ASUS H110M-A

ASUS H110M-A Micro-ATX Motherboard User Manual

Model: H110M-A

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the ASUS H110M-A Micro-ATX motherboard. Designed for 6th generation Intel processors, this motherboard offers essential features for building a reliable personal computer system.

2. Product Overview

2.1 Key Features

- DDR4 memory compatibility for enhanced system performance.
- ASUS 5X Protection II for advanced hardware safeguards and overall system reliability.
- Media-acclaimed UEFI BIOS with EZ Flash 3 for intuitive system configuration and easy updates.
- Fan Xpert 2+ for advanced fan controls, ensuring optimal cooling and quiet operation.
- Integrated audio with LED-illuminated shielding for improved sound quality.

2.2 Motherboard Layout

The ASUS H110M-A motherboard features a standard Micro-ATX form factor. Below is an overview of its main components.



Figure 1: Top-down view of the ASUS H110M-A motherboard, showing the CPU socket, RAM slots, PCIe slot, and various connectors.



Figure 2: Angled view of the ASUS H110M-A motherboard, highlighting the heatsink and various chipsets.

2.3 Rear I/O Panel

The rear I/O panel provides connectivity for external devices. Familiarize yourself with the available ports before installation.



Figure 3: Rear I/O panel of the ASUS H110M-A motherboard, featuring PS/2 ports, VGA, DVI, HDMI, USB 3.0, USB 2.0, LAN, and audio jacks.

The rear I/O panel includes:

- **PS/2 Ports:** For legacy keyboard and mouse connections.
- **VGA Port:** For analog display output.
- **DVI-D Port:** For digital display output.
- **HDMI Port:** For high-definition digital video and audio output.
- **USB 3.0 Ports:** For high-speed data transfer with compatible devices.
- **USB 2.0 Ports:** For general USB device connectivity.
- **LAN Port:** For network connectivity.
- **Audio Jacks:** For connecting speakers, headphones, and microphones.

3. Setup and Installation

Before installing the motherboard, ensure your system is powered off and disconnected from the power source. Handle the motherboard by its edges to avoid static discharge.

3.1 Package Contents

Verify that all components are present in your motherboard package:



Figure 4: Contents of the ASUS H110M-A motherboard package, including the motherboard, I/O shield, SATA cables, user guide, and support DVD.

- ASUS H110M-A Micro-ATX Motherboard
- I/O Back Plate
- 2 x Serial ATA 6Gb/s Cables
- User Guide
- Support DVD (containing drivers and utilities)

3.2 Installing the CPU

1. Locate the LGA 1151 CPU socket on the motherboard.
2. Open the CPU socket lever and lift the load plate.
3. Carefully align the CPU with the socket, ensuring the gold triangle on the CPU matches the triangle on the socket. Do not force the CPU into place.
4. Lower the load plate and secure it with the lever.
5. Install the CPU cooler according to its manufacturer's instructions.

3.3 Installing DDR4 Memory

1. Locate the two DDR4 DIMM slots on the motherboard.
2. Open the clips at both ends of the DIMM slot.
3. Align the memory module with the slot, ensuring the notch on the module matches the key in the slot.
4. Press down firmly on both ends of the memory module until the clips snap into place.

3.4 Connecting Storage Devices

The motherboard provides four SATA 6Gb/s ports for connecting storage devices such as hard drives and SSDs.

1. Connect one end of a SATA data cable to a SATA port on the motherboard.
2. Connect the other end of the SATA data cable to your storage device.
3. Connect a SATA power cable from your power supply to the storage device.

3.5 Power Connections

Ensure all necessary power connectors from your power supply are securely attached to the motherboard.

- **24-pin ATX Power Connector:** Connect the main 24-pin power cable from your power supply to the corresponding connector on the motherboard.
- **8-pin EATX 12V Power Connector:** Connect the 8-pin (or 4+4 pin) CPU power cable to the connector near the CPU socket.

3.6 Front Panel Connectors

Connect the cables from your computer case's front panel (power button, reset button, USB ports, audio jacks, LED indicators) to the corresponding headers on the motherboard. Refer to the motherboard diagram in the user guide for precise pin assignments. Note that front panel pin labels can be small and require careful attention during connection.

3.7 Installing the I/O Shield

Before installing the motherboard into the case, insert the I/O shield into the rear opening of your computer case. Ensure it is properly seated and all tabs are aligned. Some users may find the I/O shield alignment challenging; patience is advised to ensure a proper fit before securing the motherboard.

4. Operating Your System

4.1 First Boot and BIOS Setup

Upon the first boot, the system will typically enter the UEFI BIOS utility. Here you can configure system settings, boot order, and monitor hardware status.

- Press the **Delete** key during startup to enter the BIOS setup.
- The ASUS UEFI BIOS provides an intuitive graphical interface.
- Use **EZ Flash 3** to update the BIOS firmware directly from a USB drive, ensuring system stability and compatibility.
- Utilize **Fan Xpert 2+** to customize fan speeds and profiles for optimal cooling and noise levels.

4.2 Driver Installation

After installing your operating system, install the necessary drivers for the motherboard components. These can be found on the included support DVD or downloaded from the official ASUS support website.

1. Insert the support DVD into your optical drive.
2. Follow the on-screen instructions to install chipset, audio, LAN, and other essential drivers.
3. Alternatively, visit the ASUS support website for the H110M-A model to download the latest drivers.

5. Maintenance

5.1 Cleaning

Regularly clean your computer system to prevent dust buildup, which can lead to overheating and reduced performance.

- Power off and unplug your computer before cleaning.
- Use compressed air to remove dust from fans, heatsinks, and other components.
- Wipe external surfaces with a soft, damp cloth.

5.2 BIOS Updates

Periodically check the ASUS support website for BIOS updates. BIOS updates can improve system stability, add support for new hardware, and fix bugs. Always follow the instructions provided by ASUS carefully when updating the BIOS.

6. Troubleshooting

6.1 No Power / No Boot

- Ensure all power cables (24-pin ATX and 8-pin EATX 12V) are securely connected to the motherboard and power supply.
- Verify that the power supply is switched on and functioning correctly.
- Check front panel power button connections to the motherboard.
- Reseat RAM modules and expansion cards.

6.2 No Display Output

- Ensure your monitor is connected to the correct video output port on the motherboard (VGA, DVI, or HDMI).
- Verify that the monitor is powered on and set to the correct input source.
- If using a dedicated graphics card, ensure the monitor is connected to the graphics card's output and the card is properly seated and powered.

- Reseat RAM modules.

6.3 Fan Noise / Overheating

- Ensure all case fans and the CPU cooler fan are properly connected to the motherboard fan headers.
- Utilize the Fan Xpert 2+ utility in the BIOS or through ASUS software to adjust fan curves and monitor temperatures.
- Clean dust from fans and heatsinks regularly.
- Note that this motherboard has only one chassis fan connector. If you require more case fans, consider using a fan splitter cable.

6.4 Difficulty with I/O Shield Alignment

If you encounter difficulty aligning the motherboard with the I/O shield during installation, ensure the I/O shield is fully seated in the case opening. Gently adjust the motherboard's position until all ports align correctly with the shield openings before tightening mounting screws.

7. Specifications

Feature	Detail
Brand	ASUS
Model Name	H110M-A
CPU Socket	LGA 1151
Compatible Processors	Supports 6th Gen Intel Core i7/i5/i3/Pentium/Celeron Processors
Chipset Type	Intel H110
RAM Memory Technology	DDR4
Memory Slots Available	2
Ram Memory Maximum Size	32 GB
Memory Clock Speed	Up to 2133MHz (Actual supported speeds depend on CPU and memory modules)
Graphics Card Interface	Integrated (via CPU)
Total PCIe Ports	1 (PCIe 3.0 x16)
Total SATA Ports	4 (SATA 6Gb/s)
Total USB Ports	6 (2x USB 3.0, 4x USB 2.0 on rear panel; additional headers for front panel)
Total Number of HDMI Ports	1
Main Power Connector Type	24-Pin
Item Weight	1.9 Pounds

8. Warranty and Support

For warranty information and technical support, please refer to the documentation included with your product or visit the official ASUS support website. The website provides drivers, FAQs, and contact information for customer service.

ASUS Support Website: https://www.asus.com/support/

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question