

Data Sheet

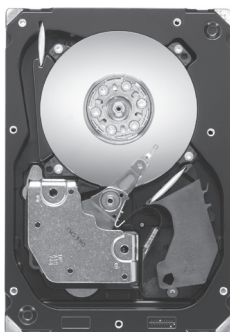
# Cheetah® 15K.7

Highest capacity, performance and reliability  
in 3.5-inch mission-critical storage

**600, 450 and 300GB • 15K RPM • 6Gb/s Serial  
Attached SCSI • 4Gb/s Fibre Channel**

**Key Advantages**

- Third-generation perpendicular recording delivers up to 600GB.
- Unprecedented performance with sustained data rate of up to 204MB/s—a 16 percent increase over last generation
- Industry's highest 3.5-inch drive reliability at 1.6-million-hours MTBF
- Seagate PowerTrim™ technology provides a 62 percent improvement in GBs/W at idle over typical 3.5-inch hard drives.
- Read/write advances deliver nonrecoverable error rate of 1x10E16
- Available in 4Gb/s FC or 6Gb/s SAS interfaces (supports SAS 2.0 feature set)
- TCG-compliant Self-Encrypting Drive (SED) option cuts IT drive retirement expenses while securely protecting data and is one of the easiest, most cost-effective security measures you can implement.<sup>1</sup>
- FIPS Self-Encrypting Drive option provides all the benefits of SED and is NIST certified to meet U.S., Canada and U.K. federal data encryption compliance requirements.<sup>1, 2</sup>



**Best-Fit Applications**

- Business and transaction processing
- Storage area networks and networked attached storage
- E-mail, decision support, Internet and e-commerce
- Government-grade, data-at-rest security when drives leave your control<sup>1</sup>
- Drive retirement cost reduction and drive life extension strategies<sup>1</sup>

<sup>1</sup> Requires TCG-compliant host or controller support. Not available in all countries.

<sup>2</sup> See FIPS 140-2 Level 2 Certificate at <http://csrc.nist.gov/groups/STM/cmvp/documents/140-1/1401vend.htm>.



FIPS 140-2 INSIDE



# Cheetah® 15K.7

Highest capacity, performance and reliability in 3.5-inch mission-critical storage



## Lowest Cost of Ownership

- Seventh-generation Seagate® Cheetah 15K.7 drive is the fastest, highest capacity and most reliable ever.
- Lower watts/GB ratio helps achieve reduced power and cooling costs while optimizing capacity requirements.
- Higher performance with fewer drives—reducing support infrastructure, physical space requirements and storage management costs
- The highest reliability of any 3.5-inch drive, with increased system reliability due to the need for fewer drives

## Highest Reliability

- Seagate continues to focus on reliability and data protection. MTBF is an industry-leading 1.6 million hours.
- Seagate-exclusive enhanced Error Correction Code better maintains performance throughout the life of the drive and reduces the probability of lost data.
- The third generation of Seagate-exclusive Background Media Scan proactively scans the media for potential defects during drive idle time. It enables incipient errors to be corrected before data is lost.
- Quick and Robust Download feature loads new firmware in seconds, with built-in protection to ensure no corruption in the event of a power failure during firmware switch.

## Strong Enough for National Security<sup>1</sup>

The Cheetah 15K.7 drive is available in SED or FIPS SED models; both eliminate the need to overwrite or physically destroy drives, enable secure return of drives for warranty or expired lease purposes, and allow organizations to securely repurpose or sell hard drives. For added physical security and more stringent regulatory compliance needs, the FIPS SED model is FIPS 140-2 Validated™ for use with sensitive but unclassified or protected (A or B) class data.

These Seagate Secure™ models help OEMs and system builders gain competitive advantage, differentiate solutions (with strong data security), sell to new customers (that require strong data security), and protect brand equity (and customer confidence).

<sup>1</sup> Requires TCG-compliant host or controller support. Not available in all countries.

| Specifications                                   | 600GB <sup>1</sup>   | 450GB <sup>1</sup>   | 300GB <sup>1</sup>   |
|--|--|--|--|
| <b>Model Number</b>                              | ST3600057SS<br>ST3600957SS <sup>2</sup><br>ST3600857SS <sup>3</sup><br>ST3600057FC<br>ST3600957FC <sup>2,4</sup><br>ST3600857FC <sup>3,4</sup> | ST3450857SS<br>ST3450757SS <sup>2</sup><br>ST3450657SS <sup>3</sup><br>ST3450857FC<br>ST3450757FC <sup>2,4</sup><br>ST3450657FC <sup>3,4</sup> | ST3300657SS<br>ST3300557SS <sup>2</sup><br>ST3300457SS <sup>3</sup><br>ST3300657FC<br>ST3300557FC <sup>2,4</sup><br>ST3300457FC <sup>3,4</sup> |
| <b>Capacity</b>                                  |  |  |  |
| Formatted 512 KB/Sector (GB)                     | 600  | 450  | 300  |
| External Transfer Rate (MB/s)                    |  |  |  |
| 4Gb/s Fibre Channel                              | 400  | 400  | 400  |
| 6Gb/s Serial Attached SCSI                       | 600  | 600  | 600  |
| <b>Performance</b>                               |  |  |  |
| Spindle Speed (RPM)                              | 15K  | 15K  | 15K  |
| Average Latency (ms)                             | 2.0  | 2.0  | 2.0  |
| Seek Time Average Read/Write (ms)                | 3.4/3.9  | 3.4/3.9  | 3.4/3.9  |
| Transfer Rate                                    |  |  |  |
| Internal (Mb/s, 0D-ID)                           | 1450 to 2370   | 1450 to 2370   | 1450 to 2370   |
| Sustained (MB/s, 1000 x 1000)                    | 122 to 204   | 122 to 204   | 122 to 204   |
| Cache, Multisegmented (MB/s)                     | 16   | 16   | 16   |
| <b>Configuration/Organization</b>                |  |  |  |
| Disks/ Heads                                     | 4/8  | 3/6  | 2/4  |
| Nonrecoverable Read Errors per Bits Read         | 1 sector per 10E16   | 1 sector per 10E16   | 1 sector per 10E16   |
| Reliability Rating at Full 24x7 Operation (AFR)  | 0.55%  | 0.55%  | 0.55%  |
| MTBF (hours)                                     | 1,600,000  | 1,600,000  | 1,600,000  |
| <b>Power Management</b>                          |  |  |  |
| Typical, Fibre Channel (W)                       | 16.31  | 15.17  | 13.8   |
| Typical, SAS (W)                                 | 16.35  | 14.6   | 12.92  |
| Power Idle, Fibre Channel (W)                    | 11.61  | 10.26  | 8.98   |
| Power Idle, SAS (W)                              | 11.68  | 10.1   | 8.74   |
| <b>Environmental</b>                             |  |  |  |
| Temperature, Operating (°C)                      | 5 to 55  | 5 to 55  | 5 to 55  |
| Temperature, Nonoperating (°C)                   | -40 to 70  | -40 to 70  | -40 to 70  |
| Shock, Operating: 2ms (Gs)                       | 60   | 60   | 60   |
| Shock, Nonoperating: 2ms (Gs)                    | 300  | 300  | 300  |
| Acoustics Idle (bels—sound power)                | 3.6  | 3.6  | 3.6  |
| Vibration, Operating: <400Hz (Gs)                | 1.0  | 1.0  | 1.0  |
| Vibration, Nonoperating: <400Hz (Gs)             | 3.0  | 3.0  | 3.0  |
| <b>Encryption</b>                                |  |  |  |
| Self-Encrypting Drive Option <sup>2,4</sup>      | Yes  | Yes  | Yes  |
| FIPS Self-Encrypting Drive Option <sup>3,4</sup> | Yes  | Yes  | Yes  |
| <b>Physical</b>                                  |  |  |  |
| Height (in/mm)                                   | 1.0/25.4   | 1.0/25.4   | 1.0/25.4   |
| Width (in/mm)                                    | 4.0/101.6  | 4.0/101.6  | 4.0/101.6  |
| Depth (in/mm)                                    | 5.76/146.52  | 5.76/146.52  | 5.76/146.52  |
| Weight (lb/kg)                                   | 1.51/0.686   | 1.49/0.676   | 1.48/0.671   |
| <b>Warranty</b>                                  |  |  |  |
| Limited Warranty (years)                         | 5  | 5  | 5  |

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

<sup>2</sup> Self-Encrypting Drive model. Requires TCG-compliant host or controller support. Not available in all countries.

<sup>3</sup> FIPS Self-Encrypting Drive model. Requires TCG-compliant host or controller support. Not available in all countries.

<sup>4</sup> Self-Encrypting Drives and FIPS Self-Encrypting Drives are only available in the channel in 6Gb/s SAS.

[www.seagate.com](http://www.seagate.com)

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