

Escalade™ 7500 Series ATA RAID Controller

ESCALADE PRODUCT FEATURES

- Supports up to 12 Ultra ATA/133 drives with a single PCI card, enabling more than a terabyte of disk storage
- StorSwitch™ non-blocking architecture for reliable, scalable, and high-performance hardware RAID
- On-card processor and firmware O/S provides intelligent drive management and all RAID functions
- RAID 0, 1, 10, 5, and JBOD support
- High data throughput, delivering 180MB/sec reads and 127MB/sec writes
- 64-bit/33MHz bus master, PCI 2.2 compliant
- BIOS setup utility and PnP, BBS compliant bootable BIOS
- Hot-swap and hot-spare features for data availability
- Windows® and Linux® operating system support

The Escalade Series of RAID controllers bring SCSI reliability and performance features to ATA or Serial ATA disk drives. Only 3ware uses a switched architecture to eliminate the performance bottleneck of traditional ATA and SCSI controller designs. The result is a RAID controller that delivers industry-leading performance, data availability and fault isolation. 3ware—the leader in powerful, cost-effective, ATA storage solutions.

Reliable RAID for PC Servers and Workstations

Driven by desktop PC volumes, ATA disk drives represent a tremendous value with higher capacity, reliability and performance, than ever before. By providing the features and performance previously available only in SCSI and other shared-bus RAID systems, the 7500 series enables the use of these cost-effective ATA drives. With StorSwitch architecture, Escalade cards offer improved reliability compared with traditional RAID implementations. Escalade products meet or exceed the requirements for PC server storage in applications such as email servers, workgroup servers and SQL database servers.

Enabling New Storage Applications

Escalade RAID controllers enable new storage applications. By attaching more than a terabyte in a single PCI slot, new applications are made possible for PC servers. Video streaming, archival near-line storage, web farms, large email servers, and other high-density storage applications are served. A new class of disk storage is created.

Escalade 7500 Series Hardware

3ware's StorSwitch architecture with on-board processor makes the difference. Similar to network packet-switching hardware, StorSwitch architecture delivers reliability, scalability, and high performance. A dedicated, port per disk drive provides both drive and cable fault isolation for greater system reliability. The non-blocking switch architecture provides performance scalability

StorSwitch architecture incorporates RAID 5 parity computation in hardware for higher performance than software implementations. The on-board processor handles all disk commands, and directs data flow through the switch for reliable RAID operation, independent of the host CPU and O/S.

Escalade 7500 Series Firmware

Escalade 7500 series firmware O/S provides intelligent disk management, including RAID strategy, rebuilding, verification and array creation and deletion. Fault detection,

cable error detection and retry, command read-back, and dynamic sector repair features contribute to data availability and robustness. SCSI-like command queuing and seek algorithms provide high-end RAID controller performance.

Self Monitoring Analysis and Reporting Technology (SMART) information is collected from the disk drives and made available locally and remotely through 3ware's Disk Manager (3DM™) utility, making the storage easier to manage and more reliable.

3ware's Escalade 7500 models, use a larger packet buffer to cache both random and sequential write operations for much faster RAID 5 writing, making RAID 5 appropriate for demanding streaming applications such as video editing.

Escalade 7500 Series Software

Escalade 7500 software consists of drivers and disk management middleware. By adhering to a SCSI device driver model, 3ware insures compatibility with major operating systems. This means that file systems and applications work transparently with this familiar disk interface.

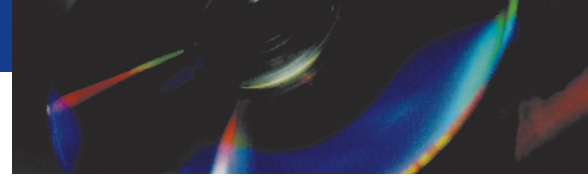
The Escalade PCI card includes a built-in BIOS utility for creating, deleting, verifying and rebuilding arrays, making installation and set-up easy.

3DM, 3ware's web browser-based disk management utility, allows local and remote management and monitoring of arrays and their disks. 3DM has a simple native GUI, as well as a browser interface. 3DM also provides email notification of disk array events and other error conditions.

Escalade Sets a New Standard for RAID

For both traditional RAID applications and new, high-density storage environments, the Escalade 7500 series delivers. By enabling reliable, cost-effective, high-performance storage that is easy to integrate and manage, Escalade 7500 ATA RAID controllers set a new standard in storage.

Escalade™ 7500 Series



Escalade Features

- StorSwitch™ point-to-point, non-blocking architecture
- On-board processor provides true hardware based RAID and intelligent drive management functions
- SCSI performance feature set
- Remote browser 3ware Disk Manager (3DM) utility with password security for network management of storage arrays
- SMTP support for email / pager notification
- Easy-to-configure arrays from BIOS
- Bootable BIOS support for greater fault tolerance
- Multiple logical volumes and RAID levels can exist on one card
- Up to four controllers in a single system
- Hot-swap and hot-spare support for data availability
- Dynamic sector repair for robust data protection
- S.M.A.R.T. disk drive monitoring for reliability

Escalade 7500 Series Specifications

- PCI 2.2 compliant 64-bit/33MHz bus master
- Auto-sensing ATA/133/100/66/33 disk drive interface
- BIOS PnP (Plug and Play), and BBS (BIOS boot services) compliant

OS Support

- Microsoft® Windows® 98/ME/NT4.0/2000/XP
 - Red Hat Linux® 7.1, 7.2, 7.3
 - SuSE Linux 7.2, 7.3, 8.0
 - Linux driver available through open source kernel 2.2.15 and later
- For complete OS listing, go to www.3ware.com/support

Physical and Environmental Specifications

- Calculated MTBF @ 25°C Over 1.27 million hours for 7500-4LP
Over 0.94 million hours for 7500-8
Over 0.90 million hours for 7500-12
- Operating Temperature 0°C to 50°C
- Operating Humidity 10% to 90% non-condensing
- Non-Operating Temperature -55°C to 85°C
- Non-Operating Humidity 5% to 95% non-condensing
- Power Requirements 5W max. on +5V, 0.25W max. on -12V
- Dimensions

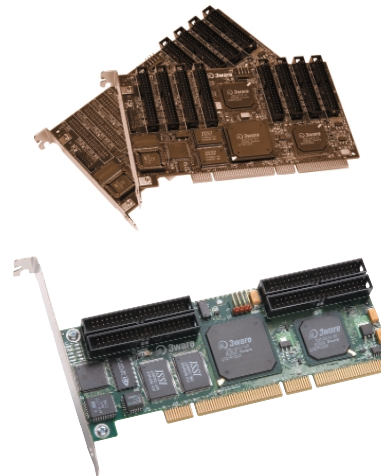
7500-4LP	6.6" L x 2.3" H
7500-8	6.875" L x 3.875" H
7500-12	12.25" L x 3.875" H

Compatibility

- For latest motherboard and HDD compatibility, go to: www.3ware.com/products/compatibility

Service and Support

- 3-year warranty on all Escalade products
- Support via the web at www.3ware.com/support



Escalade 7500 Series Selection Guide

Model	7500-4LP	7500-8	7500-12
ATA drives supported	4 ATA drives	8 ATA drives	12 ATA drives
RAID levels supported	0, 1, 10, 5, JBOD	0, 1, 10, 5, JBOD	0, 1, 10, 5, JBOD
Target Use	Medium capacity with high performance RAID 5	Highest capacity with high performance RAID 5	Maximum capacity with high performance RAID 5
Typical Platform/Applications	Departmental servers, email	Enterprise file servers, email, database applications, and video streaming	Web farms, email servers, near-line storage and external storage boxes, database applications



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