



# S453-Z30 (rev. AAV1)

Storage Server - AMD EPYC™ 9004 - 4U UP 36+2-Bay SATA/SAS

[# Storage](#) [# Networking](#)

- Single AMD EPYC™ 9004 Series Processors (with AMD 3D V-Cache™ Technology)
- 12-Channel RDIMM DDR5, 24 x DIMMs
- 2 x 10Gb/s LAN ports via Broadcom BCM57416
- 24 x 3.5"/2.5" SATA/SAS hot-swappable bays on the front side
- 12 x 3.5"/2.5" SATA/SAS hot-swappable bays on the rear side
- 2 x 2.5" SATA/SAS bays on the rear side for boot drives
- SAS expander with 12Gb/s transfer speed
- 1 x M.2 slot with PCIe Gen4 x4 interface
- 4 x LP PCIe Gen5 x16 slots
- Dual 1600W 80 PLUS Titanium redundant power supply



## OVERVIEW SPECIFICATIONS SUPPORT RESOURCES Where to Buy

### Dimensions (WxHxD, mm)

4U  
482.6 x 177 x 625

### Motherboard

[MZ33-AR0](#)

### CPU

AMD EPYC™ 9004 Series Processors  
AMD EPYC™ 9004 Series Processors with AMD 3D V-Cache™ Technology  
Single processor, 5nm technology  
\*Up to 128 coreS, 256 threads  
cTDP up to 300W at ambient 35°C

**\*cTDP supported up to 400W under limited thermal conditions. Please contact technical support for more details.**

### Socket

1 x LGA 6096  
Socket SP5

### Chipset

System on Chip

### Memory

24 x DIMM slots  
DDR5 memory supported only  
12-Channel memory architecture  
RDIMM up to 96GB supported  
3DS RDIMM up to 256GB supported  
Memory speed: Up to 4800 MT/s (1DPC), 3600 MT/s (2DPC)

### LAN

#### Rear side:

2 x 10Gb/s LAN ports (1 x Broadcom<sup>®</sup> BCM57416)  
Support NCSI function

1 x 10/100/1000 Mbps Management LAN

### Video

Integrated in Aspeed<sup>®</sup> AST2600  
2D Video Graphic Adapter with PCIe bus interface  
1920x1200@60Hz 32bpp

### Storage

#### Front side:

24 x 3.5"/2.5" SATA/SAS hot-swappable bays, connected to expander

#### Rear side:

12 x 3.5"/2.5" SATA/SAS hot-swappable bays, connected to expander  
2 x 2.5" SATA/SAS bays for boot drives, from onboard connector  
**- (Additional SAS card is required for SAS support on boot drives)**

1 x Broadcom SAS35x48 expanders  
Bandwidth: SATA 6Gb/s or SAS 12Gb/s per port

**SAS card is required to enable the drive bays**

Recommended SAS cards:

[CSA4710](#)  
CRA4760  
CRA4761

### SAS

Supported

### RAID

Depends on SAS add-in cards

### Expansion Slots

4 x PCIe x 16 (Gen5 x16) low-profile slots

1 x M.2 slot:

- M-key
- PCIe Gen4 x4
- Supports 2280/22100 cards

### Internal I/O

1 x TPM header

### Front I/O

- 2 x USB 3.2 Gen1
- 1 x Power button with LED
- 1 x ID button with LED
- 1 x Reset button
- 1 x Storage activity LED
- 1 x System status LED

### Rear I/O

- 2 x USB 3.2 Gen1
- 1 x VGA
- 1 x COM
- 2 x RJ45
- 1 x MLAN
- 1 x ID button with LED

### Backplane Board

Speed and bandwidth:

**Front side - CBPD400:** SATA 6Gb/s or SAS 12Gb/s

**Rear side - CBP2021:** SATA 6Gb/s or SAS 12Gb/s

**Rear side - CBPD0C0:** SATA 6Gb/s or SAS 12Gb/s

### TPM

1 x TPM header with SPI interface  
- **Optional** TPM2.0 kit: [CTM010](#)

### Power Supply

Dual 1600W 80 PLUS Titanium redundant power supply

#### AC Input:

- 100-127V~/ 12A, 50-60Hz
- 200-240V~/ 10A, 50-60Hz

#### DC Input: (Only for China)

- 240Vdc/ 8A

#### DC Output:

- Max 1000W/ 100-127V~
- +12.2V/ 82A
- +12.2Vsb/ 3A
- Max 1600W/ 200-240V~ or 240Vdc Input
- +12.2V/ 132A
- +12.2Vsb/ 3A

### System Management

Aspeed<sup>®</sup> AST2600 management controller  
GIGABYTE Management Console (AMI MegaRAC SP-X) web interface

Dashboard  
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  
Advanced power capping  
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

Please refer to OS compatibility table in support page

### System Fans

- 4 x 80x80x38mm (9,000rpm)
- 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)

**Packaging Dimensions**

843 x 610 x 290 mm

**Packaging Content**

1 x S453-Z30-AAV1  
1 x CPU heatsink  
1 x 3-Section Rail kit

**Part Numbers**

- Barebone package: 6NS453Z30MR000AAV1\*  
- Motherboard: 9MZ33AR0NR-000  
- 3-Section Rail kit: 25HB2-3A6104-I0R  
- CPU heatsink: 25ST1-143100-A0R  
- Backplane board - CBP2021: 9CBP2021NR-00  
- Backplane board - CBPD0C0: 9CBPD0C0NR-00  
- Backplane board - CBPD4C0: 9CBPD4C0NR-00  
- Fan module: 25420-80388-D00R  
- Fan module: 25ST2-883829-D00R  
- Power supply: 25EP0-21600D-G1S

\* The entire materials provided herein are for reference only. GIGABYTE reserves the right to modify or revise the content at anytime without prior notice.

\* Advertised performance is based on maximum theoretical interface values from respective Chipset vendors or organization who defined the interface specification. Actual performance may vary by system configuration.

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\* Due to standard PC architecture, a certain amount of memory is reserved for system usage and therefore the actual memory size is less than the stated amount.