D3i
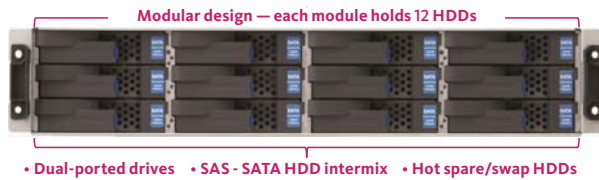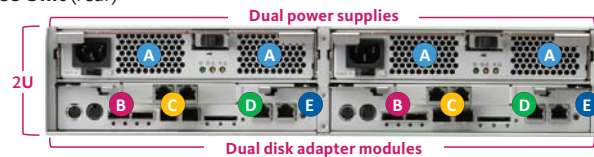## SAN STORAGE

NEC D3i Storage

The D3i storage array provides the best value in iSCSI SAN storage through a superior combination of dependability, scalability, and efficiency at a great price. D-Series arrays are used in iSCSI and Fibre Channel SANs for primary storage, high capacity secondary storage, or both in a tiered storage strategy. D-Series arrays are well-suited for virtualized environments, cloud storage, databases, data warehouses, disk-to-disk backup, and other block-level storage applications.
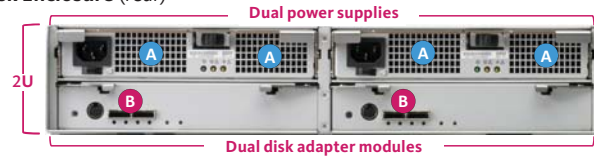
Architecture at a Glance

Base Unit/Disk Enclosure (front)

Modular design — each module holds 12 HDDs

• Dual-ported drives   • SAS - SATA HDD intermix   • Hot spare/swap HDDs

Base Unit (rear)

Dual power supplies

2U

Dual disk adapter modules

Disk Enclosure (rear)

Dual power supplies

2U

Dual disk adapter modules

A Dual fans per power supply   **B** Dual SAS back-end ports (24 Gbps wide-link)
C iSCSI front-end connectivity   **D** Redundant management ports
E ECC cache memory (mirrored, battery-backed)
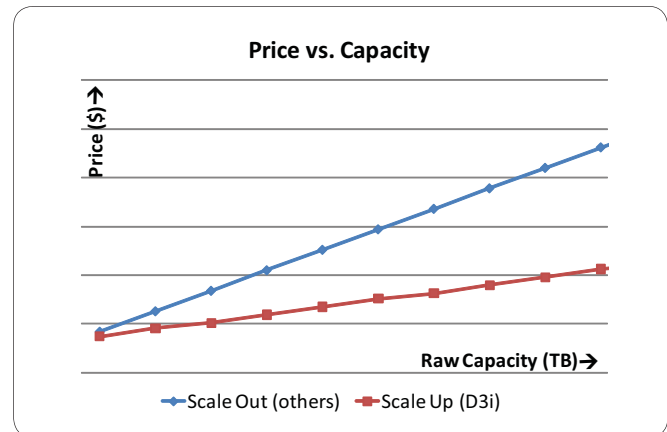
Superior Dependability

- **Self healing** reduces HDD failures by 30-50% and decreases the number of RAID rebuilds by fixing hard drives before they fail
- **Catches silent data corruption** of both SAS and SATA drives that is not detected by other systems
- **Background disk & cache scrubbing** prevents applications from receiving corrupt data

Wide Scalability

- **Expand RAID groups non-disruptively** adding HDDs one-by-one or many at a time to a maximum of 144 HDDs
- **Grow LUNs online**

High Efficiency

- **Power off RAID groups** when not in use to save energy
- **Browser-based GUI** allows remote management of up to 32 arrays in a 'single pane of glass'
- **Scale-up architecture** saves you money as you grow when compared to a scale-out architecture. (In typical scale-out architectures, each node is more costly than a D3i disk enclosure: that means more costly growth.)

Price vs. Capacity

Price ($)→

Raw Capacity (TB)→

Scale Out (others)   Scale Up (D3i)

NEC

Specifications

HARDWARE

Model		D3i
Host Ports		2 or 4 iSCSI ports at 1 Gbps (2 per controller)
Number of Controllers		Single or dual controllers (active-active)
Configuration		1 - 12 2U enclosures 12 disk drives per enclosure SAS – SATA intermix within an enclosure
Cache Memory	Capacity	2 or 4 GB (2 GB per controller)
	Battery Backup Time	24 hours
	Optional BBU Time	72 hours
Supported RAID Level	SAS	1, 10, TM (Triple Mirror), 3, 3DP (3 Double Parity), 5, 50, 6
	SATA	TM (Triple Mirror), 5, 6
Maximum Capacity	SAS	86.4 TB
	SATA	288 TB
Disk Drives	SAS	300 GB, 450 GB, 600 GB rotating at 15,000 rpm
	SATA	1 TB, 2 TB rotating at 7,200 rpm
Number of Disk Drives		3 – 144
Supported Operating Systems		Microsoft® Windows Server 2003 and 2008 (x86, x64), Hyper-V, Red Hat® Enterprise Linux®, VMware®
Base Unit/Enclosure Dimensions (WxDxH)		2U: 18.9" x 21.3" x 3.4" (480 x 540 x 86.5 mm)
Weight	Disk Array Controller	68.3 lbs. (31kg) or less
	Disk Enclosure	63.9 lbs. (29kg) or less
Power Requirements		AC 100 – 240V single phase 50/60Hz

SOFTWARE (see software data sheet for details)

Objective	NEC Storage Software	Function
Simple Operation	StorageManager (iSM)	Core storage management functionality
High Availability	PathManager	Multi-pathing for failover and load balancing
Data Protection	DynamicDataReplication (DDR)	Replication within same array
	DynamicSnapVolume (DSV)	On-demand snapshots
	ReplicationControl SQL Option	Transaction-consistent protection for MS SQL Server
Performance Management	PerformanceMonitor	Performance monitoring & alerts
	PerformanceNavigator	Analysis of performance data over time
	PerformanceOptimizer	Automates performance tuning
Energy Conservation	PowerConserver	Turn off HDDs when not needed
Compliance	VolumeProtector	Prevent unauthorized modification of data

Available on the GSA Schedule

NEC CORPORATION OF AMERICA

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Santa Clara, CA 95050

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sales@necam.com
1 866 632-3226
1 408 844-1299

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ENVIRONMENTAL

	Maximum Watts		BTU/Hour	
	All SAS	All SATA	All SAS	All SATA
D3i Base Unit	610 W	540 W	2,081 BTU/hr	1,843 BTU/hr
Disk Enclosure	430 W	370 W	1,462 BTU/hr	1,258 BTU/hr
	Operating		Storage	
Temperature	41 - 104° F (5 - 40° C)		50 - 140° F (10 - 60° C)	
Humidity	10 - 80%		5 - 80%	

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