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FusionServer

G5500 V7 GPU Server

Balanced and Flexible Configuration, Preferred Option for AI

xFusion Digital Technologies Co., Ltd.

GPU Server
FusionServer G5500 V7

Introduction

G5500 V7

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.

Highlights

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

Form Factor	4U GPU server
Processor	2 x 4th Gen Intel® Xeon® Scalable processors (Sapphire Rapids), up to 350 W TDP per processor
Chipset	Emmitsburg PCH
Memory	32 x DIMMs at up to 4800 MT/s, up to 128 GB per DIMM
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, 5, 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+N/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	5ºC to 40ºC (41ºF to 104ºF)*, 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.

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