

Enterprise Performance 15K HDD

Data Sheet

Featuring Enhanced Caching With Seagate® TurboBoost™ Technology

- Accelerates I/O operations and optimizes response times (up to 20× over base drive) completing more transactions faster, even during peak demand
- Uses traditional NAND and advanced algorithms to promote hot data and achieve performance improvement (up to 3× over base drive) in real-life workloads
- Delivers more predictable performance while protecting data from corruption due to unexpected power loss

Highest-Performing, Up to 600GB, 12Gb/s SAS, Small Form Factor 15K Hard Drive

- Stores twice the amount of Tier 1 data over previous generation
- Enables faster transaction processing, which can result in improved customer satisfaction
- Latest 12Gb/s SAS interface for improved scalability
- Industry's highest MTBF at 2M hours
- Support for all drive formats, including 512 Native, 512 Emulation and 4K Native
- Provides 23% to 30% improvement in SDR performance over previous generation¹
- SAS-based Protection Information (PI) helps protect against inadvertent data change.²
- Seagate Secure™ drive options (AES-256) help cut IT drive retirement costs while helping securely protect data where it lives—on the drive.³
- Seagate Secure FIPS drive option³

Best-Fit Applications

- High-performance Tier 1 enterprise servers
- Blade, rack and tower servers hosting transaction-based applications
- Power- and space-constrained data centers
- Compliance and data security initiatives

¹ Actual improvement varies depending on queue depth, transfer size and format.

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

³ Not all drives may be available in all countries. Seagate Secure drives meet ISO/IEC 27040 and NIST 800-88 standards. May require TCG-compliant host or controller support.





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Specifications	Sector Formats:	4KN ¹	
Capacity		600GB	300GB
Seagate Secure™ Model ⁴		—	—
Encryption ⁵		ST600MX0092	ST300MX0042
Encryption/FIPS ⁶		ST600MX0102	—
TurboBoost™ Standard Model		—	—
TurboBoost Seagate Secure Model ⁷		ST600MX0082, ST600MX0102, ST600MX0092	ST300MX0032, ST300MX0042
TurboBoost Seagate Secure FIPS 140-2		—	—
Specifications			
Capacity ⁸		600GB	300GB
Interface ⁹		SAS 12Gb/s	SAS 12Gb/s
Configuration/Organization			
Spin Speed ¹⁰		15000RPM	15000RPM
Cache ¹¹		128MB	128MB
Areal Density		479	518
Encryption ¹²		Encryption/FIPS , Encryption	Encryption
Maximum Operating Shock		25Gs	25Gs
Physical			
Maximum Length		100.45mm	100.45mm
Maximum Width		70.10mm	70.10mm
Maximum Height		15.00mm	15.00mm
Typical Weight		230g	225g
AFR		0.44%	0.44%
Operating Temperature		55° C	55° C
Average Operating Power		8.68W	8.42W
Sector Formats		4KN	4KN

Specifications	Sector Formats:	512E ²
Capacity	600GB	300GB
Seagate Secure™ Model ⁴	—	—
Encryption ⁵	ST600MX0062	ST300MX0022
Encryption/FIPS ⁶	ST600MX0072	—
TurboBoost™ Standard Model	ST600MX0052	—
TurboBoost Seagate Secure Model ⁷	ST600MX0062, ST600MX0052, ST600MX0072	ST300MX0022, ST300MX0012
TurboBoost Seagate Secure FIPS 140-2	ST600MX0072	—
Specifications		
Capacity ⁸	600GB	300GB
Interface ⁹	SAS 12Gb/s	SAS 12Gb/s
Configuration/Organization		
Spin Speed ¹⁰	15000RPM	15000RPM
Cache ¹¹	128MB	128MB
Areal Density	479	518
Encryption ¹²	Encryption, Encryption/FIPS	Encryption
Maximum Operating Shock	25Gs	25Gs
Physical		
Maximum Length	100.45mm	100.45mm
Maximum Width	70.10mm	70.10mm
Maximum Height	15.00mm	15.00mm
Typical Weight	230g	225g
AFR	0.44%	0.44%
Operating Temperature	55° C	55° C
Average Operating Power	8.68W	8.42W
Sector Formats	512E	512E

Specifications	Sector Formats:	512N ³		
Capacity		600GB	300GB	146GB
Seagate Secure™ Model ⁴		ST600MP0015, ST600MP0005, ST600MP0025	ST300MP0005, ST300MP0015, ST9300453SS, ST9300653SS	ST9146853SS, ST9146653SS, ST9146753SS
Encryption ⁵		ST600MP0015	ST300MP0015	ST9146753SS
Encryption/FIPS ⁶		ST600MP0025	ST9300453SS	ST9146653SS
TurboBoost™ Standard Model		—	—	—
TurboBoost Seagate Secure Model ⁷		—	—	—
TurboBoost Seagate Secure FIPS 140-2		—	—	—
Specifications				
Capacity ⁸		600GB	300GB	146GB
Interface ⁹		SAS 12Gb/s	SAS 12Gb/s, SAS 6Gb/s	SAS 6Gb/s
Configuration/Organization				
Spin Speed ¹⁰		15000RPM	15000RPM	15000RPM
Cache ¹¹		128MB	128MB, 64MB	64MB
Areal Density		530	526, 448	448
Encryption ¹²		Encryption, Encryption/FIPS	Encryption, Encryption/FIPS	Encryption/FIPS, Encryption
Maximum Operating Shock		25Gs	25Gs, 40Gs	40Gs
Physical				
Maximum Length		100.45mm	100.45mm	100.45mm
Maximum Width		70.10mm	70.10mm	70.10mm
Maximum Height		15.00mm	15.00mm	15.00mm
Typical Weight		230g	225g, 200g	193g
AFR		0.44%	0.44%	0.44%
Operating Temperature		55°C	55°C	55°C
Average Operating Power		8.68W	8.42W, 8.02W	7.54W
Sector Formats		512N	512N	512N

1 4KN

2 512E

3 512N

4 No

5 Encryption is a set of algorithmic schemes that encode plain text into a non-readable form and is engineered into the disk drive. Encryption models are not available in all countries.

6 FIPS 140-2 Validated Self-Encrypting Drives (SEDs) have been certified by the U.S. National Institute of Standards and Technology (NIST) and Canadian Communications Security Establishment (CSE) as meeting the Level 2 security requirements for cryptographic modules as defined in the Federal Information Processing Standards (FIPS) 140-2 Publication. FIPS Encryption models are not available in all countries.

7 TurboBoost Cache

8 The amount of memory (measured in gigabytes or terabytes) that can be stored in a disc drive. Usually given as formatted capacity (see format operation). One gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one thousand billion bytes. Your computer's operating system may use a different standard of measurement and report a lower capacity. In addition, some of the listed capacity is used for formatting and other functions and will not be available for data storage.

9 A drive's interface manages the exchange of data between the drive and a computing device.

10 Spin-speed is the number of revolutions per minute (RPM) completed by a hard disk drive's spindle. Spin-speed plays an important role in the overall performance of a hard disk drive.

11 Cache is a type of memory used by a drive to store frequently or recently used data for fast access.

12 Encryption is a set of algorithmic schemes that encode plain text into a non-readable form. These algorithmic schemes are engineered into the drive to provide additional data security. All encrypting drives meet Opal standards. For details please see the datasheet. Encryption models are not available in all countries.

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