

Enterprise SSD comparison Guide

Kingston's Enterprise SATA 3.0 and NVMe Data Center (DC) SSDs are designed with a stringent set of development requirements and a thorough testing process. This results in consistency for workloads requiring a balance of high random read-and-write IOPS performance. Power-failure features keep mission-critical environments up and running all day, every day. In this Enterprise SSD comparison guide, you can explore and compare technical specifications & features for all of our Data Center drives, as well as the applications they are best suited for.

	SATA			NVME	
Product Name	DC450R SSD	DC500R SSD	DC500M SSD	DC1500M SSD	DC1000B SSD
Interface	SATA Rev. 3.0 (6Gb/s)	SATA Rev. 3.0 (6Gb/s) – with backwards compatibility to SATA Rev. 2.0 (3Gb/s)	SATA Rev. 3.0 (6Gb/s) – with backwards compatibility to SATA Rev. 2.0 (3Gb/s)	PCIe NVMe Gen3 x4	PCIe NVMe Gen3 x4
Form Factor	2.5"	2.5"	2.5"	U.2, 2.5" x 15mm	M.2 2280
Part Number	SEDC450R/xxxG	SEDC500R/xxxG	SEDC500M/xxxG	SEDC1500M/xxxG	SEDC1000BM8/xxxG
Capacities ¹	480GB, 960GB, 1.92TB, 3.84TB, 7.68TB	480GB, 960GB, 1.92TB, 3.84TB, 7.68TB	480GB, 960GB, 1.92TB, 3.84TB	960GB, 1.92TB, 3.84TB, 7.68TB	240GB, 480GB, 960GB
Read Speed ²	Up to 560MB/s	Up to 555MB/s	Up to 555MB/s	960GB, 1.92TB, 3.84TB, 7.68TB	240GB: up to 2,200MB/s 480GB: up to 3,200MB/s 960GB: up to 3,400MB/s
Write Speed ²	480GB: Up to 510MB/s 960GB: Up to 530MB/s 1.92TB: Up to 530MB/s 3.84TB: Up to 525MB/s 7.68TB: Up to 504MB/s	480GB: Up to 500MB/s 960GB: Up to 525MB/s 1.92TB: Up to 525MB/s 3.84TB: Up to 520MB/s 7.68TB: Up to 490MB/s	Up to 520MB/s	960GB: 3,100MB/s 1.92TB: 3,300MB/s 3.84TB: 3,100MB/s 7.68TB: 3,100MB/s	240GB: up to 290MB/s 480GB: up to 565MB/s 960GB: up to 925MB/s
IOPS - Maximum 4K read/ write	480GB:99,000/17,000 IOPS 960GB:98,000/26,000 IOPS 1.92TB:99,000/28,000 IOPS 3.84TB:99,000/26,000 IOPS 7.68TB:99,000/19,000 IOPS	98,000/24,000 IOPS	98,000/75,000 IOPS	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	240GB:111,000/12,000 IOPS 480GB:205,000/20,000 IOPS 960GB:199,000/25,000 IOPS
Warranty	5 years limited ³	5 years limited ³	5 years limited ³	5 years limited ³	5 years limited ³
Encryption	Yes	Yes	Yes	-	Yes
Endurance	0.3 DWPD	0.5 DWPD	1.3 DWPD	1 DWPD	0.5 DWPD
Power Loss Protection	-	Yes	Yes	Yes	Yes
Replacement for client SSDs in a server?	Yes	-	-	-	Yes
Application	Web Hosting, Streaming, Cloud, CDN, IoT, Edge Computing	Web Hosting, Streaming, Cloud, CDN	Web Hosting, Database, OLTP, Cloud, Caching Tier	Database, OLTP, CDN, Cloud, Caching Tier	Server Boot
Suitable for	Server/Workstation Storage Array	Server/Workstation Storage Array	Server/Workstation Storage Array	Server/Workstation Storage Array	Server/Workstation Storage Array

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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 Guide at kingston.com/flashguide.

2. Speed may vary due to host and device configuration.

3. Limited warranty based on 5 years or SSD "Life Remaining" or "Percentage Used" which can be found using the Kingston SSD Manager (<http://kingston.com/SSDManager>). A new, unused product will show a wear indicator value of one hundred (100), whereas a product that has reached its endurance limit of program erase cycles will show a wear indicator value of one (1). 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). See kingston.com/wa for details.

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