

EMC Celerra NS80 Series IP Storage

Technical Specifications

Architecture

The NS80 series is available in both gateway (NS80G) and integrated (NS80) models. NS80 and NS80G products are available in high-availability failover mode and support two-, three-, or four-X-Blade configurations, providing one, two, or three active X-Blades, supporting up to 60 TB. NS80 configurations scale from two, to three, to four X-Blades, as required, and support either the X-Blade 60 or X-Blade 65 (see below).

Each X-Blade is comprised of the following:

- Dual Pentium 4 CPUs
- 4 GB Double Data Rate RAM
- Two FC ports for switch connectivity
- Two FC ports for tape connectivity
- Network interfaces:
 - Six 10/100/1000 Base T ports
 - Two optical Gig-E ports
- Instance of DART File Server software

Note: Compared to X-Blade 60, X-Blade 65 features one additional optical 10Gig-E port and uses 4 Gbps FC connectivity.

X-Blade failover supported in all configuration options.

Two- and three-X-Blade configurations can be upgraded non-disruptively up to four X-Blade configurations.

Platform managed by a Control Station (dual Control Stations for high availability are optional).

- Connection to each X-Blade via 10/100 interface
- Manages X-Blade failover
- Manages all file systems via GUI
- SNMP MIB II manageability
- Telnet access option
- HTTP server management interface
- Dual USB, 40 GB ATA, CD, floppy

Array Connectivity

- NS80 gateway features Fibre Channel connectivity to:
 1. Symmetrix® storage: FC disks
 - Symmetrix 5.x and all DMX series
 2. CLARiiON® storage: FC or ATA disks
 - CX300/400/500/600/700, CX3-20/40/80
- NS80 comes with integrated storage.

DART File Server Facilities

Protocols supported:

- NFSv2, v3, and v4, CIFS, FTP, iSCSI
- 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 FTP, NFS, CIFS, and iSCSI
- 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
- Supports Microsoft DFS as Leaf node or Root 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
- EMC Celerra HighRoad® and MPFSi
- Anti-virus checking

Note: SnapSure™ licenses are bundled. Celerra Manager-Basic is bundled.

EMC® NS80 series 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

X-Blade Enclosure:

- Redundant power supplies for X-Blades and Control Stations
- Hot-swappable power and cooling
- Battery backup for AC loss ride-through
- Internal environmental status monitoring

DART Software Capabilities:

- Ethernet Trunking
- Link Aggregation
- Failsafe Networking
- Network interface port failover
- Data Mover failover

Control Station:

- 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
- RAID 1, RAID 3, RAID 5 disks

Dimensions/Power and Dissipation (approximate)

Measurement Item	NS80 (Base Configuration and 1 Shelf of Drives)	Additional Disk Shelves	NS80G (Base Configuration)	Control Station
Height	22.23 in. (56.42 cm), 13 NEMA units (U), including mounting rails and 1 Blade Enclosure, excluding Control Station	5.25 in. (13.34 cm), 3 NEMA units (U)	13.68 in. (34.72 cm), 8 NEMA units (U), including mounting rails, excluding Control Station	1.75 in. (4.45 cm)
Width	18.98 in (48.2 cm); mounting bars fit standard 19-inch NEMA cabinets	17.72 in (45.0 cm)	18.98 in (48.2 cm); mounting bars fit standard 19-inch NEMA cabinets	17.5 in. (44.45 cm)
Depth	Chassis to rear: 31.58 in. (80.21 cm)	14.00 in. (35.56 cm)	Chassis to rear: 31.58 in. (80.21 cm)	29.5 in. (75.64 cm)
Weight	SPE (max): 411 lbs (186.3 kg) (fully configured, 4 Blades, 1 SPS, 1 BE, with 15 disks, without Control Stations)	65 lbs (29.5 kg) (fully configured with 15 drives)	SPE (max): 210 lbs (95.2 kg) (fully configured, without Control Stations)	28 lbs (12.73 kg)
AC Line Voltage	200-240 VAC +/- 10% single phase, 47 Hz to 63 Hz			
AC Line Current	15.8	2.2	8.4	0.5
Power Factor	0.98	0.98	0.98	0.98
Power Consumption (VA)	2,720	440	1,640	124
Heat Dissipation (kJ/Hr)	8,863	1,530	5,760	446
In-rush Current (A)	165	50	50	20
Startup Surge Current (A)	57	15	28	9
AC Protection: 20A Internal Fuse (non-serviceable)				
AC inlet type: IEC320-C14 appliance coupler				
Ride-through: 30 msec minimum at full load				
Current Sharing: 60% maximum, 40% minimum between power supplies				



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Specification Sheet
C1154

Operating Environment

(See CLARiiON Environmental and Regulatory Specification)

Temperature: 50–104 degrees F (10–40 degrees C)

Temperature Gradient: 18 degrees F/hr (10 degrees C/hr)

Relative Humidity: 20% to 80% (non-condensing)

Altitude

8,000 ft. (2438.4 m) @ 104 degrees F (40 degrees C) max.

10,000 ft (3048 m) @ 98.6 degrees F (37 degrees C) max.