



FAS3000 Series Technical Specifications

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Product Highlights	
Operating System	Network Appliance™ Data ONTAP®
Standard Software Features	FlexVol™, integrated automatic RAID manager, Snapshot™, Fast Boot, e-mail alerts, NIS, DNS, SNMP, FilerView®, NDMP, LDAP
Network Protocol Support	Microsoft® CIFS, NFS V2/V3/V4 over UDP or TCP, HTTP 1.0, HTTP 1.1 virtual hosts, FTP
SAN Protocol Support	FCP; iSCSI; fabric-attached and direct-attached
Licensed Software Products	FlexClone™, MultiStore™, Clustered Failover, SnapMirror®, SnapRestore®, SnapDrive®, SnapManager® for Microsoft Exchange, SnapManager for Microsoft SQL Server, SnapVault™, LockVault™, SnapLock™ Compliance, SnapLock™ Enterprise, SyncMirror™, MetroCluster, DataFabric® Manager, ApplianceWatch™ for HP Openview, Tivoli
Hardware Features	Full-duplex 10/100/1000 Base-T Ethernet onboard, Fibre Channel ports onboard, Remote LAN Management Module (optional), ⁽¹⁾ Built-in LVD SCSI Port, diagnostic LED/LCD, Compact Flash redundant hot-plug cooling fans, redundant hot-plug power supplies, 19" rack-mount enclosure, optional 220V 42U 19" system cabinet
Default (Max.) RAID Group Sizes	RAID-4 (Single Parity) - FC-Data/Parity: 7+1 (13+1); SATA-Data/Parity: 7+1 (7+1) RAID-DP (Dual-parity) - FC-Data/Parity: 14+2 (26+2); SATA-Data/Parity: 12+2 (14+2)
Disk Shelves Supported (Fibre Channel, SATA)	DS14, DS14mk2 FC, DS14mk2 AT
Disk Drive Capacities Supported	72/144/300GB FC, 250GB ATA

¹ RLM module is included at no charge with SupportEdge Premium contract; otherwise, it is an optional capability.

System Specifications	FAS3020		FAS3050	
	Active/Active Configuration	Single Controller	Active/Active Configuration	Single Controller
Max. Raw Capacity^{(2), (3)}	50TB	50TB	84TB	84TB
Max. Number of Disk Drives	168	168	336	336
Max. Number of FC Loops	8	4	8	4
Max. Drives per FC Loop	84	84	84	84
Max. Volume Size⁽³⁾	17.6TB	17.6TB	17.6TB	17.6TB
ECC Memory	4GB	2GB	8GB	4GB
Nonvolatile Memory	1GB	512MB	1GB	512MB
Onboard GbE Ports	8	4	8	4
Onboard 2Gb Fibre Channel Ports (configurable as Storage-attached initiator or Host-attached target)	8	4	8	4

² Max capacity is derived based on the type, size and number of the drives.

³ Max capacity and Volume size are calculated using Base10 arithmetic (i.e. 1TB=1,000,000,000,000 Bytes).

I/O Expandability	FAS3020		FAS3050	
	Active/Active Configuration	Single Controller	Active/Active Configuration	Single Controller
PCI-X Expansion Slots	6	3	6	3
Optional Network Connectivity				
Quad GbE (copper) cards	4	2	4	2
Dual GbE (copper or fiber) cards	6	3	6	3
Dual FC Disk Adapters	6	3	6	3
Dual FC, Single FC, or LVD SCSI Adapters for Tape	6	3	6	3

System Environmental Specifications	Single Controller Configuration	Active/Active Configuration
AC Power/Current	88 to 246VAC/9.5 to 3.2A	88 to 246/19 to 6.4A
Thermal Rating	853 Btu/hr	1706 Btu/hr
Weight	34 kg (75 lb) Fully configured	68 kg (150 lb) Fully configured
Height	13 cm (5.12") 3U EIA	26 cm (10.6") 6U EIA
Width	44.9 cm (17.7")	
Depth	61 cm (24") without cable management tray 76.2 cm (30") with cable management tray	
Operating Temperature	10°C to 40°C (50°F to 104°F)	
Nonoperating Temperature	-40°C to 65°C (-40°F to 149°F)	
Operating and Nonoperating Relative Humidity	5% to 95% relative humidity	
Operating Acoustic Noise	<54 dBA sound pressure (LpA) in normal operating conditions. Normal operating conditions consist of an active system operating at 22°C and at sea level.	
Min. Cabinet Clearances	25.4 cm (10") in front, 30.5 cm (12") in rear	
Min. Service Clearances	76.2 cm (30") in front, 76.2 cm (30") in rear	
Altitude	10,000 ft maximum	

Storage Subsystem Specifications	
Disk Drive Storage Shelf	DiskShelf14 family - DS14, DS14mk2 FC and DS14mk2AT; each w/14 low-profile slots for FC and SATA disk drives
Disk Drive Storage Shelf Interface	PCI-based Fibre Channel-Arbitrated Loop (FC-AL)
DiskShelf14 Interface	Dual, redundant loop resiliency circuit (LRC) or redundant electronically switched hub (ESH and ESH2) modules
Power Supply/Cooling Fans	Dual, redundant, hot-pluggable, integrated power supply/fan assemblies (220V/110V)
AC Power/Max. Current	100 to 120 VAC/4.4A; 200 to 240 VAC/2.3A
Operating Temperature & Relative Humidity	10°C to 40°C (50°F to 104°F); 10% to 95% relative humidity, noncondensing
Nonoperating Temperature & Relative Humidity	-40°C to 65°C (-40°F to 149°F); 10% to 95% relative humidity, noncondensing
Thermal Rating	1,215 Btu/hr (fully loaded shelf)
Operating Acoustic Noise	49 dBA @ 1m at 23°C
Dimensions (height/width/depth)	3U EIA (5.25", 13.3 cm)/19" IEC rack-compliant (17.6", 44.7 cm)/20" (50.85 cm)
Weight	77 lb (35 kg) fully loaded

FAS3000 Series FC Switch Support—Tape/SAN	
Vendor	Model
Brocade	Silkworm 2400/2800 (TapeSAN only)
Brocade	Silkworm 3200/3250/3800/3850/3900/4100/12000/24000
McData	ES 3016/3032

McData	Intrepid 6064/6140/ED 5000
McData	Sphereon 3216/3232/4500
Cisco	MDS 9120, 9140, 9216A, 9216i, 9506, 9509

NetApp Systems Cabinet	
Includes 2 Sets of Dual 16A, Zero U Power Distribution Units (PDUs)	Accommodates 1 system controller and 13 disk shelves, or 2 system controllers and 12 disk shelves, or 14 disk shelves only
AC Power	200 to 240VAC
Current	32A total - 2 redundant sets of dual 16A cables with NEMA L6-20 or IEC 309 connectors or Australia AS/NZ53123-20; 24A total - two redundant cables with NEMA L6-30 or IEC 309 connectors
Dimensions (height/width/depth)	78.75" (200 cm)/23.6" (60 cm)/37.4" (95 cm)
Min. Clearances	48" (122 cm) front and rear
Shipping Height	90.6" (230 cm)
Weight (empty)	275 lb (125 kg)

Regulations	NetApp FAS900 Series Storage System, DiskShelf14
Filer Safety	EN 60950:2002, CE, CSA 60950 and NRTL (UL) CB (all national deviations), EN60825-1:1994, IRAM, GOST-R
Disk Shelf Safety	UL/C-UL; CE
Emissions	FCC Class A, EN 55022:1998, EN 61000-3-2, EN 61000-3-3, CE, BSMI, AS/NZ 3548, VCCI
Immunity	EN 55024:1998

FAS3000 Series Tape Drive Support	
Qualified Tape Devices	Interface
Exabyte 8900 (Mammoth-1), Mammoth-2	LVD SCSI. Mammoth-2 also supports FC
HP Ultrium (LTO)	LVD SCSI
HP Ultrium 3 (LTO 3)	LVD SCSI or FC
IBM 3590B, 3590E	FC
IBM ULT3580-TDI (LTO) Ultrium-TDI (LTO)	LVD SCSI or FC
Quantum DLT 7000	SE SCSI
Quantum DLT 8000, DLT-1, SDLT 220, SDLT 320	LVD SCSI SCSI
Seagate Ultrium (LTO)	LVD SCSI
Sony AIT-1, AIT-2, AIT-3	LVD SCSI
Sony GY 8240 (DTF2)	FC
STK 9840, 9840B, 9940	FC

FC = Fibre Channel; LVD = Low Voltage Differential; SE = Single-Ended; SE and LVD cannot be mixed on an adapter.

**Visit www.netapp.com/solutions/data_protection_devices.html for current supported tape devices.

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