

Make the smart decision about how to manage your resources, time and money

NetApp FAS2220

Whether for primary or secondary storage, the FAS2220 accommodates medium sized businesses, remote offices and local storage by offering file-level data access, intelligent management software, and data protection capabilities in a cost-effective package.

- Up to 60 disks (240 TB)
- IP-SAN (iSCSI) and NAS (CIFS/NFS) protocol support
- Full SAS, full SATA or SAS/SATA disk mix
- Single and dual active-active controller models available in 2U form factor
- 4 GbE and 2 SAS ports per controller
- 6 GB memory per controller

Start right

The NetApp FAS2220 series is not only affordable but provides a more powerful platform than other systems in its class:

- "No compromise" unified storage systems
- SSD support across all FAS2220 series system
- New Flash Pool technology extends Virtual Storage Tiering to FAS2220 systems: accelerate application performance and lower storage costs
- Industry-leading efficiency features built in at no additional cost
- Use 50% less storage in virtual server environments.

Keep it simple

The NetApp FAS2220 series provides a powerful range of technologies to help increase the efficiency of your storage administrators:

- Rapidly deploy within minutes
- Manage using your Microsoft® Management Console, minimizing training costs
- Simple, automatic data movement between SSD and SATA disk through Flash Pools
- Tight integration with key business application enables administrators to manage 2 to 3 times more storage
- Slash administrative overheads by up to 60% by leveraging one common skill set for all NetApp products
- Easily tune and troubleshoot virtual server environments with OnCommand Balance.

NetApp OnCommand System Manager

OnCommand System Manager is a simple but powerful browser-based management tool that enables administrators to set up and manage individual NetApp FAS2220 systems easily:

- Intuitive wizard and workflow-driven interface automate common storage tasks
- Flash Pool support - view, create and manage Flash Pool environments.
- Use a single interface for SAN and NAS environments.
- Use System Manager across all NetApp storage systems - unlike competitive products that manage only one class of storage.

Grow smart

Protect your storage investment with systems that grow with your business needs:

- Get truly unified storage architecture
- Expand capacity and add functionality quickly and easily
- Seamlessly upgrade to other NetApp systems while using the same operating system and software tools.

Simplified software

NetApp FAS2220 systems utilize the Data ONTAP® storage operating system, plus a common set of powerful, easy-to-use data management and data protection software products. The scalable, unified software of NetApp systems uniquely provides a common software environment for both NAS and SAN, from entry systems through the largest data center systems.

With NetApp software on the FAS2220, you can:

- Enable each administrator manage two to three times more storage.
- Protect your critical data.
- Reduce disk purchases by 50% or more through a superior set of storage efficiency features.
- Reduce provisioning time by up to 90%.
- Cut test and development time in half.

Included standard with every FAS2220 system is a set of uniquely powerful NetApp software products that deliver highly efficient storage, simple management tools, and high performance. In addition, optional Extended-Value Software products provide advanced capabilities such as instant data recovery, instant cloning, data replication, disk-to-disk backup, and application aware backup and recovery.

Ideal for value-oriented deployments

Geared toward value-oriented deployments, the FAS2220 is a good fit for:

- Medium-sized businesses, remote offices and local storage
- Consolidating virtualised environments with one to three Windows applications or general file-serving workloads
- Customers that need a powerful system at a competitive price.



TECHNICAL HIGHLIGHTS

Form Factor	Standard 19-inch rackmount; 2U Controller Enclosure; 4U 24-slot Disk Shelf Expansion DS424x; 2U 24-slot Disk Shelf Expansion DS2246
Storage Controller	single or dual active/active controllers
Host Connectivity	Per controller: 4 x GbE ports
Cache Memory	6 GB memory per controller
Supported Protocols	
SAN	iSCSI
File	NFSV2/V3/V4 over UDP or TCP, PCNFSD V1/V2 for (PC) NFS client authentication, CIFS
Other	HTTP 1.0, HTTP 1.1 virtual hosts; NDMP
LUNs	up to 1 024
Max. Hosts	Up to 256 SAN connected servers (per active/active configuration)
Min/Max. Disk Drives	Up to 60 (12 internal + 48 external)
Max. Capacity (raw/formatted)	240 TB
Drives Supported	
SATA II 7200rpm	1 TB, 2 TB, 3 TB and 4 TB
SAS 10Krpm	450 GB, 600 GB, 900 GB and 1.2 TB
SAS 15Krpm	450 GB and 600 GB
Flash Drives	200 GB, 400 GB, 800 GB & 1.6 TB
RAID Support	RAID 4, RAID-DP™*
Back-end Connectivity	6 Gb/s SAS interface (2 SAS ports per controller)
Management	Full-duplex 10/100/1000 Base-T Ethernet onboard console, diagnostic LED, Maintenance Center, SNMP, telnet, SSH, HTTP, Web (SSL), host scripting, e-mail alerts
Reliability	Redundant hot-swappable controllers, cooling fans, power supplies, optics, and RJ-45 ports; ACP for DS424x & DS2246
Availability	multi-path access mirrored cache, battery-backed non-volatile Memory (NVMEM) Service Processor

HOST ENVIRONMENT

Host Operating System	Microsoft Windows, Linux, Solaris, IBM AIX, HP-UX, MacOS, VMware ESX; Consult NetApp compatibility matrices for full details.
-----------------------	---

MANAGEMENT & ADMINISTRATION

Storage Management	On Command
Multi-path Management	Yes
Snap Shot	Snapshot, SnapManager, FlexClone™, SnapDrive, SnapValidator®
Local Data Replication	SyncMirror®
Remote Data Replication	SnapMirror®
Other	MultiStore®, SnapVault®, SnapMover®, Snapstore, Clustered failover, NearStore, FilerView®, FlexCache, FlexVol, FlexShare™, Advanced Single Instance Storage, Single Mailbox Recovery, Protection Manager, Operations Manager, SnapLock

PHYSICAL SPECIFICATIONS

Dimensions (HxWxD)	
Disk Processor Enclosure	2 EIA U (3.42", 8.68 cm) x 19" IEC rack-compliant (17.61", 44.72 cm) x 22.54" (57.24 cm)
Disk Shelf Enclosure	DS424x : 4 EIA U(7", 17.8 cm) x 19" IEC rack-compliant (19", 48.3 cm) x 24" (61 cm); DS2246 : 2 EIA U(3.4", 8.5 cm) x 19" IEC rack-compliant (19", 48.0 cm) x 19.1" (48.4 cm)

PHYSICAL SPECIFICATIONS (Cont'd)

Weight	
Disk Processor Enclosure	62.26 lbs (28.30 kg) HA fully loaded
Disk Shelf Enclosure	DS424x : 110 lb (49.9 kg) fully loaded; DS2246 : 49 lb (22.2 kg) fully loaded

ENVIRONMENT

Temperature	Operating : 10° C to 40° C (50° F to 104° F); non-operating : -40° C to 65° C (-40° F to 149° F)
Humidity	Operating : 20% to 80% relative humidity, non-condensing (28° C wet bulb temperature) Non-operating : 5% to 95% relative humidity, non condensing, in original container
Altitude	<= 3,000 m (at <= 10,000' feet) elevation;
Acoustic	Declared sound power (LwAd): 6.9 Bel; sound pressure -LpAm): 51.0 dB; Disk Shelf Expansion: 58 dBA sound pressure (LpA) @normal operating conditions (at 23°C and at sea level);

POWER

Power consumption	
Disk Processor Enclosure	200 VAC: 261 W typical
Disk Shelf Enclosure	DS424x : 100 to 120 VAC, 6.3 A; 200 to 240 VAC, 3.2 A; DS2246 : 100 to 120 VAC, 3.6 A; 200 to 240 VAC, 1.9 A
Heat Dissipation	
Disk Processor Enclosure	1 509 BTU/hr (max), 891 BTU/hr (typical)
Disk Shelf Enclosure	DS424x : 2180 Btu/hr (fully loaded shelf); DS2246 : 1181 Btu/hr (fully loaded shelf)

REGULATORY & SAFETY

Safety	EN 60950, CE, CSA 60950, UL 60950, CB IEC60950-1 (all national deviations), EN60825-1, IRAM, GOST-R, BSMI CNS14336, CCC GB 4943-2001, SABS, S Resolution 92-98
Electromagnetic Compatibility (EMC)	FCC Part 15 Class A, ICES-03, CE, MIC, VCCI, AS/NZS CISPR 22, EN55022, EN55024, EN61000-3-2, EN61000-3-3, CoC (South Africa), BSMI, KN22, EN61000-4-2 to 6, EN61000-4-11, KN24, CISPR 24

WARRANTY

Standard warranty	3 years, Parts Exchange - Next Business Day
Extended Warranty	4 hours, 24x7 depending on location

* RAID-DP is a high performance RAID-6 implementation.

Bull SAS - RCS Versailles B 642 058 739 - All trademarks mentioned herein are the property of their respective owners. Bull reserves the right to modify this document at any time without prior notice. Some offers or parts of offers described in this document may not be available locally. Please contact your local Bull correspondent to know which offers are available in your country. This document has no contractual significance.

Bull SAS - rue Jean Jaurès - 78340 Les Clayes-sous-Bois - France
 UK : Maxted Road, Hemel Hempstead, Herts HP2 7DZ
 USA : 285 Billerica Road, Chelmsford, MA 01824