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 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

SEAGATE SECURE™

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 generation[1]) 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 2.6× improvements over last generation[1]). 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	12 Gb/s SAS	12 Gb/s SAS	12 Gb/s SAS
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.

EXOS™ ENTERPRISE

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	12 Gb/s SAS	12 Gb/s SAS	12 Gb/s SAS
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
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Limited Warranty (years)[3]	5	5	5
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