ASUS B660-PLUS D4

ASUS PRIME B660-PLUS D4 Motherboard User Manual

MODEL: B660-PLUS D4

1. Product Overview

The ASUS PRIME B660-PLUS D4 motherboard is engineered to support 12th and 13th Generation Intel® processors, offering a robust foundation for PC DIY builders and users seeking comprehensive performance tuning. It features a sturdy power design, extensive cooling solutions, and intelligent options accessible through its intuitive software and firmware.
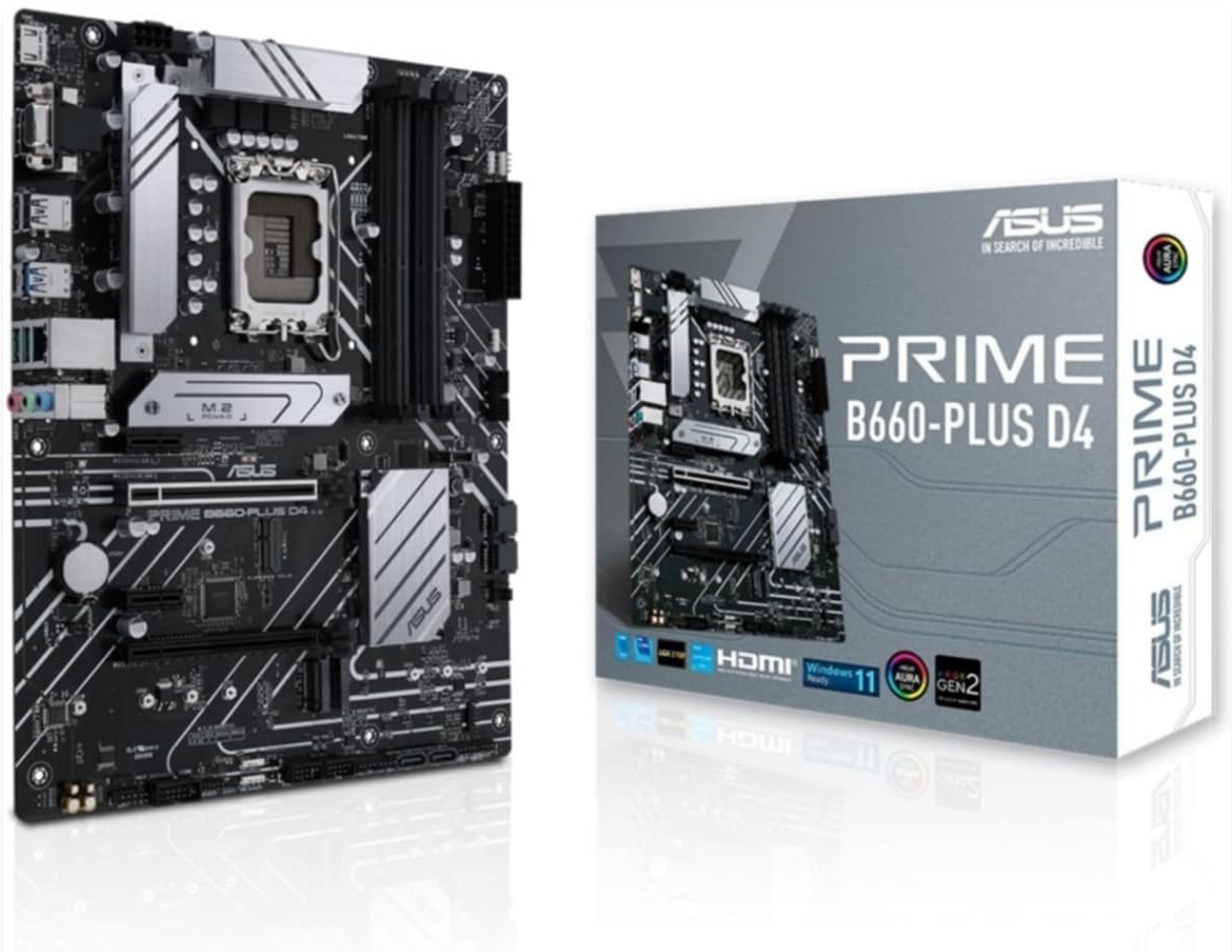

Image: ASUS PRIME B660-PLUS D4 Motherboard and its retail packaging.

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Video: A general overview of the ASUS B660-PLUS D4 motherboard, highlighting its design and key features.

2. Key Features

- **Intel LGA 1700 Socket:** Ready for Intel processors of the 12th and 13th Generation.

- **Ultra-fast Connectivity:** Features PCIe 4.0 slots, three M.2 slots, USB 3.2 Gen 2x2 Type-C on the back, USB 3.2 Gen 1 Type-C on the front, Realtek 2.5GB Ethernet, and Thunderbolt 4 support.

- **Comprehensive Cooling:** Equipped with VRM Heatsink, M.2 Heatsink, PCH Heatsink, Hybrid Fan Headers, and Fan Xpert 2+ for optimal thermal management.

- **ASUS OptiMem:** Careful laying of conductors and through-contacts to preserve signal integrity for improved storage stability.

3. Physical Layout

The ASUS PRIME B660-PLUS D4 motherboard features a standard ATX form factor with a sleek black PCB and silver heatsinks. Key components are strategically placed for efficient cooling and easy access during installation.

Image: Angled view of the motherboard, showcasing the CPU socket, RAM slots, and heatsinks.

Image: Another angled perspective, highlighting the PCIe slots and M.2 drive locations.

Image: Rear view of the motherboard, showing the backplate and mounting points.

4. Connectivity

The motherboard offers a comprehensive array of input/output (I/O) ports and internal connectors to accommodate various peripherals and expansion cards.
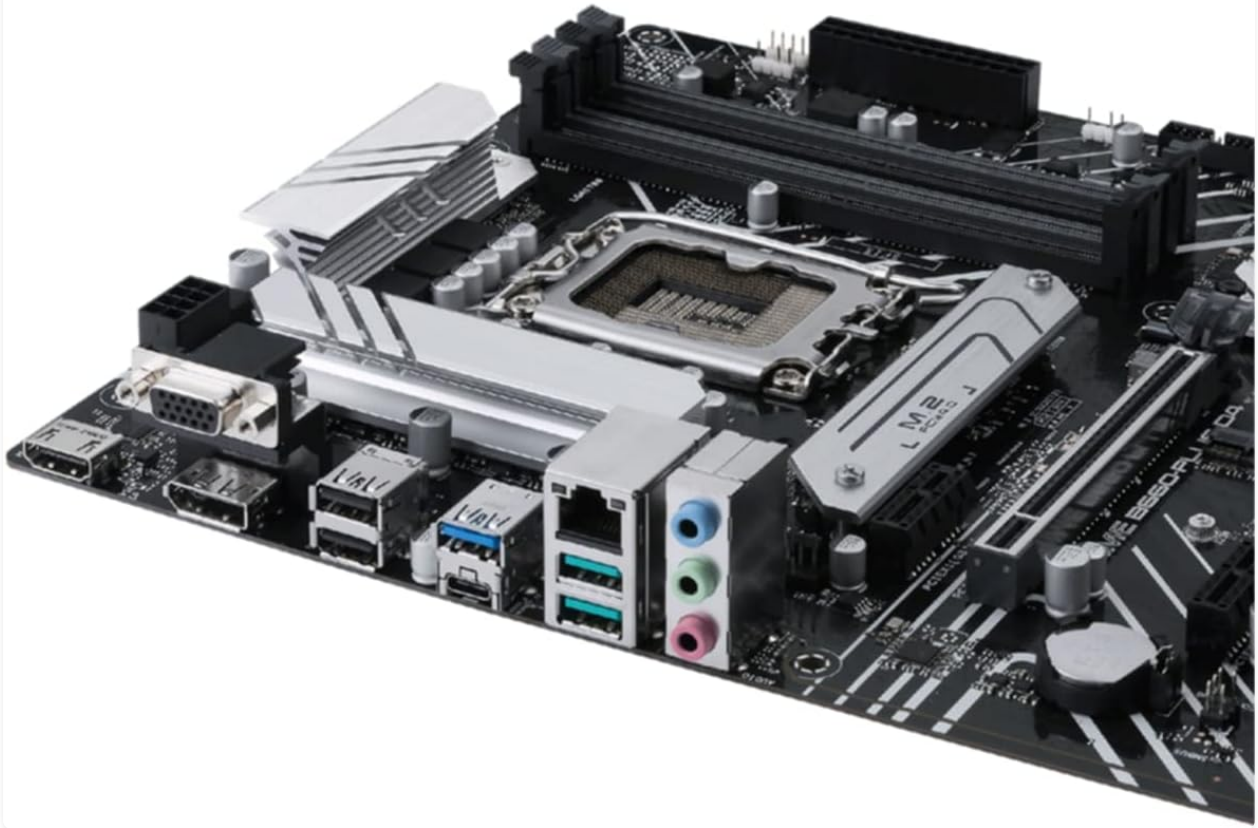
Image: Close-up of the rear I/O panel, displaying various USB ports, display outputs, Ethernet, and audio jacks.

Rear I/O Ports:

- USB 3.2 Gen 2x2 Type-C
- Multiple USB 3.2 Gen 1 ports
- DisplayPort
- HDMI ports
- Realtek 2.5GB Ethernet port
- Audio jacks

Internal Connectors:

- 3 x M.2 slots (PCIe 4.0)
- PCIe 4.0 x16 slots
- USB 3.2 Gen 1 Type-C front panel header
- Multiple SATA 6Gb/s ports
- Fan headers (Hybrid Fan Header, Fan Xpert 2+)

5. Installation Guidelines

Proper installation is crucial for optimal performance and stability. Always refer to the detailed instructions provided in the physical user manual for specific steps and safety precautions.

CPU Installation:

Carefully align your Intel LGA 1700 processor with the socket on the motherboard. Ensure the CPU is seated correctly before securing the retention arm. Avoid touching the pins on the CPU or socket.

RAM Installation:

The motherboard supports DDR4 memory. For dual-channel configuration, install memory modules into the designated slots (typically A2 and B2 first, or as indicated in the manual). Press down firmly on both ends of the RAM stick until the clips lock into place.

Storage Installation:

Install M.2 NVMe SSDs into the available M.2 slots. Secure them with the provided standoff and screw. For SATA drives, connect the SATA data and power cables to the motherboard and power supply, respectively.

Graphics Card (GPU) Installation:

Insert your PCIe 4.0 graphics card into the primary PCIe x16 slot. Ensure it is fully seated and secured with the case's retention mechanism. Connect any necessary PCIe power cables from your power supply to the GPU.

6. BIOS/UEFI Configuration

The UEFI BIOS provides an intuitive interface for configuring system settings, monitoring hardware, and updating firmware. Access the BIOS by pressing the 'Delete' or 'F2' key during system startup.

Key BIOS Features:

- **EZ Mode:** Provides a simplified interface for basic settings like boot priority, fan profiles, and system information.
- **Advanced Mode:** Offers granular control over CPU, memory, storage, and peripheral settings for experienced users.
- **Fan Xpert 2+:** Allows for comprehensive fan control and monitoring to optimize cooling performance.
- **ASUS OptiMem:** Enhances memory stability and compatibility.
- **Q-Fan Control:** Enables manual or automatic fan speed adjustments based on temperature.

7. Specifications

Feature	Detail

Brand	ASUS
Model Name	B660-PLUS D4
CPU Socket	LGA 1700
Compatible Processors	Intel Core of the 12th and 13th generation
Chipset Type	Intel B660
RAM Memory Technology	DDR4
Memory Speed	2133 MHz (up to 3200 MHz with XMP)
Max RAM	32768 MB (32 GB)
Product Dimensions	12.01 x 9.61 x 1.69 inches
Item Weight	2.2 pounds
Wireless Type	802.11a (Note: Product description mentions Realtek 2.5GB Ethernet, but not Wi-Fi. 802.11a is listed in specifications.)
Number of USB 2.0 Ports	4
Platform	Windows 10, Windows 11

8. Maintenance

Regular maintenance helps ensure the longevity and optimal performance of your motherboard and PC system.

- **Dust Removal:** Periodically clean dust from the motherboard, fans, and heatsinks using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **BIOS Updates:** Check the ASUS support website for the latest BIOS updates. Updating the BIOS can improve compatibility, stability, and performance. Follow the instructions carefully to avoid system issues.
- **Driver Updates:** Keep all system drivers (chipset, graphics, audio, network) updated to their latest versions from the ASUS support website or component manufacturers.

9. Troubleshooting

If you encounter issues with your system, consider the following basic troubleshooting steps:
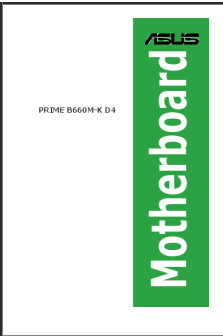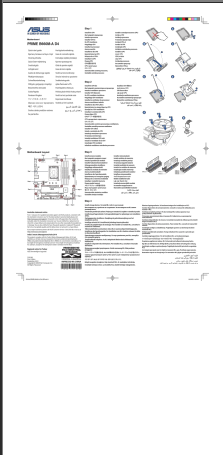
- **No Display:** Ensure all power cables are securely connected, especially the 24-pin ATX and 8-pin CPU power connectors. Verify the graphics card is properly seated and connected to the monitor.

- **System Instability:** Check RAM seating and try running with one stick at a time. Ensure CPU cooler is properly installed and making good contact. Monitor temperatures in BIOS.

- **Boot Issues:** Verify boot order in BIOS. Ensure your primary storage drive is detected. Try resetting CMOS (Clear Complementary Metal-Oxide-Semiconductor) by removing the battery or using the jumper.

- **Peripheral Not Detected:** Ensure USB devices are connected to functional ports. Check device manager in Windows for driver issues.

10. Warranty and Support

Your ASUS PRIME B660-PLUS D4 motherboard comes with a manufacturer's warranty. For detailed warranty terms, technical support, and driver downloads, please visit the official ASUS support website.

- **ASUS Support Website:** www.asus.com/support/

- **Product Registration:** Register your product on the ASUS website to receive updates and support.

Related Documents - B660-PLUS D4

PRIME B660M-K D4 **Motherboard**	[ASUS PRIME B660M-K D4 Motherboard User Manual](#) User manual for the ASUS PRIME B660M-K D4 motherboard, covering installation, BIOS setup, and specifications.
	[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 H610M-A D4	**Motherboard**	[ASUS PRIME H610M-A D4 Motherboard User Manual](#) Comprehensive user manual for the ASUS PRIME H610M-A D4 motherboard, covering installation, BIOS information, specifications, and safety precautions.
Pro B660M-C D4 E-misija	**Matična**	[ASUS Pro B660M-C D4 Matična plošča Uporabniški priročnik](#) Podroben uporabniški priročnik za matično ploščo ASUS Pro B660M-C D4, ki vključuje navodila za namestitev, specifikacije, varnostne informacije, opis komponent in nastavitve BIOS-a.
PRIME B660M-A D4	**Motherboard**	[ASUS PRIME B660M-A D4 Motherboard User Manual and Specifications](#) Comprehensive user manual for the ASUS PRIME B660M-A D4 motherboard, detailing specifications, installation guides, BIOS setup, and troubleshooting. Learn about CPU, memory, expansion slots, and connectivity.
PRIME Z490-A	**Motherboard**	[ASUS PRIME Z490-A Motherboard User Manual and Installation Guide](#) Comprehensive guide for the ASUS PRIME Z490-A motherboard, covering product introduction, basic installation steps, BIOS and RAID configuration, safety precautions, and detailed specifications for PC builders and enthusiasts.