AKHET® Performance vs. AKHET® Essential: Two Server Series for Every Application

With its server series AKHET® Performance and AKHET® Essential, Pyramid Computer offers two clearly differentiated platforms, each tailored to the specific requirements of advanced IT infrastructures. While the Performance series aims for maximum computing power, scalability and specialized high availability, the Essential series scores with efficiency, flexibility and an excellent price-performance ratio for standard workloads..

The AKHET® Performance series is designed for deployment scenarios where uncompromising performance and maximum reliability are required. Two 6th Gen Intel® Xeon® processors, up to 2 TB DDR5 ECC RAM, and a sophisticated storage layout with up to 24 hot-swap capable drives and RAID caching ensure outstanding performance for data-intensive applications. This makes this series ideal for high-performance computing (HPC), AI/ML workloads, in-memory databases, big data analytics, and complex virtualization, hyperconverged and cloud infrastructures..

The Performance series also sets standards with regard to networking: with flexible connection options of up to 200 GbE and RDMA support, it is ideal for applications with low latency and high bandwidth requirements – for example in research, the financial sector or industrial AI inference tools. Redundant power supplies (2x 1600 W Titanium) and support for current hypervisors such as VMware vSan, Windows Server 2025 and Collax V-Cube+ complete this platform for mission-critical workloads.

The 2U model in the Performance series is one of its highlights, offering space for up to three NVIDIA A2 GPUs. This configuration opens up new possibilities in the area of graphics-intensive virtualization environments, e.g., for providing CAD applications via cloud infrastructures. Thanks to special NVIDIA software, the physical GPUs can be split into several virtual graphic processors. This allows parallel user instances to be created, in which users can access powerful virtual CAD workstations with high performance and a seamless user experience. This makes the Performance systems particularly interesting for architecture and design offices, engineering service providers or universities with distributed locations.

The AKHET® Essential series is the ideal solution for classic corporate requirements and educational institutions. The Essential models are equipped with a 5th Gen Intel® Xeon® or AMD EPYC™ processor, up to 256 GB DDR5 ECC RAM and 24 hot-swap capable drives (2U). Onboard 10 GbE and IPMI management ensure good integration into existing infrastructures, while compatibility with common operating systems and hypervisors (e.g., Windows Server 2022/2025, Linux distributions) guarantees broad usability

The AKHET® Essential servers are perfect for classic IT tasks, such as user management, file servers, backup systems, internal databases, or as a stable platform for ERP and CRM systems. They also deliver reliable performance in the area of virtualization when several smaller VMs need to operate – for example, for web services, Dev Ops environments or Office applications. By supporting proven operating systems and common hypervisors, the servers can be integrated flexibly into existing IT landscapes. Their combination of energy efficiency and hot-swap capable storage also makes them the ideal choice for smaller data centers or as edge components in distributed IT operations..

Hardware Comparison AKHET® Performance vs. AKHET® Essential

Feature	Performance series	Essential series
PROCESSOR PERFORMANCE	2× Intel® Xeon® Gen 6 for maximum computing capacity	Intel® Xeon® Gen 5 or AMD EPYC for solid business performance
RAM CAPACITY	Up to 2 TB DDR5 ECC	Up to 256 GB DDR5 ECC
GPU SUPPORT	Up to 3x NVIDIA A2 (2U only) for CAD, AI, image analysis	-
NETWORK	Flexible, up to 200 GbE incl. RDMA	Onboard 2x 10 GbE+ 2x 1 GbE
STORAGE	Up to 24 hot-swap SSDs/HDDs with RAID + caching via NVMe	Up to 24 hot-swap HDDs/SSDs
VIRTUALIZATION	For high-load environments, in-memory DBs, multi-VM workloads	For SME VM clusters, web services, test scenarios
FIELDS OF APPLICATION	HPC, AI, cloud, research, finance	SMEs, public authorities, education, internal services
POWER SUPPLY	2x 1600 W redundant (Titanium)	Redundant power supply unit
OPERATING SYSTEMS/HYPERVISOR	Windows Server 2025, Azure Local , VMWare ESXi 8, Collax V-Cube+	Windows Server 2022/25, Linux, VMWare ESXi 7/8

Use Case Matrix

Use Case	Performance series	Essential series
CAD-AS A SERVICE (CADAAS)	✅ (with GPU virtualization)	-
DATABASE SERVER (IN-MEMORY)	✅	⚠️ (for smaller workloads)
WEB SERVER / APPLICATION SERVER	⚠️ (Overkill) / ✅	✅
BACKUP / FILE SERVICES	✅	✅
VIRTUALIZATION WITH MANY VMS HCI AND MULTI-NODE-CLUSTER	✅	⚠️ (limited)
RESEARCH / MACHINE LEARNING	✅	-

Conclusion

The choice between Performance and Essential is not a question of quality, but of objectives. If you need maximum performance, GPU acceleration and high-availability infrastructure for computing-intensive scenarios, the AKHET® Performance series is the right solution. For general business applications, solid virtualization, or efficient storage systems, the AKHET® Essential series is the more economical yet powerful alternative.