SA6400

Brand: Synology
Product Code: SA6400
Availability: 10
Weight: 16.50kg
Dimensions: 88.00mm x 482.00mm x 724.00mm
Call for Price:

Short Description

Synology SA6400 12-Bay Rackmount NAS with Redundant Power (Diskless)

Description

Highly scalable storage for enterprise and studios

The 12-bay Synology SA6400 is designed for rapid data scaling. With support for up to 108 drives after expansion, this unit is ideal for enterprise data centers, large production studios, and growing businesses in the retail and hospitality sectors looking to tackle data-intensive projects while leaving room for future expansion.

Scalability

Up to 2.1 PB with 8 x RX1223RP expansion units

CPU

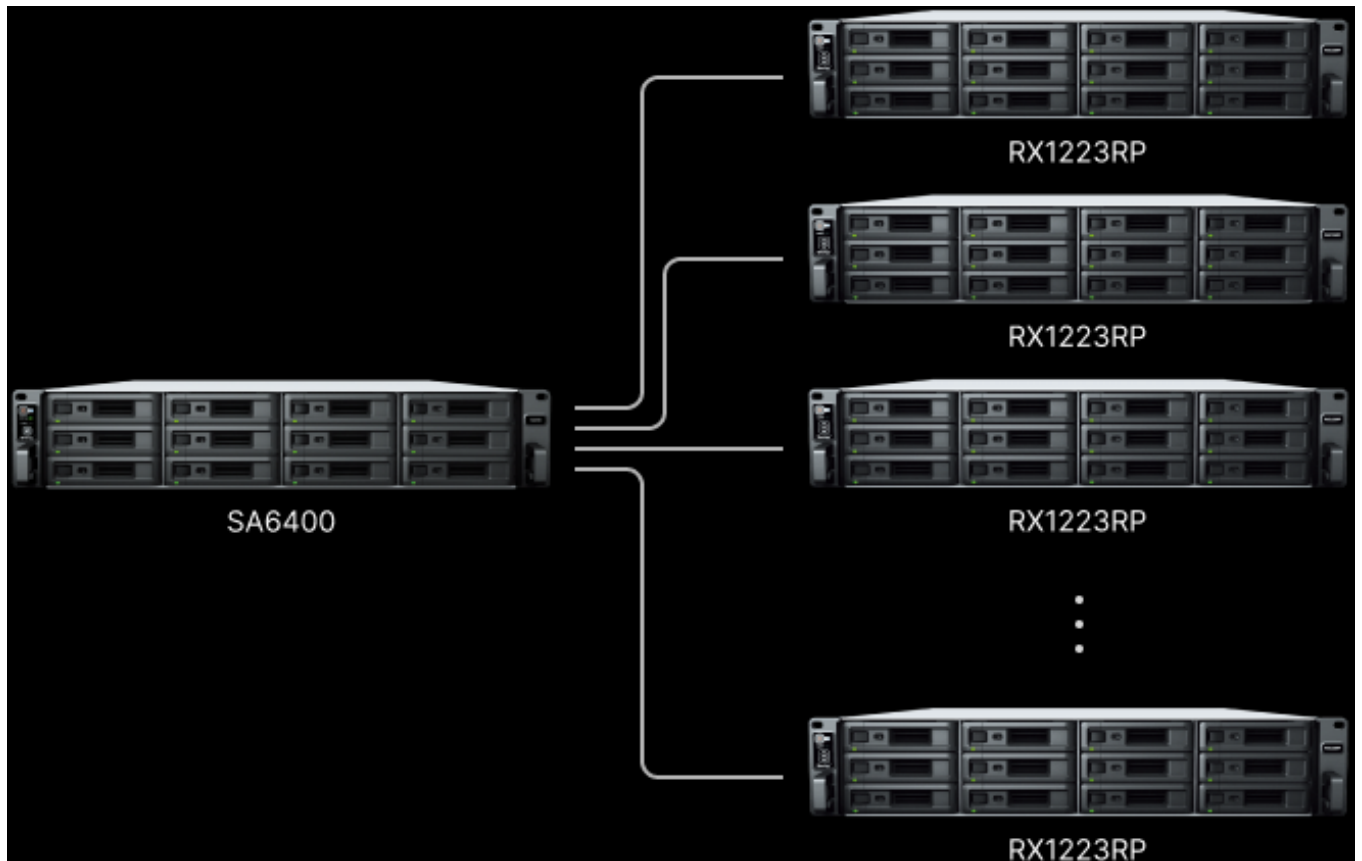Over 6,500/4,000 MB/s sequential read/write

Networking

Optional 25/40GbE or Fibre Channel connectivity

On-demand storage expansion

The SA6400 scales up flexibly whenever your data demands do. Accommodate up to 9 times the original capacity by adding 12-bay RX1223RP expansion units as your deployment grows.

Built for high reliability

The SA6400 is designed with built-in redundancies to keep mission-critical services running, even when disaster strikes.

Out-of-band (OOB) management

Remotely power on/off, force restart, and reset your server, or view real-time and historical DSM system logs, even while the device is powered off or the primary network is down, using the dedicated out-of-band management console.

Redundant power supply

Failover cluster

Power control

System logs

System reset

Advanced networking options

The SA6400 has the flexibility to accommodate different operating environments.

Built-in fast connectivity

Two 10GbE RJ-45 ports provide rapid transfer speeds right out of the box.

Configurable networking options

Add up to 2 extra 10GbE SFP+/RJ-45, 25GbE SFP28, or Fibre Channel ports in varying configurations.

Failover and network balancing

Bond multiple network interfaces with Link Aggregation to enable automatic network failover and load balancing.

Versatile data storage and business application platform

Provide easy access to business data, consolidate digital assets, or host cost-efficient business solutions.

Flexible file server

Central backup server

Business application platform

Flexible file server

Take advantage of the SA6400's high storage capacity and expansion capability to host large amounts of data on a central repository. Provide user-friendly access to business data and set up powerful cross-site syncing to empower remote and multi-site collaboration.


Private cloud

A private cloud suite for file sharing

Empower your entire organization with a streamlined ability to access, share, and sync data from anywhere. Provide employees with access to corporate files through mobile

apps, desktop clients, and a browser-based interface. Set granular file and folder access and sharing permissions. Maintain a full overview of file activities and track file share settings changes with detailed records in the Synology Drive Admin Console.

SMB/NFS implementation at scale

Leverage SMB or NFS protocols to provide efficient access to company files over the local network or VPN. Manage data access privileges with access control lists (ACL) through Active Directory/LDAP integration and protect files against tampering, loss, or removal with built-in snapshot technology.
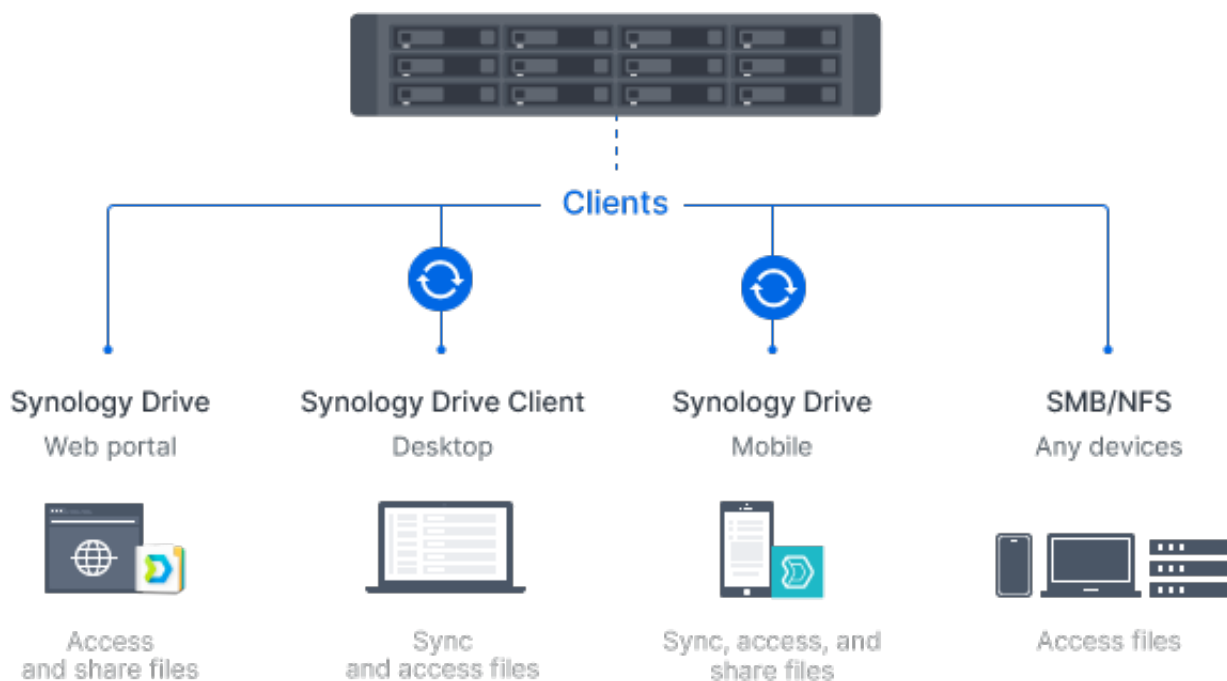
Cross-site syncing

Secure site-to site file and folder syncing

Make sure branches always have up-to-date copies of crucial documents and data available locally by syncing Synology systems one or two-way using Synology Drive ShareSync. Have files updated across locations each time there is a change to efficiently keep all stakeholders on the same page.

Efficient cross-site syncing through the cloud

Boost syncing speeds, cut bandwidth use, and reduce your storage footprint by leveraging the powerful connectivity of our data centers. Synology Hybrid Share intelligently synchronizes data to Synology devices. Large or less frequently accessed files are stored on the cloud to reduce local storage requirements, while frequently used files are stored

on local devices to provide users access at LAN speeds.

Hybrid Share for C2 Storage

Branch A

Branch B

Drive ShareSync
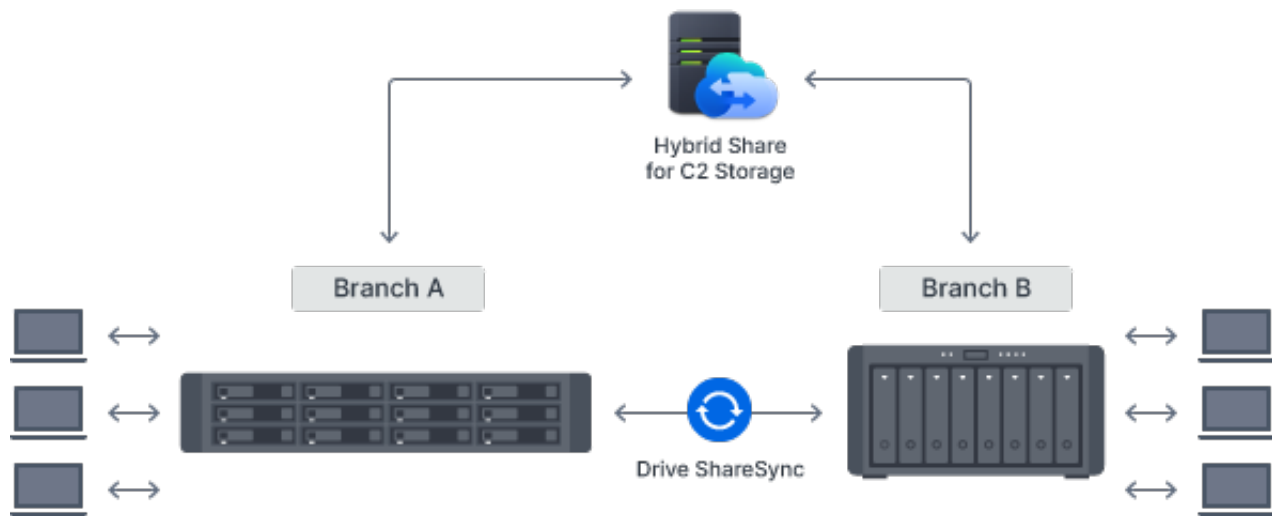
Central backup server

Back up PCs, servers, Synology systems, SaaS data, and VMs, and back up your backup servers themselves with a scalable central storage solution.

Back up Windows and Linux endpoints

Bare-metal PC, server, and VM backup

Securely back up Windows clients and servers, Linux endpoints, Synology systems, and VMware® and Hyper-V® virtual machines to the SA6400 with Active Backup for Business. Manage them through a centralized management console and choose between bare-metal or file-level restoration. Built-in data deduplication maximizes storage efficiency.

SaaS protection with local backups

Protect Microsoft 365 and Google Workspace accounts by maintaining complete offline copies of your crucial information and configurations with Active Backup for Microsoft 365 and Active Backup for Google Workspace.
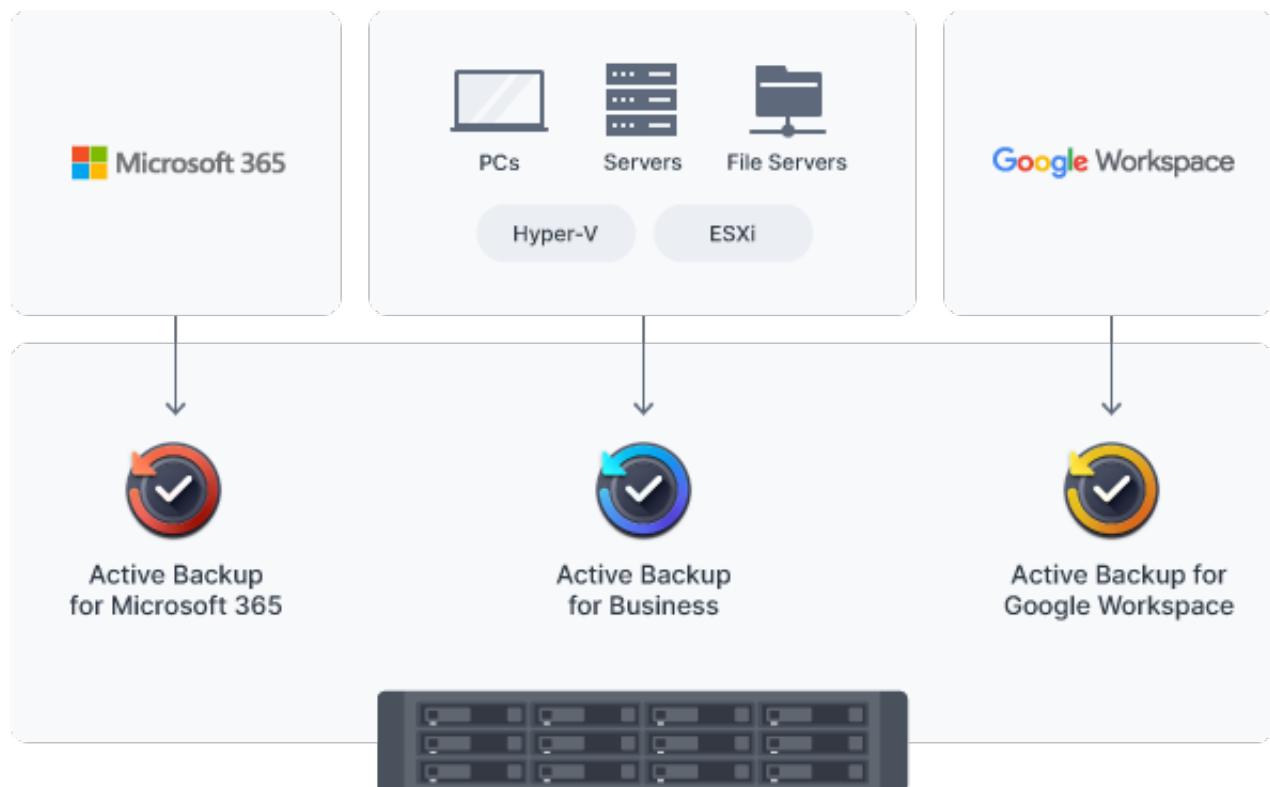
Back up Synology storage systems

Backup destination for shares and LUNs

Use Hyper Backup to back up files, LUNs, installed applications, and system configurations from tens or hundreds of Synology servers to your SA6400. Set and forget backup tasks with regular schedules, enhance security with fine-grained user permissions and encryption, reduce backup sizes with built-in deduplication, and restore data flexibly with multi-versioning.
Snapshot Replication enables configurable point-in-time snapshots of shared folders and LUNs with an RPO as low as 5 minutes and recovery within seconds.

Bare-metal backup for Synology systems

Manage bare-metal backups of all your Synology servers from a single centralized console on the SA6400. Leverage built-in deduplication technology to reduce backup sizes while multi-versioning provides flexible restoration options.

Synology NAS/SAN

LUNs

Shared folders

Active Backup for Business

Snapshot Replication

Hyper Backup
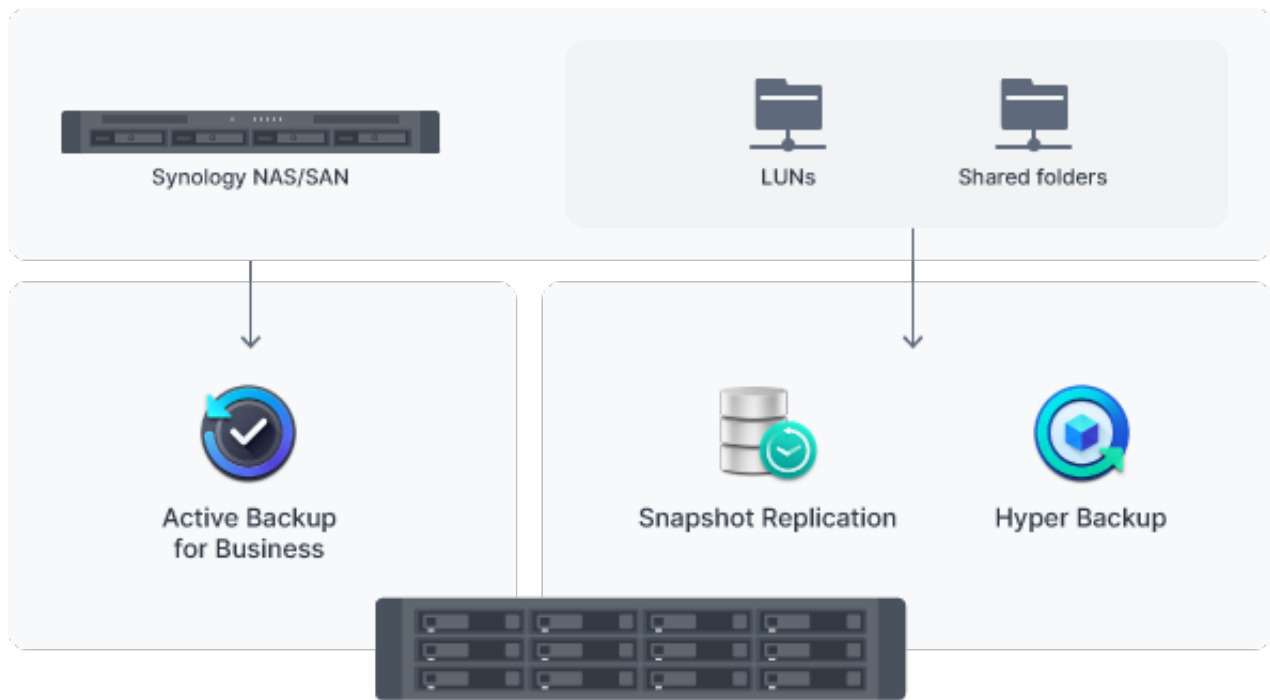
Business application platform

Host cost-efficient business solutions, either through containers, virtual machines, or Synology DiskStation (DSM)'s own solutions, including a powerful free backup suite, a versatile mail server, and a surveillance VMS with transparent licensing.

Synology productivity solutions

Collaboration in a secure cloud

Create and edit documents, spreadsheets, and slides together with your whole team in real time. Easily migrate existing documents from other platforms and take ownership of your files in a secure private cloud.

Synology's private cloud mail solution provides ease of use, full data ownership, and robust data security with a low total cost of ownership thanks to its perpetual licensing model.

Keep teams connected through encrypted one-on-one private chats, public channels, and group conversations. Efficiently organize discussions with bookmarks, searchable hashtags, and chatbots.
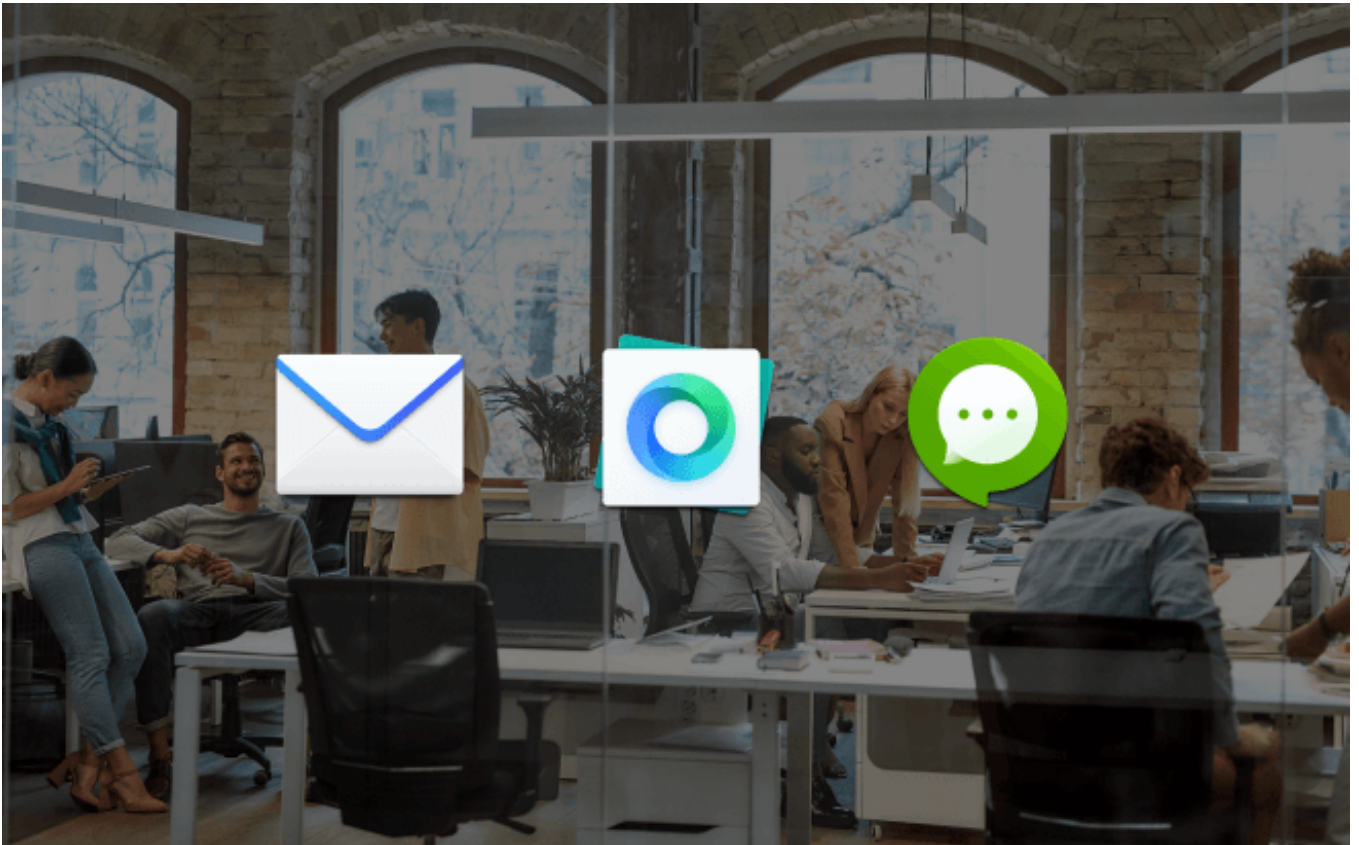
Containerization and virtualization-ready

Application test environment

Run Docker containers and VMs on SA6400 using Docker and Synology Virtual Machine Manager (VMM) — a hypervisor for virtualized versions of Windows®, Linux®, and DSM — to safely test and evaluate applications.
Virtual DSM serves as a test environment for package updates or to add an additional layer of security between applications, systems, and data.

Container	Container	Container	Guest OS	Guest OS

Docker	Synology Virtual Machine Manager

DSM
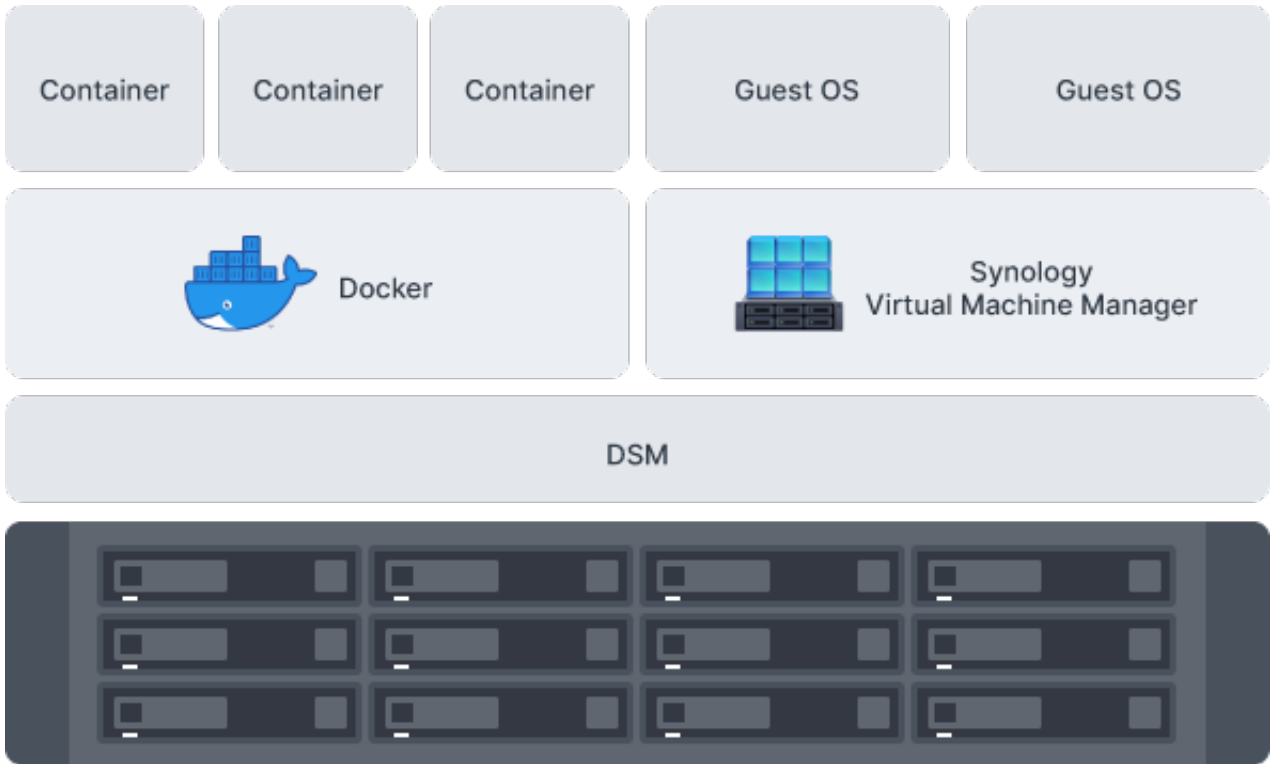
Centralized monitoring and management

Stay on top of your fleet and keep it in optimal condition with our cloud and DSM-based monitoring and management solutions.

Central Management System (CMS)

Conveniently manage your fleet of Synology systems from a centralized console.

Active Insight

A powerful cloud-based platform for monitoring performance, backup status, login activity and performing lightweight management tasks.

Synology has you covered

The SA6400 is backed by Synology's 5-year limited warranty, including technical support and hardware replacement services to maximize your return on investment and ensure continued high-quality performance.

Software

DSM Specifications

Storage Management	Maximum Single Volume Size	1 PB (64 GB memory required, for RAID 6 groups only) 200 TB 108 TB
	Maximum Internal Volume Number	256

SSD Read/Write Cache [(Determining cache size)](#)	
SSD TRIM	
RAID Group	
Supported RAID Type	• RAID F1 • Basic • JBOD • RAID 0 • RAID 1 • RAID 5 • RAID 6 • RAID 10
RAID Migration	• Basic to RAID 1 • Basic to RAID 5 • RAID 1 to RAID 5 • RAID 5 to RAID 6
Volume Expansion with Larger HDDs	• RAID F1 • RAID 1 • RAID 5 • RAID 6 • RAID 10
Volume Expansion by Adding a HDD	• RAID F1 • JBOD • RAID 5 • RAID 6
Global Hot Spare Supported RAID Type	• RAID F1 • RAID 1 • RAID 5 • RAID 6 • RAID 10
Notes	• Usable capacity for each volume will be lower than the maximum volume size and is dependent on the filesystem and the amount of system metadata stored. • When Peta Volume is enabled, validated services and packages

		are required. Please refer to [this article](#) for more information on limitations. • Volumes over 108 TB require 32 GB of memory or more.
File System	Internal Drives	• Btrfs • ext4
	External Drives	• Btrfs • ext4 • ext3 • FAT • NTFS • HFS+ • exFAT
File Services	File Protocol	• SMB • AFP • NFS • FTP • WebDAV • Rsync
	Maximum Concurrent SMB/AFP/FTP Connections	8,000
	Maximum Concurrent SMB/AFP/FTP Connections (with RAM expansion)	10,000
	Windows Access Control List (ACL) Integration	
	NFS Kerberos Authentication	
	Notes	• Regarding data concerning tests with RAM expansion, all memory slots are installed with the maximum capacity of supported RAM. • During testing, the maximum number of SSDs supported by this model is installed in a RAID 5

		configuration.
		• The testing standard was based on the maximum number of concurrent connections supported by this model. During the testing, 25% of the connections were used to transfer files concurrently. The transfer process guaranteed that the connections were not interrupted; the minimum transfer speed was not guaranteed.
[Account & Shared Folder](#)	Maximum Local User Accounts	16,000
	Maximum Local Groups	512
	Maximum Shared Folder	512
	Maximum Shared Folder Sync Tasks	32
[Hybrid Share](#)	Maximum Hybrid Share Folders	30
[Hyper Backup](#)	Folder and Package Backup	
	Entire System Backup	
	Notes	Full-system backup requires DSM 7.2 or later.
[High Availability](#)	Synology High Availability	
[Log Center](#)	Syslog Events per Second	3,000
Virtualization	VMware ESXi 6.5 and VAAI	
	Windows Server 2022	
	Citrix Ready	
	OpenStack	
[General Specifications](#)	Supported Protocols	SMB1 (CIFS), SMB2, SMB3, NFSv3, NFSv4, NFSv4.1, NFS Kerberized sessions, iSCSI, Fibre Channel, HTTP, HTTPs, FTP, SNMP, LDAP,

		CalDAV
	Supported Browsers	- Chrome - Firefox - Edge - Safari
	Supported Language	English, Deutsch, Français, Italiano, Español, Dansk, Norsk, Svenska, Nederlands, ???????, Polski, Magyar, Português do Brasil, Português Europeu, Türkçe, ?eský, ???????, ???, ???, ????, ????
	Notes	For an updated list of supported browser versions, check the [DSM Technical Specifications]().

Add-on Packages [view the complete package list]()

Central Management System

[Synology Chat]()	Suggested Users	1,500
	Notes	- Measured with simulated users, each with an average record of 20,000 messages, emojis, or stickers. The required server response time is below ten seconds. - Models with expandable memory are tested with their maximum supported memory.
Download Station	Maximum Concurrent Download Tasks	80
[SAN Manager]()	Maximum iSCSI Target Number	256
	Maximum LUN LUN Clone/Snapshot, Windows ODX	512
[Synology MailPlus / MailPlus Server]()	Free Email Accounts	5 [(Additional accounts require purchase of licenses)]()

	Suggested Users Notes	14,000
		- Suggested users is derived from testing in an environment with 20% heavy users (each with 20,000 pre-populated emails and receiving 240 emails per day) and 80% light users (each receiving an average of 20 emails per day). [Learn more](#)
		- The performance of the mail system will slightly decrease in high-availability mode due to data synchronization between the two servers.
		- Functions that were enabled in all of the tests above: anti-spam, anti-virus, DNSBL, greylist, content scan, full-text search (English only).
		- Models with expandable memory are tested with their maximum supported memory. To estimate the RAM requirement for your NAS, please [read this article](#).
[Media Server](#)	DLNA Compliance	
[Synology Photos](#)	Facial Recognition	
	Object Recognition	
[Snapshot Replication](#)	Maximum Snapshots per Shared Folder	1,024

	Maximum of System Snapshots	65,536
Surveillance Station	Default Licenses	2 (Additional cameras require purchase of licenses)
	Suggested Maximum IP Cameras and Total FPS (H.264)	1080p: 160 channels, 2800 FPS 3M: 160 channels, 1600 FPS 5M: 120 channels, 1200 FPS 4K: 80 channels, 800 FPS
	Suggested Maximum IP Cameras and Total FPS (H.265)	1080p: 200 channels, 6000 FPS 3M: 160 channels, 2800 FPS 5M: 160 channels, 1600 FPS 4K: 120 channels, 1200 FPS
	Notes	- Surveillance Station 9.1.3 or above is required to support the maximum IP cameras and FPS figures listed. - Performance figures are obtained from testing conducted with the device fully populated with drives, with their default memory configuration, and under a continuous recording setup. Actual system capabilities may vary based on configuration, drive performance, enabled features, and the

		presence of additional workloads.
		• Use [NVR Selector](#) to quickly find a suitable model based on your requirements.
		• The number of streams that can be viewed simultaneously is **twice** the suggested maximum number of cameras. For example, if the suggested maximum number of cameras for a model is 10 under H.264, 1080p, the model can support up to 20 streams of the same specification at the same time.
		• Performance metrics improve with the addition of expansion units. For detailed figures, please refer to [this article](#).
[Synology Drive](#)	Recommended Number of Concurrent Sync Clients	2,000 (the number of connections that can be maintained when the recommended number of hosted files was reached)
	Recommended Number of Hosted Files	100,000,000 (applies to files indexed or hosted by [Synology Drive](#). For file access through other standard protocols, refer to the File Services section above)
	Notes	• Exceeding the recommended numbers above will

not block application operations, but may result in longer response time.
- Utilizing SSD cache can significantly improve performance.
- Models with expandable memory are tested with their maximum supported memory.
- Btrfs file system and non-encrypted shared folders were used during the aforementioned testing.

[Synology Office](#)	Suggested Users	20,000
	Notes	

- Suggested users is derived from testing in an environment with 60% idle users (each logging in and viewing documents) and 40% active users (each executing random actions at intervals of 20 to 40 seconds) operating within documents, each document having 30 users. [Learn more](#)
- Models with expandable memory are tested with their maximum supported memory.
- Client performance may affect maximum simultaneous editing users. Client PCs used

		for testing: Intel Core i3-3220 / 8GB RAM
[Virtual Machine Manager](#)	Recommended Virtual Machine Instances	24 [(Learn more)](#)
	Recommended Virtual DSM Number [(Licenses required)](#)	24 (including 1 Free License)
	Notes	The specifications vary depending on system configuration and memory size.
[VPN Server](#)	Maximum Connections	60

Specification

NAS	
CPU Model	AMD EPYC 7272
CPU Quantity	1
CPU Core	12
CPU Architecture	64-bit
CPU Frequency	2.9 (base) / 3.2 (turbo) GHz
Hardware Encryption Engine	Yes
Memory	32 GB DDR4 ECC RDIMM
Drive Bays	12
Hot Swappable Drive	Yes
RJ-45 1GbE LAN Port	4
USB 3.2 Gen 1 Port	2
System Fan	80 mm x 80 mm x 4 pcs
Power Supply Unit / Adapter	550 watts
Total Memory Slots	16
Maximum Memory Capacity	1024 GB (64 GB x 16)
Expansion Port	8
PCIe Expansion	2 x Gen3 x8 slots (x8 link)
Form Factor (RU)	2U
Redundant Power Supply	Yes
RJ-45 10GbE LAN Port	2

Product Gallery