



DATA SHEET

Lightspeed. Solid. Impressive.

NyTRO 3000 SAS SSD



The Seagate[®] NyTRO[®] 3000 SAS SSD family includes the next generation of high-capacity, high-performance SAS SSDs designed with multiple endurance offerings optimized for demanding enterprise applications and improved TCO.



Key Features and Benefits

- Dual-port and wide-port 12Gb/s SAS interface
- Industry-leading storage density range up to 15TB
- Ultra-fast performance of up to 2100MB/s
- Endurance options for a wide range of enterprise workloads

Best-Fit Applications

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



Industry-Leading Performance up to 2100MB/s

The NyTRO 3000 SSD family delivers ultra-fast, consistent and easily scalable performance that saturates dual 12Gb/s SAS bandwidth, providing an effective 24Gb/s wide-port interface along with legacy sign and dual-port dynamic configurations. By removing the storage bottleneck, it significantly improves overall system and application responsiveness and provides consistent low-latency data access, reliably accelerating enterprise and cloud storage systems.

High-Capacity Solution With Multiple Endurance Offerings

Enterprise applications have different storage workload requirements for performance, endurance and cost. The optimal storage solution for databases or virtualization with a typically mixed read/write workload, for example, requires the highest random read/write IOPS, ultra-low latency and high endurance. Content streaming applications with highly intensive read workloads, however, demand high sequential read throughput and high storage density at the lowest cost per gigabyte. The NyTRO 3000 SSD family offers an industry-leading range of capacities up to 15TB in a 2.5-inch form factor, to increase enterprise storage density in data centers. It also enables lower TCO by offering four endurance categories to match cost and performance requirements of all enterprise workloads.

Enhanced Enterprise Reliability, Data Protection and Security

The NyTRO 3000 SSD family leverages Seagate's decades of enterprise SAS expertise to deliver the highest levels of reliability, data integrity and data security for mission-critical enterprise applications. The NyTRO 3000 SSD family helps deliver exceptional data protection and reliability by integrating full internal and external data path protection (T10 DIF), Seagate's advanced ECC algorithms, media lifecycle management, and other techniques for extending flash memory life. With advanced power-loss data protection, the NyTRO 3000 SSD maintains high data integrity to help prevent loss of user data in the event of unexpected power interruptions. The NyTRO 3000 SSD family implements security features to prevent unauthorized access to a drive and safeguards stored data with three levels of security, including Secure Downloads & Diagnostics, TCG-compliant Self-Encrypting Drive and FIPS drive.¹

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



Specifications	Nytro 3730—Mainstream Endurance			
Capacity	3.2TB	1.6TB	800GB	400GB
Standard Model Number ¹	XS3200ME70003	XS1600ME10003	XS800ME10003	XS400ME10003
Seagate Secure™ SED Model ^{1,2}	XS3200ME70013	XS1600ME10013	XS800ME10013	XS400ME10013
Seagate Secure FIPS 140-2 Model ^{1,2}	XS3200ME70023	XS1600ME10023	XS800ME10023	XS400ME10023
Interface	Dual 12Gb/s SAS	Dual 12Gb/s SAS	Dual 12Gb/s SAS	Dual 12Gb/s SAS
NAND Flash Type	3D eMLC	3D eMLC	3D eMLC	3D eMLC
Form Factor	2.5 in × 15mm	2.5 in × 7mm	2.5 in × 7mm	2.5 in × 7mm
Performance at Max Power Limit				
Sequential Read (MB/s) Sustained, 128KB ^{3,4}	2100	2100	2100	2100
Sequential Write (MB/s) Sustained, 128KB ^{3,4}	2000	2000	2000	2000
Random Read (IOPS) Sustained, 4KB ^{3,4}	400,000	400,000	400,000	345,000
Random Write (IOPS) Sustained, 4KB ^{3,4}	260,000	235,000	170,000	120,000
Random 30% Write (IOPS) Sustained, 4KB ^{3,4}	290,000	290,000	290,000	255,000
Performance at 9W Power Limit				
Sequential Read (MB/s) Sustained, 128KB ^{3,4}	2100	2100	2100	2100
Sequential Write (MB/s) Sustained, 128KB ^{3,4}	1260	1260	1260	1220
Random Read (IOPS) Sustained, 4KB ^{3,4}	375,000	375,000	375,000	345,000
Random Write (IOPS) Sustained, 4KB ^{3,4}	175,000	185,000	170,000	120,000
Random 30% Write (IOPS) Sustained, 4KB ^{3,4}	270,000	270,000	270,000	225,000
Average Latency (µs) ³	85	85	85	85
Endurance/Reliability				
Lifetime Endurance (Drive Writes per Day)	10.0	10.0	10.0	10.0
Nonrecoverable Read Errors per Bits Read	1 per 10E18	1 per 10E18	1 per 10E18	1 per 10E18
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)	0.44/0.47	0.44/0.42	0.44/0.41	0.44/0.41
Configurable Power Limit Settings (W)	7 to 14	7 to 14	7 to 14	7 to 14
Average Idle Power (W)	3.0	3.0	3.0	3.0
Physical				
Height (mm/in, max) ⁵	15.0mm/0.591in	7.0mm/0.276in	7.00mm/0.276in	7.0mm/0.276in
Width (mm/in, max) ⁵	70.10mm/2.760in	70.10mm/2.760in	70.10mm/2.760in	70.10mm/2.760in
Depth (mm/in, max) ⁵	100.45mm/3.955in	100.45mm/3.955in	100.45mm/3.955in	100.45mm/3.955in
Weight (g/lb)	165g/0.364lb	85g/0.187lb	85g/0.187lb	80g/0.176lb
Carton Unit Quantity	10	10	10	10
Cartons per Pallet/Cartons per Layer	90/9	90/9	90/9	90/9

¹ Nytro 3130—Tunable Endurance drives only: JEDEC 218 Drive Writes per Day (DWPD) endurance adjustable by modifying user capacity.

² 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.

³ Dual-port performance. 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.

⁴ Single-port performance: 1100MB/s of 64KB sequential reads and writes; 225,000 IOPS of 4KB random reads and writes

⁵ 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 3530—Light Endurance				
Capacity	6.4TB	3.2TB	1.6TB	800GB	400GB
Standard Model Number ¹	XS6400LE70003	XS3200LE10003	XS1600LE10003	XS800LE10003	XS400LE10003
Seagate Secure™ SED Model ^{1,2}	XS6400LE70013	XS3200LE10013	XS1600LE10013	XS800LE10013	XS400LE10013
Seagate Secure FIPS 140-2 Model ^{1,2}	XS6400LE70023	—	XS1600LE10023	—	—
Interface	Dual 12Gb/s SAS	Dual 12Gb/s SAS	Dual 12Gb/s SAS	Dual 12Gb/s SAS	Dual 12Gb/s SAS
NAND Flash Type	3D eMLC	3D eMLC	3D eMLC	3D eMLC	3D eMLC
Form Factor	2.5 in × 15mm	2.5 in × 7mm	2.5 in × 7mm	2.5 in × 7mm	2.5 in × 7mm
Performance at Max Power Limit					
Sequential Read (MB/s) Sustained, 128KB ^{3,4}	2100	2100	2100	2100	2100
Sequential Write (MB/s) Sustained, 128KB ^{3,4}	2000	2000	2000	1710	810
Random Read (IOPS) Sustained, 4KB ^{3,4}	400,000	400,000	400,000	400,000	245,000
Random Write (IOPS) Sustained, 4KB ^{3,4}	140,000	150,000	145,000	95,000	45,000
Random 30% Write (IOPS) Sustained, 4KB ^{3,4}	270,000	270,000	290,000	250,000	120,000
Performance at 9W Power Limit					
Sequential Read (MB/s) Sustained, 128KB ^{3,4}	2100	2100	2100	2100	2100
Sequential Write (MB/s) Sustained, 128KB ^{3,4}	1260	1260	1260	1260	810
Random Read (IOPS) Sustained, 4KB ^{3,4}	375,000	375,000	375,000	375,000	245,000
Random Write (IOPS) Sustained, 4KB ^{3,4}	80,000	80,000	115,000	95,000	45,000
Random 30% Write (IOPS) Sustained, 4KB ^{3,4}	175,000	175,000	225,000	225,000	120,000
Average Latency (µs) ³	85	85	85	85	85
Endurance/Reliability					
Lifetime Endurance (Drive Writes per Day)	3.0	3.0	3.0	3.0	3.0
Nonrecoverable Read Errors per Bits Read	1 per 10E18	1 per 10E18	1 per 10E18	1 per 10E18	1 per 10E18
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)	0.44/0.47	0.44/0.47	0.44/0.42	0.44/0.41	0.44/0.41
Configurable Power Limit Settings (W)	7 to 14	7 to 14	7 to 14	7 to 14	7 to 14
Average Idle Power (W)	3.0	3.0	3.0	3.0	3.0
Physical					
Height (mm/in, max) ⁵	15.00mm/0.591in	7.00mm/0.276in	7.0mm/0.276in	7.0mm/0.276in	7.0mm/0.276in
Width (mm/in, max) ⁵	70.10mm/2.760in	70.10mm/2.760in	70.10mm/2.760in	70.10mm/2.760in	70.10mm/2.760in
Depth (mm/in, max) ⁵	100.45mm/3.955in	100.45mm/3.955in	100.45mm/3.955in	100.45mm/3.955in	100.45mm/3.955in
Weight (g/lb)	165g/0.364lb	85g/0.187lb	85g/0.187lb	85g/0.187lb	80g/0.176lb
Carton Unit Quantity	10	10	10	10	10
Cartons per Pallet/Cartons per Layer	90/9	90/9	90/9	90/9	90/9

1 Nytro 3130—Tunable Endurance drives only: JEDEC 218 Drive Writes per Day (DWPD) endurance adjustable by modifying user capacity.

2 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.

3 Dual-port performance. 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.

4 Single-port performance: 1100MB/s of 64KB sequential reads and writes; 225,000 IOPS of 4KB random reads and writes

5 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 3330—Scaled Endurance				
Capacity	15.36TB	7.68TB	3.84TB	1.92TB	960GB
Standard Model Number ¹	XS15360SE70103	XS7680SE70103	XS3840SE10103	XS1920SE10103	XS960SE10003
Seagate Secure™ SED Model ^{1,2}	XS15360SE70113	XS7680SE70113	XS3840SE10113	XS1920SE10113	XS960SE10013
Seagate Secure FIPS 140-2 Model ^{1,2}	—	—	—	XS1920SE10123	—
Interface	Dual 12Gb/s SAS	Dual 12Gb/s SAS	Dual 12Gb/s SAS	Dual 12Gb/s SAS	Dual 12Gb/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 × 7mm	2.5 in × 7mm	2.5 in × 7mm
Performance at Max Power Limit					
Sequential Read (MB/s) Sustained, 128KB ^{3,4}	2100	2100	2100	2100	2100
Sequential Write (MB/s) Sustained, 128KB ^{3,4}	1690	1850	1720	1200	640
Random Read (IOPS) Sustained, 4KB ^{3,4}	260,000	400,000	400,000	375,000	245,000
Random Write (IOPS) Sustained, 4KB ^{3,4}	60,000	115,000	115,000	70,000	35,000
Random 30% Write (IOPS) Sustained, 4KB ^{3,4}	150,000	230,000	230,000	185,000	95,000
Performance at 9W Power Limit					
Sequential Read (MB/s) Sustained, 128KB ^{3,4}	2100	2100	2100	2100	2100
Sequential Write (MB/s) Sustained, 128KB ^{3,4}	990	990	990	990	650
Random Read (IOPS) Sustained, 4KB ^{3,4}	260,000	275,000	275,000	275,000	245,000
Random Write (IOPS) Sustained, 4KB ^{3,4}	45,000	55,000	55,000	55,000	35,000
Random 30% Write (IOPS) Sustained, 4KB ^{3,4}	105,000	125,000	125,000	125,000	95,000
Average Latency (µs) ³	120	120	120	120	120
Endurance/Reliability					
Lifetime Endurance (Drive Writes per Day)	1.0	1.0	1.0	1.0	1.0
Nonrecoverable Read Errors per Bits Read	1 per 10E18	1 per 10E18	1 per 10E18	1 per 10E18	1 per 10E18
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)	0.44/0.47	0.44/0.47	0.44/0.42	0.44/0.41	0.44/0.41
Configurable Power Limit Settings (W)	7 to 14	7 to 14	7 to 14	7 to 14	7 to 14
Average Idle Power (W)	3.0	3.0	3.0	3.0	3.0
Physical					
Height (mm/in, max) ⁵	15.00mm/0.591in	15.00mm/0.591in	7.00mm/0.276in	7.00mm/0.276in	7.00mm/0.276in
Width (mm/in, max) ⁵	70.10mm/2.760in	70.10mm/2.760in	70.10mm/2.760in	70.10mm/2.760in	70.10mm/2.760in
Depth (mm/in, max) ⁵	100.45mm/3.955in	100.45mm/3.955in	100.45mm/3.955in	100.45mm/3.955in	100.45mm/3.955in
Weight (g/lb)	165g/0.364lb	165g/0.364lb	85g/0.187lb	80g/0.176lb	80g/0.176lb
Carton Unit Quantity	10	10	10	10	10
Cartons per Pallet/Cartons per Layer	90/9	90/9	90/9	90/9	90/9

1 Nytro 3130—Tunable Endurance drives only; JEDEC 218 Drive Writes per Day (DWPD) endurance adjustable by modifying user capacity.

2 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.

3 Dual-port performance. 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.

4 Single-port performance: 1100MB/s of 64KB sequential reads and writes; 225,000 IOPS of 4KB random reads and writes

5 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 3130—Tunable Endurance		
Capacity	15.36TB	7.68TB	3.84TB
Standard Model Number ¹	XS15360TE70003	XS7680TE70003	XS3840TE10003
Seagate Secure™ SED Model ^{1,2}	XS15360TE70013	XS7680TE70013	XS3840TE10013
Seagate Secure FIPS 140-2 Model ^{1,2}	XS15360TE70023	XS7680TE70023	XS3840TE10023
Interface	Dual 12Gb/s SAS	Dual 12Gb/s SAS	Dual 12Gb/s SAS
NAND Flash Type	3D eTLC	3D eTLC	3D eTLC
Form Factor	2.5 in × 15mm	2.5 in × 15mm	2.5 in × 7mm
Performance at Max Power Limit			
Sequential Read (MB/s) Sustained, 128KB ^{3,4}	2100	2100	2100
Sequential Write (MB/s) Sustained, 128KB ^{3,4}	1780	1850	1700
Random Read (IOPS) Sustained, 4KB ^{3,4}	260,000	400,000	400,000
Random Write (IOPS) Sustained, 4KB ^{3,4}	30,000	70,000	60,000
Random 30% Write (IOPS) Sustained, 4KB ^{3,4}	90,000	170,000	150,000
Performance at 9W Power Limit			
Sequential Read (MB/s) Sustained, 128KB ^{3,4}	2100	2100	2100
Sequential Write (MB/s) Sustained, 128KB ^{3,4}	990	990	990
Random Read (IOPS) Sustained, 4KB ^{3,4}	260,000	275,000	275,000
Random Write (IOPS) Sustained, 4KB ^{3,4}	15,000	30,000	30,000
Random 30% Write (IOPS) Sustained, 4KB ^{3,4}	45,000	80,000	80,000
Average Latency (µs) ³	120	120	120
Endurance/Reliability			
Lifetime Endurance (Drive Writes per Day)	0.25	0.25	0.25
Nonrecoverable Read Errors per Bits Read	1 per 10E18	1 per 10E18	1 per 10E18
Annualized Failure Rate (AFR)	0.35%	0.35%	0.35%
Limited Warranty (years)	5	5	5
Power Management			
+5/+12V Max Start Current (A)	0.44/0.47	0.44/0.47	0.44/0.42
Configurable Power Limit Settings (W)	7 to 14	7 to 14	7 to 14
Average Idle Power (W)	3.0	3.0	3.0
Physical			
Height (mm/in, max) ⁵	15.00mm/0.591in	15.00mm/0.591in	7.00mm/0.276in
Width (mm/in, max) ⁵	70.10mm/2.760in	70.10mm/2.760in	70.10mm/2.760in
Depth (mm/in, max) ⁵	100.45mm/3.955in	100.45mm/3.955in	100.45mm/3.955in
Weight (g/lb)	165g/0.364lb	165g/0.364lb	85g/0.187lb
Carton Unit Quantity	10	10	10
Cartons per Pallet/Cartons per Layer	90/9	90/9	90/9

¹ Nytro 3130—Tunable Endurance drives only: JEDEC 218 Drive Writes per Day (DWPD) endurance adjustable by modifying user capacity.

² 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.

³ Dual-port performance. 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.

⁴ Single-port performance: 1100MB/s of 64KB sequential reads and writes; 225,000 IOPS of 4KB random reads and writes

⁵ 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).

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