



DDN A³I™ Storage Platforms

Providing unmatched storage performance and flexibility for Artificial Intelligence and Deep Learning.

DATA SHEET

Use Cases



DRIVERLESS CARS

Massive Scale Out.
Real Time Ingest and Process



DATA SECURITY FRAUD DETECTION

Fast Flash • High IO/Client Security



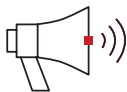
AUGMENTED REALITY

Globally Distributed
Optimized IO



HEALTHCARE DIAGNOSTICS

Sensor Data • Live Diagnostics
Security



PERSONALIZED MARKETING

Distributed Analytics
Resilient



NATURAL LANGUAGE

Massive Ingest
Flash/Disk
Large Data Sets



DDN's A³I 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, A³I solutions are optimized for ingest, training, data transformations, replication, metadata and small data transfers. DDN offers flexibility in platform choice with the all-flash NVMe AI200/AI400 or AI7990, a hybrid

flash and hard drive storage platform which leverages parallel access to flash and deeply expandable HDD storage. The AI200/AI400 and AI7990 support 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, A³I 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, A³I solutions deliver data to applications, ensuring full GPU resource utilization even with distributed applications running on multiple computing servers.

Performance testing on the DDN A³I architecture has been conducted with all widely-used DL frameworks (TensorFlow, Horovod, Torch, PyTorch, NVIDIA® TensorRT™, Caffe, Caffe2, CNTK, MXNET and Theano). Using the A³I intelligent client, containerized applications can engage the full capabilities of the data infrastructure, and that the AI servers achieves full GPU saturation consistently for DL workloads.

Capacity-Efficient AI Storage

A³I solutions provide flexible capacity expansion options, with up to 360TB of scale-out NVMe capacity per AI200/AI400 appliances, or 5.4PB of hybrid storage in the AI7990.

Highest Resiliency, Reliability, and Security at Scale

Engineered to provide the highest data availability and maximum system uptime, all A³I hardware and software components are integrated as a fully redundant system.

Unified Namespace

A³I 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

A³I 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.

Technical Specifications



AI200™



AI400™



AI7990™

System Features

High performance GPU-optimized parallel file system

Sequential read performance up to 20GB/s

Sequential write performance up to 16GB/s

Up to 1M IOPs per appliance

High performance GPU-optimized parallel file system

Sequential read performance up to 40GB/s

Sequential write performance up to 32GB/s

Up to 3M IOPs per appliance

High performance GPU-optimized parallel file system

Sequential read performance up to 20GB/s

Sequential write performance up to 16GB/s

Up to 700,000 IOPs per appliance

Controller Host Ports per Appliance

4 x EDR InfiniBand or 100 GbE

8 x EDR InfiniBand or 100 GbE

4 x EDR InfiniBand or 100 GbE

Drive Support

24 x 2.5" dual port NVMe

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90 x 3.5" drive slots support Enterprise-grade SSDs and HDDs

Up to 4 additional 90-bay expansion drive enclosures

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 e-mail, SNMP trap and syslog).

Safety

Agency Certifications UI, cUI, CE, FC

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Product Specifications Subject to Change. For physical and environmental attributes, see associated SFA Data Sheets

ABOUT DDN®

DataDirect Networks (DDN) is the world's leading big data storage supplier to data-intensive, global organizations. DDN has designed, developed, deployed, and optimized systems, software, and solutions that enable enterprises, service providers, research facilities, and government agencies to generate more value and to accelerate time to insight from their data and information, on premise and in the cloud. For more information, visit our website www.ddn.com or call 1-800-837-2298.

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