MS-B450M MORTAR

MSI B450M Mortar AMD B450 Chipset AMD Ryzen AM4 Socket Motherboard

Product Overview

MSI B450M Mortar AMD B450 Chipset AMD Ryzen AM4 Socket Motherboard, 4 x DDR4 memory slots, support up to 64GB, 1 x 24-pin ATX 12V power connector, 1 x 8-pin ATX 12V power connector, 4 x SATA 6Gb/s connectors, 2 x USB 2.0 connectors (support additional 4 USB 2.0 ports), 1 x USB 3.1 Gen1 connector (support additional 2 USB 3.1 Gen1 ports), 1 x 4-pin CPU fan connector, 3 x 4-pin system fan connectors, 2 x 5050 RGB LED strip 12V connectors, 1 x TPM module connector, 1 x Front panel audio connector, 2 x System panel connectors, 1 x Chassis Intrusion connector, 1 x Clear CMOS jumper, 1 x Serial Port connector, 1 x Parallel Port connector, BIOS FLASHBACK Button, PS/2 Combo Port, DisplayPort, LAN Port, USB 3.1 Gen2 Type A, HD Audio Connectors, 2 x USB 2.0 Port, HDMI Port, 2 x USB 3.1 Gen1, USB 3.1 Gen2 Type C, Optical S/PDIF OUT, Micro-ATX Form Factor, 24.4 cm x 24.4 cm



Specifications

Features:

- Supports AMD® Ryzen 1st and 2nd Generation/ Ryzen™ with Radeon™ Vega Graphics/ Athlon™ with Radeon™ Vega Graphics Processors for Socket AM4
- Supports DDR4 Memory, up to 3466(OC) MHz
- Extended Heatsink Design: MSI extended PWM and enhanced circuit design ensures even high-end processors to run in full speed.
- Lightning Fast Game experience: 1x TURBO M.2, AMD Turbo USB 3.1 GEN2, Store MI technology
- Core Boost: With premium layout and fully digital power design to support more cores and provide better performance.
- DDR4 Boost: Advanced technology to deliver pure data signals for the best gaming performance and stability.
- MULTI-GPU: With PCI-E STEEL ARMOR slot. Supports 2-Way AMD Crossfire™
- Mystic Light and Mystic Light Sync: 16.8 million colors / 10 effects in one click. Synchronize RGB strips and other RGB solutions for customization.
- Audio Boost: Reward your ears with studio grade sound quality for the most immersive audio experience
- BIOS FLASHBACK : Simply use a USB key to flash any BIOS within seconds, without installing a CPU, memory or graphics card.
- In-Game Weapons: Game Boost, GAMING Hotkey, X-Boost
- EZ Debug LED: Easiest way to troubleshoot.

Conquer the Battlefield

Featuring heavy plated heat sinks and fierce looks, MSI ARSENAL GAMING motherboards are packed with gaming features

for a refined gaming experience.

FIRE YOUR IMAGINATION
Create your own unique stickers! MSI Arsenal GAMING motherboards are now available for personalization. With various design offered by MSI or design from your own inspiration, you are able to easily customize heatsink cover by using stickers in your favorite styles.

Personalize your gaming rig
Customize and set up your own color scheme with MSI Mystic Light utility. Select the available colors from the palette to match your system style. Bored of the same colors? Simply change the complete look of your system in 1 second!

MILLIONS OF MARVELOUS COLORS, GREAT SELECTION OF EFFECTS
With multiple colors available, you are the artist to create your own unique gaming rig. Done selecting colors? Choose between several LED effects to really make your system come alive and enjoy your personalized design!

EXTEND YOUR RGB EXPERIENCE WITH EASE
MSI's Mystic Light Extension pinheader provides an intuitive way to control additional RGB strips and other RGB peripherals added to a system, without needing a separate RGB controller. By simply connecting any 12V RGB LED strip to the 4-pin Mystic Light Extension RGB-strip header gamers can sync colors to any style they choose.

MYSTIC LIGHT SYNC: SYNCHRONIZE YOUR LED EXPERIENCE
With the convenience of Mystic Light Sync, you can control RGB LED solutions from other brands, such as CPU coolers, keyboards and mice or RGB system fans.

GET STARTED WITH MYSTIC LIGHT
To control Onboard Mystic light LED remotely, Install the latest version of MSI Gaming App from Google Play or App Store to your smartphone.

SMARTPHONE & PC CONTROL
Create your own colorful masterpiece with ease. The easy to use MYSTIC LIGHT APP is available on PC, phone and tablet. It offers remote control, simply using your smartphone or tablet. Make your PC look and feel brand new with any color you want with just a few clicks!

Stay cool while gaming
Cooling your PC is essential for reliable performance. We've made sure to include enough fan headers with full control to allow you to cool your system any way you want.

THERMAL SOLUTION FOR MORE CORES AND HIGHER PERFORMANCE
With more cores' processors, thermal and power design is more important to make sure the temperature keeps lower. MSI extended PWM heatsink and enhanced circuit design ensures even high-end CPU to run in full speed with MSI motherboards.

FULLY CONTROLLABLE FAN HEADERS
MSI motherboards let you manage speeds and temperatures for all your system and CPU fans, giving you full control to set up a cool & silent system. The fan headers are conveniently placed with the most popular CPU coolers in mind.

Looking cool while keeping cool
High quality materials and smart fan optimizations contribute to cooling all essential components, which is key to making sure your system runs stable at the best performance during long gaming sessions.

DC OR PWM MODE WITH HYSTERESIS
MSI fan headers running in DC or PWM mode for optimal tuning of fan speeds and silence. Hysteresis also makes your fans spin up fluently to make sure your system stays silent, no matter what.

TOTAL CONTROL IN BIOS AND SOFTWARE
Total Fan Control allows you to take control of your fans and check your primary system characteristics in a simplified graphical interface. You can also set up to 4 temperature targets for CPU and motherboard, which will adjust the fan speeds automatically.

Your in-game advantage
Outsmart and outperform your opponents in-game using an array of unique MSI GAMING tools. Clever hardware & software tools, created to keep you one step ahead of the competition and boost your skills.

MSI APP PLAYER
Developed under an exclusive partnership with BlueStacks, the MSI APP Player brings seamless gaming experience between mobile games and PC platform, and leverages customized features as specific keyboard lighting and better graphics with multi-task works.

TOTAL FREEDOM, MAXIMUM EASE
Easily program your most-used commands and execute them with a single keystroke. You're free to choose any key you want, so choose wisely.

GAMING HOTKEY
Simply assign functions to any key whether to launch your favorite games, load profiles or do real-time overclocking with the push of a single button. The possibilities are endless!

DEDICATED PORT FOR GAMING PERIPHERALS
The GAMING Device Port is optimized to deliver the best connectivity for high-end gaming peripherals to fully utilize their features and responsiveness. Customize your mouse DPI to enhance accuracy or program macro combinations using the easy-to-use Mouse Master software to perform multiple commands with just one click.

Gaming benefits

- 3x more gold than regular connectors for the best signal
- 10x longer lifetime when plugging/un-plugging
- More responsive, more precise movements
- Customizable mouse settings
- No keypress left behind with n-key rollover

1-SECOND OVERCLOCKING!
Need more power from your CPU and memory to get more FPS? MSI Game Boost enables one-second overclocking, giving you the performance boost you need. Simply turn the dial or use the Gaming App and your PC gets another adrenalin shot!

WANT MORE PERFORMANCE? TRY MULTI GPU!
Gaming enthusiasts are always looking for more performance to get the ultimate experience. Using multiple graphics cards is a great way to find out just how good it gets. MSI GAMING motherboards fully support multi GPU technologies and have optimal PCI-E slot placement for the best thermal performance.

Be the first on the battlefield
This MSI GAMING motherboard supports all the latest storage standards. This allows you to connect any ultra-fast storage device, giving you in-game benefits. Start games faster, load levels faster and have a real advantage over your enemies.

AMD StoreMI
All MSI X470 & B450 motherboards are shipped with StoreMI, the new AMD SSD technology to improve storage performance. This tool helps create a virtual SSD by blending capacity storage, treats flash as primary storage and optimizes data access with monitoring continuously. All these functions can enhance read/write speed for active data and provide fast boot times and application startup.

Turbo M.2
Enjoy a blazing fast system boot up and insanely quick loading of applications and games with MSI motherboards. Delivering speeds up to 32Gb/s per device using Gen3 x4, Turbo M.2 is over 5 times faster than a regular SATA III connection!

XBOOST YOUR STORAGE PERFORMANCE
This great little tool is very simple to use and automatically detects your storage devices connected to the system. When enabled, X-Boost optimizes your SSDs to keep your system fast and maximize storage performance, making sure you reach the battlefield even quicker or saving you a lot of time when transferring data.

SATA MASS STORAGE
We made sure each MSI motherboard comes with enough SATA ports to connect loads of HDDs for long term storage of large files and system backups.

ULTRA-FAST PERFORMANCE, GREAT GAMING EXPERIENCE
All of the next gen storage connectors support NVMe, the fastest storage standard in the world. Simply put, MSI GAMING motherboards offer the best of the best in storage options & performance. Instantly load your favorite games and always be the first on the battlefield with MSI.

Immerse yourself into virtual worlds
Integrating the very best of cutting edge technologies on MSI hardware provides a smooth VR ride. Through joint efforts with major VR brands, combined with unique MSI features geared to VR, MSI brings gamers and VR professionals a vivid and realistic experience in which content truly comes alive.

GET READY TO BE OVERWHELMED BY THE REALMS OF VR
From the start of Virtual Reality, MSI has been deeply involved in making VR Ready hardware in each of its product lines. Whether it's a feature-rich motherboard, a framerate boosting graphics card or a blazing fast complete gaming system, a huge set of VR-supporting features awaits you.

OPTIMIZED FOR THE BEST VR BRANDS
Want the best of the best VR experience without any compromise? MSI motherboards offer everything you need when exploring the possibilities of VR. By closely working with the industries' leading VR vendors, we make sure you get the best possible gaming experience when choosing Virtual Reality.

STRAIGHT INTO THE ACTION WITH ONE CLICK TO VR
Both hard- and software need to be in tune for a smooth VR experience. One Click to VR makes it very fast and easy to get primed for VR. A single click sets all your key components to their highest performance and makes sure other software applications won't impact your virtual adventure.

Sound that pulls you into the game
Get the most immersive sound experience when gaming. MSI Audio Boost delivers the highest sound quality through the use of premium quality audio components. This lets you enjoy breathtaking, game-changing sound to create the most exciting gameplay.

Amplify your game with Audio Boost
Built on years of experience in building motherboards dedicated to giving gamers true Hi-Fi sound. Audio Boost has developed into a high quality audio unit, offering a clear advantage over your opponents when gaming. Locate your enemies with your eyes closed using Audio Boost.

Isolated audio design
Audio Boost operates like a dedicated soundcard by being physically isolated from the rest of the motherboard circuitry to ensure the purest audio signal possible.

Separated audio layers for clean left & right channels
Using separated layers in the PCB ensures equally pristine sound quality for both left and right audio channels.

De-pop protection
Audio Boost protects your ears by eliminating those annoying loud popping sounds when you plug/unplug devices or turn your PC on/off.

Dedicated High Definition audio processor
Audio Boost is powered by an EMI-shielded high quality HD audio processor, making sure you enjoy the purest sound quality in both stereo and surround sound.

HIGH QUALITY Audio capacitors for a warmer sound
By dedicating golden audio capacitors to the front output, a high fidelity sound experience with exceptional acoustics and realism for studio level headphones is ensured. The high quality audio capacitors are widely considered to be one of the great choices for the best sound output.

Golden connectors for optimal 7.1 sound quality
With golden audio connectors you get the best possible signal output with the least chance of distortion. Using gold also prevents any corrosion or oxidation in the long run, which could impact signal quality.

Dominate the game with the lowest latency
Get ready to crush your enemies on the battlefield with MSI GAMING LAN. Featuring the highest quality components tuned to deliver the best online gaming experience without lag.

LAN PROTECT TO SHIELD YOUR SYSTEM AGAINST POWER SURGES
Featuring 15KV anti-surge protection to shield your network from lightning strikes and static electricity, the LAN Protect connector is designed to give you a reliable networking experience.

Unmatched memory performance
MSI motherboards are crammed with features to fuel your gaming rig's memory with more speed, higher overclockability and increased stability.

Designed for limitless tuning
Founded on experience and with a long history of creating the best performing motherboards packed with smart features, you can count on this motherboard to deliver the best performance under the most extreme conditions. Countless system tuning and troubleshooting tools are at your disposal to push your system to new heights and satisfy even the most demanding tweaker.

CORE BOOST
Core Boost technology combines MSI's premium layout and full digital power design which allows for faster and undistorted current delivery to the CPU at pin-point precision. Not only supporting multi-core CPU, also creating the perfect conditions for your CPU

LOAD-LINE CALIBRATION
What you set, is what you get. LLC makes sure your CPU voltage remains 100% stable under any load. This greatly improves stability when demanding more CPU performance.

DigitALL POWER DESIGN
A fully digital power design allows for faster and undistorted current delivery to the CPU at pin-point precision. Creating the perfect conditions for CPU overclocking.

EZ DEBUG LED

Run into trouble? Onboard LEDs for key components will indicate the source of the problem so you know exactly where to look to get up and running again.

OVERVOLTAGE PROTECTION
Prevents potential short-circuit damage to the CPU and other critical components.

Maximize your USB device performance
Transfer your favorite games, music and movies over USB faster than ever. MSI offers a wide variety of options to connect and boost your USB 3.1 devices, delivering lightning-fast transfer speeds up to 10Gb/s!

More Stability with AMD Turbo USB 3.1 GEN2
Featuring the AMD TURBO USB 3.1 GEN2, MSI motherboards offer never before seen USB speeds with more stability when connecting USB devices.

Xboost
Featuring the AMD TURBO USB 3.1 GEN2, MSI motherboards offer never before seen USB speeds with more stability when connecting USB devices.

Type-C reversible connector for next-gen USB
Get all the performance benefits from USB 3.1 combined with the convenience of the USB Type-C connector. This reversible USB connector allows for effortless connecting of USB devices.

SUPER CHARGE YOUR PHONE & GAMING GEAR
MSI Super Charger USB ports charge any connected device faster. It delivers more power than regular USB ports to your smartphone, tablet, USB game controller or portable console.

DOUBLE ESD PROTECTION
Never worry about damage caused by defective USB devices. The USB ports on MSI motherboards are shielded by a set of protective ICs to prevent damage caused by Electrostatic Discharge (ESD) from plugging/unplugging USB devices.

APPS TO GREATLY IMPROVE EFFICIENCY
With years of experience in creating performance enhancing tools that are easy to use, only the highest quality applications are at your disposal. Use these tools to get the most out of your motherboard and achieve victory when gaming.

X-BOOST YOUR STORAGE
This unique and exclusive software allows you to boost the performance of any storage or USB device connected to your system. Simply use X-BOOST's Easy or Advanced mode to tune your system for up to 20% increased speeds, higher system responsiveness and faster loading of in-game levels.

Manage ALL MSI APPS through the convenient APP MANAGER
Use this smart tool to keep an easy overview of the available applications for your system to help you configure, tune and set up your system to your personal preferences. Simply click on icon to install additional apps such as COMMAND CENTER, GAMING APP, LIVE UPDATE and many more.

TAKE COMMAND OF YOUR SYSTEM
MSI's Command Center software is the perfect tool to get the most out of your motherboard. With an intuitive interface, Command Center allows you to tune settings to increase system stability, maximize performance and optimize your system's cooling features.

Always Up-To-Date
Never miss out on important updates. MSI Live Update automatically downloads and installs the latest drivers, BIOS and software so you can focus on your game.

SSD not fast enough? Try MSI® RAMDISK
MSI motherboards include RAMDisk, allowing you to create a virtual drive from your system RAM memory. Instantly load your favorite game, speed up your browser or your page file to significantly speed up your system!

- Speed up system performance, over 25x faster than a SATA SSD
- Speed up games, apps and browser
- Increase SSD lifespan

INSTANT SYSTEM STARTUP WITH MSI FAST BOOT & GO2BIOS
With the latest operating systems supporting UEFI fast booting methods, we have added a "Fast Boot" option to take full advantage of this. Simply enable "Fast Boot" either in the BIOS or with the convenient application for faster boot times.

GO2BIOS
Avoid having to mash your DEL/F2 button to get into the BIOS with the Go2BIOS button in the MSI Fast Boot application. Your PC will automatically go to the BIOS on the next reboot for quick. Some models even have an onboard Go2BIOS button.

CPU-Z MSI GAMING EDITION
MSI has worked closely with the CPUID team to develop a special edition of CPU-Z featuring the famous MSI GAMING dragon. Use CPU-Z to gather key information of your system's key components, like CPU speed, Memory speed and timings, motherboard BIOS version and much more.

Built on everlasting quality
Using only the finest quality components and integrating the latest technological innovations delivers the best possible gaming and professional experience. Rigorous quality testing under the most extreme conditions ensures a super reliable, high performance motherboard.

FORTIFY YOUR SYSTEM WITH PCI-E STEEL ARMOR
MSI PCI Express Steel Armor slots are armed with more solder points on the motherboard for a stronger hold, preventing any damage due to heavy-weight graphics cards. Steel Armor also protects PCI Express signals against electromagnetic interference for a pure gaming experience and even higher overclocking.

ULTIMATE MOTHERBOARD PROTECTION
We've made sure you can enjoy your system endlessly. MSI motherboards feature Double ESD protection with double layer grounding around the motherboard mounting holes, preventing Electrostatic discharge (ESD) surges from damaging the motherboard.

COMPONENTS CHOSEN BY ONLY HIGH QUALITY AND STABILITY
MSI uses components with the latest evolution of the industries' highest quality standard. MSI quality approved components are shielded with the best protection and make sure your system run smoothly under the most extreme gaming conditions.

CERTIFIED FOR GAMING
Each model is tweaked to deliver the best FPS for a stutter-free gaming experience. Tested in 24-hour on- and offline gaming sessions with the most popular gaming gear by the world's best eSports players, so you can enjoy top performance and reliability in the world's most popular games.

keep out zone
MSI motherboards circuitry ensure the case standoff keep out zones are pure and clean, preventing any component contact or damage to the motherboard.

A gamers' BIOS
We made sure our BIOS contains all the latest options and is easy to use for everyone. The extensive features let you fine-tune your system to deliver reliable maximum performance when gaming.

EASY TO READ, HI-RES BIOS FONT
An award-winning, high-resolution, scalable font is used to make CLICK BIOS 5 easy to read, no matter what type of screen you use. The clean design layout, together with this great font makes CLICK BIOS 5 a true next gen UEFI BIOS.

EASY MODE FOR QUICK GAMING TWEAKS
When you just want to get back to your game, EZ-mode presents you with basic BIOS settings and functions for some quick adjustments. If you feel like spending more time fine-tuning options to boost your system's performance, the Advanced mode is the way to go.

EASY SEARCH & FAVORITES
Can't find a specific BIOS setting? Don't worry, a permanent search option in the top right corner can be used to find what you need. Want quick access to important settings? My Favorites gives easy access to selected Favorite settings, supporting up to 5 groups of Favorites.

HARDWARE MONITOR WITH FAN CONTROL
Hardware monitor lets you take control of your system and check your primary system vitals in a simplified graphical interface. You can also set up to 4 temperature targets for CPU and motherboard, which will adjust the fan speeds automatically.

MAKE YOUR SSD AS FAST AS NEW WITH SECURE ERASE
When using an SSD, its performance will slowly decrease over time as more and more data is written onto it. This will slow down Read/Write speeds and increase access times of your SSD, making your system feel sluggish. Using an optimized formatting algorithm, Secure Erase lets you enjoy your SSD at maximum speed, making your system feel brand new!

Instantly Optimize and Boost your Performance
CLICK BIOS 5 provides easy access to memory profiles to optimize your internal memory timings and speeds for maximum stability and performance in-game. Safely overclock your CPU with a single button for more performance using MSI Game Boost.

Easy BIOS recovery with BIOS Flashback
Run into trouble when updating your BIOS? Simply flash the old BIOS version back and continue gaming within minutes with BIOS Flashback . BIOS Flashback even works without a CPU, memory or graphics card installed!

Specifications:

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Specifications	
Product Code	MS-B450M MORTAR
Socket	AM4
CPU (Max Support)	Ryzen 7
Chipset	AMD B450 Chipset
DDR4 Memory	1866/ 2133/ 2400/ 2667Mhz (by JEDEC)
	2667/ 2800/ 2933/ 3000/ 3066/ 3200/ 3466 MHz (by A-XMP OC MODE)
Memory Channel	Dual
DIMM Slots	4
Max Memory (GB)	64

PCI-E x16	2
PCI-E Gen	Gen3, Gen2
PCI-E x1	2
SATAIII	4
M.2 Slot	2
RAID	0/1/10
TPM (header)	1
LAN	1(Realtek 8111H)
USB 3.1 ports (Front)	2(Gen1, Type A)
USB 3.1 ports (Rear)	1(Gen2, Type C), 1(Gen2, Type A), 4(Gen1, Type A)
USB 2.0 ports (Front)	4
USB 2.0 ports (Rear)	2
Serial ports(Front)	1
Audio ports (Rear)	5 Optical S/PDIF (Realtek ALC892 Codec)
DisplayPort	1
HDMI	1
DirectX	12
Form Factor	M-ATX
CrossFire	Y
Operating System	Support for Windows 10 64-bit
	Support for Windows 7 64-bit
	* To support Windows 7 64-bit, you must install an AMD Pinnacle Ridge & Summit Ridge CPU.

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/MS-B450M-MORTAR-MSI-B450M-Mortar-AMD-B450-Chipset-AMD-Ryzen-AM4-Socket-Motherboard-p-209540.php

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