Enterprise
Performance
10K HDD

Channel Data Sheet

The Perfect Match of High Capacity and High Performance

- High-capacity and small 2.5-inch footprint enable data centres to keep pace with data growth and optimise data centre space.
- Delivers 1.8 TB of high-performance data access for write-intensive applications.
- Future-proof your storage solutions with advanced format interfaces of 512 Emulation and 4K Native.
- Seagate® TurboBoost™ accelerates I/O operations and optimises response times to complete more transactions in less time - even during peak demand.
- Latest 12 Gb/s SAS interface for improved scalability.
- Over 2× legacy 3.5-inch 10K-RPM HDD capacity within a lower power envelope.
- Seagate PowerChoice™ technology for T10-compliant power management enables IT organisations to tailor systems for enhanced power consumption.
- Seagate RAID Rebuild™ technology option makes RAID recovery faster and safer.
- Protection Information (PI) protects against inadvertent data change.[1]
- Seagate Secure FIPS 140-2 model provides government-grade security for data-at-rest and helps cut IT drive retirement costs.[2]

Best-Fit Applications

- Mission-critical servers and external storage arrays
- Power- and space-constrained data centres
- Green IT and drive-retirement cost reduction initiatives
- Compliance or data security initiatives
- Migration from 3.5 inch drive systems to next-generation technology

1 Protection Information (PI) feature requires PI-compliant host or controller support.
2 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.

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Specifications	512 Native			
Capacity	1.2TB	900GB	600GB	300GB
Standard Model[1]	ST1200MM0088	ST900MM0168	ST600MM0208	ST300MM0048
TurboBoost™ Enhanced Read Caching Model	—	—	—	—
Standard Seagate Secure SED Model[1, 2]	ST1200MM0098	ST900MM0178	ST600MM0218	ST300MM0058
TurboBoost Seagate Secure SED Model[2]	—	—	—	—
Standard Seagate Secure SED FIPS 140-2 Model[1, 2, 3]	ST1200MM0108	—	—	—
TurboBoost Seagate Secure SED FIPS 140-2 Model[1,2,3]	—	—	—	—
Performance				
Spindle Speed (RPM)	10,000 RPM	10,000 RPM	10,000 RPM	10,000 RPM
Average Latency (ms)	2.9	2.9	2.9	2.9
Sustained Transfer Rate (Outer to Inner Diameter) MB/s	215 to 108	215 to 108	215 to 125	215 to 125
Cache, Multi-segmented (MB)	128	128	128	128
Configuration/Reliability				
Discs/Heads	3/6	3/6	2/4	1/2
Interface	SAS 12 Gb/s	SAS 12 Gb/s	SAS 12 Gb/s	SAS 12 Gb/s
External Transfer Rate (MB/s)	1,200	1,200	1,200	1,200
Non-recoverable Read Errors per Bits Read, Max	1 per 10E16	1 per 10E16	1 per 10E16	1 per 10E16
Annualised Failure Rate (AFR)	0.44%	0.44%	0.44%	0.44%
Limited Warranty (years)[4]	5	5	5	5
Turboboost Enhanced Read Caching Feature				
I/O Acceleration and Response Time Optimisation	—	—	—	—
NAND Flash Type	—	—	—	—
NAND Flash Size	—	—	—	—
Intelligent NAND Endurance Management	—	—	—	—
Power Management				
Typical Op (A) +5V/+12V	0.44/0.42	0.44/0.42	0.34/0.41	0.34/0.38
Typical Operating (W)	7.25	7.25	6.68	6.3
Average Idling Power (W)	4.26	4.26	3.44	3.09
Performance Efficiency Index (Idle W/GB)	0.0036	0.0047	0.0057	0.0103
Environmental				
Ambient Temperature, Operating (C°)	5°C – 55°C	5°C – 55°C	5°C – 55°C	5°C – 55°C
Ambient Temperature, Non-operating (C°)	-40°C – 70°C	-40°C – 70°C	-40°C – 70°C	-40°C – 70°C
Shock, Max. Operating: 11ms (Gs)	40	40	40	40
Shock, Max. Non-operating: 2 ms (Gs)	400	400	400	400
Acoustics Idling (bels — sound power)	3.1	3.1	3.1	3.1
Vibration, Operating, <500 Hz (Gs)	0.5	0.5	0.5	0.5
Vibration, Non-operating: <500Hz (Gs)	3	3	3	3
Physical				
Height (mm/in, max)[5]	15 mm/0.591 in	15 mm/0.591 in	15 mm/0.591 in	15 mm/0.591 in
Width (mm/in, max)[5]	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)[5]	100.45 mm/3.955 in	100.45 mm/3.955 in	100.45 mm/3.955 in	100.45 mm/3.955 in
Weight (lb/g)	193 g/0.426 lb	193 g/0.426 lb	222 g/0.49 lb	218 g/0.481 lb
Carton Unit Quantity	40	40	40	40
Cartons per Pallet / Cartons per Layer	60/10	60/10	60/10	60/10

1 Some models require ordering through invoice SPA for channel customers. Contact your Seagate sales representative.

2 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.

3 FIPS 140-2 in review. See FIPS 140-2 Level 2 Certificate at http://csrc.nist.gov/groups/STM/cmvp/validation.html

4 Warranty period is either 5 years or when the device reaches the Total TBW Over warranty period, whichever comes first.

5 These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at www.sffcommittee.org.

Enterprise Performance 10K HDD

Channel Data Sheet

Specifications	512 Emulation			
Capacity	1.8TB	1.2TB	900GB	600GB
Standard Model[1]	ST1800MM0018	ST1200MM0018	ST900MM0018	ST600MM0018
TurboBoost™ Enhanced Read Caching Model	ST1800MM0128	ST1200MM0158	ST900MM0128	ST600MM0158
Standard Seagate Secure SED Model[1, 2]	ST1800MM0068	ST1200MM0068	ST900MM0068	ST600MM0068
TurboBoost Seagate Secure SED Model[2]	ST1800MM0148	ST1200MM0178	ST900MM0148	ST600MM0178
Standard Seagate Secure SED FIPS 140-2 Model[1, 2, 3]	ST1800MM0078	—	—	—
TurboBoost Seagate Secure SED FIPS 140-2 Model[1,2,3]	ST1800MM0158	—	—	—
Performance				
Spindle Speed (RPM)	10,000 RPM	10,000 RPM	10,000 RPM	10,000 RPM
Average Latency (ms)	2.9	2.9	2.9	2.9
Sustained Transfer Rate (Outer to Inner Diameter) MB/s	241 to 117	241 to 117	241 to 117	241 to 117
Cache, Multi-segmented (MB)	128	128	128	128
Configuration/Reliability				
Discs/Heads	4/8	3/6	3/6	2/3
Interface	SAS 12 Gb/s	SAS 12 Gb/s	SAS 12 Gb/s	SAS 12 Gb/s
External Transfer Rate (MB/s)	1,200	1,200	1,200	1,200
Non-recoverable Read Errors per Bits Read, Max	1 per 10E16	1 per 10E16	1 per 10E16	1 per 10E16
Annualised Failure Rate (AFR)	0.44%	0.44%	0.44%	0.44%
Limited Warranty (years)[4]	5	5	5	5
Turboboost Enhanced Read Caching Feature				
I/O Acceleration and Response Time Optimisation	Enabled	Enabled	Enabled	Enabled
NAND Flash Type	eMLC	eMLC	eMLC	eMLC
NAND Flash Size	32 GB	32 GB	32 GB	32 GB
Intelligent NAND Endurance Management	Yes	Yes	Yes	Yes
Power Management				
Typical Op (A) +5V/+12V	0.44/0.47	0.44/0.42	0.44/0.41	0.44/0.41
Typical Operating (W)	7.8	7.25	7.12	7.15
Average Idling Power (W)	4.55	4.26	3.88	3.91
Performance Efficiency Index (Idle W/GB)	0.0025	0.0036	0.0043	0.0065
Environmental				
Ambient Temperature, Operating (C°)	5°C – 55°C	5°C – 55°C	5°C – 55°C	5°C – 55°C
Ambient Temperature, Non-operating (C°)	-40°C – 70°C	-40°C – 70°C	-40°C – 70°C	-40°C – 70°C
Shock, Max. Operating: 11ms (Gs)	40	40	40	40
Shock, Max. Non-operating: 2 ms (Gs)	400	400	400	400
Acoustics Idling (bels — sound power)	3.1	3.1	3.1	3.1
Vibration, Operating, <500 Hz (Gs)	0.5	0.5	0.5	0.5
Vibration, Non-operating: <500Hz (Gs)	3	3	3	3
Physical				
Height (mm/in, max)[5]	15 mm/0.591 in	15 mm/0.591 in	15 mm/0.591 in	15 mm/0.591 in
Width (mm/in, max)[5]	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)[5]	100.45 mm/3.955 in	100.45 mm/3.955 in	100.45 mm/3.955 in	100.45 mm/3.955 in
Weight (lb/g)	199 g/0.439 lb	193 g/0.426 lb	189 g/0.417 lb	189 g/0.417 lb
Carton Unit Quantity	40	40	40	40
Cartons per Pallet / Cartons per Layer	60/10	60/10	60/10	60/10

1 Some models require ordering through invoice SPA for channel customers. Contact your Seagate sales representative.
2 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.
3 FIPS 140-2 in review. See FIPS 140-2 Level 2 Certificate at http://csrc.nist.gov/groups/STM/cmvp/validation.html
4 Warranty period is either 5 years or when the device reaches the Total TBW Over warranty period, whichever comes first.
5 These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at www.sffcommittee.org.

Enterprise Performance 10K HDD

Channel Data Sheet

Specifications	4K Native			
Capacity	1.8TB	1.2TB	900GB	600GB
Standard Model[1]	ST1800MM0008	ST1200MM0008	ST900MM0008	ST600MM0008
TurboBoost™ Enhanced Read Caching Model	ST1800MM0088	ST1200MM0118	ST900MM0088	ST600MM0118
Standard Seagate Secure SED Model[1,2]	ST1800MM0038	ST1200MM0038	ST900MM0038	ST600MM0038
TurboBoost Seagate Secure SED Model[2]	ST1800MM0108	ST1200MM0138	ST900MM0108	ST600MM0138
Standard Seagate Secure SED FIPS 140-2 Model[1,2,3]	ST1800MM0048	—	—	—
TurboBoost Seagate Secure SED FIPS 140-2 Model[1,2,3]	ST1800MM0118	—	—	—
Performance				
Spindle Speed (RPM)	10,000 RPM	10,000 RPM	10,000 RPM	10,000 RPM
Average Latency (ms)	2.9	2.9	2.9	2.9
Sustained Transfer Rate (Outer to Inner Diameter) MB/s	241 to 117	241 to 117	241 to 117	241 to 117
Cache, Multi-segmented (MB)	128	128	128	128
Configuration/Reliability				
Discs/Heads	4/8	4/8	4/8	4/8
Interface	SAS 12 Gb/s	SAS 12 Gb/s	SAS 12 Gb/s	SAS 12 Gb/s
External Transfer Rate (MB/s)	1,200	1,200	1,200	1,200
Non-recoverable Read Errors per Bits Read, Max	1 per 10E16	1 per 10E16	1 per 10E16	1 per 10E16
Annualised Failure Rate (AFR)	0.44%	0.44%	0.44%	0.44%
Limited Warranty (years)[4]	5	5	5	5
Turboboost Enhanced Read Caching Feature				
I/O Acceleration and Response Time Optimisation	Enabled	Enabled	Enabled	Enabled
NAND Flash Type	eMLC	eMLC	eMLC	eMLC
NAND Flash Size	32 GB	32 GB	32 GB	32 GB
Intelligent NAND Endurance Management	Yes	Yes	Yes	Yes
Power Management				
Typical Op (A) +5V/+12V	0.44/0.47	0.44/0.42	0.44/0.41	0.44/0.41
Typical Operating (W)	7.8	7.25	7.12	7.15
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