EMC ISILON X-SERIES

EMC Isilon X200

EMC Isilon X210

EMC Isilon X410

The EMC® Isilon® X-Series, powered by the OneFS® operating system, uses a highly versatile yet simple scale-out storage architecture to speed access to massive amounts of data, while dramatically reducing cost and complexity. The Isilon X-Series is comprised of three product lines — the Isilon X200 and X210, 2U platforms, and the Isilon X410, a 4U platform. The Isilon X-Series is highly flexible and strikes the balance between large capacity and high-performance storage. The X-Series is an ideal solution for high-throughput and high-concurrency applications. With SSD technology for file system metadata and file-based storage workflows, the EMC Isilon X-Series also accelerates namespace-intensive operations.

Agility: The Isilon X-Series scales from a few terabytes (TB) to over 20 petabytes (PB) and over 200 gigabytes per second (GB/s) of throughput within a single cluster. When needed, you can scale capacity and performance by adding a node in about a minute.

Simplicity: With its modular architecture, the Isilon X-Series makes deployment and management simple. Once racked, an X-Series cluster can be brought online in less than 10 minutes. With a single pool of storage with a global namespace, an X-Series cluster eliminates the need to support multiple volumes and simplifies management.

Efficiency: With Isilon, you can achieve highly efficient utilization rates—over 80 percent compared to about 50 percent for traditional storage. Isilon's SmartDedupe™ data deduplication option allows you to further reduce your storage requirements by up to 30 percent. This translates into lower acquisition and operating costs.

Security: With optional FIPS 140-2 level 2 self-encrypting drives, the X-Series platform allows you to meet regulatory and compliance needs for securing data at rest without sacrificing performance or usability.

Specifications

ARCHITECTURE
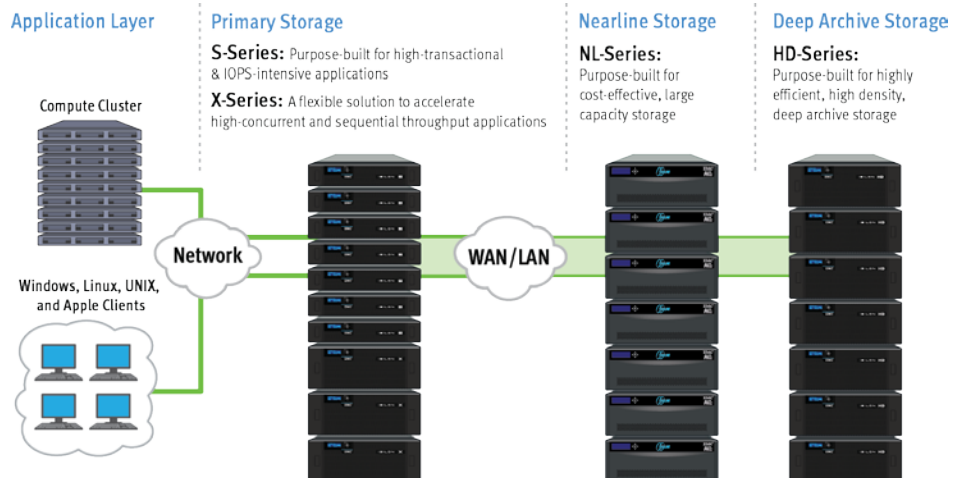
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SPECIFICATION SHEET

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EMC ISILON X-SERIES NODE SPECIFICATIONS

ISILON X200 NODE ATTRIBUTES & OPTIONS	1 TB HDD	2 TB HDD	3 TB HDD
CAPACITY	6–12 TB	12–24 TB	18–36 TB
HARD DRIVES (3.5" 7200 RPM)	6-12	6-12	6-12
SELF-ENCRYPTING DRIVE (SED HDD) OPTION (7200 RPM)	No	No	Yes
SOLID-STATE DRIVES (200, 400 OR 800 GB)	up to 6	up to 6	up to 6
SELF-ENCRYPTING DRIVE (SED SSD) OPTION (800 GB)	No	No	Yes (0, 2 or 4)
SYSTEM ECC MEMORY	6 GB, 12 GB, 24 GB, or 48 GB		
FRONT-END NETWORKING	4 x 1 Gigabit Ethernet (twin-ax copper) or 4 x 1 Gigabit Ethernet or 4 x 1 Gigabit Ethernet or 2 x 1 Gigabit Ethernet and 2 x 10GE (SFP+ or twin-ax copper)		
NETWORK INTERFACES	Isilon network interfaces support IEEE 802.3 standards for 10Gbps, 1Gbps, and 100Mbps network connectivity		
DRIVE CONTROLLER	SATA-3, 6 Gb/s		
CPU TYPE	Intel® Xeon® processor		
INFRASTRUCTURE NETWORKING	2 InfiniBand connections with double data rate (DDR) links		
NON-VOLATILE RAM (NVRAM)	512 MB		
TYPICAL POWER CONSUMPTION @ 100V	400 Watts		
TYPICAL POWER CONSUMPTION @ 240V	408 Watts		
TYPICAL THERMAL RATING	1,370 BTU/hr		

ISILON X210 NODE ATTRIBUTES & OPTIONS	1 TB HDD	2 TB HDD	3 TB HDD	4 TB HDD
	Requires Isilon OneFS 7.2.1 operating system or later			
CAPACITY	6-12 TB	12-24 TB	18-36 TB	24-48 TB
HARD DRIVES (3.5" 7200 RPM)	6-12	6-12	6-12	6-12
SELF-ENCRYPTING DRIVE (SED HDD) OPTION (7200 RPM)	No	No	Yes	Yes
SOLID-STATE DRIVES (200, 400, OR 800 GB)	Up to 6	Up to 6	Up to 6	Up to 6
SELF-ENCRYPTING DRIVE (SED SSD) OPTION (800 GB)	No	No	Yes (0, 1, 2 or 4)	Yes (0, 1, 2 or 4)
SYSTEM ECC MEMORY	24 GB or 48 GB			
FRONT-END NETWORKING	2 x 1 Gigabit Ethernet and 2 x 10GbE (SFP+ or twin-ax copper)			
NETWORK INTERFACES	Isilon network interfaces support IEEE 802.3 standards for 10Gbps, 1Gbps, and 100Mbps network connectivity			
DRIVE CONTROLLER	SATA-3, 6 Gb/s			

CPU TYPE	Single Intel® Xeon® Processor E5-2407 @ 2.4 GHz, 4 Core
INFRASTRUCTURE NETWORKING	2 InfiniBand connections supporting DDR and QDR links
NON-VOLATILE RAM (NVRAM)	2 GB
TYPICAL POWER CONSUMPTION @ 100V	400 Watts
TYPICAL POWER CONSUMPTION @ 240V	400 Watts
TYPICAL THERMAL RATING	1,370 BTU/hr

ISILON X410 NODE ATTRIBUTES & OPTIONS	1 TB HDD	2 TB HDD	3 TB HDD	4 TB HDD
	Requires Isilon OneFS 7.1.1 operating system or later			
CAPACITY	30–36 TB	60–72 TB	90–108 TB	120–144 TB
HARD DRIVES (3.5" 7200 RPM)	30–36	30–36	30–36	30–36
SELF-ENCRYPTING DRIVE (SED HDD) OPTIONS (7200 RPM)	No	No	Yes	Yes
SOLID-STATE DRIVES (400 GB, 800 GB OR 1.6 TB)	0-6	0-6	0-6	0-6
SELF-ENCRYPTING DRIVE (SED SSD) OPTIONS (800 GB)	No	No	Yes (0, 2, 4, or 6)	Yes (0, 2, 4, or 6)
SYSTEM ECC MEMORY	32 GB, 64 GB, 128 GB, or 256 GB			
FRONT-END NETWORKING	2 x 1 Gigabit Ethernet and 2 x 10GE (SFP+ or twin-ax copper)			
NETWORK INTERFACES	Isilon network interfaces support IEEE 802.3 standards for 10Gbps, 1Gbps, and 100Mbps network connectivity			
DRIVE CONTROLLER	SATA-3, 6 Gb/s			
CPU TYPE	Dual, 8-core Intel® Xeon® processor			
INFRASTRUCTURE NETWORKING	2 InfiniBand connections supporting DDR and QDR links			
NON-VOLATILE RAM (NVRAM)	2 GB			
TYPICAL POWER CONSUMPTION @ 100V	N/A			
TYPICAL POWER CONSUMPTION @ 240V	700 Watts			
TYPICAL THERMAL RATING	2,400 BTU/hr			

CLUSTER ATTRIBUTES	X200	X210	X410
NUMBER OF NODES	3–144	3-144	3–144
CAPACITY	18 TB–5.2 PB	18 TB–6.9 PB	108 TB–20.7 PB
MEMORY	18 GB–6.9 TB	72 GB-6.9 TB	96 GB to 36.8 TB
RACK UNITS	6–288	6-288	12–576

PRODUCT ATTRIBUTES

SCALE-OUT ARCHITECTURE	Truly distributed, fully symmetric clustered architecture that combines modular storage nodes with EMC data and storage management software
MODULAR DESIGN	Self-contained nodes include server, software, and disks in your choice of 2U or 4U rack-mountable nodes
OPERATING SYSTEM	EMC 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	Scales from 3 to 144 nodes in a single cluster with up to 20.7 PB capacity and 200 GB/s concurrent throughput; add a node to scale performance and capacity in 60 seconds
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
DATA RETENTION	SmartLock® policy-based retention and protection against accidental deletion
DATA ENCRYPTION OPTION	FIPS 140-2 level 2 validated self-encrypting drives (SEDs) with unique AES-256 bit strength keys assigned to each drive
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
PROTOCOL SUPPORT	NFSv3, NFSv4, NFS Kerberized sessions (UDP or TCP), SMB1 (CIFS), SMB2, SMB3 Multichannel, HTTP, FTP, NDMP, SNMP, LDAP, HDFS, ADS, NIS reads/writes
CLIENT SUPPORT	Microsoft® Windows®, Linux, UNIX®, Apple® Macintosh®
SOFTWARE COMPATIBILITY	Compatible with all EMC Isilon licensable software including: SyncIQ, SnapshotIQ™, SmartConnect™, SmartDedupe, SmartQuotas™, SmartPools®, InsightIQ™, and Aspera for Isilon

ENVIRONMENTAL SPECIFICATIONS

POWER SUPPLY	X200: Dual-redundant, hot-swappable 650W power supplies with power factor correction (PFC)
	X210: Dual-redundant, hot-swappable 650W power supplies with power factor correction (PFC)
	X410: Dual-redundant, hot-swappable 1100W power supplies with power factor correction (PFC)
OPERATING ENVIRONMENT	50° F to 95° F (10° C to 35° C), 5% to 95% relative humidity, non-condensing
DIMENSIONS/ WEIGHT	X200: height: 3.48" (8.8 cm), width: 18.87" (47.9 cm), depth: 28.5" (72.4 cm), weight: 61 lbs (27.7 kg)
	X210: height: 3.48" (8.8 cm), width: 18.87" (47.9 cm), depth: 28.5" (72.4 cm), weight: 61 lbs (27.7 kg)
	X410: height: 6.96" (17.7 cm), width: 18.90" (48 cm), depth: 28.5" (72.4 cm), weight: 120 lbs (54.5 kg)
MINIMUM SERVICE CLEARANCES	Front: 35" (88.9 cm), rear: 14" (35.6 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 EMC sales representative or authorized reseller to learn more about how the EMC Isilon X-Series can benefit your organization.

Also see our solutions in the EMC Store at https://store.emc.com/isilon.

CONTACT US

To learn more about how EMC products, services, and solutions can help solve your business and IT challenges, contact your local representative or authorized reseller, visit www.emc.com, or explore and compare products in the EMC Store.

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