



Isilon F800



Isilon F810

ISILON ALL-FLASH SCALE-OUT NAS

Dell EMC Isilon all-flash storage platforms, powered by the Isilon OneFS operating system, provide a powerful yet simple scale-out storage architecture to speed access to massive amounts of unstructured data, while dramatically reducing cost and complexity. With a highly dense design that contains 4 nodes within a single 4U chassis, Isilon all-flash delivers extreme performance and efficiency for your most demanding unstructured data applications and workloads. Isilon all-flash storage is available in 2 product lines:

- Dell EMC Isilon F800:** Provides massive performance and capacity and delivers up to 250,000 IOPS and 15 GB/sec aggregate throughput in a single chassis configuration and up to 15.75M IOPS and 945 GB/s of aggregate throughput in a 252 node⁵ cluster. Each chassis houses 60 SSDs with a capacity choice of 1.6 TB, 3.2 TB, 3.84 TB, 7.68 TB or 15.36 TB per drive. This allows you to scale raw storage capacity¹ from 96 TB to 924 TB in a single 4U chassis and up to 58 PB⁵ in a single cluster.
- Dell EMC Isilon F810:** Along with massive performance and capacity, the F810 provides inline data compression to deliver extreme efficiency. The F810 delivers up to 250,000 IOPS and 15 GB/sec aggregate throughput in a single chassis configuration and up to 9M IOPS and 540 GB/s of aggregate throughput in a single 144 node cluster². Each Isilon F810 houses 60 SSDs with a capacity choice of 3.84 TB, 7.68 TB or 15.36 TB per drive. This allows you to scale raw storage capacity from 230 TB to 924 TB in a 4U chassis and up to 33 PB in a 144 node cluster. Depending on your specific dataset, Isilon F810 inline data compression delivers up to a 3:1 reduction in storage requirements to increase the effective capacity of your solution while lowering costs.

Efficiency: Isilon scale-out storage delivers up to 80 percent storage utilization versus about 50 percent for traditional platforms. Isilon SmartDedupe data deduplication software enhances storage efficiency to reduce your physical storage requirements by up to 35 percent. Isilon's policy-based, automated tiering options allow you to optimize storage resources and further lower costs. In addition to these advantages that apply to all Isilon platforms, Isilon F810 all-flash offers inline data compression to further reduce data storage infrastructure requirements, increase density and lower costs.

Flexibility: Powered by the OneFS operating system, Isilon all-flash storage supports all major protocols and data access methods including NFS, SMB, HDFS, HTTP, and FTP. This means that you can support a wide range of unstructured data applications and workloads on a single storage platform.

Data protection: Isilon all-flash storage is highly resilient and offers N+1 through N+4 redundancy. With Isilon you may also choose from a variety of efficient and proven enterprise data backup and disaster recovery options.

Security: Isilon all-flash offers 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, and file system auditing support.

¹ Usable capacity will be lower than the raw capacity reflected in this specification sheet.

² Performance with compression will vary by data set.

ISILON F800 ALL-FLASH SPECIFICATIONS

ISILON F800 ALL-FLASH CHASSIS ATTRIBUTES & OPTIONS	1.6 TB SSD	3.2 TB SSD	3.84 TB SSD	7.68 TB SSD	15.36 TB SSD
CHASSIS CAPACITY (RAW) ³	96 TB	192 TB	230 TB	460 TB	924 TB
SSD DRIVES (2.5") PER CHASSIS	60	60	60	60	60
SELF-ENCRYPTING DRIVE (SED SSD) OPTION	Yes	Yes	No	No	Yes
OPERATING SYSTEM	Isilon OneFS 8.1 or later except for self-encrypting drive options which require Isilon OneFS 8.1.0.1 or later				
NUMBER OF NODES PER CHASSIS	4	4	4	4	4
CPU TYPE (PER NODE)	Intel® Xeon® Processor E5-2697A v4				
ECC MEMORY (PER NODE)	256 GB				
FRONT-END NETWORKING (PER NODE)	2 x 10GbE (SFP+) or 2 x 40GbE (QSFP+)				
INFRASTRUCTURE NETWORKING (PER NODE)	2 InfiniBand connections supporting QDR links or 2 x 40GbE (QSFP+)				
TYPICAL POWER CONSUMPTION @ 240V (PER CHASSIS)	1300 Watts (@25°C)				
MAXIMUM POWER CONSUMPTION @ 240V (PER CHASSIS)	1800 Watts				
TYPICAL THERMAL RATING	4,440 BTU/hr				

ISILON F810 ALL-FLASH SPECIFICATIONS

ISILON F810 ALL-FLASH CHASSIS ATTRIBUTES & OPTIONS	3.84 TB SSD	7.68 TB SSD	15.36 TB SSD
CHASSIS CAPACITY (RAW) ³	230 TB	460 TB	924 TB
SSD DRIVES (2.5") PER CHASSIS	60	60	60
SELF-ENCRYPTING DRIVE (SED SSD) OPTION	No	No	Yes
OPERATING SYSTEM	Isilon OneFS 8.1.3 only		
NUMBER OF NODES PER CHASSIS	4	4	4
CPU TYPE (PER NODE)	Intel® Xeon® Processor E5-2697A v4		
ECC MEMORY (PER NODE)	256 GB		
FRONT-END NETWORKING (PER NODE)	2 x 10GbE (SFP+) or 2 x 40GbE (QSFP+)		

INFRASTRUCTURE NETWORKING (PER NODE)	2 x 40GbE (QSFP+)
TYPICAL POWER CONSUMPTION @ 240V (PER CHASSIS)	1300 Watts (@25°C)
MAXIMUM POWER CONSUMPTION @ 240V (PER CHASSIS)	1800 Watts
TYPICAL THERMAL RATING	4,440 BTU/hour

CLUSTER ATTRIBUTES	ISILON F800 ALL-FLASH	ISILON F810 ALL-FLASH
NUMBER OF CHASSIS	1 to 63 ⁵	1 to 36
NUMBER OF NODES	4 to 252 ⁵	4 to 144
RAW CLUSTER CAPACITY ³	96 TB to 58 PB ⁵	230 TB to 33 PB
EFFECTIVE CLUSTER CAPACITY ⁴	77 TB to 46.5 PB ⁵	184 TB up to 79.6 PB
RACK UNITS	4 to 252 ⁵	4 to 144

³ Usable capacity will be lower than the raw capacity reflected in this specification sheet.

⁴ Effective capacity is based on an 80% storage utilization rate. Actual storage utilization will vary by configuration. For Isilon F810, effective capacity is also based on a data compression ratio of up to 3:1. The actual data compression ratio will vary by dataset.

⁵ Maximum cluster size for Isilon F800 running Isilon 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 Isilon intelligent software
MODULAR DESIGN	4 self-contained nodes include server, software, and SSDs in a 4U rack-mountable chassis; integrates easily into existing Isilon clusters
OPERATING SYSTEM	Eighth generation of Isilon 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	Isilon F800 running OneFS 8.2 or later scales from 4 to 252 nodes in a single cluster with up to 58 PB capacity (raw). Isilon F810 running OneFS 8.1.3 scales from 4 to 144 nodes in a single cluster with up to 33 PB capacity (raw) and up to 79.6 PB of effective storage capacity.
DATA PROTECTION	Isilon FlexProtect file-level striping with support for N+1 through N+4 and mirroring data protection schemes
DATA REPLICATION	Isilon SyncIQ fast and flexible file-based asynchronous replication
DATA RETENTION	Isilon 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	Isilon SmartDedupe data deduplication option, which can reduce storage requirements by up to 35 percent
AUTOMATED STORAGE TIERING	Policy-based automated tiering options, including Isilon 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	Isilon F800 and F810: 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)
OPERATING ENVIRONMENT	Compliant with ASHRAE A3 data center environment guidelines
DIMENSIONS/WEIGHT	The following specifications apply to Isilon F800 and F810: <ul style="list-style-type: none">• 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: 170 lbs. (77.1 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 Isilon F800 all-flash scale-out NAS storage can benefit your organization.

[Shop Dell EMC Isilon](#) to compare features and get more information.



Learn more about Dell EMC Isilon solutions



Contact a Dell EMC Expert



View more resources



Join the conversation with #DellEMCStorage