

ARC-71xx series GbE(x4) / 6Gbps eSATA / USB 3.0 to SATA

McRAID Cost-Effective RAID Storage Subsystem

The ARC-71xx RAID subsystem is a family of 8/12/16/24 6.0Gbps SATA hard drive ports depending upon the amount of storage required. The ARC-71xx is designed to provide a truly innovative multiple 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 4 port iSCSI connections deliver high performance, advanced function, high availability, and scalable storage capacity with both direct iSCSI host and IP network connectivity.



Key Features

- Support up to 24 x 6.0Gbps SATA disk channels
- Support multiple host: GbE(x4)/6Gbps eSATA/USB 3.0
- Support up to 2GB cache per controller, optional BBM cache
- LAN with MPIO, MC/S, Trunking and LACP support
- Single or dual RAID controller modular design for 24 bays enclosure
- RAID 6 and advanced power management
- Support HDD firmware download
- With LACP enabled, performance: 415 MB/sec Reading, 324 MB/sec Writing

Maximum Host Interoperability

The ARC-71xx supports multiple host interfaces; eSATA III, iSCSI or USB 3.0 that can work with different application requirement. The 6.0Gbps eSATA host interface can be directly attached to host computers by widely-adopted and low-cost eSATA interface without add-on cards and device drivers, or being included inside a host system, such as digital video recorder. As video management systems continue to trend toward IP, iSCSI RAID storage has become increasingly popular to provide massive quantities of storage in a highly secure manner. The ARC-71xx is designed with 4 1Gbps host ports for a cost-effective and shared storage solution with Link Aggregation (LACP, Trunking), Multi-Path IO (MPIO), and iSCSI Multiple Connection per Session (MC/S) support. The ARC-71xx uses iSCSI protocol, which allows system designers significant flexibility in determining placement of storage within a network as well as how the storage is allocated across multiple NVRs.





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.

Unsurpassed Data Availability

The ARC-71xx incorporates onboard 1.2GHz storage processors and 2GB on-board DDR3-1200 SDRAM memory to offer high-performance with the added advantage of central management and RAID protection. Designed and leveraged with Areca's existing high performance solution, this controller delivers 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 advanced RAID features. The ARC-71xx allows easy scalability from JBOD to RAID. It can be configured to RAID levels 0, 1, 10, 1E, 3, 5, 6, 00, 100, 30, 50, 60, Single Disk or JBOD function selection for data protection. Link aggregation combines Quad Gigabit Ethernet connections to increase data transfer past a single connection and provides redundancy in the event of a failed connection. High transfer rates and more SATA disk channels provide a major benefit for those applications requiring cost-effective RAID solutions that take advantage of low cost, high capacity SATA disk drives, especially the rapidly growing demand from the VMware ESX server external storage, DVR markets and cold storage.



Model Name	ARC-7108-eUi	ARC-7112-eUi	ARC-7116-eUi	ARC-7124-eUi
				
Form Factor	2U-8 bays 19-inch rackmount chassis	2U-12 bays 19-inch rackmount chassis	3U-16 bays 19-inch rackmount chassis	4U-24 bays 19-inch rackmount chassis
Single Ctrl Model No.	ARC-7108MS-HR2	ARC-7112MS-HR2	ARC-7116MS-HR3	ARC-7124MS-HR4
Dual Ctrl Model No.	N/A			ARC-7124MD-HR4
I/O Interface				
Host Interface	• 1 x 6.0Gbps eSATA		• 1 x 5.0Gbps USB 3.0	• 4 x 1.0Gbps GbE iSCSI
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	Up to 24 x 3.5"/2.5" HDDs or SSDs
Disk Bus Interface	6Gb/s and 3Gb/s SATA HDDs/SSDs			
RAID Controller				
RAID_on_Chip	Quad Core ARM V7 1.2 GHz processor			
Cache Memory	2GB on-board DDR3-1200 SDRAM with ECC protection			
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 and detection and rebuild using multiple Global, Dedicated or Enclosure hot-spare drives • Multiple RAID 0 and RAID 10(1E) support (RAID 00 and RAID100) • Multiple pairs SSD/HDD disk clone function • SSD automatic monitor clone support • Multiple RAID selection • Configurable stripe size up to 1024KB • eSATA host: 8 volumes(with port multiplier), iSCSI host:128 volumes and USB 3.0 host: 8 volumes • Support for native 4K and 512 byte sector SATA devices • Support HDD firmware update 			
Availability and Reliability	<p>***** The items below are only for ARC-7124 model *****</p> <ul style="list-style-type: none"> • SATA MUX function on the backplane without adding additional MUX board for dual controller • Redundant controller operation with active/active and fail-over/fail-back function • Dual-active RAID controller with cache mirroring through dedicated high speed bus • Automatic synchronization of firmware version in the dual-active mode • Multi-path & load-balancing support 			
BBM	Yes (optional): 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 	
Mechanical Specification				
Power Supply/In/Out	Dual 400W		Triple 400W	
	• Hot swap, N+1 redundant with PFC		• Supports 100–240VAC input at 47 and 63Hz frequency	
Cooling	Dual cooling fans		Quad 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 448 mm (3.5 x 17.5 x 17.6 in) • With handles 88.2 x 482 x 484 mm (3.5 x 18.9 x 19.0 in) 	<ul style="list-style-type: none"> • Without handles 88.2 x 445 x 448 mm (3.5 x 17.5 x 17.6 in) • With handles 88.2 x 482 x 484 mm (3.5 x 18.9 x 19.0 in) 	<ul style="list-style-type: none"> • Without handles 132.6 x 445 x 448 mm (5.2 x 17.5 x 17.6 in) • With handles 132.6 x 482 x 484 mm (5.2 x 18.9 x 19.0 in) 	<ul style="list-style-type: none"> • Without handles 176.4 x 445 x 448 mm (6.9 x 17.5 x 17.6 in) • With handles 176.4 x 482 x 484 mm (6.9 x 18.9 x 19.0 in)
Weight (W/O Drives)	• Single: 16.5 kg (36.4 lb)	• Single: 17 kg (37.5 lb)	• Single: 17.5 kg (38.6 lb)	<ul style="list-style-type: none"> • Single: 20 kg (44 lb) • Dual: 21 kg (46.3 lb)



8F., No.22, Lane 35, Ji-Hu Rd., 114 Taipei, Taiwan, R.O.C.
 TEL: 886-2-87974060 FAX: 886-2-87975970
<http://www.areca.com.tw>
 Technical Support: support@areca.com.tw
 Sales Information: sales@areca.com.tw



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