

Unmatched Storage Performance and Flexibility for AI and Deep Learning

RAID Inc.'s X-AI Accelerated, Any-Scale (AI) solutions break new ground for Artificial Intelligence (AI) and Deep Learning (DL), providing unmatched flexibility for your organization's AI needs. Engineered from the ground-up for the AI-enabled data center, X-AI solutions are optimized for ingest, training, data transformations, replication, metadata and small data transfers. RAID Inc. offers flexibility in platform choice with the all-flash NVMe X2/X4 or the X5, a hybrid flash and hard drive storage platform which leverages parallel access to flash and deeply expandable HDD storage. The X-AI storage platform supports a scale-out model with solutions starting at a few TBs yet scalable to 10s of PBs.

Fully Integrated, GPU-Optimized Data Platforms

Easy to deploy, RAID's X-AI solutions are turn-key, pre-configured, and provide the most capable scale-out platform for capacity and performance.

Full GPU Saturation

Fully optimized for all types of I/O patterns and data layouts, the RAID Inc. X-AI storage solutions deliver data to applications, ensuring full GPU resource utilization even with distributed applications running on multiple computing servers. Performance testing on the RAID X-AI architecture has been conducted with all widely-used DL frameworks (TensorFlow, Horovod, Torch, PyTorch, NVIDIA® TensorRT™, Caffe, Caffe2, CNTK, MXNET and Theano). Using the X-AI intelligent client, containerized applications can engage the full capabilities of the data infrastructure, achieves full GPU saturation consistently for DL workloads.



Capacity-Efficient AI Storage

RAID's X-AI storage solutions provide flexible capacity expansion options, with up to 360TB of scale-out NVMe 1400 appliances, or 5.4PB of hybrid storage in the X5.

Highest Resiliency, Reliability, and Security at Scale

By introducing cool air into the center of the chassis, drives operate at lower and more consistent temperatures than conventional systems. This results in lower fan speeds, reduced vibration, lower power consumption, quieter operation and ultimately higher reliability.

Unified Namespace

RAID's X-AI solutions allow for consolidation of hot training data and warm expanding data libraries into a single platform, providing easy data access from a unified interface.

Multi-Tenancy and Quota Support

RAID's X-AI solutions can be secured on a per-tenant basis that ensure users and applications can only access the data that they're entitled to. Advanced quota controls provide easy management of file system consumption at the user, group, and project level.

Use Cases

- Driverless Cars: Massive Scale Out. Real Time Ingest and Process.
- Financial Fraud Detection: Fast Flash. High IO/Client Security.
- Augmented Reality: Globally Distributed. Optimized IO.
- Healthcare Diagnostics – Sensor Data. Live Diagnostics. Security.
- Personalized Marketing – Distributed Analytics. Resilient.
- Natural Language – Massie Ingest. Flash/Disk. Large Data Sets.

Technical Specifications



X2



X4



X5

<p>System Features</p> <ul style="list-style-type: none"> • High Performance GPU-optimized parallel file system • Sequential read performance up to 25GB/s • Sequential write performance up to 25GB/s • Up to 750,000 IOPs per appliance <p>Controller Host Ports per Appliance</p> <ul style="list-style-type: none"> • 4 x EDR InfiniBand or 100 GbE <p>Drive Support</p> <ul style="list-style-type: none"> • 24 x 2.5" dual port NVMe 	<ul style="list-style-type: none"> • High performance GPU-optimized parallel file system • Sequential read performance up to 49GB/s • Sequential write performance up to 33GB/s • Up to 1.5M IOPs per appliance <ul style="list-style-type: none"> • 8 x EDR InfiniBand or 100 GbE <ul style="list-style-type: none"> • 24 x 2.5" dual port NVMe 	<ul style="list-style-type: none"> • High performance GPU-optimized parallel file system • Sequential read performance up to 23GB/s • Sequential write performance up to 16GB/s • Up to 750,000 IOPs per appliance <ul style="list-style-type: none"> • 4 x EDR InfiniBand or 100 GbE <ul style="list-style-type: none"> • 90 x 3.5" drive slots support Enterprise-grade SSDs and HDDs • Up to 4 additional 90-bay expansion drive enclosures
<p>Standard Software Features High performance parallel file system, LUN mapping and masking, intelligent write striping, read QoS, port zoning detection, data integrity check/correction, interface options (SSH to CLI, web-based GUI, Python API), state change messages (via email, SNMP trap and syslog).</p>		
<p>Safety Agency Certifications UI, cUI, CE, FC</p>	<p>Agency Certifications UI, cUI, CE, FC</p>	<p>Agency Certifications UI, cUI, CE, FC</p>

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