



DATA SHEET

Accelerate. Dominate. Endure. FireCuda 520 SSD

Seagate[®] FireCuda[®] 520 SSD with PCle[®] Gen4 ×4 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 PCle 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 9× 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 5000/4400MB/s, and random read/write up to 760K/700K IOPS.

Take advantage of up to 45% more speed than Gen3 M.2 NVMe $^{\text{TM}}$ and up to $9 \times$ faster sequential reads than SATA SSDs.

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

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

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

Choose from multiple capacities (up to 2TB), 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.

Three years of Rescue Data Recovery Services¹, offers an industry-leading 95% success rate against unexpected data loss.

1 Rescue Data Recovery Services not available in all countries.





Specifications	2TB	1TB	500 GB	
Standard Model (TCG Pyrite)	ZP2000GM30002	ZP1000GM30002	ZP500GM30002	
Interface	PCIe Gen4 ×4, NVMe 1.3	PCIe Gen4 ×4, NVMe 1.3	PCIe Gen4 ×4, 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	5000	5000	5000	
Sequential Write (Max, MB/s), 128KB ¹	4400	4400	2500	
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)	3600	1800	850	
Mean Time Between Failures (MTBF, hours)	1,800,000	1,800,000	1,800,000	
Rescue Data Recovery Services (years) ²	3	3	3	
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, Nonoperating (°C)	-40 to 85	-40 to 85	-40 to 85	
Shock, Nonoperating: 0.5ms (Gs)	1500	1500	1500	
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)	80.15mm/3.156in	80.15mm/3.156in	80.15mm/3.156in	
Width (mm/in, max)	22.15mm/0.872in	22.15mm/0.872in	22.15mm/0.872in	
Height (mm/in, max)	3.58mm/0.140in	3.58mm/0.140in	3.58mm/0.140in	
Weight (g/lb)	8.7g/0.019lb	8.5g/0.018lb	8.0g/0.017lb	

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 × 64 on Windows 10 host with PCle Gen4 motherboard.

² Rescue Data Recovery Services not available in all countries.





Ordering Information							
Specifications							
Retail Packaging		Box Dimensions	Master Carton Dimensions	Pallet Dimensions			
Depth/Length (in/mm)		5.285in/134.25mm	5.078in/129mm	47.244in/1219mm			
Width (in/mm)		4.291in/109mm	10.944in/278mm	39.37in/508mm			
Height (in/mm)		0.944in/24mm	6.653in/169mm	51.968in/706mm			
Weight (lb/kg)		0.136lb/0.062kg	2.028lb/0.92kg	428.799lb/47.54kg			
Quantities							
Boxes per Master Carton	10						
Master Cartons per Pallet	48						
Pallet Layers	4						

 M.2 (M key) slot, PCle® G4 ×4 interface (backwards compatible with PCle G3 interface)

Seagate[®] FireCuda[®] 520 SSD

- Windows® 10
- Linux

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

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