Storage Management System

A vital component of ASTI's fully inclusive NAS based *NET*Archive® solution is the designed-in Storage Management System (SMS). Featuring the latest storage server technology from industry-leading manufacturers, the server provides the high-performance throughput and power required to support scalable data archiving operations.

The 2U server chassis fits neatly into a standard rack mount configuration along with other solution components. Designed to manage up to 2.5 PB of nearline data with virtually limitless offline media management, the SMS accelerates internal operations with a robust hardware configuration that includes up to 96 TB RAID Cache, high-speed I/O communications, and **NETArchive** S-Series libraries scaling up to 18 ODA Optical drives.

Each SMS comes preconfigured with ASTI's Archive Management Software (AMS) designed specifically for data archiving. The easy-to-use AMS application enables the server to present itself as a standard network resource with support for SMB, NFS, and FTP protocols. Data is automatically migrated to libraries in accordance with policies established within the AMS.

ASTI's high-powered Storage Management System has the hardware speed and functionality to support archiving solutions of any size or capacity whether small business or the largest enterprise.

Summary Overview

- Provides a high-speed, high-capacity hardware foundation for archiving large amounts of unstructured data (small, medium or enterprise archives)

- SMS, AMS and library components are fully integrated for easy installation and setup

- Supports incremental, non-disruptive scaling of libraries and drives

- Integrated server offers superior operational efficiency
  - Fewer devices to manage
  - Higher degree of service integration and consistency compared with multiple independent components

- Easily connects to **NETArchive** S-Series rack mount or desktop libraries
  - High speed fiber channel library connection optimizes drive/media accessibility (Enterprise connectivity)
  - Super USB (small to medium archives)

- Convenient space-efficient rackmount options

Features

- Archive Controller w/Quad Core Processors
- 10MB Internal cache memory
- SAS RAID Drives
- Select from 2-12 RAID drives
  - Up to 96TB RAID Cache (RAW)
- Hardware RAID Controller with Supercap/NAND backup
- RAID Configuration Protection
- Redundant power supplies
- High speed connectivity to library drives
  - Dual HBA 8Gb Fibre Channel for Enterprise archives
  - Dual USB 3 Super speed for small to medium archives
- Standard NAS interface – dual 1Gbe Ethernet ports with load balancing and failover
- Rack mount or desktop installation
- RoHS Certified
- Pre-installed full-featured Archive Management Software (Ref: AMS datasheet for details)

The SMS provides the high-performance throughput and power required to support scalable data archiving operations.

SMS Technical Specifications

Archive Controller CPU	Quad Intel Xeon E5 3.5Ghz
Cache RAM Internal	10 MB Smart
SAS Ports	8
PCIe Bus	5 GB/s Gen 3
SSD Drives	2
Max Mem Bandwidth	68 GB/s
Network Connectivity	Dual - 1Gbe +IPMI Bondable for Load Balancing or Failover
Redundant Power Supplies	Yes
RAID Drives (SAS)	2 TB or 8 TB
RAID Cache (2, 8 or 12 drive)	4-96 TB Max Raw
Configurable Global Hot Spares	Up to 2
Library to Drive Connectivity - NAS30, NAS60 (ENT SMS includes Dual FC Card)	Fibre Channel 8 Gbps
Library to Drive Connectivity - NA Express	Super USB 3.0, 3.2
Cables	
Power Supply Cables	Qty 2, 10 foot
Ethernet Cables RJ45	Qty 2, 25 foot
Fibre Channel Cables ENT Only	Qty 2, 3mm LC

Notes:

• Enterprise systems with more than two drives require a Fibre Channel switch for communication with library/drives. Reference field install document for cable specifications

• Fibre Channel cables are included with ODA1, ODA2 & ODA3 S Series FC Drives (Qty 1, 3mm LC)

• See **NETArchive** rack specifications for mounting details

• SMS includes snap-in rack mount slides (all models)

• RAID expansion options are available - contact ASTI for technical details

SMS Physical & Environmental Specifications

SMS & Mounting Dimensions	
Height	3.5" 2 U standard
Depth • Front rack hole surface to rear of chassis • Rear power cord clearance behind chassis • Front rack hole surface to front drive carrier clearance • Front rack surface to optional front handle and bezel clearance • Slide rail spacing between rack hole mounting surfaces	 25.5" 3.0" 0.5" 1.75" 26-9/16"
Width • Inside mounting flanges • Outside mounting flanges	 17.6" rack opening clearance 19.0"
Slide Rail Posts:	1-5/8" between square retractable guide posts
Slide Rail Holes:	#10 x 32 Thread
SMS Weight	
Max Config fully loaded (lbs / kgs)	56 lbs / 25 kgs
Shipping Weight	
SMS (lbs / kgs)	82 lbs / 37 kgs total
Shipping Dimensions	
SMS (LxWxH) inches	36" x 26" x 15"
Power	
Operating Voltage (auto ranging)	100 to 240 VAC (50-60Hz)
AC Current (Varies according to drives)	1.5 - 3.4 Amps
Environment	
Operating Temperature	50-90F /10-32C
Humidity • Operating: • Non-operating: • Maximum Gradient:	 8% to 90% RH (non condensing) 5% to 93% RH (non condensing) 10% per hour
Temperature • Operating: • Non-operating: • Maximum Gradient	 10 to 35 °C (50 to 95 °F) 40 to 70 °C (-40 to 158 °F) 10 °C per hour
Heat Dissipation (Min/Max BTU/per hour)	717-1187
Warranty	1 Year Warranty

SMS Enterprise/SMB Rackmount Models

NA-R100F-2	Qty 2, 2TB/8TB SAS RAID Drives
NA-R100F-8	Qty 8, 2TB/8TB SAS RAID Drives
NA-R100F-12	Qty 12, 2TB/8TB SAS RAID Drives

RAID Configurations (8TB SAS HDD's)

2 Drive RAID 1		8 Drive RAID 6		12 Drive RAID 6	
Raw	Usable	Raw	Usable	Raw	Usable
16TB	7.3TB	64TB	22.4TB	96TB	52.1TB