SANDISK OPTIMUS™

5100

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/s[2] (1TB[1] and 2TB[1] models) and capacities up to 4TB[1] 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 warranty[5]. Download the free Acronis® True Image™ for SANDISK® software[7] 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.

KEY FEATURES

- **SPEED UP PROJECTS**
  Launch creator applications fast with uncompromising PCIe® 4.0 read speeds up to 7,100MB/s[2] (1TB and 2TB[1] models) and write speeds up to 6,700MB/s[2] (1TB[1]-4TB[1] models).
- **CREATE AND STORE MORE**
  Make more room for your 4K videos and high-resolution images with capacities from 500GB[1] up to 4TB[1] 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 TBW[4] (4TB[1] 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 application[6] (Windows® only).
- **FREE ACRONIS® TRUE IMAGE™ SOFTWARE**
  Download Acronis® True Image™ for SANDISK® software[7] 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/s[2] (1TB[1] and 2TB[1] models) and write speeds up to 6,700MB/s[2] (1TB[1]-4TB[1] 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 500GB[1] up to 4TB[1] built with our trusted 8th 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 TBW[4] (4TB[1] 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 warranty[5].

KEEP YOUR DRIVE UP TO DATE
Monitor your SSD's performance and check for updates with the downloadable SANDISK® Dashboard application[6] (Windows® only).

PRODUCT SPECIFICATIONS				
CAPACITIES[1]	500GB	1TB	2TB	4TB
MODEL NUMBERS	SDSP51500GAN	SDSP51100TAN	SDSP51200TAN	SDSP51400TAN
FORM FACTOR	M.2 2280			
INTERFACE[10]	PCIe® 4.0 x4, NVMe™			
NAND	SANDISK® QLC 3D CBA NAND			
DRAM CACHE	Host Memory Buffer			
SLC CACHE	SANDISK® nCache™ 4.0			
PERFORMANCE[2]				
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
POWER[3]				
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]	32ºF to 185ºF (0ºC to 85ºC)			
Non-operating Temperature[8]	-40ºF to 185ºF (-40ºC to 85ºC)			
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			
DIMENSIONS[9]	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 (JESD219) 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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