GIGABYTE™

G482-Z51

HPC System - 4U DP 8 x Gen4 GPU Server

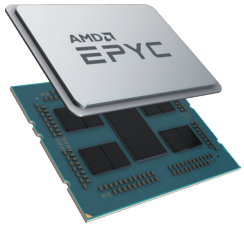
Features

The G482-Z51 is one of the world's first PCIe Gen4 GPU server systems to be released to the market, featuring support for up to eight dual-width PCIe Gen4 GPU cards.

- Up to 8 x PCIe Gen4 GPGPU cards
- Dual AMD EPYC™ 7002 series processor family
- 8-Channel RDIMM/LRDIMM DDR4, 32 x DIMMs
- 2 x 10Gb/s BASE-T LAN ports (Intel® X550-AT2)
- 2 x 1Gb/s BASE-T LAN ports (Intel® I350-AM2)
- 1 x dedicated management port
- 10 x SATA 2.5" hot-swappable HDD/SSD bays
- Aspeed® AST2500 remote management controller
- 3 x 80 PLUS Platinum 2200W 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.

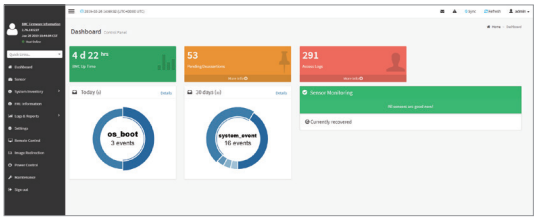
NVIDIA® Tesla® V100 Support

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:

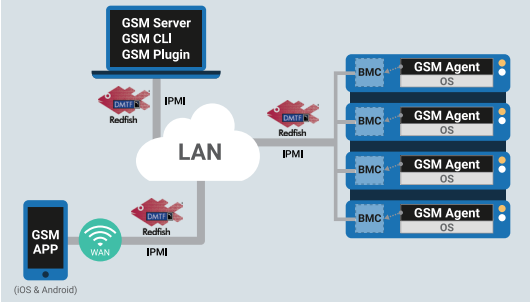
- **RESTful API support** (including the latest DMTF standards of Redfish) allows the administrator to integrate with 3rd party applications for server management
- **HTML5-based iKVM** remote management client included as a standard feature, no additional add-on license required to purchase
- **Detailed 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)	4U 448 x 176 x 880 mm
Motherboard	MZ52-G40
CPU	AMD EPYC™ 7002 series processor family Dual processors, 7nm Up to 64-core, 128 threads per processor TDP up to 225W, cTDP up to 240W Fully support 280W NOTE: If only 1 CPU is installed, some PCIe or memory functions might be unavailable Compatible with AMD EPYC™ 7001 series processor
Socket	Socet SP3
Chipset	System on Chip
Memory	32 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*/ 2933 MHz * Follow BIOS setting and memory QVL list if running 3200 Mhz with 2DPC
LAN	Rear Side: 2 x 10Gb/s BASE-T LAN ports (Intel® X550-AT2) 1 x 10/100/1000 management LAN Front Side: 2 x 1Gb/s BASE-T LAN ports (Intel® I350-AM2)
Video	Integrated in Aspeed® AST2500 2D Video Graphic Adapter with PCIe bus interface 1920x1200@60Hz 32bpp, DDR4 SDRAM
Storage	10 x 2.5" SATA hot-swappable HDD/SSD bays SATA devices supported only
SATA	Supported
SAS	Supported
RAID	-
Expansion Slots	8 x PCIe x16 slots (Gen4 x16 bus) for GPUs - System is validated for population with a uniform GPU model - Support is not provided for mixed GPU populations - Support PCIe Gen3 only if AMD Naples processor installed
Internal I/O	1 x TPM header, 1 x Front panel header
Front I/O	2 x USB 3.0, 1 x VGA, 2 x RJ45, 1 x MLAN (Reserved), 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 access LED
Rear I/O	2 x RJ45, 1 x MLAN (Primary port)
Backplane I/O	10 x 2.5" ports Supports SATA 6Gb/s
TPM	1 x TPM header with SPI interface Optional TPM2.0 kit: CTM010
System Fans	6 x 60x60x76mm (21,700rpm)
Packaging Content	1 x G482-Z51 2 x CPU fan-sinks 1 x Rail kit

Power Supply	3 x 80 PLUS Platinum 2200W redundant PSUs 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)
Weight	Net Weight: 29.5 kg Gross Weight: 47.5 kg
Part Numbers	Barebone with rail kit: 6NG482Z51MR-00 - Motherboard: 9MZ52G40NR-00 - Rail kit: 25HB2-A96100-K0R - CPU fan-sink: 12SF2-01A067-00R - LAN adapter: 9CLNP222NR-00 - Fan module: 25ST2-667620-S0R - Power supply: 25EP0-222003-D0S - C19 type power cord 125V/15A (US): 25CP1-018000-Q0R (an as option) - C19 type power cord 250V/16A (EU): 25CP3-01830H-Q0R (an as option) - C19 type power cord 250V/15A (US): 25CP1-018300-Q0R (an as option)

* All specifications are subject to change without notice. Please visit our website for the latest information.
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