

MB-GZ690AG+W

Gigabyte Z690 Aero G Z690 Express Chipset Gen 12 LGA 1700 ATX Motherboard with WiFi

Product Overview

Gigabyte Z690 Aero G + Wifi: all-in-one LGA1700 alder lake mb - with 19+1+2 phase digital VRM, hybrid core optimization, pre-mounted I/O shield with thermal armor + RGB Fusion 2.0 with on-board RGB display (multi zones), Addressable LED Strip Support



Specifications

Features:

Creativity Starts Here

AERO Series motherboards are a fresh approach to creators that evolve with optimized features for content creation. To deliver reliable computing performance, impressive connectivity, expandable graphics, and ultra-fast storage for creators to deal with heavy design workloads like 3D rendering and feature-length video production.

Go Further Without More Cables

GIGABYTE VisionLINK is an extension of your idea and creation. Transmitting data, video output, and power charging all through one USB Type-C® cable will simplify the user experience than ever. With seamless multitasking between your PC and devices, it lets you work like a pro.

All at One Cable that Does It All.

Did you experience your pen display connecting to the PC with lots of cables? GIGABYTE VisionLINK lets you not only without cable clutter, but also the benefit of data, video, and power charging the same time. One USB Type-C® cable connected, turn your workspace into neat and tidy.

Add Graphic Power to You

Ever wondered if you can have your discrete, high-end graphics card to power your pen display? Through the DisplayPort™_In and VisionLINK connections, the performance of the discrete graphics card is delivered to the pen display. Bring your creation into incredible realism and performance.

DisplayPort™ Alternate Mode with USB Power Delivery

VisionLINK equips with the unique capability of data delivery, the DisplayPort Alternate Mode for video signal, and 60W Power Delivery design for your devices charging. It's a perfectly tailored connectivity for creators and professional artists.

Up to 2.5x Faster than Gigabit Ethernet

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Intel® 2.5 GbE network connectivity supports speeds up to 2.5 times faster than Gigabit Ethernet. It gives an immediate boost to overall network performance and data transfer speeds.

WIFI 6, Ideal for All Your Online Activities

Onboard WIFI 6 technology supports 802.11ax with Bluetooth module technology, enables gigabit wireless performance, fewer dropped connections, and reduces congestion in heavy bandwidth usage scenarios. Moreover, providing better WIFI signal strength of the antenna design compared to a traditional antenna.

No Hassle Connection.

To feature the USB 3.2 Gen 2x2 connectivity design, which is double performance than the current USB 3.2 Gen 2. It works up to 20Gbps ultra-fast data transfer while connecting to USB 3.2 compliant peripherals. You can enjoy the ultimate connection flexibility to access and store massive amounts of data rapidly.

Bring your tasks without lag.

A single memory slot of the Z690 motherboard can support up to 32GB. With populated 2 DIMMs per channel on GIGABYTE Z690 motherboards, the maximum memory capacity support is 128GB. You can experience faster performance and instant access without any lag.

The Fastest, Most Robust Level

Equipped with the PCIe 5.0 x16 slot designed to optimize multitasking and large workloads, that is also ready for a new PCIe 5.0 graphics card or storage device. Brings a new level of performance for demanding applications in the high-performance market.

PCIe Bandwidth*

Up to 128 GB/s from new PCIe 5.0 x16 slot designs for the next generation add on cards need tremendous bandwidth, including the graphics card, deep learning accelerator card and the video capture card.

Fast Speed. More Space.

This new model is equipped with four PCIe 4.0 M.2 sockets and it is capable to deliver superior bandwidth. Upgrade your storage configuration now to accelerate your workflow. PCIe 4.0 M.2 SSD gives you 7X faster data transferring speeds compared to 2.5" SATA solid-state drives.

NVMe PCIe x4 M.2

GIGABYTE's M.2 solution provides NVMe SSD RAID support for fast storage performance. For creators who demand high capacity and fast storage ability, the full speed PCIe 4.0 M.2 sockets offer them the flexibility for many storage combinations.

Creates Exclusive Storage Performance

The exclusive four PCIe 4.0 x4 M.2 sockets are designed to handle the most data-consuming tasks without extra configuration.

Thermal Technology

An effective cooling solution can prevent the risk of design work being interrupted by an unexpected system crash.

GIGABYTE's advanced thermal solutions provide a perfect balance of aesthetics and performance. A large heat sink design and Direct-Touch Heatpipe II ensure stability during creative sessions.

M.2 Thermal Guard

GIGABYTE provides an Ultra-Efficient thermal solution for the latest PCIe 4.0 M.2 SSD drives. The enlarged M.2 heatsink also prevents thermal throttling of all M.2 SSDs and dissipates heat before it becomes a problem.

SMART FAN 6

Numerous hybrid fan headers and temperature sensors are planted on the motherboard to monitor in real time and configure fan mode to fit different workloads via Smart Fan 6. Creators are allowed to set the trigger point to activate the fan and its corresponding speed. The fan completely stops when performing light tasks to avoid noise.

Specifications:

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Specifications

Product Code	MB-GZ690AG+W
CPU	1. LGA1700 socket: Support for 12th Generation Intel Core i9 processors/Intel Core i7 processors/Intel Core i5 processors
	2. L3 cache varies with CPU
Chipset	1. Intel Z690 Express Chipset
Memory	1. Support for DDR4 5333(O.C.)/ DDR4 5133(O.C.)/DDR4 5000(O.C.)/4933(O.C.)/4800(O.C.)/4700(O.C.)/ 4600(O.C.)/ 4500(O.C.)/ 4400(O.C.)/ 4300(O.C.)/4266(O.C.) / 4133(O.C.) / 4000(O.C.) / 3866(O.C.) / 3800(O.C.) / 3733(O.C.) / 3666(O.C.) / 3600(O.C.) / 3466(O.C.) / 3400(O.C.) / 3333(O.C.) / 3300(O.C.) / 3200 / 3000 / 2933 / 2800 / 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
	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
Onboard Graphics	Integrated Graphics Processor-Intel HD Graphics support:
	1. 1 x USB Type-C port, supporting USB Type-C and DisplayPort video outputs and a maximum resolution of 4096x2304@60 Hz
	* Support for drawing tablets and 20V@3A of power delivery.
	* Support for DisplayPort 1.2 version and HDCP 2.3
	2. 1 x HDMI port, supporting a maximum resolution of 4096x2160@30 Hz
	* Support for HDMI 1.4 version and HDCP 2.3.
Audio	1. Realtek ALC4080 CODEC
	2. High Definition Audio
	3. 2-channel analog output
	4. Support for S/PDIF Out
	7.1-channel digital signals
	* Actual output of digital signals may vary depending on the playback content and software used, and an external DAC is required.
LAN	1. Intel 2.5GbE LAN chip (2.5 Gbps/1 Gbps/100 Mbps)

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Wireless Communication module	Intel Wi-Fi 6 AX201
	1. WIFI a, b, g, n, ac, ax, supporting 2.4/5 GHz Dual-Band
	2. BLUETOOTH 5.2
	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.
Expansion Slots	1. 1 x PCI Express x16 slot, 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.
	(The PCIEX16 slot conforms to PCI Express 5.0 standard.)
	2. 2 x PCI Express x16 slots, running at x4 (PCIEX4_1, PCIEX4_2)
	(The PCIEX4 slots conform to PCI Express 3.0 standard.)
Multi-Graphics Technology	1. Support for AMD Quad-GPU CrossFire and 2-Way AMD CrossFire technologies
Storage Interface	CPU:
	1. 1 x M.2 connector (Socket 3, M key, type 2260/2280/22110 PCIe 4.0 x4/x2 SSD support) (M2A_CPU)
	Chipset:
	1. 2 x M.2 connectors (Socket 3, M key, type 2260/2280/22110 PCIe 4.0 x4/x2 SSD support) (M2P_SB, M2Q_SB)
	2. 1 x M.2 connector (Socket 3, M key, type 2260/2280/22110 SATA and PCIe 4.0 x4/x2 SSD support) (M2M_SB)
	3. 6 x SATA 6Gb/s connectors
	Support for RAID 0, RAID 1, RAID 5, and RAID 10
	* Refer to "2-7 Internal Connectors, " for the installation notices for the M.2 and SATA connectors.
	Intel Optane Memory Ready
	* System acceleration with Intel Optane Memory can only be enabled on the M.2 connectors supported by the Chipset.
USB	Chipset:
	1. 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)
	2. 1 x USB Type-C port on the back panel, with USB 3.2 Gen 1 support
	3. 2 x USB 3.2 Gen 2 Type-A ports (red) on the back panel
	4. 2 x USB 3.2 Gen 1 ports available through the internal USB header
	5. 2 x USB 2.0/1.1 ports on the back panel
	Chipset+USB 3.2 Gen 1 Hub:
	1. 4 x USB 3.2 Gen 1 ports on the back panel
	Chipset+USB 2.0 Hub:
	1. 4 x USB 2.0/1.1 ports available through the internal USB headers

Internal I/O Connectors	1. 1 x 24-pin ATX main power connector
	2. 1 x 8-pin ATX 12V power connector
	3. 1 x 4-pin ATX 12V power connector
	4. 1 x CPU fan header
	5. 1 x water cooling CPU fan header
	6. 4 x system fan headers
	7. 2 x system fan/water cooling pump headers
	8. 2 x addressable LED strip headers
	9. 2 x RGB LED strip headers
	10. 4 x M.2 Socket 3 connectors
	11. 6 x SATA 6Gb/s connectors
	12. 1 x front panel header
	13. 1 x front panel audio header
	14. 1 x USB Type-C header, with USB 3.2 Gen 2x2 support
	15. 1 x USB 3.2 Gen 1 header
	16. 2 x USB 2.0/1.1 headers
	17. 1 x noise detection header
	18. 2 x Thunderbolt add-in card connectors
	19. 1 x Trusted Platform Module header (For the GC-TPM2.0 SPI/GC-TPM2.0 SPI 2.0 module only)
	20. 1 x serial port header
	21. 1 x Q-Flash Plus button
	22. 1 x reset button
	23. 1 x reset jumper
	24. 2 x temperature sensor headers
	25. 1 x Clear CMOS jumper
Back Panel Connectors	1. 2 x USB 2.0/1.1 ports
	2. 2 x SMA antenna connectors (2T2R)
	3. 4 x USB 3.2 Gen 1 ports
	4. 1 x DisplayPort In port
	5. 1 x HDMI port
	6. 2 x USB 3.2 Gen 2 Type-A ports (red)
	7. 1 x USB Type-C port, with USB 3.2 Gen 2x2 support
	8. 1 x USB Type-C port, with USB 3.2 Gen 1 support
	9. 1 x RJ-45 port
	10. 1 x optical S/PDIF Out connector
	11. 2 x audio jacks

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I/O Controller	1. iTE I/O Controller Chip
H/W Monitoring	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.
	7. Noise detection
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
Unique Features	1. Support for APP Center
	* 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
	2. Support for Q-Flash Plus
	3. Support for Q-Flash
	4. Support for Xpress Install
Bundled Software	1. Norton Internet Security (OEM version)
	2. cFosSpeed
Operating System	1. Support for Windows 11 64-bit
	2. Support for Windows 10 64-bit
Form Factor	1. ATX Form Factor; 30.5cm x 24.4cm

Product Information Online

For the latest product information, availability and purchasing details, please visit the product page:

Product page:

<https://www.comx-computers.co.za/MB-GZ690AG-W-Gigabyte-Z690-Aero-G-Z690-Express-Chipset-Buy-p-261073.php>

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