



# DiskStation DS220+



## Compact and High Performance NAS Solution

Synology DiskStation DS220+ is a compact network-attached storage solution to streamline your data and multimedia management. It features smooth data sharing, video streaming, and photo indexing, as well as well-rounded data protection and recovery options.

### Highlights

- **Accelerated Application Performance**  
Average 15% performance boost to photo indexing and other computing-intensive operations, as well as database response time
- **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 your 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

DS220+ is a 2-bay desktop NAS designed for fast data sharing and management. It newly features **dual 1GbE** LAN ports to support network failover, and with Link Aggregation enabled, DS220+ provides over **225 MB/s sequential read** and **192 MB/s sequential write**<sup>1</sup> throughput. Data can be further protected with RAID 1 disk mirroring to prevent sudden drive failure.

DS220+ benefits computing-intensive applications, speeding up **Synology Drive** and **Synology Moments**<sup>2</sup> by an average 15%, and boosting **Web PHP response efficiency** by around 95% compared with its predecessor. DS220+ makes data management simple and efficient.



### 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

DS220+ 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

DS220+ 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

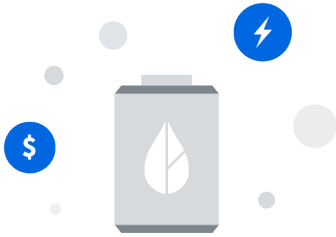
DS220+ helps you easily manage multimedia content and share it across Windows®, macOS®, and Linux® platforms.

- **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'** 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.

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### Low Power Consumption

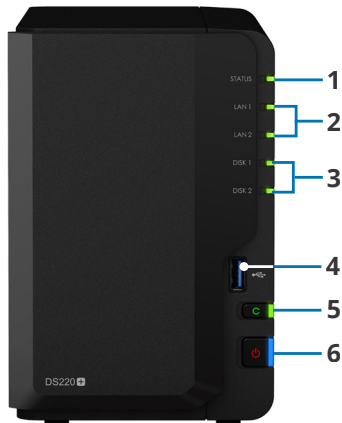
*DS220+ is designed with energy-efficiency in mind, helping you minimize your carbon footprint.*

## Cool & Quiet Design for Energy Efficiency

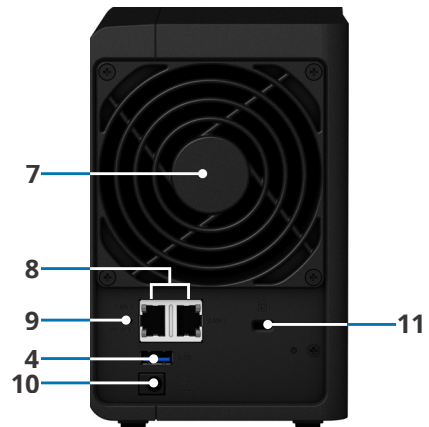
Synology DS220+ is designed with energy efficiency in mind. Compared with its average PC counterpart, Synology DS220+ consumes less power, at **14.96 watts** while accessing and **4.41 watts** when hard drive hibernation is enabled. The power scheduling feature further reduces power consumption and operating cost.

# Hardware Overview

Front



Rear



1	Status indicator	2	LAN indicator	3	Disk indicator	4	USB 3.0 port
5	Copy button	6	Power button and indicator	7	System fan	8	1GbE RJ-45 port
9	Reset button	10	Power port	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) <sup>3</sup>
Compatible drive type	2 x 3.5" or 2.5" SATA HDD/SSD (drives not included)
Hot swappable drive	Yes
External port	2 x USB 3.0 port
Size (HxWxD)	165 x 108 x 232.2 mm
Weight	1.3 kg
LAN	2 x Gigabit (RJ-45)
Wake on LAN/WAN	Yes
Scheduled power on/off	Yes
System fan	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	<ul style="list-style-type: none"> <li>Internal: Btrfs, ext4</li> <li>External: Btrfs, ext4, ext3, FAT, NTFS, HFS+, exFAT<sup>4</sup></li> </ul>
Supported RAID type	Synology Hybrid RAID (SHR), Basic, JBOD, RAID 0, RAID 1
Storage management	<ul style="list-style-type: none"> <li>Maximum single volume size: 108 TB</li> <li>Maximum system snapshots: 65,536<sup>5</sup></li> <li>Maximum internal volume: 64</li> </ul>
File sharing capability	<ul style="list-style-type: none"> <li>Maximum local user account: 2,048</li> <li>Maximum local group: 256</li> <li>Maximum shared folder: 256</li> <li>Maximum concurrent SMB/NFS/AFP/FTP connection: 500</li> </ul>
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
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, ภาษาไทย, 日本語, 한국어, 繁體中文, 简体中文

## Packages and Applications

### File Server & Synchronization

Synology Drive	<p>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.</p> <ul style="list-style-type: none"> <li>Maximum number of hosted files: 500,000</li> <li>Maximum number of concurrent connections for PC clients: 450</li> </ul>
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 <sup>6</sup>	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	<ul style="list-style-type: none"> <li>Maximum iSCSI target: 128</li> <li>Maximum iSCSI LUN: 256</li> <li>iSCSI LUN clone/snapshot support</li> </ul>
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	<ul style="list-style-type: none"> <li>Maximum of shared folder snapshots: 1,024</li> <li>Maximum of Replication: 32</li> </ul>
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 <ul style="list-style-type: none"><li>• Chat maximum number of concurrent users: 50</li><li>• Office maximum number of concurrent users: 450</li><li>• Calendar: support CalDAV and access via mobile devices</li></ul>
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Note Station	Rich-text note organization and versioning, encryption, sharing, media embedding and attachments
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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)
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Synology MailPlus	Intuitive webmail interface for Synology MailPlus Server, customizable mail labels, filters, and user interface
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## 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
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Other packages	Video Station, Photo Station, Audio Station, iTunes® Server
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## 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)
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## All-in-One Server

Synology Directory Server	Provide a flexible and cost-effective domain controller solution
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Central Management System	Provide a single interface to manage and monitor multiple Synology NAS
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VPN Server	Maximum connection: 30, supported VPN protocol: PPTP, OpenVPN™, L2TP/IPSec
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Mail Server	Supported Mail Server Protocols: POP3, SMTP, IMAP, Support LDAP/AD account
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Mail Station	Webmail interface for Mail Server to receive emails from multiple POP3 mailboxes, customizable SMTP server
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Web Station	Virtual host (up to 30 websites), PHP/MariaDB®, third-party applications support
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Other packages	DNS Server, RADIUS Server, Log Center
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## 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
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Antivirus Essential	Full system scan, scheduled scan, white list customization, virus definition auto update
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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
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Other packages	Additional 3rd-party packages available on Package Center
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## Environment and Packaging

Environment safety	RoHS compliant
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Package content	<ul style="list-style-type: none"><li>• DS220+ unit x 1</li><li>• Quick Installation Guide x 1</li><li>• Accessory pack x 1</li><li>• AC power adapter x 1</li><li>• AC power cord x 1</li><li>• RJ-45 LAN cable x 2</li></ul>
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Optional accessories <sup>7</sup>	<ul style="list-style-type: none"><li>• DDR4 non-ECC SO-DIMM 4 GB (D4NS01-4G)</li><li>• VisualStation VS360HD, VS960HD</li><li>• Surveillance Device License Pack</li><li>• Synology MailPlus License Pack</li><li>• Virtual DSM License Pack</li></ul>
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Warranty	2 years <sup>8</sup>
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\*Model specifications are subject to change without notice. Please refer to [www.synology.com](http://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 DS220+ relative to its predecessor, as tested at Synology labs. Test items include file indexing in Synology Drive and photo indexing in Synology Moments.
3. DS220+ 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](http://www.synology.com/compatibility) for the latest optional accessories list.
8. 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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