GIGABYTE™

R282-Z93
Rack Server - 2U DP 12-Bay GPU sku

Features
- Supports up to 3 x double slot GPU cards
- Dual AMD EPYC™ 7002 series processor family
- 8-Channel RDIMM/LRDIMM DDR4, 32 x DIMMs
- 2 x 1Gbit/s LAN ports (Intel® I350-AM2)
- 1 x Dedicated management port
- 12 x 3.5” SATA hot-swappable HDD/SSD bays
- Ultra-Fast M.2 with PCIe Gen3 x4 interface
- 5 x PCIe Gen4 x16 expansion slots
- 1 x OCP 3.0 Gen4 x16 mezzanine slot
- 1 x OCP 2.0 Gen3 x8 mezzanine slot
- Aspeed® AST2500 remote management controller
- 2000W 80 PLUS Platinum redundant 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

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 an 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**  
2U  
(WxHxD)  
438 x 87 x 730 mm

**Motherboard**  
MZ92-FS0

**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
  - Conditional 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**  
Socket 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 126GB supported
  - Memory speed: Up to 3200\(^{\text{th}}\) 2933 MHz

* Follow BIOS setting and memory QVL list if running 3200 MHz with 2DPC

**LAN**  
2 x 1GBE LAN ports (1 x Intel® i350-AM2)
  - 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**  
12 x 3.5" or 2.5 SATA/SAS hot-swap HDD/SSD bays from onboard SATA ports
  - Default configuration supports:
    - 12 x SATA drives
    - 4 x SATA drives
    - 8 x SAS drives via SAS HBA

SAS card is required to enable the drive bays

**Expansion Slots**  
Riser Card CRS2014: 1 x PCIe x16 slot (Gen4 x16), FHFL
  - 1 x OCP 3.0 mezzanine slot with PCIe Gen4 x16 bandwidth from CPU_0; Supported NCSI function
  - 1 x OCP 2.0 mezzanine slot with PCIe Gen3 x8 bandwidth (Type1, P1, P2); Supported NCSI function

1 x M.2 slot:
  - M-key, PCIe Gen3 x4
  - Supports NGFF-2242/2260/2280/22110 cards
  - CPU TDP is limited to 225W if using M.2 device

NOTE: Support is not provided for mixed GPU populations

**Power Supply**  
2 x 80 PLUS Platinum 2000W redundant PSUs
  - AC Input:
    - 100-120V~/2A, 50-60Hz
    - 180-240V~/2A, 50-60Hz
  - DC Input:
    - 240Vdc/10A
  - DC output:
    - 1000W@100-120V, +12.2V/81.5A, +12Vsb/2.5A
    - 1600W@180-199V, +12.2V/131A, +12Vsb/2.5A
    - 1800W@200-220V, +12.2V/147.5A, +12Vsb/2.5A
    - 2000W@224-240V, +12V/163.5A, +12Vsb/2.5A

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

**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

**Weight**  
Net Weight: 18.5 kg / Gross Weight: 25.5 kg

**System Fans**  
4 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)

Ambient temperature limited to 30°C if using 280W CPU

**Packaging Dimensions**  
982 x 588 x 268 (mm)

**Packaging Content**  
1 x R282-Z93 system, 2 x CPU heat sinks, 1 x Rail kit

**Part Numbers**  
Barebone package: 6NR282Z93MR-00

Spare parts:
  - Motherboard: 9MZ92FS0NR-00
  - Rail kit: 25HB2-3A0202-K0R
  - CPU heatsink: 25ST1-44320G-A0R
  - Front panel board: 9CFP2001NR-00
  - Back plane board: 9CBP20C4NR-00
  - Power supply: 25EP0-2200A-LOS

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