

## Snap Server™ 650

A new standard in cost-effective high-performance scalable storage



### Features

**Best-In-Class Price/Performance**

**1.2TB Capacity, Scales to 64.2TB Using SANbloc S50 JBODs**

**Instant Capacity Expansion™ (I.C.E.)**

**Cross-Platform Support Right Out of The Box**

**Unified Block and File Support**

**Hot-Swappable Disk Drives**

**Integrated CA eTrust Antivirus Software**

**Active Directory Service (ADS) Integration**

**Integrated BakBone NetVault Software with an Upgrade to a 500GB Virtual Tape Library**

**Backup Agent and NDMP Agent Support**

**Snapshot Technology**

**Optional Snap EDR Enterprise-Class Data Replication, Management, and Protection**

**Optional StorAssure Personal Edition Client Backup Software**

**RoHS and WEEE compliant**

Snap Server by Adaptec changes the way network-attached storage is defined with the Snap Server 650 and performance that, until now, has only been available in much larger, much more expensive solutions. With easy installation and operation, scalability to 64.2TB, an integrated suite of data protection software, and Serial Attached SCSI (SAS) performance and reliability, the Snap Server 650 is an ideal choice for scalable performance-intensive application storage for small and medium business.

### Best-in-class performance

The Snap Server 650 is built with two dual-core AMD Opteron™ processors and 2GB of memory for extremely fast four-way throughput. It provides the best random data access in its price range. With SAS disk drives, no other 1U storage server can touch its performance.

### Availability

The Snap Server 650 integrates availability features rarely found at this price point, including Ethernet teaming failover, (combining two Ethernet ports on a single address, which allows a path to fail without disruption to network access), hot-swappable drives, and the ability to boot from any drive. Two other rarely found features are support for four drives and dual hot-swappable power supplies in a 1U system.

### Extreme scalability

The Snap Server 650 easily grows as your data grows. Start with 1.2TB, and as needs change, add up to seven SANbloc S50 JBOD arrays by Adaptec to a maximum of 64.2TB. With Instant Capacity Expansion (I.C.E.) the new capacity is instantly available, without the traditional RAID re-configuration downtime.

### Block and file data storage

iSCSI target support built into the latest version of the award-winning GuardianOS platform allows you to store database, email, and other block data on the same server where you store file data. GuardianOS also provides automatic cross-platform file sharing, Unicode support, global hot spare support, and enhanced quota management.

### Integrated data protection

The Snap Server 650 includes a complete suite of data protection software. It integrates a Workgroup Edition of BakBone NetVault Server, which includes a free upgrade to a 500GB Virtual Tape Library; CA eTrust Antivirus Software; and support for third-party backup agents. Optional Snap Enterprise Data Replicator (Snap EDR) software by Adaptec provides advanced data protection, movement, and management for any business. Optional StorAssure Personal Edition software by Adaptec provides automated, easy-to-use, client backup for desktop and laptop systems.

### Centralized management

Simple installation and browser-based management make Snap Servers ideal for sites with little or no IT support staff. Snap Server Manager software consolidates the management of multiple units into a single console.

## Snap Server 650 Specifications

### Physical

- Width: 17.5 in (444.5 mm)
- Height: 1.75 in (44.45 mm) 1U
- Depth: 29.25 in (743 mm)
- Weight: 40 lbs (18.2 kg)

*Note: 47 lbs (21.3 kg) is the shipping weight including shipping carton and accessories*

### Mounting

- Custom 19" rackmount slide rails included
- Minimum rack depth 32" (812.8mm)

### Agency Certifications

- UL, cUL, CE, FCC Class A, Nemko, TuV

### Processor

- Two dual-core AMD Opteron processors, with 1MB L2 cache and 1000MHz HyperTransport™

### Memory

- 2GB DDR 400 ECC RAM standard
- 4 DIMM sockets supporting up to 4GB DDR 400 ECC RAM

### Drive Configuration

- 4 x 15K RPM hot-swappable SAS drives (1.2TB raw capacity)

### Standard LCD Display

- Backlit, 2 line, 16 character with system ID, IP address

### Network Interface

- Dual-Gigabit Ethernet Ports (autosensing 10/100/1000Base-T, dual RJ-45 network connectors)
- Support for stand-alone, failover, and load-balancing modes

### Expansion Array Interface

- Includes Serial Attached SCSI host bus adapter for expansion
- Supports up to 7 SANbloc S50 JBOD expansion arrays

### Local Backup Interface

- Ultra320 SCSI 68-pin VHDCI (integrated)

### Power

- Power Supply: Dual hot-swap 400W supply (standard)
- Power Rating: 400W 100-240 VAC, 50-60Hz, autosensing
- Input Current: 3.4A peak for 115VAC, 1.7A peak for 230VAC
- Power Consumption: 390W peak
- Heat Dissipation: 1057 BTUs/hr avg.

### Environmental Limits, Operating

- Temperature: 50° F to 95° F, (10° C to 35° C)
- Non-Condensing Humidity: 20% to 80%
- Vibration: 0.1G at 10-300Hz random for up to 120 minutes
- Shock: 6 pulses of 33G for up to 2ms
- Altitude: 0 ft to 10,000 ft (0 m to 3,048 m)

### Environmental Limits, Non-operating

- Temperature: 14° F to 149° F, (-10° C to 65° C)
- Non-Condensing Humidity: 5% to 95%
- Vibration: 2G at 5-500Hz for up to 90 minutes
- Altitude: 0 ft to 35,000 ft (0 m to 10,668 m)

### Included with Unit

- European and US power cable
- 2 x Cat5 Ethernet cables
- Custom 19" rackmount slide rails
- GuardianOS and included features
- Evaluation licenses for optional software

POWERED BY:



## GuardianOS Specifications

### Network Transport Protocols

- TCP/IP
- UDP/IP
- AppleTalk

### Network File Protocols

- Microsoft Networks (CIFS/SMB)
- Linux/UNIX (NFS v2/3 over TCP & UDP)
- Apple (AFP v2/v3)
- Web (HTTP 1.1/HTTPS)
- File Transport Protocol (FTP)

### Network Block Protocols

#### iSCSI Target Support

- Supports qualified iSCSI software and hardware initiators (see details below).

#### iSCSI Software Initiator Support

- Windows: Microsoft iSCSI Initiator v1.03, v1.04, v1.05, v1.06, v2.02
- Solaris: Cisco SN 5400 Series iSCSI Driver v3.3.5
- Linux: RHEL 3 & 4 and SLES 9: Built-in Initiator; Redhat 7.3 & 9.0: UNH-iSCSI Initiator v1.5.3
- NetWare: NetWare Initiator 6.5 SP1
  - emboot Bootable iSCSI Software for Windows
  - VMWare ESX v3.0 in-box iSCSI Initiator

#### iSCSI Hardware Initiator Support

- Intel PRO/1000T IP Storage Adapter v2.0, 2.1
- Alacritech SES1001 iSCSI Adapter
- QLogic QLA4010 iSCSI Initiator

### Network Client Types

- Windows: 98, Me, NT 4.0, 2000, 2003, XP
- Macintosh: OS 8.x, 9.x, OS X 10.x
- UNIX: Solaris 7, 8, 9; HP-UX 11; AIX 4.3.3, 5.x
- Linux: Red Hat Linux 7.x, 8.x, Fedora Core 3 & 4, RHEL 3 & 4, SLES 9
- FTP

### Server Emulation

- Windows 2000/2003
- Windows NT 4.0
- AppleShare
- NFS v2/3
- FTP

### Automatic IP Address Assignment

- Supports DHCP Client or Server for automatic assignment of IP address

### Network Security

- Microsoft Active Directory Service (ADS Member Server)
- Kerberos Authentication v5
- Windows NT Domain (member server)
- File and Folder Access Control List (ACL) Security for Users and Groups
- UNIX Network Information Service (NIS) Support
- UID/GID mapping between NFS & CIFS
- Secure Sockets Layer (SSL) v2/v3 128-bit Encryption
- Transport Layer Security (TLS) v1
- CHAP Authentication (iSCSI target level)

### System Management

- CA eTrust Antivirus Software
- Browser-based User Interface for Remote Administration
- Snap Server Manager Client-Based Setup Utility (platform-independent)
- SNMP (MIB II and Host Resource MIB)
- User Disk Space Quotas for Windows, Macintosh, and UNIX/Linux
- Group Disk Space Quotas for NIS Groups
- Environmental Monitoring
- Email Notification Alerts
- Network Time Protocol Support

### RAID Options

The Snap Server 650 can be configured for enhanced performance or maximum file protection. Options include:

- RAID 5 (drive striping with parity): For each array, the size of one drive is reserved for parity. Provides the best combination of performance and data protection.
- RAID 1 (drive mirroring): One or more drives duplicate one drive for maximum data protection.
- RAID 0 (drive striping): Large virtual drive with data striped across all drives of the array to provide maximum performance with no loss in usable capacity.
- Global hot spare support.
- Instant Capacity Expansion (I.C.E.) logically groups RAID volumes for dynamic online scalability.
- RAID 1/5 background scanner constantly monitors for disk media errors and if it's possible to repair the error, automatically rewrites the "marginal" block.

**GuardianOS Specifications (cont.)**

**Data Protection**

- Snapshots: Snapshot technology enables immediate or scheduled point-in-time images of the file system.
- Enterprise-Class Replication: Optional Snap EDR software simplifies cross-platform management and protection of distributed data.
- Continuous Data Protection: Optional StorAssure Personal Edition software automatically and continuously protects data stored on desktop and laptop systems.
- Local Backup: Integrated BakBone Netvault WorkGroup Edition software. Includes an upgrade to a 500GB VTL for disk-to-disk backup.
- Network Backup: Supports VERITAS NetBackup/Backup Exec, CA BrightStor ARCserve/Enterprise, Legato NetWorker, BakBone NetVault, and Microsoft Backup Software for Windows 98, Me, NT, 2000, 2003, XP. Compatible with Dantz Retrospect for Macintosh.
- UPS Support: APC brand UPS with Network Management Cards are supported for graceful system shutdown.

Models	Part Number
Snap Server 650, 1.2TB	5325301995
Software Options	
Snap EDR	5325301880
Snap EDR Advanced	5325301935
Snap EDR Express	5325301954
StorAssure Personal Edition	5325301972
Snap Server Manager license*	5325301955

\*Control of individual server is included, this license enables multi-server administration

**Worldwide Warranty**

Snap Server hardware and software are backed by world-class service and support to protect your investment from downtime and provide you with complete peace of mind. Standard services with the Snap Server 650 include:

- Three-year limited hardware warranty, return to depot
- 90-day software support

**Optional Support Programs**

Today’s mission-critical environments require maximum uptime and rapid resolution should problems arise. A comprehensive suite of service and support upgrade options help you protect your business operations. Providing additional levels of technical service and support, these services extend the standard protection packages included with Snap Servers. From extending your warranty phone support to complete onsite support for same day recovery, you can select the level of support that best fits your business and resource requirements. For more information about support services, please contact your distributor, or call 1-888-343-7627.



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