



Data Sheet

Trusted. Efficient. Versatile.
Exos 15E900



The Seagate® Exos™ 15E900 enterprise hard drive is the world's fastest hard drive, with capacities up to 900 GB in a 2.5-inch form factor, and is intended for traditional data centres where density, power consumption and data integrity are paramount.



Best-Fit Applications

- High-performance, mission-critical enterprise servers requiring 24x7 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



Performance You Need With the Affordability You Demand

Exos 15E900 hard drives accelerate I/O operations and complete more transactions faster — even during peak demand. The 900 GB model Exos 15E900 was the first to store 50% more mission-critical data than any other 15K hard drive.¹ By providing higher capacities at lower cost than high-performance alternatives, Exos 15E900 drives help optimise TCO. They deliver more predictable performance (up to 27% more sustained data rate than previous generation¹) while helping to protect data from corruption due to unexpected power loss.

Unrivalled Versatility Is Key

The Exos 15E900 supports all drive formats, including 512 native and a single Fast Format™ model for advanced formats (4Kn and 512e) that simplifies drive management. Industry-leading read caching with TurboBoost® technology for optimum response times is perfect for OLTP applications. The Advanced Write Caching feature utilises enhanced algorithms for the industry's highest mission-critical storage workload performance efficiencies. The Exos 15E900 uses traditional NAND and advanced algorithms to promote hot data and meet performance requirements (up to 2.6x improvements over last generation¹). By enabling high density with power efficiency, Exos 15E900 drives are ideal for space- and power-constrained enterprise data centres. Widely accepted, proven sixth-generation technology provides reliable access to demanding high-performance applications.

Industry-Leading Data Security Features

Seagate Secure™ models provide hardware-based security to help protect data-at-rest. With Instant Secure Erase, drive retirement is safe, fast and cost-efficient. Seagate Secure models meet the NIST 800-88 media sanitisation specification and support the Trusted Computer Group (TCG) standard.²

¹ Compared to previous generation 600 GB version

² Seagate Secure models not available in all countries. May require TCG-compliant host or controller support.



Specifications	512 Native		
Capacity	900GB	600GB	300GB
Standard Model ¹	ST900MP0006	ST600MP0006	ST300MP0006
Seagate Secure[superscript™] Model (SED) ^{1,2}	ST900MP0016	ST600MP0016	ST300MP0016
Seagate Secure FIPS 140-2/Common Criteria Model ^{1,2}	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
Mixed Workload Performance (at 5ms)	405	425	445
Max. Instantaneous Transfer Rate (SAS dual port) MB/s	2,400	2,400	2,400
Cache, Multi-segmented (MB)	256	256	256
Interface	SAS 12 Gb/s	SAS 12 Gb/s	SAS 12 Gb/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) ³	5	5	5
Power Management			
Typical Op (A) +5V/+12V	0.44/0.45	0.43/0.42	0.44/0.39
Average Idling Power (W)	5.7	5.8	4.7
Average Operating Power (W)	7.6 W	7.2 W	6.9 W
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: <500 Hz (Gs)	2.4	2.4	2.4
Physical			
Height (in/mm, max) ⁴	0.591 in/15 mm	0.591 in/15 mm	0.591 in/15 mm
Width (in/mm, max) ⁴	2.75 in/69.85 mm	2.75 in/69.85 mm	2.75 in/69.85 mm
Depth (in/mm, max) ⁴	3.955 in/100.45 mm	3.955 in/100.45 mm	3.955 in/100.45 mm
Weight (lb/g)	0.48 lb/218 g	0.486 lb/220 g	0.474 lb/215 g
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. 4Kn/512e drives ship in 512 emulation mode but can be reformatted to 4Kn with Fast Format feature.

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

⁴ 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.



Specifications	4K Native / 512 Emulation		
Capacity	900GB	600GB	300GB
Standard Model ¹	ST900MP0146	ST600MP0136	ST300MP0106
Seagate Secure[superscript™] Model (SED) ^{1,2}	ST900MP0156	ST600MP0146	ST300MP0116
Seagate Secure FIPS 140-2/Common Criteria Model ^{1,2}	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
Mixed Workload Performance (at 5ms)	700	800	900
Max. Instantaneous Transfer Rate (SAS dual port) MB/s	2,400	2,400	2,400
Cache, Multi-segmented (MB)	256	256	256
Interface	SAS 12 Gb/s	SAS 12 Gb/s	SAS 12 Gb/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
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) ³	5	5	5
Power Management			
Typical Op (A) +5V/+12V	0.44/0.45	0.43/0.42	0.44/0.39
Average Idling Power (W)	5.7	5.8	4.7
Average Operating Power (W)	7.6 W	7.2 W	6.9 W
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: <500 Hz (Gs)	2.4	2.4	2.4
Physical			
Height (in/mm, max) ⁴	0.591 in/15 mm	0.591 in/15 mm	0.591 in/15 mm
Width (in/mm, max) ⁴	2.75 in/69.85 mm	2.75 in/69.85 mm	2.75 in/69.85 mm
Depth (in/mm, max) ⁴	3.955 in/100.45 mm	3.955 in/100.45 mm	3.955 in/100.45 mm
Weight (lb/g)	0.48 lb/218 g	0.486 lb/220 g	0.474 lb/215 g
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. 4Kn/512e drives ship in 512 emulation mode but can be reformatted to 4Kn with Fast Format feature.

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

⁴ 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.com



© 2020 Seagate Technology LLC. All rights reserved. Seagate, Seagate Technology and the Spiral logo are registered trademarks of Seagate Technology LLC in the United States and/or other countries. Exos, the Exos logo, Fast Format, PowerChoice, Seagate Secure, the Seagate Secure logo and TurboBoost are either trademarks or registered trademarks of Seagate Technology LLC or one of its affiliated companies in the United States and/or other countries. All other trademarks or registered trademarks are the property of their respective owners. When referring to drive capacity, one gigabyte, or GB, equals one billion bytes; and one terabyte, or TB, equals one trillion bytes. Your computer's operating system may use a different standard of measurement and report a lower capacity. In addition, some of the listed capacity is used for formatting and other functions, and thus will not be available for data storage. Actual data rates may vary depending on operating environment and other factors, such as chosen interface and disk capacity. The export or re-export of Seagate hardware or software is regulated by the U.S. Department of Commerce, Bureau of Industry and Security (for more information, visit www.bis.doc.gov), and may be controlled for export, import and use in other countries. Seagate reserves the right to change, without notice, product offerings or specifications. DS1958.3-2005GB May 2020