H110M-R

Motherboard

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Contents

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 components, 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 be exposed to moisture.
- 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. Detailed descriptions for the BIOS parameters are also provided.

Where to find more information

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

1.   **ASUS websites**

   The ASUS website provides updated information on ASUS hardware and software products. Refer to the ASUS contact information.

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 completing a task.

CAUTION: Information to prevent damage to the components when completing 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	ASUS H110M-R motherboard
Cables	2 x Serial ATA 6.0 Gb/s cables
Accessories	1 x I/O Shield
Application DVD	1 x Support DVD
Documentation	1 x User Manual

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

H110M-R specifications summary

CPU	LGA1151 socket for 6th Generation Intel® Core™ i7 / i5 / i3, Pentium®, and Celeron® processors* Supports Intel® 14nm CPU Supports Intel® Turbo Boost Technology 2.0** *** Refer to www.asus.com for Intel® CPU support list** **** The Intel® Turbo Boost Technology 2.0 support depends on the CPU types.**
Chipset	Intel® H110 Chipset
Memory	2x DIMM, max 32 GB, DDR4 2133 MHz, non-ECC, un-buffered memory* Dual-channel memory architecture Supports Intel® Extreme Memory Profile (XMP) *** Refer to www.asus.com for the latest Memory QVL (Qualified Vendors List).** **** Due to Intel® chipset limitation, DDR4 2133 MHz and higher memory modules on XMP mode will run at the maximum transfer rate of DDR4 2133 Mhz.** ***** The supported maximum memory frequency varies with the processor.**
Expansion slots	1 x PCI Express 3.0/2.0 x16 slot (@ x16 mode) 2 x PCI Express 2.0 x1 slots

Graphics	Integrated graphics processor - Intel® HD Graphics support
	 Multi-VGA output support: HDMI, DVI-D, D-Sub ports
	   - Supports HDMI with maximum resolution 4096 x 2160 @24Hz / 2560 x 1600 @60Hz
	   - Supports DVI-D with maximum resolution of 1920 x 1200 @ 60Hz
	   - Supports D-Sub with maximum resolution 1920 x 1200 @60Hz
	 Supports up to 2 displays simultaneously
	 Maximum shared memory of 1024 MB

Storage	Intel® H110 Chipset and Intel® Rapid Storage Technology 14 support* - 4 x SATA 6.0 Gb/s ports (gray) *** This function works depending on the CPU installed.**

USB	Intel® H110 Chipset - supports ASUS USB 3.0 Boost
	   - 4 x USB 3.0 / 2.0 ports (2 ports at mid-board; 2 ports at the rear panel)
	   - 6 x USB 2.0 / 1.1 ports (2 ports at mid-board; 4 ports at the rear panel)

H110M-R specifications summary

Audio	Realtek® ALC887 8-channel*High Definition Audio CODEC - Supports jack-detection, and front panel jack-retasking *** Use a chassis with HD audio module in the front panel to support a 8-channel audio output.**
LAN	Realtek® 8111H Gigabit controller

ASUS unique features	**ASUS 5X PROTECTION II**
	- ASUS LANGuard - Surge-protected networking
	- ASUS Overvoltage Protection - World-class circuit-protecting power design
	- ASUS DIGI+ VRM - 3+1 Phase digital power design
	- ASUS DRAM Overcurrent Protection - Enhanced DRAM Overcurrent Protection
	- ASUS Stainless Steel Back I/O - 3X more durable corrosion-resistant coating
	
	Superb Performance
	UEFI BIOS
	- Most advanced options with fast response time
	- ASUS EPU
	
	Easy PC DIY
	Safe motherboard mounting
	- Component-free areas to minimize damage risk
	Q-Design
	- ASUS Q-DIMM
	- ASUS Q-Slot
	UEFI BIOS EZ Mode
	- Featuring friendly graphics user interface
	- ASUS CrashFree BIOS 3
	- ASUS EZ Flash 3
	
	Optimized Cooling
	- ASUS Fan Xpert
	
	One Stop Control
	AI Suite 3
	    Push Notice
	    - Monitor your PC status with smart devices in real time
	    PC Cleaner
	    - Fast and easy way to get rid of unnecessary junk files
	    Mobo Connect
	    - All-in-one control between your PC and smart device
	Media Streamer
	- Pipe music or movies from your PC to a smart TV
	- Media Streamer app for portable smartphone/tablet, supporting iOS7 and Android 4.0 system
	AI Charger

H110M-R specifications summary

Rear panel I/O ports	1 x PS/2 keyboard port (purple)
	1 x PS/2 mouse port (green)
	2 x USB 3.0/2.0 ports
	4 x USB 2.0/1.1 ports
	1 x HDMI port
	1 x DVI-D port
	1 x D-Sub port
	1 x LAN (RJ-45) port
	3 x Audio jacks support 8-channel audio output
	* Use a chassis with HD audio module in the front panel to support a 8-channel audio output.
Internal connectors	1 x USB 3.0 / 2.0 connector supports additional 2 USB 3.0/ 2.0 ports
	1 x USB 2.0 / 1.1 connector supports additional 2 USB 2.0/ 1.1 ports
	4 x SATA 6.0 Gb/s connectors
	1 x 4-pin CPU fan connector for 4-pin PWM mode
	1 x 4-pin Chassis Fan connector for 4-pin PWM
	1 x Front panel audio connector (AAFP)
	1 x COM header
	1 x LPT header
	1 x 24-pin EATX power connector
	1 x 4-pin ATX 12V power connector
	1 x 14-1 pin TPM header
	1 x Speaker connector
	1 x Chassis Intrusion header
	1 x System panel connector
BIOS features	128 Mb Flash ROM, UEFI AMI BIOS, PnP, DMI 2.0, WfM2.0, SM BIOS 3.0, ACPI 5.0, Multi-language BIOS, ASUS EZ Flash 3, ASUS CrashFree BIOS 3, My Favorites, Quick Note, Last Modified Log, F12 PrintScreen function, and ASUS DRAM SPD (Serial Presence Detect) memory information
Manageability	WfM 2.0, DMI 2.0, WOL by PME, PXE
Support DVD	Drivers
	ASUS utilities
	EZ Update
	Anti-virus software (OEM version)
OS support	Windows® 10 (64-bit),
	Windows® 8.1 (64-bit),
	Windows® 7 (32-bit / 64-bit) *
	* Please refer to ASUS official website and download "Windows® 7 installation guide" and "ASUS EZ installer" to install Windows® 7.
Form factor	uATX form factor: 8.3 in. x 7.1 in. (21.08 cm x 18.03 cm)

Specifications are subject to change without notice.

Product introduction

Motherboard overview

- 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.

- 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.

- Unplug the power cord before installing or removing the motherboard. Failure to do so can cause you physical injury and damage to motherboard components.
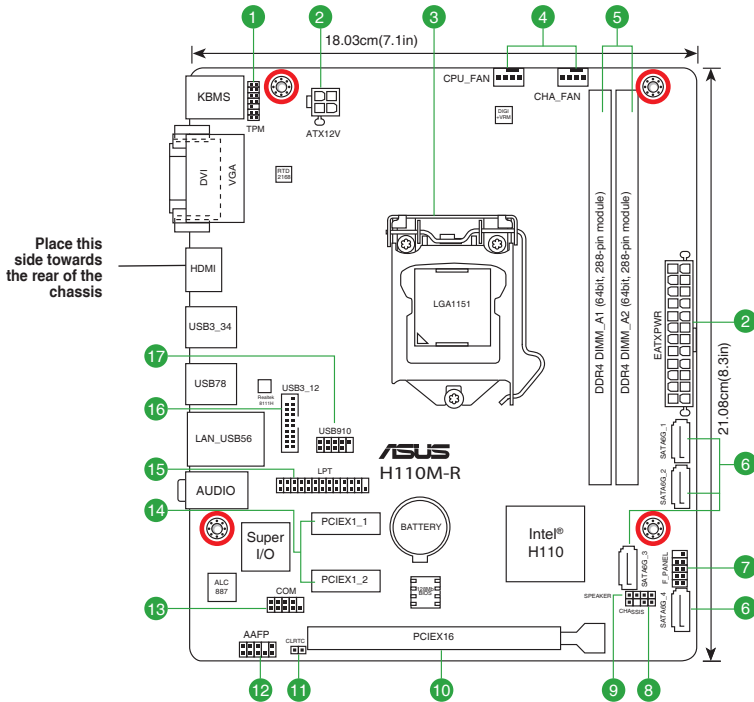
Scan the QR code to get the detailed pin definitions.

1 TPM connector (14-1 pin TPM)

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

```
                        TPM
          +3VSB  ■ ■   F_CLKRUN
S_PCIRST#_TBD  ■ ■   F_SERIRQ
                 ■ ■   F_FRAME#
          GND  ■ ■   F_LAD3
C_PCICLK_TPM  ■ ■   F_LAD2
          +3V  ■ ■   F_LAD1
          +3V  ■ ■   F_LAD0
               PIN 1
```

2 ATX power connectors (24-pin EATXPWR, 4-pin ATX12V)

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.

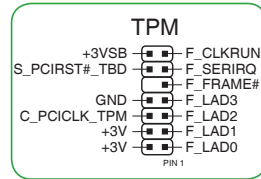- If you are uncertain about the minimum power supply requirement for your system, refer to the Recommended Power Supply Wattage Calculator at http://support.asus.com/PowerSupplyCalculator/PSCalculator.aspx?SLanguage=en-us for details.

3 Intel® LGA1151 CPU socket

Install Intel® LGA1151 CPU into this surface mount LGA1151 socket, which is designed for 6th Generation Intel® Core™ i7 / i5 / i3, Pentium®, and Celeron® processors.

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

4 CPU and chassis fan connectors (4-pin CPU_FAN, 4-pin CHA_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.

Do not forget to connect the fan cables to the fan connectors. Insufficient air flow inside the system may damage the motherboard components. These are not jumpers! Do not place jumper caps on the fan connectors! The CPU_FAN connector supports a CPU fan of maximum 1A (12 W) fan power.

5 DDR4 DIMM slots

Install 2 GB, 4 GB, 8 GB, and 16 GB unbuffered non-ECC DDR4 DIMMs into these DIMM sockets.
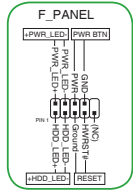
For more details, refer to **System memory**.

6 **Intel® H110 Serial ATA 6.0Gb/s connectors (7-pin SATA6G_1~4)**

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

7 **System panel connector (10-1 pin PANEL)**

This connector supports several chassis-mounted functions.

F_PANEL

+PWR_LED- | PWR BTN

+PWR_LED-
+PWR_LED-

GND
PWR
Ground

NC
PWRSW+

PIN 1

+HDD_LED-
+HDD_LED-

+HDD_LED- | RESET

8 **Chassis intrusion header (4-1 pin CHASSIS)**

This header is for a chassis-mounted intrusion detection sensor or switch. Connect one end of the chassis intrusion sensor or switch cable to this header. The chassis intrusion sensor or switch sends a high-level signal to this header when a chassis component is removed or replaced. The signal is then generated as a chassis intrusion event.

By default, the pin labeled "Chassis Signal" and "Ground" are shorted with a jumper cap. Remove the jumper caps only when you intend to use the chassis intrusion detection feature.

9 **Speaker connector (4-pin SPEAKER)**

This 4-pin connector is for the chassis-mounted system warning speaker. The speaker allows you to hear system beeps and warnings.

10 **Clear RTC RAM (2-pin CLRTC)**

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

CLRTC

+3V_BAT
GND

PIN 1
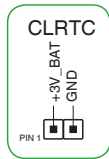
To erase the RTC RAM:

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 <**Del**> 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.

11 **Front panel audio connector (10-1 pin AAFP)**

This connector is for a chassis-mounted front panel audio I/O module that supports either HD Audio or legacy AC`97 audio standard. Connect one end of the front panel audio I/O module cable to this connector.

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

• If you want to connect a high-definition front panel audio module to this connector, set the Front Panel Type item in the BIOS setup to [HD Audio]. If you want to connect an AC'97 front panel audio module to this connector, set the item to [AC97]. By default, this connector is set to [HD Audio].

12 **Serial port connector (10-1 pin COM)**

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 **PCI Express 3.0/2.0 x16 slot**

This motherboard supports PCI Express 3.0/2.0 x16 graphic cards complying with the PCI Express specifications.

14 **PCI Express 2.0 x1 slots**

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

IRQ assignments for this motherboard

	A	B	C	D
PCIEx16_1	shared	–	–	–
PCIEx1_1	shared	–	–	–
PCIEx1_2	–	shared	–	–
Realtek 8111H LAN Controller	–	–	–	shared
HD Audio	shared	–	–	–
SATA Controller	shared	–	–	–
USB 3.0 Controller	shared	–	–	–

When using PCI cards on shared slots, ensure that the drivers support "Share IRQ" or that the cards do not need IRQ assignments. Otherwise, conflicts will arise between the two PCI groups, making the system unstable and the card inoperable.

15 **LPT connector (26-1 pin LPT)**

Connect a parrallel port device such as a printer to this LPT (Line Printing Terminal) connector.

16 **USB 3.0 connector (20-1 pin USB3_12)**

Connect a USB 3.0 module to this connector for additional USB 3.0 front or rear panel ports. This connector complies with USB 3.0 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

17 **USB 2.0 connector (10-1 pin 910)**

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

Rear panel connectors
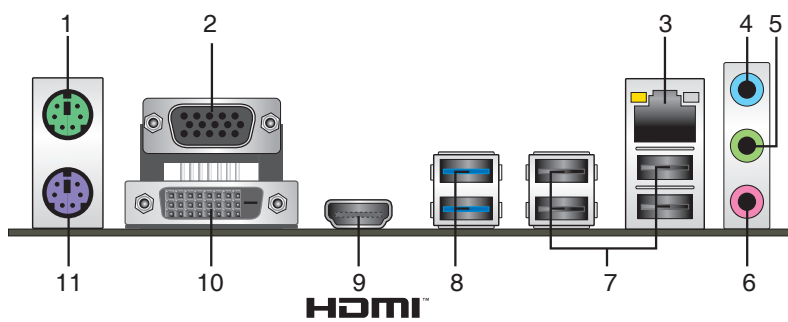
1. **PS/2 mouse port (green).** This port is for a PS/2 mouse.

2. **Video Graphics Adapter (VGA) port.** This 15-pin port is for a VGA monitor or other VGA-compatible devices.

3. **LAN (RJ-45) port.** This port allows Gigabit connection to a Local Area Network (LAN) through a network hub.

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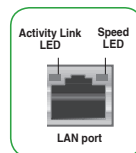
Activity/Link LED		Speed LED	
Status	Description	Status	Description
Off	No link	OFF	10Mbps connection
Orange	Linked	ORANGE	100Mbps connection
Orange (Blinking)	Data activity	GREEN	1Gbps connection
Orange (Blinking then steady)	Ready to wake up from S5 mode	–	–

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 4.1, 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 2.1, 4.1, 5.1, or 7.1-channel configuration.

Audio 2.1, 4.1, 5.1, or 7.1-channel configuration

Port	Headset 2.1-channel	4.1-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. **USB 2.0 ports.** These 4-pin Universal Serial Bus (USB) ports are for USB 2.0/1.1 devices.

8. **USB 3.0 ports**. These 9-pin Universal Serial Bus (USB) ports are for USB 3.0/2.0 devices.

- USB 3.0 devices can only be used for data storage.

- We strongly recommend that you connect USB 3.0 devices to USB 3.0 ports for faster and better performance from your USB 3.0 devices.

- Due to the design of the Intel® 100 series chipset, all USB devices connected to the USB 2.0 and USB 3.0 ports are controlled by the xHCI controller. Some legacy USB devices must update their firmware for better compatibility.

9. **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.

10. **DVI-D port.** This port is for any DVI-D compatible device.

DVI-D can not be converted to output from RGB Signal to CRT and is not compatible with DVI-I.

11. **PS/2 keyboard port (purple).** This port is for a PS/2 keyboard.

Central Processing Unit (CPU)

This motherboard comes with a surface mount LGA1151 socket designed for 6th Generation Intel® Core™ i7 / i5 / i3, Pentium®, and Celeron® processors.
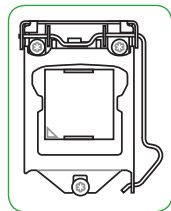
Unplug all power cables before installing the CPU.

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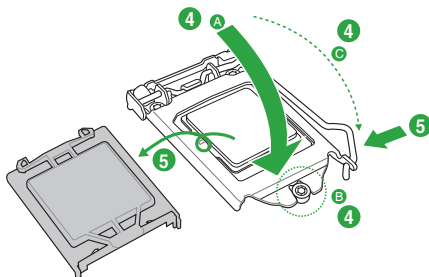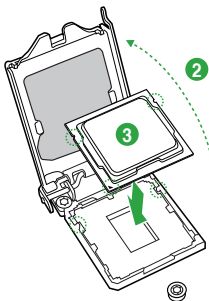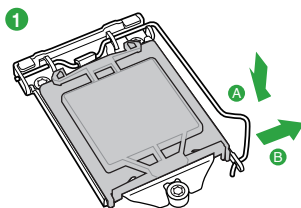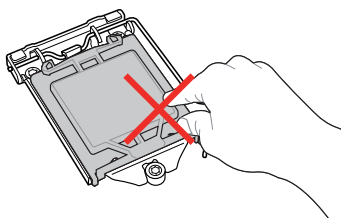
Apply the Thermal Interface Material to the CPU heatsink and CPU before you install the heatsink and fan if necessary.

System memory

Overview

This motherboard comes with two Double Data Rate 4 (DDR4) Dual Inline Memory Module (DIMM) sockets. The figure illustrates the location of the DDR4 DIMM sockets:
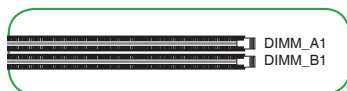
DIMM_A1
DIMM_B1

Channel	Sockets
Channel A	DIMM_A1
Channel B	DIMM_B1

- 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 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.

- According to Intel® CPU spec, DIMM voltage below 1.35V is recommended to protect the CPU.

- Due to the memory address limitation on 32-bit Windows® OS, when you install 4GB or more memory on the motherboard, the actual usable memory for the OS can be about 3GB or less. For effective use of memory, we recommend that you do any of the following:

    - Use a maximum of 3 GB system memory if you are using a 32-bit Windows® OS.

    - Install a 64-bit Windows® OS if you want to install 4GB or more on the motherboard.

    - For more details, refer to the Microsoft® support site at http://support.microsoft.com/kb/929605/en-us.

Visit the ASUS website at www.asus.com for the latest QVL.

Installing a DIMM
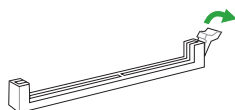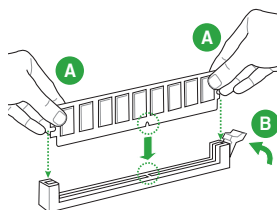
To remove a DIMM
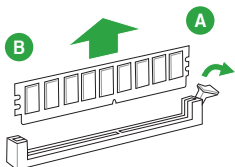
Intel® SBB support

Intel® SBB (Small Business Basics) is an entry software solution that provides simple, out-of-the-box value for small business.

> Intel® SBB requires MEI driver (AMT host software kit) to be installed and running.

Platform requirements:

- Windows® 7 (32/64-bit) / Windows® 8.1 (64-bit) / Windows® 10 (64-bit)

- PCH with 6th-generation Intel® Core™ CPU (100 Series platforms) with 2MB Intel® Management Engine 11.0 firmware installed

CPU and chipsets requirements:

- Intel® Core™ i3 / i5 /i7 with one of these chipsets: H110, B150, H170, Q170

Other requirements:

- Local Administrator rights on the target machine

> - Visit the ASUS website at www.asus.com for the latest CPU QVL (Qualified Vendors List).
> - Uninstall SBA4.0 before you install and upgrade to the latest version.

BIOS information

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>+<Del> 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>+<Del> 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.
- 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. See section **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.

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. Refer to the **Setup Mode** item in section **2.8 Boot menu** for details.

Displays the system properties of the selected mode. Click <Enter> to switch EZ System Tuning modes

Displays the CPU/motherboard temperature, CPU voltage output, CPU/chassis fan speed, and SATA information

Selects the display language of the BIOS setup program
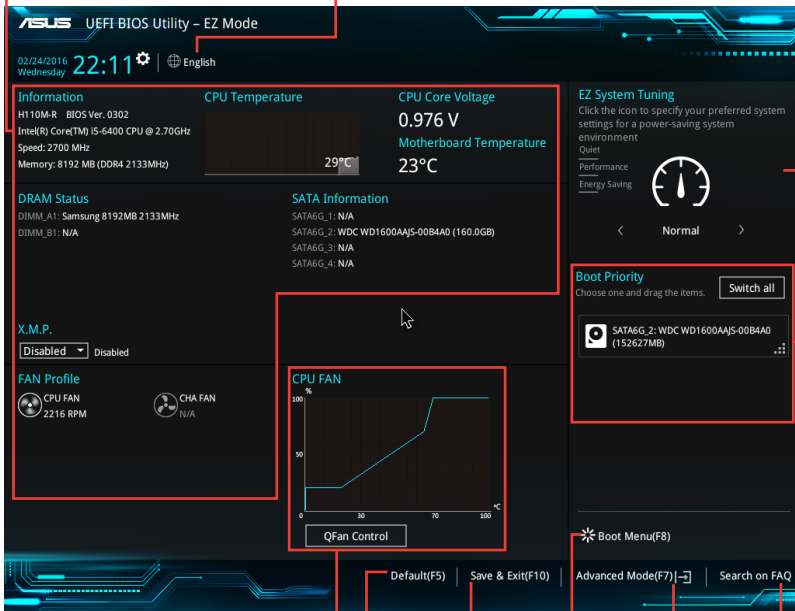
Displays the CPU Fan's speed. Click the button to manually tune the fans

Loads optimized default settings

Shows the bootable devices

Saves the changes and resets the system

Displays the Advanced mode menus

Search on FAQs

Selects the boot device priority

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

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>.

Label callouts around the figure:

- MyFavorite
- Q-Fan control
- Quick Note
- Language
- Hot Keys
- Menu bar
- Sub-menu item
- General help
- Configuration fields
- Scroll bar
- Last modified settings
- Menu items
- Goes back to EZ Mode
- Search on FAQs
- Popup window
- Displays the CPU temperature, CPU and memory voltage output

Search on FAQ

Move your mouse over this button to show a QR code. Scan this QR code with your mobile device to connect to the ASUS BIOS FAQ web page. You can also scan the QR code below.

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.
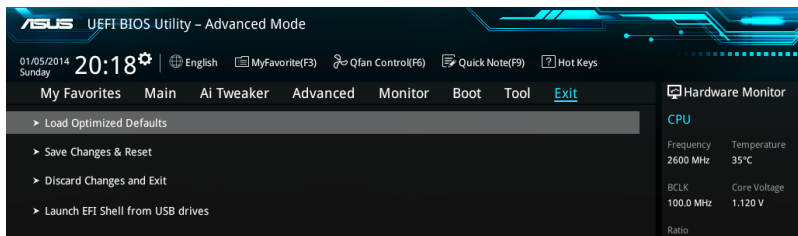
Load Optimized Defaults

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.

Appendices

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.

IC: Canadian Compliance Statement

Complies with the Canadian ICES-003 Class B specifications. This device complies with RSS 210 of Industry Canada. This Class B device meets all the requirements of the Canadian interference-causing equipment regulations.
This device complies with Industry Canada license 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.
Cut appareil numérique de la Classe B est conforme à la norme NMB-003 du Canada.
Cet appareil numérique de la Classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.
Cet appareil est conforme aux normes CNR exemptes de licence d'Industrie Canada. Le fonctionnement est soumis aux deux conditions suivantes :
(1) cet appareil ne doit pas provoquer d'interférences et
(2) cet appareil doit accepter toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité de l'appareil.

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

This class B digital apparatus complies with Canadian ICES-003.

VCCI: Japan Compliance Statement

VCCI Class B Statement

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

取扱説明書に従って正しい取り扱いをして下さい。

VCCI-B

This is a Class B product based on the standard of the VCCI Council. If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

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.

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English AsusTek Inc. hereby declares that this device is in compliance with the essential requirements and other relevant provisions of CE Directives. Please see the CE Declaration of Conformity for more details.

Français AsusTek Inc. déclare par la présente que cet appareil est conforme aux critères essentiels et autres clauses pertinentes des directives européennes. Veuillez consulter la déclaration de conformité CE pour plus d'informations.

Deutsch AsusTek Inc. erklärt hiermit, dass dieses Gerät mit den wesentlichen Anforderungen und anderen relevanten Bestimmungen der CE-Richtlinien übereinstimmt. Weitere Einzelheiten entnehmen Sie bitte der CE-Konformitätserklärung.

Italiano AsusTek Inc. con la presente dichiara che questo dispositivo è conforme ai requisiti essenziali e alle altre disposizioni pertinenti alle direttive CE. Per maggiori informazioni fate riferimento alla dichiarazione di conformità CE.

Компания ASUS заявляет, что это устройство соответствует основным требованиям и другим соответствующим условиям европейских директив. Подробную информацию, пожалуйста, смотрите в декларации соответствия.

Български С настоящото AsusTek Inc. декларира, че това устройство е в съответствие със съществените изисквания и другите приложими постановления на директивите CE. Вижте CE декларацията за съвместимост за повече информация.

Hrvatski AsusTek Inc. ovim izjavljuje da je ovaj uređaj sukladan s bitnim zahtjevima i ostalim odgovarajućim odredbama CE direktiva. Više pojedinosti potražite u CE izjavi o sukladnosti.

Čeština Společnost AsusTek Inc. tímto prohlašuje, že toto zařízení splňuje základní požadavky a další příslušná ustanovení směrnic CE. Další podrobnosti viz Prohlášení o shodě CE.

Dansk AsusTek Inc. Erklærer hermed, at denne enhed er i overensstemmelse med hovedkravene and andre relevante bestemmelser i CE-direktiverne. Du kan læse mere i CE-overensstemmelseserklæring.

Nederlands AsusTek Inc. verklaart hierbij dat dit apparaat compatibel is met de essentiële vereisten en andere relevante bepalingen van CE-richtlijnen. Raadpleeg de CE-verklaring van conformiteit voor meer details.

Eesti Käesolevaga kinnitab AsusTek Inc., et see seade vastab CE direktiivide oluliste nõuetele ja teistele asjakohastele sätetele. Vt üksikasju CE vastavusdeklaratsioonist.

Suomi AsusTek Inc. vakuuttaa täten, että tämä laite on CE-direktiivien olennaisten vaatimusten ja muiden asiaan kuuluvien lisäysten mukainen. Katso lisätietoja CE-vaatimustenmukaisuusvakuutuksesta.

Ελληνικά Με το παρόν, η AsusTek Inc. Δηλώνει ότι αυτή η συσκευή συμμορφώνεται με τις θεμελιώδεις απαιτήσεις και άλλες σχετικές διατάξεις των Οδηγιών της ΕΕ. Για περισσότερες λεπτομέρειες ανατρέξτε στην Δήλωση Συμμόρφωσης ΕΕ.

Magyar Az AsusTek Inc. ezennel kijelenti, hogy a készülék megfelel a CE-irányelvek alapvető követelményeinek és ide vonatkozó egyéb rendelkezéseinek. További részletekért tekintse meg a CE-megfelelőségi nyilatkozatot.

Latviski Lidz ar šo AsusTek Inc. paziņo, ka šī ierīce atbilst būtiskajām prasībām un citiem saistošajiem nosacījumiem, kas norādīti CE direktīvā. Lai uzzinātu vairāk, skatiet CE Atbilstības deklarāciju.

Lietuvių Šiuo dokumentu bendrovė "AsusTek Inc." pareiškia, kad šis įrenginys atitinka pagrindinius CE direktyvų reikalavimus ir kitas susijusias nuostatas. Daugiau informacijos rasite CE atitikties deklaracijoje.

Norsk AsusTek Inc. erklærer herved at denne enheten er i samsvar med hovedsaklige krav og andre relevante forskrifter i CE-direktiver. Du finner mer informasjon i CE-samsvarserklæringen.

Polski Niniejszym AsusTek Inc. deklaruje, że urządzenie jest zgodne z istotnymi wymaganiami oraz innymi powiązanymi zaleceniami Dyrektyw CE. W celu uzyskania szczegółów, sprawdź Deklarację zgodności CE.

Português A AsusTek Inc. declara que este dispositivo está em conformidade com os requisitos essenciais e outras disposições relevantes das Diretivas da CE. Para mais detalhes, consulte a Declaração de Conformidade CE.

Română Prin prezenta, AsusTek Inc. declară faptul că acest dispozitiv respectă cerințele esențiale și alte prevederi relevante ale directivelor CE. Pentru mai multe detalii, consultați declarația de conformitate CE.

Srpski AsusTek Inc. ovim izjavljuje da je ovaj uređaj u saglasnosti sa ključnim zahtevima i drugim relevantnim odredbama CE Direktiva. Molimo vas, pogledajte CE Deklaraciju o usklađenosti za više detalja.

Slovensky Spoločnosť AsusTek Inc. týmto prehlasuje, že toto zariadenie vyhovuje príslušným požiadavkám a ďalším súvisiacim ustanoveniam smerníc ES. Viac podrobností si pozrite v prehlásení o zhode ES.

Slovenščina AsusTek Inc. tukaj izjavlja, da je ta naprava skladna s temeljnimi zahtevami in drugimi relevantnimi določili direktiv CE. Za več informacij glejte Izjavo CE o skladnosti.

Español Por la presente, AsusTek Inc. declara que este dispositivo cumple los requisitos básicos y otras disposiciones relevantes de las directivas de la CE. Consulte la Declaración de conformidad de la CE para obtener más detalles.

Svenska AsusTek Inc. förklarar härmed att denna enhet är i överensstämmelse med de grundläggande kraven och andra relevanta bestämmelser i CE-direktiven. Se CE-försäkran om överensstämmelse för mer information.

Українська AsusTek Inc. заявляє, що цей пристрій відповідає основним вимогам відповідних Директив ЄС. Будь ласка, див. більше подробиць у Декларації відповідності нормам ЄС.

Türkçe AsusTek Inc., bu aygıtın temel gereksinimlerle ve CE Yönergelerinin diğer ilgili koşullarıyla uyumlu olduğunu beyan eder. Daha fazla ayrıntı için lütfen CE Uygunluk Beyanına bakın.

Bosanski AsusTek Inc. ovim potvrđuje da je ovaj uređaj usklađen s osnovnim zahtjevima i drugim relevantnim propisima Direktiva EK. Za više informacija molimo pogledajte Deklaraciju o usklađenosti EK.

ASUS contact information

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Technical Support

Support fax	+1-812-284-0883
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Technical Support

Telephone	+49-2102-5789555
Support Fax	+49-2102-959911
Online support	http://qr.asus.com/techserv

DECLARATION OF CONFORMITY

Per FCC Part 2 Section 2. 1077(a)

FC

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 : H110M-R

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.

Representative Person's Name : ___Steve Chang / President___

Signature : _____

Date : _____Feb. 24, 2016_____

Ver. 140331

EU Declaration of Conformity

We, the undersigned,

Manufacturer:	ASUSTeK COMPUTER INC.
Address:	4F, No. 150, LI-TE Rd., PEITOU, TAIPEI 112, TAIWAN
Authorized representative in Europe:	ASUS COMPUTER GmbH
Address, City:	HARKORT STR. 21-23, 40880 RATINGEN
Country:	GERMANY

declare the following apparatus:

Product name :	Motherboard
Model name :	H110M-R

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

☒ **EMC – Directive 2004/108/EC (until April 19th, 2016) and Directive 2014/30/EU (from April 20th, 2016)**

☒ EN 55022:2010+AC:2011
☒ EN 61000-3-2:2014
☒ EN 55013:2001+A1:2003+A2:2006

☒ EN 55024:2010
☒ EN 61000-3-3:2013
☒ EN 55020:2007+A11:2011

☐ **R&TTE – Directive 1999/5/EC**

☐ EN 300 328 V1.8.1(2012-06)
☐ EN 300 440-1 V1.6.1(2010-08)
☐ EN 300 440-2 V1.4.1(2010-08)
☐ EN 301 511 V9.0.2(2003-03)
☐ EN 301 908-1 V6.2.1(2013-04)
☐ EN 301 908-2 V6.2.1(2013-10)
☐ EN 301 908-13 V6.2.1(2014-02)
☐ EN 301 893 V1.7.1(2012-06)
☐ EN 300 330-2 V1.5.1(2010-02)
☐ EN 50360:2001/A1:2012
☐ EN 62479:2010
☐ EN 62311:2008

☐ EN 301 489-1 V1.9.2(2011-09)
☐ EN 301 489-3 V1.6.1(2013-12)
☐ EN 301 489-4 V2.1.1(2013-12)
☐ EN 301 489-7 V1.3.1(2005-11)
☐ EN 301 489-9 V1.4.1(2007-11)
☐ EN 301 489-17 V2.2.1(2012-09)
☐ EN 301 489-24 V1.5.1(2010-09)
☐ EN 302 357-2 V1.4.1(2008-11)
☐ EN 302 291-2 V1.1.1(2005-07)
☐ EN 302 623 V1.1.1(2009-01)
☐ EN 50566:2013/AC:2014
☐ EN 50385:2002

☒ **LVD – Directive 2006/95/EC (until April 19th, 2016) and Directive 2014/35/EU (from April 20th, 2016)**

☐ EN 60950-1: 2006 / A12: 2011
☐ EN 60950-1: 2006 / A2: 2013

☐ EN 60065:2002 / A12: 2011

☐ **Ecodesign – Directive 2009/125/EC**

☐ Regulation (EC) No. 1275/2008
☐ Regulation (EC) No. 642/2009

☐ Regulation (EC) No. 278/2009
☐ Regulation (EU) No. 617/2013

☒ **RoHS – Directive 2011/65/EU**

☒ **CE marking**
☒ **Equipment Class 1**

CE

(EU conformity marking)

Signature   **Taipei, Taiwan**
                                   Place of issue

Jerry Shen   **24/2/2016**
Printed Name   Date of issue

CEO   **2016**
Position   Year CE marking was first affixed

Ver. 160217