



AssuredSAN™

3320 and 3330 Data Protection Solutions

BENEFITS



Assured Data Protection

- AssuredSnap™ - 1000 snapshots
- AssuredCopy™ - 512 volume copies
- AssuredRemote™ - remote replication

Scalable Performance

- Dual RAID controller
- Data rates up to 1Gb/sec. iSCSI
- SimulCache™ - Low latency cache mirroring
- up to 7 expansion units per system
- support for SAS, SATA, solid state drives
- max 144 drives - 3320, 96 - 3330

Built in Redundancy

- RAID 0, 1, 3, 5, 6, 10, 50
- Redundant, hot swap components
- Built-in schedule capability

Green Features

- EcoStor™ Economically and environmentally sound technologies
- Battery-free cache backup
- DC power option
- Drive-spin-down
- RoHS-6 and WEEE compliant

Rugged Chassis

- NEBS Level 3 Compliant
- MIL STD 810F Compliant (Storage Requirements)
- European Telco Compliant

INTEGRATED DATA PROTECTION SOFTWARE 4 PORT 1Gb iSCSI SOLUTION

Dot Hill's AssuredSAN™ Solutions offer an innovative and comprehensive view of storage management — Store, Back up and Restore instantly. The AssuredSAN™ Solutions combine high performance and high capacity storage with the ease of the RAIDar™ management GUI which provides a complete set of features and tools to ensure that storage administration is the easiest job in the datacenter.

Today's solutions should not only store data, but ensure that it can be restored in an instant. That is where the AssuredSAN™ 3320R and 3330R come in – their eight 1Gb iSCSI ports can increase data access and provide more support your applications, while adding levels of data protection.

AssuredRemote™ - Easy Remote Replication for SMB's

Equipped with AssuredRemote™ remote replication software, these systems provide the easiest array-to-array remote replication solution on the market today, enabling disaster recovery protection and business continuity with support for up to 1000 snapshots per storage array. By providing centralized, array-level replication, AssuredRemote offloads backup operations from critical application servers, and aids IT managers in complying with regulations such as the HIPAA and Sarbanes-Oxley acts.

With two AssuredSAN arrays and AssuredRemote replication software you can easily implement an affordable disaster recovery or centralized backup solution. Just four easy steps!

These iSCSI storage arrays are ideal for small to medium sized organizations that are experiencing growing bandwidth demands, driven by network convergence, virtualization and I/O port consolidation trends. The AssuredSAN™ 3320 and 3330 SAN storage systems are designed to enhance your networking environment, providing greater data access speeds for virtual server environments, near line backup, database, online transaction processing, and IP-based surveillance.

Enhancing your iSCSI SAN Environment

You can implement these models in your current infrastructure and you will immediately benefit from greater access speeds, reduced energy consumption, data protection software and an easy management system.



The AssuredSAN 3420S features 2.5-inch disk drives and the 3430S features 3.5-inch disk drives. Mixed SAS, SATA, SSDs can be deployed in these arrays and up to seven JBOD expansion units can be easily added.

Environmentally Responsible

Utilizing Dot Hill's patented EcoStor™ technology, these systems have completely eliminated cache batteries, using instead super capacitors and flash memory to provide infinite cache backup during a power loss, while being environmentally friendly.

The AssuredSAN 3000 Series also features energy saving drive-spindown. With the addition of drive spin-down, mixed drive type support and dual protocol interfaces, users can now combine both high performance primary volumes and secondary storage with different performance and energy usage profiles in the same physical unit.

Storage Made Easy

AssuredSAN arrays are easy to configure and manage with RAIDar 2.0, our intuitive web based interface which provides storage setup and monitoring without the need for host based software. RAIDar 2.0 saves time with configuration and installation wizards, and schedulers for snapshots and replication.

- Easy to set up Configuration, Installation Wizards
- Automated 'Set and Forget' scheduler for snapshots
- Instant Backup AssuredSnap instantly takes point in time copies
- Replication AssuredRemote quickly transmits changes to your remote site
- Instant Restore No time consuming tape recoveries. Use our snapshots to step back in time.
- International Localization for Dutch, French, German, Italian, Spanish, Simplified Chinese, Traditional Chinese, Japanese, and Korean. including translated online help.

support

Warranty

AssuredSANs come with a three year standard hardware warranty, a 90 day software warranty, and Bronze level support, which provides you with expert 24x7 technical telephone support, access to our SANsolve and the Customer Resource

models

Without Software - 3320C, 3330C

The AssuredSAN 3320C and 3330C are hardware only models that ship with the storage array, drives, rail kit, cables, Installation Guide, and Bronze support. The Try and Buy menu in the RAIDar management interface allows customers to start using data protection or remote replication software at any time.

With 2.5" Drives - 3320C, 3320R, 3320 OEM Model

Drives per array	up to 24
Max capacity per chassis	24TB

PHYSICAL

Depth (excluding cables)	21.3 Inches / 54.0 cm
Height	3.5 Inches / 8.9 cm
Width	17.6 Inches / 44.7cm
Chassis weight	44 lbs / 20kg

Center with knowledge base articles, product documentation and firmware upgrades.

Gold and Platinum Support Programs

Dot Hill is equipped to provide the extra level of support you may need to meet your service level agreements. Our Gold and Platinum levels of support are designed to offer maximum responsiveness anywhere in the world. These programs include options for same day advance shipment, parts depot access, next business day and 4-hour onsite service. We also offer extended hardware warranties and extended software support packages.

Professional Services

In addition, Dot Hill offers professional services such as installation, remote monitoring, and remote site DR set up, and configuration, designed to make it simple and straightforward to fully deploy AssuredSAN storage solutions.

shipping information

3320C, 3330R

Packaged product weight 67.5 lbs with drives
Packaged product dimensions Width 25.5", Height 10", Depth 28.5"

3330C, 3330R

Packaged product weight 85.5 lbs with drives
Packaged product dimensions Width 25.5", Height 10", Depth 28.5"

3320 and 3330 OEM Model

Available for volume OEM customers. An OEM Customization Kit is available which allows OEM customers to create their own branded storage solutions.

With Software - 3320R, 3330R

The AssuredSAN 3320R and 3330R are hardware and software bundles which ship with a storage array and drives, AssuredRemote, 1000 Assured-Snap instances, 512 AssuredCopy instances, rail kit, cables, installation guide, and Bronze support.

3.5" Drives - 3330C, 3330R, 3330 OEM Model

Drives per array	up to 12
Max capacity per chassis	36TB

PHYSICAL

Depth (excluding cables)	23.7 Inches / 60.2 cm
Height	3.5 Inches / 8.9 cm
Width	17.6 Inches / 44.7 cm
Chassis weight	44lbs. / 20kg



GENERAL

Host speed	1Gb iSCSI
IOPs	264,000
Data protection	AssuredSnap™, AssuredCopy™, AssuredRemote™

EXPANSION

Max number of chassis	up to 8 (1 RAID, 7 JBOD)
Expansion units	Dot Hill 3120, 3130

PROTOCOLS AND STANDARDS

iSCSI (IETF)	ICMP (RFC 792, 950, 1256)
IP (RFC, 894, 1092)	SCSI-2 and SCSI-3
TCP (RFC 793)	FC Channel

HOSTS

Initiators	All iSCSI compliant initiators
Interface Type	RJ-45
External Ports	4/8 iSCSI (Gigabit Ethernet) Single/Dual Controller

DRIVE SUPPORT

3320	SAS - 146GB, 300GB 15K SAS - 300GB, 450GB, 600GB, 900GB 10K SAS - 500GB, 1TB nearline 7K SAS - SSD 150GB SLC
3330	SAS - 300GB, 450GB or 600GB 15K SAS - 500 GB, 1TB, 2TB, 3TB 7K, SATA II - 500 GB, 1TB, 2TB, 3TB 7K, 3Gb SATA SSD - 32GB SLC, 64GB SLC, 80GB MLC SAS - SSD 150GB SLC

RAID

Levels Supported	0, 1, 3, 5, 6, 10 and 50
RAID Type	Hardware
Cache Memory	2GB per controller
Cache Backup	Battery-free protection w/super capacitors
Virtual disks per System	32
Volumes per virtual disk	256
Volumes per System	256
Mirrored Cache	Yes - SimulCache™
Super Capacitor Cache Backup	Yes
Cache Backup to Flash	Yes - Non-volatile

MANAGEMENT

Interface Types	10/100 Ethernet, Mini USB
Protocols Supported	SNMP, SSL, SSH, SMTP, SMI-S Provider, HTTP(S)
Management Consoles	WEB GUI, CLI
Management Software	RAIDar 2.0

POWER REQUIREMENTS - AC INPUT

Input Power Requirements	100-240VAC 50/60Hz
Max Input Power	436W max maximum continuous
Heat Dissipation	1488 BTUs/hour

Bronze Rated - high efficiency
82% @ 20% load
86% @ 80% load
85% @ 100% load

TEMPERATURE AND HUMIDITY RANGES

Operating Temperature	41 °F to 104 °F (5 °C to 40 °C)
Shipping Temperature	-40 °F to 158 °F (-40 °C to 70 °C) Note: Derate 2 °C for every km, up to 3000 meters
Operating Humidity	10% to 90% RH @ 104 °F (40 °C), non-condensing
Non-Operating Humidity	Up to 93% RH @ 104 °F (40 °C) non-condensing

DECLARED ACOUSTIC NOISE LEVELS

Sound Power	LWAd=6,75 B
Sound Pressure	LpAm - 55dB _A

SHOCK AND VIBRATION

Shock, Operational	5G's for 10 ms
Shock, Non-Operational	15G 11ms, half sine
Vibration, Operational	5Hz to 500Hz, 0.21Grms flat spectrum
Vibration, Non-Operational	3-365-3Hz, 1.22 Grms, z-axis, 0.85 Grms, X&Y axis shaped spectrum

Note: Dot Hill AssuredSAN disk arrays chassis, power supplies, and controllers support NEBS, ETSI, and MIL-STD-810G shock and vibration standards. Hard disk drive selection may alter ability to achieve full compliance with these specifications as HDD's have varying S&V performance characteristics.

HIGH-AVAILABILITY FEATURES

Redundant Hot-Swap Controllers	Yes
Redundant Hot-Swap Disk, Fans, Power	Yes
Dual Power Cords	Yes
Hot Standby Spare	Yes
Automatic Failover	Yes
Multi-Path Support	Yes
Snapshot with AssuredSnap™	Yes
Volume Copy with AssuredCopy™	Yes
Remote Replication with AssuredRemote™	Yes

REGULATORY

Safety	UL 60950-1, 1st edition, 2007-10-31 (USA) CAN/CSA-C22.2 No.60950-1-03, 1st Edition, 2006-7 (Canada) EN 60950-1:2006 (European Union) EC 60950-1:2001 (International) EN 60950-1:2001 +A11:2004 (GS Mark, Germany) CCC Mark (power supply only, China PRC)
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Electromagnetic Compatibility

<i>Emissions</i>	CFR 47 Part 15 Subpart B Class A (U.S.A.) ICES-003:2004 Class A (Canada) EN 55022:2006 +A1:2007 Class A (EU) EN 300 386 V1.4.1:2008 Class A (EU Telco) AS/NZS CISPR 22:2009 Class A (Australia, New Zealand) VCCI:2009-04 Class A (Japan) GOST R 51318.22-99 Class A (Russia) KN 22 Class A (S. Korea) CNS 13438:2006 Class A (Taiwan)
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Harmonics

<i>Flicker</i>	EN 61000-3-3:1995 +A1:2001+A2:2005 (EU)
<i>Immunity</i>	EN 55024:1998 +A1:2001+A2:2003 (EU) EN 300 386 V1.4.1:2008 (EU Telco) GOST R 51318.24-99 (Russia) KN 24 (S. Korea)

RoHS and WEEE

RoHS-6/6 Compliance, China RoHS, WEEE

Country Approvals

United States, Canada, European Union (EU), Australia/New Zealand, Japan, China (PRC), Russia, Mexico, South Africa, Germany, South Korea, Taiwan

SUPPORT

Software Warranty	90 days
Standard Hardware Warranty	3 years
Environmental Monitoring	SNMP, CLI, RAIDar 2.0, SMTP, SMI-S Provider
SMTP	Yes
Remote Diagnostics	Yes

