



AssuredSAN™

4120 and 4130 JBODs

BENEFITS



Scalable Performance

- 6Gb/sec. SAS connectin to host
- Up to 7 expansion units per system
- Support for mixed SAS, Nearline SAS, and solid state drives (SSDs)
- Max 192 drives - 4120, 96 - 4130

Built in Redundancy

- RAID 0, 1, 3, 5, 6, 10, 50
- Redundant, hot-swappable power units, IO modules, fans and drives

Green Features

- Energy saving Drive-spin-down

Compliance

- RoHS-5/6 compliance - 4130
- RoHS-6 compliance - 4120
- WEEE compliant

EXPANSION ARRAYS

As your need for storage increases, Dot Hill provides an easy to deploy and cost effective way to extend your Fibre Channel or SAS model. The 4120 or 4130 expansion unit can be quickly deployed to add the extra storage capacity to a 4000 Series system.

Affordable Tiered Storage

A total of seven JBOD expansion units can be added. These highly flexible expansion arrays support SAS, Nearline SAS, and SSD drives within a single chassis, allowing you the flexibility to manage tiered storage within a single system. Dot Hill storage systems offer affordable, dynamic, flexible solutions for any sized enterprise.

The 4120 JBOD expansion unit can support an additional 24 drives and the 4130 JBOD expansion unit can support an additional 12 drives. These units easily expand the capacity of a customer's SAN.

The 4120 or 4130 JBOD array is controlled by the RAID controller of the primary unit and allows SAN expansion at a lower cost than a full RAID array.

Easily Expand Your SAN Capacity

As part of the 4000 Series, either expansion model can be attached to add either a tray of 2.5-inch or 3.5-inch drives to a 4000 system. This allows customers maximum flexibility in how they design and expand their 4000 storage system.



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 4000 Series also features energy saving drive-spin-down. With mixed drive type support and drive-spin-down users can combine both high performance primary volumes and secondary storage with different performance and energy usage profiles in the same physical unit.

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 4000 Series 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.

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 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.

models

4120C, 4130C

The AssuredSAN Expansion Arrays or JBODS are hardware only models that ship with the storage array, drives, cables, Installation Guide, and Bronze support.

4120 with twenty-four 2.5" Drives - 4120

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

PHYSICAL

Depth (excluding cables) 20.46 Inches / 51.9 cm
Height 3.5 Inches / 8.9 cm
Width 17.6 Inches / 44.7 cm
Chassis weight 36.4 lb / 16.5 kg
w / drives 51.8 lb / 23.5 kg

4130 with twelve 2.5" Drives - 4130

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

PHYSICAL

Depth (excluding cables) 20.57 Inches / 52.25 cm
Height 3.43 Inches / 8.71 cm
Width 8.99 Inches / 48.24 cm
Chassis weight 58.2 lb / 26.9 kg
w / drives 78.2 lb / 35.5 kg



Features

GENERAL

Product Family	4000 Series
Product Type	JBOD
Chassis Configuration	2U
Disk Architecture	6Gb SAS
Mounting Options	19" Rack, Rack tray
Max number of chassis	up to 8 (1 RAID, 7 JBOD)

DRIVE SUPPORT

4120	SAS, Nearline SAS, SSD
4130	Nearline SAS

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

SUPPORT

Standard Hardware Warranty	3 years
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RAID

Levels Supported	0, 1, 3, 5, 6, 10 and 50
RAID Type	Hardware
Virtual disks per System	32
Volumes per virtual disk	256
Volumes per System	1024
Super Capacitor Cache Backup	Yes
Cache Backup to Flash	Yes - Non-volatile

MANAGEMENT

SAS connect to RAID

Detailed Specifications

POWER REQUIREMENTS - AC INPUT

Input Power Requirements	100-240VAC 50/60Hz
Max Input Power	436W 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.

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 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)
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 (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

