

# RRC24

## Ruggedized 2U RAID System NOW with Drive Encryption within the RAID controller



The RAID enclosure features Dual-redundant RAID controllers, dual power supplies and dual fans bring uptime figures to 99.999 percent availability, so customers don't experience downtime or data loss.



*Featuring a capacity of twenty four drives, which includes two easily removable magazines containing up to twelve solid state disk or hard disk drives, each housed in rugged 2U panel height, 19.5" deep enclosure. It provides up to eight host ports of 16Gb Fibre Channel, 12GB SAS or 10GB iSCSI to SAS or SATA devices over a 12Gb SAS internal bus. The RRC24 Series scales up to 192 drives and allows customers to freely mix drive types, including HDD and SSD, for the most effective allocation of storage resources, based on capacity and performance needs.*

The RRC24 is a high performance Fibre/SAS/iSCSI Host Channel, 12Gb SAS/SATA III Solid State/Hard Disk Drive RAID Subsystem that delivers a level of operational environmental capability not previously available in COTS Data Storage Systems.

Ideal for surveillance aircraft, ships or ground missions, the post-mission canisters with the critical data is easily removed and installed into an empty ground station. Fresh new canisters are immediately re-installed for rapid redeployment. All 12 disks in a canister can be safely transported by using the built-in handle. All canisters lock in place with a locking lever. Canister insertion rate is best in class military grade and rated for 10,000 insertion cycles.

The RRC24 Series delivers up to 5200 MB/s of sustained sequential read throughput and up to 3500 MB/s of sustained sequential write performance, making it ideal for high performance data acquisition applications that also require very high storage capacity.

For demanding transaction oriented applications, such as cloud storage and business analytics, the RRC24 Series delivers an impressive 100,000 IOPS sustained from disk for fast access to database and structured data content, and up to 650,000 IOPS from cache.

Incorporating aluminum and steel in its rugged construction, the RRC24 weighs only 51 lbs with a full complement of 24 SSDs, is less than 20" deep and is certified to military specifications MIL-STD-810G and MIL-STD-461E.

Tested and Passed  
MIL-STD-461F, CE102  
MIL-STD-461F, CS114  
MIL-STD-461F, RE102  
MIL-STD-461F, SE103  
MIL-STD-810G, 514.6  
MIL-STD-810G, 516

\*Coming MIL-STD-901D (shipboard shock)

\*Optional SSD capable of 80,000ft.

## FEATURES

- Single or Dual Active, Redundant RAID Controllers
- MIL-STD-810G, and MIL-STD-461E Certified
- Two each 12 drive (24 drives total) Removable Storage Magazines
- Eight 16Gb/sec Fibre Channel, 12Gb SAS, or 10GigE iSCSI ports
- 12Gb SAS Internal Bus
- Sustained Read/Write Data Rates to 5200MB/s and 3500MB/s respectively
- Battery Free Cache Backup
- Enclosed and Electrically Isolated Drive Magazines
- Magazines Rated at 10K Mating Cycles
- Operational Altitude to 42,000 ft
- Operational Temperature - 20° to 70° C
- 40 to 440Hz, 90/240 VAC Input Operation
- Windows, Linux and Unix Support (Cluster Certified)
- Redundant, Hot-Swap Components/FRUs
- Management GUI and Failover Software
- Made in USA



# RRC24 SAS/SATA III 2U RAID SYSTEM

## TECHNICAL SPECIFICATIONS

### SUPPORTED HOST INTERFACES

Fibre Channel: 4, 8 and 16Gb/sec FC  
SAS: 6 and 12Gb/sec Serial Attached SCSI  
iSCSI: 10GigE iSCSI

### CONFIGURATION

Host OS Independent  
Single or Dual Hardware RAID  
Up to 24 SAS/SATA Storage Devices  
2 Redundant Hot-swap 650W Power Supplies  
4 Redundant 80 CFM Hot-swap Cooling Fans

### RAID OPERATION

RAID Levels	0, 1, 3, 5, 6, 10, 50, 60, NRAID and J-BOD
Cache	Up to 2GB per controller
Cache Backup	Yes, battery free
Virtual Disks per system	32
Partitions per virtual disk	128

### MANAGEMENT

Consoles	WEB GUI, CLI, Array Administrator
Interface Types	Mini DB9 RS232, 10/100 Ethernet
Protocol Support	SNMP, SSL, SSH, SMTP
Management Software	R/USC RAID

### ELECTRICAL

AC Input Power	90 to 264 VAC 40 to 440HZ
Input Current	3.3A (115 VAC), 1.7A (230 VAC)

### INTEROPERABILITY

Compatible with FC-SW-2 compliant switches Management interoperability with leading SAN management applications

### PHYSICAL

Height:	3.5" - 2U
Weight	40 lbs (unpopulated)
Width:	17.50" body
Depth:	19.52" Rack mount flange to chassis rear panel

### ENVIRONMENTAL

Shock & Vibration	
Operating Shock	60 Gs @ 2 msec
Nonoperating Shock	300 Gs @ 2 msec
Operating Vibration	3.0 Gs @ 10 to 500Hz
Nonoperating Vibration	7.0 Gs @ 22 to 500Hz

### ENVIRONMENTAL (Solid State Disks)

Temperature/Humidity  
-20 to 70 Degrees C (operational)  
-40 to 70 Degrees C (non-operational)

5% to 95% non-condensing  
Altitude 0 to 45,000 ft (operational, non-operational)

•\*Optional SSD capable of 42,000 ft

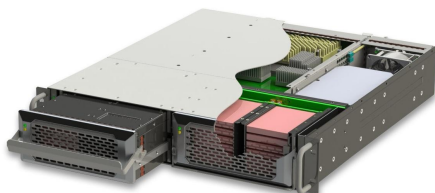
### ENVIRONMENTAL (Rotating Disks)

Temperature 5 to 70 Degrees C (operational)  
-40 to 70 Degrees C (non-operational)  
Altitude  
0 to 10,000 ft (operational)  
0 to 40,000 ft (non-operational)

### EMC COMPLIANCE

FCC 15.109:2006 Class A (Radiated Emissions)  
FCC 15.107:2006 Class A (Conducted Emissions)

MIL-STD-461: RS103, RE102, CE102, CS114



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