DC3000ME PCIe 5.0 NVMe U.2 SSD

Enterprise-class Gen5 NVMe U.2 SSD with power loss protection for server applications

Kingston's DC3000ME U.2 data center SSD features a high-speed PCIe 5.0 NVMe interface and utilises 3D eTLC NAND, making it well suited for a wide range of server applications such as AI, HPC, OLTP, databases, cloud infrastructure and edge computing. DC3000ME includes on-board power loss protection to safeguard data in the event of sudden power loss and AES 256-bit encryption for ultimate data security. DC3000ME utilises the latest high-speed PCIe 5.0 interface and is backward-compatible with PCIe 4.0 servers and backplanes. Like all of Kingston's data center SSDs, DC3000ME is designed to deliver I/O consistency and low latency as the key design criteria that system integrators, hyperscale data centers and cloud service providers can depend on. DC3000ME is offered in 3.84TB, 7.68TB and 15.36TB[1] capacities and is backed by Kingston's legendary technical support and a 5-year limited warranty.

- Enterprise PCIe 5.0 performance
- Optimal storage and efficiency
- On-board power loss protection (PLP)
- AES 256-bit encryption

Applications and workloads

DC3000ME is ideal for running a wide range of server applications and workloads including:

- AI
- HPC
- Cloud services
- Edge computing
- Software-defined storage
- RAID
- General server use

Key Features

Enterprise PCIe 5.0 performance

Delivers I/O consistency and low latency with sustained speeds of up to 14,000MB/s read and 2,800,000 read IOPS[2].

Optimal storage and efficiency

High-capacity options available offering an exceptional balance of consistent I/O delivery and ultra-high performance. Optimised to handle a wide range of server workloads efficiently.

On-board power loss protection (PLP)

Enterprise-class protection to reduce the possibility of data loss or corruption on ungraceful power fails, including NVMe-MI 1.2b out-of-band management, end-to-end data protection and TCG Opal 2.0.

AES 256-bit encryption

Secure sensitive data with AES 256-bit hardware-based encryption and TCG Opal 2.0.

Specifications

Form factor	U.2, 2.5” x 15mm
Interface	PCIe NVMe Gen5 x4 (backward compatible with Gen4)
Capacities[1]	3.84TB, 7.68TB, 15.36TB

NAND	3D eTLC
Sequential read/write[2]	3.84GB – 14,000MB/s / 5,800MB/s 7.68TB – 14,000MB/s / 10,000MBs 15.36TB – 14,000MB/s / 9,700MB/s
4k random read/write (IOPS)[2]	3.84GB – 2,700,000 / 300,000 7.68TB – 2,800,000 / 500,000 15.36TB – 2,700,000 / 400,000
Latency quality of service (QoS)[2], [3], [4]	99% - read/write: <10 µs / < 70 µs
Static and dynamic wear levelling	Yes
Power loss protection (power caps)	Yes
Encryption	Yes - TCG Opal 2.0, AES 256-bit encryption
Namespace management support	Yes - 128 namespaces supported
Enterprise diagnostics	Telemetry, media wear, temperature, health, etc.
Endurance (TBW/DWPD)[5]	3.84GB – 7,008TB, 1DWPD (5 years) 7.68TB – 14,016TB, 1DWPD (5 years) 15.36TB – 28,032TB, 1DWPD (5 years)
Power consumption	Idle: 8W Max read: 8.2W Max write: 24W
Operating temperature	0℃ ~ 70℃

Dimensions	100.50mm x 69.8mm x 14.8mm
Weight	3.84GB – 146.2g 7.68TB – 151.3g 15.36TB – 152.3g
Vibration non-operating	10G peak (10–1000Hz)
MTBF	2 million hours
Warranty/support[6]	Limited 5-year warranty with free technical support

Part Numbers

SEDC3000ME

SEDC3000ME/3T8
SEDC3000ME/7T6
SEDC3000ME/15T3

Product Image

1. Some of the listed capacity on a Flash storage device is used for formatting and other functions and thus is not available for data storage. As such, the actual available capacity for data storage is less than what is listed on the products. For more information, go to Kingston's Flash Memory Guide.
2. Performance measurement as defined by SNIA Solid State Storage Performance Test Specification Enterprise v1.1; drive write cache enabled; NVMe power state 0; sequential workloads measured using FIO with queue depth of 32; random read workloads using FIO with queue depth of 128 based on 4K sector size; random write workloads measured using FIO with queue depth of 128. Latency values measured with random workloads using FIO, 4KB transfers, queue depth = 1.
3. Measurement taken once the workload has reached steady state but including all background activities required for normal operation and data reliability.
4. Based on 15.36TB capacity.
5. Total Bytes Written (TBW) and Drives Writes Per Day (DWPD) derived from the JEDEC Enterprise Workload (JESD219A).
6. Limited warranty based on 5 years or when the usage of an NVME SSD as indicated by Kingston's implementation of the Health attribute "Percentage Used" reaches or exceeds a normalized value of one hundred (100) as indicated by the Kingston SSD Manager. For NVMe SSDs, a new unused product will show a Percentage Used value of 0, whereas a product that reaches it warranty limit will show a Percentage Used value of greater than or equal to one hundred (100).