

Datasheet

DiskStation

DS2422+





# DS2422+



# Compact, Reliable, and Powerful Storage for SMBs

Synology DiskStation DS2422+ is a compact 12-bay desktop NAS that takes file sharing and management to the next level. The unit can be scaled to 24 drive bays and excels at serving large data sets in multi-user environments. It comes with powerful file management, surveillance, and backup capabilities, and can serve as high-quality video and VM storage. With support for up to 32 GB of memory, NVMe SSD cache, and 25GbE network cards, the DS2422+ is ready for large-scale business applications.

# Accelerated Performance Delivers over 2,100 MB/s read and 1,400 MB/s sequential write performance<sup>1</sup>

- Easy Capacity Expansion
   Double storage capacity to 24 drive
   bays<sup>2</sup> with one 12-bay DX1222 expansion unit
- Supports Demanding Applications
   Leverage up to 32 GB memory, 10/25GbE networking,<sup>3</sup> or NVMe SSD Cache<sup>4</sup> to boost read and write speed

## **Versatile and Reliable Storage Platform**

The DS2422+ is a capable storage system combining performance with scale to deliver a cost-effective data management solution.

- Over 2,100 MB/s sequential read and 1,400 MB/s sequential write performance<sup>1</sup> for multi-user file sharing, infrastructure backup, and warm storage environments
- Supports 12 x SATA HDD/SSD 2.5" and 3.5" drives, <sup>5</sup> expandable to 24 drives with a Synology DX1222 expansion unit<sup>2</sup>
- Comfortably run compute-intensive processes (indexing, compression, deduplication, file synchronization) and applications (Synology Drive, Hyper Backup, Active Backup for Business) with a powerful quad-core AMD Ryzen™ processor
- Support more client file sharing connections, backup processes, or virtual machines with up to
   32 GB DDR4 ECC memory
- Boost bandwidth with 10GbE SFP+/RJ-45 and 25GbE SFP28 NICs, drive down latency with NVMe SSD cache,<sup>4</sup> or add both 10GbE and NVMe SSD with a combination card using the PCle Gen 3.0 slot

# **Optimized for Data Protection and Integrity**

Safeguard your data with user management and system administration tools on Synology's **DiskStation Manager (DSM)** coupled with powerful storage technology and an advanced **Btrfs** file system.

- Advanced snapshot technology provides schedulable and near-instantaneous data protection for shared folders and LUNs
- File and folder-level data restoration enables recovery of specific files or folders
- Flexible storage quota system helps admins manage available space by specifying storage limits for shared folders
- **File self-healing** detects and recovers corrupted files using mirrored metadata and RAID configurations
- Inline compression minimizes storage consumption and extends the life of drives by compressing data before it is written to the storage pool

## **Complete IT Infrastructure Backup Solutions**

DSM comes standard with a complete package of backup solutions available at no extra cost.

- Active Backup Suite includes backup solutions for Windows® and Linux® computers, VMs, other file servers, and SaaS applications.
- Snapshot Replication creates point-in-time copies of shared folders and LUNs to protect them from accidental modifications or ransomware incidents
- **Hyper Backup** backs up your NAS data to multiple destinations securely and efficiently with integrity checks and powerful deduplication, compression, and versioning options.
- C2 Storage for Hyper Backup offers a dedicated secure public cloud destination for Synology NAS backup data.<sup>6</sup>

#### **Remote Work and Collaboration Tools**

Synology's productivity suite provides a private cloud solution for on-site and remote workers to concurrently edit documents, share files, manage emails, send instant messages, and more.

- Synology Office lets multiple users edit, comment on, and share files together using Synology Documents, Spreadsheets, and Slides.
- Synology Drive is a cloud file management solution that supports remote data access, synchronization, on-demand file restoration, and backup.
- Synology Chat brings teams together with one-on-one chats, group chats, and encrypted private channels over multiple platforms.
- Synology MailPlus<sup>7</sup> provides a secure, reliable, and private email server.
- Synology Calendar helps teams keep track of what is most important with convenient calendar sharing and scheduling.
- Synology Hybrid Share offloads synchronization processes from the NAS to Synology C2 cloud storage, removing the need for direct data transfers between branches while reducing bandwidth costs.

## **Private Video Surveillance**

**Surveillance Station** transforms the DS2422+ into a powerful Network Video Recorder solution with support for up to 40 IP cameras.<sup>8</sup>

- 7,900+ supported camera models
- ONVIF support prevents vendor lock-in

- Private, subscription-free storage of recordings
- Access through web browsers, desktop clients, or mobile apps
- · Event-based rules to trigger specific actions
- · Email, SMS, or push notification options

## **Virtualization and Certified Storage**

Your DS2422+ can serve as virtual machine storage, host its own virtual machines (VMs) using **Virtual Machine Manager (VMM)**, and run **Container Manager**.

Virtualization solutions in DSM streamline provisioning for and management of VMs with full certification for VMware® vSphere™, Microsoft® Hyper-V®, Citrix® XenServer™, and OpenStack virtualization environments.

- VMM is a hosted hypervisor for virtual machines running Windows<sup>®</sup>, Linux<sup>®</sup>, or virtualized versions of DSM with recovery mechanisms that ensure data protection for each VM<sup>9</sup>
- Synology Storage Console for VMware<sup>®</sup> or Windows<sup>®</sup> platforms lets you manage VM storage components directly from your hypervisor. VMware VAAI integration and Windows ODX help offload storage operations and speed up data transfer

#### Notes:

- 1. Performance figures obtained through internal testing by Synology. Actual performance may vary depending on the testing environment, usage, and configuration. See performance charts for more information.
- 2. DS2422+ supports up to 24 drives with one Synology DX1222 expansion unit, sold separately.
- 3. For the most up-to-date list of compatible NICs, please check our compatibility list.
- 4. SSD cache can be enabled using SNV3400/SNV3500 M.2 NVMe SSDs with M2D20 or E10M20-T1 adapter cards or by using compatible 2.5" SATA SSDs in built-in drive bays. All devices sold separately.
- 5. Check our compatibility list for supported drives.
- 6. C2 Storage for Hyper Backup requires purchase of an annual or monthly subscription. A 30-day free trial is available for each newly registered device.
- 7. Five MailPlus email accounts are included with the DS2422+. Additional email accounts can be added with the purchase of Synology MailPlus License Packs. Learn more
- 8. Surveillance Station includes two free licenses. Connecting more cameras and devices requires additional licenses. Learn more
- 9. Certain advanced features require Virtual Machine Manager Pro. One Virtual DSM license is included. Additional Virtual DSM instances require the purchase of Virtual DSM Licenses.

# **Hardware Overview**

Front Rear





No.	Name	No.	Name
1.	Status Indicator	9.	Fans
2.	Alert Indicator	10.	PCIe Expansion Slot
3.	Power Button	11.	Reset Button
4.	LAN Indicators	12.	USB 3.2 Ports
5.	Drive Status Indicators	13.	Console Port
6.	Drive Trays	14.	Expansion Port
7.	Drive Tray Locks	15.	1GbE RJ-45 Ports
8.	Power Port		

# **Technical Specifications**

## **Hardware**

CPU		
CPU Model	AMD Ryzen V1500B	
CPU Quantity	1	
CPU Core	4	
CPU Architecture	64-bit	
CPU Frequency	2.2 GHz	
Hardware Encryption Engine	Yes	

Memory	
System Memory	4 GB DDR4 ECC SODIMM
Memory Module Pre-installed	4 GB (4 GB x 1)
Total Memory Slots	2
Maximum Memory Capacity	32 GB (16 GB x 2)
Notes	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.

Storage	
Drive Bays	12
Maximum Drive Bays with Expansion Unit	24 (DX1222 × 1)
Drive Type	<ul><li>3.5" SATA HDD</li><li>2.5" SATA HDD</li><li>2.5" SATA SSD</li></ul>
Hot Swappable Drive	Yes
Notes	Synology only guarantees full functionality, reliability, and performance for Synology drives listed on the compatibility list.  The use of non-validated components may limit certain functionality and result in data loss and system instability.

External Ports	
RJ-45 1GbE LAN Port	4
USB 3.2 Gen 1 Port	2
Expansion Port	1

PCle	
PCIe Expansion	1 x Gen3 ×8 slot (x4 link)

Appearance		
Size (Height x Width x Depth)	270 mm x 300 mm x 340 mm	
Weight	9.5 kg	

Others	
System Fan	120 mm x 120 mm x 25 mm x 2 pcs
AC Input Power Voltage	100V to 240V AC
Power Frequency	50/60 Hz, Single Phase

Temperature	
Operating Temperature	0°C to 40°C (32°F to 104°F)
Storage Temperature	-20°C to 60°C (-5°F to 140°F)
Operating Humidity	8% to 80% RH
Storage Humidity	5% to 95% RH
Maximum Operating Altitude	5,000 m

# **General DSM Specifications**

Storage Management	
Maximum Single Volume Size	108 TB
Maximum Internal Volume Number	64
SSD Read/Write Cache (Determining cache size)	Yes
Supported RAID Type	Synology Hybrid RAID,Basic,JBOD,RAID 0,RAID 1,RAID 5,RAID 6,RAID 10
Notes	<ul> <li>Each internal volume (may consist of multiple drives) is expandable up to 108TB.</li> <li>Actual maximum storage pool and volume sizes depend on drive sizes used, the number of drive bays available, and the RAID configuration.</li> </ul>
	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.

File System	
Internal Drives	Btrfs,ext4
External Drives	Btrfs,ext4,ext3,FAT32,NTFS,HFS+,exFAT

File Services	
File Protocol	SMB,AFP,NFS,FTP,WebDAV,Rsync
Maximum Number of SMB Connections (FSCT-Based)	90
Windows Access Control List (ACL) Integration	Yes
NFS Kerberos Authentication	Yes

Account & Shared Folder	
Maximum Local User Accounts	1,024
Maximum Local Groups	256
Maximum Shared Folder	256
Maximum Shared Folder Sync Tasks	8

Virtualization	
VMware vSphere	ESXi 8.0 U2, ESXi 8.0 U1, ESXi 8.0, ESXi 7.0 U3, ESXi 7.0 U2, ESXi 7.0 U1, ESXi 7.0, ESXi 6.7 U3, ESXi 6.7 U2, ESXi 6.7 U1, ESXi 6.7, ESXi 6.5 U3, ESXi 6.5 U2, ESXi 6.5 U1, ESXi 6.5
Microsoft Hyper-V	Windows Server 2022
Citrix XenServer	XenServer 8, Citrix Hypervisor 8.2 LTSR CU1
OpenStack	Cinder

#### Security

Firewall, encryption shared folder, SMB encryption, FTP over SSL/TLS, SFTP, rsync over SSH, login auto block, Let's Encrypt support, HTTPS (customizable cipher suite)

General Specifications	
Supported Protocols	SMB1 (CIFS), SMB2, SMB3, NFSv3, NFSv4, NFSv4.1, NFS Kerberized sessions, iSCSI, HTTP, HTTPs, FTP, SNMP, LDAP, CalDAV
Supported Browsers	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.

# **Packages and Applications**

#### Synology Al Console

Centralize Al management with flexible configurations for Al model integration, user access control, data privacy, usage policies, and resource allocation

Third-Party Al Model Integration	V
Maximum De-Identification Rate	90 words per second
Notes	<ul> <li>De-identification performance measurement: Filters for Credit Card Numbers, IBAN, Individual Taxpayer Identification Number, SSN, and Names applied to a 4,355-word English text.</li> <li>To enable de-identification, your device must have at least 8 GB of memory and Container Manager installed.</li> </ul>

#### **Synology Drive**

Synchronizes files across Windows®, macOS®, Linux®, Android™ and iOS. The built-in cross-platform portal allows access to data anytime and anywhere

Maximum Number of Users	170
Maximum Number of Hosted Files	1,000,000 (applies to files indexed or hosted by Synology Drive. For file access through other standard protocols, refer to the File Services section above)

#### 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

#### **Hybrid Share**

Synchronize data across multiple sites for fast and efficient multi-site teamwork. Powered by Synology C2 Storage, Hybrid Share requires purchase of a monthly or annual subscription

SAN Manager	
Maximum iSCSI Target Number	64
Maximum LUN	128
LUN Clone/Snapshot, Windows ODX	Yes

Virtual Machine Manager	
Recommended Virtual Machine Instances	8 (Learn more)
Recommended Virtual DSM Number (Licenses required)	8 (including 1 Free License)

#### Hyper Backup

Supports local backup, network backup, and data backup to other servers and public clouds, including C2 Storage

Snapshot Replication	
Maximum Snapshots per Shared Folder	256
Maximum of System Snapshots	4,096

#### Synology High Availability

Reduces service downtime by combining two identical NAS into a high-availability cluster

Synology Chat	
Maximum Number of Users	150

Synology Office	
Maximum Number of Users	160

#### Synology MailPlus / MailPlus Server

A secure, reliable, and private mail solution featuring high-availability, load balancing, security, and filtering options

Free Email Accounts	5 (Additional accounts require purchase of licenses)
Maximum Number of Users	190

Surveillance Station	
Default Licenses	2 (Additional cameras require purchase of licenses)
Suggested Maximum IP Cameras and Total FPS (H.264)	<ul> <li>1080p: 40 channels, 1050 FPS</li> <li>3M: 40 channels, 600 FPS</li> <li>5M: 40 channels, 440 FPS</li> <li>4K: 32 channels, 320 FPS</li> </ul>
Suggested Maximum IP Cameras and Total FPS (H.265)	<ul> <li>1080p: 40 channels, 1200 FPS</li> <li>3M: 40 channels, 1120 FPS</li> <li>5M: 40 channels, 600 FPS</li> <li>4K: 40 channels, 480 FPS</li> </ul>

#### **Central Management System**

Provides a single interface to manage and monitor multiple Synology NAS

VPN Server	
Maximum Connections	8

#### Other packages

Additional 3rd-party packages are available in the Package Center

# **Environment & Packaging**

#### **Environment safety**

**RoHS Compliant** 

#### **Packaging Content**

- Main Unit X 1
- Accessory Pack X 1
- AC Power Cord X 1
- RJ-45 LAN Cable X 2
- Quick Installation Guide X 1

#### **Optional Accessories**

- DDR4 ECC SODIMM: D4ES02-4G/D4ES02-8G/D4ES01-16G
- Expansion Units: DX1222
- Enterprise Series 3.5" SATA HDD: HAT5300 Series
- Plus Series 3.5" SATA HDD: HAT3300 Series
- Enterprise Series 2.5" SATA SSD: SAT5200 Series
- M.2 SSD & 10GbE Combo Adapter Card: E10M20-T1
- M.2 SSD Adapter Card: M2D20
- 25GbE Network Interface Card: E25G30-F2
- 10GbE Network Interface Card: E10G30-F2/E10G30-T2/E10G18-T1

#### Warranty

3-year hardware warranty, extendable to 5 years with EW202 or Extended Warranty Plus

#### Notes

- The warranty period starts from the purchase date as stated on your purchase receipt. (Learn more)
- Extended Warranty Plus is only available in Europe and North America. EW201/EW202 is only available in Asia, Africa, and Oceania. For exact availability information please visit their respective websites.

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