

## G292-Z42

HPC System - 2U DP 8 x Gen3 GPU Server



### Features

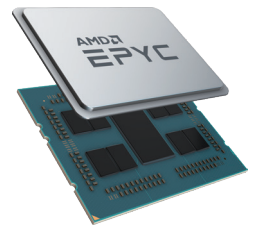
Able to support up to 8 double slot GPGPU or co-processor cards, the G292 Series enables world-leading HPC within a 2U chassis.

- Supports up to 8 x double slot GPU cards
- Dual AMD EPYC™ 7002 series processor family
- 8-Channel RDIMM/LRDIMM DDR4, total 16 x DIMMs
- 2 x 10Gb/s BASE-T LAN ports (Intel® X550-AT2)
- 1 x Dedicated management port
- 4 x NVMe, 4 x SATA/SAS 2.5" hot-swap HDD/SSD bays
- 8 x PCIe Gen3 expansion slots for GPUs
- 2 x PCIe Gen4 x16 low-profile slots for add-on cards
- Aspeed® AST2500 remote management controller
- 2+0 2200W 80 PLUS Platinum power supply

### AMD EPYC™ 7002 Series Processor (Rome)

The next generation of AMD EPYC has arrived, providing incredible compute, IO and bandwidth capability – designed to meet the huge demand for more compute in big data analytics, HPC and cloud computing.

- ✓ Built on **7nm** advanced process technology, allowing for denser compute capabilities with lower power consumption
- ✓ Up to **64 core** per CPU, built using Zen 2 high performance cores and AMD's innovative chiplet architecture
- ✓ Supporting **PCIe Gen 4.0** with a bandwidth of up to 64GB/s, twice of PCIe Gen 3.0
- ✓ **Embedded security protection** to help defend your CPU, applications, and data



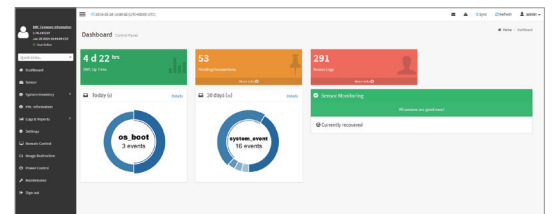
### NVIDIA® Tesla® V100 Support

GIGABYTE's AMD EPYC server systems and motherboards are fully compatible and qualified to use with NVIDIA's Tesla® V100 GPU, an advanced data center GPU built to accelerate AI, HPC, and graphics. Powered by NVIDIA's Volta™ architecture and with 640 Tensor Cores, the Tesla® V100 has broken the 100 teraflops (TFLOPS) barrier of deep learning performance — enabling data scientists, researchers, and engineers to tackle challenges that were once impossible.

### GIGABYTE Management Console (AMI MegaRAC SP-X)

This GIGABYTE server product utilizes a AMI MegaRAC SP-X platform for BMC server management, with a feature rich and easy to use browser-based graphical user interface. Notable features include:

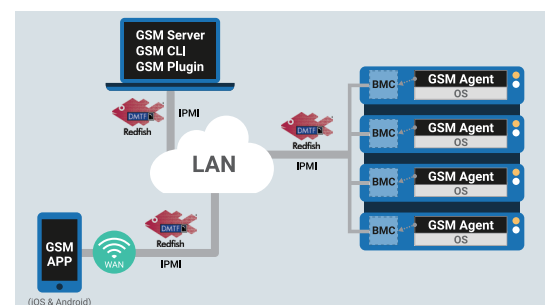
- **RESTful API support** (including the latest DMTF standards of Redfish) allows the administrator to integrate with 3rd party applications for server management
- **HTML5-based iKVM** remote management client included as a standard feature, no additional add-on license required to purchase
- **Detailed FRU information** from SMBIOS
- **Pre-event automatic video recording** feature from 10 to 30 seconds
- **SAS / RAID controller monitoring** feature



### GIGABYTE Server Management (GSM)

GIGABYTE Server Management (GSM) is GIGABYTE's proprietary multiple server remote management software platform, available as a free download from each GIGABYTE server product page. GSM is compatible with either IPMI or Redfish (RESTful API) connection interfaces, and comprises the following sub-programs:

- **GSM Server**
- **GSM CLI**
- **GSM Agent**
- **GSM Mobile**
- **GSM Plugin**



## Specification

<b>Dimensions (WxHxD)</b>	2U 448 x 87.5 x 800 mm
<b>Motherboard</b>	MZ42-G20
<b>CPU</b>	AMD EPYC™ 7002 series processor family Dual processors, 7nm Up to 64-core, 128 threads per processor cTDP up to 240W  NOTE: If only 1 CPU is installed, some PCIe or memory functions might be unavailable
<b>Socket</b>	Socket SP3
<b>Chipset</b>	System on Chip
<b>Memory</b>	16 x DIMM slots DDR4 memory supported only 8-Channel memory architecture RDIMM modules up to 64GB supported LRDIMM modules up to 128GB supported Memory speed: Up to 3200 MHz
<b>LAN</b>	2 x 10Gb/s BASE-T LAN ports (Intel® X550-AT2 controller) 1 x 10/100/1000 management LAN
<b>Video</b>	Integrated in Aspeed® AST2500 2D Video Graphic Adapter with PCIe bus interface 1920x1200@60Hz 32bpp, DDR4 SDRAM
<b>Storage</b>	8 x 2.5" hot-swappable HDD/SSD bays - 4 x amber HDD trays compatible with NVMe or SATA/SAS devices - 4 x blue HDD trays compatible with SATA/SAS devices only  SAS card is required for SAS devices support Recommended 12Gb/s SAS cards: CRA4448, CRA4548
<b>SATA</b>	Supported
<b>SAS</b>	Supported via add-on SAS Card
<b>RAID</b>	Depends on RAID HBA
<b>Expansion Slots</b>	8 x PCIe x16 slots (Gen3 x16 bus) for GPUs 2 x PCIe x16 (Gen4 x16 bus) Half-length low-profile slots  - 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
<b>Internal I/O</b>	1 x TPM header, 1 x Serial header, 1 x Buzzer
<b>Front I/O</b>	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
<b>Rear I/O</b>	2 x USB 3.0, 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
<b>Backplane I/O</b>	4 x SAS/SATA and 4 x NVMe ports Backplane P/N: 9CBPG083NR-00 Bandwidth: SATA 6Gb/s, SAS 12Gb/s and PCIe x4
<b>TPM</b>	1 x TPM header with SPI interface Optional TPM2.0 kit: CTM010
<b>Weight</b>	Net Weight: 30 kg Gross Weight: 36 kg
<b>System Fans</b>	8 x 80x80x38mm (16,300rpm)

**Power Supply** 2+0 2200W 80 PLUS Platinum power supply

### AC Input:

- 100-127V~/ 14A, 47-63Hz
- 200-240V~/ 12.6A, 47-63Hz

### DC Output:

- Max 1200W/ 100-127V~  
+12.12V/ 95.6A  
+12Vsb/ 3.5A
- Max 2200W/ 200-240V  
+12.12V/ 178.1A  
+12Vsb/ 3.5A

NOTE: The system power supply requires C19 type power cord

### System Management

Aspeed® AST2500 management controller  
GIGABYTE Management Console (AMI MegaRAC SP-X)

Dashboard  
JAVA Based Serial Over LAN  
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  
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

Windows Server 2016 ( X2APIC/256T not supported)  
Windows Server 2019  
Red Hat Enterprise Linux 7.6 ( x64) or later  
Red Hat Enterprise Linux 8.0 ( x64) or later  
SUSE Linux Enterprise Server 12 SP4 ( x64) or later  
SUSE Linux Enterprise Server 15 SP1 ( x64) or later  
Ubuntu 16.04.6 LTS (x64) or later  
Ubuntu 18.04.3 LTS (x64) or later  
VMware ESXi 6.5 EP15 or later  
VMware ESXi 6.7 Update3 or later  
Citrix Hypervisor 8.1.0

### 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 Content

1 x G292-Z42  
2 x CPU heatsinks  
1 x Rail kit

### Part Numbers

Barebone with rail kit: 6NG292Z42MR-00  
- Motherboard: 9MZ42G20NR-00  
- Tool-less rail kit: 25HB2-A86102-K0R  
- CPU heatsink: 25ST1-44320N-A3R/ 25ST1-44320P-A3R  
- Back plane board: 9CBPG083NR-00  
- Fan module: 25ST2-883827-D0R  
- Power supply: 25EP0-222001-D0S  
- C19 type power cord 125V/15A (US): 25CP1-018000-Q0R (optional)  
- C19 type power cord 250V/16A (EU): 25CP3-01830H-Q0R (optional)  
- C19 type power cord 250V/15A (US): 25CP1-018300-Q0R (optional)

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