ASUS TUF GAMING B850M-PLUS WIFI7 AMD B850 Socket AM5 micro ATX

Model: 90MB1MU0-M0EAY0

Manufacturer: ASUS

EAN: 4711636179027

Product Code: 1475075

R5,939

ASUS TUF GAMING B850M-PLUS WIFI7 takes all the essential elements of the latest AMD Ryzen™ processors and combines them with game-ready features and proven durability. Engineered with military-grade components, an upgraded power solution and a comprehensive cooling system, this motherboard goes beyond expectations with rock-solid and stable performance for marathon gaming. TUF GAMING motherboards also undergo rigorous endurance testing to ensure that they can handle conditions where others may fail. This platform delivers the power and connectivity that advanced AI PC applications demand.

Intelligent

Intelligent Control

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AI CACHE BOOST

Supercharge your large language model (LLM) workflows with AI Cache Boost. Exclusive to ASUS AMD 800 and 600 series motherboards that use Ryzen™ 9000 Series CPUs, this BIOS setting optimizes CPU cache and memory pathways to deliver up to 29% faster local LLM performance with high-speed memory tuning.

AI Advisor

ASUS AI Advisor is an ASUS technical expert that's always available to answer your questions. Owners of compatible ASUS motherboards can interact with this AI-powered technology using natural language to learn more about their hardware. For DIY beginners, it can provide easy-to-understand explanations of one-click optimization features like AI Overclocking and fan speed tuning, and for seasoned PC-building veterans, it can offer guidance and instructions on the latest features offered by ASUS.

UEFI BIOS

The UEFI interface delivers easy-to-use configuration options for PC beginners, and advanced features for veterans.

ASUS DriverHub

Simplify driver management with automatic detection, one-click installation and update for smooth, efficient system performance.

ASUS GlideX

Enable seamless screen sharing and control across PCs, tablets, and smartphones via USB or WiFi, supporting multiple platforms.

Armoury Crate

Customize Aura Sync RGB and control ASUS devices. Includes product registration and updates.

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Performance

Premium Power Design

Stable power is crucial for maximizing the performance of AMD processors. The motherboard is designed to meet the needs of high-core-count CPUs. It features 14(80A) + 2(80A) + 1(80A) power stages that integrate high-side and low-side MOSFETs and drivers into packages rated for up to 80A each. This configuration ensures optimal power delivery, efficiency, stability and performance for both current and future AMD processors.

Performance

Memory & Storage

DRAM Overclocking Performance

Comprehensive memory tuning options are the cornerstone of TUF GAMING motherboards. With the motherboard, you can extract all the potential out of your DDR5 modules*, whether they're from an extreme-speed kit or an entry-level set that would otherwise be locked.
* Memory overclocking may vary between CPU series. Please refer to the spec table for detailed information.

DDR5 DOMINANCE

For those who want to fly past stock DDR5 speeds, this motherboard is primed and ready for enthusiast-grade kits, courtesy of vast AMD Extended Profiles for Overclocking (EXPO™) support. Seasoned veterans can further tweak performance via an extensive array of settings in the UEFI.

ASUS AEMP

ASUS Enhanced Memory Profile (AEMP) is an exclusive firmware feature for PMIC-restricted memory modules. AEMP automatically detects the memory chips on your kit and then presents optimized frequency, timing and voltage profiles that you can quickly apply.

M.2 PCIe 5.0 Support

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This motherboard also features one PCIe 5.0 M.2 slot to enjoy the fastest data transfers of up to 128 Gbps*, and all M.2 slots support NVMe RAID configurations to take advantage of the latest available speeds.

Cooling

Cooler by Design

Cooler Compatibility

ASUS AIO coolers offer robust performance, high overclocking potential, bold aesthetics and customizable functionality for new TUF Gaming motherboards, empowering you to build your dream gaming rig.

Connectivity

Empowering Connection

This motherboard offers a versatile range of connectivity with PCIe 5.0, rear USB 20Gbps Type-C® port and front USB 10Gbps Type-C® connector.

PCIe 5.0 for Graphics Card

PCIe 5.0 offers twice the data transfer speed of PCIe 4.0, making it robust enough to handle new data-heavy tasks. PCIe 5.0 also brings other benefits, such as electrical changes to improve signal integrity, backward-compatible CEM connectors for add-in cards and backward compatibility with previous versions of the PCIe bus.

Rear USB 20Gbps Type-C®

Extensive USB support ensures connections to a wide array of external devices. This motherboard includes a USB 20Gbps Type-C® port on the rear I/O panel that delivers transfer speeds of up to 20Gbps.

Front USB 10Gbps Type-C®

This motherboard features a USB 10Gbps Type-C® front panel connector for speedy data transfers of up to 10Gbps.

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DIY

Easy PC DIY

PCIe Slot Q-Release

A physical lever unlocks the first PCIe slot’s security latch with one tap, greatly simplifying the process of detaching a PCIe card from the motherboard when it’s time to upgrade to a new GPU or other compatible device.

Q-Antenna

With Q-Antenna, attaching a WiFi antenna to your PC is now easy and fast. Instead of slowly rotating two fasteners until they finally lock in, they just snap into place. Less hassle, and more consistent performance.

M.2 Q-Latch

The innovative ASUS Q-Latch makes it easy to install or remove an M.2 SSD without the need for specific tools or screws. This design employs a simple locking mechanism to secure the drive and neatly detach it with one tap.

Q-LED

The on-board Q-LED troubleshooting lights give PC builders a quick indicator to confirm that key components — CPU, RAM, graphics card, storage devices — are functioning normally during startup. It can also alert them when memory modules have not been properly installed--even before booting.

Clear CMOS & BIOS FlashBack™

The Clear CMOS button quickly resets BI0S settings to factory default. lt can also be used to reboot the PC if incorrect BI0S settings have been selected.
BI0S FlashBack™ is a safe and simple way to update BI0S. Just drop the (UEFI)BIOS file onto a FAT32-formatted USB stick, plug it into the USB BIOS FlashBack port, and press the button. Updates can even be performed without having memory or a CPU installed.

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Pre-mounted I/O shield

Our pre-installed I/O shield safeguards ports, simplifies the build process, increases functionality and enhances aesthetics for PC DIY enthusiasts.

DIY

Build With Confidence

TUF GAMING Alliance is a collaboration between ASUS and trusted PC component brands to ensure compatibility across a wide range of parts, such as PC cases, power supplies, CPU coolers, memory kits and more. With new partnerships and components being added regularly, the TUF GAMING Alliance will continue to grow even stronger.

Gaming

Ultrafast Networking

Provide a feature-packed high-performance gaming package, with ultrafast networking for smoother online gameplay.

Audio

Realtek 7.1 Channel Audio

ALC1220P

This motherboard utilizes an audio codec designed in close collaboration with Realtek — the Realtek ALC1220P. It features an unprecedented 120 dB signal-to-noise (SNR) ratio for the stereo line out and a 113 dB SNR for the line in, providing pristine audio quality. Additionally, an impedance-sensing circuit automatically adjusts gain to ensure an optimal volume range for your headphones.

DTS Audio Processing

DTS® Audio Processing enhances gaming headset and speaker audio experiences by reducing distortion and by providing deeper bass, so games, movies and music sound better. It also allows you to customize audio settings.

Lighting

Outshine The Competition

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ASUS Aura Sync offers synchronized lighting with other Aura Sync products, including motherboards, graphics cards, monitors and peripherals.

Addressable RGB Gen 2 header

Automatically optimize lighting effects for the number of LEDs present in compatible ARGB gear.

In Search of Sustainable Solution

ASUS is on a mission to create a sustainable future where all can flourish on the planet we call home.

Every step counts, and as part of ASUS’s commitment to creating a more sustainable future, ASUS has begun to utilize post-consumer recycled (PCR) plastic and paper materials certified by the Forest Stewardship Council (FSC™) in the packaging of motherboard.

Join us on our journey as we make the world a better place.

BUILD FOR THE MOST ADVANCED PC FOR GAMING AND CREATING

When only the fastest will do, TUF Gaming B850 motherboards deliver. With faster dual-channel DDR5 memory support, AMD EXPO™ technology and PCIe® 5.0 support for both graphics and NVMe, you can play the most demanding games and deliver your biggest projects with the revolutionary performance of an TUF Gaming B850 motherboard and AMD Ryzen™ 9000, 8000, and 7000 Series processors.

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