



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 provides longer bursts of data

Multiple capacities up to 2TB 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 1.8M 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 Services¹, offering 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	250 GB
Standard Model (TCG Pyrite)	ZP2000GM30001	ZP1000GM30031	ZP500GM30021	ZP250GM30001
Interface	PCIe Gen3 x4, NVMe 1.3	PCIe Gen3 x4, NVMe 1.3	PCIe Gen3 x4, NVMe 1.3	PCIe Gen3 x4, NVMe 1.3
NAND Flash Memory	3D TLC	3D TLC	3D TLC	3D TLC
Form Factor	M.2 2280-D2	M.2 2280-S2	M.2 2280-S2	M.2 2280-S2
Performance				
Sequential Read (Max, MB/s), 128KB ¹	3450	3450	3450	3200
Sequential Write (Max, MB/s), 128KB ¹	3200	3100	2500	1300
Random Read (Max, IOPS), 4KB QD32 T8 ¹	620,000	620,000	420,000	210,000
Random Write (Max, IOPS), 4KB QD32 T8 ¹	600,000	600,000	600,000	320,000
Endurance/Reliability				
Total Bytes Written (TB)	2600	1300	650	300
Mean Time Between Failures (MTBF, hours)	1,800,000	1,800,000	1,800,000	1,800,000
Rescue Data Recovery Services (years) ²	3	3	3	3
Warranty, Limited (years)	5	5	5	5
Power Management				
Active Power, Average (W)	6.0	5.3	4.6	3.0
Idle Power PS3, Average (mW)	26.4	20	16	16
Low Power L1.2 mode (mW)	2	2	2	2
Environmental				
Temperature, Operating Internal (°C)	0 to 70	0 to 70	0 to 70	0 to 70
Temperature, Nonoperating (°C)	-40 to 85	-40 to 85	-40 to 85	-40 to 85
Shock, Nonoperating: 0.5ms (Gs)	1500	1500	1500	1500
Special Features				
TRIM	Yes	Yes	Yes	Yes
S.M.A.R.T.	Yes	Yes	Yes	Yes
Halogen Free	Yes	Yes	Yes	Yes
RoHS Compliance	Yes	Yes	Yes	Yes
Physical				
Length (mm/in, max)	80.15mm/3.156in	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	22.15mm/0.872in
Height (mm/in, max)	3.58mm/0.140in	2.23mm/0.087in	2.23mm/0.087in	2.23mm/0.087in
Weight (g/lb)	8.7g/0.019lb	8.7g/0.019lb	8.7g/0.019lb	8.7g/0.019lb

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.

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	47.992in/1219mm
Width (in/mm)	4.291in/109mm	10.944in/278mm	20in/508mm
Height (in/mm)	0.944in/24mm	6.653in/169mm	27.795in/706mm
Weight (lb/kg)	0.136lb/0.062kg	2.028lb/0.92kg	104.80lb/47.54kg
Quantities			
Boxes per Master Carton	10		
Master Cartons per Pallet	48		
Pallet Layers	4		

System Requirements	What's Included
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- M.2 (M key) slot, PCIe G3 x4 interface
- Windows® 10, Windows 8.1
- Linux
- Seagate® FireCuda® 510 SSD

Region	Model Number	Capacity	Limited Warranty (years)	UPC Code	EAN Code	Multi-Pack UPC
WW	ZP250GM3A001	250GB	5	763649153376	8719706031813	10763649153373
WW	ZP500GM3A021	500GB	5	763649153383	8719706031820	10763649153380
WW	ZP1000GM3A011	1000GB	5	763649153390	8719706031837	10763649153397
WW	ZP2000GM30021	2000GB	5	763649133996	8719706016605	10763649133993

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