

2-2 Product Specifications

	CPU	<ul style="list-style-type: none"> ◆ LGA1700 socket: Support for 12th Generation Intel® Core™, Pentium® Gold and Celeron® Processors (Go to GIGABYTE's website for the latest CPU support list.) ◆ L3 cache varies with CPU
	Chipset	<ul style="list-style-type: none"> ◆ Intel® Z690 Express Chipset
	Memory	<ul style="list-style-type: none"> ◆ Support for DDR5 4800/4000 MHz memory modules^① ◆ Support for DDR4 3200/3000/2933/2666/2400/2133 MHz memory modules^② ◆ 4 x DDR 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 (Go to GIGABYTE's website for the latest supported memory speeds and memory modules.)
	Onboard Graphics	<ul style="list-style-type: none"> ◆ Integrated Graphics Processor-Intel® HD Graphics support: <ul style="list-style-type: none"> - 1 x USB Type-C® port, supporting USB Type-C® and DisplayPort video outputs and a maximum resolution of 4096x2304@60 Hz <ul style="list-style-type: none"> * Support for drawing tablets and 20V@3A of power delivery. * Support for DisplayPort 1.2 version and HDCP 2.3 - 1 x HDMI port, supporting a maximum resolution of 4096x2160@30 Hz <ul style="list-style-type: none"> * Support for HDMI 1.4 version and HDCP 2.3. <p>(Graphics specifications may vary depending on CPU or graphics card support.)</p>
	Audio	<ul style="list-style-type: none"> ◆ Realtek® ALC4080 CODEC ◆ High Definition Audio ◆ 2-channel analog output ◆ Support for S/PDIF Out <ul style="list-style-type: none"> - 7.1-channel digital signals <ul style="list-style-type: none"> * Actual output of digital signals may vary depending on the playback content and software used, and an external DAC is required.
	LAN	<ul style="list-style-type: none"> ◆ Intel® 2.5GbE LAN chip (2.5 Gbps/1 Gbps/100 Mbps)
	Wireless Communication Module	<ul style="list-style-type: none"> ◆ Intel® Wi-Fi 6 AX201 (For PCB rev. 1.0) <ul style="list-style-type: none"> - WIFI a, b, g, n, ac, ax, supporting 2.4/5 GHz Dual-Band - BLUETOOTH 5.2 - Support for 11ax 160MHz wireless standard and up to 2.4 Gbps data rate ◆ Intel® Wi-Fi 6 AX200 (For PCB rev. 1.1) <ul style="list-style-type: none"> - WIFI a, b, g, n, ac, ax, supporting 2.4/5 GHz Dual-Band - BLUETOOTH 5.2 - Support for 11ax 160MHz wireless standard and up to 2.4 Gbps data rate ◆ Intel® Wi-Fi 6E AX210 (For PCB rev. 1.2) <ul style="list-style-type: none"> - WIFI a, b, g, n, ac, ax, supporting 2.4/5/6 GHz carrier frequency bands - BLUETOOTH 5.2 - Support for 11ax 160MHz wireless standard and up to 2.4 Gbps data rate <p>(Actual data rate may vary depending on environment and equipment.)</p>

① Only for Z690 AERO G.

② Only for Z690 AERO G DDR4.

	<p>Expansion Slots</p> <ul style="list-style-type: none"> ◆ 1 x PCI Express x16 slot, running at x16 (PCIEX16) <ul style="list-style-type: none"> * For optimum performance, if only one PCI Express graphics card is to be installed, be sure to install it in the PCIEX16 slot. (The PCIEX16 slot conforms to PCI Express 5.0 standard.) ◆ 2 x PCI Express x16 slots, running at x4 (PCIEX4_1, PCIEX4_2) <ul style="list-style-type: none"> (The PCIEX4 slots conform to PCI Express 3.0 standard.)
	<p>Multi-Graphics Technology</p> <ul style="list-style-type: none"> ◆ Support for AMD Quad-GPU CrossFire™ and 2-Way AMD CrossFire™ technologies
	<p>Storage Interface</p> <ul style="list-style-type: none"> ◆ CPU: <ul style="list-style-type: none"> - 1 x M.2 connector (Socket 3, M key, type 2260/2280/22110 PCIe 4.0 x4/x2 SSD support) (M2A_CPU) ◆ Chipset: <ul style="list-style-type: none"> - 2 x M.2 connectors (Socket 3, M key, type 2260/2280/22110 PCIe 4.0 x4/x2 SSD support) (M2P_SB, M2Q_SB) - 1 x M.2 connector (Socket 3, M key, type 2260/2280/22110 SATA and PCIe 4.0 x4/x2 SSD support) (M2M_SB) - 6 x SATA 6Gb/s connectors ◆ Support for RAID 0, RAID 1, RAID 5, and RAID 10 <ul style="list-style-type: none"> * Refer to "2-7 Internal Connectors," for the installation notices for the M.2 and SATA connectors. ◆ Intel® Optane™ Memory Ready <ul style="list-style-type: none"> * System acceleration with Intel® Optane™ Memory can only be enabled on the M.2 connectors supported by the Chipset.
	<p>USB</p> <ul style="list-style-type: none"> ◆ Chipset: <ul style="list-style-type: none"> - 2 x USB Type-C® ports, with USB 3.2 Gen 2x2 support (1 port on the back panel, 1 port available through the internal USB header) - 1 x USB Type-C® port on the back panel, with USB 3.2 Gen 1 support - 2 x USB 3.2 Gen 2 Type-A ports (red) on the back panel - 2 x USB 3.2 Gen 1 ports available through the internal USB header - 2 x USB 2.0/1.1 ports on the back panel ◆ Chipset+USB 3.2 Gen 1 Hub: <ul style="list-style-type: none"> - 4 x USB 3.2 Gen 1 ports on the back panel ◆ Chipset+USB 2.0 Hub: <ul style="list-style-type: none"> - 4 x USB 2.0/1.1 ports available through the internal USB headers

	Internal Connectors	<ul style="list-style-type: none"> ◆ 1 x 24-pin ATX main power connector ◆ 1 x 8-pin ATX 12V power connector ◆ 1 x 4-pin ATX 12V power connector ◆ 1 x CPU fan header ◆ 1 x water cooling CPU fan header ◆ 4 x system fan headers ◆ 2 x system fan/water cooling pump headers ◆ 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 2x2 support ◆ 1 x USB 3.2 Gen 1 header ◆ 2 x USB 2.0/1.1 headers ◆ 1 x noise detection header ◆ 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 serial port header ◆ 1 x Q-Flash Plus button ◆ 1 x reset button ◆ 1 x reset jumper ◆ 2 x temperature sensor headers ◆ 1 x Clear CMOS jumper
	Back Panel Connectors	<ul style="list-style-type: none"> ◆ 2 x USB 2.0/1.1 ports ◆ 2 x SMA antenna connectors (2T2R) ◆ 4 x USB 3.2 Gen 1 ports ◆ 1 x DisplayPort In port ◆ 1 x HDMI port ◆ 2 x USB 3.2 Gen 2 Type-A ports (red) ◆ 1 x USB Type-C® port, with USB 3.2 Gen 2x2 support ◆ 1 x USB Type-C® port, with USB 3.2 Gen 1 support ◆ 1 x RJ-45 port ◆ 1 x optical S/PDIF Out connector ◆ 2 x audio jacks
	I/O Controller	<ul style="list-style-type: none"> ◆ iTE® I/O Controller Chip

 Hardware Monitor	<ul style="list-style-type: none"> ◆ Voltage detection ◆ Temperature detection ◆ Fan speed detection ◆ Water cooling flow rate detection ◆ Fan fail warning ◆ Fan speed control <ul style="list-style-type: none"> * Whether the fan (pump) speed control function is supported will depend on the fan (pump) you install. ◆ Noise detection
 BIOS	<ul style="list-style-type: none"> ◆ 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	<ul style="list-style-type: none"> ◆ Support for APP Center <ul style="list-style-type: none"> * Available applications in APP Center may vary by motherboard model. Supported functions of each application may also vary depending on motherboard specifications. - @BIOS - EasyTune - Fast Boot - Game Boost - ON/OFF Charge - RGB Fusion - Smart Backup - System Information Viewer ◆ Support for Q-Flash Plus ◆ Support for Q-Flash ◆ Support for Xpress Install
 Bundled Software	<ul style="list-style-type: none"> ◆ Norton® Internet Security (OEM version) ◆ LAN bandwidth management software
 Operating System	<ul style="list-style-type: none"> ◆ Support for Windows 11 64-bit ◆ Support for Windows 10 64-bit
 Form Factor	<ul style="list-style-type: none"> ◆ 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.

Z690 AERO G



Z690 AERO G DDR4



Please visit GIGABYTE's website for support lists of CPU, memory modules, SSDs, and M.2 devices.



Please visit the **Support Utility List** page on GIGABYTE's website to download the latest version of apps.