

Enterprise Performance 10K HDD

Channel Data Sheet

The Perfect Match of High Capacity and High Performance

- High-capacity and small 2.5-inch footprint enables data centers to keep pace with data growth and optimize data center real estate.
- Delivers 1.8TB 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 optimizes response times to complete more transactions in less time—even during peak demand.
- Latest 12Gb/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 organizations 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 centers
- 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.



Enterprise Performance 10K HDD



Specifications	512 Native		512 Emulation		
	1.2TB ¹	1.8TB ¹	1.2TB ¹	900GB ¹	600GB ¹
Standard Model	ST1200MM0088	—	—	—	—
TurboBoost™ Model	—	ST1800MM0128	ST1200MM0158	ST900MM0128	ST600MM0158
Standard Seagate Secure® Model	ST1200MM0098 ²	—	—	—	—
TurboBoost Seagate Secure Model	—	ST1800MM0148 ²	ST1200MM0178 ²	ST900MM0148 ²	ST600MM0178 ²
TurboBoost Seagate Secure FIPS 140-2 Model	—	ST1800MM0158 ²	—	—	—
Performance					
Spindle Speed (RPM)	10K	10K	10K	10K	10K
Average Latency (ms)	2.9	2.9	2.9	2.9	2.9
Sustained Transfer Rate (Outer to Inner Diameter, MB/s)	215 to 108	241 to 117	241 to 117	241 to 117	241 to 117
Cache, Multisegmented (MB)	128	128	128	128	128
Configuration/Reliability					
Disks	3	4	3	2	2
Heads	6	8	6	4	3
Interface	12Gb/s SAS	12Gb/s SAS	12Gb/s SAS	12Gb/s SAS	12Gb/s SAS
External Transfer Rate (MB/s)	1200	1200	1200	1200	1200
Nonrecoverable Read Errors per Bits Read	1 per 10E16	1 per 10E16	1 per 10E16	1 per 10E16	1 per 10E16
Annualized Failure Rate (AFR)	0.44%	0.44%	0.44%	0.44%	0.44%
TurboBoost Enhanced Cache Feature					
I/O Acceleration and Response Time Optimization	—	Enabled	Enabled	Enabled	Enabled
NAND Flash Type	—	eMLC	eMLC	eMLC	eMLC
NAND Flash Size	—	32GB	32GB	32GB	32GB
Intelligent NAND Endurance Management	—	Yes	Yes	Yes	Yes
Power Management					
Typical Op (A) +5V/+12V	0.44/0.42	0.44/0.47	0.44/0.42	0.44/0.41	0.44/0.41
Typical Operating (W)	7.25	7.8	7.25	7.12	7.15
Power Idle (W)	4.26	4.55	4.26	3.88	3.91
Performance Efficiency Index (Idle W/GB)	0.0036	0.0025	0.0036	0.0043	0.0065
Environmental					
Temperature, Operating (°C)	5 to 55	5 to 55	5 to 55	5 to 55	5 to 55
Temperature, Nonoperating (°C)	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70
Shock, Operating: 11ms (Gs)	40	40	40	40	40
Shock, Nonoperating: 2ms (Gs)	400	400	400	400	400
Acoustics Idle (bels—sound power)	3.1	3.1	3.1	3.1	3.1
Vibration, Operating: <500Hz (Gs)	0.5	0.5	0.5	0.5	0.5
Vibration, Nonoperating: <500Hz (Gs)	3	3	3	3	3
Physical					
Height (in/mm, max) ³	0.591/15.00	0.591/15.00	0.591/15.00	0.591/15.00	0.591/15.00
Width (in/mm, max) ³	2.760/70.10	2.760/70.10	2.760/70.10	2.760/70.10	2.760/70.10
Depth (in/mm, max) ³	3.955/100.45	3.955/100.45	3.955/100.45	3.955/100.45	3.955/100.45
Weight (lb/kg)	0.426/0.193	0.439/0.199	0.426/0.193	0.417/0.189	0.417/0.189
Carton Unit Quantity	30	30	30	30	30
Cartons per Pallet	50	50	50	50	50
Cartons per Layer	10	10	10	10	10
Warranty					
Limited Warranty (years)	5	5	5	5	5

1 One gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes when referring to drive capacity.

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 These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at www.sffcommittee.org. For connector-related dimensions, see SFF-8223 (SAS models).





Enterprise Performance 10K HDD



Specifications	4K Native			
	1.8TB ¹	1.2TB ¹	900GB ¹	600GB ¹
TurboBoost™ Model	ST1800MM0088	ST1200MM0118	ST900MM0088	ST600MM0118
TurboBoost Seagate Secure® Model	ST1800MM0108 ²	ST1200MM0138 ²	ST900MM0108 ²	ST600MM0138 ²
TurboBoost Seagate Secure FIPS 140-2 Model	ST1800MM0118 ²	—	—	—
Performance				
Spindle Speed (RPM)	10K	10K	10K	10K
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, Multisegmented (MB)	128	128	128	128
Configuration/Reliability				
Disks	4	3	2	2
Heads	8	6	4	3
Interface	12Gb/s SAS	12Gb/s SAS	12Gb/s SAS	12Gb/s SAS
External Transfer Rate (MB/s)	1200	1200	1200	1200
Nonrecoverable Read Errors per Bits Read	1 per 10E16	1 per 10E16	1 per 10E16	1 per 10E16
Annualized Failure Rate (AFR)	0.44%	0.44%	0.44%	0.44%
TurboBoost Enhanced Cache Feature				
I/O Acceleration and Response Time Optimization	Enabled	Enabled	Enabled	Enabled
NAND Flash Type	eMLC	eMLC	eMLC	eMLC
NAND Flash Size	32GB	32GB	32GB	32GB
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
Power Idle (W)	4.55	4.26	3.88	3.91
Performance Efficiency Index (Idle W/GB)	0.0025	0.0036	0.0043	0.0065
Environmental				
Temperature, Operating (°C)	5 to 55	5 to 55	5 to 55	5 to 55
Temperature, Nonoperating (°C)	-40 to 70	-40 to 70	-40 to 70	-40 to 70
Shock, Operating: 11ms (Gs)	40	40	40	40
Shock, Nonoperating: 2ms (Gs)	400	400	400	400
Acoustics Idle (bels—sound power)	3.1	3.1	3.1	3.1
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Vibration, Nonoperating: <500Hz (Gs)	3	3	3	3
Physical				
Height (in/mm, max) ³	0.591/15.00	0.591/15.00	0.591/15.00	0.591/15.00
Width (in/mm, max) ³	2.760/70.10	2.760/70.10	2.760/70.10	2.760/70.10
Depth (in/mm, max) ³	3.955/100.45	3.955/100.45	3.955/100.45	3.955/100.45
Weight (lb/kg)	0.439/0.199	0.426/0.193	0.417/0.189	0.417/0.189
Carton Unit Quantity	30	30	30	30
Cartons per Pallet	50	50	50	50
Cartons per Layer	10	10	10	10
Warranty				
Limited Warranty (years)	5	5	5	5

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