



DATA SHEET

## Accelerate. Dominate. Endure. **FireCuda 520 SSD**



Seagate® FireCuda® 520 SSD with PCIe® 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 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 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™ and up to 9× 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 PCIe 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.



Specifications	2TB	1TB	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
<b>Performance</b>			
Sequential Read (Max, MB/s), 128KB <sup>1</sup>	5000	5000	5000
Sequential Write (Max, MB/s), 128KB <sup>1</sup>	4400	4400	2500
Random Read (Max, IOPS), 4KB QD32 T8 <sup>1</sup>	750,000	760,000	430,000
Random Write (Max, IOPS), 4KB QD32 T8 <sup>1</sup>	700,000	700,000	630,000
<b>Endurance/Reliability</b>			
Total Bytes Written (TB)	3600	1800	850
Mean Time Between Failures (MTBF, hours)	1,800,000	1,800,000	1,800,000
Warranty, Limited (years)	5	5	5
<b>Power Management</b>			
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
<b>Environmental</b>			
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
<b>Special Features</b>			
TRIM	Yes	Yes	Yes
S.M.A.R.T.	Yes	Yes	Yes
Halogen Free	Yes	Yes	Yes
RoHS Compliance	Yes	Yes	Yes
<b>Physical</b>			
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

<sup>1</sup> 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	Master Carton Dimensions	Pallet Dimensions
Depth/Length (in/mm)	5.285in/134.25mm	5.078in/129mm	47.244in/1200mm
Width (in/mm)	4.291in/109mm	10.944in/278mm	39.37in/1000mm
Height (in/mm)	0.944in/24mm	6.653in/169mm	51.968in/1320mm
Weight (lb/kg)	0.136lb/0.062kg	2.028lb/0.92kg	428.799lb/194.5kg
Quantities			
Boxes per Master Carton	10		
Master Cartons per Pallet	196		
Pallet Layers	7		
System Requirements		What's Included	

- 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	1TB	5	763649138298	8719706020008	10763649138295
WW	ZP2000GM3A002	2TB	5	763649138281	8719706019996	10763649138288

seagate.com



© 2019 Seagate Technology LLC. All rights reserved. Seagate, Seagate Technology, and the Spiral logo are registered trademarks of Seagate Technology LLC in the United States and/or other countries. FireCuda, the FireCuda logo, and SeaTools are either trademarks or registered trademarks of Seagate Technology LLC or one of its affiliated companies in the United States and/or other countries. The NVMe word mark and/or NVMeExpress design mark are trademarks of NVMeExpress, Inc. The PCIe word mark and/or PCIeExpress design mark are registered trademarks and/or service marks of PCI-SIG. All other trademarks or registered trademarks are the property of their respective owners. When referring to drive capacity, one gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes. Your computer's operating system may use a different standard of measurement and report a lower capacity. In addition, some of the listed capacity is used for formatting and other functions, and thus will not be available for data storage. Actual data rates may vary depending on operating environment and other factors, such as chosen interface and drive capacity. Seagate reserves the right to change, without notice, product offerings or specifications. DS2024.1-1909US September 2019