Inventec

Inventec Data Center Solutions

P9000G7(AC)

The Backbone of Next-Generation AI Infrastructure

Highlights

- **Support dual Intel® Xeon® 6 processor with E-cores and P-cores**
- **Powered by the NVIDIA HGX™ B300 system with air cooling solution**
- **Best GPU Communication with NVIDIA NVLink™ Bridge**
- **Support DDR5 DIMM, 6400 MT/s @ 1DPC, 5200 MT/s @ 2DPC**
- **Accommodate up to 8 U.2 NVMe SSD**
- **Inventec-designed retimer board boosts CPU-GPU data flow**
- **Increase power efficiency and reliability by decoupling 12V and 54V power source**
- **Modular design for scalability and serviceability**

The P9000G7 (AC) is not just another high-performance server. It is a launchpad for the next era of intelligent infrastructure. Designed from the ground up to meet the rising demands of AI and HPC, it brings together the newest Intel® Xeon® 6 processors with E-cores and P-cores and NVIDIA's most advanced GPU platform, the HGX™ B300. This fusion of compute power drives breakthroughs in machine learning, model training, and real-time analytics. With precision air cooling engineered for balance and thermal stability, P9000G7 stands as a robust, future-ready foundation for high-impact workloads.

Next-Generation Processing Power for AI Infrastructure

At the core of the P9000G7(AC) is a powerful pairing. Dual Intel® Xeon® 6 processors and the HGX™ B300 8-GPU system work together to unlock massive parallelism and energy-efficient performance. This combination provides the flexibility and speed required for a wide range of AI workloads, from training to inference. Within a 10U form factor, the system supports up to 8 U.2 NVMe SSDs for fast local access to large training datasets, while the NVIDIA ConnectX-8 SuperNIC™, integrated on the same board as the GPUs, reduce latency and improve throughput in distributed environments. This architecture ensures that compute, storage, and networking are tightly aligned to support high-performance AI at scale.

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High-Speed Interconnects for Smooth AI Execution

Efficient data movement between system components is essential for maximizing AI performance. The P9000G7 (AC) supports DDR5 memory up to 6400 MT/s at 1DPC and 5200 MT/s at 2DPC, enabling high memory bandwidth for CPU-side processing and fast access to training data. NVIDIA NVLink™ Bridge tightly connects GPUs, enabling fluid collaboration and high-throughput processing across multi-GPU workloads. To further enhance overall system responsiveness, the P9000G7 (AC) includes an Inventec-designed retimer board that improves signal integrity and accelerates data exchange between CPU and GPU modules, ensuring smooth performance in data-intensive environments.

Designed for Uptime and Maintenance Efficiency

In AI infrastructure, agility and uptime are as critical as raw performance. That is why the P9000G7(AC) is engineered with a modular, service-centric approach. Its tool-less design provides quick access to all critical components to improve serviceability and reduce maintenance effort. The clear separation between the host and GPU modules enhances airflow zoning and simplifies cooling management, ensuring stable performance and operational agility across dense computing deployments.

Form Factor	10U Rackmount W x H x D: 448x 441x 850 mm (17.63x 17.36x 33.46inch)
Processor	Intel Xeon 6700-series with E-cores Intel Xeon 6700/6500-series with P-cores
GPU Module	NVIDIA HGX™ B300 (AC)
PCIe Slot (from MLB)	Option(1) 1x FHHLDW Option(2) 2x FHHLSW Option(3) 1x OCP 3.0 SFF + 1x FHHLDW
E-W network	8x 800Gb OSFP connectors
Storage (from MLB)	8x U.2 NVMe SSD bays 4x U.2 NVMe SSD bays (option) 2x M.2 SATA SSD or NVMe SSD
Management Port	1x RJ45 for BMC(AST2600) remote management
Cooling	Air cooling
Power Supply	3300W 54V ATS PSU, support 5+1 redundancy 2000W 12V PSU, support 1+1 redundancy
Fan	15x 8086 Fan for GPU cooling 5x 8056 Fan for CPU cooling

About Inventec Data Center Solutions (Inventec EBG)

Inventec Data Center Solutions (Inventec EBG) was established in 1998 and has been focusing on the design and manufacturing of server systems in Inventec Corporation. Over decades, Inventec EBG has been the key server system supplier of the global branding clients.

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