

Asus ROG CROSSHAIR X870E HERO 90MB1IE0-M0UAY0

SKU / Model: 90MB1IE0-M0UAY0

Product overview

ROG CROSSHAIR X870E HERO The AI PC-ready ROG Crosshair X870E Hero offers unyielding power delivery, robust thermal management, hyperspeed connectivity, comprehensive PCIe 5.0 and DDR5 support to unleash the performance of AMD Ryzen? 9000 Series processors. Dark hues predominate across this motherboard, drawing your attention to premium metallic textures, nickel-plated surfaces, sleek contours and a stereoscopic visual effect on the large M.2 and chipset heatsink. This board also features the Polymo Lighting II effect. This upgraded lighting module built into the I/O shroud provides more dynamic RGB illumination for the signature ROG logo. SPECIFICATIONS CPU AMD Socket AM5 for AMD Ryzen? 9000 & 8000 & 7000 Series Desktop Processors* Chipset AMD X870E Memory 4 x DIMM slots, max.192GB, DDR5 Supports up to 8200+MT/s(OC) with Ryzen? 9000 Series Processors, 8600+MT/s(OC) with Ryzen? 8000 Series Processors, 8000+MT/s(OC) with Ryzen? 7000 Series Processors, ECC and Non-ECC, Un-buffered Memory* Dual channel memory architecture Supports AMD Extended Profiles for Overclocking (EXPO?) NitroPath DRAM Technology ASUS Enhanced Memory Profile (AEMP) Graphics 1 x HDMI? port* 2 x USB4? (40Gbps) ports support USB Type-C? display outputs** Graphics specifications may vary between CPU types. Please refer to AMD CPU specifications. VGA resolution support depends on processors' or graphic cards' resolution. *Supports 4K@60Hz as specified in HDMI 2.1. **Supports max. 4K@60Hz as specified in DisplayPort 1.4a Expansion Slots AMD Ryzen? 9000 & 7000 Series Desktop Processors* 2 x PCIe 5.0 x16 slots with Q-Release Slim (supports x16 or x8/x8** or x8/x4/x4 modes***) ** When you use both PCIe16_1 and PCIe16_2, PCIe16_1 and PCIe16_2 will run x8. *** When M.2_3 are enabled, PCIe16_1 will run x8, and ?PCIEX16_2 will run x4. **** When M.2_2 and M.2_3 are enabled simultaneously, PCIe16_2 will be disabled. AMD Ryzen? 8700 & 8600 & 8400 Series Desktop Processors* 2 x PCIe 4.0 x16 slots?with Q-Release Slim (only supports PCIe16_1 & total bandwidth for x8, PCIe16_2 will be disabled) AMD Ryzen? 8500 & 8300 Series Desktop Processors* 2 x PCIe 4.0 x16 slots with Q-Release Slim (only supports PCIe16_1 & total bandwidth for x4, PCIe16_2 will be disabled) * Please check the PCIe bifurcation table on the support site (<https://www.asus.com/support/FAQ/1037507/>). - To ensure compatibility of the device installed, please refer to <https://www.asus.com/support/> for the list of supported Storage Supports 5 x M.2 slots and 1 x SlimSAS connector and 4 x SATA 6Gb/s ports* AMD Ryzen? 9000 & 7000 Series Desktop Processors M.2_1 slot (Key M), type 2242/2260/2280 (supports PCIe 5.0 x4 mode) M.2_2 slot (Key M), type 2242/2260/2280 (supports PCIe 5.0 x4 mode) M.2_3 slot (Key M), type 2242/2260/2280 (supports PCIe 5.0 x4 mode) AMD Ryzen? 8000 Series Desktop Processors M.2_1 slot (Key M), type 2242/2260/2280

(supports PCIe 4.0 x4 mode) M.2_2 slot (Key M), type 2242/2260/2280 (Not supports) M.2_3 slot (Key M), type 2242/2260/2280 (Not supports) AMD X870E Chipset M.2_4 slot (Key M), type 2242/2260/2280 (supports PCIe 4.0 x4 mode) M.2_5 slot (Key M), type 2280 (supports PCIe 4.0 x4 mode) SlimSAS slot supports PCIe 4.0 x4 mode. 4 x SATA 6Gb/s ports ** When M.2_2 and M.2_3 are enabled simultaneously, PCIe16_2 will be disabled. ***When M.2_3 are enabled, PCIe16_1 will run x8, and ?PCIEX16_2 will run x4, M.2_2 will be disabled. AMD RAIDXpert2 Technology Ryzen? 9000 Series Processors: RAID 0/1/5/10 Ryzen? 8000 Series Processors: RAID 0/1 Ryzen? 7000 Series Processors: RAID 0/1/10 Ethernet 1 x Intel? 2.5Gb Ethernet 1 x Realtek 5Gb Ethernet ASUS LANGuard Wireless & Bluetooth Wi-Fi 7* 2x2 Wi-Fi 7 (802.11be) Supports 2.4/5/6GHz frequency band** Supports Wi-Fi 7 320MHz bandwidth, up to 6.5Gbps ?transfer rate. Bluetooth? v5.4*** *Wi-Fi features may vary depending on the operating system For Windows 11, Wi-Fi 7 will require ?24H2 or later version for full functions, Windows 11 21H2/22H2/23H2 only support Wi-Fi 6E. For Windows 10, please note that no driver is available, refer to the Wi-Fi chipset vendor's website for details. ** Wi-Fi 6GHz frequency band and bandwidth regulatory may vary between countries. *** The Bluetooth? version may vary, please refer to the Wi-Fi module manufacturer's website for the latest specifications. USB Rear USB (Total 10 ports) 2 x USB4? (40Gbps) ports (2 x USB Type-C?) 8 x USB 10Gbps ports (6 x Type-A + 2 x USB Type-C?) Front USB (Total 10 ports) 1 x USB 20Gbps (supports USB Type-C? with up to 60W PD/QC4+)* 1 x USB 20Gbps connector (supports USB Type-C?) 2 x USB 5Gbps headers support 4 additional USB 5Gbps ports 2 x USB 2.0 headers support 4 additional USB 2.0 ports USB Type-C? power delivery output: max. 5V/3A *USB Type-C? power delivery output: 5/9/15/20V max. 3A, PPS:3.3?21V max. 3A Audio ROG SupremeFX 7.1 Surround Sound High Definition Audio CODEC ALC4082* - Impedance sense for front and rear headphone outputs - Supports: Jack-detection, Multi-streaming, Front Panel MIC Jack-retasking - High quality 120 dB SNR stereo playback output and 110 dB SNR recording input - Supports up to 32-Bit/384 kHz playback on front panel Audio Features - SupremeFX Shielding Technology - ESS? ES9219 QUAD DAC - Gold-plated audio jacks - Rear optical S/PDIF out port - Premium audio capacitors * A chassis with an HD audio module in the front panel is required to support 7.1 Surround Sound audio output. ** The LINE OUT port on the rear panel does not support spatial audio. If you wish to use spatial audio, make sure to connect your audio output device to the audio jack on the front panel of your chassis or use a USB interface audio device. Back Panel I/O Ports 2 x USB4? (40Gbps) ports (2 x USB Type-C?) 8 x USB 10Gbps ports (6 x Type-A + 2 x USB Type-C?) 1 x HDMI? port 1 x Wi-Fi module 1 x Intel? 2.5Gb Ethernet port 1 x Realtek 5Gb Ethernet port 2 x Gold-plated audio jacks 1 x Optical S/PDIF out port 1 x BIOS FlashBack? button 1 x Clear CMOS button Internal I/O Connectors Fan and Cooling Related 1 x 4-pin CPU Fan header 1 x 4-pin CPU OPT Fan header 1 x 4-pin AIO Pump header 4 x 4-pin Chassis Fan headers 1 x W_PUMP+ header Power Related 1 x 24-pin Main Power connector 2 x 8-pin +12V CPU Power connector 1 x 8-pin PCIe Power connector Storage Related 5 x M.2 slots (Key M) 1 x SlimSAS connector 4 x SATA 6Gb/s ports USB 2 x USB 20Gbps

connectors (support USB Type-C?) 2 x USB 5Gbps headers support 4 additional USB 5Gbps ports
2 x USB 2.0 headers support 4 additional USB 2.0 ports Miscellaneous 3 x Addressable Gen2
headers 1 x Alteration PCIe mode switch 1 x FlexKey button 1 x Front Panel Audio header
(F_AUDIO) 1 x ReTry button 1 x Start button 1 x 10-1 pin System Panel header 1 x Thermal
Sensor header 1 x LN2 Mode jumper Special Features Extreme OC Kit - FlexKey button - LN2
Mode - ReTry button - Start button Extreme Engine Digi+ - 10K Black metallic capacitors -
MicroFine alloy choke ASUS Q-Design - M.2 Q-Latch - M.2 Q-Release - M.2 Q-Slide - Q-Release
Slim (with PCIe SafeSlot) - Q-Antenna - Q-Code - Q-Connector - Q-Dashboard - Q-LED (CPU
[red], DRAM [yellow], VGA [white], Boot Device [yellow green]) - Q-Slot ASUS Thermal
Solution - M.2 heatsink backplate - M.2 heatsink - VRM heatsink design - Metal backplate
ASUS EZ DIY - Backplate - BIOS FlashBack? button - Clear CMOS button - ProCool II -
Pre-mounted I/O shield - SafeSlot - SafeDIMM Aura Sync - Addressable Gen2 header(s) Front
Panel USB 20Gbps with Quick Charge 4+ Support - Support: up to 60W fast charging and USB
Wattage Watcher* - Output: 5/9/15/20V max. 3A, PPS:3.3?21V max. 3A - Compatible with PD3.0
and PPS * To support 60W, please install the power cable to the 8-pin PCIe power connector
or else only 27W will be supported. Software Features ROG Exclusive Software - ROG CPU-Z -
Dolby Atmos - Internet Security (1-year full version) - Polymo Lighting II ASUS Exclusive
Software Armoury Crate - AIDA64 Extreme (1 year full version) - Aura Creator - Aura Sync
-Fan Xpert 4 (with AI Cooling II) - GameFirst - HWiNFO - Power Saving ASUS DriverHub ASUS
GlideX USB Wattage Watcher TurboV Core WinRAR (40 Days Free Trial) Adobe Creative Cloud
(Free Trial) UEFI BIOS AI Overclocking Guide ASUS EZ DIY - ASUS CrashFree BIOS 3 - ASUS EZ
Flash 3 - ASUS UEFI BIOS EZ Mode - ASUS MyHotkey FlexKey BIOS 256Mb Flash ROM, UEFI AMI BIOS
Manageability WOL by PME, PXE Accessories Cables 1 x ARGB RGB extension cable 4 x SATA 6Gb/s
cables Miscellaneous 1 x ASUS WiFi Q-Antenna 1 x Q-connector 2 x M.2 Q-Latch package 3 x M.2
Q-Slide package 5 x M.2 rubber package 1 x ROG stickers 1 x ROG thank you card 1 x ROG
Bottle Opener Installation Media 1 x USB drive with utilities and drivers Documentation 1 x
Quick start guide Operating System Windows? 11 Form Factor ATX Form Factor 12 inch x 9.6
inch (30.5 cm x 24.4 cm)

Important notice

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