



2.5" SATA SSD

SAT5200

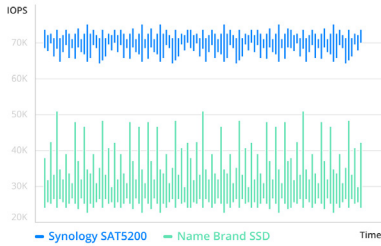


High Performance SSD with Enterprise-Grade Endurance and Reliability

Synology SAT5200 offers stable I/O performance while reducing the latency of critical services and applications. It is built to handle mixed and intensive I/O workloads without compromising on endurance, providing a streamlined storage experience on Synology systems and minimizing service disruption. The SAT5200 series comes with advanced lifetime analytics and is backed by Synology 5-year limited warranty.³

Highlights

- **Stable High Performance**
Delivers stable performance of over 60,000 4K random write IOPS for demanding I/O¹
- **Enterprise-Grade Endurance**
Suitable for intensive and mixed storage workloads with 1.3 DWPD²
- **Robust Data Protection**
End-to-end data protection and power loss protection prevent data corruption
- **Lifetime Analytics**
Actionable insight helps make optimal use of SAT5200 SSD performance and longevity
- **Built for Synology Systems**
Proven interoperability with Synology systems through rigorous validation



Consistent Performance

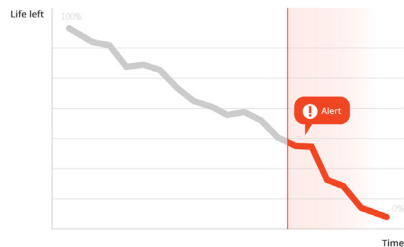
Synology SAT5200 delivers twice the IOPS and much more stable performance when compared with name brand SSD.

Stable High Performance for Demanding Workloads

Engineered for demanding workloads such as multimedia post-production, online transaction processing (OLTP) databases and virtualization deployments, Synology SAT5200 improves the performance and responsiveness of I/O intensive applications. It allows firms to modernize their existing storage infrastructure and boost performance at a competitive per-unit cost. At up to **67,000 4K random write IOPS¹**, the SAT5200 series delivers stable, consistent performance, and twice the IOPS of name brand SSD.

Enterprise-Grade Endurance and Data Protection

At up to **9,162 TBW²** when handling 24/7 enterprise workloads, Synology SAT5200 provides **1.3 DWPD** within the 5-year warranty.³ It can withstand intensive and mixed workloads in all-flash storage and cache applications. The SAT5200 series supports **end-to-end data protection** to safeguard data integrity over the entire transfer path. **Power loss protection circuit design** prevents data corruption. **Dedicated capacitors** provide power to flush data-in-flight into NAND flash in a power loss event and firmware is designed to enable a correct restart on the next power-up.



SSD Lifetime Analytics

SAT5200's full integration with Synology DSM allows for SSD remaining lifetime analytics based on each unit's actual workload.

Lifetime Analytics Based on Your Workload

Full integration with **Synology's DiskStation Manager (DSM)** operating system allows Synology systems to provide lifetime analytics based on actual workloads for each SAT5200 unit. Timely notifications allow you to plan further ahead for uninterrupted system performance and longevity. Easy monitoring allows you to make optimal use of each SSD.

Purpose-Built for Synology Systems

Firmware versions and component changes can over time cause SSD compatibility issues. Synology SAT5200 is thoroughly tested for compatibility with our systems following each engineering change, while firmware and component changes are strictly managed. Intensive I/O stress, power cycling and temperature trials ensure that all products meet our strictest standards for quality and reliability.

Technical Specifications

Hardware specifications

Model number	SAT5200-480G	SAT5200-960G	SAT5200-1920G	SAT5200-3840G
Capacity	480 GB	960 GB	1.92 TB	3.84 TB
Form factor	2.5" 7mm			
Interface	SATA 6 Gb/s			
Performance				
Sequential read (128 KB, QD32) ¹	530 MB/s			
Sequential write (128 KB, QD32) ¹	500 MB/s			
Random read (4 KB, QD32) ¹	95,000 IOPS	98,000 IOPS		
Random write (4 KB, QD32) ¹	55,000 IOPS	67,000 IOPS	60,000 IOPS	58,000 IOPS
Endurance and Reliability				
Terabytes Written (TBW) ²	1,145 TB	2,290 TB	4,581 TB	9,162 TB
Drive Writes Per Day (DWPD)	1.3			
Mean Time Between Failures (MTBF)	1.5 million hours			
Uncorrectable Bit Error Rates (UBER)	< 1 sector per 10 ¹⁷ bits read			
Power loss protection	Yes			
Warranty	5 years ³			
Power Consumption				
Supply voltage	5 V (± 5%)			
Active read (Typ.)	2.6 W	2.9 W	3.1 W	3.6 W
Active write (Typ.)	4.2 W	4.6 W	5.1 W	6.2 W
Idle	1.4 W	1.5 W	1.6 W	1.9 W
Temperature				
Operation temperature	0°C to 70°C (32°F to 158°F)			
Storage temperature	-40°C to 85°C (-40°F to 185°F)			
Others				
Dimension (H x W x D)	7.0 mm x 69.85 mm x 100 mm			
Environment	RoHS Compliant			
Certification	CE, FCC, VCCI, RCM, BSMI, KC, EAC			

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

1. Performance measured using FIO on Linux with Queue Depth 32 (128 KB = 131,072 bytes; 4 KB = 4,096 bytes).
2. The endurance rating is calculated based on JESD219A enterprise workload.
3. 5-year limited warranty provides coverage until the end of the warranty period or until the endurance usage of the drive has been reached, whichever comes first.

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