



Isilon A200



Isilon A2000

# ISILON ARCHIVE SCALE-OUT NAS

For most businesses today, data storage requirements are continuing to grow rapidly – nearly doubling every 2 to 3 years. 80% of this new data is file-based, unstructured data. This rapid data growth is straining often limited IT resources and increasing management complexity. Increasingly stringent compliance requirements is another factor driving the need for efficient data archiving solutions that can store and protect data for long-term retention. Organizations must also weigh the cost of storing archive data against the need for quick access.

To address these challenges, Dell EMC Isilon offers two highly efficient and massively scalable archive storage solutions – the A200 is an ideal active archive storage solution that combines near-primary accessibility, value and ease of use – while the A2000 is an ideal solution for high density, deep archive storage that safeguards data efficiently for long-term retention.

The A200 and the A2000 are both powered by the OneFS operating system and use an innovative modular architecture to provide an efficient, yet simple scale-out storage platform to store, manage and protect massive amounts of unstructured data, while dramatically reducing cost and complexity. Both platforms utilize a dense hardware design that provides 4 nodes within a single 4U chassis.

The archive platforms can be combined with new or existing all-flash and hybrid storage systems into a single cluster that provides an efficient tiered storage solution.

**Capacity<sup>1,2</sup>:** The A200 provides between 120 TB to 720 TB per chassis and scales to 45 PB in a single cluster. The A2000 stores up to 960 TB per chassis and scales to over 60 PB in a single cluster.

**Efficiency:** OneFS powered storage delivers up to 80 percent storage utilization versus about 50 percent for traditional platforms. SmartDedupe data deduplication software enhances storage efficiency to further reduce your physical storage requirements.

**Simplicity:** You can install, configure, and have a solution online in less than 10 minutes. It's also simple to add an A200 or A2000 to an existing cluster. When needed, you can add an additional A200 or A2000 to the cluster to scale capacity in a matter of minutes. And, your solution remains simple to manage no matter how large your data environment becomes.

**Data protection:** OneFS powered solutions are highly resilient and offers N+1 through N+4 redundancy. You may also choose from a variety of efficient and proven enterprise data backup and disaster recovery options.

**Security:** OneFS powered solutions offer a broad range of robust security options including FIPS 140-2 level 2 self-encrypting drives, role-based access control (RBAC), secure access zones, SEC 17a-4 compliant WORM data immutability, SMB3 encryption, HDFS Transparent Data Encryption (TDE) and integrated file system auditing support.

<sup>1</sup> Usable capacity will be lower than the raw capacity reflected in this specification sheet.

<sup>2</sup> Maximum cluster sizes for A200 and A2000 is 252 nodes or 63 fully populated chassis.

## A200 SPECIFICATIONS

A200 ATTRIBUTES & OPTIONS	2 TB HDD	4 TB HDD	8 TB HDD	12 TB HDD
CHASSIS CAPACITY <sup>1</sup>	120 TB	240 TB	480 TB	720 TB
HDD DRIVES (3.5" SATA) PER CHASSIS	60			
SELF-ENCRYPTING DRIVE (SED HDD) OPTION	Yes	Yes	Yes	Yes
OPERATING SYSTEM	OneFS 8.1 or later except for self-encrypting drive options which require OneFS 8.1.0.1 or later.			
NUMBER OF NODES PER CHASSIS	4			
CPU TYPE (PER NODE)	Intel® Pentium® Processor D1508			
ECC MEMORY (PER NODE)	16 GB			
CACHE (PER NODE) SOLID STATE DRIVES (400 GB SSD FOR 2, 4 AND 8 TB HDD AND 800 GB SSD FOR 12 TB HDD)	1 or 2	1 or 2	1 or 2	1 or 2
SELF-ENCRYPTING DRIVE (SED SDD) OPTION	Yes	Yes	Yes	Yes
FRONT-END NETWORKING (PER NODE)	2 x 10GbE (SFP)			
INFRASTRUCTURE NETWORKING (PER NODE)	2 InfiniBand connections supporting QDR links or 2 X 10 GbE (SFP)			
TYPICAL POWER CONSUMPTION @ 240V (PER CHASSIS)	1060 Watts (@25°C)			
MAXIMUM POWER CONSUMPTION @ 240V (PER CHASSIS)	1460 Watts			
TYPICAL THERMAL RATING	3600 BTU/hr			

<sup>1</sup> Usable capacity will be lower than the raw capacity reflected in this specification sheet.

## A2000 SPECIFICATIONS

A2000 ATTRIBUTES & OPTIONS	10 TB HDD	12 TB HDD
CHASSIS CAPACITY <sup>1</sup>	800 TB	960
HDD DRIVES (3.5" SATA) PER CHASSIS	80	
SELF-ENCRYPTING DRIVE (SED HDD) OPTION	Yes	Yes
OPERATING SYSTEM	OneFS 8.1 or later except for self-encrypting drive options which require OneFS 8.1.0.1 or later.	
NUMBER OF NODES PER CHASSIS	4	
CPU TYPE (PER NODE)	Intel® Pentium® Processor D1508	
ECC MEMORY (PER NODE)	16 GB	
CACHE (PER NODE) SOLID STATE DRIVES (400 GB SSD FOR 2, 4 AND 8 TB HDD AND 800 GB SSD FOR 12 TB HDD)	1 or 2	1 or 2
SELF-ENCRYPTING DRIVE (SED SDD) OPTION	Yes	
FRONT-END NETWORKING (PER NODE)	2 x 10GbE (SFP+)	
INFRASTRUCTURE NETWORKING (PER NODE)	2 InfiniBand connections supporting QDR links or 2 X 10GbE (SFP+)	
TYPICAL POWER CONSUMPTION @ 240V (PER CHASSIS)	1120 Watts (@25°C)	
MAXIMUM POWER CONSUMPTION @ 240V (PER CHASSIS)	1520 Watts	
TYPICAL THERMAL RATING	3800 BTU/hr	

CLUSTER ATTRIBUTES	A200	A2000
NUMBER OF CHASSIS <sup>2</sup>	1 to 63	1 to 63
NUMBER OF NODES <sup>2</sup>	4 to 252	4 to 252
CLUSTER CAPACITY <sup>1, 2</sup>	120 TB to 45.3 PB	800 TB to 60.4 PB
RACK UNITS <sup>2</sup>	4 to 252	4 to 252

<sup>1</sup> Usable capacity will be lower than the raw capacity reflected in this specification sheet.

<sup>2</sup> Maximum cluster sizes for A200 and A2000 running OneFS 8.2 or later is 252 nodes or 63 fully populated chassis.

## PRODUCT ATTRIBUTES

SCALE-OUT ARCHITECTURE	Distributed, fully symmetric clustered architecture that combines modular storage with OneFS powered operating system
MODULAR DESIGN	4 self-contained nodes include compute assembly and HDDs in a 4U rack-mountable chassis. integrates easily into existing clusters
OPERATING SYSTEM	OneFS operating system creates a cluster with a single file system and single global namespace; fully journaled, fully distributed, globally coherent write/read cache
HIGH AVAILABILITY	No single point of failure; self-healing design protects against disk or node failure; includes back-end intra-cluster failover
SCALABILITY	With OneFS 8.2 or later, scales from 4 to 252 nodes in a single cluster with up to 30 PB capacity (raw) for the A200 and up to 50 PB capacity (raw) for the A2000.
DATA PROTECTION	FlexProtect™ file-level striping with support for N+1 through N+4 and mirroring data protection schemes
DATA REPLICATION	SyncIQ® fast and flexible file-based asynchronous replication
2-WAY NDMP	Supports two ports of Fibre Channel (8G) that allows for 2-way NDMP connections, and two ports of standard 10GbE connectivity
DATA RETENTION	SmartLock® policy-based retention and protection against accidental deletion
SECURITY	File system audit capability to improve security and control of your storage infrastructure and address regulatory compliance requirements
EFFICIENCY	SmartDedupe data deduplication option, which can reduce storage requirements by up to 35 percent
AUTOMATED STORAGE TIERING	Policy-based automated tiering options, including SmartPools and CloudPools software, to optimize storage resources and lower costs
NETWORK PROTOCOL SUPPORT	NFSv3, NFSv4, NFS Kerberized sessions (UDP or TCP), SMB1 (CIFS), SMB2, SMB3, SMB3-CA, Multichannel, HTTP, FTP, NDMP, SNMP, LDAP, HDFS, ADS, NIS reads/writes

## ENVIRONMENTAL SPECIFICATIONS

POWER SUPPLY	<p>Power factor is a measure of how effectively you are using electricity. The power factor of an AC electrical power system is defined as the ratio of the real power absorbed by the load to the apparent power flowing in the circuit, and is a dimensionless number in the closed interval of -1 to 1. A power factor of less than one indicates the voltage and current are not in phase, reducing the instantaneous product of the two.</p> <p>A200 and A2000: Dual-redundant, hot-swappable 1050W (low line) 1100W (high line) power supplies with power factor correction (PFC); rated for input voltages 90 - 130 VAC (low line) and 180-264 VAC (high line)</p>
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Power factor and efficiency rate for A200 and A2000

System Load	Efficiency	PF
10%	86.00%	0.918
20%	92.95%	0.967
30%	93.93%	0.970
40%	94.41%	0.972
50%	94.49%	0.981
60%	94.11%	0.986
70%	94.04%	0.990
80%	93.86%	0.992
90%	93.63%	0.995
100%	93.25	0.996

**OPERATING ENVIRONMENT**

Compliant with ASHRAE A3 data center environment guidelines

**DIMENSIONS/WEIGHT**

A200: Height: 7" (17.8 cm); Width: 17.6" (44.8 cm);  
 Depth: (front NEMA rail to rear 2.5" SSD cover ejector): 35.8" (91.0 cm);  
 Depth: (front of bezel to rear 2.5" SSD cover ejector): 37.6" (95.5 cm);  
 Weight: 240 lbs. (108.9 kg)

A2000: Height: 7" (17.8 cm); Width: 17.6" (44.8 cm);  
 Depth: (front NEMA rail to rear 2.5" SSD cover ejector): 40.4" (102.6 cm);  
 Depth: (front of bezel to rear 2.5" SSD cover ejector): 42.2" (107.1 cm);  
 Weight: 285 lbs. (129.3 kg)

**MINIMUM SERVICE CLEARANCES**

Front: 40" (88.9 cm), rear: 42" (106.7 cm)

## SAFETY AND EMI COMPLIANCE

### Statement of Compliance

This Information Technology Equipment is compliant with the electromagnetic compatibility (EMC) and product safety regulations/standards required by the countries in which the product is sold. EMC compliance is based on FCC part 15, CISPR22/CISPR24 and EN55022/EN55024 standards, including applicable international variations. EMC compliant Class A products are marketed for use in business, industrial, and commercial environments. Product Safety compliance is based on IEC 60950-1 and EN 60951-1 standards, including applicable national deviations.

This Information Technology Equipment is in compliance with EU RoHS Directive 2011/65/EU.

The individual devices used in this product are approved under a unique regulatory model identifier that is affixed to each individual device rating label, which may differ from any marketing or product family name in this datasheet.

For additional information see <https://support.emc.com> under the Safety & EMI Compliance Information tab.

## TAKE THE NEXT STEP

Contact your Dell EMC sales representative or authorized reseller to learn more about how OneFS powered archive scale-out NAS storage solutions can benefit your organization.

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