WD Red™
NAS Storage

Storage for 1 to 8 bay NAS solutions

WD Red is designed specifically for NAS systems that have 1 to 8 drive bays in both 3.5-inch and 2.5-inch form factors. The drives are designed and extensively tested for compatibility in the unique 24x7 operating environment and for the demanding system requirements of home and small office NAS.

INTERFACE	FORM FACTORS	ROTATIONAL SPEED	CAPACITIES
SATA 6 Gb/s	3.5-inch 2.5-inch	IntelliPower™	*3.5-inch:* 1 TB to 6 TB *2.5-inch:* 750 GB and 1 TB

MODEL NUMBERS

3.5-inch		*2.5-inch*
WD60EFRX	WD30EFRX	WD10JFCX
WD50EFRX	WD20EFRX	WD7500BFCX
WD40EFRX	WD10EFRX	

Product Features

The WD Red family just got bigger
Our formula of success has led to the growth of WD Red into the highest capacities possible. Available up to 6 TB, WD offers an even broader, more comprehensive portfolio of NAS solutions for our customers with WD Red and WD Red Pro spanning a total of 1 to 16 bays.

NASware™ grows to 3.0
Built off of our determination to deliver the best NAS experience, NASware 3.0 extends our promise by further optimizing WD Red for the NAS environment with added support for 6 to 8 NAS bays. WD Red now supports small NAS systems from 1 to 8 bays thanks to NASware 3.0, which further improves drive compatibility and reliability. At 48 TB of total capacity in an 8 bay system, WD Red expands your NAS experience.

The right choice
WD Red is designed specifically for home and small office NAS systems and PCs with RAID.

Experienced in NAS
WD Red is a reflection of the most extensive NAS partner compatibility-testing list that is available on the market.* That means when you buy a NAS enclosure, you can trust that WD Red will be the most compatible drive available. Our pride is in our product and our vision is shared with our customers.

NAS for Home
Take your connected home environment to the next level with a NAS system that is equipped with WD Red hard drives and enjoy streaming your media, backing up your computers, file sharing and managing your digital content faster and easier. The WD Red NASware 3.0 experience with increased compatibility makes sharing from your mobile device, computer, TV, stereo and more an instant gratification. WD Red enables you to to create your own reliable Personal Cloud.

*Data reflects products in production as of May 2014.

Professional solutions
Designed specifically with SMB customers in mind, the WD Red family has expanded with the addition of WD Red Pro, which is available for the 8 to 16 bay medium to large-scale NAS environments. With capacities from 2 to 4 TB, WD Red Pro carries a 5-year limited warranty and was engineered to handle the increased workloads from your business.

3D Active Balance™ Plus
Our enhanced dual-plane balance control technology significantly improves the overall drive performance and reliability. Hard drives that are not properly balanced may cause excessive vibration and noise in a multi-drive system, reduce the hard drive life span, and degrade the performance over time. (EFRX models only)

Enhanced reliability
Since your NAS system is always on, a highly reliable drive is essential. With a 35% MTBF improvement over standard drives, the WD Red drive with NASware 3.0 is designed for the 24x7 environment.

Lower operating temperatures
Innovative technology reduces power consumption and lowers the operating temperature, resulting in a more reliable and affordable solution for always on NAS environments.

Longer warranty coverage
The WD Red drive is backed by a 3-year limited warranty for greater peace of mind.

Need help? We offer premium support
Every WD Red hard drive comes with our world-class professional support services including a premium dedicated 24/7 support line (available in English, other regional support hours vary).*

* Support outside of normal business hours is available in English only Go to http://support.wd.com for further details.

Applications

WD Red NAS hard drives are recommended for use in home and small office 1-8 bay NAS systems. For systems that use more than 8 bays, please consider WD Red Pro hard drives.*

* WD hard drives are designed and tested for use in specific applications and environments. This ensures that your hard drive is compatible with and functions properly in your application. Our hard drives are warranted against defects in materials and workmanship in the system for which they were designed. Use in systems other than for what the hard drive was designed could result in compatibility problems that affect proper function, unrelated to material and/or workmanship defects. For best results, be sure to select the appropriate product for your application by consulting our product spec sheets on our website at www.wd.com or by calling our customer support line where we would be happy to help you through the selection process.

Specifications	6 TB	5 TB	4 TB	3 TB	2 TB	1 TB	1 TB	750 GB
Model number[1]	WD60EFRX	WD50EFRX	WD40EFRX	WD30EFRX	WD20EFRX	WD10EFRX	WD10JFCX	WD7500BFCX
Interface	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s
Formatted capacity[2]	6 TB	5 TB	4 TB	3 TB	2 TB	1 TB	1 TB	750 GB
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch	2.5-inch	2.5-inch
Advanced Format (AF)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Native command queuing	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RoHS compliant[3]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Performance								
Data transfer rate (max)								
Interface speed	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s
Internal transfer rate	175 MB/s	170 MB/s	150 MB/s	147 MB/s	147 MB/s	150 MB/s	144 MB/s	144 MB/s
Cache (MB)	64	64	64	64	64	64	16	16
Rotational speed (RPM)[4]	IntelliPower	IntelliPower	IntelliPower	IntelliPower	IntelliPower	IntelliPower	IntelliPower	IntelliPower
Reliability/Data Integrity								
Load/unload cycles[5]	600,000	600,000	600,000	600,000	600,000	600,000	600,000	600,000
Non-recoverable read errors per bits read	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}
MTBF (hours)[6]	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Limited warranty (years)[7]	3	3	3	3	3	3	3	3
Power Management								
12VDC ±10% (A, peak)	1.75	1.75	1.75	1.73	1.73	1.20	-	-
5VDC ±10% (A, peak)	-	-	-	-	-	-	1.00	1.00
Average power requirements (W)								
Read/Write	5.3	5.3	4.5	4.1	4.1	3.3	1.4	1.4
Idle	3.4	3.4	3.3	2.7	2.7	2.3	0.6	0.6
Standby/Sleep	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.2
Environmental Specifications[8]								
Temperature (°C)								
Operating[9]	0 to 65	0 to 65	0 to 65	0 to 65	0 to 65	0 to 65	0 to 65	0 to 65
Non-operating	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 65	-40 to 65
Shock (Gs)								
Operating (2 ms, read/write)	30	30	30	30	30	30	400	400
Operating (2 ms, read)	65	65	65	65	65	65	-	-
Non-operating (2 ms)	250	250	250	250	250	350	1000	1000
Acoustics (dBA)[10]								
Idle	25	25	25	23	23	21	24	24
Seek (average)	28	28	28	24	24	22	25	25
Physical Dimensions								
Height (in./mm)	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1	0.374/9.5	0.374/9.5
Length (in./mm)	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147	3.94/100.2	3.94/100.2
Width (in./mm, ± .01 in.)	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6	2.75/69.85	2.75/69.85
Weight (lb./kg, ± 10%)	1.65/0.75	1.65/0.75	1.50/0.68	1.40/0.64	1.32/0.60	0.99/0.45	0.25/0.115	0.25/0.115

[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 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.

[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] A fine-tuned balance of spin speed, transfer rate and caching algorithms designed to deliver both significant power savings and solid performance. For each drive model, WD may use a different, invariable RPM.

[5] Controlled unload at ambient condition.

[6] Based on a typical NAS product environment under normal operating conditions.

[7] The term of the limited warranty may vary by region. Visit http://support.wd.com/warranty for details.

[8] No non-recoverable errors during operating tests or after non-operating tests.
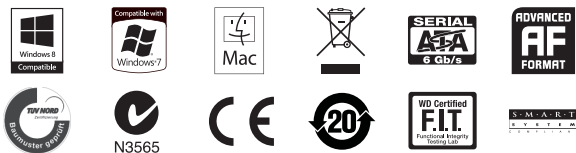
[9] On the base casting.

[10] Sound power level.

CAN ICES-3 (B) / NMB-3 (B)