Saved from manuals.plus.
Open the live page for links to other documents and user manuals.

Synology DS420j

Synology DS420j 4-Bay NAS User Manual

Model: DS420j

1. Product Overview

The Synology DS420j is a 4-bay desktop Network Attached Storage (NAS) device designed for home users, offering robust data backup and file sharing capabilities. It supports various networking protocols, multiple RAID configurations, and diverse add-on packages, enabling effortless cross-platform file synchronization and sharing on a private cloud.
Key features include:

- 4-bay home NAS with support for over 60 TB raw capacity, ideal for data backup and file sharing.
- Equipped with a 64-bit 4-core 1.4 GHz processor and 1 GB DDR4 memory for efficient performance.
- Achieves over 112 MB/s encrypted sequential reading and writing throughput.
- Provides an easy-to-deploy surveillance solution, supporting up to 16 IP cameras.
- Energy-saving design, consuming only 7.88 W in hibernation mode.



Figure 1.1: Front view of the Synology DS420j NAS unit.

2. Package Contents

Upon unpacking your Synology DS420j, please verify that all components are present. The standard package typically includes:

- Synology DS420j main unit (diskless)
- AC Power Adapter
- AC Power Cord
- RJ-45 LAN Cable
- Quick Installation Guide
- Screws for 2.5" and 3.5" drives

Note: Hard drives are not included with the DS420j and must be purchased separately.

3. Physical Components

3.1 Front Panel

The front panel of the DS420j features several indicators and a power button:

- **STATUS Indicator:** Indicates the system status.
- **LAN Indicator:** Shows network connection status.

- **Power Button:** Powers the unit on or off.
- **Drive Indicators (HDD1, HDD2, HDD3, HDD4):** Indicate the status of each installed hard drive.

3.2 Rear Panel

The rear panel provides various ports for connectivity:

- **Power Port:** Connects to the AC power adapter.
- **LAN Port:** Connects to your network router or switch.
- **USB 3.0 Ports:** For connecting external USB devices such as external hard drives or UPS.
- **Reset Button:** Used for resetting network settings or reinstalling the operating system.

4. Hardware Installation

Before powering on your DS420j, you must install compatible hard drives. The DS420j supports 3.5-inch and 2.5-inch SATA HDDs and SSDs.

4.1 Installing Hard Drives

1. Ensure the DS420j is powered off and disconnected from the power outlet.
2. Locate the drive bays on the front of the unit.
3. Gently pull the drive tray handle to slide out an empty drive tray.
4. Place your 3.5-inch hard drive into the tray and secure it with the provided screws through the side holes. For 2.5-inch drives, use the bottom screw holes.
5. Slide the loaded drive tray back into the drive bay until it clicks into place.
6. Repeat for all desired hard drives.



Figure 4.1: The Synology DS420j integrated into a home office environment.

5. Initial Setup and Software Configuration

5.1 Connecting and Powering On

1. Connect one end of the RJ-45 LAN cable to the LAN port on the DS420j and the other end to your router or switch.

2. Connect the AC power adapter to the power port on the DS420j and plug the power cord into an electrical outlet.
3. Press the power button on the front panel to turn on the DS420j.

5.2 Installing DiskStation Manager (DSM)

DiskStation Manager (DSM) is the web-based operating system for your Synology NAS. To install it:

1. Open a web browser on a computer connected to the same network as your DS420j.
2. Go to http://find.synology.com or http://diskstation:5000.
3. The Synology Web Assistant will search for your DS420j. Once found, click **Connect**.
4. Follow the on-screen instructions to install the latest version of DSM. This process will format the hard drives, so ensure they are empty or backed up.
5. During installation, you will set up an administrator account and password.

5.3 Creating Storage Pools and Volumes

After DSM installation, you need to create storage pools and volumes to store data:

1. Log in to DSM using your administrator credentials.
2. Open **Storage Manager** from the DSM desktop.
3. Go to the **Storage Pool** section and click **Create**.
4. Follow the wizard to select the RAID type (e.g., Synology Hybrid RAID (SHR), RAID 1, RAID 5) and the drives to include.
5. Once the storage pool is created, go to the **Volume** section and click **Create** to create a new volume on the storage pool.

6. Operating Your Synology DS420j

6.1 File Sharing and Access

The DS420j allows you to share files across various platforms:

- **Shared Folders:** Create shared folders in DSM's **Control Panel > Shared Folder**. Assign user permissions for access control.
- **File Station:** Access and manage files directly through the web-based File Station application in DSM.
- **Network Protocols:** Supports SMB/CIFS, AFP, NFS, FTP, and WebDAV for seamless file access from Windows, macOS, Linux, and mobile devices.

6.2 Data Backup and Synchronization

Utilize Synology's robust backup solutions:

- **Synology Drive:** Create a private cloud for file synchronization and sharing across multiple devices.
- **Hyper Backup:** Back up data from your NAS to local folders, external storage, remote Synology NAS, rsync servers, or public cloud services.
- **Active Backup for Business:** Centralized backup solution for PCs, servers, and virtual machines.

6.3 Surveillance Station

Transform your DS420j into a comprehensive surveillance system:

- Install the **Surveillance Station** package from the Package Center.
- Add IP cameras (up to 16 supported) and configure recording settings, motion detection, and alerts.
- Monitor live feeds and review recordings via web browser or mobile app.

7. Maintenance

Regular maintenance ensures the optimal performance and longevity of your Synology DS420j.

- **DSM Updates:** Regularly check for and install DSM updates via **Control Panel > Update & Restore** to ensure you have the latest features, security patches, and bug fixes.
- **Drive Health Check:** Periodically check the health of your hard drives in **Storage Manager > HDD/SSD**. Run S.M.A.R.T. tests to detect potential issues early.
- **System Logs:** Review system logs in **Log Center** for any warnings or errors that may indicate underlying problems.
- **Physical Cleaning:** Ensure proper airflow by regularly cleaning dust from the vents and fan using compressed air. Do this with the unit powered off.
- **UPS Connection:** Consider connecting your DS420j to an Uninterruptible Power Supply (UPS) to protect against power outages and ensure safe shutdown.

8. Troubleshooting

This section provides solutions to common issues you might encounter with your Synology DS420j.

8.1 Power and Connectivity Issues

- **No Power:** Ensure the power cord is securely connected to both the NAS and the power outlet. Test the outlet with another device.
- **STATUS LED Blinking Orange:** This often indicates a system error or degraded volume. Check **Storage Manager** in DSM for details.
- **Cannot Connect to DSM:** Verify network cable connections. Ensure your computer is on the same network. Try restarting your router and the DS420j. Use http://find.synology.com to locate the NAS.

8.2 Drive Related Issues

- **Drive LED Off/Blinking:** Check if the drive is properly seated in its bay. If a new drive, ensure it's compatible. If an existing drive, it might be failing; check **Storage Manager**.
- **Degraded Volume:** One or more drives in a RAID array have failed. Replace the faulty drive(s) as soon as possible and repair the volume in **Storage Manager**.
- **Slow Performance:** Check drive health, network congestion, or CPU/RAM usage in **Resource Monitor**. Ensure drives are compatible and healthy.

8.3 Resetting the DS420j

The reset button on the rear panel can be used for two types of resets:

- **Mode 1 Reset (Reset Network Settings):** Press and hold the RESET button for 4 seconds until you hear a beep. This resets the admin password, IP address, DNS, and other network settings.
- **Mode 2 Reset (Reinstall DSM):** After performing a Mode 1 reset, press and hold the RESET button again for 4 seconds until you hear a beep, then immediately press and hold it for another 4 seconds until you hear 3 more beeps. This will reinstall DSM and delete all system configurations, but keep your data on the

volumes.

9. Technical Specifications

Below are the detailed technical specifications for the Synology DS420j:

Feature	Specification
Model Name	DS420j
CPU	Realtek RTD1296 64-bit 4-core 1.4 GHz
Memory	1 GB DDR4 non-ECC
Drive Bays	4
Compatible Drive Types	3.5" SATA HDD, 2.5" SATA HDD, 2.5" SATA SSD
Maximum Raw Capacity	64 TB (16 TB drive x 4)
External Ports	2 x USB 3.0, 1 x USB 2.0
LAN Port	1 x Gigabit Ethernet (RJ-45)
Dimensions (HxWxD)	184 mm x 168 mm x 230 mm (7.24 x 6.61 x 9.06 inches)
Weight	2.21 kg (4.87 lbs)
Power Consumption	21.71 W (Access), 7.88 W (HDD Hibernation)
Operating Temperature	0°C to 40°C (32°F to 104°F)
Relative Humidity	5% to 95% RH



Figure 9.1: Dimensions of the Synology DS420j unit.

10. Warranty and Support

10.1 Product Warranty

The Synology DS420j is backed by Synology's 2-year limited warranty. This warranty covers defects in materials and workmanship under normal use. For specific terms and conditions, please refer to the warranty information provided with your product or visit the official Synology website.

10.2 Technical Support

For technical assistance, troubleshooting beyond this manual, or to report issues, please visit the official Synology Support Center:

- **Synology Support Website:** https://www.synology.com/support
- The support website offers a knowledge base, FAQs, downloads (firmware, utilities), and options to submit support tickets.

© 2024 Synology Inc. All rights reserved.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Open the live page

https://manuals.plus/asin/B083HJY9T8

More documents and user manuals: **https://manuals.plus/**