Synology®

RackStation

RS1221+
RS1221RP+



Safeguarding Critical Business Assets Through Robust Data Protection

Synology RackStation RS1221+/RS1221RP+ is a powerful 2U 8-bay rackmount network-attached storage solution, perfect for centralizing data management in short rack-depth environments. The RS1221+ series is ideal at handling heavy file workloads and protecting digital assets in small business environments through the comprehensive data protection options included in the DiskStation Manager (DSM) operating system.

Highlights

- **High Performance**
  Tackle multi-user environments effortlessly with up to 2,315 MB/s read and 1,147 MB/s write performance[1]
- **Compact Deployment**
  The RS1221+ and RS1221RP+ feature a short depth of just 298 mm and 399 mm respectively
- **10GbE Ready**
  Add in a 10GbE SFP+ or RJ-45 NIC to instantly increase network bandwidth based on your existing infrastructure[2]
- **High Availability**
  Configure two units together to create a Synology High Availability (SHA) cluster for maximum service uptime and minute-level failover

Versatile by Design

Synology RS1221+/RS1221RP+ is a multi-purpose powerhouse, suited to a wide range of scenarios. The short form-factor enables easy installation on a two-post rack (RS1221+ only) or in space-limited environments.

- Over **108,173** 4K random read IOPS and **2,315 MB/s** sequential write[1] for demanding workloads
- Features 8 bays, supporting both SATA HDD/SSD 2.5"/3.5" drives, expandable up to 12 bays using a Synology RX418 expansion unit[3]



Next-Generation File System

Btrfs is a modern file system designed to safeguard data integrity through metadata mirroring, file self-healing, and fast snapshot replication.

Optimized for Data Protection and Integrity

Powered by **Synology DSM**, our unified data management operating system, and built upon the **Btrfs** file system, data stored on the RS1221+/RS1221RP+ is safely guarded by modern data protection technologies.

- **Advanced snapshot technology** provides schedulable and near-instantaneous data protection of shared folders and LUNs
- **File and folder-level data restoration** enables restoration of specific files or folders
- **Flexible storage quota system** helps admins effortlessly manage available space by specifying storage limits for shared folders
- **File self-healing** detects and recovers corrupted files using mirrored metadata and RAID configurations
- **Inline compression** compresses data before writing it to the drive, reducing write commands and optimizing storage space



Synology Backup Solutions

DSM backup solutions are designed to be low-maintenance, with different RPO/RTO targets, storage efficiency, and backup destinations available depending on your requirements.

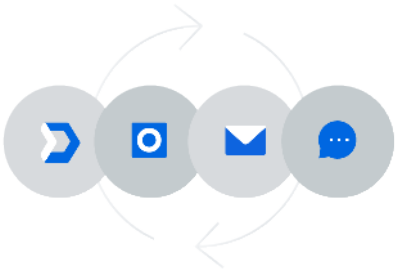
Data Backup Solutions for IT Infrastructure

Synology Active Backup Suite is a collection of license-free backup solutions built to protect Windows PCs and servers, VMs, other file servers, and cloud-based storage.

Active Backup for Business (ABB) consolidates backup tasks for physical and virtual environments and enables rapid restoration of files, entire physical machines, and VMs.

Active Backup for G Suite enables backup of Google Workspace data including Gmail, Contacts, Calendar, and Drive.

Active Backup for Microsoft 365 enables backup of Microsoft 365 data including OneDrive for Business, SharePoint Online, emails, contacts, and calendar.



Synology Collaboration Suite

A powerful and secure private cloud solution that lets teams collaborate, sync files, and communicate with others anytime, anywhere.

On-Premises Collaboration

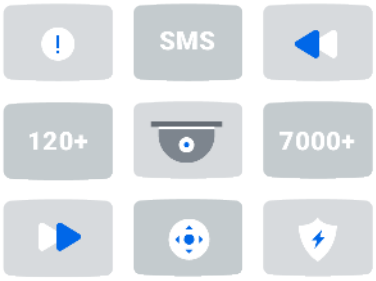
Synology's collaboration suite is a private SaaS for file sharing, concurrent document editing, emails, instant messaging, and more. By leveraging a private cloud infrastructure, it ensures data ownership while multi-layered security enables secure multi-platform access.

Synology Drive allows data access, synchronization, on-demand file restoration, and backup.

Synology MailPlus[4] provides a secure, reliable, and private email server.

Synology Chat brings teams together through instant multi-platform communication.

Synology Calendar helps teams keep track of what is most important with convenient calendar sharing and scheduling.



Always On Guard

Protect your business with Synology's reliable and intuitive VMS solution. Surveillance Station combines intelligent monitoring and robust management features for flexible deployment scenarios.



Flexible Virtualization

Whether providing VM storage through iSCSI, NFS, or running VMs directly on the RS1221+/ RS1221RP+ using Virtual Machine Manager, Synology DSM provides comprehensive tools to protect your virtual machines.

Private Video Surveillance

With **Synology Surveillance Station**, the RS1221+/RS1221RP+ becomes a powerful Network Video Recorder solution with support for up to 40 IP cameras[5].

- 7,600+ **supported camera models**
- ONVIF support to prevent vendor lock-in
- Private, subscription-free storage of the recordings
- Access through web browser, dedicated desktop clients, or mobile app
- Event-based rules to trigger specific actions
- Email, SMS, or push notification systems

Virtualization and Certified Storage

DSM streamlines the provisioning and management of storage for virtual machines (VM). Certified for VMware® vSphere™, Microsoft® Hyper-V®, Citrix® XenServer™, and OpenStack, it integrates with your virtualization platform of choice through iSCSI or NFS protocols. Install Synology Storage Console on VMware or Windows platforms for additional management convenience and functionality right in the hypervisor.

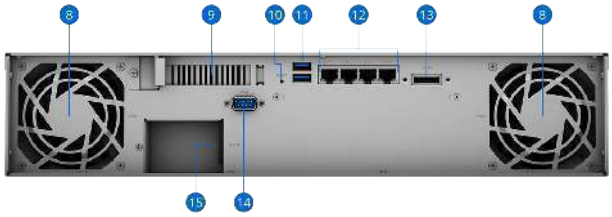
Synology Virtual Machine Manager (VMM) is a hosted hypervisor for virtual machines running Windows®, Linux®, or virtualized versions of DSM with recovery mechanisms that ensure data protection on each VM[6].

Hardware Overview

Front (RS1221+)



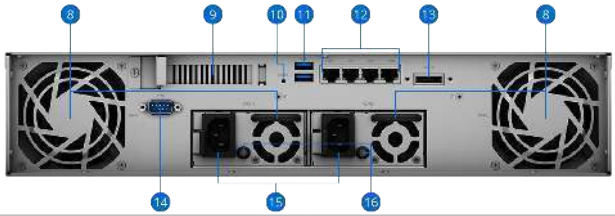
Rear (RS1221+)



Front (RS1221RP+)



Rear (RS1221RP+)



1	Power Indicator	2	Power Button	3	Alert Off Button	4	Status Indicator
5	Alert Indicator	6	Drive Status Indicators	7	Drive Trays	8	Fans
9	PCIe Expansion Slot	10	Reset Button	11	USB 3.2 Gen 1 Ports	12	1GbE RJ-45 Ports
13	Expansion Port	14	Console Port	15	Power Port(s)	16	PSU Indicators & Alert Off Buttons

Technical Specifications

Hardware

CPU	AMD Ryzen™ V1500B quad-core 2.2 GHz
Hardware encryption engine	Yes (AES-NI)
Memory	4 GB DDR4 ECC SODIMM (expandable up to 32 GB)
Compatible drive types[7]	8 x 3.5" or 2.5" SATA HDD/SSD (drives not included)
Hot swappable drive	Yes
External ports	• 2 x USB 3.2 Gen 1 ports • 1 x Expansion port (eSATA)
Form factor	Rackmount 2U
Size (HxWxD)	• RS1221+: 88 x 482 x 306.6 mm (with server handles) • RS1221RP+: 88 x 482 x 407.5 mm (with server handles)
Weight	• RS1221+: 6.9 kg • RS1221RP+: 8.4 kg
Rack installation support	• RS1221+: 2-post 19" rack (direct mounting), 4-post 19" rack • RS1221RP+: 4-post 19" rack
LAN ports	4 x 1GbE RJ-45
Wake on LAN/WAN	Yes
PCIe 3.0 slot	• 1 x 4-lane x8 slot • Supports network interface cards[2] and M.2 NVMe SSD adapter cards for SSD cache[8]
Scheduled power on/off	Yes
System fans	2 x (80 x 80 x 25 mm)
AC input power voltage	100 V to 240 V AC
Power frequency	50/60 Hz, single phase
Operating temperature	0°C to 35°C (32°F to 95°F)
Storage temperature	-20°C to 60°C (-5°F to 140°F)
Relative humidity	5% to 95% RH
Maximum operating altitude	5,000 m (16,400 ft)

General DSM Specification

Networking protocols	SMB, AFP, NFS, FTP, WebDAV, CalDAV, iSCSI, Telnet, SSH, SNMP, VPN (PPTP, OpenVPN™, L2TP)
File systems	• Internal: Btrfs, ext4 • External: Btrfs, ext4, ext3, FAT32, NTFS, HFS+, exFAT[9]
Supported RAID types	Synology Hybrid RAID (SHR), Basic, JBOD, RAID 0, RAID 1, RAID 5, RAID 6, RAID 10
Storage management	• Maximum single volume size: 108 TB • Maximum system snapshots: 65,536[10] • Maximum internal volumes: 64
SSD cache	• Read/write cache support • 2.5" SATA SSD support • M.2 NVMe SSD support[8]
File sharing capabilities	• Maximum local user accounts: 2,048 • Maximum local groups: 256 • Maximum shared folders: 512 • Maximum concurrent SMB/NFS/AFP/FTP connections: 1,000[11]
Privileges	Windows® Access Control List (ACL), application privileges
Directory services	Connects with Windows® AD/LDAP servers enabling domain users to login via SMB/NFS/AFP/FTP/File Station using their existing credentials.
Virtualization	VMware vSphere® 6.5, Microsoft Hyper-V®, Citrix®, OpenStack®
Security	Firewall, shared folder encryption, SMB encryption, FTP over SSL/TLS, SFTP, rsync over SSH, login auto block, Let's Encrypt support, HTTPS (customizable cipher suite)
Supported clients	Windows® 7 onwards, macOS® 10.12 onwards
Supported browsers	Chrome®, Firefox®, Edge®, Internet Explorer® 10 onwards, Safari® 10 onwards, Safari (iOS 10 onwards), Chrome (Android™ 6.0 onwards) on tablets
Interface languages	English, Deutsch, Français, Italiano, Español, Dansk, Norsk, Svensk, Nederlands, Русский, Polski, Magyar, Português do Brasil, Português Europeu, Türkçe, Český, ภาษาไทย, 日本語, 한국어, 繁體中文, 简体中文

Packages and Applications

File Server & Synchronization	
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 hosted files: 1,000,000 • Maximum number of concurrent connections for PC clients: 550
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.
FTP Server	Supports bandwidth control for TCP connections, custom FTP passive port ranges, anonymous FTP, FTP over TLS/SSL and SFTP protocols, network booting with TFTP and PXE support, and transfer logs.
Presto File Server[12]	Enables high-speed data transfer over WAN through the exclusive SITA technology between Synology NAS and desktop.
Cloud Sync	Offers one or two-way synchronization with public cloud storage providers including Alibaba Cloud OSS, Amazon S3-compatible storage, Backblaze B2, Baidu Cloud, Box, Dropbox, Google Cloud Storage, Google Drive, hubiC, MegaDisk, Microsoft OneDrive, OpenStack Swift-compatible storage, Tencent COS, WebDAV servers and Yandex Disk.
Universal Search	Enables global search of applications and files.
iSCSI Storage & Virtualization	
iSCSI Manager	• Maximum iSCSI targets: 128 • Maximum iSCSI LUNs: 256 • iSCSI LUN clone/snapshot support
Virtual Machine Manager	Deploys and runs virtual machines on the Synology NAS, including Windows®, Linux®, and Virtual DSM.
Data Protection & Backup Solution	
Hyper Backup	Supports local backup, network backup, and data backup to public clouds.
Backup tools	• DSM configuration backup, macOS® Time Machine® support, Synology Drive Client desktop application • Shared folder sync supports a maximum of 16 tasks
Snapshot Replication	• Maximum number of snapshots for shared folders: 1,024 • Maximum number of replications: 32
Synology High Availability	Reduces service downtime by combining two identical NAS into a high-availability cluster.
Active Backup for G Suite	Supports backup and restoration of Google Workspace My Drive, Team Drive, Gmail, Contacts, and Calendar.

Active Backup for Microsoft 365	Supports backup and restoration of Microsoft 365 OneDrive for Business, mail, contacts, and calendar.
Active Backup for Business	An all-in-one backup solution designed for heterogeneous business IT environments. It enables IT admins to remotely manage and protect PCs, servers, and VMs from one centralized console.
Productivity & Collaboration	
Collaboration tools	Users can collaborate through the instant messaging service Synology Chat, the online editor Synology Office, and the scheduling assistant Synology Calendar. • Maximum users for Chat: 1,500 • Maximum users for Office: 1,800 • Calendar supports CalDAV and access via mobile devices
Note Station	A note taking platform that supports rich text, note organization and versioning, encryption, sharing, media embedding, and attachments.
Synology MailPlus Server	A secure, reliable, and private mail solution featuring high-availability, load balancing, security, and filtering[4].
Synology MailPlus	An intuitive webmail interface for Synology MailPlus Server with customizable mail labels, filters, and user interface.
Multimedia	
Moments	A feature-rich photo management application that includes AI-powered album creation from facial and subject recognition, photo editing and sharing capabilities, similar photo detection for duplicate management, auto-editing functions such as color correction and angle adjustments, and auto-selection of the best shots. Mobile applications are available on iOS and Android™ devices.
Other packages	Video Station, Photo Station, Audio Station, iTunes® Server
Surveillance	
Surveillance Station	Maximum IP cameras: 40, for a total of 1,200 FPS at 720p (H.264)[5]
All-in-One Servers	
Synology Directory Server	Provides a flexible and cost-effective domain controller solution.
Central Management System	Provides a single interface to manage and monitor multiple Synology NAS.
VPN Server	• Maximum connections: 30 • Supported VPN protocols: PPTP, OpenVPN™, L2TP/IPSec
Mail Server	• Supported Mail Server protocols: POP3, SMTP, IMAP • LDAP/AD account support
Mail Station	A webmail interface for Mail Server to receive emails from multiple POP3 mailboxes and SMTP servers.
Web Station	Enables hosting for up to 30 websites with support for PHP/MariaDB® and 3rd-party applications.
Other packages	DNS Server, RADIUS Server, Log Center
Others	
Storage Analyzer	Displays volume and quota usage, total size of files, volume usage and trends based on past usage, size of shared folders, large files, most recently modified files, and least recently accessed files.
Antivirus Essential	Provides full system scans, scheduled scans, white list customization, and auto-update of virus definitions.
iOS/Android™ applications	Synology Drive, Synology MailPlus, Synology Chat, Synology LiveCam, Moments, DS audio, DS photo, DS video, DS cam, DS file, DS finder, DS note
Other packages	Additional 3rd-party packages are available in the Package Center.

Environment and Packaging

Environment safety	RoHS compliant
Package contents	• 1 x RS1221+/RS1221RP+ main unit • 1 x Quick Installation Guide • 1 x Accessory pack • 2 x AC power cords (RS1221RP+) / 1 x normal cable and 1 x C13 to C14 cable (RS1221+)
Optional accessories[13]	• DDR4 ECC SO-DIMM: D4ES01-4G/D4ES01-8G/D4ECSO-2666-16G • 10GbE Network Interface Card: E10G18-T2/E10G18-T1/E10G17-F2 • M.2 SSD & 10GbE Combo Adapter Card: E10M20-T1 • M.2 SSD Adapter Card: M2D20 • 2.5" SATA SSD: SAT5200 • M.2 NVMe SSD: SNV3400, SNV3500[8] • Expansion Unit: RX418 • Rail Kit (RS1221+): RKM114, RKS1317 • Rail Kit (RS1221RP+): RKS1317 • VisualStation: VS960HD/VS360HD • MailPlus License Pack[4] • Surveillance Device License Pack[5] • Virtual DSM License Pack[6]

Warranty	3 years[14]

Note: Model specifications are subject to change without notice. Please refer to **www.synology.com** for the latest information.

1. Performance figures obtained through internal testing by Synology. Actual performance may vary depending on the testing environment, usage, and configuration.
2. For the most up-to-date list of compatible NICs, please check our **compatiblity list**.
3. RS1221+/RS1221RP+ supports up to 12 drives with one Synology RX418 expansion unit, sold separately.
4. 5 MailPlus licenses are included, licenses required for additional user accounts. **Learn more** about licenses.
5. Surveillance Station includes 2 free licenses. Connecting more cameras and devices requires **additional licenses**.
6. Certain advanced features require **Virtual Machine Manager Pro**. 1 **Virtual DSM license** is included, licenses are required for running additional instances.
7. Check our **compatibility list** for validated drives to ensure system stability.
8. SSD cache can be enabled by using a **compatible 2.5" SSD** or without occupying drive bays by installing Synology SNV3400/SNV3500 M.2 2280/22110 NVMe SSD drives using M2D20 or E10M20-T1 adapter cards, sold separately.
9. exFAT Access can be purchased separately through the DSM Package Center.
10. System snapshots include snapshots taken by iSCSI Manager, Snapshot Replication, and Virtual Machine Manager. Availability of these packages varies by model.
11. Maximum concurrent connections can be increased to 2,000 with maximum installed memory of 32 GB RAM.
12. Presto File Server license can be purchased separately through the application.
13. Please refer to our **compatibility list** for the latest optional accessories list.
14. 5-year warranty is available as an optional add-on with **EW202**, a 2-year warranty extension. Available only in select regions. The warranty period starts from the purchase date as stated on your purchase receipt. **Learn more** about our limited product warranty policy.

SYNOLOGY INC.

© 2021, Synology Inc. All rights reserved. Synology, the Synology logo are trademarks or registered trademarks of Synology Inc. Other product and company names mentioned herein may be trademarks of their respective companies. Synology may make changes to specification and product descriptions at anytime, without notice.

RS1221(RP)+-2021-ENU-REV003