

ULTRASTOR™ ES3160SS

High Availability 6G SAS RAID Storage Platform



SAS

The Ultrastor ES3160SS is a 6G SAS RAID storage array that combines intelligence and automation with fault tolerance to provide simplified administration, rapid deployment, enterprise performance and reliability, and seamless scalability. The ES3160SS high performance storage arrays deliver a range of capacity points up to 32TB in a 3U chassis. ES3160SS is designed to create a virtualized storage platform that scales up to 128 TB under a single management interface.

High Availability RAID Platform

The UltraStor™ ES3160SS RAID storage platform combines a state-of-the-art Dual-active RAID design with the flexibility of a modularized hardware architecture that offers a new level of data protection, availability and ease of use. Featuring two 6G SAS interface ports per controller, users can direct attach ES3160SS to server to ensure data accessibility with high-performance and high bandwidth. In addition to the ES3160SS's dual RAID controllers and I/O modules, the dual redundant power supplies and cooling modules are also hot-swappable and can be replaced easily in the field, providing the ultimate in redundancy and reliability for mission critical applications.

Expand Your Business Capabilities

Utilizing sixteen (16) hot-swappable disk trays, the ES3160SS can host up to 32TB of capacity. However, the storage capabilities don't stop there. Unlike many storage systems, the ES3160SS can easily grow far beyond the "limitations" of its drive capacity. Each ES3160SS system can also be expanded with additional RAID protected data storage of up to 128TB (Raw) with 3 x ES3160JS SAS interface JBOD storage systems.

Easy to Use Storage Management

Managing an ES3160SS storage system is easy. With its cross platform user friendly GUI management, it's easy to configure and administer the ES3160SS. The web-based GUI interface helps manage, monitor and control the system via a standard web browser anywhere at anytime.

Eco-friendly Storage

The ES3160SS equips with 80-Plus 500W dual redundant power supplies to keep your workloads and critical applications running without hardware failure interruption and ensure system reliability and data availability. With the Energy-efficient power supply, the ES3160SS becomes an environment friendly storage system that helps users reduce utility and cooling cost due to excess heat generate by the power supply.

The Highest Level of Service and Support

Enhance Technology delivers the highest quality storage solutions by offering SATA/SAS hard disks pre-configured and fully tested in an intensive data processing environment on every system, meaning that you can easily integrate the system into your IT infrastructure right out of the box. The preferred service plan ensures peace-of-mind for customers with support and service such as 1-Year Free Advance Parts Replacement on top of the standard 3-Year depot repair warranty.

ULTRASTOR™ ES3160SS Advantages

Ease of use

- Intelligent, cross-platform management helps minimize administrative tasks
- Pre-configured RAID systems delivery out-of-box user experience
- SATA, SAS and NL-SAS hard disks are supported to meet performance driven and high capacity demanded applications

Enterprise performance

- Next generation 6G SAS interfaces provide exceptional performance for both sequential and transactional applications
- Automated, real-time load balancing across drives, RAID sets, connections, cache and controllers for optimized performance

Reliability

- Fault tolerant, fully redundant dual controllers Designed for high availability and mission critical applications
- Multiple RAID levels and point-in-time Snapshot for data protection
- Full hardware redundancy----hot swappable controllers, fans, power supplies, & disks

Scalability

- Online expansion between multiple systems
- Linear scalability --- scale capacity and performance together
- Manage a growing pool of storage from one single user interface

Product Specifications

Model	UltraStor ES3160SS
SKUs	ES3160SS-D
Hard Disks	Number: 16 Interface:SAS RPM: 7200 RPM or 15K RPM Cache: 32MB per drive
Host Interfaces	2-port 6G SAS + 1-port 6G SAS expansion per controller
Form Factor	3U low profile 19" Rackmount
RAID	0,1,0+1,3,5,6,10,30,50,60; Up to 1024 logical volumes in the system ; Up to 32 Physical Disks can be included in one RAID group; Up to 512 Snap Shot; Rollback mechanism ; Microsoft VSS compliant ; Global and dedicated hot spare disks ; Supports multiple RAID array and volumes; Online volume expansion; Online disk roaming; Flexible RAID group (RG) ownership management;
Controller	2x6G SAS ports per controller; 1x6G SAS Expansion port per controller; 4GB DDRII 533 DIMM Per Controller (8GB Total) Serial console management and UPS; Dedicated Ethernet port for WebGUI management; LCM management panel; Battery Backup Unit (Optional)
Storage Expansion	Multiple SAS JBOD expansion supported
Hot-swappability	16 Hot-swappable drive trays; Dual hot-swappable power supplies; Three hot-swappable fan modules;
Management	Management UI via: Serial console, SSH telnet, or HTTP Web UI; Event notification via: Email, SNMP trap, Browser, Syslog; Online system firmware upgrade mechanism; iSNS & DHCP support; CHAP authentication mechanism support;
Supported OS	Windows Server 2000 / 2003 / 2008 Windows XP / Vista / 7; Mac OSX; Linux VMware ESX/vSPHERE 4.0/4.1; Microsoft Hyper-V; Citrix XenServer
Physical & Environment	Operating Temperature 10°C ~ 35°C; Non-Operating Temperature -10°C ~ 50°C; Relative Humidity 5% to 95% non-condensing
Power & Cooling	Dual redundant 500W 80 PLUS power supply; AC Input: 100-240V 8-5A 47/63 Hz; PSU failure indicate sensor; 3 x hot-swappable high-speed SMART fans;
Dimension (H x W x D)	5.25" x 19" x 21.5"
Weight (w/o disks)	65 Lbs
Safety Regulations	CE, FCC
Warranty	- 3-Year Standard Warranty - 1-Year ARP (Advance Parts Replacement) - 2-Year Standard Warranty Upgrade (Option) - 2-Year ARP Upgrade (Option)

Package Included:

- ES3160SS 3U 16-Bay redundant controller storage system
- Up to 4 pre-configured drive packs
(Each drive pack includes 4 HDDs)
- Rack mounting brackets
- User manual CD
- Accessory box
- Two (2) US standard power cord
- Estimate Package Weight (w/ Drive Installed): 76 ~ 100 Lbs
- Package Dimension (H x W x D): 12" x 28" x 32"

Accessories:

Spare Drives:

- 4x 1TB Enterprise SATA HDD w/Mux Boards and Trays (ES-HDP-4TE)
- 4x 2TB Enterprise SATA HDD w/Mux Boards and Trays (ES-HDP-8TE)
- 4x 1TB 6G 7.2K SAS HDD with Trays (ES-HDP-4TS)
- 4x 2TB 6G 7.2K SAS HDD with Trays (ES-HDP-8TS)
- 4x 3TB 6G 7.2K SAS HDD with Trays (ES-HDP-12TS)
- 4x 300GB 6G 15K SAS HDD with Trays (ES-HDP-1.2TS)
- 4x 450GB 6G 15K SAS HDD with Trays (ES-HDP-1.8TS)
- 4x 600GB 6G 15K SAS HDD with Trays (ES-HDP-2.4TS)

Spare Controller Kit:

- ES3160 SS Controller (ES3160CC-SS)

Power Supply:

- Hot-swappable 500W 80+ PSU Module (PS1500G/ES)
- Hot-swappable 600W 80+ PSU Module (PS1600G)

Battery Back Unit:

- Battery Backup Unit for ES3160 (ES3160-BBU)

Spare Fan:

- Hot-swappable Cooling Fan Module (ES3160-F)

SAS Cable:

- 1 meter SFF8088-to-SFF8088 cable (CB-MS/MS-1M)
- 2 meter SFF8088-to-SFF8088 cable (CB-MS/MS-2M)

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