



DATA SHEET

Accelerate. Dominate. Endure. FireCuda 520 SSD



Seagate® FireCuda® 520 SSD with PCIe® Gen4 x4 interface is our fastest solid state drive — nearly 45% faster sequential reads/writes than the previous generation. It provides plug-and-play compatibility with all PCIe 4.0 motherboards, and delivers an extreme boost in performance with the latest 3D TLC NAND technology. Upgrading to the FireCuda 520 unlocks Gen4 speed and supplies up to 9x faster sequential reads than SATA SSDs.



Best-Fit Applications

- Creative professional systems
- High-performance PCs and workstations

Key Advantages

Leverage sequential read/write performance up to 5,000/4,400 MB/s, and random read/write up to 760K/700K IOPS.

Take advantage of up to 45% more speed than Gen3 M.2 NVMe™ and up to 9x faster sequential reads than SATA SSDs.

Utilise an E16 controller that is fully aligned with AMD X570 chipset motherboards and able to reach up to 5 GB/s reads/4.4 GB/s writes.

Easily upgrade to a drive that's compatible with Gen4 motherboards and fully backwards compatible with all PCIe 3.0 platforms.

Enjoy the latest NAND technology, which provides the most advanced speed and durability for your money.

Choose from multiple capacities (up to 2 TB), and store your gaming library on your boot drive.

Download our free SeaTools™ SSD software to take advantage of drive performance reporting, S.M.A.R.T. attributes, health monitoring, firmware updates, diagnostics, managing logs — and multiple gamer theme options.



Specifications	2 TB	1 TB	500 GB
Standard Model (TCG Pyrite)	ZP2000GM30002	ZP1000GM30002	ZP500GM30002
Interface	PCIe Gen4 x4, NVMe 1.3	PCIe Gen4 x4, NVMe 1.3	PCIe Gen4 x4, NVMe 1.3
NAND Flash Memory	3D TLC	3D TLC	3D TLC
Form Factor	M.2 2280-D2	M.2 2280-D2	M.2 2280-D2
Performance			
Sequential Read (Max, MB/s), 128KB ¹	5,000	5,000	5,000
Sequential Write (Max, MB/s), 128KB ¹	4400	4400	2,500
Random Read (Max, IOPS), 4KB QD32 T8 ¹	750,000	760,000	430,000
Random Write (Max, IOPS), 4KB QD32 T8 ¹	700,000	700,000	630,000
Endurance/Reliability			
Total Bytes Written (TB)	3,600	1800	850
Mean Time Between Failures (MTBF, hours)	1,800,000	1,800,000	1,800,000
Warranty, Limited (years)	5	5	5
Power Management			
Active Power, Average (W)	6.0	5.6	4.6
Idle Power PS3, Average (mW)	25	15	12
Low Power L1.2 mode (mW)	2	2	2
Environmental			
Temperature, Operating Internal (°C)	0 to 70	0 to 70	0 to 70
Temperature, Non-operating (°C)	-40 to 85	-40 to 85	-40 to 85
Shock, Non-operating: 0.5 ms (Gs)	1,500	1,500	1,500
Special Features			
TRIM	Yes	Yes	Yes
S.M.A.R.T.	Yes	Yes	Yes
Halogen-free	Yes	Yes	Yes
RoHS compliance	Yes	Yes	Yes
Physical			
Length (mm/in, max)	80.15 mm/3.156 in	80.15 mm/3.156 in	80.15 mm/3.156 in
Width (mm/in, max)	22.15 mm/0.872 in	22.15 mm/0.872 in	22.15 mm/0.872 in
Height (mm/in, max)	3.58 mm/0.140 in	3.58 mm/0.140 in	3.58 mm/0.140 in
Weight (lb/g)	8.7 g/0.019 lb	8.5 g/0.018 lb	8.0 g/0.017 lb

¹ Fresh out of box (FOB) performance obtained on newly formatted drive. Performance may vary based on SSD's firmware version, system hardware, and configuration. Performance based on CrystalDiskMark v.6.0.2 x64 on Windows 10 host with PCIe Gen4 motherboard.



Ordering Information	
Specifications	
Retail Packaging	Box Dimensions
Depth/Length (in/mm)	5.285 in/134.25 mm
Width (in/mm)	4.291 in/109 mm
Height (in/mm)	0.944 in/24 mm
Weight (lb/kg)	0.136 lb/0.062 kg
Master Carton Dimensions	
Depth/Length (in/mm)	5.078 in/129 mm
Width (in/mm)	10.944 in/278 mm
Height (in/mm)	6.653 in/169 mm
Weight (lb/kg)	2.028 lb/0.92 kg
Pallet Dimensions	
Depth/Length (in/mm)	47.244 in/1,200 mm
Width (in/mm)	39.37 in/1,000 mm
Height (in/mm)	51.968 in/1,320 mm
Weight (lb/kg)	428.799 lb/194.5 kg
Quantities	
Boxes per Master Carton	10
Master Cartons per Pallet	196
Pallet Layers	7

System Requirements	What's Included
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- M.2 (M key) slot, PCIe® G4 x4 interface (backwards compatible with PCIe G3 interface)
- Windows® 10
- Linux
- Seagate® FireCuda® 520 SSD

Region	Model Number	Capacity	Limited Warranty (years)	UPC Code	EAN Code	Multi-Pack UPC
WW	ZP500GM3A002	500GB	5	763649138274	8719706019989	10763649138271
WW	ZP1000GM3A002	1 TB	5	763649138298	8719706020008	10763649138295
WW	ZP2000GM3A002	2 TB	5	763649138281	8719706019996	10763649138288

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