



DiskStation DS420+



High Performance NAS with SSD Cache Acceleration Capability

Synology DiskStation DS420+ is a network-attached storage solution for smooth data sharing, video streaming, and photo indexing. Two built-in M.2 SSD slots and Synology SSD Cache technology allow you to boost system I/O and application performance.

Highlights

- **Accelerated Application Performance**
Average 15% performance boost to photo indexing and other computing-intensive operations, as well as database response time
- **Reach Optimal Performance and Capacity with SSD Cache**
Built-in M.2 2280 NVMe SSD slots permit cache acceleration without occupying storage drive bays
- **Effortless Data Sharing & Synchronization**
Access, share, and sync your data easily across different operating systems and devices
- **Protect and Restore Data in a Snap**
Back up critical data and reduce your Recovery Time Objective (RTO) with Snapshot Replication
- **Entertaining Multimedia Hub**
Organize and stream music, video, and photo collections across all your devices
- **Anytime, Anywhere**
Freely access files on the go and back up mobile photos with iOS and Android™ apps

Streamline Your Data Management Experience

DS420+ is a powerful 4-bay desktop NAS that brings you a fast and smooth data management experience, as well as over **226 MB/s sequential read** and **225 MB/s sequential write**¹ throughput. It benefits computing-intensive applications, speeding up **Synology Drive** and **Synology Moments**² by an average 15%, and boosting **Web PHP response efficiency** by about 95% compared to its predecessor, for simple and efficient data management.

DS420+ comes with two built-in **M.2 SSD slots** that support **Synology SSD Cache technology**, allowing you to reduce random I/O response time 20 times compared with spinning drives without occupying front drive bays.



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.

Establish a Strong Storage Foundation with Btrfs

DS420+ features a Btrfs file system optimized by Synology to offer you high reliability and high performance. Btrfs supports advanced storage technologies that meet the needs of modern business:

- **Advanced snapshot technology** provides schedulable and near-instantaneous data protection of shared folders and LUNs.
- **File and folder level data restoration** offers users who wish to restore only a specific file or folder more flexibility.
- **Flexible Shared Folders and User Quota System** provide comprehensive quota control on all user accounts and shared folders.
- **File self-healing** allows Btrfs file systems to auto-detect corrupted files using mirrored metadata and to recover broken data using RAID configurations.
- **Inline compression** compresses data before writing them to the drive, to optimize storage use and reduce write commands to the drives.



Synology Backup Suite

A centralized, integrated, and license-free backup solution to protect every bit of your data.



Multimedia Streaming

Seamlessly gather and stream music, video, and photo collections across all your devices.

Powerful Backup Tools

DS420+ offers users a range of backup solutions for cloud and physical, on-premises environments. Backing up and restoring data is effortless – and completely free of licenses on compatible NAS models.

- Back up your cloud data: **Cloud Sync** enables users to seamlessly back up or synchronize data between a local Synology NAS and other cloud services.
- Back up your PCs and servers: **Synology Drive Client** backs up your Windows®, Mac®, and Linux® desktop devices to safeguard important computer files.
- Back up your Synology NAS: **Hyper Backup** offers a wide range of destinations for backups of your NAS, including on-premises and cloud.

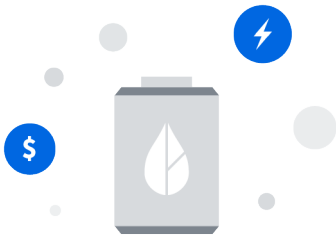
Your Personal Multimedia Library

DS420+ helps you easily manage multimedia content and share it across Windows®, macOS®, and Linux® platforms.

- **Video Station** helps you organize your personal digital video library using different data and criteria. Streaming videos to Apple TV, Android TV, Samsung TV, Chromecast and mobile apps is a breeze, and a wide range of digital devices are supported.
- **Audio Station** provides music playback via AirPlay® devices, and comes with lossless audio format support and Internet radio. Using the **Alexa Audio Station** feature, you can call out your music to your Voice Assistant.
- **Moments**¹ and **Photo Station**'s intuitive design fit both home users and professional photographers. Auto-created albums help you manage your images in seconds. You can also share photographs with local users or the public while regulating security using fine permission settings.

Multimedia Anytime, Everywhere

Synology's mobile apps let you enjoy your multimedia library anytime, anywhere. Available on iOS and Android™ platforms, **DS photo**, **DS audio**, **DS video**, and **DS file** let you access your Synology NAS through **Photo Station**, **Audio Station**, **Video Station**, and **File Station**, respectively. With Synology QuickConnect, you can connect to your Synology NAS using a secure and customizable address for instant access to media and work files on Windows®, Mac®, Linux®, and mobile devices.



Low Power Consumption

DS420+ is designed with energy-efficiency in mind, helping you minimize your carbon footprint.

Cool & Quiet Design for Energy Efficiency

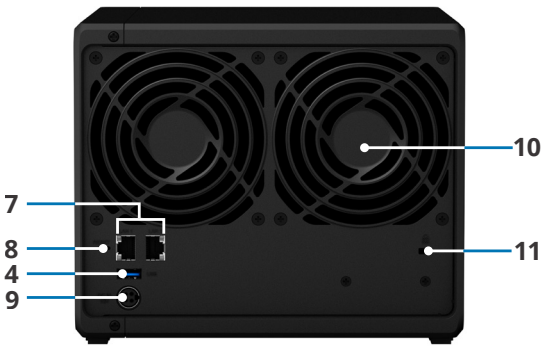
Synology DS420+ is designed with energy efficiency in mind. Compared with its average PC counterpart, Synology DS420+ consumes less power, at **28.30 watts** while accessing and **8.45 watts** when hard drive hibernation is enabled. The power scheduling feature further reduces power consumption and operating cost.

Hardware Overview

Front



Rear



1	Status indicator	2	Drive status indicator	3	Drive tray lock	4	USB 3.0 port
5	Power button and indicator	6	Drive tray	7	1GbE RJ-45 port	8	Reset button
9	Power port	10	System fan	11	Kensington Security Slot		

Technical Specifications

Hardware

CPU	Intel Celeron J4025 2-core 2.0 GHz, burst up to 2.9 GHz
Hardware encryption engine	Yes (AES-NI)
Memory	2 GB DDR4 onboard (expandable up to 6 GB) ³
Compatible drive type	• 4 x 3.5" or 2.5" SATA HDD/SSD (drives not included) • 2 x M.2 2280 NVMe SSD (drives not included)
Hot swappable drive	Yes
External port	2 x USB 3.0 port
Size (HxWxD)	166 x 199 x 223 mm
Weight	2.18 kg
LAN	2 x Gigabit (RJ-45)
Wake on LAN/WAN	Yes
Scheduled power on/off	Yes
System fan	2 (92 x 92 x 25 mm)
AC input power voltage	100 V to 240 V AC
Power frequency	50/60 Hz, single phase
Operating temperature	0°C to 40°C (32°F to 104°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 (16,400 ft)

General DSM specification

Networking protocol	SMB, AFP, NFS, FTP, WebDAV, CalDAV, iSCSI, Telnet, SSH, SNMP, VPN (PPTP, OpenVPN™, L2TP)
File system	- Internal: Btrfs, ext4 - External: Btrfs, ext4, ext3, FAT, NTFS, HFS+, exFAT⁴
Supported RAID type	Synology Hybrid RAID (SHR), Basic, JBOD, RAID 0, RAID 1, RAID 5, RAID 6, RAID 10
Storage management	- Maximum single volume size: 108 TB - Maximum system snapshots: 65,536⁵ - Maximum internal volume: 64
SSD cache	- Read/write cache support - M.2 NVMe SSD support
File sharing capability	- Maximum local user account: 2,048 - Maximum local group: 256 - Maximum shared folder: 512 - Maximum concurrent SMB/NFS/AFP/FTP connection: 500
Privilege	Windows® Access Control List (ACL), application privilege
Directory service	Windows® AD integration: Domain users login via SMB/NFS/AFP/FTP/File Station, LDAP integration
Virtualization	VMware vSphere® 6.5, Microsoft Hyper-V®, Citrix®, OpenStack®
Security	Firewall, shared folder encryption, SMB encryption, FTP over SSL/TLS, SFTP, rsync over SSH, login auto block, Let's Encrypt support, HTTPS (customizable cipher suite)
Supported client	Windows® 7 onwards, Mac OS X® 10.11 onwards
Supported browser	Chrome®, Firefox®, Edge®, Internet Explorer® 10 onwards, Safari® 10 onwards; Safari (iOS 10 onwards), Chrome (Android™ 6.0 onwards) on tablets
Interface Language	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

Synology Drive	Provide a universal portal to synchronize your files across various platforms, including Windows®, macOS®, Linux®, Android™ and iOS. The built-in universal portal allows you to access data anytime and anywhere. - Maximum number of hosted files: 500,000 - Maximum number of concurrent connections for PC clients: 450
File Station	Virtual drive, remote folder, Windows® ACL editor, compressing/extracting archived files, bandwidth control for specific users or groups, creating sharing links, transfer logs
FTP Server	Bandwidth control for TCP connections, custom FTP passive port range, anonymous FTP, FTP SSL/TLS and SFTP protocol, boot over the network with TFTP and PXE support, transfer logs
Presto File Server ⁶	High-speed data transfer over WAN with exclusive SITA technology between Synology NAS and desktop
Cloud Sync	One or two-way synchronization with public cloud storage providers including Alibaba Cloud OSS, Amazon Drive, Amazon S3-compatible storage, Backblaze B2, Baidu Cloud, Box, Dropbox, Google Cloud Storage, Google Drive, hubiC, MegaDisk, Microsoft OneDrive, OpenStack Swift-compatible storage, Tencent COS, WebDAV servers, Yandex Disk
Universal Search	Offer global search into applications and files

iSCSI Storage & Virtualization

iSCSI Manager	- Maximum iSCSI target: 128 - Maximum iSCSI LUN: 256 - iSCSI LUN clone/snapshot support
Virtual Machine Manager	Deploy and run various virtual machines on Synology NAS, including Windows®, Linux®, or Virtual DSM

Data Protection & Backup Solution

Hyper Backup	Support local backup, network backup, and backup data to public clouds
Backup tools	DSM configuration backup, macOS® Time Machine support, Synology Drive Client desktop application Shared folder sync - maximum task number: 8
Snapshot Replication	- Maximum of shared folder snapshots: 1,024 - Maximum of replication: 32
Synology High Availability	Reduce service downtime by setting up two identical NAS into one high-availability cluster
Active Backup for G Suite	Support G Suite My Drive and Team Drive backup and restoration
Active Backup for Office 365	Support Office 365 OneDrive for Business, mail, contacts, and calendar backup and restoration

Active Backup for Business	All-in-one backup solution designed for heterogeneous business IT environment, enabling IT admins to remotely manage and monitor protection over PC, servers and VM on one centralized console
Productivity & Collaboration	
Collaboration tools	Collaborate with instant message service Synology Chat, online editor Synology Office, and scheduling assistant Synology Calendar • Chat maximum number of concurrent users: 50 • Office maximum number of concurrent users: 450 • Calendar: support CalDAV and access via mobile devices
Note Station	Rich-text note organization and versioning, encryption, sharing, media embedding and attachments
Synology MailPlus Server	Secure, reliable, and private mail solution with high-availability, load balancing, security and filtering design (Includes 5 free email account licenses; additional accounts require the purchasing of additional licenses)
Synology MailPlus	Intuitive webmail interface for Synology MailPlus Server, customizable mail labels, filters, and user interface
Multimedia	
Moments	Support smart AI album with facial and subject recognition, photo editing and sharing features, similar photo detection, auto-editing functions such as color correction and angle adjustments, and AI selection of the best photos. Mobile applications are available on iOS and Android™ devices
Other packages	Video Station, Photo Station, Audio Station, iTunes® Server
Surveillance	
Surveillance Station	Maximum IP camera: 25 (total of 750 FPS at 720p, H.264) (Including two free camera licenses; additional cameras require the purchasing of additional licenses)
All-in-One Server	
Synology Directory Server	Provide a flexible and cost-effective domain controller solution
Central Management System	Provide a single interface to manage and monitor multiple Synology NAS
VPN Server	Maximum connection: 30. Supported VPN protocol: PPTP, OpenVPN™, L2TP/IPSec
Mail Server	Supported Mail Server protocols: POP3, SMTP, IMAP, LDAP/AD account support
Mail Station	Webmail interface for Mail Server to receive emails from multiple POP3 mailboxes, customizable SMTP server
Web Station	Virtual host (up to 30 websites), PHP/MariaDB®, third-party applications support
Other packages	DNS Server, RADIUS Server, Log Center
Others	
Storage Analyzer	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, least recently accessed files
Antivirus Essential	Full system scan, scheduled scan, white list customization, virus definition auto update
iOS/Android™ applications	Synology Drive, Synology MailPlus, Synology Chat, Synology LiveCam, Moments, DS audio, DS photo, DS video, DS cam, DS file, DS finder, DS note
Other packages	Additional 3rd-party packages available on Package Center

Environment and Packaging

Environment safety	RoHS compliant
Package content	• DS420+ main unit x 1 • Quick Installation Guide x 1 • Accessory pack x 1 • AC power adapter x 1 • AC power cord x 1 • RJ-45 LAN cable x 2
Optional accessories ⁷	• DDR4 non-ECC SO-DIMM 4 GB (D4NESO-2666-4G) • VisualStation VS360HD, VS960HD • Surveillance Device License Pack • Synology MailPlus License Pack • Virtual DSM License Pack
Warranty	3 years ⁸

*Model specifications are subject to change without notice. Please refer to www.synology.com for the latest information.

1. Performance figures may vary depending on environment, usage, and configuration.
2. Performance figures are based on the average percentage improvement of DS420+ relative to its predecessor, as tested at Synology labs. Test items include file indexing in Synology Drive and photo indexing in Synology Moments.
3. DS420+ comes with 2 GB DDR4 onboard and can support up to 6 GB by adding one optional DDR4 non-ECC 4 GB SO-DIMM.

4. exFAT Access can be purchased separately in Package Center.
5. System snapshots include snapshots taken by iSCSI Manager, Snapshot Replication, and Virtual Machine Manager. Availability of these packages varies by model.
6. Presto File Server licenses can be purchased separately in Package Center.
7. Please refer to www.synology.com/compatibility for the latest optional accessories list.
8. 5-year warranty is available as an optional bundle with EW201, a 2-year Extended Warranty service add-on. Visit https://www.synology.com/en-global/products/Extended_Warranty for more information on availability. The warranty period starts from the purchase date as stated on your receipt of purchase. Visit <https://www.synology.com/company/legal/warranty> for more information.

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