ROG STRIX
X670E-A
GAMING
WIFI
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Contents

Safety information........................................................................................................ v
About this guide........................................................................................................... vi
ROG STRIX X670E-A GAMING WIFI specifications summary............................... vii
Package contents...................................................................................................... xii
Installation tools and components............................................................................ xiii

Chapter 1: Product Introduction
1.1 Before you proceed ........................................................................................... 1-1
1.2 Motherboard layout .......................................................................................... 1-2

Chapter 2: Basic Installation
2.1 Building your PC system .................................................................................... 2-1
  2.1.1 CPU installation ......................................................................................... 2-1
  2.1.2 Cooling system installation ....................................................................... 2-3
  2.1.3 DIMM installation ..................................................................................... 2-6
  2.1.4 M.2 installation .......................................................................................... 2-7
  2.1.5 Motherboard installation .......................................................................... 2-15
  2.1.6 ATX power connection ............................................................................. 2-16
  2.1.7 SATA device connection .......................................................................... 2-17
  2.1.8 Front I/O connector .................................................................................. 2-18
  2.1.9 Expansion card installation ....................................................................... 2-19
  2.1.10 Wi-Fi moving antenna installation ............................................................ 2-22
  2.2 BIOS update utility ........................................................................................ 2-23
  2.3 Clear CMOS button ....................................................................................... 2-25
  2.4 Motherboard rear and audio connections ..................................................... 2-26
    2.4.1 Rear I/O connection ............................................................................... 2-26
    2.4.2 Audio I/O connections ......................................................................... 2-27
  2.5 Starting up for the first time .......................................................................... 2-30
  2.6 Turning off the computer .............................................................................. 2-30

Chapter 3: BIOS and RAID Support
3.1 Knowing BIOS ................................................................................................ 3-1
3.2 BIOS setup program ....................................................................................... 3-2
3.3 ASUS EZ Flash 3 ............................................................................................. 3-3
3.4 ASUS CrashFree BIOS 3 ................................................................................ 3-4
3.5 RAID configurations ....................................................................................... 3-5
Appendix
Notices ............................................................................................................................. A-1
Warranty ......................................................................................................................... A-11
ASUS contact information ............................................................................................. A-13
Service and Support ...................................................................................................... A-13
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.

Button/Coin Batteries Safety Information

WARNING
KEEP OUT OF REACH OF CHILDREN
Swallowing can lead to chemical burns, perforation of soft tissue, and death. Severe burns can occur within 2 hours of ingestion. Seek medical attention immediately.
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 user guide.

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

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

- **NOTE:** Tips and additional information to help you complete a task.
# ROG STRIX X670E-A GAMING WIFI

## specifications summary

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CPU</strong></td>
<td>AMD Socket AM5 for AMD Ryzen™ 7000 Series Desktop Processors*&lt;br&gt;Ref: <a href="http://www.asus.com">www.asus.com</a> for CPU support list.</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>AMD X670</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>4 x DIMM, Max. 128GB, DDR5 6400+(OC) / 6200(OC) / 6000(OC) / 5800(OC) / 5600 / 5400 / 5200 / 5000 / 4800 ECC and Non-ECC, Un-buffered Memory*&lt;br&gt;Dual Channel Memory Architecture&lt;br&gt;Supports AMD EXTended Profiles for Overclocking (EXPO™)&lt;br&gt;OptiMem II&lt;br&gt;* Supported memory types, data rate(Speed), and number of DRAM module vary depending on the CPU and memory configuration, for more information refer to <a href="http://www.asus.com">www.asus.com</a> for memory support list.&lt;br&gt;* Non-ECC, un-buffered memory supports On-Die ECC function.</td>
</tr>
<tr>
<td><strong>Graphics</strong></td>
<td>1 x DisplayPort*&lt;br&gt;1 x HDMI® port**&lt;br&gt;* Supports max. 8K@60Hz as specified in DisplayPort 1.4.&lt;br&gt;** Supports 4K@60Hz as specified in HDMI 2.1.</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>AMD Ryzen™ 7000 Series Desktop Processors*&lt;br&gt;1 x PCIe 5.0 x16 slot (supports x16 mode)&lt;br&gt;AMD X670 Chipset&lt;br&gt;1 x PCIe 4.0 x16 slot (supports x4 mode)&lt;br&gt;1 x PCIe 3.0 x1 slot&lt;br&gt;* Please check PCIe bifurcation table in support site (<a href="https://www.asus.com/support/FAQ/1037507/">https://www.asus.com/support/FAQ/1037507/</a>).</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>Total supports 4 x M.2 slots and 4 x SATA 6Gb/s ports*&lt;br&gt;AMD Ryzen™ 7000 Series Desktop Processors&lt;br&gt;M.2_1 slot (Key M), type 2242/2260/2280 (supports PCIe 5.0 x4 mode)&lt;br&gt;M.2_2 slot (Key M), type 2242/2260/2280 (supports PCIe 5.0 x4 mode)&lt;br&gt;AMD X670 Chipset&lt;br&gt;M.2_3 slot (Key M), type 2242/2260/2280/22110 (supports PCIe 4.0 x4 mode)&lt;br&gt;M.2_4 slot (Key M), type 2242/2260/2280 (supports PCIe 4.0 x4 mode)&lt;br&gt;4 x SATA 6Gb/s ports&lt;br&gt;* AMD RAIDXpert2 Technology supports both NVMe RAID 0/1/10 and SATA RAID 0/1/10.</td>
</tr>
<tr>
<td><strong>Ethernet</strong></td>
<td>1 x Intel® 2.5Gb Ethernet&lt;br&gt;ASUS LANGEuard</td>
</tr>
<tr>
<td><strong>Wireless &amp; Bluetooth</strong></td>
<td>Wi-Fi 6E&lt;br&gt;2x2 Wi-Fi 6E (802.11 a/b/g/n/ac/ax)&lt;br&gt;Supports 2.4/5/6GHz frequency band*&lt;br&gt;Bluetooth v5.2&lt;br&gt;* WiFi 6E 6GHz regulatory may vary between countries.</td>
</tr>
</tbody>
</table>

(continued on the next page)
### ROG STRIX X670E-A GAMING WIFI

**specifications summary**

<table>
<thead>
<tr>
<th>USB</th>
<th>Rear USB (Total 12 ports)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 x USB 3.2 Gen 2x2 port (1 x USB Type-C®)</td>
</tr>
<tr>
<td></td>
<td>8 x USB 3.2 Gen 2 ports (7 x Type-A + 1 x USB Type-C®)</td>
</tr>
<tr>
<td></td>
<td>1 x USB 3.2 Gen 1 port (1 x Type-A)</td>
</tr>
<tr>
<td></td>
<td>2 x USB 2.0 ports</td>
</tr>
</tbody>
</table>

| Front USB (Total 7 ports) |
| 1 x USB 3.2 Gen 2x2 connector (supports USB Type-C®) |
| 1 x USB 3.2 Gen 1 header supports additional 2 USB 3.2 Gen 1 ports |
| 2 x USB 2.0 headers support additional 4 USB 2.0 ports |

<table>
<thead>
<tr>
<th>Audio</th>
<th>ROG SupremeFX 7.1 Surround Sound High Definition Audio CODEC ALC4080</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Impedance sense for front and rear headphone outputs</td>
</tr>
<tr>
<td></td>
<td>- Supports: Jack-detection, Multi-streaming, Front Panel Jack-retasking</td>
</tr>
<tr>
<td></td>
<td>- High quality 120 dB SNR stereo playback output and 113 dB SNR recording input</td>
</tr>
<tr>
<td></td>
<td>- Supports up to 32-Bit/384 kHz playback</td>
</tr>
</tbody>
</table>

**Audio Features:**
- Audio Shielding
- Savitech SV3H712 AMP
- Rear optical S/PDIF out port
- Premium audio capacitors
- Audio cover

<table>
<thead>
<tr>
<th>Back Panel I/O Ports</th>
<th>1 x USB 3.2 Gen 2x2 port (1 x Type-C®)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8 x USB 3.2 Gen 2 ports (7 x Type-A, 2 x USB Type-C®)</td>
</tr>
<tr>
<td></td>
<td>1 x USB 3.2 Gen 1 port (1 x Type-A)</td>
</tr>
<tr>
<td></td>
<td>2 x USB 2.0 ports</td>
</tr>
<tr>
<td></td>
<td>1 x DisplayPort</td>
</tr>
<tr>
<td></td>
<td>1 x HDMI® port</td>
</tr>
<tr>
<td></td>
<td>1 x Wi-Fi Module</td>
</tr>
<tr>
<td></td>
<td>1 x Intel® 2.5Gb Ethernet port</td>
</tr>
<tr>
<td></td>
<td>5 x Audio jacks</td>
</tr>
<tr>
<td></td>
<td>1 x Optical S/PDIF out port</td>
</tr>
<tr>
<td></td>
<td>1 x BIOS FlashBack™ button</td>
</tr>
<tr>
<td></td>
<td>1 x Clear CMOS button</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Internal I/O Connectors</th>
<th>Fan and Cooling related</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 x 4-pin CPU Fan header</td>
</tr>
<tr>
<td></td>
<td>1 x 4-pin CPU OPT Fan header</td>
</tr>
<tr>
<td></td>
<td>1 x 4-pin AIO Pump header</td>
</tr>
<tr>
<td></td>
<td>5 x 4-pin Chassis Fan headers</td>
</tr>
</tbody>
</table>

**Power related**
- 1 x 24-pin Main Power connector
- 2 x 8-pin +12V Power connector

*(continued on the next page)*
# Specifications Summary

## Internal I/O Connectors

### Storage Related
- 4 x M.2 slots (Key M)
- 4 x SATA 6Gb/s ports

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

### Miscellaneous
- 3 x Addressable Gen 2 headers
- 1 x Aura RGB header
- 1 x CPU Over Voltage jumper
- 1 x Front Panel Audio header (AAFP)
- 1 x 20-3 pin System Panel header with Chassis intrude function
- 1 x Thermal Sensor header
- 1 x Thunderbolt™ header

## Special Features

### Extreme Engine Digi+
- 5K Black Metallic Capacitors

### ASUS Q-Design
- M.2 Q-Latch
- PCIe Slot Q-Release
- Q-DIMM
- Q-LED (CPU [red], DRAM [yellow], VGA [white], Boot Device [yellow green])
- Q-Slot

### ASUS Thermal Solution
- M.2 heatsinks
- M.2 heatsink backplate
- VRM heatsink design

### ASUS EZ DIY
- BIOS FlashBack™ button
- BIOS FlashBack™ LED
- Clear CMOS button
- ProCool II
- Pre-mounted I/O shield
- SafeSlot
- SafeDIMM

### Aura Sync
- Aura RGB header
- Addressable Gen 2 headers

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# ROG STRIX X670E-A GAMING WIFI

## Specifications Summary

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Software</strong></td>
<td></td>
</tr>
</tbody>
</table>
| **ROG Exclusive Software** | - GameFirst VI  
                      - ROG CPU-Z  
                      - Sonic Studio III + Sonic Studio Virtual Mixer + Sonic Suite Companion  
                      - Sonic Radar III  
                      - DTS® Sound Unbound  
                      - Anti-virus software  |
| **ASUS Exclusive Software** | - Armoury Crate  
                      - AIDA64 Extreme (60 days free trial)  
                      - Aura Creator  
                      - Aura Sync  
                      - Fan Xpert 4 (with AI Cooling II)  
                      - Power Saving  
                      - Two-Way AI Noise Cancellation  |
| **AI Suite 3**   |                                                                             |
| **UEFI BIOS**    | - ASUS EZ DIY  
                      - ASUS CrashFree BIOS 3  
                      - ASUS EZ Flash 3  
                      - ASUS UEFI BIOS EZ Mode  |
| **FlexKey**      |                                                                             |
| **BIOS**         | 256 Mb Flash ROM, UEFI AMI BIOS                                            |
| **Manageability**| WOL by PME, PXE                                                             |
| **Operating System** | Windows® 11 64-bit  |
| **Form Factor**  | ATX Form Factor  
                      12 inch x 9.6 inch (30.5 cm x 24.4 cm)  |
• Specifications are subject to change without notice. Please refer to the ASUS website for the latest specifications.

• 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 STRIX X670E-A GAMING WIFI motherboard</td>
</tr>
<tr>
<td>Cables</td>
<td>2 x SATA 6Gb/s cables</td>
</tr>
<tr>
<td>Additional Cooling Kit</td>
<td>1 x Thermal pad for M.2</td>
</tr>
<tr>
<td></td>
<td>1 x ASUS Wi-Fi moving antennas</td>
</tr>
<tr>
<td></td>
<td>1 x Cable ties pack</td>
</tr>
<tr>
<td></td>
<td>1 x M.2 Q-Latch package for M.2 backplate</td>
</tr>
<tr>
<td></td>
<td>1 x M.2 Q-Latch package</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>1 x ROG key chain</td>
</tr>
<tr>
<td></td>
<td>1 x ROG Strix sticker</td>
</tr>
<tr>
<td></td>
<td>1 x ROG Strix thank you card</td>
</tr>
<tr>
<td></td>
<td>2 x Rubber Packages for M.2</td>
</tr>
<tr>
<td></td>
<td>1 x Rubber Package for M.2 backplate</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

<table>
<thead>
<tr>
<th>Tool or Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phillips (cross) screwdriver</td>
<td></td>
</tr>
<tr>
<td>PC chassis</td>
<td>Power supply unit</td>
</tr>
<tr>
<td>AMD AM5 CPU</td>
<td>AMD AM5 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.
Chapter 1: 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.

The pin definitions in this chapter are for reference only. The pin names depend on the location of the header/jumper/connector.
1.2 Motherboard layout
<table>
<thead>
<tr>
<th>Layout contents</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CPU socket</td>
<td>1-4</td>
</tr>
<tr>
<td>2. DIMM slots</td>
<td>1-5</td>
</tr>
<tr>
<td>3. Expansion slots</td>
<td>1-7</td>
</tr>
<tr>
<td>4. Fan and Pump headers</td>
<td>1-8</td>
</tr>
<tr>
<td>5. Power connectors</td>
<td>1-9</td>
</tr>
<tr>
<td>6. M.2 Slot</td>
<td>1-10</td>
</tr>
<tr>
<td>7. SATA 6Gb/s port</td>
<td>1-11</td>
</tr>
<tr>
<td>8. USB 3.2 Gen 2x2 Type-C® Front Panel connector</td>
<td>1-12</td>
</tr>
<tr>
<td>9. USB 3.2 Gen 1 header</td>
<td>1-13</td>
</tr>
<tr>
<td>10. USB 2.0 header</td>
<td>1-14</td>
</tr>
<tr>
<td>11. Addressable Gen 2 header</td>
<td>1-15</td>
</tr>
<tr>
<td>12. Aura RGB header</td>
<td>1-16</td>
</tr>
<tr>
<td>13. CPU Over Voltage jumper</td>
<td>1-17</td>
</tr>
<tr>
<td>14. Front Panel Audio header</td>
<td>1-17</td>
</tr>
<tr>
<td>15. System Panel header</td>
<td>1-18</td>
</tr>
<tr>
<td>16. Thermal Sensor header</td>
<td>1-19</td>
</tr>
<tr>
<td>17. Thunderbolt™ header</td>
<td>1-20</td>
</tr>
<tr>
<td>18. Q-LEDs</td>
<td>1-21</td>
</tr>
<tr>
<td>19. BIOS FlashBack™ LED</td>
<td>1-21</td>
</tr>
<tr>
<td>20. 8-pin Power Plug LED</td>
<td>1-22</td>
</tr>
</tbody>
</table>
1. CPU socket

The motherboard comes with a Socket AM5 designed for AMD Ryzen™ 7000 Series Desktop Processors.

- The AM5 socket has a different pinout design. Ensure that you use a CPU designed for the AM5 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 AM5 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**

- ![DIMM_A1](image1)
- ![DIMM_B1](image2)
- ![DIMM_B2](image3)
Memory configurations
You may install 8GB, 16GB, and 32GB unbuffered, ECC or 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.
4. **Fan and Pump headers**

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

- **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 to remove the Fan Header Covers on the CPU_FAN, CPU_OPT, and AIO_PUMP headers when installing a fan cable to these headers.

- Ensure the cable is fully inserted into the header.

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

<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_FAN2</td>
<td>1A</td>
<td>12W</td>
<td>Q-Fan Controlled</td>
<td>-</td>
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<tr>
<td>CHA_FAN3</td>
<td>1A</td>
<td>12W</td>
<td>Q-Fan Controlled</td>
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<tr>
<td>CHA_FAN4</td>
<td>1A</td>
<td>12W</td>
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<tr>
<td>CHA_FAN5</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>
</tbody>
</table>
5. **Power connectors**

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

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.
6. M.2 slot

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

- **AMD Ryzen™ 7000 Series Desktop Processors:**
  - M.2_1 supports PCIe 5.0 x4 mode M Key design and type 2242 / 2260 / 2280 storage devices.
  - M.2_2 supports PCIe 5.0 x4 mode M Key design and type 2242 / 2260 / 2280 storage devices.

- **AMD X670 Chipset:**
  - M.2_3 supports PCIe 4.0 x4 mode M Key design and type 2242 / 2260 / 2280 / 22110 storage devices.
  - M.2_4 supports PCIe 4.0 x4 mode M Key design and type 2242 / 2260 / 2280 storage devices.

- The M.2 SSD module is purchased separately.
- AMD RAIDXpert2 Technology supports NVMe RAID 0, 1, and 10 configurations.
7. **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, and 10 configuration through the onboard AMD X670 chipset.

Before creating a RAID set, refer to the **RAID Configuration Guide**. You can download the **RAID Configuration Guide** from the ASUS website.
8. **USB 3.2 Gen 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.
9. **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.
10. **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.
11. 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.
12. **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.
13. **CPU Over Voltage jumper**

The CPU Over Voltage jumper allows you to set a higher CPU voltage for a flexible overclocking system (depending on the type of the installed CPU). Set to pins 2-3 to increase the CPU voltage setting, or set to pins 1-2 to use the default CPU voltage setting.

14. **Front Panel Audio header**

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

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

- **System Warning Speaker header (SPEAKER)**
  
The 4-pin header allows you to connect the chassis-mounted system warning speaker. The speaker allows you to hear system beeps and warnings.

- **Power Button/Soft-off Button header (PWRSW)**
  
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.

- **Chassis intrusion header (CHASSIS)**
  
The 2-pin header allows you to connect the chassis-mounted intrusion detection sensor or switch. The chassis intrusion sensor or switch sends a high-level signal to the header when a chassis component is removed or replaced, the signal is then generated as a chassis intrusion event.
16. **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.
17. **Thunderbolt™ header**

The Thunderbolt™ header allows you to connect an add-on Thunderbolt™ I/O card that supports Intel’s Thunderbolt™ Technology, allowing you to connect Thunderbolt™-enabled devices to form a daisy-chain configuration.

- The add-on Thunderbolt™ I/O card and Thunderbolt™ cables are purchased separately.
- Please visit the official website of your purchased Thunderbolt™ card for more details on compatibility.
18. **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.

- CPU (RED)
- DRAM (YELLOW)
- VGA (WHITE)
- BOOT (YELLOW GREEN)

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.

19. **BIOS FlashBack™ LED**

The BIOS FlashBack™ LED lights up or blinks to indicate the status of the BIOS FlashBack™.

Refer to the **BIOS update utility** section for more information on using the BIOS FlashBack™ feature.
20. 8-pin Power Plug LED

The 8-pin Power Plug LED lights up to indicate that the 8-pin power plug is not connected.

![PLUG_8PIN_PWR]
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 use a CPU designed for the AM5 socket. The CPU fits in only one correct orientation. DO NOT force the CPU into the socket to prevent bending the pins and damaging the CPU.
- ASUS will not cover damages resulting from incorrect CPU installation/removal, incorrect CPU orientation/placement, or other damages resulting from negligence by the user.

Unplug all power cables before installing the CPU.
2.1.2 Cooling system installation

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

We recommend using AM5 compatible coolers with stock AM5 backplate to prevent potential damages to the pins in the socket.

CPU heatsink and fan assembly Type 1

1. Apply the Thermal Interface Material to the CPU cooling system and CPU before you install the cooling system, if necessary.
2. We recommend using AM5 compatible coolers with stock AM5 backplate to prevent potential damages to the pins in the socket.
When using this type of CPU fan, remove the screws and the retention module only. Do not remove the plate on the bottom.
To install an AIO cooler

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

1

AIO_PUMP

2

CPU_FAN

CPU_OPT
2.1.3 DIMM installation

1. Flat the DIMM down and push it into the slot until it clicks into place.
2. To remove a DIMM, push the retaining latch B up to release the DIMM. Then pull the DIMM up by handle A.

To remove a DIMM
2.1.4 M.2 installation

- Supported M.2 type varies per motherboard.

- If the thermal pad on the M.2 heatsink becomes damaged, we recommend replacing it with the bundled thermal pad or a thermal pad with a thickness of 1.25mm.

- 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.

- The M.2 is purchased separately.

1. Completely loosen the screws on the heatsinks.
2. Lift and remove the heatsink.
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 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. (optional) Remove the thermal pad of the 2260 M.2 length screw hole and install the bundled rubber for M.2 backplate if you are installing a single sided M.2 storage device. DO NOT install the bundled rubber for M.2 backplate when installing a double-sided M.2 storage device.
  
  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 2242 and 2260 length

A. Remove the plastic film from the thermal pad.

B. Remove the 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. (optional) Remove the thermal pad of the 2242 M.2 length screw hole and install the bundled rubber for M.2 backplate if you are installing a single sided M.2 storage device. DO NOT install the bundled M.2 rubber for M.2 backplate when installing a double-sided M.2 storage device.

Follow step D only if you wish to install a single sided M.2 storage device to type 2260.
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 and M.2_4 slot

For 2280 length

A. (optional) Install the bundled rubber for M.2 if you are installing a single sided M.2 storage device. DO NOT install the bundled rubber for M.2 when installing a double-sided M.2 storage device. The rubber 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.

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, 22110 length

A. (optional) Remove the pre-installed removable M.2 Q-Latch screw at the 2280 length screw hole.

Follow step A only when you wish to install an 22110 length M.2 to M.2_3.

B. (optional) Install the bundled rubber for M.2 if you are installing a single sided M.2 storage device. DO NOT install the bundled rubber for M.2 when installing a double-sided M.2 storage device. The rubber installed by default is compatible with double sided M.2 storage devices.

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.
For 2242, 2260 length

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

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

B.  (optional) If required, remove the pre-installed removable M.2 Q-Latch screw at the 2280 length screw hole.

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

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.
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, we recommend replacing it with the bundled thermal pad or a thermal pad with a thickness of 1.25mm.

5. Replace the heatsinks.

6. Secure the heatsinks using the screws on the heatsinks.
2.1.5 Motherboard installation

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

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

---

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

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

Ensure to connect the 8-pin power plug or both 8-pin power plugs.
2.1.7 SATA device connection

1 OR

2
2.1.8 Front I/O connector

To install the front panel connector

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

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

To install USB 3.2 Gen 1 connector

To install USB 2.0 connector

To install front panel audio connector

USB 3.2 Gen 1

USB 2.0

AAFP
2.1.9 Expansion card installation

To install PCIe x16 cards

To install PCIe x1 cards
To install Thunderbolt™ series card

Ensure to install the Thunderbolt™ series card to a PCIe slot from PCH.

- Step 6 is optional, please connect a 6-pin PCIe power connector when you wish to use the USB Type-C® port Thunderbolt™ quick charge feature to charge a 5V or more device.
- The TypeC_1 port can support up to 20V devices, and the TypeC_2 port can support up to 9V devices when the 6-pin PCIe power connector is connected.
- Please visit the official website of your purchased Thunderbolt™ card for more details on compatibility.
Using the PCIe Slot Q-Release

The PCIEX16_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™ 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/ and download the latest BIOS version for this motherboard.

3. Manually rename the file as SX670EA.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 Clear CMOS button

The Clear CMOS button located on the rear I/O allows you to clear the Real Time Clock (RTC) RAM in the CMOS, which contains the date, time, system passwords, and system setup parameters.

To erase the RTC RAM:

1. Turn OFF the computer and unplug the power cord.
2. Press the Clear CMOS button.
3. Plug the power cord and turn ON the computer.
4. Hold down the <Del> key during the boot process and enter BIOS setup to re-enter data.

**WARNING**: DO NOT press the Clear CMOS button except when clearing the RTC RAM, doing so will cause system boot failure!

If the steps above do not help, remove the onboard button cell battery and press the Clear CMOS button again to clear the CMOS RTC RAM data. After clearing the CMOS, reinstall the button cell battery.
2.4 Motherboard rear and audio connections

2.4.1 Rear I/O connection

<table>
<thead>
<tr>
<th>Rear panel connectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. DisplayPort</td>
</tr>
<tr>
<td>2. USB 3.2 Gen 2 Type-A ports 1, 4, 20, and 21</td>
</tr>
<tr>
<td>3. USB 3.2 Gen 2 Type-A ports P10, 22, and 23</td>
</tr>
<tr>
<td>4. USB 2.0 ports 24 and 25</td>
</tr>
<tr>
<td>5. Intel® 2.5Gb Ethernet port*</td>
</tr>
<tr>
<td>6. HDMI® port</td>
</tr>
<tr>
<td>7. USB 3.2 Gen 2 Type-C® port C2</td>
</tr>
<tr>
<td>8. Clear CMOS button (CLR_CMOS). Press this button to clear the BIOS setup information only when the systems hangs due to overclocking.</td>
</tr>
<tr>
<td>9. BIOS FlashBack™ button</td>
</tr>
<tr>
<td>10. USB 3.2 Gen 1 Type-A port 11</td>
</tr>
<tr>
<td>11. USB 3.2 Gen 2x2 Type-C® port C18</td>
</tr>
<tr>
<td>12. Wi-Fi module</td>
</tr>
<tr>
<td>13. Optical S/PDIF OUT port</td>
</tr>
<tr>
<td>14. Audio jacks**</td>
</tr>
</tbody>
</table>

* 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® 2.5Gb Ethernet port LED indications

<table>
<thead>
<tr>
<th>Activity Link LED</th>
<th>Speed LED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Status</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>OFF</td>
<td>No link</td>
</tr>
<tr>
<td>GREEN</td>
<td>Linked</td>
</tr>
<tr>
<td>BLINKING</td>
<td>Data activity</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Port</th>
<th>2-channel</th>
<th>4-channel</th>
<th>5.1-channel</th>
<th>7.1-channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Blue (Rear panel)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Side Speaker Out</td>
</tr>
<tr>
<td>Lime (Rear panel)</td>
<td>Front Speaker Out</td>
<td>Front Speaker Out</td>
<td>Front Speaker Out</td>
<td>Front Speaker Out</td>
</tr>
<tr>
<td>Pink (Rear panel)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Black (Rear panel)</td>
<td>-</td>
<td>Rear Speaker Out</td>
<td>Rear Speaker Out</td>
<td>Rear Speaker Out</td>
</tr>
<tr>
<td>Orange (Rear panel)</td>
<td>-</td>
<td>-</td>
<td>Center/ Subwoofer</td>
<td>Center/ Subwoofer</td>
</tr>
</tbody>
</table>

2.4.2 Audio I/O connections

Audio I/O ports

Connect to Headphone and Mic
Chapter 2: Basic Installation

Connect to 2-channel Speakers

Connect to 4-channel Speakers

Connect to 5.1-channel Speakers
Connect to 7.1-channel Speakers
2.5 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.

2.6 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 SX670EA.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 AMD RAIDXpert2 Technology that supports Volume, RAIDABLE, RAID 0, RAID 1, and RAID 10 (depends on system licensing) configurations.

RAID definitions

Volume provides the ability to link-together storage from one or several disks, regardless of the size of the space on those disks. This configuration is useful in scavenging space on disks unused by other disks in the array. This configuration does not provide performance benefits or data redundancy, disk failure will result in data loss.

RAIDABLE arrays (also known as RAID Ready) are a special type of Volume (JBOD) that allows the user to add more storage space or create a redundant array after a system is installed. RAIDABLE arrays are created using Option ROM, UEFI, or rcadm.

The ability to create RAIDABLE arrays may vary per system.

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 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.

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.

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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.
Appendix

Notices

FCC Compliance Information

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

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

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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.
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

<table>
<thead>
<tr>
<th>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き、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。</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCCI-B</td>
</tr>
</tbody>
</table>

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はできません。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) 전자파해상기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.

*불법 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变更频率、加大功率或变更原设计之特性及功能。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、罰せられることもありますが、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 hôpitaux, 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

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.
France sorting and recycling information

Points de collecte sur www.quefairedemesdechets.fr
Privilégiez la réparation ou le don de votre appareil !

Safety Precautions

Accessories that came with this product have been designed and verified for the use in connection with this product. Never use accessories for other products to prevent the risk of electric shock or fire.

安全上のご注意

付属品は当該専用品です。他の機器には使用しないでください。機器の破損もしくは、火災や感電の原因となることがあります。

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)

<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>18.94 dBm</td>
</tr>
<tr>
<td></td>
<td>5150 - 5350 MHz</td>
<td>19.47 dBm</td>
</tr>
<tr>
<td></td>
<td>5470 - 5725 MHz</td>
<td>18.87 dBm</td>
</tr>
<tr>
<td></td>
<td>5725 - 5850 MHz</td>
<td>10.31 dBm</td>
</tr>
<tr>
<td></td>
<td>5945 - 6425 MHz</td>
<td>20.49 dBm</td>
</tr>
<tr>
<td>Bluetooth</td>
<td>2402 - 2480 MHz</td>
<td>14.47 dBm</td>
</tr>
</tbody>
</table>

* Receiver category 1
b. Nella seguente tabella: 5350 MHz deve essere limitato all'interno degli edifici per i paesi presenti nell'intervallo 5150-5350 MHz. L'utilizzo della rete Wi-Fi con frequenza compresa nell'intervallo 5150-5350 MHz è tuttavia consentito in Belgio, Bulgaria, Cipro, Francia, Irlanda, Germania, Nederland (NL), Spagna (ES), Ucraina e Russia nei paesi di origine dei dispositivi Wi-Fi 6E, determinati dalle Commissioni Europee per i Paesi Meridionali e Setentrionali. L'uso dei dispositivi Wi-Fi 6E deve essere limitato all'interno degli edifici per i paesi presenti nell'intervallo 5150-5350 MHz. L'uso di tali dispositivi per il ripristino dei dati critici e per i servizi di emergenza è tuttavia consentito. L'uso dei dispositivi Wi-Fi 6E per il ripristino dei dati critici e per i servizi di emergenza è tuttavia consentito. L'uso dei dispositivi Wi-Fi 6E per il ripristino dei dati critici e per i servizi di emergenza è tuttavia consentito.

La Direttiva 2014/53/EU prevede che le reti Wi-Fi 6E (potenza massima: 5350 MHz) siano operative in Europa e che la loro utilizzo sia regolato da disposizioni di conformità. ASUSTeK Computer Inc. dichiara che questo dispositivo è conforme alle disposizioni di conformità e che i suoi requisiti sono soddisfatti. La dichiarazione di conformità è disponibile su https://www.asus.com/support/.
ASUSTeK Computer Inc. hereby declares that this device complies with the essential requirements and other relevant provisions of Directive 2014/53/EU.

RoHS

ASUSTeK Computer Inc. also hereby declares that this device complies with the EU RoHS Directive.

Zolednoucí prohlášení o shodě EU


Zařízení je v souladu s předpisem EU o obnovitelných zdrojích energie.

RoHS

ASUSTeK Computer Inc. также декларирует, что эти устройства соответствуют обязательным требованиям и другим соответствующим положениям Директивы 2014/53/EU.

Založená deklarace shody EU

ASUSTeK Computer Inc. đen tuchen, že tyto zařízení splňují základní bezpečnostní a zdravotní podmínky uvedené v směrnici 2014/53/EU.

Založená deklarace shody EU

ASUSTeK Computer Inc. именует, что эти устройства соответствуют основным требованиям и другим соответствующим положениям Директивы 2014/53/EU.
Wi-Fi 6E Frequency Bands

- **b.** Wi-Fi 6E bands are restricted to indoor use with very low power (VLP) Wi-Fi 6E devices (portable devices):
  - frequencies from 5 945 to 6 425 MHz are restricted to indoor use in Belgium (BE), Bulgaria (BG), Cyprus (CY), Czech Republic (CZ), Estonia (EE), France (FR), Island (IS), Ireland (IE), Lithuania (LT), and Switzerland (CH).

- **a.** Wi-Fi devices are not allowed to be used in uncrewed aerial systems (UAS) when operating in the frequency range from 5 945 to 6 425 MHz:
  - in Belgium (BE), Bulgaria (BG), Cyprus (CY), Czech Republic (CZ), Estonia (EE), France (FR), Island (IS), Ireland (IE), and Switzerland (CH).
  - In Switzerland, Wi-Fi 6E devices operating in the frequency range from 5 945 to 6 425 MHz are only allowed in uncrewed aerial systems (UAS) when operating in the frequency range from 5 945 to 6 425 MHz.
  - Wi-Fi devices are not allowed to be used in uncrewed aerial systems (UAS) when operating in the frequency range from 5 945 to 6 425 MHz.

- **Suprapristina ES attitikties deklaracija**

Siame dokumente bendrovės ASUS Computer Inc. pareiškia, kad šis prietaisas atitinka pagrindinius reikalavimus ir kitas susijusias Direktīvos 2014/53/ES nuostatas. Visas ES atitikties deklaracijos tekstas pateikiamas čia:

https://www.asus.com/support/

Toliau nurodytas falsifikas „Wi-Fi“ įrenginys, veliau surenkamas 5 150 – 5 350 MHz dalinio juostoto, galima naudotis tik patalpose:

- **a.** Mazos galios, patalpose naudojami įrenginiai (angl. Low Power Indoor – LPI, „Wi-Fi“ 6E renginiai): bent žymią galios įrenginių tik tarpas, vėliau renginių („Wi-Fi“ 6E renginiai):
  - **b.** Šį žmogumą naudojant tik tarpas, vėliau renginių („Wi-Fi“ 6E renginiai):
  - **c.** Šį žmogumą naudojant tik tarpas, vėliau renginių („Wi-Fi“ 6E renginiai):

Firma ASUSTeK Computer Inc. nesijetės išvaizda, kad šiame dokumente teisėtų naudoti tūkstantmečio siaurą formą ir kitas neįtikėtinias debesų įrenginius.
b. WiFi-Fi 6E have lower power consumption (VLP) (portable devices): They are exclusively for use in indoor spaces in the frequency range of 5945-6425 MHz and in Belgium (BE), Bulgaria (BG), Cyprus (CY), Republica Checa (CZ), Estonia (EE), France (FR), Iceland (IS), Ireland (IE), Lithuania (LT), Germany (DE), Španija (ES).
ASUSTek Computer Inc. declares, in accordance with the requirements of Directive 2014/53/EU, that this device complies with the basic requirements and other relevant provisions of Directive 2014/53/EU.

Full text of the CE declaration of conformity is available at https://www.asus.com/support/.

Wi-Fi operation in the 5150-5350 MHz frequency band is restricted to the indoor environments listed below:

a. Wi-Fi 6E with low power (LPI) devices:
   - Use of the device is limited to indoor environments with frequencies from 5945 MHz to 6425 MHz in Belgium (BE), Bulgaria (BG), Estonia (EE), France (FR), Iceland (IS), Ireland (IE), Lithuania (LT), Luxembourg (LU), Malta (MT), the Netherlands (NL), Norway (NO), Poland (PL), Portugal (PT), Romania (RO), Slovakia (SK), Switzerland (CH), Turkey (TR), Finland (FI), and Sweden (SE).

b. Wi-Fi 6E with very low power (VLP) devices:
   - Operation of this device is prohibited in unmanned aircraft systems (UAS) with frequencies from 5945 MHz to 6425 MHz in Belgium (BE), Bulgaria (BG), Estonia (EE), France (FR), Iceland (IS), Ireland (IE), Lithuania (LT), Luxembourg (LU), Malta (MT), the Netherlands (NL), Norway (NO), Poland (PL), Portugal (PT), Romania (RO), Slovakia (SK), Switzerland (CH), Turkey (TR), Finland (FI), and Sweden (SE).

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CE RED RF Output table (Directive 2014/53/EU)
AMD Wi-Fi 6E RZ616 (Model: MT7922A22M):

<table>
<thead>
<tr>
<th>Function</th>
<th>Frequency</th>
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<td>Bluetooth</td>
<td>2402 - 2480 MHz</td>
<td>14.47 dBm</td>
</tr>
</tbody>
</table>

* Receiver category 1
Warranty

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 Waranarantie des Herstellers an.
- ASUS behält sich das Recht zur Auslegung der Bestimmungen in der ASUS Waranarantie vor.
- Diese ASUS Warenarantee wird unabhängig und zusätzlich zur rechtsmäßigen 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/.

I: Informative sulla Garanzia ASUS
- ASUS offre una Garanzia Commerciale volontaria del produttore.
- ASUS si riserva il diritto di interpretare le disposizioni della Garanzia Commerciale ASUS.
- La presente Garanzia Commerciale ASUS viene fornita in modo indipendente e in aggiunta alla Garanzia Legale prevista per legge e non pregiudica o limita in alcun modo i diritti previsti dalla Garanzia Legale.
Per tutte le informazioni sulla garanzia, visitare https://www.asus.com/it/support/.

R: Информация о гарантии ASUS
- ASUS предоставляет добровольную гарантию от производителя.
- ASUS оставляет за собой право интерпретировать положения гарантии ASUS.
- Настоящая гарантия ASUS никаким образом не ограничивает Ваши права, предусмотренные местным законодательством.
Для получения полной информации о гарантии посетите https://www.asus.com/ru/support/.

A: Garantiesinformationen für ASUS
- ASUS bietet eine freiwillige Garantie an.
- ASUS behält sich das Recht vor, die Auslegung der Bestimmungen der ASUS Garantie vorzunehmen.
- Diese ASUS Garantie wird unabhängig und zusätzlich zur rechtsmäßigen gesetzlichen Garantie gewährt und beeinträchtigt oder beschränkt in keiner Weise die Rechte aus der gesetzlichen Garantie.
Die Garantieinformationen finden Sie unter https://www.asus.com/nl/support/.

BG: Информация за гаранцията от ASUS
- ASUS предоставя доброволна търговска гаранция от производителя.
- ASUS се запазва право да интерпретира положенията на гаранцията от ASUS.
- Така гъркомазва гъркомазва гъркомазва от гарантията от ASUS не намалява или не ограничава в никакъв случай права на потребителя в законската гаранция и не намалява или не ограничава в никакъв случай права на потребителя в законската гаранция, за целта 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 výkladů ustanovení komerční záruky společnosti ASUS.
- Tato komerční záruka společnosti ASUS je poskytována nezávisle na a jako doplněk zákonní záruky a žádným způsobem neovlivňuje ani neomezuje práva vyplývající ze zákonní záruky.
Více informace o záruce najdete na adrese https://www.asus.com/cz/support/.

CR: Informace o ASÚS jmu
- ASUS dragovo nudi komercialno proizvodna jamstvo.
- ASUS zadržava pravo na tumačenje odredbi ASÚS komercialnog jamstva.
- Ovo ASUS komerčno jamstvo daje se neovisno i kao dodatak zakonskom jamstvu ni i na koji način ne ograničuje prava iz okvira zakonskog jamstva.
Sva informacije o jamstvu potražite na https://www.asus.com/sr/support/.

DU: ASÚS-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 beïnvloedt 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-e garantii kohta
- ASUS pakub vaatamatu tasulise tootjagarantiid.
- ASUS jätab endale õiguse tõlgendada ASUS-e tasulise garantii tingimusi.
- See ASUS tasuline garantii on sõltumatu lisagarantii seadusega kehtestatud garantii ega mõjuta mingit määral seadusega kehtestatud garantii piiranguid.
Vaadake garantii seadet teaevat veebisaidist https://www.asus.com/ee/.

HUG: ASUS garantialis információk
- Az ASUS önkéntes gyártói kereskedelmi garanciát kínál.
- Az ASUS fenntartja magának a jogot, hogy értelmezze 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 jogi garanciát nyújtotta jogokat.
A garanciára vonatkozó teljes körű információtól látszgasson el a https://www.asus.com/hu/support/oja.htm.

LV: ASÚS garancijas informācija
- ASUS piedāvā brīvprātīgu ražotāja komersilāgu garantiju.
- ASUS patur tiesības interpretēt ASUS komerciālās garantijas noteikumus.
- Šī ASUS komerciālā garancija tiek piedāvāta neatkarīgi un kā dodatne ASÚS juridiskajai garantijai, un tā nekādīs neiešķirību vai neievērošu juridiskajā garantijā neatkarības tiesības.
Lai iegūtu informāciju par garantiju, apmeklējiet vietni https://www.asus.com/lv/.

LT: Informacija apie ASUS garantiją
- ASUS siūlo savo vartotojams komercinę garantiją.
- ASUS patikslina tiek savo nuostatą aiškint šios komercinės ASUS garantijos nuostatas.
- Šių ASUS komercinės garantijos netekimas nėra apribota nė kokia jautė arba nepateikiam nė kokių teisių.

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

Appendix

ROG STRIX X670E-A GAMING WIFI
ASUS Garantiinformation

- ASUS erbjuder en frivillig kommersiell tillverkningsgaranti.
- ASUS förbehåller sig rätten att tolka bestämmelserna i ASUS kommersiella garantier.
- Denna kommersiella garanti från ASUS tillhandahålls separat och som tillägg till den lagstegade garantin, och påverkar eller begränsar på intet sätt rättigheten under den lagstegade garantin.

For all garantiinformation, besök https://www.asus.com/se/support/

IA: Informação sobre a garantia

- ASUS oferece uma Garantia Comercial voluntária a fabricante.
- ASUS forbereder sig for at forstå de garantier, der er fastsatt i juridisk garantie.
- ASUS tilbyder som produsent en frivillig kommersiell garanti.
- ASUS ponúka dobrovolnú obchodnú záruku.
- ASUS si pridržuje pravico do razlage določenih garancijskih del.
- ASUS предоставляет добровольную гарантию, которые предоставляются добавочным договором.
- ASUS pristojí se dohodnou komerce.
- ASUS vás dourá na dobrovolný komerčný záruku.
- ASUS ponúka dobrovoľnú obchodnú záruku.
- ASUS призывает к наблюдению за гарантией.
- ASUS pristojí se dohodnou komerčnou zárukou.
- ASUS pristojí se dohodnou komerčnou zárukou.
- ASUS pristojí se dohodnou komerčnou zárukou.

Para todas as informações sobre a garantia, visite https://www.asus.com/tr/support/

ID: Garansi ASUS

- ASUS bersedia memberikan Garansi Komersial berjalan.
- ASUS zaakkoordineert garantieservice contract.
- ASUS kommer tilbyde en frihandels garanti.
- ASUS biedt een vrijwillige commerciële garantie.
- ASUS erklærer sig tilgjengelig for en kommersiell garanti.
- ASUS garantiziert sich dem Kunden eine freiwillige Garantie.
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Mijn garantieformulier vindt u weer op https://www.asus.com/nl/support/
ASUS contact information

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ASUS COMPUTER GmbH (Germany and Austria)
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ASUSTeK (UK) LIMITED
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Service and Support