

DigiStor Enterprise PCIe Gen5 E3.S SSD

30.72-60.44TB Opal SED

TAA COMPLIANT

E3.S 1T

PCIe GEN 5

TCG OPAL

AES-256

This is an Enterprise PCIe Gen5 x4 NVMe 2.0 Solid State Drive in the E3.S 1T form factor, delivering outstanding sequential and random performance, ultra-low latency, and robust Quality of Service. Available in 30.72 TB and 61.44 TB capacities with QLC flash, supports SED (TCG Opal) security type and is designed for demanding data center and enterprise workloads.

Top Features

- PCIe Gen 5 x4
- NVMe Base Specification Rev. 2.0
- Sequential Read up to 14,000 MB/s
- Sequential Write up to 2,700 MB/s ($\leq 25W$, 61.44TB)
- Random Read up to 2,500K IOPS (QD128, 8 jobs)
- Random Write up to 34K IOPS (QD128, 8 jobs)

- QLC NAND Flash, 30.72 TB and 61.44 TB capacities
- AES-256 Encryption (SED)
- TBW: 16,819 TB / 33,638 TB | DWPD: 0.3 / 0.3
- MTBF: 2.5 million hours
- 4KB Random Read Latency: 110 μ s

Available Models

Part Number	Capacity	Form Factor	Interface	Encryption	DWPD
DIG-P5E3SG43-30T	30.72 TB	E3.S 1T	PCIe Gen5 x4	AES-XTS-256-bit	0.3
DIG-P5E3SG43-61T	61.44 TB	E3.S 1T	PCIe Gen5 x4	AES-XTS-256-bit	0.3

Performance Summary

Capacity	Seq. Read	Seq. Write	Rand. Read	Rand. Write	Flash
30.72 TB ($\leq 25W$)	14,000 MB/s	1,800 MB/s	2,500K IOPS	34K IOPS	QLC
61.44 TB ($\leq 25W$)	14,000 MB/s	2,700 MB/s	2,500K IOPS	34K IOPS	QLC

Note: Sequential performance measured at 512KB block size. Random performance measured at QD128, 8 jobs (4KB read / 16KB write). Test platform: Ubuntu 20.04.2 LTS, Linux 5.10.32, Intel Xeon Gold 5416S, Gigabyte M503-CE0-00, 64GiB RAM. Default power state is PS1 (25W). The 61440 GB model operates at PS0 ($\leq 30W$).

This document describes a product that is currently under development. Specifications, features, and performance characteristics are subject to change without notice as the product design is finalized. The information provided herein is for reference and evaluation purposes only and should not be relied upon for final design decisions. Photos in this document are for illustrative purposes only and might not be representative of the exact product described.

Reliability & Environmental

Parameter	Rating
MTBF	2.5 Million Hours
UBER	<1 sector per 1018 bits read
TBW	30.72 TB: 16819 TB 61.44 TB: 33638 TB
Op. Temp.	0°C to 70°C
Storage Temp.	-40°C to 85°C
Op. Humidity	Up to 90% RH
Shock (op / non-op)	1000G, 0.5ms / 1500G, 0.5ms
Vibration (op)	3.08 Grms (7–200 Hz)
Vibration (non-op)	20G (20–2000 Hz)
ESD	±4 kV (EN 61000-4-2 / IEC 61000-4-2)
Idle Power	5W (LPM off, both capacities)
Inrush Current	2000 mA/μs (all capacities)
Op. Voltage	12V ±10%; 3.3V _{aux} -10%/+5%
Dimensions (L×W×H)	112.75 × 76.00 × 7.50 mm

Compliance

- TAA Compliant
- TCG Opal 2.0 Compliant
- CE, FCC, RCM, RoHS

 **Contact:** sales@digistor.com | support@digistor.com |
DigiStor All specifications subject to change without notice.

Security Capabilities

- AES-256 hardware encryption
- SED (TCG Opal 2.0) — supports TCG commands, crypto erase, PSID revert, and Windows eDrive (requires activation via vendor tool)
- IEEE 1667 support (requires activation via vendor tool to prevent unintended eDrive implementation)
- Sanitize operations: Overwrite, Block Erase, Crypto Erase
- PSID Revert support
- Security Send / Security Receive NVMe commands supported
- Sanitize NVMe command supported
- End-to-end data protection capabilities (DPC: 0x13)
- Reservation commands supported (Register, Report, Acquire, Release)

Flash Management Technology

Thermal Throttling (TMT)

3-stage TMT monitors flash temp every 1s. Triggers at 77°C (TMT1) and 81°C (TMT2); thermal shutdown at flash ≥85°C or controller ≥120°C.

SMART Monitoring

Comprehensive SMART attributes including health, wear, temperature, error counts, and endurance estimation via Log IDs 02h, C0h, and D2h.

NVMe Power States

6 active power states (PS0–PS5) for fine-grained power management, with idle power as low as 5W.

VPD & SMBus Support

Vital Product Data (inventory, power, vendor data) accessible via SMBus at slave address 0xA6; SMBus/I2C management endpoint at 0x3Ah.

Typical Applications

- Hyperscale & enterprise data center storage
- AI/ML training data repositories and inference serving
- Cloud storage, object storage, and warm-tier data lakes
- High-density read-intensive and mixed workload servers