DATA SHEET

Lightspeed. Solid. Impressive.

Nytro 3000 SAS SSD Series

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

Key Features and Benefits

- Dual-port 12Gb/s SAS interface
- Industry-leading storage density range up to 15TB
- Ultra-fast performance of up to 2100MB/s

Best-Fit Applications

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

SEAGATE SECURE

Enhanced Reliability, Data Protection, and Security

Seagate has decades of enterprise SAS expertise in mission-critical applications. The Nytro 3000 SSD Series helps deliver exceptional data protection and reliability with full internal and external data path protection (T10 DIF), advanced ECC algorithms, media lifecycle management, and other techniques for extending flash memory life. Advanced power-loss data protection helps maintain data integrity in the event of unexpected power interruptions. Advanced security levels to prevent unauthorized access to an SSD and safeguard stored data include Seagate Downloads & Diagnostics, TCG-compliant Self-Encrypting Drive and government-grade FIPS/Common Criteria tamper-resistent drive.[1]

Industry-Leading Performance up to 2100MB/s

The Nytro 3000 SSD Series delivers ultra-fast, consistent, and easily scalable performance that saturates dual 12Gb/s SAS bandwidth, providing an effective 24Gb/s interface with dual-port dynamic configurations. By removing the storage bottleneck, overall system and application responsiveness is significantly improved.

High-Capacity Solution With Multiple Endurance Offerings

Enterprise applications have different storage workload requirements. Databases or virtualization with a typically mixed read/write workload require the highest random read/write IOPS, ultra-low latency, and high endurance. Content streaming applications demand high sequential read throughput and high storage density at the lowest cost per gigabyte. The Nytro 3000 SSD Series 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 endurance categories to match cost and performance requirements of all enterprise workloads.

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

NYTRO™ ENTERPRISE

Specifications	Nytro 3530—Light Endurance			
Capacity	3.2TB	1.6TB	800GB	400GB
Standard Model Number	XS3200LE10003	XS1600LE10003	XS800LE10003	XS400LE10003
Seagate Secure™ SED Model[1]	XS3200LE10013	XS1600LE10013	XS800LE10013	XS400LE10013
Seagate Secure FIPS 140-2/Common Criteria Model[1]	—	XS1600LE10023	—	—
Features				
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 × 7mm	2.5 in × 7mm	2.5 in × 7mm	2.5 in × 7mm
Performance—Single Port 12Gb\s				
Sequential Read (MB/s) Sustained, 128KB[2]	1100	1100	1100	1100
Sequential Write (MB/s) Sustained, 128KB[2]	970	970	910	800
Random Read (IOPS) Sustained, 4KB[2]	200,000	200,000	200,000	135,000
Random Write (IOPS) Sustained, 4KB[2]	60,000	80,000	80,000	45,000
Random 30% Write (IOPS) Sustained, 4KB[2]	160,000	180,000	170,000	85,000
Performance—Dual Port 12Gb\s				
Sequential Read (MB/s) Sustained, 128KB[2]	2100	2100	2100	2000
Sequential Write (MB/s) Sustained, 128KB[2]	1400	1400	1200	810
Random Read (IOPS) Sustained, 4KB[2]	240,000	240,000	230,000	135,000
Random Write (IOPS) Sustained, 4KB[2]	60,000	80,000	80,000	45,000
Random 30% Write (IOPS) Sustained, 4KB[2]	160,000	180,000	170,000	85,000
Endurance/Reliability				
Lifetime Endurance (Drive Writes per Day)	3.0	3.0	3.0	3.0
Total Bytes Written (TB)	17,500	8,700	4,300	2,100
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)	0.80/0.21	0.80/0.21	0.80/0.21	0.80/0.21
Average Idle Power (W)	4.4	4.4	4.4	4.4
Physical				
Height (mm/in, max)[3]	7.00mm/0.276in	7.0mm/0.276in	7.0mm/0.276in	7.0mm/0.276in
Width (mm/in, max)[3]	70.10mm/2.760in	70.10mm/2.760in	70.10mm/2.760in	70.10mm/2.760in
Depth (mm/in, max)[3]	100.45mm/3.955in	100.45mm/3.955in	100.45mm/3.955in	100.45mm/3.955in
Weight (g/lb)	85g/0.187lb	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 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).

NYTRO™ ENTERPRISE

Specifications	Nytro 3330—Scaled Endurance				
Capacity	15.36TB	7.68TB	3.84TB	1.92TB	960GB
Standard Model Number	XS15360SE70103	XS7680SE70103	XS3840SE10103	XS1920SE10103	XS960SE10003
Seagate Secure™ SED Model[1]	XS15360SE70113	XS7680SE70113	XS3840SE10113	XS1920SE10113	XS960SE10013
Seagate Secure FIPS 140-2/Common Criteria Model[1]	XS15360SE70143	—	—	XS1920SE10123	—
Features					
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—Single Port 12Gb\s					
Sequential Read (MB/s) Sustained, 128KB[2]	860	1000	1100	1100	1100
Sequential Write (MB/s) Sustained, 128KB[2]	920	980	930	810	860
Random Read (IOPS) Sustained, 4KB[2]	102,000	180,000	180,000	180,000	150,000
Random Write (IOPS) Sustained, 4KB[2]	15,000	55,000	50,000	40,000	28,000
Random 30% Write (IOPS) Sustained, 4KB[2]	46,000	150,000	130,000	105,000	72,000
Performance—Dual Port 12Gb\s					
Sequential Read (MB/s) Sustained, 128KB[2]	1300	1800	2100	2100	2100
Sequential Write (MB/s) Sustained, 128KB[2]	1000	1100	1100	900	870
Random Read (IOPS) Sustained, 4KB[2]	102,000	240,000	240,000	240,000	150,000
Random Write (IOPS) Sustained, 4KB[2]	15,000	55,000	50,000	40,000	28,000
Random 30% Write (IOPS) Sustained, 4KB[2]	46,000	150,000	130,000	105,000	72,000
Endurance/Reliability					
Lifetime Endurance (Drive Writes per Day)	1.0	1.0	1.0	1.0	1.0
Total Bytes Written (TB)	27,000	13,600	6,800	3,400	1,700
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)	0.80/0.21	0.80/0.21	0.80/0.21	0.80/0.21	0.80/0.21
Average Idle Power (W)	4.4	4.4	4.4	4.4	4.4
Physical					
Height (mm/in, max)[3]	15.00mm/0.591in	15.00mm/0.591in	7.00mm/0.276in	7.00mm/0.276in	7.00mm/0.276in
Width (mm/in, max)[3]	70.10mm/2.760in	70.10mm/2.760in	70.10mm/2.760in	70.10mm/2.760in	70.10mm/2.760in
Depth (mm/in, max)[3]	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 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.

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