Lenovo Storage S2200

Enterprise-class features at affordable prices

Simplicity at its Core

The Lenovo Storage S2200 SAN array offers simplicity, speed and scalability. With its easy-to-use management interface, the S2200 makes complex administrative storage tasks simple. There's no need for an additional dedicated resource to manage this array. Setup is also simple using the intuitive navigation; out-of-the-box and deployed in under an hour. The Lenovo S2200 offers a great balance between simplicity and performance.

Designed to Fit

The S2200 gives you a choice of supported connectivity choices and offers impressive capacities. Choose between SAS, Fibre Channel or iSCSI to integrate into your existing network. The S2200 supports up to 96 drives and can have mixed LFF and SFF enclosures in the same array, allowing this device to provide you with the flexibility you need in your business. And the S2200 has in-chassis controller upgrades without data migration.

Just swap out the S2200 controller with the S3200 controller and you can experience greater performance, additional fabric support, and greater capacity. The S2200 is designed not only to fit into your business, but to grow with your business.

Business Optimized

The Lenovo Storage S2200 is perfect for deployments in companies that need advanced features at an affordable price. Equipped with storage tiering, high availability, thin provisioning, and other enterprise-class features, the S2200 provides your business with a solid foundation to grow.

As your business grows, upgrading to the S3200 is easy. Simply change out the controller blades in the back of the chassis, no data migration, reestablishing LUNs, changing licenses is needed with this upgrade. Because this information is stored in the chassis, you can now have the ability to increase your performance, capacity and ports by upgrading to the S3200.

Why Lenovo

Lenovo is the leading provider of x86 systems for the data center. The portfolio includes rack, tower, blade, dense and converged systems, and supports enterprise class performance, reliability and security. Lenovo also offers a full range of networking, storage, software and solutions, and comprehensive services supporting business needs throughout the IT lifecycle.

Lenovo Storage S2200

Product features

- Affordable SAN with enterprise features
  - Intelligent Real-time Tiering provides SSD performance in a hybrid array
  - Scale up options with Thin Provisioning allows you to grow your SAN in pace with your business
  - High-performance storage to support demanding applications at entry price points
- Fits into your existing environment with flexible configurations and options
  - Supports up to 96 drives
  - Fits into a variety of environments with Fibre Channel or iSCSI fabrics, or direct connect with SAS
  - Mix LFF and SFF enclosures in the same array
- Optimized to grow with your business
  - In-chassis controller upgrades without data migrations or downtime
  - Designed to be always on with 99.999% availability
  - High availability configurations: dual controllers, redundant fans, hot-swap drives and fans
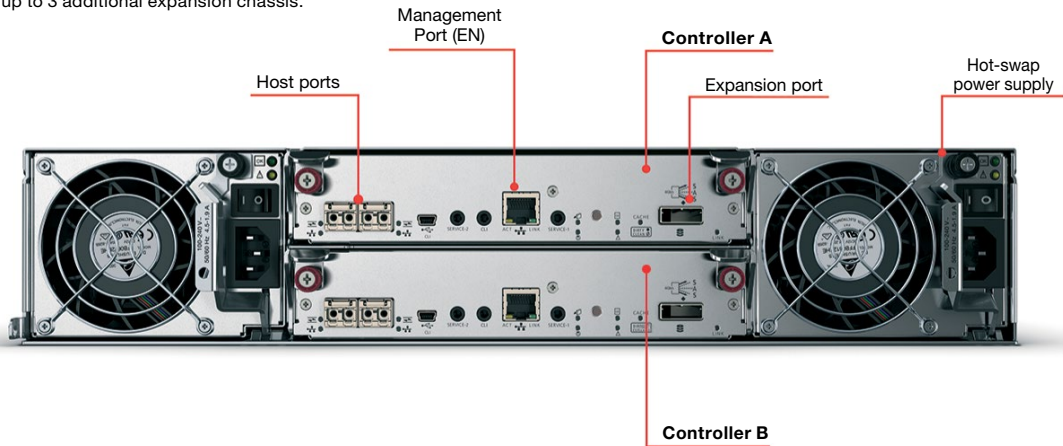
Hardware summary

- Large Form Factor or Small Form Factor chassis
- Multiple drive-types supported
- Active/Active RAID Controller
- 2 ports per controller for maximum value
- 8Gb FC or 1/10Gb iSCSI or 6/12Gb SAS
- Flexible Interface Options (CNC)
- Easy setup and user interface
- Standard and encrypted disk support
- Hybrid configurations

Unique Technology
- Real-time storage tiering
- Battery-Free cache protection
- Low latency cache mirroring

Performance highlights
- 80,000 Read IOPS
- 3300MBps Read
- 2400MBps Write

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CONTROLLER LAYOUT

- Supports 8 Gbps Fibre Channel, 10 Gbps iSCSI or 12 Gbps SAS Fabrics.
- 6 Gbps SAS Expansion port supports up to 3 additional expansion chassis.

Lenovo Storage S2200

Benefits

Virtualized Storage	• Virtual storage allows "pooled" storage across multiple drive types, improving I/O by 2.5x without impacting applications
SSD Read Cache	• Delivers priority access to "hot" data in SSD cache, increasing cache capacity by 200x
Virtualized Snapshots	• Each snapshot is an equal volume and supports full read/writes and can be standalone or nested
Thin Provisioning	• Provision volumes independent of physical storage. Only purchase the storage you need and add more as you grow.
Common Drives	• Simplify your drives, the S2200 has the same common drives as the Lenovo Storage E1012 and E1024.
Full Drive Encryption	• Keep your data locked down with 256-bit AES encryption
High Availability	• Hot-swap dual controllers, redundant PSU, hot swappable HDDs and fans, automatic failover, multi-path support, and data protection keep your data always available, built to be 99.999% available.
Battery-less Cache Backup	• No need to change or manage batteries, the battery-less cache back up provide plenty power to transport your cache data to flash storage in case of a power outage.
Synchronous Caching	• Provides instant cache mirroring with faster mirrored writes than competitive architectures.
Great Capacity	• Support for up to three expansion enclosures, E1012, supports up to 12 x 3.5-inch drives; E1024, supports up to 24 x 2.5-inch drives; and the S2200 supports up to 96 drives in a variety of configurations: SSDs, 2.5-inch HDDs, and 3.5-inch HDDs. • Rapid RAID Rebuild – Only rebuilds the stripes that contain data, not the space or other stripes. This significantly decreases the time it takes to recover lost data.
In-Chassis Upgrades	• S2200 controller modules can be upgraded to the S3200 controller without migrating data or reconfigurations.
Asynchronous Replication	• Enables customers to replicate volumes from one array to another, local or remote • Provides customers with 24/7 protection of their data and disaster recovery solution • Enables replication between S2200 systems or S3200/S2200 systems

The Lenovo Storage S2200 controller unit with three E1024 expansion units delivers a total of 96 drives.

Lenovo Storage S2200

Specifications

Host Interface	6Gbps SAS or 1/10Gbps iSCSI or 8Gbps Fibre Channel
Single/Dual Controller	Single- and Dual- (active/active) controller support
RAID Support	RAID 1, 5, 6, 10
Fans and Power Supplies	Fully redundant and hot swappable
Supported Drives	2.5-inch SAS Drives: 300GB, 600GB at 15,000rpm 2.5-inch SAS Drives: 600GB, 900GB, 1.2TB at 10,000rpm 2.5-inch NL-SAS SED Drives: 600GB, 900GB, 1.2TB at 10,000rpm 2.5-inch NL-SAS Drives: 1TB at 7,200rpm 2.5-inch SAS SSD: 400GB, 800GB, 1.6TB 3.5-inch NL-SAS Drives: 2TB, 4TB, 6TB, 8TB at 7,200rpm 3.5-inch NL-SAS SED Drive: 4TB at 7,200rpm
Cache per Controller	6GB per controller (Data (Read/Write) cache = 4GB and Metadata and System OS cache = 2GB)
LUNs per System	1024 maximum and 128TB LUN size
Snapshots per Volume	254 maximum
Expansion Units (3 max)	E1012: 12 x 3.5-inch drives; E1024: 24 x 2.5-inch drives
Snapshots	64 included
Optional Licenses	Intelligent Real-Time Tiering with SSDs, 256 snapshots, 512 snapshots, asynchronous replication
Asynchronous Replication	• Up to 32 volumes • Scheduler supports 1hr, 12hr, and 24hr time intervals • Licenses: one for target and one for source
Warranty	3-year limited warranty, 9x5 next business day parts only
ENERGY STAR Certified	The Lenovo Storage S2200 is now ENERGY STAR certified. ENERGY STAR-certified products are energy efficient which results in cost savings via reduced energy consumption and regulatory rebates. Please refer to the US EPA website for details on ENERGY STAR certification criteria and process. Lenovo Storage S2200 ENERGY STAR certification is listed on the EPA website.

For More Information

To learn more about the Lenovo Storage S2200, contact your Lenovo Business Partner or visit **lenovo.com/systems/storage**

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