

Channel Data Sheet

The Perfect Match of High Capacity and High Performance

- High-capacity and small 2.5-inch footprint enable 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-atrest and helps cut IT drive retirement costs.²

Best-Fit Applications



- 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



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.





Channel Data Sheet



Specifications		512 1	Native	
Capacity	1.2TB	900GB	600GB	300GB
Standard Model ¹	ST1200MM0088	ST900MM0168	ST600MM0208	ST300MM0048
urboBoost™ Enhanced Read Caching Model	_	_	_	
tandard Seagate Secure SED Model ^{1, 2}	ST1200MM0098	ST900MM0178	ST600MM0218	ST300MM0058
-	3112001/11/10096	31900101101176	31000101100210	31300WIWI0036
urboBoost Seagate Secure SED Model ²		_		
Standard Seagate Secure SED FIPS 140-2 Model ^{1,}	ST1200MM0108	-	_	
urboBoost Seagate Secure SED FIPS 140-2	_	_	_	_
lodel ^{1,2,3}				
erformance				
pindle Speed (RPM)	10000RPM	10000RPM	10000RPM	10000RPM
verage Latency (ms)	2.9	2.9	2.9	2.9
sustained Transfer Rate (Outer to Inner Diameter) IB/s	215 to 108	215 to 108	215 to 125	215 to 125
ache, Multisegmented (MB)	128	128	128	128
Configuration/Reliability				
Disks/Heads	3/6	3/6	2/4	1/2
nterface	SAS 12 Gb/s	SAS 12 Gb/s	SAS 12 Gb/s	SAS 12 Gb/s
xternal Transfer Rate (MB/s)	1,200	1,200	1,200	1,200
onrecoverable Read Errors per Bits Read, Max	1 per 10E16	1 per 10E16	1 per 10E16	1 per 10E16
nnualized Failure Rate (AFR)	0.44%	0.44%	0.44%	0.44%
imited Warranty (years) ⁴	5	5	5	5
urboboost Enhanced Read Caching Feature				
O Acceleration and Response Time Optimization	_	_	_	_
AND Flash Type	_	_	_	_
IAND Flash Size	_	_	_	_
ntelligent NAND Endurance Management	_	_	_	_
ower Management				
ypical Op (A) +5V/+12V	0.44/0.42	0.44/0.42	0.34/0.41	0.34/0.38
ypical Operating (W)	7.25	7.25	6.68	6.3
verage Idle Power (W)	4.26	4.26	3.44	3.09
Performance Efficiency Index (Idle W/GB)	0.0036	0.0047	0.0057	0.0103
nvironmental				
mbient Temperature, Operating (C°)	5°C – 55°C	5°C – 55°C	5°C – 55°C	5°C – 55°C
mbient Temperature, Nonoperating (C°)	-40°C – 70°C	-40°C – 70°C	-40 °C – 70 °C	-40°C – 70°C
hock, Max. Operating: 11ms (Gs)	40	40	40	40
hock, Max. Nonoperating: 2ms (Gs)	400	400	400	400
coustics Idle (bels—sound power)	3.1	3.1	3.1	3.1
libration, Operating: <500Hz (Gs)	0.5	0.5	0.5	0.5
/ibration, Nonoperating: <500Hz (Gs)	3	3	3	3
hysical				
eight (mm/in, max) ⁵	15mm/0.591in	15mm/0.591in	15mm/0.591in	15mm/0.591in
/idth (mm/in, max) ⁵	70.1mm/2.76in	70.1mm/2.76in	70.1 mm/2.76in	70.1mm/2.76in
epth (mm/in, max) ⁵	100.45mm/3.955in	100.45mm/3.955in	100.45mm/3.955in	100.45mm/3.955in
Veight (g/lb)	193g/0.426lb	193g/0.426lb	222g/0.49lb	218g/0.481lb
Carton Unit Quantity	1939/0.42610	1939/0.4260	40	2169/0.461ID 40
anon our additing	70	70	70	70

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.





Channel Data Sheet

Specifications	512 Emulation					
Specifications Capacity	1.8TB	1.2TB	900GB	600GB		
Standard Model ¹	ST1800MM0018	ST1200MM0018	ST900MM0018	ST600MM0018		
	ST1800MM0128		ST900MM0128	ST600MM0158		
urboBoost Enhanced Read Caching Model		ST1200MM0158				
Standard Seagate Secure SED Model ^{1, 2}	ST1800MM0068	ST1200MM0068	ST900MM0068	ST600MM0068		
urboBoost Seagate Secure SED Model ²	ST1800MM0148	ST1200MM0178	ST900MM0148	ST600MM0178		
Standard Seagate Secure SED FIPS 140-2 Model ^{1,}	ST1800MM0078	_	_	_		
urboBoost Seagate Secure SED FIPS 140-2	ST1800MM0158	_	_	_		
erformance						
pindle Speed (RPM)	10000RPM	10000RPM	10000RPM	10000RPM		
verage Latency (ms)	2.9	2.9	2.9	2.9		
ustained Transfer Rate (Outer to Inner Diameter)	241 to 117	241 to 117	241 to 117	241 to 117		
cache, Multisegmented (MB)	128	128	128	128		
Configuration/Reliability		·				
Disks/Heads	4/8	3/6	3/6	2/3		
nterface	SAS 12 Gb/s	SAS 12 Gb/s	SAS 12 Gb/s	SAS 12 Gb/s		
xternal Transfer Rate (MB/s)	1,200	1,200	1,200	1,200		
onrecoverable Read Errors per Bits Read, Max	1 per 10E16	1 per 10E16	1 per 10E16	1 per 10E16		
nnualized Failure Rate (AFR)	0.44%	0.44%	0.44%	0.44%		
mited Warranty (years) ⁴	5	5	5	5		
urboboost Enhanced Read Caching Feature		-				
O Acceleration and Response Time Optimization	Enabled	Enabled	Enabled	Enabled		
AND Flash Type	eMLC	eMLC	eMLC	eMLC		
AND Flash Size	32GB	32GB	32GB	32GB		
itelligent NAND Endurance Management	Yes	Yes	Yes	Yes		
ower Management		•				
ypical Op (A) +5V/+12V	0.44/0.47	0.44/0.42	0.44/0.41	0.44/0.41		
ypical Operating (W)	7.8	7.25	7.12	7.15		
verage Idle Power (W)	4.55	4.26	3.88	3.91		
erformance Efficiency Index (Idle W/GB)	0.0025	0.0036	0.0043	0.0065		
nvironmental						
mbient Temperature, Operating (C°)	5°C – 55°C	5°C – 55°C	5°C – 55°C	5°C – 55°C		
mbient Temperature, Nonoperating (C°)	-40°C - 70°C	-40°C – 70°C	-40°C – 70°C	-40°C – 70°C		
hock, Max. Operating: 11ms (Gs)	40	40	40	40		
hock, Max. Nonoperating: 2ms (Gs)	400	400	400	400		
coustics Idle (bels—sound power)	3.1	3.1	3.1	3.1		
ibration, Operating: <500Hz (Gs)	0.5	0.5	0.5	0.5		
ibration, Nonoperating: <500Hz (Gs)	3	3	3	3		
hysical						
eight (mm/in, max) ⁵	15mm/0.591in	15mm/0.591in	15mm/0.591in	15mm/0.591in		
fidth (mm/in, max) ⁵	70.1mm/2.76in	70.1mm/2.76in	70.1 mm/2.76in	70.1 mm/2.76in		
epth (mm/in, max) ⁵	100.45mm/3.955in	100.45mm/3.955in	100.45mm/3.955in	100.45mm/3.955in		
/eight (g/lb)	199g/0.439lb	193g/0.426lb	189g/0.417lb	189g/0.417lb		
arton Unit Quantity	40	40	40	40		
ration one quantity	40	40	40	60/10		

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

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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	OT					
2,3	ST1800MM0048	_	_	_		
TurboBoost Seagate Secure SED FIPS 140-2	ST1800MM0118	_	_	_		
Model ^{1,2,3}	0.1000					
Performance				1		
Spindle Speed (RPM)	10000RPM	10000RPM	10000RPM	10000RPM		
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/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		
Nonrecoverable Read Errors per Bits Read, Max	1 per 10E16	1 per 10E16	1 per 10E16	1 per 10E16		
Annualized 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 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		
Average Idle 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, Nonoperating (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. Nonoperating: 2ms (Gs)	400	400	400	400		
Acoustics Idle (bels—sound power)	3.1	3.1	3.1	3.1		
Vibration, Operating: <500Hz (Gs)	0.5	0.5	0.5	0.5		
Vibration, Nonoperating: <500Hz (Gs)	3	3	3	3		
Physical						
Height (mm/in, max) ⁵	15mm/0.591in	15mm/0.591in	15mm/0.591in	15mm/0.591in		
Width (mm/in, max) ⁵	70.1mm/2.76in	70.1mm/2.76in	70.1 mm/2.76in	70.1mm/2.76in		
Depth (mm/in, max) ⁵	100.45mm/3.955in	100.45mm/3.955in	100.45mm/3.955in	100.45mm/3.955in		
Weight (g/lb)	199g/0.439lb	193g/0.426lb	189g/0.417lb	189g/0.417lb		
Carton Unit Quantity	40	40	40	40		
Cartons per Pallet / Cartons per Layer	60/10	-	· · · · · · · · · · · · · · · · · · ·	60/10		

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