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# Z790 AORUS ELITE AX ICE

Z790 AORUS ELITE AX ICE 1.1 / Z790 AORUS ELITE AX ICE 1.0

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## Z790 AORUS ELITE AX ICE 1.1

## Z790 AORUS ELITE AX ICE 1.0

### CPU

1. LGA1700 socket: Support for the 14th, 13th, and 12th Generation Intel® Core™, Pentium® Gold and Celeron® Processors
2. L3 cache varies with CPU

(Please refer "CPU Support List" for more information.)

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### Chipset

1. Intel® Z790 Express Chipset

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### Memória

1. Support for DDR5 7600(O.C.) /7400(O.C.) /7200(O.C.) /7000(O.C.) /6800(O.C.) /6600(O.C.) / 6400(O.C.) / 6200(O.C.) / 6000(O.C.) / 5800(O.C.) / 5600(O.C.) / 5400(O.C.) / 5200(O.C.) / 4800 / 4000 memory modules
2. 4 x DDR5 DIMM sockets supporting up to 192 GB (48 GB single DIMM capacity) of system memory
3. Dual channel memory architecture
4. Support for ECC Un-buffered DIMM 1Rx8/2Rx8 memory modules (operate in non-ECC mode)
5. Support for non-ECC Un-buffered DIMM 1Rx8/2Rx8/1Rx16 memory modules
6. Support for 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" for more information.)

Integrated Graphics Processor-Intel® HD Graphics support:

1. 1 x HDMI port, supporting a maximum resolution of 4096x2160@60 Hz  
\* Support for HDMI 2.1 version and HDCP 2.3.  
\*\* Support native HDMI 2.1 TMDS compatible ports.
2. 1 x DisplayPort, supporting a maximum resolution of 4096x2304@60  
\* Support for DisplayPort 1.2 version and HDCP 2.3

(Graphics specifications may vary depending on CPU support.)

### Gráficos Onboard

1. Support for DDR5 7600(O.C.) /7400(O.C.) /7200(O.C.) /7000(O.C.) /6800(O.C.) /6600(O.C.) / 6400(O.C.) / 6200(O.C.) / 6000(O.C.) / 5800(O.C.) / 5600(O.C.) / 5400(O.C.) / 5200(O.C.) / 4800 / 4000 memory modules
2. 4 x DDR5 DIMM sockets supporting up to 192 GB (48 GB single DIMM capacity) of system memory
3. Dual channel memory architecture
4. Support for ECC Un-buffered DIMM 1Rx8/2Rx8 memory modules (operate in non-ECC mode)
5. Support for non-ECC Un-buffered DIMM 1Rx8/2Rx8/1Rx16 memory modules
6. Support for 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" for more information.)

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2. 1 x DisplayPort, supporting a maximum resolution of 4096x2304@60  
\* Support for DisplayPort 1.2 version and HDCP 2.3

(Graphics specifications may vary depending on CPU support.)

### Áudio

1. Realtek® Audio CODEC
2. High Definition Audio
3. 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.
4. Support for S/PDIF Out

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4. Support for S/PDIF Out

### LAN

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

Intel® Wi-Fi 6E AX211 (PCB rev. 1.0)

1. WIFI a, b, g, n, ac, ax, supporting 2.4/5/6 GHz carrier frequency bands

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**Wireless Communication module**

- 2. BLUETOOTH 5.3
- 3. Support for 11ax 160MHz wireless standard and up to 2.4 Gbps data rate

Realtek® Wi-Fi 6E RTL8852CE (PCB rev. 1.1)

- 1. WIFI a, b, g, n, ac, ax, supporting 2.4/5/6 GHz carrier frequency bands
- 2. BLUETOOTH 5.3
- 3. Support for 11ax 160MHz wireless standard and up to 2.4 Gbps data rate

\* Actual data rate may vary depending on environment and equipment.

CPU:

- 1. 1 x PCI Express x16 slot, supporting PCIe 5.0 and running at x16 (PCIEX16)  
\* For optimum performance, if only one PCI Express graphics card is to be installed, be sure to install it in the PCIEX16 slot.

**Slots de Expansão**

Chipset:

- 1. 1 x PCI Express x16 slot, supporting PCIe 4.0 and running at x4 (PCIEX4\_1)
- 2. 1 x PCI Express x16 slot, supporting PCIe 3.0 and running at x4 (PCIEX4\_2)

CPU:

- 1. 1 x M.2 connector (Socket 3, M key, type 22110/2280 PCIe 4.0 x4/x2 SSD support) (M2A\_CPU)

Chipset:

- 1. 2 x M.2 connectors (Socket 3, M key, type 22110/2280 PCIe 4.0 x4/x2 SSD support) (M2P\_SB, M2Q\_SB)
- 2. 1 x M.2 connector (Socket 3, M key, type 22110/2280 SATA and PCIe 4.0 x4 SSD support) (M2M\_SB)
- 3. 6 x SATA 6Gb/s connectors

**Interface de Armazenamento**

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

RAID 0, RAID 1, RAID 5, and RAID 10 support for SATA storage devices

\* Refer to "2-8 Internal Connectors," for the installation notices for the M.2 and SATA connectors.

Chipset:

- 1. 1 x USB Type-C® port on the back panel, with USB 3.2 Gen 2x2 support
- 2. 1 x USB Type-C® port with USB 3.2 Gen 2 support, available through the internal USB header
- 3. 2 x USB 3.2 Gen 2 Type-A ports (red) on the back panel
- 4. 5 x USB 3.2 Gen 1 ports (3 ports on the back panel, 2 ports available through the internal USB header)

**USB**

Chipset+2 USB 2.0 Hubs:

- 1. 8 x USB 2.0/1.1 ports (4 ports on the back panel, 4 ports

- 2. BLUETOOTH 5.3
- 3. Support for 11ax 160MHz wireless standard and up to 2.4 Gbps data rate

Realtek® Wi-Fi 6E RTL8852CE (PCB rev. 1.1)

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- 2. BLUETOOTH 5.3
- 3. Support for 11ax 160MHz wireless standard and up to 2.4 Gbps data rate

\* Actual data rate may vary depending on environment and equipment.

CPU:

- 1. 1 x PCI Express x16 slot, supporting PCIe 5.0 and running at x16 (PCIEX16)  
\* For optimum performance, if only one PCI Express graphics card is to be installed, be sure to install it in the PCIEX16 slot.

Chipset:

- 1. 1 x PCI Express x16 slot, supporting PCIe 4.0 and running at x4 (PCIEX4\_1)
- 2. 1 x PCI Express x16 slot, supporting PCIe 3.0 and running at x4 (PCIEX4\_2)

CPU:

- 1. 1 x M.2 connector (Socket 3, M key, type 22110/2280 PCIe 4.0 x4/x2 SSD support) (M2A\_CPU)

Chipset:

- 1. 2 x M.2 connectors (Socket 3, M key, type 22110/2280 PCIe 4.0 x4/x2 SSD support) (M2P\_SB, M2Q\_SB)
- 2. 1 x M.2 connector (Socket 3, M key, type 22110/2280 SATA and PCIe 4.0 x4 SSD support) (M2M\_SB)
- 3. 6 x SATA 6Gb/s connectors

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

RAID 0, RAID 1, RAID 5, and RAID 10 support for SATA storage devices

\* Refer to "2-8 Internal Connectors," for the installation notices for the M.2 and SATA connectors.

Chipset:

- 1. 1 x USB Type-C® port on the back panel, with USB 3.2 Gen 2x2 support
- 2. 1 x USB Type-C® port with USB 3.2 Gen 2 support, available through the internal USB header
- 3. 2 x USB 3.2 Gen 2 Type-A ports (red) on the back panel
- 4. 5 x USB 3.2 Gen 1 ports (3 ports on the back panel, 2 ports available through the internal USB header)

Chipset+2 USB 2.0 Hubs:

- 1. 8 x USB 2.0/1.1 ports (4 ports on the back panel, 4 ports



available through the internal USB headers)

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#### Conectores Internos I/O

1. 1 x 24-pin ATX main power connector
2. 2 x 8-pin ATX 12V power connectors
3. 1 x CPU fan header
4. 1 x water cooling CPU fan header
5. 3 x system fan headers
6. 1 x system fan/water cooling pump header
7. 2 x addressable LED strip headers
8. 2 x RGB LED strip headers
9. 4 x M.2 Socket 3 connectors
10. 6 x SATA 6Gb/s connectors
11. 1 x front panel header
12. 1 x front panel audio header
13. 1 x USB Type-C® header, with USB 3.2 Gen 2 support
14. 1 x USB 3.2 Gen 1 header
15. 2 x USB 2.0/1.1 headers
16. 2 x Thunderbolt™ add-in card connectors
17. 1 x Trusted Platform Module header (For the GC-TPM2.0 SPI/GC-TPM2.0 SPI 2.0 module only)
18. 1 x reset button
19. 1 x Q-Flash Plus button
20. 1 x Clear CMOS button
21. 1 x reset jumper
22. 1 x Clear CMOS jumper

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5. 3 x system fan headers
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7. 2 x addressable LED strip headers
8. 2 x RGB LED strip headers
9. 4 x M.2 Socket 3 connectors
10. 6 x SATA 6Gb/s connectors
11. 1 x front panel header
12. 1 x front panel audio header
13. 1 x USB Type-C® header, with USB 3.2 Gen 2 support
14. 1 x USB 3.2 Gen 1 header
15. 2 x USB 2.0/1.1 headers
16. 2 x Thunderbolt™ add-in card connectors
17. 1 x Trusted Platform Module header (For the GC-TPM2.0 SPI/GC-TPM2.0 SPI 2.0 module only)
18. 1 x reset button
19. 1 x Q-Flash Plus button
20. 1 x Clear CMOS button
21. 1 x reset jumper
22. 1 x Clear CMOS jumper

#### Conectores Painel Traseiro

1. 1 x USB Type-C® port, with USB 3.2 Gen 2x2 support
2. 2 x USB 3.2 Gen 2 Type-A ports (red)
3. 3 x USB 3.2 Gen 1 ports
4. 4 x USB 2.0/1.1 ports
5. 2 x SMA antenna connectors (2T2R)
6. 1 x HDMI 2.0 port
7. 1 x DisplayPort
8. 1 x RJ-45 port
9. 1 x optical S/PDIF Out connector
10. 2 x audio jacks

1. 1 x USB Type-C® port, with USB 3.2 Gen 2x2 support
2. 2 x USB 3.2 Gen 2 Type-A ports (red)
3. 3 x USB 3.2 Gen 1 ports
4. 4 x USB 2.0/1.1 ports
5. 2 x SMA antenna connectors (2T2R)
6. 1 x HDMI 2.0 port
7. 1 x DisplayPort
8. 1 x RJ-45 port
9. 1 x optical S/PDIF Out connector
10. 2 x audio jacks

#### Controlador I/O

1. iTE® I/O Controller Chip

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#### Monitoramento H/W

1. Voltage detection
  2. Temperature detection
  3. Fan speed detection
  4. Water cooling flow rate detection
  5. Fan fail warning
  6. Fan speed control
- \* Whether the fan (pump) speed control function is supported will depend on the fan (pump) you install.

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  4. Water cooling flow rate detection
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- \* Whether the fan (pump) speed control function is supported will depend on the fan (pump) you install.

#### BIOS

1. 1 x 256 Mbit flash
2. Use of licensed AMI UEFI BIOS
3. PnP 1.0a, DMI 2.7, WfM 2.0, SM BIOS 2.7, ACPI 5.0

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2. Use of licensed AMI UEFI BIOS
3. PnP 1.0a, DMI 2.7, WfM 2.0, SM BIOS 2.7, ACPI 5.0

1. Support for GIGABYTE Control Center (GCC)

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**Características Exclusivas**

- \* Available applications in GCC may vary by motherboard model. Supported functions of each application may also vary depending on motherboard specifications.
2. Support for Q-Flash
  3. Support for Q-Flash Plus
  4. Support for Smart Backup

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2. Support for Q-Flash
  3. Support for Q-Flash Plus
  4. Support for Smart Backup

**Pacote de Software**

1. Norton® Internet Security (OEM version)
2. LAN bandwidth management software

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**Sistema Operacional**

1. Support for Windows 11 64-bit
2. Support for Windows 10 64-bit

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2. Support for Windows 10 64-bit

**Form Factor**

1. ATX Form Factor; 30.5cm x 24.4cm

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- \* Os termos e expressões "HDMI", "HDMI High-Definition Multimedia Interface" e "Trade dress da HDMI", e os Logotipos da HDMI são marcas comerciais ou marcas registradas da HDMI Licensing Administrator, Inc.
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- \* Todas as marcas e logotipos são de propriedade de suas respectivas proprietárias.
- \* Devido a arquitetura padrão PC, uma quantia de memória é reservada para uso do sistema, portanto o tamanho da memória é menor do que a quantia exibida

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