

SANDISK OPTIMUS™ GX PRO

8100

M.2 2280 NVMe™ SSD
PCIe® 5.0 x4

THE HIGH-PERFORMANCE PCIe® 5.0 SSD FOR UNCOMPROMISING PROFESSIONALS, CREATORS AND GAMERS.

Professionals, creators, and gamers deserve optimal storage performance for demanding AI workflows and intense gaming sessions. The SANDISK Optimus™ GX PRO 8100 NVMe™ SSDs are designed to deliver exactly that. With groundbreaking PCIe® 5.0 storage performance, this SSD reaches Sequential Read/Write speeds up to 14,900/14,000 MB/s² (2TB¹ and 4TB¹ models). Seamlessly multitask with Random Read/Write speeds up to 2.3M/2.4M IOPS² (2TB¹ and 4TB¹ models), and transfer files faster thanks to integrated SANDISK® nCache™ 4.0 technology. Store expansive game libraries and large digital assets with capacities up to 8TB¹ on M.2 2280 built with the 8th generation of our trusted SANDISK® BiCS TLC 3D CBA NAND. Engineered to endure write intensive workflows, the SANDISK Optimus™ GX PRO 8100 SSD offers a 4,800 TBW⁴ (8TB¹ model) endurance rating. Ideal for compatible workstations, AI PCs, gamer PCs, and creator PCs.



KEY FEATURES

■ SERIOUS PCIe® 5.0 SPEEDS

Sequential Read/Write speeds up to 14,900/14,000 MB/s² (2TB¹ and 4TB¹ models) lets you quickly load and store massive projects.

■ SUPERCHARGE AI WORKFLOWS

Demanding AI workflows are supercharged with Random Read/Write speeds up to 2.3M/2.4M IOPS² (2TB¹ and 4TB¹ models) and integrated SANDISK® nCache™ 4.0 technology.

■ ROOM FOR YOUR IMMENSE LIBRARIES

Gamers and professionals with vast libraries can be worry-free with capacities up to 8TB¹ on M.2 2280 built with 8th Generation SANDISK® BiCS TLC 3D CBA NAND.

■ AN INDUSTRY LEADER IN POWER EFFICIENCY

Enjoy over 2x higher power efficiency than our PCIe® Gen 4 SSD¹² for on-the-go productivity and sustained gaming performance.

■ DURABILITY FOR CREATORS

With up to 4,800 TBW⁴ (8TB¹ model) endurance rating, your drive is designed for write-intensive workloads such as content creation tools and AI-enabled video editors.

■ PEACE OF MIND

To champion professionals in their work and play, Sandisk provides a 5-year limited warranty⁵ for ultimate peace of mind.

PRODUCT FEATURES

ONE OF THE FASTEST PCIe® 5.0 DRIVES OUT THERE

Whether you're pushing the boundaries at work or play, the SANDISK Optimus™ GX PRO 8100 SSD keeps up with you. Load and store massive assets, projects, and games thanks to blazingly fast Sequential Read/Write speeds of up to 14,900/14,000 MB/s² (2TB¹ and 4TB¹ models).

PUSHING LIMITS DEMANDS HIGHER STORAGE CAPACITIES

Application datasets, 8K video, full frame images, and AAA games have one thing in common: they can get massive. With capacities up to 8TB¹ on an M.2 2280 form factor built with the 8th generation of our trusted SANDISK® BiCS TLC 3D CBA NAND, you have room for what matters.

ENGINEERED TO ENDURE WRITE-INTENSIVE WORKLOADS

With up to 4,800 TBW⁴ (8TB¹ model) endurance rating, your drive is designed to handle heavy, write-intensive workloads, like scientific and financial simulation, 3D modeling, and AI production workflows.

LIGHTNING-FAST PERFORMANCE FOR SUPERCHARGED AI WORKFLOWS

AI models perform optimally with fast Random Read/Write speeds, and this SSD offers just that. With up to 2.3M/2.4M IOPS² (2TB¹ and 4TB¹ models) and our integrated SANDISK® nCache™ 4.0 technology, this SSD delivers blistering burst write performance for large file transfers.

RUNNING FAST AND STAYING COOL

With over 2x more power efficiency (1TB¹ – 4TB¹ models) than our PCIe® Gen 4.0¹² SSD at an average operating power of 7.5W³ or under, your SSD stays cool and delivers high performance over a longer period.

PEACE OF MIND COMES STANDARD

This SSD comes with a 5-year limited warranty⁵ and support for TCG Opal v2.02 for data-at-rest encryption,¹⁰ allowing you to focus on what you do best.

PRODUCT SPECIFICATIONS				
CAPACITIES¹	1TB	2TB	4TB	8TB
MODEL NUMBERS	SDSP82100TAN	SDSP82200TAN	SDSP82400TAN	SDSP82800TAN
FORM FACTOR	M.2 2280-S3-M			M.2 2280-D5-M
INTERFACE¹¹	PCIe® 5.0 x4 NVMe™ 2.0			
NAND	SANDISK® TLC 3D CBA NAND			
DRAM CACHE	Yes			
SLC CACHE	SANDISK® nCache™ 4.0			
PERFORMANCE²				
Sequential Read 1MB (MB/s) up to (Queue Depth=8, Threads=1)	14,900MB/s	14,900MB/s	14,900MB/s	14,900MB/s
Sequential Write 1MB (MB/s) up to (Queue Depth=8, Threads=1)	11,000MB/s	14,000MB/s	14,000MB/s	13,200MB/s
Random Read 4KB (IOPS) up to (Queue Depth=32, Threads=16)	1.6M IOPS	2.3M IOPS	2.3M IOPS	2.2M IOPS
Random Write 4KB (IOPS) up to (Queue Depth=32, Threads=16)	2.4M IOPS	2.4M IOPS	2.4M IOPS	2.4M IOPS
POWER³				
Average Active Power Read	6.2 W	6.4 W	6.5 W	7.1 W
Average Active Power Write	6.1 W	7.0 W	7.0 W	7.3 W
Sleep (PS4)	5 mW			
RELIABILITY				
Endurance⁴ (TBW)	600	1,200	2,400	4,800
MTTF⁴ up to (hours)	1.75M Hours			
Limited Warranty⁵	5 years			
REGULATORY				
Certifications	BSMI, CAN ICES-3(B)/NMB-3(B), CB-Scheme, CE, FCC, KCC, Morocco, RCM, TÜV, UL, VCCI, UKCA			
RoHS Compliance	Yes			
SECURITY	TCG OPAL 2.02¹⁰			
FEATURED SOFTWARE	SANDISK® Dashboard⁶ (Windows® only), Acronis® True Image™ for SANDISK® software⁷			
ENVIRONMENTAL				
Operating Temperature⁸	32°F to 185°F (0°C to 85°C)			
Non-Operating Temperature⁸	-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
1TB–4TB¹	80mm	22mm	2.38mm	7.5g
8TB¹	80mm	22mm	3.88mm	8.6g

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 Requires motherboard BIOS or third-party software to enable.

¹¹ Backwards compatible with PCIe® 4.0 x4, 4.0 x2, 4.0 x1, 3.0 x4, 3.0 x2, 3.0 x1, 2.0 x4, 2.0 x2 and 2.0 x1.

¹² Over 2x more power efficient than the 1TB, 2TB, and 4TB SANDISK Optimus™ GX PRO 850X NVMe™ SSDs.

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