

EMC CLARiiON CX200 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 CX200
- 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

- One or two storage processors per CX200
- Each storage processor has one 200 MB/s Fibre Channel arbitrated loop that supports two small form factor optical host ports. Each CX200 supports four FC-AL ports or two FC-SW 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 one 200 MB/s Fibre Channel Arbitrated Loop.

Drive Interface

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

| | 36 GB (15,000) | 73 GB (10,000) | 146 GB (10,000) | 250 GB ATA (5,400) |
|----------------------|-----------------------------|-----------------------------|-----------------------------|---------------------------|
| Formatted Capacity | | | | |
| (520 bytes/sector) | 32.9 GB | 71.25 GB | 145.7 GB | 247 GB |
| Form Factor | 3.5" | 3.5" | 3.5" | 3.5" |
| Height | 1.0" | 1.0" | 1.0" | 1.0" |
| Rotational Speed | 15,000 rpm | 10,000 rpm | 10,000 rpm | 5,400 rpm |
| Interface | Fibre Channel | Fibre Channel | Fibre Channel | ATA |
| Data Buffer | 8 MB | 16 MB | 32 MB | 2 MB |
| # of Segments | Up to 16 | Up to 16 | Up to 16 | Variable |
| Transfer Rates | | | | |
| Buffer to/from Media | 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.) | 133 MB/s (max.) |
| Access Time | | | | |
| Average Seek | 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 ms | 2.99 ms | 2.99 ms | 5.5 ms |

Available Software

- Navisphere® Base**:** configuration and management of one local array
- Navisphere Manager**:** comprehensive configuration, management, and event notification for multiple CLARiiON systems
- Access Logix™:** data protection, shared storage access, and security for heterogeneous SAN environments
- PowerPath™ Base:** path failover for continuous data access
- PowerPath:** path failover for continuous data access and load balancing for optimal channel performance
- Nondisruptive Upgrade (NDU):** online upgrades of storage software and microcode
- CLARAlert®**:** constant system monitoring and remote diagnostics

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

** Software for single storage processor.



Dimensions (approximate)

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

| Height | Width | Depth | Weight |
|---------------------------------|---------------------|----------------------|--------------------------|
| 6.83 in. (1736 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 | 90-240 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 |

* All Chassis Models have Dual Standby Power Supplies

AC Power Capability

40U Cabinet (optional)

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



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01748-9103
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