



Gigabyte X870E AORUS PRO AMD AM5 Socket Motherboard, ATX, 4x DDR5 Slots, 4x M.2 Sockets, 3x USB-C Port, Fitted I/O Shield, 2.5GbE LAN, Wi-Fi 7, 2x HDMI Port / 2x USB-C (USB4)

SPECIFICATION:

CPU

AMD Socket AM5, support for:

AMD Ryzen 9000 Series Processors/AMD Ryzen 8000 Series Processors/AMD Ryzen 7000 Series Processors

(Go to GIGABYTE's website for the latest CPU support list.)

Chipset

AMD X870E

Memory

Support for DDR5 8200(OC) / 8000(OC) / 7800(OC) / 7600(OC) / 7200(OC) / 7000(OC) / 6800(OC) / 6666(OC) / 6600(OC) / 6400(OC) / 6200(OC) / 6000(OC) / 5600(OC) / 5200 / 4800 / 4400 MT/s memory modules

4 x DDR5 DIMM sockets supporting up to 256 GB (64 GB single DIMM capacity) of system memory

Dual channel memory architecture

Support for non-ECC Un-buffered DIMM 1Rx8/2Rx8/1Rx16 memory modules

Support for AMD EXtended Profiles for Overclocking (AMD EXPO™) and Extreme Memory Profile (XMP) memory modules

(The CPU and memory configuration may affect the supported memory types, data rate (speed), and number of DRAM modules, please refer to "Memory Support List" on GIGABYTE's website for more information.)

Onboard Graphics

Integrated Graphics Processor with AMD Radeon Graphics support+ASMedia USB4 Controller:

2 x USB4 USB Type-C ports, supporting USB4 and DisplayPort video outputs and a maximum resolution of 3840x2160@240 Hz

Support for DisplayPort 1.4 version and HDR.

Integrated Graphics Processor with AMD Radeon Graphics support:

1x HDMI port, supporting a maximum resolution of 4096x2160@60 Hz

Support for HDMI 2.1 version, HDCP 2.3, and HDR.

Support for native HDMI 2.1 TMDS compatible ports.

1 x front HDMI port, supporting a maximum resolution of 1920x1080@30 Hz

Support for HDMI 1.4 version

(Graphics specifications may vary depending on CPU support.)

Audio

Realtek ALC1220 CODEC

The back panel line out jack supports DSD audio.

High Definition Audio 2/4/5.1/7.1-channel

You can change the functionality of an audio jack using the audio software. To configure 7.1-channel audio, access the audio software for audio settings.

Support for S/PDIF Out

LAN

Realtek 2.5GbE LAN chip (2.5 Gbps/1 Gbps/100 Mbps)

Wireless Communication module

Qualcomm Wi-Fi 7 QCNCM865

802.11a, b, g, n, ac, ax, be, supporting 2.4/5/6 GHz carrier frequency bands

BLUETOOTH 5.3

Support for 11be 320MHz wireless standard

(Actual data rate may vary depending on environment and equipment.)

Wi-Fi 7 features require Windows 11 SV3 to function properly. (There is no support driver for Windows 10.)

Wi-Fi 7 channels on 6 GHz band availability depends on individual country's regulations.

Expansion Slots

1x PCI Express x16 slot (PCIEX16), integrated in the CPU:

AMD Ryzen 9000/7000 Series Processors support PCIe 5.0 x16 mode

The M2B_CPU and M2C_CPU connectors share bandwidth with the PCIEX16 slot.

When the M2B_CPU or M2C_CPU connector is populated, the PCIEX16 slot operates at up to x8 mode.

AMD Ryzen 8000 Series-Phoenix 1 Processors support PCIe 4.0 x8 mode

AMD Ryzen 8000 Series-Phoenix 2 Processors support PCIe 4.0 x4 mode

(The PCIEX16 slot can only support a graphics card or an NVMe SSD. If only one graphics card is to be installed, be sure to install it in the PCIEX16 slot.)

Chipset:

1 x PCI Express x16 slot, supporting PCIe 4.0 and running at x4 (PCIEX4_1)

1 x PCI Express x16 slot, supporting PCIe 3.0 and running at x4 (PCIEX4_2)

Storage Interface

1 x M.2 connector (M2A_CPU), integrated in the CPU, supporting Socket 3, M key, type 25110/22110/2580/2280 SSDs:

AMD Ryzen 9000/7000 Series Processors support PCIe 5.0 x4/x2 SSDs

AMD Ryzen 8000 Series-Phoenix 1 Processors support PCIe 4.0 x4/x2 SSDs

AMD Ryzen 8000 Series-Phoenix 2 Processors support PCIe 4.0 x4/x2 SSDs

2 x M.2 connectors (M2B_CPU, M2C_CPU), integrated in the CPU, supporting Socket 3, M key, type 22110/2280 SSDs:

AMD Ryzen 9000/7000 Series Processors support PCIe 5.0 x4/x2 SSDs

The M2B_CPU and M2C_CPU connectors will become unavailable when using the AMD Ryzen 8000 Series-Phoenix 1/Phoenix 2 Processors.

1 x M.2 connector (M2D_SB), integrated in the Chipset, supporting Socket 3, M key, type 22110/2280 PCIe 4.0 x4/x2 SSDs

4 x SATA 6Gb/s connectors

RAID 0, RAID 1, RAID 5, and RAID 10 support for NVMe SSD storage devices

RAID 5 is only available on AMD Ryzen 9000 Series Processors.

RAID 0, RAID 1, and RAID 10 support for SATA storage devices

USB

CPU+ASMedia USB4 controller:

2 x USB4 USB Type-C ports on the back panel

CPU:

1 x USB 3.2 Gen 2 Type-A port (red) on the back panel

Chipset:

1 x USB Type-C port with USB 3.2 Gen 2x2 support, available through the internal USB header

2 x USB 3.2 Gen 2 Type-A ports (red) on the back panel

8 x USB 3.2 Gen 1 ports (4 ports on the back panel, 4 ports available through the internal USB headers)

6 x USB 2.0/1.1 ports (2 ports on the back panel, 4 ports available through the internal USB headers)

Internal I/O Connectors

1 x 24-pin ATX main power connector
2 x 8-pin ATX 12V power connectors
1 x CPU fan header
1 x CPU fan/water cooling pump header
4 x system fan headers
2 x system fan/water cooling pump headers
3 x addressable RGB Gen2 LED strip headers
1 x RGB LED strip header
4 x SATA 6Gb/s connectors
4 x M.2 Socket 3 connectors
1 x front panel header
1 x front panel audio header
1 x USB Type-C® header, with USB 3.2 Gen 2x2 support
2 x USB 3.2 Gen 1 headers
2 x USB 2.0/1.1 headers
1 x noise detection header
1 x HDMI port (Note)
1 x Trusted Platform Module header (For the GC-TPM2.0 SPI/GC-TPM2.0 SPI2.0/GC-TPM2.0 SPI V2 module only)
1 x power button
1 x reset button
2 x temperature sensor headers
1 x reset jumper
1 x Clear CMOS jumper

Back Panel Connectors

1 x Q-Flash Plus button
2 x USB 2.0/1.1 ports
1 x HDMI port (Note)
4 x USB 3.2 Gen 1 ports
2 x USB4 USB Type-C port (DisplayPort (Note))
3 x USB 3.2 Gen 2 Type-A ports (red)
1 x RJ-45 port
2 x antenna connectors (2T2R)
1 x optical S/PDIF Out connector
2 x audio jacks

I/O Controller

iTE I/O Controller Chip

H/W Monitoring

Voltage detection

Temperature detection

Fan speed detection

Water cooling flow rate detection

Fan fail warning

Fan speed control

Whether the fan (pump) speed control function is supported will depend on the fan (pump) you install.

Noise detection

BIOS

1 x 256 Mbit flash

Use of licensed AMI UEFI BIOS

PnP 1.0a, DMI 2.7, WfM 2.0, SM BIOS 2.7, ACPI 5.0

Unique Features

Support for GIGABYTE Control Center (GCC)

Available applications in GCC may vary by motherboard model. Supported functions of each application may also vary depending on motherboard specifications.

Support for Q-Flash

Support for Q-Flash Plus

Support for Smart Backup

Bundled Software

Norton Internet Security (OEM version)

LAN bandwidth management software

Operating System

Support for Windows 11 64-bit

Form Factor

ATX Form Factor; 30.5cm x 24.4cm