

**TUF B360-PRO
GAMING (WI-FI)**

ASUS®

Motherboard

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Safety information

Electrical safety

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

Operation safety

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

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 descriptions of the switches, jumpers, and connectors on the motherboard.
- **Chapter 2: BIOS Information**
This chapter discusses changing system settings through the BIOS Setup menus.

Where to find more information

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

1. ASUS website

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

2. Optional documentation

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

Conventions used in this guide

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



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



CAUTION: Information to prevent damage to the components when trying to complete a task.



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



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

Typography

Bold text

Indicates a menu or an item to select.

Italics

Used to emphasize a word or a phrase.

<Key>

Keys enclosed in the less-than and greater-than sign means that you must press the enclosed key.

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

<Key1> + <Key2> + <Key3>

If you must press two or more keys simultaneously, the key names are linked with a plus sign (+).

Package contents

Check your motherboard package for the following items.

| | |
|------------------------|---|
| Motherboard | 1 x ASUS TUF B360-PRO GAMING (WI-FI) motherboard |
| Cables | 2 x SATA 6 Gb/s cables |
| | 1 x IO Shield |
| | 2 x M.2 Screw Package |
| Accessories | 1 x ASUS 2T2R dual band Wi-Fi moving antennas (Wi-Fi 802.11 a/b/g/n/ac compliant) |
| | 1 x CPU Installation Tool |
| Application DVD | 1 x Support DVD |
| | 1 x User manual |
| Documentation | 1 x TUF Certification card(s) |
| | 1 x TUF GAMING sticker |



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

ASUS TUF B360-PRO GAMING (WI-FI) specifications summary

| | |
|--------------------------|--|
| CPU | LGA1151 socket for 8th Gen Intel® Core™ Processor Supports 14nm CPU Supports Intel® Turbo Boost Technology 2.0* * The Intel® Turbo Boost Technology 2.0 support depends on the CPU types. ** Refer to www.asus.com for Intel® CPU support list. |
| Chipset | Intel® B360 Chipset |
| Memory | 4 x DIMM, max. 64GB, DDR4 2666/2400/2133 MHz, non-ECC, un-buffered memory Dual channel memory architecture Supports Intel® Extreme Memory Profile (XMP) * DDR4 2666 MHz and higher memory modules will run at max. 2666 MHz on Intel® 8th Gen. 6-core or higher processors. ** Refer to www.asus.com for the latest Memory QVL (Qualified Vendors List). |
| Expansion slots | 1 x PCIe 3.0/2.0 x16 slot 1 x PCIe 3.0/2.0 x16 slot (max. at x4 mode) 4 x PCIe 3.0/2.0 x1 slots |
| Multi-GPU support | Supports AMD® 2-Way/Quad-GPU CrossFireX™ Technology |
| VGA | Integrated Graphics Processor- Intel® HD Graphics support Multi-VGA output support: HDMI/D-sub ports - Supports HDMI 1.4b with max. resolution 4096 x 2160 @ 24Hz / 2560 x 1600 @ 60Hz - Supports D-sub with max. resolution 1920*1200 @ 60Hz Supports Intel® InTru™ 3D/Quick Sync Video/Clear Video HD Technology/ Insider™ Maximum shared memory of 1024 MB (for iGPU exclusively) |

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ASUS TUF B360-PRO GAMING (WI-FI) specifications summary

| | |
|-------------------------------|--|
| Storage | <p>Intel® B360 Chipset</p> <ul style="list-style-type: none"> - 1 x M.2_1 Socket 3 with M Key, type 2242/2260/2280 storage devices support (both SATA & PCIE x2 mode)* - 1 x M.2_2 Socket 3 with M Key, type 2242/2260/2280/22110 storage devices support (PCIE x4 mode) - 6 x SATA 6.0 Gb/s ports - Ready for Intel® Optane Memory <p>* The M.2_1 socket shares SATA_2 port when using M.2 SATA mode devices. Adjust BIOS settings to use a SATA device.</p> |
| Wireless | <p>Intel® Wireless-AC 9560</p> <p>Wi-Fi 802.11 a/b/g/n/ac</p> <p>Supports dual band frequency 2.4/5 GHz</p> <p>Supports channel bandwidth: HT20/HT40/HT80/HT160</p> <p>Supports MU-MIMO</p> |
| Bluetooth | <p>Bluetooth V5.0</p> |
| LAN | <p>Intel® I219-V Gigabit LAN</p> <ul style="list-style-type: none"> - Dual interconnect between the integrated Media Access Controller (MAC) and physical layer (PHY) <p>TUF LANGuard</p> <p>ASUS Turbo LAN Utility</p> |
| Audio | <p>Realtek® ALC887 8-channel* high definition audio CODEC</p> <ul style="list-style-type: none"> - Exclusive DTS Custom for GAMING Headsets - Audio Shielding: Ensures precision analog/digital separation and greatly reduces multi-lateral interference - Dedicated audio PCB layers: Separate layers for left and right channels to guard the quality of the sensitive audio signals - Premium Japanese audio capacitors: Provide warm, natural and immersive sound with exceptional clarity and fidelity. - Supports jack-detection and front panel jack-retasking |
| Exclusive TUF Gaming Features | <p>TUF Armor</p> <p>TUF Components (TUF Cap, TUF Chokes, MOSFET & LANGuard ; certified by military-standard)</p> <p>ASUS TUF PROTECTION</p> <ul style="list-style-type: none"> - ASUS SafeSlot Core: Fortified PCIe with solid soldering - ASUS ESD Guard: Enhanced ESD protection - ASUS Overvoltage Protection: World-class circuit-protecting power design - ASUS Stainless-Steel Back I/O: 3X corrosion-resistance for greater durability! - ASUS DIGI+ VRM: 4+2 Phase digital power design <p>ASUS SafeSlot</p> <p>Exclusive DTS Custom for GAMING Headsets</p> <p>Turbo LAN</p> |

(continued on the next page)

ASUS TUF B360-PRO GAMING (WI-FI) specifications summary

| | |
|--|--|
| ASUS Special Features | <p>Superb Performance</p> <p>M.2 onboard</p> <ul style="list-style-type: none"> - The latest transfer technologies with up to 32Gb/s data transfer speeds <p>ASUS Fan Xpert 4 Core</p> <ul style="list-style-type: none"> - Advanced fan and liquid controls for ultimate cooling and quietness <p>ASUS EPU</p> <ul style="list-style-type: none"> - EPU <p>ASUS Exclusive Features</p> <ul style="list-style-type: none"> - AURA Sync - ASUS Ai Charger - ASUS AI Suite 3 <p>EZ DIY</p> <p>EZ Update</p> <p>UEFI BIOS EZ Mode</p> <ul style="list-style-type: none"> - Featuring friendly graphics user interface - ASUS CrashFree BIOS 3 - ASUS EZ Flash 3 <p>File Transfer</p> <ul style="list-style-type: none"> - Cloud GO! - File Transfer <p>Q-Design</p> <ul style="list-style-type: none"> - ASUS Q-LED (CPU, DRAM, VGA, Boot Device LED) - ASUS Q-Slot - ASUS Q-DIMM |
| USB | <p>Intel® B360 Chipset</p> <ul style="list-style-type: none"> - 2 x USB 3.1 Gen 2 ports up to 10Gbps at back panel (Type-A) - 3 x USB 3.1 Gen 1 ports up to 5Gbps (2 ports @mid-board; 1 ports @back panel <1C>) - 6 x USB 2.0 ports (2 ports @mid-board; 4 ports @back panel) |
| ASUS Quiet Thermal Solution | <ul style="list-style-type: none"> - ASUS Fan Xpert 4 Core - Stylish Fanless Design: PCH Heat-sink & MOS Heat-sink |
| Back Panel I/O Ports | <ul style="list-style-type: none"> 1 x D-sub port 1 x HDMI port 1 x PS/2 combo port 1 x LAN (RJ45) port 2 x USB 3.1 Gen 2 ports (Type-A) 1 x USB 3.1 Gen 1 Type-C™ port 4 x USB 2.0 ports 8-channel Audio I/O ports |

(continued on the next page)

ASUS TUF B360-PRO GAMING (WI-FI) specifications summary

| | |
|--------------------------------|---|
| Internal I/O Connectors | <ul style="list-style-type: none"> 1 x USB 3.1 Gen 1 connector supports additional 2 USB ports (19-pin) 1 x USB 2.0 connector supports additional 2 USB ports 1 x M.2_1 Socket 3 (for M Key, type 2242/2260/2280 devices) 1 x M.2_2 Socket 3 (for M Key, type 2242/2260/2280/22110 devices) 6 x SATA 6.0Gb/s connectors 1 x CPU Fan connector (support DC/PWM mode) 1 x AIO_Pump header (4-pin) 2 x Chassis Fan connectors (4-pin) for both 3-pin(DC mode) and 4-pin(PWM mode) coolers control 1 x Front panel audio connector (AAFP) 1 x 24-pin EATX Power connector 1 x 8-pin EATX 12V Power connector 1 x System Panel 1 x COM port 1 x S/PDIF header 1 x RGB header 1 x Clear CMOS jumper |
| BIOS | 128 Mb Flash ROM, UEFI AMI BIOS, PnP, DMI3.0, WfM2.0, SM BIOS 3.1, ACPI 6.1, Multi-language BIOS, ASUS EZ Flash 3, CrashFree BIOS 3, F6 Qfan Control, F3 My Favorites, F4 AURA ON/OFF, F9 Search, Last Modified log, F12 PrintScreen, and ASUS DRAM SPD (Serial Presence Detect) memory information |
| Manageability | WfM 2.0, DMI 3.0, WOL by PME, PXE |
| Support DVD | <ul style="list-style-type: none"> Drivers ASUS Utilities ASUS EZ Update Anti-virus software (OEM version) |
| OS Support | Windows® 10 (64-bit) |
| Form factor | ATX form factor: 12.0 in. x 9.6 in. (30.5 cm x 24.4 cm) |



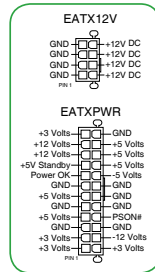
Specifications are subject to change without notice.

1.2.1 Layout contents

| Connectors/Jumpers/Slots | | Page |
|--------------------------|---|------|
| 1. | ATX power connectors (24-pin EATXPWR, 8-pin EATX12V) | 1-2 |
| 2. | Intel® LGA1151 CPU socket | 1-3 |
| 3. | CPU, chassis, and AIO pump fan connectors (4-pin CPU_FAN, 4-pin CHA_FAN1~2, 4-pin AIO_PUMP FAN) | 1-3 |
| 4. | DDR4 DIMM slots | 1-3 |
| 5. | USB 3.1 Gen 1 connector (20-1 pin U31G1_56) | 1-3 |
| 6. | M.2 sockets (M.2_1; M.2_2) | 1-4 |
| 7. | Intel® B360 Serial ATA 6.0 Gb/s connector (7-pin SATA6G_1~6) | 1-4 |
| 8. | System panel connector (20-3 pin PANEL) | 1-4 |
| 9. | Clear RTC RAM (2-pin CLRRTC) | 1-5 |
| 10. | USB 2.0 connector (10-1 pin USB411) | 1-5 |
| 11. | AURA RGB header (4-pin RGB_HEADER) | 1-5 |
| 12. | Serial port connector (10-1 pin COM) | 1-5 |
| 13. | Front panel audio connector (10-1 pin AAFP) | 1-6 |
| 14. | Digital audio connector (4-1 pin SPDIF_OUT) | 1-6 |
| 15. | PCI Express 3.0/2.0 x1 slots | 1-6 |
| 16. | PCI Express 3.0/2.0 x16 slots | 1-6 |

1 ATX power connectors (24-pin EATXPWR, 8-pin EATX12V)

Correctly orient the ATX power supply plugs into these connectors and push down firmly until the connectors completely fit.



- For a fully configured system, we recommend that you use a power supply unit (PSU) that complies with ATX 12 V Specification 2.0 (or later version) and provides a minimum power of 350 W. This PSU type has 24-pin and 8-pin power plugs.
- We recommend that you use a PSU with higher power output when configuring a system with more power-consuming devices or when you intend to install additional devices. The system may become unstable or may not boot up if the power is inadequate.

2 Intel® LGA1151 CPU socket

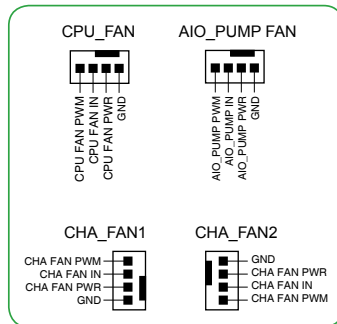
Install Intel® LGA1151 CPU into this surface mount LGA1151 socket, which is designed for 8th Generation Intel® Core™ i7 / i5 / i3, Pentium®, and Celeron® processors.



For more details, refer to **1.3 Central Processing Unit (CPU)**.

3 CPU, chassis, and AIO pump fan connectors (4-pin CPU_FAN, 4-pin CHA_FAN1~2, 4-pin AIO_PUMP FAN)

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



4 DDR4 DIMM slots

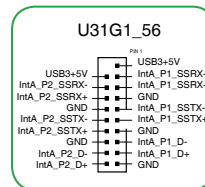
Install 2 GB, 4 GB, 8 GB, and 16 GB unbuffered non-ECC DDR4 DIMMs into these DIMM sockets.



For more details, refer to **1.4 System memory**.

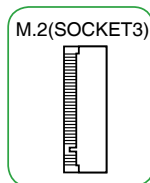
5 USB 3.1 Gen 1 connector (20-1 pin U31G1_56)

Connect a USB 3.1 Gen 1 module to any of these connectors for additional USB 3.1 Gen 1 front or rear panel ports. These connectors comply with USB 3.1 Gen 1 specifications and provides faster data transfer speeds of up to 5 Gbps, faster charging time for USB-chargeable devices, optimized power efficiency, and backward compatibility with USB 2.0



6 M.2 sockets (M.2_1; M.2_2)

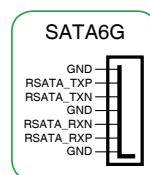
These sockets allow you to install M.2 (NGFF) SSD modules.



- The M.2_1 socket supports M Key and 2242/2260/2280 storage devices (both SATA & PCIE x2 mode), and supports data transfer speed of up to 16Gb/s.
- The M.2_2 socket supports M Key and 2242/2260/2280/22110 storage devices (PCIE x4 mode), and supports data transfer speed of up to 32Gb/s.
- When a device in SATA mode is installed on the M.2_1 socket, SATA_2 port cannot be used.

7 Intel® B360 Serial ATA 6.0Gb/s connectors (7-pin SATA6G_1-6)

These connectors connect to Serial ATA 6.0 Gb/s hard disk drives via Serial ATA 6.0 Gb/s signal cables.



8 System panel connector (20-3 pin PANEL)

This connector supports several chassis-mounted functions.

• System power LED (4-pin PWR_LED)

This 4-pin connector is for the system power LED. Connect the chassis power LED cable to this connector. The system power LED lights up when you turn on the system power, and blinks when the system is in sleep mode.

• System power LED (2-pin or 3-1 pin PLED)

The 2-pin or 3-1 pin connector is for the system power LED.

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

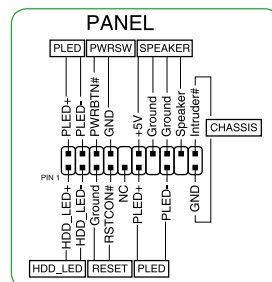
This 2-pin connector is for the HDD Activity LED.

• System warning speaker (4-pin SPEAKER)

This 4-pin connector is for the chassis-mounted system warning speaker.

• ATX power button/soft-off button (2-pin PWR_SW)

This connector is for the system power button.



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

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

- **Chassis intrusion connector (2-pin CHASSIS)**

This connector is for a chassis-mounted intrusion detection sensor or switch.

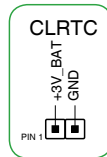
9

Clear RTC RAM (2-pin CLRRTC)

This header allows you to clear the CMOS RTC RAM data of the system setup information such as date, time, and system passwords.

To erase the RTC RAM:

1. Turn OFF the computer and unplug the power cord.
2. Use a metal object such as a screwdriver to short the two pins.
3. Plug the power cord and turn ON the computer.
4. Hold down the key during the boot process and enter BIOS setup to re-enter data.

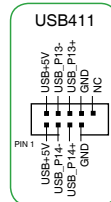


If the steps above do not help, remove the onboard battery and short the two pins again to clear the CMOS RTC RAM data. After clearing the CMOS, reinstall the battery.

10

USB 2.0 connector (10-1 pin USB411)

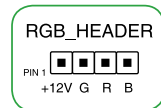
Connect a USB module cable to this connector, then install the module to a slot opening at the back of the system chassis. This USB connectors comply with USB 2.0 specifications and supports up to 480Mbps connection speed.



11

AURA RGB header (4-pin RGB_HEADER)

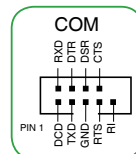
These connectors are for RGB LED strips.



12

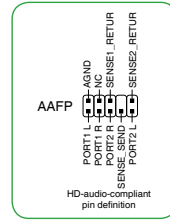
Serial port connector (10-1 pin COM)

This connector is for a serial (COM) port. Connect the serial port module cable to this connector, then install the module to a slot opening at the back of the system chassis.



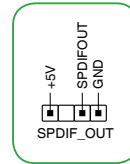
13 Front panel audio connector (10-1 pin AAFP)

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



14 Digital audio connector (4-1 pin SPDIF_OUT)

This connector is for an additional Sony/Philips Digital Interface (S/PDIF) port. Connect the S/PDIF Out module cable to this connector, then install the module to a slot opening at the back of the system chassis.



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 PCI Express 3.0/2.0 x1 slots

This motherboard has four PCI Express 3.0/2.0 x1 slots that support PCI Express x1 network cards, SCSI cards, and other cards that comply with the PCI Express specifications.

16 PCI Express 3.0/2.0 x16 slots

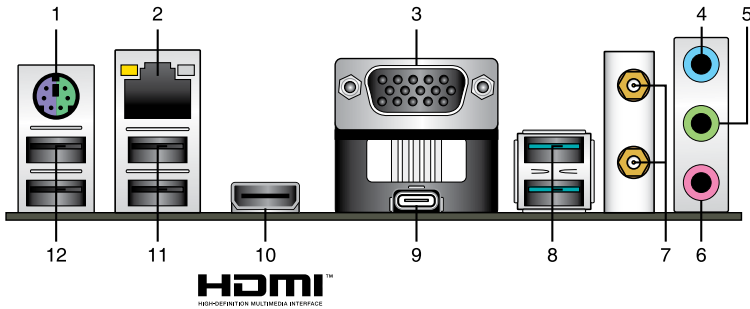
This motherboard supports two PCI Express 3.0/2.0 x16 graphic cards that comply with the PCI Express specifications. Actual PCI Express speeds varies per BIOS settings.

| VGA/PCIe card configuration | PCI Express operating mode | |
|-----------------------------|--|---|
| | PCIe 3.0 x16_1 (gray) | PCIe 3.0 x16_2 |
| Single VGA/PCIe card | x16 (Recommended for single VGA card) | N/A (x4 still available for other PCIe card) |
| Dual VGA/PCIe cards | x16 | x4 |



- In single VGA card mode, use the PCIe 3.0 x16_1 slot (gray) for a PCI Express x16 graphics card to get better performance.
- We recommend that you provide sufficient power when running CrossFire™ mode.
- Connect a chassis fan to the motherboard connector labeled CHA_FAN1/2 when using multiple graphics cards for better thermal environment.

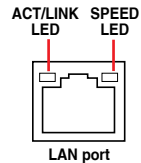
1.2.2 Rear panel connectors



1. **PS/2 Mouse/Keyboard combo port.** This port connects to a PS/2 mouse or PS/2 keyboard.
2. **LAN (RJ-45) port.** This port allows Gigabit connection to a Local Area Network (LAN) through a network hub.

LAN port LED indications

| Activity/Link LED | | Speed LED | |
|-------------------------------|------------------------------------|-----------|--------------------|
| Status | Description | Status | Description |
| Off | No link | OFF | 10Mbps connection |
| Orange | Linked | ORANGE | 100Mbps connection |
| Orange (Blinking) | Data activity | GREEN | 1Gbps connection |
| Orange (Blinking then steady) | Ready to wake Wake up from S5 mode | | |



3. **D-sub port.** This port is for a VGA monitor or other VGA compatible devices.
4. **Line In port (light blue).** This port connects to the tape, CD, DVD player, or other audio sources.
5. **Line Out port (lime).** This port connects to a headphone or a speaker. In the 4, 5.1 and 7.1-channel configurations, the function of this port becomes Front Speaker Out.
6. **Microphone port (pink).** This port connects to a microphone.



Refer to the audio configuration table for the function of the audio ports in 2, 4, 5.1, or 7.1-channel configuration.

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

| Port | Headset 2-channel | 4-channel | 5.1-channel | 7.1-channel |
|-------------------------|-------------------|-------------------|-------------------|-------------------|
| Light Blue (Rear panel) | Line In | Rear Speaker Out | Rear Speaker Out | Rear Speaker Out |
| Lime (Rear panel) | Line Out | Front Speaker Out | Front Speaker Out | Front Speaker Out |
| Pink (Rear panel) | Mic In | Mic In | Bass/Center | Bass/Center |
| Lime (Front panel) | - | - | - | Side Speaker Out |



To configure a 7.1-channel audio output:

Use a chassis with HD audio module in the front panel to support a 7.1-channel audio output.

7. **Wi-Fi 802.11 a/b/g/n/ac, Bluetooth 5.0 ports.** Connect the ASUS 2T2R dual band Wi-Fi moving antennas to these ports.
8. **USB 3.1 Gen 2 Type-A ports.** These 9-pin Universal Serial Bus 3.1 (USB 3.1) ports are for USB 3.1 Gen 2 devices.

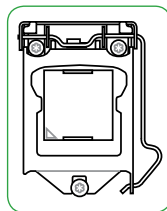


- Due to the limitation of USB 3.1 Gen 2 and USB 3.1 Gen 1 controller, USB 3.1 Gen 2 and USB 3.1 Gen 1 devices can only be used under Windows OS environment and after the USB 3.1 Gen 2 and USB 3.1 Gen 1 driver installation.
 - We strongly recommend that you connect USB 3.1 Gen 2 and USB 3.1 Gen 1 devices to USB 3.1 Gen 2 and USB 3.1 Gen 1 ports for faster and better performance from your USB 3.1 Gen 2 and USB 3.1 Gen 1 devices.
-

9. **USB 3.1 Gen 1 Type-C™ port.** This 24-pin Universal Serial Bus (USB) port is for USB (Type C) devices.
10. **HDMI port.** This port is for a High-Definition Multimedia Interface (HDMI) connector, and is HDCP compliant allowing playback of HD DVD, Blu-ray, and other protected content.
11. **USB 2.0 ports.** These 4-pin Universal Serial Bus (USB) ports are for USB 2.0/1.1 devices.
12. **USB 2.0 ports.** These 4-pin Universal Serial Bus (USB) ports are for USB 2.0/1.1 devices.

1.3 Central Processing Unit (CPU)

This motherboard comes with a surface mount LGA1151 socket designed for the 8th Generation Intel® Core™ i7 / Core™ i5 / Core™ i3, Pentium® and Celeron® processors.

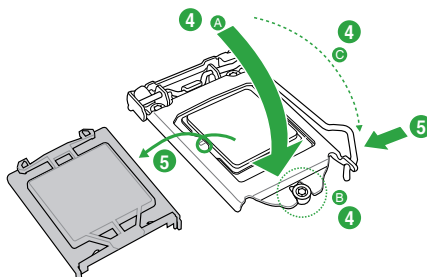
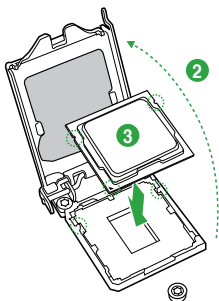
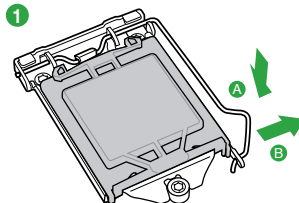
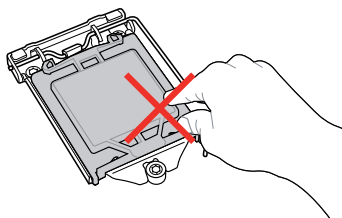


Unplug all power cables before installing the CPU.



- Ensure that you install the correct CPU designed for the LGA1151 socket only. DO NOT install a CPU designed for LGA1150, LGA1155 and LGA1156 sockets on the LGA1151 socket.
- Upon purchase of the motherboard, ensure that the PnP cap is on the socket and the socket contacts are not bent. Contact your retailer immediately if the PnP cap is missing, or if you see any damage to the PnP cap/socket contacts/motherboard components.
- Keep the cap after installing the motherboard. ASUS will process Return Merchandise Authorization (RMA) requests only if the motherboard comes with the cap on the LGA1151 socket.
- The product warranty does not cover damage to the socket contacts resulting from incorrect CPU installation/removal, or misplacement/loss/incorrect removal of the PnP cap.

Installing the CPU

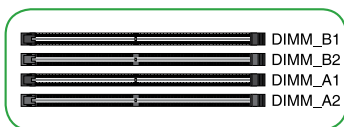


Apply the Thermal Interface Material to the CPU heatsink and CPU before you install the heatsink and fan if necessary.

1.4 System memory

Overview

This motherboard comes with four Double Data Rate 4 (DDR4) Dual Inline Memory Module (DIMM) sockets. The figure illustrates the location of the DDR4 DIMM sockets:



| Channel | Sockets |
|-----------|-------------------|
| Channel A | DIMM_A1 & DIMM_A2 |
| Channel B | DIMM_B1 & DIMM_B2 |

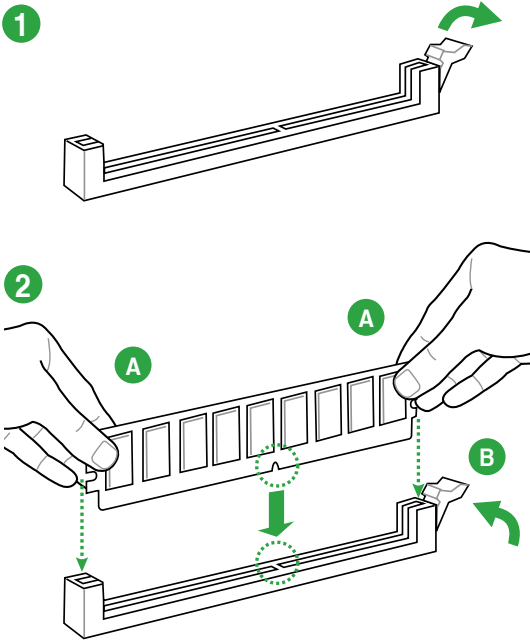


- You may install varying memory sizes in Channel A and Channel B. The system maps the total size of the lower-sized channel for the dual-channel configuration. Any excess memory from the higher-sized channel is then mapped for single-channel operation.
- Always install DIMMs with the same CAS latency. For optimal compatibility, we recommend that you install memory modules of the same version or date code (D/C) from the same vendor. Check with the retailer to get the correct memory modules.
- According to Intel® CPU spec, DIMM voltage below 1.35V is recommended to protect the CPU.
- Due to Intel® chipset limitation, DDR4 2666MHz and higher memory modules will run at max. 2666MHz on Intel® 8th Gen. 6-core or higher processors.

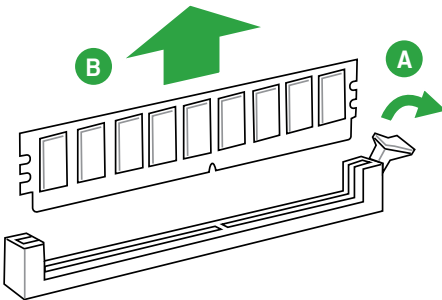


- The default memory operation frequency is dependent on its Serial Presence Detect (SPD), which is the standard way of accessing information from a memory module. Under the default state, some memory modules for overclocking may operate at a lower frequency than the vendor-marked value.
- For system stability, use a more efficient memory cooling system to support a full memory load (4 DIMMs).
- Refer to www.asus.com for the latest Memory QVL (Qualified Vendors List)

Installing a DIMM



To remove a DIMM



BIOS Information

2

2.1 Managing and updating your BIOS



Save a copy of the original motherboard BIOS file to a USB flash disk in case you need to restore the BIOS in the future. Copy the original motherboard BIOS using the ASUS Update utility.

2.1.1 EZ Update

EZ Update is a utility that allows you to automatically update your motherboard's softwares, drivers and the BIOS version easily. With this utility, you can also manually update the saved BIOS and select a boot logo when the system goes into POST.

To launch EZ Update, click **EZ Update** on the AI Suite 3 main menu bar.

The screenshot shows the ASUS EZ Update utility window. It features a dark blue background with white text. At the top right, it displays 'Current BIOS' information: Model Name: Z170K, Version: 302, Release Date: 05/22/2015. Below this, there are two main sections: 'Check updates from internet:' with a 'Check Now!' button, and 'Manually update Boot logo or BIOS:' with a text box and a '...' button. At the bottom right, there are three buttons: 'Selected BIOS', 'Selected Boot Logo', and 'Update BIOS'. Red lines with text annotations point to these elements: 'Click to automatically update your motherboard's driver, software and firmware' points to the 'Check Now!' button; 'Click to find and select the BIOS from file' points to the '...' button; 'Click to select a boot logo' points to the 'Selected Boot Logo' button; and 'Click to update the BIOS' points to the 'Update BIOS' button.



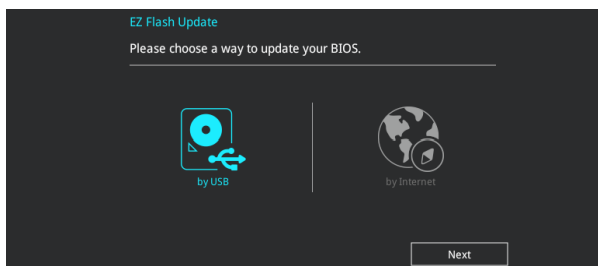
EZ Update requires an Internet connection either through a network or an ISP (Internet Service Provider).

2.1.2 ASUS EZ Flash 3

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



- Ensure to load the BIOS default settings to ensure system compatibility and stability. Select the Load Optimized Defaults item under the Exit menu. See section **2.3 Exit Menu** for details.
- Check your local Internet connection before updating through the Internet.



To update the BIOS using EZ Flash 3:

1. Enter the **Advanced Mode** of the BIOS setup program. Go to the **Tool** menu to select ASUS EZ Flash 3 and press <Enter> to enable it.
2. Follow the steps below to update the BIOS via USB or Internet.

Via USB

- a) Insert the USB flash disk that contains the latest BIOS file to the USB port, then select **by USB**.
- b) Press <Tab> to switch to the **Drive** field.
- c) Press the Up/Down arrow keys to find the USB flash disk that contains the latest BIOS, and then press <Enter>.
- d) Press <Tab> to switch to the **Folder** field.
- e) Press the Up/Down arrow keys to find the BIOS file, and then press <Enter> to perform the BIOS update process.

Via the Internet

- a) Select **by Internet**.
 - b) Press the Left/Right arrow keys to select an Internet connection method, and then press <Enter>.
 - c) Follow the onscreen instructions to complete the update.
3. Reboot the system when the update process is done.



-
- ASUS EZ Flash 3 supports USB 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!
-

2.1.3 ASUS CrashFree BIOS 3 utility

The ASUS CrashFree BIOS 3 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 updated BIOS file.



-
- Before using this utility, rename the BIOS file in the removable device into **TGB360PW.CAP**.
 - The BIOS file in the support DVD may not be the latest version. Download the latest BIOS file from the ASUS website at www.asus.com.
-

Recovering the BIOS

To recover the BIOS:

1. Turn on the system.
2. Insert the support DVD to the optical drive or the USB flash drive that contains 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 utility automatically.
4. The system requires you to enter BIOS Setup to recover BIOS settings. 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!

2.1.4 ASUS BIOS Updater

ASUS BIOS Updater allows you to update the BIOS in DOS environment.



The screen captures used in this section are for reference only and may not be exactly the same as actually shown on your computer screen.

Before updating BIOS

- Prepare the motherboard support DVD and a USB flash drive.
- Download the latest BIOS file and BIOS Updater from <https://www.asus.com/support> and save them in your USB flash drive.



NTFS is not supported under FreeDOS environment. Ensure that your USB flash drive is in single partition and in FAT32/16 format.

- Turn off the computer.
- Ensure that your computer has a DVD optical drive.

Booting the system in DOS environment

To boot the system in DOS:

1. Insert the USB flash drive with the latest BIOS file and BIOS Updater to the USB port.
2. Boot your computer then press <F8> to launch the select boot device screen.
3. When the select boot device screen appears, insert the Support DVD into the optical drive then select the optical drive as the boot device.

Please select boot device:

↑ and ↓ to move selection
ENTER to select boot device
ESC to boot using defaults

```
P2: ST3808110AS (76319MB)
aigo miniking (250MB)
UEFI: (FAT) ASUS DRW-2014L1T(4458MB)
P1: ASUS DRW-2014L1T(4458MB)
UEFI: (FAT) aigo miniking (250MB)
Enter Setup
```

4. When the booting message appears, press <Enter> within five (5) seconds to enter FreeDOS prompt.

```
ISOLINUX 3.20 2006-08-26 Copyright (C) 1994-2005 H. Peter Anvin
A Bootable DVD/CD is detected. Press ENTER to boot from the DVD/CD.
If no key is pressed within 5 seconds, the system will boot next priority
device automatically. boot:
```

5. On the FreeDOS prompt, type **d:** then press <Enter> to switch the disk from Drive C (optical drive) to Drive D (USB flash drive).

```
Welcome to FreeDOS (http://www.freedos.org) !
C: /> d:
D: />
```

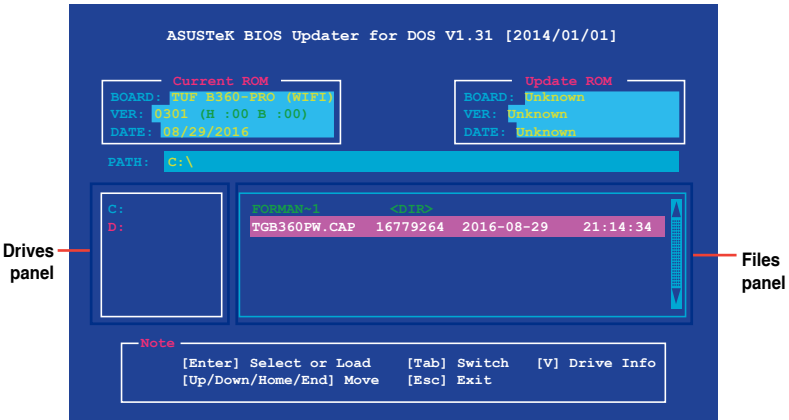
Updating the BIOS file

To update the BIOS file:

1. On the FreeDOS prompt, type **bupdater /g** and press <Enter>.

```
D: /> bupdater /g
```

2. On the BIOS Updater screen, press <Tab> to switch from Files panel to Drives panel then select D: .



3. Press <Tab> to switch from Drives panel to Files panel then press <Up/Down or Home/End> keys to select the BIOS file and press <Enter>.
4. After the BIOS Updater checks the selected BIOS file, select **Yes** to confirm the BIOS update.



The BIOS Backup feature is not supported due to security regulations.

5. Select **Yes** then press <Enter>. When BIOS update is done, press <ESC> to exit BIOS Updater.
6. Restart your computer.



DO NOT shut down or reset the system while updating the BIOS to prevent system boot failure.



Ensure to load the BIOS default settings to ensure system compatibility and stability. Select the **Load Optimized Defaults** item under the **Exit BIOS** menu. See section 2.3 **Exit Menu** for details.

2.2 BIOS setup program

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

Entering BIOS Setup 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>+ 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.



Using the power button, reset button, or the <Ctrl>+<Alt>+ keys to force reset from a running operating system can cause damage to your data or system. We recommend you always shut down the system properly from the operating system.



- The BIOS setup screens shown in this section are for reference purposes only, and may not exactly match what you see on your screen.
 - Visit the ASUS website at www.asus.com to download the latest BIOS file for this motherboard.
 - Ensure that a USB mouse is connected to your motherboard if you want to use the mouse to control the BIOS setup program.
 - If the system becomes unstable after changing any BIOS setting, load the default settings to ensure system compatibility and stability. Select the **Load Optimized Defaults** item under the Exit menu or press hotkey F5. See section 2.3 **Exit Menu** for details.
 - If the system fails to boot after changing any BIOS setting, try to clear the CMOS and reset the motherboard to the default value. See section 1.2 **Motherboard overview** for information on how to erase the RTC RAM.
-

BIOS menu screen

The BIOS setup program can be used under two modes: **EZ Mode** and **Advanced Mode**. Press <F7> to change between the two modes.

2.2.1 EZ Mode

By default, the EZ Mode screen appears when you enter the BIOS setup program. The EZ Mode provides you an overview of the basic system information, and allows you to select the display language, system performance mode, fan profile and boot device priority. To access the Advanced Mode, click **Advanced Mode(F7)** or press <F7>.



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

The screenshot shows the ASUS UEFI BIOS Utility - EZ Mode interface. The interface is divided into several sections:

- Information:** Displays system details such as TUF B360-PRO GAMING WIFI BIOS Ver. 0203, Intel(R) Core(TM) i5-8400 CPU @ 2.80GHz, Speed: 2800 MHz, and Memory: 4096 MB (DDR4 2133MHz).
- CPU Temperature:** Shows CPU Core Voltage (1.024 V) and Motherboard Temperature (30°C).
- DRAM Status:** Lists DIMM slots (A1, A2, B1, B2) and their status (N/A).
- SATA Information:** Includes a section for Intel Rapid Storage Technology with an On/Off toggle.
- FAN Profile:** Shows CPU FAN (1764 RPM) and CHA2 FAN (N/A) with AIO PUMP (N/A) status.
- EZ System Tuning:** A gauge set to Normal, with instructions to click the icon for power-saving system settings.
- Boot Priority:** A list of boot devices including UEFI: USB 2.0 SD/MMC Reader, Partition 1 (947MB) and UEFI: SanDisk, Partition 1 (30528MB).
- X.M.P.:** Set to Disabled.
- Navigation:** Bottom bar contains buttons for Default(F5), Save & Exit(F10), Advanced Mode(F7) | <F7>, and Search on FAQ.

Annotations on the screenshot include:

- Displays a quick overview of the system status** (pointing to the Information section)
- Displays the system properties of the selected mode. Click < > to switch EZ System Tuning modes** (pointing to the EZ System Tuning gauge)
- Selects the display language of the BIOS setup program** (pointing to the English language selector)
- Search(F9)** (pointing to the search icon)
- AURA ON/OFF(F4)** (pointing to the AURA ON/OFF icon)
- Enables or disables the SATA RAID mode for Intel Rapid Storage Technology** (pointing to the Intel Rapid Storage Technology toggle)
- Displays the CPU Fan's speed. Click the button to manually tune the fans** (pointing to the CPU FAN graph and QFan Control button)
- Loads optimized default settings** (pointing to the QFan Control button)
- Saves the changes and resets the system** (pointing to the Save & Exit(F10) button)
- Click to go to Advanced mode** (pointing to the Advanced Mode(F7) | <F7> button)
- Search on the FAQ** (pointing to the Search on FAQ button)
- Click to display boot devices** (pointing to the Boot Priority list)
- Selects the boot device priority** (pointing to the Boot Priority list)



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

2.2.2 Advanced Mode

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



To access the EZ Mode, click **EzMode(F7)** or press <F7>.

The screenshot shows the UEFI BIOS Utility - Advanced Mode interface. The interface is dark-themed with a blue and black background. At the top, there is a search bar labeled "Search(F9)". Below the search bar, there is a menu bar with options: "My Favorites", "Main", "AI Tweaker", "Advanced", "Monitor", "Boot", "Tool", and "Exit". The "Advanced" menu item is currently selected. On the right side, there is a "Hardware Monitor" section displaying system status information for CPU, Memory, and Voltage. The CPU section shows Frequency (3200 MHz), Temperature (32°C), BCLK (100.00 MHz), and Core Voltage (1.040 V). The Memory section shows Frequency (2133 MHz), Voltage (1.200 V), and Capacity (8192 MB). The Voltage section shows +12V (+5V), 12.096 V (4.960 V), and +3.3V (3.344 V). The main configuration area on the left lists various settings, including L2, L3, and L4 Cache, Intel VT-x Technology, Intel SMX Technology, Software Guard Extensions (SGX), Tcc Offset Time Window, Hardware Prefetcher, Adjacent Cache Line Prefetch, Intel (VMX) Virtualization Technology, Active Processor Cores, Hyper-Threading, and CPU - Power Management Control. A dropdown menu is open for "Software Guard Extensions (SGX)", showing options: "Software Controlled", "Disabled", and "Software Controlled". The "Software Controlled" option is currently selected. At the bottom of the interface, there is a footer with "Version 2.19.1269. Copyright (C) 2018 American Megatrends, Inc.", "Last Modified", "EzMode(F7)", "Hot Keys", and "Search on FAQ".

Labels in the image include:

- Configuration fields
- Pop-up Menu
- Menu bar
- Language
- MyFavorite(F3)
- Qfan Control(F6)
- Search(F9)
- AURA ON/OFF(F4)
- Scroll bar
- Hardware Monitor
- Menu items
- General help
- Last modified settings
- Go back to EZ Mode
- Hot Keys
- Search on the FAQ
- Displays a quick overview of the system status

Menu bar

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

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

Menu items

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

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

Submenu items

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

Language

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

My Favorites (F3)

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

Q-Fan Control (F6)

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

Search (F9)

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

AURA (F4)

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

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

[OFF] All AURA effects will be disabled.

Search on FAQ

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



Scroll bar

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

General help

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

Configuration fields

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

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

Hot keys

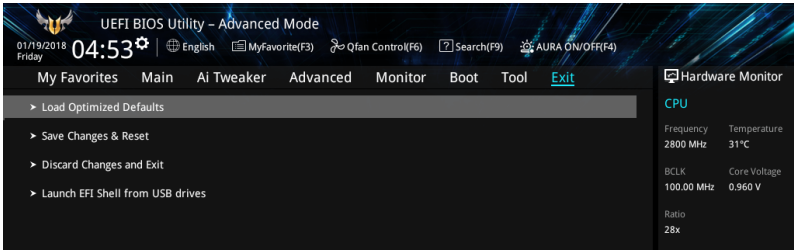
This button contains the navigation keys for the BIOS setup program. Use the navigation keys to select items in the menu and change the settings.

Last Modified button

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

2.3 Exit menu

The Exit menu items allow you to load the optimal default values for the BIOS items, and save or discard your changes to the BIOS items.



Load Optimized Defaults

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

Save Changes & Reset

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

Discard Changes and Exit

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

Launch EFI Shell from USB drives

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

Appendix

Notices

Federal Communications Commission Statement

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

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

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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



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

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

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

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

この装置は、クラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。

V C C I - B

KC: Korea Warning Statement

B급 기기 (가정용 방송통신기자재)

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

*당해 무선설비는 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없습니다.

REACH

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



DO NOT throw the motherboard in municipal waste. This product has been designed to enable proper reuse of parts and recycling. This symbol of the crossed out wheeled bin indicates that the product (electrical and electronic equipment) should not be placed in municipal waste. Check local regulations for disposal of electronic products.



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

ASUS Recycling/Takeback Services

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

Regional notice for California



WARNING

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

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.

FCC Bluetooth Wireless Compliance

The antenna used with this transmitter must not be co-located or operated in conjunction with any other antenna or transmitter subject to the conditions of the FCC Grant.

Bluetooth Industry Canada Statement

This Class B device meets all requirements of the Canadian interference-causing equipment regulations.

Déclaration d'Industrie Canada relative aux modules sans fil Bluetooth

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

NCC: Taiwan Wireless Statement

無線設備的警告聲明

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射頻、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。

於 5.25GHz 至 5.35GHz 區域內操作之
無線設備的警告聲明

工作頻率 5.250 ~ 5.350GHz 該頻段限於室內使用。

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。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.

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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 text of EU declaration of conformity is available at <https://www.asus.com/support/>

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

Déclaration 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 une utilisation en intérieur dans les pays listés dans le tableau ci-dessous:

Vereinfachte EU-Konformitätserklärung

ASUSTek COMPUTER INC erklärt hiermit, dass dieses Gerät mit den grundlegenden Anforderungen und anderen relevanten Bestimmungen der Richtlinie 2014/53/EU übereinstimmt. Der gesamte Text der EU-Konformitätserklärung ist verfügbar unter: <https://www.asus.com/support/>
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 e 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 Wi-Fi в диапазоне частот 5150-5350 должна быть ограничена использованием в помещениях для стран, перечисленных в таблице ниже:

إعلان التوافق المبسط الصادر عن الاتحاد الأوروبي

تقر شركة ASUSTek Computer Inc هذا الجهاز يتوافق مع المتطلبات الأساسية والأحكام الأخرى ذات الصلة الخاصة بتوجيه 2014/53/EU. يتوفر النص الكامل لإعلان التوافق الصادر عن الاتحاد الأوروبي على: <https://www.asus.com/support/>

يجب حصر استخدام Wi-Fi العاملة بـ 5150-5350 ميجا هرتز على الاستخدام المنزلي للبلدان المدرجة بالجدول.

Опростена декларация за съответствие на ЕС

С настоящото ASUSTek Computer Inc. декларира, че това устройство е в съответствие със съществените изисквания и другите приложими постановления на свързаната Директива 2014/53/ЕУ. Пълният текст на ЕС декларация за съвместимост е достъпен на адрес <https://www.asus.com/support/>

WiFi, работеща в диапазон 5150-5350MHz, трябва да се ограничи до употреба на закрито за страните, посочени в таблицата по-долу:

Declaração de Conformidade UE Simplificada

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

O WiFi operando na banda 5150-5350MHz deve ser restrito para uso interno para os países listados na tabela abaixo:

Pojednostavljena EU izjava o sukladnosti

ASUSTek Computer Inc. ovim izjavljuje da je ovaj uređaj sukladan s bitnim zahtjevima i ostalim odgovarajućim odredbama direktive 2014/53/EU. Cijeli tekst EU izjave o sukladnosti dostupan je na <https://www.asus.com/support/>
WiFi koji radi na opsegu frekvencija 5150-5350 MHz bit će ograničen na upotrebu u zatvorenom prostoru u zemljama na donjem popisu:

Zjednodušené prohlášení o shodě EU

Splodnosť ASUSTek Computer Inc. tímto prohlašuje, že toto zariadenie spĺňa úkladné požiadavky a ďalší príslušné ustanovenia smernice 2014/53/EU. Plné znenie prohlášení o shodě EU je v dispozícii na adrese <https://www.asus.com/support/>

V zemích uvedených v tabulce je provoz sítě Wi-Fi ve frekvenčním rozsahu 5 150 - 5 350 MHz povolen pouze ve vnitřních prostorech:

Forenlett EU-oversenstømmelseserklæring

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

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

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:

Lihtstatud EU vastusdeklaratsioon

Käesolevaga kinnitab ASUSTek Computer Inc, et seade vastab direktiivi 2014/53/EU olulistele nõuetele ja teiste asjakohaste sätetele. EL vastusdeklaratsiooni täistekst on saadaval veebisaidil <https://www.asus.com/support/>

Sagedusvahemikus 5150-5350 MHz töötava WiFi kasutamine on järgmistes riikides lubatud ainult siseruumides:

Eurooppa - EY'n vaatimustenmukaisuusvakuutus

ASUSTek Computer Inc. ilmoittaa täten, että tämä laite on direktiivin 2014/53/EU olennaisista vaatimusten ja muiden asiaankuuluvien lisäysten mukainen. Koko EY'n vaatimustenmukaisuusvakuutuksen teksti on luettavissa osoitteessa <https://www.asus.com/support/>

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

تیغیت از نسخه شده سادته بیهاتیه انتخابیه اروپا

ASUSTek Computer Inc در اینجا اعلام می کند که این دستگاه با نیازهای اساسی و سایر مقررات مربوط به بیهاتیه 2014/53/UE مطابقت دارد. متن کامل پروتیه برای این بیهاتیه انتخابیه اروپا در این آدرس موجود است: <https://www.asus.com/support/>

استفاده از فرکانس 5150-5350 مگاهرتز برای Wi-Fi باید برای استفاده در فضای داخلی ساختمان های اروپا محدود شود.

Απλοποιημένη Δήλωση Συμμόρφωσης ΕΕ

Διά του παρόντος η ASUSTek Computer Inc. δηλώνει ότι αυτή η συσκευή είναι σύμμορμη με τις βασικές προϋποθέσεις και άλλες σχετικές διατάξεις της Οδηγίας 2014/53/ΕΕ. Το πλήρες κείμενο της δήλωσης συμμόρφωσης της ΕΕ είναι διαθέσιμο στη διεύθυνση <https://www.asus.com/support/>

To WiFi που λειτουργεί στη ζώνη 5150-5350MHz περιορίζεται να χρήση σε εσωτερικούς χώρους για τις χώρες που αναφέρονται στον παρακάτω πίνακα:

הגדרת האימות הרגולטורית מקוצרת עבור האיחוד האירופי

ASUSTek Computer Inc. מצהירה בזאת כי מכשיר זה תואם לדרישות החיוביות ולשיאר הספציפיים הרלוונטיים של התקנה 2014/53/UE. ניתן לקרוא את הסכם המלא של הגדרת האימות הרגולטורית עבור האיחוד האירופי בכתובת: <https://www.asus.com/support/>

יש להגביל תשתות Wi-Fi הפועלות ברצועות התדרים 5150-5350MHz לשימוש בתוך מבנים סגורים בארצות המפורטות ברשימה הבאה:

Egyszerűsített EU megfeleléségi nyilatkozat

Az ASUSTek Computer Inc. ezennel kijelenti, hogy ez az eszköz megfelel az 2014/53/EU sz. irányelv alapvető követelményeinek és egyéb vonatkozó rendelkezéseinek. Az EU megfeleléségi nyilatkozat teljes szövegét a következő weboldalon tekintheti meg: <https://www.asus.com/support/>

Az 5150-5350 MHz-es sávban működő Wi-Fi-t beltéri használatra kell korlátozni az alábbi táblázatban felsorolt országokban:

Pernyataan Kesesuaian UE yang Disederhanakan

ASUSTek Computer Inc. dengan ini menyatakan bahwa perangkat ini memenuhi persyaratan utama dan ketentuan relevan lainnya yang terdapat pada Petunjuk 2014/53/EU. Teks lengkap pernyataan kesesuaian EU tersedia di: <https://www.asus.com/support/>

WiFi yang Beroperasi pada 5150-5350 MHz akan terbatas untuk penggunaan dalam ruangan di negara yang tercantum dalam tabel

Vienkāršota ES atbilstības paziņojums

ASUSTek Computer Inc. ar šo paziņojumu šeit liecina atbilstību Direktīvas 2014/53/ES būtiskajām prasībām un citiem citiem saistītajiem nosacījumiem. Pilns ES atbilstības paziņojuma teksts pieejams šeit: <https://www.asus.com/support/>

Wi-Fi darība 5150-5350 MHz ir jāierobežo lietošanai telpās valstīs, kuras norādītas tālāk.

Supraprastinta ES atitikties deklaracija

Šiame dokumente bendrovė „ASUSTek Computer Inc.“ pareiškia, kad šis prietaisas atitinka pagrindinius reikalavimus ir kitas susijusias Direktyvos 2014/53/ES nuostatas. Visas ES atitikties deklaracijos tekstas pateikiamas čia: <https://www.asus.com/support/>

Toliau nurodytose šalyse „WiFi“ ryšiu, veikiančiu 5 150–5 350 MHz dažniu juostoje, galima naudotis tik patalpose:

Ovaj uredaj može da se koristi u državama navedenim ispod:

Förenklat EU-samsvarserklärning

ASUSTek Computer Inc. erklærer herved at denne enheten er i samsvar med hovedsakelige krav og andre relevante forskrifter i direktivet 2014/53/EU.

Fullstendig tekst for EU-samsvarserklæringen finnes på: <https://www.asus.com/support/>

Wi-Fi-området 5150–5350 MHz skal begrenses til innendørs bruk for landene som er oppført i tabellen:

Uproszczone deklaracja zgodności UE

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

W krajach wymienionych w tabeli działanie sieci Wi-Fi w paśmie 5150–5350 MHz powinno być ograniczone wyłącznie do pomieszczeń:

Declaração de Conformidade Simplificada da UE

A ASUSTek Computer Inc. declara que este dispositivo está em conformidade com os requisitos essenciais e outras disposições relevantes da Diretiva 2014/53/UE. O texto integral da declaração de conformidade da UE está disponível em <https://www.asus.com/support/>

A utilização das frequências WiFi de 5150 a 5350MHz está restrita a ambientes interiores nos países apresentados na tabela:

Declaratie de conformitate UE, versiune simplificată

Prin prezenta, ASUSTek Computer Inc. declară că acest dispozitiv este în conformitate cu reglementările esențiale și cu celelalte prevederi relevante ale Directivei 2014/53/UE. Textul complet al declarației de conformitate UE este disponibil la adresa <https://www.asus.com/support/>

Pentru țările listate în tabelul de mai jos, rețelele WiFi care funcționează în banda de frecvență de 5.150-5.350 MHz trebuie utilizate doar în interior:

Pojednostavljena Deklaracija o usaglašenosti EU

ASUSTek Computer Inc. ovim izjavljuje da je ovaj uređaj usaglašen sa osnovnim zahtevima i drugim relevantnim odredbama Direktive 2014/53/UE. Ceo tekst Deklaracije o usaglašenosti EU dostupan je na lokaciji <https://www.asus.com/support/>

WiFi koji radi u frekventnom opsegu od 5150 MHz do 5350 MHz ograničen je isključivo na upotrebu u zatvorenom prostoru za zemlje navedene u tabeli ispod:

Zjednodušené vyhlásenie o zhode platné pre EÚ

Spoločnosť ASUSTek Computer Inc. týmto vyhlasuje, že toto zariadenie je v súlade so základnými požiadavkami a ďalšími príslušnými ustanoveniami smernice č. 2014/53/EÚ. Plné znenie vyhlásenia o zhode pre EÚ je k dispozícii na lokalite <https://www.asus.com/support/>

Činnosť WiFi v pásme 5150 - 5350 MHz bude obmedzená na použitie vo vnútornom prostredí pre krajiny uvedené v tabuľke nižšie:

Poenstovljena izjava EU o skladnosti

ASUSTek Computer Inc. tukaj izjavlja, da je ta naprava skladna s temeljnimi zahtevami in drugimi relevantnimi določili Direktive 2014/53/EU. Polno besedilo izjave EU o skladnosti je na voljo na <https://www.asus.com/support/>

WiFi, ki deluje v pasovnem območju 5150–5350 MHz, mora biti v državah, navedenih v spodnjem seznamu, omejen na notranjo uporabo:

Declaración de conformidad simplificada para la UE

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

La conexión WiFi con una frecuencia de funcionamiento de 5150-5350 MHz se restringirá al uso en interiores para los países enumerados en la tabla:

Förenklad EU-försäkran om överensstämmelse

ASUSTek Computer Inc. deklarerar härmed att denna enhet överensstämmer med de grundläggande kraven och andra relevanta bestämmelser i direktiv 2014/53/EU. Fullständig text av EU-försäkran om överensstämmelse finns på <https://www.asus.com/support/>

WiFi som används 5150-5350 MHz kommer att begränsas för användning inomhus i de länder som anges i tabellen:

ประกาศเกี่ยวกับความสอดคล้องของสหภาพยุโรปแบบย่อ

ASUSTek Computer Inc.

ขอประกาศในที่นี้ว่าอุปกรณ์นี้มีความสอดคล้องกับข้อกำหนดการที่จำเป็นและเงื่อนไขที่เกี่ยวข้องอื่น ๆ ของมาตรฐาน EUTR 2014/53/EU เนื้อหาที่สมบูรณ์ของประกาศความสอดคล้องกับ EU มีอยู่ที่ <https://www.asus.com/support/>

การทำงานของ WiFi ที่ 5150-5350MHz ถูกจำกัดให้ใช้ในอาคารสำหรับประเทศที่แสดงในตาราง

Basitleştirilmiş AB Uyumluluk Bildirimi

ASUSTek Computer Inc., bu aygıtın 2014/53/UE Yönergesinin temel gereksinimlerine ve diğer ilgili hükümlerine uygun olduğunu bildirir. AB uyumluluk bildiriminin tam metni şu adreste bulunabilir: <https://www.asus.com/support/>

5150-5350 MHz aralındaki WiFi çalışması, tabloda listelenen ülkeler için iç mekân kullanımıyla kısıtlanacaktır.

Спрощена декларація про відповідність нормам ЄС

ASUSTek Computer Inc. заявляє, що цей пристрій відповідає основним вимогам та іншим відповідним вимогам Директиви 2014 / 53 / EU. Повний текст декларації відповідності нормам ЄС доступний на <https://www.asus.com/support/>

Робота Wi-Fi на частоті 5150-5350 МГц обмежується використанням у приміщенні для країн, поданих у таблиці нижче:



| | | | | | | |
|----|----|----|----|----|----|----|
| AT | BE | BG | CZ | DK | EE | FR |
| DE | IS | IE | IT | EL | ES | CY |
| LV | LI | LT | LU | HU | MT | NL |
| NO | PL | PT | RO | SI | SK | TR |
| FI | SE | CH | UK | HR | | |

Intel Wi-Fi AC 9560 output power table:

| Function | Frequency | Maximum Output Power (EIRP) |
|-----------|-----------------|-----------------------------|
| WiFi | 2412 - 2472 MHz | 18.35 dBm |
| | 5150 - 5350 MHz | 18.85 dBm |
| | 5470 - 5725 MHz | 18.35 dBm |
| | 5725 - 5850 MHz | 8.74 dBm |
| Bluetooth | 2402 - 2480 MHz | 12.13 dBm |

ASUS contact information

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Technical Support

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Online support <https://www.asus.com/support/Product/ContactUs/Services/questionform/?lang=en>

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Web site <https://www.asus.com/us/>

Technical Support

Support fax +1-812-284-0883
Telephone +1-812-282-2787
Online support <https://www.asus.com/support/Product/ContactUs/Services/questionform/?lang=en-us>

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Technical Support

Telephone +49-2102-5789555
Support Fax +49-2102-959911
Online support <https://www.asus.com/support/Product/ContactUs/Services/questionform/?lang=de-de>

DECLARATION OF CONFORMITY
Compliance Information Statement

Per FCC Part 2 Section 2. 1077(a)



Responsible Party Name: Asus Computer International

Address: 800 Corporate Way, Fremont, CA 94539.

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

hereby declares that the product

Product Name : Motherboard

Model Number : TUF H370-PRO GAMING (WI-FI),
TUF B360-PRO GAMING (WI-FI),

Conforms to the following specifications:

FCC Part 15, Subpart B, Unintentional Radiators

Supplementary Information:

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

