



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 **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.

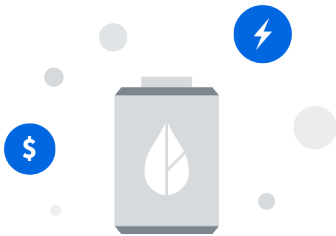
Your Personal Multimedia Library

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

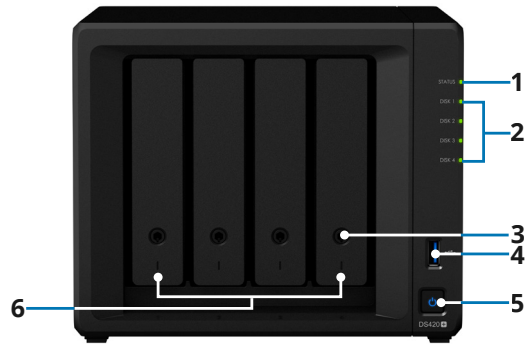
DS420+ is designed with energy-efficiency in mind, helping you minimize your carbon footprint.

Cool & Quiet Design for Energy Efficiency

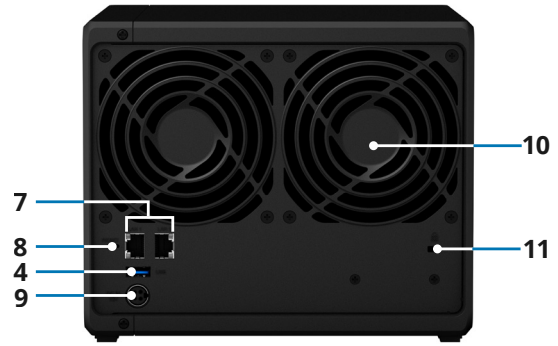
Synology DS420+ is designed with energy efficiency in mind. Compared with its average PC counterpart, Synology DS420+ consumes less power, at **28.30 watts** while accessing and **8.45 watts** when hard drive hibernation is enabled. The power scheduling feature further reduces power consumption and operating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

Hardware Overview

Front



Rear



1	Status indicator	2	Drive status indicator	3	Drive tray lock	4	USB 3.2 Gen1 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 types	<ul style="list-style-type: none"> 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 drives	Yes
External ports	2 x USB 3.2 Gen 1 port
Size (HxWxD)	166 x 199 x 223 mm
Weight	2.18 kg
LAN ports	2 x GbE RJ-45
Wake on LAN/WAN	Yes
Scheduled power on/off	Yes
System fans	2 (92 x 92 x 25 mm)
AC input power voltage	100 V to 240 V AC
Power consumption	<ul style="list-style-type: none"> Access: 28.3 W HDD Hibernation: 8.45 W
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)
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General DSM specification

Networking protocols	SMB, AFP, NFS, FTP, WebDAV, CalDAV, iSCSI, Telnet, SSH, SNMP, VPN (PPTP, OpenVPN™, L2TP)
File systems	<ul style="list-style-type: none"> Internal: Btrfs, ext4 External: Btrfs, ext4, ext3, FAT, NTFS, HFS+, exFAT⁴
Supported RAID types	Synology Hybrid RAID (SHR), Basic, JBOD, RAID 0, RAID 1, RAID 5, RAID 6, RAID 10
Storage management	<ul style="list-style-type: none"> Maximum single volume size: 108 TB Maximum system snapshots: 65,536⁵ Maximum internal volumes: 64
SSD cache	<ul style="list-style-type: none"> Read/write cache support M.2 NVMe SSD support
File sharing capabilities	<ul style="list-style-type: none"> Maximum local user accounts: 2,048 Maximum local groups: 256 Maximum shared folders: 512 Maximum concurrent SMB/NFS/AFP/FTP connections: 500
Privileges	Windows® Access Control List (ACL), application privileges
Directory services	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 clients	Windows® 7 onwards, macOS® 10.12 onwards
Supported browsers	Chrome®, Firefox®, Edge®, Internet Explorer® 10 onwards, Safari® 10 onwards; Safari (iOS 10 onwards), Chrome (Android™ 6.0 onwards) 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"> Maximum number of hosted files: 500,000 Maximum number of concurrent connections for PC clients: 350
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.
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 ⁶	Enables high-speed data transfer over WAN through the exclusive SITA technology between Synology NAS and desktop.
Cloud Sync	Offers one or two-way synchronization with public cloud storage providers including Alibaba Cloud OSS, 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 and Yandex Disk.
Universal Search	Enables global search of applications and files.
iSCSI Storage & Virtualization	
iSCSI Manager	<ul style="list-style-type: none"> Maximum iSCSI targets: 128 Maximum iSCSI LUNs: 256 iSCSI LUN clone/snapshot support
Virtual Machine Manager	Deploys and runs various virtual machines on Synology NAS, including Windows®, Linux®, or Virtual DSM
Data Protection & Backup Solution	
Hyper Backup	Supports local backup, network backup, and backup data to public clouds
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 8 tasks
Snapshot Replication	<ul style="list-style-type: none"> Maximum number of snapshots for shared folders: 1,024 Maximum number of replications: 32
Synology High Availability	Reduces service downtime by combining two identical NAS into a high-availability cluster.

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, mail, contacts, and calendar.
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, and VMs from one centralized console.
Productivity & Collaboration	
Collaboration tools	Users can collaborate through the instant messaging service Synology Chat, the online editor Synology Office, and the scheduling assistant Synology Calendar. <ul style="list-style-type: none"> • Maximum users for Chat: 600 • Maximum users for Office: 1,000 • 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.
Synology MailPlus	An intuitive webmail interface for Synology MailPlus Server with customizable mail labels, filters, and user interface.
Multimedia	
Moments	A feature-rich photo management application that includes AI-powered album creation from facial and subject recognition, photo editing and sharing capabilities, similar photo detection for duplicate management, auto-editing functions such as color correction and angle adjustments, and auto-selection of the best shots. Mobile applications are available on iOS and Android™ devices.
Other packages	Video Station, Photo Station, Audio Station, iTunes® Server
Surveillance	
Surveillance Station	Maximum IP cameras: 25, for a total of 750 FPS at 720p (H.264).
All-in-One Servers	
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: 30 • Supported VPN protocols: PPTP, OpenVPN™, L2TP/IPSec
Mail Server	<ul style="list-style-type: none"> • Supported Mail Server protocols: POP3, SMTP, IMAP • LDAP/AD account support
Mail Station	A webmail interface for Mail Server to receive emails from multiple POP3 mailboxes and SMTP servers.
Web Station	Enables hosting for up to 30 websites with support for PHP/MariaDB® and 3rd-party applications.
Other packages	DNS Server, RADIUS Server, Log Center
Others	
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.
iOS/Android™ applications	Synology Drive, Synology MailPlus, Synology LiveCam, Moments, DS audio, DS photo, DS video, DS cam, DS file, DS finder, DS note
Other packages	Additional 3rd-party packages are available in the Package Center.
Environment and Packaging	
Environment safety	RoHS compliant
Package content	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 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 license can be purchased separately through the application.
7. Please refer to [compatibility list](#) for the latest optional accessories list.
8. Up to 5 years of warranty are available as an additional bundle with Extended Warranty Plus or Extended Warranty, both 2-year extended warranty service add-ons available in select regions. Check availability for Extended Warranty EW201 or Extended Warranty Plus. Different terms and conditions may apply to Synology Certified Refurbished Products. For details, please check corresponding product specification pages or visit <https://www.synology.com/company/legal/warranty> for more information.

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