

DAKOTA RAID-LP

DakotaRAID-LP is a Linux powered Network Attached Storage Appliance designed for performance, reliability, capacity, scalability, and low total cost of ownership. Just attach it to your existing network and within minutes your Windows, UNIX, Linux and Macintosh clients can share up to 7 TB of RAID protected storage. Utilizing advanced SATA disk technology, DakotaRAID-LP delivers enterprise-class features at entry-level prices for applications such as file serving, disk-to-disk backup, online archiving, data collection, disaster recovery and email retention, just to name a few.

Performance

DakotaRAID-LP is powered by a streamlined Linux-based NAS operating system embedded in flash ROM. Equipped with dual Gigabit Ethernet NICs, DakotaRAID-LP 8430 can achieve transfer rates of up to 44 MB/s per second.

Reliability and Data Availability

DakotaRAID-LP's low overhead operating system is designed to perform one function – data delivery. This specialization provides for maximum operation efficiency and high reliability. RAID level 1 and 5 support protects your data from disk failure, while features such as hot swappable drives, global hot spares, hot expansion, automatic drive failure detection, automatic data rebuild, bad sector remapping, UPS support, and redundant hot swappable power supplies provide for high data availability. A journaling file system ensures data and file system integrity and enables DakotaRAID-LP to quickly recover in the event of a system failure. The dual Gigabit Ethernet ports can be configured in failover mode for further redundancy.

Management and Security

Web browser-based management tools embedded in firmware simplify configuration and enable administrators to manage multiple units from one location. Active Directory support enables integration into Windows 2000/2003/2008 Domains and permissions can be managed with native Windows management tools. Just right click on the file/folder to set permissions. Other authentication features include NT Domain Authentication (PDC) and Unix Network Information Services (NIS). Operating system upgrades can be downloaded from our support center and flashed to DakotaRAID-LP via the web interface.

APPLICATIONS INCLUDE:

- File Serving
- Disk-to-Disk Backup
- Document Imaging
- Online Data Archive
- Email Archiving
- Remote Disaster Recovery
- CD/DVD Archiving



APPLIANCE FEATURES

- Optimized NAS Operating System
- Journaling File System
- Web Browser Management
- Multi-Protocol Client Support
- RAID Level 0, 1, 5, & 6 Support
- Hot Swappable Drives
- Global & Dedicated Hot Spares
- Drive Roaming
- Real-Time Virus Protection
- CD/DVD Sharing & Recording
- Dual GbE NICs
- NIC Load Balancing
- NIC Failover
- NIC Aggregation
- Active Directory Security
- Unix NIS Security
- Access Control List (ACL) Security
- Local Tape Backup
- Tape Autoloader Support
- SmartSync Data Replication
- SmartExtend Management
- Snapshots
- E-mail Event Notification
- UPS Support
- Redundant Hot Swap Power Supplies*
- Flash Upgradeable Firmware
- No Client Licenses

* Offered on certain models
(see model chart)



Multi-Protocol Connectivity

DakotaRAID attaches directly to your existing network and transfers data over industry standard network access protocols (TCP/IP or AppleTalk) using standard file sharing protocols (SMB/CIFS, NFS, AFP, FTP or HTTP). A journaling file system is located and managed onboard, therefore, data can be shared simultaneously by clients regardless of which server or operating system is being used. Cross-platform connectivity provides a common storage resource and increased user productivity.

Configuration and Scalability

DakotaRAID-LP can be configured with up to 8 hot swappable SATA drives for up to 8 TB of raw storage. Scalability features such as multiple RAID set capability and Hot RAID Expansion enable you to grow your storage capacity as needed. Dual 10/100/1000 Ethernet ports can be configured for performance, redundancy, load balancing, or separate LANs.

Data Backup

DakotaRAID-LP is equipped with embedded tape backup tools featuring multiple backup options including full/incremental backups and scheduling. Local backup devices include SCSI AIT, DLT, Super DLT, & LTO. DakotaRAID-LP built-in tape backup software conforms to open standards by adopting UNIX-tar format. The backup tapes can be restored by any backup software which supports UNIX-tar format, so you need not worry about proprietary formats. Tape autoloaders are supported as an option.

For Network-based backup, DakotaRAID-LP is compatible with Veritas Backup Exec, CA BrightStor ARCserve, and all other major backup software applications.

SmartSync Disaster Recovery

SmartSync is an embedded data synchronization tool that allows two or more DakotaRAID-LP units to mirror each other over a LAN or WAN automatically and efficiently. Advanced features and configuration settings reduce demand for network bandwidth. For instance, when updating files, SmartSync only transfers differential blocks within files, thus largely reducing unnecessary network traffic. SmartSync can also optionally compress the data stream during synchronization. To allocate network resources, administrators can assign different bandwidth limits for different SmartSync tasks, depending on applications and priority. To further assist in resource management, the SmartSync software displays all running and idle tasks and their progress, so administrators can watch task progress and abort one task to allow others to run faster. SmartSync runs over SSL, which provides secure connections.

SmartExtend

SmartExtend option enables you to manage storage resource for multiple DakotaRAID-LP units on the network as a single IP Storage network. That's mean better resource utilization, ease of storage management and simpler expansion of storage infrastructure.

Snapshots

DakotaRAID-LP features a snapshot function, which creates a read-only copy of the contents of the NAS Appliance at a particular point in time. Users can access the snapshots and easily restore previous versions of files or folders without having to contact a system administrator. Up to 256 snapshots are supported with version control. Standard on 4420/8420 models and optional on others.

CD/DVD Sharing & Recording

The DakotaRAID-LP Server Module enables you to create and manage up to 4,096 RAID protected CD/DVD images for fast and easy CD/DVD sharing. Features include volume sets, remote imaging, local CD/DVD emulation & title management software. The Unique CD/DVD burning feature enables you to archive data to CD or DVD-R via the web browser management interface.

Virus Protection

DakotaRAID-LP features embedded antivirus software providing trustworthy and instant virus protection. Real-time, scheduled or manual virus scanning options protect your data from virus attacks around the clock. Automatic virus pattern updates from Trend Micro keeps virus protection up to date.

UPS Integration

DakotaRAID-LP seamlessly integrates with the smart-signaling UPS systems and administrators can monitor and configure the UPS condition from the administration web page. In the event of an extended power outage, DakotaRAID-LP will be shutdown safely, preventing potential data corruption and email an administrator of the related event.

Total Cost of Ownership

DakotaRAID-LP ensures a low total cost of ownership by eliminating the unnecessary hardware, operating system license and administrative costs of a general-purpose server. Easy-to-replace hot swappable components simplify maintenance and service.



Storage

- Up to 8 Serial ATA Drives
- Hard Drive Capacities: 250, 500, 750 GB & 1 TB (7200 RPM)
- Up to 2 IDE CD-R/RW, DVD-R/RW, DVD+R/RW, or tape drives
- Supports SCSI tape drives (AIT, DLT, Super DLT, or LTO)
- Supports Tape Libraries (Check with AMS Sales for supported models)

RAID

- RAID Level 0, 1, 5, & 6 support
- Hot Swappable drives
- Global hot spares
- Hot RAID Expansion
- Supports multiple RAID volumes
- Bad sector re-mapping
- Drive Roaming
- Multiple RAID set support

CD/DVD Server Module

- Concurrent disc sharing for Windows, Macintosh and UNIX clients
- Mount ISO-9660 and HFS simultaneously for hybrid discs
- CD/DVD Formats: ISO-9660, Joliet, Rock-Ridge, HDF, UDF, HFS, HFS+, VCD, Hybrid & Multi-Session
- Maximum # of CD/DVD Images: 4096 (with 1 GB RAM)
- Supports Volume Sets
- Includes remote imaging & recording software
- Includes local CD/DVD emulation software
- Includes title management software
- Blu Ray device support

Dual NIC Configuration

- Load Balancing
- Failover
- Teaming
- Dual Segment

Network Environment

- Microsoft: Windows 2000/2003/2008/XP
- Unix/Linux: Solaris, FreeBSD, Linux, and other UNIX derivatives
- Macintosh: MacOS 8.x, 9.x, OS X

Network Protocols

- TCP/IP, AppleTalk
- HTTP, CIFS/SMB, NFS v1, 2, 3 & 4, FTP, AFP
- BOOTP, RARP, DHCP; DNS; WINS; SMTP, SNMP; NTP; SSL

System Management

- Web-based interface for system administration and alerts
- LCD console for setting IP addresses and displaying system information
- Alert email notification
- NASTart software for server discovery, quick setup, and system configuration backup/restore
- User Quota control
- Environmental monitoring of system/CPU temperature, fan speed and CPU voltages
- Run-time event logs
- E-mail notification
- SNMP management (MIB II)
- System buzzer alerts
- Upgradeable firmware
- Data Snapshots*

Security Management

- File/Folder/Share-level security
- User/Group permissions
- Supports Access Control Lists
- User disk quota control
- Secure Socket layer (SSL) 128-bit encryption
- Built-in Trend Micro anti-virus software

Directory Services Support

- Microsoft Active Directory Service
- Unix Network Information Service (NIS)

System Availability

- Dual NICs with fail-over and load-balancing features
- System configuration backup/restore
- Dual redundant hot-swap power supplies*
- Supports UPS with smart signaling

SmartSync Disaster Recovery

- Easy to use and configure via a web GUI
- Provides scheduled or manual synchronization between NASTorage servers
- Instant access to synchronized data
- Synchronization points can be any volumes or folders
- Only transfers the differences in updated files, providing efficient network utilization
- Optional compressed data link
- SSL (secure shell) data encryption prevents risks of being eavesdropped
- The administrator can view the synchronization progress and interrupt a task at any time
- Security information (ACL) can also be synchronized
- Provides bandwidth control for each synchronization task
- Revision control for tapeless backup
- One-to-many distribution

Multilingual Support

- Localized web-pages: English, Traditional Chinese, Simplified Chinese, Korean, Japanese, French, German, Italian, Spanish
- Code-pages: English and western European, CJK DBCS, Unicode

Bundled Software

- NASTart™ software for server discovery, quick setup, and system configuration backup/restore
- eMulateCD™ software for emulation of network folders on DakotaRAID-LP as native CD/DVD titles on your workstation (CD Server)
- eContent™ software for CD/DVD library management (CD Server)

Support

- Three Year Warranty
- One Year Advance Replacement of Failed Components
- Free Firmware Upgrades
- Onsite Service Plans Available

*Available on certain models (see model chart)



Rack Models	4230CR RACK-1U	4230PR RACK-1U	4430R RACK-1U	8430RR RACK-2U	8230PR RACK-4U
CPU	Celeron 1.2 GHz	P3 – 1.26 GHz	P4 – 2.4 GHz	P4 – 2.4 GHz	P3 – 1.26 GHz
MEMORY	256 MB (Up to 512 MB)	256 MB (Up to 512 MB)	512 MB (Up to 2 GB)	512 MB (Up to 2 GB)	512 MB SDRAM (Up to 2 GB)
NETWORK	2 – GbE	2 – GbE	2 – GbE	2 – GbE	2 – GbE
PCI EXPANSION	1 – GbE or SCSI Tape	1 – GbE or SCSI Tape	None	1 – GbE or SCSI Tape	1 – GbE or SCSI Tape
SERIAL PORT FOR UPS	Yes	Yes	Yes	Yes	Yes
LCD CONFIGURATION PANEL	Yes	Yes	Yes	Yes	Yes
MAX # OF HARD DRIVES	4 – SATA	4 – SATA	8 – SATA	8 – SATA	8 – SATA
HOT SWAP DRIVES	Yes	Yes	Yes	Yes	Yes
MAX # OF OPTICAL/ TAPE DRIVES	1	1	1	1	2
SMARTSYNC SUPPORT	Yes	Yes	Yes	Yes	Yes
CD/DVD SERVER SUPPORT	Yes	Yes	Yes	Yes	Yes
MAX # OF CD/DVD VOLUMES	1536 with 512 MB	1536 with 512 MB	4096 with 1 GB	4096 with 1 GB	1536 with 512 MB
ANTI-VIRUS SUPPORT	Yes	Yes	Yes	Yes	Yes
SNAPSHOT SUPPORT	Optional	Optional	Yes	Yes	Optional
SMARTEXTEND TARGET SUPPORT	Yes	Yes	Yes	Yes	Yes
SMARTEXTEND INITIATOR SUPPORT	Optional	Optional	Optional	Optional	Optional
SECOND COPY BACKUP SOFTWARE	Included	Included	Included	Included	Included
TAPE BACKUP SUPPORT	SCSI	SCSI	SCSI	SCSI	SCSI
TAPE LIBRARY SUPPORT	Optional	Optional	No	Optional	Optional
REDUNDANT HOT SWAP POWER SUPPLIES	No	No	No	Yes	Yes
POWER WATTS	250 W	250 W	350 W	350 W	350 W
POWER INPUT VOLTAGE	90 – 260 V	90 – 260 V	90 – 260 V	90 – 260 V	90 – 260 V
OPERATING TEMPERATURE	0 – 40 C	0 – 40 C	0 – 40 C	0 – 40 C	0 – 40 C
OPERATING HUMIDITY	10 – 80% non-condensing	10 – 80% non-condensing	10 – 80% non-condensing	10 – 80% non-condensing	10 – 80% non-condensing
DIMENSIONS H x W x D (IN.)	1.75 x 17.5 x 28	1.75 x 17.5 x 28	1.75 x 17.5 x 28	3.5 x 17.5 x 28	7 x 17 x 19.75

Tower Models	420CT DESKTOP	420PT DESKTOP	4230CT DESKTOP	4230PT DESKTOP	820CT TOWER	820PT TOWER
CPU	Celeron 1.2 GHz	P3-1.26 GHz	Celeron 1.2 GHz	P3-1.26 GHz	Celeron 1.2 GHz	P3-1.26 GHz
MEMORY	256 MB (Up to 512 MB)	256 MB (Up to 512 MB)	256 MB (Up to 512 MB)	256 MB (Up to 512 MB)	512 MB (Up to 2 GB)	(Up to 2 GB)
NETWORK	2 – GbE	2 – GbE	2 – GbE	2 – GbE	2 – GbE	2 – GbE
PCI EXPANSION	1 – GbE or SCSI Tape	1 – GbE or SCSI Tape	1 – GbE or SCSI Tape	1 – GbE or SCSI Tape	Yes	Yes
SERIAL PORT FOR UPS	Yes	Yes	Yes	Yes	Yes	Yes
LCD CONFIGURATION PANEL	Yes	Yes	Yes	Yes	Yes	Yes
MAX # OF HARD DRIVES	1 – SATA	1 – SATA	4 – SATA	4 – SATA	1 – SATA	1 – SATA
HOT SWAP DRIVES	No	No	Yes	Yes	No	No
MAX # OF OPTICAL/ TAPE DRIVES	4	4	1	1	8	8
SMARTSYNC SUPPORT	Yes	Yes	Yes	Yes	Yes	Yes
CD/DVD SERVER SUPPORT	Yes	Yes	Yes	Yes	Yes	Yes
MAX # OF CD/DVD VOLUMES	1536 with 512 MB	1536 with 512 MB	1536 with 512 MB	1536 with 512 MB	1536 with 512 MB	1536 with 512 MB
ANTI-VIRUS SUPPORT	Yes	Yes	Yes	Yes	Yes	Yes
SNAPSHOT SUPPORT	Optional	Optional	Optional	Optional	Optional	Optional
SMARTEXTEND TARGET SUPPORT	Yes	Yes	Yes	Yes	Yes	Yes
SMARTEXTEND INITIATOR SUPPORT	Optional	Optional	Optional	Optional	Optional	Optional
SECOND COPY BACKUP SOFTWARE	Included	Included	Included	Included	Included	Included
TAPE BACKUP SUPPORT	SCSI	SCSI	SCSI	SCSI	SCSI	SCSI
TAPE LIBRARY SUPPORT	Optional	Optional	Optional	Optional	Optional	Optional
REDUNDANT HOT SWAP POWER SUPPLIES	No	No	No	No	No	No
POWER WATTS	300 W	300 W	300 W	300 W	320 W	320 W
POWER INPUT VOLTAGE	90 – 260 V	90 – 260 V	90 – 260 V	90 – 260 V	90 – 260 V	90 – 260 V
OPERATING TEMPERATURE	0 – 40 C	0 – 40 C	0 – 40 C	0 – 40 C	0 – 40 C	0 – 40 C
OPERATING HUMIDITY	10 – 80% non-condensing	10 – 80% non-condensing	10 – 80% non-condensing	10 – 80% non-condensing	10 – 80% non-condensing	10 – 80% non-condensing
DIMENSIONS H x W x D (in.)	10.625 x 7.5 x 17.25	10.625 x 7.5 x 17.25	10.625 x 7.5 x 17.25	10.625 x 7.5 x 17.25	17.5 x 7.5 x 18	17.5 x 7.5 x 18

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