Datasheet

—

DiskStation

DS1621+

DiskStation

DS1621+

Data management and protection, for anyone

Synology DiskStation DS1621+ is a powerful 6-bay network-attached storage solution designed to store and protect critical data assets. The growing amount of unstructured data requires smarter and increasingly higher performance methods of storing, accessing, and sharing. DS1621+ is a compact desktop form-factor NAS that is beyond evolutionary, featuring over 110K, or 174% higher 4K random read IOPS,1 compared to its predecessor. Designed for scalability, the DS1621+ enables you to start small, then expand as your data grows.

- **Accelerated Performance**
  174% higher 4K random read IOPS and 76% faster sequential write speeds compared to its predecessor[1]

- **Maximize Performance**
  Turbocharge HDD arrays without occupying drive bays using dual built-in M.2 slots for NVMe SSD cache

- **Easy Storage Expansion**
  Scale-up on-demand to 16 drives with two DX517 expansion units[2]

- **Includes Everything to Protect Your Data**
  Back up critical data to and from public clouds, Windows PCs and servers, virtual machines, and data on the NAS with Synology Active Backup suite, Hyper Backup, and Snapshot Replication

- **Ready for 10/25GbE**
  Supports 10GbE SFP+ / RJ-45 and 25GbE SFP28 NICs to instantly increase network bandwidth based on your infrastructure[3]

Versatility and Raw Power in a Single Solution

Synology DS1621+ can be a multi-purpose powerhouse, suitable for a wide range of usage environments. The compact, 11.5L desktop formfactor makes it easy to store away whether it is at home or in a quiet office environment.

- Up to **110,608** 4K random read IOPS and **2,300** MB/s sequential read speeds1 for demanding workloads
- Dual **M.2 2280 slots for NVMe SSD** let you maximize performance and capacity efficiently[4]
- Features 6 bays for 2.5" and 3.5" SATA HDD/SSD drives, and can be expanded to 16 bays with two Synology DX517 expansion units
- Powered by **Synology DiskStation Manager (DSM)**, Synology's unified operating system built for data management

Robust Data Protection with Btrfs

DS1621+ supports a Btrfs file system optimized by Synology to offer both high reliability and high performance. Btrfs supports advanced storage technologies that meet the needs of modern business:

- **Advanced snapshot technology** provides schedulable and near-instantaneous data protection for shared folders and LUNs
- **File and folder-level data restoration** offers users who wish to restore only a specific file or folder more flexibility
- **Flexible shared folder and user quota system** provides comprehensive quota control for all user accounts and shared folders
- **File self-healing** allows Btrfs file systems to autodetect corrupted files using mirrored metadata and to restore broken data using RAID configurations
- **Inline compression** compresses data before writing it to the drive, to optimize storage use and reduce write commands to the drives

On-Premises Collaboration

Synology Collaboration Suite allows businesses to host their own essential IT services for file sharing, concurrent document editing, emails, instant messaging, and more. Create a multi-user collaborative environment while leveraging private cloud infrastructure to reduce privacy concerns. Multi-layered security enables secure access to files and services, even for a distributed or remote workforce across Windows®, macOS®, Linux®, Android™, and iOS platforms.

- **Synology Drive** enables data access, synchronization, and backup via web portal and desktop applications across Windows®, macOS®, and Linux® platforms. Intelliversioning saves

historical versions while minimizing storage space usage and supports on-demand data restoration.

- **Synology Office** includes Documents, Spreadsheets, and Slides. The online collaborative editing environment allows multiple users to edit, comment on, and share documents together.

- **Synology MailPlus**[5] enables you to set up a secure, reliable, and private email server, with an intuitive web-based client to boost productivity.

- **Synology Chat** enables instant conversations and optimizes team communications with powerful features including message encryption, pinning, forwarding, reminders, and scheduling.

- **Synology Calendar** helps teams keep track of what is important, with easy-to-use sharing and scheduling functions keeping everyone on the same page.

Running and Protecting Virtual Machines

Synology Virtual Machine Manager (VMM) is a hosted hypervisor that lets users easily set up virtual machines running Windows® or Linux®-based platforms and a virtualized version of Synology DSM, Virtual DSM, on the DS1621+. Users can set up a cluster environment with multiple Synology systems for flexibility to perform online migration based on load balancing and resource allocation requirements. High-performance snapshots, replication, cloning, and recovery mechanisms enable comprehensive management and data protection on each VM.[6]

DSM also simplifies the provisioning and management of storage for virtual machines. Certified for VMware® vSphere™, Microsoft® Hyper-V®, Citrix® XenServer™, and OpenStack, Synology systems can integrate with your virtualization platform of choice through iSCSI or NFS protocols. Install Synology Storage Console for VMware/Windows for additional ease of management and functionality right in the hypervisor.

Comprehensive Data Protection Options

DS1621+ includes a range of free backup solutions to protect local, remote, and cloud-based applications. Easily set up automated backups and even enable self-serve functionality to reduce maintenance and upkeep.

- **Back up data on Synology NAS**: Snapshot Replication enables lightning-fast snapshots for point-in-time file versioning, great for rolling back unintended file modifications and protecting your data against ransomware attacks. Hyper Backup offers a wide range of destinations for backups of your NAS, including to on-premises devices and cloud storage providers.

- **Back up business infrastructure**: Synology Active Backup suite is a collection of powerful backup solutions built to protect Windows PCs and servers, VMware and Hyper-V VMs, other file servers, and even Google Workspace and Microsoft 365 cloud applications.
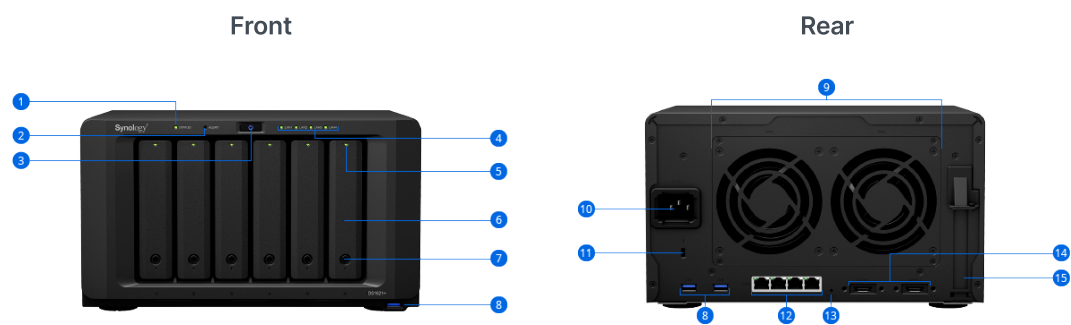
Private Video Surveillance

With Synology Surveillance Station, DS1621+ becomes a powerful VMS solution. With support for up to 40 IP cameras, you can easily cover large installations.[7]

- **7,900 supported cameras and counting:** Find a compatible camera from our constantly updated compatibility lists to match your video requirements and budget. ONVIF support prevents vendor lock-in.

- **Private and subscription-free:** Unlike cloud-based cameras, you can keep your recordings private and on premises. Simple per-camera licensing means no subscriptions are needed to access your data.

- **Flexible monitoring & control:** Access your surveillance system from a web browser, dedicated desktop clients, or from the DS cam mobile app. Internet access is optional.

- **Automation & notification:** Set up rules to trigger specific actions when an event occurs, such as automatically taking a picture when motion detection is triggered. Get notified by email, SMS, or push notification so that you can act quickly.

Notes:

1. Performance figures obtained through internal testing by Synology. Actual performance may vary depending on the testing environment, usage, and configuration. Comparisons are done against the DS1618+ under specific testing conditions.

2. DS1621+ supports up to two Synology DX517 expansion units, sold separately.

3. Requires a supported NIC, Synology E25G21-F2, E10G21-F2, E10G18-T2, E10G18-T1, E10G17-F2, or other compatible models (http://sy.to/ds1621pnic) .

4. SSD cache can be enabled by using SAT5200 2.5" SSD drives or without occupying drive bays by installing Synology SNV3400 M.2 NVMe SSD drives into the built-in M.2 slots. Drives are sold separately.

5. Five MailPlus licenses are included, licenses required for additional user accounts. Learn more (http://sy.to/ds1621pmpl) about licenses.

6. Certain advanced features require Virtual Machine Manager Pro (http://sy.to/ds1621pvmm) . One Virtual DSM license (http://sy.to/ds1621pvlp) is included, licenses are required for running additional instances.

7. Surveillance Station includes two free licenses. Connecting more cameras and devices requires additional licenses (http://sy.to/ds1621pdlp) .

Hardware Overview

Front

Rear

No.	Name	No.	Name
1.	Status indicator	9.	System fan
2.	Alert indicator	10.	Power port
3.	Power button and indicator	11.	Kensington Security Slot
4.	LAN indicator	12.	1GbE RJ-45 port
5.	Drive status indicator	13.	Reset button
6.	Drive tray	14.	Expansion port
7.	Drive tray lock	15.	PCIe expansion slot
8.	USB 3.2 Gen 1 port		

Technical Specifications

Hardware

CPU

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

System Memory	4 GB DDR4 ECC SODIMM
Memory Module Pre-installed	4 GB (4 GB x 1)
Total Memory Slots	2
Maximum Memory Capacity	32 GB (16 GB x 2)
Notes	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.

Storage

Drive Bays	6
Maximum Drive Bays with Expansion Unit	16 (DX517 × 2)
M.2 Drive Slots	2 (NVMe)
Drive Type	3.5" SATA HDD 2.5" SATA HDD 2.5" SATA SSD - M.2 2280 NVMe SSD
Hot Swappable Drive	Yes
Notes	The hot swappable drive feature is not supported by M.2 SSD slots.

External Ports

RJ-45 1GbE LAN Port	4

USB 3.2 Gen 1 Port	3
Expansion Port	2

PCIe

PCIe Expansion	1 x Gen3 ×8 slot (x4 link)

Appearance

Size (Height x Width x Depth)	166 mm x 282 mm x 243 mm
Weight	5.1 kg

Others

System Fan	92 mm x 92 mm x 25 mm x 2 pcs
AC Input Power Voltage	100V to 240V AC
Power Frequency	50/60 Hz, Single Phase

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)
Relative Humidity	5% to 95% RH
Maximum Operating Altitude	5,000 m

General DSM Specifications

Storage Management

Maximum Single Volume Size	108 TB
Maximum Internal Volume Number	64
SSD Read/Write Cache (Determining cache size)	Yes
Supported RAID Type	Synology Hybrid RAID,Basic,JBOD,RAID 0,RAID 1,RAID 5,RAID 6,RAID 10

Notes

- Each internal volume (may consist of multiple drives) is expandable up to 108TB.
- Actual maximum storage pool and volume sizes depend on drive sizes used, the number of drive bays available, and the RAID configuration.
- 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.
- 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)

File System

Internal Drives	Btrfs,ext4
External Drives	Btrfs,ext4,ext3,FAT32,NTFS,HFS+,exFAT

File Services

File Protocol	SMB,AFP,NFS,FTP,WebDAV,Rsync
Maximum Number of SMB Connections (FSCT-Based) with RAM Expansion	50
Windows Access Control List (ACL) Integration	Yes
NFS Kerberos Authentication	Yes

Account & Shared Folder

Maximum Local User Accounts	1,024
Maximum Local Groups	256
Maximum Shared Folder	256
Maximum Shared Folder Sync Tasks	8

Virtualization

VMware ESXi 6.5 and VAAI	Yes
Windows Server 2022	Yes
Citrix Ready	Yes
OpenStack	Yes

Security

Firewall, encryption shared folder, SMB encryption, FTP over SSL/TLS, SFTP, rsync over SSH, login auto block, Let's Encrypt support, HTTPS (customizable cipher suite)

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, 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 DSM Technical Specifications.

Packages and Applications

Synology 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 Users	100
Maximum Number of Hosted Files	1,000,000 (applies to files indexed or hosted by Synology Drive. For file access through other standard protocols, refer to the File Services section above)

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

Hybrid Share

Efficiently synchronizes files across sites by keeping shared data on Synology C2 Storage and streaming files to Synology NAS worldwide on request. Frequently requested files are cached at each site for low-latency access C2 Storage for Hyper Backup and Hybrid Share requires purchase of an annual or monthly subscription. A free trial is available for each newly registered device.

SAN Manager

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

Virtual Machine Manager

Recommended Virtual Machine Instances	8 (Learn more)

Recommended Virtual DSM Number (Licenses required)	8 (including 1 Free License)

Hyper Backup

Supports local backup, network backup, and data backup to other servers and public clouds, including C2 Storage

Snapshot Replication

Maximum Snapshots per Shared Folder	256
Maximum of System Snapshots	4,096

Synology High Availability

Reduces service downtime by combining two identical NAS into a high-availability cluster

Synology Chat

Maximum Number of Users	150

Synology Office

Maximum Number of Users	100

Synology MailPlus / MailPlus Server

A secure, reliable, and private mail solution featuring high-availability, load balancing, security, and filtering options

Free Email Accounts	5 (Additional accounts require purchase of licenses)
Maximum Number of Users	120

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

Central Management System

Provides a single interface to manage and monitor multiple Synology NAS

VPN Server

Maximum Connections	8

Other packages

Additional 3rd-party packages are available in the Package Center

Environment & Packaging

Environment safety

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: D4ES01-4G/D4ES01-8G/D4ECSO-2666-16G
- 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 Series
- 25GbE Network Interface Card: E25G30-F2
- 10GbE Network Interface Card: E10G30-F2/E10G30-T2/E10G18-T1

Notes	All memory modules will operate at the maximum frequency specified by the CPU manufacturer.

Warranty

3-year hardware warranty, extendable to 5 years with EW201 or Extended Warranty Plus

Notes	• The warranty period starts from the purchase date as stated on your purchase receipt. (Learn more)
	• Extended Warranty Plus is only available in Europe and North America. EW201/EW202 is only available in Asia, Africa, and Oceania. For exact availability information please visit their respective websites.