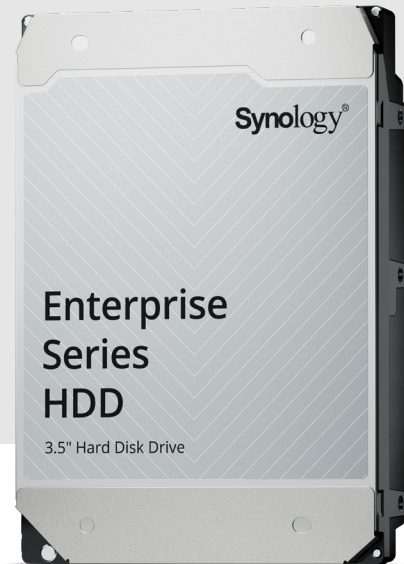




3.5" SATA HDD

# Enterprise Series



## Built for Demanding Workloads and High-Capacity Arrays

Synology HAT5300 series HDDs are engineered for demanding, high-volume workloads, delivering up to 23% greater multi-client sequential read performance compared to third-party drives.<sup>1</sup> Built for unwavering reliability, these CMR-based drives have undergone over 500,000 hours of rigorous validation and are backed by a 5-year Synology limited warranty.<sup>2</sup>

## Highlights

- **Enterprise Reliability and Durability**  
For demanding 24/7 environments, rated for up to 2.5 million hours MTBF<sup>3</sup> and up to 550 TB per year workloads
- **Persistent Write Cache Technology**  
Minimizes the chance of data corruption in the event of sudden power loss
- **Better Performance**  
Firmware and DiskStation Manager (DSM) optimizations improve multi-client seq. read performance by up to 23%<sup>1</sup>
- **One-Stop Update**  
Get one-click firmware updates through DSM, reducing the need for additional maintenance sessions
- **For Synology, by Synology**  
Stringent validation and up to 500,000 hours of tests ensures maximum reliability in Synology systems

## Scale-up Confidently

Synology HAT5300 series drives are engineered to provide fast and dependable performance. Firmware and software collaborate to ensure maximum performance, delivering over 23% higher sequential read performance than similar capacity drives.<sup>1</sup> HAT5300 series provides outstanding performance for large-scale video surveillance, multimedia post-production, and enterprise file server environments.

## Maximum Endurance and Reliability

Designed with our expertise in storage systems, HAT5300 series drives are backed by an up to 2.5 million hour MTBF rating, workload support of 550 TB per year, and persistent write cache technology.<sup>3</sup>

Over 500,000 hours of compatibility and stress testing ensure that HAT5300 Series drives can continuously operate even under extreme workloads with our NAS and IP SAN lineup.

Combined with data protection solutions running on Synology systems, you can confidently depend on your data 24/7 using HAT5300 series drives.

## Streamlined Maintenance for Reduced Downtime

The HAT5300 series drives feature one-click firmware update capability within DSM. This user-friendly update process reduces maintenance time from over 50 minutes to just a few minutes per system, eliminating the need for Linux command line operations.<sup>4</sup> Additionally, using Synology hard disk drives along with Synology systems simplifies IT infrastructure as the entire system receives support from Synology.

# Hardware specifications

Capacity <sup>5</sup>	4 TB	8 TB	12 TB	16 TB	20 TB
Model number	HAT5300-4T	HAT5310-8T	HAT5300-12T	HAT5300-16T	HAT5310-20T
Form factor <sup>6</sup>	3.5"				
Interface	SATA				
Sector size	512e				
Drive design	Air		Helium-sealed		
<b>Performance</b>					
Rotational speed	7,200 rpm				
Interface speed	6.0 Gb/s, 3.0 Gb/s, 1.5 Gb/s				
Cache (MB)	256 MB			512 MB	
Maximum sustained data transfer speed (Typ.)	255 MB/s	260 MB/s	254 MB/s	275 MB/s	281 MB/s
<b>Reliability</b>					
Mean Time Between Failure (MTBF) <sup>3</sup>	2,000,000 hours		2,500,000 hours		
Workload rating <sup>7</sup>	550 TB/year data write/read				
Warranty <sup>2</sup>	5 years				
<b>Power Consumption</b>					
Supply Voltage	12 V (±10%) / 5 V (+10/-7%)				
Idle power average	4.07 W	5.61 W	4.25 W	4.00 W	4.38 W
Average operating power	7.76 W	9.29 W	7.83 W	7.63 W	8.11 W
<b>Environmental</b>					
Temperature	Operating	5°C to 60°C (41°F to 140°F) (No condensation)			
	Non-operating	-40°C to 70°C (-40°F to 158°F) (No condensation)			

<b>Shock</b>	Operating	686 m/s <sup>2</sup> (2 ms duration)		490 m/s <sup>2</sup> (2 ms duration)
	Non-operating	2,940 m/s <sup>2</sup> (2 ms duration)	2,450 m/s <sup>2</sup> (2 ms duration)	1,960 m/s <sup>2</sup> (2 ms duration)
<b>Vibration</b>	Operating	5 Hz to 300 Hz: 7.35 m/s <sup>2</sup> 300 Hz to 500 Hz: 2.45 m/s <sup>2</sup>		
	Non-operating	5 Hz to 500 Hz: 29.4 m/s <sup>2</sup>		
<b>Altitude</b>	Operating	-304.8 m to 3,048 m		
	Non-operating	-304.8 m to 12,192 m		
<b>Relative humidity</b>	Operating	5% to 90% R.H. (No condensation)		
	Non-operating	5% to 95% R.H. (No condensation)		
<b>Others</b>				
<b>Size (H x W x D)</b>	26.1 mm x 101.85 mm x 147 mm			
<b>Weight</b>	693 g	720 g		
<b>Certification</b>	CE, RCM, BSMI, KC, EAC, UL, TUV, ICES, UKCA, RoHS, Morocco Mark			

Note: Model specifications are subject to change without advance notice. Please refer to [www.synology.com](http://www.synology.com) for the latest information.

- Performance testing was conducted by Synology using 12 drives on an SA3600, configured using RAID 5, against similar class drives (Enterprise) with IOMeter (64KB blocks). Results are for reference only. Actual performance may vary depending on workload, testing methods, and how devices and software are configured.
- The warranty period starts from the purchase date as stated on your receipt of purchase. [Learn more](#) about our limited product warranty policy.
- Mean Time Between Failure (MTBF) is not a guarantee or estimate of product life; it is a statistical value related to mean failure rates for a large number of products which may not accurately reflect actual operation. Actual operating life of the product may be different from the MTBF.
- The average update time is based on tests conducted using a Synology system fitted with 24 Synology drives. The average update time data for 3rd-party drives was calculated by multiplying the time required for updating a single drive by 24.
- Definition of capacity: When describing hard drive capacity, a terabyte (TB) is defined as 1,000,000,000,000 bytes. However, computer operating systems report storage capacity using powers of 2 for the definition of 1 GB = 2<sup>30</sup> = 1,073,741,824 bytes. This means operating systems will report less available storage capacity. Available storage capacity will also vary based on file sizes, formatting, settings, software, and operating system used. Actual formatted capacity may vary.
- 3.5-inch" is the form factor of HDDs. They do not indicate the physical size of the drive.
- Workload is defined as the amount of data written, read, or verified by commands from a host system.
- Product images are for illustrative purposes only. Actual product may appear with different labeling or housing, which does not affect the performance characteristics of the product.

## Safety Information



### Waste Electrical and Electronic Equipment recycling (WEEE)

The following information is only for EU-member states:

The use of the symbol indicates that this product may not be treated as household waste. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more detailed information about recycling this product, please contact your local city office, household waste disposal service, or the shop where you purchased the product.



### Electrostatic Discharge Warning

Storage drives are susceptible to damage from electrostatic discharge (ESD) during handling. To protect against ESD, take appropriate measures when handling or installing drives. Ensure you are grounded using, e.g., an anti-static wrist wrap and refrain from touching connectors or the circuit board.

## **SYNOLOGY INC.**

© 2024, 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.

HAT5300-series-2024-ENU-REV000