

*At the heart of storage*

## ARC-6060-U320

Cable Solution Ultra320 SCSI-to-SATA Controller



## ARC-6060-Fibre

Cable Solution 2Gb Fibre-to-SATA Controller

The ARC-6060 external RAID controller features a two Ultra320 SCSI host or a two 2Gb Fibre host and SATA device attachment.

The array controller provides reliable data protection for servers and offers a new level polynomial technology to implement the extreme performance RAID 6 function. Its performance is very similar to RAID 5. The controller is designed for flexibility scalability, high fault-tolerance and performance. It is ideal for DAS or server RAID application at a price that fits your budget.

### HIGHLIGHTS

- ★ Two Ultra320 SCSI or Two 2Gb Fibre host and SATA channel device compatibility
- ★ Support up to 16 ports SATA or SATA II drive
- ★ Support RAID level 0, 1, (0+1), 3, 5, 6 and JBOD
- ★ Areca ASIC Engine to support highest speed RAID 6
- ★ Online Capacity expansion, RAID level/stripe size migration
- ★ Online Dynamic Volume Set Capacity expansion
- ★ Firmware-embedded Web Browser-based RAID manager, SMTP manager, and SNMP agent Via Ethernet Port with no software required
- ★ Redundant flash image for adapter availability
- ★ Support Greater than 2TB per Volume set and battery backup module (BBM)

### Unparalleled Performance

The controller new high-performance architecture comes from Intel 80321 I/O processor, a 100MHz/64-bit PCI-X, a new polynomial RAID 6 engine and DDR200 memory architecture. The data flow at 100MHz/64 bit PCI-X bus and 64-bit 200Mhz ECC DDR SDRAM makes its high data throughput more than existing RAID controller with PATA drive. Data can be transferred between the controller and the drives through a high-speed 100MHz/64-bit path at a burst rate up to 800MB/S. The controller can be configured with up to 1 GB DDR200 SDRAM cache, depending on the type of memory modules being used.

### Unsurpassed DataAvailability

As storage capacities continue to rapidly increase, users need greater level of disk drive fault tolerance, which can be implemented without doubling the investment in disk drives. The RAID 6 can offer fault tolerance greater than RAID 1 or RAID 5 but only consumes the capacity of 2 disk drives for distributed parity data. The SATA RAID controllers with extreme performance RAID 6 engine supported provide the highest RAID 6 feature to meet this requirement. The controller can concurrently compute two parity blocks and get comparable with RAID 5 performance.

The RAID controller provides RAID levels 0, 1 (0+1), 3, 5, 6 and JBOD RAID configurations. It can be managed either through the LCD control panel, RS232 port or Ethernet port. Its high data availability and protection derives from the following capabilities: Online RAID Capacity Expansion, 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 Battery Backup.

During the controller firmware upgrade flash process, it is possible for a problem to occur resulting in corruption of the controller firmware. With our Redundant Flash image feature the controller will revert back to the last known version of firmware and continue operating. This reduces the risk of system failure due to firmware crash. ARECA greater than 2TB 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. The firmware also contains an embedded terminal emulation via the RS-232 port. The firmware-embedded Web Browser-based RAID manager allows local or remote to access it from any standard internet browser via a LAN or WAN with no software or patches required. The firmware contains SMTP manager monitors all system events and user can select either single or multiple user notifications to be sent via ' Plain English' e-mails. The firmware-embedded SNMP agent allows remote to monitor events via LAN with no SNMP agent required. The controller also supports API library for customer to write its own monitor utility. The hardware monitor can monitor system voltage, temperature and FAN.

## Cable Solution Ultra320 / 2Gb Fibre-to-SATA Controller

### RAID Architecture

- ★ Intel 80321 400MHz 64-bit I/O Processor
- ★ Up to 1GB DDR200 SDRAM on one DIMM socket with ECC protection and ECC or non-ECC SDRAM module using X8 or x16 devices.
- ★ Marvell 8 channels SATA 1.0 controller (88sx5080, PCB1.1)
- ★ Marvell 8 Channels SATA II controller (88sx6081, PCB2.0 or later)
- ★ Areca ASIC to support extreme performance RAID 6 function
- ★ NVRAM for RAID configuration & transaction log
- ★ Write-through or write-back cache support
- ★ Redundant flash image for adapter availability
- ★ Battery Backup Module (BBM) ready (Option)

### RAID Features

- ★ RAID level 0,1(10),3,5,6 and JBOD
- ★ Multiple RAID selection
- ★ Online Array roaming
- ★ 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 2TB per volume set
- ★ Support S.M.A.R.T NCQ and OOB Staggered Spin-up capable drives

### Host Interface

Ultra320 SCSI-to-SATA

- ★ Two Ultra320 SCSI Channels - 320MB/sec per channel

2Gb Fibre-to-SATA

- ★ Two 2Gb Fibre Channels - 200MB/sec per channel

### Drive Interface

- ★ 8/12/16 SATA 1.0 Channel-1.5Gbps (PCB 1.1)
- ★ 8/12/16 SATA II Channel-3.0Gbps (PCB 2.0 or later)

### Monitors/Notification

- ★ LCD Control Panel for setup, alarm mute and configuration
- ★ System status indication through HDD activity/fault connector LCD connector and alarm buzzer
- ★ I2C enclosure management ready

### RAID Management

- ★ Field-upgradeable firmware in flash ROM
- ★ Browser-based RAID manager via ArchHttp Proxy Server through RS232 for Windows & Linux system
- ★ Firmware-embedded manager via RS-232 port
- ★ Support controller's API library for customer to write its own software
- ★ Single Admin Portal (SAP) monitor utility
- ★ Disk Stress Test (DST) utility for production in Windows
- ★ Firmware-embedded Browser-based RAID manager, SMTP manager, SNMP agent, and Telnet function via Ethernet port with no software required
- ★ Firmware-embedded Telnet function via Ethernet port

### Operating System

- ★ OS independent

## Environmental/Physical

| Mechanical  | Environment                                     |
|---|---|
| Form Factor One 5.25" Half-height driver bays               | Operating Temperature: +5°C to +50°C            |
| Dimension(H X L) 146 x 43 x 230 mm                          | Humidity: 15-80%, non-condensing                |
| I/O Interface (16 X 2) header for fault LED connector       | Storage Temperature: Temperature: -40°C to 70°C |
| (16 X 2) header for activity LED connector                  | Humidity: 5-90% non-condensing                  |
| (2 X 4) header I2C Port for activity LCD & button connector |   |
| (10 X 2) header for Battery Backup Module (BBM) connector   | <b>Electrical</b>                               |
| (2 X 5) box header serial port connector                    | Power Requirements 20W max. On +5V              |
| (2 X SFP) ports for optical Fibre connector                 | 1.2W max. On +12V                               |
| (1 X RJ45) Ethernet Port                                    |   |
| (2 X 68pin) LVD SCSI connector                              |   |
| (16 X 7pin) SATA connector                                  |   |

| ARECA Custom-made backplane solution also available                                 |  |
|---|--|
| Ultra320-to-SATA  | 2Gb Fibre-to-SATA  |
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