

# 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.



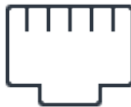
## **Scalability**

Up to 2.1 PB with 8 x RX1223RP expansion units



## **CPU**

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

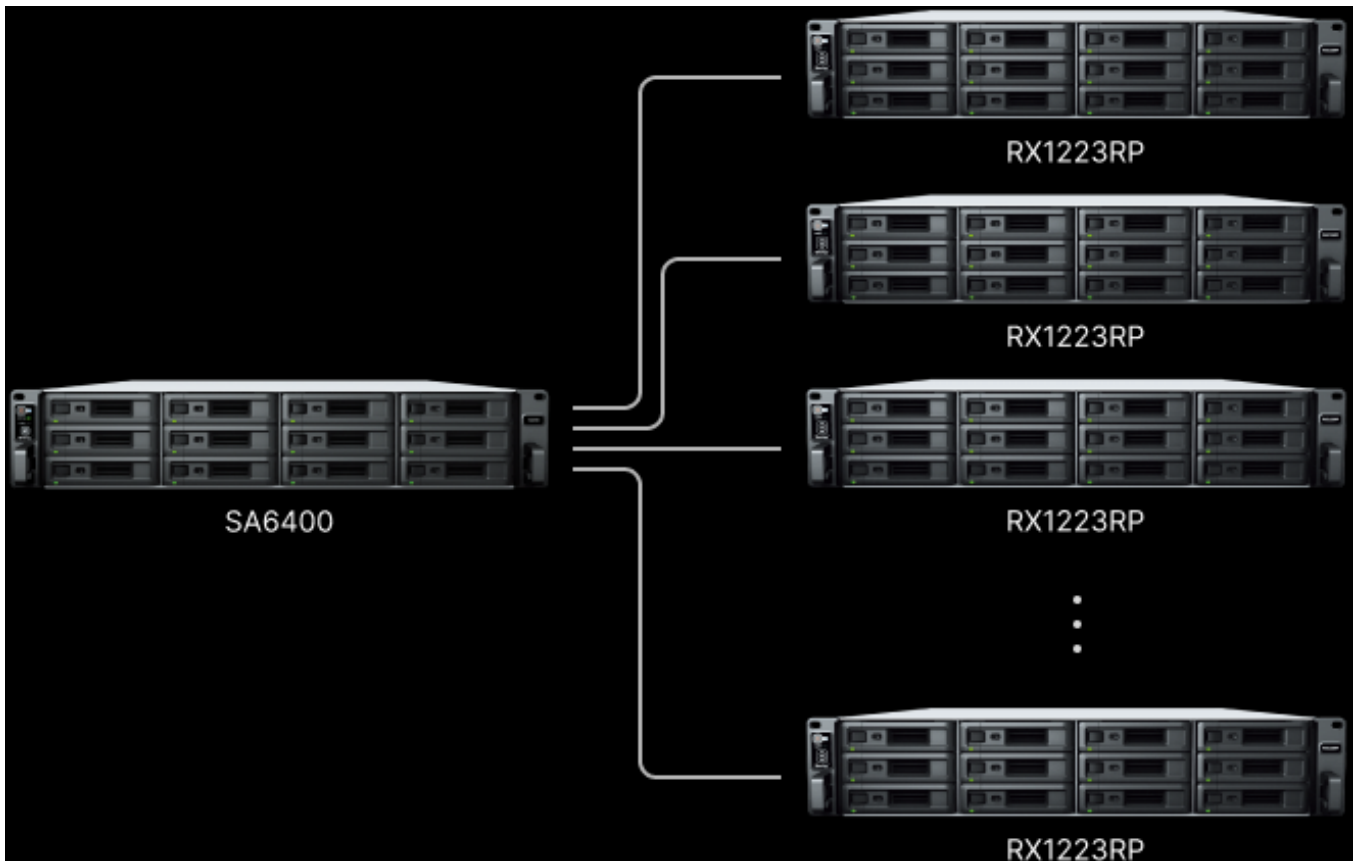


## **Networking**

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**

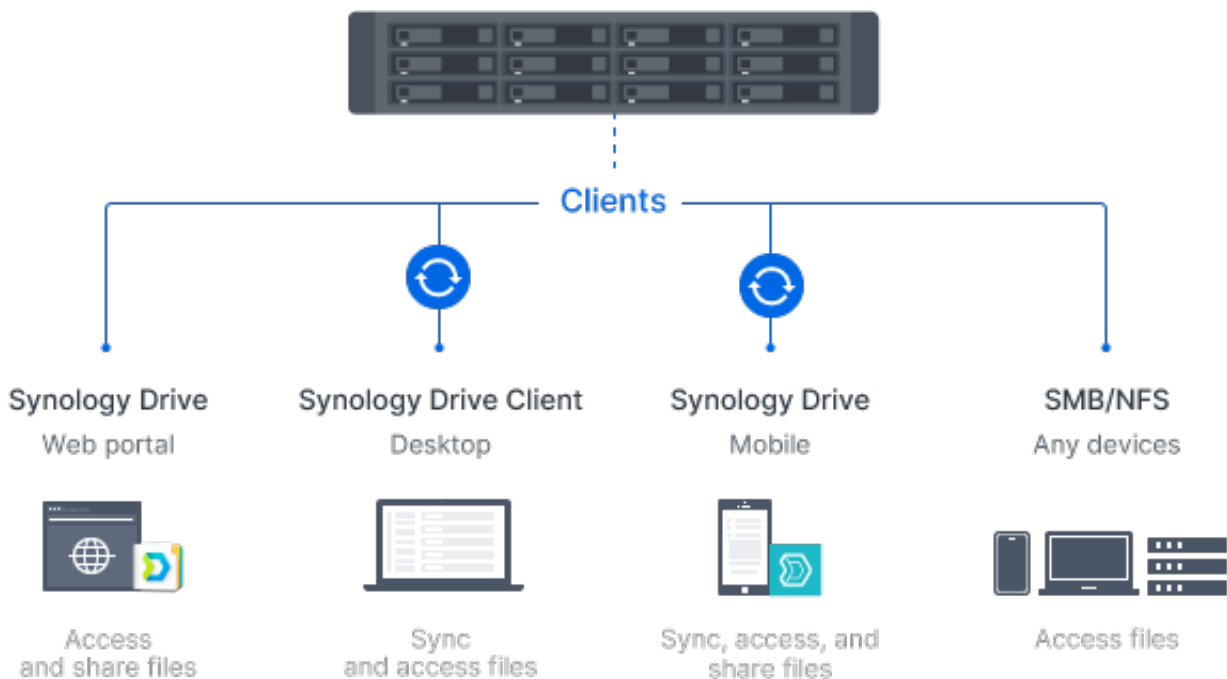
### **A private cloud suite for file sharing**

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**

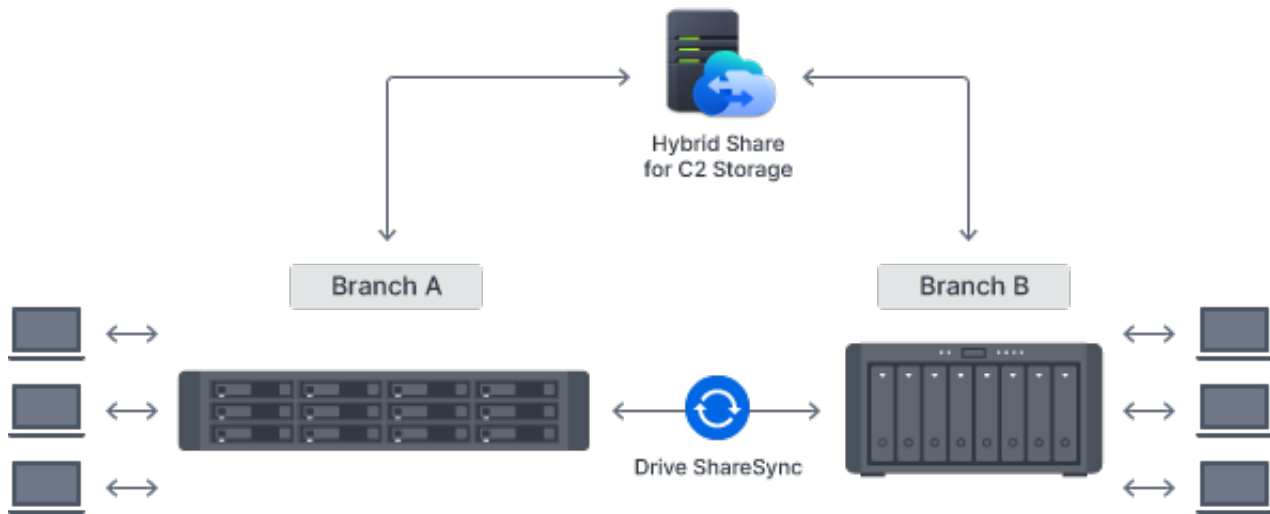
### **Secure site-to site file and folder syncing**

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.



## 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.

---

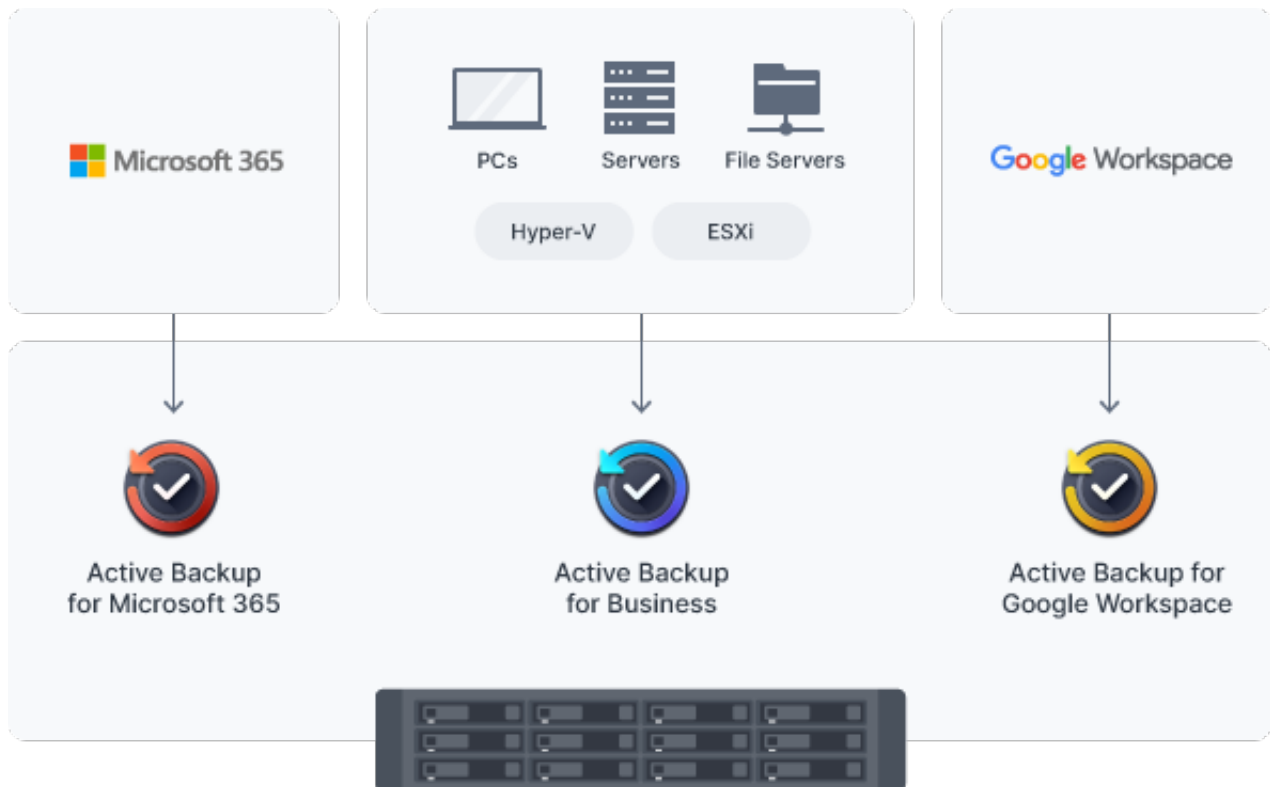
## **Back up Windows and Linux endpoints**

### **Bare-metal PC, server, and VM backup**

Securely back up Windows clients and servers, Linux endpoints, Synology systems, and VMware<sup>®</sup> and Hyper-V<sup>®</sup> 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**

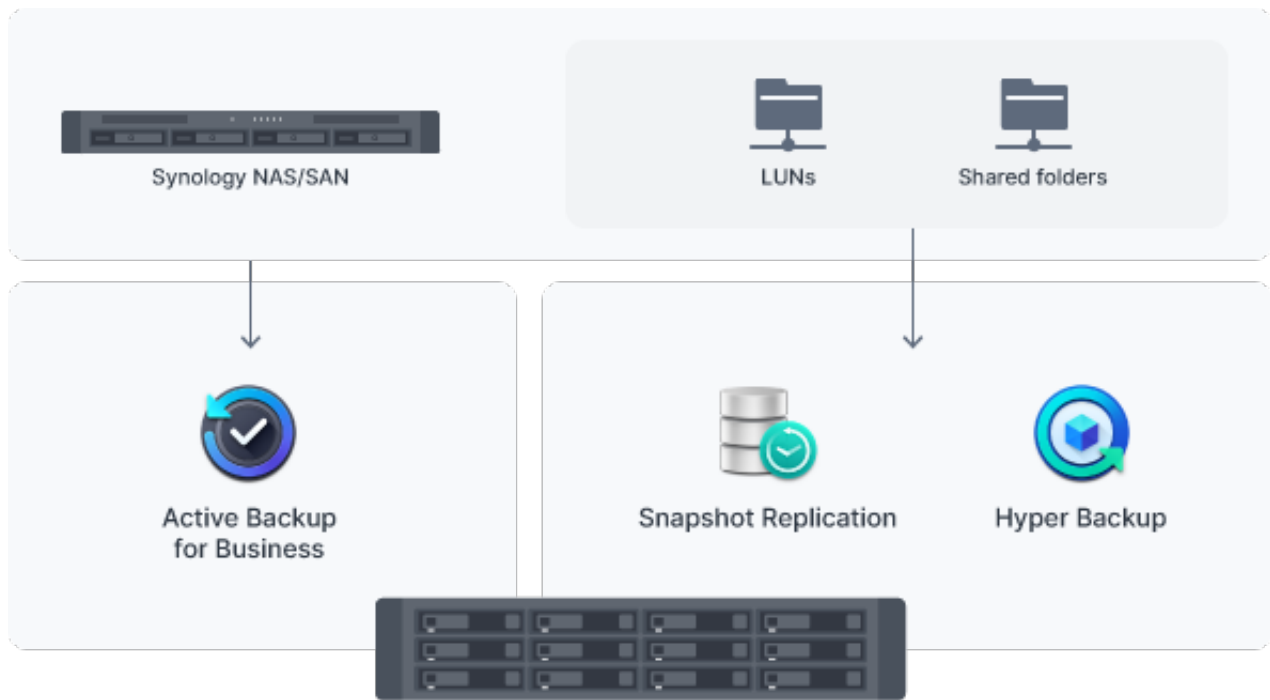
Use Hyper Backup to back up files, LUNs, installed applications, and system configurations from tens or hundreds of Synology servers to your SA6400. Set and forget backup tasks with regular schedules, enhance security with fine-grained user permissions and encryption, reduce backup sizes with built-in 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.





## **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.

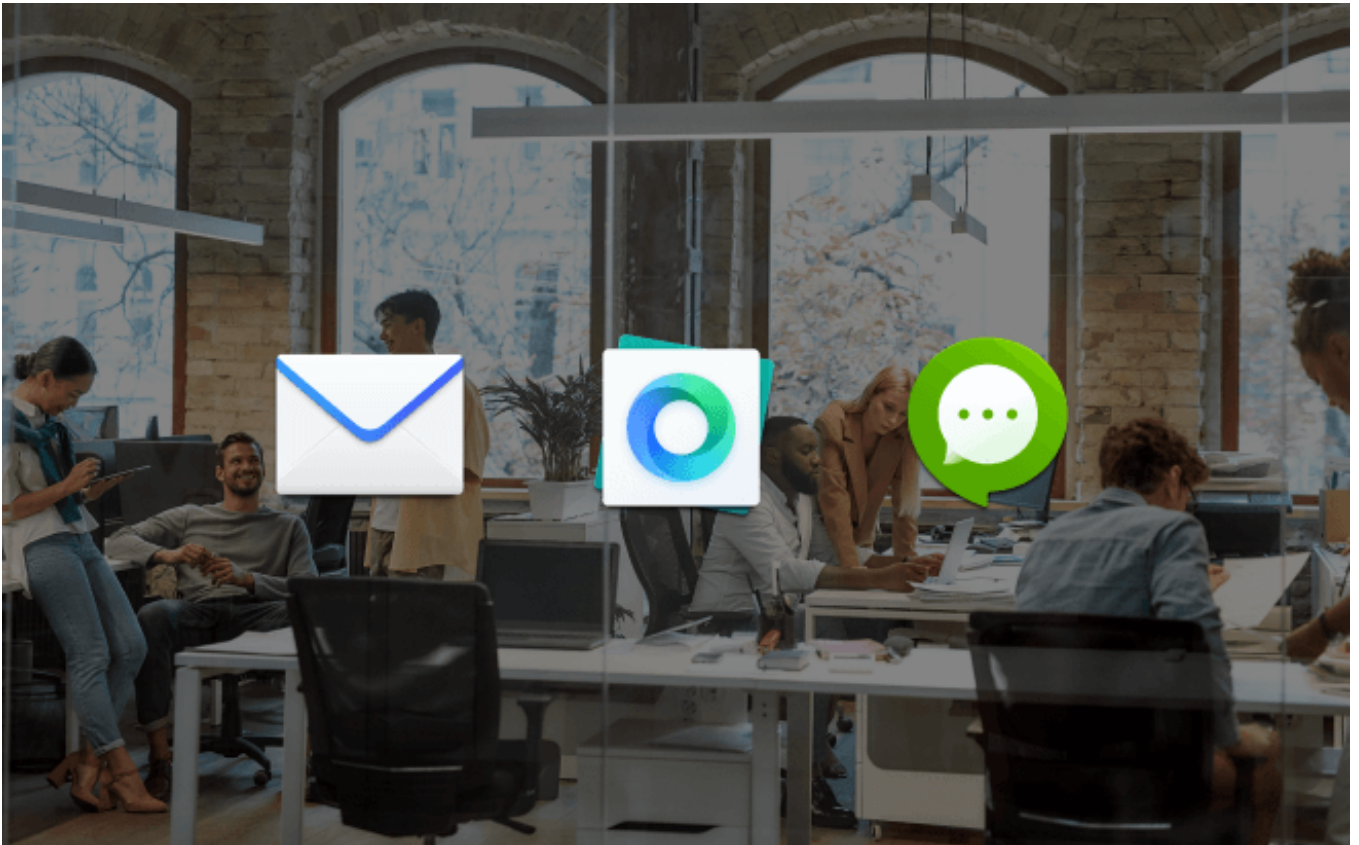
## **Synology productivity solutions**

### **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.



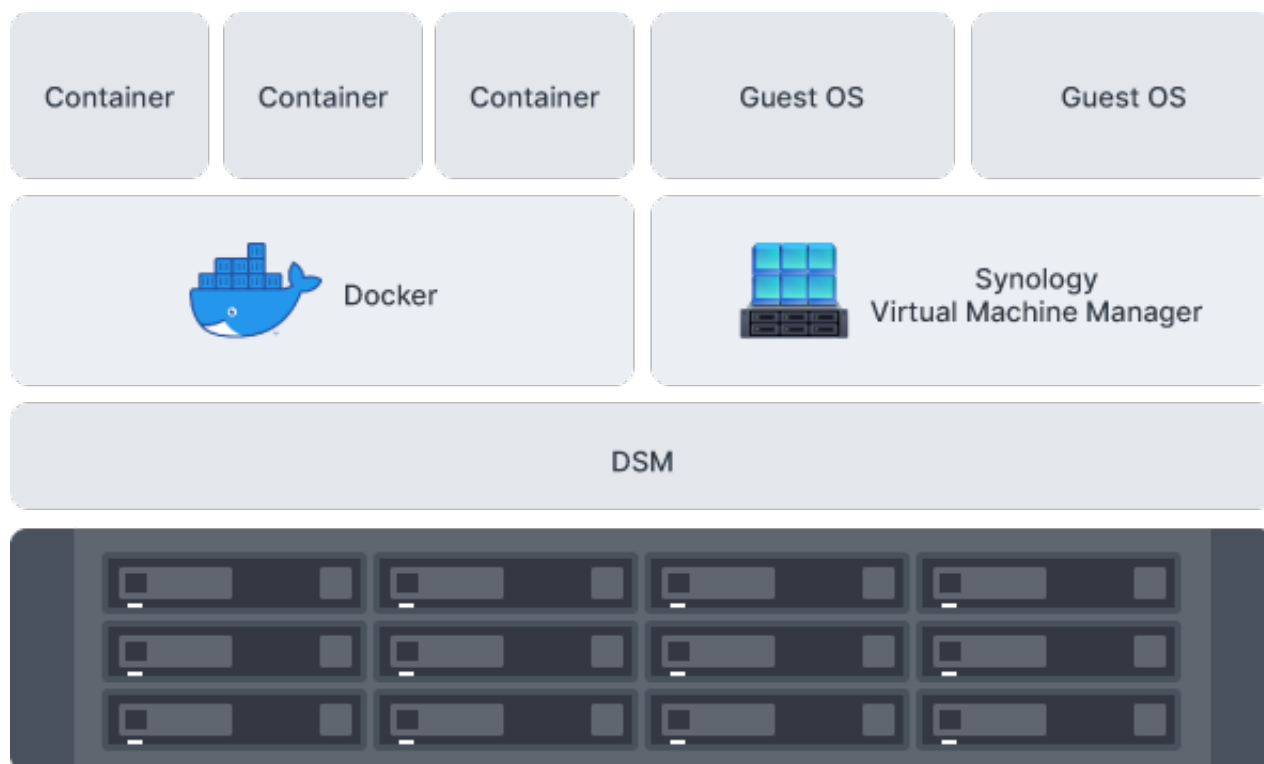
---

**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<sup>®</sup>, Linux<sup>®</sup>, 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.



## **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    256  
Number

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](#)  
[Synology Photos](#)

[Snapshot Replication](#)

DLNA Compliance  
Facial Recognition  
Object Recognition  
Maximum Snapshots per  
Shared Folder

1,024

## Surveillance Station

Maximum of System Snapshots	65,536
Default Licenses	2 ( <a href="#">Additional cameras require purchase of licenses</a> )
Suggested Maximum IP Cameras and Total FPS (H.264)	<ul style="list-style-type: none"><li>• 1080p: 160 channels, 2800 FPS</li><li>• 3M: 160 channels, 1600 FPS</li><li>• 5M: 120 channels, 1200 FPS</li><li>• 4K: 80 channels, 800 FPS</li></ul>
Suggested Maximum IP Cameras and Total FPS (H.265)	<ul style="list-style-type: none"><li>• 1080p: 200 channels, 6000 FPS</li><li>• 3M: 160 channels, 2800 FPS</li><li>• 5M: 160 channels, 1600 FPS</li><li>• 4K: 120 channels, 1200 FPS</li></ul>
Notes	<ul style="list-style-type: none"><li>• Surveillance Station 9.1.3 or above is required to support the maximum IP cameras and FPS figures listed.</li><li>• 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</li></ul>

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  
Notes

20,000

- 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

<a href="#">Virtual Machine Manager</a>	Recommended Virtual Machine Instances	24 ( <a href="#">Learn more</a> )
	Recommended Virtual DSM Number ( <a href="#">Licenses required</a> )	24 (including 1 Free License)
	Notes	The specifications vary depending on system configuration and memory size.
<a href="#">VPN Server</a>	Maximum Connections	60

## Specification

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

## Product Gallery