



## Galaxy<sup>®</sup> HDX3 24 Bay RAID Storage

### Galaxy<sup>®</sup> HDX3 RAID Family

- » High Performance RAID
- » Scalable up to 208TB
- » FC, SAS, and SATA options
- » Award Winning Service & Support

Available through Rorke Data and Avnet.

- » New "Green Design" 80% high efficiency power supplies, Smart drive, idle mode, and spin-down technology, reducing power consumption for inactive drives
- » 6<sup>th</sup> Generation RAID technology with dual 667Mhz processors, 40% increase over the previous generation
- » 24 Bay 4U rackmount RAID with single or dual redundant controllers
- » Four 8Gb Fibre Host connections with per controller
- » New faster 6Gb drive backplane supports next generation SAS and SATA HDDs
- » Increased to 2GB of standard RAM, increased BBU battery life to 3 years
- » New larger expansion 16 Bay SAS JBOD support up to a total of 104 HDDs
- » Enhanced Media Scan and Error Handling keeps the RAID working when there are degraded or damaged drives
- » Hot swap drives, fans, PSUs, and controller modules for easy maintenance
- » Built in, browser-based management software

### The Galaxy HDX3 Advantage

The Galaxy HDX3 is the latest addition to the award winning Galaxy family of RAID storage solutions. This 6th Generation design delivers increased performance and enhanced feature sets, ideal for high performance, mission critical and data intensive environments. Galaxy HDX3 uses its latest design improvements along with the fastest disk drive technologies to create a highly reliable, powerful workhorse while maintaining a customer-friendly design.

- The RAID engine's new faster dual processors along with doubling the disk drive backplane interface speeds increases performance by at least 40% over the previous generation
- Increased scalability has been achieved with the ability to add up to 104 HDD using SAS multi-lane expansion JBODs
- HDX3 incorporates a new flash memory cache that is used to protect write data during a power failure. This is coupled with an increased 3 year BBU life cycle that powers this cache process during a power failure, securing data integrity

Galaxy HDX3's modular design includes hot-swappable drives, fans, redundant power supplies and controller modules, making maintenance simple without service interruption. The built-in browser-based management software provides easy to use set-up, diagnostic, and monitoring capabilities. The HDX3 easily scales using add-on JBODs and can be tuned for high performance and fault-tolerant applications. Rorke Data's skilled engineers can custom configure the RAID specific to your application, so it is ready to use out of the box.

### A Purpose-Built Solution

With over 10,000 Galaxy units in the field, Rorke Data's award winning RAID products provide the performance, protection, and expansion capabilities for diverse customer environments. Our engineers can customize HDX3 for optimal performance in the following applications:

- » Virtualization
- » Medical Imaging
- » Digital Video Security
- » Near-line storage
- » D2D (Disk-to-disk) backup
- » Financial Record Storage
- » Internet Content
- » Server storage
- » Rich Media Content Creation
- » Backup & Disaster Recovery
- » OEM-Application Custom Configurations
- » Cluster Storage
- » Email & Exchange Server Storage
- » Document Imaging
- » Compliance Storage

# Galaxy<sup>®</sup> HDX3 24 Bay RAID Storage

## System and Controller Features

Chassis	Rack mountable, compact 4RU steel and aluminum alloy enclosure with folding front handles, dual hot swap power supplies and cooling modules
Controllers	Hot swap single or dual HA controllers with 2GB of RAM [ upgradeable to 4GB ], hot swap Flash / RAM backup battery, supports up to 104 drives in 5 add on SAS JBODs
Drive Support	Twenty four (24) 3.5" x 1" SAS / SATA 3Gb/s hot swap hard drives in replaceable canisters, drive fault / activity LED support;
Host I/O interfaces per controller	Four (4) 8bit Fibre Channel
Management interfaces	Ethernet for out of band management GUI, embedded manager uses RS232 audio jack or LCD keypad, fault and activity LED support

## Operational Features

RAID protection	RAID 0, 1, 0+1, 3, 5, 6, 10, 30, 50, 60 and NRAID
RAID Configurations	Designed, pre-configured and tuned to high bandwidth streaming data rates. The RAID will be preconfigured to provide these data rates or to your specific user defined settings. Configuration options include up to 64 LUNs and 32 logical drives, Multi-path support
RAID Robustness	Supports RAID Migration; Global, Dedicated or Enclosure-specific hot drive spares; Bad Sector re-mapping, SMART and NCQ support, scheduled intelligent data scans or while idling, error recovery mechanisms and automated defect elimination, Two (2) pre-installed Cache Backup Modules (CBM), each including one Li-Ion battery backup unit (BBU) and one Flash Backup Module (FBM)
Mapping LUN Configurations	Flexible easy to use LUN mapping provides portions of the RAID storage to be used by multiple hosts exclusively and simultaneously
Host Command Handling	Multiple host concurrent queuing of up to 1024 commands
SAN Ready	Supports most common SAN Management Software: Xsan, StorNext, CommandSoft, metaSAN

## System Management

Supported Operating Systems	Windows, MAC OSX, Linux, Solaris, VMware
Management Tools	Embedded Web browser GUI, Telnet and SSH management support via Ethernet port; Embedded terminal management accessed thru RS232 audio style connector; Front panel LCD panel provides same utility and setup capabilities as Telnet. Easy to use error logs and status monitoring; Available reset of factory defaults; SSH monitoring via ethernet
Status Indicators	Operator panel: Power/Busy/Attention ; Drive:Fail/Activity ; Power Supply: Fail ; BBU: Fail ; Cooling Module: Fail Fan1/Fail Fan2 Controller: Status / Cache Dirty / Hot Temp / BBU Link / Host Busy / Drive Busy ; FC or SAS I/O Status: Linked
Green Designs	Power supplies delivering more than 80% of energy efficiency; Dynamic cooling mechanism: Smart drive spin-down; 3 year extended life cache BBU
Event Notification	Email ; LAN broadcast ; SMS ; SNMP traps, and MSN

## Mechanical/Electrical Specifications

Voltage	100-240 Vac Auto-Ranging
Current (Maximum)	9 A @ 100 Vac; 4.5 A @ 200 Vac (current rating with two power cords)
Frequency	50-60 Hz
Power Supply / Cooling Module	Three redundant 405W Power Supplies and Cooling Modules with replaceable fans
Power Consumption	475 Watts (under load with SATA HDDs)
Operating Temperature / Humidity	5° to 35°C (-40° to 60°C non operational) Humidity: Maximum 95%, non condensing
Dimensions	4U, 19-inch rackmount ; 445mm (W) x 174mm (H) x 498mm (D) 4U, 19 inch rackmount ; 19 [W] x 6.86 [H] x 20.2 [D]
Weight [Assume each hard drive 0.67 kg]	Net weight (system only): 22 kg (48lbs) without drives, 61 kg (134 lbs) with 24 drives Gross weight (including carton): 71kg (157 lbs) with drives
Safety / EMC	CE, FCC, BMSI, UL RoHS, Microsoft WHQL- Windows Server 2003 EMC

## Warranty and Support

Warranty	HDX3 RAID: three years limited warranty ; drives: five years limited warranty
Support	24 x 7 Email and phone support options (Americas & EMEA); 24 x 7 access to Rorke Data support site ; Advanced replacements program

## Easy to Install and Manage

Since 1985, Rorke Data has been successfully bringing you easy-to-install products. Pre-configured, tested, and customized to your needs before it leaves our ISO 13485 and ISO 9001 certified integration facility, your system is ready to use out of the box. Setting up minor configuration changes on site is simple. Our technical support staff is well versed and can help with any installation issues you may incur.

## Service and Support

Rorke Data's Engineering Services delivers a unique value proposition for our customers. Through our US and EMEA customer support centers, we offer customized and flexible service agreements, installation and training, call center with online support options, advance parts replacement to onsite 24x7 options, contracted phone, page, and web support as well as extended equipment warranty options.