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## ASUS PRIME H810M-E-CSM

# ASUS Prime H810M-E-CSM Motherboard User Manual

## INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, maintenance, and troubleshooting of the ASUS Prime H810M-E-CSM Intel H810 mATX Commercial CSM Motherboard. This motherboard is engineered for Intel Core Ultra (Series 2) processors, offering robust performance and essential features for commercial and AI PC applications.

## SAFETY INFORMATION

Always observe the following safety precautions during installation and operation:

- Disconnect the power cord from the wall outlet before touching any components.
- Wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage to components.
- Handle components by their edges to avoid touching sensitive parts.
- Ensure proper ventilation within your PC case to prevent overheating.
- Refer to the specific component manuals for additional safety guidelines.

## PACKAGE CONTENTS

Verify that all items are present in your motherboard package:

- ASUS Prime H810M-E-CSM Motherboard
- SATA 6Gb/s Data Cables (2x)
- M.2 SSD Anchors (2x)
- Rear I/O Shield
- User Manual / Quick Start Guide

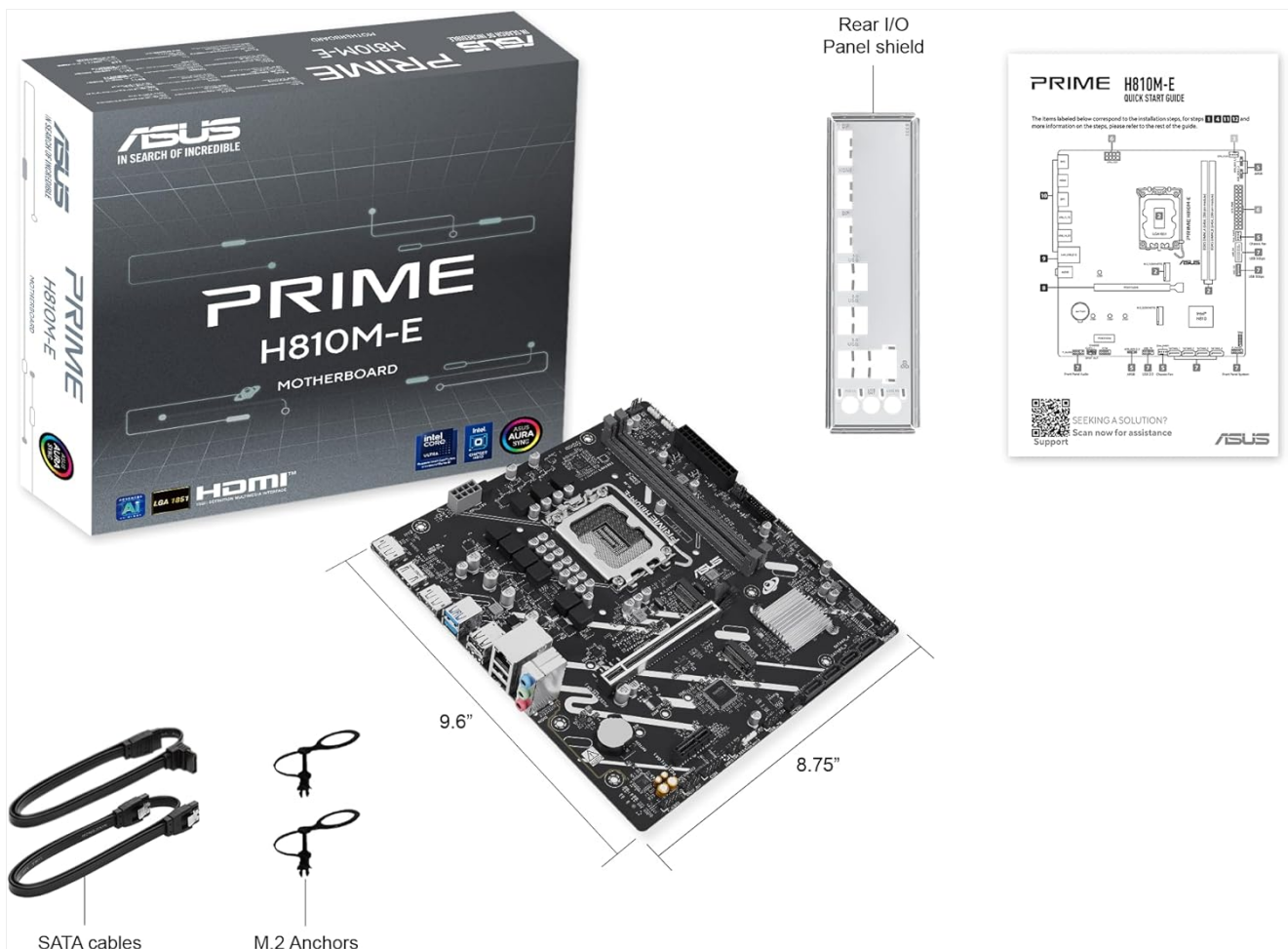


Image: Contents of the ASUS Prime H810M-E-CSM motherboard package, including the motherboard, SATA cables, M.2 anchors, rear I/O shield, and documentation.

## MOTHERBOARD LAYOUT

Familiarize yourself with the key components and connectors on the motherboard.

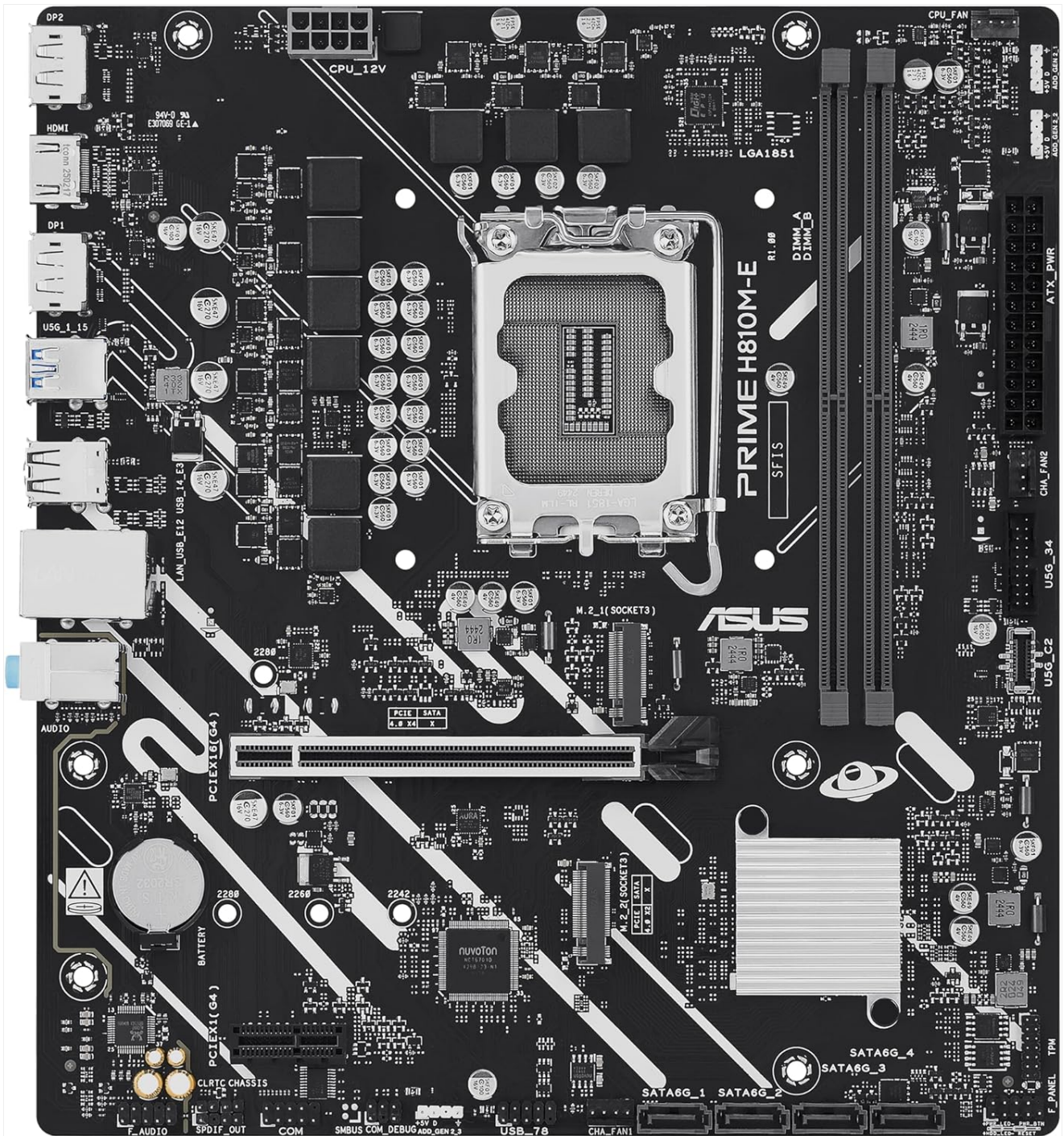


Image: Top-down view of the ASUS Prime H810M-E-CSM motherboard, highlighting the LGA 1851 CPU socket, DDR5 DIMM slots, PCIe slots, and various headers.



Image: Close-up view of the rear I/O panel, showing HDMI, USB 3.2 Gen 1, USB 2.0, 1Gb LAN, and audio ports.

## 1. CPU Installation

This motherboard supports Intel Core Ultra (Series 2) processors with an LGA 1851 socket.

1. Open the CPU socket lever and remove the protective cap.
2. Carefully align the CPU with the socket, ensuring the notches on the CPU match the keys on the socket.
3. Gently place the CPU into the socket without applying force.
4. Close the socket lever to secure the CPU.
5. Install the CPU cooler according to its manufacturer's instructions.

## 2. Memory (RAM) Installation

The motherboard features two DDR5 DIMM slots, supporting up to 128GB of RAM.

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

## 3. Storage Installation

The motherboard supports M.2 SSDs and SATA drives.

### M.2 SSD Installation:

1. Locate the M.2 slot on the motherboard.
2. Insert the M.2 SSD into the slot at a 30-degree angle.
3. Gently push down the SSD and secure it with the provided M.2 anchor or screw.

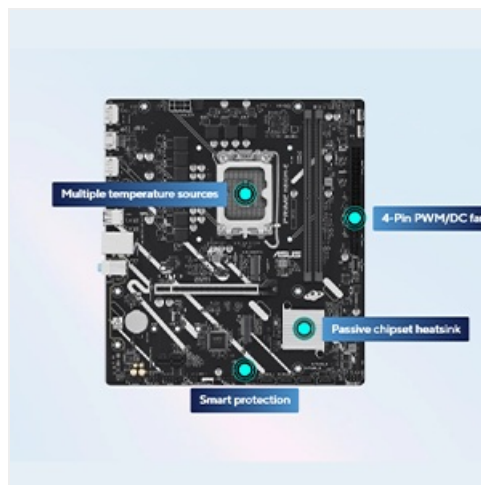


Image: Diagram showing the location of the M.2 slot on the motherboard for storage installation.

### SATA Drive Installation:

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 drive (HDD/SSD).
3. Connect a SATA power cable from your power supply unit (PSU) to the storage drive.

## 4. PCIe Card Installation

Install graphics cards or other expansion cards into the PCIe 4.0 slots.

1. Open the retention clip at the end of the PCIe slot.
2. Align the expansion card with the slot and press down firmly until it is seated and the clip snaps shut.
3. Secure the card to the PC case with a screw.



Image: Close-up view of a PCIe 4.0 slot on the motherboard, indicating where expansion cards are installed.

## 5. Power Connections

Connect the power supply unit (PSU) cables to the motherboard.

- **24-pin ATX Power Connector:** Connect the main 24-pin power cable from your PSU to the corresponding connector on the motherboard.
- **8-pin CPU Power Connector (EATX12V):** Connect the 8-pin CPU power cable from your PSU to the connector located near the CPU socket.

## 6. Front Panel Connections

Connect your PC case's front panel cables (power button, reset button, USB ports, audio jacks, LED indicators) to the corresponding headers on the motherboard. Refer to the motherboard diagram for exact locations.

## OPERATING

### First Boot and BIOS/UEFI Setup

After assembling your system, connect a monitor, keyboard, and mouse. Power on the system.

- Press the **Delete** key during startup to enter the BIOS/UEFI setup utility.
- Configure boot order, system time, and other essential settings.
- Save changes and exit the BIOS.



Image: Screenshot of the ASUS UEFI BIOS interface, showing various configuration options for system settings.

## Driver and Operating System Installation

Install your preferred operating system (e.g., Windows 10/11) from a bootable USB drive or DVD. After OS installation, install the latest drivers for the motherboard chipset, LAN, audio, and any other integrated components from the ASUS support website to ensure optimal performance and stability.

## MAINTENANCE

### Cleaning

Regularly clean your PC to prevent dust buildup, which can lead to overheating and component failure. Use compressed air to remove dust from heatsinks, fans, and other components. Ensure the system is powered off and unplugged before cleaning.

### BIOS Updates

Periodically check the ASUS support website for BIOS updates. BIOS updates can improve system stability, compatibility, and performance. Follow the instructions provided by ASUS carefully when performing a BIOS update to avoid system damage.

## TROUBLESHOOTING

This section addresses common issues you might encounter.

- **No Display / No Post:**

- Ensure all power cables (24-pin ATX, 8-pin CPU) are securely connected.
- Reseat the RAM modules. Try booting with only one RAM stick.
- Verify the CPU is correctly seated and the CPU cooler is properly installed.
- Check that the graphics card is fully seated in its PCIe slot and has adequate power.
- If using integrated graphics, ensure your monitor is connected to the motherboard's video output (HDMI).

- **System Instability / Crashes:**

- Ensure all drivers are up to date.
- Check CPU and GPU temperatures using monitoring software.
- Run memory diagnostic tools to check for faulty RAM.
- Verify PSU wattage is sufficient for all components.

- **Peripheral Not Detected:**

- Try connecting the peripheral to a different port.
- Install or update drivers for the peripheral.
- Check BIOS settings to ensure the port is enabled.

## SPECIFICATIONS

Feature	Specification
Brand	ASUS
Model Name	PRIME H810M-E-CSM
CPU Socket	LGA 1851
Compatible Processors	Intel Core Ultra Processors (Series 2)
Chipset Type	Intel H810
RAM Memory Technology	DDR5
Memory Slots Available	2
Ram Memory Maximum Size	128 GB
Graphics Card Interface	PCI Express 4.0
Total PCIe Ports	2
Total SATA Ports	4
Total M.2 Slots	1
Total USB Ports	11 (various types)
Total Number of HDMI Ports	1
Number of Ethernet Ports	1 (1Gb LAN)
Main Power Connector Type	24-Pin
Platform	Windows 10, Windows 11
Item Dimensions L x W x H	9.6"L x 8.7"W x 1.5"H
Item Weight	1.1 Pounds

## WARRANTY INFORMATION

The ASUS Prime H810M-E-CSM Motherboard comes with a **3-year manufacturer's warranty**. For detailed terms and conditions, please refer to the warranty card included in your package or visit the official ASUS support website.

## SUPPORT

For further assistance, technical support, driver downloads, or BIOS updates, please visit the official ASUS support website:

**ASUS Global Support**

You can also find additional resources and FAQs on the ASUS product page for the Prime H810M-E-CSM.

