

## High Availability Enterprise RAID Subsystem... The ultimate RAID solution!



*Best Enterprise Storage you can afford! The most versatile hardware & operating system compatible and reliable raid solution tailored to fit your budget!!*

3.5TB to 6TB High availability RAID storage. **Almost 50TB** in one array system. Big Savings for Enterprise storage solutions, video streaming and Real time OLTP

### Cepoint R-STOR™ SATA, Rx300 and 400 Series Rack mount Serial-ATA RAID System

Serial ATA stand alone, SATA to SCSI or SATA to FC-AL 2GB/s Fibre Channel Host Bus Disk Arrays. Ideal for SAN and Enterprise Network attached, fault tolerant, clustering solutions. Space saving 2U, 3U, 4U or 5U Profile with 4, 8, 12, 14 16 and 24 -drives SATA/ATA-133/100 to SCSI or Fiber Channel RAID 0, 1, 0 + 1, 3, 5, 10, 30 50 and JBOD configurable options. High Performance.



Plug-and-play shared Raid array storage Server Sub-system, built to solve your Enterprise storage needs and, save you lots of cash and headache! R-STOR™ is built using 64-bit powerful RISC processor. This ensures 24 x7 continuous high performance, availability and reliability in high computing or mission-critical applications.



**Photo : (Model RA3160H) shown. Other models of the same series may look different. For example Model RA3160H shown here has horizontal and RA3160V has vertical drive layout)**



**Model Rx314V photo shown)**

### OVERVIEW:

#### Two Fibre Channel FC-AL (2GB/s) or SCSI-160 Host Channels

Two Fibre Channel or two SCSI-160 host channels with up to 16 serial ATA (SATA)/ATA-133 drives in a single storage subsystem.

Supports up to 16 or 24 SATA (Serial ATA) compatible hard disk drives or 16 PATA (Parallel-ATA) compatible hard disk drives

Multiple logical volumes and Drive with different RAID Level configurations

Dynamic sector repair, auto detection, auto rebuild, hot spare, and hot swap capability

#### Intelligent Drive Handling:

Auto sensing SATA/ATA-133/ATA-100/ATA-66

Bootable BIOS support for greater fault tolerance

S.M.A.R.T disk drive monitoring for reliability

Remote browser support with password for Network management of storage arrays

SMTP support for email/ pager notification

#### RAID Levels: RAID Levels support 0, 1, 3, 5, 10, 50 and JBOD

#### Highest capacity with performance RAID 5

Modular components:

Hot swappable Redundant power supply w/460 watts output power

Hot swappable cooling fans

Hot swappable drives. Redundant or hot spare

#### Enclosure Fault Management

The operating status of different subsystem components, including the power supply units, fans, controller modules and disk drives; are monitored by the subsystem. An audible alarm, and LEDs and the RAID manager software can all serve to notify onsite users of

component failure. Administrators can also be notified remotely via e-mail, SNMP, pager, or a LAN broadcast.



**Photo:** (Model Rx316 vertical drive config)

Rx300 or 400 SATA series comes as 3U or 4U, 4 to 16bays or 24 bays, SATA to SCSI or SATA-to-Fibre channel FC-AL 2GB/s host bus Interface with up to 200 or 400 GB/s data transfer rate, making it one of the best blazing speed RAID Subsystem.

Disk auto rebuild. Failed drive auto rebuild Failed drive indicators Audible alarm Host independent Environment monitor Online expansion and continuous rebuild.

Consistently checks status Password protection Fax / Pager notification UPS connection Bad block auto-remapping.

## Fibre Channel Operation Specifications:

**Fibre Channel Data Rate** 2Gb/sec, 200 MB/sec (half duplex), 400 MB/sec (full duplex)

**Multi-rate Option** Auto-negotiates for 1Gb or 2Gb operation

**BIOS Support** Bootable (Arbitrated Loop)

**Topology** Arbitrated Loop – public and private, fabric support (F- and FL-login)

**Class** FC-2 and 3

**Upper Layer Protocol** SCSI FCP – on-chip automation of complete SCSI I/O

**Loop Initialization** Completely hardware-based for high availability

**Arbitrated Loop Capabilities** Loop map, loop directed reset, loop broadcast

**Link Diagnostics** Link status indicators, internal/external loopback

**Standards** FC-PH, FC-AL, FC-PLDA, FCP-SCSI, FC-FS, FC-PI

## RAID Management:

Browser-based JAVA, GUI (Graphical User Interface) management utility.

Self Monitoring Analysis and Reporting Technology (SMART) information is collected from the disk drives and made available locally and remotely through Disk Manager utility, making the storage easier to manage and more reliable.

Multiple logical volumes and RAID Levels

Hot swap and hot spare supports for data availability

Transparent Storage management

Optional SAN manager

LUN Masking

Dynamic Load Balancing

Fail Over – Automatic Switching to redundant data path

Fail back – Automatic path recovery after hardware failure correction

R-STOR™ plug-and-play raid array storage sub system has been designed to meet your current storage need and the ever growing hunger for more storage space for your enterprise. Today's applications are faced with exponential storage growth, complex network infrastructures and tight budgets. Cepoint's R-STOR™ storage sub system allow you to boost storage and network capacity without adding management complexity.

Comparing the low-cost and simplicity with other vendors complex and expensive systems will convince you that you have made the right choice by selecting R-STOR™ as the most cost saving and viable alternative. Cepoint's clustering servers provide enterprise-class performance, reliability and scalability. Featuring cross-platform file sharing, seamless integration with popular management tools, extensive backup software support, hardware redundancy and advanced capabilities such as data replication and aggregation, Cepoint's servers and storage systems will satisfy the demands of today's evolving and demanding enterprise environments without squeezing your company's wallet dry.

**R-Stor RAS3160 series Fiber Channel-to-SATA RAID storage subsystems from Cepoint Networks combine the cost-effective performance of SATA/ATA RAID with SCSI or Fibre bus connectivity at 1 or 2GB/s fibre or Ultra 160 SCSI performance without the high-end price.**

**R-STOR™ uses PowerPC CPU, a powerful 64 bit RISC microprocessor that utilizes Ultra 160 SCSI or SAN industry standard Fibre Channel technology, performance feature set and so can deliver reliable, high-performance data protection to support mission critical, business applications on mid and high-range RAID subsystems.**

## Features:

Operation System : OS independent and Transparent

CPU : PowerPC 64-bit RISC microprocessor

Processor : RISC

RAID Level : 0,1,3,5,0+1,10, 30, 50, JBOD

RAID Architecture : Multiple RAID

Cache Memory : Up to 1024MB(1GB) SDRAM With ECC on board

Dual Controller Capability : Yes (option)

Battery Backup : Yes (option)

SCSI Architecture : Multiple ID & Multiple LUN

SCSI or Fibre Channel to Host : 2 x FC-AL 2GB/s ports or SCSI

SATA/ATA-133 Channel to Device : Max. 24 /Minimum 4

Data Transfer Rate : Up to 400MB/s

Devices support per Channel : Up to 30

Disk Drives : Up to 24 drives (depending on model)

Tagged Command Queuing : Yes, up to 256 Commands

Stripe Size : Variable

Write Option : Write through or Write Back

Hot Swap : Yes

Hot Spare : Yes (rebuild Transparently & Automatically)

SAF-TE Enclosure Management : Yes

On Line Expansion : Yes

User Friendly GUI man : Yes

Remote Alerts : SMTP email/ Fax, Pager

Serving up your Enterprise application demands. R-Stor's Transparent functionality ensures that your enterprise storage interoperability will help reduce cost and complexities associated with high availability in mission-critical applications requiring 24 x 7 uptime.



### Model Rx424

Whether you are implementing clustering using Oracle's 9i RAC (Real Application Clustering) or just shared array storage for high availability, R-stor's easy-to-implement features makes this a snap.

Advantages include: 1) Reduced cost of lost application Services due to unavailability of applications. 2) Increase data and system availability uptime. 3) Avoid extended downtime with implementation of clustering . 4) Easy scalability. Grow your Enterprise storage capability as the need increases

SPECIFICATIONS	
<b>Drive Bays Provided</b>	
Free Qty	Varies (zero when fully populated from factory)
Total drives Qty	24/16/15/14/12/11/9/8 or 4 drives (depending on P/N quoted)
Type	Hot-swap
<b>Cabinet</b>	
Chassis Built-in Devices	Status Alarm indicators/Excellent cooling fans and temp management
Chassis Form Factor	19" Rack-mountable
Chassis Installed Devices Modules	24/16/15/14/12/11/9/8 or 4 drive options
Chassis Supported Devices Modules	Up to 24
Chassis Type	Heavy-duty Storage cold rolled steel cabinet
<b>Dimensions</b>	
Depth	26"
Height	1.75"(1U), 3.5"(2U), 5.25" (3U)or 7" (4U)
Weight	75 Lbs (approx; fully populated with 14 drives)
Width	19" (17" without rack mount ears)
<b>Environmental Parameters</b>	
Humidity Range Operating	10 - 90% RH
Max Altitude Operating	7500 Ft
Max Operating Temperature	0 °C - 45 °C / 32°F - 115°F
Non Operating Temperature	-25°C - 65 °C / -13° - 149°F
Vibration Tolerance Storage	2 G @ 5-500 Hz
<b>Operating System</b>	
	Windows 2000/NT, Linux, Unix AIX, operating software compatible

Manufacturer	Cepoint Networks, LLC
Models available	Model 314 (14 drives, 3U) Model 315(15 drives, 3U) Model 209(9 drives, 2U). Model 316(16 drives, 3U) Model 424 (24drives)
Packaged Quantity	1
Product Line	Cepoint Storage Raid array Sub-system
<b>Host Interface Provided</b>	
Connector Type	2 x FC-AL (2GB/s) or 2xSCSI-Ultra160, RJ-45, RS-232, (may vary on models P/N) 2 x Ext. 68 pin type-P connector
Interface (Storage)	Ethernet 10Base-T/100Base-TX/1000Base-T x 2
NIC	2 (option)
<b>Miscellaneous</b>	
Height (Rack Units)	3U (19"W x 5.25"H x 26" D)/ 4U (19" W x7.0"H x 26"D) / 2RU
<b>Networking</b>	
Compliant Standards	IEEE 802.3 802.3z 802.3U
Data Link Protocol	Ethernet, Gigabit Ethernet, Fast Ethernet (option)
Form Factor	Integrated (option)
Network Transport Protocol	TCP/IP, AppleTalk protocols, SMTP
Remote Management Protocol	SNMP
Type	Embedded Network Interface Adapter
<b>Power Supply</b>	
Form Factor	Plug-in module
Frequency Required	50/60 Hz
Power Wattage (Operational)	Redundant Power up to 900 Watts / or 1000 Watts (non redundant)
Type	Power supply - hot-plug / redundant
Voltage	AC 100/240 Volts (-48V dc-dc optional)
<b>Service</b>	
Support Details Full Contract Period	3 year parts and labor
Support Details Location	Factory
Support Details Service Included	Phone consulting, Parts and labor
Support Details Type	Technical support, Limited warranty
Warranty	3yr on system. 3 years warranty on drives.

Drive slot Type	Hot swappable dr. slots
<b>Software</b>	
Type	Drivers & Utilities: Windows and Linux, Unix clustering support
<b>Storage</b>	
Type	Hard drive array 480GB to 6TB can be daisy chained to 50TB
<b>Storage CD/DVD</b>	
Type	1 Slim CD-ROM (depends on model)
<b>I/O</b>	
Types	2 x FC-AL (2Gb/s), RS-232, RJ-45, 68-pin Ext U320 SCSI
<b>Storage Controller</b>	
Controller Interface Type	SATA-150 Mbs/PATA-133 or U320/ U160 SCSI
Form Factor	Integrated or Host Bus Adapter
Installed	1 min. 2 max Standalone/ or 1 shared
Max Storage Devices	Up to 24
RAID Level	RAID 0, 1, 0 + 1, 3, 5, 10, 30, 50, JBOD
Supported Device Type	Serial-ATA, SCSI, PATA-133 IDE and Fibre Channel
Type	RAID
<b>Storage Hard Drives</b>	
UnFormatted Capacity per drive	250 GB max per drive(Up to 6TB for total Cap per chassis)
Installed	Up to 16( for model Rx316 ) or 24 for model Rx424
Interface Type	SATA/PATA or Ultra 320/Ultra 160 SCSI option)
Total Max Cap/system	Up 6TB or 4 Terabyte Max per subsystem
Type	Hot-swap
<b>Storage Removable Backplane Modules</b>	
Type	HDD SATA-150 M/s backplane interface carrier/ or U320 SCSI
<b>System Requirements</b>	
Operating System: Transparent, R-STOR™ is operating system independent and will support:	Microsoft Windows 2000 / NT4.0/XP/Me, Red Hat Linux 6.2 or later, HP-UX 11.0 or later, IBM AIX 4.3.3 or later, Microsoft Windows 95/98, Apple MacOS 8.0 or later, Microsoft Windows Millennium Edition, UnixWare 7.1.1, SCO Open Server 5.0.5, SunSoft Solaris 7
<b>Video Output</b>	
Type	DB-15 VGA Option (Installed Option)

**ORDERING:** Please specify Model, No. of drives, drive types, total storage capacity and Host Bus Option when placing order.

Contact us: [sales@cepoint.com](mailto:sales@cepoint.com) .603.883.7979. [www.cepoint.com](http://www.cepoint.com) fax: (603)883-3266 Cepoint Networks, LLC

copyright© 2002-2003. All rights reserved.