ROG
MAXIMUS
Z690 HERO
Motherboard
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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 MAXIMUS Z690 HERO specifications summary

| CPU | Intel® Socket LGA1700 for 12th Gen Intel® Core™, Pentium® Gold and Celeron® Processors*.  
|     | Supports Intel® Turbo Boost Technology 2.0 and Intel® Turbo Boost Max Technology 3.0**  
|     | * Refer to www.asus.com for CPU support list.  
|     | ** Intel® Turbo Boost Max Technology 3.0 support depends on the CPU types.  

| Chipset | Intel® Z690 Chipset  
| Memory | 4 x DIMM, Max. 128GB, DDR5 6400+(OC) / 6200(OC) / 6000(OC) / 5800(OC) / 5600(OC) / 5400(OC) / 5200(OC) / 5000(OC) / 4800 Non-ECC, Un-buffered Memory*  
|         | Dual Channel Memory Architecture  
|         | Supports Intel® Extreme Memory Profile (XMP)  
|         | * Actual memory data rate support depends on the CPU types and DRAM modules, for more information refer to www.asus.com for the Memory QVL (Qualified Vendors Lists).  

| Graphics | 1 x HDMI® port**  
|          | 2 x Intel® Thunderbolt™ 4 ports (USB Type-C®) support DisplayPort 1.4 and Thunderbolt™ video outputs  
|          | * Graphics specifications may vary between CPU types. Please refer to www.intel.com for any updates.  
|          | ** Support 4K@60Hz as specified in HDMI® 2.1.  

| Expansion Slots | Intel® 12th Gen Processors*  
|                 | 2 x PCIe 5.0 x16 slots (supports x16 or x8/x8 modes)**  
|                 | Intel® Z690 Chipset***  
|                 | 1 x PCIe 4.0 x16 slot (supports x4, x4/x4 modes)  
|                 | * Please check PCIe bifurcation table in Chapter 1.  
|                 | ** When ROG Hyper M.2 card is installed on PCIEX16(G5)_1, PCIEX16(G5)_2 will run x8 only and if ROG Hyper M.2 card is installed on PCIEX16(G5)_2, PCIEX16(G5)_1 will run x8 only.  
|                 | *** Supports Intel® Optane Memory H Series on PCH-attached PCIe slot.  

| Storage | Total supports 5 x M.2 slots and 6 x SATA 6Gb/s ports*  
|         | Intel® 12th Gen Processors  
|         | M.2_1 slot (Key M), type 2242/2260/2280/22110  
|         | - Intel® 12th Gen processors support PCIe 4.0 x4 mode  
|         | Hyper M.2_1 slot (Key M) via ROG Hyper M.2 card, type 2242/2260/2280/22110***  
|         | - Intel® 12th Gen processors support PCIe 5.0 x4 mode  

(continued on the next page)
### ROG MAXIMUS Z690 HERO specifications summary

| Storage | Intel® Z690 Chipset**  
| | M.2_2 slot (Key M), type 2242/2260/2280 (supports PCIe 3.0 x4 mode)  
| | M.2_3 slot (Key M), type 2242/2260/2280 (supports PCIe 4.0 x4 & SATA modes)  
| | Hyper M.2_1 slot (Key M) via ROG Hyper M.2 card, type 2242/2260/2280/22110 (supports PCIe 4.0 x4 mode)***  
| | Hyper M.2_2 slot (Key M) via ROG Hyper M.2 card, type 2242/2260/2280/22110 (supports PCIe 4.0 x4 mode)****  
| | 6 x SATA 6Gb/s ports*****  
| | * Intel® Rapid Storage Technology supports NVMe RAID 0/1/5, SATA RAID 0/1/5/10.  
| | ** Intel® Rapid Storage Technology supports Intel® Optane Memory H Series on PCH-attached M.2 slots.  
| | *** When ROG Hyper M.2 card is installed on PCIEX16(G5)_1, Hyper M.2_1 slot can support PCIe 4.0 x4 mode. When ROG Hyper M.2 card is installed on PCIEX16(G5)_2, Hyper M.2_1 slot can support PCIe 5.0 x4 mode. When ROG Hyper M.2 card is installed on PCIEX16(G4), Hyper M.2_1 and Hyper M.2_2 slots can support PCIe 4.0 x4 mode.  
| | **** When ROG Hyper M.2 card is installed on PCIEX16(G5)_1 or PCIEX16(G5)_2, Hyper M.2_2 slot will be disabled. When ROG Hyper M.2 card is installed on PCIEX16(G4), Hyper M.2_1 and Hyper M.2_2 slots can support PCIe 4.0 x4 mode.  
| | ***** RAID configuration and boot drives are not supported on the SATA6G_E1-2 ports.  
| Ethernet | 1 x Intel® 2.5Gb Ethernet  
| | ASUS LANGuard  
| Wireless & Bluetooth | Wi-Fi 6E  
| | 2x2 Wi-Fi 6E (802.11 a/b/g/n/ac/ax)  
| | Supports 2.4/5/6GHz frequency band*  
| | Bluetooth v5.2  
| | * WiFi 6E 6GHz regulatory may vary between countries, and function will be ready in Windows 11 or later.  
| USB | Rear USB (Total 11 ports)  
| | 2 x Thunderbolt™ 4 ports (2 x USB Type-C®)  
| | 7 x USB 3.2 Gen 2 ports (6 x Type-A + 1 x USB Type-C®)  
| | 2 x USB 2.0 ports (2 x Type-A)  
| | Front USB (Total 9 ports)  
| | 1 x USB 3.2 Gen 2x2 connector (supports USB Type-C®)  
| | 2 x USB 3.2 Gen 1 headers support additional 4 USB 3.2 Gen 1 ports  
| | 2 x USB 2.0 headers supports additional 4 USB 2.0 ports  
| Audio | ROG SupremeFX 7.1 Surround Sound High Definition Audio CODEC ALC4082  
| | - Impedance sense for front and rear headphone outputs  
| | - Supports: Jack-detection, Multi-streaming, Front Panel Jack-retasking  
| | - High quality 120 dB SNR stereo playback output and 113 dB SNR recording input  
| | - Supports up to 32-Bit/384 kHz playback  

(continued on the next page)
### Audio Features:
- SupremeFX Shielding Technology
- ESS® SABRE9018Q2C DAC/AMP
- Gold-plated audio jacks
- Rear optical S/PDIF out port
- Premium audio capacitors
- Audio cover

### Back Panel I/O Ports
- 2 x Thunderbolt™ 4 USB Type-C® ports
- 7 x USB 3.2 Gen 2 ports (6 x Type-A + 1 x USB Type-C®)
- 2 x USB 2.0 ports (2 x Type-A)
- 1 x HDMI® port
- 1 x Wi-Fi Module
- 1 x Intel® 2.5Gb Ethernet port
- 5 x Gold-plated audio jacks
- 1 x Optical S/PDIF out port
- 1 x BIOS FlashBack™ button
- 1 x Clear CMOS button

### Internal I/O connectors
- **Fan and Cooling related**
  - 1 x 4-pin CPU Fan header
  - 1 x 4-pin CPU OPT Fan header
  - 1 x 4-pin AIO Pump header
  - 4 x 4-pin Chassis Fan headers
  - 1 x W_PUMP+ header
  - 1 x 2-pin Water In header
  - 1 x 2-pin Water Out header
  - 1 x 3-pin Water Flow header

- **Power related**
  - 1 x 24-pin Main Power connector
  - 2 x 8-pin +12V Power connector
  - 1 x 6-pin PCIe Graphics Card connector

- **Storage related**
  - 3 x M.2 slots (Key M)
  - 6 x SATA 6Gb/s ports

- **USB**
  - 1 x USB 3.2 Gen 2x2 connector (supports USB Type-C®)
  - 2 x USB 3.2 Gen 1 headers support additional 4 USB 3.2 Gen 1 ports
  - 2 x USB 2.0 headers support additional 4 USB 2.0 ports

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## ROG MAXIMUS Z690 HERO specifications summary

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<th>Internal I/O connectors</th>
<th>Miscellaneous</th>
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<td>3 x Addressable Gen 2 headers</td>
</tr>
<tr>
<td></td>
<td>1 x AURA RGB header</td>
</tr>
<tr>
<td></td>
<td>1 x FlexKey button</td>
</tr>
<tr>
<td></td>
<td>1 x Front Panel Audio header (AAFP)</td>
</tr>
<tr>
<td></td>
<td>1 x SPI TPM header (14-1pin)</td>
</tr>
<tr>
<td></td>
<td>1 x Start button</td>
</tr>
<tr>
<td></td>
<td>1 x ReTry button</td>
</tr>
<tr>
<td></td>
<td>1 x 10-1 pin System Panel header</td>
</tr>
<tr>
<td></td>
<td>1 x Thermal Sensor header</td>
</tr>
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<table>
<thead>
<tr>
<th>Special Features</th>
<th>Extreme OC Kit</th>
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<td>- FlexKey button</td>
</tr>
<tr>
<td></td>
<td>- ReTry button</td>
</tr>
<tr>
<td></td>
<td>- Start button</td>
</tr>
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<thead>
<tr>
<th></th>
<th>Extreme Engine Digi+</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>- 10K Black Metallic Capacitors</td>
</tr>
<tr>
<td></td>
<td>- MicroFine Alloy Choke</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>ASUS Q-Design</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- M.2 Q-Latch</td>
</tr>
<tr>
<td></td>
<td>- PCIe Slot Q-Release</td>
</tr>
<tr>
<td></td>
<td>- Q-Code</td>
</tr>
<tr>
<td></td>
<td>- Q-Connector</td>
</tr>
<tr>
<td></td>
<td>- Q-DIMM</td>
</tr>
<tr>
<td></td>
<td>- Q-LED (CPU [red], DRAM [yellow], VGA [white], Boot Device [yellow green])</td>
</tr>
<tr>
<td></td>
<td>- Q-Slot</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>ASUS Thermal Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- M.2 heatsink backplate</td>
</tr>
<tr>
<td></td>
<td>- M.2 heatsinks</td>
</tr>
<tr>
<td></td>
<td>- VRM heatsink design</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>ASUS EZ DIY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- BIOS FlashBack™ button</td>
</tr>
<tr>
<td></td>
<td>- Clear CMOS button</td>
</tr>
<tr>
<td></td>
<td>- CPU Socket lever protector</td>
</tr>
<tr>
<td></td>
<td>- ProCool II</td>
</tr>
<tr>
<td></td>
<td>- Pre-mounted I/O shield</td>
</tr>
<tr>
<td></td>
<td>- SafeSlot</td>
</tr>
<tr>
<td></td>
<td>- SafeDIMM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>AURA Sync</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- AURA RGB header</td>
</tr>
<tr>
<td></td>
<td>- Addressable Gen 2 headers</td>
</tr>
</tbody>
</table>

(continued on the next page)
ROG MAXIMUS Z690 HERO specifications summary

<table>
<thead>
<tr>
<th>Special Features</th>
<th>Front Panel USB 3.2 Gen 2x2 with Quick Charge 4+ Support</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Support: up to 60W charging*</td>
</tr>
<tr>
<td></td>
<td>- Output: 5/9/15/20V max. 3A, PPS:3.3–21V max. 3A</td>
</tr>
<tr>
<td></td>
<td>- Compatible with QC 4.0/3.0/2.0, PD3.0 and PPS</td>
</tr>
<tr>
<td></td>
<td>* To support 60W, please install the power cable to 6-pin PCIe Graphics Card connector or can only support 27W.</td>
</tr>
</tbody>
</table>

| ASUS HYDRANODE    | - 3 x Chassis fan support* (CHA_FAN1P,CHA_FAN2P,CHA_FAN3P)* |
|                  | * Visit ASUS Website for the latest compatibility list.  |

<table>
<thead>
<tr>
<th>Software Features</th>
<th>ROG Exclusive Software</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- ROG CPU-Z</td>
</tr>
<tr>
<td></td>
<td>- GameFirst VI</td>
</tr>
<tr>
<td></td>
<td>- Sonic Studio III + Sonic Studio Virtual Mixer + Sonic Suite Companion</td>
</tr>
<tr>
<td></td>
<td>- Sonic Radar III</td>
</tr>
<tr>
<td></td>
<td>- DTS® Sound Unbound</td>
</tr>
<tr>
<td></td>
<td>- BullGuard Internet Security (1-year full version)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ASUS Exclusive Software</th>
<th>Armoury Crate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- AIDA64 Extreme (1 year full version)</td>
</tr>
<tr>
<td></td>
<td>- AURA Creator</td>
</tr>
<tr>
<td></td>
<td>- AURA Sync</td>
</tr>
<tr>
<td></td>
<td>- Fan Xpert 4</td>
</tr>
<tr>
<td></td>
<td>- Two-Way AI Noise Cancelation</td>
</tr>
</tbody>
</table>

| AI Suite 3             | 5-Way Optimization with AI Overclocking |
|                        | TPU  |
|                        | EPU  |
|                        | DIGI+ Power Control |
|                        | Turbo app  |

| MyAsus                 |  |
| WinRAR                 |  |

| UEFI BIOS              | AI Overclocking Guide |
|                       | ASUS EZ DIY           |
|                       | - ASUS CrashFree BIOS 3 |
|                       | - ASUS EZ Flash 3     |
|                       | - ASUS UEFI BIOS EZ Mode |

MemTest86

*(continued on the next page)*
## ROG MAXIMUS Z690 HERO specifications summary

<table>
<thead>
<tr>
<th>BIOS</th>
<th>256 Mb Flash ROM, UEFI AMI BIOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manageability</td>
<td>WOL by PME, PXE</td>
</tr>
<tr>
<td>Operating System</td>
<td>Windows® 11 64-bit</td>
</tr>
<tr>
<td></td>
<td>Windows® 10 64-bit</td>
</tr>
<tr>
<td>Form Factor</td>
<td>ATX Form Factor</td>
</tr>
<tr>
<td></td>
<td>12 inch x 9.6 inch (30.5 cm x 24.4 cm)</td>
</tr>
</tbody>
</table>

- Specifications are subject to change without notice. Please refer to the ASUS website for the latest specifications.
- MyASUS offers a variety of support features such as helping to troubleshoot issues, optimizing product performance, integrating ASUS software, and recovery drive creation. Please scan the QR Code for installation guide and FAQ.
## Package contents

Check your motherboard package for the following items.

<table>
<thead>
<tr>
<th>Category</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motherboard</td>
<td>1 x ROG MAXIMUS Z690 HERO motherboard</td>
</tr>
<tr>
<td>Cables</td>
<td>1 x ARGB RGB extension cable</td>
</tr>
<tr>
<td></td>
<td>1 x RGB extension cable</td>
</tr>
<tr>
<td></td>
<td>4 x SATA 6Gb/s cables</td>
</tr>
<tr>
<td>ROG HYPER M.2 CARD</td>
<td>1 x ROG Hyper M.2 Card with heatsink</td>
</tr>
<tr>
<td></td>
<td>2 x M.2 screw packages for ROG Hyper M.2 Card</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>1 x ASUS Wi-Fi moving antennas</td>
</tr>
<tr>
<td></td>
<td>1 x M.2 Q-Latch package</td>
</tr>
<tr>
<td></td>
<td>2 x M.2 Q-Latch packages for M.2 backplate</td>
</tr>
<tr>
<td></td>
<td>1 x M.2 Rubber package</td>
</tr>
<tr>
<td></td>
<td>1 x Q-connector</td>
</tr>
<tr>
<td></td>
<td>1 x ROG Graphics card holder</td>
</tr>
<tr>
<td></td>
<td>1 x ROG stickers</td>
</tr>
<tr>
<td></td>
<td>1 x ROG key chain</td>
</tr>
<tr>
<td></td>
<td>1 x ROG thank you card</td>
</tr>
<tr>
<td>Installation Media</td>
<td>1 x USB drive with utilities and drivers</td>
</tr>
<tr>
<td>Documentation</td>
<td>1 x User guide</td>
</tr>
</tbody>
</table>

If any of the above items is damaged or missing, contact your retailer.
## Installation tools and components

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<tr>
<th>PC chassis</th>
<th>Phillips (cross) screwdriver</th>
</tr>
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<tr>
<td>Power supply unit</td>
<td>Intel® LGA 1700 compatible CPU Fan</td>
</tr>
<tr>
<td>Intel® LGA 1700 CPU</td>
<td>Intel® LGA 1700 compatible CPU Fan</td>
</tr>
<tr>
<td>DDR5 DIMM</td>
<td>SATA hard disk drive</td>
</tr>
<tr>
<td>SATA optical disc drive (optional)</td>
<td>Graphics card (optional)</td>
</tr>
<tr>
<td>M.2 SSD module (optional)</td>
<td>1 Bag of screws</td>
</tr>
</tbody>
</table>

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

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.
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<td>9. USB 3.2 Gen 2x2 Type-C® Front Panel connector</td>
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<td>13. AURA RGB header</td>
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<td>14. FlexKey button</td>
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<td>15. Front Panel Audio header</td>
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<td>16. ReTry button</td>
<td>1-19</td>
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<tr>
<td>17. Start button</td>
<td>1-20</td>
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<tr>
<td>18. System Panel header</td>
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<tr>
<td>19. Thermal Sensor header</td>
<td>1-22</td>
</tr>
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<td>20. TPM header</td>
<td>1-23</td>
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<tr>
<td>21. Q-Code LED</td>
<td>1-24</td>
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<tr>
<td>22. Q-LEDs</td>
<td>1-25</td>
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<tr>
<td>23. Storage Device Activity LED</td>
<td>1-25</td>
</tr>
<tr>
<td>24. 8-pin Power Plug LED</td>
<td>1-26</td>
</tr>
</tbody>
</table>
1. **CPU socket**

The motherboard comes with a LGA1700 socket designed for 12th Gen Intel® Core™, Pentium® Gold and Celeron® Processors.

- Ensure that you install the correct CPU designed for LGA1700 socket only. DO NOT install a CPU designed for other sockets on the LGA1700 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 LGA1700 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 DDR5 (Double Data Rate 5) memory modules.

A DDR5 memory module is notched differently from a DDR, DDR2, DDR3, or DDR4 module. DO NOT install a DDR, DDR2, DDR3, or DDR4 memory module to the DDR5 slot.

Recommended memory configurations
Memory configurations

You may install 8GB, 16GB, and 32GB unbuffered and non-ECC DDR5 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 Hyper M.2 configuration.
PCIe bifurcation & M.2 settings in PCIe x16 slots for ROG Hyper M.2 Card

<table>
<thead>
<tr>
<th>Slot Description</th>
<th>Quantity of identifiable M.2 SSD (pcs)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Situation for ROG Hyper M.2 Card</td>
</tr>
<tr>
<td></td>
<td>Hyper M.2_1</td>
</tr>
<tr>
<td>1 PCIEX16(G5)_1</td>
<td>PCIe 4.0 x4</td>
</tr>
<tr>
<td>2 PCIEX16(G5)_2</td>
<td>PCIe 5.0 x4/ PCIe 4.0 x4</td>
</tr>
<tr>
<td>3 PCIEX16(G4)</td>
<td>PCIe 4.0 x4</td>
</tr>
</tbody>
</table>

- The ROG Hyper M.2 card is bundled as an accessory.
- Ensure to enable the ROG Hyper M.2 card under BIOS settings.
- When ROG Hyper M.2 card is installed on PCIEX16(G5)_1, Hyper M.2_1 slot can support PCIe 4.0 x4 mode. When ROG Hyper M.2 card is installed on PCIEX16(G5)_2, Hyper M.2_1 slot can support PCIe 5.0 x4 mode. When ROG Hyper M.2 card is installed on PCIEX16(G4), Hyper M.2_1 and Hyper M.2_2 slots can support PCIe 4.0 x4 mode.
- When ROG Hyper M.2 card is installed on PCIEX16(G5)_1 or PCIEX16(G5)_2, Hyper M.2_2 slot will be disabled. When ROG Hyper M.2 card is installed on PCIEX16(G4), Hyper M.2_1 and Hyper M.2_2 slots can support PCIe 4.0 x4 mode.
- We recommend installing the ROG Hyper M.2 card to the PCIEX16(G4) slot.
- Enable the PCIEX16(G4) to support x4/x4 mode for 2 SSDs under BIOS settings.
4. **Fan and Pump headers**

The Fan and Pump headers allow you to connect fans or pumps to cool the system. When an ASUS HYDRANODE fan is connected to a ASUS HYDRANODE fan connector, the ASUS HYDRANODE function will be available.

- **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.

**CHA_FAN1P, CHA_FAN2P, and CHA_FAN3P** can support ASUS HYDRANODE fans.

<table>
<thead>
<tr>
<th>Header</th>
<th>Max. Current</th>
<th>Max. Power</th>
<th>Default Speed</th>
<th>Shared Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU_FAN</td>
<td>1A</td>
<td>12W</td>
<td>Q-Fan Controlled</td>
<td>A</td>
</tr>
<tr>
<td>CPU_OPT</td>
<td>1A</td>
<td>12W</td>
<td>Q-Fan Controlled</td>
<td>A</td>
</tr>
<tr>
<td>CHA_FAN1P</td>
<td>1A</td>
<td>12W</td>
<td>Q-Fan Controlled</td>
<td>-</td>
</tr>
<tr>
<td>CHA_FAN2P</td>
<td>1A</td>
<td>12W</td>
<td>Q-Fan Controlled</td>
<td>-</td>
</tr>
<tr>
<td>CHA_FAN3P</td>
<td>1A</td>
<td>12W</td>
<td>Q-Fan Controlled</td>
<td>-</td>
</tr>
<tr>
<td>CHA_FAN4</td>
<td>1A</td>
<td>12W</td>
<td>Q-Fan Controlled</td>
<td>-</td>
</tr>
<tr>
<td>AIO_PUMP</td>
<td>1A</td>
<td>12W</td>
<td>Full Speed</td>
<td>-</td>
</tr>
<tr>
<td>W_PUMP+</td>
<td>3A</td>
<td>36W</td>
<td>Full Speed</td>
<td>-</td>
</tr>
</tbody>
</table>
5. **Liquid Cooling System headers**

The Liquid Cooling System headers allow you to connect sensors to monitor the temperature and flow rate of your liquid cooling system. You can manually adjust the fans and water pump to optimize the thermal efficiency of your liquid cooling system.
6. **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.

Ensure to connect the 8-pin power plug, or connect both 8-pin power plugs.

- 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.

The **PD_12V_PWR** connector provides additional power for your PCIe X16 slots. To support 60W, please install the power cable to the 6-pin PCIe Graphics Card connector (**PD_12V_PWR**) else only 27W will be supported.
7. **M.2 slot**

The M.2 slot allows you to install M.2 devices such as M.2 SSD modules.

- **Intel® 12th Gen Processors:**
  - M.2_1 supports PCIe 4.0 x4 mode M Key design and type 2242 / 2260 / 2280 / 22110 storage devices.

- **Intel® Z690 Chipset:**
  - M.2_2 supports PCIe 3.0 x4 mode M Key design and type 2242 / 2280 storage devices.
  - M.2_3 supports PCIe 4.0 x4 and SATA modes M Key design and type 2242 / 2260 / 2280 storage devices.
  - Intel® Rapid Storage Technology supports Intel® Optane Memory H Series on PCH attached M.2 slots.

- **Intel® Rapid Storage Technology** supports NVMe RAID 0/1/5, SATA RAID 0/1/5/10.

The M.2 SSD module is purchased separately.
8. **SATA 6Gb/s port**

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

- If you installed SATA storage devices to the SATA6G_1-4 ports, you can create a RAID 0, 1, 5, and 10 configuration with the Intel® Rapid Storage Technology through the onboard Intel® Z690 chipset.
- RAID configuration and boot drives are not supported on the SATA6G_E1-2 ports.

Before creating a RAID set, refer to the **RAID Configuration Guide**. You can download the **RAID Configuration Guide** from the ASUS website.
9. USB 3.2 Gen 2x2 Type-C® Front Panel connector

The USB 3.2 Gen 2x2 Type-C® connector allows you to connect a USB 3.2 Gen 2x2 Type-C® module for an additional USB 3.2 Gen 2x2 Type-C® port on the front panel. The USB 3.2 Gen 2x2 Type-C® connector provides data transfer speeds of up to 20 Gb/s.

The USB 3.2 Gen 2x2 Type-C® module is purchased separately.

10. 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.
11. **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 connection speed.

---

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

---

The USB 2.0 module is purchased separately.
12. **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.
13. **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.
14. **FlexKey button (Reset)**

Press the FlexKey button to reboot the system. You may also configure the button and assign a quick access feature such as activating Safe Boot or turning Aura lighting on or off to the button.

This button set to [Reset] by default. You can assign a different function to this button in the BIOS settings.
15. **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.

![Front Panel Audio Diagram]

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.

The HYDRANODE pins are reserved for ASUS HYDRANODE devices.
16. **ReTry button**

The ReTry button is specially designed for overclockers and is most useful during the booting process where the Reset button is rendered useless. Press this button to force the system to reboot while retaining the same settings to be retried in quick succession to achieve a successful POST.

17. **Start button**

Press the Start button to power up the system, or put the system into sleep or soft-off mode (depending on the operating system settings).

The button also lights up when the system is plugged to a power source, indicating that you should shut down the system and unplug the power cable before removing or installing any motherboard component.
18. **System Panel header**
The System Panel header supports several chassis-mounted functions.

- **System Power LED header (PLED)**
The 2-pin header allows you to connect the System Power LED. The System Power LED lights up when the system is connected to a power source, or when you turn on the system power, and blinks when the system is in sleep mode.

- **Storage Device Activity LED header (HDLED)**
The 2-pin header allows you to connect the Storage Device Activity LED. The Storage Device Activity LED lights up or blinks when data is read from or written to the storage device or storage device add-on card.

- **Power Button/Soft-off Button header (PWRBTN)**
The 3-1 pin header allows you to connect the system power button. Press the power button to power up the system, or put the system into sleep or soft-off mode (depending on the operating system settings).

- **Reset button header (RESET)**
The 2-pin header allows you to connect the chassis-mounted reset button. Press the reset button to reboot the system.
19. **Thermal Sensor header**

The Thermal Sensor header allows you to connect a sensor to monitor the temperature of the devices and the critical components inside the motherboard. Connect the thermal sensor and place it on the device or the motherboard's component to detect its temperature.

The thermal sensor is purchased separately.
20. **TPM header**

The TPM header allows you to connect a TPM module, which securely stores keys, digital certificates, passwords, and data. A TPM system also helps enhance network security, protect digital identities, and ensures platform integrity.

The TPM module is purchased separately.
21. **Q-Code LED**

The Q-Code LED design provides you with a 2-digit error code that displays the system status.

- The Q-Code 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.
- Please refer to the Q-Code table in the Appendix section for more details.
22. **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.

23. **Storage Device Activity LED**

The Storage Device Activity LED lights up or blinks when data is read from or written to the storage device or storage device add-on card.
24. **8-pin Power Plug LED**

The 8-pin Power Plug LED lights up to indicate that the 8-pin power plug is not connected.
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 LGA1700 socket only. DO NOT install a CPU designed for LGA1155, LGA1156, LGA1151, and LGA1200 sockets on the LGA1700 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.

Take caution when lifting the load lever, ensure to hold onto the load lever when releasing the load lever. Letting go of the load lever immediately after releasing it may cause the load lever to spring back and cause damage to your motherboard.
Ensure to remove the CPU Socket lever protector on the lever latch before locking the lever latch under the retention tab. Failure to do so may cause damages to your system when installing the cooling system.
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.
- Ensure to remove the CPU Socket lever protector on the lever latch before installing the cooling system, failure to do so may cause damages to your system.

To install a CPU heatsink and fan assembly

1. Apply Thermal Interface Material to the CPU cooling system and CPU.
2. Ensure to remove the CPU Socket lever protector on the lever latch before installing the cooling system.
3. Place the CPU heatsink and fan assembly onto the CPU socket.
4. Secure the CPU socket lever by pressing down on the lever latch.
• We recommend using a LGA1700 compatible cooling system on an Intel® 600 series motherboard.

• Additional holes for LGA1200 compatible cooling systems are also available on ASUS’ Intel® 600 series motherboards, however, we still strongly advise consulting with your cooling system vendor or manufacturer on the compatibility and functionality of the cooling system.

• Push-pin type LGA1200 compatible cooling systems cannot be installed to this motherboard.
To install an AIO cooler

- We recommend using a LGA1700 compatible cooling system when installing a cooling system to an Intel® 600 series motherboard.
- Additional holes for LGA1200 compatible cooling systems are also available on ASUS’ Intel® 600 series motherboards, however, we still strongly advise consulting with your cooling system vendor or manufacturer on the compatibility and functionality of the cooling system.
- If you wish to install an AIO cooler, we recommend installing the AIO cooler after installing the motherboard into the chassis.
2.1.3 DIMM installation

1

2

3

To remove a DIMM
2.1.4 M.2 installation

Supported M.2 type varies per motherboard.

- The illustrations only show the installation steps for a single M.2 slot, the steps are the same for the other M.2 slots if you wish to install an M.2 to another M.2 slot.
- Use a Phillips screwdriver when removing or installing the screws or screw stands mentioned in this section.
- If the thermal pad on the M.2 heatsink becomes damaged and needs to replaced, we recommend replacing it with a thermal pad with a thickness of 1.25mm.
- The M.2 is purchased separately.

1. Loosen the screws from the M.2 heatsinks.
2. Lift and remove the heatsinks.
3. Install your M.2 to your M.2 slot. The steps may differ between installing M.2 of different lengths, please refer to the different types and their installation steps below:

- **To install an M.2 to M.2_1 slot**

**For 22110 length**

A. Remove the pre-installed M.2 Q-latch at the 2280 length screw hole by rotating the handle counterclockwise then pushing it towards the M.2 slot and removing it from the latch hole.

B. Remove the plastic film from the thermal pad.

C. Rotate and adjust the M.2 Q-latch at the 22110 position so that the handle points away from the M.2 slot.

D. Install your M.2 to the M.2 slot.

E. Rotate the M.2 Q-Latch clockwise to secure the M.2 in place.
For 2280 length

A. Rotate and adjust the M.2 Q-latch at the 2280 position so that the handle points away from the M.2 slot.

B. Remove the plastic film from the thermal pad.

C. Install your M.2 to the M.2 slot.

D. Rotate the M.2 Q-Latch clockwise to secure the M.2 in place.
For 2242 and 2260 length

A. Remove the pre-installed M.2 Q-latch at the 2280 length screw hole by rotating the handle counterclockwise then pushing it towards the M.2 slot and removing it from the latch hole.

B. Remove the plastic film from the thermal pad.

C. Remove the plastic film and thermal pad of the M.2 length screw hole you wish to install your M.2 to, then install the M.2 Q-latch.

D. Rotate and adjust the M.2 Q-latch so that the handle points away from the M.2 slot.

E. Install your M.2 to the M.2 slot.

F. Rotate the M.2 Q-Latch clockwise to secure the M.2 in place.
• To install an M.2 to M.2_2 slot

For 2280 length

A. (optional) Install the bundled M.2 rubber pad if you are installing a 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.

B. Rotate and adjust the M.2 Q-latch so that the handle points away from the M.2 slot.

C. Install your M.2 to the M.2 slot.

D. Rotate the M.2 Q-Latch clockwise to secure the M.2 in place.
For 2242, 2260 length

A. (optional) Remove the M.2 rubber pad.

Follow this step only if you wish to install an M.2 to type 2242.

B. Install the M.2 Q-Latch to the M.2 length screw hole you wish to install your M.2 to.

C. Rotate and adjust the M.2 Q-latch so that the handle points away from the M.2 slot.

D. Install your M.2 to the M.2 slot.

E. Rotate the M.2 Q-Latch clockwise to secure the M.2 in place.
• To install an M.2 to M.2_3 slot

For 2280 length

A. Remove the plastic film from the thermal pad.

B. Rotate and adjust the M.2 Q-latch at the 2280 position so that the handle points away from the M.2 slot.

C. Install your M.2 to the M.2 slot.

D. Rotate the M.2 Q-Latch clockwise to secure the M.2 in place.
For 2242 and 2260 length

A. Remove the plastic film from the thermal pad.

B. Remove the plastic film and thermal pad of the M.2 length screw hole you wish to install your M.2 to, then install the M.2 Q-latch.

C. Rotate and adjust the M.2 Q-latch so that the handle points away from the M.2 slot.

D. Install your M.2 to the M.2 slot.

E. Rotate the M.2 Q-Latch clockwise to secure the M.2 in place.
4. Remove the plastic film from the thermal pads on the bottom of the heatsinks.

If the thermal pad on the M.2 heatsink becomes damaged and needs to replaced, we recommend replacing it with a thermal pad with a thickness of 1.25mm.

5. Replace the heatsinks.

6. Secure the heatsinks using the screws removed previously.
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.

This instruction is for reference only, please place the amount of screws according to your installation situation.

DO NOT over tighten the screws! Doing so can damage the motherboard.
2.1.6 ATX power connection

1. Ensure to connect the 8-pin power plug or both 8-pin power plugs.
The **PD_12V_PWR** connector provides additional power for your PCIe X16 slots. To support 60W, please install the power cable to the 6-pin PCIe Graphics Card connector (**PD_12V_PWR**) else only 27W will be supported.
2.1.7 SATA device connection

1

2
2.1.8 Front I/O connector

To install ASUS Q-Connector

This connector will only fit in one orientation. Push the connector until it clicks into place.

To install USB 3.2 Gen 2x2 Type-C® connector

To install USB 3.2 Gen 1 connector

USB 3.2 Gen 1

To install USB 2.0 connector

USB 2.0

To install front panel audio connector

AAFP
2.1.9 Expansion card installation

To install PCIe x16 cards
To install ROG HYPER M.2 Card

1. Remove the four (4) cover screws that secure the cover to the ROG HYPER M.2 card, then remove the cover and set it aside.

2. Peel the plastic films off the thermal pads by the M.2 slots.

3. Secure the stand screws onto the ROG HYPER M.2 card.
4. Install the M.2 storage devices into the onboard M.2 slots (A), then secure the M.2 storage devices with the bundled screws (B).

- When ROG Hyper M.2 card is installed on PCIEX16(G5)_1 or PCIEX16(G5)_2, Hyper M.2_2 slot will be disabled. When ROG Hyper M.2 card is installed on PCIEX16(G4), Hyper M.2_1 and Hyper M.2_2 slots can support PCIe 4.0 x4 mode.

- When ROG Hyper M.2 card is installed on PCIEX16(G5)_1, Hyper M.2_1 slot can support PCIe 4.0 x4 mode. When ROG Hyper M.2 card is installed on PCIEX16(G5)_2, Hyper M.2_1 slot can support PCIe 5.0 x4 mode. When ROG Hyper M.2 card is installed on PCIEX16(G4), Hyper M.2_1 and Hyper M.2_2 slots can support PCIe 4.0 x4 mode.

5. Peel the plastic films off the thermal pads (A), secure the cover to the ROG HYPER M.2 card with the cover screws that you removed earlier (B), then install the ROG HYPER M.2 card into a PCIe slot (C).
6. Enter the BIOS Setup during POST to configure your BIOS settings.

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.
Using the PCIe Slot Q-Release
The PCIEX16(G5)_1 slot comes with a PCIe Slot Q-Release button allowing you to easily remove an expansion card installed to this PCIe slot, even when the expansion card may be blocking the PCIe push-latch, such as a graphics card.

Before installing an expansion card:
Pressing the PCIe Slot Q-Release button before installing an expansion card to this slot will ensure the PCIe push-latch is completely pushed down before installation.

To release an expansion card using the PCIe Slot Q-Release:
Slightly lift the expansion card with one hand and press the PCIe Slot Q-Release button with the other hand. This should release the expansion card so that you can remove it with ease.

The illustration below is for reference only. The motherboard and PCIe Slot Q-Release button may differ between models, but the steps for using the PCIe Slot Q-Release remain the same.
2.1.10 Wi-Fi moving antenna installation

Installing the ASUS Wi-Fi moving antenna

Connect the bundled ASUS Wi-Fi moving antenna connector to the Wi-Fi ports at the back of the chassis.

- Ensure that the ASUS Wi-Fi moving antenna is securely installed to the Wi-Fi ports.
- Ensure that the antenna is at least 20 cm away from all persons.

The illustration above is for reference only. The I/O port layout may vary with models, but the Wi-Fi moving antenna installation procedure is the same for all models.
2.2 BIOS update utility

**BIOS FlashBack™**

BIOS FlashBack™ allows you to easily update the BIOS without entering the existing BIOS or operating system.

**To use BIOS FlashBack™:**

1. Insert a USB storage device to the BIOS FlashBack™ port.
   
   We recommend you to use a USB 2.0 storage device to save the latest BIOS version for better compatibility and stability.

2. Visit [https://www.asus.com/support/](https://www.asus.com/support/) and download the latest BIOS version for this motherboard.

3. Manually rename the file as `MZ690H.CAP`, or launch the `BIOSRenamer.exe` application to automatically rename the file, then copy it to your USB storage device.
   
   The `BIOSRenamer.exe` application is zipped together with your BIOS file when you download a BIOS file for a BIOS FlashBack™ compatible motherboard.

4. Shut down your computer.

5. Press the BIOS FlashBack™ button for three (3) seconds until the BIOS FlashBack™ LED blinks three times, indicating that the BIOS FlashBack™ function is enabled.

6. Wait until the light goes out, indicating that the BIOS updating process is completed.

   For more BIOS update utilities in BIOS setup, refer to the section **Updating BIOS** in Chapter 3.

   - Do not unplug portable disk, power system, or press the CLR_CMOS button while BIOS update is ongoing, otherwise update will be interrupted. In case of interruption, please follow the steps again.
   - If the light flashes for five seconds and turns into a solid light, this means that the BIOS FlashBack™ is not operating properly. This may be caused by improper installation of the USB storage device and filename/file format error. If this scenario happens, please restart the system to turn off the light.
   - Updating BIOS may have risks. If the BIOS program is damaged during the process and results to the system’s failure to boot up, please contact your local ASUS Service Center.
For more information on using the BIOS FlashBack™ feature, please refer to https://www.asus.com/support/, or by scanning the QR code below.
2.3 Motherboard rear and audio connections

2.3.1 Rear I/O connection

Rear panel connectors

1. Clear CMOS button (CLR_CMOS). Press this button to clear the BIOS setup information only when the systems hangs due to overclocking.
2. Intel® 2.5Gb Ethernet port*
3. USB 3.2 Gen 2 Type-A ports 1 and 2
4. USB 3.2 Gen 2 Type-A ports 4, 5, 6, and P7
5. BIOS FlashBack™ button
6. HDMI® port
7. Thunderbolt™ 4 USB Type-C® port E1
8. USB 2.0 port 11
9. Thunderbolt™ 4 USB Type-C® port E2
10. USB 2.0 port 6
11. USB 3.2 Gen 2 Type-C® port C3
12. Wi-Fi module
13. Optical S/PDIF OUT port
14. Gold-plated 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. For example connecting your USB 3.2 Gen 1 devices to USB 3.2 Gen 1 ports for faster and better performance for your devices.
** Intel® I225-V 2.5Gb Ethernet port LED indications**

<table>
<thead>
<tr>
<th>Activity Link LED</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>No link</td>
<td></td>
</tr>
<tr>
<td>Green</td>
<td>Linked</td>
<td></td>
</tr>
<tr>
<td>Blinking</td>
<td>Data activity</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Speed LED</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>No link</td>
<td></td>
</tr>
<tr>
<td>Off</td>
<td>100 Mbps / 10 Mbps connection</td>
<td></td>
</tr>
<tr>
<td>Green</td>
<td>2.5 Gbps connection</td>
<td></td>
</tr>
<tr>
<td>Orange</td>
<td>1 Gbps connection</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Port</th>
<th>Headset / 2-channel</th>
<th>4-channel</th>
<th>5.1-channel</th>
<th>7.1-channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Blue</td>
<td>Line In</td>
<td>Line In</td>
<td>Line In</td>
<td>Side Speaker Out</td>
</tr>
<tr>
<td>Lime</td>
<td>Line Out</td>
<td>Front Speaker Out</td>
<td>Front Speaker Out</td>
<td>Front Speaker Out</td>
</tr>
<tr>
<td>Pink</td>
<td>Mic In</td>
<td>Mic In</td>
<td>Mic In</td>
<td>Mic In</td>
</tr>
<tr>
<td>Orange</td>
<td>–</td>
<td>–</td>
<td>Center/Sub woofer</td>
<td>Center/Sub woofer</td>
</tr>
<tr>
<td>Black</td>
<td>–</td>
<td>Rear Speaker Out</td>
<td>Rear Speaker Out</td>
<td>Rear Speaker Out</td>
</tr>
</tbody>
</table>

2.3.2 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
2.4 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.

<table>
<thead>
<tr>
<th>BIOS Beep</th>
<th>Description</th>
</tr>
</thead>
</table>
| 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 |

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

2.5 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.
3
Chapter 3

BIOS and RAID Support

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 guide 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.

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 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 the Left arrow key 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 the Right arrow key 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.
3.4 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 a USB flash drive that contains the BIOS file.

Recovering the BIOS

1. Download the latest BIOS version for this motherboard from whttps://www.asus.com/support/.

2. Rename the BIOS file as ASUS.CAP or MZ690H.CAP and copy the renamed BIOS file to a USB flash drive.

3. Turn on the system.

4. Insert the USB flash drive containing the BIOS file to a USB port.

5. 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.

6. 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!
3.5 RAID configurations

The motherboard comes with the Intel® Rapid Storage Technology that supports NVMe RAID 0/1/5 and SATA RAID 0/1/5/10 configurations.

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

### Q-Code table

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>Not used</td>
</tr>
<tr>
<td>01</td>
<td>Power on. Reset type detection (soft/hard).</td>
</tr>
<tr>
<td>02</td>
<td>AP initialization before microcode loading</td>
</tr>
<tr>
<td>03</td>
<td>System Agent initialization before microcode loading</td>
</tr>
<tr>
<td>04</td>
<td>PCH initialization before microcode loading</td>
</tr>
<tr>
<td>06</td>
<td>Microcode loading</td>
</tr>
<tr>
<td>07</td>
<td>AP initialization after microcode loading</td>
</tr>
<tr>
<td>08</td>
<td>System Agent initialization after microcode loading</td>
</tr>
<tr>
<td>09</td>
<td>PCH initialization after microcode loading</td>
</tr>
<tr>
<td>0B</td>
<td>Cache initialization</td>
</tr>
<tr>
<td>0C – 0D</td>
<td>Reserved for future AMI SEC error codes</td>
</tr>
<tr>
<td>0E</td>
<td>Microcode not found</td>
</tr>
<tr>
<td>0F</td>
<td>Microcode not loaded</td>
</tr>
<tr>
<td>10</td>
<td>PEI Core is started</td>
</tr>
<tr>
<td>11 – 14</td>
<td>Pre-memory CPU initialization is started</td>
</tr>
<tr>
<td>15 – 18</td>
<td>Pre-memory System Agent initialization is started</td>
</tr>
<tr>
<td>19 – 1C</td>
<td>Pre-memory PCH initialization is started</td>
</tr>
<tr>
<td>2B – 2F</td>
<td>Memory initialization</td>
</tr>
<tr>
<td>30</td>
<td>Reserved for ASL (see ASL Status Codes section below)</td>
</tr>
<tr>
<td>31</td>
<td>Memory Installed</td>
</tr>
<tr>
<td>32 – 36</td>
<td>CPU post-memory initialization</td>
</tr>
<tr>
<td>37 – 3A</td>
<td>Post-Memory System Agent initialization is started</td>
</tr>
<tr>
<td>3B – 3E</td>
<td>Post-Memory PCH initialization is started</td>
</tr>
<tr>
<td>4F</td>
<td>DXE IPL is started</td>
</tr>
<tr>
<td>50 – 53</td>
<td>Memory initialization error. Invalid memory type or incompatible memory speed</td>
</tr>
<tr>
<td>54</td>
<td>Unspecified memory initialization error</td>
</tr>
<tr>
<td>55</td>
<td>Memory not installed</td>
</tr>
<tr>
<td>56</td>
<td>Invalid CPU type or Speed</td>
</tr>
<tr>
<td>57</td>
<td>CPU mismatch</td>
</tr>
<tr>
<td>58</td>
<td>CPU self test failed or possible CPU cache error</td>
</tr>
<tr>
<td>59</td>
<td>CPU micro-code is not found or micro-code update is failed</td>
</tr>
<tr>
<td>5A</td>
<td>Internal CPU error</td>
</tr>
<tr>
<td>5B</td>
<td>Reset PPI is not available</td>
</tr>
<tr>
<td>5C – 5F</td>
<td>Reserved for future AMI error codes</td>
</tr>
</tbody>
</table>

(continued on the next page)
## Q-Code table

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E0</td>
<td>S3 Resume is stared (S3 Resume PPI is called by the DXE IPL)</td>
</tr>
<tr>
<td>E1</td>
<td>S3 Boot Script execution</td>
</tr>
<tr>
<td>E2</td>
<td>Video repost</td>
</tr>
<tr>
<td>E3</td>
<td>OS S3 wake vector call</td>
</tr>
<tr>
<td>E4 – E7</td>
<td>Reserved for future AMI progress codes</td>
</tr>
<tr>
<td>E8</td>
<td>S3 Resume Failed</td>
</tr>
<tr>
<td>E9</td>
<td>S3 Resume PPI not Found</td>
</tr>
<tr>
<td>EA</td>
<td>S3 Resume Boot Script Error</td>
</tr>
<tr>
<td>EB</td>
<td>S3 OS Wake Error</td>
</tr>
<tr>
<td>EC – EF</td>
<td>Reserved for future AMI error codes</td>
</tr>
<tr>
<td>F0</td>
<td>Recovery condition triggered by firmware (Auto recovery)</td>
</tr>
<tr>
<td>F1</td>
<td>Recovery condition triggered by user (Forced recovery)</td>
</tr>
<tr>
<td>F2</td>
<td>Recovery process started</td>
</tr>
<tr>
<td>F3</td>
<td>Recovery firmware image is found</td>
</tr>
<tr>
<td>F4</td>
<td>Recovery firmware image is loaded</td>
</tr>
<tr>
<td>F5 – F7</td>
<td>Reserved for future AMI progress codes</td>
</tr>
<tr>
<td>F8</td>
<td>Recovery PPI is not available</td>
</tr>
<tr>
<td>F9</td>
<td>Recovery capsule is not found</td>
</tr>
<tr>
<td>FA</td>
<td>Invalid recovery capsule</td>
</tr>
<tr>
<td>FB – FF</td>
<td>Reserved for future AMI error codes</td>
</tr>
<tr>
<td>60</td>
<td>DXE Core is started</td>
</tr>
<tr>
<td>61</td>
<td>NVRAM initialization</td>
</tr>
<tr>
<td>62</td>
<td>Installation of the PCH Runtime Services</td>
</tr>
<tr>
<td>63 – 67</td>
<td>CPU DXE initialization is started</td>
</tr>
<tr>
<td>68</td>
<td>PCI host bridge initialization</td>
</tr>
<tr>
<td>69</td>
<td>System Agent DXE initialization is started</td>
</tr>
<tr>
<td>6A</td>
<td>System Agent DXE SMM initialization is started</td>
</tr>
<tr>
<td>6B – 6F</td>
<td>System Agent DXE initialization (System Agent module specific)</td>
</tr>
<tr>
<td>70</td>
<td>PCH DXE initialization is started</td>
</tr>
<tr>
<td>71</td>
<td>PCH DXE SMM initialization is started</td>
</tr>
<tr>
<td>72</td>
<td>PCH devices initialization</td>
</tr>
<tr>
<td>73 – 77</td>
<td>PCH DXE Initialization (PCH module specific)</td>
</tr>
<tr>
<td>78</td>
<td>ACPI module initialization</td>
</tr>
<tr>
<td>79</td>
<td>CSM initialization</td>
</tr>
<tr>
<td>7A – 7F</td>
<td>Reserved for future AMI DXE codes</td>
</tr>
</tbody>
</table>

(continued on the next page)
### Q-Code table

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>90</td>
<td>Boot Device Selection (BDS) phase is started</td>
</tr>
<tr>
<td>91</td>
<td>Driver connecting is started</td>
</tr>
<tr>
<td>92</td>
<td>PCI Bus initialization is started</td>
</tr>
<tr>
<td>93</td>
<td>PCI Bus Hot Plug Controller Initialization</td>
</tr>
<tr>
<td>94</td>
<td>PCI Bus Enumeration</td>
</tr>
<tr>
<td>95</td>
<td>PCI Bus Request Resources</td>
</tr>
<tr>
<td>96</td>
<td>PCI Bus Assign Resources</td>
</tr>
<tr>
<td>97</td>
<td>Console Output devices connect</td>
</tr>
<tr>
<td>98</td>
<td>Console input devices connect</td>
</tr>
<tr>
<td>99</td>
<td>Super IO Initialization</td>
</tr>
<tr>
<td>9A</td>
<td>USB initialization is started</td>
</tr>
<tr>
<td>9B</td>
<td>USB Reset</td>
</tr>
<tr>
<td>9C</td>
<td>USB Detect</td>
</tr>
<tr>
<td>9D</td>
<td>USB Enable</td>
</tr>
<tr>
<td>9E–9F</td>
<td>Reserved for future AMI codes</td>
</tr>
<tr>
<td>A0</td>
<td>IDE initialization is started</td>
</tr>
<tr>
<td>A1</td>
<td>IDE Reset</td>
</tr>
<tr>
<td>A2</td>
<td>IDE Detect</td>
</tr>
<tr>
<td>A3</td>
<td>IDE Enable</td>
</tr>
<tr>
<td>A4</td>
<td>SCSI initialization is started</td>
</tr>
<tr>
<td>A5</td>
<td>SCSI Reset</td>
</tr>
<tr>
<td>A6</td>
<td>SCSI Detect</td>
</tr>
<tr>
<td>A7</td>
<td>SCSI Enable</td>
</tr>
<tr>
<td>A8</td>
<td>Setup Verifying Password</td>
</tr>
<tr>
<td>A9</td>
<td>Start of Setup</td>
</tr>
<tr>
<td>AA</td>
<td>Reserved for ASL (see ASL Status Codes section below)</td>
</tr>
<tr>
<td>AB</td>
<td>Setup Input Wait</td>
</tr>
<tr>
<td>AC</td>
<td>Reserved for ASL (see ASL Status Codes section below)</td>
</tr>
<tr>
<td>AD</td>
<td>Ready To Boot event</td>
</tr>
<tr>
<td>AE</td>
<td>Legacy Boot event</td>
</tr>
<tr>
<td>AF</td>
<td>Exit Boot Services event</td>
</tr>
<tr>
<td>B0</td>
<td>Runtime Set Virtual Address MAP Begin</td>
</tr>
<tr>
<td>B1</td>
<td>Runtime Set Virtual Address MAP End</td>
</tr>
<tr>
<td>B2</td>
<td>Legacy Option ROM Initialization</td>
</tr>
<tr>
<td>B3</td>
<td>System Reset</td>
</tr>
</tbody>
</table>

(continued on the next page)
## Q-Code table

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>B4</td>
<td>USB hot plug</td>
</tr>
<tr>
<td>B5</td>
<td>PCI bus hot plug</td>
</tr>
<tr>
<td>B6</td>
<td>Clean-up of NVRAM</td>
</tr>
<tr>
<td>B7</td>
<td>Configuration Reset (reset of NVRAM settings)</td>
</tr>
<tr>
<td>B8–BF</td>
<td>Reserved for future AMI codes</td>
</tr>
<tr>
<td>D0</td>
<td>CPU initialization error</td>
</tr>
<tr>
<td>D1</td>
<td>System Agent initialization error</td>
</tr>
<tr>
<td>D2</td>
<td>PCH initialization error</td>
</tr>
<tr>
<td>D3</td>
<td>Some of the Architectural Protocols are not available</td>
</tr>
<tr>
<td>D4</td>
<td>PCI resource allocation error. Out of Resources</td>
</tr>
<tr>
<td>D5</td>
<td>No Space for Legacy Option ROM</td>
</tr>
<tr>
<td>D6</td>
<td>No Console Output Devices are found</td>
</tr>
<tr>
<td>D7</td>
<td>No Console Input Devices are found</td>
</tr>
<tr>
<td>D8</td>
<td>Invalid password</td>
</tr>
<tr>
<td>D9</td>
<td>Error loading Boot Option (LoadImage returned error)</td>
</tr>
<tr>
<td>DA</td>
<td>Boot Option is failed (StartImage returned error)</td>
</tr>
<tr>
<td>DB</td>
<td>Flash update is failed</td>
</tr>
<tr>
<td>DC</td>
<td>Reset protocol is not available</td>
</tr>
</tbody>
</table>

## ACPI/ASL Checkpoints (under OS)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>03</td>
<td>System is entering S3 sleep state</td>
</tr>
<tr>
<td>04</td>
<td>System is entering S4 sleep state</td>
</tr>
<tr>
<td>05</td>
<td>System is entering S5 sleep state</td>
</tr>
<tr>
<td>30</td>
<td>System is waking up from the S3 sleep state</td>
</tr>
<tr>
<td>40</td>
<td>System is waking up from the S4 sleep state</td>
</tr>
<tr>
<td>AC</td>
<td>System has transitioned into ACPI mode. Interrupt controller is in PIC mode.</td>
</tr>
<tr>
<td>AA</td>
<td>System has transitioned into ACPI mode. Interrupt controller is in APIC mode.</td>
</tr>
</tbody>
</table>

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.

RF exposure warning

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

HDMI Compliance Statement

The terms HDMI, HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.
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.

Operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

CAN ICES-003(B)/NMB-003(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.

La bande 5150–5250 MHz est réservée uniquement pour une utilisation à l’intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.

CAN ICES-003(B)/NMB-003(B)

VCCI: Japan Compliance Statement

Class B ITE

| この装置は、クラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。
| 取扱説明書に従って正しい取り扱いをして下さい。 |

VCCI - B

Japan JATE

本製品は電気通信事業者（移動通信会社、固定通信会社、インターネットプロバイダ等）の通信回線（公衆無線LANを含む）に直接接続することができません。本製品をインターネットに接続する場合は、必ずルーター等を経由し接続してください。

KC: Korea Warning Statement

B급 기기 (가정용 방송통신기자재)
이 기기는 가정용 (B급) 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.

*상해 무선설비는 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없습니다.
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See the License for the specific language governing permissions and limitations under the License.

**NCC: Taiwan Wireless Statement**

取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。低功率射頻器材之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前述合法通信，指依電信管理法規定作業之無線電通信。低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

應避免影響附近雷達系統之操作。

**Japan RF Equipment Statement**

屋外での使用について

本製品は、5GHz帯域での通信に対応しています。電波法の定めにより5.2GHz、5.3GHz帯域の電波は屋外で使用が禁じられています。

法律および規制遵守

本製品は電波法及びこれに基づく命令の定めるところに従い使用してください。日本国外では、その国の法律または規制により、本製品の使用ができないことがあります。このような国では、本製品を運用した結果、罰せられることがありますので、当社は一切責任を負いかねますのでご了承ください。

** Précautions d’emploi de l’appareil :**

a. **Soyez particulièrement vigilant quant à votre sécurité lors de l’utilisation de cet appareil dans certains lieux** (les avions, les aéroports, les hôtels, les stations-service et les garages professionnels).

b. **Évitez d’utiliser cet appareil à proximité de dispositifs médicaux implantés. Si vous portez un implant électronique (stimulateurs cardiaques, pompes à insuline, neurostimulateurs...), veuillez impérativement respecter une distance minimale de 15 centimètres entre cet appareil et l’implant pour réduire les risques d’interférence.**

c. **Utilisez cet appareil dans de bonnes conditions de réception pour minimiser le niveau de rayonnement. Ce n’est pas toujours le cas dans certaines zones ou situations, notamment dans les parkings souterrains, dans les ascenseurs, en train ou en voiture ou tout simplement dans un secteur mal couvert par le réseau.**

d. **Tenez cet appareil à distance du ventre des femmes enceintes et du bas-ventre des adolescents.**
Declaration of compliance for product environmental regulation

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 diphenyls (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.

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.
Simplified UKCA Declaration of Conformity

ASUSTek Computer Inc. hereby declares that this device is in compliance with the essential requirements and other relevant provisions of The Radio Equipment Regulations 2017 (S.I. 2017/1206). Full text of UKCA declaration of conformity is available at https://www.asus.com/support/.

The WiFi operating in the band 5150-5350MHz shall be restricted to indoor use for the country listed below:

UK

UKCA RF Output table (The Radio Equipment Regulations 2017)
Intel® Wi-Fi 6E AX210 (Model: AX210NGW):

<table>
<thead>
<tr>
<th>Function</th>
<th>Frequency</th>
<th>Maximum Output Power (EIRP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WiFi</td>
<td>2412 - 2472 MHz</td>
<td>19.31 dBm</td>
</tr>
<tr>
<td></td>
<td>5150 - 5350 MHz</td>
<td>19.11 dBm</td>
</tr>
<tr>
<td></td>
<td>5470 - 5725 MHz</td>
<td>18.34 dBm</td>
</tr>
<tr>
<td></td>
<td>5725 - 5850 MHz</td>
<td>10.05 dBm</td>
</tr>
<tr>
<td>Bluetooth</td>
<td>2402 - 2480 MHz</td>
<td>12.58 dBm</td>
</tr>
</tbody>
</table>

For the standard EN 300 440, if this device operates in 5725-5875 MHz, it will be considered as a receiver category 2.

UKCA RF Output table (The Radio Equipment Regulations 2017)
Intel® Wi-Fi 6E AX211 (Model: AX211NGW):

<table>
<thead>
<tr>
<th>Function</th>
<th>Frequency</th>
<th>Maximum Output Power (EIRP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WiFi</td>
<td>2412 - 2472 MHz</td>
<td>19.06 dBm</td>
</tr>
<tr>
<td></td>
<td>5150 - 5350 MHz</td>
<td>19.19 dBm</td>
</tr>
<tr>
<td></td>
<td>5470 - 5725 MHz</td>
<td>18.54 dBm</td>
</tr>
<tr>
<td></td>
<td>5725 - 5850 MHz</td>
<td>10.02 dBm</td>
</tr>
<tr>
<td>Bluetooth</td>
<td>2402 - 2480 MHz</td>
<td>12.15 dBm</td>
</tr>
</tbody>
</table>

For the standard EN 300 440, if this device operates in 5725-5875 MHz, it will be considered as a receiver category 2.

* The actual Wi-Fi module that comes with this motherboard may vary, please refer to the label on the product for more details.
Simplified EU Declaration of Conformity

ASUSTeK Computer Inc. hereby declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2014/35/EU. Full text of EU declaration of conformity is available at https://www.asus.com/support/.

The WiFi operating in the band 5150-5350MHz shall be restricted to indoor use for countries listed in the table below:

Declaración simplificada de conformidad de la UE

ASUSTeK Computer Inc. declara por la presente que este aparato cumple con las exigencias esenciales y otras disposiciones pertinentes de la directiva 2014/35/UE. El texto completo de la declaración de conformidad UE está disponible en: https://www.asus.com/support/.

El WiFi que opera en la banda 5150-5350 MHz sólo está permitido para uso interior para los países listados en la tabla siguiente:

Vereinbarte CE-Konformitätserklärung


Der WLAN-Betrieb im Band 5150-5350 MHz ist für die in der unteren Tabelle aufgeführten Länder auf Innenräume eingeschränkt.

Dichiarazione di conformità UE semplificata

ASUSTeK Computer Inc. con la presente dichiara che questo dispositivo è conforme ai requisiti essenziali e alle altre disposizioni pertinenti con la direttiva 2014/35/UE. Il testo completo della dichiarazione di conformità UE è disponibile all'indirizzo: https://www.asus.com/support/.

L'utilizzo della rete Wi-Fi a frequenze comprese nell'intervallo 5150-5350 MHz deve essere limitato all'interno degli edifici per i paesi presenti nella seguente tabella:

Упрощённое заявление о соответствии европейской директивы

ASUSTeK Computer Inc. заявляет, что устройство соответствует основным требованиям и другим соответствующим условиям директивы 2014/35/UE. Полнотекстовое заявление о соответствии EU доступно на: https://www.asus.com/support/.

Работа WiFi в диапазоне частот 5150-5350 MHz может быть ограничена для стран, перечисленных в таблице ниже:

Zjednodušená EU Izjava o shodě

ASUSTeK Computer Inc. tímto prohlašuje, že toto zařízení splňuje základní požadavky a další příslušné ustanovení směrnice 2014/35/EU. Plné znění prohlášení o shodě EU je k dispozici na adrese: https://www.asus.com/support/.

Úpravou týkající se národních limitací pro vnitřní použití WiFi je dostupné na: https://www.asus.com/support/.

Zjednodušená EU-deklarace o shodě

ASUSTeK COMPUTER INC. déclare par la présente que cet appareil est conforme aux exigences essentielles et autres dispositions pertinentes de la directive 2014/35/UE. Le texte complet de la déclaration de conformité UE est disponible sur: https://www.asus.com/support/.

L'utilisation de la bande WiFi 5150-5350 MHz doit être limitée aux utilisations intérieures pour les pays listés dans le tableau ci-dessous:

Vereinfachte EU-Konformitätserklärung

ASUSTeK COMPUTER INC erklärt, dass dieses Gerät mit den grundlegenden Anforderungen und anderen relevanten Bestimmungen der Richtlinie 2014/35/UE übereinstimmt. Der gesamte Test der EU-Konformitätserklärung ist verfügbar unter: https://www.asus.com/support/.

Der WLAN-Betrieb im Band 5150-5350 MHz ist für die in der unteren Tabelle aufgeführten Länder auf Innenräume eingeschränkt.

Simplified EU Declaration of Conformity

ASUSTeK Computer Inc. hereby declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2014/35/EU. Full text of EU declaration of conformity is available at https://www.asus.com/support/.

The WiFi operating in the band 5150-5350MHz shall be restricted to indoor use for countries listed in the table below:

Declaración simplificada de conformidad de la UE

ASUSTeK Computer Inc. declara por la presente que este aparato cumple con las exigencias esenciales y otras disposiciones pertinentes de la directiva 2014/35/UE. El texto completo de la declaración de conformidad UE está disponible en: https://www.asus.com/support/.

El WiFi que opera en la banda 5150-5350 MHz sólo está permitido para uso interior para los países listados en la tabla siguiente:

Vereinbarte CE-Konformitätserklärung


Der WLAN-Betrieb im Band 5150-5350 MHz ist für die in der unteren Tabelle aufgeführten Länder auf Innenräume eingeschränkt.

Dichiarazione di conformità UE semplificata

ASUSTeK Computer Inc. con la presente dichiara che questo dispositivo è conforme ai requisiti essenziali e alle altre disposizioni pertinenti con la direttiva 2014/35/UE. Il testo completo della dichiarazione di conformità UE è disponibile all'indirizzo: https://www.asus.com/support/.

L'utilizzo della rete Wi-Fi a frequenze comprese nell'intervallo 5150-5350 MHz deve essere limitato all'interno degli edifici per i paesi presenti nella seguente tabella:

Упрощённое заявление о соответствии европейской директивы

ASUSTeK Computer Inc. заявляет, что устройство соответствует основным требованиям и другим соответствующим условиям директивы 2014/35/UE. Полнотекстовое заявление о соответствии EU доступно на: https://www.asus.com/support/.

Работа WiFi в диапазоне частот 5150-5350 MHz может быть ограничена для стран, перечисленных в таблице ниже:

Zjednodušená EU Izjava o shodě

ASUSTeK Computer Inc. tímto prohlašuje, že toto zařízení splňuje základní požadavky a další příslušné ustanovení směrnice 2014/35/EU. Plné znění prohlášení o shodě EU je k dispozici na adrese: https://www.asus.com/support/.

Úpravou týkající se národních limitací pro vnitřní použití WiFi je dostupné na: https://www.asus.com/support/.

Zjednodušená EU-deklarace o shodě

ASUSTeK COMPUTER INC. déclare par la présente que cet appareil est conforme aux exigences essentielles et autres dispositions pertinentes de la directive 2014/35/UE. Le texte complet de la déclaration de conformité UE est disponible sur: https://www.asus.com/support/.

L'utilisation de la bande WiFi 5150-5350 MHz doit être limitée aux utilisations intérieures pour les pays listés dans le tableau ci-dessous:

Vereinfachte EU-Konformitätserklärung

ASUSTeK COMPUTER INC erklärt hiermit, dass dieses Gerät mit den grundlegenden Anforderungen und anderen relevanten Bestimmungen der Richtlinie 2014/35/UE übereinstimmt. Der gesamte Test der EU-Konformitätserklärung ist verfügbar unter: https://www.asus.com/support/.

Der WLAN-Betrieb im Band 5150-5350 MHz ist für die in der unteren Tabelle aufgeführten Länder auf Innenräume eingeschränkt.

Simplified EU Declaration of Conformity

ASUSTeK Computer Inc. hereby declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2014/35/EU. Full text of EU declaration of conformity is available at https://www.asus.com/support/.

The WiFi operating in the band 5150-5350MHz shall be restricted to indoor use for countries listed in the table below:

Declaración simplificada de conformidad de la UE

ASUSTeK Computer Inc. declara por la presente que este aparato cumple con las exigencias esenciales y otras disposiciones pertinentes de la directiva 2014/35/UE. El texto completo de la declaración de conformidad UE está disponible en: https://www.asus.com/support/.

El WiFi que opera en la banda 5150-5350 MHz sólo está permitido para uso interior para los países listados en la tabla siguiente:

Vereinbarte CE-Konformitätserklärung


Der WLAN-Betrieb im Band 5150-5350 MHz ist für die in der unteren Tabelle aufgeführten Länder auf Innenräume eingeschränkt.
Declaración de Conformidad Simplificada da UE

Por la presente, ASUSTek Computer Inc. declara que este dispositivo cumple con los requisitos básicos y otras disposiciones relevantes de la Directiva 2014/53/UE. Pléne text Declarație de conformitate pentru EA este disponibil la adresa https://www.asus.com/support/

Pentru cele patru țări listate în tabelul de mai jos, rețelele WiFi care funcționează în banda de frecvență 5.150-5.350 MHz trebuie utilizate doar în interior.

Declaración de conformidad simplificada para la UE

Por la presente, ASUSTek Computer Inc. declara que este dispositivo cumple con los requisitos básicos y otras disposiciones pertinentes de la directiva 2014/53/UE. El texto completo de la declaración de conformidad UE está disponible en https://www.asus.com/support/

Firma ASUSTek Computer Inc. niniejszym oświadcza, że urządzenie to jest zgodne z zasadniczymi wymogami oraz innymi właściwymi postanowieniami dyrektywy 2014/53/EU. Pełny tekst deklaracji zgodności UE jest dostępny pod adresem https://www.asus.com/support/

For the standard EN 300 440, if this device operates in 5725-5875 MHz, it will be considered as a receiver category 2.
Appendix

EN: ASUS Guarantee Information
- ASUS offers a voluntary manufacturer’s Commercial Guarantee.
- ASUS reserves the right to interpret the provisions of the ASUS Commercial Guarantee.
- This ASUS Commercial Guarantee is provided independently and in addition to the statutory Legal Guarantee and in no way affects or limits the rights under the Legal Guarantee.
For all the guarantee information, please visit https://www.asus.com/support.

F: Garantie ASUS
- ASUS fournit une garantie commerciale en tant que garantie volontaire du fabricant.
- ASUS se réserve le droit d’interpréter et de clarifier les informations relatives à la garantie commerciale ASUS.
- Cette garantie commerciale ASUS est fournie indépendamment et parallèlement à la garantie légale, elle n’affecte ou ne limite d’aucune façon les droits acquis par la garantie légale.
Pour plus d’informations sur la garantie, consultez le site https://www.asus.com/fr/support.

G: ASUS Garantieinformationen
- ASUS bietet eine freiwillige Warengarantie des Herstellers an.
- ASUS behält sich das Recht zur Auslegung der Bestimmungen in der ASUS Warengarantie vor.
- Diese ASUS Warengarantie wird unabhängig und zusätzlich zur rechtskräftigen gesetzlichen Garantie gewährt und beeinträchtigt oder beschränkt in keiner Weise die Rechte aus der gesetzlichen Garantie.
Die vollständigen Garantieinformationen finden Sie unter https://www.asus.com/de/support.

R: Informationen über die Garantie von ASUS
- ASUS bietet eine Garantie, die unabhängig und außerhalb der gesetzlichen Garantie ist.
- Der Rechtsausschuss von ASUS garantiert, dass keine rechtliche Bedeutung verleimt.
- Für alle Informationen zur Garantie, besuchen Sie die Website https://www.asus.com/ru/support.

BG: Информация за гаранция на ASUS
- ASUS предоставя доброволна гаранция от производителя.
- ASUS оставя правото да интерпретира положенията на гаранцията ASUS.
- Тъй като гаранцията ASUS е независима, няма възможност за ограничаване на възможностите по закон.
За подробни информация относно гаранцията, моля, посетете https://www.asus.com/bg/support.

CZ: Informace o záruce společnosti ASUS
- Společnost ASUS nabízí dobrovolnou komerční záruku výrobce.
- Společnost ASUS si vyhrazuje právo vykládat ustanovení komerční záruky společnosti ASUS.
- Tato komerční záruka společnosti ASUS je poskytována nezávisle a jako doplněk zákonné záruky a zádným způsobem neovlivňuje ani neomezuje práva vyplývající ze zákonné záruky. Více informací o záruce najdete na adrese https://www.asus.com/cz/support.

CR: Informacje o ASUS jamstvu
- ASUS drauzovno nudi komercialno proizvodni jamstvo.
- ASUS zadržava prava na tumačenje odredbe ASUS komercialnega jamstva.
- Ovo ASUS komercialno jamstvo daje se neovisno in kadar dodatni zakonsko jamstvo ni na način ne ograničuje prava iz okvira zakonskega jamstva.
Sve informacije o jamstvu potražite na https://www.asus.com/hr/support.

DU: ASUS-garantie-informatie
- ASUS biedt een vrijwillige commerciële garantie van de fabrikant.
- ASUS behoudt zich het recht voor om de bepalingen van de commerciële garantie van ASUS uit te leggen.
- Deze commerciële garantie van ASUS wordt onafhankelijk en als aanvulling op de statutaire Wettelijke garantie geboden en beïnvloed of beperkt in geen geval de rechten onder de wettelijke garantie.
Voor alle informatie over de garantie, gaat u naar https://www.asus.com/nl/support.

EE: Teave ASUS-i garantii kohta
- ASUS pakub valitultatud tootjagarantii.
- ASUS jätab endale õiguse tõlgendada ASUS-i tasuliste garantii tingimusi.
- See ASUS tasuline garantii on sõltumatu lisagarantii seadusega kehtestatud garantii ega mõjutab mingil määral seadusega kehtestatud garantii piiranguid.

HUG: ASUS garanciális információk
- AZ ASUS önkéntes gyárható garancia kínál.
- AZ ASUS fenntartja magának a jogot, hogy értesítsze az ASUS kereskedelmi garanciáira vonatkozó rendelkezéseket.
- Ezt a kereskedelmi garanciát az ASUS függetlenül és a törvényes garancia mellett nyújtja és semmilyen módon nem befolyásolja, vagy korlátozza a joga garancia nyújtottak joga.
A garanciára vonatkozó teljes körű információkért látogasson el a https://www.asus.com/hu/support oldalra.

IT: Informazioni apie ASUS garantiją
- ASUS siéra savaimoni komercine garanciją, kurioje
- ASUS pasiūla teigiamą išorų nuolatų asmeninių komercinių garancijų
- Tai garantija ASU nepriklauso nuo teisės aktų
- Dėl to gali išlaikyti ir tola išlaikyti teisės
- Tūkstančiai informacijos apie garantiją, siejus http://www.asus.com/it/support.

LT: Informacija apie ASUS garantiją
- ASUS siūlo savaimoni komercine garanciją, kurioje
- ASUS pasiūla teigiamą išorų nuolatų asmeninių komercinių garancijų
- Tai garantija ASU nepriklauso nuo teisės aktų
- Dėl to gali išlaikyti ir tola išlaikyti teisės
- Tūkstančiai informacijos apie garantiją, siejus http://www.asus.com/lt/support.

LV: Informācija par garantiju ASUS
- ASUS sniedz savaimoni komerciālu garantiju, kur vieta
- ASUS sniedz savaimoni komerciālu garantiju, kur vieta
- Tai garantija ASU nepriklauso nuo teisės aktų
- Dėl to gali išlaikyti ir tola išlaikyti teisės
- Tūkstančiai informacijos apie garantiją, siejus http://www.asus.com/lv/support.

PL: Informacje o gwarancji firmy ASUS
- Firma ASUS oferuje dobrowolną gwarancję handlową producenta.
- Firma ASUS zaszczytuje sobie prawo do interpretacji warunków gwarancji handlowej firmy ASUS.
- Niniejsza gwarancja handlowa firmy ASUS jest udzielana niezależnie, jako dodatek do wymaganej ustawowo gwarancji prawnej w w żaden sposób nie wpływa na prawa przysługujące na mocy gwarancji prawnej ani ich nie ogranicza.
Wszelkie informacje na temat gwarancji można znaleźć na stronie https://www.asus.com/pl/support.

HU: ASUS garanciális információk
- AZ ASUS önkéntes gyárható garancia kínál.
- AZ ASUS fenntartja magának a jogot, hogy értesítsze az ASUS kereskedelmi garanciáira vonatkozó rendelkezéseket.
- Ezt a kereskedelmi garanciát az ASUS függetlenül és a törvényes garancia mellett nyújtja és semmilyen módon nem befolyásolja, vagy korlátozza a joga garancia nyújtottak joga.
A garanciára vonatkozó teljes körű információkért látogasson el a https://www.asus.com/hu/support oldalra.

UK: ASUS гарантійна інформація
- ASUS надає добровільну комерційну гарантію від виробника.
- ASUS залишає собі право інтерпретувати положення комерційної гарантії ASUS.
- Ця комерційна гарантія ASUS надається незалежно і в додаток до законної гарантії. За цим визначається вплив вказів відповідно до законної гарантії, та немає обмежень або впливу на законну гарантію.
Оскільки ця торгова гарантія ASUS, не обмежує чи не впливає на правові наслідки гарантії.
https://www.asus.com/uk.

CR: Informações sobre garantia de uso de ASUS
- ASUS fornece uma garantia voluntária ao fabricante.
- ASUS reserva-se o direito de interpretar as cláusulas de garantia do ASUS.
- Esta garantia voluntária do ASUS é fornecida independentemente e juntamente à garantia legal, ela não afeta ou limita de alguma forma os direitos adquiridos pela garantia legal.
Para obter mais informações sobre a garantia, consulte o site https://www.asus.com/cz/support.
• ASUS offers a commercial warranty voluntarily. 
• ASUS has the reserved right to interpret the terms of the commercial warranty. 
• ASUS reserves the right to interpret the terms of the commercial warranty. 
• ASUS retains the right to interpret the terms of the commercial warranty.

For more information on ASUS’s warranty, visit: https://www.asus.com/ro/support/.
ASUS contact information

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Service and Support