



DATA SHEET

Lightspeed. Solid. Impressive.

Nytro 1000 SSD Series

The Seagate[®] Nytro[®] 1000 SATA SSD Series is a cost-effective, enterprise-grade solution for data center and cloud server applications. It is designed to deliver high, sustained, and consistent performance for improved QoS and enhanced user experience.





Key Features and Benefits

- SATA 6Gb/s interface for easy deployment
- Seagate DuraWrite[™] lossless datareduction technology
- Tunable capacity for performanceor capacity-optimised SSD solutions
- Seagate Secure options
- Power loss data protection circuit
- Enterprise-class reliability with 2Mhr. MTBF and a 5-year limited warranty

Best-Fit Applications

- Public and private cloud
- Web servers
- Tiered storage analytics
- Databases (OLTP)

SSDs with the SATA storage interface meet the high performance and reliability requirements without disrupting legacy storage infrastructures or involving additional investments in software and hardware.

Optimised for Performance, Integration and Cost

Boost the performance of applications that require faster random access performance

Maintain fast, consistent performance for read-intensive and mixed workloads

Take advantage of easy deployment and more processing power without investment in new hardware

Require less energy to run 24×7, and save on cooling and overall energy cost

Wide Range of Storage and Security Options

Receive endurance, security, and capacity options for enterprise applications

Choose the capacity and endurance to fit a range of application and workload needs

Achieve peace of mind through Seagate Secure [™] data protection

Enterprise-Grade Feature Set

Maintain high data integrity in the event of unexpected power loss

Leverage Seagate's reliability and system compatibility test infrastructure

Attain end-to-end data protection with Seagate SHIELD $^{\text{TM}}$ and Seagate RAISE technologies









Specifications	Nytro 1351 SATA SSD — Light Endurance							
Capacity	3.84TB	1.92TB	960GB	480GB	240GB			
Standard Model	XA3840LE10063	XA1920LE10063	XA960LE10063	XA480LE10063	XA240LE10003			
Seagate Secure [™] SED Model (TCG Enterprise)	XA3840LE10083	XA1920LE10083	XA960LE10083	XA480LE10083	XA240LE10023			
Seagate Secure SED Model (TCG OPAL) ¹	XA3840LE10103	XA1920LE10103	XA960LE10103	XA480LE10103	XA240LE10043			
Features								
Interface	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s			
NAND Flash Type	3D TLC	3D TLC	3D TLC	3D TLC	3D TLC			
Form Factor	2.5 in × 7mm	2.5 in × 7mm	2.5 in × 7mm	2.5 in × 7mm	2.5 in × 7 mm, 2.5 in × 7mm			
Performance								
Sequential Read (MB/s) Sustained, 128KB QD32 ^{2,3,4}	564	564	564	564	564			
Sequential Write (MB/s) Sustained, 128KB QD32 ^{2,3,4}	536	536	536	488	232			
Random Read (IOPS) Sustained, 4KB QD32 ^{2,3,4}	90,000	94,000	93,000	80,000	55,000			
Random R70R (IOPS) Sustained. 4KB QD32 ^{2,3,4}	46,000	47,000	40,000	29,000	18,000			
Random Write (IOPS) Sustained, 4KB QD32 ^{2,3,4}	22,000	23,000	22,000	16,000	8,000			
Average Read Latency (µs), 4KB QD1 ^{2,3,4}	172	154	153	154	154			
Average Write Latency (µs), 4KB QD1 ^{2,3,4}	58	58	58	65	124			
Endurance/Reliability								
Lifetime Endurance (Drive Writes per Day)	1	1	1	1	1			
Total Bytes Written to Flash (TB)	12,300	6,140	3,070	1,540	768			
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, hours)	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000			
Warranty, Limited (years) ⁵	5	5	5	5	5			
Power Management								
+5/+12V Overall Average Active Power (W) ⁶	3.5	3.4	3.2	2.7	2.3			
Average Idling Power (W)	1.2	1.2	1.2	1.1	1.1			
Environmental								
Temperature, Operating Internal (°C)	0°C – 70°C	0°C – 70°C	0°C – 70°C	0°C – 70°C	0°C – 70°C			
Temperature, Non-operating (°C)	-40°C - 85°C	-40°C – 85°C	-40°C - 85°C	-40°C – 85°C	-40°C – 85°C			
Temperature Change Rate/Hr, Max (°C)	20	20	20	20	20			
Shock, 0.5 ms (Gs)	1,000	1,000	1,000	1,000	1,000			
Physical								
Height (mm/in, max)	7 mm/0.276 in	7 mm/0.276 in	7 mm/0.276 in	7 mm/0.276 in	7 mm/0.276 in			
Width (mm/in, max)	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/2.76 in			
Depth (mm/in, max)	100.25 mm/3.947 in	100.25 mm/3.947 in	100.25 mm/3.947 in	100.25 mm/3.947 in	100.25 mm/3.947 in			
Weight (lb/g)	82 g/0.1808 lb	77 g/0.1698 lb	77 g/0.1698 lb	75 g/0.1653 lb	75 g/0.1653 lb			
Carton Unit Quantity	10	10	10	10	10			

¹ Windows Hardware Quality Labs (WHQL) certification for Opal configurations is not available at this time.

² Performance data is based on testing under certain workload conditions and is subject to change. Performance assumes 20% data compressibility as set with VDBench.

³ System variations and HBA used will affect measured results.

⁴ Performance varies by capacities and endurance.

⁵ Refer to Product Manual for more detailed warranty information.

^{6 3.84}TB, 1.92TB, 960GB capacity points require 12V in addition to 5V power.





Specifications	Nytro 1551 SATA SSD — Mainstream Endurance								
Capacity	3.84TB	1.92TB	960GB	480GB	240GB				
Standard Model	XA3840ME10063	XA1920ME10063	XA960ME10063	XA480ME10063	XA240ME10003				
Seagate Secure [™] SED Model (TCG Enterprise)	XA3840ME10083	XA1920ME10083	XA960ME10083	XA480ME10083	XA240ME10023				
Seagate Secure SED Model (TCG OPAL) ¹	XA3840ME10103	XA1920ME10103	XA960ME10103	XA480ME10103	XA240ME10043				
Features									
Interface	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s				
NAND Flash Type	3D TLC	3D TLC	3D TLC	3D TLC	3D TLC				
Form Factor	2.5 in × 7mm	2.5 in × 7mm	2.5 in × 7mm, 2.5 in × 7 mm	2.5 in × 7mm	2.5 in × 7mm				
Performance									
Sequential Read (MB/s) Sustained, 128KB QD32 ^{2,3,4}	564	564	564	564	564				
Sequential Write (MB/s) Sustained, 128KB QD32 ^{2,3,4}	536	537	537	536	333				
Random Read (IOPS) Sustained, 4KB QD32 ^{2,3,4}	92,000	94,000	93,000	82,000	57,000				
Random R70R (IOPS) Sustained. 4KB QD32 ^{2,3,4}	61,000	66,000	57,000	45,000	32,000				
Random Write (IOPS) Sustained, 4KB QD32 ^{2,3,4}	41,000	48,000	59,000	48,000	30,000				
Average Read Latency (µs), 4KB QD1 ^{2,3,4}	162	150	148	148	150				
Average Write Latency (µs), 4KB QD1 ^{2,3,4}	38	38	38	38	37				
Endurance/Reliability	`								
Lifetime Endurance (Drive Writes per Day)	3	3	3	3	3				
Total Bytes Written to Flash (TB)	28,700	14,300	7,170	3,580	1,790				
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, hours)	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000				
Warranty, Limited (years) ⁵	5	5	5	5	5				
Power Management									
+5/+12V Overall Average Active Power (W) ⁶	3.5	3.4	3.2	2.7	2.3				
Average Idling Power (W)	1.2	1.2	1.2	1.1	1.1				
Environmental									
Temperature, Operating Internal (°C)	0°C – 70°C	0°C – 70°C	0°C – 70°C	0°C – 70°C	0°C – 70°C				
Temperature, Non-operating (°C)	-40°C - 85°C	-40°C – 85°C	-40°C – 85°C	-40°C – 85°C	-40°C – 85°C				
Temperature Change Rate/Hr, Max (°C)	20	20	20	20	20				
Shock, 0.5 ms (Gs)	1,000	1,000	1,000	1,000	1,000				
Physical									
Height (mm/in, max)	7 mm/0.276 in	7 mm/0.276 in	7 mm/0.276 in	7 mm/0.276 in	7 mm/0.276 in				
Width (mm/in, max)	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/2.76 in				
Depth (mm/in, max)	100.25 mm/3.947 in	100.25 mm/3.947 in	100.25 mm/3.947 in	100.25 mm/3.947 in	100.25 mm/3.947 in				
Weight (lb/g)	82 g/0.1808 lb	77 g/0.1698 lb	77 g/0.1698 lb	75 g/0.1653 lb	75 g/0.1653 lb				
Carton Unit Quantity	10	10	10	10	10				

¹ Windows Hardware Quality Labs (WHQL) certification for Opal configurations is not available at this time.

seagate.com



© 2019 Seagate Technology LLC. All rights reserved. Seagate Seagate Technology, and the Spiral logo are registered trademarks of Seagate Technology LLC in the United States and/or other countries. DuraWrite, the DuraWrite logo, Nytro, Seagate Secure, the Seagate Secure logo, and Seagate SHIELD are either trademarks or registered trademarks of Seagate Technology LLC or one of its affiliated companies in the United States and/or other countries. All other trademarks or registered trademarks are the property of their respective owners. When referring to drive capacity, one gigabyte, or GB, equals one billion bytes; and one terabyte, or TB, equals one trillion bytes. Your computer's operating system may use a different standard of measurement and report a lower capacity. In addition, some of the listed capacity is used for formatting and other functions, and thus will not be available for data storage. Actual data rates may vary depending on operating environment and other factors, such as chosen interface and disk capacity. The export or re-export of Seagate hardware or software is regulated by the U.S. Department of Commerce, Bureau of Industry and Security (for more information, visit www.bis.doc.gov), and may be controlled for export, import and use in other countries. Seagate reserves the right to change, without notice, product offerings or specifications. DS1992.4-1907US July 2019

² Performance data is based on testing under certain workload conditions and is subject to change. Performance assumes 20% data compressibility as set with VDBench.

³ System variations and HBA used will affect measured results.

⁴ Performance varies by capacities and endurance.

⁵ Refer to Product Manual for more detailed warranty information.

^{6 3.84}TB, 1.92TB, 960GB capacity points require 12V in addition to 5V power.