

ASUS TUF GAMING Z690-PLUS WIFI

ASUS TUF Gaming Z690-Plus WIFI Motherboard User Manual

Model: TUF GAMING Z690-PLUS WIFI

Brand: ASUS

INTRODUCTION

The ASUS TUF Gaming Z690-Plus WIFI motherboard is designed for 12th Gen Intel Core processors, offering robust performance and durability. It integrates advanced power delivery, comprehensive cooling, and high-speed connectivity features, making it suitable for demanding gaming and computing tasks. This manual provides essential information for setting up, operating, and maintaining your motherboard.



Figure 1: ASUS TUF Gaming Z690-Plus WIFI Motherboard and its retail packaging.

SETUP AND INSTALLATION

Follow these steps for proper installation of your ASUS TUF Gaming Z690-Plus WIFI motherboard into your system.

1. Processor and Memory Installation

This motherboard supports Intel LGA 1700 socket processors (12th Gen Intel Core) and DDR5 RAM. Ensure proper alignment and seating for both components.

- **CPU Installation:** Carefully align the CPU with the LGA 1700 socket, ensuring the triangular markers match. Lower the retention arm to secure the CPU.
- **RAM Installation:** Insert DDR5 memory modules into the DIMM slots. Press down firmly on both ends until the clips lock into place. The motherboard supports up to 128GB DDR5 RAM.

Extreme Power & Performance

14+1 Power Stages, 4x DIMM 128GB DDR5, 4xM.2 NVMe SSD and 1x PCIe 5.0 x 16 Slot

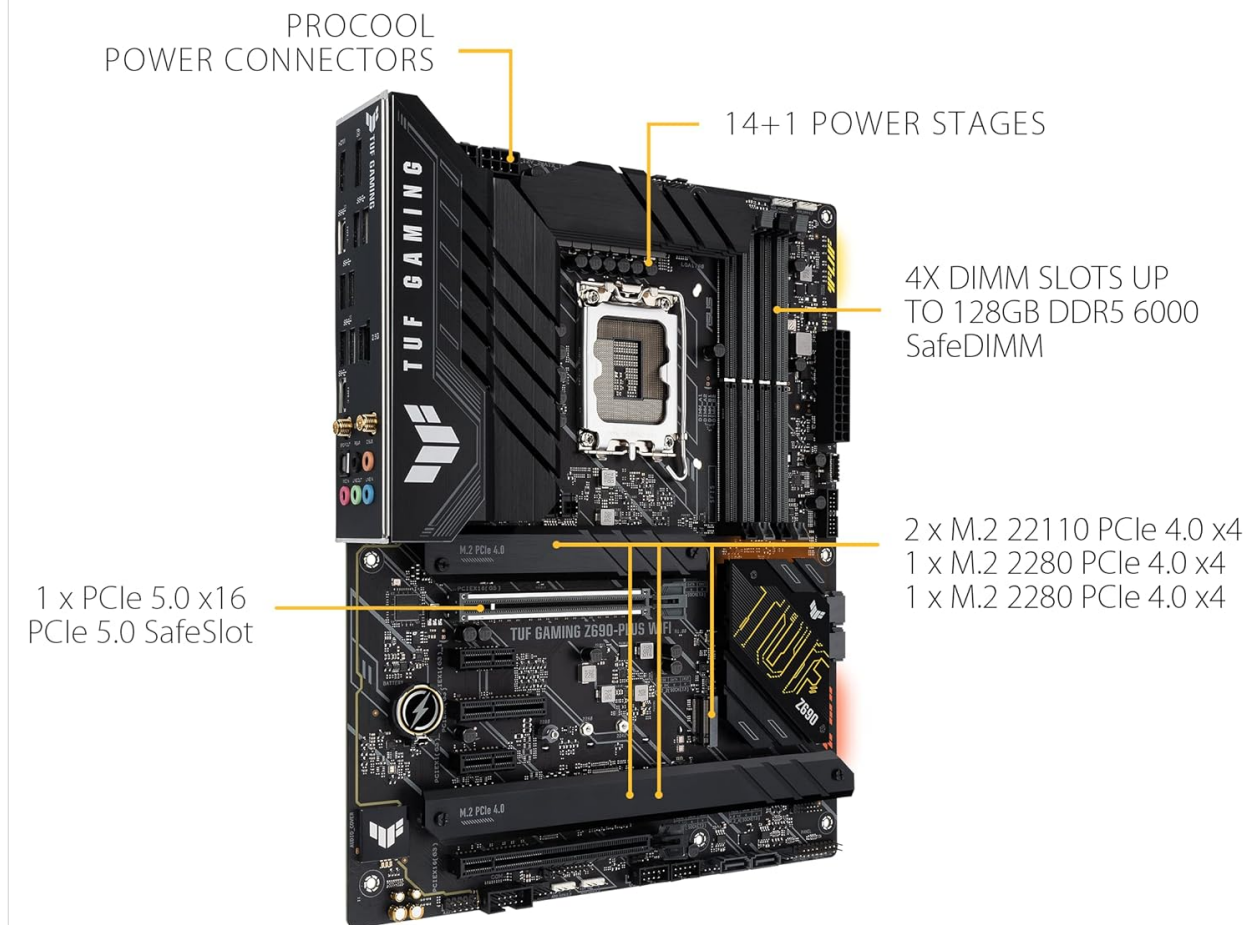


Figure 2: Key areas for processor, memory, and power connections, including 14+1 power stages, 4x DIMM slots for DDR5, and a PCIe 5.0 x16 slot.

2. Storage Devices

The motherboard features multiple M.2/NVMe SSD slots and SATA 3.0 ports for storage. Utilize the M.2 Q-Latch for tool-less M.2 installation.

- **M.2 SSDs:** Install M.2 NVMe SSDs into the available slots. The motherboard includes M.2 heatsinks for optimal performance.
- **SATA Drives:** Connect traditional SATA hard drives or SSDs to the SATA 3.0 ports using SATA cables.

3. Cooling System

Ensure adequate cooling for stable operation. The motherboard features comprehensive cooling solutions.

- **Fan Headers:** Connect case fans and CPU coolers to the 4-pin PWM fan headers. The Fan Xpert 4 utility allows for precise fan control.
- **Heatsinks:** The motherboard is equipped with VRM heatsinks, a PCH fanless heatsink, and M.2 heatsinks to dissipate heat effectively.

Comprehensive Cooling

Massive VRM & M.2 Heatsinks, Multiple Fan Headers

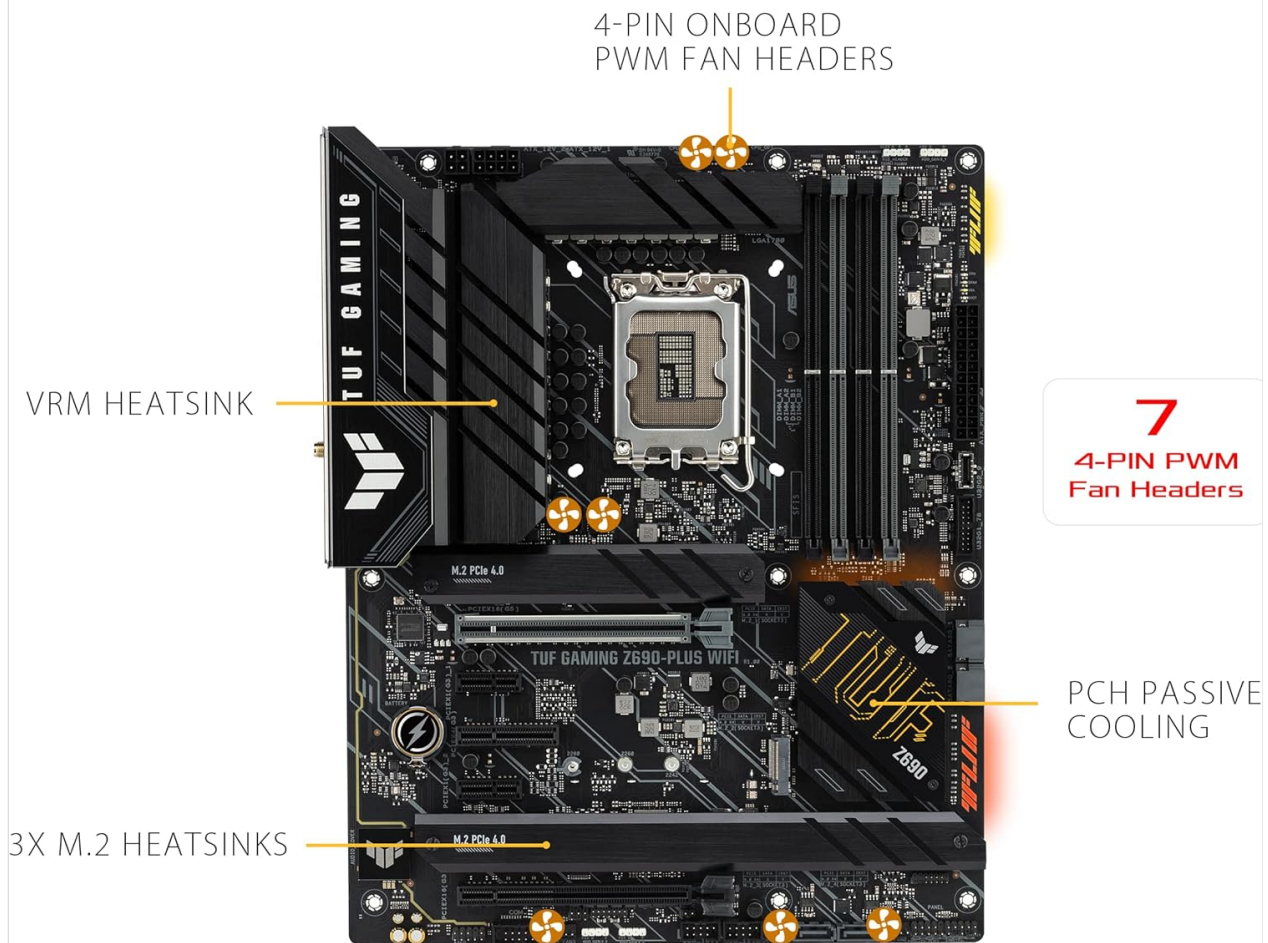


Figure 3: Overview of the motherboard's cooling system, showing VRM heatsinks, PCH passive cooling, and M.2 heatsinks.

4. Power Connections

Connect the main 24-pin ATX power connector and the 8-pin/4-pin CPU power connectors from your power supply to the motherboard. ProCool sockets ensure a secure and reliable power delivery.

5. Peripheral Connections

Connect your peripherals to the appropriate ports.

- **USB Ports:** Utilize the various USB 3.2 Gen 2 Type-C, USB 3.2 Gen 2, and USB 3.2 Gen 1 ports on the rear I/O. Front panel USB 3.2 Gen 2 Type-C and Thunderbolt 4 headers are also available.
- **Networking:** Connect to your network via the Intel I225-V 2.5Gb LAN port or use the integrated WiFi 6 AX201 (802.11ax) for wireless connectivity.
- **Audio:** Connect audio devices to the 7.1-channel audio jacks. The Realtek S1200A codec provides high-quality audio.

Full Gaming Connectivity

WiFi 6E, Intel® 2.5G LAN, USB 3.2 Gen 2X2 and Front Panel USB 3.2 Gen 1 Type-C

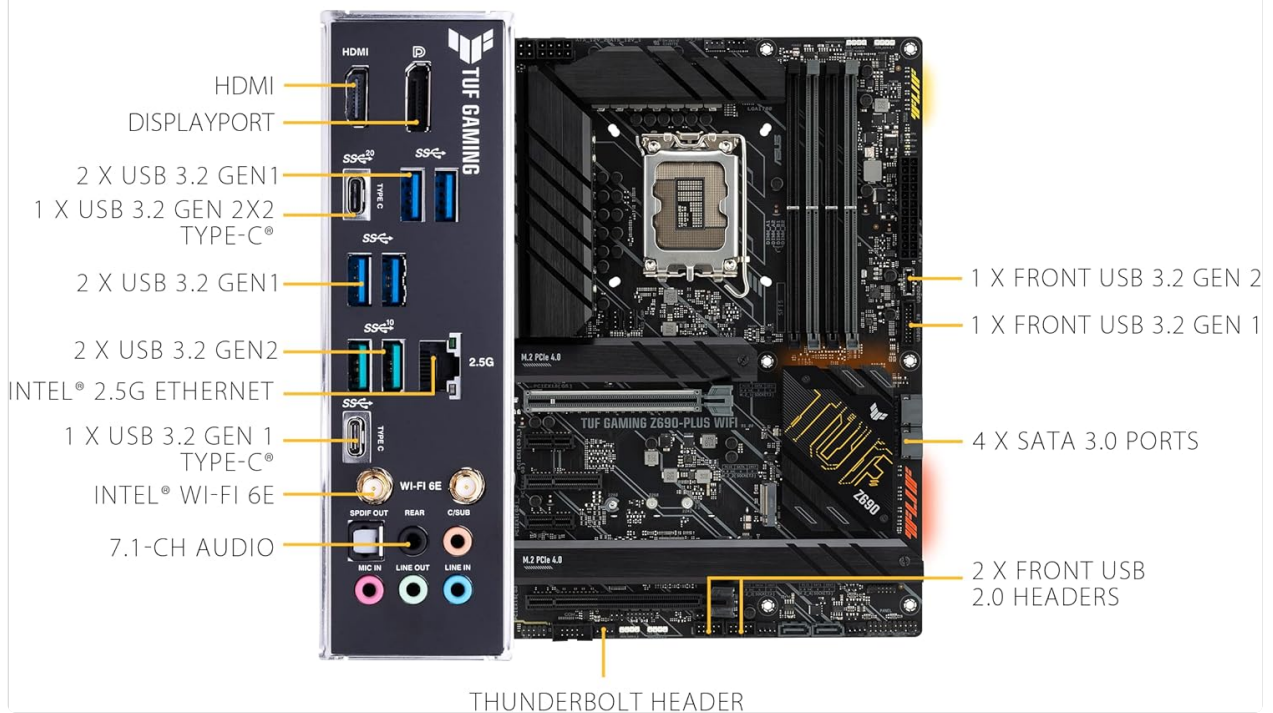


Figure 4: Detailed view of the motherboard's connectivity options, including rear I/O ports (HDMI, DisplayPort, USB, LAN, WiFi) and internal headers (Front USB, SATA, Thunderbolt).

6. BIOS Configuration

Upon first boot, access the BIOS/UEFI settings (typically by pressing **DEL** or **F2** during startup) to configure system settings, boot order, and enable specific features.

OPERATING INSTRUCTIONS

Once your system is assembled and the operating system is installed, you can begin using your computer. The ASUS TUF Gaming Z690-Plus WIFI motherboard provides a stable and feature-rich platform.

- **System Boot:** Power on your system. The Q-LED indicators can help diagnose boot issues.
- **Driver Installation:** Install all necessary drivers for the motherboard components (chipset, LAN, WiFi, audio, etc.) from the ASUS support website or the provided support DVD.
- **BIOS/UEFI Updates:** Regularly check the ASUS support website for BIOS/UEFI updates to ensure optimal performance and compatibility.
- **Aura Sync:** Customize the integrated RGB lighting and connected ARGB strips using ASUS Aura Sync software.

Total Gaming Immersion

Pre-mounted I/O & Armor, Addressable Gen 2 RGB Headers, Two-Way AI Noise Cancellation

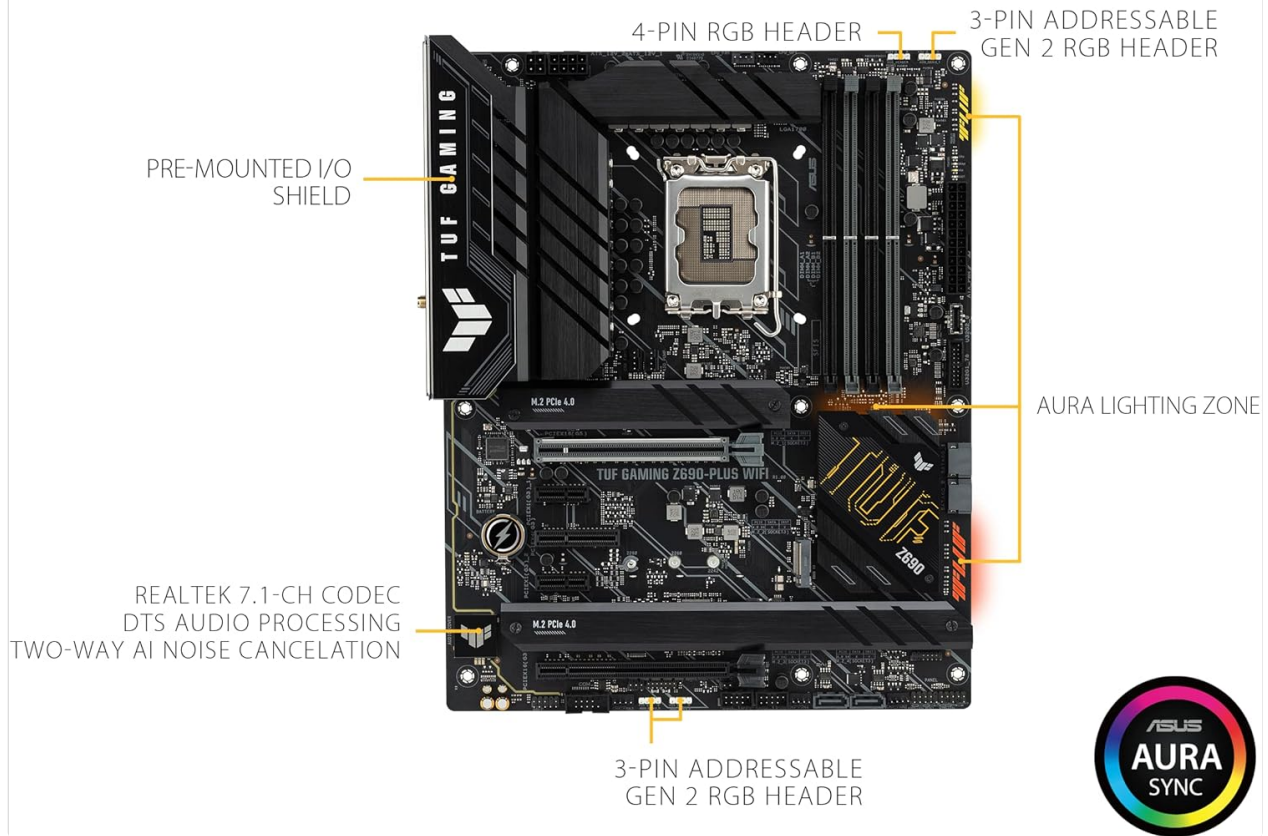


Figure 5: Features for immersive gaming, including pre-mounted I/O shield, RGB headers, and Realtek 7.1-CH audio with AI Noise Cancellation.

MAINTENANCE

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

- **Dust Removal:** Periodically clean dust from inside your PC case, especially from heatsinks and fan blades, using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **Software Updates:** Keep your operating system, drivers, and BIOS/UEFI updated.
- **Cable Management:** Ensure internal cables are neatly managed to promote good airflow and prevent interference.

TROUBLESHOOTING

If you encounter issues, refer to the following common troubleshooting steps:

- **No Power/No Boot:**
 - Check all power connections (24-pin ATX, 8-pin/4-pin CPU).
 - Ensure the power supply is switched on.
 - Verify CPU and RAM are correctly seated.
 - Observe Q-LED indicators for diagnostic codes.
- **No Display:**
 - Ensure your monitor is connected to the graphics card (if installed) or the motherboard's integrated graphics port.
 - Reseat the graphics card and RAM modules.
 - Test with a different display cable or monitor.
- **WiFi/LAN Connectivity Issues:**
 - Install the latest WiFi and LAN drivers from the ASUS support website.
 - Ensure the WiFi antenna is securely connected.
 - Check network cable connections for LAN.
- **M.2 SSD Not Detected:**
 - Ensure the M.2 SSD is fully seated in its slot.
 - Check BIOS settings to confirm M.2 slots are enabled and configured correctly.
 - Verify M.2 heatsink clearance, especially if using a third-party heatsink.
- **BIOS Issues:**
 - If the system fails to POST after a BIOS change, clear the CMOS (refer to your motherboard's detailed manual for location of the CLRTC jumper).
 - Update BIOS to the latest version if experiencing compatibility issues.

TECHNICAL SPECIFICATIONS

Feature	Specification
Brand	ASUS
Model Name	TUF GAMING Z690-PLUS WIFI
CPU Socket	LGA 1700
Compatible Processors	12th Gen Intel Core, Intel Celeron
Chipset Type	Intel Z690
RAM Memory Technology	DDR5

Feature	Specification
Memory Speed	2133 MHz
Memory Storage Capacity	128 GB (Max)
Wireless Type	802.11a/b/g/n/ac, 802.11ax (WiFi 6)
LAN	Intel I225-V 2.5Gb Ethernet
USB Ports	Multiple USB 3.2 Gen 2 Type-C, USB 3.2 Gen 2, USB 3.2 Gen 1, USB 2.0
PCIe Slots	PCIe 5.0 x16, PCIe 4.0 x16, PCIe 3.0 x1
M.2 Slots	4x M.2/NVMe SSD slots
SATA Ports	4x SATA 6Gb/s ports
Audio	Realtek S1200A 7.1-Channel High Definition Audio CODEC
Dimensions (LxWxH)	8.66 x 3.15 x 1.18 inches
Item Weight	2 pounds
Platform	Windows

WHAT'S IN THE BOX

The ASUS TUF Gaming Z690-Plus WIFI motherboard package typically includes the following items:

What's in the Box

Exclusive TUF GAMING Z690-PLUS WIFI Bundle



Figure 6: Included accessories with the ASUS TUF Gaming Z690-Plus WIFI motherboard.

- ASUS TUF Gaming Z690-Plus WIFI Motherboard
- User Guide / Manual
- Support DVD
- ASUS 2x2 Dual Band WiFi Antenna
- 2x SATA 6Gb/s Cables
- M.2 Screw Package
- TUF Gaming Stickers

WARRANTY AND SUPPORT

For warranty information, technical support, and driver downloads, please visit the official ASUS support website. You can find detailed product information, FAQs, and contact options there.


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

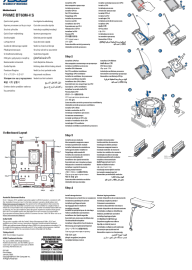
When contacting support, have your motherboard model name (TUF GAMING Z690-PLUS WIFI) and serial

number ready.

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Related Documents - TUF GAMING Z690-PLUS WIFI

	<p>ASUS PRIME Z690-P D4 Motherboard Quick Start Guide</p> <p>Concise guide for installing the ASUS PRIME Z690-P D4 motherboard, covering CPU, RAM, storage, expansion cards, and system connections.</p>
	<p>ASUS ROG Strix Z690-I Gaming WiFi Motherboard User Manual</p> <p>Comprehensive user guide for the ASUS ROG Strix Z690-I Gaming WiFi motherboard, covering installation, basic setup, BIOS configuration, and technical specifications for Intel 12th Gen processors.</p>
	<p>ASUS PRIME Z790-P WIFI Motherboard User Guide</p> <p>Comprehensive user guide for the ASUS PRIME Z790-P WIFI motherboard, covering installation, specifications, safety information, and BIOS setup. Learn about its features for building a high-performance PC.</p>
	<p>ASUS TUF Gaming B660-PLUS WIFI D4 Motherboard User Manual</p> <p>Comprehensive user manual for the ASUS TUF Gaming B660-PLUS WIFI D4 ATX motherboard. Includes installation guides, specifications, safety information, BIOS setup, and support details.</p>

<div><p>Compatibility Motherboard List for Dual GeForce RTX 4060 Ti SSD</p><p>For the dual GeForce RTX 4060 Ti SSD, the motherboard must be compatible with the PCIe 4.0 slot and support a minimum of 32GB of RAM.</p><p>For the motherboard to be compatible with the RTX 4060 Ti SSD, it must be compatible with the PCIe 4.0 slot and support a minimum of 32GB of RAM. The motherboard must also be compatible with the BIOS settings for the RTX 4060 Ti SSD.</p><p>The motherboard must be compatible with the BIOS settings for the RTX 4060 Ti SSD. The motherboard must also be compatible with the BIOS settings for the RTX 4060 Ti SSD.</p><p>Please refer to the motherboard manual for more information on BIOS settings and the motherboard manual for more information on BIOS settings.</p><p>For the motherboard to be compatible with the RTX 4060 Ti SSD, it must be compatible with the PCIe 4.0 slot and support a minimum of 32GB of RAM. The motherboard must also be compatible with the BIOS settings for the RTX 4060 Ti SSD.</p></div>	<div><h3>ASUS Dual GeForce RTX 4060 Ti SSD Motherboard Compatibility List</h3><p>This document provides a comprehensive list of compatible ASUS motherboards for the Dual GeForce RTX 4060 Ti SSD, detailing PCIe lane configuration requirements and BIOS settings for optimal performance.</p></div>
<div><p>The image shows the cover of the ASUS PRIME B760M-KS Motherboard Quick Start Guide. It features the ASUS logo, the product name, and a diagram of the motherboard with various components labeled. The guide is designed to help users install and set up the motherboard quickly and easily.</p></div>	<div><h3>ASUS PRIME B760M-KS Motherboard Quick Start Guide</h3><p>Concise guide for installing and setting up the ASUS PRIME B760M-KS motherboard, covering CPU, memory, storage, expansion cards, and system setup.</p></div>