GIGABYTE™

G242-Z11

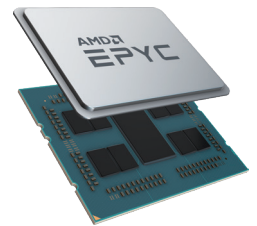## HPC System - 2U UP 4 x GPU Gen4 Server

Features

- Up to 4 x NVIDIA Tesla® PCIe Gen4 GPU cards
- Single AMD EPYC™ 7002 series processor family
- 8-Channel RDIMM/LRDIMM DDR4, 8 x DIMMs
- 1 x dedicated management port
- 4 x SATA 3.5" hot-swap HDD/SSD bays in front side
- 2 x NVMe/SATA 2.5" hot-swap SSD bays in rear side
- 2 x FHHL PCIe Gen4 expansion slots
- 1 x OCP 3.0 Gen4 x16 mezzanine slot
- Aspeed® AST2500 remote management controller
- 2 x 80 PLUS Platinum 1600W redundant PSU

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

AMD Radeon Instinct™ MI50 Support

This GIGABYTE server features support for AMD's Radeon Instinct™ MI50 compute card, designed to deliver high levels of performance for deep learning, high performance computing (HPC), cloud computing, and rendering systems.
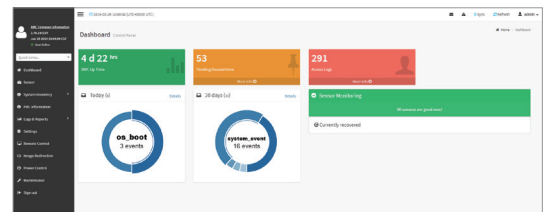
NVIDIA® Tesla® V100 Support

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:
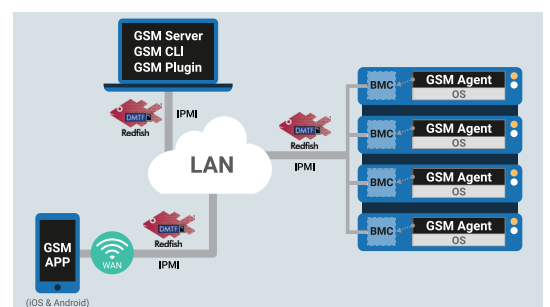
- **RESTful API support** (including the latest DMTF standards of Redfish) allows the administrator to integrate with 3rd party applications for server management
- **HTML5-based iKVM** remote management client included as a standard feature, no additional add-on license required to purchase
- **Detailed 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

Dimensions (WxHxD)	2U 438 x 87.5 x 820 mm
Motherboard	MZ12-HD3
CPU	AMD EPYC™ 7002 series processor family Single processor, 7nm technology Up to 64-core, 128 threads per processor TDP up to 225W, cTDP up to 240W Fully support 280W Compatible with AMD EPYC™ 7001 series processor
Socket	Socet SP3
Chipset	System on Chip
Memory	8 x DIMM slots DDR4 memory supported only 8-Channel memory architecture RDIMM modules up to 128GB supported LRDIMM modules up to 128GB supported Memory speed: Up to 3200 MHz
LAN	1 x 10/100/1000 management LAN
Video	Integrated in Aspeed® AST2500 2D Video Graphic Adapter with PCIe bus interface 1920x1200@60Hz 32bpp, DDR4 SDRAM
Storage	Front side: 4 x 3.5" SATA hot-swap HDD/SSD bays 2.5" HDD/SSD supported SATA devices supported only Rear side: 2 x 2.5" NVMe/SAS/SATA hybrid hot-swap HDD/SSD bays SAS card is required for SAS devices support
SATA	Supported
SAS	Depend on SAS Card
RAID	-
Expansion Slots	4 x PCIe x16 slots (Gen4 x16) for GPUs Riser Card CRSG120: - 1 x PCIe x16 slot (Gen4 x16 or x8), FHHL - 1 x PCIe x8 slots (Gen4 x0 or x8), FHHL 1 x OCP 3.0 mezzanine slot with PCIe Gen4 x16 bandwidth - System is validated for population with a uniform GPU model - Support is not provided for mixed GPU populations
Internal I/O	1 x TPM header, 1 x Front panel header
Front I/O	1 x USB 3.0, 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, 1 x HDD activity LED, 2 x LAN activity LEDs
Rear I/O	2 x USB 3.0, 1 x VGA, 1 x MLAN, 1 x ID LED
Backplane I/O	Front side_CBPG041: 4 x SATA/SAS ports Rear side_CBP2021: 2 x NVMe/SATA/SAS ports Speed and bandwidth: SATA 6Gb/s, SAS 12Gb/s or PCIe x4 per port
TPM	1 x TPM header with SPI interface Optional TPM2.0 kit: CTM010
Weight	Net Weight: 18.5 kg Gross Weight: 29 kg

Power Supply	2 x 80 PLUS Platinum 1600W redundant PSUs AC Input: - 100-120V~/ 12A, 50-60Hz - 200-240V~/ 10A, 50-60Hz DC Output: - Max 1000W/ 100-120V~ +12V/ 81.5A +12Vsb/ 2.5A - Max 1600W/ 200-240V or 240Vdc Input +12V/ 133A +12Vsb/ 2.5A
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 Ubuntu 20.04 LTS (x64) or later VMware ESXi 6.5 EP15 or later VMware ESXi 6.7 Update3 or later VMware ESXi 7.0 or later Citrix Hypervisor 8.1.0 or later
System Fans	5 x 80x80x38mm (16,300rpm)
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 G242-Z11, 1 x CPU heatsink, 1 x Rail kit
Part Numbers	Barebone with rail kit: 6NG242Z11MR-00 - Motherboard: 9MZ12HD3NR-00 - Rail kit: 25HB2-3A0202-K0R - CPU heatsink: 25ST1-15320E-J1R - Back plane board_4-port: 9CBPG041NR-00 - Back plane board_2-port: 9CBP2021NR-00 - Riser Card: 9CRSG02CNR-00 - Front panel board: 9CFP1000NR-00 - Power supply: 25EP0-216007-L0S