

# WD Xe<sup>™</sup>

### **Datacenter Hard Drives**

Protect your investment by upgrading to the latest Enterprise performance storage technology from WD. WD Xe drives deliver 50% higher capacity, higher reliability and up to 67% lower power consumption versus 3.5-inch 15,000 RPM drives.



**INTERFACE** 

SAS 6 Gb/s

WIDTH/HEIGHT

3.5-inch/1-inch

**ROTATIONAL SPEED** 

10.000 RPM

**CAPACITIES** 

300, 450, 600 and 900 GB

MODEL NUMBERS

WD9001HKHG WD6001HKHG WD4501HKHG WD3001HKHG Note: Not all products may be available in all regions of the world.

#### **Product Benefits**

#### Ultra-fast SAS storage

WD Xe delivers 6 Gb/s transfer rates, sustained sequential data rates up to 204 MB/s, and a fast average read seek time of 3.6 ms.

#### Industry's highest reliability rating

2 million hours MTBF.

#### Low power consumption

The 3.5-inch SAS drive delivers up to 67% lower power versus 3.5-inch 15,000 RPM drives, which can result in substantially lower total cost of ownership (TCO) while increasing capacity and reliability.

#### Dual port, full duplex connectivity

Offers higher reliability, performance and data availability by eliminating single points of failure, designed for high-availability mission-critical enterprise systems.

#### 3.5-inch performance adapter

WD Xe comes pre-mounted in a 3.5-inch performance adapter, providing easy installation into legacy 3.5-inch server and storage system slots, while optimizing the drive's thermal management efficiency.

## Rotary Acceleration Feed Forward (RAFF™)

Optimizes operation and performance when the drives are used in vibration-prone, multi-drive chassis.

#### NoTouch™ ramp load technology

The recording head never touches the disk media ensuring significantly less wear to the recording head and media as well as better drive protection in transit.

#### **Environmentally conscious**

In addition to being ROHS compliant, these drives are built with halogen reduced components.

#### 5-year limited warranty

### Applications

- Performance servers All I/O-driven applications and configurations
- Performance storage Data centers and NAS arrays





| Specifications   | 900 GB                   | 600 GB                   | 450 GB                   | 300 GB                   |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| Model number   | WD9001HKHG               | WD6001HKHG               | WD4501HKHG               | WD3001HKHG               |
| Interface  | SAS 6 Gb/s               | SAS 6 Gb/s               | SAS 6 Gb/s               | SAS 6 Gb/s               |
| Formatted capacity 1   | 900 GB                   | 600 GB                   | 450 GB                   | 300 GB                   |
| User sectors per drive   | 1,758,174,768            | 1,172,123,568            | 879,097,968              | 586,072,368              |
| SCSI command queuing   | Yes                      | Yes                      | Yes                      | Yes                      |
| Form factor  | 3.5-inch                 | 3.5-inch                 | 3.5-inch                 | 3.5-inch                 |
| RoHS compliant <sup>2</sup>  | Yes                      | Yes                      | Yes                      | Yes                      |
| Performance  |                          |                          |                          |                          |
| Data transfer rate (max) Buffer to host Host to/from drive (sustained)                             | 6 Gb/s<br>204 MB/s       | 6 Gb/s<br>204 MB/s       | 6 Gb/s<br>204 MB/s       | 6 Gb/s<br>204 MB/s       |
| Cache (MB)   | 32                       | 32                       | 32                       | 32                       |
| Rotational speed (RPM)   | 10,000                   | 10,000                   | 10,000                   | 10,000                   |
| Average drive ready time (sec)   | 13                       | 13                       | 13                       | 13                       |
| Reliability/Data Integrity   |                          |                          |                          |                          |
| Load/unload cycles 3   | 600,000                  | 600,000                  | 600,000                  | 600,000                  |
| Non-recoverable read errors per bits read  | <10 in 10 <sup>17</sup>  |
| MTBF (hours) <sup>4</sup>  | 2,000,000                | 2,000,000                | 2,000,000                | 2,000,000                |
| Limited warranty (years) 5   | 5                        | 5                        | 5                        | 5                        |
| Power Management   |                          |                          |                          |                          |
| 12VDC (A, max)   | 1.450                    | 1.450                    | 1.450                    | 1.450                    |
| Average power requirements (W)<br>Sequential read<br>Sequential write<br>Random read/write<br>Idle | 7.0<br>5.3<br>6.4<br>5.2 | 7.0<br>5.3<br>6.4<br>5.2 | 7.0<br>5.3<br>6.4<br>5.2 | 7.0<br>5.3<br>6.4<br>5.2 |
| Environmental Specifications 6   |                          |                          |                          |                          |
| Temperature (°C)<br>Operating<br>Non-operating   | 5 to 55<br>-40 to 70     |
| Shock (Gs) Operating (2 ms, read/write) Operating (2 ms, read) Non-operating (2 ms)                | 30<br>65<br>300          | 30<br>65<br>300          | 30<br>65<br>300          | 30<br>65<br>300          |
| Acoustics (dBA) <sup>7</sup> Idle Seek (average)   | 30<br>40                 | 30<br>40                 | 30<br>40                 | 30<br>40                 |
| Physical Dimensions  |                          |                          |                          |                          |
| 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, ± 10%)   | 1.10/0.49                | 1.10/0.49                | 1.10/0.49                | 1.10/0.49                |

<sup>1</sup> As used for storage capacity, one megabyte (MB) = one million bytes, one gigabyte (GB) = one billion bytes, and one terabyte (TB) = one billion 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. Effective maximum SAS 6 Gb/s transfer rate calculated according to the SAS specification published by the INCTIS T10 organization as of the date of this specification sheet. Visit www.t10.org for details.

Western Digital 3355 Michelson Drive, Suite 100 Irvine, California 92612 U.S.A.

#### For service and literature:

http://support.wd.com www.wd.com

800.ASK.4WDC (800.275.4932) 800.832.4778 +800.6008.6008

Spanish Asia Pacific Europe

North America























Canada ICES-003 Class B / NMB-003 Classe B

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<sup>2</sup> MD hard drive products manufactured and sold worldwide after June 8, 2011, meet or exceed Restriction of Hazardous Substances (RoHS) compliance requirements as mandated by the RoHS Directive 2011/65/EU.

<sup>3</sup> Controlled unload at ambient condition.

 $<sup>^4\,</sup>$  100% workload at 50°C on base casting.

<sup>&</sup>lt;sup>5</sup> The term of the limited warranty may vary by region. Visit http://support.wd.com/warranty for details.

 $<sup>^{\,\,6}\,</sup>$  No non-recoverable errors during operating tests or after non-operating tests.

<sup>7</sup> Sound power level.