# EMC ISILON S-SERIES

**EMC Isilon S210**

The EMC® Isilon® S-Series, powered by the OneFS® operating system, uses a highly versatile yet simple scale-out storage architecture to speed access to massive amounts of critical data, while dramatically reducing cost and complexity. The Isilon S-Series includes the S210 product line, a high-performance 2U platform that provides ultrafast primary storage for your file-based applications.

**Performance:** The Isilon S210 provides over 3.0M IOPS and 175GB/s of aggregate throughput per cluster. To accomplish these extraordinary speeds, the S210 utilizes high–performance solid-state drive (SSD) and 10,000 RPM 2.5-inch Serial Attached SCSI (SAS) drive technology, quad 1GbE or dual 1GbE and dual 10GbE front-end networking, a high-performance InfiniBand back-end, and over 700 terabytes (TB) of globally coherent cache in a single cluster.
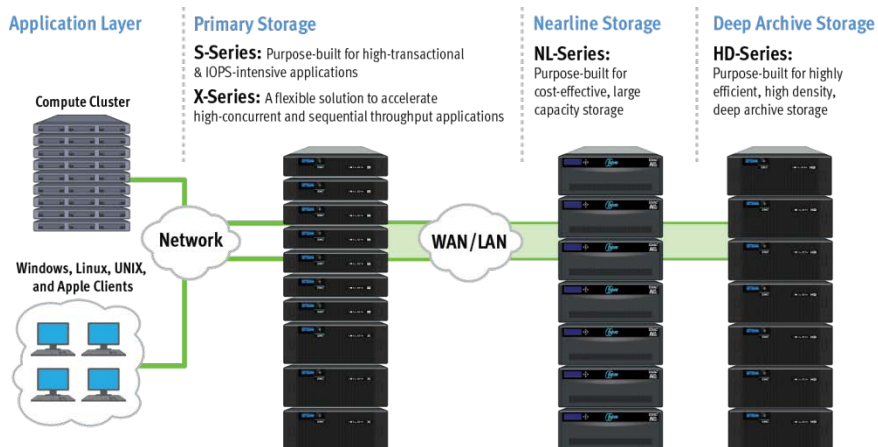
**Simplicity:** You can install, configure, and have an Isilon S-Series cluster online in less than 10 minutes. When needed, you can add a node to scale performance and capacity in about a minute.

**Efficiency:** Isilon scale-out storage is highly efficient and delivers over 80 percent storage utilization versus about 50 percent for traditional platforms. Isilon SmartDedupe™ data deduplication software further enhances storage efficiency to reduce your physical storage requirements and associated costs. With its impressive performance benchmarks and resulting low cost per IOP, the Isilon S-Series offers unmatched value for a performance platform.

**Security:** With optional FIPS 140-2 level 2 self-encrypting drives, the Isilon S210 allows you to meet regulatory and compliance needs for securing data at rest without sacrificing performance or usability.

## Specifications

### ARCHITECTURE



**Application Layer**

**Primary Storage**

**S-Series:** Purpose-built for high-transactional & IOPS-intensive applications

**X-Series:** A flexible solution to accelerate high-concurrent and sequential throughput applications

**Nearline Storage**

**NL-Series:** Purpose-built for cost-effective, large capacity storage

**Deep Archive Storage**

**HD-Series:** Purpose-built for highly efficient, high density, deep archive storage

Compute Cluster

Windows, Linux, UNIX, and Apple Clients

Network

WAN/LAN

REDEFINE

EMC²

## EMC ISILON S-SERIES NODE SPECIFICATIONS

| ISILON S210 NODE ATTRIBUTES & OPTIONS | 300 GB HDD | 600 GB HDD | 900 GB HDD | 1.2 TB HDD |
|---|---|---|---|---|
| | (Requires Isilon OneFS 7.1.1 operating system or later) | | | |
| CAPACITY (HDD/SSD) | 5.4 to 7.2 TB / 0 to 1.6 TB | 10.8 to 14.4 TB / 0 to 3.2 TB | 16.2 to 21.6 TB / 0 to 6.4 TB | 21.6 to 28.8 TB / 0 to 9.6 TB |
| HARD DRIVES (2.5" 10K RPM) | 18 to 24 | 18 to 24 | 18 to 24 | 18 to 24 |
| SELF-ENCRYPTING DRIVE (SED HDD) OPTION (2.5" 10K RPM) | No | No | Yes | No |
| SOLID-STATE DRIVES (400 GB, 800 GB OR 1.6 TB) | 0 to 6 | 0 to 6 | 0 to 6 | 0 to 6 |
| SELF-ENCRYPTING DRIVE (SED SSD) OPTION (800 GB) | No | No | Yes | No |
| SYSTEM ECC MEMORY | 32 GB, 64 GB, 128 GB or 256 GB | | | |
| FRONT-END NETWORKING | 2 copper 1000 Base-T (GE) and 2 x 10GE (SFP+ or twin-ax copper) | | | |
| DRIVE CONTROLLER | SAS-2, 6 Gb/s | | | |
| CPU TYPE | Dual, 6-core Intel Xeon® processor | | | |
| INFRASTRUCTURE NETWORKING | 2 InfiniBand connections supporting DDR and QDR links | | | |
| NON-VOLATILE RAM (NVRAM) | 2 GB | | | |
| TYPICAL POWER CONSUMPTION @ 100V | 425 Watts | | | |
| TYPICAL POWER CONSUMPTION @ 240V | 425 Watts | | | |
| TYPICAL THERMAL RATING | 1,500 BTU/hr | | | |

| CLUSTER ATTRIBUTES | S210 |
|---|---|
| NUMBER OF NODES | 3–144 |
| CLUSTER CAPACITY | 16.2 TB to 4.15 PB |
| MEMORY | 96 GB to 36.8 TB |
| RACK UNITS | 6 to 288 |

## PRODUCT ATTRIBUTES

| | |
|---|---|
| **SCALE-OUT ARCHITECTURE** | Truly distributed, fully symmetric clustered architecture that combines modular storage nodes with Isilon intelligent software |
| **MODULAR DESIGN** | Self-contained nodes include server, software, and disks in a 2U rack-mountable node |
| **OPERATING SYSTEM** | Seventh 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** | Scales from 3 to 144 nodes in a single cluster with up to 4.15 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 |
| **NETWORK 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 |

## ENVIRONMENTAL SPECIFICATIONS

| | |
|---|---|
| **POWER SUPPLY** | Dual redundant, hot-swappable 875W 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** | Height: 3.48" (8.8 cm), width: 18.87" (47.9 cm), depth: 30.5" (77.47 cm), weight: 55 lbs (25.0 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 S-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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