G293-Z41 (rev. AAP1)

HPC/AI Server - AMD EPYC™ 9004 - 2U DP 4 x PCle Gen5 GPUs | Application: AI , AI Training , AI Inference & HPC

- Supports up to 4 x Dual slot Gen5 GPU cards
- AMD EPYC[™] 9004 series processors
- Dual processor, 5nm technology
- 12-Channel RDIMM DDR5, 24 x DIMMs
- Dual ROM Architecture
- 2 x 10Gb/s BASE-T LAN ports (Broadcom[®] BCM57416)
- 1 x Dedicated management port
- 4 x 2.5" Gen5 NVMe/SATA/SAS hot-swappable bays
- 4 x 2.5" SATA/SAS hot-swappable bays
- 4 x FHFL PCIe Gen5 x16 or 8 x FHFL PCIe Gen5 x8 slots for GPUs
- 2 x LP PCIe Gen5 x16 slots for add-on cards
- Dual 3000W (240V) 80 PLUS Titanium redundant power supply



OVERVIEW SPECIFICATIONS SUPPORT RESOURCES BUY G293-Z41 (rev. AAP1)

Dimensions (WxHxD, mm)

2U 448 x 87.5 x 800

Motherboard

MZ43-G20

CPU

AMD EPYC™ 9004 series processors Dual processor, 5nm technology Up to 32-core, 64 threads per processor CPU TDP up to 210W

cTDP 240W supported at ambient 30°C

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

24 x DIMM slots DDR5 memory supported only 12-Channel memory architecture RDIMM modules up to 96GB supported 3DS RDIMM modules up to 256GB supported Memory speed: Up to 4800 MHz

LAN

Rear side:

2 x 10Gb/s BASE-T LAN ports (1 x Broadcom $^{\otimes}$ BCM57416) Supported NCSI function

1 x 10/100/1000 management LAN

Video

Integrated in Aspeed® AST2600 2D Video Graphic Adapter with PCIe bus interface 1920x1200@60Hz 32bpp, DDR4 SDRAM

Storage

Front side:

4 x 2.5" Gen5 NVMe/SATA/SAS hot-swappable bays 4 x 2.5" SATA/SAS hot-swappable bays - (NVMe from CPU_1, SATA from CPU_1)

SAS card is required for SAS devices support

SAS

Depends on SAS Add-on card

RAID

N/A

Expansion Slots

Riser Card CRSG821 x 2:

- 2 x PCle x16 (Gen5 x16) or 4 x PCle x16 (Gen5 x8) FHFL slots, from PS7101, for GPUs

Riser Card CRSG822 x 2:

- 2 x PCle x16 (Gen5 x16) or 4 x PCle x16 (Gen5 x8) FHFL slots, from PS7101, for GPUs

Riser Card CRSG01F x 2:

- 2 x PCIe x16 (Gen5 x16) low-profile slots, from CPU_0
- Maximum limitation of GPU card: 285mm (L) x 111.5mm (W) x 39.5mm (H)
- System is validated for population with a uniform GPU model
- Support is not provided for mixed GPU populations
- For the latest GPU cards QVL, please contact your GIGABYTE representative

Internal I/O

1 x TPM header

Front I/O

- 1 x Power button with LED
- 1 x ID button with LED
- 2 x LAN activity LEDs
- 1 x HDD activity LED
- 1 x System status LED
- 1 x Reset button

Rear 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 Reset button
- 1 x NMI button
- 1 x System status LED

Backplane I/O

Speed and bandwidth:

PCIe Gen5 x4 or SATA 6Gb/s or SAS 12Gb/s

TPM

1 x TPM header with SPI interface Optional TPM2.0 kit: CTM010

Power Supply

Dual 3000W (240V) 80 PLUS Titanium redundant power supply

AC Input:

- 100-127V~/ 15.5A, 50-60Hz
- 200-220V~/ 15.5A, 50-60Hz
- 220-240V~/ 15.5A, 50-60Hz

DC Input:

- 240Vdc/ 15.5A

DC Output:

- Max 1000W/ 100-127V~
- + 12.2V/81A
- + 12Vsb/ 3A
- Max 2600W/ 200-220V~
- + 12.2V/ 213A
- + 12Vsb/3A
- Max 3000W/ 220-240V~ or 240Vdc Input
- + 12.2V/ 245A
- + 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 Loa 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:

Red Hat Enterprise Linux 9.0 (x64) or later Windows Server 2022 (x64)

System Fans

8 x 80x80x38mm (18,300rpm)

Clear All

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

1133 x 724 x 261 mm

Packaging Content

- 1 x G293-Z41
- 2 x CPU heatsinks
- 1 x L-shape Rail kit

Part Numbers

- Barebone package: 6NG293Z41DR000AAP1*
- Motherboard: 9MZ43G20UR-000
- L-shape Rail kit: 25HB2-A86102-K0R
- CPU heatsink: 25ST1-243105-A0R/25ST1-553202-A0R
- Backplane board CBPG086: 9CBPG086NR-00
- Fan module: 25ST2-88382R-S1R
- Riser card CRSG01F: 9CRSG01FNR-00
- Riser card CRSG821: 9CRSG821NR-00
- Riser card CRSG822: 9CRSG822NR-00 - Power supply: 25EP0-230005-G1S

Optional parts:

- C19 power cord 125V/15A (US): 25CP1-018000-Q0R
- C19 power cord 250V/16A (EU): 25CP3-01830H-Q0R

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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.

