

## S452-Z30

Storage Server - 4U 42-Bay Single Processors



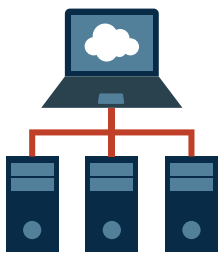
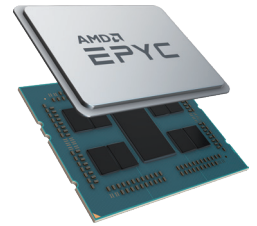
### Features

- Single AMD EPYC™ 7002 series processor family
- 8-Channel RDIMM/LRDIMM DDR4, 16 x DIMMs
- 2 x 1Gb/s LAN ports (Intel® I350-AM2)
- 1 x dedicated management port
- 36 x 3.5" SATA/SAS hot-swap HDD/ SSD bays
- 2 x 2.5" SATA hot-swap SSD bays
- 4 x 2.5" SATA/NVMe hybrid hot-swap SSD bays
- SAS expander with 12Gb/s transfer speed
- 2 x Ultra-Fast M.2 with PCIe Gen3 x4 bandwidth
- Up to 5 x PCIe Gen4 slots and 2 x PCIe Gen3 low profile slots
- Aspeed® AST2500 remote management controller
- Dual 1200W 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



### Easy, Flexible & Powerful Storage Deployment

The S452-Z30 offers the following advantages to your storage deployment:

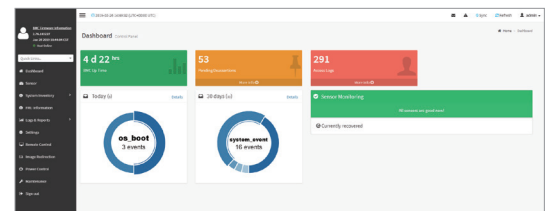
- x86 architecture means compatibility with a large variety of SDS (Software Defined Storage) platforms & applications
- 36 x 3.5" SATA / SAS drive bays for large scale out capacity, over 500TB raw capacity per server
- Rear 4 x 2.5" NVMe / hybrid drive bays for caching to improve I/O performance
- Rear 2 x 2.5" SATA drive bays for OS disks

GIGABYTE has also validated and created reference architectures for our products with various open source software defined storage systems to help make your deployment even faster and easier.

### 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:

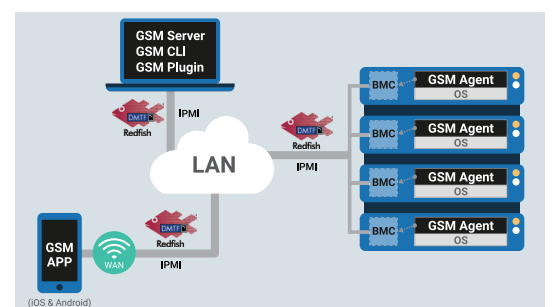
- **RESTful API support** (including the latest DMTF standards of Redfish) allows the administrator to integrate with 3rd party applications for server management
- **HTML5-based iKVM** remote management client included as a standard feature, no additional add-on license required to purchase
- **Detailed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

<b>Dimensions (WxHxD)</b>	4U 482.6 x 177 x 625 mm	<b>TPM</b>	1 x TPM header with SPI interface Optional TPM2.0 kit: CTM010
<b>Motherboard</b>	MZ32-AR0	<b>Power Supply</b>	2 x 80 PLUS Platinum 1200W redundant PSUs  AC Input: - 100-240V~/ 12-7A, 50-60Hz DC Input: - 240Vdc/ 6A DC Output: - Max 1000W/ 100-240V~ +12V/ 80.5A +12Vsb/ 3A - Max 1200W/ 200-240V~ or 240Vdc input +12V/ 97A +12Vsb/ 3A
<b>CPU</b>	AMD EPYC™ 7002 series processor family Single processors, 7nm Up to 64-core, 128 threads per processor cTDP up to 180W Compatible with AMD EPYC™ 7001 series processor	<b>System Management</b>	Asped® 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
<b>Socket</b>	Socet SP3	<b>OS Compatibility</b>	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
<b>Chipset</b>	System on Chip	<b>Weight</b>	Net Weight: 30.18kg / Gross Weight: 53.7 kg
<b>Memory</b>	16 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	<b>System Fans</b>	4 x 80x80x38mm (16,300rpm)
<b>LAN</b>	2 x 1GbE LAN ports (1 x Intel® I350-AM2) 1 x 10/100/1000 management LAN	<b>Operating Properties</b>	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)
<b>Video</b>	Integrated in Asped® AST2500 2D Video Graphic Adapter with PCIe bus interface 1920x1200@60Hz 32bpp, DDR4 SDRAM	<b>Packaging Dimensions</b>	843 x 610 x 290 mm
<b>Storage</b>	Front: 24 x 3.5" or 2.5" SATA/SAS hot-swap HDD/SSD bays Rear: 12 x 3.5" or 2.5" SATA/SAS hot-swap HDD/SSD bays 2 x 2.5" SATA/SAS hot-swap SSD bays* 4 x 2.5" SATA/SAS/NVMe hybrid hot-swap SSD bays*  Default supports: 2 x SATA/SAS and 4 x SATA/SAS/NVMe devices available in rear side 2 x Broadcom SAS35x48 expanders Bandwidth: SATAIII 6Gb/s or SAS 12Gb/s per port SAS card is required to enable the drive bays Suggested 12Gb/s SAS cards: CRA4648, CSA4648  2 x M.2 slots: M-key, PCIe Gen3 x4 (Supports NGFF-2242/2260/2280 cards)	<b>Packaging Content</b>	1 x S452-Z30 1 x CPU heatsinks 1 x Rail kit
<b>SATA</b>	Yes, enterprise devices only	<b>Part Numbers</b>	Barebone package: 6NS452Z30MR-00 - Motherboard: 9MZ32AR0NR-00 - Rail kit: 25HB2-3A6104-I0R - CPU heatsink: 25ST1-44320G-A0R - Back plane board_Front_24-port: 9CBPD4O0NR-00 - Back plane board_Rear_12-port: 9CBPD0C0NR-00 - Back plane board_Rear_2*2.5"-port: 9CBP2021NR-00 - Back plane board_Rear_4*2.5"-port: 9COBPU43NR-00 - 1200W Power supply: 25EPO-212003-D0S
<b>SAS</b>	Depends on SAS add-on Card		
<b>RAID</b>	Depends on SAS add-on Card		
<b>Expansion Slots</b>	Slot_7: 1 x PCIe x16 (Gen4 x16) slot; shared with 4 x NVMe ports Slot_6: 1 x PCIe x16 (Gen4 x16) slot Slot_5: 1 x PCIe x16 (Gen4 x8) slot Slot_4: 1 x PCIe x16 (Gen4 x16) slot Slot_3: 1 x PCIe x16 (Gen4 x16) slot Slot_2: 1 x PCIe x8 (Gen3 x0 or x8) slot Slot_1: 1 x PCIe x16 (Gen3 x16 or x8) slot; shared with slot_2  1 x OCP mezzanine slot with PCIe Gen3 x16 bandwidth (Type1, P1, P2, P3, P4)		
<b>Internal I/O</b>	1 x 24-pin ATX main power connector, 2 x 8-pin ATX 12V power connectors, 10 x SlimSAS connectors, 2 x M.2 slots, 1 x CPU fan headers, 5 x System fan headers, 1 x USB 3.0 header, 1 x USB 2.0 header, 1 x COM_2 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, 1 x Buzzer		
<b>Front I/O</b>	2 x USB 3.0, 1 x Power button with LED, 1 x ID button with LED, 1 x NMI button, 1 x System status LED, 2 x LAN activity LEDs		
<b>Rear I/O</b>	3 x USB 3.0, 1 x VGA, 1 x COM_1, 2 x RJ45, 1 x MLAN, 1 x ID button with LED		
<b>Backplane I/O</b>	3.5" HDD/SSD bandwidth: SATA 6Gb/s or SAS 12Gb/s per port 2.5" HDD/SSD bandwidth: SATA 6Gb/s or SAS 12Gb/s or NVMe PCIe x4 per port		

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

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