DiskStation DS1821+

Brand: Synology
Product Code: DS1821+
Availability: 10
Weight: 6.00kg
Dimensions: 166.00mm x 343.00mm x 243.00mm
Call for Price:

Short Description

Synology 8 Bay DiskStation DS1821+ (Diskless), 8-bay; 4gb ddr4

Description

Designed for scalability and performance

The 8-bay Synology DS1821+ is aimed at IT enthusiast and SMB customers looking for a powerful and scalable storage solution, its business-grade backup solutions keep users safe and protected from potential data loss, while major improvements to compute capabilities and throughput means workloads are finished faster than ever before.

CPU

AMD Ryzen™
Quad-core 2.2 GHz

Cache Acceleration

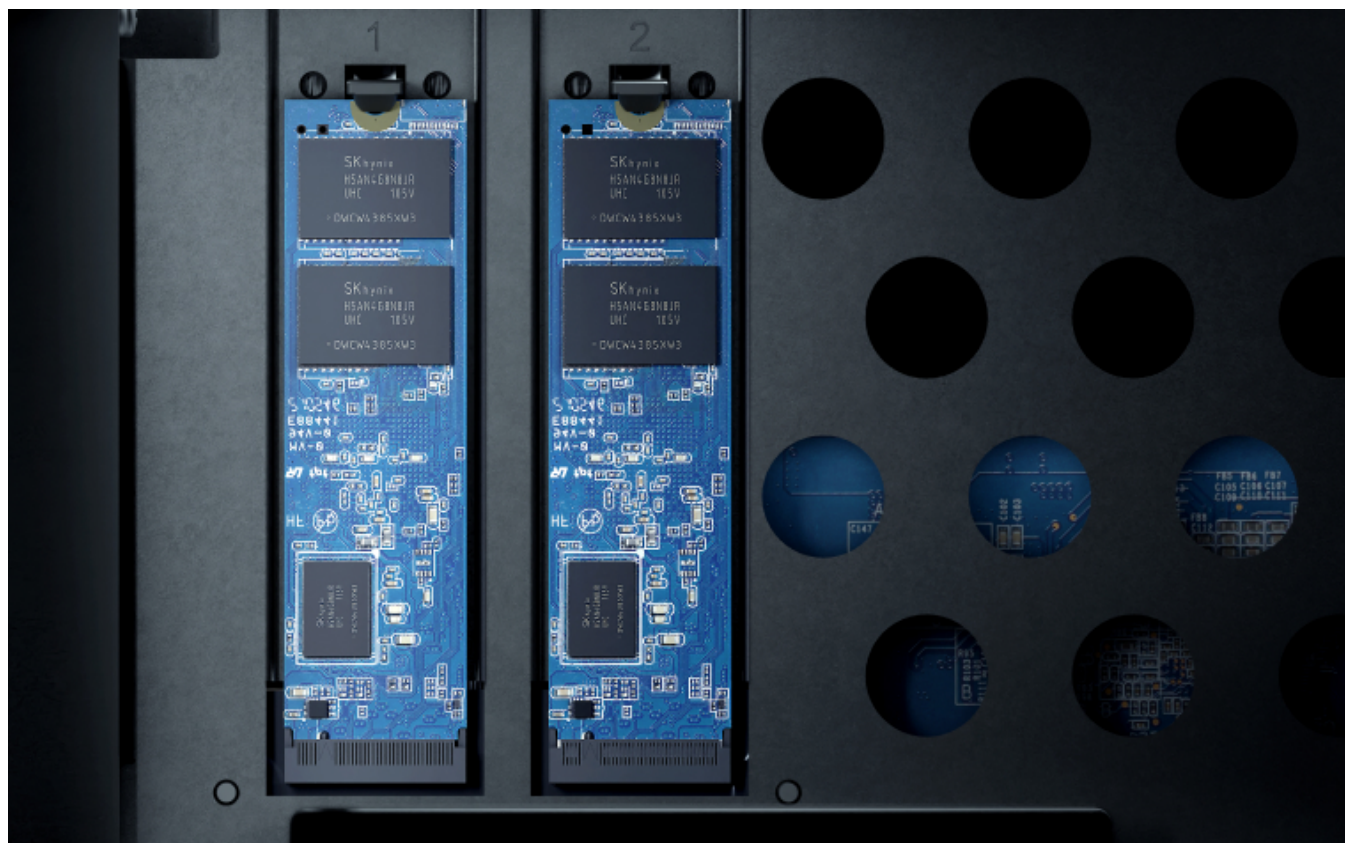Dual M.2 2280 slots for NVMe Cache

Performance

113K 4K random read IOPS

Scalability

Expand up to 18 drives
with two DX517 expansion units

The performance you need

Reduce transfer times with the DS1821+, designed to accelerate your workloads. Easily add faster [networking](#) and [NVMe drives](#) to further boost performance.

Storage that fits your needs

Make the most of high-performance networking and file access without taking up unnecessary space. DS1821+ comes equipped with 8 bays and can scale up to 18 bays with 2 DX517 expansion units as your data needs grow.

DS1821+

DX517 X 2

Fully certified storage virtualization solutions

Synology iSCSI storage fully supports most virtualization solutions to enhance work efficiency with easy management interface. VMware vSphere 6 and VAAI integration helps offload storage operations and optimizes computation efficiency. Windows Offloaded Data Transfer (ODX) speeds up data transfer and migration rate. OpenStack Cinder support turns your Synology NAS into a block-based storage component.

Windows
Server
2022

Certified

Ultimate Backup Solution

DS1821+ integrates various backup applications into an intuitive user interface, offering durable storage technologies to safeguard your valuable data on any device.

Active Backup for Business

Centralize backup tasks for VMware, Windows, and file servers. Restore whatever you want fast and reliably when needed.

Hyper Backup

Comprehensively back up your data to a local shared folder, an external device, another Synology NAS, an rsync server, or a public cloud to ensure data safety.

Drive Package

Safeguard your computer with Synology Drive Client. Effortlessly perform real-time data backups and point-in-time file recovery.

Active Backup for Microsoft 365 / Google Workspace

Protect corporate data stored on the cloud. On-premise backup solution with a centralized dashboard. Optimize storage efficiency with single instancing and block-level deduplication technology.

[Microsoft 365](Google Workspace)

Extra protection with Extended Warranty Plus

Extend the standard 3-year hardware warranty of your DS1821+ with 2 more years of Synology-certified support and premium services that help you recover faster in the event of disaster.

Powered by Synology DiskStation Manager

Central Management System

Conveniently manage your fleet of Synology NAS from a centralized console.

Synology MailPlus

Secure, reliable, and private mail server solution with an intuitive and modern mail client.

Synology High Availability

Seamless transition between clustered servers in the event of a server failure to minimize the impact on applications.

Security

Shield your Synology NAS from the most sophisticated threats with industry-leading security solutions.

Synology Drive

Instantly access your NAS files across multiple devices whenever you want, wherever you are.

Surveillance

Protect your home or business with intelligent monitoring and video management tools.

Software
DSM Specifications

[Storage Management](#)	Maximum Single Volume Size	108 TB
	Maximum Internal Volume Number	64
	M.2 SSD Storage Pool Support*	
	SSD Read/Write Cache [(Determining cache size)](#)	
	SSD TRIM	
	Supported RAID Type	• Synology Hybrid RAID • Basic • JBOD • RAID 0 • RAID 1 • RAID 5 • RAID 6 • RAID 10
	RAID Migration	• Basic to RAID 1 • Basic to RAID 5 • RAID 1 to RAID 5 • RAID 5 to RAID 6
	Volume Expansion with Larger HDDs	• Synology Hybrid RAID • RAID 1 • RAID 5 • RAID 6 • RAID 10
	Volume Expansion by Adding a HDD	• Synology Hybrid RAID • JBOD • RAID 5 • RAID 6
	Global Hot Spare Supported RAID Type	• Synology Hybrid RAID • RAID 1

		- RAID 5 - RAID 6 - RAID 10
	Notes	- 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](#)) - 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. - Each internal volume (may consist of multiple drives) is expandable up to 108TB.
[File System](#)	Internal Drives	- Btrfs - ext4
	External Drives	- Btrfs - ext4 - ext3 - FAT - NTFS - HFS+ - exFAT
	Notes	exFAT Access can be

		installed for free from Package Center in DSM 7.0. In DSM 6.2 or earlier versions, exFAT Access needs to be purchased in Package Center.
[File Services](#)	File Protocol	- SMB - AFP - NFS - FTP - WebDAV - Rsync
	Maximum Concurrent SMB/AFP/FTP Connections	1,000
	Maximum Concurrent SMB/AFP/FTP Connections (with RAM expansion)	2,000
	Windows Access Control List (ACL) Integration	
	NFS Kerberos Authentication	
	Notes	- Regarding data concerning tests with RAM expansion, all memory slots are installed with the maximum capacity of supported RAM. - The testing standard was based on the maximum number of concurrent connections supported by this model. During the testing, 25% of the connections were used to transfer files concurrently. The transfer process guaranteed that the connections were not interrupted; the minimum transfer

		speed was not guaranteed.
Account & Shared Folder	Maximum Local User Accounts	2,048
	Maximum Local Groups	256
	Maximum Shared Folder	512
	Maximum Shared Folder Sync Tasks	16
Hybrid Share	Maximum Hybrid Share Folders	10
Hyper Backup	Folder and Package Backup	
	Entire System Backup	
	Notes	Full-system backup requires DSM 7.2 or later.
High Availability	Synology High Availability	
Log Center	Syslog Events per Second	1,000
Virtualization	VMware ESXi 6.5 and VAAI	
	Windows Server 2016	
	Windows Server 2019	
	Windows Server 2022	
	Citrix Ready	
	OpenStack	
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, ???????, Polski, Magyar, Português do Brasil, Português Europeu, Türkçe, ?eský, ???????, ???, ???, ????, ????
	Notes	For an updated list of supported browser versions,

		check the [DSM Technical Specifications]().
Add-on Packages [view the complete package list]() [Central Management System]()		
[Synology Chat]()	Suggested Users	150
	Notes	Models with expandable memory are tested with their maximum supported memory.
Download Station	Maximum Concurrent Download Tasks	80
[SAN Manager]()	Maximum iSCSI Target Number	128
	Maximum LUN LUN Clone/Snapshot, Windows ODX	256
	Notes	iSCSI Manager has been renamed to SAN Manager in DSM 7.0.
[Synology MailPlus / MailPlus Server]()	Free Email Accounts	5 [(Additional accounts require purchase of licenses)]()
	Suggested Users	750
	Notes	• Suggested users is derived from testing in an environment with 20% heavy users (each with 20,000 pre-populated emails and receiving 240 emails per day) and 80% light users (each receiving an average of 20 emails per day). [Learn more]() • The performance of the mail system will slightly decrease in high-availability mode due to data synchronization between the two servers.

		- Functions that were enabled in all of the tests above: anti-spam, anti-virus, DNSBL, greylist, content scan, full-text search (English only).
		- Models with expandable memory are tested with their maximum supported memory. To estimate the RAM requirement for your NAS, please [read this article](#).
[Media Server](#)	DLNA Compliance	
[Synology Photos](#)	Facial Recognition	
	Object Recognition	
[Snapshot Replication](#)	Maximum Snapshots per Shared Folder	1,024
	Maximum of System Snapshots	65,536
[Surveillance Station](#)	Default Licenses	2 [(Additional cameras require purchase of licenses)](#)
	Suggested Maximum IP Cameras and Total FPS (H.264)	- 1080p: 40 channels, 1050 FPS - 3M: 40 channels, 600 FPS - 5M: 40 channels, 440 FPS - 4K: 32 channels, 320 FPS
	Suggested Maximum IP Cameras and Total FPS (H.265)	- 1080p: 40 channels, 1200 FPS - 3M: 40 channels, 1120 FPS - 5M: 40 channels, 600 FPS - 4K: 40 channels, 480 FPS
	Notes	- 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.

- Use NVR Selector to quickly find a suitable model based on your requirements.
- The number of streams that can be viewed simultaneously is **twice** the suggested maximum number of cameras. For example, if the suggested maximum number of cameras for a model is 10 under H.264, 1080p, the model can support up to 20 streams of the same specification at the same time.

Synology Drive	Recommended Number of Concurrent Sync Clients	550 (the number of connections that can be maintained when the recommended number of hosted files was reached)

	Recommended Number of Hosted Files	50,000,000 (applies to files indexed or hosted by [Synology Drive](#). For file access through other standard protocols, refer to the File Services section above)
	Notes	- Exceeding the recommended numbers above will not block application operations, but may result in longer response time. - Utilizing SSD cache can significantly improve performance. - Models with expandable memory are tested with their maximum supported memory. - Btrfs file system and non-encrypted shared folders were used during the aforementioned testing.
[Synology Office](#)	Suggested Users	4,500
	Notes	Suggested users is derived from testing in an environment with 60% idle users (each logging in and viewing documents) and 40% active users (each executing random actions at intervals of 20 to 40 seconds) operating within documents, each document having 30 users. [Learn more](#)

		- Models with expandable memory are tested with their maximum supported memory. - Client performance may affect maximum simultaneous editing users. Client PCs used for testing: Intel Core i3-3220 / 8GB RAM
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	40

Specification

NAS	
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	4 GB DDR4 ECC SODIMM
Drive Bays	8
Hot Swappable Drive	Yes
RJ-45 1GbE LAN Port	4
USB 3.2 Gen 1 Port	4
System Fan	120 mm x 120 mm x 2 pcs
Power Supply Unit / Adapter	250 watts
Total Memory Slots	2
Maximum Memory Capacity	32 GB (16 GB x 2)
Expansion Port	2

| PCIe Expansion | 1 x Gen3 x8 slot (x4 link) |

Product Gallery