R282-Z92
Rack Server - 2U DP 24-Bay NVMe

Features

- Dual AMD EPYC™ 7002 series processor family
- 8-Channel RDIMM/LRDIMM DDR4, 32 x DIMMs
- 2 x 1Gb/s LAN ports (Intel® I350-AM2)
- 1 x Dedicated management port
- 24 x 2.5” NVMe hot-swappable SSD bays
- 2 x 2.5” SATA/SAS hot-swappable HDD/SSD bays in rear side
- Ultra-Fast M.2 with PCIe Gen3 x4 interface
- 2 x PCIe Gen4 expansion slots
- Aspeed® AST2500 remote management controller
- 1+1 1600W 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

Get the Memory Performance Edge
3200Mhz Even at 2 DIMMS Per Channel
On previous AMD server platforms, memory speed has been automatically downgraded by design when a user installed two DIMMs per channel. GIGABYTE has now developed a unique solution to overcome this performance downgrade headache: with our new 2nd Generation AMD EPYC 7002 Series server platforms, maximum memory speed (3200Mhz) is now supported even when using 2 DIMMS per channel*. GIGABYTE’s server platforms give you the performance edge, with more memory capacity at faster speeds than competing solutions!

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**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>2U</th>
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<tbody>
<tr>
<td>(WxHxD)</td>
<td>438 x 87 x 730 mm</td>
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**Motherboard**

M92S-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

Conditionally support 280W

NOTE: If only 1 CPU is installed, some PCIe or memory functions might be unavailable

Compatible with AMD EPYC™ 7001 series processors

**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 128GB supported

Memory speed: Up to 3200 MT/s 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

2D Video Graphic Adapter with PCIe bus interface

**Expansion Slots**

Riser Card CRS2014:

- 1 x PCIe x16 slot (Gen4 x16), Occupied by CNV3024, 4 x NVMe HBA

Riser Card CRS2023:

- 1 x PCIe x16 slot (Gen4 x16), FHHL, Occupied by CNV3024, 4 x NVMe HBA

- 1 x PCIe x8 slot (Gen4 x8), FHHL, Occupied by CNV3022, 2 x NVMe HBA

- 1 x PCIe x8 slot (Gen4 x8), FHHL

Riser Card CRS2033:

- 1 x PCIe x16 slot (Gen4 x16), FHHL, Occupied by CNV3024, 4 x NVMe HBA

- 1 x PCIe x8 slot (Gen4 x8), FHHL, Occupied by CNV3022, 2 x NVMe HBA

- 1 x PCIe x8 slot (Gen4 x8), FHHL

1 x OCP 3.0 mezzanine slot with PCIe Gen4 x16 bandwidth

- Supported NCSI function, Occupied by CNV0134, 4 x NVMe HBA

1 x OCP 2.0 mezzanine slot with PCIe Gen3 x8 bandwidth

- Supported NCSI function, Occupied by CNV0022, 2 x NVMe HBA

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

**Internal I/O**

1 x M.2 slot, 1 x USB 3.0 header, 1 x COM header, 1 x TPM header, 1 x Front panel header, 1 x HDD back plane board header, 1 x PMBus connector, 1 x IPMB connector, 1 x Clear CMOS jumper, 1 x BIOS recovery jumper

**Front I/O**

2 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, 2 x RJ45, 1 x MLAN (Primary port)

**Rear I/O**

2 x USB 3.0, 1 x VGA, 2 x RJ45, 1 x MLAN, 1 x ID button with LED

**Backplane I/O**

Front side_CBP2005: 24 x NVMe ports

Rear side_CBP2020: 2 x SATA/SAS ports

**TPM**

1 x TPM header with SPI interface

Optional TPM2.0 kit: CTM010

**Power Supply**

1+1 1600W 80 PLUS Platinum redundant PSUs

AC Input:

- 100-127V~ / 12A, 47-63Hz

- 200-240V~/ 9.48A, 47-63Hz

DC output:

- - Max 1000W / 100-127V

- +12V / 82A

- +12Vab / 2.1A

- Max 1600W / 200-240V

- +12V / 132A

- +12Vab / 2.1A

**System Management**

Aspeed® AST2500 management controller

GIGABYTE Management Console (AMI MegaRAC SP-X)

Dashboard

JAVA Based Serial Over LAN

HTML5 KWM

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/CLP 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

**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-Z92 system,

1 x CPU heatsinks,

1 x Rail kit

**Part Numbers**

Barebone package: 6NR282Z92MR-00

Spare parts:

- Motherboard: 9M292FS0NR-00

- Rail kit: 25HB2-3A0202-K0R

- CPU heatsink: 25ST1-15320E-J1R

- Back plane board, 24-port: 9CBP2005NR-00

- Rear panel board, 2-port: 9CBP2002NR-00

- Front panel board: 9CPF2001NR-00

- Fan module: 25ST2-883829-D0R

- Power supply: 25EP0-216008-LOS

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

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