

eSSD Positioning & Workload Focus

	Accelerated		Mainstream	
	AI / ML	HPC	Performance Intensive	Capacity Intensive
Storage Requirements				
Description	LLM Training & Inferencing	Hi-Perf Technical Computing	Hi-Perf Business Computing	Storage Servers
Target Applications	<ul style="list-style-type: none"> GenAI (ChatGPT) Autonomous Driving Facial Recognition 	<ul style="list-style-type: none"> Big Data Analytics Scientific Simulations Weather Prediction 	<ul style="list-style-type: none"> Mission Critical Workloads Web hosting Software Development 	<ul style="list-style-type: none"> Business Critical Workloads Fast Object Stores Video/Secondary/Warm Store
Representative Benchmarks	<ul style="list-style-type: none"> MLPerf Storage Vector DB Bench (RAG) 	<ul style="list-style-type: none"> IOR (parallel IO testing) mdtest (metadata test) 	<ul style="list-style-type: none"> SQL Server OLTP (TPC-C) FIO/HammerDB/YCSB 	<ul style="list-style-type: none"> VDBench/YCSB S3-Benchmarks
SNDK Use Case Category	<ul style="list-style-type: none"> AI/ML/DL 	<ul style="list-style-type: none"> AI/ML/DL Caching 	<ul style="list-style-type: none"> Caching Database 	<ul style="list-style-type: none"> Object Store Database
Storage Attributes	<ul style="list-style-type: none"> Highest RR/SR Extremely Low Latency 	<ul style="list-style-type: none"> Highest RR/RW, SR/SW Extremely Low Latency 	<ul style="list-style-type: none"> Extremely high RR/RW Extremely Low Latency 	<ul style="list-style-type: none"> Read Intensive High Sequential I/O

DC SN861 NVMe™ SSDs



Model Training & Inference



Big Data Analytics & Simulation



Mission Critical & Hosting



SPECIFICATIONS

PCIe Gen 5.0
OCP 2.0
NVMe™ 2.0 Compliant
BiCS6 TLC 4P NAND

CAPACITIES

2TB, 4TB, 8TB, 16TB

FORM-FACTORS

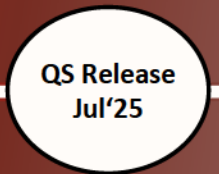
U.2, E1.S, E3.S

ADDITIONS

Higher performance
New Security / Enterprise Features

WD ADVANTAGES

Industry leading random read performance
Optimized for extremely low latency
Best in Class power efficiency



Product Configuration

Specifications	Details			
Interface	PCIe Gen5 1x4			
Controller	Fadu Echo 3			
NAND Technology	BiCS6 512Gb 4P TLC, 1Tb 4P TLC NAND			
Form Factor	E1.S 15mm, E3.S 7.5mm, U.2 15mm			
Capacities Supported (TB)	1.6 / 1.92	3.2 / 3.84	6.4 / 7.68	12.8 / 15.36
5Y Endurance (JESD219)	10K PE/Cycles, 1 / 3 DWPD			
Ambient Condition	35°C 295LFM			
Indirection Unit (IU)	4K			
Default power consumption (Avg Max)	20W			
Low Power Idle	~5W			
Drive Reliability (UBER/MTBF/DR)	1E-17 / 2.5 Million Hours / 3-month 40°C			
SKU Support	TCG Opal, SE, ISE			
NVMe Namespace	128			

Feature List

Industry Standards		Enterprise Features	
OCP	2.5	DIF/DIX	√
NVMe	2.0	PI	√
NVMe MI	1.2c	Atomic Writes	4K (covers power fail)
		Weighted Round Robin	√
Security		XOR Protection	Plane, Block, Die
Security Hardware	RSA 3K, SHA 384	OCP Log Pages	√
Secure Boot	OCP	Telemetry	OCP
Key revocation	Up to 3 (OCP)	BMC over SMBus	√
Secure FW Update	√	Hot swap	√
FW Update	Anti rollback, without reset	Global Unique NGUID/EU64	√
Crypto Erase	√	NVMe MI over PCIe	√
End-to-End Data Protection	√	Sector Size	512, 4K, 512+8, 4K+16, 4K+64
Power Loss Protection	√	PWRDIS	√
TCG	2.02	SRIS/SRNS	√
		Customized FDP	√

Performance Plan

Metrics	1.92TB	3.84TB	7.68TB	15.36TB
Rand. RD 4K QD1024 (KIOPS)	2100	3300	3300	3300
Rand. WR 4K QD1024 (KIOPS)	175	360	480	370
Rand. Mixed 4K QD 256 R/W 70:30 (KIOPS)	370	750	1200	1000
Seq. RD 128K QD128 (MB/s)	13700	13700	13700	13700
Seq. WR 128K QD128 (MB/s)	3600	7300	8600	8400
Rand RD Latency (us) – QD1(50%,Average)	65	65	65	65
Rand WR Latency (us) – QD1(50%,Average)	8	8	8	8
Estimated Power (W) – Avg Power	14W	18W	20W	20W

Stargate DC SN670

FUTURE FWD

SANDISK™

DC SN670 NVMe™ SSDs

Transform Your Storage Infrastructure



Designed for High-Capacity Storage Solutions



Data Ingest, Preparation, & Faster Data Lakes



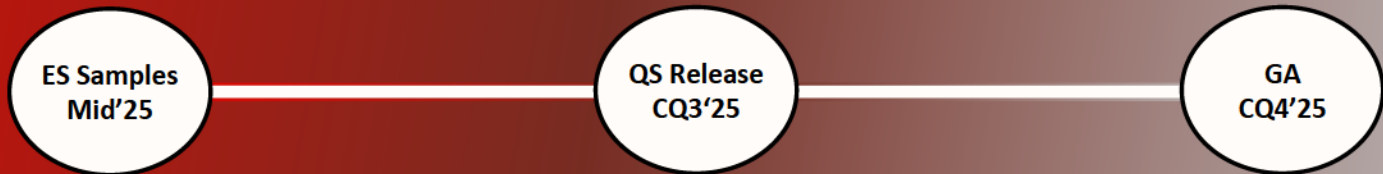
Converged and Scalable Platform



Improving Storage TCO



U.2



SPECIFICATIONS

PCIe Gen 5.0 (Backward Compatible)
NVMe™ 2.0 Compliant
BiCS 8 QLC 4P NAND

CAPACITIES

16TB, 32TB, 64TB, 128TB

FORM-FACTORS

U.2, E3, E1.L

WD ADVANTAGES

Designed for High-Capacity
WDC 1st Enterprise Grade QLC Product
Converged and Scalable Platform

Product Configuration

Specifications	Details			
Interface	PCIe Gen5 1x4			
Controller	In house -- Sirius1			
NAND Technology	BiCS8 1Tb, 4P QLC		BiCS8 2Tb QLC	
Form Factor	U.2, E3, E1.L			
Capacities Supported (TB)	15.36	30.72	61.44	122.88
Endurance	0.35 RW, 1.8 SW, 100% utilization			
Ambient Condition	Meeting per FF and specification requirement			
Indirection Unit (IU)	16K			
Default power consumption (Avg Max)	15W	18W	20W	23W
Low Power Idle	<5W			
Drive Reliability (UBER/MTBF/DR)	1E-17 / 2.5 Million Hours / 3-month 40°C			
SKU Support	TCG Opal, SE, ISE			
NVMe Namespace	128			

Feature List

Industry Standards		Enterprise Features	
OCP	2.5	DIF/DIX	√
NVMe	2.0	PI	√
NVMe MI	1.2c	Atomic Writes	4K (covers power fail)
		Weighted Round Robin	√
Security		XOR Protection	Plane, Block, Die
Security Hardware	RSA 3K, SHA 384	OCP Log Pages	√
Secure Boot	OCP	Telemetry	OCP
Key revocation	Up to 3 (OCP)	BMC over SMBus	√
Secure FW Update	√	Hot swap	√
FW Update	Anti rollback, without reset	Global Unique NGUID/EU64	√
Crypto Erase	√	NVMe MI over PCIe	√
End-to-End Data Protection	√	Sector Size	512, 4K, 512+8, 4K+16, 4K+64
Power Loss Protection	√	PWRDIS	√
TCG	2.02	SRIS/SRNS	√
		Customized FDP	√