2.5-in SSD DATA SHEET

Lightspeed. Solid. Impressive.

Consistent high performance for the modern data centre.



The Seagate® Nytro® 5050 series NVMe solid state drive represents the next generation of enterprise SSDs. Engineered for efficiency, high performance, and increased storage density in data centres, Nytro 5050 SSD eliminates performance bottlenecks and significantly improves quality of service (QoS).



Best-Fit Applications

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

Best-in-class performance — PCIe Gen4 NVMe SSD doubles the random throughput of the latest SAS SSDs, achieving over ten times the bandwidth of SATA.

Blistering 7.4 GB/s bandwidth and up to 1.7M IOPS removes data bottlenecks and provides consistent response times.

Boosted capacity in ultra-dense environments — up to 15 TB[1] supporting U.2 and U.3 interface, and dual ports support active active high availability.

Highly optimised, the Nytro 5350 withstands read-intensive workloads while the Nytro 5550 is built to endure mixed workloads.

Quintupled performance over SATA SSDs with 10x more bandwidth and IOPS over previous generations to get more computing using minimal space, energy and cost.

Low latency and high quality of service deliver improved responsiveness and enhanced user experience.

Effortless serviceability and maintenance with no downtime requirements, and hot-swap capability for easy SSD addition, removal or replacement.

Hardware-based encryption Self-Encrypting Drive (SED) models[2] support the TCG standard to help keep valuable data secure.

Operating system friendly to easily integrate with Linux and Microsoft.

Enhanced durability and reliability with 1 and 3 DWPD at 2.5M MTBF — move massive enterprise data for the long haul.

1 Available soon. For more information, contact your Seagate sales representative.

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

NYTRO™



Specifications	Nytro 5550H 15 mm — Mixed Use				
Capacity	12.8 TB	6.4 TB	3.2 TB	1.6 TB	800GB
Standard Model	XP12800LE70005	XP6400LE70005	XP3200LE70005	XP1600LE70005	XP800LE70005
SED Model[1]	XP12800LE70015	XP6400LE70015	XP3200LE70015	XP1600LE70015	XP800LE70015
FIPS 140-3/Common Criteria Model[1]	XP12800LE70025	XP6400LE70025	XP3200LE70025	XP1600LE70025	XP800LE70025
Features					
Interface (Dual Port)	PCIe® Gen4 ×4 NVMe	PCIe® Gen4 ×4 NVMe	PCIe® Gen4 ×4 NVMe	PCIe® Gen4 ×4 NVMe	PCIe® Gen4 ×4 NVMe
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					
Sequential Read (MB/s) Sustained, 128 KB[2]	7,400	7,400	7,400	7,400	7,400
Sequential Write (MB/s) Sustained, 128 KB[2]	7,200	7,200	6,900	4,300	1,900
Random Read (IOPS) Sustained, 4 KB QD64[3]	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000
Random Write (IOPS) Sustained, 4 KB QD64[3]	495,000	470,000	470,000	315,000	140,000
Average Read Latency (µs), 4 KB QD1	75	75	75	75	75
Average Write Latency (µs), 4 KB QD1	12	12	12	12	12
Endurance/Reliability					
Lifetime Endurance (Drive Writes per Day)	3	3	3	3	3
Total Bytes Written (TB)	70,000	35,000	17,500	8,700	4,300
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)	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
Limited Warranty (years)	5	5	5	5	5
Power Management					
12V Overall Average Active Power (W)	23	21	20	15	11
Average Idling Power (W)	7	6	6	6	5
Environmental					
Temperature, Operating Internal (°C)	0 to 70	0 to 70	0 to 70	0 to 70	0 to 70
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)	30	30	30	30	30
Shock, 0.5ms (Gs)	1,500	1,500	1,500	1,500	1,500
Physical					
Height (mm/in, max)	14.9 mm/0.587 in	14.9 mm/0.587 in	14.9 mm/0.587 in	14.9 mm/0.587 in	14.9 mm/0.587 in
Width (mm/in, max)	70.1 mm/2.760 in	70.1 mm/2.760 in	70.1 mm/2.760 in	70.1 mm/2.760 in	70.1 mm/2.760 in
Depth (mm/in, max)	100.4 mm/3.953 in	100.4 mm/3.953 in	100.4 mm/3.953 in	100.4 mm/3.953 in	100.4 mm/3.953 in
Weight (g/lb, max)	170g/0.38 lb	205g/0.45 lb	205g/0.45 lb	205g/0.45 lb	205g/0.45 lb
Carton Unit Quantity	10	20	20	20	20

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 Sequential performance measured at queue depth of 32 at beginning of life. System application performance may vary based on host and prior system workload.

3 Random performance measured at queue depth of 256 at beginning of life. System application performance may vary based on host and prior system workload.

NYTRO™



Specifications	Nytro 5350H 15 mm — Read Intensive			
Capacity	15.36 TB	7.68 TB	3.84 TB	1.92 TB
Standard Model	XP15360SE70005	XP7680SE70005	XP3840SE70005	XP1920SE70005
SED Model[1]	XP15360SE70015	XP7680SE70015	XP3840SE70015	XP1920SE70015
FIPS 140-3/Common Criteria Model[1]	XP15360SE70025	XP7680SE70025	XP3840SE70025	XP1920SE70025
Features				
Interface (Dual Port)	PCIe® Gen4 ×4 NVMe	PCIe® Gen4 ×4 NVMe	PCIe® Gen4 ×4 NVMe	PCIe® Gen4 ×4 NVMe
NAND Flash Type	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
Performance				
Sequential Read (MB/s) Sustained, 128 KB[2]	7,400	7,400	7,400	7,400
Sequential Write (MB/s) Sustained, 128 KB[2]	7,200	7,200	6,900	4,300
Random Read (IOPS) Sustained, 4 KB QD64[3]	1,700,000	1,700,000	1,700,000	1,700,000
Random Write (IOPS) Sustained, 4 KB QD64[3]	195,000	195,000	195,000	118,000
Average Read Latency (µs), 4 KB QD1	75	75	75	75
Average Write Latency (µs), 4 KB QD1	12	12	12	12
Endurance/Reliability				
Lifetime Endurance (Drive Writes per Day)	1	1	1	1
Total Bytes Written (TB)	28,000	14,000	7,000	3,500
Non-recoverable Read Errors per Bits Read	1 per 10E17	1 per 10E17	1 per 10E17	1 per 10E17
Mean Time Between Failures (MTBF, hours)	2,500,000	2,500,000	2,500,000	2,500,000
Limited Warranty (years)	5	5	5	5
Power Management				
12V Overall Average Active Power (W)	23	21	20	15
Average Idling Power (W)	7	6	6	6
Environmental				
Temperature, Operating Internal (°C)	0 to 70	0 to 70	0 to 70	0 to 70
Temperature, Non-operating (°C)	-40°C – 85°C	-40°C – 85°C	-40°C – 85°C	-40°C – 85°C
Temperature Change Rate/Hr, Max (°C)	30	30	30	30
Shock, 0.5ms (Gs)	1,500	1,500	1,500	1,500
Physical				
Height (mm/in, max)	14.9 mm/0.587 in	14.9 mm/0.587 in	14.9 mm/0.587 in	14.9 mm/0.587 in
Width (mm/in, max)	70.1 mm/2.760 in	70.1 mm/2.760 in	70.1 mm/2.760 in	70.1 mm/2.760 in
Depth (mm/in, max)	100.4 mm/3.953 in	100.4 mm/3.953 in	100.4 mm/3.953 in	100.4 mm/3.953 in
Weight (g/lb, max)	170g/0.38 lb	205g/0.45 lb	205g/0.45 lb	205g/0.45 lb
Carton Unit Quantity	10	20	20	20

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 Sequential performance measured at queue depth of 32 at beginning of life. System application performance may vary based on host and prior system workload.

3 Random performance measured at queue depth of 256 at beginning of life. System application performance may vary based on host and prior system workload.

NYTRO™



Specifications	Nytro 5550M 15 mm — Mixed Use				
Capacity	12.8 TB	6.4 TB	3.2 TB	1.6 TB	800GB
Standard Model	XP12800LE70035	XP6400LE70035	XP3200LE70035	XP1600LE70035	XP800LE70035
SED Model[1]	XP12800LE70045	XP6400LE70045	XP3200LE70045	XP1600LE70045	XP800LE70045
FIPS 140-3/Common Criteria Model[1]	XP12800LE70055	XP6400LE70055	XP3200LE70055	XP1600LE70055	XP800LE70055
Features					
Interface (Dual Port)	PCIe® Gen4 ×4 NVMe	PCIe® Gen4 ×4 NVMe	PCIe® Gen4 ×4 NVMe	PCIe® Gen4 ×4 NVMe	PCIe® Gen4 ×4 NVMe
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					
Sequential Read (MB/s) Sustained, 128 KB[2]	6,200	7,200	7,400	7,400	7,400
Sequential Write (MB/s) Sustained, 128 KB[2]	2,600	3,400	3,400	3,400	1,900
Random Read (IOPS) Sustained, 4 KB QD64[3]	1,000,000	1,200,000	1,150,000	1,150,000	1,000,000
Random Write (IOPS) Sustained, 4 KB QD64[3]	200,000	250,000	250,000	230,000	140,000
Average Read Latency (µs), 4 KB QD1	90	90	90	90	90
Average Write Latency (µs), 4 KB QD1	12	12	12	12	12
Endurance/Reliability					
Lifetime Endurance (Drive Writes per Day)	3	3	3	3	3
Total Bytes Written (TB)	70,000	35,000	17,500	8,700	4,300
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)	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
Limited Warranty (years)	5	5	5	5	5
Power Management					
12V Overall Average Active Power (W)	15	15	15	14	11
Average Idling Power (W)	7	6	6	6	5
Environmental					
Temperature, Operating Internal (°C)	0 to 70	0 to 70	0 to 70	0 to 70	0 to 70
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)	30	30	30	30	30
Shock, 0.5ms (Gs)	1,500	1,500	1,500	1,500	1,500
Physical					
Height (mm/in, max)	14.9 mm/0.587 in	14.9 mm/0.587 in	14.9 mm/0.587 in	14.9 mm/0.587 in	14.9 mm/0.587 in
Width (mm/in, max)	70.1 mm/2.760 in	70.1 mm/2.760 in	70.1 mm/2.760 in	70.1 mm/2.760 in	70.1 mm/2.760 in
Depth (mm/in, max)	100.4 mm/3.953 in	100.4 mm/3.953 in	100.4 mm/3.953 in	100.4 mm/3.953 in	100.4 mm/3.953 in
Weight (g/lb, max)	170g/0.38 lb	205g/0.45 lb	205g/0.45 lb	205g/0.45 lb	205g/0.45 lb
Carton Unit Quantity	10	20	20	20	20

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 Sequential performance measured at queue depth of 32 at beginning of life. System application performance may vary based on host and prior system workload.

3 Random performance measured at queue depth of 256 at beginning of life. System application performance may vary based on host and prior system workload.

NYTRO™



Specifications	Nytro 5350M 15 mm — Read Intensive			
Capacity	15.36 TB	7.68 TB	3.84 TB	1.92 TB
Standard Model	XP15360SE70035	XP7680SE70035	XP3840SE70035	XP1920SE70035
SED Model[1]	XP15360SE70045	XP7680SE70045	XP3840SE70045	XP1920SE70045
FIPS 140-3/Common Criteria Model[1]	XP15360SE70055	XP7680SE70055	XP3840SE70055	XP1920SE70055
Features				
Interface (Dual Port)	PCIe® Gen4 ×4 NVMe	PCIe® Gen4 ×4 NVMe	PCIe® Gen4 ×4 NVMe	PCIe® Gen4 ×4 NVMe
NAND Flash Type	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
Performance				
Sequential Read (MB/s) Sustained, 128 KB[2]	6,200	7,400	7,400	7,400
Sequential Write (MB/s) Sustained, 128 KB[2]	2,600	3,400	3,400	3,400
Random Read (IOPS) Sustained, 4 KB QD64[3]	1,000,000	1,200,000	1,150,000	1,150,000
Random Write (IOPS) Sustained, 4 KB QD64[3]	85,000	110,000	110,000	90,000
Average Read Latency (µs), 4 KB QD1	90	90	90	90
Average Write Latency (µs), 4 KB QD1	12	12	12	12
Endurance/Reliability				
Lifetime Endurance (Drive Writes per Day)	1	1	1	1
Total Bytes Written (TB)	28,000	14,000	7,000	3,500
Non-recoverable Read Errors per Bits Read	1 per 10E17	1 per 10E17	1 per 10E17	1 per 10E17
Mean Time Between Failures (MTBF, hours)	2,500,000	2,500,000	2,500,000	2,500,000
Limited Warranty (years)	5	5	5	5
Power Management				
12V Overall Average Active Power (W)	15	15	15	14
Average Idling Power (W)	7	6	6	6
Environmental				
Temperature, Operating Internal (°C)	0 to 70	0 to 70	0 to 70	0 to 70
Temperature, Non-operating (°C)	-40°C – 85°C	-40°C – 85°C	-40°C – 85°C	-40°C – 85°C
Temperature Change Rate/Hr, Max (°C)	30	30	30	30
Shock, 0.5ms (Gs)	1,500	1,500	1,500	1,500
Physical				
Height (mm/in, max)	14.9 mm/0.587 in	14.9 mm/0.587 in	14.9 mm/0.587 in	14.9 mm/0.587 in
Width (mm/in, max)	70.1 mm/2.760 in	70.1 mm/2.760 in	70.1 mm/2.760 in	70.1 mm/2.760 in
Depth (mm/in, max)	100.4 mm/3.953 in	100.4 mm/3.953 in	100.4 mm/3.953 in	100.4 mm/3.953 in
Weight (g/lb, max)	170g/0.38 lb	205g/0.45 lb	205g/0.45 lb	205g/0.45 lb
Carton Unit Quantity	10	20	20	20

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 Sequential performance measured at queue depth of 32 at beginning of life. System application performance may vary based on host and prior system workload.

3 Random performance measured at queue depth of 256 at beginning of life. System application performance may vary based on host and prior system workload.

NYTRO™



Specifications	Nytro 5550M 7 mm — Mixed Use			
Capacity	6.4 TB	3.2 TB	1.6 TB	800GB
Standard Model	XP6400LE10005	XP3200LE10005	XP1600LE10005	XP800LE10005
SED Model[1]	XP6400LE10015	XP3200LE10015	XP1600LE10015	XP800LE10015
FIPS 140-3/Common Criteria Model[1]	XP6400LE10025	XP3200LE10025	XP1600LE10025	XP800LE10025
Features				
Interface (Dual Port)	PCIe® Gen4 ×4 NVMe	PCIe® Gen4 ×4 NVMe	PCIe® Gen4 ×4 NVMe	PCIe® Gen4 ×4 NVMe
NAND Flash Type	3D eTLC	3D eTLC	3D eTLC	3D eTLC
Form Factor	2.5 in × 7 mm	2.5 in × 7 mm	2.5 in × 7 mm	2.5 in × 7 mm
Performance				
Sequential Read (MB/s) Sustained, 128 KB[2]	6,000	6,000	6,000	6,000
Sequential Write (MB/s) Sustained, 128 KB[2]	2,700	2,700	2,700	1,900
Random Read (IOPS) Sustained, 4 KB QD64[3]	950,000	950,000	950,000	1,000,000
Random Write (IOPS) Sustained, 4 KB QD64[3]	180,000	200,000	180,000	140,000
Average Read Latency (µs), 4 KB QD1	90	90	90	90
Average Write Latency (µs), 4 KB QD1	12	12	12	12
Endurance/Reliability				
Lifetime Endurance (Drive Writes per Day)	3	3	3	3
Total Bytes Written (TB)	35,000	17,500	8,700	4,300
Non-recoverable Read Errors per Bits Read	1 per 10E17	1 per 10E17	1 per 10E17	1 per 10E17
Mean Time Between Failures (MTBF, hours)	2,500,000	2,500,000	2,500,000	2,500,000
Limited Warranty (years)	5	5	5	5
Power Management				
12V Overall Average Active Power (W)	12.5	12.5	12.5	12.5
Average Idling Power (W)	5	5	5	5
Environmental				
Temperature, Operating Internal (°C)	0 to 70	0 to 70	0 to 70	0 to 70
Temperature, Non-operating (°C)	-40°C – 85°C	-40°C – 85°C	-40°C – 85°C	-40°C – 85°C
Temperature Change Rate/Hr, Max (°C)	30	30	30	30
Shock, 0.5ms (Gs)	1,500	1,500	1,500	1,500
Physical				
Height (mm/in, max)	7.1 mm/0.28 in	7.1 mm/0.28 in	7.1 mm/0.28 in	7.1 mm/0.28 in
Width (mm/in, max)	70.1 mm/2.760 in	70.1 mm/2.760 in	70.1 mm/2.760 in	70.1 mm/2.760 in
Depth (mm/in, max)	100.4 mm/3.953 in	100.4 mm/3.953 in	100.4 mm/3.953 in	100.4 mm/3.953 in
Weight (g/lb, max)	105g/0.23 lb	105g/0.23 lb	105g/0.23 lb	105g/0.23 lb
Carton Unit Quantity	20	20	20	20

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 Sequential performance measured at queue depth of 32 at beginning of life. System application performance may vary based on host and prior system workload.

3 Random performance measured at queue depth of 256 at beginning of life. System application performance may vary based on host and prior system workload.

NYTRO™



Specifications	Nytro 5350M 7 mm — Read Intensive		
Capacity	7.68 TB	3.84 TB	1.92 TB
Standard Model	XP7680SE10005	XP3840SE10005	XP1920SE10005
SED Model[1]	XP7680SE10015	XP3840SE10015	XP1920SE10015
FIPS 140-3/Common Criteria Model[1]	XP7680SE10025	XP3840SE10025	XP1920SE10025
Features			
Interface (Dual Port)	PCIe® Gen4 ×4 NVMe	PCIe® Gen4 ×4 NVMe	PCIe® Gen4 ×4 NVMe
NAND Flash Type	3D eTLC	3D eTLC	3D eTLC
Form Factor	2.5 in × 7 mm	2.5 in × 7 mm	2.5 in × 7 mm
Performance			
Sequential Read (MB/s) Sustained, 128 KB[2]	6,000	6,000	6,000
Sequential Write (MB/s) Sustained, 128 KB[2]	2,700	2,700	2,700
Random Read (IOPS) Sustained, 4 KB QD64[3]	950,000	950,000	950,000
Random Write (IOPS) Sustained, 4 KB QD64[3]	95,000	80,000	80,000
Average Read Latency (µs), 4 KB QD1	90	90	90
Average Write Latency (µs), 4 KB QD1	12	12	12
Endurance/Reliability			
Lifetime Endurance (Drive Writes per Day)	1	1	1
Total Bytes Written (TB)	14,000	7,000	3,500
Non-recoverable Read Errors per Bits Read	1 per 10E17	1 per 10E17	1 per 10E17
Mean Time Between Failures (MTBF, hours)	2,500,000	2,500,000	2,500,000
Limited Warranty (years)	5	5	5
Power Management			
12V Overall Average Active Power (W)	12.5	12.5	12.5
Average Idling Power (W)	5	5	5
Environmental			
Temperature, Operating Internal (°C)	0 to 70	0 to 70	0 to 70
Temperature, Non-operating (°C)	-40°C – 85°C	-40°C – 85°C	-40°C – 85°C
Temperature Change Rate/Hr, Max (°C)	30	30	30
Shock, 0.5ms (Gs)	1,500	1,500	1,500
Physical			
Height (mm/in, max)	7.1 mm/0.28 in	7.1 mm/0.28 in	7.1 mm/0.28 in
Width (mm/in, max)	70.1 mm/2.760 in	70.1 mm/2.760 in	70.1 mm/2.760 in
Depth (mm/in, max)	100.4 mm/3.953 in	100.4 mm/3.953 in	100.4 mm/3.953 in
Weight (g/lb, max)	105g/0.23 lb	105g/0.23 lb	105g/0.23 lb
Carton Unit Quantity	20	20	20

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 Sequential performance measured at queue depth of 32 at beginning of life. System application performance may vary based on host and prior system workload.

3 Random performance measured at queue depth of 256 at beginning of life. System application performance may vary based on host and prior system workload.

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