Datasheet

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DiskStation

DS1823xs+

DiskStation

DS1823xs+

Private Cloud Solution Built for Performance

The DS1823xs+ is a powerful 8-bay storage server that can easily be deployed anywhere to provide central data storage and sharing, endpoint and server backup, VM storage, surveillance management, and other business applications. It is perfect in settings where no dedicated server rack or data center is available. With over 3,100/2,600 MB/s sequential read/write performance, 144 TB of raw storage,[1] and the option to further boost I/O speeds through SSD cache, the DS1823xs+ provides powerful and flexible storage with built-in data protection capabilities.

- **Powerful Performance**
  Over 3,100/2,600 MB/s sequential read/write throughput and over 227,000/83,000 random read/write IOPS[2] support heavier applications

- **On-Demand Expansion**
  Attach up to 2 plug-and-play Synology DX517 Expansion Units[3] for up to 18 drive bays and 324 TB or raw storage

- **Comprehensive Backups**
  Protect your IT infrastructure with license-free solutions for backup, replication, and recovery

- **Availability Safeguards**
  Maximize uptime with hot-swappable drives, online volume expansion, and Synology High Availability clustering

- **Long-Term Support**
  Backed by Synology's 5-year limited warranty[4]

Powerful Storage in a Desktop Form Factor

DS1823xs+ is a compact server designed for users ranging from small and medium-sized businesses to creative studios and IT enthusiasts maintaining home labs. Built-in data protection solutions and easy hardware expandability make it an excellent option for all scenarios requiring high-performance, dependable, and cost-efficient data storage.

- Over 3,100/2,600 MB/s sequential read/write performance supports large data transfer volumes and enables fast file sharing, syncing, and backup for multiple users

- Support for all-flash and hybrid storage arrays allows combining the I/O performance of SSDs and efficiency of HDDs, by designating M.2 NVMe and SATA SSDs as storage volumes or as read/write cache to speed up HDD volumes[5]

- Built-in 10GbE connectivity is supplemented by a PCIe 3.0 expansion slot to boost bandwidth through optional 1/10/25GbE and Fibre Channel expansion cards[6]

- Simple capacity expansion to 324 TB of raw storage is available whenever needed with two Synology DX517 Expansion Units[3]

Engineered for Data and Service Availability

Maximize system and service uptime with hardware and software features that are designed with availability in mind.

- Hot-swappable drive trays ensure easy replacement in the event of drive malfunctions, while fanless CPU heat sinks with passive cooling technology reduce possible points of failure

- Comprehensive web-based storage management includes remote and automatic drive replacement through Synology DiskStation Manager, cloudbased system health and security monitoring with Active Insight, and a dedicated out-of-band (OOB) management port that allows remote reboot, reset, and troubleshooting, even when the system is turned off

- Synology High Availability minimizes service downtime in case of planned maintenance, updates, or unforeseen disaster by providing fast failover between two identical units configured in an active-passive cluster

Centralized Backup Platform for Data and Devices

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

- Active Backup Suite consolidates backup tasks and offers rapid restoration of Windows, Linux, and macOS endpoints, VMs, Synology systems, 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 Synology system 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[7]

Collaboration and Communication Hub for Teams

Synology's collaboration 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 Drive supports file sharing, remote data access, cross-device and cross-site synchronization, on-demand file restoration, and backup

- The Synology Office extension lets users collaborate on documents, spreadsheets, and presentation slides in real time, supported by convenient options such as file versioning for easy restoration and password protection

- Synology Chat brings teams together with one-on-one chats, group chats, and encrypted private channels over multiple platforms

- Synology MailPlus[8] provides a secure, reliable, and private email server

- Synology Calendar helps teams keep track of priorities with convenient calendar sharing and scheduling

- Synology Hybrid Share combines reliable on-premises storage and efficient syncing of shared folders in the cloud to enable seamless cross-site synchronization and local file access at LAN speeds[7]

Reliable and Secure Virtualization and Containerization

Leverage your Synology system as virtual machine storage, VM backup server, and alternative container or VM host, with full certification for VMware® vSphere™, Microsoft® Hyper-V®, Citrix® XenServer™, and OpenStack environments.

- Synology Storage Console for VMware or Windows 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 transfers

- Host lightweight containers and VMs for testing, sandboxing, and emergency recovery purposes with Docker and Synology Virtual Machine Manager, a native hypervisor that supports Windows, Linux, and virtual versions of DSM[9]

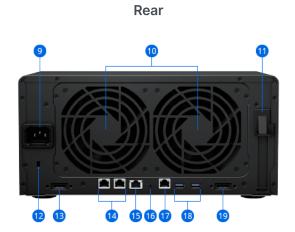## Backed by Synology's 5-Year Limited Warranty

Maximize your return on investment with the comprehensive hardware replacement and premium technical support services offered under Synology's 5-year limited hardware warranty.

Notes:

1. Raw capacity. Usable storage capacity may vary depending on drives used and RAID configuration.
2. 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.
3. DS1823xs+ supports up to 18 drives with two Synology DX517 Expansion Units, sold separately.
4. The warranty period starts from the date of purchase as stated on your purchase receipt. Visit https://www.synology.com/company/legal/warranty for more information.
5. SSD cache can be enabled by using Synology SAT5200 Series 2.5" SATA SSD drives in standard drive bays or without occupying drive bays by installing Synology SNV3400 Series M.2 NVMe SSD drives through the built-in M.2 slots. SNV3400 Series M.2 NVMe SSD drives can also be used to create SSD storage pools. Drives are sold separately.
6. For the most up-to-date list of compatible NICs and HBAs, please check our compatibility list.
7. C2 Storage for Hyper Backup and Hybrid Share requires purchase of an annual or monthly subscription. A free trial is available for each newly registered device.
8. Five MailPlus email accounts are included. Additional email accounts can be added with the purchase of Synology MailPlus License Packs. 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

Bottom

No.	Name	No.	Name
1.	Status Indicator	11.	PCIe Expansion Slot
2.	Alert Indicator	12.	Kensington Security Slot
3.	Power Button and Indicator	13.	Expansion Port
4.	LAN Indicators	14.	1GbE RJ-45 Ports
5.	Drive Status Indicators	15.	10GbE RJ-45 Port
6.	Drive Trays	16.	Reset Button
7.	Drive Tray Locks	17.	Management Port

8.	USB 3.2 Gen 1 Port	**18.**	USB 3.2 Gen 1 Ports
9.	Power Port	**19.**	Expansion Port
10.	Fans	**20.**	Memory Slots

Technical Specifications

Hardware

CPU	
CPU Model	AMD Ryzen V1780B
CPU Quantity	1
CPU Core	4
CPU Architecture	64-bit
CPU Frequency	3.35 (base) / 3.6 (turbo) GHz
Hardware Encryption Engine	Yes

Memory	
System Memory	8 GB DDR4 ECC SODIMM
Memory Module Pre-installed	8 GB (8 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	8
Maximum Drive Bays with Expansion Unit	18 (DX517 × 2)
M.2 Drive Slots	2 (NVMe)
Drive Type	• 3.5" SATA HDD • 2.5" SATA SSD • M.2 2280 NVMe SSD
Hot Swappable Drive	Yes
Notes	• The hot swappable drive feature is not supported by M.2 SSD slots. • 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	2
RJ-45 10GbE LAN Port	1
Out-of-Band Management LAN Port	1
USB 3.2 Gen 1 Port	3
Expansion Port	2

PCIe

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

Appearance

Size (Height x Width x Depth)	166 mm x 343 mm x 243 mm
Weight	6.2 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	200 TB (32 GB memory required) 108 TB
Maximum Internal Volume Number	256
SSD Read/Write Cache (Determining cache size)	Yes
Supported RAID Type	RAID F1,Basic,JBOD,RAID 0,RAID 1,RAID 5,RAID 6,RAID 10
Notes	- Volumes over 108 TB require 32 GB of memory or more. - 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. - Creating M.2 storage pools requires the use of Synology-verified SSDs, which are rigorously tested under extreme temperature conditions. Thermal parameters for SSDs and NAS units are fine-tuned to ensure optimal management of thermal conditions under I/O-intensive environments. (Learn more)

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)	340
Windows Access Control List (ACL) Integration	Yes
NFS Kerberos Authentication	Yes

Account & Shared Folder

Maximum Local User Accounts	2,048
Maximum Local Groups	512
Maximum Shared Folder	512
Maximum Shared Folder Sync Tasks	12

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, Fibre Channel, 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 AI Console	
Centralize AI management with flexible configurations for AI model integration, user access control, data privacy, usage policies, and resource allocation	
Third-Party AI Model Integration	v
Maximum De-Identification Rate	340 words per second
Notes	- 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. - To enable de-identification, your device must have at least 8 GB of memory and Container Manager installed.

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	610
Maximum Number of Hosted Files	5,000,000 (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	400

Synology Office

Maximum Number of Users	590

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	710

Surveillance Station

Default Licenses	2 (Additional cameras require purchase of licenses)
Suggested Maximum IP Cameras and Total FPS (H.264)	• 1080p: 75 channels, 2100 FPS • 3M: 75 channels, 1500 FPS • 5M: 75 channels, 900 FPS • 4K: 55 channels, 550 FPS
Suggested Maximum IP Cameras and Total FPS (H.265)	• 1080p: 75 channels, 2250 FPS • 3M: 75 channels, 2250 FPS • 5M: 75 channels, 1500 FPS • 4K: 75 channels, 900 FPS

Central Management System

Provides a single interface to manage and monitor multiple Synology NAS

VPN Server	
Maximum Connections	12

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: D4ES02-8G/D4ES01-16G • Expansion Units: DX517 • Enterprise Series 3.5" SATA HDD: HAT5300 Series • Plus Series 3.5" SATA HDD: HAT3300 Series • Enterprise Series 2.5" SATA SSD: SAT5200 Series • Enterprise Series M.2 2280 NVMe SSD: SNV3400 & SNV5400 Series • 25GbE Network Interface Card: E25G30-F2 • 10GbE Network Interface Card: E10G30-F2/E10G30-T2/E10G18-T1

Warranty
5 Years

| Notes | The warranty period starts from the purchase date as stated on your purchase receipt. (Learn more) |