

# Hitachi TagmaStore® Network Storage Controller Model NSC55

The NSC55 delivers proven enterprise-class functionality—virtualization of externally attached storage, logical partitioning, and universal replication—in cost-effective, space-efficient, modular packaging.

## Delivering Enterprise-class Functionality

As pressure from government and regulatory agencies for long-term data protection and retention intensifies, entry-level enterprises and fast-growing organizations are confronted with storage issues resembling those that burden larger enterprises: escalating data growth, application performance and availability, business continuity, backup windows, and complex infrastructures. Unlike larger enterprises, however, organizations like yours are typically limited by budget, staff, and data center space. Hitachi TagmaStore® Network Storage Controller model NSC55, powered by Hitachi Universal Star Network™ crossbar switch architecture, delivers the enterprise-class functionality introduced with the industry-leading Hitachi TagmaStore Universal Storage Platform—virtualization of external storage, logical partitioning, and universal replication—in a cost-effective, small-footprint package.

## Business Benefits

### Simplify Management

- ⌘ Improve utilization and flexibility by aggregating internal NSC55 storage and externally attached Hitachi and third-party storage systems (EMC, HP, IBM, and Sun) into a single, flexible virtual pool.
- ⌘ Use a single console and a common set of software tools to manage any storage resources connected to the NSC55.

- ⌘ Automate storage management functions to help enhance administrator productivity.

### Maximize Availability and Performance

- ⌘ Count on the proven, third-generation Universal Star Network crossbar switch architecture.
- ⌘ Ensure application QoS by partitioning storage resources.
- ⌘ Match application requirements to storage attributes and improve storage cost-effectiveness, meet service level agreements, and respond quickly to evolving business needs.
- ⌘ Ensure business continuity by simplifying and unifying data replication between heterogeneous storage systems.

### Facilitate Regulatory Compliance

- ⌘ Meet regulatory compliance and corporate governance requirements for tamperproof long-term data retention.
- ⌘ Build the foundation of a complete data lifecycle management solution by enabling the dynamic, nondisruptive movement of data between different tiers of storage.
- ⌘ Lower costs by archiving mainframe data to virtualized, externally attached SATA-based storage systems.

### A New Category of Storage

According to IDC, the Universal Storage Platform represents a new category of storage, “potentially market changing” products in the storage solutions market. The NSC55 extends this category to the modular market, providing:

- ⌘ Controller-based virtualization and management of as much as 16PB of internal and attached storage
- ⌘ Eight logical partitions, dedicating cache, ports, and internal/external capacity to ensure application quality of service (QoS)
- ⌘ Universal replication across heterogeneous storage for business continuity

## Optimize the Data Center Environment

- ∴ Gain enterprise-class availability, performance, and connectivity in a space-conscious modular storage system.
- ∴ Deploy applications within a new framework, whether for tiered storage, for business continuity, or to simplify the storage infrastructure.
- ∴ Consolidate open systems, mainframe, and NAS data onto fewer physical storage devices to minimize maintenance costs and lower software license fees, capital expenditures, and environmental costs.
- ∴ Protect investments and reduce total cost of ownership by extending the useful life of existing storage systems.

## Network Storage Controller Model NSC55 Specifications

<b>Controller</b>		<b>Array frames</b>	
Basic platform unit—integrated control/array frame	19" rack	Number of array frames	up to two 19" racks
<b>Universal Star Network™ Crossbar Switch</b>		<b>Hard disks (GB)</b>	
Number of switches	2	Type (Fibre Channel)	73, 146, 300
Data bandwidth (GB/sec)	8.5	Number (minimum/maximum)	0-240
Control bandwidth (GB/sec)	3.6	<b>Spare drives per system (minimum/maximum)</b>	
Aggregate bandwidth (GB/sec)	12.1	1/4	
<b>Cache memory</b>		<b>Internal raw capacity (TB)</b>	
Cards	1	Minimum (73GB disks)	0
Base memory (GB)	4	Maximum (300GB disks)	69
Maximum (GB)	64	<b>Maximum usable capacity—RAID-5 (TB)</b>	
<b>Control memory</b>		Open systems	56.5
Cards	2	IBM® z/OS-compatible	53
Base memory (GB)	2	<b>Maximum usable capacity—RAID-1+ (TB)</b>	
Maximum (GB)	6	Open systems	34.6
<b>Front-end directors (connectivity)</b>		z/OS-compatible	29.6
Cards	1-2	<b>External storage support</b>	
Fibre Channel host ports	16-48	Maximum internal and external capacity	16PB
Virtual host ports	1,024 per physical port	Private Virtual Storage Machines	8
FICON host ports	0-16	<b>High Availability</b>	
ESCON host ports	0-16	Hi-Track® "call-home" service/remote maintenance tool	Standard
NAS Blade*/ports	0-1/0-8	<b>Operating System Support</b>	
iSCSI Blade/ports	0-1/0-8	<b>Mainframe:</b> Fujitsu MSP; IBM OS/390®, MVS/ESA™, MVS/XA™, VM/ESA®, VSE/ESA™, z/OS, z/OS.e, z/VM®, z/VSE™, TPF; Red Hat Linux for IBM S/390® and zSeries®	
<b>Standard back-end directors</b>		<b>Open Systems:</b> HP (HP-UX, Tru64 UNIX, OpenVMS), Sun Solaris, IBM AIX®, Microsoft (Windows 2000 and Windows Server 2003), Novell NetWare, SGI IRIX, Red Hat and SuSE Linux	
<b>Logical devices (LUNs)—maximum supported</b>			
Open systems	16,384		
z/OS®	65,536		

Note: All capacities are based on 1GB = 1,000,000,000 bytes; 1TB = 1,000GB

\*Each NAS Blade consists of dual NAS servers.

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