



2.5-in SSD DATA SHEET

Lightspeed. Solid. Impressive. Consistent high performance for the modern data center.



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 centers, Nytro 5050 SSD eliminates performance bottlenecks and significantly improves quality of service (QoS).



Best-Fit Applications

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

Boosted capacity in ultra-dense environments —up to 15TB¹ supporting U.2 and U.3 interface, and dual ports support active active high availability.

Highly optimized, 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 15mm—Mixed Use					
Capacity	12.8TB	6.4TB	3.2TB	1.6TB	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					
NAND Flash Type	3D eTLC					
Form Factor	2.5 in × 15mm					
Performance						
Sequential Read (MB/s) Sustained, 128KB ²	7,400	7,400	7,400	7,400	7,400	
Sequential Write (MB/s) Sustained, 128KB ²	7,200	7,200	6,900	4,300	1,900	
Random Read (IOPS) Sustained, 4KB QD64 3	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	
Random Write (IOPS) Sustained, 4KB QD64 ³	495,000	470,000	470,000	315,000	140,000	
Average Read Latency (µs), 4KB QD1	75	75	75	75	75	
Average Write Latency (µs), 4KB 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	
Nonrecoverable Read Errors per Bits Read	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 Idle Power (W)	7	6	6	6	5	
Environmental						
Temperature, Operating Internal (°C)	0 to 70					
Temperature, Nonoperating (°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)	14.9mm/0.587in	14.9mm/0.587in	14.9mm/0.587in	14.9mm/0.587in	14.9mm/0.587in	
Width (mm/in, max)	70.1mm/2.760in	70.1mm/2.760in	70.1mm/2.760in	70.1mm/2.760in	70.1mm/2.760in	
Depth (mm/in, max)	100.4mm/3.953in	100.4mm/3.953in	100.4mm/3.953in	100.4mm/3.953in	100.4mm/3.953in	
Weight (g/lb, max)	170g/0.38lb	205g/0.45lb	205g/0.45lb	205g/0.45lb	205g/0.45lb	
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 15mm—Read Intensive					
Capacity	15.36TB	7.68TB	3.84TB	1.92TB		
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 × 15mm	2.5 in × 15mm	2.5 in × 15mm	2.5 in × 15mm		
Performance			· · · · · · · · · · · · · · · · · · ·			
Sequential Read (MB/s) Sustained, 128KB ²	7,400	7,400	7,400	7,400		
Sequential Write (MB/s) Sustained, 128KB ²	7,200	7,200	6,900	4,300		
Random Read (IOPS) Sustained, 4KB QD64 3	1,700,000	1,700,000	1,700,000	1,700,000		
Random Write (IOPS) Sustained, 4KB QD64 3	195,000	195,000	195,000	118,000		
Average Read Latency (µs), 4KB QD1	75	75	75	75		
werage Write Latency (µs), 4KB QD1	12	12	12	12		
Endurance/Reliability			· · · · · · · · · · · · · · · · · · ·			
ifetime Endurance (Drive Writes per Day)	1	1	1	1		
Total Bytes Written (TB)	28,000	14,000	7,000	3,500		
Nonrecoverable 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 Idle Power (W)	7	6	6	6		
Environmental						
Femperature, Operating Internal (°C)	0 to 70	0 to 70	0 to 70	0 to 70		
Femperature, Nonoperating (°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						
leight (mm/in, max)	14.9mm/0.587in	14.9mm/0.587in	14.9mm/0.587in	14.9mm/0.587in		
Nidth (mm/in, max)	70.1mm/2.760in	70.1mm/2.760in	70.1mm/2.760in	70.1mm/2.760in		
Depth (mm/in, max)	100.4mm/3.953in	100.4mm/3.953in	100.4mm/3.953in	100.4mm/3.953in		
Veight (g/lb, max)	170g/0.38lb	205g/0.45lb	205g/0.45lb	205g/0.45lb		
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 15mm—Mixed Use					
Capacity	12.8TB	6.4TB	3.2TB	1.6TB	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	PCle [®] Gen4 ×4 NVMe	PCIe [®] Gen4 ×4 NVMe	PCle [®] Gen4 ×4 NVMe	PCle [®] Gen4 ×4 NVMe	
NAND Flash Type	3D eTLC					
Form Factor	2.5 in × 15mm					
Performance						
Sequential Read (MB/s) Sustained, 128KB ²	6,200	7,200	7,400	7,400	7,400	
Sequential Write (MB/s) Sustained, 128KB ²	2,600	3,400	3,400	3,400	1,900	
Random Read (IOPS) Sustained, 4KB QD64 ³	1,000,000	1,200,000	1,150,000	1,150,000	1,000,000	
Random Write (IOPS) Sustained, 4KB QD64 ³	200,000	250,000	250,000	230,000	140,000	
Average Read Latency (µs), 4KB QD1	90	90	90	90	90	
Average Write Latency (µs), 4KB 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	
Nonrecoverable Read Errors per Bits Read	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 Idle Power (W)	7	6	6	6	5	
Environmental						
Temperature, Operating Internal (°C)	0 to 70					
Temperature, Nonoperating (°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)	14.9mm/0.587in	14.9mm/0.587in	14.9mm/0.587in	14.9mm/0.587in	14.9mm/0.587in	
Width (mm/in, max)	70.1mm/2.760in	70.1mm/2.760in	70.1mm/2.760in	70.1mm/2.760in	70.1mm/2.760in	
Depth (mm/in, max)	100.4mm/3.953in	100.4mm/3.953in	100.4mm/3.953in	100.4mm/3.953in	100.4mm/3.953in	
Weight (g/lb, max)	170g/0.38lb	205g/0.45lb	205g/0.45lb	205g/0.45lb	205g/0.45lb	
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 15mm—Read Intensive					
Capacity	15.36TB	7.68TB	3.84TB	1.92TB		
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 × 15mm	2.5 in × 15mm	2.5 in × 15mm	2.5 in × 15mm		
Performance						
Sequential Read (MB/s) Sustained, 128KB ²	6,200	7,400	7,400	7,400		
Sequential Write (MB/s) Sustained, 128KB ²	2,600	3,400	3,400	3,400		
Random Read (IOPS) Sustained, 4KB QD64 3	1,000,000	1,200,000	1,150,000	1,150,000		
Random Write (IOPS) Sustained, 4KB QD64 ³	85,000	110,000	110,000	90,000		
Average Read Latency (µs), 4KB QD1	90	90	90	90		
Average Write Latency (µs), 4KB 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		
Nonrecoverable 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)	15	15	15	14		
Average Idle Power (W)	7	6	6	6		
Environmental						
Femperature, Operating Internal (°C)	0 to 70	0 to 70	0 to 70	0 to 70		
Femperature, Nonoperating (°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)	14.9mm/0.587in	14.9mm/0.587in	14.9mm/0.587in	14.9mm/0.587in		
Width (mm/in, max)	70.1mm/2.760in	70.1mm/2.760in	70.1mm/2.760in	70.1mm/2.760in		
Depth (mm/in, max)	100.4mm/3.953in	100.4mm/3.953in	100.4mm/3.953in	100.4mm/3.953in		
Neight (g/lb, max)	170g/0.38lb	205g/0.45lb	205g/0.45lb	205g/0.45lb		
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 7mm—Mixed Use						
Capacity	6.4TB	3.2TB	1.6TB	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						
NAND Flash Type	3D eTLC	3D eTLC	3D eTLC	3D eTLC			
Form Factor	2.5 in × 7mm						
Performance							
Sequential Read (MB/s) Sustained, 128KB ²	6,000	6,000	6,000	6,000			
Sequential Write (MB/s) Sustained, 128KB ²	2,700	2,700	2,700	1,900			
Random Read (IOPS) Sustained, 4KB QD64 3	950,000	950,000	950,000	1,000,000			
Random Write (IOPS) Sustained, 4KB QD64 3	180,000	200,000	180,000	140,000			
Average Read Latency (µs), 4KB QD1	90	90	90	90			
Average Write Latency (µs), 4KB 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			
Nonrecoverable 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							
2V Overall Average Active Power (W)	12.5	12.5	12.5	12.5			
Average Idle Power (W)	5	5	5	5			
Environmental							
Femperature, Operating Internal (°C)	0 to 70	0 to 70	0 to 70	0 to 70			
Temperature, Nonoperating (°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)	7.1mm/0.28in	7.1mm/0.28in	7.1mm/0.28in	7.1mm/0.28in			
Width (mm/in, max)	70.1mm/2.760in	70.1mm/2.760in	70.1mm/2.760in	70.1mm/2.760in			
Depth (mm/in, max)	100.4mm/3.953in	100.4mm/3.953in	100.4mm/3.953in	100.4mm/3.953in			
Neight (g/lb, max)	105g/0.23lb	105g/0.23lb	105g/0.23lb	105g/0.23lb			
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 7mm—Read Intensive				
Capacity	7.68TB	3.84TB	1.92TB			
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 × 7mm	2.5 in × 7mm	2.5 in × 7mm			
Performance						
Sequential Read (MB/s) Sustained, 128KB ²	6,000	6,000	6,000			
Sequential Write (MB/s) Sustained, 128KB ²	2,700	2,700	2,700			
Random Read (IOPS) Sustained, 4KB QD64 ³	950,000	950,000	950,000			
Random Write (IOPS) Sustained, 4KB QD64 ³	95,000	80,000	80,000			
Average Read Latency (µs), 4KB QD1	90	90	90			
Average Write Latency (µs), 4KB 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			
Nonrecoverable 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 Idle Power (W)	5	5	5			
Environmental						
Temperature, Operating Internal (°C)	0 to 70	0 to 70	0 to 70			
Temperature, Nonoperating (°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)	7.1mm/0.28in	7.1mm/0.28in	7.1mm/0.28in			
Width (mm/in, max)	70.1mm/2.760in	70.1mm/2.760in	70.1mm/2.760in			
Depth (mm/in, max)	100.4mm/3.953in	100.4mm/3.953in	100.4mm/3.953in			
Weight (g/lb, max)	105g/0.23lb	105g/0.23lb	105g/0.23lb			
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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