

RackStation RS2821RP+



Brand: Synology

Product Code: RS2821RP+

Availability: 10

Weight: 17.10kg

Dimensions: 656.50mm x 482.00mm x
132.30mm

Call for Price:

Short Description

Synology RackStation RS2821RP+ 3U 16-Bay Rackmount NAS for SMB

Description

Versatile and scalable storage

Synology RS2821RP+ is a 3U 16-bay storage server designed to accommodate a diverse set of business requirements. Scalable to 28 drives, the unit provides powerful backup and restoration functionality for the SMB sector. It delivers 2,200 MB/s sequential read and 105K 4K random read performance¹, and can be upgraded with SSD cache and 10/25Gb Ethernet² options.



Compute

AMD Ryzen™ V1500B quad-core 2.2 GHz



2,220 MB/s seq. read 105K 4K random read performance¹



4 GB ECC DDR4, up to 32 GB



Up to 28 drive bays with RX1217RP/RX1217

High performance storage for anything

Over 105K/59K random read/write IOPS and up to 2,220/1,164 MB/s sequential read/write throughput ensure ample performance for demanding workloads.¹

Built for reliability

Redundant power

Reduce the possibility of power disruptions on a single distribution channel or PDU adversely impacting data and service availability.

Near-zero downtime

Pair two identical devices with Synology High Availability and enable automatic minute-level failover between both devices in the event one server fails.

Data integrity and protection

ECC memory prevents data corruption, while the Btrfs file system brings higher reliability, snapshot technology, and simplified data protection.

Customize to suit

Easily adapt the RS2821RP+ to any business environment by adding faster networking, local SSD cache, or storage capacity.²

10/25GbE ready

Support for 10/25GbE NICs lets you boost server throughput up to five times using Link Aggregation (bonding).

SSD cache³

On-demand drive bays

License-free backup solutions

Back up your NAS to other devices

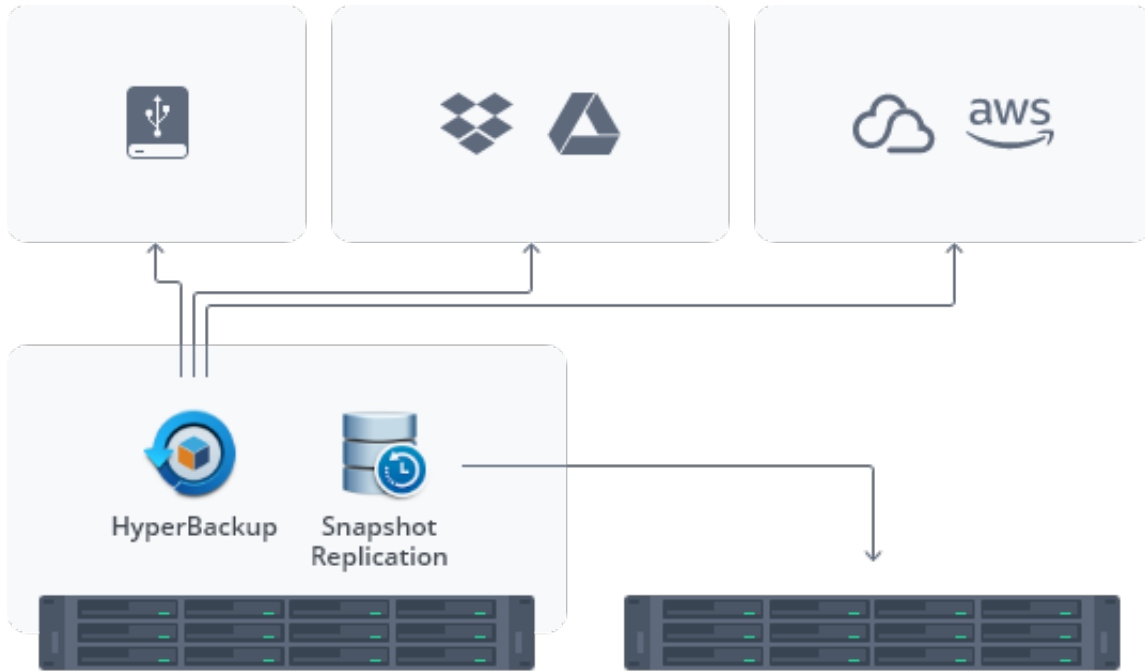
Hyper Backup

Back up files, iSCSI LUNs, installed applications, and system configurations to destinations including Synology C2 Storage, public cloud platforms, USB devices, file servers, local folders, or other Synology NAS.

Set and forget backup tasks with regular schedules, enhance security with fine-grained user permissions and encryption, keep backup sizes small with built-in deduplication⁴, and restore data flexibly with multi-versioning.

Snapshot Replication

Snapshot Replication enables flexible point-in-time snapshots of shared folders, and virtual machines with an RPO as low as 5 minutes and recovery within seconds.

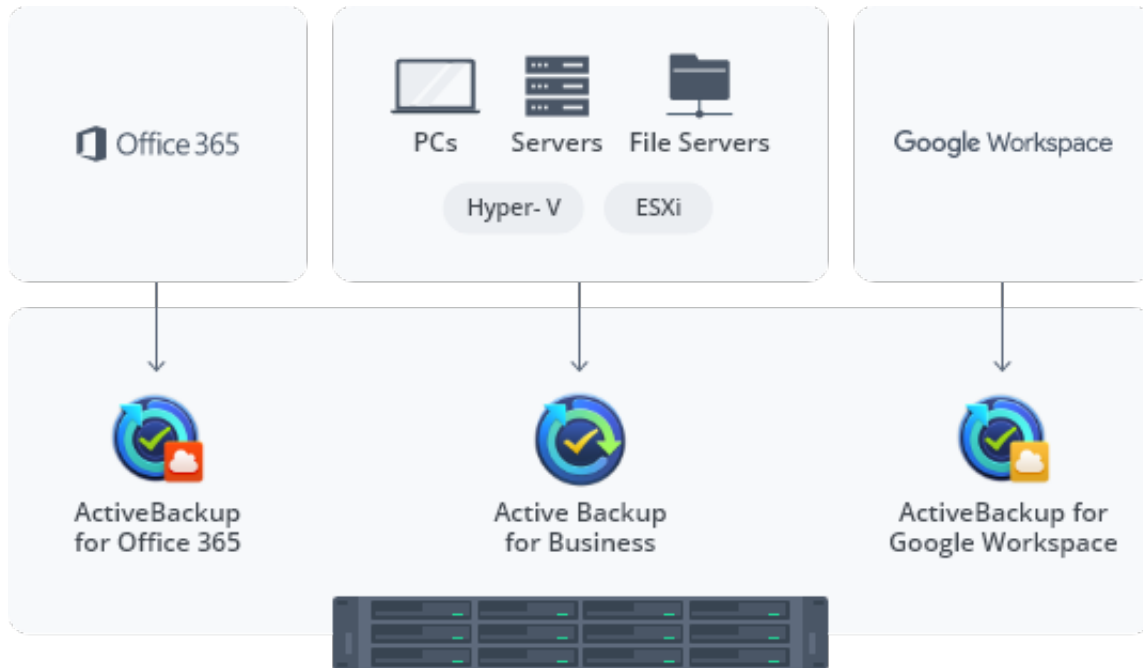


Consolidate backups to your NAS

Active Backup Suite

Securely back up Windows clients and servers, Microsoft 365 and Google Workspace accounts, file servers, and VMware and Hyper-V virtual machines with the Active Backup Suite.

Leverage built-in deduplication⁴ technology to reduce backup sizes and multi-versioning to allow flexible restoration.



Serving remote workforces

Keep your remote workforce connected with powerful out-of-the-box solutions for collaboration, file sharing, and communication.

Synology Drive

Host your own private cloud behind the safety of your NAS with 100% data ownership and no subscription fees.

Synology Office

Synology Chat

Storage for virtualization

DSM streamlines provisioning for and management of virtual machines with full certification for VMware® vSphere™, Microsoft® Hyper-V®, Citrix® XenServer™, and OpenStack virtualization environments.

Synology Storage Console for VMware or Windows platforms lets you manage storage directly from your hypervisor. VMware VAAI integration and Windows ODX help offload storage operations and speed up data transfer.

Software

DSM Specifications

Storage Management

Maximum Single Volume Size	108 TB
Maximum Internal Volume Number	64
SSD Read/Write Cache (Determining cache size)	
SSD TRIM	
Supported RAID Type	<ul style="list-style-type: none">• Synology Hybrid RAID• Basic• JBOD• RAID 0• RAID 1• RAID 5• RAID 6• RAID 10
RAID Migration	<ul style="list-style-type: none">• Basic to RAID 1• Basic to RAID 5• RAID 1 to RAID 5• RAID 5 to RAID 6
Volume Expansion with Larger HDDs	<ul style="list-style-type: none">• Synology Hybrid RAID• RAID 1• RAID 5• RAID 6• RAID 10
Volume Expansion by Adding a HDD	<ul style="list-style-type: none">• Synology Hybrid RAID• JBOD• RAID 5• RAID 6
Global Hot Spare Supported RAID Type	<ul style="list-style-type: none">• Synology Hybrid RAID• RAID 1• RAID 5

Notes

- RAID 6
- RAID 10
- 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

External Drives

- ext4
- 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 1,000

SMB/AFP/FTP Connections

Maximum Concurrent 2,000

SMB/AFP/FTP Connections
(with RAM expansion)

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
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[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
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[Virtualization](#)

VMware ESXi 6.5 and VAAI

General Specifications	Windows Server 2022	
	Citrix Ready	
	OpenStack	
	Supported Protocols	SMB1 (CIFS), SMB2, SMB3, NFSv3, NFSv4, NFSv4.1, NFS Kerberized sessions, iSCSI, HTTP, HTTPS, FTP, SNMP, LDAP, CalDAV
	Supported Browsers	<ul style="list-style-type: none"> • 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	256
	LUN Clone/Snapshot, Windows ODX	
	Notes	iSCSI Manager has been renamed to SAN Manager in DSM 7.0.

[Synology MailPlus / MailPlus Server](#)

Free Email Accounts

Suggested Users

Notes

5 ([Additional accounts require purchase of licenses](#))

750

- 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: 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
Notes

4,500

- 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

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.

Specification

NAS	
CPU Architecture	64-bit
CPU Core	4
CPU Frequency	2.2 GHz
CPU Model	AMD Ryzen V1500B
CPU Quantity	1
Drive Bays	16
Expansion Port	1
Form Factor (RU)	3U
Hardware Encryption Engine	Yes
Hot Swappable Drive	Yes
Maximum Memory Capacity	32 GB (16 GB x 2)
Memory	4 GB DDR4 ECC UDIMM
PCIe Expansion	1 x Gen3 x8 slot (x4 link)
Power Supply Unit / Adapter	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	2
USB 3.2 Gen 1 Port	2

Product Gallery

