

# G493-ZB3 (rev. AAP1)

HPC/AI Server - AMD EPYC™ 9004 - 4U DP 8 x PCIe Gen5 GPUs

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NVIDIA-Certified Systems™ - Data Center Servers

Supports up to 8 x Dual slot Gen5 GPUs

Dual AMD EPYC™ 9004 Series Processors (with AMD 3D V-Cache™ Technology)

12-Channel RDIMM DDR5, 48 x DIMMs

Dual ROM Architecture

2 x 1Gb/s LAN ports via Intel I350-AM2

12 x 2.5" Gen5 NVMe/SATA/SAS-4 hot-swappable bays

2 x M.2 slots with PCIe Gen3 x4 interface

8 x FHFL PCIe Gen5 x16 slots for GPUs

8 x LP PCIe Gen5 x16 slots

2 x LP PCIe Gen5 x16 slots on the front side



## SPECIFICATIONS

### Dimensions (WxHxD, mm)

4U  
448 x 176 x 880

### Motherboard

MZB3-G41

### CPU

AMD EPYC™ 9004 Series Processors  
AMD EPYC™ 9004 Series Processors with AMD 3D V-Cache™ Technology  
Dual processor, 5nm technology

\*Up to 128 cores, 256 threads per processor  
cTDP up to 300W at ambient 35°C

**\*cTDP supported up to 400W under limited thermal conditions. Please contact technical support for more details.**

Note: If only 1 CPU is installed, some PCIe or memory functions might be unavailable.

### Socket

2 x LGA 6096  
Socket SP5

### Chipset

System on Chip

### Memory

48 x DIMM slots  
DDR5 memory supported only  
12-Channel memory architecture  
RDIMM up to 96GB supported  
3DS RDIMM up to 256GB supported  
Memory speed: Up to 4800 MT/s (1DPC), 3600 MT/s (2DPC)

### LAN

**Front side:**  
2 x 1Gb/s LAN ports (1 x Intel® I350-AM2)  
Support NCSI function

1 x 10/100/1000 Mbps Management LAN

### Video

Integrated in Aspeed® AST2600  
2D Video Graphic Adapter with PCIe bus interface  
1920x1200@60Hz 32bpp

### Storage

**Front side:**  
12 x 2.5" Gen5 NVMe/SATA/SAS-4\* hot-swappable bays  
- (6 x NVMe from CPU\_0, 6 x NVMe from CPU\_1)

### SAS

Require SAS add-in cards

### RAID

Require RAID add-in cards

### Expansion Slots

4 x PCIe x16 (Gen5 x16) FHFL slots, from PEX89144\_0, for GPUs  
4 x PCIe x16 (Gen5 x16) FHFL slots, from PEX89144\_1, for GPUs

4 x PCIe x16 (Gen5 x16) low-profile slots, from PEX89144\_0  
4 x PCIe x16 (Gen5 x16) low-profile slots, from PEX89144\_1

1 x PCIe x16 (Gen5 x16) low-profile slot on the front side, from CPU\_0

1 x PCIe x16 (Gen5 x16) low-profile slot on the front side, from CPU\_1

- System is validated for population with a uniform GPU model.  
- Support is not provided for mixed GPU populations.

1 x M.2 slot:  
- M-key  
- PCIe Gen3 x4, from CPU\_0  
- Supports 2280/22110 cards

1 x M.2 slot:  
- M-key  
- PCIe Gen3 x4, from CPU\_1  
- Supports 2280/22110 cards

### Internal I/O

1 x TPM header

### Front I/O

2 x USB 3.2 Gen1  
1 x VGA  
2 x RJ45  
1 x MLAN  
1 x Power button with LED  
1 x ID button with LED  
1 x NMI button  
1 x Reset button  
1 x Storage activity LED  
1 x System status LED

### Rear I/O

N/A

### Backplane Board

Speed and bandwidth:  
PCIe Gen5 x4 or SATA 6Gb/s or SAS-4 24Gb/s

### TPM

1 x TPM header with SPI interface  
Optional TPM2.0 kit: [CTM010](#)

### Power Supply

3+1 3000W 80 PLUS Titanium redundant power supplies

AC Input:  
- 100-127V~/ 14.5A, 50/60Hz  
- 200-220V~/ 16A, 50/60Hz  
- 220-240V~/ 16A, 50/60Hz

DC Input: (Only for China)  
- 240Vdc/ 16A

DC Output:  
- Max 1097.4W/ 100-127V~  
+12.2V/ 87A  
+12Vsb/ 3A  
- Max 2598W/ 200-220V~  
+12.2V/ 210A  
+12Vsb/ 3A  
- Max 3037.2W/ 220-240V~ or 240Vdc Input  
+12.2V/ 246A  
+12Vsb/ 3A

Note: The system power supply requires C19 power cord.

### System Management

Aspeed® AST2600 management controller  
GIGABYTE Management Console (AMI MegaRAC SP-X) web interface

Dashboard  
HTML5 KVM  
Sensor Monitor (Voltage, RPM, Temperature, CPU Status ...etc.)  
Sensor Reading History Data  
FRU Information  
SEL Log in Linear Storage / Circular  
Storage Policy  
Hardware Inventory  
Fan Profile  
System Firewall  
Power Consumption  
Power Control  
Advanced power capping  
LDAP / AD / RADIUS Support  
Backup & Restore Configuration  
Remote BIOS/BMC/CPLD Update  
Event Log Filter  
User Management  
Media Redirection Settings  
PAM Order Settings  
SSL Settings  
SMTP Settings

### OS Compatibility

Please refer to OS compatibility table in support page

**Additional certifications:**  
**VMware ESXi 8.0**

### System Fans

12 x 60x60x38mm (23,000rpm)\*

\*Two fans share a single power connector.

**Operating Properties**

Operating temperature: 10°C to 35°C  
Operating humidity: 8%–80% (non-condensing)  
Non-operating temperature: –40°C to 60°C  
Non-operating humidity: 20%–95% (non-condensing)

**Packaging Dimensions**

1200 x 800 x 444 mm w/ pallet

**Packaging Content**

1 x G493-ZB3-AAP1  
2 x CPU fansinks  
8 x GPU power cables (12VHPWR to 12VHPWR, 150mm)  
1 x L-shape Rail kit

**Part Numbers**

- Barebone package: 6NG493ZB3DR000AAP1\*  
- Motherboard: 9MZB3G41UR-000  
- L-shape Rail kit: 25HB2-A96100-K0R  
- CPU fansink: 25ST0-OZ6023-C1R/25ST0-OZ6024-C1R  
- Backplane board - CBP10C2: 9CBP10C2NR-00  
- Fan module: 25ST2-663823-F1R  
- PCIe bridge board - CPBG000: 9CPBG000NR-00  
- PCIe switch board - CPB4AG0: 9CPB4AG0NR-00  
- G-SCM board - CDCG110: 9CDCG110UR-00  
- GPU power cable (12VHPWR, 150mm): 25CRI-150004-Y4R  
- Power supply: 25EP0-23000C-D0S

**Optional parts:**

- C19 power cord 125V/15A (US): 25CP1-018000-Q0R  
- C19 power cord 250V/16A (EU): 25CP3-01830H-Q0R  
- C19 power cord 125V/15A (JP): 25CPA-01830B-Q0R  
- RMA packaging: 6NG493ZB3SR-RMA-A100

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\* 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.

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\* 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.