



## ISILON HYBRID SCALE-OUT NAS

Dell EMC Isilon hybrid storage platforms, powered by the OneFS operating system, use a highly versatile yet simple scale-out storage architecture to speed access to massive amounts of data, while dramatically reducing cost and complexity. The hybrid storage platforms are highly flexible and strikes the balance between large capacity and high-performance storage to provide support for a broad range of enterprise file workloads. The hybrid storage platforms are available in 4 product lines:

- **Isilon H5600:** Combines massive scalability – 1.28 PB per chassis<sup>1</sup> – and up to 8 GB/s bandwidth – in an efficient, highly dense, deep 4U chassis. The H5600 is designed to support a wide range of demanding, large-scale file applications and workloads.

All hybrid storage platforms are powered by the OneFS operating system and use a dense, modular architecture to provide a powerful, yet simple scale-out storage platform to speed access to unstructured data, while reducing cost and complexity.

**Efficiency:** OneFS powered scale-out storage delivers over 80 percent storage utilization versus about 50 percent for traditional platforms. SmartDedupe data deduplication software enhances storage efficiency to reduce your physical storage requirements. The policy-based, automated tiering options allow you to optimize storage resources and further lower costs.

**Flexibility:** OneFS powered storage solutions support all major protocols and data access methods including NFS, SMB, HDFS, S3, HTTP, and FTP. This means that you can support a wide range of applications and workloads on a single platform.

**Data protection:** The storage is 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 offers a broad range of 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 file system auditing.

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

## H5600 SPECIFICATIONS

H5600 ATTRIBUTES & OPTIONS	10 TB HDD	12 TB HDD	16 TB HDD
CHASSIS CAPACITY <sup>1</sup>	800 TB	960 TB	1.28 PB
HDD DRIVES (3.5" 4KN SATA) PER CHASSIS	80		
SELF-ENCRYPTING DRIVE (SED HDD) OPTION	Yes for 10 and 12 TB HDD. Not yet supported on 16 TB HDD		
OPERATING SYSTEM	OneFS 8.2 or later.		
NUMBER OF NODES PER CHASSIS	4		
CPU TYPE (PER NODE)	Intel® Xeon® Processor E5-2680 v4		
ECC MEMORY (PER NODE)	256 GB		
CACHE (PER NODE) SOLID STATE DRIVES (SSD) (3.2 TB ONLY)	1 or 2	2	
SELF-ENCRYPTING DRIVE (SED SSD) OPTION	Yes	No	
FRONT-END NETWORKING (PER NODE)	2 x 10GbE (SFP+) or 2 x 25GbE (SFP28) or 2 x 40GbE (QSFP+)		
INFRASTRUCTURE (BACK-END) NETWORKING (PER NODE)	2 InfiniBand connections with QDR links or 2 x 40GbE (QSFP+)		
MAX POWER CONSUMPTION @ 200~240V (PER CHASSIS) <sup>3</sup>	1670VA (@25°C)		
TYPICAL THERMAL RATING	5628 BTU/hr		

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

<sup>2</sup> Cluster attributes in this table are based on use of OneFS 8.2 which supports up to 252 nodes in a single cluster.

<sup>3</sup> Values at <25° C are reflective of more steady state maximum values during normal operation

## PRODUCT ATTRIBUTES

SCALE-OUT ARCHITECTURE	Distributed, fully symmetric clustered architecture that combines modular storage with OneFS operating system
MODULAR DESIGN	4 self-contained nodes include compute assembly and storage media in a 4U rack-mountable chassis. Integrates easily into existing clusters
OPERATING SYSTEM	OneFS distributed file 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	A cluster scales from 4 to 252 nodes. Add an additional chassis to scale performance and capacity in about a minute.
DATA PROTECTION	FlexProtect™ file-level striping with support for N+1 through N+4 and mirroring data protection schemes
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 REPLICATION	SyncIQ® fast and flexible file-based asynchronous replication
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, S3, ADS, NIS reads/writes

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## 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>H5600: Dual-redundant, hot-swappable 1450W power supplies with power factor correction (PFC); rated for input voltage 180 – 265 VAC (optional rack mount step-up transformer for 90-130 VAC input regions).</p> <p>Power factor and efficiency rate for H5600 PSU</p>		
	System Load	Efficiency	PF
	10%	89.74%	0.933
	20%	94.28%	0.982
	30%	95.02%	0.990
	40%	95.19%	0.994
	50%	95.11%	0.996
	60%	94.77%	0.997
	70%	94.50%	0.998
	80%	94.13%	0.998
	90%	93.66%	0.998
	100%	92.93%	0.998
OPERATING ENVIRONMENT	Compliant with ASHRAE A3 data center environment guidelines		

## DIMENSIONS/WEIGHT

H5600: 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);

H5600: 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 hybrid scale-out NAS solutions can benefit your organization.



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