

1200 SSD

Data Sheet

Ultra-Fast, Consistent Performance Plus 12Gb/s SAS

- Helps remove storage bottlenecks and close the gap between processor and data access performance
- Delivers the speed and performance consistency needed for demanding enterprise applications
- Designed to reduce data access wait times under the most complex, write-intensive and mixed workloads
- First SSD to ship in volume with 12Gb/s SAS while ensuring the highest level of reliability and scalability
- Ensures data availability for critical production systems by using redundant, failover I/O communication paths
- Helps improve ROI by leveraging existing SAS infrastructures
- Custom-designed controller leverages Seagate enterprise expertise and manufacturing excellence
- Helps safeguard data against unexpected power loss and protects data from undetected, unintentional corruption
- Helps ensure data integrity with multiple layers of I/O error detection and correction
- Strong data security with Self-Encrypting Drive (SED) and FIPS SED models^{1,2}

Best-Fit Applications

- Demanding, enterprise applications with complex, write-intensive and mixed workloads
- IOPs-hungry enterprise applications, such as high-performance computing, online transaction processing (OLTP) and heavy data analytics
- Enterprise applications that demand high data availability and integrity as well as interface failover redundancy
- External enterprise storage solutions (SAN, NAS, DAS) and servers



¹ Self-Encrypting Drives (SED) and FIPS 140-2 Validated drives are not available in all models or countries. May require TCG-compliant host or controller support.

² FIPS 140-2 in review. See FIPS 140-2 Level 2 Certificate at <http://csrc.nist.gov/groups/STM/cmvp/validation.html>

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Specifications	800GB ¹	400GB ¹	200GB ¹
SED Models	ST800FM0053 ²	ST400FM0073 ²	ST200FM0073 ²
FIPS 140-2 Models	ST800FM0063 ^{2,3}		
Interface Options	12Gb/s SAS	12Gb/s SAS	12Gb/s SAS
NAND Flash Type	MLC	MLC	MLC
Performance			
Sustained Data Transfer Rate, Max (MB/s)	750	750	750
I/O Data Transfer Rate, Max (MB/s)	1,200	1,200	1,200
I/Os per Second per Watt (IOPS/W)	27,160	29,650	27,990
Sequential Read/Write Command Rate (MB/s) Peak, 128KB	750/500	750/500	750/400
Random Read/Write Command Rate (IOPS) Peak, 4KB	110,000/40,000	110,000/40,000	110,000/25,000
Configuration/Reliability			
Non-recoverable Read Errors per Bits Read, Max	1 per 10 ¹⁶	1 per 10 ¹⁶	1 per 10 ¹⁶
Annualised Failure Rate (AFR)	0.44%	0.44%	0.44%
Total Terabytes Written (TBW) over Warranty Period ⁴	14,600	7,300	3,650
Limited Warranty With Media Usage (years) ⁵	5	5	5
Power Management			
+5/+12V Max Start Current (A)	0.7/0.4	0.7/0.4	0.7/0.4
Average Sleep Power (W)	2.5	2.5	2.5
Average Idling Power (W)	3.0	2.72	2.89
Average Operating Power (W)	4.05	3.71	3.93
Environmental			
Internal Operating Temperature (°C)	0 to 60	0 to 60	0 to 60
Non-operating Temperature (°C)	-40 to 75	-40 to 75	-40 to 75
Temperature Change Rate/Hr, Max (°C)	20	20	20
Relative Humidity, Non-condensing (%)	5 to 95	5 to 95	5 to 95
Shock, 0.5ms (Gs)	1,000	1,000	1,000
Vibration, 20Hz to 2,000Hz (Grms)	11.08	11.08	11.08
Physical			
Height (mm/in) ⁶	7.0/0.276	7.0/0.276	7.0/0.276
Width (mm/in) ⁶	70.10/2.76	70.10/2.76	70.10/2.76
Depth (mm/in) ⁶	100.45/3.955	100.45/3.955	100.45/3.955
Weight (g/lb)	100/0.220	100/0.220	100/0.220
Carton Unit Quantity	20	20	20
Cartons per Pallet	45	45	45
Cartons per Layer	9	9	9

¹ One gigabyte, or GB, equals one billion bytes when referring to drive capacity.

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⁴ Per the JEDEC JESD218A standard, using enterprise workload JESD219A with all LBAs allocated

⁵ Warranty period is either 5 years or when the device life indicator has shown that the device has exhausted its useful life, as defined in the product manual, whichever comes first.

⁶ The drive physical dimensions conform to the Small Form Factor Standard (SFF-8201) found at www.sffcommittee.org. For connector-related dimensions, see SFF-8223.

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