

EMC CLARiiON CX400 Networked Storage System

Specifications

RAID Levels

RAID 0: Data striped across three to 16 drives

RAID 1: Mirrored pairs of two drives

RAID 1/0: Data mirrored, then striped across four to 16 drives

RAID 3: Independent data access on five or nine drives (with dedicated parity disk)

RAID 5: Independent data access on three to 16 drives (with striped parity)

Any combination of these RAID levels can exist on a single CX400

RAID stripe depth configurable to 4, 16, 64, 128, or 256 sectors per disk

Rebuild priority tuning: adjustment of minimum I/O reserved for server use during rebuild

Configurable global hot spares

Front End (Host) Connectivity

Two storage processors per CX400

Each storage processor has two 200 MB/s Fibre Channel optical ports

FCP SCSI-3 protocol

Command tag queuing up to 256 tags

FC-AL and FC-SW support

Maximum Cable Length

Shortwave Optical: 300 meters (2 Gb/s), 500 meters (1 Gb/s)

Back End (Disk) Connectivity

Each storage processor has two 200 MB/s Fibre Channel Arbitrated Loops. Multiple RAID groups may be distributed across redundant loops to maximize bandwidth to disks.

Drive Interface

Failover from each storage processor to both Fibre Channel loops is possible

	36 GB (10,000)	36 GB (15,000)	73 GB (10,000)	146 GB (10,000)	320 GB ATA (5,400)
Formatted Capacity (520 bytes/sector)	35.15 GB	32.9 GB	71.25 GB	145.7 GB	324 GB
Form Factor	3.5"	3.5"	3.5"	3.5"	3.5"
Height	1.0"	1.0"	1.0"	1.0"	1.0"
Rotational Speed	10,000 rpm	15,000 rpm	10,000 rpm	10,000 rpm	5,400 rpm
Interface	Fibre Channel	Fibre Channel	Fibre Channel	Fibre Channel	ATA
Data Buffer	16 MB	8 MB	16 MB	32 MB	2 MB
# of Segments	Up to 16	Up to 16	Up to 16	Up to 16	Variable
Transfer Rates					
Buffer to/from Media	26.7-40.2 MB/s	51-69 MB/s	26.7-40.2 MB/s	43-78 MB/s	26-50 MB/s
SP to/from Buffer	200 MB/s (max.)	200 MB/s (max.)	200 MB/s (max.)	200 MB/s (max.)	133 MB/s (max.)
Access Time					
Average Seek	5.2 ms Read 6.0 ms Write	3.6 ms Read 4.2 ms Write	5.2 ms Read 6.2 ms Write	4.7 ms Read 5.3 ms Write	12 ms Read 13 ms Write
Rotational Latency	2.99 ms	2 ms	2.99 ms	2.99 ms	5.5 ms

Available Software*

SnapView™: point-in-time view of information for nondisruptive backup and BCVs

MirrorView™: remote synchronous mirroring for disaster protection

Nondisruptive Upgrade (NDU): online upgrades of storage software and microcode

Navisphere® Manager: complete configuration, management, and event notification

Navisphere Analyzer: comprehensive performance, management, and trends analysis

CLARAlert™: constant system monitoring and remote diagnostics

Access Logix™: data protection, shared storage access, and security for heterogeneous SAN environments

SAN Manager™: data protection, shared storage access, SAN management

StorageScope™: storage asset management

PowerPath®: path failover for continuous data access and dynamic load balancing

SAN Copy™: Enables local or long distance data movement between various arrays (e.g., CLARiiON®, Symmetrix®, StorageWorks HSG80)

* Consult your EMC account manager for availability, software configuration, and compatibility information.



Dimensions (approximate)

Rackmount Processor Chassis with Standby Power Supplies (standard NEMA 19-inch rack)

Height	Width	Depth	Weight
6.83 in. (17.36 cm), 4 EIA units	17.72 in. (45.0 cm)	23.75 in. (60.38 cm)	164.1 lb. (74.6 kg) max.

Rackmount 2 Gbit Fibre Channel Disk Expansion Chassis with Dual Power Supplies

Height	Width	Depth	Weight
5.25 in. (13.33 cm), 3 EIA units	17.72 in (45.0 cm)	23.75 in. (60.38 cm)	88 lb. (40 kg) max. configuration

Rackmount ATA Disk Expansion Chassis with Dual Power Supplies

Height	Width	Depth	Weight
5.25 in. (13.33 cm), 3 EIA units	17.72 in (45.0 cm)	23.75 in. (60.38 cm)	84 lb. (38 kg) max. configuration

40U Rack Enclosure

Height	Width	Depth	Weight
75.0 in. (190.8 cm)	24.0 in. (61.1 cm)	36.0 in. (91.6 cm)	Empty: 300 lb. (136 kg)

Power

	Processor Chassis	2Gbit Fibre Channel Disk Expansion Chassis	ATA Disk Expansion Chassis
Frequency	47-63 Hz	47-63 Hz	47-63 Hz
AC Voltage	90-264 Vrms, single phase	90-264 Vrms, single phase	90-264 Vrms, single phase
Power Factor	.98 (min)	.98 (min)	.98 (min)
Power Consumption (maximum)	650 VA, 618W	400 VA, 392W	300 VA, 294W
Heat Dissipation (maximum)	2,000 BTU/hour	1,340 BTU/hour	1,017 BTU/hour
Protection	Rackmount: 10 amps, fused	Rackmount: 10 amps, fused	Rackmount: 10 amps, fused
AC Circuits	Redundant, external AC circuits	Redundant, external AC circuits	Redundant, external AC circuits
Inlet Type	Dual Inlet Rackmount: IE320-C14 appliance coupler	Dual Inlet Rackmount: IE320-C14 appliance coupler	Dual Inlet Rackmount: IE320-C14 appliance coupler

AC Power Capability

40U Cabinet

Dual Inlets
NEMA L6-30P or IEC309-332 P6 or IP-57 (Australia)
200-240 VAC +/- 10%, Single Phase
47-63 Hz
4800 VA @ 200 V, 5760 VA @ 240 V
30A, 2-pole circuit breaker

Operating Environment

Temperature: 50-104 degrees F (10-40 degrees C)
Temperature Gradient: 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.

Electromagnetic Emissions and Immunity

FCC Class A EN5022 Class A
CE Mark VCCI Class A (for Japan)
ICES-003 Class A (for Canada) AS/NZS 3548 Class A (for Australia/New Zealand)
EN55024 Immunity, ITEBSMI Class A (for Taiwan)

Quality and Safety Standards

UL 1950; CSA C22.2-950; EN60950
NEBS Level 3 Certified
Manufactured under an ISO 9000-registered quality system

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Specification Sheet
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