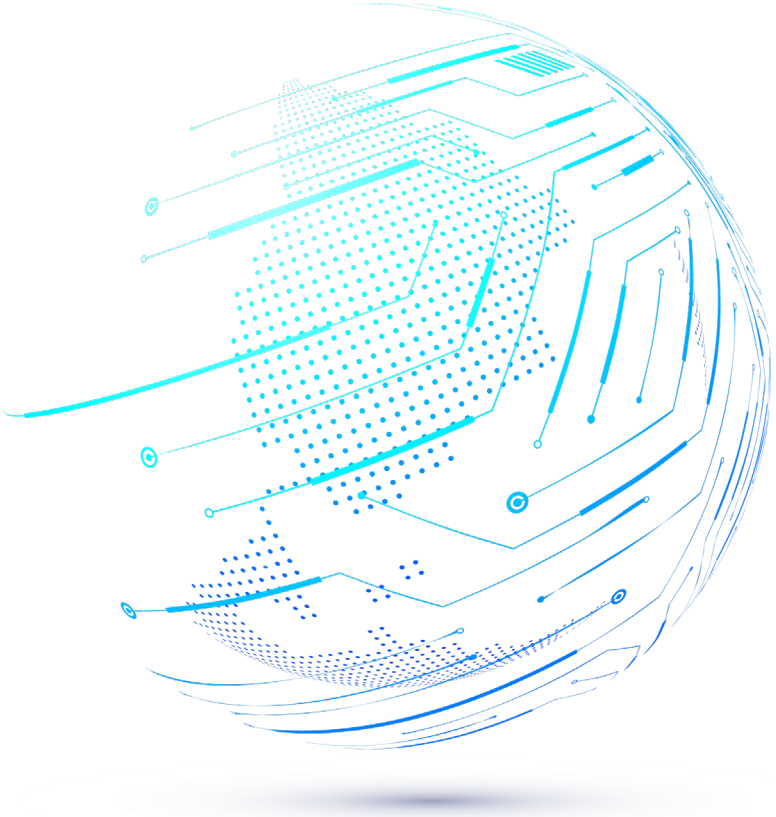
Fusion X, Digital Infinity

KunLun Mission Critical Servers

KunLun 9008 V5

Technical Specifications



Leading Transformation Towards x86 Mission Critical Servers

KunLun Mission Critical Servers

Openness is the IT industry trend. For a long time, enterprises have used closed mission critical servers that incur high O&M costs and hinder service innovation. They do not meet enterprises' strategic development requirements in digital economy era. Enterprises need to move their mission critical computing to open architectures. The new era for mission critical servers has come.

Based on the x86 open ecosystem, KunLun mission critical servers deliver industry-leading high performance and reliability. Compared to closed mission critical servers, KunLun has obvious advantages in terms of flexibility, interoperability, and cost-effectiveness. It helps enterprises accelerate service innovation and take the lead in the digital economy era.

KunLun Mission Critical Servers

KunLun supports both single-node scale-up and multi-node scale-out and incorporates FusionServer's innovative RAS 2.0 technology, featuring high stability and reliability, flexible consolidation, and open ecosystem:

Stable and reliable

Innovative RAS 2.0 technology, proactive failure analysis engine (PFAE), intelligent Memory Secure Protection (MSP), ensuring service continuity.

Flexible consolidation

Support for scale-up and scale-out; physical partitioning, enhancing resource utilization.

Open ecosystem

Cooperating with the world's top partners in building open, comprehensive industry chains and E2E solutions, improving the economic efficiency of mission critical computing and enterprises' IT ROI.

Application Scenarios

Database

Compatible with mainstream databases such as Oracle DB/IBM DB 2/SQL Server, 30% lower TCO and 40% higher performance

In-memory computing

Certified for operating full-series SAP HANA of 192 GB to 18 TB, massive data real-time interaction and insight

HPC fat nodes

Support for 18x single-node computing resources, 25x memory bandwidth, and ns-level transmission latency for higher service processing efficiency

Cloud computing & virtualization

Elastic computing resources, unified management, and strong interoperability, simplifying O&M complexity

Highlights

Stable and reliable

RAS 2.0 proactive fault management for service continuity

- Multi-layer fault-tolerant architecture: fault-tolerant chips, firmware, and OSs; key component redundancy to avoid single points of failure.
- PFAE: OS-independent fault information collection and analysis, component-level proactive fault warning, locating, isolation, and replacement.
- Modular design for easy maintenance without opening the chassis cover: tool-free maintenance, greatly improving O&M efficiency.

Flexible consolidation

Service-oriented partition management and on-demand computing resource allocation

- K-Par partitioning: K-Par physical partitioning, allowing flexible partitioning and maximizing resource utilization.
- industry-leading computing performance proven in SPECint_rate Integer and SPECfp_rate Floating Point

Open ecosystem

Comprehensive industry chain support and E2E solution capabilities

- Compatible with mainstream databases (Oracle DB/IBM DB2/SQL Server/SAP HANA), middleware, and OSs (Red Hat Linux/SUSE Linux/Windows Server); cooperation with partners to promote industry chain development and meet enterprises' core requirements.
- Comprehensive solution capabilities: Professional solution development team built to provide one-stop services from consulting, planning, to after-sales O&M with their extensive UNIX to Linux migration experience, helping enterprises accelerate their transformation to open mission critical computing.
- Better economic benefits of mission critical computing: Compared with conventional UNIX servers, KunLun reduces TCO by over 30% and brings higher IT ROI.

KunLun 9008 V5 Product Specifications

- Up to 8 CPUs, 224 cores, and 18 TB memory
- Standard cabinet

Category	Item	KunLun 9008 V5
Basic configuration	One system compute enclosure (SCE)	
Processor	2/4/6/8 Intel® Xeon® Scalable processors Skylake/Cascade Lake with a maximum TDP of 205 W	
Memory	96 DDR4 DIMM slots and up to 18 TB memory capacity. If Intel® Optane™ DC persistent memory is configured, the maximum memory capacity is 36 TB	
Local storage	Up to 48 x 2.5-inch SAS/SATA HDDs or 40 x 2.5-inch NVMe SSDs; external storage of M.2 SSDs (supporting hardware RAID)	
RAID	RAID 0, 1, 10, 5, 50, 6, or 60; optional supercapacitor for power-off protection for the cache; RAID state transition; RAID configuration memory; self-diagnosis; web-based remote configuration	
LOM network port	2 x 10GE + 2 x GE ports	
PCIe expansion	Up to 18 PCIe 3.0 slots	
Partitioning	Physical partitioning K-Par	Two physical partitions supported
Management	The iBMC chip integrates one dedicated GE management port to provide comprehensive management functions such as fault diagnosis, automated 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 CD-free deployment and Agentless for smart and simplified management. (Optional) Configured with the FusionDirector management software to provide advanced management functions such as stateless computing, batch OS deployment, and automated firmware upgrade, enabling automatic management throughout the lifecycle.	
DVD drive	Up to one SATA DVD-RW drive	
Fan module	Eight hot-swappable counter-rotating fan modules in N+1 redundancy mode	
PSU	SCE	Four hot-swappable PSUs in N+N redundancy mode: 2000 W AC Titanium, 2500 W DC Platinum, or 3000 W AC Platinum
	Central management enclosure (CME) and REE	By default, each chassis is configured with two AC PSUs that support 1+1 redundancy.
Mechanical specifications	Dimensions	SCE (H x W x D): 325.4 mm x 447 mm x 840 mm (12.81 in. x 17.60 in. x 33.07 in.)
Environmental specifications	Temperature	Operating temperature: 5°C to 45°C (41°F to 104°F) (ASHRAE Class A3 compliant)
Installation Kit	Supports adjustable L-shaped guide rails	
OS and virtualization software		Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), Microsoft Windows Server, VMware ESX For details, visit https://www.xfusion.com/en/

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xFusion Digital Technologies Co., Ltd.

9th Floor, Building 1, Zensun Boya Square, Longzihu Wisdom Island,
Zhengdong New District, Zhengzhou, Henan Province

Consulting telephone: 400-080-6888
Technical hotline: 400-009-8999
Postal code: 450046