



TÀI LIỆU GIỚI THIỆU SẢN PHẨM

Tin cậy. Hiệu quả. Đa năng. Exos 7E8

Ổ cứng doanh nghiệp Seagate® Exos™ 7E8 giúp lưu trữ an toàn tới 8TB dữ liệu mà không làm giảm sút hiệu năng. Dòng ổ cứng này sở hữu tính năng bảo mật, hiệu năng cao, dung lượng lớn được tối ưu hóa dành cho ứng dụng dữ liệu lớn, nhằm đáp ứng nhu cầu khắc khe nhất của doanh nghiệp.



Các ứng dụng phù hợp nhất

- Các ứng dụng qui mô siêu lớn/ Trung tâm dữ liệu điện toán đám mây
- Các trung tâm dữ liệu mở rộng qui mô lớn
- Các ứng dụng xử lý giao dịch trực tuyến OLTP và HPC
- Môi trường lưu trữ RAID mật độ cao, dung lượng lớn
- Tủ rack lưu trữ qui mô doanh nghiệp
- Các hệ thống Dữ liệu Phân tán, bao gồm cả Hadoop và Ceph
- Sao lưu và khôi phục dữ liệu doanh nghiệp (D2D), băng từ ảo
- Hệ thống giám sát tập trung

Ổ cứng doanh nghiệp dành cho Ứng dụng Dữ liệu lớn

Ổ cứng Exos 7E8 có dung lượng lên tới 8TB¹, cung cấp môi trường lưu trữ dữ liệu lớn cho các cơ sở hạ tầng doanh nghiệp đòi hỏi độ bền bỉ và tin cậy cao. Exos 7E8 cung cấp khả năng truy cập dữ liệu phi cấu trúc an toàn và tiết kiệm chi phí. Được phát triển dựa trên công nghệ CMR (Conventional Magnetic Recording - Ghi Từ tính Thông thường) thế hệ thứ 10 đã được kiểm chứng trong thực tế, ổ đĩa Exos 7E8 giúp nâng cao năng lực của môi trường lưu trữ dữ liệu, cho phép các kiến trúc sư xây dựng Trung tâm Dữ liệu và chuyên gia CNTT mang tới hiệu năng ổn định, độ tin cậy cao, bảo mật mạnh mẽ và giảm tổng chi phí sở hữu (TCO²) cho các hoạt động liên tục 24x7.

Lưu trữ dữ liệu lớn hiệu quả trong hệ thống hoạt động 24x7

Ổ cứng Exos 7E8 có chỉ số độ bền (MTBF³) lên tới 2 triệu giờ, với khả năng chịu tải 550TB/năm - cao hơn 10 lần so với ổ cứng máy tính thông thường. Sở hữu bộ nhớ đệm lớn, các thuật toán sửa lỗi cao cấp khi hệ thống đang hoạt động và thiết kế chống rung, ổ cứng Exos 7E8 đảm bảo hiệu năng ổn định trong các hệ thống nhân bản dữ liệu và hệ thống RAID nhiều ổ cứng.

Hiệu năng cao dành cho các ứng dụng Trung tâm Dữ liệu

Đáp ứng các yêu cầu về chịu tải lớn cho công việc lưu trữ, trong không gian trung tâm dữ liệu có hiệu suất và hiệu quả về chi phí tốt nhất trên thị trường hiện nay. Exos 7E8 đảm bảo khả năng tích hợp dễ dàng với các hệ thống lưu trữ dữ liệu lớn bằng các tùy chọn chuẩn giao tiếp SAS 12Gb/s và SATA 6Gb/s. Với những tiến bộ công nghệ sáng tạo như PowerChoice™ và Seagate RAID Rebuild®, doanh nghiệp có thể dễ dàng tùy biến các yêu cầu lưu trữ của mình để giảm tối đa tổng chi phí sở hữu (TCO).

Độ tin cậy, Khả năng bảo vệ dữ liệu và Bảo mật cao cấp

Các tính năng bảo mật tiên tiến giúp bảo vệ dữ liệu trong môi trường lưu trữ trên ổ cứng. Exos 7E8 có khả năng chặn truy cập trái phép vào ổ cứng và bảo vệ dữ liệu lưu trữ bằng các tính năng bảo mật như Secure Downloads & Diagnostics, ổ cứng tự mã hóa theo tiêu chuẩn TCG⁴ và ổ cứng chống can thiệp theo tiêu chuẩn FIPS/Common Criteria, đáp ứng yêu cầu khắc khe nhất của các cơ quan chính phủ². Ổ cứng tích hợp bảo mật Seagate Secure™ đơn giản hóa việc thay đổi mục đích sử dụng hoặc thanh lý ổ đĩa, giúp bảo mật dữ liệu lưu trữ cũng như đáp ứng các yêu cầu của doanh nghiệp và của cơ quan chính phủ về bảo mật dữ liệu.



1 Seagate khuyến nghị xác nhận cấu hình của doanh nghiệp với nhà sản xuất bộ điều khiển HBA/RAID để đảm bảo dung lượng tối đa.

2 TCO – Total Cost of Ownership

3 MTBF – Mean Time between Failures

4 Ổ cứng tự mã hóa (Self-Encrypting Drives - SED) không có sẵn ở mọi model hay mọi quốc gia. Cần có hệ thống máy chủ hoặc bộ điều khiển đạt chuẩn TCG để sử dụng.



Specifications	512n SATA				
	6TB	4TB	3TB	2TB	1TB
Capacity	6TB	4TB	3TB	2TB	1TB
Base Model	ST6000NM002A	ST4000NM000A	ST3000NM000A	ST2000NM000A	ST1000NM000A
PowerBalance™ Model	—	—	—	—	—
Seagate Secure™ SED Model ¹	—	—	—	—	—
Seagate Secure SED-FIPS Model ¹	—	ST4000NM013A	ST3000NM004A	—	—
Features					
Protection Information (T10 DIF)	—	—	—	—	—
Humidity Sensor	Yes	Yes	Yes	Yes	Yes
SuperParity	Yes	Yes	Yes	Yes	Yes
Low Halogen	Yes	Yes	Yes	Yes	Yes
PowerChoice™ Technology	Yes	Yes	Yes	Yes	Yes
PowerBalance Technology	Yes	Yes	Yes	Yes	Yes
Cache, Multisegmented (MB)	256	256	256	256	256
Advanced Write Caching (2M internal NOR flash)	Yes	Yes	Yes	Yes	Yes
Reliability/Data Integrity					
Vibration, Nonoperating: 10Hz to 500Hz (Grms)	5	5	5	5	5
Mean Time Between Failures (MTBF, hours)	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Reliability Rating @ Full 24x7 Operation (AFR)	0.44%	0.44%	0.44%	0.44%	0.44%
Nonrecoverable Read Errors per Bits Read	—	—	—	—	—
Power-On Hours per Year	8,760	8,760	8,760	8,760	8,760
Bytes per Sector	512	512	512	512	512
Warranty, Limited (years)	5	5	5	5	5
Performance					
Spindle Speed (RPM)	7200	7200	7200	7200	7200
Interface Access Speed (Gb/s)	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5
Max. Sustained Transfer Rate OD	215MB/s	215MB/s	215MB/s	215MB/s	215MB/s
Average Latency (ms)	4.16	4.16	4.16	4.16	4.16
Interface Ports	Single	Single	Single	Single	Single
Rotational Vibration @ 1500Hz (rad/s ²)	12.5	12.5	12.5	12.5	12.5
Power Consumption					
Idle Power, Average (W)	7.1	5.38	5.38	4.48	4.48
Typical Operating, Random Read (W)	12.91	10.77	10.77	9.91	9.91
Power Supply Requirements	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V
Environmental					
Temperature, Operating (°C)	5°C – 60°C	5°C – 60°C	5°C – 60°C	5°C – 60°C	5°C – 60°C
Shock, Operating 2ms Read/Write (Gs)	70/40Gs	70/40Gs	70/40Gs	70/40Gs	70/40Gs
Shock, Nonoperating, (1ms/2ms) (Gs)	150/300	150/300	150/300	150/300	150/300
Physical					
Height (in/mm, max) ²	1.028in/26.1mm	1.028in/26.1mm	1.028in/26.1mm	1.028in/26.1mm	1.028in/26.1mm
Width (in/mm, max) ²	4.01in/101.85mm	4.01in/101.85mm	4.01in/101.85mm	4.01in/101.85mm	4.01in/101.85mm
Depth (in/mm, max) ²	5.787in/147mm	5.787in/147mm	5.787in/147mm	5.787in/147mm	5.787in/147mm
Weight (g/lb)	716g/1.58lb	649g/1.43lb	649g/1.43lb	620g/1.37lb	620g/1.37lb
Carton Unit Quantity	20	20	20	20	20
Cartons per Pallet/Cartons per Layer	40 / 8	40 / 8	40 / 8	40 / 8	40 / 8

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

² These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at www.sffcommittee.org. For connector-related dimensions, see SFF-8223.



Specifications	512n SAS				
	6TB	4TB	3TB	2TB	1TB
Capacity	6TB	4TB	3TB	2TB	1TB
Base Model	ST6000NM003A	ST4000NM003A	ST3000NM001A	ST2000NM003A	ST1000NM001A
PowerBalance™ Model	—	—	—	—	—
Seagate Secure™ SED Model ¹	—	—	—	—	—
Seagate Secure SED-FIPS Model ¹	—	ST4000NM015A	ST3000NM005A	—	—
Features					
Protection Information (T10 DIF)	Yes	Yes	Yes	Yes	Yes
Humidity Sensor	Yes	Yes	Yes	Yes	Yes
SuperParity	Yes	Yes	Yes	Yes	Yes
Low Halogen	Yes	Yes	Yes	Yes	Yes
PowerChoice™ Technology	Yes	Yes	Yes	Yes	Yes
PowerBalance Technology	Yes	Yes	Yes	Yes	Yes
Cache, Multisegmented (MB)	256	256	256	256	256
Advanced Write Caching (2M internal NOR flash)	Yes	Yes	Yes	Yes	Yes
Reliability/Data Integrity					
Vibration, Nonoperating: 10Hz to 500Hz (Grms)	5	5	5	5	5
Mean Time Between Failures (MTBF, hours)	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Reliability Rating @ Full 24x7 Operation (AFR)	0.44%	0.44%	0.44%	0.44%	0.44%
Nonrecoverable Read Errors per Bits Read	—	—	—	—	—
Power-On Hours per Year	8,760	8,760	8,760	8,760	8,760
Bytes per Sector	512	512	512	512	512
Warranty, Limited (years)	5	5	5	5	5
Performance					
Spindle Speed (RPM)	7200	7200	7200	7200	7200
Interface Access Speed (Gb/s)	12.0, 6.0, 3.0	12.0, 6.0, 3.0	12.0, 6.0, 3.0	12.0, 6.0, 3.0	12.0, 6.0, 3.0
Max. Sustained Transfer Rate OD	215MB/s	215MB/s	215MB/s	215MB/s	215MB/s
Average Latency (ms)	4.16	4.16	4.16	4.16	4.16
Interface Ports	Dual	Dual	Dual	Dual	Dual
Rotational Vibration @ 1500Hz (rad/s ²)	12.5	12.5	12.5	12.5	12.5
Power Consumption					
Idle Power, Average (W)	7.97	5.94	5.94	4.86	4.86
Typical Operating, Random Read (W)	13.18	11.33	11.33	10.09	10.09
Power Supply Requirements	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V
Environmental					
Temperature, Operating (°C)	5°C – 60°C	5°C – 60°C	5°C – 60°C	5°C – 60°C	5°C – 60°C
Shock, Operating 2ms Read/Write (Gs)	70/40Gs	70/40Gs	70/40Gs	70/40Gs	70/40Gs
Shock, Nonoperating, (1ms/2ms) (Gs)	150/300	150/300	150/300	150/300	150/300
Physical					
Height (in/mm, max) ²	1.028in/26.1mm	1.028in/26.1mm	1.028in/26.1mm	1.028in/26.1mm	1.028in/26.1mm
Width (in/mm, max) ²	4.01in/101.85mm	4.01in/101.85mm	4.01in/101.85mm	4.01in/101.85mm	4.01in/101.85mm
Depth (in/mm, max) ²	5.787in/147mm	5.787in/147mm	5.787in/147mm	5.787in/147mm	5.787in/147mm
Weight (g/lb)	716g/1.58lb	649g/1.43lb	649g/1.43lb	620g/1.37lb	620g/1.37lb
Carton Unit Quantity	20	20	20	20	20
Cartons per Pallet/Cartons per Layer	40 / 8	40 / 8	40 / 8	40 / 8	40 / 8

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Specifications	512e/4KN (FastFormat™) SATA			
	8TB	6TB	4TB	2TB
Capacity	8TB	6TB	4TB	2TB
Base Model	ST8000NM000A	ST6000NM021A	ST4000NM002A	ST2000NM001A
PowerBalance™ Model	ST8000NM016A	ST6000NM037A	—	—
Seagate Secure™ SED Model ¹	—	—	—	—
Seagate Secure SED-FIPS Model ¹	ST8000NM008A	ST6000NM025A	ST4000NM012A	—
Features				
Protection Information (T10 DIF)	—	—	—	—
Humidity Sensor	Yes	Yes	Yes	Yes
SuperParity	Yes	Yes	Yes	Yes
Low Halogen	Yes	Yes	Yes	Yes
PowerChoice™ Technology	Yes	Yes	Yes	Yes
PowerBalance Technology	Yes	Yes	Yes	Yes
Cache, Multisegmented (MB)	256	256	256	256
Advanced Write Caching (2M internal NOR flash)	Yes	Yes	Yes	Yes
Reliability/Data Integrity				
Vibration, Nonoperating: 10Hz to 500Hz (Grms)	5	5	5	5
Mean Time Between Failures (MTBF, hours)	2,000,000	2,000,000	2,000,000	2,000,000
Reliability Rating @ Full 24x7 Operation (AFR)	0.44%	0.44%	0.44%	0.44%
Nonrecoverable Read Errors per Bits Read	—	1 sector per 10E15	—	—
Power-On Hours per Year	8,760	8,760	8,760	8,760
Bytes per Sector	512	512	512	512
Warranty, Limited (years)	5	5	5	5
Performance				
Spindle Speed (RPM)	7200	7200	7200	7200
Interface Access Speed (Gb/s)	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5
Max. Sustained Transfer Rate OD	249MB/s	245MB/s	226MB/s	226MB/s
Average Latency (ms)	4.16	4.16	4.16	4.16
Interface Ports	Single	Single	Single	Single
Rotational Vibration @ 1500Hz (rad/s ²)	12.5	12.5	12.5	12.5
Power Consumption				
Idle Power, Average (W)	7.64	6.2	5.4	4.42
Typical Operating, Random Read (W)	12.81	11.67	10.89	9.83
Power Supply Requirements	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V
Environmental				
Temperature, Operating (°C)	5°C – 60°C	5°C – 60°C	5°C – 60°C	5°C – 60°C
Shock, Operating 2ms Read/Write (Gs)	70/40Gs	70/40Gs	70/40Gs	70/40Gs
Shock, Nonoperating, (1ms/2ms) (Gs)	150/300	150/300	150/300	150/300
Physical				
Height (in/mm, max) ²	1.028in/26.1mm	1.028in/26.1mm	1.028in/26.1mm	1.028in/26.1mm
Width (in/mm, max) ²	4.01in/101.85mm	4.01in/101.85mm	4.01in/101.85mm	4.01in/101.85mm
Depth (in/mm, max) ²	5.787in/147mm	5.787in/147mm	5.787in/147mm	5.787in/147mm
Weight (g/lb)	716g/1.58lb	693g/1.53lb	649g/1.43lb	620g/1.37lb
Carton Unit Quantity	20	20	20	20
Cartons per Pallet/Cartons per Layer	40 / 8	40 / 8	40 / 8	40 / 8

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Specifications	512e/4KN (FastFormat) SAS			
Capacity	8TB	6TB	4TB	2TB
Base Model	ST8000NM001A	ST6000NM029A	ST4000NM005A	ST2000NM004A
PowerBalance™ Model	—	—	—	—
Seagate Secure™ SED Model ¹	—	—	—	—
Seagate Secure SED-FIPS Model ¹	ST8000NM010A	ST6000NM033A	ST4000NM014A	—
Features				
Protection Information (T10 DIF)	Yes	Yes	Yes	Yes
Humidity Sensor	Yes	Yes	Yes	Yes
SuperParity	Yes	Yes	Yes	Yes
Low Halogen	Yes	Yes	Yes	Yes
PowerChoice™ Technology	Yes	Yes	Yes	Yes
PowerBalance Technology	Yes	Yes	Yes	Yes
Cache, Multisegmented (MB)	256	256	256	256
Advanced Write Caching (2M internal NOR flash)	Yes	Yes	Yes	Yes
Reliability/Data Integrity				
Vibration, Nonoperating: 10Hz to 500Hz (Grms)	5	5	5	5
Mean Time Between Failures (MTBF, hours)	2,000,000	2,000,000	2,000,000	2,000,000
Reliability Rating @ Full 24x7 Operation (AFR)	0.44%	0.44%	0.44%	0.44%
Nonrecoverable Read Errors per Bits Read	—	1 sector per 10E15	—	—
Power-On Hours per Year	8,760	8,760	8,760	8,760
Bytes per Sector	512, 520, 528	512, 520, 528	512, 520, 528	512, 520, 528
Warranty, Limited (years)	5	5	5	5
Performance				
Spindle Speed (RPM)	7200	7200	7200	7200
Interface Access Speed (Gb/s)	12.0, 6.0, 3.0	12.0, 6.0, 3.0	12.0, 6.0, 3.0	12.0, 6.0, 3.0
Max. Sustained Transfer Rate OD	249MB/s	245MB/s	226MB/s	226MB/s
Average Latency (ms)	4.16	4.16	4.16	4.16
Interface Ports	Dual	Dual	Dual	Dual
Rotational Vibration @ 1500Hz (rad/s ²)	12.5	12.5	12.5	12.5
Power Consumption				
Idle Power, Average (W)	7.97	6.84	5.79	5.06
Typical Operating, Random Read (W)	13.18	12.3	11.12	10.14
Power Supply Requirements	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V
Environmental				
Temperature, Operating (°C)	5°C – 60°C	5°C – 60°C	5°C – 60°C	5°C – 60°C
Shock, Operating 2ms Read/Write (Gs)	70/40Gs	70/40Gs	70/40Gs	70/40Gs
Shock, Nonoperating, (1ms/2ms) (Gs)	150/300	150/300	150/300	150/300
Physical				
Height (in/mm, max) ²	1.028in/26.1mm	1.028in/26.1mm	1.028in/26.1mm	1.028in/26.1mm
Width (in/mm, max) ²	4.01in/101.85mm	4.01in/101.85mm	4.01in/101.85mm	4.01in/101.85mm
Depth (in/mm, max) ²	5.787in/147mm	5.787in/147mm	5.787in/147mm	5.787in/147mm
Weight (g/lb)	716g/1.58lb	693g/1.53lb	649g/1.43lb	620g/1.37lb
Carton Unit Quantity	20	20	20	20
Cartons per Pallet/Cartons per Layer	40 / 8	40 / 8	40 / 8	40 / 8

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

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Specifications	4Kn SATA			
Capacity	8TB	6TB	4TB	2TB
Base Model	ST8000NM002A	ST6000NM022A	ST4000NM001A	ST2000NM002A
PowerBalance™ Model	—	—	—	—
Seagate Secure™ SED Model ¹	—	—	—	—
Seagate Secure SED-FIPS Model ¹	—	—	—	—
Features				
Protection Information (T10 DIF)	—	—	—	—
Humidity Sensor	Yes	Yes	Yes	Yes
SuperParity	Yes	Yes	Yes	Yes
Low Halogen	Yes	Yes	Yes	Yes
PowerChoice™ Technology	Yes	Yes	Yes	Yes
PowerBalance Technology	Yes	Yes	Yes	Yes
Cache, Multisegmented (MB)	256	256	256	256
Advanced Write Caching (2M internal NOR flash)	Yes	Yes	Yes	Yes
Reliability/Data Integrity				
Vibration, Nonoperating: 10Hz to 500Hz (Grms)	5	5	5	5
Mean Time Between Failures (MTBF, hours)	2,000,000	2,000,000	2,000,000	2,000,000
Reliability Rating @ Full 24x7 Operation (AFR)	0.44%	0.44%	0.44%	0.44%
Nonrecoverable Read Errors per Bits Read	—	1 sector per 10E15	—	—
Power-On Hours per Year	8,760	8,760	8,760	8,760
Bytes per Sector	4096	4096	4096	4096
Warranty, Limited (years)	5	5	5	5
Performance				
Spindle Speed (RPM)	7200	7200	7200	7200
Interface Access Speed (Gb/s)	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5
Max. Sustained Transfer Rate OD	249MB/s	245MB/s	226MB/s	226MB/s
Average Latency (ms)	4.16	4.16	4.16	4.16
Interface Ports	Single	Single	Single	Single
Rotational Vibration @ 1500Hz (rad/s ²)	12.5	12.5	12.5	12.5
Power Consumption				
Idle Power, Average (W)	7.64	6.2	5.4	4.42
Typical Operating, Random Read (W)	12.81	11.67	10.89	9.83
Power Supply Requirements	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V
Environmental				
Temperature, Operating (°C)	5°C – 60°C	5°C – 60°C	5°C – 60°C	5°C – 60°C
Shock, Operating 2ms Read/Write (Gs)	70/40Gs	70/40Gs	70/40Gs	70/40Gs
Shock, Nonoperating, (1ms/2ms) (Gs)	150/300	150/300	150/300	150/300
Physical				
Height (in/mm, max) ²	1.028in/26.1mm	1.028in/26.1mm	1.028in/26.1mm	1.028in/26.1mm
Width (in/mm, max) ²	4.01in/101.85mm	4.01in/101.85mm	4.01in/101.85mm	4.01in/101.85mm
Depth (in/mm, max) ²	5.787in/147mm	5.787in/147mm	5.787in/147mm	5.787in/147mm
Weight (g/lb)	716g/1.58lb	693g/1.53lb	649g/1.43lb	620g/1.37lb
Carton Unit Quantity	20	20	20	20
Cartons per Pallet/Cartons per Layer	40 / 8	40 / 8	40 / 8	40 / 8

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

² These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at www.sffcommittee.org. For connector-related dimensions, see SFF-8223.



Specifications	4Kn SAS			
	8TB	6TB	4TB	2TB
Capacity	8TB	6TB	4TB	2TB
Base Model	ST8000NM003A	ST6000NM030A	ST4000NM004A	ST2000NM005A
PowerBalance™ Model	—	—	—	—
Seagate Secure™ SED Model ¹	—	—	—	—
Seagate Secure SED-FIPS Model ¹	—	—	—	—
Features				
Protection Information (T10 DIF)	Yes	Yes	Yes	Yes
Humidity Sensor	Yes	Yes	Yes	Yes
SuperParity	Yes	Yes	Yes	Yes
Low Halogen	Yes	Yes	Yes	Yes
PowerChoice™ Technology	Yes	Yes	Yes	Yes
PowerBalance Technology	Yes	Yes	Yes	Yes
Cache, Multisegmented (MB)	256	256	256	256
Advanced Write Caching (2M internal NOR flash)	Yes	Yes	Yes	Yes
Reliability/Data Integrity				
Vibration, Nonoperating: 10Hz to 500Hz (Grms)	5	5	5	5
Mean Time Between Failures (MTBF, hours)	2,000,000	2,000,000	2,000,000	2,000,000
Reliability Rating @ Full 24x7 Operation (AFR)	0.44%	0.44%	0.44%	0.44%
Nonrecoverable Read Errors per Bits Read	—	1 sector per 10E15	—	—
Power-On Hours per Year	8,760	8,760	8,760	8,760
Bytes per Sector	4096, 4160, 4224	4096, 4160, 4224	4096, 4160, 4224	4096, 4160, 4224
Warranty, Limited (years)	5	5	5	5
Performance				
Spindle Speed (RPM)	7200	7200	7200	7200
Interface Access Speed (Gb/s)	12.0, 6.0, 3.0	12.0, 6.0, 3.0	12.0, 6.0, 3.0	12.0, 6.0, 3.0
Max. Sustained Transfer Rate OD	249MB/s	245MB/s	226MB/s	226MB/s
Average Latency (ms)	4.16	4.16	4.16	4.16
Interface Ports	Dual	Dual	Dual	Dual
Rotational Vibration @ 1500Hz (rad/s ²)	12.5	12.5	12.5	12.5
Power Consumption				
Idle Power, Average (W)	7.97	6.84	5.79	5.06
Typical Operating, Random Read (W)	13.18	12.3	11.12	10.14
Power Supply Requirements	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V
Environmental				
Temperature, Operating (°C)	5°C – 60°C	5°C – 60°C	5°C – 60°C	5°C – 60°C
Shock, Operating 2ms Read/Write (Gs)	70/40Gs	70/40Gs	70/40Gs	70/40Gs
Shock, Nonoperating, (1ms/2ms) (Gs)	150/300	150/300	150/300	150/300
Physical				
Height (in/mm, max) ²	1.028in/26.1mm	1.028in/26.1mm	1.028in/26.1mm	1.028in/26.1mm
Width (in/mm, max) ²	4.01in/101.85mm	4.01in/101.85mm	4.01in/101.85mm	4.01in/101.85mm
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