

SSD COMPARISON GUIDE

CRUCIAL SSDs: A SIDE-BY-SIDE COMPARISON



		BASIC				MAINSTREAM			
		CRUCIAL® BX100				CRUCIAL® MX200			
BASIC ATTRIBUTES	Interface	SATA 6Gb/s				SATA 6Gb/s			
	Controller	Silicon Motion® SM2246EN				Marvell® 88SS9189			
	Capacities	120GB	250GB	500GB	1TB	250GB	500GB	1TB	
	NAND	Micron® 16nm MLC	Micron® 16nm MLC	Micron® 16nm MLC	Micron® 16nm MLC	Micron® 16nm MLC	Micron® 16nm MLC	Micron® 16nm MLC	
FORM FACTORS	2.5-inch	•	•	•	•	•	•	•	
	mSATA	—	—	—	—	•	•	—	
	M.2 (2260)	—	—	—	—	•	•	—	
	M.2 (2280)	—	—	—	—	•	•	—	
PERFORMANCE (up to)	Sequential Read (in MB/s)	535	535	535	535	555	555	555	
	Sequential Write (in MB/s)	185	370	450	450	500	500	500	
	Random Read (in K IOPS)	87	87	90	90	100	100	100	
	Random Write (in K IOPS)	43	70	70	70	87	87	87	
ADVANCED FEATURES	Data Path Protection	•	•	•	•	•	•	•	
	Power Loss Protection ¹	•	•	•	•	•	•	•	
	Encryption	—	—	—	—	•	•	•	
	RAIN	—	—	—	—	•	•	•	
	Basic Thermal Monitoring	•	•	•	•	—	—	—	
	Advanced Thermal Monitoring	—	—	—	—	•	•	•	
	Exclusive Data Defense	—	—	—	—	•	•	•	
	Native Write Acceleration	—	—	—	—	•	•	•	
Dynamic Write Acceleration	—	—	—	—	•	• ²	—		
POWER	Active Average (mW)	150	150	150	150	150	150	150	
	Idle (mW)	115	115	115	115	100	100	100	
	DEVSLP (mW)	—	—	—	—	2	2	4	
ENDURANCE, RELIABILITY, & WARRANTY	Endurance	72TB TBW (40GB/day for 5 years)				80TB TBW (43GB/day for 5 years)	160TB TBW (87GB/day for 5 years)	320TB TBW (175GB/day for 5 years)	
	MTTF (hours)	1.5 million				1.5 million			
	Warranty (in years)	3				3			

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CONSUMER AND BUSINESS: 512GB CLASS SSD COMPARISON

	SSD ³	Capacity	Sequential Read (in MB/s)	Sequential Write (in MB/s)	Random Read (in K IOPS)	Random Write (in K IOPS)	Warranty (in years)	Software Tools
ADV.	Samsung® 850 PRO	512GB	550	520	100	90	10	•
	SanDisk® Extreme PRO	480GB	550	515	100	90	10	•
MAINSTREAM	Crucial® MX200	500GB	555	500	100	87	3	•
	Samsung® 850 EVO	500GB	540	520	98	90	5	•
	SanDisk® Extreme II	480GB	545	500	95	75	3	•
	Kingston® HyperX 3K	480GB	540	450	74	32	3	•
BASIC	Crucial® BX100	500GB	535	450	90	70	3	•
	SanDisk® Ultra II	480GB	550	500	98	83	3	•
	Kingston® V300	480GB	450	208	73	28	3	•

With over a thousand hours of prerelease validation testing and hundreds of SSD qualification tests, Crucial SSDs have been thoroughly tried, tested, and recommended for the most demanding applications. [To learn more about our SSDs, contact your Crucial representative today.](#)

Note: 1GB equals 1 billion bytes. Crucial 1TB drives have a storage capacity of 1000GB and meet terabyte-class standards, which refer to drives that store between 960GB and 1024GB of data. Actual useable capacity may vary.

1. Refers to data at rest.
2. Module form factors only.
3. Competitions drive specs taken from manufacturer product pages.

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