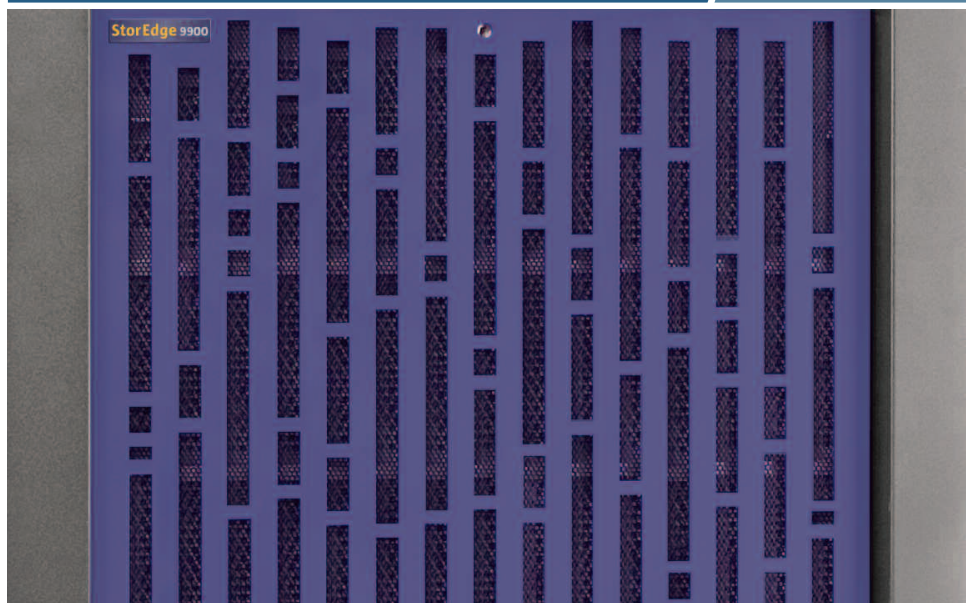


Sun StorEdge™ 9985 System Data Center Class Availability in a Modular Package



Highlights

- The same crossbar architecture, software, microcode, connectivity protocols, and key components as the Sun StorEdge 9900 system, in a modular package
- Remote replication with disk-based journaling and pull technology, for fast, reliable disaster recovery; multi-data center support and link failure mitigation; and workload management to reduce primary-system resource usage
- Storage Virtualization, supports data lifecycle management (DLM) by enabling multiple storage systems to be managed as one, and creates a tiered storage infrastructure
- Logical partitioning allocates cache, disks, and I/O to specific applications and helps organizations meet service level agreements
- Write-Once Read-Many (WORM) capability to protect data by making it non-erasable and non-writable, enabling data retention and compliance requirements



Today, staying competitive means managing risk and keeping pace with the constant growth of data. In an era where information is shared at lightning speed, you can't afford to lose access to your data, even for a short time. To ensure that you stay up and running, you need to store and protect your data so that it's available when and where you need it. Many organizations have standardized on data center class storage systems, but now need more flexible deployment options.

A building block for the high-end data center

To that end, Sun offers the Sun StorEdge 9985 system, delivering all the benefits of the Sun's StorEdge 9900 system in a flexible, modular package. The Sun StorEdge 9985 system provides an excellent foundation for complex data management needs, and complements the Sun StorEdge 9900 in an overall DLM strategy. For divisions or locations that don't require the scalability of the StorEdge 9900, the Sun StorEdge 9985 system leverages the same crossbar architecture, microcode, and software of the Sun StorEdge 9900 system — at a lower cost of entry. The Sun StorEdge 9985 system delivers market-proven reliability and availability, as well as compatibility with the same software and management tools as the Sun StorEdge 9900 system. Additionally, customers who want to

upgrade the technology of their Sun StorEdge 9970 systems, the Sun StorEdge 9985 system is a compelling choice, providing improved performance, capacity, scalability, and manageability.

Data center features in a modular package

What sets the Sun StorEdge 9985 apart from the rest of Sun's StorEdge 9900 series is its modular packaging, enabling more deployment options without sacrificing advanced functionality. Virtualization software supports management of multiple storage systems as a single unit. Logical partitioning allows the allocation of disks, cache, and I/O to a particular customer or application, enabling organizations to meet service level agreements. Advanced remote replication enables fast, complex disaster recovery through disk-based journaling and pull

technology, delivering better performance and reliability. And the system's Write-Once Read-Many (WORM) capability enables data retention and regulatory compliance needs, protecting data by making it non-erasable and non-corruptible. In addition, the Sun StorEdge 9985 also delivers the multiprotocol connectivity required in many large data centers, including support for mainframe connectivity protocols (FC, NAS, FICON*, and ESCON*).

The Sun StorEdge 9985 system supports Sun Fire servers as well as the HP 9000 Family, IBM 6000 SP and P Series, IBM ZSeries, Compaq AlphaServer, SGI Origin2000, and many more. In addition, the StorEdge systems support most operating systems, including Sun Solaris OS, HP UX, IBM AIX, IRIX, True 64, Linux, Novell Netware, Windows, and IBM ZOS.*

Software choices to optimize your storage system

To ensure your data is protected, highly available, and easy to manage, you need software that can optimize your storage system. The Sun StorEdge 9985 system, utilizes all the same software of the Sun StorEdge 9990 system, including the Universal Volume Manager for storage virtualization, Universal Replicator for complex business continuity and disaster recovery plans, Virtual Partitioning Manager for resource allocation, and Tiered Storage Management for data lifecycle management.

Sun StorEdge 9900 Universal Volume Manager

Simplified management is a key component of large-scale data storage. Sun StorEdge 9900 Universal Volume Manager allows you to manage multiple storage systems connected to the Sun StorEdge 9985 system under a single point of control. Using Universal Volume Manager, you can manage

mixed storage systems from Sun and other vendors as if they were all one system. External storage volumes form a shared storage pool that can be used by multiple servers and multiple applications.

Sun StorEdge 9900 Virtual Partitioning Manager

Sun StorEdge 9900 Virtual Partitioning Manager enables the logical partitioning of ports, cache, and disk capacity on a Sun StorEdge 9985 system to create up to eight independently managed Virtual Private Storage Machines. Virtual Private Storage Machines create separate, independently managed, dedicated storage resources for specific users, servers, or applications. Sun StorEdge 9900 Virtual Partitioning Manager allocates storage resources based on business requirements and priorities, and allows you to update the allocation as needed, ensuring the most efficient allocation of resources and enabling organization to meet service level agreements. To the host, partitions appear as individual, independently managed storage

systems. Administrators can only configure and manage resources within their assigned partitions.

Sun StorEdge 9900 HiCommand Tiered Storage Manager

Sun StorEdge 9900 HiCommand Tiered Storage Manager lets you store data according to its current business value, storing it on the appropriate media, or tier, to satisfy quality-of-service and cost requirements as they change over time. A critical piece of information included in an online transaction, for example, becomes less important when the transaction is complete. Tiered Storage Manager enables administrators to easily match price, performance, and availability needs to storage system characteristics. This software manages and automates the movement of data into the correct tier according to cost, performance, data protection, and business requirements.



The Sun StorEdge 9985 system: Front and rear views.

Sun StorEdge 9900 Universal Replicator Software

Replication of data is key to business continuity, maximizing uptime and enabling disaster recovery. The ability to replicate effectively in any environment over any distance without data loss is critical. Sun StorEdge 9900 Universal Replicator goes beyond traditional replication to achieve unmatched data protection. Delivering the ability to asynchronously replicate over any distance in a heterogeneous environment, this software represents a technological breakthrough that enables you to significantly lower the cache and resource consumption of the primary storage system.

You can use this software, for example, to replicate from a Sun StorEdge 9990 system to a Sun StorEdge 9985, regardless of the distance to the receiving system. The software uses performance-optimized disk-based journaling and a pull-style replication engine to help mitigate link failures, preventing data loss even in the event of a communications breakdown. This software also helps you to improve bandwidth utilization and optimize your resource usage.

Sun StorEdge 9900 TrueCopy Remote Replication Software

Sun StorEdge 9990 TrueCopy Remote Replication Software automates the data recovery process, so that in case of an interruption, business operations can resume in a matter of seconds. TrueCopy replicates data independent of the host, over any distance, without affecting application performance. Whether an interruption is a planned test or an unexpected disruption, Sun StorEdge 9900 TrueCopy reduces recovery time by using continuously available online copies rather than tape-based restoration. This software facilitates regulatory compliance, reduces the frequency and duration of planned maintenance outages, and improves business

resilience by enabling non-disruptive testing. The synchronous replication of Sun StorEdge 9900 TrueCopy Remote Replication Software complements Sun StorEdge 9900 Universal Replicator Software to help you achieve advanced multi-data center replication, with up-to-date copies of data in various locations.

Sun StorEdge 9900 ShadowImage In-System Replication Software

Sun StorEdge 9900 ShadowImage In-System Replication Software uses high-speed, non-disruptive local mirroring to rapidly create multiple copies of mission-critical data within all Sun StorEdge 9900 Series systems, in both mainframe and open-system environments. This software keeps your data RAID-protected and fully recoverable, simplifying and quickening the recovery process. Its consistency-group function provides multi-volume, point-in-time copies of applications and databases. Through its Quick-restore feature, it reduces recovery time from data corruption. ShadowImage can handle large data volumes without affecting performance, creating copies for backup, testing, and data mining without impacting revenue-generating applications. ShadowImage reduces testing time and increases competitive advantage by facilitating information sharing within the organization and providing always-available copies of current production data.

Sun StorEdge 9900 HiCommand Device Manager Software

Sun StorEdge 9900 HiCommand Device Manager Software allows you to manage all Sun StorEdge 9900 series systems and any other storage products that comply with the Storage Management Initiative Specification (SMI-S), from a single, central platform. It enables you to logically organize and manage storage to reflect the needs of different organizations or departments. This software provides an immediate view of available storage and current usage, enabling

easy deployment of storage resources according to current needs. It simplifies automation of data management and configuration—improving organizational operations. Sun StorEdge 9900 HiCommand Device Manager Software helps mitigate risk by allowing automated failover and providing quick access to complementary products. By reducing training costs and allowing single-point administration, this software can help reduce operational costs.

Sun StorEdge 9900 HiCommand Tuning Manager Software

Sun StorEdge 9900 HiCommand Tuning Manager Software maps, monitors, analyzes, and reviews storage network resources. This software provides an intuitive, Web-based interface that enables forecasting of future storage needs. Sun StorEdge 9900 HiCommand Tuning Manager Software integrates seamlessly with key business applications such as Oracle and Microsoft SQL to facilitate consolidation of storage resource management procedures. Fully integrated with Sun StorEdge HiCommand Device Manager, it can help reduce total cost of ownership by improving storage performance and capacity management and maximizing storage utilization.

Sun StorEdge 9900 Storage Area Management (SAM) Suite

The Sun StorEdge 9900 Storage Area Management (SAM) Suite is a comprehensive, application-oriented suite of components that allows you to manage the performance and capacity of your entire storage infrastructure. This suite manages your Sun StorEdge 9900 Series systems' performance and functionality according to your specific business needs. The suite's management modules visually render and administer your entire data infrastructure as a shared utility, supporting multiple-vendor storage systems, switches, servers, host BUS

adapters, and file systems that serve business applications. Centralized control of the multi-vendor storage environment enables you to rapidly deploy applications and ensure their availability, reduce errors and operational costs, maximizing return on current and future storage investments, while enhancing the simplified management of heterogeneous storage environments.

Sun StorEdge 9985 System Specifications

Drives

Minimum drives	4D + 1 spare
Maximum drives	120, 240**
Supported drives	73 GB, 15K 146 GB/10K 300 GB/10K
RAID Levels	1, 5, 6
RAID Configuration	RAID1 2D+2D RAID5 3D+1P RAID6 6D+2P

Maximum Capacity

73 GB HDDs	8.6 TB, 17 TB**
146 GB HDDs	17 TB, 34 TB**
300 GB HDDs	35 TB, 72 TB**
Max external capacity	16 PB

Host/SAN Connectivity

Fibre Channel	48
FICON*	8
ESCON*	16
NAS	8
Maximum logical devices	TBD

Cache

Minimum cache	4 GB
Maximum cache	32 GB/64 GB**

Software

Operating System Support	Solaris OS 7, 8, 9; HP-UX; IBM AIX; Microsoft Windows NT; Microsoft Windows 2000; Microsoft Windows 2003; Compaq Tru64 UNIX; IRIX; Novell NetWare; Red Hat Linux; IBM zOS
Host Fail-over and Alternate Path support	SunCluster 3.0 and 3.1; VERITAS ClusterServer; HP MC/ServiceGuard; IBM HACMP; Microsoft Cluster Server; Novell Cluster Server; TruCluster
Storage Virtualization and DLM	Sun StorEdge 9900 Universal Volume Manager Sun StorEdge 9900 Virtual Partitioning Manager Sun StorEdge 9900 Tiered Storage Manager

Learn More

Contact your Sun sales representative for more information.
Or visit us on the Web at sun.com/storage/highend

Business Continuity, Disaster Recovery, and Data Movement	Sun StorEdge 9900 Universal Replicator** Sun StorEdge 9900 TrueCopy Replication Sun StorEdge 9900 ShadowImage In-System Replication Sun StorEdge 9900 Business Continuity Manager Sun StorEdge 9900 Volume Migration Software Sun StorEdge 9900 FlashCopy
Data Protection	Sun StorEdge 9900 Data Retention Utility
Storage Management	Sun StorEdge 9900 Device Manager Sun StorEdge 9900 Tuning Manager Sun StorEdge 9900 Dynamic Link Manager Sun StorEdge 9900 SAM Suite

Power

AC input, 1 phase	60Hz: 200V, 208V or 230V 50Hz: 200V, 220V, 230V or 240V
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Dimensions

Height	1,920mm
Width	610mm
Depth	925mm

Warranty/Service

Warranty	Three years coverage Year one: Next day on-site response Years two and three: Parts exchange Business hours phone support
Installation service	Sun StorEdge™ 9900 Installation Service (optional)
Service upgrades	SunSpectrum™ service upgrades are available

* Consult your Sun Sales and Systems Engineering representative for the latest information regarding supported operating systems and servers.

**Available in phase two.