



3.5" SATA HDD

# HAT5300

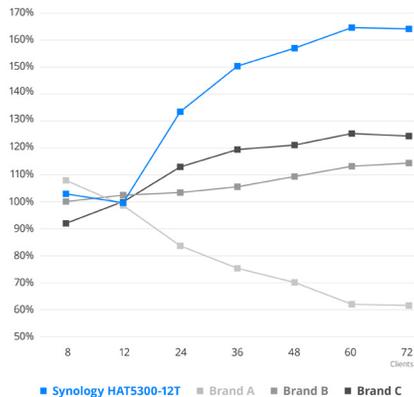


## Built for Demanding Workloads and High-Capacity Arrays

Synology HAT5300 is designed to tackle demanding, high-volume workloads. Optimized specifically for Synology storage solutions, its design enables high sequential throughput, maximizing the number of concurrent clients the system can sustain. HAT5300 series drives are engineered for maximum dependability, passing over 400,000 hours of validation, and are backed by Synology's 5-year limited warranty.

## Highlights

- **Enterprise Reliability and Durability**  
For demanding 24/7 environments, rated for up to 2.5 million hours MTTF 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 Together**  
Firmware and DiskStation Manager (DSM) optimizations improve multi-client seq. read performance by up to 23%<sup>1</sup>
- **One-stop Update**  
Get automatic firmware updates together through DSM updates, reducing the need for additional maintenance sessions
- **For Synology, by Synology**  
Stringent validation and up to 400,000 hours of tests ensures maximum reliability in Synology systems



### Faster Together

*Synology HAT5300 delivers stable and consistent sequential read performance in a multi-user RAID environment compared with similar-class drives used on Synology systems.<sup>1</sup>*

## Scale-up Confidently

Synology HAT5300 drives are engineered to provide fast and dependable performance, even for a large number of clients. Firmware and software collaborate to ensure maximum performance, delivering over 23% higher sequential read performance than similar capacity drives.<sup>1</sup> HAT5300 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 MTTF rating, workload support of 550 TB per year, and persistent write cache technology.

Over 400,000 hours of compatibility and stress testing ensure that the HAT5300 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.

## Simplified Maintenance

DSM updates will ensure that compatible Synology drives will be updated together with the operating system. This reduces the number of maintenance sessions IT teams need to schedule while also increasing the entire system's service availability.

Simplify IT infrastructure planning requirements by getting support for the entire system from Synology.

# Technical Specifications

## Hardware specifications

| Model number                                 | HAT5300-4T  | HAT5300-8T   | HAT5300-12T                                    | HAT5300-16T |
|--|---|--|--|-------------|
| Capacity <sup>2</sup>                        | 4 TB  | 8 TB   | 12 TB  | 16 TB       |
| Form factor <sup>3</sup>                     | 3.5"  |  |  |             |
| Interface                                    | SATA 6 Gb/s                                       |  |  |             |
| Sector size                                  | 512e  |  |  |             |
| <b>Performance</b>                           |   |  |  |             |
| Rotational speed                             | 7,200 rpm   |  |  |             |
| Interface speed                              | 6.0 Gb/s, 3.0 Gb/s, 1.5 Gb/s                      |  |  |             |
| Buffer size <sup>4</sup>                     | 256 MiB   |  |  | 512 MiB     |
| Maximum sustained data transfer speed (Typ.) | 243 MiB/s   | 230 MiB/s  | 242 MiB/s                                      | 262 MiB/s   |
| <b>Reliability</b>                           |   |  |  |             |
| Mean Time to Failure (MTTF) <sup>5</sup>     | 2,000,000 hours                                   | 2,500,000 hours  |  |             |
| Workload rating <sup>6</sup>                 | 550 total TB transferred per year                 |  |  |             |
| Warranty <sup>7</sup>                        | 5 years   |  |  |             |
| <b>Power Consumption</b>                     |   |  |  |             |
| Supply voltage                               | 12 V (±10%) / 5 V (+10/-7%)                       |  |  |             |
| Active Idle (Typ.)                           | 4.07 W  | 6.38 W   | 4.25 W   | 4.00 W      |
| Random Read/Write 4KB Q1 (Typ.)              | 7.76 W  | 9.10 W   | 7.83 W   | 7.63 W      |
| <b>Environmental</b>                         |   |  |  |             |
| 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 <sup>2</sup> {70 G} (2 ms duration)  |  |             |
|  | Non-operating                                     | 2,940 m/s <sup>2</sup> {300 G} (2 ms duration)   | 2,450 m/s <sup>2</sup> {250 G} (2 ms duration) |             |
| Vibration                                    | Operating   | 7.35 m/s <sup>2</sup> {0.75 G} (5 to 300 Hz), 2.45 m/s <sup>2</sup> {0.25 G} (300 to 500 Hz) |  |             |
|  | Non-operating                                     | 29.4 m/s <sup>2</sup> {3.0 G} (5 to 500 Hz)  |  |             |
| Altitude                                     | Operating   | -305 m to 3,048 m  |  |             |
|  | Non-operating                                     | -305 m to 12,192 m   |  |             |
| Relative humidity                            | Operating   | 5% to 90% R.H. (no condensation)   |  |             |
|  | Non-operating                                     | 5% to 95% R.H. (no condensation)   |  |             |
| <b>Others</b>                                |   |  |  |             |
| Size (H x W x D)                             | 26.1 mm x 101.85 mm x 147 mm                      |  |  |             |
| Weight                                       | 693 g   | 770 g  | 720 g  |             |
| Certification                                | CE, RCM, BSMI, KC, EAC, UL, TUV, ICES, UKCA, RoHS |  |  |             |

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.
- Definition of capacity: Hard drives define a terabyte (TB) as 1,000,000,000,000 bytes. A computer operating system, however, reports storage capacity using powers of 2 for the definition of 1GB = 2<sup>30</sup> = 1,073,741,824 bytes and therefore shows less storage capacity. Available storage capacity will vary based on file size, formatting, settings, software, and operating system. Actual formatted capacity may vary.
- "3.5-inch" is the form factor of HDDs. It does not indicate the drive's physical size.
- A mebibyte (MiB) means 2<sup>20</sup> bytes, or 1,048,576 bytes. MB/s is 10<sup>6</sup> bytes.

5. Mean Time to Failure (MTTF) 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 MTTF.
6. Workload is defined as the amount of data written, read, or verified by commands from the host system.
7. The warranty period starts from the purchase date as stated on the receipt of purchase. Visit <https://www.synology.com/company/legal/warranty> for more information.
8. Product images are for illustrative purposes only. Actual product may appear with different labeling or housing, which do not affect the performance characteristics of the product.

## Safety Information

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

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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

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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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