

## H510MHP-E Motherboard





- Supports 10<sup>th</sup> /11<sup>th</sup> Generation Intel Core™ Processor
- Intel H510 single chip architecture
- Supports 2-DIMM DDR4 up to 64 GB Memory
- Supports PCIe 4.0
- Supports PCIe 3.0 M.2 (32Gb/s)
- Supports USB 3.2 Gen1

### Specification

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| CPU SUPPORT      | Socket 1200 for 10th / 11th Gen Intel Core™, Pentium and Celeron processors<br>* Please refer to <a href="http://www.biostar.com.tw">www.biostar.com.tw</a> for CPU support list.   |
| MEMORY           | Supports Dual Channel DDR4 3200/ 2933/ 2666/ 2400/ 2133/ 1866<br>2 x DDR4 DIMM Memory Slot, Max. Supports up to 64 GB Memory<br>Each DIMM supports non-ECC 4/8/16/32GB DDR4 module<br>* Please refer to <a href="http://www.biostar.com.tw">www.biostar.com.tw</a> for Memory support list. |
| INTEGRATED VIDEO | By CPU model<br>Supports DX12<br>Supports HDCP  |
| STORAGE          | 4 x SATA III Connector (6Gb/s)<br>1 x M.2 (M Key) Socket:<br>Supports M.2 Type 2242/ 2260/ 2280 SSD module.<br>Supports PCIe 3.0 x4 (32Gb/s) & SATA III (6Gb/s) SSD<br>* When using SATA SSD module on M2_PCIEG3_32G_SATA_1 slot, the SATA_1 connector will be disabled.                    |
| LAN              | Intel I219V<br>10/ 100/ 1000 Mb/s auto negotiation, Half / Full duplex capability   |
| AUDIO CODEC      | Realtek ALC897<br>7.1 Channels, High Definition Audio   |
| USB              | 4 x USB 3.2(Gen1) ports (2 on rear I/Os and 2 via internal headers)<br>4 x USB 2.0 ports (2 on rear I/Os and 2 via internal headers)  |
| EXPANSION SLOT   | 1 x PCIe 3.0 x1 Slot<br>1 x PCIe 3.0/4.0x16 Slot<br>*The PCIe 4.0 only depends on Rocket Lake CPUs.   |

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| REAR I/O        | <ul style="list-style-type: none"> <li>1 x PS/2 Keyboard</li> <li>1 x PS/2 Mouse</li> <li>1 x HDMI Port</li> <li>1 x VGA Port</li> <li>2 x USB 3.2 (Gen1) Ports</li> <li>2 x USB 2.0 Ports</li> <li>1 x GbE LAN Port</li> <li>3 x Audio Jack</li> <li>1 x WiFi Antenna Port</li> </ul>   |
| INTERNAL I/O    | <ul style="list-style-type: none"> <li>4 x SATA III Connectors (6Gb/s)</li> <li>1 x M.2 (E Key) Socket : Supports 2230 type Wi-Fi &amp; Bluetooth module and Intel CNVi</li> <li>1 x USB 2.0 Header (each header supports 2 USB 2.0 ports)</li> <li>1 x USB 3.2 (Gen1) Header (each header supports 2 USB 3.2 (Gen1) ports)</li> <li>1 x 8-Pin Power Connector</li> <li>1 x 24-Pin Power Connector</li> <li>1 x CPU Fan Connector</li> <li>1 x System Fan Connector</li> <li>1 x Front Panel Header</li> <li>1 x Front Audio Header</li> <li>1 x Clear CMOS Header</li> <li>1 x COM Port Header</li> <li>* M.2 (E key) Wi-Fi card is not provided</li> </ul> |
| H/W MONITORING  | <ul style="list-style-type: none"> <li>CPU / System Temperature Monitoring</li> <li>CPU / System Fan Monitoring</li> <li>Smart / Manual CPU Fan Control</li> <li>CPU/DDR Voltage Monitoring</li> </ul>   |
| DIMENSION       | Micro ATX Form Factor Dimension: 18.5cm x 23.5cm ( W x L )   |
| OS SUPPORT      | <ul style="list-style-type: none"> <li>Supports Windows 10 (64bit) / 11(64bit)</li> <li>*Biostar reserves the right to add or remove support for any OS with or without notice.</li> </ul>   |
| BUNDLE SOFTWARE | BullGuard  |
| ACCESSORIES     | <ul style="list-style-type: none"> <li>2 x SATA Cable</li> <li>1 x I/O Shield</li> <li>1 x DVD Driver</li> <li>1 x Quick Guide</li> <li>1 x WiFi antenna accessories(Optional)</li> </ul>  |

## OVERVIEW

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|  | <p><b>Intel H510 chipset</b></p> <p>With the Intel® H510 chipset and the 10<sup>th</sup>/ 11<sup>th</sup> 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 H510 chipset provides you with the power and performance you need.</p> |
|  | <p><b>HD Audio</b></p> <p>Provides high quality sound with minimal loss of audio fidelity.</p>   |

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|     | <h3>Hi-Fi Ground</h3> <p>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.</p>  |
|    | <h3>Smart Ear</h3> <p>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.</p>   |
|    | <h3>HDMI 4K2K</h3> <p>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.</p>                                 |
|    | <h3>DX12</h3> <p>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.</p> |
|   | <h3>PCIe M.2</h3> <p>PCIe M.2 32Gb/s delivers the highest bandwidth and lower latency. It is 3 times faster compared with PCIe M.2 10Gb/s.</p>   |
|  | <h3>SATAIII 6Gbps</h3> <p>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.</p>   |
|  | <h3>Dual DDR4</h3> <p>The primary advantages of DDR4 over DDR3, include higher module density, lower voltage requirements, coupled with higher data transfer rate.</p>   |
|  | <h3>PCIe 4.0</h3> <p>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.</p>   |
|  | <h3>USB 3.2 Gen1 Type-A</h3> <p>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.</p>   |

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|     | <h3>S-Hyper PWM</h3> <p>The S-Hyper PWM has DCR current sensing architecture and lossless characteristic, offering excellent precision in delivering stable power with 100% fixed voltage to ensure that critical components of the motherboard are under protected with the maximum performance and reliability.</p>   |
|    | <h3>Super Durable Solid Caps</h3> <p>The best quality solid state capacitors with ultra low ESR design, the Super Durable Solid Caps doubles the lifespan.</p>  |
|    | <h3>Moistureproof PCB</h3> <p>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.</p>  |
|    | <h3>Super LAN Surge Protection</h3> <p>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.</p> |
|  | <h3>UEFI BIOS</h3> <p>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.</p>   |
|  | <h3>BIO-Flasher</h3> <p>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.</p>  |
|  | <h3>A.I FAN</h3> <p>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.</p>  |
|  | <h3>A.I TP Control</h3> <p>A.I TP Control is designed for overclockers. It provides a user-friendly BIOS environment that overclockers can adjust the temperature setting to keep your PC safe and enjoy extreme overclocking performance.</p>  |
|  | <h3>Smart Update</h3> <p>Biostar Smart Update is a utility that can help users run online update. It can download the drivers for your motherboard from Biostar official website and install them automatically.</p>  |



## 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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