SanDisk®

DC SN861

E1.S, 15mm, NVMe SSD
1.92TB, 3.84TB, 7.68TB[1]

Redefining the limits for high-performance storage

Be ready for the future of mission critical workloads with the SanDisk DC SN861. The latest SanDisk SSD with cutting-edge PCIe Gen5 enterprise-class speeds, the DC SN861 offers exceptional performance and multiple capacities up to 7.68TB[1]. With high random read speeds and low power consumption, the DC SN861 is optimized for compute-intensive AI and machine learning applications, ensuring superior read/write performance, extremely low latency, and maximize IOPs/Watt available. The DC SN861 also provides a rich feature set including Flexible Data Placement (FDP), OCP 2.0 support, and a 5-year limited warranty[6], making it the ideal solution for hyperscale, cloud, and enterprise data centers.

Features

Ready for the Demands of AI Workloads
Designed to handle compute-intensive AI and machine learning applications which require high bandwidths and low latencies.

Superior Performance and Capacity
Experience future-ready PCIe Gen5 read/write speeds with multiple capacities up to 7.68TB[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 TCG security and encryption, helping ensure data integrity and security.

Future-Ready Data Infrastructure
Designed with industry compliant NVMe™ 2.0[10], and NVMe MI 1.2c, along with Flexible Data Placement (FDP)[9] and OCP 2.0 supportive, for enhanced scalability and efficiency.

Highlights

- Experience exceptional PCIe Gen5 performance in multiple capacities up to 7.68TB[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
- U.2 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 TCG security and encryption, all backed by a 5-year limited warranty[6]

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

DATA SHEET	**DATA CENTER SOLID STATE DRIVE**

Product Information

Capacity[1]	1.92TB	3.84TB	7.68TB
Endurance[2]		1 DWPD	
Security		TCG OPAL 2.01	
Form Factor		E1.S (15mm)	
Interface		PCIe® Gen5×4	
NVMe Specification		NVMe v1.4b	
Out-of-Band Management Support		Basic Management Over SMBUS	

Performance

Read Throughput (max MB/s, Seq 128KiB)[3]	12,100	13,700	13,700
Write Throughput (max MB/s, Seq 128KiB)[3]	3,400	6,500	7,000
Read IOPS (max, Rnd 4KiB)[3]	1,550K	2,850K	2,850K
Write IOPS (max, Rnd 4KiB)[3]	140K	210K	235K
Read Latency (μS)[4]	70	70	70
Write Latency (μS)[4]	10	10	10

Reliability

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

Power Management

Requirement (DC, +/- 10%)	+12v	+12v	+12v
Operating Modes (avg, max)	12W	21W	21W
Idle (Average)	< 5W	< 5W	< 5W

Physical Size

z-height (mm)	15mm
Dimensions (width x length, mm)	33.75mm x 118.75mm
Weight (g, max)	95g

Environmental

Operating Temperature (Ambient)[7]	0°C to 70°C
Worst Case Airflow to reach max performance in 30°C	1.5 meters per second at sea level
Non-Operating Temperature[8]	-40°C to 85°C

Ordering Information

	Security	1.92TB	3.84TB	7.68TB
OTS Number	TCG Opal	0TS2566	0TS2567	0TS2568
Model Number	TCG Opal	SDS6A7619PKP8X7	SDS6A7638PKP8X7	SDS6A7676PKP8X7

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

[2] NAND Endurance.

[3] 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 persecond. Subject to change.

[4] Average random read latency at 4KiB, QD=1

[5] 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.

[6] 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.

[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.

[9] Flexible Data Placement (FDP) available on E1.S device only.

[10] Only available on U.2 form factor.

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