P300 Data Sheet

Model

		HDWD260	HDWD240	HDWD130	HDWD320
Model Number		HDWD260	HDWD240	HDWD130	HDWD320
Capacity ※1		6 TB	4 TB	3 TB	2 TB
Recording Technology ※2		SMR	SMR	CMR	SMR
Parts Number		HDWD260UZSVA	HDWD240UZSVA	HDWD130UZSVA EOL	HDWD320UZSVA

Basic Specifications

Interface ※3		SATA 6.0 Gbit/s	SATA 6.0 Gbit/s	SATA 6.0 Gbit/s	SATA 6.0 Gbit/s
Form Factor		3.5-inch	3.5-inch	3.5-inch	3.5-inch
Sector Size ※4		512e	512e	512e	512e

Features

Native command queuing (NCQ)		yes	yes	yes	yes
Advanced Format (AF)		yes	yes	yes	yes
RoHS compliant		yes	yes	yes	yes
Halogen Free		yes	yes	yes	yes

Performances

Interface Speed ※3	[Gbit/s]	6.0 / 3.0 / 1.5	6.0 / 3.0 / 1.5	6.0 / 3.0 / 1.5	6.0 / 3.0 / 1.5
Rotation Speed	[rpm]	5400	5400	7200	7200
Sustained data transfer rate ※3	[MB/s]	Non-Public	Non-Public	Non-Public	Non-Public
Buffer Size ※7	[MB]	128	128	64	256

Reliability

MTTF ※8	[hours]	Non-Public	Non-Public	Non-Public	Non-Public
Unrecoverable Error Rate		1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14
Maximum rated workload ※9	[TB/year]	Non-Public	Non-Public	Non-Public	Non-Public
Load/Unload cycles	[times]	600 000	600 000	300 000	600 000

Power Requirements

Supply Voltage ※10	[V]	12 VDC ±10 %	12 VDC ±10 %	12 VDC ±10 %	12 VDC ±10 %
※11	[V]	5 VDC ±5 %	5 VDC ±5 %	5 VDC ±5 %	5 VDC ±5 %
Power Consumption (Spin up, +12 VDC) ※12	[A, peak]	0.89	0.97	2	1.15
(Spin up, +5 VDC) ※12	[A, peak]	0.41	0.41	1.2	0.47
(Operating) ※13	[W]	4.46	4.11	7.3	5.21
(Idel-A) ※14	[W]	2.68	2.32	5.2	2.92
(Standby)	[W]	0.21	0.21	1	0.32

Environmental

Temperature (Operating)	[℃] (Ambient)	0 to 55	0 to 55	0 to 60	0 to 55
(Operating)	[℃] (Surface)	0 to 60	0 to 60	0 to 65	0 to 60
(Non-operating) ※15, 18	[℃]	-40 to 65	-40 to 65	-40 to 70	-40 to 70
Humidity (Operating)	[%RH]	5 to 90	5 to 90	8 to 90	5 to 90
(Non-operating) ※15	[%RH]	5 to 95	5 to 95	5 to 95	5 to 95
Vibration (Operating) ※16、17	[m/s2] [G]	4.90 {0.50 G} (5 to 350 Hz)	4.90 {0.50 G} (5 to 350 Hz)	6.57 {0.67 G} (5 to 500 Hz)	4.90 {0.50 G} (5 to 350 Hz)
	[m/s2] [G]	2.45 {0.25 G} (350 to 500 Hz)	2.45 {0.25 G} (350 to 500 Hz)	-	2.45 {0.25 G} (350 to 500 Hz)
	[m/s2] [G]	-	-	-	-
(Non-operating) ※16, ※19	[m/s2] [G]	29.4 {3.0 G} (5 to 500 Hz)	29.4 {3.0 G} (5 to 500 Hz)	10.2 {1.04 G} (2 to 200 Hz)	29.4 {3.0 G} (5 to 500 Hz)
Shock (Operating) ※16	[m/s2] [G]	686 {70 G} (2 ms duration)	686 {70 G} (2 ms duration)	686 {70 G} (2 ms duration)	785 {80 G} (2 ms duration)
(Non-operating) ※10, ※11	[m/s2] [G]	2940 {300 G} (2 ms duration)	2940 {300 G} (2 ms duration)	2940 {300 G} (2 ms duration)	3432 {350 G} (2 ms duration)
Altitude (Operating)	[m]	-305 to 3048	-305 to 3048	-300 to 3048	-305 to 3048
(Non-operating) ※10	[m]	-305 to 12 192	-305 to 12 192	-300 to 12 000	-305 to 12 192
Acoustics ※20 Seek	[dB] (Typ.)	25	24	29	27
Idle mode	[dB] (Typ.)	24	22	27	25

Physical Dimension

Height	[mm] (Max)	26.1	26.1	26.1	26.1
Length	[mm] (Max)	147	147	147	147
Width	[mm] (Max)	101.85	101.85	101.85	101.85
Weight	[g] (Max)	680	650	680	450
Bottom holes type ※21		TYPE2	TYPE2	TYPE2	TYPE2

P300 Data Sheet

Model			HDWD220	HDWD120	HDWD110
Model Number			HDWD220	HDWD120	HDWD110
Capacity ※1			2 TB	2 TB	1 TB
Recording Technology ※2			SMR	CMR	CMR
Parts Number			HDWD220UZSVA	HDWD120UZSVA	HDWD110UZSVA
				EOL	

Basic Specifications					
Interface ※3			SATA 6.0 Gbit/s	SATA 6.0 Gbit/s	SATA 6.0 Gbit/s
Form Factor			3.5-inch	3.5-inch	3.5-inch
Sector Size ※4			512e	512e	512e

Features					
Native command queuing (NCQ)			yes	yes	yes
Advanced Format (AF)			yes	yes	yes
RoHS compliant			yes	yes	yes
Halogen Free			yes	yes	yes

Performances					
Interface Speed ※3		[Gbit/s]	6.0 / 3.0 / 1.5	6.0 / 3.0 / 1.5	6.0 / 3.0 / 1.5
Rotation Speed		[rpm]	5400	7200	7200
Sustained data transfer rate ※3		[MB/s]	Non-Public	Non-Public	Non-Public
Buffer Size ※7		[MB]	128	64	64

Reliability					
MTTF ※8		[hours]	Non-Public	Non-Public	Non-Public
Unrecoverable Error Rate			1 per 10E14	1 per 10E14	1 per 10E14
Maximum rated workload ※9		[TB/year]	Non-Public	Non-Public	Non-Public
Load/Unload cycles		[times]	600 000	300 000	300 000

Power Requirements					
Supply Voltage ※10		[V]	12 VDC ±10 %	12 VDC ±10 %	12 VDC ±10 %
※11		[V]	5 VDC ±5 %	5 VDC ±5 %	5 VDC ±5 %
Power Consumption	(Spin up, +12 VDC) ※12	[A, peak]	0.98	2	2
	(Spin up, +5 VDC) ※12	[A, peak]	0.41	1.2	0.6
	(Operating) ※13	[W]	4.14	6.7	6.4
	(Idel-A) ※14	[W]	2.11	4.4	3.7
	(Standby)	[W]	0.31	1	1

Environmental					
Temperature	(Operating)	[°C] (Ambient)	0 to 55	0 to 60	0 to 60
	(Operating)	[°C] (Surface)	0 to 60	0 to 65	0 to 65
	(Non-operating) ※15, 18	[°C]	-40 to 65	-40 to 70	-40 to 70
Humidity	(Operating)	[%RH]	5 to 90	8 to 90	8 to 90
	(Non-operating) ※15	[%RH]	5 to 95	5 to 95	5 to 95
Vibration	(Operating) ※16、17	[m/s2] [G]	4.90 {0.50 G} (5 to 350 Hz)	6.57 {0.67 G} (5 to 500 Hz)	6.57 {0.67 G} (5 to 500 Hz)
		[m/s2] [G]	2.45 {0.25 G} (350 to 500 Hz)	-	-
		[m/s2] [G]	-	-	-
	(Non-operating) ※16,※19	[m/s2] [G]	29.4 (3.0 G) (5 to 500 Hz)	10.2 {1.04 G} (2 to 200 Hz)	10.2 {1.04 G} (2 to 200 Hz)
Shock	(Operating) ※16	[m/s2] [G]	686 {70 G} (2 ms duration)	686 {70 G} (2 ms duration)	686 {70 G} (2 ms duration)
	(Non-operating) ※10, ※11	[m/s2] [G]	3430 {350 G} (2 ms duration)	3430 {350 G} (2 ms duration)	3432 {350 G} (2 ms duration)
Altitude	(Operating)	[m]	-305 to 3048	-300 to 3048	-300 to 3048
	(Non-operating) ※10	[m]	-305 to 12 192	-300 to 12000	-300 to 12 000
Acoustics ※20	Seek	[dB] (Typ.)	26	28	26
	Idle mode	[dB] (Typ.)	21	25	25

Physical Dimension					
Height		[mm] (Max)	26.1	26.1	26.1
Length		[mm] (Max)	147	147	147
Width		[mm] (Max)	101.85	101.85	101.85
Weight		[g] (Max)	440	680	450
Bottom holes type ※21			TYPE2	TYPE2	TYPE2

※1 One terabyte (TB) = one trillion bytes; accessible capacity will be less and actual capacity depends on the operating environment and formatting.
※2 CMR means Conventional Magnetic Recording, SMR means Shingled Magnetic Recording.
※3 The maximum sustained data rate and interface speed may be restricted to the response speed of host system and by transmission characteristics. 1 Gbit/s = 1 000 000 000 bit/s. 1 MiB/s = 1 048 576 B/s
※4 Read–modify-write is supported.
※5 Number of surveillance cameras support capability is defined by performance simulation with High Definition cameras at 10Mbit/s rate. Actual results may vary based on various factors, including the types of cameras installed, the system's hardware and software capabilities, and the video compression technology used, as well as system variables such as resolution, frames per second, and other settings.
※6 As for "Drive Bays Supported", please contact your Solutions Provider because the compatibility with the host device will vary based on the system.
※7 1 MiB = 1 048 576 B
※8 MTTF (Mean Time to Failure) is not a guarantee or estimate of product life; it is a statistical value related to mean failure rates for a large number of products which may not accurately reflect actual operation. Actual operating life of the product may be different from the MTTF.

※9 Workload is defined as the amount of data written, read or verified by commands from host system.
※10 Input voltages are specified at the HDD connector side, during HDD ready state.
※11 Make sure the value is not less than DC -0.3V (less than -0.6V, 0.1 ms) when turning on or off the power
※12 Not including glitch less than 100 µs.
※13 Operating watt is measured using 80 % random read/write and 20 % performance idle. (HDWD1xx) Random R/W : 40 IOPS / 16 Blocks Random Write and Random Read
※14 Idle is active idle
※15 Non-operating condition (except storage condition) assumes short term transportation.
※16 Vibration applied to the HDD is measured at near the mounting screw hole on the frame as much as possible
※17 At random seek write/read and default on retry setting with log sweep vibration
※18 The range of altitude is 3048 m or less. Up to 55 °C at 7620 m. Up to 40℃ at 12 192 m.
※19 At power-off state after installation
※20 The measuring method is based on ISO 7779. Idle is active idle mode.

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