# WD BLACK™

DATA SHEET INTERNAL DRIVE FOR RETAIL



### **Highlights**

- Performance storage available in up to 6TB<sup>2</sup> capacities
- 2X DRAM cache up to 256 MB for faster read operations
- Designed for creative professionals, gamers, and system builders
- Western Digital®'s StableTrac™ and Dynamic Cache Technology increase reliability and optimize performance
- An industry-leading 5-year Limited Warranty<sup>5</sup>

INTERFACE SATA 6 Gb/s

FORM FACTOR
3.5-inch

CAPACITIES 1TB to 6TB<sup>2</sup> MODEL NUMBERS

WDBSLA0060HNC-WRSN WDBSLA0040HNC-NRSN WDBSLA0020HNC-NRSN WDBSLA0010HNC-NRSN

#### THE WESTERN DIGITAL ADVANTAGE

Western Digital puts our products through extensive Functional Integrity Testing (F.I.T.) prior to any product launch. This testing ensures our products consistently meet the highest quality and reliability standards of the Western Digital brand.

Western Digital also has a detailed Knowledge Base with more than 1,000 helpful articles as well as helpful software and utilities. Our customer support lines have longer operational hours to ensure you get the help you need when you need it. Our toll-free customer support lines are here to help or you can access our Western Digital Support site for additional details.

WD Black™ 3.5-inch PC Hard Drives are designed to enhance the PC experience across higher intensity computing tasks for digital artists, video editors, photographers, and gamers. Available with up to 256MB² of DRAM cache on higher capacity models, the WD Black 3.5-inch PC Hard Drives are optimized for performance so you can spend more time experiencing the things you love most.

# Inspiring performance and capacity

Available in capacities up to 6TB², WD Black 3.5-inch PC Hard Drives deliver rapid transfer speeds and feature impressive DRAM cache sizes of up to 256MB on high capacity models. Western Digital®'s Dynamic Cache Technology makes real-time optimizations in the allocation of cache between reads and writes to maximize performance based on the user's specific workload. Combine a WD Black hard drive with a Western Digital SSD for a dual drive configuration that allows the operating system and critical applications to be stored on the SSD for further-enhanced system performance.

#### For Creative Professionals

When it comes to storing and editing your digital portfolio, look no further than WD Black 3.5-inch PC Hard Drives. Use the WD Black hard drives for storing large multimedia files including photos, videos, and games to get the best combination of performance and capacity.

#### For Gamers

WD Black 3.5-inch PC Hard Drives are the perfect storage solutions for gaming machines, providing large capacities to store high-resolution games with their associated downloadable content (DLC) and increased cache sizes that reduce load times. System performance can be boosted even further when combined with a Western Digital SSD. 2TB and greater models of WD Black hard drives also include StableTrac™ Technology for more accurate data tracking and to help reduce any impact from vibrations caused by other gaming hardware.

#### **Increased Reliability**

StableTrac Technology (on 2TB and greater models) enables more accurate tracking that improves the performance of both read and write operations. By securing the motor shaft, the impacts of system-induced vibrations from other components are reduced, leading to enhanced reliability.

#### An Industry Leading Warranty

WD Black 3.5-inch PC Hard Drives are tested under more strenuous conditions over a longer period when compared to our standard hard drives. This comprehensive testing ensures an overall quality benchmark for a stable, high performance storage solution backed by an industry leading 5-year limited warranty<sup>5</sup>.



INTERNAL DRIVE FOR RETAIL

## **Specifications**

	6TB	4TB	2TB	1TB
Model Number <sup>1</sup>	WDBSLA0060HNC-WRSN	WDBSLA0040HNC-NRSN	WDBSLA0020HNC-NRSN	WDBSLA0010HNC-NRSN
Formatted capacity <sup>2</sup>	6TB	4TB	2TB	1TB
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch
Advanced Format (AF)	Yes	Yes	Yes	Yes
RoHS compliant <sup>3</sup>	Yes	Yes	Yes	Yes
Performance				
Interface transfer rate (max) <sup>2</sup> Buffer to host Host to/from drive (sustained)	6 Gb/s 227 MB/s	6 Gb/s 128 MB/s	6 Gb/s 164 MB/s	6 Gb/s 150 MB/s
Cache (MB) <sup>2</sup>	256	64	64	64
Performance Class	7200 RPM	7200 RPM	7200 RPM	7200 RPM
Reliability/Data Integrity				
Load/unload cycles <sup>4</sup>	300,000	300,000	300,000	300,000
Non-recoverable read errors per bits read	<1 in 10 <sup>14</sup>			
Limited warranty (years) <sup>5</sup>	5	5	5	5
Power Management <sup>6</sup>				
Average power requirements (W) Read/Write Idle Standby and Sleep	9.1 7.1 1.0	9.1 5.8 1.0	9.5 8.1 1.3	6.8 6.1 0.8
Environmental Specifications	<b>S</b> <sup>7</sup>			
Temperature (°C) Operating Non-operating	5 to 55 -40 to 70	5 to 55 -40 to 70	5 to 55 -40 to 70	0 to 60 -40 to 70
Shock (Gs) Operating (2 ms, read/write) Operating (2 ms, read) Non-operating (2 ms)	30 65 300	30 65 300	30 65 300	30 65 350
Acoustics (dBA) <sup>8</sup> Idle Seek (average)	29 36	29 36	29 34	29 30
Physical Dimensions	<u> </u>	<u> </u>	<u> </u>	
Height (in./mm, max)	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1
Length (in./mm, max)	5.787/147	5.787/147	5.787/147	5.787/147
Width (in./mm, ± .01 in.)	4/101.6	4/101.6	4/101.6	4/101.6
Weight (lb/kg)	1.58/0.72 ± 3%	1.58/0.72 ± 10%	1.32/0.60	0.99/0.45

#### Specifications subject to change without notice.

# Western Digital.

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As used for storage capacity, one megabyte (MB) = one million bytes, one gigabyte (GB) = one billion bytes, and one terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on operating environment. As used for buffer or cache, one megabyte (MB) = 1,048,576 bytes. As used for transfer rate or interface, megabyte per second (MB/s) = one million bytes per second, and gigabit per second (Gb/s) = one billion bits per second. Performance will vary depending on your hardware and software components and configurations. Effective maximum SATA 3 Gb/s transfer rate calculated according to the Serial ATA specification published by the SATA-IO organization as of the date of this specification sheet. Visit www.sata-io.org for details.

<sup>&</sup>lt;sup>3</sup> WD hard drive products manufactured and sold worldwide after June 8, 2011, meet or exceed Restriction of Hazard-ous Substances (RoHS) compliance requirements as mandated by the RoHS Directive 2011/65/EU.

<sup>&</sup>lt;sup>4</sup> Controlled unload at ambient condition.

See http://support.wdc.com/warranty for regional specific warranty details.

 $<sup>^{\</sup>rm 6}\,$  Power measurements at room-ambient temperature.

<sup>&</sup>lt;sup>7</sup> No non-recoverable errors during operating tests or after non-operating tests.

<sup>&</sup>lt;sup>8</sup> Sound power level.