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At the Heart of Storage

Thunderbolt ARC-8050 RAID Storage

(Thunderbolt to 6Gb/s SAS RAID box)

Compact 8-Disk RAID
- Thunderbolt host connection
- Dual core 800Mhz RAID-On-Chip
- Up to 8 channels 6Gb/s SAS port

Thunderbolt Technology

Thunderbolt technology is a revolutionary high-speed, dual protocol I/O technology designed for performance, simplicity and flexibility. Thunderbolt I/O technology lets you move data between high-resolution displays and high-performance data devices on a single, compact port. Both data and display signals can be sent and received at the same time through dual 10 Gbps channels. A single cable attached to one of the ports provides 2 channels able to achieve the 10 Gbps speeds flowing both ways simultaneously. A single Thunderbolt port supports hubs as well as a daisy chain of up to seven Thunderbolt devices. To improve bandwidth transmission, Thunderbolt has implemented two duplex (PCIe and DisplayPort) channels into the controller and each channel can provide full bi-directional performance.

Unsurpassed Data Availability

Designed and leveraged with Areca's existing high performance solution, the RAID storage deliver high-capacity at the best of cost performance value. It supports the hardware RAID 6 engine to allow two HDDs failures without impact the existing data and performance. Its high data availability and protection derives from the many advance RAID features. ARC-8050 Thunderbolt RAID box allows easy scalability from JBOD to RAID. It can be configured to RAID levels 0, 1, 1E, 3, 5, 6, 10, 30, 50, 60, Single Disk for JBOD. With innovative new ROC 6Gb/s SAS feature and support for SATA, SAS and SSDs, the ARC-8050 provides powerful small-workgroup server, power users and consumers with superior levels performance and enterprise level data protection for external storage.

Unparalleled Performance

ARC-8050 is the most complete 6Gb/s SAS 8-bay Thunderbolt box with RAID control capabilities solution for both PC and Mac. Thunderbolt host interface make ARC-8050 RAID box well suited for SOHO group professional who work at home and or in the office. Thunderbolt technology developed for high speed data transfer at the speed of 10Gbps per channel. Thunderbolt port is shared by multiple devices and can transfer data equally distribute to all connected devices. The ARC-8050 incorporated on-board high performance dual core 800Mhz ROC storage processor and with 1GB DDR3-1333 SDRAM memory on-board to deliver true high performance hardware RAID for the demands of serious HD media creators needs. For example, the benefit for video editor by using ARC-8050 to unleash their professional creativity work in real-time, with the high-bandwidth allow large amount of audio and video capture/mixing devices transferred faster with low latency and high-accurate synchronization at 10 Gbps.

Easy RAID Management

Configuration and monitoring can be managed either through the LCD control panel, McBIOS setup or Ethernet port. Firmware-embedded web browser-based RAID manager allows local or remote to access it from any standard internet browser via a out-of-band 10/100Mbit LAN port or in-band Archttp utility. ARC-8050 Thunderbolt RAID storage also provides API library for customer to combine with its own monitor utility. The Single Admin Portal (SAP) windows version 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 Intelligent cooling continuously adapts to environmental conditions by automatically controlling the speed of the cooling fans. This super silent design, optimizing balance between noise reduction and necessary cooling, make ARC-8050 well suited for audio/video application especially the rapidly growing demand from the video editing markets.

Controller Architecture

- 800 MHz Dual core ROC for RAID core and SAS microcode
- 1GB on-board DDR3-1333 SDRAM with ECC protection
- Write-through or write-back cache support
- Redundant flash image for adapter availability
- Battery Backup Module ready (Option)

RAID Features

- RAID level 0, 1, 1E, 3, 5, 6, 10, 30, 50, 60, Single Disk or JBOD
- Multiple RAID selection
- Online array roaming
- Online RAID level/stripe size migration
- Online capacity expansion and RAID level migration simultaneously
- Online volume set growth
- Support global hot spare and local hot spare
- Instant availability and background initialization
- Automatic drive insertion / removal detection and rebuilding
- Disk scrubbing/ array verify scheduling for automatic repair of all configured RAID sets
- Support intelligent power management to save energy and extend service life
- Support NTP protocol to synchronize RAID controller clock over the on-board LAN port

Monitors/Notification

- 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
- Enclosure management ready

Drive Support

- Up to 8 x 6Gb/s SAS/SATA/SSD

Host Connection

Two Thunderbolt Channels- dual 10 Gbps channel per channel

- Simultaneous bi-directional, 10 Gbps transfers over a single cable
- Dual-protocol support (PCI Express and DisplayPort)
- Compatible with existing DisplayPort devices
- Daisy-chaining devices

RAID Management

- Field-upgradeable firmware in flash ROM
- Firmware-embedded RAID manager via McBIOS Setup and LCD
- Firmware-embedded browser-based RAID manager, SMTP manager, SNMP agent and Telnet function via out-of-band 10/100Mbit LAN port or in-band Archttp utility
- API library for customer to combine GUI with its own monitor utility
- Command Line Interface

Software Drivers

- Mac OS X 10.6.x/10.7.x/10.8.x
- Windows 7/8

THUNDERBOLT™

Daisy Chain

ARC-8050 RAID Storage

Form Factor	Compact – 8 Disk Compact Tower
Operation temperature	0° ~ 40°C
Operation humidity	5% ~ 95 %, Non-condensing
Cooling Fan	2 x 2700rpm/0.135A Brushless Fan
Power Supply/In/out	270W / 90-256V AC / +12V/26A, +5V/18A, +3.3V/16A
Dimension (W x H x D)	146 x 302 x 290 mm
Weight	14.9 lbs / 6.8Kg (Without Disk)

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