

**SANDISK™**

"DATA SHEET"

SN861 SSD



(→) SANDISK® SN861 SSD Enterprise NVMe™ Drive

Redefining the limits for high-performance storage

Be ready for the future of mission critical workloads with the SANDISK® SN861 SSD. The latest SANDISK® SSD with a cutting-edge PCIe® Gen5 enterprise-class speeds, the SANDISK® SN861 SSD offers exceptional performance and multiple capacities up to 15.36TB.¹ With high random read speeds and low power consumption, the SANDISK® SN861 SSD is optimized for compute-intensive AI and machine learning applications, ensuring superior read/write performance, extremely low latency, and maximize IOPs/Watt. The SANDISK® SN861 SSD also provides a rich feature set including Flexible Data Placement (FDP), NVMe™ 2.0 and OCP 2.5 support, 1 & 3 DWPD, and a 5-year limited warranty,² making it the ideal solution for hyperscale, cloud, and enterprise data centers.

Product Highlights

- Experience exceptional PCIe® Gen5 performance in multiple capacities up to 15.36TB,¹ perfect for compute-intensive applications
- Engineered for minimal power consumption, optimizing efficiency and reducing operational costs without compromising performance
- Achieve optimized solutions at low cost for your enterprise's mixed workloads with high-speed random read performance
- Delivering consistent QoS, even under heavy workloads, helping latency during mission-critical operations
- E1.S and E3.S options also available, ensuring scalability and flexibility to meet your enterprise storage needs
- Benefit from enterprise-class features including Power Loss Protection, End-to-End Data Path Protection, and SE, ISE, and TCG security and encryption, all backed by a 5-year limited warranty²

Applications/Environments

- AI Model Training and Inference, Machine Learning, Deep Learning
- Hyperscale Cloud and Enterprise Datacenters
- Compute Intensive Applications
- Standard Compute, High CPU, High GPU, HPC Workloads
- Big Data, Data Analytics, Data Modeling, Predictive Analysis

Features

Ready for the Demands of AI Workloads

Designed to handle compute-intensive AI and machine learning applications which require high bandwidth and low latency.

Superior Performance and Capacity

Experience future-ready PCIe® Gen5 read/write speeds with multiple capacities up to 15.36TB.¹

Designed for Power Efficiency

Architected to provide heightened performance per watt, optimizing power efficiency and reducing operational costs.

Outstanding Mixed Workload Performance

High-speed random reads provide enhanced solutions at low cost for your enterprise.

Optimized for Quality of Service (QoS)

Reduce latency during mission-critical workloads, delivering consistent Quality of Service (QoS) for your applications, even under heavy workloads.

Rich Enterprise Features

Benefit from enterprise-class features such as Power Loss Protection, End-to-End Data Path Protection, and SE, ISE, and TCG security and encryption, helping ensure data integrity and security.

Future-Ready Data Infrastructure

Designed with industry compliance NVMe™ 2.0, and NVMe™ MI 1.2c, along with Flexible Data Placement (FDP) and OCP 2.5 support, for enhanced scalability and efficiency.

Product Information

Capacity ¹	1.92TB	3.84TB	7.68TB	15.36TB	1.60TB	3.20TB	6.40TB	12.80TB
Endurance ³ (projected)	1 DWPD			3 DWPD				
Security	SE, ISE, TCG OPAL							
Form Factor	U.2							
Interface	PCIe® Gen5x4							
NVMe™ Specification	NVMe™ v2.0, NVMe™ MI 1.2c							

Performance (projected)

Read Throughput (max MB/S, Seq 128KiB) ⁴	13,700	13,700	13,700	13,700	13,700	13,700	13,700	13,700
Write Throughput (max MB/S, Seq 128KiB) ⁴	3,600	7,200	8,800	8,400	3,600	7,200	8,800	8,400
Read IOPS (max, Rnd 4KiB) ⁴	2,100K	3,300K	3,300K	3,300K	2,100K	3,300K	3,300K	3,300K
Write IOPS (max, Rnd 4KiB) ⁴	175K	350K	430K	350K	330K	675K	800K	700K
Read Latency (µS) ⁵	70	70	70	70	70	70	70	70
Write Latency (µS) ⁵	10	10	10	10	10	10	10	10

Reliability

MTTF ⁶ (hours, projected)	2.5M
Uncorrectable Bit Error Rate (UBER)	1 in 10 ¹⁷
Annualized Failure Rate ⁶ (AFR, projected)	0.35%
Limited Warranty ²	5 years

Power Management (projected)

Requirement (DC, +/- 10%)	+12v
Operating Mode	12W, 14W, 16W, 18W, 20W, 23W (Default)
Idle (avg.)	~5W

Physical Size

z-height (mm)	15mm
Dimensions (width × length)	69.85mm × 100.45mm

Environmental

Operating Temperature (ambient) ⁷	0°C to 70°C
Non-Operating temperature ⁸	-40°C to 85°C

Ordering Information: 1DWPD

	Region	Security	1.92TB	3.84TB	7.68TB	15.36TB
OTS Number	Worldwide	SE	OTS2635	OTS2636	OTS2637	OTS2608
Model Number	Worldwide	SE	SDS6BA1190SP9X1	SDS6BA1380SP9X1	SDS6BA1760SP9X1	SDS6BA1A10SP9X1
OTS Number	Worldwide	ISE	OTS2644	OTS2645	OTS2646	OTS2609
Model Number	Worldwide	ISE	SDS6BA1190SP9X3	SDS6BA1380SP9X3	SDS6BA1760SP9X3	SDS6BA1A10SP9X3
OTS Number	Worldwide	TCG Opal	OTS2647	OTS2648	OTS2649	OTS2610
Model Number	Worldwide	TCG Opal	SDS6BA1190SP9X7	SDS6BA1380SP9X7	SDS6BA1760SP9X7	SDS6BA1A10SP9X7
OTS Number	China	SE	Not Applicable	OTS2639	OTS2640	OTS2611
Model Number	China	SE	Not Applicable	SDS6BA1380SP9X1	SDS6BA1760SP9X1	SDS6BA1A10SP9X1

Ordering Information: 3DWPD

	Region	Security	1.60TB	3.20TB	6.40TB	12.80TB
OTS Number	Worldwide	SE	OTS2656	OTS2657	OTS2658	OTS2612
Model Number	Worldwide	SE	SDS6CA2160SP9X1	SDS6CA2320SP9X1	SDS6CA2640SP9X1	SDS6CA2A20SP9X1
OTS Number	Worldwide	ISE	OTS2650	OTS2651	OTS2652	OTS2613
Model Number	Worldwide	ISE	SDS6CA2160SP9X3	SDS6CA2320SP9X3	SDS6CA2640SP9X3	SDS6CA2A20SP9X3
OTS Number	Worldwide	TCG Opal	OTS2653	OTS2654	OTS2655	OTS2614
Model Number	Worldwide	TCG Opal	SDS6CA2160SP9X7	SDS6CA2320SP9X7	SDS6CA2640SP9X7	SDS6CA2A20SP9X7
OTS Number	China	SE	Not Applicable	OTS2642	OTS2643	OTS2615
Model Number	China	SE	Not Applicable	SDS6CA2320SP9X1	SDS6CA2640SP9X1	SDS6CA2A20SP9X1

1. One terabyte (TB) is equal to 1,000GB (one trillion bytes). Actual user capacity may be less due to operating environment.

2. The warranty for the product will expire on the earlier of (i) the date when the flash media has reached one-percent (1%) of its remaining life or (ii) the expiration of 5 years.

3. NAND Endurance.

4. Based on internal testing. Performance will vary by capacity point, or with the changes in useable capacity. Consult product manual for further details. All performance measurements are in full sustained mode and are peak values.IOPS = input/output operations per second.Subject to change.

5. Average random latency at 4KiB, QD=1

6. MTTF and AFR specifications will be based on a sample population and are estimated by statistical measurements and acceleration algorithms under typical operating conditions for this drive model.MTTF and AFR ratings do not predict an individual drive's reliability and do not constitute a warranty.

7. Composite temperature reading

8. Values are based on ambient temperature. Avoid non-operational exposure to temperatures in excess of 40°C for periods exceeding three months.