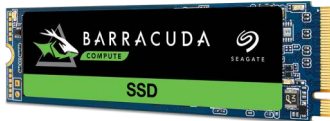


DATA SHEET

Fast. Dependable. Versatile.

BarraCuda 510 SSD

The Seagate® BarraCuda™ 510 SSD — legendary storage designed for taking your data to the next level of performance, reliability and efficiency.



Best-Fit Applications

- Ultra-thin laptops
- Business PCs and laptops
- Workstations and all-in-one PCs

Key Advantages

Amazing speed with next-level 3D TLC NAND and a PCIe® Gen3 x4, NVMe™ 1.3 unlock sequential read/write speeds of up to 3,400/2,180 MB/s

The trusted dependability of the BarraCuda brand with a 5-year limited warranty, and MTBF of 1.8M hours.

Amazing versatility with capacities of 250 GB to 1 TB lets you pick the right drive for the job and budget

Slim form factor with single-sided M.2 2280 for ultra-thin/ultra-small laptops, mini PCs, and desktop PCs

Low power consumption with up to 5.3W active power and multiple low power modes make for longer battery life and cooler running speeds



Specifications	1 TB	512 GB	500 GB	256 GB	250 GB
Standard Model (TCG Pyrite)	ZP1000CM30001	–	ZP500CM30001	–	ZP250CM30001
SED Model (TCG Opal)	–	ZP512CM30031	–	ZP256CM30031	–
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	PCIe Gen3 x4, NVMe 1.3
NAND Flash Memory	3D TLC	3D TLC	3D TLC	3D TLC	3D TLC
Form Factor	M.2 2280-S2	M.2 2280-S2	M.2 2280-S2	M.2 2280-S2	M.2 2280-S2
Performance					
Sequential Read (Max, MB/s), 128KB ¹	3,400	3,400	3,400	3,100	3,100
Sequential Write (Max, MB/s), 128KB ¹	3,000	2,180	2,400	1,050	1,200
Random Read (Max, IOPS), 4KB QD32 T8 ¹	600,000	350,000	410,000	180,000	210,000
Random Write (Max, IOPS), 4KB QD32 T8 ¹	600,000	530,000	540,000	260,000	280,000
Endurance/Reliability					
Total Bytes Written (TB)	640	320	320	160	160
Mean Time Between Failures (MTBF, hours)	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000
Warranty, Limited (years)	5	5	5	5	5
Power Management					
Active Power, Average (W)	5.3	4.2	4.6	3.0	3.0
Idle Power PS3, Average (mW)	20	16	16	16	16
Low Power L1.2 mode (mW)	2	2	2	2	2
Environmental					
Temperature, Operating Internal (°C)	0 to 70	0 to 70	0 to 70	0 to 70	0 to 70
Temperature, Non-operating (°C)	–40 to 85	–40 to 85	–40 to 85	–40 to 85	–40 to 85
Shock, Non-operating: 0.5 ms (Gs)	1,500	1,500	1,500	1,500	1,500
Special Features					
TRIM	Yes	Yes	Yes	Yes	Yes
S.M.A.R.T.	Yes	Yes	Yes	Yes	Yes
Halogen-free	Yes	Yes	Yes	Yes	Yes
RoHS compliance	Yes	Yes	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	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	22.15 mm/0.872 in	22.15 mm/0.872 in
Height (mm/in, max)	2.23 mm/0.087 in	2.23 mm/0.087 in	2.23 mm/0.087 in	2.23 mm/0.087 in	2.23 mm/0.087 in
Weight (lb/g)	8.7 g/0.019 lb	6.9 g/0.015 lb	8.7 g/0.019 lb	6.5 g/0.014 lb	8.7 g/0.019 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.



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)	0.134 lb/0.061 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)	2.006 lb/0.91 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)	424.389 lb/192.5 kg
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® G3 x4 interface
- Windows® 10, Windows 8.1, Windows 7
- Linux

- Seagate® BarraCuda™ 510 SSD

Region	Model Number	Capacity	Limited Warranty (years)	UPC Code	EAN Code	Multi-Pack UPC
WW	ZP250CM3A001	250GB	5	763649138212	8719706019927	10763649138219
WW	ZP256CM30041	256GB	5	763649134009	8719706016612	10763649134006
WW	ZP500CM3A001	500GB	5	763649138229	8719706019934	10763649138226
WW	ZP512CM30041	512GB	5	763649134016	8719706016629	10763649134013
WW	ZP1000CM3A001	1TB	5	763649138236	8719706019941	10763649138233

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