# EMC ISILON S-SERIES

**EMC Isilon S200**

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. When ultimate IOPS performance is mission-critical, the S200 delivers. The EMC Isilon S200 product line—next-generation high performance 2U platform built on Isilon's proven unified scale-out storage technology—accelerates business and increases speed-to-market by providing ultra-fast primary storage for your mission-critical, random access file-based applications.

**Performance:** The Isilon S200 surpasses the limits of traditional primary file storage, providing over 1.6 million CIFS SPECsfs file operations per second and 1.1 million NFS SPECsfs file operations per second with over 100 gigabytes per second (GBps) of aggregate throughput, all from a single file system. To accomplish these extraordinary speeds, the S200 combines the power of ultra-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, dual quad core Intel CPUs, a high-performance InfiniBand back-end, and up to 13.8 TB of globally coherent cache. In addition, the Isilon S200 leverages enterprise SSD technology to accelerate namespace-intensive metadata operations, and provides an ability to place mission critical, latency-sensitive data on SSDs in a SmartPools™ environment.
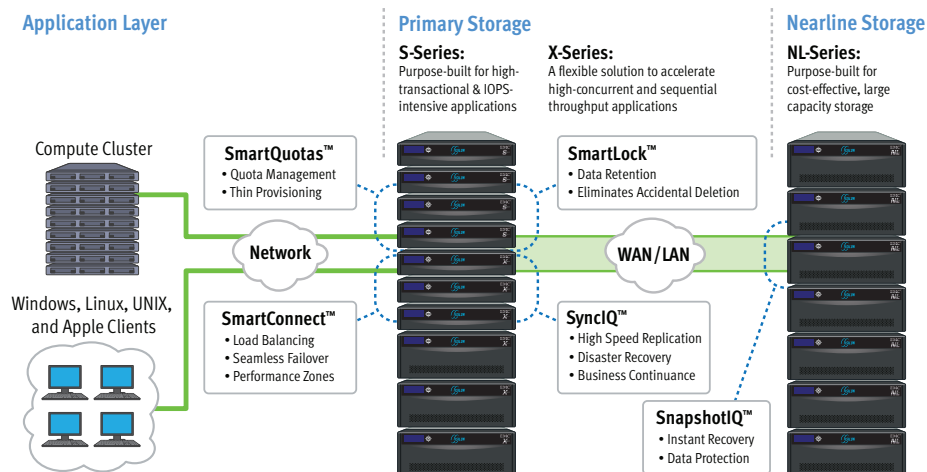
**Simplicity:** The S200, built on the same principles of simplicity as all Isilon products, provides ultimate ease of use. You can install, configure and have an Isilon S200 cluster online in under 10 minutes, without the need for expensive, specialized integration and configuration services.

**Economics:** With its impressive performance benchmarks, the Isilon S200 affords the best dollar per I/O solution available. And, with the proven high-utilization factor of Isilon scale-out storage—over 80 percent versus 50 percent for traditional NAS and SAN—overall storage efficiency is significantly improved while initial acquisition costs are greatly reduced.

## SPECIFICATIONS

### ARCHITECTURE

**EMC Isilon Scale-out Storage Architecture:**

**EMC²**

| EMC Isilon S200 Node Attributes & Options | 300GB | | | 600GB | | | 900GB | | |
|---|---|---|---|---|---|---|---|---|---|
| | Base | Option 1 | Option 2 | Base | Option 1 | Option 2 | Base | Option 1 | Option 2 |
| **Capacity** (HDD/SSD) | 7.2TB | 6.9TB/200GB | 5.4TB/1.2TB | 14.4TB | 13.2TB/400GB | 10.8TB/1.2TB | 21.6TB | 19.8TB/400GB | 18.9TB/1.2TB |
| **Hard Drives** (2.5" SAS) | 24 | 23 | 18 | 24 | 22 | 18 | 24 | 22 | 21 |
| **Solid State Drives** (SLC) 200GB | 0 | 1 | 6 | 0 | 2 | 6 | 0 | 2 | 3 (400GB) |
| **ECC Memory** (FBDiMM cache) | 24GB, 48GB or 96GB | | | | | | | | |
| **Front-end Networking** | 4 Copper 1000 Base-T (GigE) | 4 x GigE (Copper) OR 2 x GigE and 2 x 10GigE (SFP+ or Twin-ax Copper) | | 4 Copper 1000 Base-T (GigE) | 4 x GigE (Copper) OR 2 x GigE and 2 x 10GigE (SFP+ or Twin-ax Copper) | | 2 x GigE and 2 x 10GigE  (SFP+) | | |
| **CPU Type** | Intel® Xeon® Processor | | | | | | | | |
| **Infrastructure Networking** | 2 InfiniBand connections | | | | | | | | |
| **Non-volatile RAM** (NVRAM) | 512 MB | | | | | | | | |
| **Typical Power Consumption @ 100v** | 450W | | | | | | | | |
| **Typical Power Consumption @ 240v** | 456W | | | | | | | | |
| **Typical Thermal Rating** | 1,550 BTU/hr | | | | | | | | |

| EMC Isilon S200 Cluster Attributes | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Number of nodes** | 144 | **Capacity** | 3.11PB | **Memory** | 13.8TB | **Rack Units** | 288 |

## PRODUCT ATTRIBUTES

| | |
|---|---|
| **Scale-out Architecture** | Truly distributed, fully symmetric clustered architecture that combines modular storage nodes with Isilon's intelligent software. |
| **Modular Design** | Self-contained nodes include server, software, and disks in a 2U rack-mountable node. |
| **Operating System** | Sixth 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 backend intra-cluster failover. |
| **Scalability** | Initial cluster setup in under 10 minutes. Add performance and capacity in 60 seconds. Up to 3.11PB and over 100 GBps throughput. |
| **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. |
| **Network Protocol Support** | NFSv3, NFSv4, NFS Kerberized Sessions (UDP or TCP), iSCSI, SMB1 (CIFS), SMB2, HTTP, FTP, NDMP, SNMP, LDAP, HDFS, ADS, NIS reads/writes. |

## ENVIRONMENTAL SPECIFICATIONS

| | |
|---|---|
| **Power Supply** | Dual redundant, hot-swappable 760W 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 |
| **Dimension/Weight** | Height: 3.48" (8.8 cm), Width: 18.87" (47.9 cm), Depth: 28.5" (72.4 cm), Weight: 48.8 lbs / 22.1 kg |
| **Minimum Service Clearances** | Front: 35" (89.0 cm), Rear: 14" (35.6 cm) |

## CONTACT US

To learn more about how EMC Isilon products, services, and solutions can help solve your business and IT challenges, contact your local representative or authorized reseller—or visit us at www.EMC.com/Isilon.

**EMC²**®