



2.5-in SSD DATA SHEET

Built for Fast Data Center Applications Nytro 3000 SAS SSD Series

The Seagate® Nytro® 3050 SAS SSDs delivers up to 15TB in a 2.5-in × 15mm form factor, a 12Gb/s interface with dual ports for speeds up to 2200MB/s, drive monitoring, government-grade encryption, and up to 10 DWPD for fast, scalable, secure performance for demanding enterprise workloads.



Best-Fit Applications

- Server virtualization
- OLTP databases
- Software-defined storage
- All-flash arrays
- Caching and tiering



Key Advantages

12Gb/s SAS interface and dual ports for 24×7 performance

High-density capacities of up to 15TB in a 2.5-in × 15mm form factor

Low latency and high QoS for better responsiveness and user experience

Easily manage and monitor SSD health with SeaChest

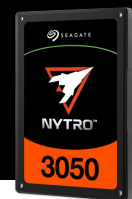
Three endurance options to meet workload, deployment, and TCO demands

Ensures reliable data protection for mission-critical applications

Seagate Secure™ with Secure Download and Diagnostics (SD&D), SED, and SED FIPS 140-2 options for advanced data security¹

Built for easy integration with Linux and Microsoft OS

¹ Self-encrypting drives (SED) are not available in all models or countries. May require TCG-compliant host or controller support.

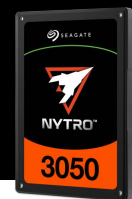


Specifications	Nytro 3350—Scaled Endurance				
Capacity	15.36TB	7.68TB	3.84TB	1.92TB	960GB
Standard Model	XS15360SE70045	XS7680SE70045	XS3840SE70045	XS1920SE70045	XS960SE70045
Standard Seagate Secure SED Model ¹	XS15360SE70055	XS7680SE70055	XS3840SE70055	XS1920SE70055	XS960SE70055
Seagate Secure FIPS 140-2/Common Criteria Mode ¹	XS15360SE70065	XS7680SE70065	XS3840SE70065	XS1920SE70065	XS960SE70065
Seagate Instant Secure Erase (ISE) Model	XS15360SE70075	XS7680SE70075	XS3840SE70075	XS1920SE70075	XS960SE70075
Features					
Interface (Dual Port)	12 Gb/s SAS	12 Gb/s SAS	12 Gb/s SAS	12 Gb/s SAS	12 Gb/s SAS
NAND Flash Type	3D eTLC	3D eTLC	3D eTLC	3D eTLC	3D eTLC
Form Factor	2.5 in × 15mm	2.5 in × 15mm	2.5 in × 15mm	2.5 in × 15mm	2.5 in × 15mm
Performance—Single Port 12Gb/s					
Sequential Read (MB/s) Sustained, 128KB ²	1050	1100	1100	1100	1100
Sequential Write (MB/s) Sustained, 128KB ²	950	1050	1050	1050	1050
Random Read (IOPS) Sustained, 4KB ²	125,000	195,000	195,000	195,000	190,000
Random Write (IOPS) Sustained, 4KB ²	15,000	80,000	80,000	70,000	60,000
Random 30% Write (IOPS) Sustained, 4KB ²	60,000	150,000	150,000	135,000	115,000
Performance—Dual Port 12Gb/s					
Sequential Read (MB/s) Sustained, 128KB ²	2100	2200	2200	2200	2150
Sequential Write (MB/s) Sustained, 128KB ²	1100	1800	1800	1550	1300
Random Read (IOPS) Sustained, 4KB ²	165,000	250,000	250,000	250,000	250,000
Random Write (IOPS) Sustained, 4KB ²	20,000	80,000	80,000	70,000	60,000
Random 30% Write (IOPS) Sustained, 4KB ²	60,000	170,000	170,000	160,000	130,000
Endurance/Reliability					
Lifetime Endurance (Drive Writes per Day)	1.0	1.0	1.0	1.0	1.0
Total Bytes Written (TB)	28,000	14,000	7000	3500	1700
Nonrecoverable 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
Annualized Failure Rate (AFR)	0.35%	0.35%	0.35%	0.35%	0.35%
Limited Warranty (years)	5	5	5	5	5
Power Management					
+5/+12V Max Start Current (A)	0.75/0.24	0.80/0.26	0.72/0.23	0.74/0.2	0.76/0.27
Average Idle Power (W)	4.6	4.6	4.6	4.6	4.6
Physical					
Height (in/mm, max) ³	0.591/15.00	0.591/15.00	0.591/15.00	0.591/15.00	0.591/15.00
Width (in/mm, max) ³	2.760/70.10	2.760/70.10	2.760/70.10	2.760/70.10	2.760/70.10
Depth (in/mm, max) ³	3.955/100.45	3.955/100.45	3.955/100.45	3.955/100.45	3.955/100.45
Weight (lb/gm)	0.3638/165	0.3638/165	0.3638/165	0.3638/165	0.3638/165
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).

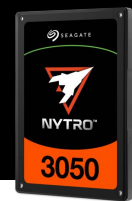


Specifications	Nytro 3550—Mixed Workloads			
Capacity	6.4TB	3.2TB	1.6TB	800GB
Standard Model	XS6400LE70045	XS3200LE70045	XS1600LE70045	XS800LE70045
Standard Seagate Secure SED Model ¹	XS6400LE70055	XS3200LE70055	XS1600LE70055	XS800LE70055
Seagate Secure FIPS 140-2/Common Criteria Mode ¹	XS6400LE70065	XS3200LE70065	XS1600LE70065	XS800LE70065
Seagate Instant Secure Erase (ISE) Model	XS6400LE70075	XS3200LE70075	XS1600LE70075	XS800LE70075
Features				
Interface (Dual Port)	12 Gb/s SAS	12 Gb/s SAS	12 Gb/s SAS	12 Gb/s SAS
NAND Flash Type	3D eTLC	3D eTLC	3D eTLC	3D eTLC
Form Factor	2.5 in × 15mm	2.5 in × 15mm	2.5 in × 15mm	2.5 in × 15mm
Performance—Single Port 12Gb/s				
Sequential Read (MB/s) Sustained, 128KB ²	1100	1100	1100	1100
Sequential Write (MB/s) Sustained, 128KB ²	1050	1050	1050	1050
Random Read (IOPS) Sustained, 4KB ²	195,000	195,000	195,000	190,000
Random Write (IOPS) Sustained, 4KB ²	130,000	130,000	130,000	105,000
Random 30% Write (IOPS) Sustained, 4KB ²	175,000	175,000	165,000	135,000
Performance—Dual Port 12Gb/s				
Sequential Read (MB/s) Sustained, 128KB ²	2200	2200	2200	2150
Sequential Write (MB/s) Sustained, 128KB ²	1800	1800	1700	1300
Random Read (IOPS) Sustained, 4KB ²	250,000	250,000	250,000	250,000
Random Write (IOPS) Sustained, 4KB ²	135,000	130,000	130,000	105,000
Random 30% Write (IOPS) Sustained, 4KB ²	220,000	220,000	220,000	160,000
Endurance/Reliability				
Lifetime Endurance (Drive Writes per Day)	3.0	3.0	3.0	3.0
Total Bytes Written (TB)	35,000	17,500	8,700	4,400
Nonrecoverable 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
Annualized Failure Rate (AFR)	0.35%	0.35%	0.35%	0.35%
Limited Warranty (years)	5	5	5	5
Power Management				
+5/+12V Max Start Current (A)	0.81/0.23	0.75/0.26	0.78/0.24	0.76/0.25
Average Idle Power (W)	4.6	4.6	4.6	4.6
Physical				
Height (in/mm, max) ³	0.591/15.00	0.591/15.00	0.591/15.00	0.591/15.00
Width (in/mm, max) ³	2.760/70.10	2.760/70.10	2.760/70.10	2.760/70.10
Depth (in/mm, max) ³	3.955/100.45	3.955/100.45	3.955/100.45	3.955/100.45
Weight (lb/gm)	0.3638/165	0.3638/165	0.3638/165	0.3638/165
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 3750—Write Intensive			
Capacity	3.2TB	1.6TB	800GB	400GB
Standard Model	XS3200ME70045	XS1600ME70045	XS800ME70045	XS400ME70045
Standard Seagate Secure SED Model ¹	XS3200ME70055	XS1600ME70055	XS800ME70055	XS400ME70055
Seagate Secure FIPS 140-2/Common Criteria Mode ¹	XS3200ME70065	XS1600ME70065	XS800ME70065	XS400ME70065
Seagate Instant Secure Erase (ISE) Model	XS3200ME70075	XS1600ME70075	XS800ME70075	XS400ME70075
Features				
Interface (Dual Port)	12 Gb/s SAS	12 Gb/s SAS	12 Gb/s SAS	12 Gb/s SAS
NAND Flash Type	3D eTLC	3D eTLC	3D eTLC	3D eTLC
Form Factor	2.5 in × 15mm	2.5 in × 15mm	2.5 in × 15mm	2.5 in × 15mm
Performance—Single Port 12Gb/s				
Sequential Read (MB/s) Sustained, 128KB ²	1100	1100	1100	1100
Sequential Write (MB/s) Sustained, 128KB ²	1050	1050	1050	1050
Random Read (IOPS) Sustained, 4KB ²	195,000	195,000	195,000	190,000
Random Write (IOPS) Sustained, 4KB ²	200,000	200,000	200,000	160,000
Random 30% Write (IOPS) Sustained, 4KB ²	200,000	200,000	200,000	160,000
Performance—Dual Port 12Gb/s				
Sequential Read (MB/s) Sustained, 128KB ²	2200	1400	2200	2150
Sequential Write (MB/s) Sustained, 128KB ²	1800	1800	1700	1300
Random Read (IOPS) Sustained, 4KB ²	250,000	250,000	250,000	250,000
Random Write (IOPS) Sustained, 4KB ²	210,000	210,000	220,000	180,000
Random 30% Write (IOPS) Sustained, 4KB ²	250,000	250,000	240,000	190,000
Endurance/Reliability				
Lifetime Endurance (Drive Writes per Day)	10.0	10.0	10.0	10.0
Total Bytes Written (TB)	58,400	29,200	14,600	7300
Nonrecoverable 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
Annualized Failure Rate (AFR)	0.35%	0.35%	0.35%	0.35%
Limited Warranty (years)	5	5	5	5
Power Management				
+5/+12V Max Start Current (A)	0.81/0.26	0.74/0.25	0.75/0.23	0.73/0.23
Average Idle Power (W)	4.6	4.6	4.6	4.6
Physical				
Height (in/mm, max) ³	0.591/15.00	0.591/15.00	0.591/15.00	0.591/15.00
Width (in/mm, max) ³	2.760/70.10	2.760/70.10	2.760/70.10	2.760/70.10
Depth (in/mm, max) ³	3.955/100.45	3.955/100.45	3.955/100.45	3.955/100.45
Weight (lb/gm)	0.3638/165	0.3638/165	0.3638/165	0.3638/165
Carton Unit Quantity	10	10	10	10
Cartons per Pallet	90	90	90	90
Cartons per Layer	9	9	9	9

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