WD RE2-GP

Power-Saving Hard Drives

Reduced Power Consumption
Environmentally Responsible
Lower Cost of Ownership

Interface

SATA

Width/Height

3.5-inch/1-inch

Rotational Speed

IntelliPower

Capacities

500 GB to 1 TB

Model Numbers

WD5000ABPS
WD7500AYPS
WD1000FYPS

Note: Not all products may be available in all regions of the world.

GreenPower™
Hard Drives by WD

As demand for storage continues to expand, the need for more efficient power solutions becomes paramount. WD RE2-GP enterprise SATA hard drives make it possible for large-scale data centers to increase storage capacity without exceeding available power, and in many cases actually reducing power consumption. WD RE2-GP drives help combat the four major challenges large data installations face—total drive slots, maximum capacity, power allotment, and financial constraints—while lowering the total cost of ownership.

Product Benefits

Reduced power consumption — The combination of WD's IntelliSeek™, IntelliPark™, and IntelliPower™ technologies brings optimized performance at industry-leading low power consumption; power is reduced as much as 40 percent.

Helps enable eco-friendly servers — Each WD RE2-GP drive consumes an average of 4-5 watts less than competitor drives making it possible for energy-conscious customers to build servers with higher capacities, ensured reliability, and promote energy conservation.

Lower total cost of ownership — Large data-hungry financial institutions and web service providers can save up to $10 per drive per year in electricity costs (U.S). A large data center with 10,000 drives could realize up to $100,000 in savings per year.

Product Features

IntelliPower — A fine-tuned balance of spin speed, transfer rate, and caching algorithms designed to deliver both significant power savings and solid performance. Additionally, GreenPower drives consume less current during start up allowing more drives to spin up simultaneously resulting in faster system readiness.

IntelliSeek — Calculates optimum seek speeds to lower unnecessary power consumption, noise, and vibration.

IntelliPark — Delivers lower power consumption by automatically unloading recording heads during idle to reduce aerodynamic drag and disengages read/write electronics.

Active Power Management – WD GreenPower drives monitor work load and automatically invoke idle mode whenever possible to further reduce unnecessary power consumption. Drive recovery time from idle mode is less than one second, providing seamless power management between the drive and the host controller.

StableTrac™ — Secures the motor shaft at both ends to reduce system-induced vibration and stabilize platters for accurate tracking, during read and write operations (750 GB and 1 TB models only).

RAID-specific time-limited error recovery (TLER) — Pioneered by WD, this feature prevents drive fallout caused by the extended hard drive error-recovery processes common to desktop drives.

Rotary Acceleration Feed Forward (RAFF™) optimizes operation and performance when the drives are used in vibration-prone multi-drive systems such as rackmounted servers.

1.2 million hours MTBF — The highest available reliability rating on a high-capacity drive.

WD RE2-GP

Power Saving Hard Drives

Enterprise Hard Drives

Physical Specifications

	500 GB (2-disk)	750 GB (3-disk)	1 TB (4-disk)
Model numbers	WD5000ABPS	WD7500AYPS	WD1000FYPS
Formatted capacity[1]	500,107 MB	750,156 MB	1,000,204 MB
User sectors per drive	976,773,168	1,465,149,168	1,953,525,168
Interface	SATA 3 Gb/s	SATA 3 Gb/s	SATA 3 Gb/s
Form factor	3.5-inch	3.5-inch	3.5-inch
Bytes per sector (STD)	512	512	512
Actuator latch/auto park	Yes	Yes	Yes
SATA latching connector	Yes	Yes	Yes
RoHS compliant[2]	Yes	Yes	Yes

Performance Specifications

Data Transfer Rate

Buffer to host	*3 Gb/s* [3]
Buffer to disk	*84 MB/s sustained* [4]

Read seek time[5]	8.9 ms (average)
Rotational speed	IntelliPower
Buffer	16 MB
Drive ready time (2-disk)	11.0 sec (average)
Drive ready time (3- and 4-disk)	17.0 sec (average)
Load/unload cycles[6]	600,000 minimum
LBA support	Yes
Error rate (non-recoverable)	<1 in 10^{15} bits read

Physical Dimensions

Height	1.028 in (26.1 mm) max
Length	5.787 in (147.0 mm) max
Width	4.0 in (101.6 mm) ± .01 in.
Weight (2-disk)	1.39 lb (0.63 kg) ± 10%
Weight (3-disk)	1.52 lb (0.69 kg) ± 10%
Weight (4-disk)	1.61 lb (0.73 kg) ± 10%

Power Requirements (2-disk)

Performance mode	12V (±10%)	5V (±5%)	Power
Read/Write	*220 mA*	*700 mA*	*6W*
Idle	*180 mA*	*220 mA*	*3.3W*
Standby	*6 mA*	*180 mA*	*0.97W*
Sleep	*6 mA*	*180 mA*	*0.97W*

Power Requirements (3- and 4-disk)

Performance mode	12V (±10%)	5V (±5%)	Power
Read/Write	*340 mA*	*675 mA*	*7.4W*
Idle	*254 mA*	*195 mA*	*4W*
Standby	*6 mA*	*180 mA*	*0.97W*
Sleep	*6 mA*	*180 mA*	*0.97W*

Environmental Specifications[7]

Shock

Operating (2 ms)	*30G (read/write), 65G (read)*
Non-operating (2 ms)	
2-disk models	*300G*
3- and 4-disk models	*250G*

Half sine wave measured in 2 ms duration, measured without isolation.

Vibration

Operating	
- Random	*0.004 g^2/Hz (10 to 300 Hz)*
- Linear	*20-300 Hz, 0.75G (0 to peak)*
Non-operating	
- Random	*0.05 g^2/Hz (10 to 300 Hz)*
- Linear	*20-500 Hz, 4.0G (0 to peak)*

Acoustics (average)[8]

Idle mode	*24 dBA*
Perfomance seek mode	*29 dBA*
Quiet seek mode	*25 dBA*

Limited Warranty[9]

5 years

[1] *One gigabyte (GB) = one billion bytes. One terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on operating environment.*
[2] *WD hard drive products manufactured and sold worldwide after June 1, 2006, 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.*
[3] *Effective maximum SATA 3 Gb/s transfer rate.*
[4] *Maximum drive capacity model.*
[5] *Read Seek Time=Move Time + Read Settle Time (excluding command overhead & latency).*
[6] *Controlled unload at ambient condition.*
[7] *No non-recoverable errors during operating tests or after non-operating tests.*
[8] *Sound power level.*
[9] *The term of the limited warranty may vary by region. Visit support.wdc.com/warranty for details.*

For service and literature:
support.wdc.com
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