B450MX-S Motherboard

- Supports AMD Ryzen APU / CPU
- AMD B450 single chip architecture
- Supports 4-DIMM DDR4 up to 128 GB Memory
- Supports Realtek Gigabit LAN
- Supports USB 3.2 Gen1
- Supports M.2(32Gb/s)
- Supports HDMI® 4K resolution

Specifcation	
CPU SUPPORT	Socket AM4 supports AMD Ryzen™ APU (Raven Ridge, Picasso)/ Ryzen™ CPU (Summit Ridge, Pinnacle Ridge, Matisse) * Please refer to www.biostar.com.tw for CPU support list.
MEMORY	Supports Dual Channel DDR4 1866/ 2133/ 2400/ 2667 Supports Dual Channel DDR4 2933(OC)/ 3200(OC)/ 3600(OC)/ 4000(OC) 4 x DDR4 DIMM Memory Slot, Max. Supports up to 128 GB Memory Each DIMM supports non-ECC 8/ 16/ 32 GB DDR4 module * DDR4 - 2667 only for Ryzen CPU. * Please refer to www.biostar.com.tw for Memory support list.
INTEGRATED VIDEO	By CPU model Supports DX12 Supports HDCP
STORAGE	4 x SATA III Connectors (6Gb/s) : Supports AHCI & RAID 0, 1, 10 1 x M.2 (M Key) Socket: Supports M.2 Type 2242/ 2260/ 2280 SSD module Supports PCIe 3.0 x4 (32Gb/s) - NVMe/ AHCI SSD Supports SATA III (6Gb/s) SSD * M.2 (M Key) Socket : The bandwidth is depended on CPU, Ryzen is 32Gb/s ; APU is 16Gb/s.
LAN	Realtek RTL8111H 10/ 100/ 1000 Mb/s auto negotiation, Half / Full duplex capability
AUDIO CODEC	ALC887 / 897 7.1 Channels, High Definition Audio, Hi-Fi (Front)
USB	6 x USB 3.2 (Gen1) ports(4 on rear I/Os and 2 via internal headers) 6 x USB 2.0 ports (2 on rear I/Os and 4 via internal headers)

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ESG

EXPANSION SLOT	AMD Processors 1 x PCIe 3.0 x16 Slot: Supports PCIe 3.0 x16 mode with AMD Ryzen™ processors. Supports PCIe 3.0 x8 mode AMD Ryzen™ with Radeon Vega Graphics processors. AMD Chipset 1 x PCIe 2.0 x16 Slot (x4 mode) 1 x PCIe 2.0 x1 Slot * According to different CPUs will have different speeds.
REAR I/O	1 x PS/2 Keyboard/ Mouse Port 1 x HDMI® Port 1 x LAN port 4 x USB 3.2 (Gen1) Ports 2 x USB 2.0 Ports 3 x Audio Jack
INTERNAL I/O	4 x SATA III (6.0Gb/s) Connectors 2 x USB 2.0 Headers (each header supports 2 USB 2.0 ports) 1 x USB 3.2 (Gen1) Header (each header supports 2 USB 3.2 (Gen1) ports) 1 x 8-Pin Power Connector 1 x 24-Pin Power Connector 1 x CPU Fan Connector 2 x System Fan Connectors 1 x Front Panel Header 1 x Front Audio Header 1 x Clear CMOS Header 1 x Speaker Header 1 x S/PDIF out Connector 1 x COM Port Header
H/W MONITORING	CPU / System Temperature Monitoring CPU / System Fan Monitoring Smart / Manual CPU Fan Control CPU/DDR Voltage Monitoring
DIMENSION	Micro ATX Form Factor Dimension: 24.4cm x 24.4cm (W x L)
OS SUPPORT	Supports Windows 7(64it)/ 10(64bit) Windows 7(64bit) for Summit Ridge/ Pinnacle Ridge only ※Biostar reserves the right to add or remove support for any OS with or without notice.
BUNDLE SOFTWARE	BullGuard
ACCESSORIES	2 x SATA Cables 1 x I/O Shield 1 x DVD Driver 1 x Quick Guide
FEATURES	A.I FAN PCIe M.2 32Gb/s

OVERVIEW

AMD B450 chipset

AMD B450 is the high-end chipset for overclockers and tweakers who need robust platforms. This chip provides the ultimate low-level control to its users and delivers ultimate graphics card bandwidth.

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HD Audio

Provides high quality sound with minimal loss of audio fidelity.

Hi-Fi Ground

BIOSTAR Hi-Fi Ground (Golden Line) is noise-blocking multi-layer PCB design to isolates analog audio signals from digital sources. Unique PCB layout is ideal for exceptional clarity and high fidelity sound.

HDMI® 4K2K

The new 4K2K resolution enables high-definition image display with four times the resolution of full HD, 4K2K display is faithfully express bright, highly detailed content that fills the entire screen with lifelike images. Connectivity with PCs via a single HDMI® cable for displaying 4K2K data.

DX12

DirectX 12 introduces the next version of Direct3D, the graphics API at the heart of DirectX. Direct3D is one of the most critical pieces of a game or game engine, and we've redesigned it to be faster and more efficient than ever before. Direct3D 12 enables richer scenes, more objects, and full utilization of modern GPU hardware.

Integrated HDMI® with HDCP

Onboard HDMI® connector allows full video & audio support. It has industry-leading high definition video quality.

PCIe M.2

PCIe M.2 32Gb/s delivers the highest bandwidth and lower latency. It is 3 times faster compared with PCIe M.2 10Gb/s.

PCIe 3.0

PCIe 3.0 is the ubiquitous and general-purpose PCI Express I/O standard. At 8GT/s bit rate, the interconnect performance bandwidth is doubled over PCIe 2.0, while preserving compatibility with software and mechanical interfaces.

SATAIII 6Gbps

SATAIII 6Gbps provides a higher bandwidth to retrieve and transfer HD media. With this super speed data transfer, SATAIII allows an incredible data boost which is 2x faster than the SATA II.

Dual DDR4

The primary advantages of DDR4 over DDR3, include higher module density, lower voltage requirements, coupled with higher data transfer rate.

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USB 3.2 Gen1 Type-A

USB 3.2 Gen1 delivers a compelling performance boosts and can be used to connect multiple devices without worrying about compatibility. It is capable of data transfer speeds up to 5Gbps and backwards compatible with all existing USB products.

Digital PWM

Digital PWM controller is with dual-output multiphase that faster transient performance and accurately regulated frequency control. It can be enabled to greatly increase system efficiency.

Super Durable Solid Caps

The best quality solid state capacitors with ultra low ESR design, the Super Durable Solid Caps doubles the lifespan.

Moistureproof of PCB

The popularity of PC usage and working environment is getting deteriorating and moist (rural, coastal, etc.). The PCB will be oxidizing easily by damp or absorbed moisture, and ionic migration or CAF (Conductive Anodic Filament) will be generated. Moisture-proof PCB meets high density and high reliability requirements for moisture proof.

OC / OV / OH Protection

OC / OV / OH Protection design detects overvoltage conditions and prevents voltage surges from spreading in real time. It also actively cuts off the overvoltage supply to protect your system.

BullGuard

BullGuard Internet Security (90 days FREE trial)

BullGuard Internet Security comes with the broadest line-up of internet security features on the market, including: a cutting-edge dual Antivirus engine, Online Backup for your precious files, PC Tune Up to speed up your system, a Game Mode for a seamless gaming experience, Parental Control, Firewall, Safe Browsing and many more. Make the most of your digital life with Bullguard!

UEFI BIOS

Unified Extensible Firmware Interface (UEFI) is a brand new framework that provides a revolutionary interface. It is a modern clear and easy-to-use graphical user interface. The UEFI comes with a colorful easy-understand icons leads users into the setup layer directly.

BIO-Flasher

BIO-Flasher is a convenient BIOS update tool. Just launch this tool and put the BIOS on USB pen driver before entering the OS. You can update your BIOS with only a few clicks without preparing an additional floppy disk or other complicated flash utility.

A.I FAN

With A.I FAN users can ensure that their gaming PC can maintain its performance while staying cool. According to different cooling needs and usage scenarios, users can control speed modes. Allows users to have more customizability of fan modes and automatically detects different temperatures to make fan operate at defined speed for optimal cooling performance.

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HDMI®

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*The specification and pictures are subject to change without notice and the package contents may differ by area or your motherboard version!

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