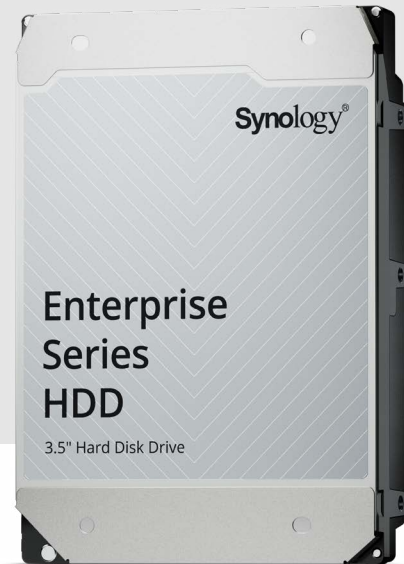**Synology®**

3.5" SAS HDD

Enterprise Series

Engineered for Demanding Workloads in Enterprise Environments

Synology HAS5300 is designed to meet the capacity, efficiency, and reliability needs of modern enterprise deployments. Built to handle workloads up to 550 TB per year, it empowers host systems to serve large pools of concurrent clients. With a 2.5 million-hour MTBF[1] and backed by Synology's 5-year limited warranty[2], HAS5300 meets the highest standards of dependability.

Highlights

- **Enterprise Durability**
  For demanding 24/7 environments, rated for 2.5 million hours MTBF and up to 550 TB per year workloads

- **Tested for Maximum Reliability**
  Over 200,000 hours of stringent validation tests ensure maximum reliability on Synology SA, HD, and UC Series solutions[3]

- **Faster Array Rebuild**
  Up to 19% faster[4] RAID array repair with firmware fine-tuned and optimized for performance

- **Persistent Write Cache**
  Minimizes the chance of data corruption in the event of sudden power loss

- **One-Stop Update**
  Firmware updates through DSM simplify maintenance

Perfect for scalable and high-availability systems

Synology HAS5300 SAS hard drives are specifically developed and tested to provide tight integration with our SA, HD, and UC lines of storage systems[3]. Enabling your applications to take full advantage of the bandwidth available, they are the ideal choice for high-capacity, mission-critical workloads that require 24/7 operation.

Optimized firmware and integration with Synology's DiskStation Manager (DSM) operating system running on Synology storage solutions result in up to 19% faster RAID array repair speeds[4], greatly reducing the time the system spends in a degraded state.

Maximum durability and strong data protection

Rated for a 550 TB per year workload at a 2.5 million hours MTBF[1], HAS5300 series drives are a safe and reliable choice for any critical data storage application. Persistent write cache technology bolsters data integrity protection and enhances overall write performance.

Over 200,000 hours of validation and stress testing with Synology systems guarantee interoperability for each HAS5300 drive, ensuring maximum reliability on Synology solutions under even the heaviest workloads.

Combined with backup and replication solutions running on Synology DSM, HAS5300 series SAS HDDs provide an additional layer of protection.

Integrated maintenance

Using Synology drives and host systems simplifies IT deployment. HAS5300 series drives are backed by Synology's 5-year limited warranty, providing you with long-term support for your entire system.

Drive firmware update capability within DSM reduce required maintenance while increasing your systems' service availability.

Technical Specifications

Hardware

Capacity[5]	8 TB	12 TB	16 TB	20 TB
Model number	HAS5300-8T	HAS5310-12T	HAS5300-16T	HAS5310-20T
Form factor[6]	3.5"			
Interface	SAS 12 Gb/s			
Sector size	512e			
Drive design	Air	Helium-sealed		
Performance				
Rotational speed	7,200 rpm			
Interface speed	12.0 Gb/s, 6.0 Gb/s, 3.0 Gb/s, 1.5 Gb/s			
Cache	256 MB	512 MB		
Maximum sustained data transfer speed (Typ.)	241 MB/s	281 MB/s	275 MB/s	281 MB/s
Reliability				
Mean Time Between Failure (MTBF)[1]	2,500,000 hours			
Workload rating[7]	550 TB/year data write/read			
Warranty[2]	5 years			
Power Consumption				
Supply Voltage	12 V (± 10%) / 5 V (+10/-7%)			
Idle power average	6.62 W	3.76 W	4.46 W	4.74 W
Average operating power	9.87 W	7.95 W	8.12 W	8.46 W
Environmental				
Temperature — Operating	5°C to 60°C (41°F to 140°F) (No condensation)			
Temperature — Non-operating	-40°C to 70°C (-40°F to 158°F) (No condensation)			

Shock	Operating	686 m/s² (2 ms duration)	490 m/s² (2 ms duration)
	Non-operating	2,450 m/s² (2 ms duration)	1,960 m/s² (2 ms duration)

Vibration	Operating	5 Hz to 300 Hz: 7.35 m/s² 300 Hz to 500 Hz: 2.45 m/s²
	Non-operating	5 Hz to 500 Hz: 29.4 m/s²

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 (H x W x D)	26.1 mm x 101.85 mm x 147 mm		
Weight	770 g	690 g	720 g
Certification	CE, RCM, BSMI, KC, EAC, UKCA, UL, TUV, ICES, RoHS, Morocco Mark		

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

1. 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.

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. Some exceptions may apply. Please check the compatibility list for more details.

4. Performance testing was conducted by Synology using 12x HAS5310-20T drives on an SA3610, 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.

5. 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^{30} = 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.

6. "3.5-inch" describes the form factor of HDDs. It does not indicate the physical size of the drives.

7. Workload rating is defined as the amount of data written, read, or verified by commands from a host system.

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.