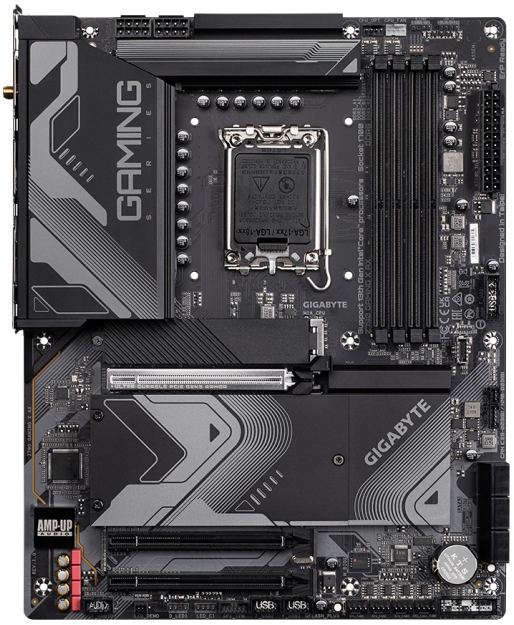
Gigabyte Z790 GAMING X AX



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Gigabyte

UNPARALLELED PERFORMANCE
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To ensure maximum Turbo Boost and overclocking performance of Intel's new generation CPU, GIGABYTE GAMING series motherboard equip the best VRM design ever built with the highest quality components.

Shielded Memory Routing
All memory routing is under the PCB inner layer shielded by a large ground layer to protect from external interference.

Impedance Optimized Topology
By optimizing memory trace width, length and style from HPC simulation to actual implementation, overall impedance is lowered between CPU memory controller and memory modules to achieve higher DDR5 speed.

Low Signal Loss PCB
Server grade mid-loss or low-loss PCB material is chosen to lower signal loss inside PCB and maintain DDR5 high speed signal transmission.

DDR5 Auto Booster
Automatically Boost the Native DDR5 frequency to 5000MHz while the system is under heavy loading by a single click.

XMP 3.0 User Profile
Define and create your own SPD profile into Native and XMP 3.0 memory modules or apply the pre-tuned profiles to XMP 3.0 User Profile. Two user-defined profiles can be saved, loaded either locally or from/to an external storage device.
- Two empty SPD profiles can be defined by users and carry to next computer
- Transfer DDR5 XMP Booster profiles into XMP 3.0 User Profiles
- Quick memory performance simulation based on user input clock and timing parameters
- Profile save and load function to share your memory parameters online

Hybrid Cores Optimization
With new Intel Hybrid technology, GIGABYTE exclusively creates two new "CPU Upgrade" in BIOS profiles to meet different users' scenarios by adjusting P-Core and E-Core activation and voltage policy.
- Deactivate all E-Core
- Zero compromise on gaming performance
- Up to 20% lower CPU package power
- Up to 5°C lower CPU temperature

OUTSTANDING THERMAL DESIGN

GIGABYTE Motherboards' Un-throttled performance is guaranteed by innovative and optimized thermal design to ensure the best CPU, Chipset, SSD stability and low temperatures under full load application and gaming performance.

4X Large Surface
Increased surface area up to 4X larger compared to traditional heatsinks. It improves heat dissipation from the MOSFETs.

Real One-piece Build
TMOS is a TRUE single piece heatsink. Its one-piece design and larger surface drastically improve the cooling performance against competitors' multi-piece design.

Multi-Cut Design
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M.2 Thermal Guard
With durability in mind, GIGABYTE provides a thermal solution for M.2 SSD devices. The M.2 Thermal Guard prevents throttling and bottlenecks from high speed M.2 SSDs as it helps to dissipate heat before it becomes an issue.

SMART FAN 6
Smart Fan 6 contains several unique cooling features that ensure gaming PC maintain its performance while staying cool and quiet. Multiple fan headers can support PWM/DC fan and pump, and users can easily define each fan curve based on different temperature sensors across the board via intuitive user interface.

Cooling Features
- High Current Support
Each fan headers support PWM and DC fan and Water Cooling Pump , and up to 24W (12V x 2A) with Over-Current Protection

- Precision Control
Multiple temperature/fan speed control points for precise fan curve

- Dual Curve Mode
Slope/Stair dual mode for different user scenario

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Fan can stop completely below users' specified temperature point

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- Support Multi-Gig(10/100/1000/2500Mbps) RJ-45 Ethernet

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PCIe EZ-Latch
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Zusammenfassung

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Gigabyte Z790 GAMING X AX, Intel, LGA 1700, Intel® Celeron®, Intel® Core™ i3, Intel® Core™ i5, Intel® Core™ i7, Intel® Core™ i9,..., LGA 1700, DDR5-SDRAM, 128 GB

Gigabyte Z790 GAMING X AX. Processor manufacturer: Intel, Processor socket: LGA 1700, Compatible processor series: Intel® Celeron®, Intel® Core™ i3, Intel® Core™ i5, Intel® Core™ i7, Intel® Core™ i9,.... Supported memory types: DDR5-SDRAM, Maximum internal memory: 128 GB, Memory slots type: DIMM. Supported storage drive interfaces: M.2, PCI Express 4.0, SATA III, Supported storage drive types: HDD & SSD, RAID levels: 0, 1, 5, 10. Parallel processing technology support: Crossfire, Maximum resolution: 4096 x 2304 pixels. USB connector type: USB Type-A, USB Type-C

Merkmale

Packaging content

Cables included	SATA

Expansion slots

PCI Express x16 slots	3
Number of M.2 (M) slots	4

Weight & dimensions

Width	305 mm
Depth	244 mm

Graphics

Parallel processing technology support	Crossfire
Maximum resolution	4096 x 2304 pixels
HDCP	Y

Processor

Processor manufacturer	Intel
Processor socket	LGA 1700
Compatible processor series	Intel® Celeron®, Intel® Core™ i3, Intel® Core™ i5, Intel® Core™ i7, Intel® Core™ i9, Intel® Pentium® Gold
Supported processor sockets	LGA 1700

Storage controllers

Supported storage drive types	HDD & SSD
Supported storage drive interfaces	M.2, PCI Express 4.0, SATA III
Number of storage drives supported	10
RAID support	Y
RAID levels	0, 1, 5, 10

BIOS

BIOS type	UEFI AMI
BIOS memory size	256 Mbit
ACPI version	5.0
Clear CMOS jumper	Y
Desktop Management Interface (DMI) version	2.7
System Management BIOS (SMBIOS) version	2.7

Features

Motherboard chipset	Intel Z790
Audio output channels	7.1 channels
PC health monitoring	Fan, Temperature, Voltage, Water cooling
Component for	PC
Motherboard form factor	ATX
Motherboard chipset family	Intel
Windows operating systems supported	Windows 10 x64, Windows 11 x64

Network

Ethernet LAN	Y
Ethernet interface type	2.5 Gigabit Ethernet
Wi-Fi	Y
Top Wi-Fi standard	Wi-Fi 6E (802.11ax)
Wi-Fi standards	802.11a, 802.11b, 802.11g, Wi-Fi 4 (802.11n), Wi-Fi 5 (802.11ac), Wi-Fi 6 (802.11ax), Wi-Fi 6E (802.11ax)
WLAN controller model	Intel Wi-Fi 6E AX211
Bluetooth	Y
Bluetooth version	5.3

Memory

Supported memory types	DDR5-SDRAM
Number of memory slots	4
Memory slots type	DIMM
Memory channels	Dual-channel
ECC	Y
Non-ECC	Y
Supported memory clock speeds	4000,4800,5200,5400,5600,5800,6000,6200,6400,6600,6800,7000,7200,7400,7600 MHz
Supported memory clock speed (max)	7600 MHz
Maximum internal memory	128 GB
Unbuffered memory	Y

Internal I/O

USB 2.0 connectors	2

USB 3.2 Gen 1 (3.1 Gen 1) connectors	1
USB 3.2 Gen 2 (3.1 Gen 2) connectors	1
Number of SATA III connectors	6
Front panel audio connector	Y
Front panel connector	Y
ATX Power connector (24-pin)	Y
CPU fan connector	Y
EPS power connector (8-pin)	Y
TPM connector	Y
Thunderbolt headers	2
12V power connector	Y
RGB LED pin header	Y

Rear panel I/O ports

USB 2.0 ports quantity	4
USB 3.2 Gen 1 (3.1 Gen 1) Type-A ports quantity	3
USB 3.2 Gen 2 (3.1 Gen 2) Type-A ports quantity	2
USB 3.2 Gen 2x2 Type-C ports quantity	1
Ethernet LAN (RJ-45) ports	1
HDMI ports quantity	1
HDMI version	2.0
DisplayPorts quantity	1
DisplayPort version	1.2
Headphone outputs	2
Microphone in	Y
S/PDIF out port	Y
WiFi-AP antenna jack	2
USB connector type	USB Type-A, USB Type-C

Preisänderungen und Irrtümer vorbehalten. Alle Produkte solange der Vorrat reicht.