Enterprise Performance 15K HDD

Data Sheet

Performance You Need, Versatility You Want, Affordability You Demand

- Accelerates I/O operations and completes more transactions faster — even during peak demand
- At 900 GB, stores 50% more mission-critical data than any other 15K HDD[1]
- Optimises TCO with higher capacity at lower cost than high-performance alternatives
- Delivers more predictable performance (up to 27% SDR over previous generation[1]) while helping to protect data from corruption due to unexpected power loss
- Supports all drive formats including 512 native and a single Fast Format™ model for advanced formats (4Kn and 512e) that simplifies HDD management
- Industry-leading read caching with TurboBoost™ technology for optimum response times — perfect for OLTP applications
- Advanced Write Caching feature utilising enhanced algorithms for the industry's highest mission-critical storage workload performance efficiencies
- Uses traditional NAND and advanced algorithms to promote hot data and achieve performance improvement (up to 2.6× improvements over last generation[1])
- Enables high density with power efficiency due to lower power and cooling requirements — ideal for space - and power-constrained enterprise data centers
- Widely accepted, proven sixth-generation technology for reliable access to demanding high performance applications.

Best-Fit Applications

- High-performance, mission-critical enterprise servers requiring 24×7 availability
- Highly reliable blade, pedestal, rack and tower servers
- Transaction-based applications, like OLTP, databases, HPC and big data analytics
- Power- and space-constrained data centres
- Compliance and data security initiatives

1 Compared to competitive 15K hard drives shipping Q4CY16

SEAGATE

Enterprise Performance 15K HDD

Specifications	512 Native		
Capacity	900GB	600GB	300GB
Standard Model[1]	ST900MP0006	ST600MP0006	ST300MP0006
Seagate Secure® Model (SED/Common Criteria)[1,2]	ST900MP0016	ST600MP0016	ST300MP0016
Seagate Secure FIPS 140-2 Model[1,2,3]	ST900MP0126	ST600MP0026	—
Performance			
Average Latency (ms)	2	2	2
Sustained Transfer Rate (Outer to Inner Diameter) MB/s	300 to 210	300 to 210	300 to 210
Max. Instantaneous Transfer Rate (SAS dual port) MB/s	2,400	2,400	2,400
Cache, Multi-segmented (MB)	256	256	256
Interface	SAS 12Gb/s	SAS 12Gb/s	SAS 12Gb/s
Intelligent NAND Endurance Management	No	No	No
Features			
Fast-Format Models	No	No	No
TurboBoost™ Enhanced Read Caching	No	No	No
Advanced Write Caching	Yes	Yes	Yes
Low Halogen	Yes	Yes	Yes
PowerChoice™ Idle Power Technology	Yes	Yes	Yes
Hot Plug Support	Yes	Yes	Yes
Organic Solderability Preservative	Yes	Yes	Yes
Digital Sensors for Humidity	Yes	Yes	Yes
Configuration/Reliability			
Discs/Heads	3/6	2/4	1/2
Non-recoverable Read Errors per Bits Read, Max	1 per 10E16	1 per 10E16	1 per 10E16
Annualised Failure Rate (AFR)	0.44%	0.44%	0.44%
Limited Warranty (years)[4]	5	5	5
Power Management			
Typical Op (A) +5V/+12V	7.6	7.2	6.9
Average Idling Power (W)	5.7	5.8	4.7
Average Operating Power (W)	7.6	7.2	6.9
Environmental			
Ambient Temperature, Operating (C°)	5°C – 55°C	5°C – 55°C	5°C – 55°C
Ambient Temperature, Non-operating (C°)	-40°C – 70°C	-40°C – 70°C	-40°C – 70°C
Temperature Change Rate/Hr, Max (°C)	20	20	20
Relative Humidity, Non-condensing (max gradient 20%/hour)	5% – 95%	5% – 95%	5% – 95%
Shock, Max. Operating: 11ms (Gs)	40	40	40
Shock, Max. Non-operating: 2 ms (Gs)	400	400	400
Vibration, Operating, <400 Hz (Gs)	0.5	0.5	0.5
Vibration, Non-operating: <500Hz (Gs)	2.4	2.4	2.4
Physical			
Height (mm/in)[5]	15 mm/0.591 in	15 mm/0.591 in	15 mm/0.591 in
Width (mm/in, max)[5]	69.85 mm/2.75 in	69.85 mm/2.75 in	69.85 mm/2.75 in
Depth (mm/in, max)[5]	100.45 mm/3.955 in	100.45 mm/3.955 in	100.45 mm/3.955 in
Weight (lb/g)	230 g/0.507 lb	230 g/0.507 lb	225 g/0.496 lb
Carton Unit Quantity	40	40	40
Cartons per Pallet / Cartons per Layer	60/10	60/10	60/10

1 512 Emulation and 4K Native models will provide a higher level of performance in 4K-aligned systems. Default configuration for 4K Native/512 Emulation models when shipped from Seagate is 512e format.

2 Seagate Secure Drives (SED) and FIPS 140-2 Validated drives are not available in all models or countries. May require TCG-Compliant host or controller support. In addition, some models require ordering through invoice SPA for channel customers. Contact your Seagate sales representative.

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

4 Warranty period is either 5 years or when the device reaches the Total TBW Over warranty period, whichever comes first.

5 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.

SEAGATE

Enterprise Performance 15K HDD

Specifications	4K Native / 512 Emulation		
Capacity	900GB	600GB	300GB
Standard Model[1]	ST900MP0146	ST600MP0136	ST300MP0106
Seagate Secure® Model (SED/Common Criteria)[1,2]	ST900MP0156	ST600MP0146	ST300MP0116
Seagate Secure FIPS 140-2 Model[1,2,3]	ST900MP0166	ST600MP0156	—
Performance			
Average Latency (ms)	2	2	2
Sustained Transfer Rate (Outer to Inner Diameter) MB/s	315 to 215	315 to 215	315 to 215
Max. Instantaneous Transfer Rate (SAS dual port) MB/s	2,400	2,400	2,400
Cache, Multi-segmented (MB)	256	256	256
Interface	SAS 12Gb/s	SAS 12Gb/s	SAS 12Gb/s
Intelligent NAND Endurance Management	Yes	Yes	Yes
Features			
Fast-Format Models	Yes	Yes	Yes
TurboBoost™ Enhanced Read Caching	Yes	Yes	Yes
Advanced Write Caching	Yes	Yes	Yes
Low Halogen	Yes	Yes	Yes
PowerChoice™ Idle Power Technology	Yes	Yes	Yes
Hot Plug Support	Yes	Yes	Yes
Organic Solderability Preservative	Yes	Yes	Yes
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AMERICAS Seagate Technology LLC 10200 South De Anza Boulevard, Cupertino, California 95014, United States, 408-658-1000
ASIA/PACIFIC Seagate Singapore International Headquarters Pte. Ltd. 7000 Ang Mo Kio Avenue 5, Singapore 569877, 65-6485-3888
EUROPE, MIDDLE EAST AND AFRICA Seagate Technology SAS 16-18, rue du Dôme, 92100 Boulogne-Billancourt, France, 33 1-4186 10 00

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