KC1000 NVMe PCIe SSD

Exceptional performance for systems with NVMe support

Kingston's KC1000 solid-state drive is a high-performance PCIe NVMe™ solution that is over 2x faster than SATA-based SSDs and 40x faster than a 7200RPM hard-disk drive[1]. Using a PCIe Gen 3.0 x4 interface and an 8-channel Phison PS5007-E7 controller, this drive features 4 cores and 2x the DRAM to help power users blaze through even the toughest projects with high-speed data transfers of up to 2700MB/s[1].
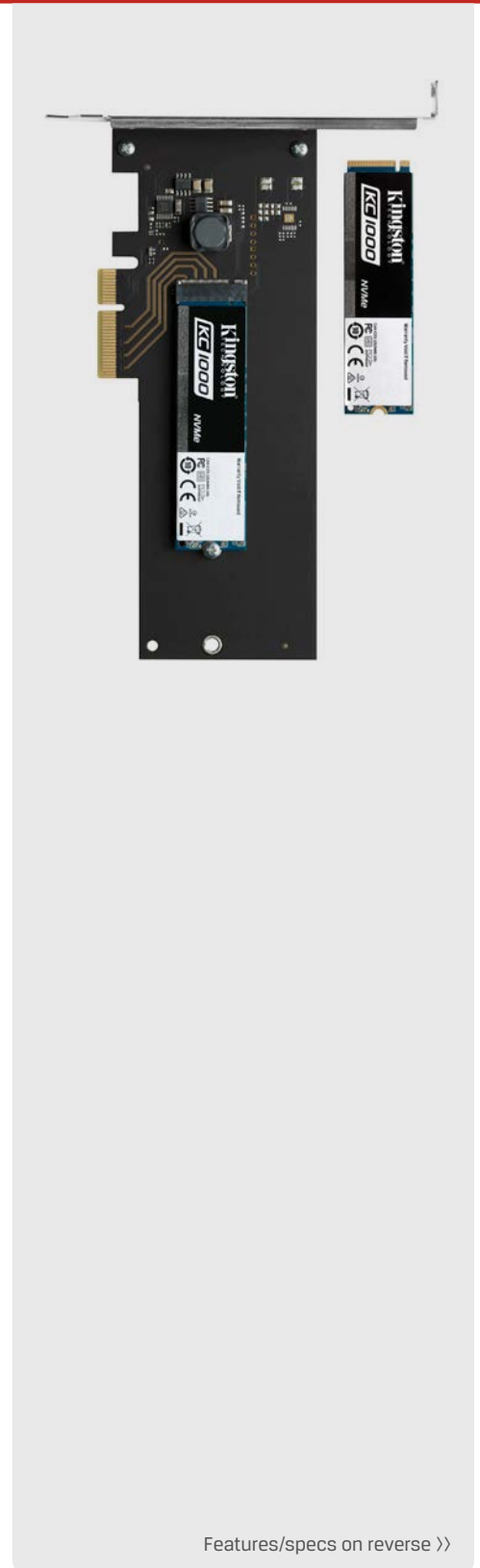
KC1000 uses native OS drivers and is NVMe 1.2 compliant which allows users to take full advantage of the high throughput, IOPS and low latency that is available to systems that support NVMe. This protocol was designed specifically to support Flash-based storage versus SATA, which was developed for traditional spinning disks. It removes performance bottlenecks and provides the system with instant access to the device once the SSD is installed.

KC1000 is easily installed in either a standard M.2 or PCI Express socket using the M.2 2280 or the half-height, half-length add-in card for greater design-in flexibility when used by system builders. There is a range of capacities available from 240GB to 960GB[2], and the KC1000 is backed by a limited five-year warranty[3] and legendary Kingston support.

> **High-performance, next-generation PCIe NVMe SSD**

> **NVMe — Designed for SSDs, not legacy storage products**

> **Form factor choices to fit a wide range of systems**

Kingston TECHNOLOGY

KC1000 NVMe PCIe SSD

FEATURES/BENEFITS

> **Superior client SSD performance** — Outperforms traditional hard drive and SATA-based SSDs.

> **Uses NVMe protocol** — Designed for SSD, unlike legacy SATA which was developed for hard-disk drives.

> **Multiple form factors** — Available in either M.2 2280 or Half-Height, Half-Length Add-in Card (HHHL AIC).

> **Multiple capacities** — Available in a range of capacities from 240GB to 960GB to meet your data storage requirements.

SPECIFICATIONS

> **Form Factor** M.2 2280

> **Interface** NVMe™ PCIe Gen 3.0 x 4 lanes

> **Capacities[2]** 240GB, 480GB, 960GB

> **Controller** Phison PS5007-E7

> **NAND** MLC

> **Sequential Read/Write[1]** 240GB — up to 2700/900MB/s 480GB, 960GB — up to 2700/1600MB/s

> **Maximum 4K Read/Write[1]** 240GB — up to 225,000/190,000 IOPS 480GB, 960GB — up to 290,000/190,000 IOPS

> **Random 4K Read/Write** 240GB, 480GB — up to 190,000/160,000 IOPS 960GB — up to 190,000/165,000 IOPS

> **PCMARK® Vantage HDD Suite Score** 150,000

> **Total Bytes Written (TBW)[4]** 240GB — 300TB and 0.70 DWPD[5]
480GB — 550TB and 0.64 DWPD[5]
960GB — 1PB and 0.58 DWPD[5]

> **Power Consumption** 0.11W idle / 0.99W avg / 4.95W (MAX) read 7.40W (MAX) write

> **Storage Temperature** -40°C to 85°C

> **Operating Temperature** 0°C to 70°C

> **Dimensions** 80mm x 22mm x 3.5mm (M.2)
180.98mm x 120.96mm x 21.59mm (with HHHL AIC – standard bracket)
181.29mm x 80.14mm x 23.40mm (with HHHL AIC – low-profile bracket)

> **Weight** 10g (M.2)
76g (with HHHL AIC – standard bracket)
69g (with HHHL AIC – low-profile bracket)

> **Vibration operating** 2.17G peak (7-800Hz)

> **Vibration non-operating** 20G peak (20-1000Hz)

> **MTBF** 2,000,000

> **Warranty/support[3]** limited 5-year warranty with free technical support

PART NUMBERS

M.2 Version

SKC1000/240G	240GB
SKC1000/480G	480GB
SKC1000/960G	960GB

HHHL (Add-in Card) Version

SKC1000H/240G	240GB
SKC1000H/480G	480GB
SKC1000H/960G	960GB

PACKAGE CONTENTS

M.2 only
- hard drive cloning software – download coupon[6]

M.2 with HHHL AIC
- standard & low-profile brackets
- hard drive cloning software – download coupon[6]

The SSD is designed for use in desktop and notebook computer workloads, and is not intended for Server environments.

1 Based on "out-of-box performance" using a SATA Rev 3.0 / PCIe 3.0 motherboard. Speed may vary due to host hardware, software, and usage. IOMETER Random 4K Read/Write is based on 8GB partition.

2 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 Memory Guide at Kingston.com/flashguide.

3 Limited warranty based on 5 years or "SSD Life Remaining", which can be found using the Kingston SSD Manager (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). See Kingston.com/wa for details.

4 Total Bytes Written (TBW) is derived from the JEDEC Client Workload (JESD219A).

5 Drive Writes Per Day (DWPD).

6 Operating system software support: Windows® 10, 8.1, 8.

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