FusionServer
G5500 V7 GPU Server
Balanced and Flexible Configuration, Preferred Option for AI
FusionServer G5500 V7 (G5500 V7) is a next-generation 4U 2-socket GPU server. It supports up to 10 x dual-width GPU cards and has the capability to accommodate 4 x standard PCIe cards and 3 x OCP cards for extensive expansion. With 24 x 3.5" drives or 12 x NVMe SSDs, it provides remarkable storage options with ultra-large capacity or ultra-fast storage. G5500 V7 features high performance, flexible architecture, solid reliability, easy deployment, and simplified management. It is designed for accelerating applications such as AI training, AI inference, high-performance computing (HPC), image and video analysis, and databases, and supports enterprise and public cloud deployment.

Optimal performance
- General computing: 2 x 4th Gen Intel® Xeon® Sapphire Rapids processors with up to 350 W TDP per processor, and 32 x DDR5 DIMMs, improving overall performance by up to 50%
- Intelligent computing: up to 10 x dual-width GPU cards, improving AI computing by 25% compared with the server with 8 x GPU cards
- Large storage: up to 24 x 3.5" SAS/SATA drives or 12 x NVMe SSDs + 8 x SATA/SAS drives
- Numerous I/Os: typical configuration of 8 x dual-width GPUs, another 6 x standard PCIe cards and 3 x OCP NICs, leading the industry

Extreme flexibility
- One-click switchover between cascaded and balanced topologies, flexibly adapting to multiple scenarios
- PCIe Retimer-free design, reducing the PCIe lane latency and system power consumption
- GPUDirect Storage/RDMA/P2P, adaptive to large-scale cluster deployment

Ultimate reliability
- Innovative drive design with vibration resistance and noise reduction, diminishing the failure rate by 60% compared to the industry average
- Enhanced system robustness design and automatic firmware recovery
- Reliable fan redundancy: 6 or 8 x customized 8080+ fans in N+1 redundancy
- PSU redundancy and high efficiency: 4 x 3000 W Titanium PSUs in N+N/N+M redundancy
### Technical Specifications

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
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<tbody>
<tr>
<td><strong>Form Factor</strong></td>
<td>4U GPU server</td>
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<tr>
<td><strong>Processor</strong></td>
<td>2 x 4th Gen Intel® Xeon® Scalable processors (Sapphire Rapids), up to 350 W TDP per processor</td>
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<td><strong>Chipset</strong></td>
<td>Emmitsburg PCH</td>
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<td><strong>Memory</strong></td>
<td>32 x DIMMs at up to 4800 MT/s, up to 128 GB per DIMM</td>
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| **Local Storage** | Hot-swappable and flexible drive configurations:  
- Up to 24 x 3.5” SAS/SATA drives  
- Up to 12 x NVMe SSDs and 8 x SATA/SAS drives  
Flash storage: dual M.2 SSDs |
| **RAID**          | RAID 0, 1, 10, 50, 6, and 60; supercapacitors for cache data protection against power failures;  
RAID level migration, drive roaming, self-diagnosis, and remote web-based configuration |
| **GPU Card**      | 10 x dual-width GPU cards                                                                                                                |
| **Network**       | Multiple network expansion capabilities, 3 x OCP 3.0 NICs                                                                                   |
| **PCIe Expansion**| Up to 14 x standard PCIe 5.0 slots, including 10 x dedicated slots for GPU cards                                                          |
| **Fan Module**    | 6 or 8 x hot-swappable counter-rotating fan modules in N+1 redundancy                                                                        |
| **PSU**           | 4 x hot-swappable Platinum/Titanium PSUs in N+NN+N+M redundancy:  
- 1500 W 380 V HVDC PSUs (input: 260 V to 400 V DC)  
- 1200 W -48 V to -60 V DC PSUs (input: -38.4 V to -72 V DC)  
- 2000 W AC Platinum/Titanium PSUs  
1800 W (input: 200 V to 220 V AC, or 192 V to 200 V DC)  
2000 W (input: 220 V to 240 V AC, or 200 V to 288 V DC)  
2150 W Titanium PSUs (input: 230 V to 240 V AC, or 230 V to 288 V DC)  
- 3000 W AC Titanium PSUs  
2500 W (input: 200 V to 220 V AC, or 192 V to 200 V DC)  
2900 W (input: 220 V to 230 V AC, or 200 V to 230 V DC)  
3000 W (input: 230 to 240 V AC, or 230 to 288 V DC) |
| **Management**    | The iBMC chip integrates one dedicated management GE network port, providing comprehensive management features such as fault diagnosis, automatic O&M, and hardware security hardening.  
The iBMC supports standard interfaces such as Redfish, SNMP, and IPMI 2.0, provides a remote management user interface based on HTML5/VNC KVM; supports out-of-band management functions such as monitoring, diagnosis, configuration, Agentless, and remote control for simplified management  
- It is optional to configure the FusionDirector management software that provides advanced management features such as five intelligent technologies, enabling intelligent, automatic, visualized, and refined management throughout the lifecycle |
| **OS**            | Microsoft Windows Server, SUSE Linux Enterprise Server, Red Hat Enterprise Linux, and Ubuntu                                                  |
| **Security**      | Power-on password, administrator password, Trusted Platform Module (TPM) 2.0, security panel, secure boot, and chassis cover opening detection |
| **Operating Temperature** | 5°C to 40°C (41°F to 104°F)*, compliant with ASHRAE Classes A1/A2/A3 |
| **Certification** | CCC, CQC, VCCI, and CE                                                                                                                    |
| **Installation Suite** | L-shaped guide rails, adjustable guide rails, and holding rails                                                                      |
| **Dimensions (H x W x D)** | 175 mm x 447 mm x 898mm (6.89 in. x 17.60 in. x 35.35 in.)                                                                                       |

*The highest operating temperature varies depending on the server configuration. For details, see the white paper.*