



Enterprise Storage

Designed for today's needs and
tomorrow's growth

The Dell | EMC CX4 and
Dell™ AX4-5 Storage Family



Simplifying IT

Dell™ storage is designed to maximize the availability of your data while protecting your storage infrastructure investment as your needs change. The Dell / EMC CX4 storage arrays build on the CX reputation of flexibility, ease-of-use, and innovation, and are designed to greatly improve levels of performance and expandability. With Dell being fully accountable for your storage infrastructure from end-to-end, your enterprise storage is fully supported – from environment assessment to maintenance and upgrades – resulting in a complete solution designed to deliver real business value.

The Dell difference:

Impressive flexibility

Provide investment protection for your current and future storage needs with UltraFlex™ technology, which allows you to customize the network interconnects and number of ports on each array.

Massive scalability

Scale from 5 to 960 drives, connect up to 4,096 highly available hosts, and store up to 1.9 PB of data.

Virtual provisioning

Utilize virtual provisioning to help reduce acquisition and operational costs while improving capacity utilization. This can result in fewer drives and reduce hardware costs, management time, and power consumption.

Green storage

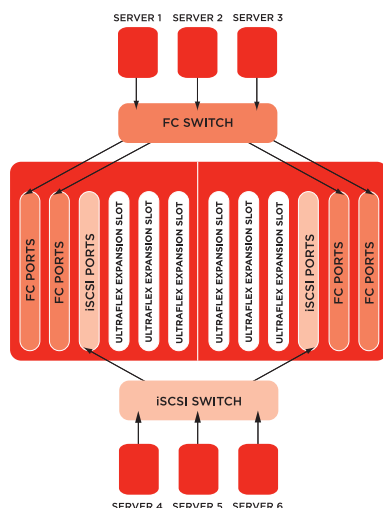
Help lower power consumption and cooling requirements with new options for disk drives, such as solid state drives and low power SATA, and drive spin down.

Built to protect, built for value, built for flexibility

The unique Dell / EMC partnership brings to market enterprise-class storage with a common, high-availability architecture and excellent investment protection. Fourth generation Dell / EMC CX4 arrays deliver new levels of performance, flexibility, ease-of-use, data management, and resource utilization. The Dell / EMC CX4 family forms the core of a scalable enterprise infrastructure that is easy to deploy, manage, and upgrade. The Dell AX4-5 arrays offer an intuitive user interface that helps simplify operations and capacity allocation.

Seamless growth

All Dell / EMC CX4 arrays offer data in-place upgrades, within the CX4 family and from previous generations, that support larger capacities and greater performance. The same applications that provide advanced data protection, replication and migration, and data path management and optimization on the CX3 arrays are also supported on the CX4 arrays. In addition, the CX4 arrays support dual-mode connectivity with options of 8Gbit and 4Gbit FC and 10Gbit and 1Gbit iSCSI. The CX4 arrays are future-ready, allowing you to take advantage of new network technologies by simply adding I/O modules as they become available. The Dell / EMC CX4 arrays can help decrease storage architecture complexity by relieving concerns about "architecture lock-in" and minimizing the IT resource burden.



Massive flexibility and scalability

The ability to scale to 960 drives and 32GB of system cache and add flash drives provides a monumental level of performance scalability, giving you more opportunities to address storage needs with a single solution. The new UltraFlex I/O modules enable you to scale the ports on your array as needed — FC or iSCSI — up to a total of 32 front-end ports. Instead of complex solution islands, the Dell / EMC CX4 arrays can be managed as a single storage system — regardless of scale — standardizing a manageable IT infrastructure.

Reduced operational costs

Virtual provisioning can reduce the total number of drives needed, helping to save time and lower hardware and management costs. With the addition of enterprise flash drives (EFD) and low-power SATA drives, there are now more options available for data tiering, which helps users reduce costs and maximize resource utilization. With the Dell / EMC CX4 Fully Automated Storage Tiering (FAST) feature, data can be moved to higher performance or cost effective storage to meet

demanding application service levels and to increase storage efficiency. FAST enables applications to always remain optimized by eliminating trade-offs between capacity and performance. As a result, you are able to lower costs and deliver higher services levels at the same time.

Lower power and cooling costs

Innovations built into the new Dell / EMC CX4 arrays help reduce power consumption and cooling requirements. These improvements include drive spin-down, new options for disk drives and data tiering as well as adaptive cooling that enables fans to spin only at the speed necessary to keep the array cool. The energy-efficient SATA drives consume up to 32%* less energy than standard (7200 rpm) drives, and at similar performance levels, flash drives consumes up to 98%* less power than 15K FC drives.

Data protection

With all products, your data is protected at the fundamental storage processor level. Each storage processor's cache mirrors the other processor's cache. Data is also protected throughout the data path as it travels and is stored in your network. Automated backups and data snapshots capture data changes in real time, while cache de-stage to disk provides enhanced protection to help protect data during an extended power loss.

Easily move data within and across arrays

With Dell / EMC storage arrays, you can easily deploy, expand, and re-deploy storage. You can migrate data seamlessly between different classes of drives and RAID types to deliver the optimal combination of performance and availability. And with Virtual LUN technology, data migration takes place dynamically and effortlessly, helping avoid disruption. Dell / EMC storage arrays support the EMC data replication and migration applications, Mirrorview™ and SAN Copy™. These optional tools let you remotely mirror data from one array to another to help meet replication and disaster recovery goals or to simply move data across arrays.

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 and Oracle 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.

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

Simply put:

Dell / EMC Storage delivers maximum scalability and performance, energy efficient solutions and reduced ownership costs, all from one source.

	Dell AX4-5	Dell / EMC CX4-120	Dell / EMC CX4-240	Dell / EMC CX4-480	Dell / EMC CX4-960
Maximum Cache	2 GB	6 GB	8 GB	16 GB	32 GB
Drives per Array	60	120	240	480	960
Maximum Capacity per Array	Up to 60 TB with SATA Up to 36 TB with SAS	Up to 235 TB with SATA Up to 72 TB with FC	Up to 459 TB with SATA Up to 144 TB with FC	Up to 939 TB with SATA Up to 288 TB with FC	Up to 1.9 PB with SATA Up to 576 TB with FC
Host Connectivity	FC or iSCSI	FC/iSCSI	FC/iSCSI	FC/iSCSI	FC/iSCSI
Maximum SAN Attached HA Hosts	64	256	512	1024	4096
Maximum Direct Attached HA Hosts	AX4-5F: 4 FC AX4-5I: 2 iSCSI	6 FC or 4 iSCSI	6 FC or 6 iSCSI	8 FC or 6 iSCSI	12 FC or 8 iSCSI
Maximum LUNs	512	1024	2048	4096	8192
Power, Watts (SPE+SPS)	470W	320W	320W	340W	835W
Optional Software	EMC® Navisphere Express* EMC SnapView EMC MirrorView™ (FC only) EMC SAN Copy (FC only) EMC PowerPath™*	EMC Navisphere Manager EMC SnapView EMC MirrorView EMC SAN Copy EMC PowerPath™*	EMC Navisphere® Manager EMC SnapView EMC MirrorView EMC SAN Copy EMC PowerPath	EMC Navisphere Manager EMC SnapView EMC MirrorView EMC SAN Copy EMC PowerPath	EMC Navisphere Manager EMC SnapView EMC MirrorView EMC SAN Copy EMC PowerPath
Form Factor	2U Storage Processor 1U Standby Power Supply 2U Disk Array Enclosure	2U Storage Processor 1U Standby Power Supply 3U Disk Array Enclosure	2U Storage Processor 1U Standby Power Supply 3U Disk Array Enclosure	2U Storage Processor 1U Standby Power Supply 3U Disk Array Enclosure	4U Storage Processor 2U Standby Power Supply 3U Disk Array Enclosure

* Bundled Software

Simplify storage at Dell.com/EMC

