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	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 ◆ 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 (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® Thunderbolt™ 4 Controller: <ul style="list-style-type: none"> - 1 x VisionLINK TB connector (Intel® Thunderbolt™ 4/USB Type-C® port) - 1 x Intel® Thunderbolt™ 4 connector (USB Type-C® port)
		<ul style="list-style-type: none"> * The Intel® Thunderbolt™ 4 connectors support DisplayPort and Thunderbolt™ video outputs and a maximum resolution of 5120x2880@60 Hz with 24 bpp (via single display output) * Because of the limited I/O resources of the PC architecture, the number of Thunderbolt™ devices that can be used is dependent on the number of the PCI Express devices being installed. (Refer to Chapter 2-7, "Back Panel Connectors," for more information.) * Support for DisplayPort 1.4 version and HDCP 2.3. ◆ Integrated Graphics Processor-Intel® HD Graphics support: <ul style="list-style-type: none"> - 1 x HDMI port, supporting a maximum resolution of 4096x2160@30 Hz * Support for HDMI 1.4 version and HDCP 2.3. <p>(Graphics specifications may vary depending on CPU support.)</p>
	Audio	<ul style="list-style-type: none"> ◆ Realtek® ALC4080 codec (rear panel audio) <ul style="list-style-type: none"> - Support for DTS:X® Ultra - High Definition Audio - 2-channel ◆ Realtek® ALC897 codec (front panel audio)
	LAN	<ul style="list-style-type: none"> ◆ Marvell® AQtion AQC113C 10GbE LAN chip (10 Gbps/5 Gbps/2.5 Gbps/1 Gbps/100 Mbps) (LAN2) ◆ Intel® 2.5GbE LAN chip (2.5 Gbps/1 Gbps/100 Mbps) (LAN1)
	Wireless Communication Module	<ul style="list-style-type: none"> ◆ Intel® Wi-Fi 6E AX210 (For PCB rev. 1.0) <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 ◆ Intel® Wi-Fi 6E AX211 (For PCB rev. 1.1) <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>

	<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. ◆ 1 x PCI Express x16 slot, running at x8 (PCIEX8) <ul style="list-style-type: none"> * The PCIEX8 slot shares bandwidth with the PCIEX16 slot. When the PCIEX8 slot is populated, the PCIEX16 slot operates at up to x8 mode. <p>(The PCIEX16 and PCIEX8 slots conform to PCI Express 5.0 standard.)</p> <ul style="list-style-type: none"> ◆ 1 x PCI Express x16 slot, running at x4 (PCIEX4) <ul style="list-style-type: none"> (The PCIEX4 slot conforms 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 "2-8 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+Intel® Thunderbolt™ 4 Controller: <ul style="list-style-type: none"> - 2 x USB Type-C® ports on the back panel, with USB 3.2 Gen 2 support ◆ Chipset: <ul style="list-style-type: none"> - 1 x USB Type-C® port with USB 3.2 Gen 2x2 support, available through the internal USB header - 6 x USB 3.2 Gen 2 Type-A ports (red) 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 available through the internal USB headers ◆ Chipset+2 USB 2.0 Hubs: <ul style="list-style-type: none"> - 6 x USB 2.0/1.1 ports available through the internal USB headers
	<p>Internal Connectors</p> <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 ◆ 3 x system fan headers ◆ 3 x system fan/water cooling pump headers ◆ 2 x addressable LED strip headers ◆ 2 x RGB LED strip headers

	Internal Connectors	<ul style="list-style-type: none"> ◆ 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 ◆ 2 x USB 3.2 Gen 1 headers ◆ 3 x USB 2.0/1.1 headers ◆ 1 x noise detection header ◆ 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 ◆ 2 x temperature sensor headers
	Back Panel Connectors	<ul style="list-style-type: none"> ◆ 2 x SMA antenna connectors (2T2R) ◆ 1 x DisplayPort In port ◆ 1 x HDMI port ◆ 2 x Thunderbolt™ 4 connectors (USB Type-C® port, with USB 3.2 Gen 2 support) ◆ 6 x USB 3.2 Gen 2 Type-A ports (red) ◆ 2 x RJ-45 ports ◆ 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) ◆ cFosSpeed
	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"> ◆ E-ATX Form Factor; 30.5cm x 25.9cm

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



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.