check key components (CPU, DRAM, VGA, and booting devices) during the motherboard booting process. If an error is found, the critical component's LED stays lit up until the problem is solved.




The Q-LEDs provide the most probable cause of an error code as a starting point for troubleshooting. The actual cause may vary from case to case.

# Basic Installation

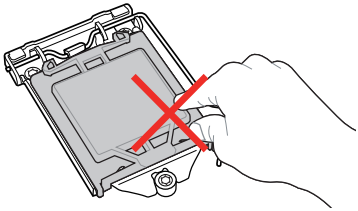
2

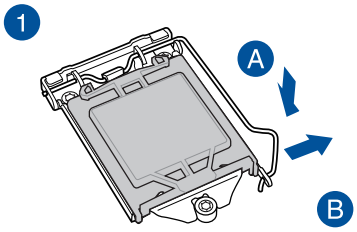
## 2.1 Building your PC system

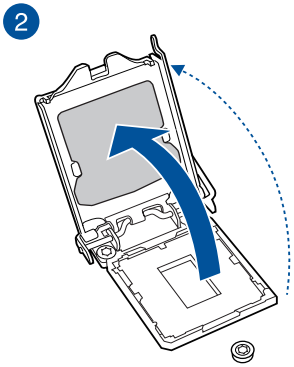
The diagrams in this section are for reference only. The motherboard layout may vary with models, but the installation steps are the same for all models.

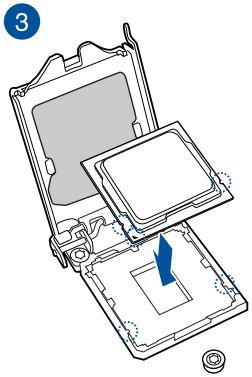
### 2.1.1 CPU installation

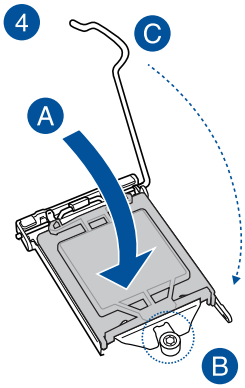
- Ensure that you install the correct CPU designed for LGA1200 socket only. DO NOT install a CPU designed for LGA1155, LGA1156, and LGA1151 sockets on the LGA1200 socket.
- ASUS will not cover damages resulting from incorrect CPU installation/removal, incorrect CPU orientation/placement, or other damages resulting from negligence by the user.

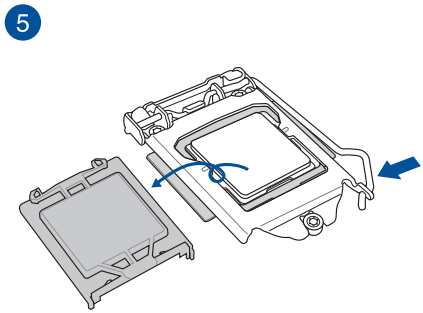




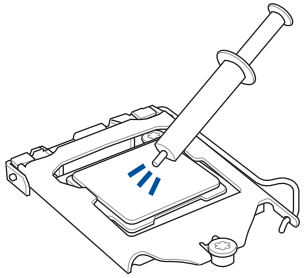




4
C
A
B

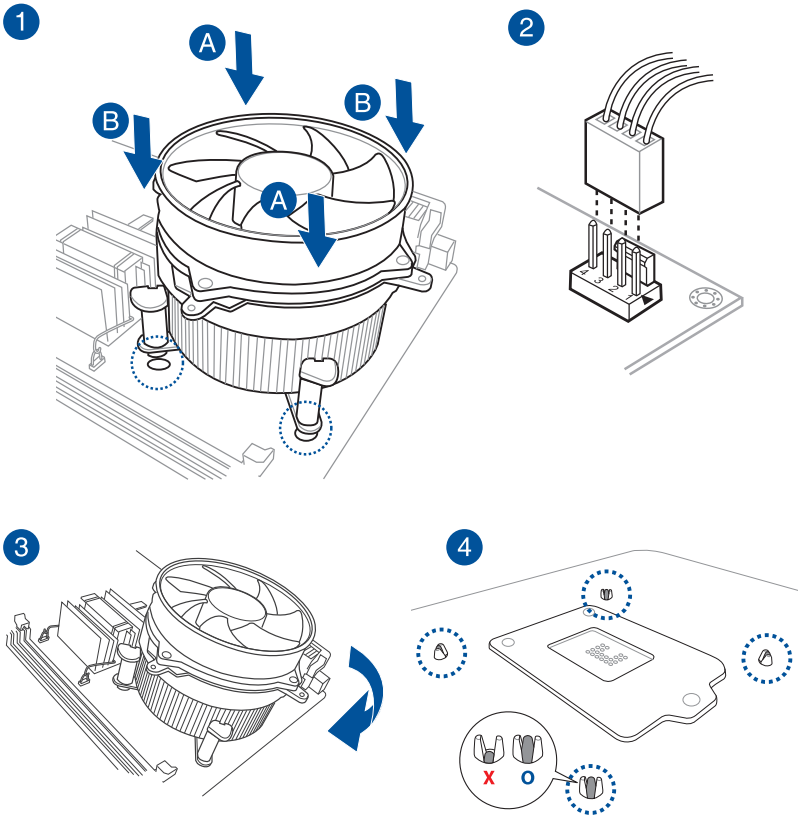

5

## 2.1.2 Cooling system installation



Apply Thermal Interface Material to the CPU cooling system and CPU before you install the cooling system, if necessary.

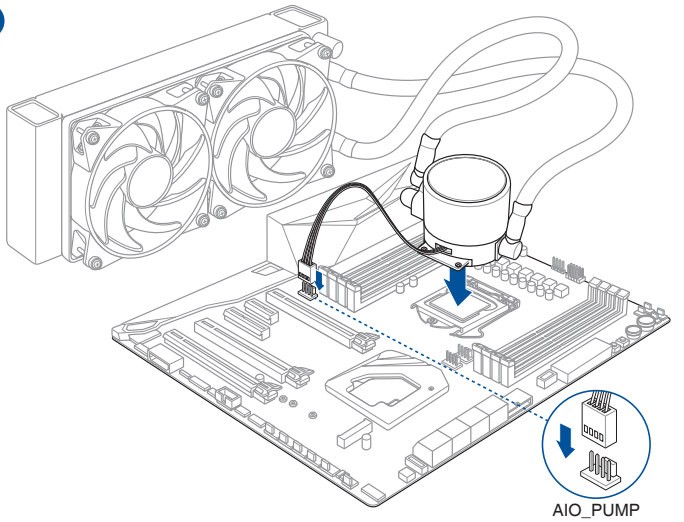
**To install a CPU heatsink and fan assembly**



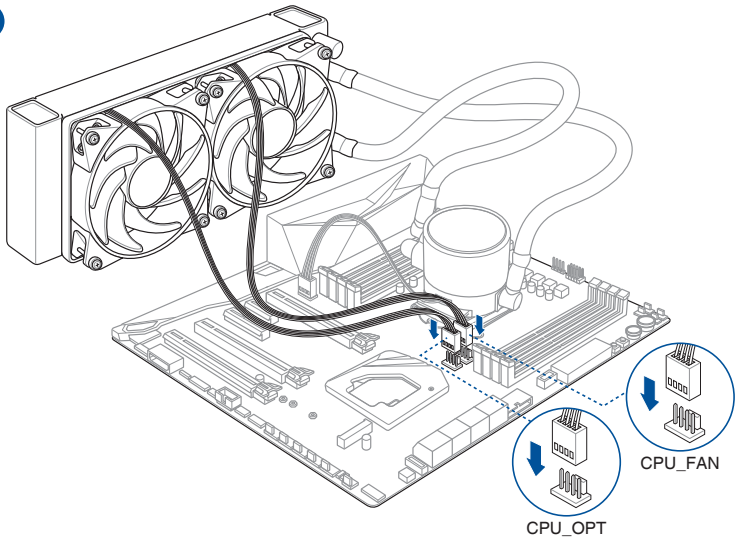
### To install an AIO cooler

If you wish to install an AIO cooler, we recommend installing the AIO cooler after installing the motherboard into the chassis.

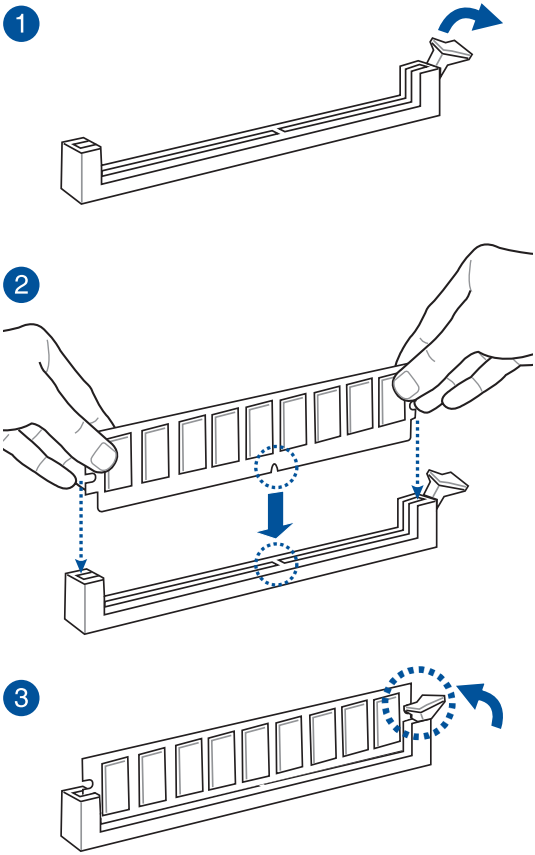
1



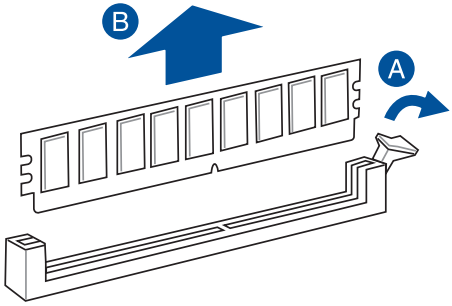

2



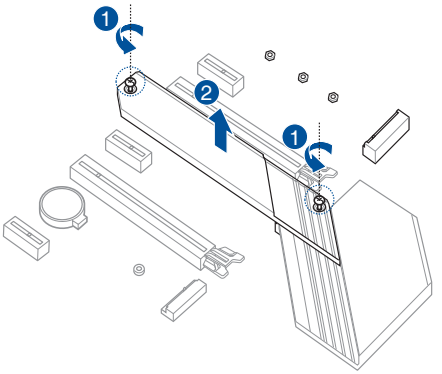
### 2.1.3 DIMM installation

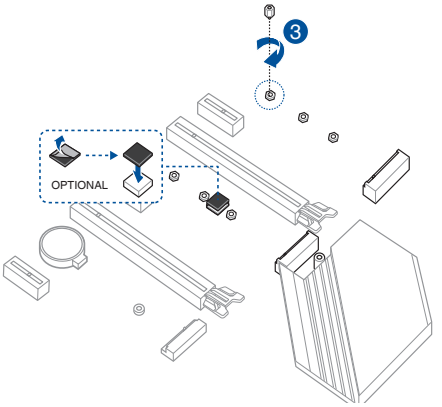



**To remove a DIMM**

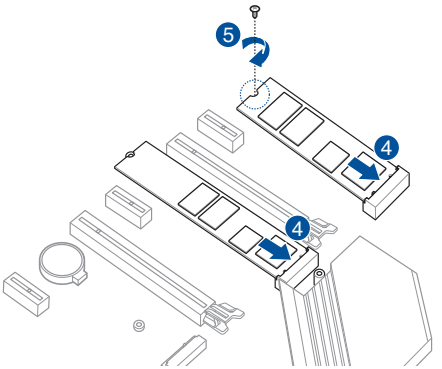


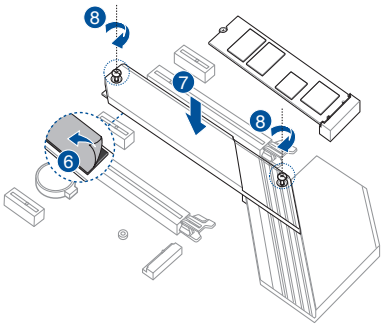
## 2.1.4 M.2 installation




- The M.2 rubber pad is optional for when installing a single sided M.2 storage device. Ensure to install the bundled M.2 rubber pad before installing your single sided M.2 storage device.
- DO NOT install the bundled M.2 rubber pads when installing a double-sided M.2 storage device. The rubber pad installed by default is compatible with double sided M.2 storage devices.

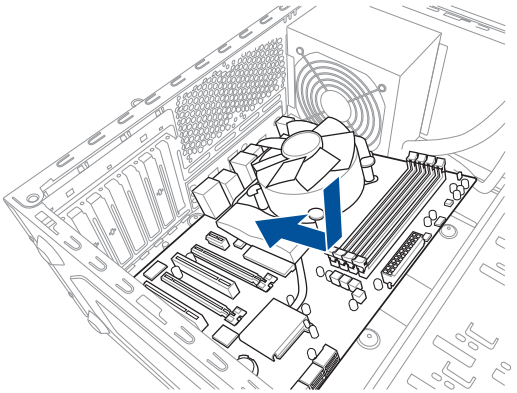




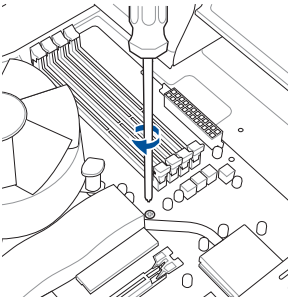

The M.2 is purchased separately.

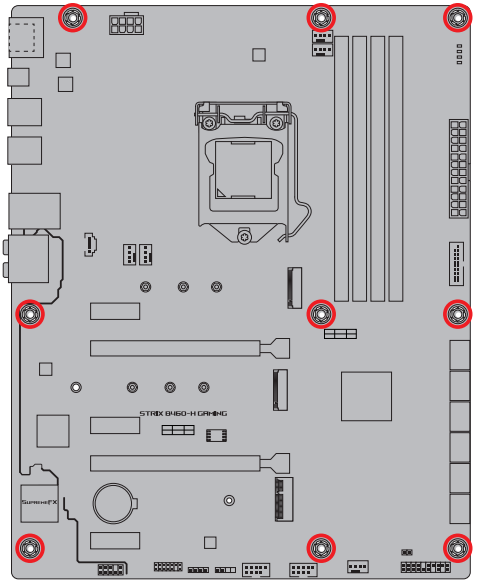
## 2.1.5 Motherboard installation

1. Place the motherboard into the chassis, ensuring that its rear I/O ports are aligned to the chassis' rear I/O panel.



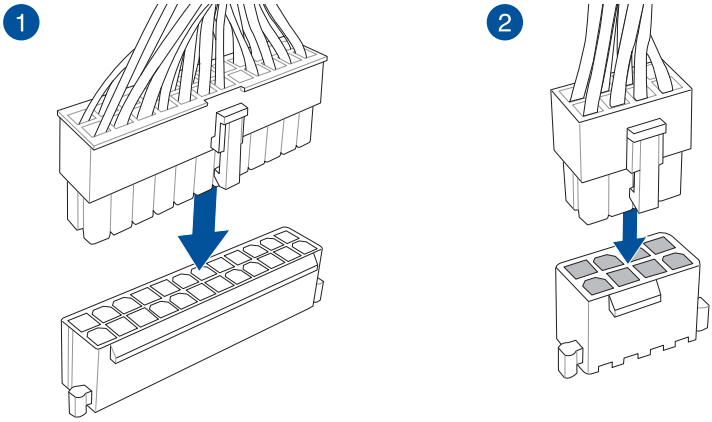
2. Place nine (9) screws into the holes indicated by circles to secure the motherboard to the chassis.





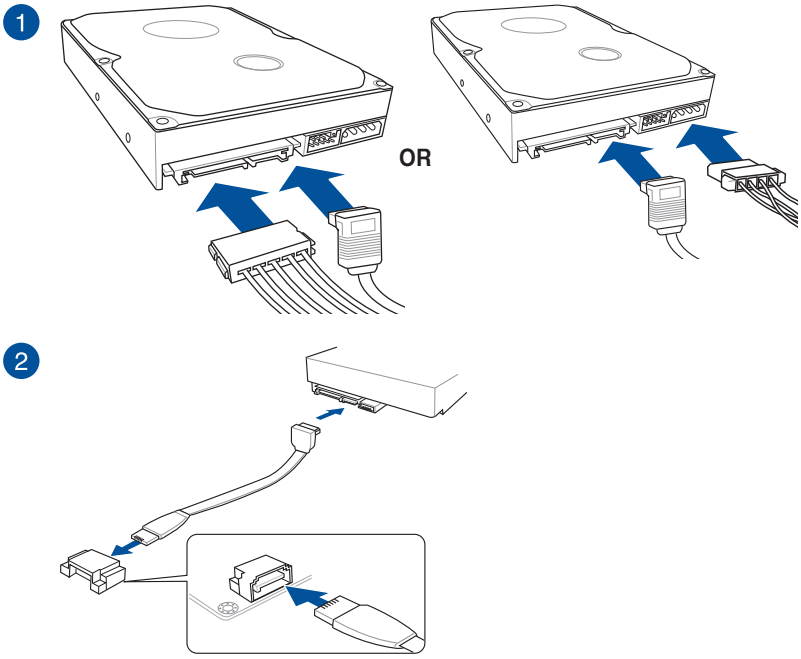

DO NOT over tighten the screws! Doing so can damage the motherboard.

## 2.1.6 ATX power connection



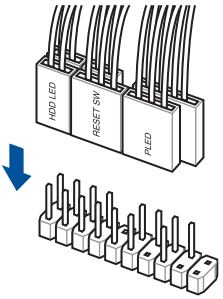
Ensure to connect the 8-pin power plug.

## 2.1.7 SATA device connection

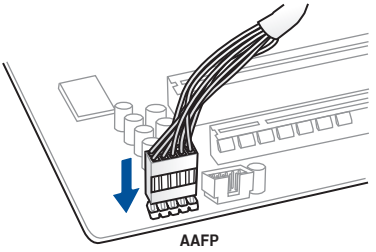


## 2.1.8 Front I/O connector

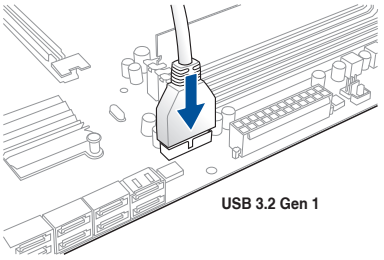
### To install front panel connector



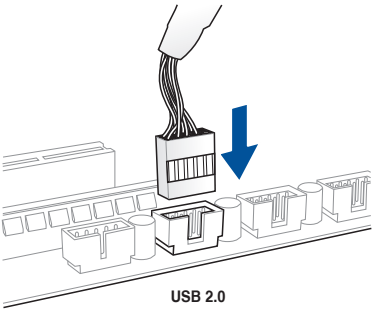

### To install front panel audio connector




### To install USB 3.2 Gen 1 connector

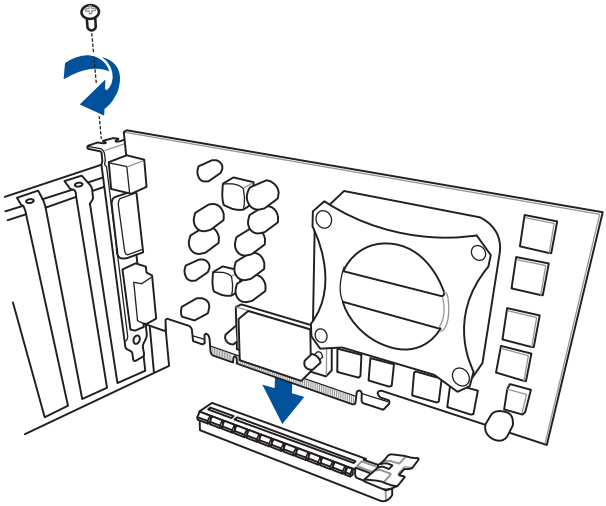



### To install USB 2.0 connector

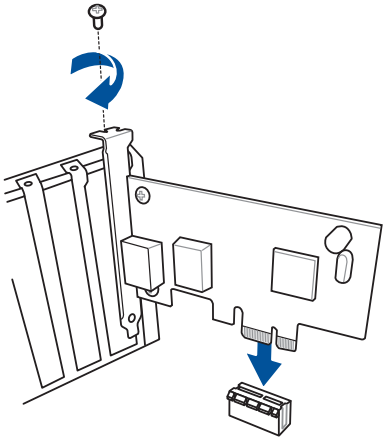


## 2.1.9 Expansion card installation

**To install PCIe x16 cards**

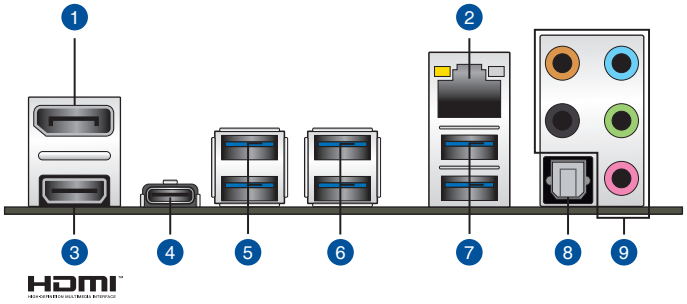


**To install PCIe x1 cards**



## 2.2 Motherboard rear and audio connections

### 2.2.1 Rear I/O connection



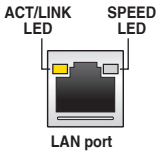

| Rear panel connectors | |
|---|---|
| 1. | DisplayPort |
| 2. | Intel® I219-V 1Gb Ethernet port* |
| 3. | HDMI™ port |
| 4. | USB 3.2 Gen 2x2 Type-C® port EC1 |
| 5. | USB 3.2 Gen 1 Type-A ports 5 and 6 |
| 6. | USB 3.2 Gen 1 Type-A ports 3 and 4 |
| 7. | USB 3.2 Gen 1 Type-A ports 1 and 2 |
| 8. | Optical S/PDIF OUT port |
| 9. | Audio jacks** |

*** and ** : Refer to the tables on the next page for LAN port LEDs, and audio port definitions.**

We strongly recommend that you connect your devices to ports with matching data transfer rate. Please connect your USB 3.2 Gen 1 devices to USB 3.2 Gen 1 ports and your USB 3.2 Gen 2 devices to USB 3.2 Gen 2 ports for faster and better performance for your devices.

*** Intel® I219-V 1Gb Ethernet port LED indications**

| Activity Link LED | | Speed LED | |
|---|---|---|---|
| Status | Description | Status | Description |
| Off | No link | Off | 10 Mbps connection |
| Orange | Linked | Orange | 100 Mbps connection |
| Blinking | Data activity | Green | 1 Gbps connection |

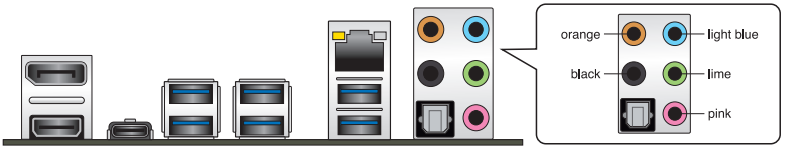



**** Audio 2, 4, 5.1 or 7.1-channel configuration**

| Port | Headset 2-channel | 4-channel | 5.1-channel | 7.1-channel |
|---|---|---|---|---|
| Light Blue | Line In | Line In | Line In | Side Speaker Out |
| Lime | Line Out | Front Speaker Out | Front Speaker Out | Front Speaker Out |
| Pink | Mic In | Mic In | Mic In | Mic In |
| Orange | – | – | Center/Sub woofer | Center/Sub woofer |
| Black | – | Rear Speaker Out | Rear Speaker Out | Rear Speaker Out |

## 2.2.2 Audio I/O connections

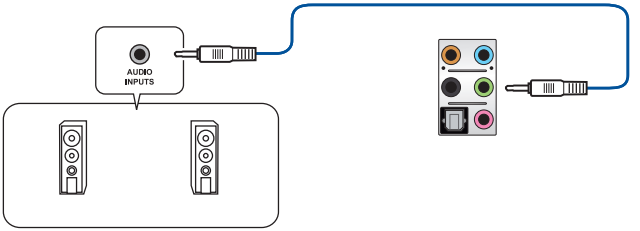
### Audio I/O ports



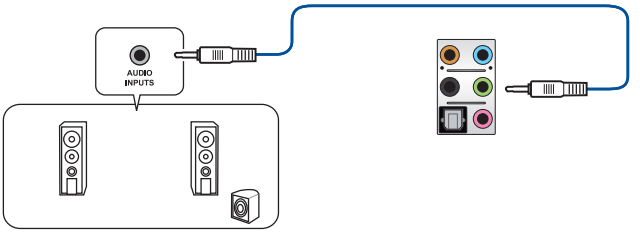

### Connect to Headphone and Mic



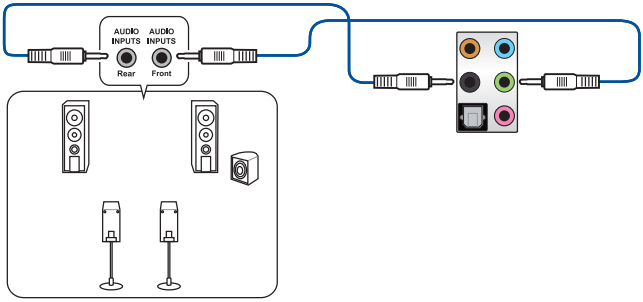
### Connect to Stereo Speakers



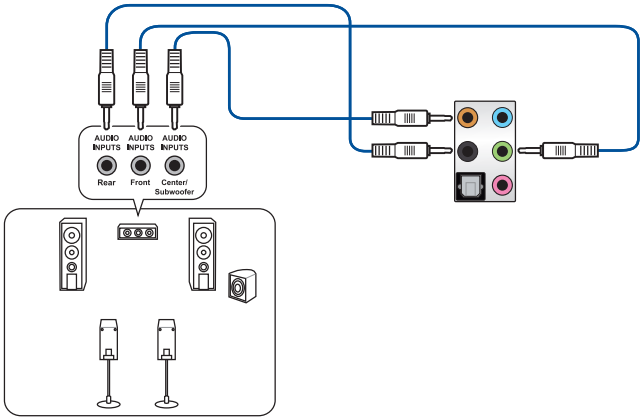

### Connect to 2-channel Speakers



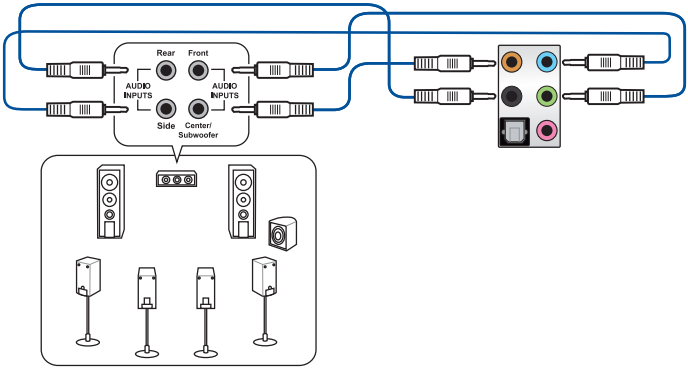
### Connect to 4-channel Speakers




### Connect to 5.1-channel Speakers




### Connect to 7.1-channel Speakers



## 2.3 Starting up for the first time

1. After making all the connections, replace the system case cover.
2. Ensure that all switches are off.
3. Connect the power cord to the power connector at the back of the system chassis.
4. Connect the power cord to a power outlet that is equipped with a surge protector.
5. Turn on the devices in the following order:
   a. Monitor
   b. External storage devices (starting with the last device on the chain)
   c. System power
6. After applying power, the system power LED on the system front panel case lights up. For systems with ATX power supplies, the system LED lights up when you press the ATX power button. If your monitor complies with the "green" standards or if it has a "power standby" feature, the monitor LED may light up or change from orange to green after the system LED turns on.

   The system then runs the power-on self tests (POST). While the tests are running, the BIOS beeps (refer to the BIOS beep codes table) or additional messages appear on the screen. If you do not see anything within 30 seconds from the time you turned on the power, the system may have failed a power-on test. Check the jumper settings and connections or call your retailer for assistance.

| BIOS Beep | Description |
|---|---|
| One short beep | VGA detected<br>Quick boot set to disabled<br>No keyboard detected |
| One continuous beep followed by two short beeps then a pause (repeated) | No memory detected |
| One continuous beep followed by three short beeps | No VGA detected |
| One continuous beep followed by four short beeps | Hardware component failure |

7. At power on, hold down the <Delete> key to enter the BIOS Setup. Follow the instructions in Chapter 3.

## 2.4 Turning off the computer

While the system is ON, press the power button for less than four seconds to put the system on sleep mode or soft-off mode, depending on the BIOS setting. Press the power button for more than four seconds to let the system enter the soft-off mode regardless of the BIOS setting.

# BIOS and RAID Support 3

For more details on BIOS and RAID configurations, please refer to www.asus.com/support.

## 3.1 Knowing BIOS

The new ASUS UEFI BIOS is a Unified Extensible Interface that complies with UEFI architecture, offering a user-friendly interface that goes beyond the traditional keyboard-only BIOS controls to enable a more flexible and convenient mouse input. You can easily navigate the new UEFI BIOS with the same smoothness as your operating system. The term "BIOS" in this user manual refers to "UEFI BIOS" unless otherwise specified.

BIOS (Basic Input and Output System) stores system hardware settings such as storage device configuration, overclocking settings, advanced power management, and boot device configuration that are needed for system startup in the motherboard CMOS. In normal circumstances, the default BIOS settings apply to most conditions to ensure optimal performance. **DO NOT change the default BIOS settings** except in the following circumstances:

- An error message appears on the screen during the system bootup and requests you to run the BIOS Setup.
- You have installed a new system component that requires further BIOS settings or update.

Inappropriate BIOS settings may result to instability or boot failure. **We strongly recommend that you change the BIOS settings only with the help of a trained service personnel**.

- When downloading or updating the BIOS file, rename it as **RSB460HG.CAP** for this motherboard.
- BIOS settings and options may vary due to different BIOS release versions. Please refer to the latest BIOS version for settings and options.

## 3.2 BIOS setup program

Use the BIOS Setup to update the BIOS or configure its parameters. The BIOS screen include navigation keys and brief onscreen help to guide you in using the BIOS Setup program.

### Entering BIOS at startup

To enter BIOS Setup at startup, press <Delete> or <F2> during the Power-On Self Test (POST). If you do not press <Delete> or <F2>, POST continues with its routines.

### Entering BIOS Setup after POST

To enter BIOS Setup after POST:

- Press <Ctrl>+<Alt>+<Delete> 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.

After doing either of the three options, press <Delete> key to enter BIOS.

- Ensure that a USB mouse is connected to your motherboard if you want to use the mouse to control the BIOS setup program.
- If the system becomes unstable after changing any BIOS setting, load the default settings to ensure system compatibility and stability. Select the **Load Optimized Defaults** item under the **Exit** menu or press hotkey **<F5>**.
- If the system fails to boot after changing any BIOS setting, try to clear the CMOS and reset the motherboard to the default value.
- The BIOS setup program does not support Bluetooth devices.

### BIOS menu screen

The BIOS Setup program can be used under two modes: **EZ Mode** and **Advanced Mode**. You can change modes from **Setup Mode** in **Boot menu** or by pressing the <F7> hotkey.

## 3.3 EZ Update

The EZ Update is a utility that allows you to update the motherboard BIOS in Windows® environment.

- EZ Update requires an Internet connection either through a network or an ISP (Internet Service Provider).
- This utility is available in the support DVD that comes with the motherboard package.

## 3.4 ASUS EZ Flash 3

The ASUS EZ Flash 3 feature allows you to update the BIOS without using an OS-based utility.

Ensure to load the BIOS default settings to ensure system compatibility and stability. Select the **Load Optimized Defaults** item under the **Exit** menu or press hotkey **<F5>**.

**To update the BIOS:**

- This function can support devices such as a USB flash disk with FAT 32/16 format and single partition only.
- DO NOT shut down or reset the system while updating the BIOS to prevent system boot failure!

1. Insert the USB flash disk that contains the latest BIOS file to the USB port.
2. Enter the Advanced Mode of the BIOS setup program. Go to the **Tool** menu to select **ASUS EZ Flash 3 Utility** and press <Enter>.
3. Press <Tab> to switch to the **Drive** field.
4. Press the Up/Down arrow keys to find the USB flash disk that contains the latest BIOS, and then press <Enter>.
5. Press <Tab> to switch to the **Folder** field.
6. Press the Up/Down arrow keys to find the BIOS file, and then press <Enter> to perform the BIOS update process. Reboot the system when the update process is done.

## 3.5 ASUS CrashFree BIOS 3

The ASUS CrashFree BIOS 3 utility is an auto recovery tool that allows you to restore the BIOS file when it fails or gets corrupted during the updating process. You can restore a corrupted BIOS file using the motherboard support DVD or a USB flash drive that contains the BIOS file.

The BIOS file in the motherboard support DVD may be older than the BIOS file published on the ASUS official website. If you want to use the newer BIOS file, download the file at https://www.asus.com/support/ and save it to a USB flash drive.

### Recovering the BIOS

**To recover the BIOS:**

1. Turn on the system.
2. Insert the motherboard support DVD to the optical drive, or the USB flash drive containing the BIOS file to the USB port.
3. The utility automatically checks the devices for the BIOS file. When found, the utility reads the BIOS file and enters ASUS EZ Flash 3 automatically.
4. The system requires you to enter BIOS Setup to recover the BIOS setting. To ensure system compatibility and stability, we recommend that you press <F5> to load default BIOS values.

DO NOT shut down or reset the system while updating the BIOS! Doing so can cause system boot failure!

## 3.6 RAID configurations

The motherboard comes with the Intel® Rapid Storage Technology that supports RAID 0, RAID 1, RAID 5 and RAID 10 configuration.

For more information on configuring your RAID sets, please refer to the **RAID Configuration Guide** which you can find at https://www.asus.com/support, or by scanning the QR code.

### RAID definitions

**RAID 0 (Data striping)** optimizes two identical hard disk drives to read and write data in parallel, interleaved stacks. Two hard disks perform the same work as a single drive but at a sustained data transfer rate, double that of a single disk alone, thus improving data access and storage. Use of two new identical hard disk drives is required for this setup.

**RAID 1 (Data mirroring)** copies and maintains an identical image of data from one drive to a second drive. If one drive fails, the disk array management software directs all applications to the surviving drive as it contains a complete copy of the data in the other drive. This RAID configuration provides data protection and increases fault tolerance to the entire system. Use two new drives or use an existing drive and a new drive for this setup. The new drive must be of the same size or larger than the existing drive.

**RAID 5** stripes both data and parity information across three or more hard disk drives. Among the advantages of RAID 5 configuration include better HDD performance, fault tolerance, and higher storage capacity. The RAID 5 configuration is best suited for transaction processing, relational database applications, enterprise resource planning, and other business systems. Use a minimum of three identical hard disk drives for this setup.

**RAID 10** is data striping and data mirroring combined without parity (redundancy data) having to be calculated and written. With the RAID 10 configuration you get all the benefits of both RAID 0 and RAID 1 configurations. Use four new hard disk drives or use an existing drive and three new drives for this setup.

# Appendix

## Notices

### FCC Compliance Information

| | |
|---|---|
| Responsible Party: | Asus Computer International |
| Address: | 48720 Kato Rd., Fremont, CA 94538, USA |
| Phone / Fax No: | (510)739-3777 / (510)608-4555 |

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B 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 the 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 into 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.

## Compliance Statement of Innovation, Science and Economic Development Canada (ISED)

This device complies with Innovation, Science and Economic Development Canada licence exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

CAN ICES-3(B)/NMB-3(B)

## Déclaration de conformité de Innovation, Sciences et Développement économique Canada (ISED)

Le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

CAN ICES-3(B)/NMB-3(B)

## VCCI: Japan Compliance Statement

## Class B ITE

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取扱説明書に従って正しい取り扱いをして下さい。

VCCI－B

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ASUS follows the green design concept to design and manufacture our products, and makes sure that each stage of the product life cycle of ASUS product is in line with global environmental regulations. In addition, ASUS disclose the relevant information based on regulation requirements.

Please refer to http://csr.asus.com/Compliance.htm for information disclosure based on regulation requirements ASUS is complied with:

### EU REACH and Article 33

Complying with the REACH (Registration, Evaluation, Authorisation, and Restriction of Chemicals) regulatory framework, we published the chemical substances in our products at ASUS REACH website at http://csr.asus.com/english/REACH.htm.

### EU RoHS

This product complies with the EU RoHS Directive. For more details, see http://csr.asus.com/english/article.aspx?id=35

### India RoHS

This product complies with the “India E-Waste (Management) Rules, 2016” and prohibits use of lead, mercury, hexavalent chromium, polybrominated biphenyls (PBBs) and polybrominated diphenyl ethers (PBDEs) in concentrations exceeding 0.1% by weight in homogenous materials and 0.01% by weight in homogenous materials for cadmium, except for the exemptions listed in Schedule II of the Rule.

### Vietnam RoHS

ASUS products sold in Vietnam, on or after September 23, 2011,meet the requirements of the Vietnam Circular 30/2011/TT-BCT.

Các sản phẩm ASUS bán tại Việt Nam, vào ngày 23 tháng 9 năm2011 trở về sau, đều phải đáp ứng các yêu cầu của Thông tư 30/2011/TT-BCT của Việt Nam.

### Turkey RoHS

AEEE Yönetmeliğine Uygundur

### ASUS Recycling/Takeback Services

ASUS recycling and takeback programs come from our commitment to the highest standards for protecting our environment. We believe in providing solutions for you to be able to responsibly recycle our products, batteries, other components as well as the packaging materials. Please go to http://csr.asus.com/english/Takeback.htm for detailed recycling information in different regions.



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.

## Regional notice for California



**WARNING**

Cancer and Reproductive Harm -
www.P65Warnings.ca.gov

Appendix

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**Français** AsusTek Computer Inc. déclare par la présente que cet appareil est conforme aux critères essentiels et autres clauses pertinentes des directives concernées. La déclaration de conformité de l'UE peut être téléchargée à partir du site Internet suivant : www.asus.com/support

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**Italiano** ASUSTeK Computer Inc. con la presente dichiara che questo dispositivo è conforme ai requisiti essenziali e alle altre disposizioni pertinenti con le direttive correlate. Il testo completo della dichiarazione di conformità UE è disponibile all'indirizzo: www.asus.com/support

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**Dansk** ASUSTeK Computer Inc. erklærer hermed, at denne enhed er i overensstemmelse med hovedkravene og andre relevante bestemmelser i de relaterede direktiver. Hele EU-overensstemmelseserklæringen kan findes på: www.asus.com/support

**Nederlands** ASUSTeK Computer Inc. verklaart hierbij dat dit apparaat voldoet aan de essentiële vereisten en andere relevante bepalingen van de verwante richtlijnen. De volledige tekst van de EU-verklaring van conformiteit is beschikbaar op: www.asus.com/support

**Eesti** Käesolevaga kinnitab ASUSTeK Computer Inc, et see seade vastab asjakohaste direktiivide oluliste nõuetele ja teistele asjassepuutuvatele sätetele. EL vastavusdeklaratsiooni täielik tekst on saadaval järgmisel aadressil: www.asus.com/support

**Suomi** ASUSTeK Computer Inc. ilmoittaa täten, että tämä laite on asiaankuuluvien direktiivien olennaisten vaatimusten ja muiden tätä koskevien säädösten mukainen. EU-yhdenmukaisuusilmoituksen koko teksti on luettavissa osoitteessa: www.asus.com/support

**Ελληνικά** Με το παρόν, η AsusTek Computer Inc. δηλώνει ότι αυτή η συσκευή συμμορφώνεται με τις θεμελιώδεις απαιτήσεις και άλλες σχετικές διατάξεις των Οδηγιών της ΕΕ. Το πλήρες κείμενο της δήλωσης συμβατότητας είναι διαθέσιμο στη διεύθυνση: www.asus.com/support

**Magyar** Az ASUSTeK Computer Inc. ezennel kijelenti, hogy ez az eszköz megfelel a kapcsolódó Irányelvek lényeges követelményeinek és egyéb vonatkozó rendelkezéseinek. Az EU megfelelőségi nyilatkozat teljes szövege innen letölthető: www.asus.com/support

**Latviski** ASUSTeK Computer Inc. ar šo paziņo, ka šī ierīce atbilst saistīto Direktīvu būtiskajām prasībām un citiem citiem saistošajiem nosacījumiem. Pilns ES atbilstības paziņojuma teksts pieejams šeit: www.asus.com/support

**Lietuvių** „ASUSTeK Computer Inc." šiuo tvirtina, kad šis įrenginys atitinka pagrindinius reikalavimus ir kitas svarbias susijusių direktyvų nuostatas. Visą ES atitikties deklaracijos tekstą galima rasti: www.asus.com/support

**Norsk** ASUSTeK Computer Inc. erklærer herved at denne enheten er i samsvar med hovedsaklige krav og andre relevante forskrifter i relaterte direktiver. Fullstendig tekst for EU-samsvarserklæringen finnes på: www.asus.com/support

**Polski** Firma ASUSTeK Computer Inc. niniejszym oświadcza, że urządzenie to jest zgodne z zasadniczymi wymogami i innymi właściwymi postanowieniami powiązanych dyrektyw. Pełny tekst deklaracji zgodności UE jest dostępny pod adresem: www.asus.com/support

**Português** A ASUSTeK Computer Inc. declara que este dispositivo está em conformidade com os requisitos essenciais e outras disposições relevantes das Diretivas relacionadas. Texto integral da declaração da UE disponível em: www.asus.com/support

**Română** ASUSTeK Computer Inc. declară că acest dispozitiv se conformează cerinţelor esenţiale şi altor prevederi relevante ale directivelor conexe. Textul complet al declaraţiei de conformitate a Uniunii Europene se găseşte la: www.asus.com/support

**Srpski** ASUSTeK Computer Inc. ovim izjavljuje da je ovaj uređaj u saglasnosti sa osnovnim zahtevima i drugim relevantnim odredbama povezanih Direktiva. Pun tekst EU deklaracije o usaglašenosti je dostupan da adresi: www.asus.com/support

**Slovensky** Spoločnosť ASUSTeK Computer Inc. týmto vyhlasuje, že toto zariadenie vyhovuje základným požiadavkám a ostatým príslušným ustanoveniam príslušných smerníc. Celý text vyhlásenia o zhode pre štáty EÚ je dostupný na adrese: www.asus.com/support

**Slovenščina** ASUSTeK Computer Inc. izjavlja, da je ta naprava skladna z bistvenimi zahtevami in drugimi ustreznimi določbami povezanih direktiv. Celotno besedilo EU-izjave o skladnosti je na voljo na spletnem mestu: www.asus.com/support

**Español** Por la presente, ASUSTeK Computer Inc. declara que este dispositivo cumple los requisitos básicos y otras disposiciones pertinentes de las directivas relacionadas. El texto completo de la declaración de la UE de conformidad está disponible en: www.asus.com/support

**Svenska** ASUSTeK Computer Inc. förklarar härmed att denna enhet överensstämmer med de grundläggande kraven och andra relevanta föreskrifter i relaterade direktiv. Fulltext av EU-försäkran om överensstämmelse finns på: www.asus.com/support

**Українська** ASUSTeK Computer Inc. заявляє, що цей пристрій відповідає основним вимогам та іншим відповідним положенням відповідних Директив. Повний текст декларації відповідності стандартам ЄС доступний на: www.asus.com/support

**Türkçe** AsusTek Computer Inc., bu aygıtın temel gereksinimlerle ve ilişkili Yönergelerin diğer ilgili koşullarıyla uyumlu olduğunu beyan eder. AB uygunluk bildiriminin tam metni şu adreste bulunabilir: www.asus.com/support

**Bosanski** ASUSTeK Computer Inc. ovim izjavljuje da je ovaj uređaj usklađen sa bitnim zahtjevima i ostalim odgovarajućim odredbama vezanih direktiva. Cijeli tekst EU izjave o usklađenosti dostupan je na: www.asus.com/support

# ASUS contact information

## ASUSTeK COMPUTER INC.

| | |
|---|---|
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### *Technical Support*

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| Telephone | +86-21-38429911 |
| Online support | https://qr.asus.com/techserv |

## ASUS COMPUTER INTERNATIONAL (America)

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| Address | 48720 Kato Rd., Fremont, CA 94538, USA |
| Telephone | +1-510-739-3777 |
| Fax | +1-510-608-4555 |
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### *Technical Support*

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| Support fax | +1-812-284-0883 |
| Telephone | +1-812-282-2787 |
| Online support | https://qr.asus.com/techserv |

## ASUS COMPUTER GmbH (Germany and Austria)

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| Address | Harkortstrasse 21-23, 40880 Ratingen, Germany |
| Web site | https://www.asus.com/de |
| Online contact | https://www.asus.com/support/Product/ContactUs/Services/questionform/?lang=de-de |

### *Technical Support*

| | |
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| Telephone (DE) | +49-2102-5789557 |
| Telephone (AT) | +43-1360-2775461 |
| Online support | https://www.asus.com/de/support |