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### ASUS PRIME B760M-K D4 (90MB1DS0-M1EAY0)

# ASUS Prime B760M-K D4 Gaming Motherboard User Manual

Model: PRIME B760M-K D4 (90MB1DS0-M1EAY0)

## INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of your ASUS Prime B760M-K D4 Gaming Motherboard. Designed for Intel LGA 1700 processors, this mATX motherboard offers robust performance, extensive connectivity, and reliable stability for your computing needs. Please read this manual thoroughly before proceeding with installation to ensure proper setup and optimal performance.



Figure 1: ASUS Prime B760M-K D4 Motherboard and Retail Packaging.

## KEY FEATURES

The ASUS Prime B760M-K D4 motherboard is equipped with several features designed to enhance your system's performance and stability:

- **Intel LGA 1700 Socket:** Ready for the 13th and 12th Generation Intel Processors, ensuring compatibility with the latest CPUs.
- **Ultra-fast connectivity:** Features PCIe 4.0 support, two PCIe 4.0 M.2 slots for high-speed storage, Realtek 2.5Gb Ethernet for fast networking, and front USB 3.2 Gen 1 support for modern peripherals.
- **Comprehensive cooling:** Includes a VRM heatsink, PCH heatsink, hybrid fan headers, and Fan Xpert for efficient thermal management, ensuring stable operation under load.
- **Aura Sync RGB Lighting:** Integrated addressable Gen 2 headers and Aura RGB headers allow for customizable RGB LED strip synchronization with other Aura Sync-enabled hardware, personalizing your build's aesthetics.

## Enhanced Power Delivery and Cooling

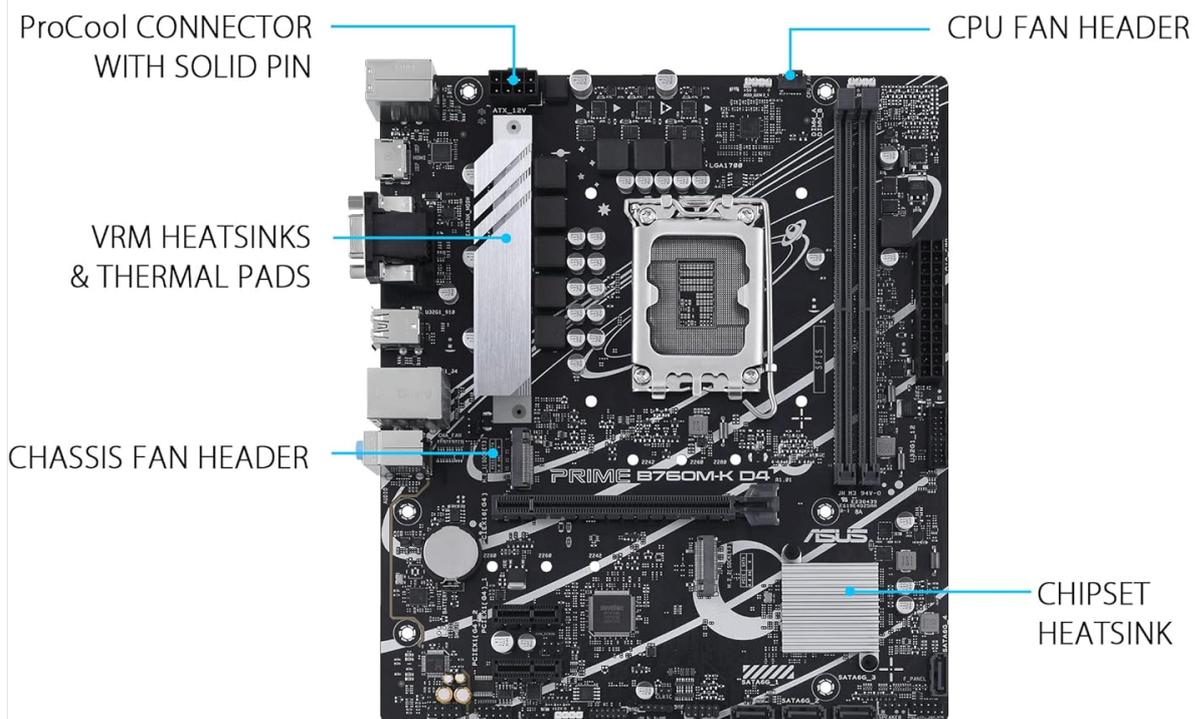


Figure 2: Enhanced Power Delivery and Cooling components, including VRM heatsinks and a chipset heatsink, ensuring stable operation.

# Build For Every Productivity

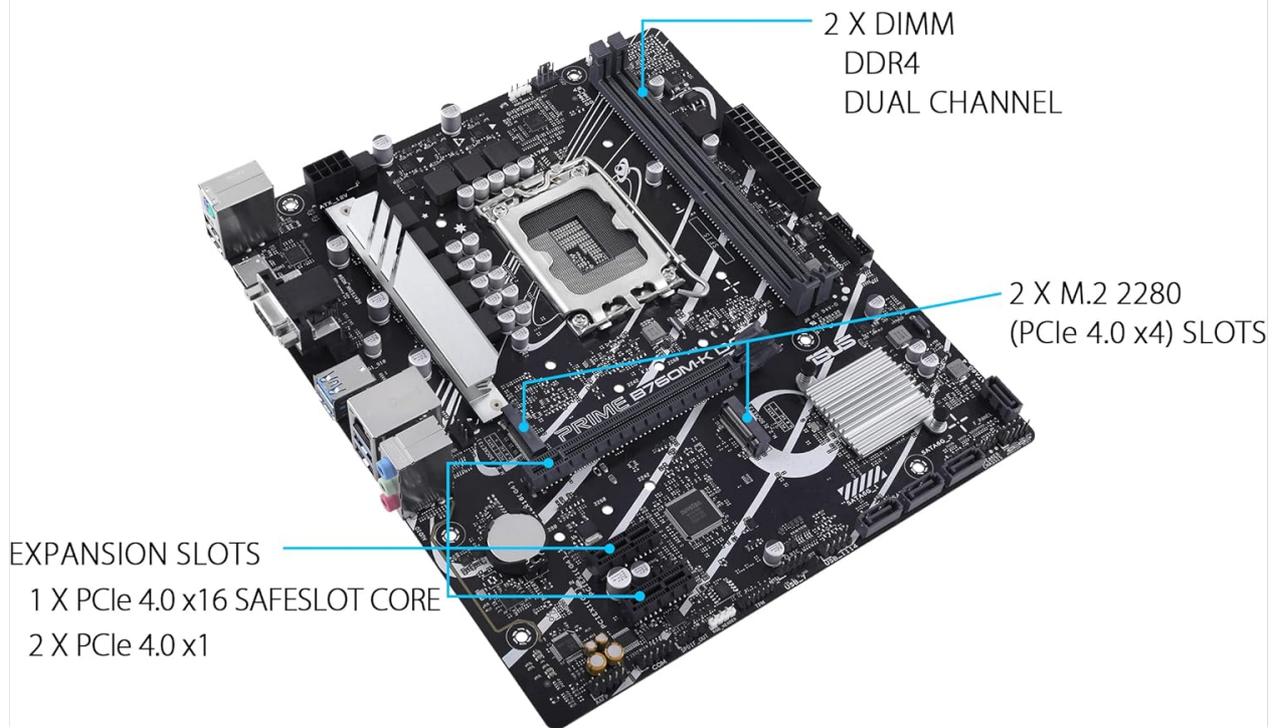


Figure 3: Overview of memory (2x DDR4 DIMM) and storage (2x M.2 2280 PCIe 4.0 x4) slots, designed for productivity.

# Personalize Your Build

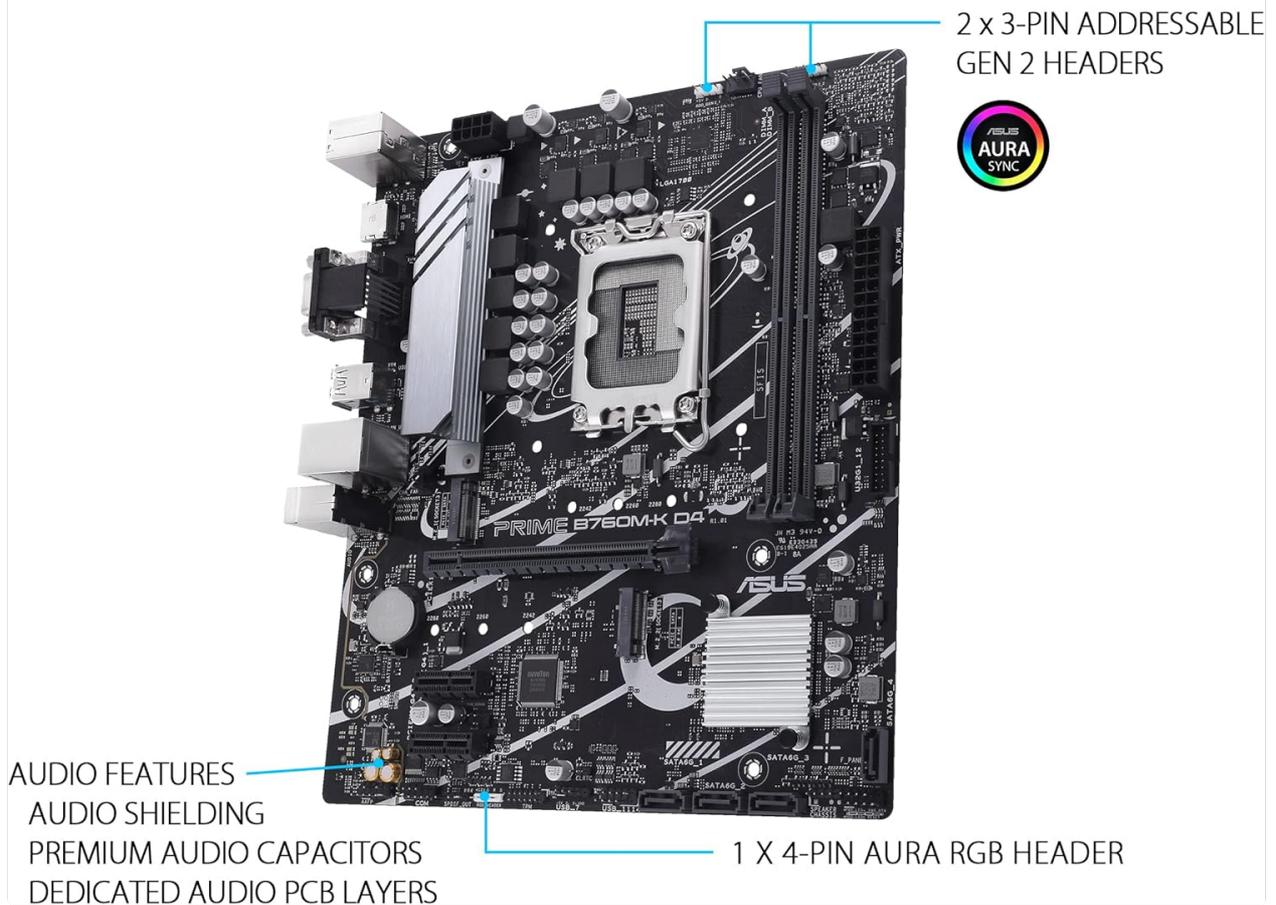


Figure 4: Personalization options including 2x 3-pin addressable Gen 2 headers and 1x 4-pin Aura RGB header for customizable lighting, alongside premium audio features.

## SETUP GUIDE

Follow these steps to properly install your ASUS Prime B760M-K D4 motherboard and its components:

1. **Prepare the Case:** Ensure your computer case is compatible with mATX motherboards. Install the I/O shield (if not pre-attached) into the case's rear opening.
2. **Install the CPU:** Carefully open the CPU socket lever. Align the triangular mark on the CPU with the mark on the socket and gently place the CPU into the socket. Close the lever to secure the CPU.
3. **Install the CPU Cooler:** Apply thermal paste (if not pre-applied) to the CPU. Mount the CPU cooler according to its manufacturer's instructions, ensuring it is securely fastened and the fan cable is connected to the CPU\_FAN header.
4. **Install RAM:** Open the clips on the DDR4 DIMM slots. Align the notch on the memory module with the key in the slot and press down firmly on both ends until the clips snap into place. For dual-channel performance, install memory modules into the recommended slots (refer to the motherboard's silkscreen or full manual for specific slot pairing).
5. **Install M.2 SSDs:** Insert M.2 SSDs into the M.2 slots. Secure them with the provided M.2 anchors or screws.
6. **Mount the Motherboard:** Carefully place the motherboard into the case, aligning the screw holes with the

standoffs. Secure the motherboard with screws.

7. **Connect Power Cables:** Connect the 24-pin ATX power cable and the 8-pin (or 4+4-pin) CPU power cable from your power supply to the corresponding connectors on the motherboard.
8. **Connect Front Panel Cables:** Connect the case's front panel connectors (Power SW, Reset SW, HDD LED, Power LED) to the F\_PANEL header on the motherboard. Also connect USB and audio headers.
9. **Install Expansion Cards:** Insert your graphics card into the PCIe 4.0 x16 slot and any other expansion cards into the PCIe 4.0 x1 slots. Secure them with case screws.
10. **Connect Storage Drives:** Connect SATA data cables from your storage drives (HDDs/SSDs) to the SATA 6Gb/s ports on the motherboard. Connect power cables from your power supply to these drives.

## Ultrafast Connectivity

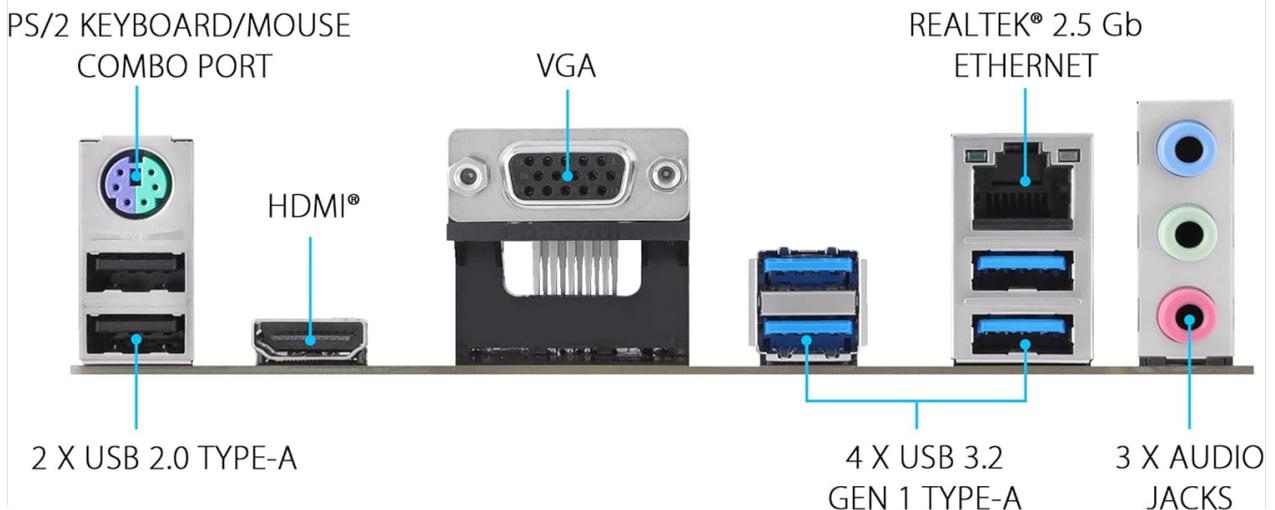


Figure 5: Rear I/O Panel showcasing various connectivity options including PS/2, USB 2.0, HDMI, VGA, Realtek 2.5Gb Ethernet, USB 3.2 Gen 1, and audio jacks.

## OPERATING INSTRUCTIONS

### First Boot and BIOS/UEFI Setup

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

- **Accessing BIOS/UEFI:** During startup, repeatedly press the **DEL** key or **F2** key to enter the BIOS/UEFI setup utility.
- **Initial Configuration:** In the BIOS/UEFI, you can configure boot order, system time, fan speeds, and other hardware settings. For most users, the default settings are sufficient for initial boot.
- **Operating System Installation:** Insert your Windows or Linux installation media (USB drive or DVD). Set the boot priority in BIOS/UEFI to your installation media and proceed with the operating system installation.

## Driver Installation

After installing the operating system, it is crucial to install the latest drivers for your motherboard components to ensure optimal performance and stability.

- **Included Driver CD/DVD:** Your motherboard package may include a driver CD/DVD. Insert it and follow the on-screen instructions to install necessary drivers.
- **ASUS Support Website:** For the most up-to-date drivers, visit the official ASUS support website. Navigate to the support page for your specific motherboard model (PRIME B760M-K D4) and download the latest chipset, audio, LAN, and other relevant drivers.
- **ASUS Armoury Crate:** Consider installing ASUS Armoury Crate software, which can help manage drivers, utilities, and Aura Sync lighting.

## MAINTENANCE

Regular maintenance helps ensure the longevity and stable operation of your motherboard and system.

- **Dust Cleaning:** Periodically clean dust from inside your computer case, especially from heatsinks (CPU, PCH, VRM) and fan blades. Use compressed air or a soft brush. Ensure the system is powered off and unplugged before cleaning.
- **BIOS/UEFI Updates:** Check the ASUS support website for BIOS/UEFI updates. Updates can improve compatibility, stability, and performance. Follow the update instructions carefully to avoid system damage.
- **Driver Updates:** Keep your drivers updated. Regularly check the ASUS support website for new versions of chipset, audio, LAN, and other drivers.
- **Cable Management:** Ensure internal cables are neatly managed to improve airflow and prevent interference.

## TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

Problem	Possible Cause	Solution
System does not power on.	Loose power cables, faulty power supply, incorrect front panel connections.	Check 24-pin ATX and 8-pin CPU power cables. Verify front panel power switch connection. Test power supply.
No display on monitor.	Graphics card not seated properly, monitor cable loose, faulty RAM.	Reseat graphics card and RAM modules. Check monitor cable connections. Try a different display output or monitor.
System powers on but no POST/boot.	Incompatible RAM, CPU not seated correctly, BIOS settings.	Reseat RAM and CPU. Clear CMOS (refer to motherboard manual for jumper location). Check Q-LED indicators if available.
Operating system not detected.	Incorrect boot order, loose SATA/M.2 connection, corrupted OS.	Check boot order in BIOS/UEFI. Verify SATA/M.2 cable connections. Reinstall OS if necessary.
System crashes or freezes.	Overheating, unstable overclock, faulty drivers, corrupted OS.	Monitor temperatures. Reset BIOS to default. Update drivers. Run memory diagnostic.

For more detailed troubleshooting, refer to the complete user manual available on the ASUS support website or contact ASUS technical support.

## SPECIFICATIONS

Below are the key technical specifications for the ASUS Prime B760M-K D4 Motherboard:

Feature	Detail
Brand	ASUS
Model Name	PRIME B760M-K D4
Item Model Number	90MB1DS0-M1EAY0
CPU Socket	LGA 1700
Compatible Processors	Intel® Celeron®, Intel® Core™ i3, Intel® Core™ i5, Intel® Core™ i7, Intel® Core™ i9, Intel® Pentium® Gold (12th/13th Gen Intel Processors)
Chipset Type	Intel B760
RAM Memory Technology	DDR4
Memory Slots	2 x DIMM, Max. 64GB, DDR4
Memory Clock Speed	Up to 4800 MHz (OC)
Storage Interfaces	2 x M.2 slots (PCIe 4.0 x4), 4 x SATA 6Gb/s ports
Expansion Slots	1 x PCIe 4.0 x16, 2 x PCIe 4.0 x1
Ethernet	Realtek 2.5Gb Ethernet
USB Ports (Rear I/O)	2 x USB 2.0 Type-A, 4 x USB 3.2 Gen 1 Type-A
Video Output	HDMI, VGA
Audio	Realtek 7.1 Surround Sound High Definition Audio CODEC
Form Factor	mATX (9.61 x 8.31 x 1.42 inches)
Operating System Support	Windows 10, Windows 11 (64-bit)

## WHAT'S IN THE BOX

Your ASUS Prime B760M-K D4 Motherboard package typically includes the following items:

- ASUS Prime B760M-K D4 Motherboard
- User Guide / Manual
- Rear I/O Panel Shield

- SATA 6Gb/s Cables (typically 2)
- M.2 Anchor / Screws for M.2 SSD installation
- Support DVD (for drivers and utilities, though online downloads are recommended for latest versions)

# What's in the Box

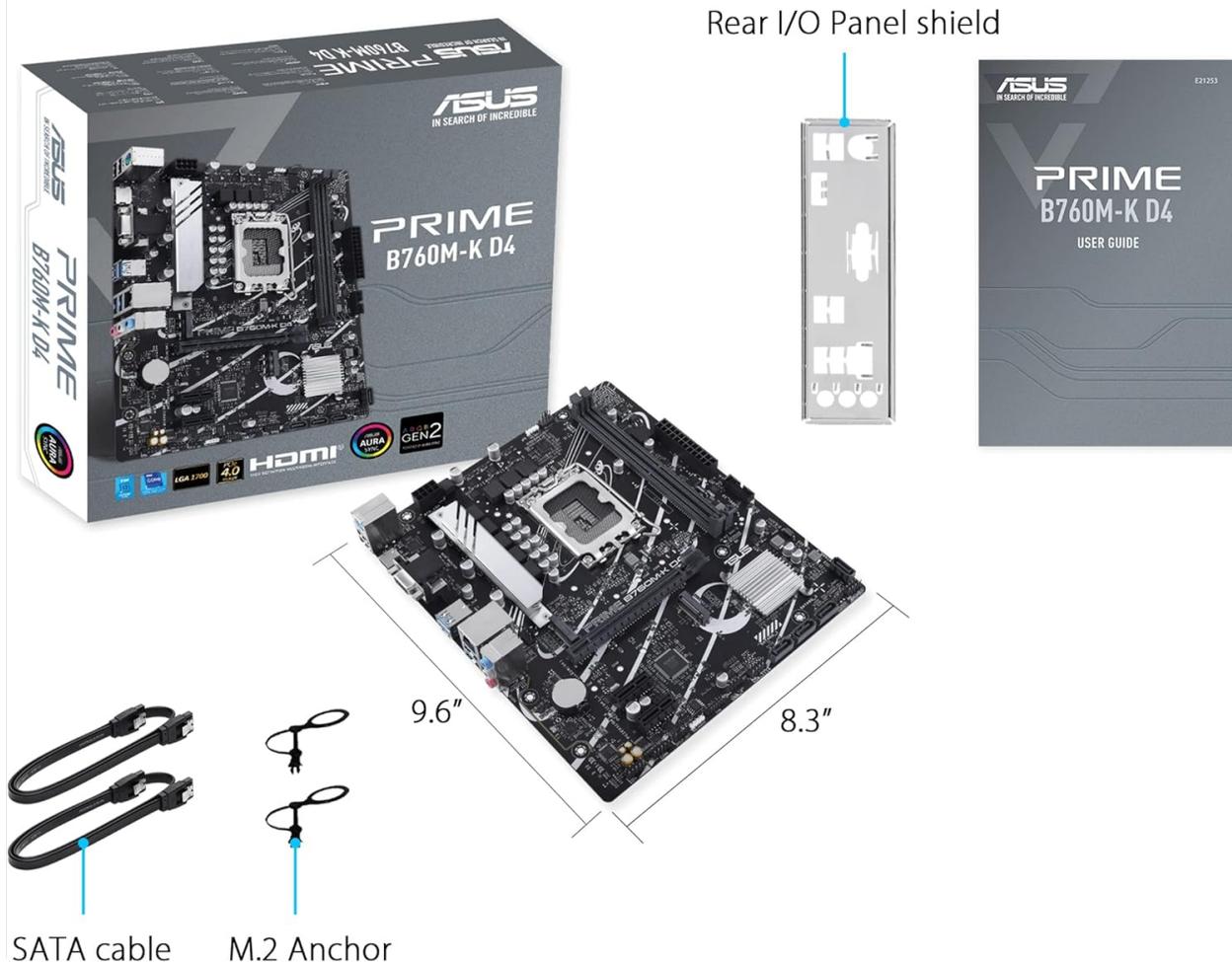


Figure 6: Typical contents included in the ASUS Prime B760M-K D4 retail box.

## WARRANTY AND SUPPORT

ASUS products are backed by a manufacturer's warranty. The specific terms and duration of your warranty may vary by region and product. Please retain your proof of purchase for warranty claims.

For technical support, driver downloads, BIOS updates, and detailed product information, please visit the official ASUS support website. You can typically find support resources by searching for your product model (PRIME B760M-K D4) on their website.

**ASUS Official Support Website:** [www.asus.com/support/](http://www.asus.com/support/)

