

# G294-S41-AAP2

HPC/AI Server - Intel® Xeon® 6700/6500-Series Processors -  
2U DP 4 x PCIe Gen5 GPUs



## Key Features

- Supports up to 4 x dual-slot Gen5 GPUs
- Supports 4 x NVIDIA H200 NVL PCIe GPUs
- Dual Intel® Xeon® 6700/6500-Series Processors
- 8-Channel DDR5 RDIMM/MRDIMM per CPU with 24 x DIMMs
- 2 x 10 Gb/s LAN ports via Intel® X710-AT2
- 8 x 2.5" Gen5 NVMe/SATA/SAS-4 hot-swap bays
- 4 x FHFL PCIe x16 slots with Gen5 x16 lanes or  
8 x FHFL PCIe x16 slots with Gen5 x8 lanes for GPUs
- 2 x LP PCIe x16 slots with Gen5 x16 lanes
- Dual 3000 W 80 PLUS Titanium redundant power supplies

## Applications

AI Platform, AI Training Server, AI Inference Server, Visual Computing, High-Performance Computing Server...

## Specification

|                         |                                                                                                                                                                                                                                                                                                                                                                       |                              |                                                                                                                                                                                                                                        |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dimensions</b>       | 2U (W448 x H87.5 x D962 mm, depth incl. 112 mm rear fans)                                                                                                                                                                                                                                                                                                             | <b>RAID</b>                  | Require RAID add-in cards<br>Onboard VROC key headers                                                                                                                                                                                  |
| <b>Motherboard</b>      | MS44-G20                                                                                                                                                                                                                                                                                                                                                              | <b>PCIe Expansion Slots</b>  | 4 x FHFL x16 (Gen5 x16) or 8 x FHFL x16 (Gen5 x8), for GPUs<br>2 x LP x16 (Gen5 x16)<br><br>*The system supports 4 x <b>NVIDIA H200 NVL</b> PCIe GPUs at 25°C ambient, arranged as four individual GPUs without NVLink bridge support. |
| <b>CPU</b>              | Intel® Xeon® 6 Processors<br>- Intel® Xeon® 6700-Series Processors<br>- Intel® Xeon® 6500-Series Processors<br>Dual processors, TDP up to 250 W<br>- At 30°C ambient, TDP up to 300 W<br>- At 25°C ambient, TDP up to 350 W                                                                                                                                           | <b>I/O Ports</b>             | <b>Rear:</b><br>2 x USB 3.2 Gen1, 1 x VGA, 2 x RJ45, 1 x MLAN                                                                                                                                                                          |
| <b>OS Compatibility</b> | <a href="#">OS Support List</a>                                                                                                                                                                                                                                                                                                                                       | <b>TPM</b>                   | 1 x TPM header (SPI), Optional TPM 2.0 kit: CTM012<br>1 x ProT connector (only enabled on RoT SKU)                                                                                                                                     |
| <b>Socket</b>           | 2 x LGA 4710 (Socket E2)                                                                                                                                                                                                                                                                                                                                              | <b>Power Supply</b>          | Dual 3000 W 80 PLUS Titanium redundant power supplies<br>AC Input: 100-240 V<br><br>*The system power supply requires C19 power cord.                                                                                                  |
| <b>Chipset</b>          | System on Chip                                                                                                                                                                                                                                                                                                                                                        | <b>System Fans</b>           | 8 x 80x80x80mm                                                                                                                                                                                                                         |
| <b>Memory</b>           | 8-Channel DDR5 RDIMM/MRDIMM, 24 x DIMMs <sup>[1]</sup><br>[RDIMM] Up to 6400 MT/s (1DPC), 6000 MT/s (2DPC)<br>[MRDIMM] Up to 8000 MT/s <sup>[2]</sup><br><br><sup>[1]</sup> Intel® Xeon® 6700E-Series Processors only support up to 16 x DIMMs.<br><sup>[2]</sup> MRDIMMs are only supported with Intel® Xeon® 6 Processors with P-cores and in a 1DPC configuration. | <b>Operating Properties</b>  | Operating: 10°C to 35°C, 8% to 80% (non-condensing)<br>Non-operating: -40°C to 60°C, 20% to 95% (non-condensing)                                                                                                                       |
| <b>LAN</b>              | 2 x 10 Gb/s LAN (1 x Intel® X710-AT2), Support NCSI<br>1 x 10/100/1000 Mb/s Management LAN                                                                                                                                                                                                                                                                            | <b>Packaging Content</b>     | 1 x G294-S41-AAP2<br>2 x CPU heatsinks<br>4 x GPU power cables (16-pin, 250mm)<br>4 x Carriers<br>1 x L-shape Rail kit                                                                                                                 |
| <b>Video</b>            | Integrated in ASPEED® AST2600<br>- 1 x VGA port                                                                                                                                                                                                                                                                                                                       | <b>Ordering Part Numbers</b> | 6NG294S41DR000AAP2*                                                                                                                                                                                                                    |
| <b>Storage</b>          | <b>Front hot-swap:</b><br>8 x 2.5" Gen5 NVMe/SATA/SAS-4 <sup>[1][2]</sup><br><br><sup>[1]</sup> Storage card is required to support SATA and SAS drives.<br><sup>[2]</sup> Optional M.2 storage kit available for SATA support without requiring a PCIe storage card.                                                                                                 |                              |                                                                                                                                                                                                                                        |



Learn more at: <https://www.gigabyte.com/Enterprise>

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