

WD Red[®] Pro NAS Storage

Storage for 1 to 16 bay NAS solutions

Joining the original color of NAS, WD Red Pro continues the formula of success that has led the WD Red product family by adding support beyond consumer, SOHO, and small business markets into medium and large 1-16 bay business storage systems. WD Red Pro hard drives integrate WD's exclusive technology, NASware[®] 3.0, to provide unparalleled support for drive compatibility, reliability, and performance.



CAPACITIES

2TB to 6TB

INTERFACE SATA 6 Gb/s FORM FACTOR 3.5-inch

MODEL NUMBERS WD6002FFWX WD3001FFSX WD6001FFWX WD2001FFSX WD4002FFWX WD4002FFXX

Product Benefits

Professional 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 longer 5-year limited warranty.

NAS for Big Business

Increase the efficiency and productivity of your business with WD Red Pro hard drives for up to 16 bay NAS system. 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

PERFORMANCE CLASS

7200 RPM Class

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 multiaxis 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. NAS environments.

Applications

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



WD Red[®]Pro

Specifications	6TB		5TB	4TB	
Model number ¹	WD6002FFWX	WD6001FFWX	WD5001FFWX	WD4002FFWX	WD4001FFSX
Interface	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s
Formatted capacity ²	6TB	6TB	5TB	4TB	4TB
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch
Advanced Format	Yes	Yes	Yes	Yes	Yes
Native command queuing	Yes	Yes	Yes	Yes	Yes
RoHS compliant ³	Yes	Yes	Yes	Yes	Yes
Performance					
Data transfer rate (max) Buffer to host Host to/from drive (sustained)	6 Gb/s 226 MB/s	6 Gb/s 214 MB/s	6 Gb/s 194 MB/s	6 Gb/s 201 MB/s	6 Gb/s 171 MB/s
Cache (MB)	128	128	128	128	64
Performance Class	7200 RPM Class	7200 RPM Class	7200 RPM Class	7200 RPM Class	7200 RPM Class
Reliability/Data Integrity					
Load/unload cycles⁴	600,000	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 1015	<10 in 10 ¹⁵	<10 in 10 ¹⁵
MTBF (hours) for 8-16 bay NAS⁵	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Limited warranty (years) ⁶	5	5	5	5	5
Power Management					
12VDC-/+10% (A, peak)	1.79	1.9	1.9	1.79	1.9
Average power requirements (W) Read/Write Idle Standby/Sleep	9.1 5.8 1.0	10.6 7.4 1.6	10.6 7.4 1.6	9.1 5.8 1.0	8.6 6.5 0.6
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	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	30 65 300
Acoustics (dBA) ⁹ Idle Seek (average)	29 36	31 34	31 34	29 36	31 34
Physical Dimensions					
Height (in./mm, max)	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
Width (in./mm, ± .01 in.)	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6
Weight (lb/kg, ± 10%)	1.58/0.72	1.66/0.75	1.66/0.75	1.58/0.72	1.66/0.75

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

Total a product register an angular to a register (MB) = one million bytes, one gigatyte (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 interactive maximum SATA 6 Gib/s transfer rate calculated according to the Serial ATA specification published by the SATA-10 organization as of the date of this specification sheet. Visit www.sata-io.org for datals.

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 Based on a typical 8-16 bay tabletop NAS product environment under normal operating conditions.

⁶ The term of the limited warranty may vary by region. Visit http://support.wd.com/warranty for 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	3TB	2TB
Model number ¹	WD3001FFSX	WD2001FFSX
Interface	SATA 6 Gb/s	SATA 6 Gb/s
Formatted capacity ²	3TB	2TB
Form factor	3.5-inch	3.5-inch
Advanced Format	Yes	Yes
Native command queuing	Yes	Yes
RoHS compliant ³	Yes	Yes
Performance		
Data transfer rate (max) Buffer to host Host to/from drive (sustained)	6 Gb/s 168 MB/s	6 Gb/s 164 MB/s
Cache (MB)	64	64
Performance Class	7200 RPM Class	7200 RPM Class
Reliability/Data Integrity		
Load/unload cycles⁴	600,000	600,000
Non-recoverable read errors per bits read	<10 in 10 ¹⁵	<10 in 10 ¹⁵
MTBF (hours) for 8-16 bay NAS ⁵	1,000,000	1,000,000
Limited warranty (years) ⁶	5	5
Power Management		
12VDC-/+10% (A, peak)	1.9	1.9
Average power requirements (W) Read/Write Idle Standby/Sleep	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
Shock (Gs) Operating (2 ms, read/write) Operating (2 ms, read) Non-operating (2 ms)	30 65 300	30 65 300
Acoustics (dBA) ⁹ Idle Seek (average)	31 34	31 34
Physical Dimensions		
Height (in./mm, max)	1.028/26.1	1.028/26.1
Length (in./mm, max)	5.787/147	5.787/147
Width (in./mm, ± .01 in.)	4/101.6	4/101.6
Weight (lb/kg, ± 10%)	1.66/0.75	1.55/0.70

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

2 As used for strange capacity, energiphyte (NE) = one million bytes, one gigabyte (GE) = one billion bytes, and one teachyte (TE) = one trillion bytes. Total accessible capacity varies depending on operating environment. As used for buffer or cache, one megabyte (NE) = 1,048,576 bytes. As used for transfer rate or interface, megabyte per second, (MD/s) = one million bytes per second, and gigabit per second. Effective maximum SATA 6 Gb/s transfer rate calculated according to the Serial ATA specification published by the SATA-10 organization as of the date of this specification sheet. Visit www.sata-io.org for details.

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⁴ Controlled unload at ambient condition.

⁵ Based on a typical 8-16 bay tabletop NAS product environment under normal operating conditions

⁶ The term of the limited warranty may vary by region. Visit http://support.wd.com/warranty for details.

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

8 On the base casting.

9 Sound power level.

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