

SANDISK OPTIMUS™

M.2 2280 NVMe™ SSD
PCIe® 4.0 x4

THE UNCOMPROMISING HIGH PERFORMANCE AFFORDABLE SSD.

The SANDISK Optimus™ 5100 NVMe™ SSD strikes the ideal balance of high performance and affordability for creators. Boasting PCIe® 4.0 speeds up to 7,100MB/s² (1TB¹ and 2TB¹ models) and capacities up to 4TB¹ on a slim M.2 2280, boost your creative workflows or everyday tasks. Seamless application multitasking and fast file copies with integrated SANDISK® nCache™ 4.0 technology. Have peace of mind with your data stored on our trusted 8th generation SANDISK® BiCS QLC 3D CBA NAND and a 5-year limited warranty⁵. Download the free Acronis® True Image™ for SANDISK® software⁷ to migrate to your new SSD (separate cable and enclosure may be required). Don't wait to upgrade your laptop or desktop PC and transform everything you do.

5100



KEY FEATURES

■ SPEED UP PROJECTS

Launch creator applications fast with uncompromising PCIe® 4.0 read speeds up to 7,100MB/s² (1TB and 2TB¹ models) and write speeds up to 6,700MB/s² (1TB¹-4TB¹ models).

■ CREATE AND STORE MORE

Make more room for your 4K videos and high-resolution images with capacities from 500GB¹ up to 4TB¹ on M.2 2280 built with our trusted 8th generation SANDISK® BiCS QLC 3D CBA NAND.

■ IT GOES WHERE YOU GO

With an all-new power efficient design, your drive delivers high performance with low power, giving you more time to be productive while on the go.

■ UNCOMPROMISED RELIABILITY

With up to 1,200 TBW⁴ (4TB¹ model) endurance rating, your drive is designed for creators.

■ KEEP YOUR DRIVE UPDATED

Monitor your SSD's performance and check for updates with the downloadable SANDISK® Dashboard application⁶ (Windows® only).

■ FREE ACRONIS® TRUE IMAGE™ SOFTWARE

Download Acronis® True Image™ for SANDISK® software⁷ to transfer your data to your new SSD (separate cable/enclosure may be required).

PRODUCT FEATURES

STORAGE TO REVITALIZE YOUR PC

Launch applications fast with uncompromising PCIe® 4.0 read speeds up to 7,100MB/s² (1TB¹ and 2TB¹ models) and write speeds up to 6,700MB/s² (1TB¹-4TB¹ models). Seamless project multitasking and fast file copies with integrated SANDISK® nCache™ 4.0 technology.

IT GOES WHERE YOU GO

With an all-new power-efficient design, your drive delivers high performance with low power, giving you more time to be productive on-the-go.

FREE ACRONIS® TRUE IMAGE™ FOR SANDISK®⁷

Download Acronis® True Image™ for SANDISK® data migration software to transfer your data to your new SSD (separate cable/enclosure may be required)⁷.

CREATE AND STORE MORE

Make more room for your 4K videos and high-resolution images with capacities from 500GB¹ up to 4TB¹ built with our trusted Bth generation SANDISK® QLC 3D CBA NAND. A slim M.2 2280 form-factor makes an easy upgrade for compatible laptops or a secondary high-capacity addition to your desktop PC.

UNCOMPROMISED RELIABILITY

With up to 1,200 TBW⁴ (4TB¹ model) endurance rating, your drive is designed for video editing and productivity suites. As the trusted brand for reliability, Sandisk covers your drive with a 5-year limited warranty⁵.

KEEP YOUR DRIVE UP TO DATE

Monitor your SSD's performance and check for updates with the downloadable SANDISK® Dashboard application⁶ (Windows® only).

PRODUCT SPECIFICATIONS

CAPACITIES ¹	500GB	1TB	2TB	4TB
MODEL NUMBERS	SDSP51500GAN	SDSP51100TAN	SDSP51200TAN	SDSP51400TAN
FORM FACTOR	M.2 2280			
INTERFACE¹⁰	PCIe® 4.0 x4, NVMe™			
NAND	SANDISK® QLC 3D CBA NAND			
DRAM CACHE	Host Memory Buffer			
SLC CACHE	SANDISK® nCache™ 4.0			
PERFORMANCE²				
Sequential Read 1MB (MB/s) up to (Queue Depth=8, Threads=1)	6,600MB/s	7,100MB/s	7,100MB/s	6,900MB/s
Sequential Write 1MB (MB/s) up to (Queue Depth=8, Threads=1)	5,600MB/s	6,700MB/s	6,700MB/s	6,700MB/s
Random Read 4KB (IOPS) up to (Queue Depth=32, Threads=16)	660K IOPS	1M IOPS	1M IOPS	900K IOPS
Random Write 4KB (IOPS) up to (Queue Depth=32, Threads=16)	1.1M IOPS	1.3M IOPS	1.3M IOPS	1.1M IOPS
POWER³				
Average Power - Read	3.8 W	3.9 W	4.1 W	4.3 W
Average Power - Write	3.8 W	3.9 W	4.1 W	4.3 W
Idle (Sleep)	4 mW			4.5 mW
RELIABILITY				
Endurance (TBW) ⁴	300	600	900	1,200
MTTF up to (hours) ⁴	1.75M			
Limited Warranty ⁵	5 years			
REGULATORY				
Certifications	BSMI, CAN ICES-3(B)/NMB-3(B), CB-Scheme, CE, FCC, KCC, Morocco, RCM, TÜV, UL, VCCI, UKCA			
RoHS Compliant	Yes			
SECURITY	TCG Pyrite 2.01, ATA Security passthrough over NVMe™			
FEATURED SOFTWARE	SANDISK® Dashboard ⁶ (Windows® only), Acronis® True Image™ for SANDISK® software ⁷			
ENVIRONMENTAL				
Operating Temperature ⁸	32°F to 185°F (0°C to 85°C)			
Non-operating Temperature ⁸	-40°F to 185°F (-40°C to 85°C)			
Operating Vibration	5 gRMS, 10-2000 Hz, 3 axes			
Non-operating Vibration	4.9 gRMS, 7-800 Hz, 3 axes			
Shock	1,500G @ 0.5 ms half-sine			
DIMENSIONS⁹	Length	Width	Height	Weight
500GB ¹ - 4TB ¹	80mm	22mm	2.38mm	5.7g

¹ 1GB = 1 billion bytes and 1TB = 1 trillion bytes. Actual user capacity may be less depending on operating environment.

² 1MB/s = 1 million bytes per second. IOPS = input/output operations per second. Based on internal testing; performance may vary depending upon host device, usage conditions, drive capacity, and other factors.

³ Average Power – Read and Average Power – Write are measured using IOMeter 1.1.0 during a burst sequential read and write operation (measured separately) and represent a moving average over a 10 second period. Performance may vary depending on test setup, configuration and firmware version.

⁴ TBW (terabytes written) values calculated using JEDEC client workload (UESD219) and vary by product capacity. MTTF = Mean Time To Failure based on internal testing using Telcordia™ stress part testing (Telcordia SR-332, GF, 25°C). MTTF is based on a sample population and is estimated by statistical measurements and acceleration algorithms. MTTF does not predict an individual drive's reliability and does not constitute a warranty.

⁵ 5 years or Max Endurance (TBW) limit, whichever occurs first. See support.sandisk.com for region-specific warranty details.

⁶ Available for download at sandisk.com/support

⁷ Download, installation, and administrative privileges required. Includes 5-year license for your compatible drive. Redeem within 90 days of purchase. Terms and conditions apply. User account registration may be required. May not be combined with other offers. Limited time offer; see sandisk.com/support for more details. Offer subject to change.

⁸ Operational temperature is defined as temperature reported by the drive. Note that drive temperature readings are expected to be higher than ambient temperature when the SSD is placed inside a system. The SSD box package is rated up to 60°C.

Non-operational storage temperature does not guarantee data retention.

⁹ Physical product dimensions for length and width may vary by ± 0.15mm and product weight may vary by ± 1g.

¹⁰ Backwards compatible with PCIe® 3.0 x4, 3.0 x2, 3.0 x1, 2.0 x4, 2.0 x2 and 2.0 x1.

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