

Product Specifications

FS6420

Synology

Hardware Specs

CPU	
CPU Model	AMD EPYC 7303
CPU Quantity	1
CPU Cores	16
CPU Threads	32
CPU Architecture	64-bit
CPU Frequency	2.4 (base) / 3.4 (turbo) GHz
Hardware Encryption Engine	v

Memory	
System Memory	64 GB DDR4 ECC RDIMM
Memory Module Pre-installed	64 GB (64 GB × 1)
Total Memory Slots	16
Maximum Memory Capacity	1024 GB (64 GB × 16)
Notes	• Synology may revise pre-installed memory module specifications in response to component lifecycle and supply conditions. All revised components undergo the same rigorous validation to ensure equivalent compatibility, stability, and performance. • 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. • 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.

Storage	
Drive Bays (See all supported drives)	24 × 2.5" SATA SSD
Hot Swappable Drive*	v
Notes	• Compatible drives are mandatory. Please consult our compatibility list before purchasing hard drives. For more details, please refer to this article. • SSD cache can be enabled with select compatible SSD. See the compatibility list for model-specific support and details. SSDs are sold separately.

External Ports

RJ-45 10GbE LAN Port	2
Out-of-Band Management LAN Port	1
USB 3.2 Gen 1 Port	2

PCIe

PCIe Expansion	2 × Gen4 ×16 slot (x16 link)
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Appearance

Form Factor (RU)	2U
Size (Height × Width × Depth)	88 mm × 482 mm × 724 mm
Weight	15.5 kg
Rack Installation Support*	4-post 19" rack (Synology Rail Kit - RKS-02)
Notes	The rail kit is sold separately

Others	
System Fan	80 mm × 80 mm × 4 pcs
Fan Speed Mode	• Full-Speed Mode • Cool Mode • Quiet Mode
Easy Replacement System Fan	v
Power Recovery	v
Noise Level	53.0 dB(A)
Scheduled Power On / Off	v
Wake on LAN / WAN	v
Power Supply Unit / Adapter	550 watts
Redundant Power Supply	v
AC Input Power Voltage	100V to 240V AC
Power Frequency	50/60 Hz, Single Phase
Power Consumption	164.74 watts (Access)
British Thermal Unit	561.76 BTU/hr (Access)
Notes	• For more information on how power consumption is measured, refer to this article. • Noise testing was conducted with the Synology system fully installed with Synology SATA SSDs and in an idle state. Two G.R.A.S. type 40AE microphones were placed at a 1 m distance from the front and rear of the device. Background noise: 16.49-17.51 dB(A); Temperature: 24.25-25.75°C; Humidity: 58.2-61.8%.

Temperature

Operating Temperature	0°C to 35°C (32°F to 95°F)
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Storage Temperature	-20°C to 60°C (-5°F to 140°F)
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Operating Humidity	8% to 80% RH
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Storage Humidity	5% to 95% RH
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Certification

- FCC
- CE
- BSMI
- VCCI
- RCM
- UKCA
- EAC
- CCC
- KC
- BIS
- UL

Warranty

5 Years

Notes	The warranty period starts from the purchase date as stated on your purchase receipt. (Learn more)
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Environment

RoHS Compliant

Packaging Content

- Main Unit × 1
- Accessory Pack × 1
- C13 to C14 power cord × 2
- Front Cover × 1

Optional Accessories

- DDR4 ECC RDIMM: [D4ER02-64G](#)
- Enterprise Series 2.5" SATA SSD: [SAT5200 Series](#)
- 25GbE Network Interface Card: [E25G30-F2](#)
- 10GbE Network Interface Card: [E10G30-F2/E10G30-T2/E10G30-T1](#)
- Rail Kit Sliding: [RKS-02](#)

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.

Software Specs

DSM Specifications

Storage Management

Maximum Single Volume Size	• 1 PB (for RAID 6 groups only) • 200 TB • 108 TB
Maximum Internal Volume Number	32
SSD Read/Write Cache (Determining cache size)	v
SSD TRIM	v
Storage Efficiency	v
RAID Group	v
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	• Volumes over 108 TB require 32 GB of memory or more. • Certain conditions are required to support a 1 PB volume. Please refer to this article for more information. • 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. • Storage efficiency helps reduce storage space consumption through deduplication and compression. For more information about this feature and its support requirements, please refer to this article.

File System

Internal Drives	• Btrfs
External Drives	• Btrfs • ext4 • ext3 • FAT32 • NTFS • HFS+ • exFAT

File Services

File Protocol	• SMB • AFP • NFS • FTP • WebDAV • Rsync
Maximum Number of SMB Connections (FSCT-Based)	10,000
Windows Access Control List (ACL) Integration	v
NFS Kerberos Authentication	v
Notes	• Connection value of this model is tested with Synology SATA SSD fully populated and up to four 10GbE network ports • Models with expandable memory are tested with the maximum supported quantity installed. • SMB performance was evaluated using Microsoft File Server Capacity Tool (FSCT) version 1.3, with the following configuration: ◦ Test workload: HomeFolder scenario provided by the FSCT tool ◦ Test duration: 600 seconds ◦ Domain controller & FSCT controller: Windows Server 2022 ◦ FSCT clients: 8 × Windows 10 machines ◦ SMB feature: Directory leasing enabled

Account & Shared Folder

Maximum Local User Accounts	15,360
Maximum Local Groups	512
Maximum Shared Folder	512
Maximum Shared Folder Sync Tasks	32

Hybrid Share

Maximum Hybrid Share Folders	30
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Hyper Backup

Folder and Package Backup	v
Entire System Backup	v

High Availability

Synology High Availability	v
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Log Center

Syslog Events per Second	3,000
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Virtualization	
VMware vSphere	ESXi 8.0 U2, ESXi 8.0 U1, ESXi 8.0, ESXi 7.0 U3, ESXi 7.0 U2, ESXi 7.0 U1, ESXi 7.0, ESXi 6.7 U3, ESXi 6.7 U2, ESXi 6.7 U1, ESXi 6.7, ESXi 6.5 U3, ESXi 6.5 U2, ESXi 6.5 U1, ESXi 6.5
Microsoft Hyper-V	Windows Server 2025
Citrix XenServer	XenServer 8.4, XenServer 8, Citrix Hypervisor 8.2 LTSR CU1
OpenStack	Cinder

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 .

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

Central Management System
v

Synology AI Console

Third-Party AI Model Integration	v
Maximum De-Identification Rate	12,000 words per second
Notes	- De-identification performance measurement: Filters for Credit Card Numbers, IBAN, Individual Taxpayer Identification Number, SSN, and Names applied to a 4,355-word English text. - To enable de-identification, your device must have at least 8 GB of memory and Container Manager installed.

Synology Chat

Maximum Number of 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 the maximum supported quantity installed.

SAN Manager

Maximum iSCSI Target Number	256
Maximum LUN	512
LUN Clone/Snapshot, Windows ODX	v

Synology MailPlus / MailPlus Server

Free Email Accounts	5 (Additional accounts require purchase of licenses)
Maximum Number of Users	25,000
Notes	• The suggested maximum number of users is based on the following workload: 20% of users with a 20,000 item mailbox randomly performing actions and receiving 240 emails per day, and 80% of users receiving 20 emails per day. Learn more • Models with SSD support are tested with a single SSD volume. • Models with expandable memory are tested with the maximum supported quantity installed. Learn more about memory requirements. • Operating in high-availability mode will incur additional overhead. • Features enabled during evaluation: anti-spam, anti-virus, DNSBL, greylist, content scanning, and full-text search (English).

Snapshot Replication

Maximum Snapshots per Shared Folder	1,024
Maximum Snapshots per LUN	256
Maximum Snapshots per System	65,536
Maximum Replication Tasks for Shared Folders	128
Maximum Replication Tasks for LUNs	64
Maximum Replication Tasks per System	128

Surveillance Station

Default Licenses	2 (Additional cameras require purchase of licenses)
Maximum IP Cameras and Total FPS (H.264)	• 1080p: 485 channels, 4850 FPS • 3M: 450 channels, 4500 FPS • 5M: 300 channels, 3000 FPS • 4K: 220 channels, 2200 FPS
Maximum IP Cameras and Total FPS (H.265)	• 1080p: 520 channels, 15600 FPS • 3M: 485 channels, 4850 FPS • 5M: 450 channels, 4500 FPS • 4K: 300 channels, 3000 FPS
Notes	• 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 video channels that can be viewed simultaneously is double the maximum number of cameras for the same codec and resolution. • The values above are based on testing with RTSP streaming. If SRTP is enabled for all cameras, overall performance will decrease to 70% of the stated figures.

Synology Drive

Maximum Number of Users	45,500
Maximum 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	• The suggested maximum number of users is based on the following workload: 20% of users randomly perform file operations (upload, download, move, and delete), and 80% of users are logged in but idle. Learn more • Models with SSD support are tested with a single SSD volume. • Models with expandable memory are tested with the maximum supported quantity installed. • Exceeding the recommended numbers above will not block application operations, but may result in longer response time. • Btrfs file system and non-encrypted shared folders were used during the aforementioned testing.

Synology Office

Maximum Number of Users	39,600
Notes	• The suggested maximum number of users is based on the following workload: 20% of users are executing random actions at an average of 30-second intervals, and 80% of users are logged in and viewing a file. Learn more • Models with SSD support are tested with a single SSD volume. • Models with expandable memory are tested with the maximum supported quantity installed. • 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	32 (Learn more)
Recommended Virtual DSM Number (Licenses required)	32 (including 1 Free License)
Notes	The specifications vary depending on system configuration and memory size.

VPN Server

Maximum Connections	32
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