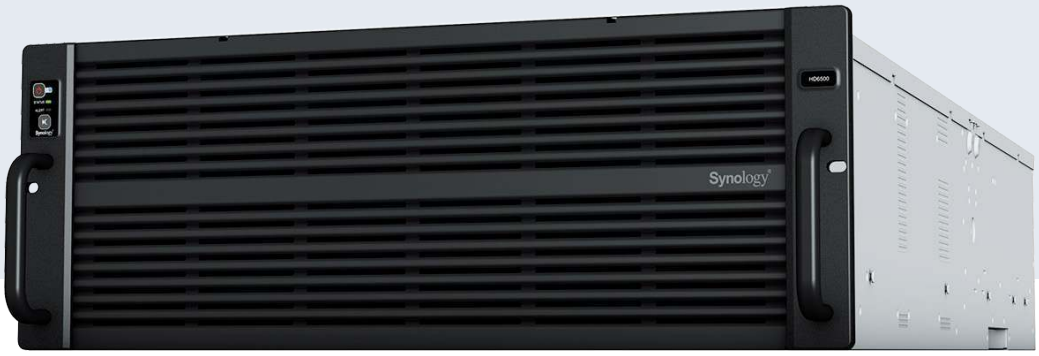
Synology®

High Density
HD6500

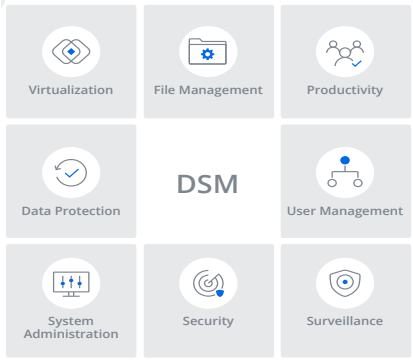


Fast and Scalable 4U Storage Server for Multi-Petabyte Applications

The Synology HD6500 is a high-density data storage solution for large-scale applications. The 60-bay 4U rackmount server easily scales to 300 drives. Support for fast networking options and built-in high-availability tools make it reliable for warm and cold storage. Native data protection software for PCs, servers, and VMs makes it a powerful centralized backup server. HD6500 is backed by Synology's 5-year limited warranty.[1]

Highlights

- **High-Performance Solution**
  Leverage dual Intel Xeon Silver 10-core processors and up to 512 GB DDR4 ECC RDIMM memory
- **Versatile Storage Server**
  Great for full system backups, video post-production, and large surveillance deployments
- **Easy Capacity Expansion**
  Easily add up to 4 RX6022sas Expansion Units and leverage a maximum of 300 bays
- **Flexible Networking Options**
  Add 10/25GbE SFP+/SFP28 connectivity or Fibre Channel ports with 4 PCIe slots[6]
- **Native Backup Solutions**
  Reliably protect PCs, servers, VMs, and SaaS applications with Active Backup Suite



Full-Featured Operating System

The HD6500 runs the Synology DSM operating system, offering powerful storage, efficient productivity solutions, extensive backup options, and solid security.



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.

Reliable and Scalable Mass Storage Solution

Simultaneously large and highly scalable, the HD6500 is the perfect solution for organizations looking to consolidate their warm and cold data storage on a single, highly reliable, and highly capable platform.

- Over **6688/6662 MB/s sequential read/write performance** supports large data transfer volumes[2]
- Features **60 3.5" SAS HDD bays** and can be expanded on the fly to up to **300 drives**[3] with four Synology **RX6022sas** expansion units[4]
- With **dual Intel Xeon Silver 10-core processors** and 64 GB built-in DDR4 ECC RDIMM memory, expandable up to 512 GB, the HD6500 performs all storage operations with ease
- Its **advanced Btrfs file system** supports **volumes up to 1 PB** by default, allowing you to consolidate large archives and accommodate fast growing data stores on a single volume[5]
- Built-in **dual 10GbE RJ-45 ports** and **three Gigabit Ethernet ports** can be supplemented with up to 10 additional network interfaces using **10GbE SFP+/RJ-45** and **25GbE SFP28 NICs**, and **Fibre Channel** adapters on the four PCIe slots[6]
- Dedicated **out-of-band management** (OOB) port helps system administrators reduce maintenance and troubleshooting efforts
- **Redundant power supply units** and system fans, support for **automatic failover between network ports**, and redundant links to expansion units thanks to **SAS multipathing** prevent single points of hardware failure

Built Around Data Protection and Integrity

Safeguard your critical data with the **powerful storage management features** of Synology DiskStation Manager (DSM), built on the advanced **Btrfs** file system.

- **Advanced snapshot technology** provides schedulable and near-instantaneous data protection for shared folders and LUNs
- **File and folder-level data restoration** enables recovery of specific files or folders
- **Configurable storage quotas** help admins 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** minimizes storage consumption and extends the life of drives by compressing data before it is written to the storage pool

Comprehensive Tools for Uptime Protection

The HD6500 is built for easy remote monitoring and management, and offers a free high-availability solution to keep your systems running 24/7.

- **Synology High Availability** provides fast failover between two identical HD6500 units configured in an active-passive cluster to minimize downtime in case of planned maintenance, updates, or disaster
- **Synology Active Insight** lets you monitor system performance and health, login activities, and backup task status for all your Synology servers safely in the cloud, with automated alerts and notifications in case of potential issues or suspicious events[7]
- The **out-of-band management console** allows you to power on, power off, and reboot the device over LAN, and access a system console for further troubleshooting, independently from DSM



Synology Backup Solutions

DSM backup solutions are designed to be low-maintenance and efficient, delivering low RPO and RTO targets and offering a large selection of backup destinations for a variety of workloads.

Complete IT Infrastructure Backup Solutions

The HD6500 comes with native comprehensive **backup solutions** for your Synology systems and a large range of endpoints.

- **Active Backup Suite** consolidates backup tasks and offers rapid restoration of Windows and Linux endpoints, VMs, Synology servers, and SaaS applications
- **Snapshot Replication** creates point-in-time copies of shared folders and LUNs to protect them from accidental modifications or ransomware incidents[5]
- **Hyper Backup** protects your NAS by backing up data and configurations to multiple destinations with efficiency delivered by built-in deduplication, integrity checks, compression, and versioning
- **C2 Storage for Hyper Backup** offers a dedicated and secure public cloud destination for Synology NAS backup data[8]



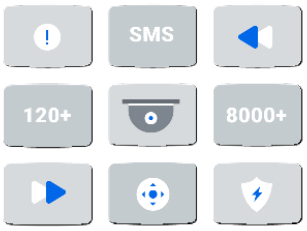
Synology Productivity Suite

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

Local and Hybrid File Syncing and Sharing

Synology DSM comes with efficient solutions for file management, syncing, and sharing, whether on premises or across multiple different sites.

- **Synology Drive** is a private cloud file management solution that supports remote data access, synchronization, on-demand file restoration, and backup
- **Synology Hybrid Share** combines reliable on-premises storage and efficient syncing of shared folders in the cloud to enable seamless cross-site synchronization and local file access at LAN speed[8]



Round-The-Clock Security

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



Synology Has You Covered

Keep your business running with the technical support services included in Synology's 5-year limited warranty.[1]

Private Video Surveillance Solution

Transform the HD6500 into a powerful Network Video Recorder solution with support for up to 150 IP cameras with **Synology Surveillance Station.**[9]

- **8,300+ supported camera models**
- ONVIF support prevents vendor lock-in
- Private, subscription-free storage of recordings
- Access through web browsers, desktop clients, or mobile apps
- Event-based rules to trigger specific actions
- Email, SMS, or push notification options

Backed by Synology's 5-Year Limited Warranty

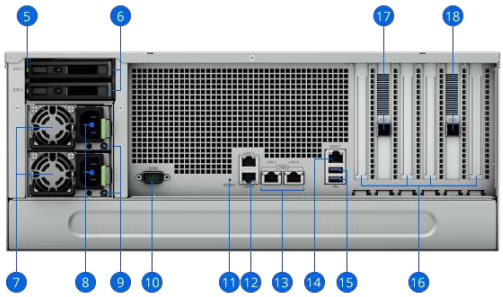
Maximize your return on investment with the comprehensive hardware replacement and premium technical support services offered under Synology's 5-year limited hardware warranty.[1]

Hardware Overview

Front



Rear



Top



1	Power Button and Indicator	2	Status Indicator	3	Alert Indicator	4	Mute Button
5	System Drive Status Indicators	6	System Drive Trays	7	PSU Fans	8	Power Port
9	PSU Indicators	10	Console Port	11	Reset Button	12	1GbE RJ-45 Ports
13	10GbE RJ-45 Ports	14	Management Port	15	USB 3.2 Gen 1 Ports	16	PCI Express Expansion Slots
17	SAS OUT Port (Primary)	18	SAS OUT Port (secondary)	19	Drive Trays	20	Drive Status Indicators

Technical Specifications

Hardware

CPU	2 x Intel Xeon Silver 4210R 10-core 2.4 GHz, Turbo Boost up to 3.2 GHz
Hardware encryption	AES-NI
Memory	64 GB DDR4 ECC RDIMM (expandable up to 512 GB)
Compatible drive types	• System Drives: 2 x 2.5" SATA SSD (included)[10] • Storage Drives: 60 x 3.5" SAS HDD (drives not included) • Synology only guarantees full functionality, reliability, and performance for Synology drives listed on the compatibility list. The use of non-validated components may limit certain functionality and result in data loss and system instability[3]
Hot swappable drives	Yes
External ports	• 2 x USB 3.2 Gen 1 ports • 2 x Expansion ports (Mini-SAS HD)
Form factor	Rackmount 4U
Size (HxWxD)	• 176 x 438 x 985 mm • 176 x 482 x 1020 mm (with server handles)
Weight	37.9 kg
LAN ports	• 1 x 1GbE RJ-45 (out-of-band management and data transfer) • 2 x 1GbE RJ-45 (data transfer) • 2 x 10GbE RJ-45
Wake on LAN/WAN	Yes (only on 1GbE ports)
Out-of-band management	Yes • Power on/off/reboot • Access system console
PCIe expansion	• 2 x 8 width slot, Gen 3.0 x8 lanes • 2 x 16 width slot, Gen 3.0 x16 lanes • Supports network interface cards and Fibre Channel host bus adapters[6]
Scheduled power on/off	Yes
System fans	4 x (80 x 80 x 38 mm)
AC input power voltage	200 V to 240 V AC

Power frequency	50/60 Hz, single phase
Operating environment	• Temperature: 0°C to 35°C (32°F to 95°F) • Relative humidity: 8% to 80% RH
Storage environment	• 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 Specifications

Networking protocols	SMB, AFP, NFS, FTP, WebDAV, CalDAV, iSCSI, Telnet, SSH, SNMP, and VPN (PPTP, OpenVPN™, L2TP)
File systems	• Internal: Btrfs • External: Btrfs, ext4, ext3, FAT32, NTFS, HFS+, exFAT
Supported RAID types	Basic, JBOD, RAID 0, RAID 1, RAID 5, RAID 6, and RAID 10
Storage management	• Max. single volume size: 200 TB / 1 PB (Peta Volume)[5] • Max. number of system snapshots: 65,536[11] • Max. number of internal volumes: 256
SSD cache	Not supported
File sharing capabilities	• Maximum local user accounts: 16,000 • Maximum local groups: 512 • Maximum shared folders: 512 • Maximum concurrent SMB/NFS/AFP/FTP connections: 6,000
Privileges	Windows® Access Control List (ACL) and 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™, Microsoft® Hyper-V®, Citrix® XenServer™, OpenStack, and Kubernetes
Security	Firewall, shared folder encryption, SMB encryption, FTP over SSL/TLS, SFTP, rsync over SSH, login auto block, Let's Encrypt support, and HTTPS (configurable cipher suite)
Supported browsers	Google Chrome®, Firefox®, Microsoft Edge®, Safari® 13 and later, and Safari (iOS 13.0 and later) on iPad, Chrome (Android™ 11.0 and later) 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 • Max. number of hosted files: 100,000,000 • Max. number of concurrent connections for PC clients: 2,000
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[8]	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
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 platforms
Cloud Sync	Offers one or two-way synchronization with public cloud storage providers including Alibaba Cloud OSS, 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	Search through files, metadata, and more on your NAS. Integration with Windows Search and macOS Spotlight makes it easy to find files
Migration Assistant	Migrates data, system setting, and applications seamlessly from one Synology NAS to another to ensure maximum service availability

SAN Storage & Virtualization	
SAN Manager	• Max. number of iSCSI targets: 256 • Max. number of LUNs: 512 • LUN clone/snapshot support
Virtual Machine Manager	Supports running Windows®, Linux®, and Virtual DSM-based virtual machines on Synology NAS
Data Protection & Backup Solution	
Hyper Backup	Supports local backup, network backup, and data backup to other servers and public clouds, including C2 Storage
Backup tools	• DSM configuration backup, macOS® Time Machine® support, Synology Drive Client desktop application • Shared folder sync supports a maximum of 32 tasks
Snapshot Replication[5]	• Maximum number of snapshots for shared folders: 1,024 • Maximum number of replications: 64
Synology High Availability	Reduces service downtime by combining two identical NAS into a high-availability cluster
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
Active Backup for Google Workspace	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, Outlook, Contacts, and Calendar
Productivity & Collaboration	
Collaboration tools	Collaborate with instant messaging service Synology Chat, online documents editor Synology Office, and scheduling assistant Synology Calendar • Max. number of concurrent users for Chat: 500 • Max. number of users for Office: 3,400 • 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[13]	A secure, reliable, and private mail solution featuring high-availability, load balancing, security, and filtering options
Synology MailPlus	An intuitive webmail interface for Synology MailPlus Server with configurable mail labels, filters, and user interface
Surveillance	
Surveillance Station[9]	Maximum IP cameras: 150, for a total of 4,500 FPS at 720p (H.264)
Management & Administration	
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: 60 • Supported VPN protocols: PPTP, OpenVPN™, L2TP/IPSec
Active Insight[7]	Monitor health statistics, login activity, and backup statuses for your Synology servers worldwide, and receive notifications and advice from our centralized cloud-hosted management platform
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
Web Station	Enables hosting for up to 30 websites with support for PHP/MariaDB® and 3rd-party applications
Other packages	DNS Server, RADIUS Server, and Log Center
Others	
iOS/Android™ applications	Synology Drive, Synology MailPlus, Synology Secure SignIn, Synology Chat, Synology LiveCam, Synology Active Insight, DS cam, DS file, DS finder, and 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 HD6500 main unit • 1 x Quick Installation Guide • 2 x Synology 480 GB SATA SSD • 1 x Rail Kit RKS-03 • 1 x Accessory pack • 2 x AC power cord

Optional accessories[14]	• DDR4 ECC RDIMM: D4ER01-32G • 10GbE Network Interface Cards: E10G21-F2 / E10G18-T2 • 25GbE Network Interface Cards: E25G21-F2 • 3.5" SAS HDD: HAS5300 • Expansion Unit: RX6022sas • MailPlus License Pack[13] • Surveillance Device License Pack[9] • Virtual DSM License Pack[15]
Warranty	5 years[1]

Note: Specifications are subject to change without notice. Please refer to the unitl's **specifications page** for the most up to date information.

1. The warranty period starts from the date of purchase as stated on your purchase receipt. Visit **https://www.synology.com/company/legal/warranty** for more information.
2. Performance figures are obtained through internal testing by Synology. Actual performance may vary depending on the testing environment, usage, and configuration. See **performance charts** for more information.
3. Check our **compatibility list** for supported drives.
4. HD6500 supports up to 300 drives by connecting four Synology RX6022sas expansion units, sold separately.
5. Volumes between 200 TB and 1 PB make use of the **Btrfs (Peta Volume)** file system and support a limited selection of applications, services, and configurations. Snapshot Replication, shared folder encryption, file compression, and other functions are not available for volumes over 200 TB. For more information and restrictions, refer to **this article**.
6. Up to 10 network ports can be added to the existing 5 ports. For the most up-to-date list of compatible NICs and Fibre Channel HBAs, please check our **compatibility list**.
7. Synology Active Insight is currently in Beta with all features available for evaluation. Certain functionalities may require a subscription upon official release.
8. 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.
9. Surveillance Station includes two free licenses. Connecting more cameras and devices requires additional licenses. **Learn more**
10. Two Synology SATA SSDs are included in the accessory pack of the HD6500 for use as system drives.
11. System snapshots include snapshots taken by SAN Manager, Snapshot Replication, and Virtual Machine Manager.
12. Presto File Server license can be purchased separately through the application.
13. Five MailPlus email accounts are included. Additional email accounts can be added with the purchase of Synology MailPlus License Packs. **Learn more**
14. Please refer to our **compatibility list** for the latest optional accessories list.
15. Certain advanced features require Virtual Machine Manager Pro. One Virtual DSM license is included. Additional Virtual DSM instances require the purchase of Virtual DSM Licenses.

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