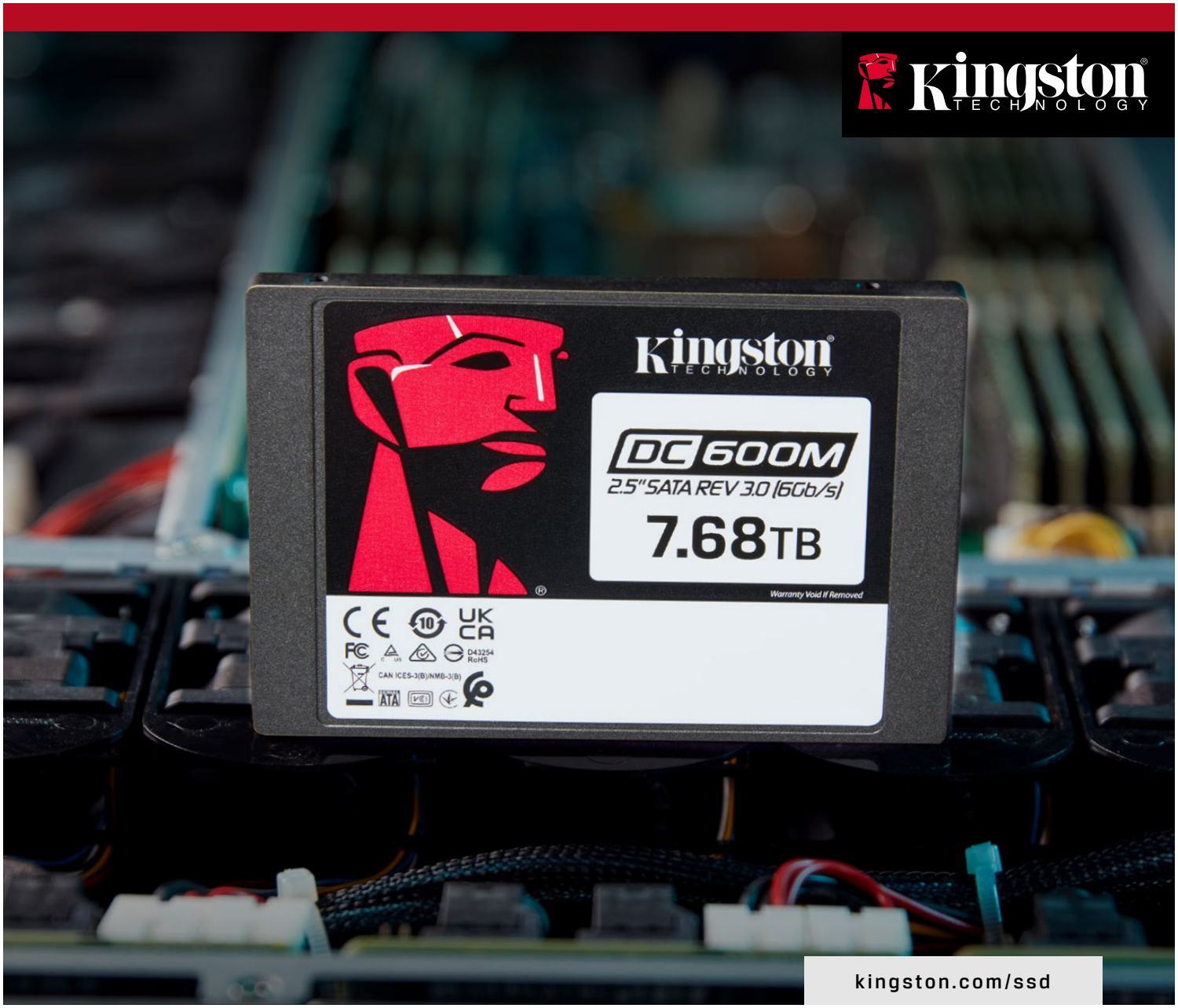

DC600M SSD

Enterprise-class mixed-use SSD with power loss protection

Kingston's DC600M SSD is a fourth-generation data center SATA 3.0, 6Gbps SSD with 3D TLC NAND intended for "mixed use" workloads. The DC600M is suited for use in high-volume rack-mount servers and includes hardware-based on-board PLP. Via power loss capacitors, DC600M protects data against unexpected power failure to reduce the possibility of data loss and ensure that the drive will successfully re-initialise on the next power-up of the system. DC600M is designed to deliver latency and IOPS consistency for system integrators, hyperscale data centers and cloud service providers.

Capacities available from 480GB–7680GB[1] to meet your data storage requirements.

- Designed for data center environments
- Hardware-based power loss protection
- Latency and IOPS consistency
- Capacities of up to 7680GB[1]

more ››

FEATURES / BENEFITS

Designed for data center environments — Optimised to meet the high demands of server RAID applications with low latency and IO consistency as the key design criteria.

Hardware-based PLP — Power loss capacitors to protect user data against unexpected power loss and enhance performance.

Delivers excellent quality of service (QoS)[1] — Optimised performance predictability to meet service-level agreements (SLAs).

Capacities of up to 7680GB — Upgrade and manage storage with capacities of up to 7680GB[2].

SPECIFICATIONS

Form factor
2.5 inch

Interface
SATA Rev. 3.0 (6Gb/s) – with backwards compatibility to SATA Rev. 2.0 (3Gb/s)

Capacities[1]
480GB, 960GB, 1920GB, 3840GB, 7680G

NAND
3D TLC

Sequential read/write
480GB – 560MBs/470MBs
960GB – 560MBs/530MBs
1,920GB – 560MBs/530MBs
3,840GB – 560MBs/530MBs
7680GB – 560MBs/530MBs

Steady-state 4k random read/write
480GB – 94,000/41,000 IOPS
960GB – 94,000/65,000 IOPS
1920GB – 94,000/78,000 IOPS
3840GB – 94,000/59,000 IOPS
7680GB – 94,000/34,000 IOPS

Quality of service (latency)[2,3,4], (99.999) read/write
480GB – 180/110 uSec
960GB – 3840GB – 200/300 uSec
7680GB – 240/170 uSec

Typical latency - read/write[2,3,4]
<200 µs / <30 us

Hot-plug capable
Static and dynamic wear levelling

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

Hardware-based power loss protection

Endurance
480GB – 876TBW[5], 1 DWPD (5 years)[6], 1.66 DWPD (3 years)[6]
960GB – 1752TBW[5], 1 DWPD (5 years)[6], 1.66 DWPD (3 years)[6]
1920GB – 3504TBW[5], 1 DWPD (5 years)[6], 1.66 DWPD (3 years)[6]
3840GB – 7008TBW[5], 1 DWPD (5 years)[6], 1.66 DWPD (3 years)[6]
7680GB – 14016TBW[5], 1 DWPD (5 years)[6], 1.66 DWPD (3 years)[6]

Power consumption
Idle: 1.30W
Average: 1.45W
Max read: 1.6W
Max write: 3.6W

Storage temperature
-40°C ~ 85°C

Operating temperature
0°C ~ 70°C

Dimensions
69.9mm x 100mm x 7mm

Weight
92.34g

Vibration operating
2.17G peak (7–800Hz)

Vibration non-operating
20G peak (10–2000Hz)

MTBF
2 million hours

UBER
≤10 -17

Warranty/support[7]
Limited 5-year warranty with free technical support

KINGSTON PART NUMBERS

DC600M SSD
SEDC600M/480G
SEDC600M/960G
SEDC600M/1920G
SEDC600M/3840G
SEDC600M/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. Measurement taken once the workload has reached a steady state but including all background activities required for normal operation and data reliability.
3. Based on 1920GB capacity.
4. Workload based on FIO, random aligned 4KB QD=1 workload. Quality of service is measured as the time taken for 99.999 percentile of commands to finish the round trip from host to drive and to host. Typical latency is measured as the time taken for 99.9 percentile of commands to finish the round trip from host to drive and to host.
5. Total bytes written (TBW) is derived from the JEDEC Enterprise Workload (JESD219A).
6. Drives writes per day (DWPD).
7. Five-year conditional SSD warranty based on which of the following events occurs first: (i) five (5) years from the date of purchase by the original end user customer; (ii) when the usage of a SATA SSD as measured by Kingston's implementation of the SMART attribute 231, labelled as "SSD Wear Indicator", reaches a normalised value of one (1) as indicated by Kingston's SSD Manager ("KSM").

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