



U.3 NVMe SSD

Enterprise Series



Dual-port U.3 enterprise SSDs for critical data center operations

Synology Enterprise Series U.3 NVMe SSDs are designed for the active-active architecture of Synology PAS systems. With consistent I/O performance, low latency, and enterprise-grade endurance, these dual-port SSDs ensure continuous operation and robust data security.

Highlights

- **High Performance**
Up to 140,000 4K random write IOPS¹ for demanding I/O operations
- **Enterprise Endurance**
TBW of up to 14,016², suitable for enterprise mixed workloads
- **Lifetime Analytics**
Stay on top of drive health with lifetime wear analytics and notifications
- **Robust Data Protection**
End-to-end data protection and power loss protection (PLP) prevent data corruption
- **Built for Synology PAS7700**
Tailored for Synology dual-controller all-flash NVMe storage solutions

Scale with Confidence

The Enterprise Series U.3 NVMe SSDs deliver the speed and reliability required for mixed enterprise workloads and applications such as business intelligence, data warehousing, AI/ML, and OLTP. With over **1,250,000/140,000 4K random read/write IOPS** and **TBW of up to 14,016²**, these drives balance speed and durability. These SSDs, in combination with data deduplication of Synology PAS systems, provides significant cost savings.

Enterprise-Grade Data Protection

Synology Enterprise Series U.3 NVMe SSDs ensure data integrity with end-to-end data protection and power loss protection. End-to-end protection **safeguards data across the entire transfer path**, while dedicated capacitors and specialized firmware **prevent data corruption during power outages**, ensuring a successful restart.

Advanced Security and Data Sanitization

These drives offer advanced security features, including robust data sanitization. As TCG Opal compliant, certified self-encrypting drives (SEDs), they **protect data at rest**, maintaining confidentiality even if the drive is physically removed. The crypto erase function provides **instant data sanitization** by deleting the encryption key, rendering all data unreadable and irrecoverable. For complete drive resets, support for Physical Security ID (PSID) offers a physical mechanism to **revert the drive to its factory state**, also ensuring data sanitization.

Simplified Drive Management and Maintenance

Drive firmware updates for Enterprise Series U.3 NVMe SSDs are integrated directly within Synology DSM Enterprise, enabling one-click updates. This simplified process **reduces maintenance downtime and increases system availability**. Full integration with DSM Enterprise also provides comprehensive, real-world lifespan analytics for SPU7200D drives, **empowering proactive maintenance decisions and ensuring continuous uptime**. Furthermore, these drives are backed by Synology's **5-year limited warranty**,³ ensuring long-term support.

Technical Specifications

Hardware specifications

	SPU7200D-1920G	SPU7200D-3840G	SPU7200D-7680G
General			
Capacity	1920G	3840G	7680G
Form factor	2.5" 15mm		
Interface	NVMe PCIe 4.0 ×4 Single Port x4 lanes/Dual Port x2 lanes		
Performance^{4,5}			
Sequential read (128 KB, QD32) ¹	7,000 MB/s		
Sequential write (128 KB, QD32) ¹	3,200 MB/s	4,000 MB/s	
Random read (4 KB, QD64) ¹	1,250,000 IOPS		
Random write (4 KB, QD64) ¹	90,000 IOPS	140,000 IOPS	130,000 IOPS
Endurance and Reliability			
Terabytes Written (TBW) ²	3,504	7,008	14,016
Mean Time Between Failures (MTBF) ⁶	2,500,000 hours		
Uncorrectable Bit Error Rates (UBER)	<1 sector per 10 ¹⁸ bits read		
Power loss protection	Yes		
Warranty ³	5 years		
Power Consumption			
Supply Voltage	12 V		
Active read (Typ.)	12.5 W	13.4 W	15.1 W
Active write (Typ.)	11.7 W	14 W	15 W
Idle power average	5.07 W	5.19 W	5.58 W

Temperature	
Operating temperature	0°C to 70°C (32°F to 158°F)
Storage temperature	-40°C to 85°C (-40°F to 185°F)
Others	
Size (H x W x D)	15 mm x 70 mm x 100 mm
Certification	FCC, CE, EAC, BSMI, VCCI, KC, RoHS, UKCA
Security	SED (AES-256 Encryption, TCG Opal)

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

1. All performance measurements refer to sustained performance achieved in a steady state, as defined by test specifications in accordance with the Storage Networking Industry Association (SNIA).
2. The TBW specifications denote the baseline endurance levels for Synology SSDs and are calculated using the JESD219A enterprise workload.
3. The warranty period starts from the purchase date as stated on your receipt of purchase. The 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. [Learn more](#) about our limited product warranty policy.
4. The specifications have undergone thorough review and verification by Synology to ensure they meet the performance demands and compatibility standard of each Synology system while providing high reliability.
5. Performance specifications represent single-unit SSD performance results obtained from Synology's testing environment; actual performance may vary according to the host system's hardware and software setup.
6. Mean time between failures (MTBF) is not an estimate or guarantee of product life. It is a statistical value related to mean failure rates for a large number of products and may not accurately reflect actual operation. Actual operating life of the product may be different from the MTBF.

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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