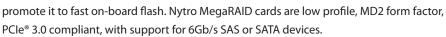# LSI

Storage. Networking. Accelerated.™

LSI® Nytro™ MegaRAID®
Application Acceleration Card

- **Dual core, enterprise-grade RAID-on-chip and on-card flash storage for optimum performance and data protection**
- **Sophisticated caching algorithms migrate frequently accessed data to flash storage**
- **Hot spot data on flash also means faster HDD array rebuild times**
- **Low profile, MD2 form factor, PCIe 3.0 compliant, with support for 6Gb/s SAS or SATA devices.**

The Nytro MegaRAID family of application acceleration cards deliver on-board flash technology with LSI dual core RAID-on-Chip (ROC) technology to help accelerate key business applications. In some case by up to 47x.

The cards use intelligent caching algorithms to help identify application "hot spots", frequently accessed data, and promote it to fast on-board flash. Nytro MegaRAID cards are low profile, MD2 form factor, PCIe® 3.0 compliant, with support for 6Gb/s SAS or SATA devices.

DAS acceleration evolved, the Nytro MegaRAID cards can be more cost effective than direct attached solid state drive (SSD)-only arrays or over-provisioned direct attached hard disk drive (HDD) environments.

THE Smarter WAY TO FASTER™

Key Hardware Features

- Complete solution for acceleration of SAS connected storage
- Provides SAS connectivity, RAID protection and read and write caching software
- Includes embedded solid state storage directly on card for improved performance and manageability
- Automatic, dynamic classification of "hot" data

Key Software Features

- Automatic self-starting and self-configuring
- Transparent to Applications, File system, OS and device drivers
- Supports Read and Write caching
- Integrated in the HBA and runs locally on the controller
- Limited CPU and memory overhead
- Compatible with existing MSM management interfaces
- Low Administrative overhead

Fast
- Up to 10x improvement over HDDs only
- Up to 75% improvement in array rebuild times

Smart
- Migrates "hot" data from disk to flash
- Combines flash performance with disk capacity
- ROC-based RAID for enterprise level data protection
- Supports read and write caching

Easy
- Automatic self-starting and self-configuring
- Reduced administrative overhead
- Transparent to applications
- No BBU required

Nytro MegaRAID Card Specifications

Operating Systems	RHEL : 6.0, 6.1 SLES 10, 11 Windows 7/Windows 2008/Windows Server 2008 R2 OEL: 6, 6.1, 6.2 Ubuntu 10.04, 11.1, 12.04 Debian 5.0.7, 6.0.0, 6.0.4 Fedora 15, 16 VMware 4.0, 4.1, 5.0 FreeBSD 8.2, 8.3 Solaris 10, 11 Check www.lsi.com/channel for latest OS support
Physical Dimensions	MD2 Low profile (2.536"x6.60")
Internal Connector	Mini-SAS SFF8087 internal connector
Device Support	Up to 128 devices
Host Bus Type	x8 lane PCI Express 3.0 compliant
Data Transfer Rates	6Gb/s per SAS lane
DDR memory for RAID cache assist	1 GB 1333MHz DDRIII SDRAM
RAID Data Protection Features	RAID levels 0, 1, 5 and 6 on HDDs RAID spans 10, 50 and 60 on HDDs RAID levels 0 and 1 on the on card flash storage Online RAID Level Migration (RLM) • Configurable stripe size up to 1MB Fast initialization for quick array setup • 64 logical drive support • Up to 64TB LUN support • S.M.A.R.T Mode 5 support
Operating Temperature	0 - 45° C (at 300 LFM)
Operating Voltage and Power	+3.3V, +12V, power requirements less than 25 watts
Regulatory Certifications	EN55022, EN55024, EN60950, EN 61000-3-2, EN 61000-3-3; FCC Class A, Class B; UL1950; UL; CSA C22.2; VCCI; RRL for MIC; BSMI; C-tick

Ordering Information LSI Nytro MegaRAID Card

Name	Memory Type	Capacity	Part Number
Nytro MegaRAID 8100-4i	SLC	100GB	LSI00350
Nytro MegaRAID 8110-4i	eMLC	200GB	LSI00351
Nytro MegaRAID 8120-4i	eMLC	800GB	LSI00353
Nytro MegaRAID SCM-01 SuperCap kit for DRAM Cache Protection			LSI00355

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For more information and sales office locations, please visit the LSI website at:
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