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DC1500M U.2 ENTERPRISE SSD

Gen 3.0 x4 PCIe NVMe Storage for Mixed-Use Workloads

Kingston DC1500M U.2 NVMe SSD features high-storage capacity and enhanced enterprise performance. It offers a high-performance Gen 3.0 x4 PCIe NVMe design to deliver latency and IOPS consistency. DC1500M 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. DC1500M is hot pluggable, eliminating the challenges of serviceable PCIe storage.

It boasts enterprise-class features such as end-to-end data path protection, namespace management, power loss protection (PLP) and telemetry monitoring for increased data center reliability. Backed by Kingston's legendary pre- and post-sales support and a five-year limited warranty⁶. Capacities range from 960GB to 7.6TB¹.

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 PCIe NVMe Gen 3.0 x4 SSD
- › Exceptional speeds of up to 3GB/s
- › Predictable low latency and I/O consistency
- › On-board Power Loss Protection (PLP)

FEATURES / BENEFITS

Data Center NVMe Performance — Incredible I/O consistency with sustained speeds of up to 3GB/s and 510K 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 the possibility of data loss or corruption on ungraceful power fails.

SPECIFICATIONS

Form factor

U.2, 2.5" x 15mm

Interface

PCIe NVMe Gen3 x4

Capacities¹

960GB, 1.92TB, 3.84TB, 7.68TB

NAND

3D TLC

Sequential read/write

960GB – 3,100 / 1,700MB/s 1.92TB – 3,300/2,700MB/s
3.84TB – 3,100/2,700MB/s 7.68TB – 3,100/2,700MB/s

Steady-state 4k read/write

960GB – 440,000/150,000 IOPS 1.92TB – 510,000/220,000 IOPS
3.84TB – 480,000/210,000 IOPS 7.68TB – 420,000/200,000 IOPS

Latency Quality of Service (QoS)^{2, 3, 4}

99.9 - read/write: <110 µs / <206 µs

Static and dynamic wear levelling

Yes

Power loss protection (power caps)

Yes

Namespace management support

Yes - 64 namespaces supported

Enterprise diagnostics

Telemetry, media wear, temperature, health and error logs, etc.

Endurance

960GB — 1681 TBW⁵ (1 DDPD/5yrs)⁵ (1.6 DDPD/3yrs)⁵
1.92TB — 3362 TBW⁵ (1 DDPD/5yrs)⁵ (1.6 DDPD/3yrs)⁵
3.84TB — 6725 TBW⁵ (1 DDPD/5yrs)⁵ (1.6 DDPD/3yrs)⁵
7.68TB — 13450 TBW⁵ (1 DDPD/5yrs)⁵ (1.6 DDPD/3yrs)⁵

Power consumption

960GB – Idle: 6.30W Average read: 6.21W Average write: 11.40W
Max read: 6.60W Max write: 12.24W

1.92TB – Idle: 6.60W Average read: 6.30W Average write: 13.7W
Max read: 6.63W Max write: 15.36W

3.84TB – Idle: 6.8W Average read: 6.40W Average write: 14.20W
Max read: 7W Max write: 16W

7.68TB – Idle: 7W Average read: 7.30W Average write: 17.14W
Max read: 8.16W Max write: 20.88W

Operating temperature

0°C ~ 70°C

Dimensions

100.09mm x 69.84mm x 14.75mm

Weight

960GB — 145g 1.92TB — 150g
3.84TB — 155g 7.68TB — 160g

Vibration operating

2.17G peak (7–800Hz)

Vibration non-operating

20G peak (10–2000Hz)

MTBF

2 million hours

Warranty/support⁶

limited 5-year warranty with free technical support



KINGSTON PART NUMBERS

DC1500M
SEDC1500M/960G
SEDC1500M/1920G
SEDC1500M/3840G
SEDC1500M/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 1920GB capacity.

5. Total Bytes Written (TBW) and Drives writes per day (DDPD) 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).

