



HITACHI
DATA SYSTEMS

Hitachi TagmaStore®
AMS1000, AMS500,
AMS200, and WMS100
with NAS Option

Partner Beyond Technology



Hitachi TagmaStore® AMS1000, AMS500, AMS200, and WMS100 with NAS Option

Raise service levels for NAS applications. Lower management costs. Protect your data with the advanced technologies of Hitachi TagmaStore modular systems with NAS Option.

NAS Option—Best-in-class Performance, Reliability, Scalability, and Availability

Hitachi TagmaStore® Adaptable Modular Storage models AMS1000, AMS500, and AMS200 with NAS Option and Workgroup Modular Storage model WMS100 with NAS Option offer best-in-class performance, reliability, scalability, and availability at an affordable price. These products are configured and managed from easy-to-use, graphical user interface-based (GUI-based) software that functions identically to software developed for the Hitachi TagmaStore Universal Storage Platform and Network Storage Controller enterprise models. Hitachi NAS Manager Suite software comes integrated with backup and antivirus modules and the Hitachi Sync Image snapshot module for ease of order and management.

The AMS1000, AMS500, and AMS200 with NAS Option support workloads on high-performance Fibre Channel or cost-effective Fibre Channel and Serial-ATA (SATA) drive intermix. The economical, easy-to-install all-SATA model WMS100 with NAS Option provides the scalability and performance needed to meet small and midsize business (SMB) storage requirements, while lowering the total cost of ownership (TCO).

Each of these systems supports CIFS, NFS, and FTP workloads. They are easy to order. And they can be financed quickly via the Easy Lease program from Hitachi Data Systems Credit Corporation. These NAS Option models are currently available from Hitachi Data Systems and from Hitachi TrueNorth™ Channel sales partners throughout the world.

NAS Convenience, Sophisticated Software, a Newly Manageable IT Environment

Looking for a NAS solution? These modular choices are ideal for midsized companies, branch offices, or remote sites that require file-sharing and backup solutions in UNIX-dominant or UNIX and Microsoft Windows mixed environments. They are also excellent choices for a tiered storage architecture focused on an economical deployment of Fibre Channel and SATA intermix:

- **Model AMS1000 with NAS Option.** Choose from native NAS, Fibre Channel, and iSCSI protocols—up to two protocols—based on application requirements.

- **Models AMS500 and AMS200 with NAS Option.** Employ best-in-class scalability, high availability, and performance for critical applications—all Fibre Channel or Fibre Channel and SATA intermix.
- **Model WMS100 with NAS Option.** Select cost-effective, easy-to-use, all-SATA (high-reliability RAID-6) for file-sharing and backup solutions.

Business Benefits

Consolidating your file servers into NAS lowers management complexity and cost. And you can count on fewer outages, both planned and unplanned. Virtually every component on models AMS1000, AMS500, AMS200, and WMS100 with NAS Option can be hot-swapped, while hard disk drive roaming and RAID-6 features significantly reduce parity group rebuild times, ensuring adequate performance even during a failure and rebuild scenario.

Reduce Operational and Capital Costs

- Save with economically priced models that offer best-in-class performance, reliability, availability, and scalability.
- Lower TCO by consolidating file servers into one modular NAS system: fewer licenses to buy, fewer file servers to manage.
- Go easy with this NAS solution. It's easy to order, finance, and manage.

Mitigate Risk

- Reduce operator errors through consistent procedures and processes for NAS storage via centralized backup.
- Support multiple levels of reliability with cost-effective SATA and Fibre Channel intermix.
- Count on RAID-6 dual-parity striping for high availability.

Full NAS Functionality

- Support major-name services and IP protocols.
- Offer Hitachi NAS Manager Suite software integrated with file-aware backup, antivirus module, and the Hitachi Sync Image snapshot module.

Hitachi TagmaStore® AMS1000, AMS500, AMS200, and WMS100 with NAS Option

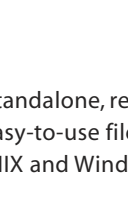
Product Specifications	
Operating system	Hitachi-tuned Linux OS
Network protocol support	NFS v2/v3, CIFS, FTP, HTTP (management)
Supported software products	VERITAS NetBackup and Hitachi Data Protection Suite, powered by CommVault®
Hardware features	16 Gigabit Ethernet ports including 8 ports for data, multipath I/O, active/active cluster, PCI-X back end
Maximum number of NAS nodes per storage system	2 (1 cluster)
Maximum number of volumes	128 per node; 256 per cluster
Maximum volume size	2TB
File system minimum/maximum	Hitachi-tuned XFS, 1–256 per cluster, 1–128 with LVM per node
File size	2TB
Maximum number of NFS file shares per cluster	256
Maximum number of CIFS file shares per cluster	256
ECC memory	Up to 4GB per NAS node/8GB per cluster
Controller cache	Up to 8GB/controller
Clustered failover	Active/active
Snapshots	Yes, via Hitachi Sync Image
Management Software	
Web-based NAS GUI	Hitachi NAS Manager Suite
Performance tuning	Integrated with Hitachi HiCommand® Tuning Manager software
Antivirus protection	NAS Manager Suite supports Symantec AntiVirus



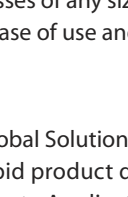
AMS1000 with NAS Option
174TB Fibre Channel and SATA
8 Gigabit Ethernet ports



AMS500 with NAS Option
86TB Fibre Channel and SATA
8 Gigabit Ethernet ports



AMS200 with NAS Option
40TB Fibre Channel and SATA
8 Gigabit Ethernet ports



WMS100 with NAS Option
41TB SATA only
8 Gigabit Ethernet ports

Best-in-class Scalability, Availability

- :: Scale up to 174TB capacity.
- :: Ensure high availability through clustered NAS servers with active-active failover.
- :: Rely on redundant hot-pluggable cooling fans and power supplies.
- :: Protect data fully with superior Hitachi hardware-based RAID technology.
- :: Integrate Sync Image software for snapshot capabilities.
- :: Avoid hardware failures by using the Hi-Track® “call-home” service/remote maintenance tool.

Looking for a file-sharing solution for UNIX-dominant or a Windows and UNIX mixed environment? Choose from the following solutions with NAS option systems.

- :: **NAS and SAN Consolidation** enables Fibre Channel for block-based application and NAS for file-level application within a single device.
- :: **NAS and iSCSI Consolidation** addresses file and block storage needs over IP with one single device.
- :: **File Server Consolidation** serves organizations with UNIX-dominant or UNIX and Microsoft Windows mixed environments that want to reduce costs and improve operational efficiencies by consolidating file servers onto NAS solutions.
- :: **Storage Consolidation (for Remote/Branch Offices)** serves large organizations looking to reduce complexity, improve efficiency, and ensure compliance by consolidating remote and branch office storage systems with NAS-based solutions.

- :: **File Sharing** serves standalone, remote, or branch office operations seeking easy-to-use file-sharing storage for their UNIX-dominant or UNIX and Windows mixed environments.
- :: **Backup** serves businesses of any size looking to deploy NAS as a “backup device” for ease of use and restore.

At Your Service

The Hitachi Data Systems Global Solution Services team delivers a full range of storage design, rapid product deployment, and ongoing management services to create Application Optimized Storage™ solutions that map to your critical business application requirements and truly deliver value to your organization. The Implementation Service for Hitachi NAS Solutions is designed to implement one NAS Option in a cluster failover configuration on a Hitachi TagmaStore modular storage system and integrate the NAS Option into your IP network with shared file systems accessible by UNIX and Windows clients (up to five for each environment). The service includes Sync Image software configuration and a demonstration of file system recovery using snapshot capabilities.

Complementary Software and Services

Hitachi HiCommand® Device Manager Software

Hitachi HiCommand Tuning Manager Software

Hitachi Resource Manager™ Utility Package

Hitachi Volume Migration Software

Hi-Track® “Call-Home” Service/Remote Maintenance Tool

Antivirus Protection—Optional, with Symantec AntiVirus Scan Engine



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