

## DATA SHEET

Accelerate. Dominate. Endure.

# FireCuda 510 SSD

Built specifically for professional-level gamers, the Seagate® FireCuda® 510 SSD brings the intense speeds, lasting endurance, and large capacity needed to accelerate PC storage performance.



## Best-Fit Applications

- Gaming PC desktops
- Gaming PC laptops
- High-performance PCs and workstations
- Creative professional systems



## Key Advantages

**NVMe PCIe Gen3 x4** interface unleashes the speed of NAND and delivers up to 6× faster performance than SATA SSDs

**Blazing-fast sequential read/writes** bring faster load times, faster program installations, and faster processing

**Ultra-high random read/write IOPS** translates to faster program response times and more responsive multiple program multitasking

**Enhanced dynamic SLC cache** with up to 28 GB reserved provides longer bursts of data

**2 TB, 1 TB, and 500 GB capacities** for the storage of huge files and games without the worry of maxing out your drive or partitioning

**M.2 2280 form factor** for massive speed and capacity in a compact package for installation in tight spaces, leaving room for other components

**Top-tier endurance** gives pro-level gamers peace of mind with a 5-year limited warranty and MTBF of 1.8 M hours

**SeaTools™ SSD enhanced gaming tool** with drive management and health monitoring so gamers can tune the drive to their performance needs

**Three years of Rescue Data Recovery Services<sup>1</sup>**, offering an industry-leading 95% success rate against unexpected data loss.

1 Rescue Data Recovery Services not available in all countries.



Specifications	2 TB	1 TB	500 GB
Standard Model (TCG Pyrite)	ZP2000GM30001	ZP1000GM30001	ZP500GM30001
Interface	PCIe G3 x4, NVMe 1.3	PCIe G3 x4, NVMe 1.3	PCIe G3 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 <sup>1</sup>	3,450	3,450	3,450
Sequential Write (Max, MB/s), 128KB <sup>1</sup>	3,200	3,200	2,500
Random Read (Max, IOPS), 4KB QD32 T8	485,000	620,000	420,000
Random Write (Max, IOPS), 4KB QD32 T8 <sup>1</sup>	600,000	600,000	600,000
Endurance/Reliability			
Total Bytes Written (TB)	2,600	1,300	650
Mean Time Between Failures (MTBF, hours)	1,800,000	1,800,000	1,800,000
Rescue Data Recovery Services (years) <sup>2</sup>	3	3	3
Warranty, Limited (years)	5	5	5
Power Management			
Active Power, Average (W)	6.0	5.5	4.7
Idle Power PS3, Average (mW)	26.4	20	16
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.5.2.1 x64 on Windows 10 host.

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)		5.285 in/134.25 mm	5.078 in/129 mm	47.992 in/1,219 mm
Width (in/mm)		4.291 in/109 mm	10.944 in/278 mm	20 in/508 mm
Height (in/mm)		0.944 in/24 mm	6.653 in/169 mm	27.795 in/706 mm
Weight (lb/kg)		0.136 lb/0.062 kg	2.028 lb/0.92 kg	104.80 lb/47.54 kg
Quantities				
Boxes per Master Carton	10			
Master Cartons per Pallet	48			
Pallet Layers	4			

#### System Requirements

#### What's Included

- M.2 (M key) slot, PCIe G3 x4 interface
- Windows® 10, Windows 8.1, Windows 7
- Linux
- Seagate® FireCuda® 510 SSD

Region	Model Number	Capacity	Limited Warranty (years)	UPC Code	EAN Code	Multi-Pack UPC
WW	ZP500GM3A001	500GB	5	763649138458	8719706020169	10763649138455
WW	ZP1000GM30011	1000GB	5	763649133989	8719706016599	10763649133986
WW	ZP2000GM30021	2000GB	5	763649133996	8719706016605	10763649133993

[seagate.com](http://seagate.com)



© 2020 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. 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 disk capacity. Seagate reserves the right to change, without notice, product offerings or specifications. DS1999.4-2012GB December 2020