

# EMC NS700 Series Network-Attached Storage

## Technical Specifications

### Architecture

The NS700 series is available in both gateway (NS700G/NS704G) and integrated (NS700/NS704) models. NS700 and NS700G 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. The NS704 and NS704G models feature four Data Movers in N+1 availability configurations.

Each Data Mover consists of the following:

- Dual 3.0 GHz Pentium IV CPUs
- 4 GB Double Data Rate RAM (266 MHz)
- 2x2 Gbps Fibre Channel ports for array/switch connectivity
- 2x2 Gbps Fibre Channel port for tape connection
- 2 serial ports
- 6 10/100/1000 BaseT ports
- 2 optical Gigabit Ethernet ports
- 1 10/100 management port
- 1 10/100/1000 management port
- Instance of DART File Server software

Data Mover failover supported in the Primary/Standby configurations.

Single Data Mover configurations can be upgrade 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 for NS700 and NS700G
- Dual control stations supported on NS704 and NS704G
- Dual USB, 40 GB ATA, CD, floppy
- 6 serial ports

### Array Connectivity

- NS700G/NS704G 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
- NS700/NS704 come with integrated storage.

### DART File Server Facilities

#### Protocols supported:

- NFSv2 and v3, 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 NFS, CIFS, and iSCSI
- 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)

#### Optional DART software facilities:

- Celerra® Replicator
  - TimeFinder® FS (Symmetrix only)
  - SRDF® (Symmetrix only)
  - Celerra Manager Advanced Edition
- Note: SnapSure™ licenses are bundled.

EMC® NS700 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

### 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 Capabilities:

- 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	NS700	NS700G	NS704	NS704G	Control Station
Height	14.00 in. (35.56 cm), 8 NEMA units (U), including mounting rails	7.00 in. (17.78 cm), 4 NEMA units (U), including mounting rails	21.00 in. (53.34 cm), 12 NEMA units (U), including mounting rails	14.00 in. (35.56 cm), 8 NEMA units (U), including mounting rails	1.75 in. (4.45 cm)
Width	17.5 in. (44.45 cm); mounting bars fit standard 19-inch NEMA cabinets	17.5 in. (44.45 cm); mounting bars fit standard 19-inch NEMA cabinets	17.5 in. (44.45 cm); mounting bars fit standard 19-inch NEMA cabinets	17.5 in. (44.45 cm); mounting bars fit standard 19-inch NEMA cabinets	17.5 in. (44.45 cm)
Depth	Front door to rear: 27.57 in. (70.02 cm) • Chassis to rear: 26.42 in. (67.1 cm) • Rail front-to-back: 25.24 in. (64.12 cm)	Front door to rear: 27.57 in. (70.02 cm) • Chassis to rear: 26.42 in. (67.1 cm) • Rail front-to-back: 25.24 in. (64.12 cm)	Front door to rear: 27.57 in. (70.02 cm) • Chassis to rear: 26.42 in. (67.1 cm) • Rail front-to-back: 25.24 in. (64.12 cm)	Front door to rear: 27.57 in. (70.02 cm) • Chassis to rear: 26.42 in. (67.1 cm) • Rail front-to-back: 25.24 in. (64.12 cm)	29.5 in. (75.64 cm)
Weight	SPE (max): 230 lbs (104.4 kg) (fully configured) 14 in. (35.56 cm)	SPE (max): 115 lbs (52.2 kg) (fully configured) 7 in. (17.78 cm)	SPE (max): 345 lbs (156.6 kg) (fully configured) 21 in. (53.34 cm)	SPE (max): 230 lbs (104.4 kg) (fully configured) 14 in. (35.56 cm)	28 lbs (12.73 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



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Specification Sheet  
C1088.3

## 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: 5.2 A maximum at 100 V (fully configured), 2.6 A maximum at 200 V (fully configured)

Power consumption: 520 VA (510 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: 1,840 KJ/hr (1,740 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