DATA CENTER DC1000M U.2 NVME SSD

Enterprise-Class U.2 NVMe SSD with PLP

Data Center DC1000M

The Kingston DC1000M U.2 NVMe SSD features high storage capacity and best-in-class enterprise performance. It offers a high-performance Gen 3.0 x4 PCIe NVMe interface that enables high throughput and low latency on standardised platforms. It's designed to deliver up to 540K IOPS of random read performance and 3GB/s of throughput. The DC1000M is backed by strict QoS requirements to ensure predictable random IO performance as well as predictable latencies over a wide range of workloads.

The U.2 form-factor design (2.5", 15mm) works seamlessly with the latest generation servers and storage arrays utilising PCIe and U.2 backplanes. It's hot pluggable, which makes the challenge of serviceable PCIe storage an issue of the past.

It also features enterprise-class features such as end-to-end data path protection, power loss protection (PLP) and telemetry monitoring for increased data centre reliability. Backed by Kingston's legendary pre- and post-sales support and a five-year limited warranty. Capacities[1] range from 960GB to 7.6TB.

Applications

The "mixed-use" workload drive makes it ideal for running a wide range of customer applications including:

- Virtualisation
- High-performance cloud service
- Web hosting caching
- High-resolution media capture and transport
- ERP, CRM, GL, OLAP, OLTP, ERM, BI and EDW workloads

- **› Enterprise-class U.2 NVMe PCIe SSD Gen 3.0 x4 SSD**
- **› High performance over 3GB/s**
- **› Predictable low latency and I/O consistency**
- **› On-board power loss protection (PLP)**

more ››

FEATURES/BENEFITS

Data centre NVMe performance — Incredible I/O consistency with speeds of up to 3GB/s and 540K IOPS.

Enterprise-Class Mixed-Use Storage — An exceptional balance of consistent I/O delivery with high read and write IOPS performance to manage a wide range of transactional workloads.

Reduce Application Latencies — Quality of Service (QoS) delivers ultra-low transactional latency for large data sets and various web-based applications.

On-board Power Loss Protection (PLP) — Enterprise-class protection to reduce possibility of data loss or corruption on ungraceful power failure.

SPECIFICATIONS

Form factor
U.2, 2.5"x 15mm

Interface
PCIe NVMe Gen3 x4

Capacities[1]
960GB, 1.92TB, 3.84TB, 7.68TB

NAND
3D TLC

Sequential read/write
960GB – 3,100MBs/1330MBs 1.92TB – 3,100MBs/2600MBs
3.84TB – 3,100MBs/2700MBs 7.68TB – 3,100MBs/2800MBs

Steady-state 4k read/write
960GB – 400,000/125,000 IOPS 1.92TB – 540,000/205,000 IOPS
3.84TB – 525,000/210,000 IOPS 7.68TB – 485,000/210,000 IOPS

Latency[2, 3, 4]
TYP read/write: <300 µs / <1 ms

Static and dynamic wear levelling
yes

Power loss protection (power caps)
yes

Enterprise SMART tools
reliability tracking, usage statistics, SSD life remaining, wear levelling, temperature

Endurance
960GB – (1 DWPD/5yrs)[5] 1.92TB – (1 DWPD/5yrs)[5]
3.84TB – (1 DWPD/5yrs)[5] 7.68TB – (1 DWPD/5yrs)[5]

Power consumption

960GB: idle: 5.14W	average read: 5.25W	average write: 9.10W
max read: 5.64W	max write: 9.80W	
1.92TB: idle: 5.22W	average read: 5.31W	average write: 13.1W
max read: 5.70W	max write: 13.92W	
3.84TB: idle: 5.54W	average read: 5.31W	average write: 14.69W
max read: 6.10W	max write: 15.5W	
7.68TB: idle: 5.74W	average read: 5.99W	average write: 17.06W
max read: 6.63W	max write: 17.88W	

Storage temperature
-40°C ~ 85°C

Operating temperature
0°C ~ 70°C

Dimensions
100.09mm x 69.84mm x 14.75mm

Weight
160(g)

Vibration operating
2.17G peak (7-800Hz)

Vibration non-operating
20G peak (10-2,000Hz)

MTBF
2 million hours

Warranty/support[6]
limited 5-year warranty with free technical support

KINGSTON PART NUMBERS

DC1000M
SEDC1000M/960G
SEDC1000M/1920G
SEDC1000M/3840G
SEDC1000M/7680G

1. Some of the listed capacity on a Flash storage device is used for formatting and other functions and is thus 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 Guide at kingston.com/flashguide.
2. Workload based on FIO, random 4KB QD=1 workload, measured as the time taken for 99.9% of commands to finish the round-trip from host to drive and to host.
3. Measurement taken once the workload has reached a steady state but including all background activities required for normal operation and data reliability.
4. Based on 960GB capacity.
5. 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 normalised value of one hundred (100) as indicated by the Kingston SSD Manager (kingston.com/SSDManager). For NVMe SSDs, a new unused product will show a Percentage Used value of 0, whereas a product that reaches its warranty limit will show a Percentage Used value of greater than or equal to one hundred (100).

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