ASUS H110M-E/M.2

ASUS H110M-E/M.2 Motherboard User Manual

LGA1151 DDR4 M.2 HDMI USB3.0 H110 MicroATX Motherboard

Introduction

The ASUS H110M-E/M.2 motherboard is designed to support 6th Generation Intel processors, offering a robust platform for various computing needs. It incorporates advanced hardware safeguards with 5X Protection II, ensuring durability and reliability. This motherboard features DDR4 memory compatibility and an integrated M.2 slot for high-speed solid-state drives (SSDs) of 2242, 2260, and 2280 lengths. It is suitable for a range of applications, from entry-level gaming systems to corporate workstations, providing essential features for a stable and efficient computing experience.

What's in the Box

Upon opening your ASUS H110M-E/M.2 motherboard package, please verify that all the following items are included:

- ASUS H110M-E/M.2 Motherboard
- I/O Shield
- M.2 Screw package
- Serial ATA 6.0Gb/s cable (2)
- Support DVD (containing drivers and utilities)
- User's manual (this document)



Image: Contents of the ASUS H110M-E/M.2 motherboard package, showing the motherboard, SATA cables, M.2 screw package, I/O shield, support DVD, and user guide.

Setup

1. Pre-Installation Checks

Before installing the motherboard, ensure compatibility with your chosen CPU (LGA 1151 socket, 6th or 7th Gen Intel Core processors), RAM (DDR4), and other components. Verify that your power supply unit (PSU) has sufficient wattage and the necessary connectors.

2. Motherboard Installation

1. **Prepare the Case:** Install the I/O shield into the rear opening of your computer case. Ensure standoffs are correctly aligned and installed for the MicroATX form factor.
2. **Install the Motherboard:** Carefully place the motherboard into the case, aligning the screw holes with the standoffs. Secure the motherboard with screws.
3. **Install the CPU:** Open the CPU socket lever, align the CPU with the socket (triangle mark on CPU to triangle mark on socket), gently place the CPU, and close the lever.
4. **Install the CPU Cooler:** Attach the CPU cooler according to its manufacturer's instructions. Ensure proper thermal paste application.
5. **Install RAM:** Open the DIMM slot clips, align the DDR4 memory modules with the slots (notch on RAM to notch on slot), and press down firmly until the clips snap into place. This motherboard supports up to 32GB DDR4 RAM across two slots.
6. **Install M.2 SSD (Optional):** If using an M.2 SSD, insert it into the M.2 slot and secure it with the provided M.2 screw.

3. Connecting Peripherals

- **Power Connectors:** Connect the 24-pin ATX power connector and the 4-pin CPU power connector from your PSU to the motherboard.
- **Storage Devices:** Connect SATA data cables from your storage drives (HDDs/SSDs) to the SATA 6.0Gb/s ports on the motherboard. Connect power cables from the PSU to the drives.
- **Front Panel Connectors:** Connect the case's front panel cables (power button, reset button, HDD LED, power LED, USB ports, audio jacks) to the corresponding headers on the motherboard. Refer to the motherboard manual for exact pin layouts.
- **Expansion Cards:** Install any PCIe expansion cards (e.g., graphics card) into the appropriate PCIe slots and secure them.
- **External Peripherals:** Connect your monitor, keyboard, mouse, and other USB devices to the rear I/O panel.



Image: Rear I/O panel of the ASUS H110M-E/M.2 motherboard, featuring PS/2 ports, VGA, USB 2.0, HDMI, USB 3.0, LAN, and audio jacks.

4. Initial Boot

After all connections are made, power on your system. The system should POST (Power-On Self-Test) and display the BIOS/UEFI screen or attempt to boot from an installed operating system.

Operating

1. BIOS/UEFI Access and Navigation

To access the BIOS/UEFI setup utility, press the **Delete** key or **F2** key repeatedly during the system's boot-up process. The BIOS provides options for configuring system settings, boot order, hardware monitoring, and more. Navigate using the keyboard or mouse.

2. Driver Installation

After installing your operating system, install the necessary drivers for the motherboard components. These include chipset drivers, audio drivers, LAN drivers, and any other specific device drivers. The included Support DVD contains most required drivers. Alternatively, download the latest drivers from the official ASUS support website for your specific motherboard model.

3. System Configuration

Configure your operating system settings, install software, and ensure all hardware is recognized and functioning correctly. For optimal performance, ensure your operating system is up-to-date.

Maintenance

1. Keeping Components Clean

Regularly clean your computer's interior to prevent dust buildup, which can lead to overheating and reduced performance. Use compressed air to remove dust from fans, heatsinks, and other components. Ensure the system is powered off and unplugged before cleaning.

2. BIOS and Driver Updates

Periodically check the ASUS support website for updated BIOS versions and drivers. BIOS updates can improve system stability, add support for new hardware, or fix bugs. Driver updates can enhance performance and compatibility. Follow the instructions provided by ASUS carefully when performing updates.

3. System Backups

Regularly back up your important data to an external drive or cloud storage. This protects against data loss due to hardware failure or other unforeseen issues.

Troubleshooting

This section provides solutions to common issues you might encounter.

1. No Power / No POST

- **Check Power Connections:** Ensure the 24-pin ATX and 4-pin CPU power connectors are securely seated. Verify the PSU is switched on and connected to a working power outlet.
- **Reseat Components:** Remove and re-install the CPU, RAM modules, and any expansion cards to ensure they are properly seated.
- **Clear CMOS:** Refer to the motherboard manual for instructions on how to clear the CMOS (Complementary Metal-Oxide-Semiconductor) settings, which can resolve boot issues caused by incorrect BIOS configurations.
- **Test with Minimal Components:** Disconnect all non-essential components (e.g., extra storage drives, expansion cards) and attempt to boot with only the CPU, one RAM stick, and the graphics output.

2. Component Detection Issues

- **Check Cables:** Ensure SATA cables for storage drives are securely connected at both ends.
- **BIOS Settings:** Verify that the components are enabled in the BIOS/UEFI settings. For M.2 drives, ensure the M.2 slot is enabled and not conflicting with other SATA ports (refer to the manual for specific port sharing details).
- **Driver Installation:** Ensure all necessary drivers are installed for the operating system to recognize hardware.

3. BIOS Update Failures

If a BIOS update fails, do not power off the system. Many ASUS motherboards have a BIOS Flashback feature or a recovery mode. Refer to the specific instructions in the full user manual or ASUS support website for BIOS recovery procedures.

4. Contacting Support

If you are unable to resolve an issue after following these steps, please contact ASUS customer support for further assistance. Provide them with your motherboard model number and a detailed description of the problem.

SPECIFICATIONS

Feature	Specification
Brand	ASUS
Model Name	H110M-E/M.2
CPU Socket	LGA 1151
Compatible Processors	Intel Core i3-6100, i5-6400, i7-6700, i3-7100, i5-7400, i7-7700, i3-8100, i5-8400, i7-8700
Chipset Type	Intel H110
RAM Memory Technology	DDR4
Memory Clock Speed	2400 MHz
Ram Memory Maximum Size	32 GB
Memory Slots Available	2
Graphics Card Interface	Integrated, PCI Express
Total SATA Ports	4
Total USB Ports	6 (including USB 2.0 and USB 3.0)
Total Number of HDMI Ports	1
Total PCIe Ports	1
Main Power Connector Type	ATX
Item Weight	1.5 Pounds
Platform	Windows 10

Warranty Information

ASUS typically provides a manufacturer's warranty for its motherboards. Based on user feedback, this model may come with a **3-year warranty**. For precise and up-to-date warranty terms and conditions, please refer to the warranty card included with your product or visit the official ASUS support website. Keep your proof of purchase for warranty claims.

Support

For additional support, driver downloads, BIOS updates, and troubleshooting guides, please visit the official ASUS support website:
https://www.asus.com/support/
You can also find detailed product information and FAQs specific to the H110M-E/M.2 model on the ASUS website.

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