RackStation RS4021xs+

Brand: Synology
Product Code: RS4021xs+
Availability: 10
Weight: 17.40kg
Dimensions: 132.30mm x 482.00mm x 656.50mm
Call for Price:

Short Description
Synology 16 bay RackStation RS4021xs+ (Diskless)

Description

Securing your business assets

The 16-bay RS4021xs+ provides solid data security and lightening-fast performance with over 234K 4K random read IOPS and 6,258 MB/s sequential read throughput[1]. Together with its 8-core processor, ECC memory, advanced snapshot technology, and built-in 10GbE connectivity, the RS4021xs+ can support large multi-user environments while handling data-intensive workloads.

Compute

Intel® Xeon® D-1541 8-core 2.1 GHz
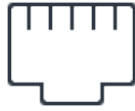
Networking

Built-in dual-port 10GbE

Memory

16 GB ECC DDR4 Up to 64 GB

Scalability

Up to 40 drive bays with RX1217RP/RX1217

Engineered for service continuity

The RS4021xs+ ensures mission-critical data is always available, enabling businesses to deliver the best results, even in the face of disaster.

Redundant power

Dual PSUs provide protection against a PSU failure or accidental cord removal while hot-swappable fans can be replaced without powering down the system.

Maximize service availability

Synology High Availability (SHA) pairs two identical units together creating an active-passive cluster with minute-level failover.

Next-generation file system

Btrfs prevents data corruption and reduces maintenance overheads with advanced storage technologies and optimized snapshots.
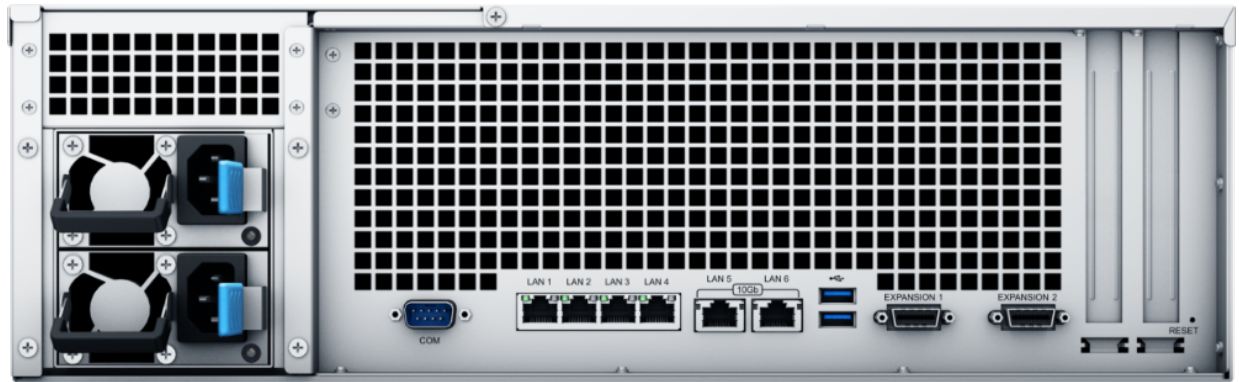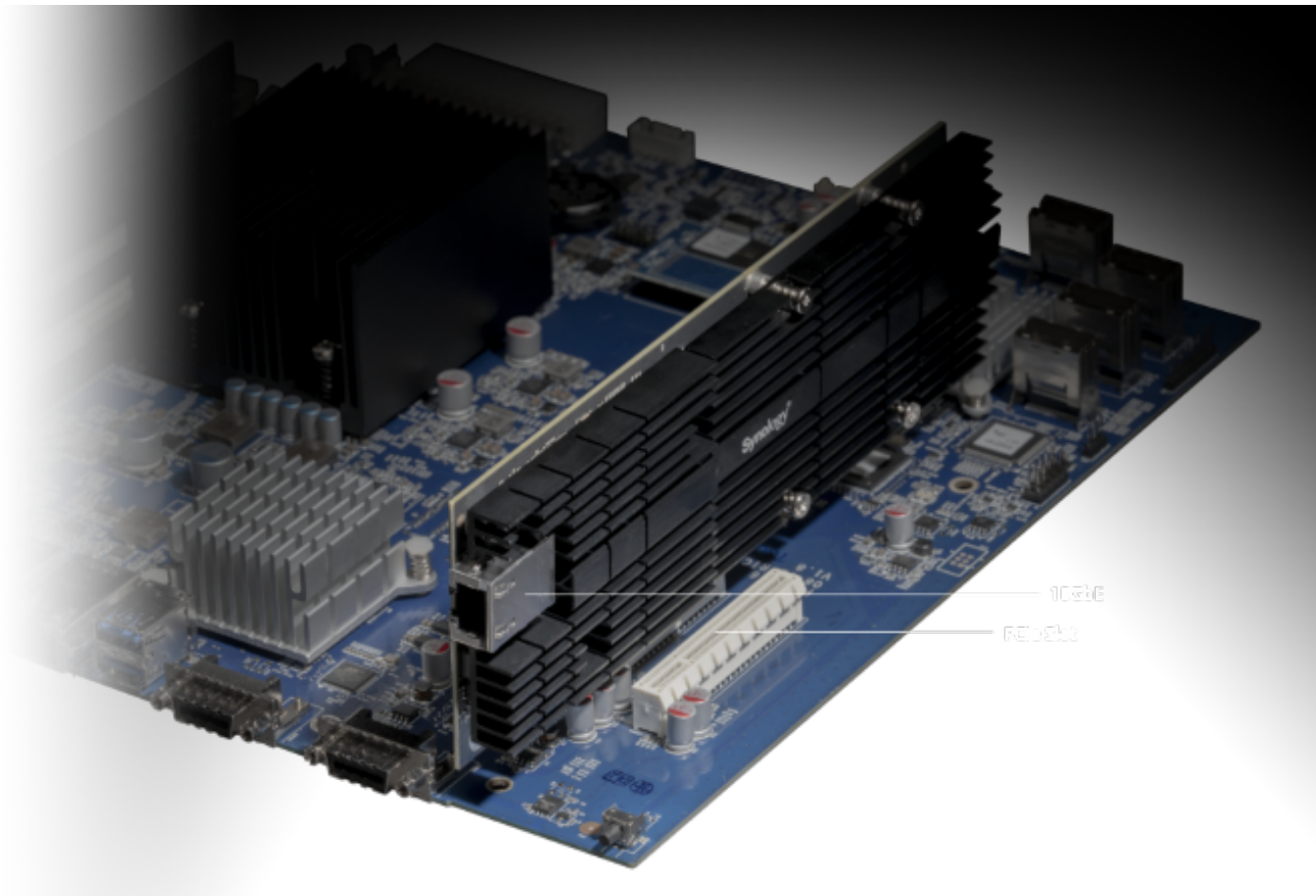
Customize to your business

The RS4021xs+ includes two PCIe slots for performance, networking, and storage upgrades enabling it to adapt to any business environment[2].

Double bandwidth

Upgrade network bandwidth in minutes by 2x or more with Synology's range of 10GbE NICs.

SSD cache

Storage expansion

# The ultimate backup solutions — license-free

Keep disaster at bay

Hyper Backup

A comprehensive backup and recovery solution for securing data stored on Synology servers. Backup data locally, to another Synology device, rsync server, or cloud-based storage such as Google Drive, Dropbox, S3-compatible destinations, and [Synology C2](). Deduplication, integrity checks, and incremental transfer technology reduce bandwidth and storage used.

Snapshot Replication

Easily schedule flexible point-in-time backups of shared folders and iSCSI LUNs with an RPO as low as 5 minutes and recovery in seconds. Set up replication and failover to other Synology storage systems for fast RTOs and minimal service disruption.

Hyper Backup

USB   Hyper Backup   Hyper Backup Vault   Hyper Backup
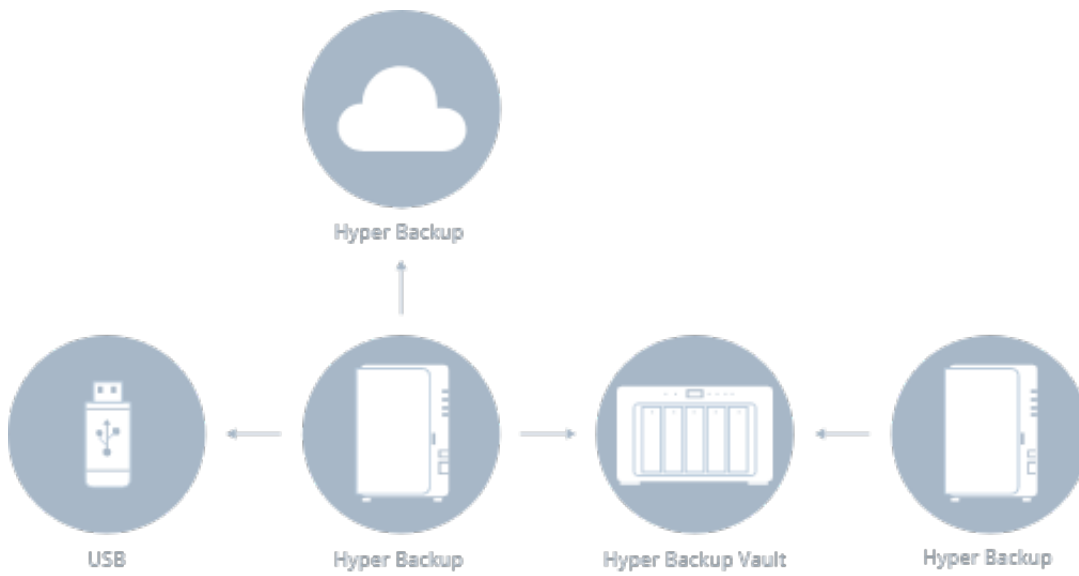
Backup your entire IT infrastructure

Active Backup Suite

Enables administrators to easily backup the entire IT infrastructure to their NAS,

including Windows & Linux workstations and servers, file servers, VMware and Hyper-V virtual machines, and Microsoft 365 and Google Workspace accounts. Backups benefit from deduplication, multiversioning, and optimizations to reduce bandwidth and storage used.

Storage for virtualization

Synology iSCSI storage supports mainstream virtualization solutions with an easy management interface to enhance usability. VMware vSphere 6.5 and VAAI integration helps offload storage operations. Windows Offloaded Data Transfer (ODX) speeds up

data transfer. OpenStack Cinder support turns your Synology NAS into a block-based storage component. Additionally, Synology Storage Console enables even more simplified storage provisioning and management options in VMware and Windows environments.

All-in-one surveillance solution

Synology Surveillance Station transforms the RS4021xs+ into a feature-packed Network Video Recorder solution. Support for up to 90 IP cameras and video analytics such as motion detection, no idle zone, foreign object detection, and anomaly detection cater to the most common surveillance scenarios.

Secure and private

AES-256 encryption keeps locally-stored footage secure.

Access from anywhere, anytime

Access recordings and live streams whenever you want using a web browser, desktop client, or the DS cam mobile app.

Real-time alerts

Email, SMS, or push notifications alert you when incidents occur or predefined conditions are met.

Software
DSM Specifications

[Storage Management](#)	Maximum Single Volume Size	• 1 PB (64 GB memory required, for RAID 6 groups only) • 200 TB (32 GB memory required) • 108 TB
	Maximum Internal Volume Number	256
	SSD Read/Write Cache [(Determining cache size)](#)	
	SSD TRIM	
	RAID Group	
	Supported RAID Type	• RAID F1 • 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	- RAID F1 - RAID 1 - RAID 5 - RAID 6 - RAID 10
Volume Expansion by Adding a HDD	- RAID F1 - JBOD - RAID 5 - RAID 6
Global Hot Spare Supported RAID Type	- RAID F1 - RAID 1 - RAID 5 - RAID 6 - RAID 10
Notes	- 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. - When Peta Volume is enabled, validated services and packages are required. Please refer to this article for more information on limitations. - Actual maximum storage pool and volume sizes depend on drive sizes used, the number of drive

			bays available, and the RAID configuration. • Volumes over 108 TB require 32 GB of memory or more.
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	4,000	
	Maximum Concurrent SMB/AFP/FTP Connections (with RAM expansion)	10,000	
	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.
- During testing, the maximum number of SSDs supported by this model is installed in a RAID 5 configuration.
- 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	16,000
	Maximum Local Groups	512
	Maximum Shared Folder	512
	Maximum Shared Folder Sync Tasks	32
[Hybrid Share](#)	Maximum Hybrid Share Folders	15
[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	3,000
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, 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, ???????, 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	500
	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	256
	Maximum LUN LUN Clone/Snapshot, Windows ODX	512
	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	10,000
	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](#) [Synology Photos](#)	DLNA Compliance 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: 280 channels, 2800 FPS 3M: 200 channels, 2000 FPS 5M: 120 channels, 1200 FPS 4K: 85 channels, 850 FPS
	Suggested Maximum IP Cameras and Total FPS (H.265)	1080p: 285 channels, 8550 FPS 3M: 280 channels, 2800 FPS 5M: 200 channels, 2000 FPS 4K: 120 channels, 1200 FPS
	Notes	- Surveillance Station 9.1.3 or above is required to support the maximum IP cameras and FPS figures listed. - 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	2,000 (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 Notes	12,500 - 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	16 [(Learn more)](#)

	Recommended Virtual DSM Number [(Licenses required)](#)	16 (including 1 Free License)
	Notes	The specifications vary depending on system configuration and memory size.
[VPN Server](#)	Maximum Connections	60

Specification

NAS	
RJ-45 10GbE LAN Port	2
CPU Architecture	64-bit
CPU Core	8
CPU Frequency	2.1 (base) / 2.7 (turbo) GHz
CPU Model	Intel Xeon D-1541
CPU Quantity	1
Expansion Port	2
Form Factor (RU)	3U
Hardware Encryption Engine	Yes
PCIe Expansion	2 x Gen3 x8 slots (x8 link)
Power Supply Unit / Adapter	800 watts 550 watts*
Redundant Power Supply	Yes
RJ-45 1GbE LAN Port	4
System Fan	80 mm x 80 mm x 3 pcs
Total Memory Slots	4
USB 3.2 Gen 1 Port	2

Product Gallery