

ARC-73xx SAS series 12Gb/s SAS to SAS

McRAID Cost-Effective RAID Storage Subsystem

The ARC-73xx SAS RAID subsystem is a family of 8/12/16 12.0Gbps SAS hard drive ports depending upon the amount of storage required. The ARC-73xx SAS is designed to provide a truly innovative 12Gb/s SAS host interfaces to address the needs of different cost-effective RAID storage requirements. When properly configured, the RAID subsystem can provide non-stop service with a high degree of fault tolerance through the use of RAID technology and advanced array management features. The 12Gb/s SAS interface supports both 12Gb/s SAS disk drives for data-intensive applications and 6Gb/s SATA drives for low-cost bulk storage of reference data. The SAS to 12Gb/s SAS RAID controllers attach directly to SATA/SAS midplanes and increase capacity using one additional HD SF-8644 external connector.



Key Features

- 12Gb/s SAS-based external storage subsystem
- Support up to 2GB cache per controller, optional FBM/BBM cache
- Hot-swap and redundant components for increased system availability
- Single RAID controller modular design
- RAID Advanced Power Management
- Support HDD firmware download
- SED (Self-encrypting drives) function support

Overview

The ARC-73xx SAS SAS to SAS RAID subsystem provides 12Gb/s SAS host interface link to the host board on the server system. This RAID controller utilizes the same RAID kernel that has been field-proven in existing internal/external SATA/SAS RAID controller products, allowing to bring stable and reliable SAS RAID external subsystem. The ARC-73xx SAS provides 2U/3U rack-mounted external storage chassis capable of accommodating up to 8/12/16 12.0-Gb/s, Serial-Attached SCSI (SAS) drives or 6.0-Gb/s Serial ATA (SATA) drives.

Unparalleled Performance for 12Gb/s SAS

The ARC-73xx SAS SAS RAID subsystems raise the standard to higher performance levels with several enhancements including new high performance 1.2 GHz dual core ROC processor, a DDR3-1866 memory architecture and 12Gb/s SAS technology. The subsystem each includes 2GB DDR3-1866 and ECC SDRAM. The 12Gb/s SAS is designed for backward compatibility with 6Gb/s and 3Gb/s SAS and SATA hard drives. Regardless of the drive speed, 12Gb/s SAS RAID controllers will provide maximum read/write performance improvements for the most performance-hungry database and IT applications.




Unsurpassed Data Availability

Designed and leveraged with Areca's existing high performance RAID solution, ARC-73xx SAS series subsystems provide superior levels performance and enterprise level data protection for the most demanding next generation server and storage environments. It supports the hardware RAID 6 engine to allow two HDDs failures without impact the existing data and performance. It allows users to hot swap drive in the event of a drive failure with zero downtime. With innovative new RAID-on-Chip 12Gb/s SAS feature and support for SATA, SAS and SSDs, the SAS RAID subsystems provides small- to mid-sized enterprises with superior levels of RAID performance and scalability for external storage. The optional flash-based backup module provides power to transfer the cache data from the SDRAM memory to the NAND flash memory if it contains data not yet written to the drives when power is lost. The subsystem also supports traditional Lithium-ion (Li-ion) battery backup module (BBM) to protect cached data on RAID Controllers.

Easy RAID Management

Configuration and monitoring can be managed either through the LCD control panel, RS232 port or LAN port. The firmware also contains an embedded terminal emulation via the RS-232 port. The firmware-embedded several available RAID managers include internet browser, CLI, Telnet, API, SMTP and SNMP via a LAN port. The ArcSAP Quick Manager can scan multiple RAID units in the local and remote side and provide an effective management interface for configuration, and monitoring Areca RAID controllers.



Model Name	ARC-7308SS-DR2	ARC-7312SS-DR2	ARC-7316SS-DR3
			
Form Factor	2U-8 bays 19-inch rackmount chassis	2U-12 bays 19-inch rackmount chassis	3U-16 bays 19-inch rackmount chassis
I/O Interface			
Host Interface	2 x 12Gb/s SAS ports (4-lanes per port)		
Drive Channel per Enclosure	Up to 8 x 3.5"/2.5" HDDs or SSDs	Up to 12 x 3.5"/2.5" HDDs or SSDs	Up to 16 x 3.5"/2.5" HDDs or SSDs
Disk Bus Interface	12Gb/s SAS or 6Gb/s and 3Gb/s SAS/SATA HDDs/SSDs		
Max. JBOD per RAID Ctrl	<ul style="list-style-type: none"> Expansion up to 7 JBODs with 256 HDDs limitation One downstream SFF-8644 (4 x 12Gb/s) expansion port 		
RAID Controller			
RAID_on_Chip	Dual Core RAID-on-Chip (ROC) 1.2 GHz processor		
Cache Memory	On-board 2GB DDR3-1866 ECC SDRAM		
RAID Features	<ul style="list-style-type: none"> 0, 1, 10(1E), 3, 5, 6, 30, 50, 60, Single Disk or JBOD Automatic drive failover/detection and rebuild using multiple Global, Dedicated or Enclosure hot-spare drives Multiple RAID 0 and RAID 10(1E) support (RAID 00 and RAID100) Configurable stripe size up to 1MB Multiple pairs SSD/HDD disk clone function SSD automatic monitor clone support SED (Self-encrypting drives) function support Support for native 4K and 512 byte sector devices Support HDD firmware update 		
FBM/BBM	Yes (optional): ARC-1883-CAP/ARC-6120BAT121-12G		
Subsystem Management			
RAID Management	<ul style="list-style-type: none"> Field-upgradeable firmware in flash ROM Firmware-embedded manager via RS-232 port API library for customer to write its own monitor utility 	<ul style="list-style-type: none"> Embedded browser-based RAID manager via built-in 10/100 Lan port SAP monitor utility easily manage multiple RAID units in the network Access terminal menu by telnet via a LAN port 	
Monitors / Notification	<ul style="list-style-type: none"> LCD control panel for setup, alarm mute and configuration System status indication through LCD, LED and alarm buzzer SMTP support for email notification 	<ul style="list-style-type: none"> SNMP support for remote manager Enclosure management ready (SES over in-band SAS) 	
Mechanical Specification			
Power Supply/In/out	<ul style="list-style-type: none"> Redundant and hot-swappable 550W x2 with PFC and energy-efficient 80Plus Platinum Compliant Supports 100-240VAC input at 47 and 63Hz frequency 		
Cooling	Dual cooling fans		
Environment	<ul style="list-style-type: none"> Temperature: 0 to 40°C operating/ -40 to 60°C non-operation Relative humidity: Operating 10% to 80% (non-condensing)/ Storage 5% to 95% (non-condensing) 		
Dimensions (H x W x D)	<ul style="list-style-type: none"> Without handles 88.2 x 445 x 506 mm (3.2 x 17.5 x 19.9 in) With handles 88.2 x 482 x 542 mm (3.2 x 22.9 x 21.3 in) 	<ul style="list-style-type: none"> Without handles 88.2 x 445 x 506 mm (3.2 x 17.5 x 19.9 in) With handles 88.2 x 482 x 542 mm (3.2 x 22.9 x 21.3 in) 	<ul style="list-style-type: none"> Without handles 132.6 x 445 x 506 mm (5.2 x 17.5 x 19.9 in) With handles 132.6 x 482 x 542 mm (5.2 x 22.9 x 21.3 in)
Weight (W/O Drives)	16.5 kg (36.4 lb)	17 kg (37.5 lb)	17.5 kg (38.6 lb)



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