## 2-2 Product Specifications

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| CPU | ◆ | LGA1700 socket: Support for the 13th and 12th Generation Intel® Core™, Pentium® Gold and Celeron® Processors<br>(Go to GIGABYTE's website for the latest CPU support list.) |
| | ◆ | L3 cache varies with CPU |
| Chipset | ◆ | Intel® Z790 Express Chipset |
| Memory | ◆ | Support for DDR5 5600/5200/4800/4400 MT/s memory modules |
| | ◆ | 4 x DDR5 DIMM sockets supporting up to 128 GB (32 GB single DIMM capacity) of system memory |
| | ◆ | Dual channel memory architecture |
| | ◆ | Support for ECC Un-buffered DIMM 1Rx8/2Rx8 memory modules (operate in non-ECC mode) |
| | ◆ | Support for non-ECC Un-buffered DIMM 1Rx8/2Rx8/1Rx16 memory modules |
| | ◆ | Support for Extreme Memory Profile (XMP) memory modules<br>(Go to GIGABYTE's website for the latest supported memory speeds and memory modules.) |
| Onboard Graphics | ◆ | Integrated Graphics Processor-Intel® HD Graphics support:<br>-  1 x DisplayPort, supporting a maximum resolution of 4096x2304@60 Hz<br>    * Support for DisplayPort 1.2 version and HDCP 2.3<br>-  1 x HDMI port, supporting a maximum resolution of 4096x2160@60 Hz<br>    * Support for HDMI 2.0 version and HDCP 2.3.<br>(Graphics specifications may vary depending on CPU support.) |
| Audio | ◆ | Realtek® Audio CODEC |
| | ◆ | High Definition Audio |
| | ◆ | 2/4/5.1/7.1-channel<br>    * 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 Module① | ◆ | Intel® Wi-Fi 6E AX210<br>-  WIFI a, b, g, n, ac, ax, supporting 2.4/5/6 GHz carrier frequency bands<br>-  BLUETOOTH 5.3<br>-  Support for 11ax 160MHz wireless standard and up to 2.4 Gbps data rate<br>(Actual data rate may vary depending on environment and equipment.) |
| Expansion Slots | ◆ | CPU:<br>-  1 x PCI Express x16 slot, supporting PCIe 5.0 and running at x16 (PCIEX16)<br>    * For optimum performance, if only one PCI Express graphics card is to be installed, be sure to install it in the PCIEX16 slot. |
| | ◆ | Chipset:<br>-  1 x PCI Express x16 slots, supporting PCIe 4.0 and running at x4 (PCIEX4_1)<br>-  1 x PCI Express x16 slots, supporting PCIe 3.0 and running at x4 (PCIEX4_2) |

① Only for Z790 GAMING X AX.

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| Storage Interface | ◆ | CPU:<br>- 1 x M.2 connector (Socket 3, M key, type 22110/2280 PCIe 4.0 x4/x2 SSD support) (M2A_CPU) |
| | ◆ | Chipset:<br>- 2 x M.2 connectors (Socket 3, M key, type 22110/2280 PCIe 4.0 x4/x2 SSD support) (M2P_SB, M2Q_SB)<br>- 1 x M.2 connector (Socket 3, M key, type 22110/2280 SATA and PCIe 4.0 x4/x2 SSD support) (M2M_SB)<br>- 6 x SATA 6Gb/s connectors<br>   * Refer to "2-8 Internal Connectors," for the installation notices for the M.2 and SATA 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 |
| USB | ◆ | Chipset:<br>- 1 x USB Type-C® port on the back panel, with USB 3.2 Gen 2x2 support<br>- 1 x USB Type-C® port with USB 3.2 Gen 2 support, available through the internal USB header<br>- 2 x USB 3.2 Gen 2 Type-A ports (red) on the back panel<br>- 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:<br>- 8 x USB 2.0/1.1 ports (4 ports on the back panel, 4 ports available through the internal USB headers) |
| Internal Connectors | ◆ | 1 x 24-pin ATX main power connector |
| | ◆ | 2 x 8-pin ATX 12V power connectors |
| | ◆ | 1 x CPU fan header |
| | ◆ | 1 x water cooling CPU fan header |
| | ◆ | 3 x system fan headers |
| | ◆ | 1 x system fan/water cooling pump header |
| | ◆ | 2 x addressable LED strip headers |
| | ◆ | 2 x RGB LED strip headers |
| | ◆ | 4 x M.2 Socket 3 connectors |
| | ◆ | 6 x SATA 6Gb/s connectors |
| | ◆ | 1 x front panel header |
| | ◆ | 1 x front panel audio header |
| | ◆ | 1 x USB Type-C® header, with USB 3.2 Gen 2 support |
| | ◆ | 1 x USB 3.2 Gen 1 header |
| | ◆ | 2 x USB 2.0/1.1 headers |
| | ◆ | 2 x Thunderbolt™ add-in card connectors |
| | ◆ | 1 x Trusted Platform Module header (For the GC-TPM2.0 SPI/GC-TPM2.0 SPI 2.0 module only) |
| | ◆ | 1 x Q-Flash Plus button |
| | ◆ | 1 x reset button |
| | ◆ | 1 x reset jumper |
| | ◆ | 1 x Clear CMOS jumper |

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| Back Panel Connectors | ◆ | 4 x USB 2.0/1.1 ports |
| | ◆ | 2 x SMA antenna connectors (2T2R) ① |
| | ◆ | 2 x USB 3.2 Gen 2 Type-A ports (red) |
| | ◆ | 1 x DisplayPort |
| | ◆ | 1 x HDMI 2.0 port |
| | ◆ | 3 x USB 3.2 Gen 1 ports |
| | ◆ | 1 x USB Type-C® port, with USB 3.2 Gen 2x2 support |
| | ◆ | 1 x RJ-45 port |
| | ◆ | 1 x optical S/PDIF Out connector |
| | ◆ | 2 x audio jacks |
| I/O Controller | ◆ | iTE® I/O Controller Chip |
| Hardware Monitor | ◆ | 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. |
| 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 |
| | ◆ | Support for Windows 10 64-bit |
| Form Factor | ◆ | ATX Form Factor; 30.5cm x 24.4cm |

* GIGABYTE reserves the right to make any changes to the product specifications and product-related information without prior notice.

① Only for Z790 GAMING X AX.

☞ Please visit GIGABYTE's website for support lists of CPU, memory modules, SSDs, and M.2 devices.
https://www.gigabyte.com/Motherboard/Z790-GAMING-X-AX-rev-10?m=dl#support-dl
https://www.gigabyte.com/Motherboard/Z790-GAMING-X-rev-10?m=dl#support-dl

☞ Please visit the **SERVICE/SUPPORT\Utility** page on GIGABYTE's website to download the latest version of apps.
https://www.gigabyte.com/Support/Utility/Motherboard?m=ut