

TÀI LIỆU GIỚI THIỆU SẢN PHẨM

Dành cho Trung tâm Dữ liệu tốc độ cao

NyTRO 3032 SAS SSD Series



Ổ SSD SAS Seagate® NyTRO® 3032 có dung lượng lên tới 15TB trong kích thước nhỏ gọn chỉ 2.5-in x 15 mm, chuẩn kết nối SAS 12 Gb/s với hai cổng để đạt tốc độ lên tới 2.200 MB/s, tích hợp tính năng giám sát ổ cứng, công nghệ mã hóa đáp ứng yêu cầu của các cơ quan chính phủ và độ bền tối đa 10 DWPD, phù hợp cho hệ thống hiệu năng cao, an toàn, có khả năng mở rộng dễ dàng, đáp ứng nhu cầu chịu tải công việc khẩn cấp của doanh nghiệp.



Các ứng dụng phù hợp nhất

- Ảo hóa máy chủ,
- Cơ sở dữ liệu cho hệ thống giao dịch trực tuyến (OLTP)
- Môi trường lưu trữ được định nghĩa bằng phần mềm
- Tủ lưu trữ toàn Flash
- Lưu trữ đệm và Lưu trữ Phân lớp

Những ưu điểm chính

Giao diện SAS 12 Gb/s và hai cổng kết nối nhằm đảm bảo hiệu năng liên tục 24x7

Dung lượng cao lên tới 15TB trong kích thước nhỏ gọn 2.5-in x 15 mm

Độ trễ thấp và QoS cao để tăng thời gian phản hồi và trải nghiệm người dùng

Dễ dàng quản lý và giám sát trạng thái của ổ SSD bằng tính năng SeaChest

Ba lựa chọn về độ bền nhằm đáp ứng các nhu cầu về chịu tải công việc, kế hoạch triển

khai và giảm tổng chi phí sở hữu (TCO¹)

Đảm bảo khả năng bảo vệ dữ liệu tin cậy dành cho các ứng dụng trọng yếu

Tính năng bảo mật Seagate Secure™ với các tùy chọn SD&D (Secure Download and Diagnostics - Tải về và Chẩn đoán An toàn), SED và SED FIPS 140-2 để tăng cường bảo mật dữ liệu¹

Được phát triển để đảm bảo khả năng tích hợp dễ dàng với các hệ điều hành Linux và Microsoft

¹ TCO – Total Cost of Ownership.

² Ổ cứng tự mã hóa (Self-Encrypting Drives - SED) không có sẵn ở mọi quốc gia. Cần có hệ thống máy chủ hoặc bộ điều khiển đạt chuẩn TCG để sử dụng.



Specifications	Nytro 3332 — Scaled Endurance				
Capacity	15.36TB	7.68TB	3.84TB	1.92TB	960GB
Standard Model	XS15360SE70084	XS7680SE70084	XS3840SE70084	XS1920SE70084	XS960SE70084
Seagate Secure™ SED Model ¹	XS15360SE70094	XS7680SE70094	XS3840SE70094	XS1920SE70094	XS960SE70094
Seagate Secure FIPS 140-2/Common Criteria Model ¹	XS15360SE70104	XS7680SE70104	XS3840SE70104	XS1920SE70104	XS960SE70104
Seagate Instant Secure Erase (ISE) Model	XS15360SE70114	XS7680SE70114	XS3840SE70114	XS1920SE70114	XS960SE70114
Features					
Interface (Dual Port)	SAS 12 Gb/s	SAS 12 Gb/s	SAS 12 Gb/s	SAS 12 Gb/s	SAS 12 Gb/s
NAND Flash Type	3D eTLC	3D eTLC	3D eTLC	3D eTLC	3D eTLC
Form Factor	2.5 in × 15 mm	2.5 in × 15 mm	2.5 in × 15 mm	2.5 in × 15 mm	2.5 in × 15 mm
Performance — Single Port 12 Gb/s					
Sequential Read (MB/s) Sustained, 128 KB ²	1,050	1,100	1,100	1,100	1,100
Sequential Write (MB/s) Sustained, 128 KB ²	950	1,000	1,000	1,000	950
Random Read (IOPS) Sustained, 4 KB ²	120,000	170,000	180,000	180,000	170,000
Random Write (IOPS) Sustained, 4 KB ²	16,000	80,000	85,000	85,000	70,000
Random 30% Write (IOPS) Sustained, 4 KB ²	46,000	160,000	160,000	150,000	130,000
Performance — Dual Port 12 Gb/s					
Sequential Read (MB/s) Sustained, 128 KB ²	2,100	2,000	2,200	2,200	2,150
Sequential Write (MB/s) Sustained, 128 KB ²	1,000	1,650	1,650	1,650	1,300
Random Read (IOPS) Sustained, 4 KB ²	150,000	240,000	240,000	230,000	210,000
Random Write (IOPS) Sustained, 4 KB ²	20,000	80,000	85,000	85,000	70,000
Random 30% Write (IOPS) Sustained, 4 KB ²	46,000	160,000	160,000	160,000	140,000
Endurance/Reliability					
Lifetime Endurance (Drive Writes per Day)	1	1	1	1	1
Total Bytes Written (TB)	28,000	14,000	7,000	3,500	1,700
Non-recoverable Read Errors per Bits Read	1 per 10E17	1 per 10E17	1 per 10E17	1 per 10E17	1 per 10E17
Mean Time Between Failures (MTBF, hrs)	2.5 Million	2.5 Million	2.5 Million	2.5 Million	2.5 Million
Annualised Failure Rate (AFR)	0.35%	0.35%	0.35%	0.35%	0.35%
Warranty, Limited (years)	5	5	5	5	5
Power Management					
+5/+12 V Max Start Current (A)	0.80/0.21	0.80/0.21	0.80/0.21	0.80/0.21	0.80/0.21
Average Idling Power (W)	4.6	4.6	4.6	4.6	4.6
Physical					
Height (in/mm, max) ³	0.591 in/15 mm	0.591 in/15 mm	0.591 in/15 mm	0.591 in/15 mm	0.591 in/15 mm
Width (in/mm, max) ³	2.76 in/70.1 mm	2.76 in/70.1 mm	2.76 in/70.1 mm	2.76 in/70.1 mm	2.76 in/70.1 mm
Depth (in/mm, max) ³	3.955 in/100.45 mm	3.955 in/100.45 mm	3.955 in/100.45 mm	3.955 in/100.45 mm	3.955 in/100.45 mm
Weight (lb/g)	0.364 lb/165 g	0.364 lb/165 g	0.364 lb/165 g	0.364 lb/165 g	0.364 lb/165 g
Carton Unit Quantity	10	10	10	10	10
Cartons per Pallet	90	90	90	90	90
Cartons per Layer	9	9	9	9	9

¹ Not all drives may be available in all countries. Seagate Secure drives meet ISO/IEC 27040 and NIST 800-88 standards and may require use of TCG-compliant host or controller support.

² All performance measured at queue depth of 32 per PHY at beginning of life. System application performance may vary based on SAS host and prior system workload.

³ 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 (SAS models).



Specifications	Nytro 3532 — Mixed Workloads			
Capacity	6.4TB	3.2TB	1.6TB	800GB
Standard Model	XS6400LE70084	XS3200LE70084	XS1600LE70084	XS800LE70084
Seagate Secure™ SED Model ¹	XS6400LE70094	XS3200LE70094	XS1600LE70094	XS800LE70094
Seagate Secure FIPS 140-2/Common Criteria Model ¹	—	XS3200LE70104	XS1600LE70104	XS800LE70104
Seagate Instant Secure Erase (ISE) Model	XS6400LE70114	XS3200LE70114	XS1600LE70114	XS800LE70114
Features				
Interface (Dual Port)	SAS 12 Gb/s	SAS 12 Gb/s	SAS 12 Gb/s	SAS 12 Gb/s
NAND Flash Type	3D eTLC	3D eTLC	3D eTLC	3D eTLC
Form Factor	2.5 in x 15 mm	2.5 in x 15 mm	2.5 in x 15 mm	2.5 in x 15 mm
Performance — Single Port 12 Gb/s				
Sequential Read (MB/s) Sustained, 128 KB ²	1,100	1,100	1,100	1,100
Sequential Write (MB/s) Sustained, 128 KB ²	1,000	1,000	1,000	950
Random Read (IOPS) Sustained, 4 KB ²	170,000	180,000	180,000	170,000
Random Write (IOPS) Sustained, 4 KB ²	120,000	130,000	130,000	120,000
Random 30% Write (IOPS) Sustained, 4 KB ²	170,000	170,000	170,000	150,000
Performance — Dual Port 12 Gb/s				
Sequential Read (MB/s) Sustained, 128 KB ²	2,200	2,200	2,200	2,150
Sequential Write (MB/s) Sustained, 128 KB ²	1,650	1,650	1,650	1,300
Random Read (IOPS) Sustained, 4 KB ²	240,000	240,000	230,000	210,000
Random Write (IOPS) Sustained, 4 KB ²	120,000	130,000	130,000	120,000
Random 30% Write (IOPS) Sustained, 4 KB ²	220,000	220,000	220,000	170,000
Endurance/Reliability				
Lifetime Endurance (Drive Writes per Day)	3	3	3	3
Total Bytes Written (TB)	35,000	17,500	8,700	4,400
Non-recoverable Read Errors per Bits Read	1 per 10E17	1 per 10E17	1 per 10E17	1 per 10E17
Mean Time Between Failures (MTBF, hrs)	2.5 Million	2.5 Million	2.5 Million	2.5 Million
Annualised Failure Rate (AFR)	0.35%	0.35%	0.35%	0.35%
Warranty, Limited (years)	5	5	5	5
Power Management				
+5/+12 V Max Start Current (A)	0.80/0.21	0.80/0.21	0.80/0.21	0.80/0.21
Average Idling Power (W)	4.6	4.6	4.6	4.6
Physical				
Height (in/mm, max) ³	0.591 in/15 mm	0.591 in/15 mm	0.591 in/15 mm	0.591 in/15 mm
Width (in/mm, max) ³	2.76 in/70.1 mm	2.76 in/70.1 mm	2.76 in/70.1 mm	2.76 in/70.1 mm
Depth (in/mm, max) ³	3.955 in/100.45 mm	3.955 in/100.45 mm	3.955 in/100.45 mm	3.955 in/100.45 mm
Weight (lb/g)	0.364 lb/165 g	0.364 lb/165 g	0.364 lb/165 g	0.364 lb/165 g
Carton Unit Quantity	10	10	10	10
Cartons per Pallet	90	90	90	90
Cartons per Layer	9	9	9	9

¹ Not all drives may be available in all countries. Seagate Secure drives meet ISO/IEC 27040 and NIST 800-88 standards and may require use of TCG-compliant host or controller support.

² All performance measured at queue depth of 32 per PHY at beginning of life. System application performance may vary based on SAS host and prior system workload.

³ 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 (SAS models).



Specifications	Nytro 3732 — Write Intensive			
Capacity	3.2TB	1.6TB	800GB	400GB
Standard Model	XS3200ME70084	XS1600ME70084	XS800ME70084	XS400ME70084
Seagate Secure™ SED Model ¹	XS3200ME70094	XS1600ME70094	XS800ME70094	XS400ME70094
Seagate Secure FIPS 140-2/Common Criteria Model ¹	XS3200ME70104	XS1600ME70104	—	—
Seagate Instant Secure Erase (ISE) Model	XS3200ME70114	XS1600ME70114	XS800ME70114	XS400ME70114
Features				
Interface (Dual Port)	SAS 12 Gb/s	SAS 12 Gb/s	SAS 12 Gb/s	SAS 12 Gb/s
NAND Flash Type	3D eTLC	3D eTLC	3D eTLC	3D eTLC
Form Factor	2.5 in x 15 mm	2.5 in x 15 mm	2.5 in x 15 mm	2.5 in x 15 mm
Performance — Single Port 12 Gb/s				
Sequential Read (MB/s) Sustained, 128 KB ²	1,100	1,100	1,100	1,100
Sequential Write (MB/s) Sustained, 128 KB ²	1,000	1,000	1,000	950
Random Read (IOPS) Sustained, 4 KB ²	170,000	180,000	180,000	170,000
Random Write (IOPS) Sustained, 4 KB ²	200,000	200,000	200,000	200,000
Random 30% Write (IOPS) Sustained, 4 KB ²	190,000	190,000	190,000	180,000
Performance — Dual Port 12 Gb/s				
Sequential Read (MB/s) Sustained, 128 KB ²	2,200	2,200	2,200	2,150
Sequential Write (MB/s) Sustained, 128 KB ²	1,650	1,650	1,650	1,300
Random Read (IOPS) Sustained, 4 KB ²	240,000	240,000	220,000	200,000
Random Write (IOPS) Sustained, 4 KB ²	200,000	200,000	200,000	200,000
Random 30% Write (IOPS) Sustained, 4 KB ²	260,000	260,000	250,000	200,000
Endurance/Reliability				
Lifetime Endurance (Drive Writes per Day)	10	10	10	10
Total Bytes Written (TB)	58,400	29,200	14,600	7,300
Non-recoverable Read Errors per Bits Read	1 per 10E17	1 per 10E17	1 per 10E17	1 per 10E17
Mean Time Between Failures (MTBF, hrs)	2.5 Million	2.5 Million	2.5 Million	2.5 Million
Annualised Failure Rate (AFR)	0.35%	0.35%	0.35%	0.35%
Warranty, Limited (years)	5	5	5	5
Power Management				
+5/+12 V Max Start Current (A)	0.80/0.21	0.80/0.21	0.80/0.21	0.80/0.21
Average Idling Power (W)	4.6	4.6	4.6	4.6
Physical				
Height (in/mm, max) ³	0.591 in/15 mm	0.591 in/15 mm	0.591 in/15 mm	0.591 in/15 mm
Width (in/mm, max) ³	2.76 in/70.1 mm	2.76 in/70.1 mm	2.76 in/70.1 mm	2.76 in/70.1 mm
Depth (in/mm, max) ³	3.955 in/100.45 mm	3.955 in/100.45 mm	3.955 in/100.45 mm	3.955 in/100.45 mm
Weight (lb/g)	0.364 lb/165 g	0.364 lb/165 g	0.364 lb/165 g	0.364 lb/165 g
Carton Unit Quantity	10	10	10	10
Cartons per Pallet	90	90	90	90
Cartons per Layer	9	9	9	9

¹ Not all drives may be available in all countries. Seagate Secure drives meet ISO/IEC 27040 and NIST 800-88 standards and may require use of TCG-compliant host or controller support.

² All performance measured at queue depth of 32 per PHY at beginning of life. System application performance may vary based on SAS host and prior system workload.

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