

CPU	1. LGA1700 socket: Support for 12th Generation IntelCore™ i9 processors/Intel Core™ i7 processors/IntelCore™ i5 processors 2. L3 cache varies with CPU
(Please refer to "CPU Support List" for more information.)	
Chipset	1. Intel Z690 Express Chipset
Memory	1. Support for DDR5 6400(O.C.) / 6200(O.C.) / 6000(O.C.) / 5800(O.C.) / 5600(O.C.) / 5400(O.C.) / 5200(O.C.) / 4800 / 4000 MHz memory modules 2. 4 x DDR5 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
(Please refer "Memory Support List" for more information.)	
Onboard Graphics	Integrated Graphics Processor-Intel HD Graphics support: 1. 1 x DisplayPort, supporting a maximum resolution of 4096x2304@60 Hz * Support for DisplayPort 1.2 version and HDCP 2.3
(Graphics specifications may vary depending on CPU support.)	
Audio	1. Realtek ALC1220-VB CODEC * The front panel line out jack supports DSD audio. 2. ESS ES9118 DAC chip 3. Support for DTS:X Ultra 4. High Definition Audio 5. 2/4/5.1/7.1-channel 6. Support for S/PDIF Out
LAN	1. Marvell AQtion AQC113C 10GbE LAN chip (10 Gbps/5 Gbps/2.5 Gbps/1 Gbps/100 Mbps)
Wireless Communication module	Intel Wi-Fi 6E AX210 1. WIFI a, b, g, n, ac, ax, supporting 2.4/5/6 GHz carrier frequency bands

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_1 slot shares bandwidth with the M2C_SB connector. The PCIEX4_1 slot becomes unavailable when a device is installed in the M2C_SB connector.
(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

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:

Storage Interface

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 2242/2260/2280 PCIe 3.0 x4/x2 SSD support) (M2C_SB)
3. 1 x M.2 connector (Socket 3, M key, type 2242/2260/2280 SATA and PCIe 4.0 x4/x2 SSD support) (M2M_SB)
4. 6 x SATA 6Gb/s connectors

Support for RAID 0, RAID 1, RAID 5, and RAID 10

* Refer to "2-8 Internal Connectors," for the installation notices for the PCIEX4_1, 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. 3 x USB 3.2 Gen 2 Type-A ports (red) on the back panel

Chipset+USB 3.2 Gen 2 Hub:

- 1. 1 x USB Type-C port on the back panel, with USB 3.2 Gen 2 support
- 2. 2 x USB 3.2 Gen 2 Type-A ports (red) on the back panel

Chipset+2 USB 3.2 Gen 1 Hubs:

- 1. 8 x USB 3.2 Gen 1 ports (4 ports on the back panel, 4 ports available through the internal USB headers)

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. 2 x 8-pin ATX 12V power connectors
- 3. 1 x CPU fan header
- 4. 1 x water cooling CPU fan header
- 5. 4 x system fan headers
- 6. 4 x system fan/water cooling pump headers
- 7. 2 x addressable LED strip headers
- 8. 2 x RGB LED strip headers
- 9. 5 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 2x2 support
- 14. 2 x USB 3.2 Gen 1 headers
- 15. 2 x USB 2.0/1.1 headers
- 16. 1 x noise detection header
- 17. 2 x Thunderbolt™ add-in card connectors
- 18. 1 x Trusted Platform Module header (For the GC-TPM2.0 SPI/GC-TPM2.0 SPI 2.0 module only)
- 19. 1 x power button
- 20. 1 x reset button
- 21. 1 x reset jumper
- 22. 1 x Clear CMOS jumper
- 23. 2 x temperature sensor headers
- 24. Voltage Measurement Points

**Back Panel
Connectors**

- 1. 1 x Q-Flash Plus button
- 2. 1 x Clear CMOS button
- 3. 2 x SMA antenna connectors (2T2R)
- 4. 1 x DisplayPort
- 5. 1 x USB Type-C port, with USB 3.2 Gen 2 support
- 6. 1 x USB Type-C port, with USB 3.2 Gen 2x2 support
- 7. 5 x USB 3.2 Gen 2 Type-A ports (red)
- 8. 4 x USB 3.2 Gen 1 ports
- 9. 1 x RJ-45 port
- 10. 1 x optical S/PDIF Out connector
- 11. 5 x audio jacks

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. E-ATX Form Factor; 30.5cm x 25.9cm

-
- * The entire materials provided herein are for reference only. GIGABYTE reserves the right to modify or revise the content at anytime without prior notice.
 - * Advertised performance is based on maximum theoretical interface values from respective Chipset vendors or organization who defined the interface specification. Actual performance may vary by system configuration.
 - * All trademarks and logos are the properties of their respective holders.
 - * Due to standard PC architecture, a certain amount of memory is reserved for system usage and therefore the actual memory size is less than the stated amount.