



How breakthroughs begin.™

# Isilon X-Series Specifications



## PRODUCT ATTRIBUTES

<b>Clustered Architecture</b>	Truly distributed, fully symmetric clustered architecture that combines modular storage nodes with Isilon's intelligent software.
<b>Modular Design</b>	Self-contained nodes include server, software and disks in a 2U rack-mountable node.
<b>Distributed File System</b>	The fifth 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.
<b>High-Availability</b>	No single point of failure. Self-healing design protects against disk or node failures. Includes backend intracluster failover.
<b>Scalability</b>	Initial cluster set-up in under 10 minutes. Add new nodes for performance and capacity in 60 seconds.
<b>Protection Levels</b>	FlexProtect-AP file-level striping with support for N+1 through N+4 and mirroring data protection schemes.
<b>Network Protocol Support</b>	NFS v3 (UDP or TCP), CIFS, FTP, HTTP reads/writes.
<b>Client Support</b>	Microsoft® Windows®, Linux, UNIX, Apple® Macintosh.
<b>Front-End Networking</b>	Two (2) copper 1000 Base-T (Gigabit Ethernet) per node.
<b>Intracluster Networking</b>	Two (2) InfiniBand® connections.

## SOFTWARE HIGHLIGHTS

<b>Automatic Content Migration</b>	AutoBalance automatically redistributes data and maximizes utilization across entire cluster when new nodes are added. No downtime, application changes or manual intervention is required.
<b>Accelerated Access to Content</b>	Files are striped across nodes in a cluster. SmartCache algorithms predict content access patterns and accordingly cache data to ensure maximum performance for popular files in a huge and unified memory cache.
<b>Flexible File Protection</b>	FlexProtect-AP allows data protection levels to be changed on the fly and can be set at cluster, directory and file levels. Operates as a background operation, requiring no downtime.
<b>Platform Extension</b>	Isilon's clustered storage architecture enables the addition of Isilon IQ Accelerator-x and EX 6000/9000/12000 extension products to scale performance and capacity independently.
<b>Management</b>	Powerful Web-based management interface. Command line interface (Telnet/SSH). Front panel LCD.
<b>Monitoring</b>	Support for SNMP v2/v3. Environmental monitoring system for monitoring fans, power, temperature, operating voltages and node status. Web-based and LCD/LED monitoring of health, capacity and performance.
<b>Alerting</b>	E-mail alerts to administrator(s). E-mail home to Isilon for proactive customer support. Front panel LCD and LEDs. SNMP support.
<b>Authentication and Security</b>	Support for Microsoft Active Directory Services (ADS), Network Information Service (NIS) and Lightweight Directory Access Protocol (LDAP).
<b>Data Integrity</b>	MediaScan proactive file-level health check continuously and automatically runs in the background to analyze and heal files, ensuring long-term data integrity.
<b>Backup and Restore</b>	Supports standard NDMP v3 and v4.

## LICENSABLE APPLICATION SOFTWARE

<b>SyncIQ™</b>	Delivers extremely fast replication of files across multiple Isilon IQ clusters over WAN and LAN.
<b>SnapshotIQ™</b>	Delivers breakthrough snapshot technology for simple, flexible and scalable data protection of large storage environments.
<b>SmartConnect™</b>	Maximizes performance and availability of client connections by providing automatic load balancing and NFS failover across all Isilon IQ nodes within the cluster.
<b>SmartQuotas™</b>	Delivers quotas and thin provisioning for clustered storage.
<b>Aspera for Isilon IQ</b>	High-performance wide area file and content delivery.

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## ENVIRONMENTAL SPECIFICATIONS

<b>Power Supply</b>	Dual redundant, hot-swappable 650W power supplies with Power Factor Correction (PFC)
<b>Operating Environment</b>	50° F to 95° F (10° C to 35° C), 5% to 95% relative humidity, non-condensing
<b>Non-Operating Environment</b>	-40° F to 149° F (-40° C to 65° C), 5% to 95% relative humidity, non-condensing
<b>Dimensions/Weight</b>	Height: 3.48" (8.8 cm), Width: 18.87" (47.9 cm), Depth: 28.5" (72.4 cm), Weight: 58.2 lbs / 26.4 kg
<b>Minimum Service Clearances</b>	Front: 35" (88.9 cm), Rear: 14" (35.6 cm)

Single Node Attributes	Isilon IQ 1920	Isilon IQ 3000	Isilon IQ 6000	Isilon IQ 9000	Isilon IQ 12000										
<b>Capacity</b>	1.92 TB	3.00 TB	6.00 TB	9.00 TB	12.00 TB										
<b>Hard Drives (hot-swappable)</b>	Twelve (12) 3.5" SATA-2 160 GB HDD	Twelve (12) 3.5" SATA-2 250 GB HDD	Twelve (12) 3.5" SATA-2 500 GB HDD	Twelve (12) 3.5" SATA-2 750 GB HDD	Twelve (12) 3.5" SATA-2 1 TB HDD										
<b>Storage Expansion</b>	N/A	N/A	YES — via Serial Attached SCSI (SAS)	YES — via Serial Attached SCSI (SAS)	YES — via Serial Attached SCSI (SAS)										
<b>Typical Power Consumption @ 100v</b>	3.6A	3.6A	3.6A	3.6A	3.6A										
<b>Typical Power Consumption @ 240v</b>	1.5A	1.5A	1.5A	1.5A	1.5A										
<b>Typical Thermal Rating</b>	1250 BTU/hour	1250 BTU/hour	1250 BTU/hour	1250 BTU/hour	1250 BTU/hour										
<b>CPU Type</b>	2.0 GHz Quad core Intel® Xeon™ processor														
<b>Front-End Networking</b>	Two (2) copper 1000 Base-T (Gigabit Ethernet) per node														
<b>Intracluster Networking</b>	Two (2) InfiniBand® connections per node														
<b>ECC Memory</b>	4 GB of FBDiMM Cache														
<b>Non-volatile RAM (NVRAM)</b>	512 MB														
<b>External Indicators</b>	Cluster status and alert (LED) and front panel LCD														
Cluster Attributes (Nodes)	3 (min)	10	96 (max)	3 (min)	10	96 (max)	3 (min)	10	96 (max)	3 (min)	10	96 (max)	3 (min)	10	96 (max)
<b>Capacity (TB)</b>	5.7	19.0	184	9	30	288	18	60	576	27	90	864	36	120	1152
<b>Memory (GB)</b>	12	40	384	12	40	384	12	40	384	12	40	384	12	40	384
<b>Rack Units (RU)</b>	6U	20U	192U	6U	20U	192U	6U	20U	192U	6U	20U	192U	6U	20U	192U

## INDUSTRY CERTIFICATIONS

### North American (NA) Safety

UL/cUL Listing (UL 60950-1:2003, First Edition)  
CSA C22.2 No.60950-1-03

### International Safety

CB Scheme IEC 60950-1 (2001) First Edition with all national deviations

### European Union (EU) Safety

CE, Low Voltage Directive

### NA EMC

US FCC Part 15/ Canada IC ICES-03

### International EMC

EU EMC Directive (EN 55022 & EN 55024)  
Japan (VCCI) South Korea (MIC)  
China (CCC)

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