

Product

FS6400



Hardware Specs

CPU	
CPU Model	Intel Xeon Silver 4110
CPU Quantity	2
CPU Core	8
CPU Architecture	64-bit
CPU Frequency	2.1 (base) / 3.0 (turbo) GHz
Hardware Encryption Engine	v
Memory	
System Memory	32 GB DDR4 ECC RDIMM
Memory Module Pre-installed	32 GB (16 GB x 2)
Total Memory Slots	16
Maximum Memory Capacity	512 GB (32 GB x 16)
Notes	<ul style="list-style-type: none">• Synology reserves the right to replace memory modules with the same or higher frequency based on supplier's product life cycle status. Rest assured that the compatibility and stability have been strictly verified with the same benchmark to ensure identical 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 more information on the recommended memory configurations, visit here.
Storage	
Drive Bays	24

Maximum Drive Bays with Expansion Unit	72 (FX2421 x 2)
Compatible Drive Type* (See all supported drives)	<ul style="list-style-type: none"> • 2.5" SAS HDD • 2.5" SAS SSD • 2.5" SATA SSD
Hot Swappable Drive*	v
Notes	"Compatible drive type" indicates drives that have been tested to be compatible with Synology products. This term does not indicate the maximum connection speed of each drive bay.
External Ports	
RJ-45 1GbE LAN Port	2
RJ-45 10GbE LAN Port	2
USB 3.2 Gen 1 Port*	2
Expansion Port	1
Expansion Port Type	Mini-SAS HD
Notes	The USB 3.0 standard was renamed to USB 3.2 Gen 1 by the USB Implementers Forum (USB-IF) in 2019.
PCIe	
PCIe Expansion	2 x Gen3 x8 slots (x8 link)
Appearance	
Form Factor (RU)	2U
Size (Height x Width x Depth)	88 mm x 482 mm x 724 mm
Weight	17.26 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 x 80 mm x 4 pcs
Fan Speed Mode	<ul style="list-style-type: none"> • Full-Speed Mode • Cool Mode • Quiet Mode
Easy Replacement System Fan	v
Power Recovery	v
Noise Level*	53.7 dB(A)
Scheduled Power On / Off	v
Wake on LAN / WAN	v
Power Supply Unit / Adapter	800 watts
Redundant Power Supply	v
AC Input Power Voltage	100V to 240V AC
Power Frequency	50/60 Hz, Single Phase
Power Consumption	288.49 watts (Access) 145.8 watts (HDD Hibernation)
British Thermal Unit	984.37 BTU/hr (Access) 497.49 BTU/hr (HDD Hibernation)
Notes	<ul style="list-style-type: none"> • Power consumption is measured when it is fully loaded with HGST 1.8TB HUC101818CS4204 hard drive(s). • Noise Level Testing Environment: Fully loaded with Toshiba 600GB AL14SEB060N hard drive(s) in the idle state. Two G.R.A.S. Type 40AE microphones, each set up 1 meter away from the Synology NAS at the front and rear. 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)
Storage Temperature	-20°C to 60°C (-5°F to 140°F)
Relative Humidity	5% to 95% RH

Certification

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

Warranty

5 Years

Notes

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

Environment

RoHS Compliant

Packaging Content

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

Optional Accessories

- DDR4 ECC RDIMM: [D4RD-2666-16G*/D4RD-2666-32G](#)
- Expansion Units: [FX2421*/RX1217sas](#)
- Enterprise Series 2.5" SATA SSD: [SAT5200 Series](#)
- 25GbE Network Interface Card: [E25G30-F2](#)
- 10GbE Network Interface Card: [E10G21-F2/E10G30-T2/E10G18-T1](#)
- Rail Kit Sliding: [RKS-02](#)

Notes

- It is required to use D4RD-2666-16G with identical memory modules of the same capacity and frequency. For more information, visit [here](#).
- Expansion Unit FX2421 can only be used with identical expansion units.

Software Specs

DSM Specifications

Storage Management

Maximum Single Volume Size	<ul style="list-style-type: none">• 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)	v
SSD TRIM	v
RAID Group	v
Supported RAID Type	<ul style="list-style-type: none">• RAID F1• Basic• JBOD• RAID 0• RAID 1• RAID 5• RAID 6• RAID 10
RAID Migration	<ul style="list-style-type: none">• Basic to RAID 1• Basic to RAID 5• RAID 1 to RAID 5• RAID 5 to RAID 6
Volume Expansion with Larger HDDs	<ul style="list-style-type: none">• RAID F1• RAID 1• RAID 5• RAID 6• RAID 10

Volume Expansion by Adding a HDD	<ul style="list-style-type: none"> • RAID F1 • JBOD • RAID 5 • RAID 6
Global Hot Spare Supported RAID Type	<ul style="list-style-type: none"> • RAID F1 • RAID 1 • RAID 5 • RAID 6 • RAID 10
Notes	<ul style="list-style-type: none"> • 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. • Actual maximum storage pool and volume sizes depend on drive sizes used, the number of drive bays available, and the RAID configuration.

File System

Internal Drives	<ul style="list-style-type: none"> • Btrfs • ext4
External Drives	<ul style="list-style-type: none"> • Btrfs • ext4 • ext3 • FAT • NTFS • HFS+ • exFAT
Notes	exFAT Access can be installed for free from Package Center in DSM 7.0. In DSM 6.2 or earlier versions, exFAT Access needs to be purchased in Package Center.

File Services

File Protocol	<ul style="list-style-type: none"> • SMB • AFP • NFS • FTP • WebDAV • Rsync
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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	v
NFS Kerberos Authentication	v
Notes	<ul style="list-style-type: none"> 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
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Hyper Backup

Folder and Package Backup	v
Entire System Backup	v
Notes	Full-system backup requires DSM 7.2 or later.
High Availability	
Synology High Availability	v
Log Center	
Syslog Events per Second	3,000
Virtualization	
VMware ESXi 6.5 and VAAI	v
Windows Server 2016	v
Windows Server 2019	v
Windows Server 2022	v
Citrix Ready	v
OpenStack	v
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	<ul style="list-style-type: none"> • 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](#)

Antivirus by McAfee (Trial)

v

Central Management System

v

Synology Chat

Suggested Maximum Users	6,000
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Suggested Concurrent Users	1,500
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Notes	For tested models with expandable memory, the maximum amount of RAM was installed.
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SAN Manager

Maximum iSCSI Target Number	256
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Maximum LUN	512
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LUN Clone/Snapshot, Windows ODX	v
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Notes	iSCSI Manager has been renamed to SAN Manager in DSM 7.0.
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Synology MailPlus / MailPlus Server

Free Email Accounts	5 (Additional accounts require purchase of licenses)
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Suggested Maximum Users	17,500
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Suggested Concurrent Users	3,500
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Maximum Server Performance	5,721,000 emails per day, approx. 174GB
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Notes

- FS series were installed with 12 SSDs in RAID F1 configuration.
- For tested models with expandable memory, the maximum amount of RAM was installed.
- 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).

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)

- 720p: 520 channels, 15600 FPS
- 1080p: 485 channels, 4850 FPS
- 3M: 450 channels, 4500 FPS
- 5M: 380 channels, 3800 FPS
- 4K: 220 channels, 2200 FPS

Suggested Maximum IP Cameras and Total FPS (H.265)

- 720p: 550 channels, 16500 FPS
- 1080p: 520 channels, 15600 FPS
- 3M: 485 channels, 4850 FPS
- 5M: 450 channels, 4500 FPS
- 4K: 380 channels, 3800 FPS

Notes	<ul style="list-style-type: none"> • 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 maximum number of camera stream outputs is 2 times the suggested maximum number of IP cameras.
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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	<ul style="list-style-type: none"> • Exceeding the recommended numbers above will not block application operations, but may result in longer response time. • Utilizing SSD cache can significantly improve performance. • For tested models with expandable memory, the maximum amount of RAM was installed. • Btrfs file system and non-encrypted shared folders were used during the aforementioned testing.

Synology Office

Suggested Maximum Users	16,250
Suggested Concurrent Users	6,500

Notes

- Multiple files were opened for testing and each file was edited by 30 users simultaneously.
- For tested models with expandable memory, the maximum amount of RAM was 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

60