EMC NS500 Series
Network-Attached Storage

Technical Specifications

Architecture

EMC® NS500 series features either 1 or 2 Data Movers utilizing the CLARiiON® architecture.

The NS500 series is available in both gateway (NS500G) and integrated (NS500) models.

NS500 series products support both single and dual Data Mover configurations. Dual Data Mover configurations can be deployed in Primary/Primary mode for performance-oriented environments or Primary/Standby for additional hardware availability protection.

Each Data Mover consists of the following:

- Dual 1.6 GHz Pentium IV CPUs
- 4 GB Double Data Rate RAM (266 MHz)
- 2x2 Gbps Fibre Channel ports for array/switch connectivity
- 1x2 Gbps Fibre Channel port for tape connection
- 2 serial ports
- 4 10/100/1000 BaseT ports
- 1 10/100 management port
- Instance of DART File Server software

Data Mover failover supported in the Primary/Standby configuration.

Single Data Mover configurations can be upgraded non-disruptively to dual Data Mover configurations.

Platform managed by a Control Station

- Redundant connection to each Data Mover via serial and 10/100 interface
- Manages Data Mover failover
- Manages all file systems via GUI
- SNMP MIB II manageability
- Telnet access option
- HTTP server management interface
- Single control station only supported
- Dual USB, 40 GB ATA, CD, floppy
- 6 serial ports

Array Connectivity

- NS500G features Fibre Channel connectivity to:
  1. Symmetrix® storage: FC disks
     - Symmetrix 5.x and DMX series
  2. CLARiiON storage: FC or ATA disks
     - CX300, CX400, CX500, CX600, CX700
- NS500 comes with integrated storage

DART File Server Facilities

Protocols supported:

- NFSv2, v3, and v4, CIFS, FTP
- Network Lock Manager (NLM) v1, v3, v4
- Routing Information Protocol (RIP) v1-v2
- Simple Network Mgmt Protocol (SNMP)
- Network Data Mgmt Protocol (NDMP) v1-v4
- Address Resolution Protocol (ARP)
- Internet Control Message Protocol (ICMP)
- Network Time Protocol (NTP) client
- Simple Network Time Protocol (SNTP)
- Kerberos Authentication
- Lightweight Directory Access Prot (LDAP)

Client Connectivity Facilities:

- File can be accessed by NFS and CIFS
- File sharing by multiple Data Movers
- Virtual Data Movers for Windows clients
- Ethernet Trunking
- Link Aggregation (IEEE 802.3ad)
- Virtual LAN (IEEE 802.1q)
- UNIX archive utilities (tar/cpio)
- Network Status Monitor (NSM) v1
- Portmapper v2
- Network Information Service (NIS) Client
- Microsoft DFS Leaf Server
- NT LAN Manager (NTLM)
- LDAP signing for Windows
- Microsoft Windows Server 2003 Access-based Enumeration (ABE)

Optional DART software facilities:

- Celerra Replicator™
- TimeFinder® FS (Symmetrix only)
- SRDF® (Symmetrix only)
- Celerra® Manager Advanced Edition

Note: SnapSure™ licenses are bundled.

EMC NS500 systems can be integral elements of a comprehensive information lifecycle management strategy—a strategy that helps your enterprise attain the maximum value from its information, at the lowest TCO, at every point in the information lifecycle. Information lifecycle management maps the right service level to the right application at the right cost—at the right time.

High Availability Features

Data Mover Enclosure:
- Redundant power supplies for Data Movers and Control Stations
- Hot-swappable power and cooling
- Battery backup for AC loss ride-through
- Internal environmental status monitoring

DART Software Capabiltiies:
- Ethernet Trunking
- Link Aggregation
- Failsafe Networking
- Network interface port failover
- Data Mover failover

Control Stations:
- Hot-swappable
- Dial-in remote maintenance
- Phone-home alerts

Symmetrix Storage:
- Automatic cache and disk scrubbing
- Auto-call remote monitoring
- RAID 1 and RAID 5 disks
- Online hot-spare disk assemblies
- Battery backup to permit AC power loss ride-through
- Redundant power, battery, bus structures, and I/O subsystems

CLARiiON Storage (NAS only and SAN/NAS):
- Disk scrubbing
- Mirrored write cache with de-stage to disk upon AC power loss
- Redundant hot-swap power, bus structures, and I/O subsystems
- Auto-call remote monitoring
- Online global hot-spare disks

Dimensions (approximate)

Measurement Item	NS500	NS500G
Height	14 in. (35.57 cm)	7 in. (17.79 cm)
Width	17.72 in. (45.0 cm)	17.72 in. (45.0 cm)
Depth	23.75 in. (60.33 cm)	23.75 in. (60.33 cm)
Weight (max.)	98.3 lbs (44.5 kg) (includes enclosure with 15 drives)	62.3 lbs (28 kg)

Operating Environment

(See CLARiiON Environmental and Regulatory Specification)

Ambient temperature: 10 to 40 Deg C

Temperature gradient: 10 Deg C/hr

Relative humidity: 20 to 80 (%, non-condensing)

Elevation 8,000 ft @ 40 degrees C, 10,000 ft @ 37 degrees C

AC Power and Dissipation

Requirement: Description

AC line voltage: 100 to 240 VAC +10%, single phase

Frequency: 47 to 63 Hz, full auto-ranging

AC line current: 5.9 A maximum at 100 V (fully configured), 2.9 A maximum at 200 V (fully configured)

Power consumption: 590 VA (578 W) maximum (fully configured)

Startup surge current: 15 A peak (10.6 Arms) maximum for 100 ms, at any line voltage

Power factor: 0.98 minimum at full load, 100 VAC

Heat dissipation: 2,070 KJ/hr (1,975 Btu/hr) maximum estimate

In-rush current: 25 A peak estimate for 1/2 line cycle per power supply @ 240 VAC, 15 A peak estimate for 1/2 line cycle per power supply @ 120 VAC

AC protection: 10 A internal fuse (non-serviceable)

AC inlet type: IEC320-C14 appliance coupler

Ride-through: 30 ms minimum at full load

Current sharing: 60% maximum, 40% minimum between power supplies

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Specification Sheet
C1116.3