

## WD AV-GP

### Power-saving Hard Drives

24x7 Reliability  
Cool Running  
Whisper Quiet



Ideal for set top boxes, media servers, media centers, and mainstream surveillance systems.



## Green Power for AV: Cool. Quiet. Reliable.

Power-conserving WD AV-GP SATA hard drives take advantage of WD GreenPower Technology™ to meet the extreme requirements of demanding audio and video environments. With power reduction of up to 40 percent, they deliver cool and quiet operation and reliability perfect for audio video applications such as PVRs, DVRs, set-top boxes (STBs) as well as surveillance video recording.

- **Long-term reliability** – These drives are designed to last in high temperature, always-on, streaming digital audio/video environments.
- **Reduced power consumption** – With the combination of WD's IntelliSeek™, IntelliPark™, and IntelliPower™ technologies, WD has reduced power consumption by up to 40 percent compared to competitors' drives.
- **Quiet** – Noise levels have been optimized to less than one sone\* – virtually below the threshold of human hearing.

### Technology Features

**SilkStream™** – Optimized for smooth, continuous digital video playback of up to twelve simultaneous HD streams. SilkStream is compatible with the ATA streaming command set so CE customers can use standard streaming management and error recovery options.

**IntelliSeek** – Calculates optimum seek speeds to lower power consumption, noise, and vibration.

**IntelliPower** – A fine-tuned balance of spin speed, transfer rate, and caching algorithms designed to deliver both significant power savings and solid performance.

**IntelliPark** – Delivers lower power consumption by automatically unloading the heads during idle to reduce aerodynamic drag.

**Preemptive Wear Leveling (PWL)** – The drive arm frequently sweeps across the disk to reduce uneven wear on the drive surface common to audio video streaming applications.

\*A sone is a subjective unit of loudness as perceived by a person with normal hearing.

# WD AV-GP Power-saving Hard Drives

| Specifications <sup>1</sup>  | 2 TB                       | 1.5 TB                     | 1 TB                          | 750 GB                            | 640 GB                     | 500 GB                            | 320 GB                     | 250 GB                     | 160 GB                     |
|--|----------------------------|----------------------------|-------------------------------|-----------------------------------|----------------------------|-----------------------------------|----------------------------|----------------------------|----------------------------|
| Model numbers  | WD20EVDs                   | WD15EVDs                   | WD10EVDs<br>WD10EVDs          | WD7500AVDS<br>WD7500AVVS          | WD6400AVVS                 | WD5000AVDS<br>WD5000AVVS          | WD3200AVVS                 | WD2500AVVS                 | WD1600AVVS                 |
| Formatted capacity   | 2,000,398 MB               | 1,500,301 MB               | 1,000,204 MB                  | 750,156 MB                        | 640,135 MB                 | 500,107 MB                        | 320,072 MB                 | 251,059 MB                 | 160,041 MB                 |
| User sectors per drive   | 3,907,029,168              | 2,930,277,168              | 1,953,525,168                 | 1,465,149,168                     | 1,250,263,728              | 976,773,168                       | 625,142,448                | 490,350,672                | 312,581,808                |
| Native command queuing   | Yes                        | Yes                        | Yes                           | Yes                               | Yes                        | Yes                               | Yes                        | Yes                        | Yes                        |
| SATA latching connector  | Yes                        | Yes                        | Yes                           | Yes                               | Yes                        | Yes                               | Yes                        | Yes                        | Yes                        |
| Actuator latch/auto park   | Yes                        | Yes                        | Yes                           | Yes                               | Yes                        | Yes                               | Yes                        | Yes                        | Yes                        |
| Form factor  | 3.5-inch                   | 3.5-inch                   | 3.5-inch                      | 3.5-inch                          | 3.5-inch                   | 3.5-inch                          | 3.5-inch                   | 3.5-inch                   | 3.5-inch                   |
| RoHS compliant <sup>2</sup>  | Yes                        | Yes                        | Yes                           | Yes                               | Yes                        | Yes                               | Yes                        | Yes                        | Yes                        |
| <b>Performance</b>   |                            |                            |                               |                                   |                            |                                   |                            |                            |                            |
| Data transfer rate (max)<br>Buffer to host (SATA)<br>Host to/from drive (sustained)          | SATA 3 Gb/s<br>110 MB/s    | SATA 3 Gb/s<br>110 MB/s    | SATA 3 Gb/s<br>111 MB/s       | SATA 3 Gb/s<br>110 MB/s           | SATA 3 Gb/s<br>108 MB/s    | SATA 3 Gb/s<br>110 MB/s           | SATA 3 Gb/s<br>80 MB/s     | SATA 3 Gb/s<br>80 MB/s     | SATA 3 Gb/s<br>80 MB/s     |
| Cache (MB)   | 32                         | 32                         | 32 (WD10EVDs)<br>8 (WD10EVDs) | 32 (WD7500AVDS)<br>8 (WD7500AVVS) | 8                          | 32 (WD5000AVDS)<br>8 (WD5000AVVS) | 8                          | 8                          | 8                          |
| Average latency (ms)   | 4.2                        | 4.2                        | 4.2                           | 4.2                               | 4.2                        | 4.2                               | 4.2                        | 4.2                        | 4.2                        |
| Rotational speed (RPM)   | IntelliPower               | IntelliPower               | IntelliPower                  | IntelliPower                      | IntelliPower               | IntelliPower                      | IntelliPower               | IntelliPower               | IntelliPower               |
| Average drive ready time (sec)   | 14.5                       | 14.5                       | 14.3                          | 14.3                              | 14.3                       | 14.3                              | 8                          | 8                          | 8                          |
| <b>Configuration/Organization</b>  |                            |                            |                               |                                   |                            |                                   |                            |                            |                            |
| Heads/disks  | 8/4                        | 8/4                        | 4/2                           | 4/2                               | 4/2                        | 2/1                               | 2/1                        | 2/1                        | 1/1                        |
| Bytes per sector (STD)   | 512                        | 512                        | 512                           | 512                               | 512                        | 512                               | 512                        | 512                        | 512                        |
| <b>Reliability/Data Integrity</b>  |                            |                            |                               |                                   |                            |                                   |                            |                            |                            |
| Load/unload cycles <sup>3</sup>  | 300,000                    | 300,000                    | 300,000                       | 300,000                           | 300,000                    | 300,000                           | 300,000                    | 300,000                    | 300,000                    |
| Non-recoverable read errors per bits read  | <1 in 10 <sup>15</sup>     | <1 in 10 <sup>15</sup>     | <1 in 10 <sup>15</sup>        | <1 in 10 <sup>15</sup>            | <1 in 10 <sup>15</sup>     | <1 in 10 <sup>15</sup>            | <1 in 10 <sup>15</sup>     | <1 in 10 <sup>15</sup>     | <1 in 10 <sup>15</sup>     |
| Limited warranty (years) <sup>4</sup>  | 3                          | 3                          | 3                             | 3                                 | 3                          | 3                                 | 3                          | 3                          | 3                          |
| <b>Power Management</b>  |                            |                            |                               |                                   |                            |                                   |                            |                            |                            |
| 12VDC (A, max)   | 1.603                      | 1.603                      | 1.671                         | 1.671                             | 1.671                      | 1.392                             | 1.350                      | 1.350                      | 1.350                      |
| Average power requirements (W)<br>Read/Write<br>Idle<br>Standby<br>Sleep                     | 5.9<br>4.9<br>0.7<br>0.7   | 5.9<br>4.9<br>0.7<br>0.7   | 4.9<br>4.2<br>0.4<br>0.4      | 4.9<br>4.2<br>0.4<br>0.4          | 5.4<br>2.8<br>0.4<br>0.4   | 4.1<br>3.7<br>0.8<br>0.8          | 4.7<br>2.3<br>0.8<br>0.8   | 4.7<br>2.3<br>0.8<br>0.8   | 4.7<br>2.3<br>0.8<br>0.8   |
| <b>Environmental Specifications<sup>5</sup></b>  |                            |                            |                               |                                   |                            |                                   |                            |                            |                            |
| Temperature (°C)<br>Base casting (max)<br>Operating<br>Non-operating                         | 70<br>0 to 60<br>-40 to 70 | 70<br>0 to 60<br>-40 to 70 | 70<br>0 to 60<br>-40 to 70    | 70<br>0 to 60<br>-40 to 70        | 70<br>0 to 60<br>-40 to 70 | 70<br>0 to 60<br>-40 to 70        | 70<br>0 to 60<br>-40 to 70 | 70<br>0 to 60<br>-40 to 70 | 70<br>0 to 60<br>-40 to 70 |
| Shock (Gs)<br>Operating (2 ms, read)<br>Operating (2 ms, read/write)<br>Non-operating (2 ms) | 30<br>65<br>250            | 30<br>65<br>250            | 30<br>65<br>300               | 30<br>65<br>300                   | 30<br>65<br>300            | 30<br>65<br>350                   | 30<br>65<br>350            | 30<br>65<br>350            | 30<br>65<br>350            |
| Average acoustics (dBA) <sup>6</sup><br>Idle mode<br>Quiet seek mode                         | 25<br>26                   | 25<br>26                   | 24<br>25                      | 24<br>25                          | 24<br>25                   | 21<br>22                          | 22<br>22                   | 22<br>22                   | 22<br>22                   |
| <b>Physical Dimensions</b>   |                            |                            |                               |                                   |                            |                                   |                            |                            |                            |
| Height (in./mm, max)   | 1.028/26.1                 | 1.028/26.1                 | 1.028/26.1                    | 1.028/26.1                        | 1.028/26.1                 | 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                         | 5.787/147                  | 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                           | 4/101.6                    | 4/101.6                           | 4/101.6                    | 4/101.6                    | 4/101.6                    |
| Weight (lb./kg, ± 10%)   | 1.61/0.73                  | 1.61/0.73                  | 1.32/0.60                     | 1.32/0.60                         | 1.32/0.60                  | 0.97/0.44                         | 0.99/0.45                  | 0.99/0.45                  | 0.99/0.45                  |

<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 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. 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](http://www.sata-io.org) for details.

<sup>2</sup> WD products manufactured and sold worldwide after August 1, 2005, meet or exceed Restriction of Hazardous Substances (RoHS) compliance requirements as mandated by the European Union for electrical and electronic products. The RoHS Directive 2002/95/EC of the European Parliament, which is effective in the EU beginning July 1, 2006, aims to protect human health and the environment by restricting the use of certain hazardous substances in new equipment, and consists of restrictions on lead, mercury, cadmium, and other substances.

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

<sup>4</sup> The term of the limited warranty may vary by region. Visit [support.wdc.com/warranty](http://support.wdc.com/warranty) for details.

<sup>5</sup> No non-recoverable errors during operating test or after non-operating tests.

<sup>6</sup> Sound power level.

## For service and literature:

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