

DATA SHEET

UltraStor™ ES3160TG

High-Availability 10GbE Dual Active
RAID Controller SAN Storage Solution



Overview

The UltraStor™ ES3160TG is a powerful yet easy to use dual active controller 10GbE iSCSI SAN storage solution. It delivers best-in-class performance and reliability to meet the toughest SMB/SME business continuity requirements. Simple & powerful management console reduces deployment time & increases productivity. ES3160TG is expandable & scalable to over 192TB via 3x ES3160JS enterprise JBOD storage system to meet your future growth requirements. Businesses can benefit from its high availability, scalability, and sustainability for advance storage applications such as SQL/Exchange servers, high performance backup, virtualization, or cloud computing.

Dual Redundancy Delivers High-Availability

The UltraStor™ ES3160TG-D is powered by dual active RAID controllers for maximum data protection and data high availability. Users can attach ES3160TG-D to multiple servers to ensure data accessibility with high-performance and full 10GbE bandwidth. The ES3160TG-D's controller modules, dual redundant 80 PLUS power supplies and cooling modules are hot-swappable and can be replaced easily on the field, providing the ultimate redundancy and reliability to meet the most critical storage needs.

10GbE Delivers Performance & Value

With a total of 4x 10GbE ports and backward compatible with the industry standard Ethernet interface, the ES3160TG-D is a simple, powerful & robust SAN storage solution for disk-to-disk backup and shared SAN environments. Validated for Microsoft Multipath I/O (MPIO), the ES3160TG-D delivers over 1,200MB/s data transfer rate, minimizes downtime and makes high capacity storage available shared by a numbers of servers ensuring fast response time when serving data for multiple applications.



The ES3160TG-D 10GbE SAN storage brings the very latest in high-performance host connection with technology generally found in higher priced storage systems. It provides perfect blends of performance, RAID protection, and manageability designed for application servers, public cloud computing, database archives, data centers, iSCSI storage networks, and remote replication.

Expand Your Business Capabilities

The ES3160 Series allow users to choose a primary RAID controller unit for low initial cost with the ability to expand later. Utilizing sixteen (16) hot-swappable disk trays, the ES3160TG-D can host up to 48TB of storage capacity. The ES3160TG-D can easily grow far beyond the "limitations" of its drive capacity allowing the array to grow as needs grow, thus giving customers a maximum return on investment. Each ES3160TG-D system can be expanded with additional RAID protected storage space for up to 144TB (Raw) with 3x ES3160JS JBOD expansion arrays for a total of 192TB

Easy to Use & Powerful Storage Management

Managing an ES3160TG storage system is easy with its cross platform user friendly GUI management. The intuitive web based interface helps manage, monitor and control the system and its expansion units via a standard web browser anytime anywhere and receive real time system notification through Email without additional software.



Energy-Efficient & Eco-Friendly

The ES3160TG-D equips with 80-Plus 500W dual redundant power supply 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 and validated for storage virtualization, the ES3160TG-D is environmental friendly resulting in reduction on total cost of ownership. Besides the green power suppliers, Enhance Technology continues its initiative on implementation of green technologies with features like auto disk spin-down, field replaceable component modules.

Highest Level of Service & Support

Enhance Technology not only delivers high performance and reliability on the UltraStor ES Series HA storage systems but also backing it up with its preferred service and support plan to protect your investment for years to come. It comes with standard 3-year depot repair warranty, 1-year Advance Replacement Program, 1-Year Loaner Unit and optional On-Site Support program. Extended warranty plans are also available upon request.

Specifications

Model	UltraStor ES3160TG
SKUs	ES3160TG-D
Hard Disks	Number: 16 Interface: SAS RPM: 7200 RPM or 15K RPM Cache: 32MB per drive
Host Interfaces	2-port 10GbE 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	Intel IOP 81342 1.2GHz; 2x 10GbE ports per controller; 4GB DDRII 533 DIMM Per Controller (8GB Total) UARTs for serial console management and UPS; Dedicated Fast Ethernet port For Web-UI; LCM supported for easy management use; Battery Backup Unit (Optional)
Storage Expansion	Supports multiple enclosures daisy-chain expansion via SFF-8088 port;
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	EnhanceCARE SSP - 3-Year Standard Warranty - 1-Year ARP (Advance Replacement Program) - Optional extended warranty - Extended After-hour Support

Package Included:

- One (1x) pcs 3U 16-disk Rackmount Enclosure
- Sixteen (16x) pcs Hot-Swap Removable HDD w/Trays (Installed)
- Three (3x) pcs Hot-swappable cooling fans (Installed)
- Dual Redundant 500 Watt Power Supply (Installed)
- One (1x) set mounting bracket
- Double-Box Protection
- Heavy Duty Foam Protection
- User Manual CD
- Screws for Mounting Hard Drives
- One Standard Power Cord
- Package Weight: 100 Lbs
- Package Dimension (H x W x D): 12" x 28" x 32"

Accessories:

Spare Drive:

- 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:

- ES3160TG Controller Kit (ES3160CC-TG)

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)

Cables:

- 1x10G SFP+ Transceiver
- 1x MiniSAS-to-MiniSAS Cable (CB-MS/MS-1M)
- 1x MiniSAS-to-MiniSAS Cable (CB-MS/MS-2M)

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