## ASUS H610M-A D4-CSM

# ASUS Prime H610M-A D4-CSM Motherboard User Manual

Model: H610M-A D4-CSM | Brand: ASUS

## 1. INTRODUCTION

This user manual provides comprehensive instructions for the installation, operation, and maintenance of your ASUS Prime H610M-A D4-CSM Micro-ATX Commercial Motherboard. Designed for 12th Generation Intel Core processors, this motherboard offers enhanced enterprise-level features, including robust system protection, 24/7 stability and reliability, and an improved management suite, ASUS Control Center Express, to streamline IT operations.

## 2. SAFETY INFORMATION

Always handle the motherboard with care. Static electricity can damage components. Use an anti-static wrist strap or discharge static electricity by touching a grounded metal object before handling the motherboard. Ensure the power supply is disconnected from the wall outlet before installing or removing any components. Refer to the power supply unit's manual for specific safety guidelines.

## 3. PACKAGE CONTENTS

Verify that all items are present in the package:

- ASUS Prime H610M-A D4-CSM Motherboard
- User Guide
- Quick Start Guide
- Support DVD (for drivers and utilities)
- I/O Shield
- SATA 6Gb/s Cables (2x)
- M.2 SSD Screws and Stand-offs

Image 1: ASUS Prime H610M-A D4-CSM Motherboard and its retail packaging.

# 4. Setup

## 4.1. CPU Installation (LGA 1700 Socket)

The motherboard supports 12th Gen Intel Core, Pentium Gold, and Celeron Processors. Carefully align the CPU with the LGA 1700 socket, ensuring the triangular markers on the CPU and socket match. Lower the load plate and secure the retention lever.
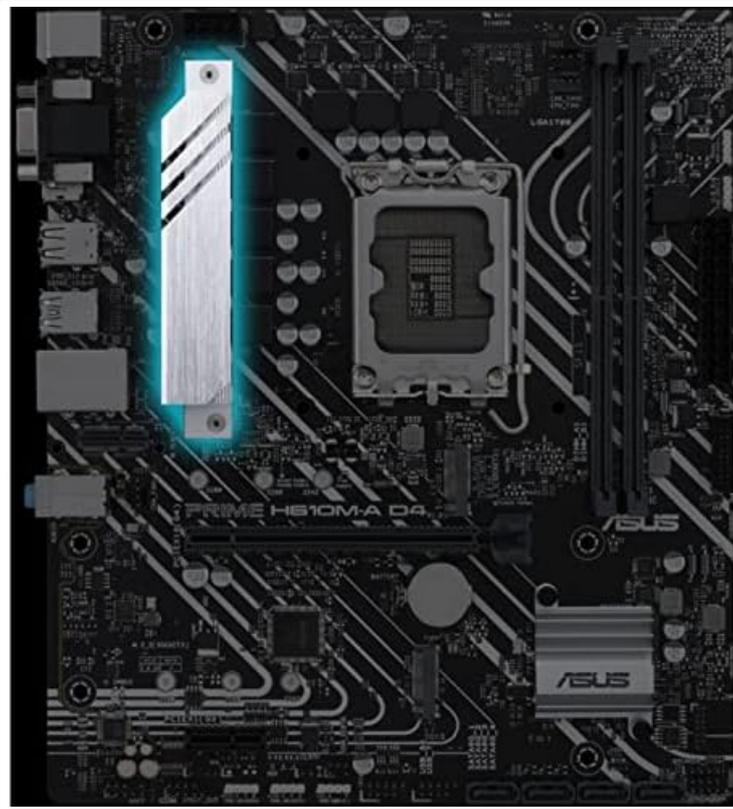
Image 2: Close-up view of the LGA 1700 CPU socket on the ASUS Prime H610M-A D4-CSM motherboard.

## 4.2. Memory Installation (DDR4)

This motherboard features two DIMM slots supporting up to 64GB of DDR4 memory. For optimal performance, install memory modules in a dual-channel configuration. Ensure the memory modules are correctly oriented and firmly seated in the DIMM slots until the clips snap into place.

## 4.3. Storage Installation (M.2 and SATA)

The motherboard provides two M.2 slots for NVMe SSDs and four SATA 6Gb/s ports for traditional SATA drives. Install M.2 SSDs by aligning them with the slot and securing them with the provided screw and stand-off. Connect SATA drives using the SATA cables.

## 4.4. Expansion Slots

The motherboard includes one PCIe 4.0 x16 slot for graphics cards and one PCIe 3.0 x1 slot for other expansion cards. Insert expansion cards firmly into their respective slots and secure them with chassis screws.

## 4.5. Connecting Peripherals

Connect your display to the DisplayPort, HDMI, or D-Sub port on the rear I/O panel. Utilize the rear USB 3.2 Gen 2 Type-A ports and front USB 3.2 Gen 1 header for high-speed peripheral connectivity. The integrated Intel 1Gb Ethernet port provides reliable network access. Audio jacks are available for speaker and microphone connections.

## 5. OPERATING INSTRUCTIONS

After all components are installed and connected, ensure the power supply is properly connected to the motherboard (24-pin ATX power and 8-pin ATX 12V power). Power on your system. The motherboard will initiate the Power-On Self-Test (POST). If using a 13th Generation Intel processor, a BIOS update may be required for proper system operation. Refer to the ASUS support website for the latest BIOS versions and update procedures.

## 6. MAINTENANCE

Regularly clean your computer case and motherboard to prevent dust buildup, which can lead to overheating. Ensure proper airflow within the chassis. Keep your BIOS updated to the latest version from the ASUS support website to benefit from performance improvements, bug fixes, and enhanced compatibility. This motherboard features ASUS-exclusive self-recovering BIOS technology for automatic system BIOS recovery from a verified backup, enhancing system stability.

## 7. TROUBLESHOOTING

If you encounter issues, consult the following common troubleshooting steps:

- **No Display Output:** Verify that the monitor is connected to the correct port (DisplayPort, HDMI, or D-Sub) and that the graphics card (if installed) is properly seated. Ensure the CPU and RAM are correctly installed.
- **System Not Booting:** Check all power connections to the motherboard and components. Reseat RAM modules. If using a 13th Gen Intel CPU, ensure the BIOS has been updated to a compatible version.
- **Peripheral Recognition Issues:** Ensure USB devices are connected to the correct ports. Check device drivers in your operating system.
- **BIOS Update for 13th Gen CPUs:** As noted in user reviews, this motherboard may require a BIOS update to support 13th Generation Intel processors. If you experience boot issues with a 13th Gen CPU, you may need to temporarily install a 12th Gen CPU to perform the BIOS update.

For more detailed troubleshooting, refer to the comprehensive user guide or the ASUS support website.

## 8. SPECIFICATIONS

| Feature | Specification |
| --- | --- |
| Brand | ASUS |
| Series | PRIME H610M-A D4-CSM |
| Model Number | H610M-A D4-CSM |
| CPU Socket | LGA 1700 (for 12th Gen Intel Core, Pentium Gold, Celeron Processors) |
| Chipset | Intel H610 |
| Memory | 2 x DIMM, Max. 64GB, DDR4 3200/3000/2933/2800/2666/2400/2133 Non-ECC, Un-buffered Memory |
| Storage | 2 x M.2 slots (PCIe 3.0 x4/x2 mode), 4 x SATA 6Gb/s ports |
| Expansion Slots | 1 x PCIe 4.0 x16, 1 x PCIe 3.0 x1 |
| USB Ports (Rear) | 2 x USB 3.2 Gen 2 Type-A, 4 x USB 2.0 Type-A |
| USB Ports (Front) | 1 x USB 3.2 Gen 1 header (supports 2 additional USB 3.2 Gen 1 ports), 1 x USB 2.0 header (supports 3 additional USB 2.0 ports) |
| Ethernet | 1 x Intel 1Gb Ethernet (ASUS LANGuard) |
| Graphics Output | 1 x DisplayPort, 1 x HDMI, 1 x D-Sub (VGA) |

| Feature | Specification |
|---------|---------------|
| Audio | Realtek 7.1 Surround Sound High Definition Audio CODEC |
| Dimensions | Micro-ATX Form Factor (9.6 inches x 8.3 inches) |

## 9. WARRANTY AND SUPPORT

ASUS Corporate Stable Model (CSM) motherboards offer up to 36-month supply availability, End-of-Life (EOL) notice, and Engineering Change Notice (ECN) control. For warranty information, technical support, and driver downloads, please visit the official ASUS support website: www.asus.com/support.

You can also visit the ASUS Store on Amazon for product information:ASUS Store.

## Related Documents - H610M-A D4-CSM

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|---|---|
| PRIME H610M-D D4 **Motherboard** | **ASUS PRIME H610M-D D4 Motherboard User Manual**<br>This manual provides detailed information on the ASUS PRIME H610M-D D4 motherboard, including safety precautions, component layout, specifications, BIOS information, and installation guides for CPU and system memory. |
| EX-H610M-V3 D4 **Motherboard** | **ASUS EX-H610M-V3 D4 Motherboard User Manual**<br>Comprehensive user manual for the ASUS EX-H610M-V3 D4 motherboard, covering product introduction, specifications, BIOS setup, safety information, and compliance details. |
| PRIME H610M-A D4 **Motherboard** | **ASUS PRIME H610M-A D4 Motherboard User Manual**<br>Comprehensive user manual for the ASUS PRIME H610M-A D4 motherboard, covering installation, BIOS information, specifications, and safety precautions. |

| | [ASUS PRIME B660M-A D4 Motherboard Quick Start Guide - Installation Steps](#) |
| --- | --- |
| | A concise, SEO-optimized HTML guide for installing the ASUS PRIME B660M-A D4 motherboard. Covers CPU, RAM, storage, expansion cards, power connections, and initial setup with detailed textual descriptions of diagrams. |
| PRIME B660M-A D4 — Motherboard | [ASUS PRIME B660M-A D4 Motherboard User Manual](#)<br><br>User manual for the ASUS PRIME B660M-A D4 motherboard, covering product overview, BIOS/RAID information, specifications, and support. |
| PRIME H510M-R — Motherboard | [ASUS PRIME H510M-R Motherboard Benutzerhandbuch: Installation, Spezifikationen und BIOS-Infos](#)<br><br>Umfassendes Benutzerhandbuch für das ASUS PRIME H510M-R Motherboard, das Installation, Sicherheitshinweise, Hardware-Übersicht, BIOS-Informationen, detaillierte Spezifikationen und Umwelt-Compliance abdeckt. |