GIGABYTE™

W291-Z00

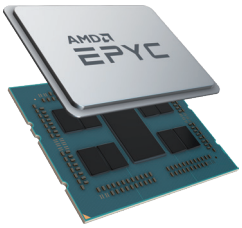
AMD EPYC™ DP Tower System

Features

- High performance tower workstation / e-business server
- Supports up to 4 x double slot GPU cards
- AMD EPYC™ 7002 and 7001 series processor family
- 8-Channel RDIMM/LRDIMM DDR4, 8 x DIMMs
- 2 x 1Gb/s LAN ports (Intel® I210-AT)
- 1 x dedicated management port
- 4 x 3.5" or 2.5" SATAIII hot-swappable HDD/SSD bays
- Ultra-Fast M.2 with PCIe Gen3 x4 interface
- Up to 5 x PCIe Gen3 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.



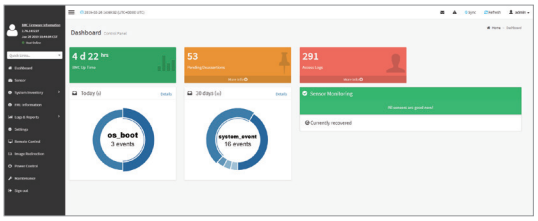
- Built on **7nm** advanced process technology, allowing for denser compute capabilities with lower power consumption
- Up to **64 core** per CPU, built using Zen 2 high performance cores and AMD's innovative chiplet architecture
- Supporting **PCIe Gen 4.0** with a bandwidth of up to 64GB/s, twice of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

NVIDIA® V100 Tensor Core GPU Support

GIGABYTE's AMD EPYC server systems and motherboards are fully compatible and qualified to use with NVIDIA® V100 Tensor Core GPUs, an advanced data center GPU built to accelerate AI, HPC, and graphics. Powered by NVIDIA Volta™ architecture and with 640 Tensor Cores, the NVIDIA 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

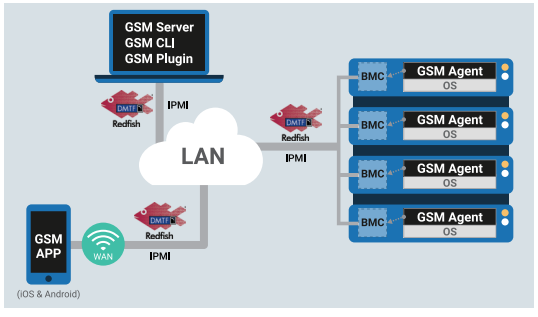
GIGABYTE server utilizes the AMI MegaRAC SP-X solution for BMC server management, has a browser-based graphical user interface, and is feature-rich and easy to use.



- RESTful API support includes the latest DMTF standard of Redfish. Allows integration with 3rd party applications for server management
- Including HTML5 based iKVM remote management client, no need to purchase other additional licenses
- Detailed FRU information from SMBIOS
- 10 to 30 seconds pre-event automatic recording function
- SAS / RAID controller monitoring function

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)	Pedestal 200 x 450.2 x 642.2 mm
Motherboard	MZ01-CE1
CPU	AMD EPYC™ 7002 series processor family Single processors, 7nm Up to 64-core, 128 threads per processor TDP up to 225W, cTDP up to 240W Conditional 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 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
LAN	2 x 1GbE LAN ports (Intel® I210-AT) 1 x 10/100/1000 management LAN
Video	Integrated in Aspeed® AST2500 2D Video Graphic Adapter with PCIe bus interface 1920x1200@60Hz 32bpp
Storage	4 x 3.5" SATAIII hot-swappable HDD/SSD bays 2.5" HDD/SSD supported SAS card is required for SAS devices support
RAID	Depends on SAS Add-on card
Peripheral Drives	1 x 5.25" space reserved for ODD device
Expansion Slots	Slot_7 (PCIe_7): 1 x PCIe x16 (Gen3 x16 bus) Slot_5 (PCIe_5): 1 x PCIe x16 (Gen3 x16 bus) Slot_4 (PCIe_4): 1 x PCIe x8 (Gen3 x8 bus) Slot_3 (PCIe_3): 1 x PCIe x16 (Gen3 x16 bus) Slot_1 (PCIe_1): 1 x PCIe x16 (Gen3 x16 bus) 1 x M.2 slot: - M-key - PCIe Gen3 x4 - Supports NGFF-2242/2260/2280/22110 cards
Internal I/O	1 x 24-pin ATX main power connector, 2 x 8-pin ATX 12V power connectors, 4 x SlimSAS connectors, 1 x M.2 slot, 1 x CPU fan header, 6 x System fan headers, 1 x USB 3.0 header, 2 x COM headers, 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, 2 x LAN activity LEDs Hard drive cage: 1 x HDD power on LED, 1 x HDD activity LED, 1 x HDD key lock
Rear I/O	2 x USB 3.0, 1 x VGA, 2 x RJ45, 1 x MLAN, 1 x ID switch with LED, 1 x Power switch with LED
TPM	1 x TPM header with LPC interface Optional TPM2.0 kit: CTM000
Weight	Net Weight: 19.5 kg / Gross Weight: 23 kg

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 +12Vsb/ 2.1A - Max 1600W/ 200-240V +12V/ 132A +12Vsb/ 2.1A NOTE: Select 2000W power supply if using 280W CPU with full loading configuration
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 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
System Fans	3 x 120x120x38mm (8,500 rpm) 1 x 92x92x25mm (Attached in HDD cage)
Operating	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 W291-Z00, 1 x Heatsink, 1 x Quick Installation guide
Part Numbers	Barebone package: 6NW291Z00MR-00-A* - Motherboard: 9MZ01CE1NR-00-2* - I/O shield: 12AIO-MZ01C1-00R - Power supply: 25EP0-216007-L0S - CPU Fan-sink: 12SF2-01A067-00R - CPU Fan-sink for 280W: 25ST1-243103-A0R(as an option) - System Fan for 280W CPU: 25ST2-88382C-D0R(as an option) - External cable for 280W CPU: 25CRI-350B02-A4R(as an option)

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