# B560MH-E PRO Motherboard

- Supports 10th/ 11th Generation Intel Core™ Processor
- Intel B560 single chip architecture
- Supports 4-DIMM DDR4- 2133/ 2400/ 2666/ 2800/ 2933/ 3200/ 3600(OC)/ 3733(OC)/ 3800(OC)/ 3866(OC)/ 4000+(OC) up to 128 GB Memory
- Supports PCIe 4.0
- Supports PCIe M.2 4.0 (64Gb/s)
- Supports Intel Optane Technology
- Supports USB 3.2 Gen1
- Supports WiFi 6 module (No WiFi 6 card included)
- Supports HDMI® 4K resolution

| Specifcation | |
|---|---|
| CPU SUPPORT | Support for 10th/ 11th Generation Intel Core i9/ i7/ i5/ i3 processors and Intel Pentium processors/<br>Intel Celeron processors in the LGA1200 package<br>* Please refer to www.biostar.com.tw for CPU support list. |
| MEMORY | Supports Dual Channel DDR4<br>4000+(OC)/3866(OC)/3800(OC)/3733(OC)/3600(OC)/3200/2933/2666/2400/2133<br>4 x DDR4 DIMM Memory Slot, Max. Supports up to 128 GB Memory<br>Each DIMM supports non-ECC 4/8/16/32GB DDR4 module<br>* Please refer to www.biostar.com.tw for Memory support list. |
| INTEGRATED VIDEO | By CPU model<br>Supports DX12<br>Supports HDCP |
| STORAGE | -- Total supports 2 x M.2 socket and 4 x SATA III (6Gb/s) ports<br>4 x SATA III Connector (6Gb/s) : Supports AHCI & Intel Rapid Storage Technology<br>1 x M.2 (M Key) Socket (M2_PCIEG4_64G_11TH_ONLY):<br>Supports M.2 Type 2280 SSD module<br>Supports PCIe 4.0 x 4 (64Gb/s)<br>Support 11th Gen processor only<br>1 x M.2 (M Key) Socket (M2_PCIEG3_32G_SATA_RST1):<br>Supports M.2 Type 2242/ 2260/ 2280 SSD module<br>Supports PCIe 3.0 x 4 (32Gb/s) & SATA III (6Gb/s) SSD<br>Supports Intel Optane Technology<br>* M.2 (M Key) Socket (M2_PCIEG4_64G_11TH_ONLY) support 11th Gen Rocket Lake-S CPU only. |
| LAN | Intel I219V<br>10/ 100/ 1000 Mb/s auto negotiation, Half / Full duplex capability |
| AUDIO CODEC | ALC897<br>7.1 Channels, High Definition Audio, Hi-Fi(Front) |
| USB | 6 x USB 3.2(Gen1) port (4 on rear I/Os and 2 via internal headers)<br>6 x USB 2.0 port (2 on rear I/Os and 4 via internal headers) |

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| | |
|---|---|
| EXPANSION SLOT | 1 x PCIe 3.0 x1 Slot<br>1 x PCIe 4.0 x16 Slot (x16 mode)<br>1 x PCIe 3.0 x16 Slot (x4 mode)<br>* According to different CPUs will have different speeds.<br>* PCIe 4.0 speed only for INTEL 11th Gen CPUs. |
| REAR I/O | 2 x WIFI Antenna Ports<br>1 x PS/2 Keyboard/ Mouse Port<br>1 x VGA Port<br>1 x HDMI® Port<br>4 x USB 3.2 (Gen1) ports<br>2 x USB 2.0 ports<br>1 x LAN port<br>3 x Audio Jack |
| INTERNAL I/O | 4 x SATA III Connectors (6Gb/s)<br>1 x M.2 (E Key) Socket : Supports 2230 type Wi-Fi & Bluetooth module and Intel CNVi<br>2 x USB 2.0 Headers (each header supports 2 USB 2.0 ports)<br>1 x USB 3.2 (Gen1) Header (each header supports 2 USB 3.2 (Gen1) ports)<br>1 x 8-Pin Power Connector<br>1 x 24-Pin Power Connector<br>1 x CPU Fan Connector<br>1 x CPU water cooling connector (CPU_OPT)<br>1 x System Fan Connector<br>1 x Front Panel Header<br>1 x Front Audio Header<br>1 x Speaker Header<br>1 x Clear CMOS Header<br>1 x COM Port Header<br>1 x TPM Header<br>* M.2 (E key) Wi-Fi card is not provided |
| H/W MONITORING | CPU / System Temperature Monitoring<br>CPU / System Fan Monitoring<br>Smart / Manual CPU Fan Control<br>System Voltage Monitoring |
| DIMENSION | Micro ATX Form Factor Dimension: 24.4cm x 24.4cm ( W x L ) |
| OS SUPPORT | Supports Windows 10(64bit) / 11(64bit)<br>※Biostar reserves the right to add or remove support for any OS with or without notice. |
| BUNDLE SOFTWARE | BullGuard |
| ACCESSORIES | 2 x SATA Cable<br>1 x I/O Shield<br>1 x DVD Driver<br>1 x Quick Guide<br>1 x WiFi antenna accessories(Wi-Fi accessories are optional, contact your local dealer to purchase.) |
| FEATURES | BIO-FLASHER<br>BullGuard |

# OVERVIEW

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## Intel B560 chipset

With the Intel® B560 chipset and the 10th/11th generation Intel® Core™ i9/ i7/ i5/ i3 processors and Intel® Pentium® processors, you will immediately be at the forefront of the battlefield, fueled by mind-blowing power and performance. From content creation to gaming, the Intel B560 chipset provides you with the power and performance you need.

## 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.

## Smart Ear

Smart EAR is a windows-based audio utility which allows you to easily adjust system volume. With its user-friendly GUI, you can also increase or decrease impedance setting (Low/High Gain) to optimize your headphone performance. You can easily enjoy high-quality and awesome 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.

## Intel GbE LAN

Unlike ordinary LAN solution, Intel® GbE LAN offers fewer CPU resource consumption and more bandwidth stability. Thus, Intel® LAN is the best choice for performance seekers.

## 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.

## 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.

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## Dual DDR4

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

## PCIe 4.0

PCIe 4.0 is the ubiquitous and general-purpose PCI Express I/O standard. At 16GT/s bit rate, the interconnect performance bandwidth is doubled over PCIe 3.0, while preserving compatibility with software and mechanical interfaces.

## PCIe 4.0 M.2

PCIe 4.0 M.2 delivers the highest bandwidth and lower latency. It is 2 times faster compared with PCIe 3.0 M.2 .

## 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.

## Iron Bar Protection

BIOSTAR's exclusive Iron Bar Protection can reinforce PCI-E x16 slots to handle heavier graphics cards, prevent bending, and extend longevity of the slot, making the new-gen BIOSTAR motherboards much more robust.

## Moistureproof PCB

The PCB will be oxidizing easily by damp or absorbed moisture, and ionic migration or CAF (Conductive Anodic Filament) will be generated. Moistureproof PCB meets high density and high reliability requirements for moisture proof.

## Super LAN Surge Protection

Super LAN Surge Protection, providing LAN port with more advanced antistatic protection capabilities by adding an integrated chip to strengthen electrical stability and prevent damage from lightning strikes and electrical surges. SLSP (Super LAN Surge Protection) series motherboard upgrades the existing system protection standards with maximum 4X protection comparing to other board makers.

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## ESD Protection

ESD (Electrostatic Discharge) is the major factor to destroy the PC by electrical overstress (EOS) condition. ESD occurred by PC users when touch any devices connect to a PC, which may result in damage to the motherboard or parts. ESD protection is designed to protect the motherboard and equipment from damage by EOS.

## 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.

## 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.

## CPU OPT

BIOSTAR offers one more fan header which is called CPU OPT. Users can use it to connect any kind of water coolers for a liquid cooling system. Keep your computer stable and enjoy your machine at the utmost potential.

## Debug LED

Debug LED helps you identify any issues going with your board or hardware. When error occurs, the corresponding LED lights will inform you on the status of your board or hardware to shorten the test time effectively.

## HDMI®

The terms HDMI® and HDMI® High-Definition Multimedia Interface, and the HDMI® Logo are trademarks or registered trademarks of HDMI® Licensing Administrator, Inc. in the United States and other countries.

*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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