Product Highlights

- Capacity up to 8TB[1]
- Engineered specifically for mainstream surveillance systems
- WD AllFrame technology delivers optimizations for write-intensive, low bit-rate, high stream-count workloads typical to mainstream surveillance applications
- Supports up to 180 TB/yr workload rate[10]
- Support for up to 16 bays[5]
- Tarnish-resistant components[6]
- 3-year limited warranty[13]

Three-Year Limited Warranty

As an industry-leading hard drive manufacturer, Western Digital stands behind their surveillance storage solutions with a 3-year limited warranty included with every WD Purple drive.

WD Purple™

WD Purple drives are designed to meet the challenges of 24x7 video surveillance recording. These drives are engineered specifically for surveillance to help withstand the elevated heat fluctuations and equipment vibrations within NVR environments. An average desktop drive is built to run for only short intervals, not the harsh 24x7 always-on environment of a high-definition surveillance system. With WD Purple drives, you get reliable, surveillance-class storage that's tested for compatibility in a wide range of security systems. Exclusive WD AllFrame™ technology helps reduce frame loss and improve overall video playback.

Surveillance You Can Trust

Western Digital has provided surveillance-grade storage for more than a decade. With WD Purple surveillance storage, drives are engineered for high temperature, always-on surveillance systems so you can rely on quality video when you need it most. WD Purple delivers smart video storage that you can trust and are backed by a 3-year limited warranty[13].

Western Digital's Exclusive WD AllFrame Technology

All WD Purple drives are equipped with AllFrame technology, which helps reduce video frame drops and improves video recording and playback.

Enhanced Workload Ratings

WD Purple drives feature a workload rating of up to 180TB/year[10]—up to three times that of desktop drives—to handle the unique demands of mainstream video surveillance DVR and NVR systems.

Multiple Cameras, Multiple Streams

Modern recorders now support multiple video streams per camera. WD Purple drives support up to 64 single-stream HD cameras[4] and can also support many of the latest cameras that transmit multiple streams to enable basic AI functionality. With so many options, you have the flexibility to upgrade or expand your security applications in the future.

Designed for Surveillance Solutions

With an MTBF of up to 1 million hours[12], WD Purple drives are engineered for mainstream surveillance DVRs and NVRs that operate 24x7. With tarnish-resistant components[6] and support for up to sixteen bays[5], WD Purple drives deliver reliable operation even in harsh environments.

Wide Compatibility. Seamless Integration.

WD Purple hard drives are built with compatibility in mind, so you can quickly and seamlessly add capacity to your surveillance system. With a wide range of industry-leading enclosures and chipsets supported, you're sure to find the DVR or NVR configuration that's right for you.

WD Purple™

Specifications

	8TB	6TB	6TB	6TB	6TB
Model Number[2]	WD84PURZ	WD64PURZ	WD63PURZ	WD62PURZ	WD60PURZ
Formatted capacity[1]	8TB	6TB	6TB	6TB	6TB
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch
Advanced Format (AF)	Yes	Yes	Yes	Yes	Yes
Recording Technology	CMR	CMR	CMR	CMR	CMR
RoHS compliant[3]	Yes	Yes	Yes	Yes	Yes
Product Features					
Cameras supported[4]	Up to 64 HD	Up to 64 HD	Up to 64 HD	Up to 64 HD	Up to 64 HD
Drive Bays Supported	16	16	16	16	16
Firmware Feature Name	AllFrame	AllFrame	AllFrame	AllFrame	AllFrame
Tarnish resistant components	Yes	Yes	Yes	Yes	Yes
Performance					
Interface transfer rate (max)					
Buffer to host[7]	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s
Host to/from drive (sustained)[8]	194 MB/s	180MB/s	175MB/s	185 MB/s	175 MB/s
Cache (MB)[1]	128	256	256	128	64
Reliability/Data Integrity					
Load/unload cycles[9]	300,000	300,000	300,000	300,000	300,000
Annualized workload rating[10]	180TB/yr	180TB/yr	180TB/yr	180TB/yr	180TB/yr
Non-recoverable read errors per bits read[11]	<1 in 10^14	<1 in 10^14	<1 in 10^14	<1 in 10^14	<1 in 10^14
MTBF[12]	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Limited warranty (years)[13]	3	3	3	3	3
Power Management[14]					
Average power requirements (W)					
Read/Write	6.2	4.7	4.6	6.2	5.3
Idle	5.5	4.3	3.7	5.5	4.9
Standby and Sleep	0.4	0.3	0.3	0.4	0.4
Environmental Specifications					
Temperature (°C)					
Operating[15]	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
Shock (Gs)					
Operating (2 ms, read/write)	30	30	30	30	30
Operating (2 ms, read)	65	65	65	65	65
Non-operating (2 ms)	250	250	250	250	250
Acoustics (dBA)[16]					
Idle	25	23	23	25	25
Seek (average)	30	27	27	30	28
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	1.26/0.57	1.26/0.57	1.58/0.72	1.65/0.75

[1] 1MB = 1 million bytes, 1GB = 1 billion bytes, and 1TB = 1 trillion bytes. Actual user capacity may be less depending on operating environment.

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

[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] Single stream at 3.2Mbps (1080p, H.265, 25 fps) for (WD22PURZ, WD33PURZ, WD42PURZ, WD43PURZ, WD60PURZ, WD62PURZ, WD63PURZ, WD64PURZ, WD84PURZ) and 2.6Mbps (720p, H.265, 25 fps) for (WD10PURZ, WD20PURZ, WD30PURZ, WD40PURZ.) Results may vary depending on camera resolution, file format, frames per second, software, system settings, video quality, and other factors.

[5] 1TB through 3TB (WD30PURZ) support up to eight bays; 3TB (WD33PURZ) and 4TB and above support up to 16 bays.

[6] Tarnish resistant components for capacities 3TB (WD33PURZ) and 4TB and higher.

[7] 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.

[8] 1 MB/s = 1 million bytes per second. Based on internal testing; performance may vary depending upon host device, usage conditions, drive capacity, and other factors.

[9] Controlled unload at ambient condition.

[10] 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.

[11] No non-recoverable errors during operating tests or after non-operating tests.

[12] MTBF specifications are based on a sample population and are estimated by statistical measurements and acceleration algorithms under typical operating conditions: workload of 90TB/year and drive temperature of 40°C. Derating of MTBF will occur above these parameters, up to 65°C drive temperature. MTBF does not predict an individual drive's reliability and does not constitute a warranty.

[13] See support.wdc.com/warranty for regional specific warranty details.

[14] Power measurements at room-ambient temperature.

[15] On the base casting.

[16] Sound power level.

WD Purple™

Specifications

	4TB	4TB	4TB	3TB	3TB
Model Number[2]	WD43PURZ	WD42PURZ	WD40PURZ	WD33PURZ	WD30PURZ
Formatted capacity[1]	4TB	4TB	4TB	3TB	3TB
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch
Advanced Format (AF)	Yes	Yes	Yes	Yes	Yes
Recording Technology	CMR	CMR	CMR	CMR	CMR
RoHS compliant[3]	Yes	Yes	Yes	Yes	Yes
Product Features					
Cameras supported[4]	Up to 64 HD	Up to 64 HD	Up to 64	Up to 64 HD	Up to 64
Drive Bays Supported	16	16	16	16	8
Firmware Feature Name	AllFrame	AllFrame	AllFrame	AllFrame	AllFrame
Tarnish resistant components	Yes	Yes	Yes	Yes	No
Performance					
Interface transfer rate (max)					
Buffer to host[7]	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s
Host to/from drive (sustained)[8]	180 MB/s	175 MB/s	150 MB/s	180 MB/s	145 MB/s
Cache (MB)[1]	256	256	64	256	64
Reliability/Data Integrity					
Load/unload cycles[9]	300,000	300,000	300,000	300,000	300,000
Annualized workload rating[10]	180TB/yr	180TB/yr	180TB/yr	180TB/yr	180TB/yr
Non-recoverable read errors per bits read[11]	<1 in 10^14	<1 in 10^14	<1 in 10^14	<1 in 10^14	<1 in 10^14
MTBF[12]	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Limited warranty (years)[13]	3	3	3	3	3
Power Management[14]					
Average power requirements (W)					
Read/Write	4.7	4.6	5.1	4.7	5.0
Idle	4.3	3.7	4.5	4.3	4.4
Standby and Sleep	0.3	0.3	0.4	0.3	0.4
Environmental Specifications					
Temperature (°C, on the base casting)					
Operating[15]	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
Shock (Gs)					
Operating (2 ms, read/write)	30	30	30	30	30
Operating (2 ms, read)	65	65	65	65	65
Non-operating (2 ms)	250	250	250	250	250
Acoustics (dBA)[16]					
Idle	23	23	25	23	23
Seek (average)	27	27	28	27	24
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%)	1.26/0.57	1.26/0.57	1.50/0.68	1.26/0.57	1.40/0.64

[1] 1MB = 1 million bytes, 1GB = 1 billion bytes, and 1TB = 1 trillion bytes. Actual user capacity may be less depending on operating environment.

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

[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] Single stream at 3.2Mbps (1080p, H.265, 25 fps) for (WD22PURZ, WD33PURZ, WD42PURZ, WD43PURZ, WD60PURZ, WD62PURZ, WD63PURZ, WD64PURZ, WD84PURZ) and 2.6Mbps (720p, H.265, 25 fps) for (WD10PURZ, WD20PURZ, WD30PURZ, WD40PURZ.) Results may vary depending on camera resolution, file format, frames per second, software, system settings, video quality, and other factors.

[5] 1TB through 3TB (WD30PURZ) support up to eight bays; 3TB (WD33PURZ) and 4TB and above support up to 16 bays.

[6] Tarnish resistant components for capacities 3TB (WD33PURZ) and 4TB and higher.

[7] 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.

[8] 1 MB/s = 1 million bytes per second. Based on internal testing; performance may vary depending upon host device, usage conditions, drive capacity, and other factors.

[9] Controlled unload at ambient condition.

[10] 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.

[11] No non-recoverable errors during operating tests or after non-operating tests.

[12] MTBF specifications are based on a sample population and are estimated by statistical measurements and acceleration algorithms under typical operating conditions: workload of 90TB/year and drive temperature of 40°C. Derating of MTBF will occur above these parameters, up to 65°C drive temperature. MTBF does not predict an individual drive's reliability and does not constitute a warranty.

[13] See support.wdc.com/warranty for regional specific warranty details.

[14] Power measurements at room-ambient temperature.

[15] On the base casting.

[16] Sound power level.

⧑™ Western Digital.

3

WD Purple™

Specifications

	2TB	2TB	1TB
Model Number[2]	WD22PURZ	WD20PURZ	WD10PURZ
Formatted capacity[1]	2TB	2TB	1TB
Form factor	3.5-inch	3.5-inch	3.5-inch
Advanced Format (AF)	Yes	Yes	Yes
Recording Technology	CMR	CMR	CMR
RoHS compliant[3]	Yes	Yes	Yes
Product Features			
Cameras supported[4]	Up to 64 HD	Up to 64	Up to 64
Drive Bays Supported	8	8	8
Firmware Feature Name	AllFrame	AllFrame	AllFrame
Tarnish resistant components	No	No	No
Performance			
Interface transfer rate (max)			
Buffer to host[7]	6 Gb/s	6 Gb/s	6 Gb/s
Host to/from drive (sustained)[8]	175MB/s	145 MB/s	110 MB/s
Cache (MB)[1]	256	64	64
Reliability/Data Integrity			
Load/unload cycles[9]	300,000	300,000	300,000
Annualized workload rating[10]	180TB/yr	180TB/yr	180TB/yr
Non-recoverable read errors per bits read[11]	<1 in 10^14	<1 in 10^14	<1 in 10^14
MTBF[12]	1,000,000	1,000,000	1,000,000
Limited warranty (years)[13]	3	3	3
Power Management[14]			
Average power requirements (W)			
Read/Write	3.8	4.4	3.8
Idle	3.2	4.1	3.2
Standby and Sleep	0.3	0.4	0.6
Environmental Specifications			
Temperature (°C, on the base casting)			
Operating[15]	0 to 65	0 to 65	0 to 65
Non-operating	-40 to 70	-40 to 70	-40 to 70
Shock (Gs)			
Operating (2 ms, read/write)	30	30	30
Operating (2 ms, read)	65	65	65
Non-operating (2 ms)	250	250	250
Acoustics (dBA)[16]			
Idle	21	23	21
Seek (average)	26	24	22
Physical Dimensions			
Height (in./mm, max)	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
Width (in./mm, ± .01 in.)	4/101.6	4/101.6	4/101.6
Weight (lb/kg, ± 10%)	0.99/0.45	1.32/0.60	0.99/0.45

[1] 1MB = 1 million bytes, 1GB = 1 billion bytes, and 1TB = 1 trillion bytes. Actual user capacity may be less depending on operating environment.

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

[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] Single stream at 3.2Mbps (1080p, H.265, 25 fps) for (WD22PURZ, WD33PURZ, WD42PURZ, WD43PURZ, WD60PURZ, WD62PURZ, WD63PURZ, WD64PURZ, WD84PURZ) and 2.6Mbps (720p, H.265, 25 fps) for (WD10PURZ, WD20PURZ, WD30PURZ, WD40PURZ.) Results may vary depending on camera resolution, file format, frames per second, software, system settings, video quality, and other factors.

[5] 1TB through 3TB (WD30PURZ) support up to eight bays; 3TB (WD33PURZ) and 4TB and above support up to 16 bays.

[6] Tarnish resistant components for capacities 3TB (WD33PURZ) and 4TB and higher.

[7] 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.

[8] 1 MB/s = 1 million bytes per second. Based on internal testing; performance may vary depending upon host device, usage conditions, drive capacity, and other factors.

[9] Controlled unload at ambient condition.

[10] 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.

[11] No non-recoverable errors during operating tests or after non-operating tests.

[12] MTBF specifications are based on a sample population and are estimated by statistical measurements and acceleration algorithms under typical operating conditions: workload of 90TB/year and drive temperature of 40°C. Derating of MTBF will occur above these parameters, up to 65°C drive temperature. MTBF does not predict an individual drive's reliability and does not constitute a warranty.

[13] See support.wdc.com/warranty for regional specific warranty details.

[14] Power measurements at room-ambient temperature.

[15] On the base casting.

[16] Sound power level.

Western Digital®