ASUS ROG CROSSHAIR X870E APEX AMD X870E Socket AM5 ATX

Brand : ASUS

Product code: 90MB1KR0-M0AAY0

Product name : ROG CROSSHAIR X870E APEX

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ASUS ROG CROSSHAIR X870E APEX AMD X870E Socket AM5 ATX:

AMD X870E (AM5 Socket) ATX motherboard, Advanced AI PC-ready, 18+2+2 power stages, Dynamic OC Switcher, Core Flex, DDR5 slots with AEMP, ROG Memory Fan Kit for DDR5 overclocking, Wi-Fi 7 with ASUS WiFi Q-Antenna, three PCIe® 5.0 M.2 slots onboard, two PCIe 4.0 slots on an ROG DIMM.2 card, PCIe® 5.0 x16 SafeSlots with PCIe® Slot Q-Release Slim and full support for next-gen graphics cards, two USB4® ports, two USB 20Gbps Type-C® front-panel connectors (one with Quick Charge 4+ up to 60W and USB Wattage Watcher), AI Overclocking, AI Cooling II, and AI Networking II

Processor	
Processor manufacturer *	AMD
Processor socket *	Socket AM5
Compatible processor series *	AMD Ryzen 7000 Series, AMD Ryzen 8000 Series, AMD Ryzen 9000 Series
Supported processor sockets	Socket AM5

Memory	
Supported memory types *	DDR5-SDRAM
Number of memory slots *	2
Memory slots type	DIMM
Memory channels	Dual-channel
ECC compatibility	ECC & Non-ECC
Maximum internal memory *	128 GB
Unbuffered memory	✔

Storage controllers	
Supported storage drive types	HDD & SSD
Supported storage drive interfaces *	M.2, SATA III
Number of HDDs supported	4
Number of storage drives supported	9
RAID support	✔
RAID levels	0, 1, 5, 10

Graphics	
Parallel processing technology support *	Not supported
On-board graphics card	✘

Internal I/O	
USB 2.0 connectors *	2

Expansion slots	
PCI Express x1 (Gen 3.x) slots	1
PCI Express x4 (Gen 4.x) slots	1
PCI Express x16 (Gen 4.x) slots	2
PCI Express x16 (Gen 5.x) slots	2
Number of M.2 (M) slots	5
1st M.2 largest key size	2280
1st M.2 highest PCI Express generation	5.0
2nd M.2 largest key size	2280
2nd M.2 highest PCI Express generation	5.0
3rd M.2 largest key size	2280
3rd M.2 highest PCI Express generation	5.0
4th M.2 largest key size	22110
4th M.2 highest PCI Express generation	4.0
5th M.2 largest key size	22110
5th M.2 highest PCI Express generation	4.0

BIOS	
BIOS type *	UEFI AMI
BIOS memory size	512 Mbit

Packaging data	
Package width	370 mm
Package depth	312 mm
Package height	108 mm
Package weight	4.16 kg

Internal I/O	
USB 3.2 Gen 1 (3.1 Gen 1) connectors *	2
USB 3.2 Gen 2x2 connectors	2
Number of SATA III connectors *	4
Front panel audio connector	✔
Front panel connector	✔
ATX Power connector (24-pin)	✔
CPU fan connector	✔
Number of chassis fan connectors	2
EPS power connector (8-pin)	✔
12V power connector	✔
RGB LED pin header	✔
Number of RGB LED pin headers	3

Rear panel I/O ports	
USB 3.2 Gen 1 (3.1 Gen 1) Type-A ports quantity *	2
USB 3.2 Gen 2 (3.1 Gen 2) Type-A ports quantity *	5
USB 3.2 Gen 2 (3.1 Gen 2) Type-C ports quantity *	1
USB4 Gen 3x2 ports quantity	2
Ethernet LAN (RJ-45) ports *	1
PS/2 ports quantity	1
S/PDIF out port	✔
WiFi-AP antenna jack	1

Network	
Ethernet LAN	✔
Ethernet interface type	5 Gigabit Ethernet
Wi-Fi *	✔
Top Wi-Fi standard	Wi-Fi 7 (802.11be)
Wi-Fi standards	Wi-Fi 7 (802.11be)
Bluetooth	✔
Bluetooth version	5.4

Features	
Motherboard chipset *	AMD X870E
Audio output channels *	7.1 channels
Product colour	Black
Component for *	PC
Motherboard form factor *	ATX
Motherboard chipset family *	AMD
Windows operating systems supported	Windows 11

Weight & dimensions	
Width	305 mm
Depth	244 mm

Packaging content	
Cables included	SATA
Antenna included	✔
Screws included	✔
Drivers included	✔

Other features	
Audio output	"ROG SupremeFX 7.1 Surround Sound High Definition Audio CODEC ALC4080* - 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 - Savitech SV3H712 AMP - Gold-plated audio jacks - Rear optical S/PDIF out port - Premium audio capacitors - Audio cover * 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.
Special features	**Supports 5 x M.2 slots 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** DIMM.2_1 slot (Key M), type 2230/2242/2260/2280/22110 (supports PCIe 4.0 x4 mode) DIMM.2_2 slot (Key M), type 2230/2242/2260/2280/22110 (supports PCIe 4.0 x4 mode) 4 x SATA 6Gb/s ports * Specifications vary by CPU types. **When M.2_2 is enabled, but M.2_3 is not in use, PCIEX16_1 will run in x8 mode and PCIEX16_2 will be disabled. **When M.2_3 is enabled, but M.2_2 is not in use, PCIEX16_1 will run in x8 mode and PCIEX16_2 will run in x4 mode. **When both M.2_2 and M.2_3 are enabled, PCIEX16_1 will run in x8 mode and PCIEX16_2 will be disabled.

Other features	
Other features	2 x DIMM slots, max. 128GB, DDR5 Supports up to 8200+MT/s(OC) with Ryzen™ 9000 Series Processors, 9600+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™) ASUS Enhanced Memory Profile (AEMP) * 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/download-center/. * Non-ECC, un-buffered DDR5 memory supports On-Die ECC function.
Graphics output	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 max. 4K@60Hz as specified in DisplayPort 1.4a

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