EMC² where information lives

EMC CLARiiON CX700 Networked Storage System

EMC® CLARiiON® CX 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.

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 CX700

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

MetaLUNs: Storage virtualization via online LUN expansion through either striping or concatenation

Configurable global hot spares

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

Front-End (Host) Connectivity

Two storage processors per CX700

Each storage processor has four 2 Gb 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), 500 meters (1 Gb)

Back-End (Disk) Connectivity

Each storage processor has four 2 Gb Fibre Channel Arbitrated Loops. Multiple RAID groups may be distributed across redundant loops to maximize bandwidth to disks. CX700 supports a maximum of 240 disk drives.

Drive Interface

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

	73 GB (10,000)	146 GB (10,000)	300 GB (10,000)	73 GB (15,000)	146 GB (15,000)	250 GB SATA (7,200)	320 GB ATA (5,400)
Formatted Capacity (520 bytes/sector, 1 MB = 1,000,000 bytes)	72.67 GB	145.78 GB	272.59 GB	72.67 GB	145.78 GB	233 GB	320 GB
Form Factor	3.5”	3.5”	3.5”	3.5”	3.5”	3.5”	3.5”
Height	1.0”	1.0”	1.0”	1.0”	1.0”	1.0”	1.0”
Rotational Speed	10,000 rpm	10,000 rpm	10,000 rpm	15,000 rpm	15,000 rpm	7,200 rpm	5,400 rpm
Interface	Fibre Channel	Fibre Channel	Fibre Channel	Fibre Channel	Fibre Channel	Serial ATA	ATA
Data Buffer	16 MB	32 MB	32 MB	16 MB	32 MB	8 MB	2 MB
Transfer Rates							
Buffer to/from Media MB/s	26.7–40.2 MB/s	43–78 MB/s	59–118 MB/s	57–86 MB/s	58–96 MB/s	37–67 MB/s	26–50
SP to/from Buffer	200 MB/s (max.)	200 MB/s (max.)	200 MB/s (max.)	200 MB/s (max.)	200 MB/s (max.)	150 MB/s (max.)	133 MB/s (max.)
Access Time							
Average Seek	5.2 ms Read 6.2 ms write	4.7 ms Read 5.3 ms Write	4.7 ms Read 5.4 ms Write	3.6 ms Read 4.0 ms Write	3.5 ms Read 4.0 ms Write	8.5 ms Read 9.5 ms Write	12 ms Read 13 ms Write
Rotational Latency	2.99 ms	2.99 ms	3.00 ms	2 ms	2 ms	4.17 ms	5.5 ms

Available Software*

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

MirrorView™: remote synchronous and asynchronous mirroring for disaster protection

Nondisruptive Upgrade (NDU): online upgrades of storage software and FLARE™ operating system

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

Navisphere Analyzer: comprehensive performance, management, and trends analysis

CLARalert™: constant system monitoring, call-home notification, and remote diagnostics

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®, HP StorageWorks)

VisualSAN®/VisualSRM™: data protection, shared storage access, SAN management

StorageScope™: storage asset management

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

System Memory

Two Storage Processors per CX700

4 GB of Memory per Storage Processor

Dimensions (approximate)

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

Height	Width	Depth	Weight
8.75 in. (22.23 cm), 5 EIA units (includes SPS)	17.5 in. (44.5 cm)	27.57 in. (70.02 cm)	139 lb. (63.1 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 cm)	23.75 in. (60.38 cm)	88 lb. (40 kg) max. configuration

Rackmount 2 Gbit Fibre Channel Point-to-Point 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)	14.00 in. (35.56 cm)	68 lb. (30.9 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	2Gbit Fibre Channel Point-to-Point Disk Expansion Chassis	ATA Disk Expansion Chassis
AC Voltage	90–264 Vrms, single phase	90–264 Vrms, single phase	90–264 Vrms, single phase	90–264 Vrms, single phase
Frequency	47–63 Hz	47–63 Hz	47–63 Hz	47–63 Hz
Power Factor	.98 (min)	.98 (min)	.98 (min)	.98 (min)
DC Voltage	–36 V to –72 V dc	–36 V to –72 V dc	–36 V to –72 V dc	N/A
Power Consumption (maximum)	650 VA, 618W	400 VA, 392W	440 VA, 425W	300 VA, 294W
Heat Dissipation (maximum)	2,000 Btu/hour	1,340 Btu/hour	1,450 Btu/hour	1,017 Btu/hour
Protection	Rackmount: 10 amps, fused	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	Redundant, external AC circuits
Inlet Type	Dual Inlet	Dual Inlet	Dual Inlet	Dual Inlet
	Rackmount: IE320-C14 appliance coupler	Rackmount: IE320-C14 appliance coupler	Rackmount: IE320-C14 appliance coupler	Rackmount: IE320-C14 appliance coupler

40U Cabinet (optional) AC Power Capability

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	EN55022 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, ITE BSMI	Class A (for Taiwan)

Quality and Safety Standards

UL 60950; CSAC 22.2-60950, FN 60950

NEBS Level 3 Certification

ETSI EN 300 386

Manufactured under an ISO 9000-registered quality system

EMC² where information lives®

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Specification Sheet
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