

Intel® H470 (LGA 1200) micro ATX motherboard with PCIe 4.0, 32Gbps M.2 slot, HDMI™, VGA, USB 3.2 Gen 1 Type-A, SATA 6 Gbps, Intel® Optane Memory Ready, FAN Xpert, Armoury Crate, 5X PROTECTION III

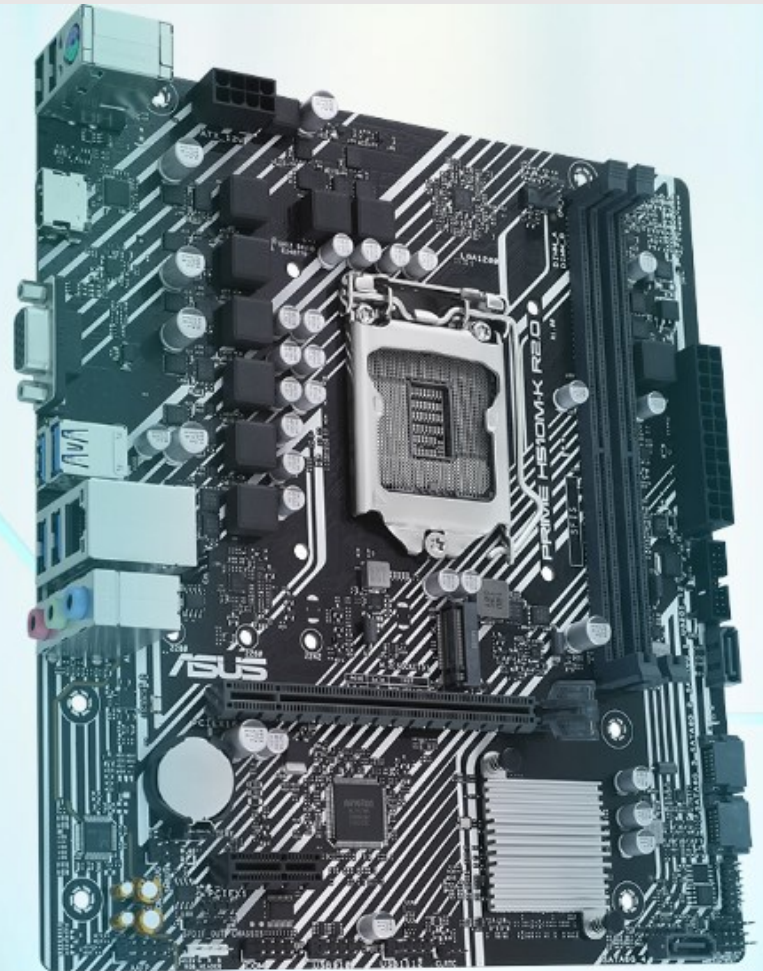
- **Intel® LGA 1200 socket:** Ready for 11th and 10th Gen Intel® Processors
- **Ultrafast connectivity:** PCIe 4.0, 32Gbps M.2 slot, 1 Gb Ethernet and USB 3.2 Gen 1
- **Comprehensive cooling:** PCH heatsink and Fan Xpert
- **5X Protection III:** Multiple hardware safeguards for all-round protection



PRIME

H510M-K R2.0

ASUS Prime series motherboards are expertly engineered to unleash the full potential of 11th and 10th Generation Intel® processors. Boasting a robust power design, comprehensive cooling solutions and intelligent tuning options, PRIME H510M-K R2.0 provides daily users and DIY PC builders a range of performance tuning options via intuitive software and firmware features.



1 x PS/2
2 x USB 2.0

HDMI™

VGA

4 x USB 3.2 Gen 1

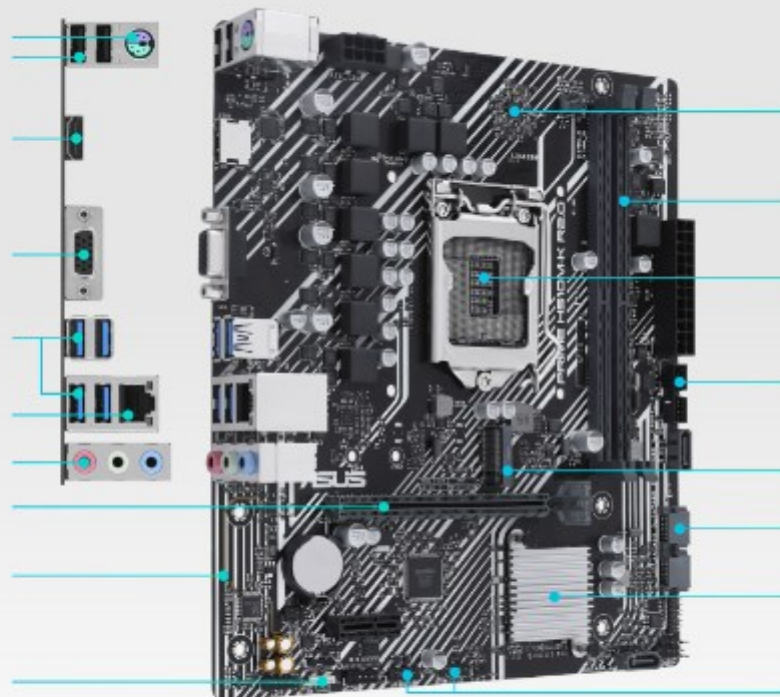
Realtek 1Gb Ethernet

3 x Audio jacks

PCIe 4.0/3.0 x16
• ASUS SafeSlot Core

Audio Features
• Audio Shielding
• Premium audio capacitors
• Dedicated audio PCB layers

1 x RGB header



DIGI+ VRM & EPU

2 x DDR4

LGA 1200 Socket
• Intel® 11th & 10th Gen Processors

2 x Front USB 3.2 Gen 1

32Gb/s M.2
PCIe 3.0 x4 & SATA modes
Intel® Optane™ Memory Ready
4 x SATA 6Gb/s

Intel® H470 Chipset

4 x Front USB 2.0

▶▶▶ FLEXIBILITY ◀◀◀

Comprehensive controls form the foundation of the ASUS Prime series. The Prime H510 motherboard packs flexible tools to tune every aspect of your system, enabling performance tweaks to perfectly match the way you work, to maximize productivity.

Intelligent Control

UEFI BIOS

Intelligent Control

ASUS Intelligent Control makes your PC smart. Along with taking care of complex tuning and dynamically optimizing essential aspects of your system, it offers intelligently simplified options for newcomers to PC DIY, as well as more comprehensive features for seasoned veterans.

EPU

Fan Xpert

Digi+ VRM Control



All-Around Energy Efficiency

With the Energy Processing Unit (EPU), you'll enjoy system-wide power savings. The EPU automatically optimizes power consumption and maximizes savings with Away mode.

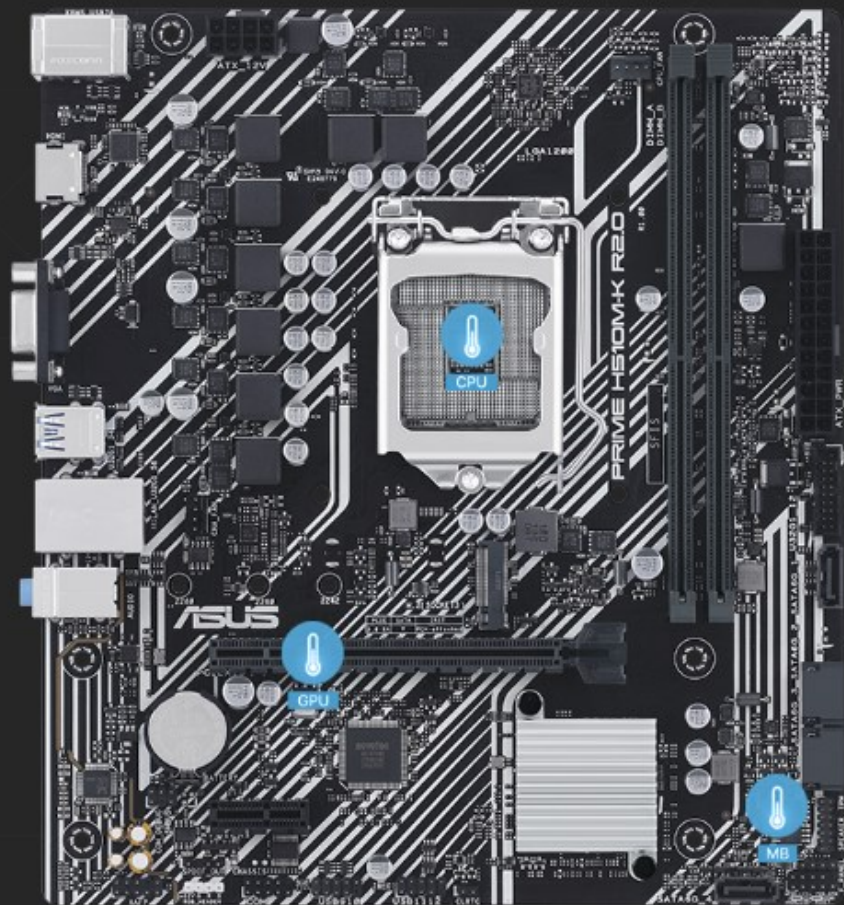
COOLING

Prime H510 series is engineered with an array of hybrid fan headers to ensure your rig stays cool and stable under intense workloads.

Cooler by Design

Cooler by Design

Prime H510 series features comprehensive cooling controls that are configurable via Fan Xpert software or via the UEFI BIOS.



Multiple Temperature Sources

Each header can dynamically reference three thermal sensors. Fan Xpert allows you to map the temperature of supported ASUS graphics cards to optimize cooling for GPU- and CPU-intensive tasks.



PERFORMANCE

Prime H510 series is built to handle the additional cores and increased bandwidth of 11th Generation Intel® Core™ processors. ASUS H510 motherboards provide all the fundamentals to boost daily productivity, so your system will be ready for action with stable power, intuitive cooling and flexible transfer options.

Storage

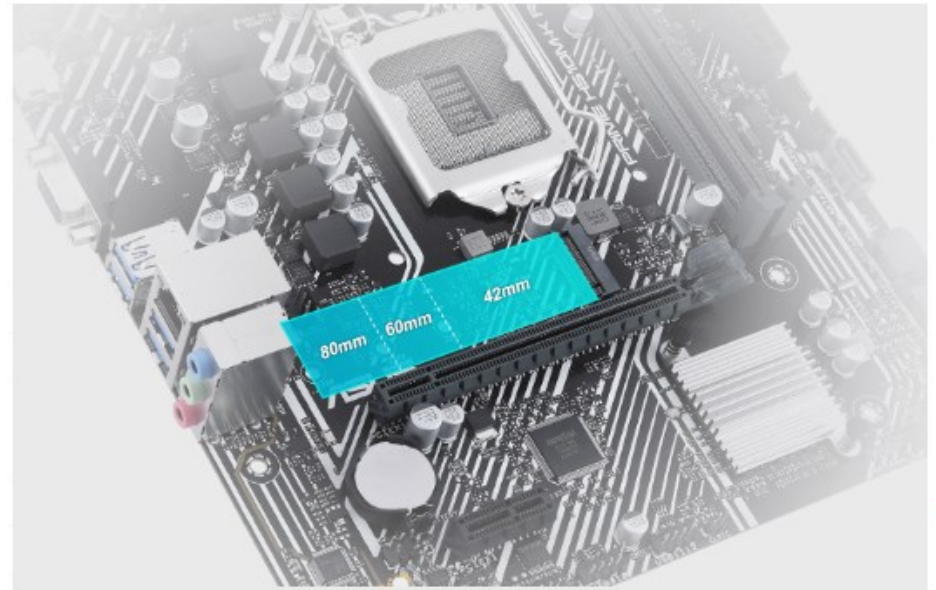
Connectivity

Storage

M.2 Slot (up to 32 Gbps)

M.2 slot supports data-transfer speeds of up to 32 Gbps via x4 PCI Express® 3.0 bandwidth, enabling quicker boot-up and app load times with OS or application drives.

*Actual transmission speeds will be lower than the theoretical maximum speed.



CUSTOMIZATION

Prime H510 series adds the nuanced details that improve every experience, exclusive codecs that provide pristine audio quality let you customize your system to create a uniquely personal look.

Audio

Personalization

DIY-Friendly

Outstanding Audio

Combined onboard features deliver elevated audio

Intelligent design and premium hardware create audio quality unlike anything you've ever experienced.



Model

PRIME H510M-K R2.0

CPU

Intel® Socket LGA1200 for 11th Gen Intel® Core™ Processors & 10th Gen Intel® Core™, Pentium® Gold and Celeron® Processors*
Supports Intel® 14 nm CPU

Supports Intel® Turbo Boost Technology 2.0 and Intel® Turbo Boost Max Technology 3.0**

* Refer to www.asus.com for CPU support list.

** Intel® Turbo Boost Max Technology 3.0 support depends on the CPU types.

Chipset

Intel® H470 Chipset

Memory

2 x DIMM, Max. 64GB, DDR4 3200(OC)/3000(OC)/2933/2800/2666/2400/2133 Non-ECC, Un-buffered Memory*
Dual Channel Memory Architecture

Supports Intel® Extreme Memory Profile (XMP)

* 10th Gen Intel® Core™ i7/i9 processors support 2933/2800/2666/2400/2133 natively, others will run at the maximum transfer rate of DDR4 2666.

* 11th Gen Intel[®] processors support 3200(OC)/3000(OC)/2933/2800/2666/2400/2133.

* Supported memory types, data rate (speed), and number of DRAM modules vary depending on the CPU and memory configuration, for more information please refer to CPU/Memory Support list under the Support tab of product information site or visit <https://www.asus.com/support/>.

Graphics

1 x VGA port

1 x HDMI[™] port**

* Graphics specifications may vary between CPU types.

** Only Intel[®] 11th Gen processors support HDMI[™] 2.1 with max. resolution of 4K@60Hz, others will only support HDMI[™] 1.4 with max. resolution of 4K@30Hz. Please refer to www.intel.com for any updates.

Expansion Slots

Intel[®] 11th & 10th Gen Processors*

1 x PCIe 4.0/3.0 x16 slot

- Intel[®] 11th Gen processors support PCIe 4.0 x16

- Intel[®] 10th Gen processors support PCIe 3.0 x16

Intel[®] H470 Chipset

1 x PCIe 3.0 x1 slot

Storage

Total supports 1 x M.2 slot and 4 x SATA 6Gb/s ports

Intel[®] H470 Chipset

M.2 slot (Key M), type 2242/2260/2280 (supports PCIe 3.0 x4 & SATA modes)

4 x SATA 6Gb/s ports

Back Panel I/O Ports

4 x USB 3.2 Gen 1 ports (4 x Type-A)
2 x USB 2.0 ports (2 x Type-A)
1 x VGA port
1 x HDMI™ port
1 x Realtek 1Gb Ethernet port
3 x Audio jacks
1 x PS/2 Keyboard/Mouse combo port

Internal I/O Connectors

Fan and Cooling related

1 x 4-pin CPU Fan header
1 x 4-pin Chassis Fan header

Power related

1 x 24-pin Main Power connector
1 x 8-pin +12V Power connector

Storage related

1 x M.2 slot (Key M)
4 x SATA 6Gb/s ports

USB

1 x USB 3.2 Gen 1 header supports 2 additional USB 3.2 Gen 1 ports
2 x USB 2.0 headers support 4 additional USB 2.0 ports

Miscellaneous

1 x RGB header
1 x Clear CMOS header
1 x COM Port header
1 x Front Panel Audio header (AAFP)
1 x S/PDIF Out header
1 x Speaker header
1 x SPI TPM header (14-1pin)

1 x 10-1 pin System Panel header

Special Features

ASUS 5X PROTECTION III

- DIGI+ VRM
- LANGuard
- Overvoltage Protection
- SafeSlot Core
- Stainless-Steel Back I/O

ASUS Q-Design

- Q-DIMM
- Q-LED Core
- Q-Slot

ASUS Thermal Solution

- Aluminum heatsink design

ASUS Lighting Control

- RGB header
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Software Features

ASUS Exclusive Software

Armoury Crate

AI Suite 3

- Performance And Power Saving Utility

TurboV EVO

EPU

DIGI+ VRM

Fan Xpert

- EZ update

ASUS CPU-Z

ASUS CPU-Z
Norton 360 Deluxe (60 Days Free Trial)
WinRAR
UEFI BIOS
ASUS EZ DIY
- ASUS CrashFree BIOS 3
- ASUS EZ Flash 3
- ASUS UEFI BIOS EZ Mode

BIOS

128 Mb Flash ROM, UEFI AMI BIOS

Manageability

WOL by PME, PXE

Accessories

Cables
2 x SATA 6Gb/s cables
Miscellaneous
1 x I/O Shield
1 x M.2 Anchor
Documentation
1 x User guide

Operating System

Windows™ 10 64-bit

Form Factor

micro-ATX Form Factor
8.9 inch x 8.0 inch (22.6 cm x 20.3 cm)
