

Datasheet



High Scalability

SA3400D

Synology

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SA3400D



Resilient and Dependable Servers for Businesses

Designed for reliable data storage, the dual-controller Synology SA3400D provides a cost-effective and compact high-availability solution for businesses of all sizes. With up to 192 TB of raw storage capacity (576 TB when fully expanded), this 12-bay enterprise server is equally suitable for file and block storage.

Advanced data management and backup solutions for physical endpoints, VMs, and SaaS applications are all available in the Synology DiskStation Manager (DSM) operating system.

- **Enterprise-class Performance**
Handles data-intensive applications with over 3,500/2,900 MB/s sequential read/write throughput¹
- **High Service Availability**
Two controller nodes in an active-passive configuration support minute-level failover, minimizing downtime
- **Built-in Data Protection Solutions**
Safeguard data with Snapshot Replication, Hyper Backup, and Active Backup Suite
- **Flexible Expansion Options**
Triple total storage capacity by adding up to two Synology RXD1219sas Expansion Units for 36 total drive bays²
- **Long-Term Support**
Backed by Synology's 5-year limited warranty³

Efficient High Availability Server Solution

The SA3400D is engineered with high service uptime in mind, with a redundant controller module ready to take over all data and service tasks in case of planned or unplanned downtime on the primary module. The dual controller modules are connected in an active-passive configuration via reliable and high-speed Non-Transparent Bridge (NTB). This allows for memory and cache protection whereby all data is synced from the active to the passive node, enabling efficient minute-level failover.

- **Hot-swappable dual power supplies** further reduce single points of hardware failure
- Built-in **dual 1GbE RJ-45 ports and a 10GbE RJ-45 port** (per controller) make it easy to fit the SA3400D into existing fast networks, while a **PCIe 3.0 expansion slot** (per controller) supports 10/25GbE and Fibre Channel cards⁴ for bandwidth-consuming applications
- Twelve bays for 3.5"/2.5" SAS drives can be scaled up to 36 bays with 2 additional Synology RXD1219sas Expansion Units²
- Support for **hybrid storage arrays** allows combining the speed of SSD and efficiency of HDD by designating **SAS SSD volumes as read/write cache for HDD volumes** to cut down I/O speeds and latency⁵

Data Storage and Recovery Made Easy

Solutions included with Synology DSM help protect data and configurations on your Synology system and back up and restore all your devices, VMs, and cloud applications.

- **Snapshot Replication** provides schedulable, near-instantaneous data protection with version control, ensuring that data stored in shared folders and LUNs remain safe and available
- **Hyper Backup** protects your Synology system by backing up data and configurations to multiple destinations, including the secure **C2 Storage** public cloud,⁶ with efficiency delivered by built-in deduplication, integrity checks, compression, and versioning
- **Synology Active Backup Suite** lets you consolidate protection of Windows clients and servers, Linux endpoints, Synology systems, VMware[®] and Hyper-V[®] VMs, and SaaS applications, maximizing storage efficiency with data deduplication technology

Powerful Sharing and Collaboration Tools

Synology's productivity solutions and file protocols enable on-site and remote workers to access company data, edit documents, share files, manage emails, send instant messages, and more, on a private cloud solution.

- **Synology Drive** supports file sharing, remote data access, cross-device and cross-site synchronization, on-demand file restoration, and backup
- **Synology Office** 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 of shared files
- **Synology Chat** brings teams together with one-on-one chats, group chats, and encrypted private channels over multiple platforms
- **Synology MailPlus⁷** provides a secure, reliable, and private email server
- **Synology Calendar** helps teams keep track of priorities 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 speed⁶
- **SMB and NFS protocol support** allow teams to access data over local networks or VPN and manage data access privileges via Active Directory/LDAP integration

Certified SAN Storage for Virtualization and Containerization

Leverage your Synology system as **virtual machine storage**, VM backup server, and alternative container or VM host. The SA3400D is 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 Container Manager and Synology Virtual Machine Manager, a native hypervisor that supports Windows, Linux, and virtual versions of DSM⁸

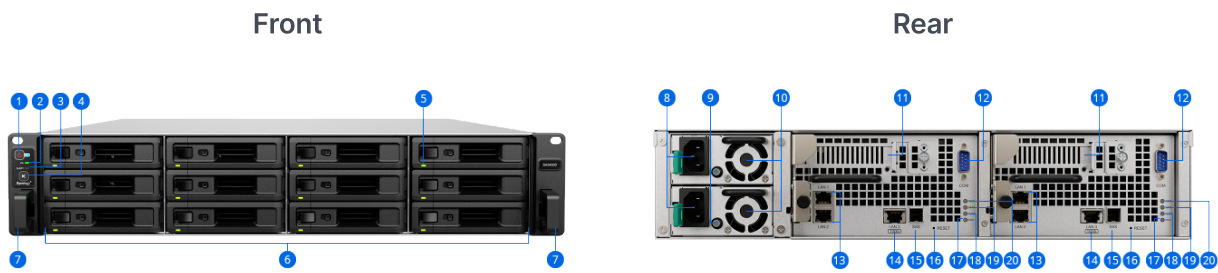
Backed by Synology's 5-Year Limited Warranty

Maximize your return on investment with the comprehensive hardware replacement and premium technical support services offered under Synology's 5-year limited hardware warranty.³

Notes:

1. Performance figures obtained through internal testing by Synology using a RAID 6 configuration. Actual performance may vary depending on the testing environment, usage, and configuration. See [performance charts](#) for more information.
2. The SA3400D supports up to 36 drives with two RXD1219sas expansion units, sold separately.
3. The warranty period starts from the date of purchase as stated on your purchase receipt. [Learn more](#) about our limited product warranty policy.
4. For the most up-to-date list of compatible NICs and HBAs, please check our [compatibility list](#).
5. SSD cache volumes store frequently accessed data from conventional HDD volumes to reduce I/O latency and improve system performance. To find out which SAS SSDs are supported, please check our [compatibility list](#).
6. 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.
7. Five MailPlus email accounts are included. Additional email accounts can be added with the purchase of Synology MailPlus License Packs. [Learn more](#)
8. 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](#).

Hardware Overview



| No. | Name | No. | Name |
|-----|------------------------------------|-----|-----------------------------|
| 1. | Power button and indicator | 11. | PCI Express Expansion Slots |
| 2. | High Availability Status Indicator | 12. | Console Ports |
| 3. | Alert Indicator | 13. | 1GbE RJ-45 Ports |
| 4. | Mute Button | 14. | 10GbE RJ-45 Ports |
| 5. | Drive Status Indicators | 15. | Expansion Ports |
| 6. | Drive Trays | 16. | Reset Buttons |
| 7. | Rail Kit Release Tabs | 17. | Remove Indicators |
| 8. | Power Ports | 18. | Alert Indicators |
| 9. | PSU Indicators | 19. | Status Indicators |
| 10. | PSU Fans | 20. | Power Indicators |

Technical Specifications

Hardware

Controller

| | |
|-----------------------------|---|
| Number of Controller Module | 2 |
|-----------------------------|---|

CPU

| | |
|----------------------------|------------------------------|
| CPU Model | Intel Xeon D-1541 |
| CPU Quantity | 1 (per controller) |
| CPU Core | 8 |
| CPU Architecture | 64-bit |
| CPU Frequency | 2.1 (base) / 2.7 (turbo) GHz |
| Hardware Encryption Engine | Yes |

Memory

| | |
|-----------------------------|---|
| System Memory | 8 GB DDR4 ECC UDIMM (per controller) |
| Memory Module Pre-installed | 8 GB (8 GB x 1) (per controller) |
| Total Memory Slots | 4 (per controller) |
| Maximum Memory Capacity | 64 GB (16 GB x 4) (per controller) |
| Notes | Please select Synology memory modules for optimum compatibility and reliability. Synology will not provide complete product warranty or technical support if non-Synology memory modules are used for memory expansion. |

Storage

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|--|---|
| Drive Bays | 12 |
| Maximum Drive Bays with Expansion Unit | 36 (RXD1219sas x 2) |
| Drive Type | <ul style="list-style-type: none">• 3.5" dual-port SAS HDD• 2.5" dual-port SAS SSD |
| Hot Swappable Drive | Yes |

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| Notes | 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 instability. |
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External Ports

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|----------------------|--------------------|
| RJ-45 1GbE LAN Port | 2 (per controller) |
| RJ-45 10GbE LAN Port | 1 (per controller) |
| Expansion Port | 1 (per controller) |

PCIe

| | |
|----------------|---|
| PCIe Expansion | 1 x Gen3 ×8 slot (x8 link) (per controller) |
|----------------|---|

Appearance

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|-------------------------------|---|
| Form Factor (RU) | 2U |
| Size (Height x Width x Depth) | 88 mm x 482 mm x 724 mm |
| Weight | 19.7 kg |
| Rack Installation Support | 4-post 19" rack (Synology Rail Kit - RKS-02) |
| Notes | The rail kit is sold separately |

Others

| | |
|------------------------|-------------------------------|
| System Fan | 60 mm x 60 mm x 51 mm x 2 pcs |
| AC Input Power Voltage | 100V to 240V AC |
| Power Frequency | 50/60 Hz, Single Phase |

Temperature

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|----------------------------|-------------------------------|
| Operating Temperature | 0°C to 35°C (32°F to 95°F) |
| Storage Temperature | -20°C to 60°C (-5°F to 140°F) |
| Relative Humidity | 5% to 95% RH |
| Maximum Operating Altitude | 5,000 m |

General DSM Specifications

Storage Management

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|---|---|
| Maximum Single Volume Size | <ul style="list-style-type: none">• 200 TB (32 GB memory required)• 108 TB |
| Maximum Internal Volume Number | 64 |
| SSD Read/Write Cache (Determining cache size) | Yes |
| Supported RAID Type | RAID F1,Basic,JBOD,RAID 0,RAID 1,RAID 5,RAID 6,RAID 10 |
| Notes | <ul style="list-style-type: none">• Volumes over 108 TB require 32 GB of memory or more.• Actual maximum storage pool and volume sizes depend on drive sizes used, the number of drive bays available, and the RAID configuration.• 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. |

File System

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|-----------------|------------|
| Internal Drives | Btrfs,ext4 |
|-----------------|------------|

File Services

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|---|------------------------------|
| File Protocol | SMB,AFP,NFS,FTP,WebDAV,Rsync |
| Maximum Number of SMB Connections (FSCT-Based) with RAM Expansion | 1,400 |
| Windows Access Control List (ACL) Integration | Yes |
| NFS Kerberos Authentication | Yes |

Account & Shared Folder

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|----------------------------------|-------|
| Maximum Local User Accounts | 5,120 |
| Maximum Local Groups | 512 |
| Maximum Shared Folder | 512 |
| Maximum Shared Folder Sync Tasks | 32 |

Virtualization

| | |
|--------------------------|-----|
| VMware ESXi 6.5 and VAAI | Yes |
| Windows Server 2022 | Yes |
| Citrix Ready | Yes |
| OpenStack | Yes |

Security

Firewall, encryption shared folder, SMB encryption, FTP over SSL/TLS, SFTP, rsync over SSH, login auto block, Let's Encrypt support, HTTPS (customizable cipher suite)

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, Русский, Polski, Magyar, Português do Brasil, Português Europeu, Türkçe, Český, ภาษาไทย, 日本語, 한국어, 繁體中文, 简体中文 |
| Notes | For an updated list of supported browser versions, check the DSM Technical Specifications . |

Packages and Applications

Synology Drive

Synchronizes files across Windows®, macOS®, Linux®, Android™ and iOS. The built-in cross-platform portal allows access to data anytime and anywhere

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|--------------------------------|--|
| Maximum Number of Users | 2,600 |
| Maximum Number of Hosted Files | 25,000,000 (applies to files indexed or hosted by Synology Drive . For file access through other standard protocols, refer to the File Services section above) |

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

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 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.

SAN Manager

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| Maximum iSCSI Target Number | 128 |
| Maximum LUN | 256 |
| LUN Clone/Snapshot, Windows ODX | Yes |

Virtual Machine Manager

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|--|-----------------------------------|
| Recommended Virtual Machine Instances | 16 (Learn more) |
| Recommended Virtual DSM Number (Licenses required) | 16 (including 1 Free License) |

Hyper Backup

Supports local backup, network backup, and data backup to other servers and public clouds, including C2 Storage

Snapshot Replication

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|-------------------------------------|--------|
| Maximum Snapshots per Shared Folder | 512 |
| Maximum of System Snapshots | 16,384 |

Synology High Availability

Reduces service downtime by combining two identical NAS into a high-availability cluster

Synology Chat

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|-------------------------|-----|
| Maximum Number of Users | 500 |
|-------------------------|-----|

Synology Office

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|-------------------------|-------|
| Maximum Number of Users | 2,600 |
|-------------------------|-------|

Synology MailPlus / MailPlus Server

A secure, reliable, and private mail solution featuring high-availability, load balancing, security, and filtering options

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|---------------------|--|
| Free Email Accounts | 5 (Additional accounts require purchase of licenses) |
|---------------------|--|

| | |
|-------------------------|-------|
| Maximum Number of Users | 3,100 |
|-------------------------|-------|

Surveillance Station

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| Default Licenses | 2 (Additional cameras require purchase of licenses) |
|------------------|---|

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|--|--|
| Suggested Maximum IP Cameras and Total FPS (H.264) | <ul style="list-style-type: none">• 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) | <ul style="list-style-type: none">• 1080p: 200 channels, 6000 FPS• 3M: 160 channels, 2800 FPS• 5M: 160 channels, 1600 FPS• 4K: 120 channels, 1200 FPS |
|--|--|

Central Management System

Provides a single interface to manage and monitor multiple Synology NAS

VPN Server

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|---------------------|----|
| Maximum Connections | 32 |
|---------------------|----|

Other packages

Additional 3rd-party packages are available in the Package Center

Environment & Packaging

Environment safety

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|----------------|
| RoHS Compliant |
|----------------|

Packaging Content

- Main Unit X 1
 - Accessory Pack X 1
 - AC Power Cord X 2
 - Quick Installation Guide X 1
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Optional Accessories

- DDR4 ECC UDIMM: [D4EC-2666-8G/D4EC-2666-16G](#)
 - Expansion Units: [RXD1219sas](#)
 - Enterprise Series 3.5" SAS HDD: [HAS5300 Series](#)
 - 25GbE Network Interface Card: [E25G30-F2](#)
 - 10GbE Network Interface Card: [E10G30-F2/E10G30-T2/E10G18-T1](#)
 - Rail Kit Sliding: [RKS-02](#)
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Notes

For multi-module memory configurations, all modules must be identical and share the same model number. Check the [Product Manual](#) of your Synology product for recommended memory configurations.

Warranty

5 Years

Notes

The warranty period starts from the purchase date as stated on your purchase receipt. ([Learn more](#))

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