ROG STRIX B360-H GAMING



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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.

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:

1. 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.

2. Chapter 2: Basic Installation

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

3. Chapter 3: BIOS Setup

This chapter tells how to change system settings through the BIOS Setup menus. Detailed descriptions of the BIOS parameters are also provided.

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.



DANGER/WARNING: Information to prevent injury to yourself when trying to complete a task.



CAUTION: Information to prevent damage to the components 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.

Typography

Bold text Indicates a menu or an item to select.

Italics Used to emphasize a word or a phrase.

<Key> Keys enclosed in the less-than and greater-than sign

means that you must press the enclosed key.

Example: <Enter> means that you must press the Enter or

Return key.

<Key1> + <Key2> + <Key3> If you must press two or more keys simultaneously, the key

names are linked with a plus sign (+).

ROG STRIX B360-H GAMING specifications summary

	1 - 180 1 - 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
	Intel® Socket LGA1151 for 8th Generation Core™ Processors**			
OBIL	Supports 14nm CPU			
CPU	Supports Intel® Turbo Boost Technology 2.0*			
	* The support of these features depends on the CPU types.			
	** Refer to www.asus.com for Intel® CPU support list.			
Chipset	Intel® B360 Chipset			
	4 x DIMM, max. 64GB DDR4 2666** / 2400 / 2133 MHz non-ECC, un-buffered memory			
	Dual channel memory architecture			
	Supports Intel® Extreme Memory Profile (XMP)*			
Memory	Hyper DIMM support is subject to the physical characteristics of individual CPUs. Please refer to Memory QVL(Qualified Vendors List) for details.			
	** DDR4 2666MHz memory frequency is only supported by 8th Generation Intel® 6-core processors. Higher memory modules will run at the maximum transfer rate of DDR4 2666MHz.			
	Integrated Graphics Processor - Intel® HD Graphics support			
	Multi-VGA output support: HDMI / DVI-D ports			
Graphics	- Supports HDMI with max. resolution 4096 x 2160@24Hz			
	- Supports DVI-D with max. resolution 1920 x 1200@60Hz			
	Maximum shared memory of 1024MB			
Multi-GPU support	Supports AMD 2-Way CrossFireX Technology			
	1 x PCle 3.0/2.0 x16 slot (x16 mode)			
	1 x PCIe 3.0/2.0 x16 slot (max at x4 mode)*			
Expansion	4 x PCIe 3.0/2.0 x1 slots**			
slots	* PCIe x16_2 slot shares bandwidth with PCIe x1_3 and PCIe x1_4 slots. When PCIe x1_3 and PCIe x1_4 slots are occupied, PCIe x16_2 slot runs at x2 mode.			
	** When both PCle x1_1 and PCle x1_2 slots are occupied, only the device installed into the PCle x1_1 slot can be detected. Adjust BIOS settings to use PCle x1_2 slot.			
	Intel® B360 Chipset			
	- 1 x M.2_1 Socket 3 with M key, type 2242/2260/2280 storage devices support (both SATA & PCIe modes)*			
	- 1 x M.2_2 Socket 3 with M key, type 2242/2260/2280/22110 storage devices support (PCIe 3.0 x 4 mode)**			
Storage	- 6 x SATA 6Gb/s ports			
Storage	- Intel® Optane™ Memory Ready			
	* The M.2_1 socket shares bandwidth with the SATA6G_2 port when using M.2 SATA mode device. Adjust BIOS settings to use SATA device.			
	** The M.2_2 socket supports Intel® Optane™ Technology. Intel® Optane™ Technology is only supported when using 8th Generation Intel® processors. Before using Intel® Optane™ memory modules, ensure that you have updated your motherboard drivers and BIOS to the latest version from ASUS support website.			
	Intel® I219-V Gigabit LAN - Dual interconnect between the integrated Media Access Controller (MAC) and physical layer (PHY)			
LAN	Anti-surge LANGuard			

(continued on the next page)

ROG STRIX B360-H GAMING specifications summary

Audio	ROG SupremeFX S1220A 8-Channel High Definition Audio CODEC - Supports up to 32-Bit/192kHz playback - Impedance sense for front and rear headphone outputs - High quality 120dB SNR stereo playback output and 113dB SNR recording input - SupremeFX Shielding Technology - Dual Op Amplifiers - Supports Jack-detection, Multi-streaming, and Front Panel Jack-retasking - Optical S/PDIF out port at back panel Audio Features: - Sonic Radar III - Sonic Studio III + Sonic Studio Link
USB	Intel® B360 Chipset - 2 x USB 3.1 Gen 2 ports (2 ports at back panel, red, Type-A)* - 4 x USB 3.1 Gen 1 ports (2 ports at back panel [Blue], 2 ports at mid-board) - 6 x USB 2.0 ports (2 ports at back panel, 4 ports at mid-board) * Supports 3A power output, one at a time only.
ROG exclusive features	ROG RAMCache II ROG CPU-Z ROG CloneDrive ROG Overwolf ROG GameFirst IV
ASUS special features	ASUS Exclusive Features - Al Suite 3 - Al Charger ASUS EZ DIY - ASUS CrashFree BIOS 3 - ASUS EZ Flash 3 ASUS Q-Design - ASUS Q-Shield - ASUS Q-LED (CPU, DRAM, VGA, Boot Device LED) - ASUS Q-Slot - ASUS Q-DIMM Gamer's Guardian - SafeSlot - DIGI+ VRM - DRAM Overcurrent Protection - ESD Guards on LAN, Audio, KBMS and USB ports - Highly Durable Components - Stainless Steel Back I/O AURA - Aura Lighting Control - Aura Lighting Effects Synchronization with compatible ASUS ROG devices

(continued on the next page)

ROG STRIX B360-H GAMING specifications summary

	1 x PS/2 keyboard/mouse combo port
	1 x HDMI port
	1 x DVI-D port
Rear Panel I/O	2 x USB 3.1 Gen 2 ports Type-A [red]
Ports	2 x USB 3.1 Gen 1 ports [blue]
	2 x USB 2.0 ports [black]
	1 x Anti-surge LAN (RJ45) port
	5 x Audio jacks
	1 x Optical S/PDIF out
	1 x USB 3.1 Gen 1 connector supports additional 2 USB 3.1 Gen1 ports
	2 x USB 2.0 connectors support additional 4 USB 2.0 ports
	1 x M.2_1 Socket 3 with M key, type 2242/2260/2280 storage devices support (SATA & PCIe 3.0 x2 modes)
	1 x M.2_2 Socket 3 with M key, type 2242/2260/2280/22110 storage devices support (PCle 3.0 x4 mode)
	6 x SATA 6Gb/s connectors
	1 x 4-Pin CPU_FAN connector
	1 x 4-Pin CPU_OPT fan connector
Internal I/O	1 x 4-Pin AIO_PUMP connector
connectors	2 x 4-Pin CHA_FAN connectors
	1 x 24-pin EATX power connector
	1 x 8-pin EATX 12V power connector
	1 x System panel connector
	1 x Clear CMOS jumper
	1 x Thermal sensor header
	1 x 14-1 pin TPM connector
	1 x Aura RGB Strip Header
	1 x Front panel audio connector (AAFP)
BIOS Features	1 x 128 Mb Flash ROM, UEFI AMI BIOS, PnP, SM BIOS 3.1, ACPI 6.1, Multi-language BIOS, ASUS EZ Flash 3, CrashFree BIOS 3, Secure Erase, User Profile, F6 Qfan Control, F3 My Favorites, Last Modified log, F12 PrintScreen, F4 AURA ON/OFF and F9 Search
Manageability	WOL, PXE
	Drivers
Support DVD	ASUS Utilities
contents	EZ Update
	Anti-virus software (OEM version)
Operating system support	Windows® 10 64-bit
Form factor	ATX Form Factor, 12"x 9.6" (30.5cm x 24.4cm)



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

Package contents

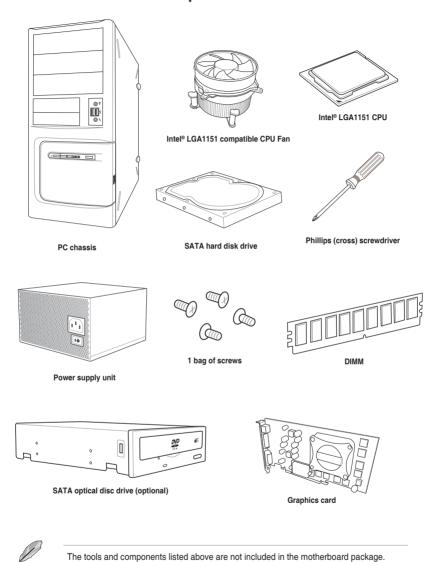
Check your motherboard package for the following items.

Motherboard	1 x ROG STRIX B360-H GAMING motherboard
Cables	4 x SATA 6Gb/s cables
	1 x Cable Ties set
	1 x ROG Strix Series sticker
Accessories	1 x ROG Strix Series Door Hanger
	2 x M.2 Screws Packages
	1 x Extension Cable for RGB strips (80 cm)
Application drive	1 x ROG motherboard support DVD
Documentation	1 x User guide



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

Installation tools and components



Product Introduction



1.1 Motherboard overview

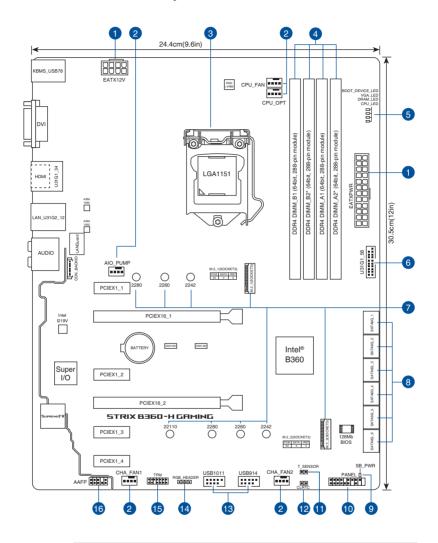
1.1.1 Before you proceed

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.

1.1.2 Motherboard layout





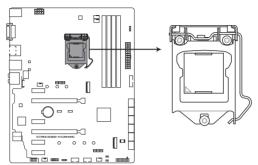
Refer to 1.1.8 Internal connectors and 2.2.1 Rear I/O connection for more information about rear panel connectors and internal connectors.

Layout contents

Connectors/Jumpers/Buttons and switches/Slots		
1.	ATX power connectors (24-pin EATXPWR; 8-pin EATX12V)	1-16
2.	CPU, CPU optional, and chassis fan connectors; AlO pump connector (4-pin CPU_FAN; 4-pin CPU_OPT; 4-pin CHA_FAN1-2; 4-pin AlO_PUMP)	1-14
3.	LGA1151 CPU socket	1-4
4.	DDR4 DIMM slots	1-5
5.	Q LEDs (CPU, DRAM, VGA, BOOT)	1-9
6.	USB 3.1 Gen 1 connector (20-1 pin U31G1_56)	1-12
7.	M.2 sockets (M.2_1; M.2_2)	1-15
8.	Intel® Serial ATA 6 Gb/s connectors (7-pin SATA6G_1-6)	1-10
9.	Standby Power LED (SB_PWR)	1-9
10.	System panel connector (20-5 pin PANEL)	1-17
11.	Thermal sensor connector (2-pin T_SENSOR)	1-15
12.	Clear RTC RAM jumper (2-pin CLRTC)	1-8
13.	USB 2.0 connectors (10-1 pin USB1011, USB914)	1-12
14.	AURA RGB header (4-pin RGB_HEADER)	1-13
15.	TPM connector (14-1 pin TPM)	1-11
16.	Front panel audio connector (10-1 pin AAFP)	1-11

1.1.3 Central Processing Unit (CPU)

The motherboard comes with a surface mount LGA1151 socket designed for the 8th Generation Intel® Core™ processors.



ROG STRIX B360-H GAMING CPU LGA1151



Ensure that you install the correct CPU designed for LGA1151 socket only. DO NOT install a CPU designed for LGA1150, LGA1155 and LGA1156 sockets in the LGA1151 socket.



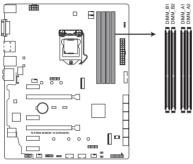
- Ensure that all power cables are unplugged before installing the CPU.
- Upon purchase of the motherboard, ensure that the PnP cap is on the socket and the socket contacts are not bent. Contact your retailer immediately if the PnP cap is missing, or if you see any damage to the PnP cap/socket contacts/motherboard components.
- 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 LGA1151 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.

1.1.4 System memory

The motherboard comes with four DDR4 (Double Data Rate 4) Dual Inline Memory Modules (DIMM) slots.

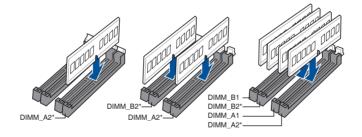


A DDR4 module is notched differently from a DDR, DDR2, or DDR3 module. DO NOT install a DDR, DDR2, or DDR3 memory module to the DDR4 slot.



ROG STRIX B360-H GAMING 288-pin DDR4 DIMM sockets

Recommended memory configurations



Memory configurations

You may install 1 GB, 2 GB, 4 GB, 8 GB and 16 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.

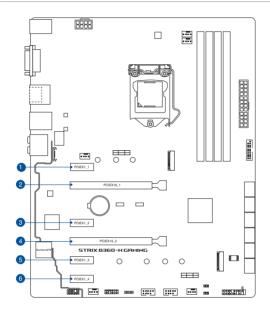


- The default memory operation frequency is dependent on its Serial Presence Detect (SPD), which is the standard way of accessing information from a memory module.
 Under the default state, some memory modules for overclocking may operate at a lower frequency than the vendor-marked value.
- For system stability, use a more efficient memory cooling system to support a full memory load (4 DIMMs).
- Memory modules with memory frequency higher than 2133 MHz and its corresponding timing or the loaded X.M.P. Profile is not the JEDEC memory standard. The stability and compatibility of these memory modules depend on the CPU's capabilities and other installed devices.
- 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.
- ASUS exclusively provides hyper DIMM support function.
- Hyper DIMM support is subject to the physical characteristics of individual CPUs. Load the X.M.P. or D.O.C.P. settings in the BIOS for the hyper DIMM support.
- Visit the ASUS website for the latest QVL.

1.1.5 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.



Slot No.	Slot Description
1	PCle x1_1 slot
2	PCle x16_1 slot
3	PCle x1_2 slot
4	PCIe x16_2 slot
5	PCle x1_3 slot
6	PCIe x1_4 slot

	PCI Express 3.0 operating mode			
VGA configuration	PCle x16_1	PCle x16_2		
Single VGA/PCle card	x16 (single VGA recommended)	N/A		
Dual VGA/PCle card	x16	x4		

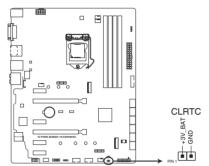


- We recommend that you provide sufficient power when running CrossFireX™ mode.
- Connect a chassis fan to the motherboard connector labeled CHA_FAN1-2 when using multiple graphics cards for better thermal environment.

1.1.6 Jumpers

1. Clear RTC RAM jumper (2-pin CLRTC)

This jumper allows you to clear the Real Time Clock (RTC) RAM in CMOS. You can clear the CMOS memory of date, time, and system setup parameters by erasing the CMOS RTC RAM data. The onboard button cell battery powers the RAM data in CMOS, which include system setup information such as system passwords.



ROG STRIX B360-H GAMING Clear RTC RAM

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.
- Hold down the <Delete> key during the boot process and enter BIOS setup to re-enter data.

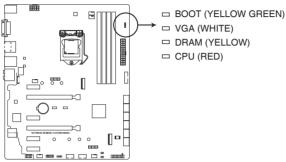


Except when clearing the RTC RAM, never remove the cap on CLRTC jumper default position. Removing the cap will cause system boot failure!

1.1.7 Onboard LEDs

1. Q LEDs (CPU, DRAM, VGA, BOOT)

Q LEDs check key components (CPU, DRAM, VGA card, and booting devices) in sequence during motherboard booting process. If an error is found, the corresponding LED remains lit until the problem is solved. This user-friendly design provides an intuitive way to locate the root problem within seconds.



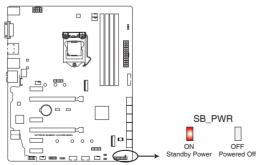
ROG STRIX B360-H GAMING CPU/DRAM/BOOT DEVICE/VGA LED



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.

2. Standby Power LED

The motherboard comes with a standby power LED. The LED lights up to indicate that the system is ON, in sleep mode, or in soft-off mode. This is a reminder that you should shut down the system and unplug the power cable before removing or plugging in any motherboard component. The illustration below shows the location of the onboard LED.

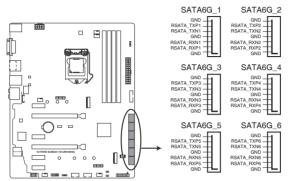


ROG STRIX B360-H GAMING Standby power LED

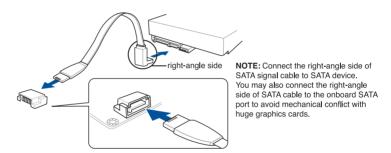
1.1.8 Internal connectors

1. Intel® Serial ATA 6 Gb/s connectors (7-pin SATA6G_1-6)

These connectors connect to Serial ATA 6 Gb/s hard disk drives via Serial ATA 6 Gb/s signal cables.

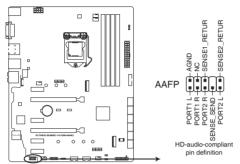


ROG STRIX B360-H GAMING Intel® SATA 6 Gb/s connectors



2. Front panel audio connector (10-1 pin AAFP)

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



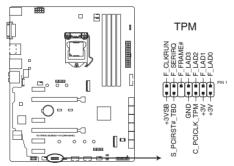
ROG STRIX B360-H GAMING Front panel audio connector



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.

3. TPM connector (14-1 pin TPM)

This connector supports a Trusted Platform Module (TPM) system, which securely stores keys, digital certificates, passwords and data. A TPM system also helps enhance network security, protect digital identities, and ensures platform integrity.



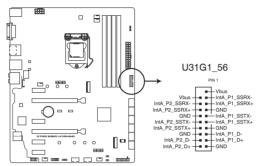
ROG STRIX B360-H GAMING TPM connector



The TPM module is purchased separately.

4. USB 3.1 Gen 1 connector (20-1 pin U31G1_56)

This connector allows you to connect a USB 3.1 Gen 1 module for additional USB 3.1 Gen 1 front or rear panel ports. With an installed USB 3.1 Gen 1 module, you can enjoy all the benefits of USB 3.1 Gen 1 including faster data transfer speeds of up to 5 Gbps, faster charging time for USB-chargeable devices, optimized power efficiency, and backward compatibility with USB 2.0.



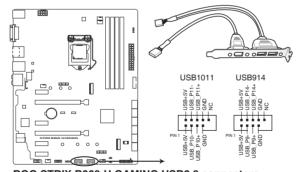
ROG STRIX B360-H GAMING USB 3.1 Gen 1 connector



The USB 3.1 Gen 1 module is purchased separately.

5. USB 2.0 connectors (10-1 pin USB914, USB1011)

These connectors are for USB 2.0 ports. Connect the USB module cable to these connectors, then install the module to a slot opening at the back of the system chassis. This USB connector complies with USB 2.0 specification that supports up to 480 Mb/s connection speed.



ROG STRIX B360-H GAMING USB2.0 connectors



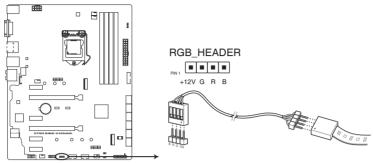
DO NOT connect a 1394 cable to the USB connectors. Doing so will damage the motherboard!



The USB 2.0 module is purchased separately.

6. AURA RGB headers (4-pin RGB_HEADER)

This connector is for RGB LED strips.



ROG STRIX B360-H GAMING RGB HEADER connector



The RGB header supports 5050 RGB multi-color LED strips (12V/G/R/B), with a maximum power rating of 3A (12V), and no longer than 3 m.



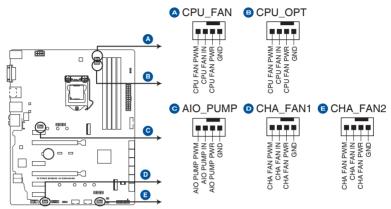
Before you install or remove any component, ensure that the ATX power supply is switched off or the power cord is detached from the power supply. Failure to do so may cause severe damage to the motherboard, peripherals, or components.



- 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 operating.
- · The LED strip is purchased separately.

7. CPU, CPU optional, and chassis fan connectors; AiO pump connector (4-pin CPU_FAN; 4-pin CPU_OPT; 4-pin CHA_FAN1-2; 4-pin AIO_PUMP)

Connect the fan cables to the fan connectors on the motherboard, ensuring that the black wire of each cable matches the ground pin of the connector.



ROG STRIX B360-H GAMING Fan connectors



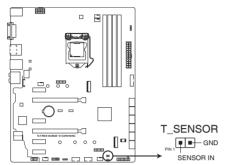
- DO NOT forget to connect the fan cables to the fan connectors. Insufficient air flow inside the system may damage the motherboard components. These are not jumpers!
 Do not place jumper caps on the fan connectors!
- Ensure that the CPU fan cable is securely installed to the CPU fan connector.



Connect the pump cable from the all-in-one cooler (AIO cooler) to the AIO_PUMP header, and connect the fan cables to the CPU_FAN and/or CPU_OPT header(s).

8 Thermal sensor connector (2-pin T SENSOR)

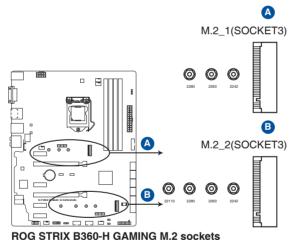
This connector is for the thermistor cable that allows you to monitor the temperature of your motherboard's critical components and connected devices.



ROG STRIX B360-H GAMING Thermal sensor connector

9. M.2 sockets (M.2 1; M.2 2)

These sockets allow you to install M.2 SSD modules.





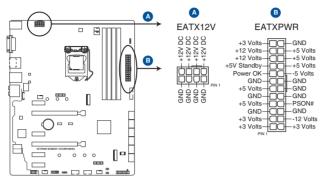
- M.2_1 socket supports PCle 3.0 x2 and SATA mode M Key design and type 2242 / 2260 / 2280 PCIe and SATA storage devices.
- $M.2_2$ socket supports PCle 3.0 x4 M Key design and type 2242 / 2260 / 2280 / 22110 PCIe storage devices.
- M.2_2 socket supports IRST (Intel® Rapid Storage Technology).



The M.2 SSD module is purchased separately.

10. ATX power connectors (24-pin EATXPWR; 8-pin EATX12V)

These connectors are for ATX power supply plugs. The power supply plugs are designed to fit these connectors in only one orientation. Find the proper orientation and push down firmly until the connectors completely fit.



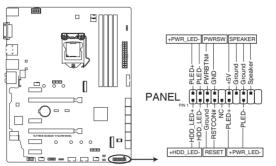
ROG STRIX B360-H GAMING ATX power connectors



- For a fully configured system, we recommend that you use a power supply unit (PSU) that complies with ATX 12 V Specification 2.0 (or later version) and provides a minimum power of 350 W.
- DO NOT forget to connect the 8-pin EATX12V power plug. Otherwise, the system will not boot.
- 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 high-end PCI Express x16 cards, use a PSU with 1000W power
 or above to ensure the system stability.

11. System panel connector (20-5 pin PANEL)

This connector supports several chassis-mounted functions.



ROG STRIX B360-H GAMING System panel connector

System power LED (2-pin or 3-1 pin PWR LED)

The 2-pin or 3-1 pin connector is for the system power LED. Connect the chassis power LED cable to this connector. 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 connector is for the HDD Activity LED. Connect the HDD Activity LED cable to this connector. 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 connector 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 connector 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 connector is for the chassis-mounted reset button for system reboot without turning off the system power.

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Basic Installation



2.1 Building your PC system

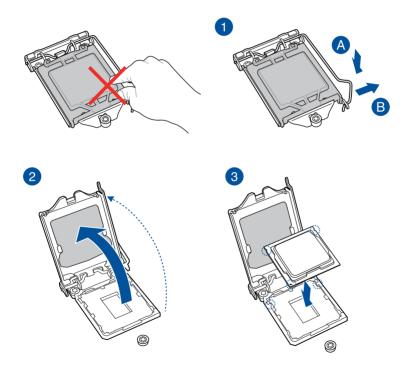


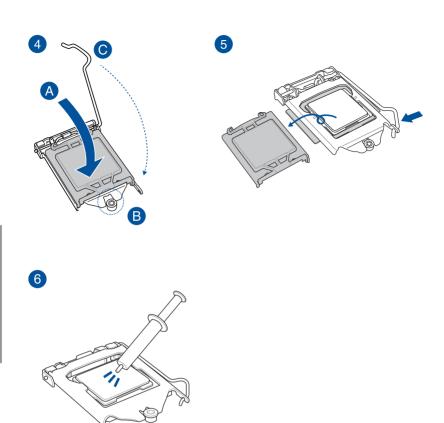
The diagrams in this section are for reference only. The motherboard layout may vary with models, but the installation steps are the same for all models.

2.1.1 CPU installation



Ensure that you install the correct CPU designed for LGA1151 socket only. DO NOT install a CPU designed for LGA1155 and LGA1156 sockets on the LGA1151 socket.





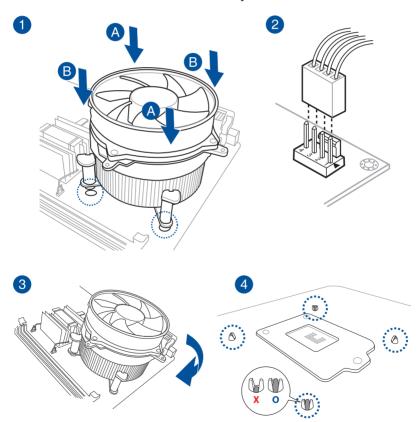
2.1.2 **Cooling system installation**



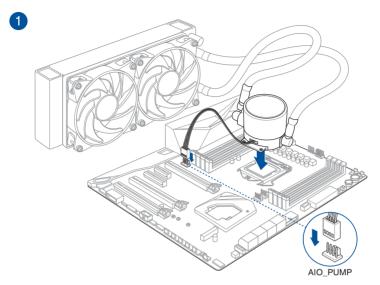


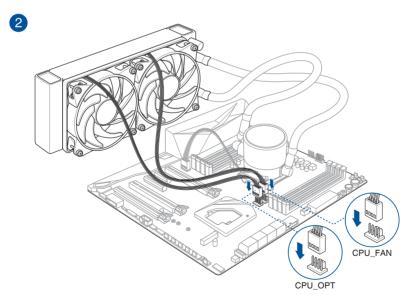
Apply the Thermal Interface Material to the CPU cooling system and CPU before you install the cooling system, if necessary.

To install the CPU heatsink and fan assembly



To install an AIO cooler



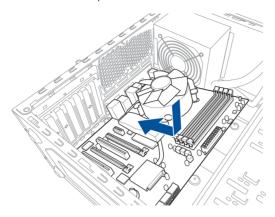




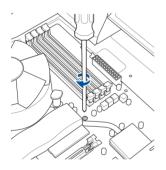
The illustrations in this section are for reference only. Please refer to section 1.1.2 **Motherboard Layout** for the actual location of the header(s).

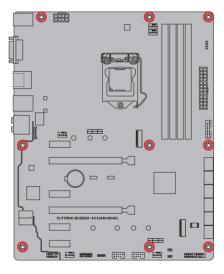
2.1.3 Motherboard installation

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



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

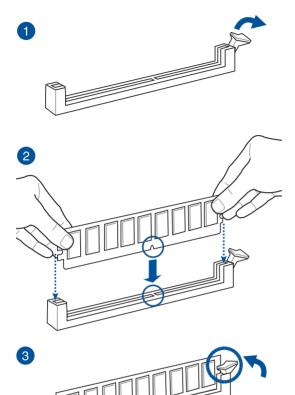




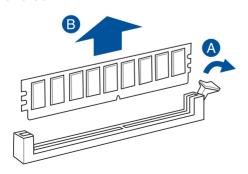


DO NOT overtighten the screws! Doing so can damage the motherboard.

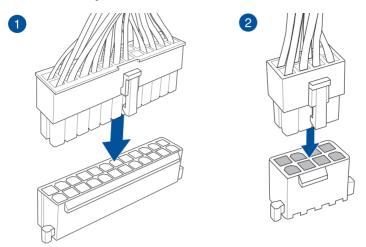
2.1.4 DIMM installation







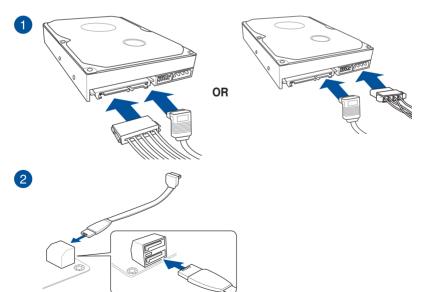
2.1.5 ATX power connection





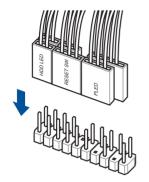
Ensure to connect the 8-pin power plug.

2.1.6 SATA device connection

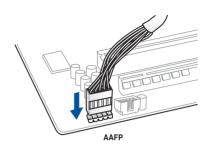


2.1.7 Front I/O connector

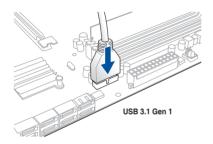
To install front panel connector



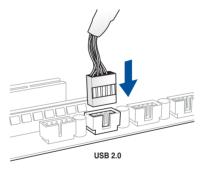
To install front panel audio connector



To install USB 3.1 Gen 1 connector

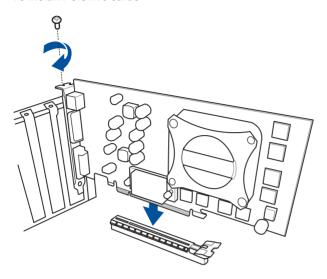


To install USB 2.0 connector

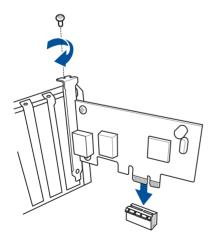


2.1.8 Expansion card installation

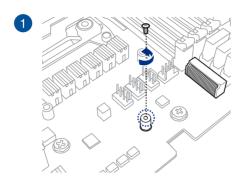
To install PCle x16 cards

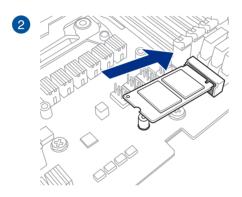


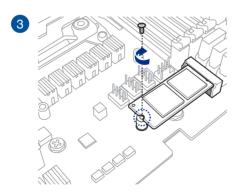
To install PCle x1 cards



2.1.9 M.2 installation









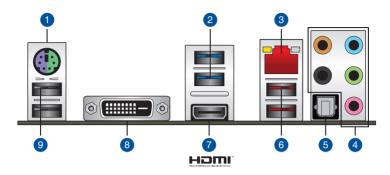
Supported M.2 type varies per motherboard.



Use the bundled M.2 screws to secure the M.2.

2.2 Motherboard rear and audio connections

2.2.1 Rear I/O connection



Rea	r panel connectors		
1.	PS/2 keyboard/mouse combo port	6.	USB 3.1 Gen 2 Type-A ports
2.	USB 3.1 Gen 1 ports	7.	HDMI 1.4b port
3.	Intel® LAN port*	8.	DVI-D port
4.	Audio I/O ports**	9.	USB 2.0 ports
5.	Optical S/PDIF Out port		

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



- USB 3.1 Gen 1/Gen 2 devices can only be used as data storage only.
- Due to the design of the Intel® 300 series chipset, all USB devices connected to the USB 2.0 and USB 3.1 Gen 2 / Gen 1 ports are controlled by the xHCl controller. Some legacy USB devices must update their firmware for better compatibility.
- We strongly recommend that you connect your devices to ports with matching data transfer rate. Please connect your USB 3.1 Gen 2 devices to USB 3.1 Gen 2 ports for faster and better performance for your devices.

* LAN ports LED indications

Activity Link LED		Speed LED		
Status	Description	Status	Description	
Off	No link	Off	10 Mbps connection	
Orange	Linked	Orange	100 Mbps connection	
Orange (Blinking)	Data activity	Green	1 Gbps connection	
Orange (Blinking then steady)	Ready to wake up from S5 mode			





You can disable the LAN controller in BIOS. Due to hardware design, the LAN port's LEDs may continue to blink even when disabled.

** Audio 2, 4, 6, or 8-channel configuration

Port Headset 2-channel		4-channel 6-channel		8-channel	
Light Blue	Line In	Line In	Line In	Side speaker	
Lime	Line Out	Front Speaker Out	Front Speaker Out	Front Speaker Out	
Pink	Mic In	Mic In	Mic In	Mic In	
Orange	_	_	Center/Subwoofer	Center/Subwoofer	
Black	-	Rear Speaker Out	Rear Speaker Out	Rear Speaker Out	

2.2.2 Audio I/O connections

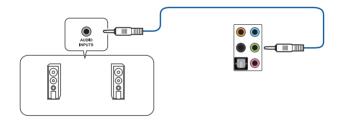
Audio I/O ports



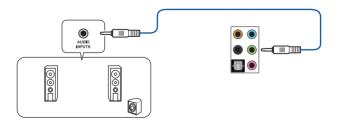
Connect to Headphone and Mic



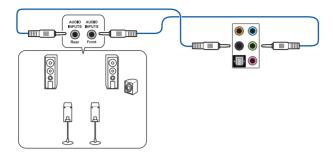
Connect to Stereo Speakers



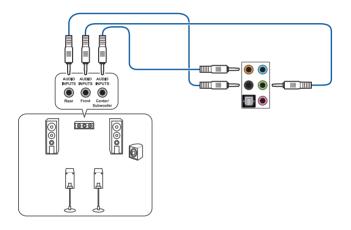
Connect to 2 channel Speakers



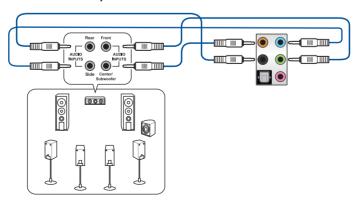
Connect to 4 channel Speakers



Connect to 6 channel Speakers



Connect to 8 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 SCSI 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
	Quick boot set to disabled
	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

 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 switch for more than four seconds to let the system enter the soft-off mode regardless of the BIOS setting.

BIOS Setup



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 B360HGAM.CAP for this motherboard

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.



- The BIOS setup screens shown in this section are for reference purposes only, and may not exactly match what you see on your screen.
- 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>. See section 3.10 Exit Menu for details.
- If the system fails to boot after changing any BIOS setting, try to clear the CMOS and reset the motherboard to the default value. See section 1.1.6 Jumpers for information on how to erase the RTC RAM via the Clear CMOS jumper.
- The BIOS setup program does not support the Bluetooth devices.



Please visit ASUS website for the detailed BIOS content manual.

BIOS menu screen

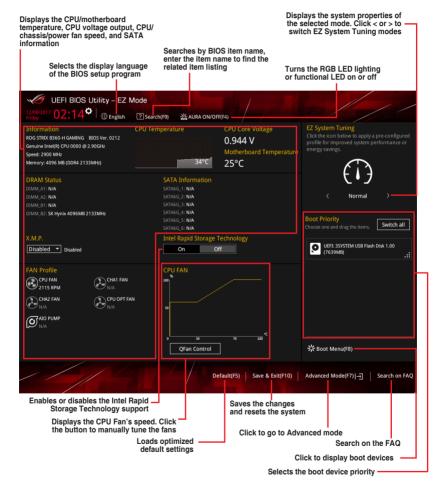
The BIOS Setup program can be used under two modes: **EZ Mode** and **Advanced Mode**. You can change modes from **Setup Mode** in **Boot menu** or by pressing the <F7> hotkey.

3.2.1 F7 Mode

The EZ Mode provides you an overview of the basic system information, and allows you to select the display language, system performance, mode and boot device priority. To access the Advanced Mode, select **Advanced Mode** or press the <F7> hotkey for the advanced BIOS settings.



The default screen for entering the BIOS setup program can be changed. Refer to the **Setup Mode** item in section **Boot menu** for details.





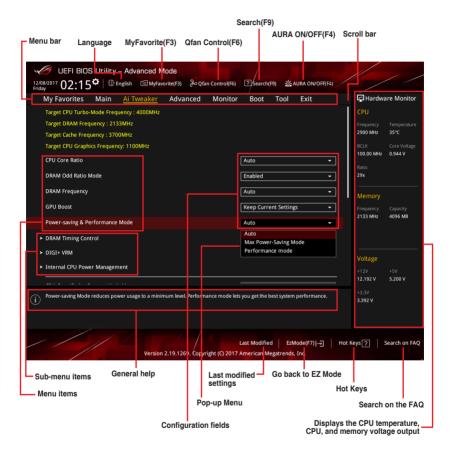
The boot device options vary depending on the devices you installed to the system.

3.2.2 Advanced Mode

The Advanced Mode provides advanced options for experienced end-users to configure the BIOS settings. The figure below shows an example of the Advanced Mode. Refer to the following sections for the detailed configurations.



To switch from EZ Mode to Advanced Mode, click **Advanced Mode(F7)** or press the <F7> hotkey.



Menu bar

The menu bar on top of the screen has the following main items:

My Favorites	My Favorites For saving the frequently-used system settings and configuration.			
Main	For changing the basic system configuration			
Ai Tweaker	For changing the overclocking settings			
Advanced For changing the advanced system settings				
Monitor	For displaying the system temperature, power status, and changing the fan settings.			
Boot	For changing the system boot configuration			
Tool	For configuring options for special functions			
Exit	For selecting the exit options and loading default settings			

Menu items

The highlighted item on the menu bar displays the specific items for that menu. For example, selecting **Main** shows the Main menu items.

The other items (My Favorites, Ai Tweaker, Advanced, Monitor, Boot, Tool, and Exit) on the menu bar have their respective menu items.

Submenu items

A greater than sign (>) before each item on any menu screen means that the item has a submenu. To display the submenu, select the item and press <Enter>.

Language

This button above the menu bar contains the languages that you can select for your BIOS. Click this button to select the language that you want to display in your BIOS screen.

My Favorites(F3)

This button above the menu bar shows all BIOS items in a Tree Map setup. Select frequently-used BIOS settings and save it to MyFavorites menu.



Refer to section 3.3 My Favorites for more information.

Q-Fan Control(F6)

This button above the menu bar displays the current settings of your fans. Use this button to manually tweak the fans to your desired settings.



Refer to section 3.2.3 QFan Control for more information.

Search (F9)

This button allows you to search by BIOS item name, enter the item name to find the related item listing.

AURA (F4)

This button allows you to turn the RGB LED lighting or functional LED on or off.

[ON] All AURA effects will be enabled. (Default mode)

[OFF] All AURA effects will be disabled.

[Stealth Mode] Functional LEDs (Qcode and HDD LED) will be disabled along with all

AURA effects.

Search on FAQ

Move your mouse over this button to show a QR code, scan this QR code on your mobile device to connect to the BIOS FAQ web page of the ASUS support website. You can also scan the following QR code:



Hot keys

This button above the menu bar contains the navigation keys for the BIOS setup program. Use the navigation keys to select items in the menu and change the settings.

Scroll bar

A scroll bar appears on the right side of a menu screen when there are items that do not fit on the screen. Press the Up/Down arrow keys or <Page Up> / <Page Down> keys to display the other items on the screen.

General help

At the bottom of the menu screen is a brief description of the selected item. Use <F12> key to capture the BIOS screen and save it to the removable storage device.

Configuration fields

These fields show the values for the menu items. If an item is user-configurable, you can change the value of the field opposite the item. You cannot select an item that is not user-configurable.

A configurable field is highlighted when selected. To change the value of a field, select it and press <Enter> to display a list of options.

Last Modified button

This button shows the items that you last modified and saved in BIOS Setup.

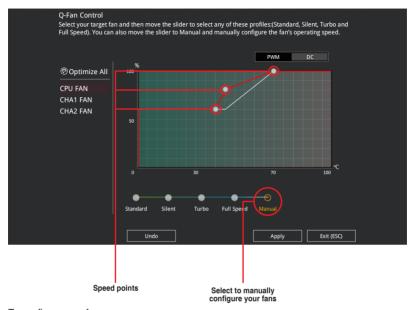
3.2.3 QFan Control

The QFan Control allows you to set a fan profile or manually configure the operating speed of your CPU and chassis fans.



Configuring fans manually

Select Manual from the list of profiles to manually configure your fans' operating speed.



To configure your fans:

- 1. Select the fan that you want to configure and to view its current status.
- 2. Click and drag the speed points to adjust the fans' operating speed.
- 3. Click Apply to save the changes then click Exit (ESC).

3.3 My Favorites

My Favorites is your personal space where you can easily save and access your favorite BIOS items.

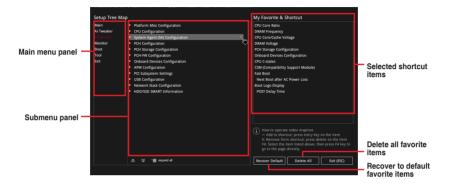


My Favorites comes with several performance, power saving, and fast boot related items by default. You can personalize this screen by adding or removing items.

Adding items to My Favorites

To add BIOS items:

- 1. Press <F3> on your keyboard or click Setup Tree Map screen.
- On the Setup Tree Map screen, select the BIOS items that you want to save in My Favorites screen.



3. Select an item from main menu panel, then click the submenu that you want to save as favorite from the submenu panel and click + or press <Enter> on your keyboard.



You cannot add user-managed items such as language and boot order to My Favorites.

- 4. Click Exit (ESC) or press < Esc> key to close Setup Tree Map screen.
- 5. Go to My Favorites menu to view the saved BIOS items.

3.4 Main menu

The Main menu screen appears when you enter the Advanced Mode of the BIOS Setup program. The Main menu provides you an overview of the basic system information, and allows you to set the system date, time, language, and security settings.

Security

The Security menu items allow you to change the system security settings.



- If you have forgotten your BIOS password, erase the CMOS Real Time Clock (RTC)
 RAM to clear the BIOS password. See section 1.1.6 Jumpers for information on how
 to erase the RTC RAM via the Clear CMOS button.
- The Administrator or User Password items on top of the screen show the default [Not Installed]. After you set a password, these items show [Installed].

3.5 Ai Tweaker menu

The Ai Tweaker menu items allow you to configure overclocking-related items.



Be cautious when changing the settings of the Ai Tweaker menu items. Incorrect field values can cause the system to malfunction



The configuration options for this section vary depending on the CPU and DIMM model you installed on the motherboard.

CPU Core Ratio

This item allows you to set the CPU core ratios. Configuration options: [Auto] [Sync All Cores] [Per Core]

DRAM Frequency

This item allows you to set the memory operating frequency. The configurable options vary with the BCLK (base clock) frequency setting. Select the auto mode to apply the optimized setting. Configuration options: [Auto] [DDR4-800MHz] - [DDR4-8533MHz]

Internal CPU Power Management

The subitems in this menu allow you to set the CPU ratio and features.

Intel(R) SpeedStep(tm)

Allows the operating system to dynamically adjust the processor voltage and cores frequency to decrease the average power consumption and decrease average heat production. Configuration options: [Auto] [Enabled] [Disabled]

Turbo Mode

Allows you to enable your processor cores to run faster than the base operating frequency when it is below power, current and specification limit. Configuration options: [Disabled] [Enabled]

3.6 Advanced menu

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



Be cautious when changing the settings of the Advanced menu items. Incorrect field values can cause the system to malfunction.

3.6.1 Platform Misc Configuration

The items in this menu allow you to change the ASPM for PCH and SA PCI Express.

3.6.2 CPU Configuration

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



The items in this menu may vary based on the CPU installed.

CPU - Power Management Control

This item allows you to manage and configure the CPU's power.

Intel(R) SpeedStep(tm)

This item allows more than two frequency to be supported. Configuration options: [Auto] [Disabled] [Enabled]

Turbo Mode

This item allows you to automatically set the CPU cores to run faster than the base operating frequency when it is below the operating power, current and temperature specification limit. Configuration options: [Disabled] [Enabled]

CPU C states

This item allows you to set the power saving of the CPU states. Configuration options: [Auto] [Disabled] [Enabled]

3.6.3 System Agent (SA) Configuration

The items in this menu allow you to adjust the Link Speed for PEG Port and Multi-Monitor.

3.6.4 PCH Configuration

The items in this menu allow you to adjust the PCH PCI Express speed.

PCI Express Configuration

This item allows you to configure the PCI Express slots.

PCIe Speed

This item allows your system to automatically select the PCI Express port speed. Configuration options: [Auto] [Gen1] [Gen2] [Gen3]

3.6.5 PCH Storage Configuration

While entering Setup, the BIOS automatically detects the presence of SATA devices. The SATA Port items show **Empty** if no SATA device is installed to the corresponding SATA port.

SATA Controller(s)

This item allows you to enable or disable the SATA Device. Configuration options: [Enabled] [Disabled]

SMART Self Test

SMART (Self-Monitoring, Analysis and Reporting Technology) is a monitoring system that shows a warning message during POST (Power-on Self Test) when an error occurs in the hard disks. Configuration options: [On] [Off]

SATA6G_1(Charcoal Black) - SATA6G_6(Charcoal Black)

SATA6G 1(Charcoal Black) - SATA6G 6(Charcoal Black)

This item allows you to enable or disable the selected SATA port. Configuration options: [Disabled] [Enabled]

Hot Plua

These items appears only when the SATA Mode Selection is set to [AHCI] and allows you to enable or disable SATA Hot Plug Support.

Configuration options: [Disabled] [Enabled]

3.6.6 PCH-FW Configuration

This item allows you to configure the firmware TPM.

3.6.7 Onboard Devices Configuration

The items in this menu allow you to switch between PCIe Lanes and configure onboard devices.

HD Audio

This item allows you to use the Azalia High Definition Audio Controller.

Configuration options: [Disabled] [Enabled]

M.2 1 Configuration

[Auto] Automatically detects the M.2 device mode. If a SATA device is detected.

SATA6G 2 port will be disabled.

[SATA] Supports M.2 1 SATA devices only. SATA6G 2 port will be disabled.

[PCIE] Supports M.2_1 PCIe devices only.

PCIEX16_2 Configuration

[Auto] Automatically detects the devices installed. When both PCle x1_3 and

PCIe x1_4 slots are occupied, PCIe x16_2 slot runs at x2 mode. When there are no devices installed on both PCIe x1_3 and PCIe x1_4 slots.

PCle x16_2 slot runs at x4 mode.

[X2] PCle x16_2 slot runs at x2 mode. PCle x1_3 and PCle x1_4 slots are

enabled.

[X4] PCIe x16 2 slot runs at x4 mode. PCIe x1 3 and PCIe x1 4 slots are

disabled.

PCIEX1 1 & PCIEX1 2 Select

[Auto] Automatically detects the devices installed. When both PCle x1_1 and

PCIe x1_2 slots are occupied, only the device installed in the PCIe x1_1

slot can be detected.

[PCle x1_1] Allocates all bandwidth to the PCle x1_1 slot. Only the device installed in

the PCle x1_1 slot can be detected. The PCle x1_2 slot will be disabled.

[PCle x1_2] Allocates all bandwidth to the PCle x1_2 slot. Only the device installed in

the PCle x1 2 slot can be detected. The PCle x1 1 slot will be disabled.

Intel LAN Controller [Enabled]

[Enabled] Enables the Intel LAN controller.

[Disabled] Disables the controller.

3.6.8 APM Configuration

The items in this menu allow you to set system wake and sleep settings.

ErP Ready

This item allows you to switch off some power at S4+S5 or S5 to get the system ready for ErP requirement. When set to **[Enabled]**, all other PME options are switched off.

Configuration options: [Disabled] [Enable(S4+S5)] [Enable(S5)]

3.6.9 USB Configuration

The items in this menu allow you to change the USB-related features.



The **Mass Storage Devices** item shows the auto-detected values. If no USB device is detected, the item shows **None**.

USB Single Port Control

This item allows you to enable or disable the individual USB ports.



Refer to section 1.1.2 Motherboard layout for the location of the USB ports.

3.6.10 Network Stack Configuration

The items in this menu allow you to configure Ipv4 / Ipv6 PXE support.

3.6.11 HDD/SSD SMART Information

The items in this menu display the SMART information of the connected devices.

3.7 Monitor menu

The Monitor menu displays the system temperature/power status, and allows you to change the fan settings.

Q-Fan Configuration

Qfan Tuning

Click this item to automatically detect the lowest speed and configure the minimum duty cycle for each fan.

3.8 Boot menu

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

Boot Configuration

Fast Boot

[Disabled] Allows your system to go back to its normal boot speed.

[Enabled] Allows your system to accelerate the boot speed.



The following items appear only when you set the Fast Boot to [Enabled].

Next Boot after AC Power Loss

[Normal Boot] Returns to normal boot on the next boot after an AC power

loss.

[Fast Boot] Accelerates the boot speed on the next boot after an AC

power loss.

Setup Mode

[Advanced Mode] This item allows you to go to Advanced Mode of the BIOS after

POST.

[EZ Mode] This item allows you to go to EZ Mode of the BIOS after POST.

CSM (Compatibility Support Module)

This item allows you to configure the CSM (Compatibility Support Module) items to fully support the various VGA, bootable devices and add-on devices for better compatibility.

Launch CSM

[Enabled] For better compatibility, enable the CSM to fully support the non-UEFI

driver add-on devices or the Windows® UEFI mode.

[Disabled] Disable the CSM to fully support the non-UEFI driver add-on devices

or the Windows® UEFI mode.



The following items appear only when you set the Launch CSM to [Enabled].

Boot Devices Control

This item allows you to select the type of devices that you want to boot. Configuration options: [UEFI and Legacy OPROM] [Legacy OPROM only] [UEFI only]

Boot from Network Devices

This item allows you to select the type of network devices that you want to launch. Configuration options: [Ignore] [Legacy only] [UEFI only]

Boot from Storage Devices

This item allows you to select the type of storage devices that you want to launch. Configuration options: [Ignore] [Legacy only] [UEFI only]

Boot from PCI-E/PCI Expansion Devices

This item allows you to select the type of PCI-E/PCI expansion devices that you want to launch. Configuration options: [Ignore] [Legacy only] [UEFI only]

Secure Boot

This item allows you to configure the Windows® Secure Boot settings and manage its keys to protect the system from unauthorized access and malwares during POST.

Boot Option Priorities

These items specify the boot device priority sequence from the available devices. The number of device items that appears on the screen depends on the number of devices installed in the system.



- To access Windows[®] OS in Safe Mode, press <F8> after POST.
- To select the boot device during system startup, press <F8> when the ASUS Logo appears.

Boot Override

These items displays the available devices. The number of device items that appears on the screen depends on the number of devices installed in the system. Click an item to start booting from the selected device.

3.9 Tool menu

The Tool menu items allow you to configure options for special functions. Select an item then press <Enter> to display the submenu.

3.9.1 ASUS EZ Flash 3 Utility

This item allows you to run ASUS EZ Flash 3. When you press <Enter>, a confirmation message appears. Use the left/right arrow key to select between [Yes] or [No], then press <Enter> to confirm your choice.



For more details, refer to section 3.11.2 ASUS EZ Flash 3.

3.9.2 Secure Erase

SSD speeds may lower over time as with any storage medium due to data processing. Secure Erase completely and safely cleans your SSD, restoring it to factory performance levels.

To launch Secure Erase, click **Tool > Secure Erase** on the Advanced mode menu.



- The time to erase the contents of your SSD may take a while depending on its size.
 Do not turn off the system during the process.
- Secure Erase is only supported on Intel SATA port. For more information about Intel SATA ports, refer to section 1.1.2 Motherboard layout of this manual.





Status definition:

- Frozen. The frozen state is the result of a BIOS protective measure. The BIOS guards drives that do not have password protection by freezing them prior to booting. If the drive is frozen, a power off or hard reset of your PC must be performed to proceed with the Secure Erase.
- Locked. SSDs might be locked if the Secure Erase process is either incomplete
 or was stopped. This may be due to a third party software that uses a different
 password defined by ASUS. You have to unlock the SSD in the software before
 proceeding with Secure Erase.

3.9.3 ASUS SPD Information

This item allows you to view the DRAM SPD information.

3.9.4 Graphics Card Information

This item displays the information about the graphics card installed in your system.

GPU Post

This item displays the information and recommended configuration for the PCIE slots that the graphics card is installed in your system.



This feature is only supported on selected ASUS graphics cards.

3.10 Exit menu

The Exit menu items allow you to load the optimal default values for the BIOS items, and save or discard your changes to the BIOS items. You can access the EZ Mode from the Exit menu.

Load Optimized Defaults

This option allows you to load the default values for each of the parameters on the Setup menus. When you select this option or if you press <F5>, a confirmation window appears. Select **OK** to load the default values.

Save Changes & Reset

Once you are finished making your selections, choose this option from the Exit menu to ensure the values you selected are saved. When you select this option or if you press <F10>, a confirmation window appears. Select **OK** to save changes and exit.

Discard Changes and Exit

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

Launch EFI Shell from USB drives

This item allows you to attempt to launch the EFI Shell application (shellx64.efi) from one of the available filesystem devices.

3.11 Updating BIOS

The ASUS website publishes the latest BIOS versions to provide enhancements on system stability, compatibility, and performance. However, BIOS updating is potentially risky. If there is no problem using the current version of BIOS, DO NOT manually update the BIOS. Inappropriate BIOS updating may result to system's failure to boot. Carefully follow the instructions in this chapter to update your BIOS when necessary.



Visit http://www.asus.com to download the latest BIOS file for this motherboard.

The following utilities allow you to manage and update the motherboard BIOS setup program.

- 1. EZ Update: Updates the BIOS in Windows® environment.
- 2. ASUS EZ Flash 3: Updates the BIOS using a USB flash drive.
- ASUS CrashFree BIOS 3: Restores the BIOS using the motherboard support DVD or a USB flash drive when the BIOS file fails or gets corrupted.

3.11.1 **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.

3.11.2 ASUS EZ Flash 3

ASUS EZ Flash 3 allows you to download and update to the latest BIOS through the Internet without having to use a bootable floppy disk or an OS-based utility.



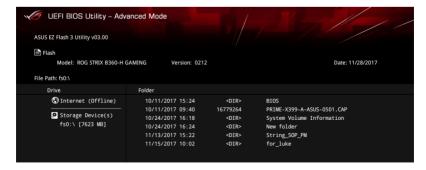
Updating through the Internet varies per region and Internet conditions. Check your local Internet connection before updating through the Internet.

To update the BIOS by USB:

- Enter the Advanced Mode of the BIOS setup program. Go to the Tool menu to select ASUS EZ Flash Utility and press <Enter>.
- 2. Insert the USB flash disk that contains the latest BIOS file to the USB port.
- 3. Select via Storage Device(s).



- 4. Press <Tab> to switch to the Drive field.
- Press the Up/Down arrow keys to find the USB flash disk that contains the latest BIOS, and then press <Enter>.
- 6. Press <Tab> to switch to the Folder Info field.
- 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.





- 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!



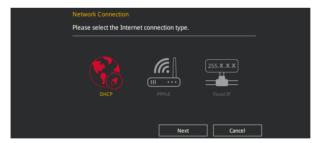
Ensure to load the BIOS default settings to ensure system compatibility and stability. Select the Load Optimized Defaults item under the Exit menu. See section **3.10 Exit Menu** for details.

To update the BIOS by Internet:

- Enter the Advanced Mode of the BIOS setup program. Go to the Tool menu to select ASUS EZ Flash Utility and press <Enter>.
- Select via Internet.



Press the Left/Right arrow keys to select an Internet connection method, and then press <Enter>.



- 4. Follow the onscreen instructions to complete the update.
- 5. Reboot the system when the update process is done.



Ensure to load the BIOS default settings to ensure system compatibility and stability. Select the Load Optimized Defaults item under the Exit menu. See section **3.10 Exit Menu** for details.

3.11.3 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.
- Insert the motherboard support DVD to the optical drive, or the USB flash drive containing the BIOS file to the USB port.
- 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.
- 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!

Appendix

Notices

Federal Communications Commission Statement

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

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

This equipment has been tested and found to comply with the limits for a Class 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 manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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



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

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)

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

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A-2 Appendix

RFACH

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.



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.

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.

Regional notice for California



WARNING

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

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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 ie 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/suoport

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: <u>www.asus.com/support</u>

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: <u>www.asus.com/support</u>

A-4 Appendix

ASUS contact information

ASUSTEK COMPUTER INC.

Address 4F, No. 150, Li-Te Road, Peitou, Taipei 112, Taiwan

Telephone +886-2-2894-3447 Fax +886-2-2890-7798 Web site www.asus.com

Technical Support

Telephone +86-21-38429911

 Fax
 +86-21-5866-8722, ext. 9101#

 Online support
 http://qr.asus.com/techserv

ASUS COMPUTER INTERNATIONAL (America)

Address 800 Corporate Way, Fremont, CA 94539, USA

Telephone +1-510-739-3777
Fax +1-510-608-4555
Web site http://www.asus.com/us/

Technical Support

Support fax +1-812-284-0883 Telephone +1-812-282-2787

Online support http://qr.asus.com/techserv

ASUS COMPUTER GmbH (Germany and Austria)

Address Harkort Str. 21-23, 40880 Ratingen, Germany

Fax +49-2102-959931
Web site http://www.asus.com/de
Online contact http://eu-rma.asus.com/sales

Technical Support

Telephone +49-2102-5789555 Support Fax +49-2102-959911

Online support http://gr.asus.com/techserv

DECLARATION OF CONFORMITY

Per FCC Part 2 Section 2. 1077(a)



Responsible Party Name: Asus Computer International

Address: 800 Corporate Way, Fremont, CA 94539.

Phone/Fax No: (510)739-3777/(510)608-4555

hereby declares that the product

Product Name: Motherboard

Model Number: ROG STRIX B360-H GAMING

Conforms to the following specifications:

Supplementary Information:

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.

Representative Person's Name : Steve Chang / President

Signature:

Date: Feb. 5, 2018

Steve Chang

Ver. 170324

A-6 Appendix