



# Dell | EMC CX4-960

Bringing a new level of performance, flexibility, and resource utilization to enterprise-class storage

## Enterprise-class storage

Dell / EMC CX series storage arrays have built a reputation for performance, ease of use, scalability, flexibility, reliability, and investment protection since their initial launch in 2002. Now in their fourth generation, the CX4 arrays build on that reputation and are designed to greatly increase performance and capacity from the previous generation. The CX4 series provides impressive flexibility and investment protection with the introduction of new UltraFlex™ technologies as they become available.

## CX4-960

The Dell / EMC CX4-960 offers an excellent combination of performance, flexibility, and scalability for users with high availability requirements. It is well suited for demanding OLTP and messaging workloads or other applications that benefit from array-based replication. The adaptability offered with this highly scalable storage array helps protect your company's bottom line by allowing your storage infrastructure to scale to meet your needs today and tomorrow.

## Ultraflex technology

The CX4 series introduces UltraFlex technology that enables the user to customize the network interconnect and number of ports needed to meet current and future storage requirements. The CX4-960 comes standard with Fibre Channel (FC) connectivity. It also comes with either iSCSI or Fibre Channel over Ethernet (FCoE) ports. It can be easily expanded with additional FC, iSCSI, or FCoE ports for a wide range of flexible storage networking.

## Massive scalability and flexibility

The CX4-960 supports up to 960 hard drives and 32GB of system cache, connects to as many as 4096 highly available hosts, and has 12 UltraFlex I/O slots for connectivity customization. In addition, the CX4-960 supports enterprise flash drives (EFD). These drives can provide an extremely high level of performance scalability, giving you more opportunities to address storage needs with a single solution.

## Reduce operational costs

Thin provisioning enables the CX4-960 to allocate space only as it is needed by hosts instead of setting up a large pool of storage that goes unused. The result is that fewer drives are required, helping to reduce hardware costs, management time and costs, and power consumption.

## Fully automated storage tiering

Fully automated storage tiering (FAST) seamlessly moves 1GB chunks of data to different disk tiers based on performance requirements. On the CX4-960, flash drives can be used as a "Tier 0" for data with the highest performance requirements. Fibre Channel drives are available in both 10K and 15K rotational speeds as a Tier 1 for the next level of performance. 7.2K RPM SATA drives are available as a Tier 2 for high capacity and lower cost storage needs.

## Help reduce power and cooling costs

The Dell / EMC CX4-960 delivers several features to help reduce power and cooling costs.

- Low power SATA drives consume up to 32% less energy than standard 7.2k RPM SATA drives\*.
- Drive spin down comes standard on the CX4, which allows drives to be powered down when not in use.
- LUN Compression and Thin Provisioning reduces the amount of physical disks needed for a data set.
- Adaptive cooling optimizes fan speed to reduce power consumption.

## Manage your data

Dell / EMC storage arrays now come with Unisphere, a task based, highly intuitive management interface that controls current and legacy CX environments. This enhancement reduces administrator overhead and improves reliability.

## Solve your problems

Dell / EMC storage arrays are integrated into Dell's Exchange®, SQL Server®, and Oracle® solutions, which offer tested and validated reference architectures to help solve your messaging and database challenges.

## Storage consulting from Dell

Offers a comprehensive suite of assessment, design and implementation services to help customers get the most from their Dell / EMC CX arrays, covering data management, application performance, data protection and cost of ownership. Dell Consultants can provide practical action-oriented plans, to deliver specific, predictable and measured outcomes through high-impact, short duration projects.

Feature	Dell   EMC CX4-960
Storage Capacity	Up to 576TB raw storage capacity with Fibre Channel drives; Up to 1.9PB with high-capacity SATA drives
Scalability	Up to 960 drives in the storage array
Number of Storage Processors	2 per array
System Cache	32GB standard. Up to 2TB with optional Fast Cache.
RAID Levels	RAID 0, 1, 1/0, 3, 5, and 6
Supported Servers	All dual- and quad-socket Dell™ PowerEdge™ servers; Variety of Compaq®, HP®, IBM®, and SUN® servers as validated by EMC
OS Support	Microsoft® Windows® 2000 Server, Windows Server™ 2003, Windows Server 2008, Linux®, Solaris™, VMware®, AIX, HP-UX
Number of Supported Hosts	Up to 12 Fibre Channel or 8 iSCSI; Up to 4096 SAN attached HA connected hosts
Front-End Connectivity (Ports Per Array)	<b>Base Models:</b> Eight 4Gbit Fibre Channel and four 1Gbit iSCSI Eight 8Gbit Fibre Channel and four 1Gbit iSCSI Eight 8Gbit Fibre Channel and four 10Gbit iSCSI Eight 8Gbit Fibre Channel and four 10Gbit FCoE  <b>Additional Optional UltraFlex IO Modules:</b> 4Gbit Fibre Channel 8Gbit Fibre Channel 1Gbit iSCSI 10Gbit iSCSI Valid configurations depend on selected base model. Visit <a href="http://dell.com/emc">dell.com/emc</a> for details.
Drive Interface	4Gbit Fibre Channel interface Failover from each storage processor to both Fibre Channel loops is possible
Drives Available (Visit <a href="http://dell.com/emc">dell.com/emc</a> for current capacities)	Enterprise Flash Drives 15k RPM Fibre Channel 10k RPM Fibre Channel 7.2k RPM SATA II 5.4k RPM SATA II (Low Power)
Available Software	EMC SnapView™, MirrorView™, Unisphere, Analyzer, Quality of Service Manager, PowerPath®, SAN Copy™, Thin Provisioning, LUN Compression, Fast Cache, Fully Automated Storage Tiering, Replication Manager Family, VMware®, RecoverPoint/SE
Dimensions	<b>Storage Processing Enclosure with Standby Power Supplies</b> Height: 5.25 in. (13.33 cm), 3 EIA units Width: 17.5 in. (44.45 cm) Depth: 24.25 in. (61.6 cm) Weight: 99.5 lbs. (45.4 kg) max.  <b>4Gbit Fibre Channel Point-to-Point Disk Array Expansion</b> Height: 5.25 in. (13.34 cm), 3 EIA units Width: 17.72 in (45.0 cm) Depth: 14.00 in. (35.56 cm) Weight: 68 lbs. (30.8 kg) max. configuration

\*Based on drive specifications. Actual power consumption will vary based on configuration, usage, and manufacturing variability.

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