



# FusionServer G8600 V7 GPU Server

New-Generation Flagship



xFusion Digital Technologies Co., Ltd.

# GPU Server

## FusionServer G8600 V7

### Introduction



G8600 V7

FusionServer G8600 V7 is a new-generation flagship GPU server ideal for high-performance scenarios such as large-scale accelerated computing, scientific computing, and image and data analysis. It features flagship computing power, ultimate energy efficiency, high reliability, and easy O&M.

### Highlights



#### Supreme Computing Power

- General computing power: 2 x 4th Gen Intel® Xeon® processors (Sapphire Rapids) with up to 350 W TDP per processor, and 32 x DDR5 DIMMs, improving the overall performance by up to 50%
- Intelligent computing power: 8 x GPU modules with the unmatched computing power in the industry
- Optimal architecture: compatible with the high-performance and balanced NVIDIA topologies; PCIe 5.0 devices in cable-free chassis without Retimer chips



#### Ultimate Energy Efficiency

- The 54 V and 12 V dual-plane architecture combined with the Model Predictive Control (MPC) algorithm for GPUs and CPUs enables 5.9% higher energy efficiency than the industry average and saves 500 W power under the typical load
- Compared with the 12 V PSUs, the dual-partitioned 54 V and 12 V PSUs reduce a power conversion step, saving 76 W power per server
- Self-developed 54 V and 12 V Titanium PSUs improve the power efficiency by 2% compared with Platinum PSUs under 50% load
- The 54 V PSUs support dual inputs, improving the power load rate and promoting the power efficiency by 1.9%
- The MPC algorithm for heat dissipation control saves about 1.1% power for fan modules



#### Optimal Reliability

- Highly reliable power supply architecture: 54 V dual-bus PSUs allow a smaller PSU amount and higher redundancy
- Modular and easy O&M: Six modules (GPU, CPU, fan, power supply, and I/O modules) can be replaced without being removed from the chassis, reducing maintenance time by 2.5 times
- Fan module and PSU redundancy: GPU and CPU fan modules in N+1 redundancy, 12 V PSUs in N+N redundancy, and 54 V PSUs in N+1 redundancy

## Technical Specifications

<b>Form Factor</b>	8U GPU server
<b>Processor</b>	2 x 4th Gen Intel® Xeon® Scalable processors (Sapphire Rapids), up to 350 W TDP per processor
<b>Chipset</b>	Emmitsburg PCH
<b>Memory</b>	32 x DIMMs, up to 128 GB per DIMM, up to 4800 MT/s
<b>Local Storage</b>	Hot-swappable drive configurations: - Up to 25 x 2.5" SAS/SATA drives - Up to 8 x NVMe SSDs - 2 x M.2 SSDs
<b>RAID</b>	RAID 0, 1, 10, 5, 50, 6, or 60; supercapacitors for cache data protection from power failures; RAID level migration, drive roaming, self-diagnosis, and remote web-based configuration
<b>GPU Module</b>	8 x GPU modules
<b>Network</b>	2 x OCP 3.0 NICs, which can be configured as required and supports orderly hot swap
<b>PCIe Expansion</b>	Up to 22 x PCIe slots, including 20 x standard PCIe slots, 2 x OCP 3.0 slots, and 1 x built-in RAID controller card slot
<b>Fan Module</b>	GPU: 10 x 54 V fan modules in N+1 redundancy; CPU: 5 x 12 V fan modules in N+N redundancy
<b>PSU</b>	54 V PSUs Up to 6 x hot-swappable PSUs in N+1 redundancy: - 3000 W AC Titanium PSUs 1500 W (input: 100 V AC to 180 V AC) 2500 W (input: 180 V AC to 200 V AC) 3000 W (input: 200 V AC to 264 V AC) 12 V PSUs 2 x hot-swappable PSUs in N+N redundancy: - 3000 W AC Titanium PSUs 2500 W (input: 200 V AC to 220 V AC) 2900 W (input: 220 V AC to 230 V AC) 3000 W (input: 230 V AC to 240 V AC)
<b>Management</b>	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
<b>OS</b>	Ubuntu, SUSE Linux Enterprise Server, Red Hat Enterprise Linux, and others
<b>Security</b>	Power-on password, administrator password, Trusted Platform Module (TPM) 2.0, and secure boot
<b>Operating Temperature</b>	5°C to 35°C (41°F to 95°F), compliant with ASHRAE Class A1/A2/A3
<b>Certification</b>	CQC, CE, and RoHS
<b>Installation Suite</b>	L-shaped guide rails
<b>Dimensions (H x W x D)</b>	356 mm x 447 mm x 898 mm (14.02 in. x 17.60 in. x 35.35 in.)

\*According to the plan, it will be realized within 2023.



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