



High Scalability

SA6400



Highly Scalable Storage for Enterprises and Studios

Synology SA6400 is a 12-bay rackmount storage server engineered for scalability and performance. The high sustained throughput, the ability to scale up to 108 drive bays, and the comprehensive high-availability and data protection solutions available in Synology DiskStation Manager (DSM) make the SA6400 ideal for large storage deployments requiring lightning-fast data transfer speeds and dependable service uptime.

Highlights

- **On-Demand Expansion**
Up to 1.944 PB of storage¹ with up to 8 Synology RX1223RP Expansion Units²
- **Accelerated Performance**
Over 6,500/4,000 MB/s sequential read/write throughput for efficient file transfer operations even in data-intensive scenarios³
- **Fast Connectivity**
Built-in 10GbE RJ-45 ports for easy integration into any environment and support for 25/40GbE or Fibre Channel upgrades⁴
- **Uptime Protection**
Option to combine two identical devices into a Synology High Availability cluster for maximum service uptime and minute-level failover
- **Long-Term Support**
Backed by Synology's 5-year limited warranty⁵



Next-Generation File System

Btrfs is a modern file system designed to safeguard data integrity through metadata mirroring, file self-healing, and fast snapshot replication.

Scalable and Reliable Data Management

With the ability to deliver more than 1 petabyte of raw capacity, SA6400 is designed for extensive, on-demand scaling of data storage. The stable high performance makes it 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.

- Over **487,600/126,700 iSCSI 4K random read/write IOPS** and over **6,500/4,000 MB/s sequential read/write performance** support both I/O-intensive applications and large file transfers³
- Equipped with **dual 10GbE RJ-45 ports** for fast networking out of the box and **2 PCIe 3.0 expansion slots⁴** to accommodate more streams and tackle specialized applications through 25/40GbE adapter cards⁴
- Dedicated **out-of-band management (OOB) port** helps IT administrators reduce maintenance and troubleshooting efforts, while **redundant power supply units and system fans** eliminate single points of hardware failure
- Maximize your return on investment while accommodating more demanding business needs by flexibly adding **SSD cache** to lower down latency and boost read/write speeds⁶



Synology Backup Solutions

DSM backup solutions are designed to be low-maintenance and efficient, delivering low RPO and RTO targets and offering a large selection of backup destinations for a variety of workloads.

Engineered for Data and Service Availability

Built-in solutions help maintain high system availability and facilitate fast recovery if a disaster or major outage occurs.

- **Synology High Availability** provides fast failover between two identical SA6400 units to keep services online when disaster strikes
- **Snapshot Replication** provides schedulable, near-instantaneous data protection with version control, ensuring that documents in shared folders and LUNs remain safe and available¹
- **Hyper Backup** protects your Synology system by backing up data and configurations to multiple destinations, including the secure **C2 Storage** public cloud,⁷ with efficiency delivered by built-in deduplication, integrity checks, compression, and versioning
- Protect full VMware® vSphere™ and Microsoft® Hyper-V® deployments with agentless virtual machine backup in **Synology Active Backup for Business**



Synology Productivity Suite

A powerful and secure private cloud solution that lets teams collaborate, sync files, and communicate with others anytime, anywhere.

Seamless Collaboration and Powerful Sharing Tools

Synology's **collaboration suite** provides a private cloud solution for on-site and remote workers to concurrently edit documents, share files, manage emails, send instant messages, and more.

- **Synology Drive** supports file sharing, remote data access, cross-device and cross-site synchronization, on-demand file restoration, and backup
- **Synology Office** extension lets users collaborate on documents, spreadsheets, and presentation slides in real time, supported by convenient options such as file versioning for easy restoration and password protection
- **Synology Chat** brings teams together with one-on-one chats, group chats, and encrypted private channels over multiple platforms
- **Synology MailPlus**⁸ provides a secure, reliable, and private email server
- **Synology Calendar** helps teams keep track of what is most important with convenient calendar sharing and scheduling
- **Synology Hybrid Share** combines reliable on-premises storage and efficient syncing of shared folders in the cloud to enable seamless cross-site synchronization and local access at LAN speed⁷



Flexible Virtualization

Whether providing VM storage through iSCSI and NFS or running VMs directly on the SA6400 using Virtual Machine Manager, Synology DSM provides comprehensive tools to protect your VMs.

Certified Virtualization Storage and Containerization

SA6400 can serve as **virtual machine storage**, VM backup server, and elastic container and VM host. It is fully certified as storage for VMware[®] vSphere™, Microsoft[®] Hyper-V[®], Citrix[®] XenServer™, and OpenStack environments.

- **Synology Storage Console** for VMware or Windows platforms lets you manage VM storage components directly from your hypervisor. VMware VAAI integration and Windows ODX help offload storage operations and speed up data transfer
- **Host lightweight containers and VMs** for testing, sandboxing, and emergency recovery purposes with **Docker** and **Synology Virtual Machine Manager**, a native hypervisor that supports Windows, Linux, and virtualized versions of DSM⁹



Backed by Synology's 5-Year Limited Warranty

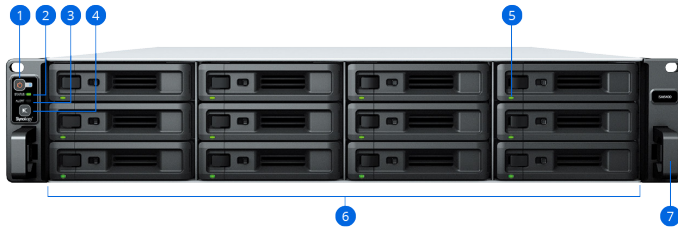
Maximize your return on investment with the comprehensive hardware replacement and premium technical support services offered under Synology's 5-year limited hardware warranty.⁵

Synology Has You Covered

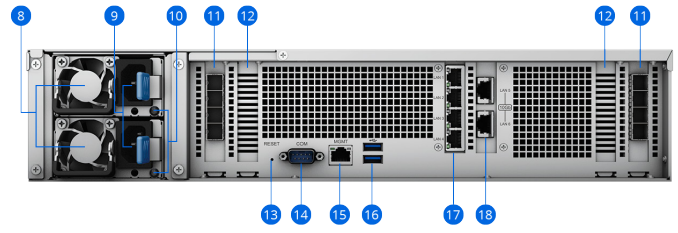
Keep your business running with the technical support services included in Synology's 5-year limited warranty⁵

Hardware Overview

Front



Rear



1	Power Button and Indicator	2	Status Indicator	3	Alert Indicator	4	Mute Button
5	Drive Status Indicators	6	Drive Trays	7	Rail Kit Release Tabs	8	PSU Fans
9	Power Ports	10	PSU Indicators	11	Expansion Ports	12	PCI Express Expansion Slots
13	RESET Button	14	Console Port	15	Management Port	16	USB 3.2 Gen 1 Ports
17	1GbE RJ-45 Ports	18	10GbE RJ-45 Ports				

Technical Specifications

Hardware

CPU	AMD EPYC™ 7272 12-core (24-thread) 2.9 GHz, max boost clock up to 3.2 GHz
Hardware encryption	AES-NI
Memory	32 GB DDR4 ECC RDIMM (expandable up to 1,024 GB)
Compatible drive types	<ul style="list-style-type: none"> • 12 x 2.5" or 3.5" Synology SATA HDD/SSD (drives not included) • Synology only guarantees full functionality, reliability, and performance for Synology drives listed on the compatibility list. The use of non-validated components may limit certain functionality and result in data loss and system instability⁰
Hot swappable drives	Yes
External ports	<ul style="list-style-type: none"> • 2 x USB 3.2 Gen 1 ports • 8 x Expansion ports (Mini-SAS HD)
Form factor	Rackmount 2U
Size (HxWxD)	<ul style="list-style-type: none"> • 88 x 430.5 x 692 mm • 88 x 482 x 724 mm (with server handles)
Weight	16.5 kg
LAN ports	<ul style="list-style-type: none"> • 1 x 1GbE RJ-45 (out-of-band management and data transfer) • 4 x 1GbE RJ-45 (data transfer) • 2 x 10GbE RJ-45
Wake on LAN/WAN	Yes (only on 1GbE ports)
PCIe expansion	<ul style="list-style-type: none"> • 2 x 8 width slot, Gen 3.0 x8 lanes • Supports network interface cards⁴
Scheduled power on/off	Yes
System fans	4 x (80 x 80 x 38 mm)
AC input power voltage	100 V to 240 V AC
Power frequency	50/60 Hz, single phase
Operating environment	<ul style="list-style-type: none"> • Temperature: 0°C to 35°C (32°F to 95°F) • Relative humidity: 8% to 80% RH
Storage environment	<ul style="list-style-type: none"> • Temperature: -20°C to 60°C (-5°F to 140°F) • Relative humidity: 5% to 95% RH
Maximum operating altitude	5,000 m (16,400 ft)

General DSM Specifications

Networking protocols	SMB, AFP, NFS, FTP, WebDAV, CalDAV, iSCSI, Telnet, SSH, SNMP, and VPN (PPTP, OpenVPN™, L2TP)
File systems	<ul style="list-style-type: none"> Internal: Btrfs, ext4 External: Btrfs, ext4, ext3, FAT32, NTFS, HFS+, exFAT
Supported RAID types	Synology RAID F1, Basic, JBOD, RAID 0, RAID 1, RAID 5, RAID 6, and RAID 10
Storage management	<ul style="list-style-type: none"> Max. single volume size: 1 PB/200 TB¹ Max. number of system snapshots: 65,535¹¹ Max. number of internal volumes: 256
SSD cache ⁶	<ul style="list-style-type: none"> Read/write cache support M.2 NVMe and 2.5" SATA SSD support
Out-of-band (OOB) management	Power on, shutdown, force shutdown, force reboot, reset system, view DSM logs, monitor DSM logs, view OOB log
File sharing capabilities	<ul style="list-style-type: none"> Max. number of local user accounts: 16,000 Max. number of local groups: 512 Max. number of shared folders: 512 Max. number of concurrent SMB/NFS/AFP/FTP connections: 8,000 (10,000 with RAM expansion)¹²
Privileges	Windows® Access Control List (ACL) and application privileges
Directory services	Connects with Windows® AD/LDAP servers enabling domain users to login via SMB/NFS/AFP/FTP/File Station using their existing credentials
Virtualization	VMware® vSphere™, Microsoft® Hyper-V®, Citrix® XenServer™, OpenStack, and Kubernetes
Security	Firewall, shared folder encryption, SMB encryption, FTP over SSL/TLS, SFTP, rsync over SSH, login auto block, Let's Encrypt support, and HTTPS (customizable cipher suite)
Supported browsers	Google Chrome®, Firefox®, Microsoft Edge®, Safari® 13 and later, and Safari (iOS 13.0 and later) on iPad, Chrome (Android™ 11.0 and later) on tablets
Interface languages	English, Deutsch, Français, Italiano, Español, Dansk, Norsk, Svensk, Nederlands, Русский, Polski, Magyar, Português do Brasil, Português Europeu, Türkçe, Český, ไทย, 日本語, 한국어, 繁體中文, 简体中文

Packages and Applications

File Server & Synchronization	
Drive	Synchronizes files across Windows®, macOS®, Linux®, Android™, and iOS. The built-in cross-platform portal allows access to data anytime and anywhere <ul style="list-style-type: none"> Max. number of hosted files: 100,000,000 Max. number of concurrent connections for PC clients: 2,000
File Station	Provides virtual drives, remote folders, Windows® ACL editor, compression/extraction of archived files, bandwidth control for specific users/groups, creation of sharing links, and transfer logs
Hybrid Share ⁷	Efficiently synchronizes files across sites by keeping shared data on Synology C2 Storage and streaming files to Synology NAS worldwide on request. Frequently requested files are cached at each site for low-latency access
FTP Server	Supports bandwidth control for TCP connections, custom FTP passive port ranges, anonymous FTP, FTP over TLS/SSL and SFTP protocols, network booting with TFTP and PXE support, and transfer logs
Presto File Server ¹³	Enables high-speed data transfer over WAN between Synology NAS and desktop platforms through the exclusive SITA technology
Cloud Sync	Offers one or two-way synchronization with public cloud storage providers including Alibaba Cloud OSS, Backblaze B2, Baidu Cloud, Box, Dropbox, Google Cloud Storage, Google Drive, hubiC, MegaDisk, Microsoft OneDrive, OpenStack Swift-compatible storage, Tencent COS, WebDAV servers, and Yandex Disk
Universal Search	Search through files, metadata, and more on your NAS. Integration with Windows Search and macOS Spotlight makes it easy to find files
Migration Assistant	Migrates data, system setting, and applications seamlessly from one Synology NAS to another to ensure maximum service availability
SAN Storage & Virtualization	
SAN Manager	<ul style="list-style-type: none"> Max. number of iSCSI targets: 256 Max. number of LUNs: 512 LUN Clone/Snapshot, Windows ODX support
Virtual Machine Manager ⁹	Supports running Windows®, Linux®, and Virtual DSM-based virtual machines on Synology NAS
Data Protection & Backup Solution	
Hyper Backup	Supports local backup, network backup, and data backup to other servers and public clouds, including C2 Storage

Backup tools	<ul style="list-style-type: none"> • DSM configuration backup, macOS® Time Machine® support, Synology Drive Client desktop application • Shared folder sync supports a maximum of 32 tasks
Snapshot Replication	<ul style="list-style-type: none"> • Max. number of snapshots for shared folders: 1,024 • Max. number of replications: 64
Synology High Availability	Reduces service downtime by combining two identical NAS into a high-availability cluster
Active Backup for Business	An all-in-one backup solution designed for heterogeneous business IT environments. It enables IT admins to remotely manage and protect PCs, servers, Synology systems, and VMs from one centralized console
Active Backup for Google Workspace	Supports backup and restoration of Google Workspace My Drive, Team Drive, Gmail, Contacts, and Calendar
Active Backup for Microsoft 365	Supports backup and restoration of Microsoft 365 OneDrive for Business, Outlook, Contacts, and Calendar
Productivity & Collaboration	
Collaboration tools	<p>Collaborate with instant messaging service Synology Chat, online documents editor Synology Office, and scheduling assistant Synology Calendar</p> <ul style="list-style-type: none"> • Max. number of concurrent users for Chat: 1,500 • Max. number of users for Office: 3,400 • Calendar supports CalDAV and access via mobile devices
Note Station	A note taking platform that supports rich text, note organization and versioning, encryption, sharing, media embedding, and attachments
Synology MailPlus Server®	A secure, reliable, and private mail solution featuring high-availability, load balancing, security, and filtering options
Synology MailPlus	An intuitive webmail interface for Synology MailPlus Server with configurable mail labels, filters, and user interface
Multimedia	
Synology Photos	An efficient photo management solution for professional and amateur photographers. Automated tools allow users to group, filter, organize, and share content while keeping their photos safe and secure
Other packages	Video Station, Audio Station, and iTunes® Server
Surveillance	
Surveillance Station ¹⁴	Suggested maximum IP cameras: 300, for a total of 9000 FPS at 720p (H.265)
Management & Administration	
Synology Directory Server	Provides a flexible and cost-effective domain controller solution
Central Management System	Provides a single interface to manage and monitor multiple Synology NAS
VPN Server	<ul style="list-style-type: none"> • Maximum connections: 60 • Supported VPN protocols: PPTP, OpenVPN™, L2TP/IPSec
Active Insight ¹⁵	Monitor health statistics, login activity, and backup statuses for your Synology servers worldwide, and receive notifications and advice from our centralized cloud-hosted management platform
Storage Analyzer	Displays volume and quota usage, total size of files, volume usage and trends based on past usage, size of shared folders, large files, most recently modified files, and least recently accessed files
Antivirus Essential	Provides full system scans, scheduled scans, white list customization, and auto-update of virus definitions
Web Station	Enables hosting for up to 30 websites with support for PHP/MariaDB® and 3rd-party applications
Other packages	DNS Server, RADIUS Server, and Log Center
Others	
iOS/Android™ applications	Synology Drive, Synology MailPlus, Synology Secure SignIn, Synology Chat, Synology LiveCam, Synology Active Insight, DS cam, DS file, DS finder, and DS note
Other packages	Additional 3rd-party packages are available in the Package Center
Environment and Packaging	
Environment safety	RoHS compliant
Package contents	<ul style="list-style-type: none"> • 1 x SA6400 main unit • 1 x Quick Installation Guide • 1 x Accessory pack • 2 x AC power cord
Optional accessories ¹⁶	<ul style="list-style-type: none"> • DDR4 RDIMM: D4ER01-32G / D4ER01-64G • Expansion Unit: RX1223RP • 10GbE Network Interface Card: E10G21-F2 / E10G18-T2 / E10G18-T1 • 25GbE Network Interface Card: E25G21-F2 • M.2 SSD & 10GbE Combo Adapter Card: E10M20-T1

- M.2 SSD Adapter Card: M2D20
- NVMe SSD: SNV3500 series / SNV3510 series
- 2.5" SATA SSD: SAT5200 series / SAT5210 series
- 3.5" SATA HDD: HAT5300 series / HAT5310 series
- Sliding Rail Kit: RKS-02
- MailPlus License Pack⁸
- Surveillance Device License Pack¹⁴
- Virtual DSM License Pack⁹

Warranty

5 years⁵

Note: Specifications are subject to change without notice. Please refer to the unit's [specifications page](#) for the most up to date information.

1. Volumes between 200 TB and 1 PB make use of the Btrfs (Peta Volume) file system and support a limited selection of applications, services, and configurations. Snapshot Replication, shared folder encryption, file compression, and other functions are not available for volumes over 200 TB. For more information and restrictions, refer to [this article](#).
2. Synology SA6400 supports up to 108 drives with eight [Synology RX1223RP](#) expansion units, sold separately.
3. Performance figures obtained through internal testing by Synology. Actual performance may vary depending on the testing environment, usage, and configuration. See [performance charts](#) for more information.
4. For the most up-to-date list of compatible NICs, please check our [compatibility list](#).
5. The warranty period starts from the date of purchase as stated on your purchase receipt. [Learn more](#) about our limited product warranty policy.
6. SSD cache can be enabled by using Synology SAT5200 2.5" SSDs in standard drive bays or without occupying drive bays by installing Synology SNV3500 NVMe SSDs using M2D20 or E10M20-T1 adapter cards, sold separately.
7. C2 Storage for Hyper Backup and Hybrid Share requires purchase of an annual or monthly [subscription](#). A free trial is available for each newly registered device.
8. Five MailPlus email accounts are included. Additional email accounts can be added with the purchase of Synology MailPlus License Packs. [Learn more](#).
9. Certain advanced features require [Virtual Machine Manager Pro](#). One Virtual DSM license is included. Additional Virtual DSM instances require the purchase of [Virtual DSM Licenses](#).
10. Check our [compatibility list](#) for supported drives.
11. System snapshots include snapshots taken by SAN Manager, Snapshot Replication, and Virtual Machine Manager.
12. Maximum concurrent connections can be increased to 10,000 with maximum installed memory of 1,024 GB RAM.
13. Presto File Server license can be purchased separately through the application.
14. Surveillance Station includes two free licenses. Connecting more cameras and devices requires additional licenses. [Learn more](#).
15. Synology Active Insight is currently in Beta with all features available for evaluation. Certain functionalities may require a subscription upon official release.
16. Please refer to our [compatibility list](#) for the latest optional accessories list.

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