



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 TB¹ supporting U.2 and U.3 interface, and dual ports support 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) models² 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.

Available soon. For more information, contact your Seagate sales representative.
Self-Encrypting Drives (SED) are not available in all models or countries. May require TCG-compliant host or controller support.





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						
nterface (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	
werage Write Latency (µs), 4 KB QD1	12	12	12	12	12	
Endurance/Reliability						
ifetime Endurance (Drive Writes per Day)	3	3	3	3	3	
Fotal 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	
imited Warranty (years)	5	5	5	5	5	
Power Management						
2V Overall Average Active Power (W)	23	21	20	15	11	
Average Idling Power (W)	7	6	6	6	5	
Environmental						
Femperature, Operating Internal (°C)	0 to 70	0 to 70	0 to 70	0 to 70	0 to 70	
emperature, Non-operating (°C)	-40°C – 85°C	-40°C – 85°C	-40° C – 85° C	-40° C – 85° C	-40°C – 85°C	
emperature 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						
leight (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	
Vidth (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	
Veight (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	

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.





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					
nterface (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	
Fotal 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	
imited Warranty (years)	5	5	5	5	
Power Management					
2V 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	

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.





Specifications			Nytro 5550M 15 mm — Mixed Use	9	
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 $^{\circ}$	200,000	250,000	250,000	230,000	140,000
Average Read Latency (µs), 4 KB QD1	90	90	90	90	90
werage Write Latency (µs), 4 KB QD1	12	12	12	12	12
Endurance/Reliability					
ifetime Endurance (Drive Writes per Day)	3	3	3	3	3
Fotal 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
imited Warranty (years)	5	5	5	5	5
Power Management					
2V Overall Average Active Power (W)	15	15	15	14	11
Average Idling Power (W)	7	6	6	6	5
Environmental					
Femperature, Operating Internal (°C)	0 to 70	0 to 70	0 to 70	0 to 70	0 to 70
Femperature, Non-operating (° C)	-40°C – 85°C	-40°C – 85°C	-40° C – 85° C	-40°C – 85°C	-40°C – 85°C
Femperature 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
Neight (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

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.





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	PCle [®] 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		

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.





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					
nterface (Dual Port)	PCIe [®] Gen4 ×4 NVMe	PCIe [®] Gen4 ×4 NVMe	PCIe [®] Gen4 ×4 NVMe	PCle [®] Gen4 ×4 NVMe	
NAND Flash Type	3D eTLC	3D eTLC	3D eTLC	3D eTLC	
orm Factor	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	
andom Write (IOPS) Sustained, 4 KB QD64 ³	180,000	200,000	180,000	140,000	
werage Read Latency (µs), 4 KB QD1	90	90	90	90	
verage Write Latency (µs), 4 KB QD1	12	12	12	12	
Endurance/Reliability					
ifetime Endurance (Drive Writes per Day)	3	3	3	3	
otal 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	
Iean Time Between Failures (MTBF, hours)	2,500,000	2,500,000	2,500,000	2,500,000	
imited Warranty (years)	5	5	5	5	
Power Management					
2V Overall Average Active Power (W)	12.5	12.5	12.5	12.5	
Average Idling Power (W)	5	5	5	5	
Environmental					
Cemperature, Operating Internal (°C)	0 to 70	0 to 70	0 to 70	0 to 70	
emperature, Non-operating (°C)	-40°C – 85°C	-40°C – 85°C	-40°C – 85°C	-40°C – 85°C	
Femperature 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	
Vidth (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	
Veight (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	

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.





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			

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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