Product Highlights

- Available in capacities ranging from 2–6TB with support for up to 8 bays
- 5400RPM performance class
- NASware firmware for compatibility
- NAS systems with daily workloads associated with personal and home office environments and idle time available to perform necessary background operations
- 3-year limited warranty
- Supports up to 180 TB/yr Workload Rate[6]

Desktop Drives vs. WD Red

Do right by your NAS and choose the drive pur-pose-built for NAS with an array of features to help preserve your data and maintain optimum per-formance. Take the following into consideration when choosing a hard drive for your NAS:

- **Compatibility**: Unlike desktop drives, these drives are tested for compatibility and optimum performance.
- **Reliability**: The always-on environment of a NAS or RAID is a hot one, and desktop drives aren't typically designed and tested under those conditions like WD Red is.
- **Error recovery controls**: WD Red NAS hard drives are specifically designed with RAID error recovery control to help reduce failures within the NAS system.
- **Noise and Vibration Protection**: Designed to operate solo, desktop drives typically offer little or no protection from the noise and vibration present in a multi-drive system. WD Red drives are designed to thrive in multi-bay NAS system environments.

Power Your NAS with WD Red™

There's a leading edge WD Red™ drive for every compatible NAS system to store your precious data. With drives up to 6TB, WD Red offers a wide array of storage for customers looking to build a NAS solution. Built and tested for personal and home NAS systems with up to 8-bays, these drives pack all the punch you need in one power-house unit for storing, archiving, and sharing. With WD Red, you're ready for what's next.

WD Red for Personal or Home Office

Stream, backup, share, and organize your digital content at home with a NAS and WD Red drives designed to effortlessly share content with the devices in your personal or home office environments. NASware™ 3.0 technology increases your drives' compati-bility with your existing network and devices, TV, stereo, and more. Live in a connected world.

Exclusive NASware 3.0

Not just any drive will do. Get up to 48TB of capacity in your 8-bay system and with WD's exclusive NASware 3.0 technology, you can optimize each and every drive. Built into every WD Red hard drive, NASware 3.0's advanced technology improves your system's storage performance by increasing compatibility, integration, upgradeability, and reliability.

Built for Optimum NAS Compatibility

Designed for personal and home office NAS systems, our unique algorithm balances performance and reliability in NAS and RAID environments. WD Red drives are opti-mized for environments where idle time is available to perform necessary background operations. To ensure optimal performance, always check compatibility with your system. WD Red drives may not be suitable for higher workload environments. For ZFS file systems and overall NAS system compatibility, we highly recommend WD Red Plus drives, which are optimized for higher workloads.

24/7 Environment

Since your NAS system is always on, a reliable drive is essential. With an MTBF of up to 1 million hours, the WD Red drive is engineered to tackle 24×7 environments.

Premium Support and a 3-year Limited Warranty

Confidently upgrade your NAS performance with the assurance of a 3-year limited war-ranty, coupled with world-class support services included with every WD Red drive.

WD Red™

Specifications

	6TB	4TB	3TB	2TB
Model Number[1]	WD60EFAX	WD40EFAX	WD30EFAX	WD20EFAX
Recording Technology[9]	SMR	SMR	SMR	SMR
Interface[2]	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s
Formatted capacity[2]	6TB	4TB	3TB	2TB
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch
Native command queuing	Yes	Yes	Yes	Yes
Advanced Format (AF)	Yes	Yes	Yes	Yes
RoHS compliant[3]	Yes	Yes	Yes	Yes
Performance				
Interface Transfer Rate[2] up to	180 MB/s	180 MB/s	180 MB/s	180 MB/s
Cache (MB)[2]	256	256	256	256
Performance Class	5400 RPM Class	5400 RPM Class	5400 RPM Class	5400 RPM Class
Reliability/Data Integrity				
Load/unload cycles[4]	600,000	600,000	600,000	600,000
Non-recoverable read errors per bits read	<1 in 1014	<1 in 1014	<1 in 1014	<1 in 1014
MTBF (hours)[5]	1,000,000	1,000,000	1,000,000	1,000,000
Workload Rate (TB/year)[6]	180	180	180	180
Limited warranty (years)[7]	3	3	3	3
Power Management				
12VDC ±5% (A, peak)	1.75	1.75	1.75	1.31
5VDC ±5% (A, peak)				
Average power requirements (W)				
Read/Write	4.8	4.8	4.8	4.1
Idle	3.1	3.1	3.1	2.3
Standby and Sleep	0.6	0.4	0.4	0.6
Environmental Specifications[9]				
Temperature (°C)				
Operating	0 to 60	0 to 60	0 to 65	0 to 65
Non-operating	-40 to 70	-40 to 70	-40 to 70	-40 to 70
Shock (Gs)				
Operating, (2 ms, read/write)	30	30	30	30
Operating, (2 ms, read)	65	65	65	65
Non-operating (2 ms)	250	250	250	250
Acoustics (dBA)				
Idle	23	23	23	21
Seek (average)	27	27	27	26
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%)	1.40 / 0.64	1.26/0.57	1.40/0.64	1.32/0.60

Specifications subject to change without notice.

[1] Not all products may be available in all regions of the world

[2] 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 6 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. Performance will vary depending on your hardware and softwre components and configurations.

[3] WD 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.

[4] Controlled unload at ambient condition.

[5] MTBF specifications are based upon internal testing using a 40°C base casting temperature. MTBF is based on a sample population and is estimated by statistical measurements and acceleration algorithms. MTBF does not predict an individual drive's reliability and does not constitute a warranty.

[6] Workload Rate is defined as the amount of user data transferred to or from the hard drive. Workload Rate is annualized (TB transferred X (8760 / recorded power-on hours)). Workload Rate will vary depending on your hardware and software components and configurations.

[7] See support.wdc.com/warranty for regionally specific warranty details.

[8] Power measurements at room-ambient temperature.

[9] Implementation of SMR for these products is device-managed SMR.

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