

Raidium[®] 4300

Scalable Data Storage for Growing Enterprise Networks



Intelligent Data Storage for Enterprise Class Networks

All of PerifiTech[®]'s 4000 series arrays provide the highest degree of data availability and storage fault tolerance for demanding enterprise networks. Array 4300s attach to a SAN fibre backbone or directly to network servers or workstations using Ultra320 SCSI or 2GB fibre to ensure high performance and scalability for future storage expansion. PerifiTech's unique design specifications allows the Array 4300 to offer the following highlights:

- Ultra320 SCSI Disks with >80% duty cycle
- RAID 0, 1, (0+1), 3, 5, 10, or JBOD
- Multiple RAID Levels in Same Cabinet
- Host connection via U320 SCSI or 2GB Fibre
- Total Storage and Power Fault Tolerance
- Ease of Installation and Serviceability

Array 4300s consist of three elements: Chassis with single or dual array controllers, hot-swap disks and redundant power system. A variety of options based on capacity, application and budget can be added to all Array 4300 subsystems.

The Raidium 4300 Controller

This high performance, intelligent controller is available with up to 8 Ultra320 SCSI interfaces and will link up to 100 drives. Simultaneous distribution of multi-threaded I/O requests from the host allow high speed parallel data transfers. Four base SCSI channels are provided with the ability to upgrade to eight channels via an optional channel expansion board. Each channel can be individually programmed as a host or disk channel. Dual channel fibre option allows SAN connection to servers running different operating systems to share the Array. Automatic hot-standby drive rebuilding allows the Array 4300 Controller to reconfigure the array, should a defective drive be detected. If a hot-standby drive is not designated, the

defective drive can be hot-swapped and rebuilt on-line. Controller and array status can be monitored via an LCD front panel display or remotely through the RS232 terminal port or web interface.

For added security, the Array 4300R features dual array controllers. In the event that the primary controller should become defective, a secondary controller assumes full operation in real time.

Hot-Swap Disk Drives

All Raidium 4300 subsystems are equipped with matching Ultra320 SCSI disk drives. Each disk drive is optimized for array use and specific OS performance, using PerifiTech's award winning disk optimization process. This tuning process enhances disk I/O by up to 100% per server disk.

Flexibility and Growth

Data storage can be increased at any time by adding additional PerifiTech disk drives. With dynamic expansion support, it is no longer necessary to re-configure the array each time disk drives are added or removed. RAID modes can also be configured and later reconfigured through simple software techniques without having to re-cable the array. All Raidium 4300 disk arrays will accommodate any combination of PerifiTech disk drives, CD ROMs or tape backup solutions.

Chassis Options

Array 4000 Subsystems address power fault tolerance through hot-swap power supply modules matched to the disk population and array capacity. Modules load-share under normal operation, and will take over full-load in the event of any supply failure. Failed supplies can be changed during server operation with externally accessible locks and handles. Rack choices include 9 drive 2U, 12 drive 3U and 15 drive 4U.

Key Features:

- **Fault Tolerant RAID Operation**
Provides over 3TB of RAID 0, 1 (0+1), 3, 5, 10, 30, 50, NRAID and JBOD data storage
- **Ultra320 SCSI Interface**
Supports up to 320MB/s data throughput
- **Redundant Controller Models**
Raidium 4300R features dual array controllers for added security
- **Multi-Host SAN**
Allows multiple servers to share a single array
- **Optimized Disk Drives**
Provides unmatched disk drive throughput
- **Removable Disk Storage**
Adds data security and easy disk replacement
- **LCD Display Panel**
Displays real time array status and diagnostic information
- **Redundant Power Supply System**
Sustains operation via fault tolerant power
- **Full Compatibility**
Compatible with Intel[®], Novell*, Windows*, Linux* and most popular Unix* platforms

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Where Performance is Paramount

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Product Specifications

Models:

- Array 4300: Single array controller
- Array 4300R: Redundant array controllers

General Features:

- Multiple arrays configurable with dedicated or global hot spares
- RAID levels supported: RAID 0, 1 (0+1), 3, 5, 10, 30, 50, NRAID and JBOD
- Online expansion by: Adding new drives or copying and replacing drives with drives of larger capacity
- Automatic background rebuilds
- Configurable stripe size and write policy per array
- Intelligent Drive Handling
- In degraded mode: Skips irreparable blocks to continue rebuild
- In normal operation: Data block verification and repair
- Firmware-embedded Java-based GUI RAID manager
- Centralized management of multiple arrays over in-band or Ethernet
- Real-time event notification over email, LAN broadcast, or SNMP traps
- SNMP 2.0 MIB files with get-and-set commands
- Firmware-embedded management utility via LCD keypad or RS-232C serial port
- Three (3) LED status-indicators on the LCD panel
- Onboard alarm
- Optional Li-ION battery module for cache memory backup
- Immediate array availability
- Drive roaming, array configuration on drives
- Controller voltage and temperature self-diagnostics

Disk Drives:

- Formatted Capacity: 36GB, 73GB, 147GB and 300GB
- Interface: Ultra320 SCSI
- Removable (hot-swap) drive caddy with cooling fans
- Data XFR Rate: Up to 320MB/s
- Rotational Speed: 10,000 and 15,000RPM
- Cache Buffer: Up to 8 MB
- MTBF: >1,400,000 Hours

Chassis Options:

- Tower Chassis w/4 HH Bays
- Tower / 5U Rack Chassis w/10 drive bays
- 2U Rack Chassis w/9 drive bays
- 3U Rack Chassis w/12 drive bays
- 4U Rack Chassis: w/15 drive bays
- Chassis include Dual Hot Swap, 420W Power Supplies
- Supports Load Balancing and Power Sharing

Warranty:

- 3 year limited warranty - parts & labor
- 5 year limited warranty - parts & labor on disks drives

Raidium 4400 Controller



Provides RAID 0, 1(0+1), 3, 5, 10, 30, 50, NRAID and JBOD data storage with expansion for up to 8 Ultra320 SCSI channels. LCD Display provides real time configuration and diagnostic information.

Hot-Swap Disk Drives



Intelligent Hot-Swap drive caddies provide for quick and easy drive replacement. Backlit LCD Display provides real time drive temperature, voltage, fan rotation and MTBF data.

Custom Rack Furniture



Industrial grade rack furniture in a variety of sizes, complete with removable side panels, lockable plexiglas door, casters and available UPS power options.