WD Red™ Pro
NAS Storage

Storage for 1 to 16 bay NAS solutions

Designed specifically with SMB customers in mind, WD Red Pro is available for up to 16 bay medium to large-scale NAS environments. Engineered to handle increased workloads from your business, WD Red Pro is extensively tested and carries a long 5-year limited warranty.

INTERFACE
SATA 6 Gb/s

FORM FACTOR
3.5-inch

PERFORMANCE CLASS
7200 RPM Class

CAPACITIES
2TB to 8TB

MODEL NUMBERS

WD8001FFWX
WD6002FFWX
WD6001FFWX
WD5001FFWX
WD4002FFWX
WD4001FFSX
WD3001FFSX
WD2001FFSX

Product Benefits

NAS for Big Business
Increase the efficiency and productivity of your business with WD Red Pro hard drives for up to 16 bay NAS systems. WD Red Pro comes equipped with NASware 3.0, which increases system compatibility allowing for seamless integration with your existing network infrastructure. Add value to your business by enabling your employees to quickly share their files and back up folders reliably with WD Red Pro NAS hard drives in your NAS solution.

Exclusive NASware 3.0 technology
Our exclusive advanced firmware technology, NASware 3.0 enables seamless integration, robust data protection and optimal performance for NAS systems operating under heavy demand.

Built for optimum NAS compatibility
Desktop drives aren't purpose-built for NAS. But WD Red Pro drives with NASware are. Our exclusive technology takes the guesswork out of selecting a drive and balances performance and reliability in NAS and RAID environments. Simply put, WD Red Pro is the most compatible drive available for medium to large NAS enclosures. But don't take our word for it. WD Red Pro is a reflection of the most extensive NAS partner compatibility-testing list that is available on the market.*

*Compatibility list as of March 2016

Larger NAS Bay Shock Protection
WD Red Pro is equipped with a multi-axis shock sensor that automatically detects subtle shock events and dynamic fly height technology which adjusts each read-write function to compensate and protect the data. This combination of technology further protects the drives in larger 1 to 16 bay NAS environments and helps increase hard drive reliability.

Applications

Specifically targeted at the medium to large business NAS applications with 1-16 bays.

Specifications	8TB	6TB		5TB
Model number[1]	WD8001FFWX	WD6002FFWX	WD6001FFWX	WD5001FFWX
Interface[2]	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s
Formatted capacity[2]	8TB	6TB	6TB	5TB
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch
Advanced Format	Yes	Yes	Yes	Yes
Native command queuing	Yes	Yes	Yes	Yes
RoHS compliant[3]	Yes	Yes	Yes	Yes
Performance				
Data transfer rate (max)[2] Buffer to host Host to/from drive (sustained)	 6 Gb/s 205 MB/s	 6 Gb/s 227 MB/s	 6 Gb/s 214 MB/s	 6 Gb/s 194 MB/s
Cache (MB)	128	128	128	128
Performance Class	7200 RPM Class	7200 RPM Class	7200 RPM Class	7200 RPM Class
Reliability/Data Integrity				
Load/unload cycles[4]	600,000	600,000	600,000	600,000
Non-recoverable read errors per bits read	<10 in 10^{15}	<10 in 10^{15}	<10 in 10^{15}	<10 in 10^{15}
MTBF (hours) for 8-16 bay NAS[5]	1,000,000	1,000,000	1,000,000	1,000,000
Limited warranty (years)[6]	5	5	5	5
Power Management				
12VDC-/+10% (A, peak)	1.79	1.79	1.9	1.9
Average power requirements (W) Read/Write Idle Standby/Sleep	 7.2 5.1 1.0	 9.1 7.1 1.0	 10.6 7.4 1.6	 10.6 7.4 1.6
Environmental Specifications[7]				
Temperature (°C) Operating[8] Non-operating	 5 to 60 -40 to 70	 5 to 60 -40 to 70	 5 to 60 -40 to 70	 5 to 60 -40 to 70
Shock (Gs) Operating (2 ms, read/write) Operating (2 ms, read) Non-operating (2 ms)	 30 65 300	 30 65 300	 30 65 300	 30 65 300
Acoustics (dBA)[9] Idle Seek (average)	 20 36	 29 36	 31 34	 31 34
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%)	1.43/0.65	1.58/0.72	1.58/0.72	1.58/0.72

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.

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 Product MTBF specifications are based upon a 40°C base casting temperature and typical system workload of 180TB/year. Workload is defined as the amount of user data transferred to or from the hard drive.

6 See http://support.wd.com/warranty for regional specific warranty details.

7 No non-recoverable errors during operating tests or after non-operating tests.

8 On the base casting.

9 Sound power level.

WD Red™ Pro

Specifications	4TB		3TB	2TB
Model number[1]	WD4002FFWX	WD4001FFSX	WD3001FFSX	WD2001FFSX
Interface[2]	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s
Formatted capacity[2]	4TB	4TB	3TB	2TB
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch
Advanced Format	Yes	Yes	Yes	Yes
Native command queuing	Yes	Yes	Yes	Yes
RoHS compliant[3]	Yes	Yes	Yes	Yes
Performance				
Data transfer rate (max)[2] Buffer to host Host to/from drive (sustained)	 6 Gb/s 202 MB/s	 6 Gb/s 171 MB/s	 6 Gb/s 168 MB/s	 6 Gb/s 164 MB/s
Cache (MB)	128	64	64	64
Performance Class	7200 RPM Class	7200 RPM Class	7200 RPM Class	7200 RPM Class
Reliability/Data Integrity				
Load/unload cycles[4]	600,000	600,000	600,000	600,000
Non-recoverable read errors per bits read	<10 in 10^{15}	<10 in 10^{15}	<10 in 10^{15}	<10 in 10^{15}
MTBF (hours) for 8-16 bay NAS[5]	1,000,000	1,000,000	1,000,000	1,000,000
Limited warranty (years)[6]	5	5	5	5
Power Management				
12VDC-/+10% (A, peak)	1.79	1.9	1.9	1.9
Average power requirements (W) Read/Write Idle Standby/Sleep	 9.1 5.8 1.0	 8.6 6.5 0.6	 8.6 6.5 0.6	 6.5 4.9 0.4
Environmental Specifications[7]				
Temperature (°C) Operating[8] Non-operating	 5 to 60 -40 to 70	 5 to 60 -40 to 70	 5 to 60 -40 to 70	 5 to 60 -40 to 70
Shock (Gs) Operating (2 ms, read/write) Operating (2 ms, read) Non-operating (2 ms)	 30 65 300	 30 65 300	 30 65 300	 30 65 300
Acoustics (dBA)[9] Idle Seek (average)	 29 36	 31 34	 31 34	 31 34
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%)	1.58/0.72	1.66/0.75	1.58/0.72	1.55/0.70

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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.

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For service and literature:
http://support.wdc.com
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WD Red premium support

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+800.55593733	Europe/Middle East/Africa/ Asia Pacific

Learn more about WD Red hard drives

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

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