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(2) for the cost of reproduction and shipment, which is dependent on the preferred carrier and the location where you want to have it shipped to, by sending a request to:

ASUSTeK Computer Inc.
Legal Compliance Dept.
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Beitou Dist., Taipei City 112,
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Safety information

Electrical safety

- To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system.

- When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.

- Before connecting or removing signal cables from the motherboard, ensure that all power cables are unplugged.

- Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit.

- Ensure that your power supply is set to the correct voltage in your area. If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.

- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.

Operation safety

- Before installing the motherboard and adding devices on it, carefully read all the manuals that came with the package.

- Before using the product, ensure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.

- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.

- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet.

- Place the product on a stable surface.

- If you encounter technical problems with the product, contact a qualified service technician or your retailer.

- Your motherboard should only be used in environments with ambient temperatures between 0°C and 40°C.
About this guide
This user guide contains the information you need when installing and configuring the motherboard.

How this guide is organized
This guide contains the following parts:

- **Chapter 1: Product Introduction**
  This chapter describes the features of the motherboard and the new technology it supports. It includes description of the switches, jumpers, and connectors on the motherboard.

- **Chapter 2: Basic Installation**
  This chapter lists the hardware setup procedures that you have to perform when installing system components.

- **Chapter 3: BIOS and RAID Support**
  This chapter tells how to boot into the BIOS, upgrade BIOS using the EZ Flash Utility and support on RAID.

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

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

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

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

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

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

- **NOTE:** Tips and additional information to help you complete a task.
ROG STRIX Z490-E GAMING specifications summary

<table>
<thead>
<tr>
<th>Section</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CPU</strong></td>
<td>Intel® Socket LGA 1200 for 10th Gen Intel® Core™, Pentium® Gold and Celeron® processors*&lt;br&gt;Supports Intel® 14 nm CPU&lt;br&gt;Supports Intel® Turbo Boost Technology 2.0 and Intel® Turbo Boost Max Technology 3.0**&lt;br&gt;* Refer to <a href="http://www.asus.com">www.asus.com</a> for CPU support list.&lt;br&gt;** Intel® Turbo Boost Max Technology 3.0 support depends on the CPU types.</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® Z490 Chipset</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>4 x DIMM, Max. 128GB, DDR4 4600(O.C) / 4500(O.C) / 4400(O.C) / 4266(O.C) / 4133(O.C) / 4000(O.C) / 3866(O.C) / 3733(O.C) / 3600(O.C) / 3466(O.C) / 3400(O.C) / 3333(O.C) / 3200(O.C) / 3000(O.C) / 2933(O.C) / 2800(O.C) / 2666 / 2400 / 2133 MHz Non-ECC, Un-buffered Memory&lt;br&gt;Dual Channel Memory Architecture&lt;br&gt;Supports Intel® Extreme Memory Profile (XMP)&lt;br&gt;OptiMem II&lt;br&gt;* 10th Gen Intel® Core™ i9/i7 CPUs support 2933/2800/2666/2400/2133 natively. Refer to <a href="http://www.asus.com">www.asus.com</a> for the Memory QVL (Qualified Vendors Lists).</td>
</tr>
<tr>
<td><strong>Graphics</strong></td>
<td>1 x DisplayPort 1.4*&lt;br&gt;1 x HDMI™ 1.4b&lt;br&gt;* Support DisplayPort 1.4 with max. resolution of 4096 x 2304 @60Hz. Please refer to <a href="http://www.intel.com">www.intel.com</a> for any update.&lt;br&gt;** Graphics specifications may vary between CPU types.</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>Intel® 10th Gen Processors*&lt;br&gt;2 x PCIe 3.0 x16 slots (support x16 or x8/x8 modes)&lt;br&gt;Intel® Z490 Chipset&lt;br&gt;1 x PCIe 3.0 x16 slot (supports x4 mode)&lt;br&gt;3 x PCIe 3.0 x1 slots&lt;br&gt;* Support PCIe bifurcation for RAID on CPU function.</td>
</tr>
<tr>
<td><strong>Multi-GPU support</strong></td>
<td>Supports NVIDIA 2-Way SLI® Technology&lt;br&gt;Supports AMD 3-Way CrossFireX™ Technology</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>Total supports 2 x M.2 slots and 6 x SATA 6Gb/s ports&lt;br&gt;Intel® Z490 Chipset&lt;br&gt;M.2_1 slot (Key M), type 2242/2260/2280/22110 (supports PCIe 3.0 x4 &amp; SATA modes)<em>&lt;br&gt;M.2_2 slot (Key M), type 2242/2260/2280/22110 (supports PCIe 3.0 x4 mode)<strong>&lt;br&gt;6 x SATA 6Gb/s ports</strong>&lt;br&gt;Intel® Rapid Storage Technology supports Raid 0,1,5,10&lt;br&gt;Intel® Optane™ Memory Ready&lt;br&gt;</em> When M.2_1 is operating in SATA mode, SATA6G_2 will be disabled.&lt;br&gt;** M.2_2 shares bandwidth with SATA6G_56. When M.2_2 is populated SATA6G_56 will be disabled.</td>
</tr>
<tr>
<td><strong>Ethernet</strong></td>
<td>1 x Intel® I225-V Ethernet&lt;br&gt;ASUS LANGuard</td>
</tr>
</tbody>
</table>

(continued on the next page)
### Wireless & Bluetooth

- **Intel® Wi-Fi 6 AX201**
  - 2x2 Wi-Fi 6 (802.11 a/b/g/n/ac/ax) support 1024QAM/OFDMA/MU-MIMO
  - Supports up to 2.4Gbps max data rate
  - Supports 2.4/5GHz Dual-Band
  - Supports channel bandwidth: HT20/HT40/HT80/HT160
  - Supports CNVI interface
  - Bluetooth v5.1*
  - * BT 5.1 function will be ready in Windows 10 build 19041 or later.

### USB

- **Rear USB (Total 10 ports)**
  - 4 x USB 3.2 Gen 2 ports (3 x Type-A + 1 x USB Type-C®)
  - 2 x USB 3.2 Gen 1 ports
  - 4 x USB 2.0 ports (4 x Type-A)

- **Front USB (Total 7 ports)**
  - 1 x USB 3.2 Gen 2 front panel 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

### Audio

- **ROG SupremeFX 8-Channel High Definition Audio CODEC S1220A**
  - Impedance sense for front and rear headphone outputs
  - 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/192kHz playback*

### Audio Features:
- Dual OP Amplifiers
- SupremeFX Shielding Technology
- Gold-plated audio jacks
- Rear optical S/PDIF out port
- Premium Japanese audio capacitors
- Audio cover

  - * Due to limitations in HDA bandwidth, 32-Bit/192kHz is not supported for 8-Channel audio.

### Back Panel I/O Ports

- 4 x USB 3.2 Gen 2 ports (3 x Type-A + 1 x USB Type-C®)
- 2 x USB 3.2 Gen 1 ports (2 x Type-A)
- 4 x USB 2.0 ports (4 x Type-A)
- 1 x DisplayPort
- 1 x HDMI™ port
- 1 x ASUS Wi-Fi Module
- 1 x Intel® I225-V Ethernet port
- 5 x Gold-plated audio jacks
- 1 x Optical S/PDIF out port
- 1 x BIOS FlashBack™ button

*(continued on the next page)*
## 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
- 2 x 4-Pin Chassis Fan headers
- 1 x 4-Pin M.2 Fan header
- 1 x W_PUMP+ header
- 1 x VRM Heatsink Fan header

**Power Related**
- 1 x 24-pin Main Power connector
- 1 x 8-pin +12V Power connector
- 1 x 4-pin +12V Power connector

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

**USB**
- 1 x USB 3.2 Gen 2 Front Panel 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**
- 2 x AURA Addressable Gen 2 headers
- 2 x AURA RGB headers
- 1 x Clear CMOS 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

**ASUS Q-Design**
- ASUS Q-Code
- ASUS Q-DIMM
- ASUS Q-LED (CPU [red], DRAM [yellow], VGA [white], Boot Device [yellow green])
- ASUS Q-Slot

**ASUS Thermal Solution**
- Aluminum M.2 heatsink

**ASUS EZ DIY**
- BIOS FlashBack™ button
- BIOS FlashBack™ LED
- Procool II
- Pre-mounted I/O Shield
- SafeSlot

**Aura Sync**
- Standard RGB headers
- Addressable Gen 2 RGB headers

(continued on the next page)
## ROG STRIX Z490-E GAMING specifications summary

<table>
<thead>
<tr>
<th>Software Features</th>
<th>ROG Exclusive Software</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- RAMCache III</td>
</tr>
<tr>
<td></td>
<td>- ROG CPU-Z</td>
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<tr>
<td></td>
<td>- GameFirst VI</td>
</tr>
<tr>
<td></td>
<td>- Sonic Studio III + Sonic Studio Virtual Mixer</td>
</tr>
<tr>
<td></td>
<td>- Sonic Radar III</td>
</tr>
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<td></td>
<td>- DTS® Sound Unbound</td>
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<td></td>
<td>- Overwolf</td>
</tr>
<tr>
<td></td>
<td>- Anti-virus software</td>
</tr>
<tr>
<td></td>
<td><strong>ASUS Exclusive Software Features</strong></td>
</tr>
<tr>
<td></td>
<td>Armoury Crate</td>
</tr>
<tr>
<td></td>
<td>- Aura Creator</td>
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<tr>
<td></td>
<td>- Aura Sync</td>
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<tr>
<td></td>
<td>AI Suite 3</td>
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<tr>
<td></td>
<td>- 5-way Optimization with AI Overclocking</td>
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<td></td>
<td>- EZ update</td>
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<td></td>
<td>WinRAR</td>
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<td></td>
<td><strong>UEFI BIOS</strong></td>
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<td></td>
<td>AI Overclocking Guide</td>
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<tr>
<td></td>
<td>ASUS EZ DIY</td>
</tr>
<tr>
<td></td>
<td>- ASUS CrashFree BIOS 3</td>
</tr>
<tr>
<td></td>
<td>- ASUS EZ Flash 3</td>
</tr>
<tr>
<td></td>
<td>- ASUS UEFI BIOS EZ Mode</td>
</tr>
<tr>
<td></td>
<td>FlexKey</td>
</tr>
<tr>
<td>BIOS</td>
<td>192 (128+64) Mb Flash ROM, UEFI AMI BIOS</td>
</tr>
<tr>
<td>Manageability</td>
<td>WOL by PME, PXE</td>
</tr>
<tr>
<td>Operating System</td>
<td>Windows® 10 - 64 bit</td>
</tr>
<tr>
<td>Form Factor</td>
<td>ATX Form Factor</td>
</tr>
</tbody>
</table>

12 inch x 9.6 inch (30.5 cm x 24.4 cm)

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

<table>
<thead>
<tr>
<th>Configuration</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>A PCIEX16_1</td>
<td>x16</td>
<td>x8</td>
</tr>
<tr>
<td>PCIEX16_2</td>
<td>-</td>
<td>x8</td>
</tr>
<tr>
<td>B M.2_2</td>
<td>x4</td>
<td>x2</td>
</tr>
<tr>
<td>SATA_56</td>
<td>-</td>
<td>V</td>
</tr>
<tr>
<td>C M.2_1</td>
<td>SATA Mode</td>
<td>PCIe Mode</td>
</tr>
<tr>
<td>SATA_2</td>
<td>Disabled</td>
<td>Enabled</td>
</tr>
</tbody>
</table>

- When M.2_1 is operating in SATA device, SATA6G_2 will be disabled.
- M.2_2 shares bandwidth with SATA6G_56. When M.2_2 is populated SATA6G_56 will be disabled.
**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 Z490-E GAMING motherboard</td>
</tr>
<tr>
<td>Cables</td>
<td>1 x Addressable 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></td>
<td>1 x Thermistor cable pack</td>
</tr>
<tr>
<td>ROG Additional Cooling Kit</td>
<td>1 x Assistant fan(40mm)</td>
</tr>
<tr>
<td></td>
<td>1 x Screw package for cooling kit</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>1 x Cable ties pack</td>
</tr>
<tr>
<td></td>
<td>1 x M.2 Rubber Package</td>
</tr>
<tr>
<td></td>
<td>1 x M.2 SSD screw package</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>1 x ASUS 2x2 dual band Wi-Fi moving antennas</td>
</tr>
<tr>
<td>Installation Media</td>
<td>1 x Support DVD</td>
</tr>
<tr>
<td>Documentation</td>
<td>1 x User manual</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/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>Intel® LGA 1200 CPU</td>
<td>Intel® LGA 1200 compatible CPU Fan</td>
</tr>
<tr>
<td>DDR4 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.
1.2 Motherboard layout
<table>
<thead>
<tr>
<th>Layout contents</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CPU socket</td>
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<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>1-9</td>
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<tr>
<td>5. VRM Heatsink Fan header</td>
<td>1-10</td>
</tr>
<tr>
<td>6. Power connectors</td>
<td>1-11</td>
</tr>
<tr>
<td>7. M.2 slot</td>
<td>1-12</td>
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<tr>
<td>8. SATA 6GB/s port</td>
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<tr>
<td>9. USB 3.2 Gen 2 Front Panel connector</td>
<td>1-14</td>
</tr>
<tr>
<td>10. USB 3.2 Gen 1 header</td>
<td>1-14</td>
</tr>
<tr>
<td>11. USB 2.0 header</td>
<td>1-15</td>
</tr>
<tr>
<td>12. AURA Addressable Gen2 header</td>
<td>1-16</td>
</tr>
<tr>
<td>13. AURA RGB header</td>
<td>1-17</td>
</tr>
<tr>
<td>14. Clear CMOS header</td>
<td>1-18</td>
</tr>
<tr>
<td>15. CPU Over Voltage jumper</td>
<td>1-19</td>
</tr>
<tr>
<td>16. Front Panel Audio header</td>
<td>1-19</td>
</tr>
<tr>
<td>17. System Panel header</td>
<td>1-20</td>
</tr>
<tr>
<td>18. Thermal Sensor header</td>
<td>1-21</td>
</tr>
<tr>
<td>19. Thunderbolt header</td>
<td>1-22</td>
</tr>
<tr>
<td>20. Q-Code LED</td>
<td>1-23</td>
</tr>
<tr>
<td>21. Q-LEDs</td>
<td>1-24</td>
</tr>
<tr>
<td>22. 8-pin Power Plug LED</td>
<td>1-24</td>
</tr>
</tbody>
</table>
1. **CPU socket**

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

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

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

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

---

**Recommended memory configurations**

![DIMM configurations](image_url)
Memory configurations
You may install 2 GB, 4 GB, 8 GB, 16 GB, and 32 GB unbuffered and non-ECC DDR4 DIMMs into the DIMM sockets.

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

- The default memory operation frequency is dependent on its Serial Presence Detect (SPD), which is the standard way of accessing information from a memory module. Under the default state, some memory modules for overclocking may operate at a lower frequency than the vendor-marked value.

- For system stability, use a more efficient memory cooling system to support a full memory load or overclocking condition.

- Always install the DIMMS with the same CAS Latency. For an optimum compatibility, we recommend that you install memory modules of the same version or data code (D/C) from the same vendor. Check with the vendor to get the correct memory modules.

- Visit the ASUS website for the latest QVL.
3. Expansion slots

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

Please refer to the following tables for the recommended VGA configuration and Hyper M.2 configuration.
Recommended VGA configuration

<table>
<thead>
<tr>
<th>Slot Description</th>
<th>Single VGA</th>
<th>Dual VGA</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. PCIe 3.0 x16_1</td>
<td>x16</td>
<td>x8</td>
</tr>
<tr>
<td>4. PCIe 3.0 x16_2</td>
<td>N/A</td>
<td>x8</td>
</tr>
</tbody>
</table>

- We recommend that you provide sufficient power when running CrossFireX™ or SLI® mode.
- Ensure to connect the 8-pin and 4-pin power plugs when running CrossFireX™ or SLI® mode.
- Connect a chassis fan to the chassis fan connectors when using multiple graphics cards for better thermal environment.

Hyper M.2 X16 series card configuration

<table>
<thead>
<tr>
<th>Slot Description</th>
<th>Up to 2 Intel® SSD on CPU support</th>
<th>Up to 3 Intel® SSD on CPU support</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. PCIe 3.0 x16_1</td>
<td>-</td>
<td>x8+x4+x4</td>
</tr>
<tr>
<td>4. PCIe 3.0 x16_2</td>
<td>x4+x4</td>
<td>-</td>
</tr>
</tbody>
</table>

- Hyper M.2 X16 series card is purchased separately.
- When using up to 2 Intel® SSD on CPU support on PCIe 3.0 x16_2, PCIe 3.0 x16_1 will run at x8.
- When using up to 3 Intel® SSD on CPU support, PCIe 3.0 x16_2 will be disabled. If you wish to connect a display, we suggest using the internal VGA, or installing a VGA card to PCIe x16_3, which will run at x4.
- Enable the Hyper M.2 X16 series card under BIOS settings.
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 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>
</table>
5. **VRM Heatsink Fan header**

The VRM Heatsink fan header is for connecting the VRM Heatsink fan on the integrated heatsink. You may also install a VRM fan to a fan holder and connect it to the VRM Heatsink header to cool the VRM when the VRM’s temperature becomes too high.

Please refer to the *Additional cooling kit installation* section in Chapter 2 for more details on installing the fan bracket.
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.

![Diagram of power connectors]

Ensure to connect the 8-pin power plug.

- For a fully configured system, we recommend that you use a power supply unit (PSU) that complies with ATX 12V Specification 2.0 (or later version) and provides a minimum power of 350 W.

- We recommend that you use a PSU with a higher power output when configuring a system with more power-consuming devices. The system may become unstable or may not boot up if the power is inadequate.

- If you want to use two or more high-end PCI Express x16 cards, use a PSU with 1000W power or above to ensure the system stability.
7. **M.2 slot**

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

- M.2_1 slots support PCIe 3.0 x4 and SATA mode Key M design and type 2242 / 2260 / 2280 / 22110 storage devices.
- M.2_2 slot supports PCIe 3.0 x4 mode Key M design and type 2242 / 2260 / 2280 / 22110 storage devices.
- When M.2_1 is operating in SATA mode, SATA6G_2 will be disabled.
- M.2_2 shares bandwidth with SATA6G_56. When M.2_2 is populated SATA6G_56 will be disabled.
- M.2 slots supports IRST (Intel® Rapid Storage Technology).

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

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

If you installed SATA storage devices, you can create a RAID 0, 1, 5, and 10 configuration with the Intel® Rapid Storage Technology through the onboard Intel® Z490 chipset.

- The slots are set to [AHCI Mode] by default. If you intend to create a SATA RAID set using these connectors, set the SATA Mode item in the BIOS to [Intel RST Premium (RAID)].
- When M.2_1 is operating in SATA device, SATA6G_2 will be disabled.
- M.2_2 shares bandwidth with SATA6G_56. When M.2_2 is populated SATA6G_56 will be disabled.
- 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 2 Front Panel connector

The USB 3.2 Gen 2 connector allows you to connect a USB 3.2 Gen 2 module for additional USB 3.2 Gen 2 ports. The USB 3.2 Gen 2 connector provides data transfer speeds of up to 10 Gb/s.

The USB 3.2 Gen 2 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. **AURA Addressable Gen2 header**

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

![Diagram of AURA Addressable Gen2 header](image)

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 LED header**

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

The AURA RGB LED 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. Clear CMOS header

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

To erase the RTC RAM:

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

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

If the steps above do not help, remove the onboard button cell battery and move the jumper again to clear the CMOS RTC RAM data. After clearing the CMOS, reinstall the button cell battery.
15. **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.

16. **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.
17. **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 connector (CHASSIS)**
  The 2-pin connector 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 connector when a chassis component is removed or replaced, the signal is then generated as a chassis intrusion event.
18. 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.
19. Thunderbolt header

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

The add-on Thunderbolt I/O card and Thunderbolt cables are purchased separately.
20. **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.
21. **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.

22. **8-pin Power Plug LED**

The 8-pin Power Plug LED lights up to indicate that the 8-pin power plug is not connected.
Chapter 2: 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 LGA1200 socket only. DO NOT install a CPU designed for LGA1155, LGA1156, and LGA1151 sockets on the LGA1200 socket.

- ASUS will not cover damages resulting from incorrect CPU installation/removal, incorrect CPU orientation/placement, or other damages resulting from negligence by the user.
2.1.2 Cooling system installation

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

To install a CPU heatsink and fan assembly

1. Apply Thermal Interface Material (A) to the heatsink and fan assembly (B).
2. Attach the heatsink and fan assembly to the CPU.
3. Secure the assembly with screws (A).
4. Connect the power cable (B) to the CPU.
To install an AIO cooler

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

1

2

AIO_PUMP/
W_PUMP+

CPU_FAN

CPU_OPT

Chapter 2: Basic Installation
2.1.3 DIMM installation

1

2

3

To remove a DIMM

B

A
2.1.4 M.2 installation

- The M.2 rubber pad is optional for when installing a single sided M.2 storage device. Ensure to install the bundled M.2 rubber pad before installing your single sided M.2 storage device.

- DO NOT install the bundled M.2 rubber pads when installing a double-sided M.2 storage device. The rubber pad installed by default is compatible with double sided M.2 storage devices.
The M.2 is purchased separately.
2.1.5 Additional cooling kit installation

- When using high performance settings whilst overclocking, ensure to install the bundled fan onto the MOS fan holder.

- You may install 12V (1A, 12W), 40mm x 40mm fans.
- You may adjust the height of the fan holder to your preference when installing the fan holder.
- Ensure to use the bundled screws that came with your accessory.
2.1.6 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.
2.1.7 ATX power connection

1

2

- DO NOT connect the 4-pin power plug only, the motherboard may overheat under heavy usage.
- Ensure to connect the 8-pin power plug, or connect both the 8-pin and 4-pin power plugs.
2.1.8 SATA device connection

1 OR

2
2.1.9 Front I/O connector

To install Front Panel connector

To install USB 3.2 Gen 2 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
2.1.10 Expansion card installation

To install PCIe x16 cards

To install PCIe x1 cards
To install ThunderboltEX 3-TR card

Ensure to install the ThunderboltEX 3-TR 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 ThunderboltEX 3-TR card can support quick charging up to 100W.
- 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.
- The Thunderbolt card is sold separately.
2.1.11 Wi-Fi antenna installation

Installing the ASUS 2x2 dual band Wi-Fi antenna

Connect the bundled ASUS 2x2 dual band Wi-Fi antenna connector to the Wi-Fi ports at the back of the chassis.

• Ensure that the ASUS 2x2 dual band Wi-Fi 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 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. Simply insert a USB storage device to the USB port (the USB port hole marked in green on the I/O shield) then press the BIOS FlashBack™ button for three seconds to automatically update the BIOS.

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 SZ490E.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 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 short the CLR_CMOS header 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.
2.3 Motherboard rear and audio connections

2.3.1 Rear I/O connection

Rear panel connectors

1. DisplayPort
2. USB 2.0 ports 5, 6, 7, and 12
3. USB 3.2 Gen 1 Type-A ports 9 and 10
4. Intel® I225-V Ethernet port
5. Wi-Fi 6 (802.11 a/b/g/n/ac/ax), Bluetooth V5.1
6. HDMI™ port
7. BIOS FlashBack™ button
8. USB 3.2 Gen 2 Type-A ports 1 and 2
9. USB 3.2 Gen 2 Type-A port 3
10. USB 3.2 Gen 2 Type-C® port C4
11. Optical S/PDIF OUT port
12. Gold-plated audio jacks*

* Refer to the table on the next page for audio port definitions.

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

- Due to the design of the Intel chipset, all USB devices connected to the USB 3.2 Gen 1 ports are controlled by the xHCI controller. Some legacy USB devices must update their firmware for better compatibility.
**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.
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 manual refers to “UEFI BIOS” unless otherwise specified.

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

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

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

- When downloading or updating the BIOS file, rename it as **SZ490E.CAP** for this motherboard.
- BIOS settings and options may vary due to different BIOS release versions. Please refer to the latest BIOS version for settings and options.
3.2 BIOS setup program

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

Entering BIOS at startup

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

Entering BIOS Setup after POST

To enter BIOS Setup after POST:

- Press <Ctrl>+<Alt>+<Delete> simultaneously.
- Press the reset button on the system chassis.
- Press the power button to turn the system off then back on. Do this option only if you failed to enter BIOS Setup using the first two options.

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

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

BIOS menu screen

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

3.3 EZ Update

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

- EZ Update requires an Internet connection either through a network or an ISP (Internet Service Provider).
- This utility is available in the support USB drive that comes with the motherboard package.
3.4 ASUS EZ Flash 3
The ASUS EZ Flash 3 feature allows you to update the BIOS without using an OS-based utility.

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

To update the BIOS:

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

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

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

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

Recovering the BIOS

To recover the BIOS:

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

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

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

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

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</td>
<td>Reserved for future AMI codes</td>
</tr>
<tr>
<td>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>
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

Identification of the assembled product: INTEL® WI-FI 6 AX201
Model Name: INTEL® WI-FI 6 AX201 FCC ID: PD9AX201NG

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-3(B)/NMB-3(B)

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

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

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-3(B)/NMB-3(B)

VCCI: Japan Compliance Statement

Class B ITE

 KC: Korea Warning Statement

이 기기는 가정용 전자통신기기로 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.

*말해 무선설비는 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없습니다.
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NCC: Taiwan Wireless Statement

經型式認證合格之低功率射頻電機，非經許可，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。低功率射頻電機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。

前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機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かが、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 biphenyls (PBBs) and polybrominated diphenyl ethers (PBDEs) in concentrations exceeding 0.1% by weight in homogenous materials and 0.01% by weight in homogenous materials for cadmium, except for the exemptions listed in Schedule II of the Rule.

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

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

Turkey RoHS
AEEE Yönetmeliğine Uygundur

ASUS Recycling/Takeback Services
ASUS recycling and takeback programs come from our commitment to the highest standards for protecting our environment. We believe in providing solutions for you to be able to responsibly recycle our products, batteries, other components as well as the packaging materials. Please go to http://csr.asus.com/english/Takeback.htm for detailed recycling information in different regions.
DO NOT throw the motherboard in municipal waste. This product has been designed to enable proper reuse of parts and recycling. This symbol of the crossed out wheeled bin indicates that the product (electrical and electronic equipment) should not be placed in municipal waste. Check local regulations for disposal of electronic products.

DO NOT throw the mercury-containing button cell battery in municipal waste. This symbol of the crossed out wheeled bin indicates that the battery should not be placed in municipal waste.

Regional notice for California

WARNING

Cancer and Reproductive Harm -
www.P65Warnings.ca.gov
Forenklad EU-overensstemmelseserklæring

ASUSTeK Computer Inc. erklærer hermed at denne enhed er i overensstemmelse med hovedkravene og øvrige relevante bestemmelser i direktivet 2014/53/EU. EU-overensstemmelseserklæringen kan findes på https://www.asus.com/support/

Wi-Fi, der bruger 5150-5350 MHz skal begrænases til indendørs brug i lande, der er anført i tabellen.

Vereenigd Koninkrijk EU-conformiteitsverklaring

ASUSTeK Computer Inc. verklaar hierbij dat dit apparaat voldoet aan de essentiële vereisten en andere relevante bepalingen van Richtlijn 2014/53/EU. De volledige tekst van de EU-conformiteitsverklaring is beschikbaar op https://www.asus.com/support/

De WiFi op 5150-5350MHz zal beperkt zijn tot binnengebruik voor in de tabel vermelde landen:

Lihtsustatud EU-vastavusdeklaratsioon

Kaeasleva kinnitab ASUSTeK Computer Inc. et see vastab direktiivi 2014/53/EU olulistele nõutetele ja teistele asjakohastele sätetele. EL vastavusdeklaratsiooni täitestik on saadaval veebisaitil:

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

Sagedusvahemikus 5150-5350 MHz tõidav WiFi kasutamine on järgmistes niides kubardatud ainult siijas:

Europopa - EY:n vaatimustenmuutuksivakuutus

ASUSTeK Computer Inc. ilmoittaa tätä, että tämä laite on direktiivin 2014/53/EU olennaisen vaatimuksen ja muiden asianmukavuusliisien mukainen. Koko EY:nn vaatimustenmuutuksivakuutuksen luettelo on saatavilla osoitteessa:

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

5 150 - 5 350 MHz:in taajuudella toimiva WiFi on rajoitettu sisäkäyttöön:

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 2014/53/EU. Full 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:

Declaration simplifiée de conformité de l’UE

ASUSTeK Computer Inc. déclare par la présente que cet appareil est conforme aux critères essentiels et autres clauses pertinentes de la directive 2014/53/EU. La déclaration de conformité de l’UE peut être téléchargée à partir du site internet suivant : https://www.asus.com/support/

Dans la plage de fréquence 5150-5350 MHz, le Wi-Fi est restreint à un usage intérieur en dehors des pays listés dans le tableau ci-dessous:

Veireifachtigd EU-Konformitätserklärung


Der WLAN-Betrieb im Band von 5150-5350 MHz ist für die in der unteren Tabelle aufgeführten Länder auf den Innenbereich beschränkt:

Dichiarazione di conformità UE semplificata

ASUSTeK Computer Inc. con la presente dichiara che questo dispositivo è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti con la direttiva 2014/53/EU. Il testo completo della dichiarazione di conformità UE è disponibile all’indirizzo: https://www.asus.com/support/

L’utilizzo della rete Wi-Fi con frequenza compresa nell’intervallo 5150-5350MHz deve essere limitato all’interno degli edifici per i paesi presenti nella seguente tabella:

Упрощенное заявление о соответствии европейской директиве

ASUSTeK COMPUTER INC. заявляет, что устройство соответствует основным требованиям и другим соответствующим условиям директивы 2014/53/EU. Полный текст декларации соответствия ЕС доступен на:

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

Работа WiFi в диапазоне частот 5150-5350 должен быть ограничен для использования в помещениях для стран, перечисленных в таблице ниже:

Opravněná deklarace za účinnosti Evropské direktivy

ASUSTeK Computer Inc. deklaruje, že toto zařízení splňuje základní požadavky a další podmínky stanovené směrnicí 2014/53/EU. Plný text deklarace za účinnosti Evropské direktivy je dostupný na:

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

Podezdmena deklaração para a conformidade com a CE

ASUSTeK Computer Inc. declara que este dispositivo está em conformidade com os requisitos essenciais e outras disposições relevantes relacionadas às directivas 2014/53/EU. O texto completo da declaração de conformidade com a CE está disponível em https://www.asus.com/support/

O WiFi operando na banda 5150-5350 MHz deve ser restrito para uso interno para os países listados no tabela abaixo:

Pernyataan Kesesuaian UE yang Disederhanakan

ASUSTeK Computer Inc. dengan ini menyatakan bahwa perangkat ini memenuhi persyaratan utama dan ketentuan lain yang terdapat pada Petunjuk 2014/53/EU. Teks lengkap pernyataan kesesuaian UE tersedia di:

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

Wi-Fi yang Bergerak pada 5150-5350 MHz akan terbatas untuk penggunaan dalam naungan di negara yang tercantum dalam tabel

Vereenvoudigd EU-conformiteitsverklaring

ASUSTeK Computer Inc. verklaart hierbij dat dit apparaat voldoet aan de essentiële vereisten en andere relevante bepalingen van Richtlijn 2014/53/EU. De volledige tekst van de EU-conformiteitsverklaring is beschikbaar op https://www.asus.com/support/

De WiFi op 5150-5350MHz zal beperkt zijn tot binnengebruik voor in de tabel vermelde landen:

Vereenvoudigd EU-conformiteitsverklaring

ASUSTeK Computer Inc. verklaart hierbij dat dit apparaat voldoet aan de essentiële vereisten en andere relevante bepalingen van Richtlijn 2014/53/EU. De volledige tekst van de EU-conformiteitsverklaring is beschikbaar op https://www.asus.com/support/

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De WiFi op 5150-5350MHz zal beperkt zijn tot binnengebruik voor in de tabel vermelde landen:
Suprapristina ES atitikties deklaracija

Forenklet EU-samsvarerklæring
ASUSTek Computer Inc. erklærer herved at denne enheten er i samsvar med hovedreglerne og andre relevante forskrifter i direktivet 2014/34/EU. Fullständig tekst for EU-samsvarerklæringen finnes på: https://www.asus.com/support/

WiFi som använder 5150-5350 MHz kommer att begränsas för användning
2014/53/EU. fullständig text av EU-försäkran om överensstämmelse finns på https://www.asus.com/support/

BT-ställningssändare AB Yumuluk Bildirimi

Simplified EU declaration of conformity
ASUSTek Computer Inc. declares that this device is in conformity with the essential requirements and other relevant provisions of Directive 2014/53/EU. The full text declaration of conformity for this device is available at: https://www.asus.com/support/

Déclaration de Conformité Simplificada da UE
A ASUSTek Computer Inc. declara que este dispositivo está em conformidade com os requisitos essenciais e outras disposições relevantes da Diretiva 2014/34/UE. O texto integral da declaração de conformidade da UE está disponível em https://www.asus.com/support/

Declaración de Conformidad Simplificada de la UE
Prin prezenta, ASUSTek Computer Inc. declară că acest dispozitiv este în conformitate cu regulamentele esențiale și cu celelalte prevederi relevante ale Directivel 2014/34/UE. Textul complet al declarației de conformitate UE este disponibil la adresa https://www.asus.com/support/

Declaración de conformidad UE, versión simplificada
Asi como lo dispone la normativa europea de 2014/53/UE, ASUSTek Computer Inc. declara que este dispositivo cumple con los requisitos esenciales y otras disposiciones pertinentes de la Directiva 2014/34/UE. Puede leer el texto completo de la declaración de conformidad UE en: https://www.asus.com/support/

A utilização das frequências WiFi de 5150 a 5350 MHz está restrita a
2014/53/EU. O texto completo da declaração de conformidade UE está disponível em https://www.asus.com/support/

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

Declaración de conformidad simplificada para la UE
Por la presente, ASUSTek Computer Inc. declara que este dispositivo cumple con los requisitos esenciales y otras disposiciones pertinentes de la Directiva 2014/53/UE. Puede leer el texto completo de la declaración de conformidad para la UE en: https://www.asus.com/support/

Primo jarije listate in tabeli de mai joi, rețelele WiFi care funcționează în banda de frecvență de 5.150-5.350 MHz trebuie utilizate doar în interior:
https://www.asus.com/support/

Poenotvájį įjūra EU apie skaitmeninio esmės

Zjednodušená vyhlášení o zhode platné pre EÚ
Spoľahlivosť ASUSTek Computer Inc. týmto vyhlasuje, že toto zariadenie je v zhode s príslušnými nariadeniami a inými základnými ustanoveniami smernice č. 2014/53/EU. Plné znímenie vyhlásenia o zhode pre EÚ je k dispozícii na lokalite https://www.asus.com/support/

Chinnos WiFi na pásme 5150 - 5350 MHz bude obmedzena na použitie vo vnútornom prostredí pre krajiny uvedené v tabuľke nižšie:
https://www.asus.com/support/

Poenotvájį įjūra EU apie skaitmeninio esmės

Zjednodušená vyhlášení o zhode platné pro EÚ
Spoločnosť ASUSTek Computer Inc. týmto oznámením vyhlasuje, že tohto zariadenia je v zhode s príslušnými nariadeniami a inými základnými ustanoveniami smernice č. 2014/53/EU. Plné znímenie vyhlásenia o zhode pre EÚ je na lokalite https://www.asus.com/support/

Possedotvájį įjūra EU apie skaitmeninio esmės

Zjednodušená vyhlášení o zhode platné pro EÚ
ASUSTek Computer Inc. toto zariadenie je v zhode s príslušnými nariadeniami a inými základnými ustanoveniami smernice č. 2014/53/EU. Plné znímenie vyhlásenia o zhode pre EÚ je na lokalite https://www.asus.com/support/

Zjednodušená vyhlášení o zhode platné pro EÚ
ASUSTek Computer Inc. tímto vyhlasuje, že toto zariadenie je v zhode s príslušnými nariadeniami a inými základnými ustanoveniami smernice č. 2014/53/EU. Plné znímenie vyhlásenia o zhode pre EÚ je na lokalite https://www.asus.com/support/

Possedotvájį įjūra EU apie skaitmeninio esmės

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Possedotvájį įjūra EU apie skaitmeninio esmės

Possedotvájį įjūra EU apie skaitmeninio esmės
## ASUS contact information

### ASUSTeK COMPUTER INC.

<table>
<thead>
<tr>
<th>Address</th>
<th>1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone</td>
<td>+886-2-2894-3447</td>
</tr>
<tr>
<td>Fax</td>
<td>+886-2-2890-7798</td>
</tr>
<tr>
<td>Web site</td>
<td><a href="https://www.asus.com">https://www.asus.com</a></td>
</tr>
</tbody>
</table>

**Technical Support**

<table>
<thead>
<tr>
<th>Telephone</th>
<th>+86-21-38429911</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online support</td>
<td><a href="https://qr.asus.com/techserv">https://qr.asus.com/techserv</a></td>
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### ASUS COMPUTER INTERNATIONAL (America)

<table>
<thead>
<tr>
<th>Address</th>
<th>48720 Kato Rd., Fremont, CA 94538, USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone</td>
<td>+1-510-739-3777</td>
</tr>
<tr>
<td>Fax</td>
<td>+1-510-608-4555</td>
</tr>
<tr>
<td>Web site</td>
<td><a href="https://www.asus.com/us/">https://www.asus.com/us/</a></td>
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</table>

**Technical Support**

<table>
<thead>
<tr>
<th>Support fax</th>
<th>+1-812-284-0883</th>
</tr>
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<tbody>
<tr>
<td>Telephone</td>
<td>+1-812-282-2787</td>
</tr>
<tr>
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</tr>
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</table>

### ASUS COMPUTER GmbH (Germany and Austria)

<table>
<thead>
<tr>
<th>Address</th>
<th>Harkortstrasse 21-23, 40880 Ratingen, Germany</th>
</tr>
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<tbody>
<tr>
<td>Web site</td>
<td><a href="https://www.asus.com/de">https://www.asus.com/de</a></td>
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<tr>
<td>Online contact</td>
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**Technical Support**

<table>
<thead>
<tr>
<th>Telephone (DE)</th>
<th>+49-2102-5789557</th>
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<tbody>
<tr>
<td>Telephone (AT)</td>
<td>+43-1360-2775461</td>
</tr>
<tr>
<td>Online support</td>
<td><a href="https://www.asus.com/de/support">https://www.asus.com/de/support</a></td>
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