12Gb/s SAS JBOD Storage Enclosures

To meet growing needs for storage capacity and performance, Areca simple modular Enterprise-class 12Gb/s SAS JBODs solutions add capacity quickly, and easily to meet growing storage demand. It can scale and expand host system configurations on your existing storage systems to support an on demand environment by helping to enable storage to grow as demands increase. Areca ARC-93xx series JBODs support both 2.5" and 3.5" drives and offer mix-and-match SAS and SATA hard drives, lets you deploy drive technology as needed to fit your computing environment.

Keyfeatures

- 2U-12 and 2U/4U-24 form factor featuring hot-swappable drives bays

- Redundant hot-swappable SAS expander I/O modules, power with cooling fan modules

- Activity / Fault LEDs for each individual drive carrier

- Single JBOD I/O module with optional upgrade to dual SAS I/O modules

- Four 12Gb/s SFF-8644 connectors for connection to host or expansion to additional JBOD enclosures

- Hot swap and redundant components for increased system availability

- CLI through out-of-band RS-232 serial port

- SES-3 over in-band SAS for enclosure management

- Supports any mix of 12Gb/s, 6Gb/s and 3Gb/s SATA and SAS hard drives and SSDs for greater flexibility

Scalable and Expandable Storage for Data Demands

This JBOD storage enclosure solution delivers industry-leading data performance, availability, storage density, and upgradeability to meet customers' demanding and growing storage needs. Daisy-chains longer than the limitation of subsystems are not supported even if it may be workable. The total drive numbers depend on the RAID controller or the host adapter firmware ability. And because these JBOD enclosures are managed by the SAS RAID controller or SAS host adapter in the primary server, they give IT administrators a flexibilities way to respond and meet their storage demands. New 12Gb/s SAS JBOS storage from Areca is always affordable for customers to scale up and down rapidly, handle rich data, and have always-on capability.

SAS for Maximum Scalability

The ARC-93xx series JBOD incorporates LSI DataBolt bandwidth optimizer technology to buffer 6Gb/s data and then transfers it out to the host at 12Gb/s speeds in order to match the bandwidth between faster hosts and slower SAS or SATA devices. Applications can be optimized for cost/performance through the use of both SAS and SATA drive types. High performance architecture sets new boundaries of industry performance expectations: 12Gb/s SAS (1.2 GB/s bandwidth per physical link) 6.0Gb/s SATA (600MB/s bandwidth

per physical link). Each ARC-93xx JBOD enclosure supports four 12Gb/s SFF-8644 connectors for SAS host and expansion connections. Configuration and environmental information is accessible either via in-band SAS or out-of-band serial port.

Rack-Optimized Enterprise-level Storage Enclosure

The SAS-to-SAS JBOD enclosures provides a 2U/4U rack-mounted external storage enclosure capable of accommodating up to 12 or 24 12.0Gb/s, Serial-Attached SCSI (SAS) drives or 6.0Gb/s Serial ATA (SATA) drives. The enclosure can support 3.5-inch disk drives with capability for 2.5-inch disk drives. The dual active/active models provide fault-tolerant links across separate SAS domains, while the Single JBOD I/O module provides a single, straight-through data path. If your enclosure has two expander modules, a SAS device is required so that both expander modules can access the disk drives. Constant access to critical data is available with fully redundant, hot-swappable expander module and power supplies with two cooling fans, which are all field replaceable by the customer. Also, with LED status on the expander module and each individual drive carrier, all system components are closely monitored to help your business continuity and running in the event of a component failure or disruption.

Model Name	ARC-9312R2	ARC-9324R2	ARC-9324R4
Form Factor	2U-12 bays 19-inch rackmount chassis	2U-24 bays 19-inch rackmount chassis	4U-24 bays 19-inch rackmount chassis
Single Ctrl Model No.	ARC-9312R2-SJ1Q	ARC-9324R2-SJ1Q	ARC-9324R4-SJ1Q
Dual Ctrl Model No.	ARC-9312R2-DJ1Q	ARC-9324R2-DJ1Q	ARC-9324R4-DJ1Q

I/O Interface

External Interface	• 4 x Mini SAS HD (SFF-8644) per expander module using using LSI SAS35X40 expander chip • Host/Expansion Interface to additional JBOD enclosures		
Drive Channel per Enclosure	Up to 12 x 3.5"/2.5" HDDs or SSDs	Up to 24 x 2.5" HDDs or SSDs	Up to 24 x 3.5"/2.5" HDDs or SSDs
Disk Bus Interface	• 12Gb & 6Gb SAS if using dual expanders • 12Gb & 6Gb SAS/SATA if using single expander • Supports any mix of SATA and SAS HDD or SSDs for greater flexibility		

Enclosure Management

Management Interface	CLI through out-of-band RS-232 serial port		
LED Indicators	• Activity / Fault for each individual drive carrier • Activity/ Link for each external I/O port • Audible Alarm		
Enclosure Management Protocols	SES 3.0 via inband SAS SMP protocol		

Mechanical Specification

Power Supply/In/out	• Redundant and hot-swappable 550W x2 with PFC and energy-efficient 80Plus Platinum Compliant • Supports 100–240VAC input at 47 and 63Hz frequency		
Cooling	Two pluggable, hot swappable redundant fan modules with fan speed control for wide range airflow design		
Environment	• Temperature: 0 to 35°C Operating: -40 to 60°C non-operation • Relative humidity: 5 to 95% non-condensing, operating and non-operating		

Dimensions (H x W x D)	• 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)
		• Without handles
		  88.2 x 445 x 470 mm
		  (3.2 x 17.5 x 18.5 in)
		• With handles
		  88.2 x 482 x 506 mm
		  (3.2 x 22.9 x 19.9 in)
			• Without handles
			  176.4 x 445 x 506 mm
			  (6.4 x 17.5 x 19.9 in)
			• With handles
			  176.4 x 482 x 542 mm
			  (6.4 x 22.9 x 21.3 in)

Weight (W/O Drives)	• Single: 26.5 kg (58.4 lb) • Dual: 27 kg (59.5 lb)	• Single: 27.5 kg (60.6 lb) • Dual: 28 kg (61.7 lb)	• Single: 34 kg (74 lb) • Dual: 35 kg (77 lb)

Front Side of ARC-9324-R2

Rear Side of ARC-9324-R4

12Gb/s Serial Attached SCSI   SERIAL ATA 6Gb/s   CE   FC