

# Dot Hill 3920 and 3930

8Gb Fibre Channel with 1Gb iSCSI SAN Arrays



## iSCSI and 8Gb Fibre Channel - in One System

The Dot Hill 3920/3930 are first to market storage systems - delivering 8Gb Fibre Channel/1Gb iSCSI hybrid arrays in a 2U format, with remote replication for entry level customers. Combining both 8Gb Fibre Channel and 1Gb iSCSI host interfaces within the same unit, these systems enable SMBs to leverage both iSCSI and 8Gb Fibre Channel storage and perform both file and block level storage, easily adapting as needs change with a single unified storage system.

## AssuredRemote™ - Easy Remote Replication for SMB's

Dot Hill's optional AssuredRemote™ software provides the easiest array-to-array remote replication solution on the market today, enabling disaster recovery protection and business continuity with support for up to 512 snapshots per storage array. By providing centralized, array-level replication, AssuredRemote offloads backup operations from critical application servers, and aids SMBs in complying with regulations such as the HIPAA and Sarbanes-Oxley acts.

## First to Market with RAID Support for 6Gb SAS

The Dot Hill 3000 Series is the first RAID solution to feature out-of-the-box support for 6Gb SAS drives. Leveraging the product's 6Gb SAS-enabled mid-plane together with 6Gb SAS drives, customers can achieve improved system throughput that allows for faster access to business data. The doubling of system bandwidth makes the 3000 Series ideal for performance-intensive applications such as server virtualization, server backup and video streaming.

## 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 3000 Series also adds energy saving drive-spin-down.

## Enhanced Performance

The storage systems leverage patented SimulCache™ technology that instantly and simultaneously mirrors cache between RAID controllers, leading to significant performance improvements over traditional implementations.

## Storage Made Easy

The 3920/3930 fibre channel SAN 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.

## Benefits

### Assured Data Protection

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

### Scalable Performance

- Dual or single RAID controller
- Data rates up to 8Gb/sec. Fibre Channel and 1Gb iSCSI
- up to 7 expansion units per system
- support for SAS, SATA, solid state drives
- max 144 drives - 3720, 96 - 3730
- 264,000 measured IOPS

### Built in Redundancy

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

### Environmentally Responsible



- EcoStor™ Economically and environmentally sound technologies
  - SimulCache™ - Low latency cache mirroring
  - Battery-free cache backup
  - DC power option
  - Drive-spin-down **new!**
- RoHS-6 and WEEE compliant

### Rugged Chassis

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

■ 3920 24-DRIVE ARRAY FEATURES .....	
Drive size	2.5-inch drives
Drives per array	up to 24
Max capacity per chassis	12TB

■ 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
w/146GB drives	60 bs / 27.2kg

■ 3930 12-DRIVE ARRAY FEATURES .....	
Drive size	3.5-inch drives
Drives per array	up to 12
Max capacity per chassis	24TB

■ 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
w/500GB drives	68lbs. / 30.84kg

# 3920/3930 specifications

## ■ GENERAL

Host speed	2 ports 8Gb Fibre Channel 2 ports 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

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

## ■ HOSTS

<b>Fibre Channel</b>	
Supported Hosts	4 direct connected hosts, 8Gb, 4Gb, 2Gb Fibre Channel. 64 switched
Interface Type	FCP
External Ports	2 Single or 4 Dual Controller

### iSCSI

Initiators	All iSCSI compliant initiators
Interface Type	RJ-45
External Ports	2 Single or 4 Dual Controller

## ■ DRIVES

Drive Types	SAS, SATA, SSD
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## ■ RAID

Levels Supported	0, 1, 3, 5, 6, 10 and 50
RAID Type	Hardware
Cache Memory	2GB per controller
Cache Backup	Battery-free protection with 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

## ■ POWER REQUIREMENTS - DC INPUT

Voltage	-36 to -72VDC, -48/-60V nominal
Max Input Power	436W maximum continuous
Heat Dissipation	1488 BTU/hour

## ■ 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 <sub>A</sub>

## ■ SHOCK AND VIBRATION

Shock, Operational	10G's for 10 ms (3720) 5G's for 10 ms (3730)
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

## ■ 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)
Electromagnetic Compatibility Emissions	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)
Harmonics Flicker Immunity	EN61000-3-2:2006 (EU) EN 61000-3-3:1995 +A1:2001+A2:2005 (EU) EN 55024:1998 +A1:2001+A2:2003 (EU) EN 300 386 V1.4.1:2008 (EUTelco) GOST R 51318.24-99 (Russia) KN 24 (S. Korea)
RoHS and WEEE Country Approvals	RoHS-6/6 Compliance, China RoHS, WEEE 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
Phone-home Capability	Yes
Remote Diagnostics	Yes
Non-disruptive Updates	Yes
Non-disruptive Volume Expansion	Yes for primary volumes and snapshot volumes and snapshots

