

# Enterprise Capacity 3.5 HDD

VERSION 5

Data Sheet

## Capacity-Optimised Enterprise Hard Drive for Bulk-Data Applications

- 1 TB to 8 TB<sup>1</sup>, 3.5-inch enterprise drive with industry-leading CMR technology, for maximum storage per storage slot
- Advanced Write Caching feature utilises enhanced algorithms, resulting the industry's highest storage workload performance efficiencies
- Reliable access to unstructured data in bulk storage applications
- 12 Gb/s SAS and SATA 6 Gb/s interfaces in industry-standard formats (512n, 512e and 4Kn) for easy integration into replicated and RAID multi-drive storage servers and systems
- State-of-the-art cache, on-the-fly error-correction algorithms, super parity and end-to-end SAS-based data integrity for accurate data storage
- Industry-leading rotational vibration design helps ensure consistent performance in dense multi-drive systems
- Engineered for 24x7 workloads of 550TB/yr - 10x that of desktop drives
- Robust performance with dual processors, ramp load technology, top-cover-attached motor and humidity sensor for optimum performance in all chassis
- On-demand PowerBalance™ feature available for lower power/performance in random read/write environments
- Seagate Secure® Self-Encrypting Drive featuring Instant Secure Erase for cost-saving drive retirement and secure data-at-rest protection<sup>2</sup>



## Best-Fit Applications

- Hyperscale applications/cloud data centres with replicated storage
- Massive scale-out data centres and big data analytics
- High-capacity density RAID storage
- Mainstream enterprise external storage arrays
- Distributed file systems, including Hadoop and Ceph
- Enterprise backup and restore - D2D, virtual tape
- Centralised surveillance

<sup>1</sup> Seagate recommends validating your configuration with your HBA/RAID controller manufacturer to ensure full capacity capabilities.

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



# Enterprise Capacity 3.5 HDD

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Specifications	4Kn SATA			
	8TB	6TB	4TB	2TB
Capacity	8TB	6TB	4TB	2TB
Base Model	ST8000NM0045	ST6000NM0125	ST4000NM0085	ST2000NM0105
PowerBalance™ Model	—	—	—	—
Seagate Secure® Model <sup>1</sup>	ST8000NM0115	ST6000NM0185	ST4000NM0055	—
Seagate Secure SED-FIPS Model <sup>1,2</sup>	ST8000NM0145	ST6000NM0265	—	—
<b>Special Features</b>				
Protection Information (T10 DIF)	—	—	—	—
Humidity Sensor	Yes	Yes	Yes	Yes
SuperParity	—	—	—	—
Halogen-free	Yes	Yes	Yes	Yes
PowerChoice™ Technology	Yes	Yes	Yes	Yes
PowerBalance™ Technology	Yes	Yes	Yes	Yes
Cache	256 MB	256 MB	128 MB	128 MB
Advanced Write Caching (Internal NOR flash)	Yes	Yes	Yes	Yes
<b>Reliability/Data Integrity</b>				
Vibration, Non-operating: 10 Hz to 500 Hz (Grms)	5	5	5	5
MTBF	2,000,000 hr	2,000,000 hr	2,000,000 hr	2,000,000 hr
Reliability Rating @ Full 24x7 Operation (AFR)	0.44%	0.44%	0.44%	0.44%
Non-recoverable Read Errors per Bits Read, Max	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15
Power-on Hours	8,760	8,760	8,760	8,760
Bytes per Sector	4,096	4,096	4,096	4,096
Warranty, Limited (years)	5	5	5	5
<b>Performance</b>				
Spindle Speed (RPM)	7,200	7,200	7,200	7,200
Interface Access Speed (Gb/s)	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5
Max Sustainable Transfer Rate	249MB/s	226MB/s	226MB/s	226MB/s
Average Latency (ms)	4.16	4.16	4.16	4.16
Interface Ports	Single	Single	Single	Single
Rotational Vibration @ 1,500 Hz (rad/s <sup>2</sup> )	12.5	12.5	12.5	12.5
<b>Power Consumption</b>				
Idling Average (W)	7.6 W	7.25 W	5.45 W	4.25 W
Average Operating Power	11 W	8.31 W	6.94 W	5.9 W
Power Supply Requirements	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V
<b>Environmental/Temperature</b>				
Temperature, Operating (°C)	5°C – 60°C	5°C – 60°C	5°C – 60°C	5°C – 60°C
Shock, Operating Read/Write (Gs)	70/40 Gs	70/40 Gs	70/40 Gs	70/40 Gs
Shock, Non-operating, 1 ms/2 ms (Gs)	150/250	150/250	150/300	150/300
<b>Physical</b>				
Height (mm/in) <sup>3</sup>	26.1 mm/1.028 in	26.1 mm/1.028 in	26.1 mm/1.028 in	26.1 mm/1.028 in
Width (mm/in, max) <sup>3</sup>	101.85 mm/4.01 in	101.85 mm/4.01 in	101.85 mm/4.01 in	101.85 mm/4.01 in
Depth (mm/in, max) <sup>3</sup>	147 mm/5.787 in	147 mm/5.787 in	147 mm/5.787 in	147 mm/5.787 in
Weight (lb/g)	780 g/1.72 lb	705 g/1.55 lb	680 g/1.5 lb	610 g/1.34 lb
Carton Unit Quantity	20	20	20	20
Cartons per Pallet / Cartons per Layer	40/8	40/8	40/8	40/8

<sup>1</sup> Self-Encrypting Drives (SED) and FIPS 140-2 Validated drives are not available in all models or countries. May require TCG-compliant host or controller support.

<sup>2</sup> FIPS 140-2 Level 2 Certification in process.

<sup>3</sup> These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at [www.sffcommittee.org](http://www.sffcommittee.org). For connector-related dimensions, see SFF-8223.

# Enterprise Capacity 3.5 HDD



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Specifications	4Kn SAS			
	8TB	6TB	4TB	2TB
Capacity	8TB	6TB	4TB	2TB
Base Model	ST8000NM0065	ST6000NM0105	ST4000NM0095	ST2000NM0115
PowerBalance™ Model	—	—	—	—
Seagate Secure® Model <sup>1</sup>	ST8000NM0095	ST6000NM0205	ST4000NM0075	—
Seagate Secure SED-FIPS Model <sup>1,2</sup>	ST8000NM0125	ST6000NM0255	—	—
<b>Special Features</b>				
Protection Information (T10 DIF)	Yes	Yes	Yes	Yes
Humidity Sensor	Yes	Yes	Yes	Yes
SuperParity	Yes	Yes	Yes	Yes
Halogen-free	Yes	Yes	Yes	Yes
PowerChoice™ Technology	Yes	Yes	Yes	Yes
PowerBalance™ Technology	Yes	Yes	Yes	Yes
Cache	256 MB	256 MB	128 MB	128 MB
Advanced Write Caching (Internal NOR flash)	Yes	Yes	Yes	Yes
<b>Reliability/Data Integrity</b>				
Vibration, Non-operating: 10 Hz to 500 Hz (Grms)	5	5	5	5
MTBF	2,000,000 hr	2,000,000 hr	2,000,000 hr	2,000,000 hr
Reliability Rating @ Full 24x7 Operation (AFR)	0.44%	0.44%	0.44%	0.44%
Non-recoverable Read Errors per Bits Read, Max	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15
Power-on Hours	8,760	8,760	8,760	8,760
Bytes per Sector	4,096, 4,160, 4,224	4,096, 4,160, 4,224	4,096, 4,160, 4,224	4,096, 4,160, 4,224
Warranty, Limited (years)	5	5	5	5
<b>Performance</b>				
Spindle Speed (RPM)	7,200	7,200	7,200	7,200
Interface Access Speed (Gb/s)	12.0, 6.0, 3.0	12.0, 6.0, 3.0	12.0, 6.0, 3.0	12.0, 6.0, 3.0
Max Sustainable Transfer Rate	249MB/s	226MB/s	226MB/s	226MB/s
Average Latency (ms)	4.16	4.16	4.16	4.16
Interface Ports	Dual	Dual	Dual	Dual
Rotational Vibration @ 1,500 Hz (rad/s <sup>2</sup> )	12.5	12.5	12.5	12.5
<b>Power Consumption</b>				
Idling Average (W)	8.5 W	8.37 W	6.52 W	4.57 W
Average Operating Power	12 W	9.2 W	7.74 W	6.34 W
Power Supply Requirements	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V
<b>Environmental/Temperature</b>				
Temperature, Operating (°C)	5°C – 60°C	5°C – 60°C	5°C – 60°C	5°C – 60°C
Shock, Operating Read/Write (Gs)	70/40 Gs	70/40 Gs	70/40 Gs	70/40 Gs
Shock, Non-operating, 1 ms/2 ms (Gs)	150/250	150/250	150/300	150/300
<b>Physical</b>				
Height (mm/in) <sup>3</sup>	26.1 mm/1.028 in	26.1 mm/1.028 in	26.1 mm/1.028 in	26.1 mm/1.028 in
Width (mm/in, max) <sup>3</sup>	101.85 mm/4.01 in	101.85 mm/4.01 in	101.85 mm/4.01 in	101.85 mm/4.01 in
Depth (mm/in, max) <sup>3</sup>	147 mm/5.787 in	147 mm/5.787 in	147 mm/5.787 in	147 mm/5.787 in
Weight (lb/g)	780 g/1.72 lb	705 g/1.55 lb	680 g/1.5 lb	610 g/1.34 lb
Carton Unit Quantity	20	20	20	20
Cartons per Pallet / Cartons per Layer	40/8	40/8	40/8	40/8

<sup>1</sup> Self-Encrypting Drives (SED) and FIPS 140-2 Validated drives are not available in all models or countries. May require TCG-compliant host or controller support.

<sup>2</sup> FIPS 140-2 Level 2 Certification in process.

<sup>3</sup> These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at [www.sffcommittee.org](http://www.sffcommittee.org). For connector-related dimensions, see SFF-8223.

# Enterprise Capacity 3.5 HDD



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Specifications	512e SATA			
	8TB	6TB	4TB	2TB
Capacity	8TB	6TB	4TB	2TB
Base Model	ST8000NM0055	ST6000NM0115	ST4000NM0115	ST2000NM0125
PowerBalance™ Model	ST8000NM0165	ST6000NM0215	—	—
Seagate Secure® Model <sup>1</sup>	ST8000NM0105	ST6000NM0175	ST4000NM0245	—
Seagate Secure SED-FIPS Model <sup>1,2</sup>	ST8000NM0155	ST6000NM0275	ST4000NM0225	—
<b>Special Features</b>				
Protection Information (T10 DIF)	—	—	—	—
Humidity Sensor	Yes	Yes	Yes	Yes
SuperParity	—	—	—	—
Halogen-free	Yes	Yes	Yes	Yes
PowerChoice™ Technology	Yes	Yes	Yes	Yes
PowerBalance™ Technology	Yes	Yes	Yes	Yes
Cache	256 MB	256 MB	128 MB	128 MB
Advanced Write Caching (Internal NOR flash)	Yes	Yes	Yes	Yes
<b>Reliability/Data Integrity</b>				
Vibration, Non-operating: 10 Hz to 500 Hz (Grms)	5	5	5	5
MTBF	2,000,000 hr	2,000,000 hr	2,000,000 hr	2,000,000 hr
Reliability Rating @ Full 24x7 Operation (AFR)	0.44%	0.44%	0.44%	0.44%
Non-recoverable Read Errors per Bits Read, Max	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15
Power-on Hours	8,760	8,760	8,760	8,760
Bytes per Sector	512	512	512	512
Warranty, Limited (years)	5	5	5	5
<b>Performance</b>				
Spindle Speed (RPM)	7,200	7,200	7,200	7,200
Interface Access Speed (Gb/s)	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5
Max Sustainable Transfer Rate	249MB/s	226MB/s	226MB/s	226MB/s
Average Latency (ms)	4.16	4.16	4.16	4.16
Interface Ports	Single	Single	Single	Single
Rotational Vibration @ 1,500 Hz (rad/s <sup>2</sup> )	12.5	12.5	12.5	12.5
<b>Power Consumption</b>				
Idling Average (W)	7.6 W	7.25 W	5.45 W	4.25 W
Average Operating Power	11 W	8.31 W	6.94 W	5.9 W
Power Supply Requirements	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V
<b>Environmental/Temperature</b>				
Temperature, Operating (°C)	5°C – 60°C	5°C – 60°C	5°C – 60°C	5°C – 60°C
Shock, Operating Read/Write (Gs)	70/40 Gs	70/40 Gs	70/40 Gs	70/40 Gs
Shock, Non-operating, 1 ms/2 ms (Gs)	150/250	150/250	150/300	150/300
<b>Physical</b>				
Height (mm/in) <sup>3</sup>	26.1 mm/1.028 in	26.1 mm/1.028 in	26.1 mm/1.028 in	26.1 mm/1.028 in
Width (mm/in, max) <sup>3</sup>	101.85 mm/4.01 in	101.85 mm/4.01 in	101.85 mm/4.01 in	101.85 mm/4.01 in
Depth (mm/in, max) <sup>3</sup>	147 mm/5.787 in	147 mm/5.787 in	147 mm/5.787 in	147 mm/5.787 in
Weight (lb/g)	780 g/1.72 lb	705 g/1.55 lb	680 g/1.5 lb	610 g/1.34 lb
Carton Unit Quantity	20	20	20	20
Cartons per Pallet / Cartons per Layer	40/8	40/8	40/8	40/8

<sup>1</sup> Self-Encrypting Drives (SED) and FIPS 140-2 Validated drives are not available in all models or countries. May require TCG-compliant host or controller support.

<sup>2</sup> FIPS 140-2 Level 2 Certification in process.

<sup>3</sup> These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at [www.sffcommittee.org](http://www.sffcommittee.org). For connector-related dimensions, see SFF-8223.

# Enterprise Capacity 3.5 HDD



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Specifications	512e SAS			
	8TB	6TB	4TB	2TB
Capacity	8TB	6TB	4TB	2TB
Base Model	ST8000NM0075	ST6000NM0095	ST4000NM0125	ST2000NM0135
PowerBalance™ Model	ST8000NM0175	ST6000NM0225	—	—
Seagate Secure® Model <sup>1</sup>	ST8000NM0085	ST6000NM0195	ST4000NM0255	—
Seagate Secure SED-FIPS Model <sup>1,2</sup>	ST8000NM0135	ST6000NM0285	ST4000NM0235	—
<b>Special Features</b>				
Protection Information (T10 DIF)	Yes	Yes	Yes	Yes
Humidity Sensor	Yes	Yes	Yes	Yes
SuperParity	Yes	Yes	Yes	Yes
Halogen-free	Yes	Yes	Yes	Yes
PowerChoice™ Technology	Yes	Yes	Yes	Yes
PowerBalance™ Technology	Yes	Yes	Yes	Yes
Cache	256 MB	256 MB	128 MB	128 MB
Advanced Write Caching (Internal NOR flash)	Yes	Yes	Yes	Yes
<b>Reliability/Data Integrity</b>				
Vibration, Non-operating: 10 Hz to 500 Hz (Grms)	5	5	5	5
MTBF	2,000,000 hr	2,000,000 hr	2,000,000 hr	2,000,000 hr
Reliability Rating @ Full 24x7 Operation (AFR)	0.44%	0.44%	0.44%	0.44%
Non-recoverable Read Errors per Bits Read, Max	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15
Power-on Hours	8,760	8,760	8,760	8,760
Bytes per Sector	512, 520, 528	512, 520, 528	512, 520, 528	512, 520, 528
Warranty, Limited (years)	5	5	5	5
<b>Performance</b>				
Spindle Speed (RPM)	7,200	7,200	7,200	7,200
Interface Access Speed (Gb/s)	12.0, 6.0, 3.0	12.0, 6.0, 3.0	12.0, 6.0, 3.0	12.0, 6.0, 3.0
Max Sustainable Transfer Rate	249MB/s	226MB/s	226MB/s	226MB/s
Average Latency (ms)	4.16	4.16	4.16	4.16
Interface Ports	Dual	Dual	Dual	Dual
Rotational Vibration @ 1,500 Hz (rad/s <sup>2</sup> )	12.5	12.5	12.5	12.5
<b>Power Consumption</b>				
Idle Average (W)	8.5 W	8.37 W	6.52 W	4.57 W
Average Operating Power	12 W	9.2 W	7.74 W	6.34 W
Power Supply Requirements	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V
<b>Environmental/Temperature</b>				
Temperature, Operating (°C)	5°C – 60°C	5°C – 60°C	5°C – 60°C	5°C – 60°C
Shock, Operating Read/Write (Gs)	70/40 Gs	70/40 Gs	70/40 Gs	70/40 Gs
Shock, Non-operating, 1 ms/2 ms (Gs)	150/250	150/250	150/300	150/300
<b>Physical</b>				
Height (mm/in) <sup>3</sup>	26.1 mm/1.028 in	26.1 mm/1.028 in	26.1 mm/1.028 in	26.1 mm/1.028 in
Width (mm/in, max) <sup>3</sup>	101.85 mm/4.01 in	101.85 mm/4.01 in	101.85 mm/4.01 in	101.85 mm/4.01 in
Depth (mm/in, max) <sup>3</sup>	147 mm/5.787 in	147 mm/5.787 in	147 mm/5.787 in	147 mm/5.787 in
Weight (lb/g)	780 g/1.72 lb	705 g/1.55 lb	680 g/1.5 lb	610 g/1.34 lb
Carton Unit Quantity	20	20	20	20
Cartons per Pallet / Cartons per Layer	40/8	40/8	40/8	40/8

<sup>1</sup> Self-Encrypting Drives (SED) and FIPS 140-2 Validated drives are not available in all models or countries. May require TCG-compliant host or controller support.

<sup>2</sup> FIPS 140-2 Level 2 Certification in process.

<sup>3</sup> These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at [www.sffcommittee.org](http://www.sffcommittee.org). For connector-related dimensions, see SFF-8223.

# Enterprise Capacity 3.5 HDD



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Specifications	512n SATA				
Capacity	6TB	4TB	3TB	2TB	1TB
Base Model	ST6000NM0235	ST4000NM0035	ST3000NM0005	ST2000NM0055	ST1000NM0055
PowerBalance™ Model	—	—	—	—	—
Seagate Secure® Model <sup>1</sup>	—	ST4000NM0045	ST3000NM0015	ST2000NM0065	ST1000NM0065
Seagate Secure SED-FIPS Model <sup>1,2</sup>	—	ST4000NM0105	ST3000NM0055	—	—
<b>Special Features</b>					
Protection Information (T10 DIF)	—	—	—	—	—
Humidity Sensor	Yes	Yes	Yes	Yes	Yes
SuperParity	Yes	Yes	Yes	Yes	Yes
Halogen-free	Yes	Yes	Yes	Yes	Yes
PowerChoice™ Technology	Yes	Yes	Yes	Yes	Yes
PowerBalance™ Technology	No	No	No	No	No
Cache	256 MB	128 MB	128 MB	128 MB	128 MB
Advanced Write Caching (Internal NOR flash)	No	No	No	No	No
<b>Reliability/Data Integrity</b>					
Vibration, Non-operating: 10 Hz to 500 Hz (Grms)	5	5	5	5	5
MTBF	2,000,000 hr	2,000,000 hr	2,000,000 hr	2,000,000 hr	2,000,000 hr
Reliability Rating @ Full 24x7 Operation (AFR)	0.44%	0.44%	0.44%	0.44%	0.44%
Non-recoverable Read Errors per Bits Read, Max	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15
Power-on Hours	8,760	8,760	8,760	8,760	8,760
Bytes per Sector	512	512	512	512	512
Warranty, Limited (years)	5	5	5	5	5
<b>Performance</b>					
Spindle Speed (RPM)	7,200	7,200	7,200	7,200	7,200
Interface Access Speed (Gb/s)	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5
Max Sustainable Transfer Rate	215MB/s	215MB/s	215MB/s	215MB/s	215MB/s
Average Latency (ms)	4.16	4.16	4.16	4.16	4.16
Interface Ports	Single	Single	Single	Single	Single
Rotational Vibration @ 1,500 Hz (rad/s <sup>2</sup> )	12.5	12.5	12.5	12.5	12.5
<b>Power Consumption</b>					
Idling Average (W)	8.15 W	5.45 W	5.45 W	4.25 W	4.25 W
Average Operating Power	9.8 W	6.9 W	6.9 W	5.91 W	5.91 W
Power Supply Requirements	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V
<b>Environmental/Temperature</b>					
Temperature, Operating (°C)	5°C – 60°C	5°C – 60°C	5°C – 60°C	5°C – 60°C	5°C – 60°C
Shock, Operating Read/Write (Gs)	70/40 Gs	70/40 Gs	70/40 Gs	70/40 Gs	70/40 Gs
Shock, Non-operating, 1 ms/2 ms (Gs)	150/250	150/300	150/300	150/300	150/300
<b>Physical</b>					
Height (mm/in) <sup>3</sup>	26.1 mm/1.028 in	26.1 mm/1.028 in	26.1 mm/1.028 in	26.1 mm/1.028 in	26.1 mm/1.028 in
Width (mm/in, max) <sup>3</sup>	101.85 mm/4.01 in	101.85 mm/4.01 in	101.85 mm/4.01 in	101.85 mm/4.01 in	101.85 mm/4.01 in
Depth (mm/in, max) <sup>3</sup>	147 mm/5.787 in	147 mm/5.787 in	147 mm/5.787 in	147 mm/5.787 in	147 mm/5.787 in
Weight (lb/g)	780 g/1.72 lb	704 g/1.55 lb	704 g/1.55 lb	610 g/1.34 lb	610 g/1.34 lb
Carton Unit Quantity	20	20	20	20	20
Cartons per Pallet / Cartons per Layer	40/8	40/8	40/8	40/8	40/8

<sup>1</sup> Self-Encrypting Drives (SED) and FIPS 140-2 Validated drives are not available in all models or countries. May require TCG-compliant host or controller support.

<sup>2</sup> FIPS 140-2 Level 2 Certification in process.

<sup>3</sup> These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at [www.sffcommittee.org](http://www.sffcommittee.org). For connector-related dimensions, see SFF-8223.

# Enterprise Capacity 3.5 HDD



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Specifications	512n SAS				
Capacity	6TB	4TB	3TB	2TB	1TB
Base Model	ST6000NM0245	ST4000NM0025	ST3000NM0025	ST2000NM0045	ST1000NM0045
PowerBalance™ Model	—	—	—	—	—
Seagate Secure® Model <sup>1</sup>	—	ST4000NM0065	ST3000NM0035	ST2000NM0085	ST1000NM0075
Seagate Secure SED-FIPS Model <sup>1,2</sup>	—	ST4000NM0135	ST3000NM0045	—	—
<b>Special Features</b>					
Protection Information (T10 DIF)	Yes	Yes	Yes	Yes	Yes
Humidity Sensor	Yes	Yes	Yes	Yes	Yes
SuperParity	Yes	Yes	Yes	Yes	Yes
Halogen-free	Yes	Yes	Yes	Yes	Yes
PowerChoice™ Technology	Yes	Yes	Yes	Yes	Yes
PowerBalance™ Technology	No	No	No	No	No
Cache	256 MB	128 MB	128 MB	128 MB	128 MB
Advanced Write Caching (Internal NOR flash)	No	No	No	No	No
<b>Reliability/Data Integrity</b>					
Vibration, Non-operating: 10 Hz to 500 Hz (Grms)	5	5	5	5	5
MTBF	2,000,000 hr	2,000,000 hr	2,000,000 hr	2,000,000 hr	2,000,000 hr
Reliability Rating @ Full 24x7 Operation (AFR)	0.44%	0.44%	0.44%	0.44%	0.44%
Non-recoverable Read Errors per Bits Read, Max	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15
Power-on Hours	8,760	8,760	8,760	8,760	8,760
Bytes per Sector	512	512	512	512	512
Warranty, Limited (years)	5	5	5	5	5
<b>Performance</b>					
Spindle Speed (RPM)	7,200	7,200	7,200	7,200	7,200
Interface Access Speed (Gb/s)	12.0, 6.0, 3.0	12.0, 6.0, 3.0	12.0, 6.0, 3.0	12.0, 6.0, 3.0	12.0, 6.0, 3.0
Max Sustainable Transfer Rate	215MB/s	215MB/s	215MB/s	215MB/s	215MB/s
Average Latency (ms)	4.16	4.16	4.16	4.16	4.16
Interface Ports	Dual	Dual	Dual	Dual	Dual
Rotational Vibration @ 1,500 Hz (rad/s <sup>2</sup> )	12.5	12.5	12.5	12.5	12.5
<b>Power Consumption</b>					
Idling Average (W)	8.57 W	6.52 W	6.52 W	4.75 W	4.75 W
Average Operating Power	10.86 W	7.74 W	7.74 W	6.3 W	6.3 W
Power Supply Requirements	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V
<b>Environmental/Temperature</b>					
Temperature, Operating (°C)	5°C – 60°C	5°C – 60°C	5°C – 60°C	5°C – 60°C	5°C – 60°C
Shock, Operating Read/Write (Gs)	70/40 Gs	70/40 Gs	70/40 Gs	70/40 Gs	70/40 Gs
Shock, Non-operating, 1 ms/2 ms (Gs)	150/250	150/300	150/300	150/300	150/300
<b>Physical</b>					
Height (mm/in) <sup>3</sup>	26.1 mm/1.028 in	26.1 mm/1.028 in	26.1 mm/1.028 in	26.1 mm/1.028 in	26.1 mm/1.028 in
Width (mm/in, max) <sup>3</sup>	101.85 mm/4.01 in	101.85 mm/4.01 in	101.85 mm/4.01 in	101.85 mm/4.01 in	101.85 mm/4.01 in
Depth (mm/in, max) <sup>3</sup>	147 mm/5.787 in	147 mm/5.787 in	147 mm/5.787 in	147 mm/5.787 in	147 mm/5.787 in
Weight (lb/g)	780 g/1.72 lb	680 g/1.5 lb	680 g/1.5 lb	610 g/1.34 lb	610 g/1.34 lb
Carton Unit Quantity	20	20	20	20	20
Cartons per Pallet / Cartons per Layer	40/8	40/8	40/8	40/8	40/8

<sup>1</sup> Self-Encrypting Drives (SED) and FIPS 140-2 Validated drives are not available in all models or countries. May require TCG-compliant host or controller support.

<sup>2</sup> FIPS 140-2 Level 2 Certification in process.

<sup>3</sup> These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at [www.sffcommittee.org](http://www.sffcommittee.org). For connector-related dimensions, see SFF-8223.

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