ROG STRIX B450-F GAMING

Asus ROG Strix B450-F Gaming AMD B450 Chipset AMD Ryzen AM4 Socket Motherboard

Product Overview

Asus ROG Strix B450-F Gaming, AM4 RYZEN 2ND GEN, B450, 4XDDR4, PCIE (2X16, 1X8, 1X4, 3X1), 2XM.2, 6XSATA, ATX



Specifications

Features:

SOLID HARDWARE SPECS FOR GAMING AND MORE
With ample power to fuel Ryzen's cores, plus cooling, storage and connectivity options for a range of hardware, the ROG Strix B450-F Gaming motherboard has everything you need to build on a budget or load up with high-performance components to game in the big leagues.

Cooler By Design
ROG Strix B450-F Gaming features the most comprehensive cooling options ever, configurable via Fan Xpert 4 or the UEFI BIOS.

4-pin PWM/DC fan
Every onboard header supports auto-detection of PWM or DC fans.

AIO pump fan
A dedicated PWM/DC header for self-contained water-cooling setups.

Dual PCIe Gen3 M.2
Dual PCIe 3.0 x4 M.2 slots provide NVMe SSD RAID support for an incredible performance boost. Create a RAID configuration with up to three PCIe 3.0 storage devices via two M.2 slots and a PCIe x16 slot to enjoy incredible data-transfer speeds.

AMD StoreMI
AMD StoreMI technology is a software utility that accelerates any drive for better system responsiveness with reduced startup and software load times. It combines SSD performance with the affordability and capacity of an HDD by automatically moving frequently accessed data to dedicated SSD storage.

Improved DDR4 Stability

Tuned to take full advantage of Ryzen's capabilities, and ready for the latest memory kits, ROG Strix B450 Gaming Series motherboards are built specifically for high-performance gaming rigs. Intelligent firmware delivers the plug-and-play experience that first-time DIYers demand and the essential tuning options that performance-addicts need. Maximize frame rates with a high-bandwidth memory kit or leverage a host of tuning options to extract peak performance potential from a modest setup. Load up any way you want and get into the game with ROG Strix B450 Gaming Series motherboards.

Intel Gigabit Ethernet
ROG Strix B450-F Gaming features Intel Ethernet (I211-AT), ensuring data exchanges with your network and the outside world are fast and smooth. Intel LAN reduces CPU overhead and increases TCP and UDP throughput, keeping more processing power available for the game.

LANGuard
Featuring advanced signal-coupling technology and high-tolerance components, LANGuard provides consistent Ethernet performance and greater protection against static electricity and power surges.

SupremeFX
Immerse yourself in sound with SupremeFX audio technology. Utilizing the S1220A codec, SupremeFX is the integrated-audio solution that's engineered to provide a flat frequency response for a neutral, detailed sound signature. And to ensure that pristine signature is perfectly preserved, the front-panel output is driven with dual op amps, delivering sonics with the scale and authority to create virtual worlds via your gaming headset.

Audio cover
Effective shielding against electromagnetic interference preserves the integrity of audio signals for the best sound quality.

Audio-line shielding
Intelligent shielding blocks electromagnetic interference from the motherboard or add-on cards to provide cleaner audio.

Dual Op Amplifiers
Two onboard Op amps output exceptional audio and can drive headphones with an input impedance of 32-600ohm.

Premium Nichicon™ audio capacitors
High-quality Japanese-made components produce warm, natural audio with exceptional clarity and fidelity.

DESIGN, CUSTOMIZATION, AND SETUP
A host of design touches, customization options, comprehensive validation lists, and the most diverse ecosystem of components in the industry make building and personalizing a gaming rig with ROG Strix B450-F Gaming wonderfully easy.

Cyber Outlook
The distinctive sleek cuts across the ROG Strix heatsink are now accented with a futuristic cyber-text pattern, fusing multiple gaming cultures to create a unique identity for this generation. If you prefer a subtler style, you can swap the PCH sticker with an included alternative. The choice is yours.

Outshine the Competition
ROG Strix motherboards deliver superior performance and aesthetics to Outshine the Competition. ASUS Aura offers full RGB lighting control with a variety of functional presets for the built-in RGB LEDs and lighting strips connected to the RGB header. All lighting can be synced with an ever-growing portfolio of Aura-capable ASUS hardware.

Perfect Synchronization
The ASUS Aura ecosystem is in the ascendancy, with an extensive and growing list of ASUS products now offering Aura Sync compatibility - along with loads of compatible accessories and kits available through partners. Your ROG Strix motherboard's built-in Aura RGB lighting easily syncs with PC cases, memory modules, coolers and RGB LED strips from a broad selection of well-known manufacturers. ASUS Aura software provides simple and intuitive lighting management.

Certified Compatibility
Having the freedom to pick and choose the parts that go into your machine is at the heart of PC DIY. That's why ROG Strix undergoes an extensive certification program focused on providing the very best compatibility with the widest range of components and devices. Our extensive list of guaranteed-compatible components is an invaluable aid to building a ROG Strix gaming rig. It specifies thousands of compatible parts, and it includes a dedicated Qualified Vendor List (QVL) for memory - so you can build fuss-free.

The ROG Strix Ecosystem Awaits
Gear up with ROG Strix components, from graphics and monitors, to mice and keyboards, and up your game with complementary aesthetics, control and compatibility. The ROG Strix ecosystem is more extensive than any competing brand, so enjoy greater choice as your system expands.

TUNE YOUR RIG THE WAY YOU WANT
The ROG Strix B450-F Gaming motherboard features firmware controls and software utilities crafted for all skill levels, making first-time setup, tuning, and system maintenance simple. With options from overclocking and cooling to managing network performance and audio characteristics, you can configure your ROG Strix gaming build to perform the way you want.

Easy-To-Use UEFI BIOS
The UEFI BIOS is an early waypoint on any PC-building journey, and ROG Strix B450-F Gaming offers one of the best in the business.

EZ MODE

- EZ Tuning Wizard - Quickly apply a CPU overclock to improve system performance or configure a RAID array for faster data retrieval and backups.
- Intuitive graphical fan controls - Fine-tune individual fans simply by dragging a curve with the mouse.
- SATA Information - Easily display SATA port details for device identification.
- Fast and easy clock adjustment - Use the mouse to quickly change time and date settings.

ADVANCED MODE

- My Favorites - Quickly find tuning options and add preferred tools to the list.
- EZ Flash 3 - Update the BIOS via the internet, without leaving the BIOS interface.
- SMART - Check your storage device Self-Monitoring, Analysis, and Reporting Technology logs to gauge reliability and identify potential failures.
- GPU POST - View recommendations for multi-VGA configurations and detailed information for select ASUS graphics cards.
- Secure Erase - Restore your SSDs and NVMe storage to factory settings.
- Last Modified Log - Track the last change and save preferred profiles to a USB drive.
- SATA Port Renaming - Rename SATA ports for easy identification.
- User Profile - Save BIOS settings for migration to a new BIOS version or system.
- Q-Fan Control - Configure the fan's operating speed manually or use pre-configured fan profiles to quickly select Standard, Silent, Turbo or Full Speed modes. By default, system fans will automatically switch to full speed if the temperature reaches 75 degreesC.

Performance Level Up
With the exclusive AI Suite 3, you can push performance as far as possible for brilliant gaming thrills. Its dashboard-style control panel lets you fine-tune almost every aspect of your ROG Strix B450-F Gaming system. Get the best balance between performance, cooling, stability and efficiency via one simple and intuitive interface.

Fan Xpert 4
ROG Strix motherboards provide comprehensive control over fans and all-in-one (AIO) coolers. Each header can be set to monitor and react to three user-configurable thermal sensors via Fan Xpert 4 or the media-acclaimed UEFI. Whether you're cooling with air or water, Auto-Tuning mode intelligently configures all parameters with a single click. There's also an Extreme

Quiet mode which reduces all fan speeds to below the default minimum to keep your system whisper-quiet when performing light tasks.

EPU
The Energy Processing Unit leverages an onboard microcontroller (EPU) to provide system-wide power savings by automatically optimizing power consumption, and the Away mode smart setting saves energy by shutting down unused I/O controllers.

Digital Power Controls
The Digi+ voltage regulator module (VRM) with onboard power circuitry delivers real-time control over voltage droop, switching frequency, and power-efficiency settings, allowing you to fine-tune CPU voltage regulation for ultimate stability and performance.

TPU
Unleash your PC's full performance potential with the ASUS AI Suite 3 utility. The TurboV Processing Unit (TPU) is an intelligent onboard micro-controller that provides an array of system-tuning features, including the ability to fine-tune voltages, monitor system stats and adjust overclocking parameters.

AM4 socket for AMD Ryzen™ 2nd Generation / Ryzen™ with Radeon™ Vega Graphics / Ryzen™ 1st Generation Processors
The AMD Ryzen™ processor is based on the innovative Zen core architecture and features up to eight cores and Radeon™ Vega integrated graphics. Together with dual-channel DDR4 memory, native 5Gbps USB 3.1 Gen 1 and 16 PCI Express® 3.0/2.0 lanes, these AMD AM4-socket processors deliver superb computing performance.

AMD B450 chipset
The AMD B450 chipset delivers high performance and flexibility with the latest AMD AM4-socket Ryzen™ processors. It also offers AMD StoreMI storage acceleration technology and provides two 10Gbps USB 3.1 Gen2 ports, two USB 3.1 Gen1 ports, and four 6Gbps SATA ports for faster data retrieval.

Specifications:

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Specifications	
Product Code	ROG STRIX B450-F GAMING
CPU	AMD AM4 Socket AMD Ryzen 2nd Generation/Ryzen with Radeon Vega Graphics/Ryzen 1st Generation Processors
Chipset	AMD B450
Memory	AMD Ryzen Processors
	4 x DIMM, Max. 64GB, DDR4 3200(O.C.) / 3000(O.C.) / 2800(O.C.) / 2666 / 2400 / 2133 MHz Non-ECC, Un-buffered Memory
	Dual Channel Memory Architecture
Graphic	Integrated in the AMD Ryzen with Radeon Vega Graphics Processors
	Multi-VGA output support : HDMI/DisplayPort ports
	- Supports HDMI 2.0b with maximum resolution of 4096 x 2160 @ 60 Hz
	- Supports DisplayPort 1.2 with max. resolution 4096 x 2160 @ 60 Hz

Multi-GPU Support	AMD Ryzen 2nd Generation/Ryzen 1st Generation Processors
	Supports AMD 3-Way CrossFireX Technology
Expansion Slots	AMD Ryzen 2nd Generation/ Ryzen 1st Generation Processors
	2 x PCIe 3.0/2.0 x16 (x16 or x8/x4)
	AMD Ryzen with Radeon Vega Graphics Processor
	1 x PCIe 3.0/2.0 x16 (x8 mode)
	AMD B450 chipset
	1 x PCIe 2.0 x16 (max at x4 mode)
	3 x PCIe 2.0 x1
Storage	AMD Ryzen 2nd Generation/ Ryzen 1st Generation Processors :
	1 x M.2 Socket 3,, with M key, type 2242/2260/2280 storage devices support (SATA & PCIE 3.0 x 4 mode)
	1 x M.2 Socket 3,, with M key, type 2242/2260/2280/22110 storage devices support (PCIE 3.0 x 4 mode)
	2 x SATA 6Gb/s port(s)
	AMD Ryzen with Radeon Vega Graphics Processor :
	1 x M.2 Socket 3, with M key, type 2242/2260/2280 storage devices support (SATA & PCIE 3.0 x 4 mode)
	2 x SATA 6Gb/s port(s)
	AMD B450 chipset :
	4 x SATA 6Gb/s port(s)
	Support Raid 0, 1, 10
LAN	Intel I211-AT, 1 x Gigabit LAN Controller(s)
	Anti-surge LANGuard
	ROG GameFirst Technology
Audio	ROG SupremeFX 8-Channel High Definition Audio CODEC S1220A
	- Dual OP Amplifiers
	- Impedance sense for front and rear headphone outputs
	- Supports : Jack-detection, Multi-streaming, Front Panel Jack-retasking
	- High quality 120 dB SNR stereo playback output and 113 dB SNR recording input
	- SupremeFX Shielding Technology
	- Supports up to 32-Bit/192kHz playback
	Audio Feature :
	- Optical S/PDIF out port(s) at back panel
	- Sonic Radar III
	- Sonic Studio III + Sonic Studio Link

USB Ports	AMD Ryzen 2nd Generation/ Ryzen with Radeon Vega Graphics/ Ryzen 1st Generation :
	3 x USB 3.1 Gen 1 port(s) (3 at back panel, blue)
	AMD Ryzen 2nd Generation/ Ryzen with Radeon Vega Graphics/ Ryzen 1st Generation :
	1 x USB 3.1 Gen 1 port(s) (1 at back panel, Type-C)
	AMD B450 chipset :
	2 x USB 3.1 Gen 2 port(s) (2 at back panel, red)
	AMD B450 chipset :
	2 x USB 3.1 Gen 1 port(s)
	AMD B450 chipset :
	6 x USB 2.0 port(s) (2 at back panel, 4 at mid-board)
ROG Exclusive Features	ROG RAMCache II
	ROG CPU-Z
	Pre-mounted I/O Shield
	Overwolf
	GameFirst IV

Special Features	5-Way Optimization by Dual Intelligent Processors 5
	- Whole system optimization with a single click! 5-Way Optimization tuning key perfectly consolidates TPU, EPU, DIGI+ VRM, Fan Xpert 4, and Turbo App together, providing better CPU performance, efficient power saving, precise digital power control, whole system cooling and even tailor your own app usages.
	TPU
	- Auto Tuning, TurboV, GPU Boost
	Fan Xpert4
	- Fan Xpert 4 featuring Fan Auto Tuning function and multiple thermistors selection for optimized system cooling control
	Gamer's Guardian:
	- ESD Guards on LAN, Audio, KBMS and USB3.1/3.0/2.0 ports
	- DRAM Overcurrent Protection
	- Highly Durable Components
	- SafeSlot
	ASUS EPU :
	- EPU
	AURA :
	- Aura Lighting Control
	- Aura RGB Strip Headers
	- Aura Lighting Effects Synchronization with compatible ASUS ROG devices
	ASUS Exclusive Features :
	- AI Suite 3
	- Ai Charger
	- ASUS Grid
	ASUS EZ DIY :
	- ASUS CrashFree BIOS 3
	- ASUS EZ Flash 3
	ASUS Q-Design :
	- ASUS Q-Shield
	- ASUS Q-LED (CPU, DRAM, VGA, Boot Device LED)
	- ASUS Q-Slot
	- ASUS Q-DIMM
	Digi+VRM
	Turbo APP
	- featuring system performance tuning for selected applications

Back I/O Ports	1 x PS/2 keyboard/mouse combo port(s)
	1 x DisplayPort
	1 x HDMI
	1 x LAN (RJ45) port(s)
	2 x USB 3.1 Gen 2 (red)Type-A
	4 x USB 3.1 Gen 1 (blue)
	2 x USB 2.0
	1 x Optical S/PDIF out
	5 x Audio jack(s)
Internal I/O Ports	2 x Aura RGB Strip Headers
	1 x USB 3.1 Gen 1(up to 5Gbps) connector(s) support(s) additional 2 USB 3.1 Gen 1 port(s)
	2 x USB 2.0 connector(s) support(s) additional 4 USB 2.0 port(s)
	1 x M.2 Socket 3 with M key, type 2242/2260/2280 storage devices support (SATA & PCIE 3.0 x 4 mode)
	1 x M.2 Socket 3 with M key, type 2242/2260/2280/22110 storage devices support (PCIE 3.0 x 4 mode)
	1 x TPM header
	1 x COM port(s) connector(s)
	6 x SATA 6Gb/s connector(s)
	1 x CPU Fan connector(s)
	1 x CPU OPT Fan connector(s)
	3 x Chassis Fan connector(s)
	1 x AIO_PUMP connector
	1 x 24-pin EATX Power connector(s)
	1 x 8-pin EATX 12V Power connectors
	1 x Front panel audio connector(s) (AAFP)
	1 x System panel(s)
	1 x Thermal sensor connector(s)
	1 x Clear CMOS jumper(s)
Operating System	Windows 10 64-bit
Form Factor	ATX Form Factor
	12 inch x 9.6 inch (30.5 cm x 24.4 cm)
Note	*1 PCIe x16_3 slot shares bandwidth with PCIe x1_2 and PCIe x1_3.
	*2 Support StoreMI and NVMe RAID
	*3 When the M.2_1 Socket 3 is operating in SATA or PCIE mode, SATA6G_5/6 ports will be disabled.
	*4 When the M.2_2 is occupied by M.2 device, PCIe x16_1 will run at x8 mode.
	*5 *Due to limitations in HDA bandwidth, 32-Bit/192kHz is not supported for 8-Channel audio.

Product Information Online

For the latest product information, availability and purchasing details, please visit the product page:

Product page:
https://www.comx-computers.co.za/ROG-STRIX-B450-F-GAMING-Asus-ROG-Strix-B450-F-Gaming-AMD-B450-Chipset-AMD-Ryzen-AM4-p-205367.php

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