

Datasheet



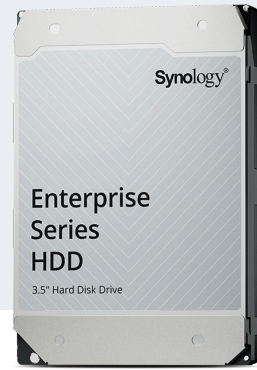
3.5" SATA HDD

Enterprise Series

Synology

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Enterprise Series



Built for Demanding Workloads and High-Capacity Arrays

Synology HAT5300 series HDDs are engineered for demanding, high-volume workloads, delivering up to 35% greater multi-client sequential read performance compared to third-party drives.¹ 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.²

- **Enterprise Reliability and Durability**
For demanding 24/7 environments, rated for up to 2.5 million hours MTBF³ 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 35%¹
- **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 35% higher sequential read performance than similar capacity drives.¹ 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.³

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.⁴ Additionally, using Synology hard disk drives along with Synology systems simplifies IT infrastructure as the entire system receives support from Synology.

Notes:

1. Sequential read performance testing was conducted by Synology using 12 x HAT5320-8T on an SA3600, configured using RAID 5 and tested using FIO with 1 MB block sizes. Results are for reference only. Actual performance may vary depending on workload, testing methods, and how devices and software are configured.
2. The warranty period starts from the purchase date as stated on your receipt of purchase. [Learn more](#) about our limited product warranty policy.
3. 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.
4. 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.

Technical Specifications

Hardware

Model	HAT5320-4T	HAT5320-8T	HAT5300-12T	HAT5310-16T	HAT5320-20T	HAT5320-24T
General						
Capacity	4 TB	8 TB	12 TB	16 TB	20 TB	24 TB
Form Factor	3.5"					
Interface	SATA 6 Gb/s					
Sector Size	512e					
Drive design	Air		Helium-sealed			
Notes	<ul style="list-style-type: none"> 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 = 2³⁰ = 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. 					
Performance						
Rotational Speed	7,200 rpm					
Buffer Size	512 MB	256 MB	512 MB	1 GB		
Maximum Sustained Data Transfer Speed (Typ.)	281 MB/s	254 MB/s	281 MB/s	295 MB/s	309 MB/s	
Reliability						
Mean Time Between Failures (MTBF)	2 million hours		2.5 million hours			
Workload Rating	550 TB Transferred per Year					
Warranty	5 Years					
Notes	<ul style="list-style-type: none"> 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. Workload is defined as the amount of data written, read, or verified by commands from a host system. The warranty period starts from the purchase date as stated on your purchase receipt. (Learn more) 					
Power Consumption						
Supply Voltage	12 V (± 10%) / 5 V (+10/-7%)					
Idle power average	3.49 W	4.92 W	4.25 W	4.16 W	4.35 W	
Average operating power	7.29 W	8.74 W	7.83 W	8.35 W	8.11 W	
Notes	Power consumption may differ according to configurations and platforms.					
Temperature						
Operating	5°C to 60°C (41°F to 140°F)					
Non-operating	-40°C to 70°C (-40°F to 158°F)					

Shock				
Operating	686 m/s ² (2 ms duration)		490 m/s ² (2 ms duration)	
Non-operating	2,450 m/s ² (2 ms duration)		1,960 m/s ² (2 ms duration)	
Vibration				
Operating	5 Hz to 300 Hz: 7.35 m/s ² , 300 Hz to 500 Hz: 2.45 m/s ²			
Non-operating	5 Hz to 500 Hz: 29.4 m/s ²			
Altitude				
Operating	-304.8 m to 3,048 m			
Non-operating	-304.8 m to 12,192 m			
Relative Humidity				
Operating	5% to 90% R.H. (No condensation)			
Non-operating	5% to 95% R.H. (No condensation)			
Others				
Size (Height x Width x Depth)	26.1 mm x 101.85 mm x 147 mm			
Weight	690 g	730 g	720 g	730 g
Certification	<ul style="list-style-type: none"> • CE • BSMI • RCM • KC • ICES • UKCA • TUV • UL • RoHS 			
Notes	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.

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