



## DC600M Series 2.5" SATA Enterprise SSD

### 6Gbps SATA 3.0 Storage for Mixed-Use Server Workloads

---

Kingston's DC600M and DC600ME SSDs are 4th generation data center SATA 3.0, 6Gbps SSDs utilizing 3D TLC NAND intended for "mixed use" server workloads. Both are well suited for a wide variety of server applications and include on-board power loss protection via hold-up capacitors. DC600M and DC600ME are designed to protect data against unexpected power failure and to ensure the drive will successfully re-initialize on the next power-up of the system. Designed to deliver low latency and IO consistency for system integrators, hyperscale data centers, and cloud service providers.

DC600ME features AES 256-bit encryption and supports TCG OPAL 2.0 security standards.

Capacities available from 480GB-7.68TB<sup>1</sup> to meet your data storage requirements.

---

- Designed for data center environments
- Hardware-based power loss protection
- Latency and IOPS consistency
- AES 256-bit Encryption with DC600ME
- Capacities up to 7.68TB<sup>1</sup>

## Key Features

- **Designed for data center environments**  
 Optimized 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)<sup>2</sup>**  
 Optimized performance predictability to hit Service-level agreements (SLAs).
- **AES 256-bit Encryption with DC600ME**  
 Protect sensitive data with support for AES 256-bit hardware-based encryption and TCG Opal 2.0 security standards with DC600ME.
- **Capacities up to 7.68TB**  
 Upgrade and manage storage with capacities up to 7.68TB.<sup>1</sup>

## Specifications

### DC600M

|                         |   |
|-------------------------|---|
| Form factor             | 2.5 Inch  |
| Interface               | SATA Rev. 3.0 (6Gb/s) – with backwards compatibility to SATA Rev. 2.0 (3Gb/s) |
| Capacities <sup>1</sup> | 480GB, 960GB, 1.92GB, 3.84GB, 7.68GB  |
| NAND                    | 3D TLC  |
| DRAM Cache              | Yes   |

|  |  |
|--|--|
| Sequential Read/Write                                    | 480GB – 560MBs/470MBs<br>960GB – 560MBs/530MBs<br>1.92TB – 560MBs/530MBs<br>3.84TB – 560MBs/530MBs<br>7.68TB – 560MBs/530MBs   |
| Steady State 4k Random Read/Write                        | 480GB – 94,000/41,000 IOPS<br>960GB – 94,000/65,000 IOPS<br>1.92TB – 94,000/78,000 IOPS<br>3.84TB – 94,000/59,000 IOPS<br>7.68TB – 94,000/34,000 IOPS  |
| Quality of Service (Latency) <sup>3, 4, 5</sup> (99.999) | Read/Write<br>480GB – 180/110 uSec<br>960GB – 3.84TB – 200/300 uSec<br>7.68TB – 240/170 uSec   |
| Typical Latency - Read/Write                             | <200 μs / <30 us <sup>3, 4, 5</sup>  |
| Hot-Plug Capable   | Static and Dynamic Wear Leveling   |
| Enterprise SMART tools                                   | Reliability tracking, usage statistics, life remaining, wear leveling, temperature   |
| Hardware-based Power Loss Protection                     | Yes  |
| Endurance (TBW) <sup>6</sup>                             | 480GB – 876TB, 1 DWPD (5 years), 1.66 DWPD (3 years)<br>960GB – 1752TB, 1 DWPD (5 years), 1.66 DWPD (3 years)<br>1.92TB – 3504TB, 1 DWPD (5 years), 1.66 DWPD (3 years)<br>3.84TB – 7008TB, 1 DWPD (5 years), 1.66 DWPD (3 years)<br>7.68TB – 14016TB, 1 DWPD (5 years), 1.66 DWPD (3 years) |
| Power Consumption  | Idle: 1.30W<br>Average: 1.45W<br>Max Read: 1.6W<br>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 <sup>-17</sup>   |
| Warranty/support        | Limited 5-year warranty with free technical support <sup>7</sup> |

## DC600ME

|                         |   |
|-------------------------|---|
| Form factor             | 2.5 Inch  |
| Interface               | SATA Rev. 3.0 (6Gb/s) – with backwards compatibility to SATA Rev. 2.0 (3Gb/s) |
| Capacities <sup>1</sup> | 480GB, 960GB, 1.92GB, 3.84GB, 7.68GB  |
| NAND                    | 3D TLC  |
| DRAM Cache              | Yes   |

|  |  |
|--|--|
| Sequential Read/Write                                    | 480GB – 560MBs/470MBs<br>960GB – 560MBs/530MBs<br>1.92TB – 560MBs/530MBs<br>3.84TB – 560MBs/530MBs<br>7.68TB – 560MBs/530MBs   |
| Steady State 4k Random Read/Write                        | 480GB – 94,000/41,000 IOPS<br>960GB – 94,000/65,000 IOPS<br>1.92TB – 94,000/78,000 IOPS<br>3.84TB – 94,000/59,000 IOPS<br>7.68TB – 94,000/34,000 IOPS  |
| Quality of Service (Latency) <sup>3, 4, 5</sup> (99.999) | Read/Write<br>480GB – 500/130 uSec<br>960GB - 200/400 uSec<br>1.92TB – 450/210 uSec<br>3.84TB - 410/500 uSec<br>7.68TB – 200/100 uSec  |
| Typical Latency - Read/Write                             | <130 μs / <70 us <sup>3, 4, 5</sup>  |
| Hot-Plug Capable   | Static and Dynamic Wear Leveling   |
| Enterprise SMART tools                                   | Reliability tracking, usage statistics, life remaining, wear leveling, temperature   |
| Hardware-based Power Loss Protection                     | Yes  |
| Endurance (TBW) <sup>6</sup>                             | 480GB – 876TB, 1 DWPD (5 years), 1.66 DWPD (3 years)<br>960GB – 1752TB, 1 DWPD (5 years), 1.66 DWPD (3 years)<br>1.92TB – 3504TB, 1 DWPD (5 years), 1.66 DWPD (3 years)<br>3.84TB – 7008TB, 1 DWPD (5 years), 1.66 DWPD (3 years)<br>7.68TB – 14016TB, 1 DWPD (5 years), 1.66 DWPD (3 years) |

|                         |  |
|-------------------------|--|
| Power Consumption       | Idle: 1.30W<br>Average: 1.45W<br>Max Read: 1.6W<br>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 <sup>-17</sup>   |
| Warranty/support        | Limited 5-year warranty with free technical support <sup>7</sup>   |

## Part Numbers

### SEDC600M

|                 |
|-----------------|
| SEDC600M/480G   |
| SEDC600M/960G   |
| SEDC600M/1920G  |
| SEDC600M/3840G  |
| SEDC600M/7680G  |
| SEDC600ME/480G  |
| SEDC600ME/960G  |
| SEDC600ME/1920G |
| SEDC600ME/3840G |
| SEDC600ME/7680G |

## 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. Quality of Service (QoS) of an SSD refers to the consistency and predictability of Latency (response time) and IOPS (IOs Per Second) performance while servicing a read/write workload. QoS metrics demonstrate that, given a worst-case workload tested over a period of time, an SSD's latency and IOPS profiles stay within a specified range without having unexpected outliers causing a sudden drop in application performance.
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 1920GB capacity.
5. 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.
6. [Total Bytes Written](#) (TBW) & Drives Writes Per Day (DWPD) derived from the JEDEC Enterprise Workload (JESD219A).
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, labeled as "SSD Wear Indicator", reaches a normalized value of one (1) as indicated by Kingston's SSD Manager ("KSM")



THIS DOCUMENT SUBJECT TO CHANGE WITHOUT NOTICE.

©2024 Kingston Technology Corporation, 17600 Newhope Street, Fountain Valley, CA 92708 USA. All rights reserved. All trademarks and registered trademarks are the property of their respective owners. MKD-05292024