

StorageWorks Enterprise Storage Arrays

Universal storage solutions for your largest systems

StorageWorks

For a storage solution that knows no bounds, turn to Digital's StorageWorks Enterprise Storage Arrays. Enormous capacity, scaleable performance, universal platform support, and mission-critical data availability ensure complete support for your business. And the flexible StorageWorks architecture lets you configure storage that matches, and easily evolves with, your environment.



Designed to support the largest system needs, StorageWorks Enterprise Storage Arrays feature the benefits of Digital's innovative, modular StorageWorks design — delivering open-ended scalability, re-usable components, continuous data availability, and investment protection.

Benefits

- **Enormous capacity and performance** — Capacity is scaleable to *over ten terabytes of on-line storage*... with performance that actually increases as your capacity grows.
- **Flexible, continuous availability** — Choose disk mirroring, parity RAID or inter-mixed arrays, according to your needs. Redundant, hot-swappable controllers and components ensure your data is always available.

- **Universal platform support** — Supported on UNIX®, OpenVMS™ and Windows NT™ platforms. *If that doesn't describe your environment — call us.*
- **Advanced architecture** — Designed to optimize your use of modern operating systems.
- **Tailored to your environment** — Centralized or distributed, the choice of operating environment is yours. Easy to configure and reconfigure, StorageWorks Enterprise Storage Arrays don't limit your ability to meet the needs of your changing business environment. They change with you.

Unparalleled performance and capacity for the most demanding environments

With open-ended capacity and performance, StorageWorks Enterprise Storage Arrays bring new meaning to the word scalability. Designed to support incremental growth, you can easily add controllers and disks as your requirements change. You gain double benefits:

- You can choose your entry point and add on as needed
- Your subsystem performance actually increases with added capacity.

Business protection

You can't afford interruptions to your business because a storage component failed. StorageWorks Enterprise Storage Arrays ensure continu-

ous subsystem availability with redundant, hot-swappable controllers, components, power, cooling and disks, and hot spares.

Data availability according to your needs

RAID technology is incorporated into every StorageWorks Enterprise Storage Array. Choose disk mirroring (RAID Level 1 or Level 0+1) when you absolutely cannot afford data disruptions or require disaster protection. Or increase your available capacity with Digital's innovative Adaptive Parity (Level 3/5) RAID. Adaptive Parity RAID adjusts on-the-fly to changing workloads, providing excellent performance across a broad range of applications. For maximum configuration flexibility, you can intermix RAID levels within a single array.

Oracle Warehouse Terabyte Test-to-Scale Certification

Digital's multi-terabyte StorageWorks Enterprise Storage Array has achieved Oracle's Test-to-Scale certification. The subsystem was the first storage solution to demonstrate a RAID Level 5, multi-terabyte configuration that meets data warehousing requirements while offering higher availability and substantially lower cost per megabyte when compared with RAID Level 0+1 configurations.

A custom storage solution

Different application environments make unique demands on storage subsystems; environments vary among request-intensive, read-only, bandwidth-intensive, or mixtures. Whether you're running customer service, office, data warehousing, data mining, transaction processing or mixed application environments, StorageWorks Enterprise Storage Arrays take care of business. Digital offers

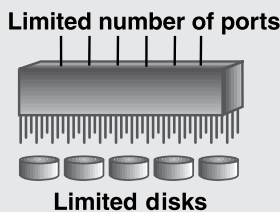
the arrays in a variety of models, so you can select a configuration that optimizes performance for your business and application needs.

Call it investment storage

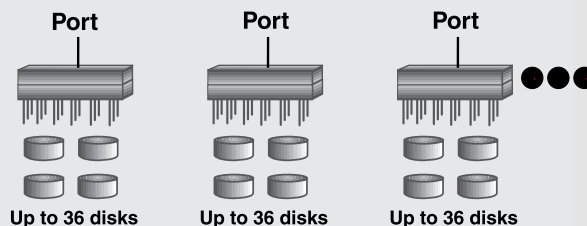
With support for a complete range of platforms, StorageWorks Enterprise Storage Arrays cover the full breadth of your enterprise. You can re-use legacy servers, extending their useful life and protecting your valuable system investments. The evolutionary StorageWorks concept, with its modular, plug and play design, also lets you recycle components and devices as your environment evolves. And, with backward and forward compatibility, it's equally easy to integrate new technology.

Traditional architecture vs scaleable StorageWorks architecture

Traditional architecture



StorageWorks modular architecture
Unlimited number of controllers and ports



Compare the data on data storage

StorageWorks

Limitless capacity and performance

Universal support across the full breadth and depth of your organization

Customized to your infrastructure and application environment

Cost-effective with re-usable servers and components, RAID options, economies of scale

Traditional

Limited capacity and performance

Restricted to traditional, mainframe environments

Force-fit to centralized infrastructure and rigid configuration

Costly lack of RAID or service choices

A single architecture across your enterprise

Every time you re-use existing technology, you're getting more value from your original investment. StorageWorks Enterprise Storage Arrays are completely compatible with the multivendor StorageWorks product line, so you can standardize on a single storage architecture through the full depth of your enterprise. From the workgroup to the board room, you can bring the storage capabilities you need to your desk and data center, re-deploy older technology, integrate new technology, limit staff training and operations to a single storage style, all while enjoying economies of scale.

Advanced architecture for optimum performance

The traditional batch processing approach to data processing and storage, associated with older, mainframe environments, is ineffective in modern database environments. StorageWorks Enterprise Storage Arrays take full advantage of current application designs, delivering superior performance across the enterprise, and at a lower cost. The bottom line? Your users are working with data, not waiting for it.

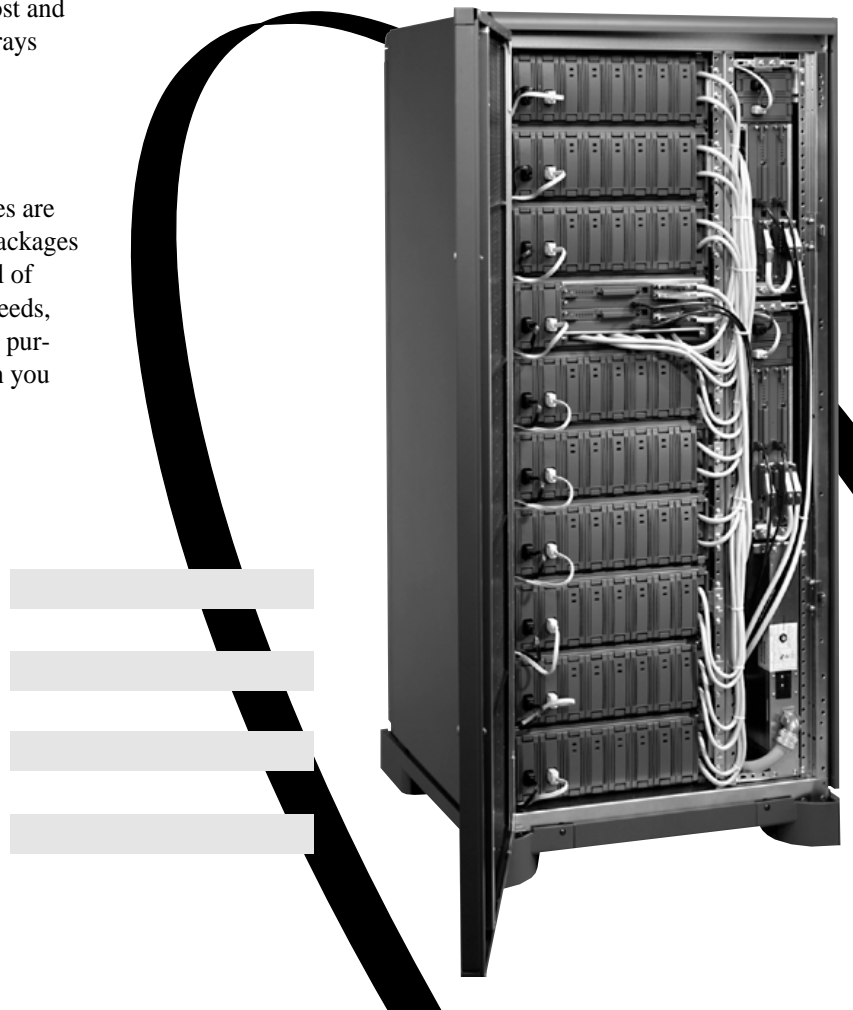
Enhanced controls for ease-of-use

The StorageWorks Command Console facilitates configuration and re-configuration of your Enterprise Storage Array. Its user-friendly graphical user interface allows ongoing monitoring, providing at-a-glance summary status 24 hours a day. Enhanced security and protection capabilities are built-in. The StorageWorks Command Console can monitor from a networked host and can manage multiple arrays across your enterprise.

Store your data with confidence

Digital's flexible services are offered in a variety of packages — you can select a level of support suited to your needs, and you aren't forced to purchase more support than you can use.

StorageWorks Enterprise Storage Arrays arrive fully tested, burned-in and qualified. A full range of services ensure you're covered from start to finish — from technical expertise to assist with capacity and performance planning, to on-site installation of hardware and software, through ongoing consulting and 7x24 support with mission-critical response.



Specifications

Host interface	Industry-standard SCSI-2
Drive interface	Fast-wide, single ended SCSI-2
SCSI channels per controller	6 (dual redundant configuration)
RAID levels supported	0, 1, 0+1, 3/5
Maximum disks per controller	36 (dual redundant configuration)
Maximum logical RAID devices	32 (dual redundant configuration)
Controller cache	256 (dual redundant configuration)
Serviceability	Hot-pluggable
Operating environment	Class A
Regulatory approvals	FCC-A, UL, CSA, VDE, TÜV

Physical dimensions (per cabinet)

Height (mm/in)	1700/67
Width (mm/in)	800/31
Depth (mm/in)	875/34.5
Weight (kg/lb, empty cabinet)	454/1000

Power requirements

AC plug type	120/208 V ac, 240/416 V ac
Number of phases	NEMA L21-30, IEC 309-516P
Rated current	24 Amps/phase

Models and options

Model No.	Description
ESA 150-C4	155 GB array, 1 FWD-host port, 256 MB cache
ESA 450-C4	464 GB array, 3 FWD-host ports, 768 MB cache
ESA 900-C4	929 GB array, 6 FWD-host ports, 1536 MB cache
ESA 1850-C4	1858 GB array, 12 FWD-host ports, 3072 MB cache
ESA 3700-C4	3715 GB array, 24 FWD-host ports, 6144 MB cache
ESA 10200-C4	10217 GB array, 66 FWD-host ports, 16896 MB cache
ESA 150-M4	155 GB array, 2 FWD-host ports, 512 MB cache
ESA 350-M4	387 GB array, 5 FWD-host ports, 1280 MB cache
ESA 1150-M4	1161 GB array, 15 FWD-host ports, 3840 MB cache
ESA 150-L4	155 GB array, 3 FWD-host ports, 786 MB cache
ESA 350-L4	361 GB array, 7 FWD-host ports, 1792 MB cache
ESA 700-L4	722 GB array, 14 FWD-host ports, 3584 MB cache
ESA 1050-L4	1084 GB array, 21 FWD-host ports, 5376 MB cache

Call Us

For more information on StorageWorks Enterprise Storage Arrays, please contact your local sales representative or call one of the following numbers::

Location	Phone	FAX
US and Canada	1-800-STORWORK	
Europe	31-24-3529955	31-24-3529696
Japan	81-3-5349-7100	81-3-5349-7421
United Kingdom	0500 827140	
Australia/New Zealand	61-2-561-6123	61-2-561-5650
Hong Kong	852-805-3274	852-805-4201
Singapore	65-299-7188	62-295-1296

Online address

The Storage InfoCenter <http://www.storage.digital.com>

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