

Product Specifications



# DS1823XS+

Synology

# Hardware Specs

CPU	
CPU Model	AMD Ryzen V1780B
CPU Quantity	1
CPU Cores	4
CPU Threads	8
CPU Architecture	64-bit
CPU Frequency	3.35 (base) / 3.6 (turbo) GHz
Hardware Encryption Engine	v

Memory	
System Memory	8 GB DDR4 ECC SODIMM
Total Memory Slots	2
Maximum Memory Capacity	32 GB (16 GB x 2)
Notes	<ul style="list-style-type: none"><li>• Synology may revise pre-installed memory module specifications in response to component lifecycle and supply conditions. All revised components undergo the same rigorous validation to ensure equivalent compatibility, stability, and performance.</li><li>• 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.</li><li>• For multi-module memory configurations, all modules must be identical and share the same model number. Check the <a href="#">Product Manual</a> of your Synology product for recommended memory configurations.</li></ul>

Storage	
Drive Bays	8
Maximum Drive Bays with Expansion Unit	18 (DX517 × 2)
M.2 Drive Slots	2 (NVMe)
Drive Type ( <a href="#">See all supported drives</a> )	<ul style="list-style-type: none"> <li>• 3.5" SATA HDD</li> <li>• 2.5" SATA SSD</li> <li>• M.2 2280 NVMe SSD</li> </ul>
Hot Swappable Drive*	v
Notes	<ul style="list-style-type: none"> <li>• The hot swappable drive feature is not supported by M.2 SSD slots.</li> <li>• Synology only guarantees full functionality, reliability, and performance for Synology drives listed on the <a href="#">compatibility list</a>. The use of non-validated components may limit certain functionality and result in data loss and system instability.</li> </ul>

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
Expansion Port Type	eSATA
Notes	This device's 1GbE LAN ports have a maximum transmission unit (MTU) size of 1,500 bytes.

## 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 2 pcs
Fan Speed Mode	<ul style="list-style-type: none"> <li>• Full-Speed Mode</li> <li>• Cool Mode</li> <li>• Quiet Mode</li> </ul>
Easy Replacement System Fan	v
Brightness Adjustable Front LED Indicators	v
Power Recovery	v
Noise Level*	23.6 dB(A)
Scheduled Power On / Off	v
Wake on LAN / WAN	v
Power Supply Unit / Adapter	250 watts
AC Input Power Voltage	100V to 240V AC
Power Frequency	50/60 Hz, Single Phase
Power Consumption	87.93 watts (Access) 28.37 watts (HDD Hibernation)
British Thermal Unit	300.23 BTU/hr (Access) 96.87 BTU/hr (HDD Hibernation)
Notes	<ul style="list-style-type: none"> <li>• For more information on how power consumption is measured, refer to <a href="#">this article</a>.</li> <li>• Noise testing was conducted with the Synology system fully installed with Synology SATA HDDs and in an idle state. Two G.R.A.S. Type 40AE microphones are placed at a 1 m distance from the front and rear of the device. Background noise: 16.49-17.51 dB(A); Temperature: 24.25-25.75°C; Humidity: 58.2-61.8%</li> </ul>

## 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
------------------	--------------

## Certification

- FCC
- CE
- BSMI
- VCCI
- RCM
- EAC
- CCC
- KC
- BIS

## Warranty

5 Years

### Notes

The warranty period starts from the purchase date as stated on your purchase receipt. ([Learn more](#))

## Environment

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: [D4ES03-8G/D4ES03-16G](#)
  - 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](#)
-

# Software Specs

## DSM Specifications

Storage Management	
Maximum Single Volume Size	<ul style="list-style-type: none"><li>• 200 TB (32 GB memory required)</li><li>• 108 TB</li></ul>
Maximum Internal Volume Number	256
M.2 SSD Storage Pool Support*	v
SSD Read/Write Cache (Determining cache size)	v
SSD TRIM	v
RAID Group	v
Supported RAID Type	<ul style="list-style-type: none"><li>• RAID F1</li><li>• Basic</li><li>• JBOD</li><li>• RAID 0</li><li>• RAID 1</li><li>• RAID 5</li><li>• RAID 6</li><li>• RAID 10</li></ul>
RAID Migration	<ul style="list-style-type: none"><li>• Basic to RAID 1</li><li>• Basic to RAID 5</li><li>• RAID 1 to RAID 5</li><li>• RAID 5 to RAID 6</li></ul>
Volume Expansion with Larger HDDs	<ul style="list-style-type: none"><li>• RAID F1</li><li>• RAID 1</li><li>• RAID 5</li><li>• RAID 6</li><li>• RAID 10</li></ul>

Volume Expansion by Adding a HDD	<ul style="list-style-type: none"> <li>• RAID F1</li> <li>• JBOD</li> <li>• RAID 5</li> <li>• RAID 6</li> </ul>
Global Hot Spare Supported RAID Type	<ul style="list-style-type: none"> <li>• RAID F1</li> <li>• RAID 1</li> <li>• RAID 5</li> <li>• RAID 6</li> <li>• RAID 10</li> </ul>
Notes	<ul style="list-style-type: none"> <li>• Volumes over 108 TB require 32 GB of memory or more.</li> <li>• 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.</li> <li>• 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. (<a href="#">Learn more</a>)</li> </ul>

## File System

Internal Drives	<ul style="list-style-type: none"> <li>• Btrfs</li> <li>• ext4</li> </ul>
External Drives	<ul style="list-style-type: none"> <li>• Btrfs</li> <li>• ext4</li> <li>• ext3</li> <li>• FAT32</li> <li>• NTFS</li> <li>• HFS+</li> <li>• exFAT</li> </ul>

## File Services

File Protocol	<ul style="list-style-type: none"><li>• SMB</li><li>• AFP</li><li>• NFS</li><li>• FTP</li><li>• WebDAV</li><li>• Rsync</li></ul>
Maximum Number of SMB Connections (FSCT-Based)	340
Windows Access Control List (ACL) Integration	v
NFS Kerberos Authentication	v
Notes	<ul style="list-style-type: none"><li>• Connection value of this model is tested with Synology SATA SSD fully populated and up to four 10GbE network ports</li><li>• Models with expandable memory are tested with the maximum supported quantity installed.</li><li>• SMB performance was evaluated using Microsoft File Server Capacity Tool (FSCT) version 1.3, with the following configuration:<ul style="list-style-type: none"><li>◦ Test workload: HomeFolder scenario provided by the FSCT tool</li><li>◦ Test duration: 600 seconds</li><li>◦ Domain controller &amp; FSCT controller: Windows Server 2022</li><li>◦ FSCT clients: 8 × Windows 10 machines</li><li>◦ SMB feature: Directory leasing enabled</li></ul></li></ul>

### Account & Shared Folder

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

### Hybrid Share

Maximum Hybrid Share Folders	15
------------------------------	----

### Hyper Backup

Folder and Package Backup	v
Entire System Backup	v
Notes	Full-system backup requires DSM 7.2 or later.

### High Availability

Synology High Availability	v
----------------------------	---

### Log Center

Syslog Events per Second	3,000
--------------------------	-------

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

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	<ul style="list-style-type: none"> <li>• Chrome</li> <li>• Firefox</li> <li>• Edge</li> <li>• Safari</li> </ul>
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 <a href="#">DSM Technical Specifications</a> .

Add-on Packages [view the complete package list](#)

Central Management System
v

## Synology AI Console

Third-Party AI Model Integration	v
Maximum De-Identification Rate	340 words per second
Notes	<ul style="list-style-type: none"><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 Chat

Maximum Number of Users	400
Notes	<ul style="list-style-type: none"><li>• Measured with simulated users, each with an average record of 20,000 messages, emojis, or stickers. The required server response time is below ten seconds.</li><li>• Models with expandable memory are tested with the maximum supported quantity installed.</li></ul>

## Download Station

Maximum Concurrent Download Tasks	80
-----------------------------------	----

## SAN Manager

Maximum iSCSI Target Number	64
Maximum LUN	128
LUN Clone/Snapshot, Windows ODX	v

## Synology MailPlus / MailPlus Server

Free Email Accounts	5 ( <a href="#">Additional accounts require purchase of licenses</a> )
Maximum Number of Users	710
Notes	<ul style="list-style-type: none"><li>• The suggested maximum number of users is based on the following workload: 20% of users with a 20,000 item mailbox randomly performing actions and receiving 240 emails per day, and 80% of users receiving 20 emails per day. <a href="#">Learn more</a></li><li>• Models with SSD support are tested with a single SSD volume.</li><li>• Models with expandable memory are tested with the maximum supported quantity installed. <a href="#">Learn more about memory requirements.</a></li><li>• Operating in high-availability mode will incur additional overhead.</li><li>• Features enabled during evaluation: anti-spam, anti-virus, DNSBL, greylist, content scanning, and full-text search (English).</li></ul>

## Media Server

DLNA Compliance	v
-----------------	---

## Synology Photos

Facial Recognition	v
--------------------	---

Object Recognition	v
--------------------	---

## Snapshot Replication

Maximum Snapshots per Shared Folder	256
-------------------------------------	-----

Maximum Snapshots per LUN	64
---------------------------	----

Maximum Snapshots per System	4,096
------------------------------	-------

Maximum Replication Tasks for Shared Folders	32
--	----

Maximum Replication Tasks for LUNs	16
------------------------------------	----

Maximum Replication Tasks per System	32
--------------------------------------	----

## Surveillance Station

Default Licenses	2 (Additional cameras require purchase of licenses)
Maximum IP Cameras and Total FPS (H.264)	<ul style="list-style-type: none"><li>• 1080p: 75 channels, 2100 FPS</li><li>• 3M: 75 channels, 1500 FPS</li><li>• 5M: 75 channels, 900 FPS</li><li>• 4K: 55 channels, 550 FPS</li></ul>
Maximum IP Cameras and Total FPS (H.265)	<ul style="list-style-type: none"><li>• 1080p: 75 channels, 2250 FPS</li><li>• 3M: 75 channels, 2250 FPS</li><li>• 5M: 75 channels, 1500 FPS</li><li>• 4K: 75 channels, 900 FPS</li></ul>
Notes	<ul style="list-style-type: none"><li>• Performance figures are obtained from testing conducted with the device fully populated with drives, with their default memory configuration, and under a continuous recording setup. Actual system capabilities may vary based on configuration, drive performance, enabled features, and the presence of additional workloads.</li><li>• Use <a href="#">NVR Selector</a> to quickly find a suitable model based on your requirements.</li><li>• The number of video channels that can be viewed simultaneously is double the maximum number of cameras for the same codec and resolution.</li></ul>

## Synology Drive

Maximum Number of Users	610
Maximum Number of Hosted Files	5,000,000 (applies to files indexed or hosted by <a href="#">Synology Drive</a> . For file access through other standard protocols, refer to the File Services section above)
Notes	<ul style="list-style-type: none"><li>• The suggested maximum number of users is based on the following workload: 20% of users randomly perform file operations (upload, download, move, and delete), and 80% of users are logged in but idle. <a href="#">Learn more</a></li><li>• Models with SSD support are tested with a single SSD volume.</li><li>• Models with expandable memory are tested with the maximum supported quantity installed.</li><li>• Exceeding the recommended numbers above will not block application operations, but may result in longer response time.</li><li>• Btrfs file system and non-encrypted shared folders were used during the aforementioned testing.</li></ul>

## Synology Office

Maximum Number of Users	590
Notes	<ul style="list-style-type: none"><li>• The suggested maximum number of users is based on the following workload: 20% of users are executing random actions at an average of 30-second intervals, and 80% of users are logged in and viewing a file. <a href="#">Learn more</a></li><li>• Models with SSD support are tested with a single SSD volume.</li><li>• Models with expandable memory are tested with the maximum supported quantity installed.</li><li>• Client performance may affect maximum simultaneous editing users. Client PCs used for testing: Intel Core i3-3220 / 8GB RAM</li></ul>

## Virtual Machine Manager

Recommended Virtual Machine Instances

8 ([Learn more](#))

Recommended Virtual DSM Number ([Licenses required](#))

8 (including 1 Free License)

Notes

The specifications vary depending on system configuration and memory size.

## VPN Server

Maximum Connections

12