

ARC-5020 RAID BOX

Hi-Speed eSATA/USB 2.0/iSCSI/AoE

Compact 4-Disk RAID

- True 3.0Gbps eSATA
- Multiple Volumes (up to 4)
- Up to 16 Volumes Per Controller



Highlights

The ARC-5020 RAID box offers a truly innovative eSATA(3.0Gbps)/USB2.0/iSCSI/AoE solution for use with your PC and Mac workstation. The ARC-5020 RAID subsystem board incorporates onboard high performance 400MHz storage processors and on-board DDR2-400 128 MB SDRAM memory to deliver true hardware RAID. Designed and leveraged with Areca existing high performance solution, this RAID box delivers high-capacity performance at the best of cost/performance value. The iSCSI/AoE solution allows user quickly export an ARC-5020 volume sets to all the clients. AoE protocol support provides the same functionality as iSCSI in those environments where ATA-over-Ethernet technology is used.

Unparalleled Performance

ARC-5020 RAID box unleashes the power of 3.0Gbps performance and NCQ support on the eSATA host port. The eSATA port delivers in excess of 210MB/s sustained RAID 5 reads and over 176MB/s RAID 5 sequential writes. The result is superior overall performance compared to other 4 bay eSATA solution. High transfer rates make ARC-5020 RAID box well suited for audio/video application, especially the rapidly growing demand from the Mac Video Editing markets. With the target mode multiplier emulation, eSATA host channel (with port multiplier function) can support multiple volumes (up to 4). iSCSI/AoE and USB2.0 host channel can also support up to 8 volumes for each host. Up to 16 volumes can be created on each ARC-5020 RAID subsystem.

Unsurpassed Data Availability

The ARC-5020 RAID box provides RAID levels 0, 1, 10, 3, 5, Single Disk or JBOD RAID configurations. Its high data availability and protection derives from the following capabilities: Online RAID Capacity Expansion, Online Array Roaming, Online RAID Level / Stripe Size Migration, Global Online Spare, Automatic Drive Failure Detection, Automatic Failed Drive Rebuilding, Disk Hot Swap, Online Background Rebuilding, Instant Availability/Background Initialization, Auto Reassign Sector and Redundant Flash Image. Areca greater than Two TB support allows for very large volume set application in 64-bit environment such as data-mining and managing large databases.

Easy RAID Management

Manual configuration and monitoring can be done through the LCD Control Panel, RS-232 and LAN port. The LCD Hot-Key supports one-step easy RAID configuration to simplify the firstly setup of ARC-5020 RAID box. It's API library supports customer to write its own monitor utility. The Single Admin Portal (SAP) monitor utility can support one application to manage multiple RAID units in the network. The Disk Stress Test (DST) utility kicks out disks meeting marginal spec before the RAID unit is actually put on-line for real business. The hardware monitor can monitor system voltage, fan and temperature. The warning message will show in the LCD, alarm buzzer and respect LED.

Adapter Architecture

- 400MHz storage I/O processor
- 128MB on-board DDR2-400 SDRAM
- Unleash the power of 3.0Gbps and NCQ on the eSATA host port
- NVRAM for RAID configuration & transaction log
- Write-through or write-back cache support
- Redundant flash image for controller availability
- RAID level 0, 1, 10, 3, 5, Single Disk or JBOD
- Multiple RAID selection
- Up to 16 volumes per RAID controller
 - SATA host with port multiplier: 8 x volumes
 - SATA host without port multiplier: 1 x volume
 - iSCSI/AoE: 8 x volumes
 - USB 2.0: 8 x volumes
- Online array roaming
- Offline RAID set
- Online RAID level/stripe size migration
- Online capacity expansion and RAID level migration simultaneously
- Online dynamic volume set capacity expansion
- Instant availability and background initialization
- Automatic insertion/removal detection and rebuild
- Greater than two TB per volume set
- Support SMART, NCQ, and OOB staggered spin-up capable drives

Host Interface

- 3Gbps eSATA
- USB2.0 or iSCSI/AoE (iSCSI/AoE support from version 2.0)

ARC-5020 RAID Box

Host Interface	1 x eSATA (SATA II 3.0Gbps) 1 x Hi-Speed USB 2.0 1 x iSCSI/AoE
Disk Interface	SATA II Compatible: Up to 3.0Gbps (300MB/s)
System Requirements	Computer with USB or eSATA connection
OS Compatibility	OS Independent
Power Supply / Input /Output	180W / 90-265V AC / +5V/16A, +12V/14A, +3.3V/14A
Dimensions	123(L) x 165.6(W) x 232(H) mm
Weight	9.0 lbs / 4.0 kg
Warranty	3 years limited

Disk Interface

- 4 x SATA II 3.0Gbps, hot swappable drive trays

Monitors/Notification

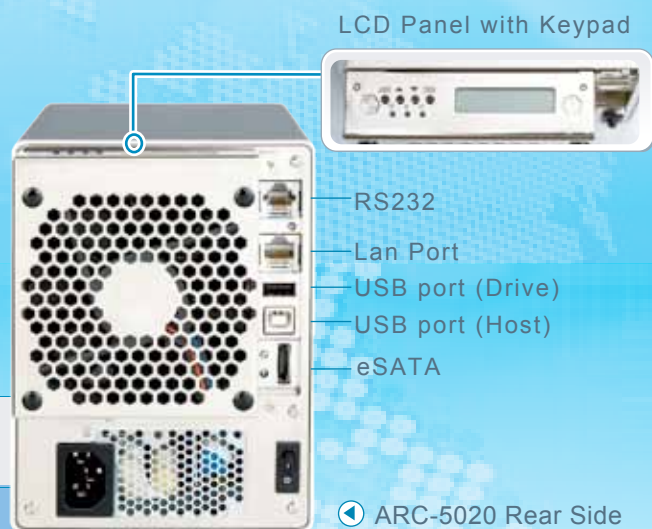
- Push Buttons and LCD Display Panel for setup and status
- Environment and drive failure indication through LCD, LED and alarm buzzer
- Keep silent and adequate air flow and cooling by intelligent cooling fan speed controller

RAID Management

- Field-upgradeable firmware in flash ROM via RS-232 and LAN port
- LCD Hot-Key supports one-step creation RAID configuration
- Firmware-embedded manager via RS-232 port
- Firmware-embedded Browser-based RAID manager, SMTP manager, SNMP agent and Telnet function via LAN port

Accessory

- ARC-5020-3 (Internal SATA to eSATA redriver board)
- ARC-1300-4e (4 port eSATA host adapter)



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