



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.<sup>1</sup> 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<sup>1</sup>) 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 generation<sup>1</sup>). 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.<sup>2</sup>

<sup>1</sup> Compared to previous generation 600 GB version

<sup>2</sup> 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 <sup>1</sup>                                    | ST900MP0006        | ST600MP0006        | ST300MP0006        |
| Seagate Secure[superscript™] Model (SED) <sup>1,2</sup>        | ST900MP0016        | ST600MP0016        | ST300MP0016        |
| Seagate Secure FIPS 140-2/Common Criteria Model <sup>1,2</sup> | 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 <sup>®</sup> 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) <sup>3</sup>                          | 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) <sup>4</sup>                               | 0.591 in/15 mm     | 0.591 in/15 mm     | 0.591 in/15 mm     |
| Width (in/mm, max) <sup>4</sup>                                | 2.75 in/69.85 mm   | 2.75 in/69.85 mm   | 2.75 in/69.85 mm   |
| Depth (in/mm, max) <sup>4</sup>                                | 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. 4K/512e drives ship in 512 emulation mode but can be reformatted to 4K 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](http://www.sffcommittee.org). For connector-related dimensions, see SFF-8223.



| Specifications                                                 | 4K Native / 512 Emulation |                    |                    |
|----------------------------------------------------------------|---------------------------|--------------------|--------------------|
| Capacity                                                       | 900GB                     | 600GB              | 300GB              |
| Standard Model <sup>1</sup>                                    | ST900MP0146               | ST600MP0136        | ST300MP0106        |
| Seagate Secure[superscript™] Model (SED) <sup>1,2</sup>        | ST900MP0156               | ST600MP0146        | ST300MP0116        |
| Seagate Secure FIPS 140-2/Common Criteria Model <sup>1,2</sup> | 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 <sup>®</sup> Enhanced Read Caching                  | Yes                       | Yes                | Yes                |
| Advanced Write Caching                                         | Yes                       | Yes                | Yes                |
| Low Halogen                                                    | Yes                       | Yes                | Yes                |
| PowerChoice <sup>™</sup> 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) <sup>3</sup>                          | 5                         | 5                  | 5                  |
| Power Management                                               |                           |                    |                    |
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| Environmental                                                  |                           |                    |                    |
| Ambient Temperature, Operating (°C)                            | 5°C – 55°C                | 5°C – 55°C         | 5°C – 55°C         |
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| 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                |
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| Physical                                                       |                           |                    |                    |
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| Depth (in/mm, max) <sup>4</sup>                                | 3.955 in/100.45 mm        | 3.955 in/100.45 mm | 3.955 in/100.45 mm |
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| Carton Unit Quantity                                           | 40                        | 40                 | 40                 |
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