P300 Data Sheet

Model						
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	HDWD320UZSVA
					EOL	
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) X14	[W]	2.68	2.32	5.2	2.92
	(Standby)	[w]	0.21	0.21	1	0.32
	(Standby)	[w]	0.21	0.21	1	0.32
Environmental						
Temperature	(Operating)	[°C] (Ambient)	0 to 55			
				0 to 55	0 to 60	0 to 55
	(Operating)	[°C] (Surface)	0 to 60	0 to 55 0 to 60	0 to 60 0 to 65	0 to 55 0 to 60
Humidity	(Operating)	[°C] (Surface)	0 to 60	0 to 60	0 to 65	0 to 60
Humidity	(Operating) (Non-operating) ※ 15, 18	[°C] (Surface) [°C]	0 to 60 -40 to 65	0 to 60 -40 to 65	0 to 65 -40 to 70	0 to 60 -40 to 70
	(Operating) (Non-operating) ※ 15, 18 (Operating) (Non-operating) ※ 15	[°C] (Surface) [°C] [%RH] [%RH]	0 to 60 -40 to 65 5 to 90 5 to 95	0 to 60 -40 to 65 5 to 90 5 to 95	0 to 65 -40 to 70 8 to 90 5 to 95	0 to 60 -40 to 70 5 to 90 5 to 95
	(Operating) (Non-operating) ※ 15, 18 (Operating)	[°C] (Surface) [°C] [%RH] [%RH] [m/s2] [G] [m/s2] [G]	0 to 60 -40 to 65 5 to 90	0 to 60 -40 to 65 5 to 90	0 to 65 -40 to 70 8 to 90	0 to 60 -40 to 70 5 to 90
	(Operating) (Non-operating) ※15, 18 (Operating) (Non-operating) ※15 (Operating) ※16、17	[°C] (Surface) [°C] [%RH] [%RH] [m/s2] [G] [m/s2] [G] [m/s2] [G]	0 to 60 -40 to 65 5 to 90 5 to 95 4.90 (0.50 G) (5 to 350 Hz) 2.45 (0.25 G) (350 to 500 Hz)	0 to 60 -40 to 65 5 to 90 5 to 95 4.90 (0.50 G) (5 to 350 Hz) 2.45 (0.25 G)	0 to 65 -40 to 70 8 to 90 5 to 95 6.57 {0.67 G} (5 to 500 Hz) -	0 to 60 -40 to 70 5 to 90 5 to 95 4.90 (0.50 G) (5 to 350 Hz) 2.45 (0.25 G) (350 to 500 Hz)
Vibration	(Operating) 第15, 18 (Operating) (Non-operating) 第15 (Operating) 第15 (Operating) 第16、17	[°C] (Surface) [°C] [%RH] [%RH] [m/s2] [G] [m/s2] [G] [m/s2] [G]	0 to 60 -40 to 65 5 to 90 5 to 95 4.90 (0.50 G) [5 to 350 Hz] 2.45 (0.25 G) [350 to 500 Hz) - 29.4 (3.0 G) [5 to 500 Hz]	0 to 60 -40 to 65 5 to 90 5 to 90 5 to 95 4.90 (0.50 G) [5 to 350 Hz] 2.45 (0.25 G) [350 to 500 Hz)	0 to 65 -40 to 70 -8 to 90 -5 to 95 -5.57 (0.67 G) (5 to 500 Hz)	0 to 60 -40 to 70 5 to 90 5 to 95 4.90 (0.50 G) (5 to 350 Hz) 2.45 (0.25 G) (350 to 500 Hz) 2.9.4 (3.0 G) (5 to 500 Hz)
Vibration	(Operating) (Non-operating) 第15,18 (Operating) (Non-operating) (Non-operating) 第15 (Operating) 第16, 17 (Non-operating) 第16, 第19 (Operating) 第16, 第19	[°C] (Surface) [°C] [%RH] [%RH] [m/s2] [G] [m/s2] [G] [m/s2] [G] [m/s2] [G]	0 to 60 -40 to 65 5 to 90 5 to 95 4.90 (0.50 6) [5 to 350 Hz] 2.45 (0.25 6) [330 to 500 Hz] -29.4 (3.0 G) [5 to 500 Hz] 688 (70 G) [2 ms duration]	0 to 60 -40 to 65 5 to 90 5 to 95 4.30 (0.50 6) [5 to 350 Hz] 2.45 (0.25 6) [350 to 500 Hz) 29.4 [3.0 6) [5 to 500 Hz] 686 (70 6) [2 ms duration]	0 to 65 -40 to 70 -8 to 90 -5 to 95 -6.57 (0.67 G) (5 to 500 Hz) -10.2 (1.04 G) (2 to 200 Hz) -688 (70 G) (2 ms duration)	0 to 60 -40 to 70 5 to 90 5 to 99 4.90 (0.50 G) (5 to 350 Hz) 2.45 (0.25 G) (350 to 500 Hz) 29.4 (3.0 G) (5 to 500 Hz) 785 (80 G) (2 ms duration)
Vibration	(Operating) ※15, 18 (Operating) (Non-operating) ※15 (Operating) ※15 (Operating) ※16、17	[°C] (Surface) [°C] [%RH] [%RH] [m/s2] [G] [m/s2] [G] [m/s2] [G]	0 to 60 -40 to 65 5 to 30 5 to 95 4.90 (0.50 G) [5 to 350 Hz] 2.45 (0.25 G) [350 to 500 Hz] 29.4 (3.0 G) [5 to 500 Hz] 686 [70 G) [2 ms duration) 2940 (300 G) [2 ms duration)	0 to 60 -40 to 65 5 to 90 5 to 90 4.90 (0.50 G) [5 to 350 Hz] 2.45 (0.25 G) [350 to 500 Hz) 29.4 (3.0 G) [5 to 500 Hz) 686 [70 G) [2 ms duration) 2940 (300 G) [2 ms duration)	0 to 65 -40 to 70 8 to 90 5 to 95 6.57 (0.67 G) (5 to 500 Hz) -1 10.2 (1.04 G) (2 to 200 Hz) 686 (70 G) (2 ms duration) 2940 (300 G) (2 ms duration)	0 to 60 -40 to 70 5 to 90 5 to 99 4.90 (0.50 6) (5 to 350 Hz) 2.45 (0.25 G) (350 to 500 Hz) 2.94 (3.0 G) (5 to 500 Hz) 335 (80 G) (2 ms duration) 342 (350 G) (2 ms duration) 342 (350 G) (2 ms duration)
Vibration	(Operating) (Non-operating) 第15,18 (Operating) (Non-operating) (Non-operating) 第15 (Operating) 第16, 17 (Non-operating) 第16, 第19 (Operating) 第16, 第19	[°C] (Surface) [°C] [%RH] [%RH] [m/s2] [G] [m/s2] [G] [m/s2] [G] [m/s2] [G]	0 to 60 -40 to 65 5 to 90 5 to 95 4.90 (0.50 6) [5 to 350 Hz] 2.45 (0.25 6) [330 to 500 Hz] -29.4 (3.0 G) [5 to 500 Hz] 688 (70 G) [2 ms duration]	0 to 60 -40 to 65 5 to 90 5 to 95 4.30 (0.50 6) [5 to 350 Hz] 2.45 (0.25 6) [350 to 500 Hz) 29.4 [3.0 6) [5 to 500 Hz] 686 (70 6) [2 ms duration]	0 to 65 -40 to 70 -8 to 90 -5 to 95 -6.57 (0.67 G) (5 to 500 Hz) -10.2 (1.04 G) (2 to 200 Hz) -688 (70 G) (2 ms duration)	0 to 60 -40 to 70 5 to 90 5 to 99 4.90 (0.50 G) (5 to 350 Hz) 2.45 (0.25 G) (350 to 500 Hz) 29.4 (3.0 G) (5 to 500 Hz) 785 (80 G) (2 ms duration)
Vibration	(Operating) (Non-operating) ※15, 18 (Operating) (Non-operating) ※15 (Operating) ※16, 17 (Non-operating) ※16, ※19 (Operating) ※16, ※19 (Operating) ※10, ※11	[*C] (Surface) [*C] [%RH] [%RH] [m/s2] [G] [m/s2] [G] [m/s2] [G] [m/s2] [G] [m/s2] [G] [m/s2] [G]	0 to 60 -40 to 65 5 to 30 5 to 95 4.90 (0.50 G) [5 to 350 Hz] 2.45 (0.25 G) [350 to 500 Hz] 29.4 (3.0 G) [5 to 500 Hz] 686 [70 G) [2 ms duration) 2940 (300 G) [2 ms duration)	0 to 60 -40 to 65 5 to 90 5 to 90 4.90 (0.50 G) [5 to 350 Hz] 2.45 (0.25 G) [350 to 500 Hz) 29.4 (3.0 G) [5 to 500 Hz) 686 [70 G) [2 ms duration) 2940 (300 G) [2 ms duration)	0 to 65 -40 to 70 8 to 90 5 to 95 6.57 (0.67 G) (5 to 500 Hz) -1 10.2 (1.04 G) (2 to 200 Hz) 686 (70 G) (2 ms duration) 2940 (300 G) (2 ms duration)	0 to 60 -40 to 70 5 to 90 5 to 99 4.90 (0.50 6) (5 to 350 Hz) 2.45 (0.25 G) (350 to 500 Hz) 2.94 (3.0 G) (5 to 500 Hz) 335 (80 G) (2 ms duration) 342 (350 G) (2 ms duration) 342 (350 G) (2 ms duration)
Vibration Shock Altitude	(Operating) 第15, 18 (Operating) (Non-operating) 第15, 18 (Operating) 第15 (Operating) 第16, 17 (Non-operating) 第16, 第19 (Operating) 第16 (Non-operating) 第10, 第11 (Operating) 第10	[*C] (Surface) [*C] [SRRH] [SRRH] [M/S2] [G]	0 to 60 -40 to 65 5 to 90 5 to 95 4.90 (0.50 G) (5 to 350 Hz) 2.45 (0.25 G) (350 to 350 Hz) 2.94 (3.0.0 G) (5 to 500 Hz) 686 (70 G) (2 ms duration) 2.940 (300 G) (2 ms duration) -305 to 3088	0 to 60 -40 to 65 5 to 90 5 to 95 4.90 (0.50 G) [5 to 350 Hz] 2.45 (0.25 G) [350 to 500 Hz) 29.4 (3.0 G) [5 to 500 Hz) 686 [70 G) [2 ms duration] 2940 [300 G) [2 ms duration]	0 to 65 -40 to 70 -8 to 90 -5 to 95 -6.57 (0.67 G) (5 to 500 Hz) -10.2 (1.04 G) (2 to 200 Hz) -686 (70 G) (2 ms duration) -2940 (300 G) (2 ms duration) -300 to 3048	0 to 60 -40 to 70 5 to 90 5 to 99 4.90 (0.50 6] (5 to 350 Hz) 2.45 (0.25 6) [350 to 500 Hz] 2.9.4 (3.0 G) (5 to 500 Hz) 785 (80 G) (2 ms duration) 3432 (350 0) [2 ms duration) 3350 to 3048
Vibration Shock Altitude	(Operating) (Non-operating) ※15, 18 (Operating) ※15, 18 (Operating) ※15 (Operating) ※15 (Operating) ※16, ※19 (Operating) ※16, ※19 (Operating) ※10, ※11 (Operating) ※10, ※11 (Operating) ※10, ※11	[*C] (Surface) [*C] [%RH] [%RH] [m/s2] [G]	0 to 60 -40 to 65 -5 to 90 -5 to 95 -4.90 (0.50 of) (5 to 350 Hz) -2.45 (0.25 of) (5 to 350 Hz) -2.45 (0.25 of) (5 to 500 Hz) -2.4 (3.0 of) (5 to 500 Hz) -2.4 (3.0 of) (5 to 500 Hz) -3.00 to 3048 -3.05 to 12 192	0 to 60 -40 to 65 5 to 90 5 to 90 4.90 (0.50 G) [5 to 50 Hz] 2.45 (0.25 G) [350 to 500 Hz] 29.4 (3.0 G) [5 to 500 Hz] 29.4 (3.0 G) [5 to 500 Hz] 29.4 (3.0 G) [6 to 500 Hz] 305 to 1008 305 to 1008	0 to 65 -40 to 70 -8 to 90 -5 to 95 -6.57 (0.67 6) (5 to 500 Hz) -10.2 (1.04 6) (2 to 200 Hz) -280 (70 G) (2 ms duration) -290 (300 G) (2 ms duration) -300 to 3048 -300 to 12 000	0 to 60 -40 to 70 5 to 90 5 to 95 4.90 (0.50 6) (5 to 350 Hz) 2.45 (0.25 6) (350 to 500 Hz) 2.94 (3.0 6) (5 to 500 Hz) 785 (80 6) (2 m5 duration) 3422 (330 G) (2 m5 duration) -305 to 3048 -305 to 12 192
vibration Shock Altitude Acoustics 猴 20	(Operating) (Non-operating) ※15, 18 (Operating) (Non-operating) ※15 (Operating) ※16, ※19 (Non-operating) ※16, ※19 (Operating) ※16, ※11 (Operating) ※10, ※11 (Operating) (Non-operating) ※10, ※11 Seek	[*C] (Surface) [*C] [%RH] [%RH] [%RH] [m/s2] [G] [m] [m] [d8] (Typ.)	0 to 60 -40 to 65 -5 to 90 -5 to 95 -5 to 95 -4.90 (0.56 G) [5 to 350 Hz] -2.45 (0.25 G) [350 to 500 Hz) -29.4 (3.0.6 [5] [5 to 500 Hz] -686 (70 G) [2 ms duration] -2940 (300 G) [2 ms duration] -305 to 3048 -305 to 12 192 -25	0 to 60 -40 to 65 -5 to 90 -5 to 90 -4.90 (5.05 G) (5 to 50 Hz) -2.45 (0.25 G) (350 to 500 Hz) -2.45 (0.25 G) (250 to 500 Hz) -2.46 (3.0 G) (5 to 500 Hz) -2.40 (30.0 G) (2 ms duration) -3.05 to 3.088 -3.05 to 12.192 -2.4	0 to 65 -40 to 70 8 to 90 5 to 95 6.57 (0.67 6) (5 to 500 Hz)	0 to 60 -40 to 70 5 to 90 5 to 95 4.90 (0.50 oil [5 to 350 Hz] 2.45 (0.25 6] (350 to 500 Hz] 2.45 (0.25 6) (350 to 500 Hz] 785 (80 6) [2 ms duration] -305 to 3048 -305 to 12 192 27
Vibration Shock Altitude Acoustics ※20 Physical Dimension	(Operating) (Non-operating) ※15, 18 (Operating) (Non-operating) ※15 (Operating) ※16, ※19 (Non-operating) ※16, ※19 (Operating) ※16, ※11 (Operating) ※10, ※11 (Operating) (Non-operating) ※10, ※11 Seek	[**O] (Surface) [**O] [*KRH] [*KRH] [*KRH] [*m/s2] [*G] [*m] [*m] [*m] [*m] [*m] [*m] [*m] [*m	0 to 60 -40 to 65 5 to 90 5 to 95 4.90 (0.50 G) (5 to 350 Hz) 2.45 (0.25 G) (350 to 550 Hz) -29.4 (3.00 G) (5 to 500 Hz) 686 (70 G) (2 ms duration) 2940 (300 G) (2 ms duration) -305 to 3048 -305 to 12 192 25 24	0 to 60 -40 to 65 -40 to 65 -5 to 90 -5 to 95 -4.90 (5.05 G) (5 to 500 Hz) 2.45 (0.25 G) (350 to 500 Hz) -29.4 (3.0.6) (5 to 5000 Hz) -686 (70 G) (2 ms duration) 2940 (300 G) (2 ms duration) -305 to 102 Ms -305 to 12 192 -24 -22	0 to 65 -40 to 70 8 to 90 5 to 95 6.57 (0.67 6) (5 to 500 Hz) - 10.2 (1.04 6) (2 to 200 Hz) 686 (70 6) (2 ms duration) 2940 (300 6) (2 ms duration) -300 to 3048 -300 to 12 000 29 27	0 to 60 -40 to 70 -5 to 90 -5 to 90 -5 to 95 -4.90 (0.50 6) (5 to 550 Hz) 2.45 (0.25 6) (350 to 500 Hz) 29.4 (3.0 G) (5 to 500 Hz) 785 (80 6) (2 ms duration) -305 to 3048 -305 to 12 192 27 25
Vibration Shock Altitude Acoustics 號20 Physical Dimension Height	(Operating) (Non-operating) ※15, 18 (Operating) (Non-operating) ※15 (Operating) ※16, ※19 (Non-operating) ※16, ※19 (Operating) ※16, ※11 (Operating) ※10, ※11 (Operating) (Non-operating) ※10, ※11 Seek	[**O] (Surface) [**O] [**ORH]	0 to 60 -40 to 65 -5 to 30 -5 to 95 -4.90 (0.50 G) [5 to 350 Hz] -2.45 (0.25 G) [350 to 500 Hz] -29.4 (3.0 G) [5 to 500 Hz] -686 (70 G) [2 ms duration) -390 (300 G) [2 ms duration) -305 to 12 192 -25 -24	0 to 60 -40 to 65 5 to 90 5 to 90 5 to 91 4.90 (0.50 6) [5 to 50 th2) 2.45 (0.25 6) [350 to 500 Hz) 29.4 (3.0 6) [6 to 500 Hz) 686 [70 6) [2 ms duration) 2940 (300 6] [2 ms duration) 305 to 3048 -305 to 12 192 24 22 26.1	0 to 65 -40 to 70 8 to 90 5 to 95 6.57 (0.67 G) (5 to 500 Hz) - 10.2 (1.04 G) (2 to 200 Hz) 686 (70 G) (2 ms duration) 290 (300 G) (2 ms duration) -300 to 3048 -300 to 12 000 29 27	0 to 60 -40 to 70 -5 to 90 -5 to 95 -4.90 (0.50 6) (5 to 350 Hz) 2.45 (0.25 6) (350 to 500 Hz) 2.45 (0.25 6) (350 to 500 Hz) 785 (80 6) (2 ms duration) 3432 (356 6) (2 ms duration) -305 to 3048 -305 to 12 192 27 25
Vibration Shock Altitude Acoustics 餐20 Physical Dimension Height	(Operating) (Non-operating) ※15, 18 (Operating) (Non-operating) ※15 (Operating) ※16, ※19 (Non-operating) ※16, ※19 (Operating) ※16, ※11 (Operating) ※10, ※11 (Operating) (Non-operating) ※10, ※11 Seek	TO (Surface) TO (Surface) TO (SKR1) SKR1 (m/s2 G m/s2 Max m/s2 Max m/s2 Max m/s2 Max Max m/s2 Max Max m/s2 Max Max m/s2 Max M	0 to 60 -40 to 65 -5 to 90 -5 to 95 -5 to 95 -4.90 (0.56 G) (5 to 350 Hz) -2.45 (0.25 G) (350 to 500 Hz) -2.9.4 (3.0.6) (5 to 500 Hz) -688 (70 G) (2 ms duration) -305 to 3048 -305 to 12 192 -25 -24 -26.1 -147	0 to 60 -40 to 65 -40 to 65 -5 to 90 -5 to 90 -5 to 95 -4.90 (0.50 G) [5 to 500 Hz) -2.45 (0.25 G) [350 to 500 Hz) -2.45 (0.25 G) [350 to 500 Hz) -2.46 (30.0 G) [6 to 500 Hz) -2.40 (30.0 G) [2 ms duration] -3.05 to 30.48 -3.05 to 12 192 -2.4 -2.2 -2.6.1 -1.47	0 to 65 -40 to 70 8 to 90 5 to 95 6.57 (0.67 6) (5 to 500 Hz) - 10.2 (1.04 6) (2 to 200 Hz) 686 (70 6) (2 ms duration) -300 to 3048 -300 to 12 000 29 27 26.1 147	0 to 60 -40 to 70 -5 to 90 -5 to 90 -5 to 95 -4.90 (0.50 oi] (5 to 350 Hz) 2.45 (0.25 6) (350 to 500 Hz) 2.45 (0.25 6) (350 to 500 Hz) 785 (80 6) (2 ms duration) -305 to 3048 -305 to 12 192 27 25 26.1
Vibration Shock Altitude Acoustics ※20 Physical Dimension Height Length Width	(Operating) (Non-operating) ※15, 18 (Operating) (Non-operating) ※15 (Operating) ※16, ※19 (Non-operating) ※16, ※19 (Operating) ※16, ※11 (Operating) ※10, ※11 (Operating) (Non-operating) ※10, ※11 Seek	[**O] (Surface) [**O] [**O] [**ORH] [*	0 to 60 -40 to 65 -5 to 90 -5 to 95 -4.90 (0.50 6) [5 to 350 Hz] -2.45 (0.25 6) [350 to 500 Hz] -2.9.4 (3.0 6) [5 to 500 Hz] -2.9.4 (3.0 6) [5 to 500 Hz] -2.9.4 (3.0 6) [2 ms duration) -3.90 to 30.06] [2 ms duration) -3.90 to 30.08 -3.90 to 12 192 -25 -24	0 to 60 -40 to 65 5 to 90 5 to 90 5 to 91 4.90 (0.50 6) [5 to 50 Hz] 2.45 (0.25 6) [350 to 500 Hz] 2.94 (3.0 G) [5 to 500 Hz] 2.94 (3.0 G) [6 to 500 Hz] 2.94 (3.00 G) [2 ms duration) 2.940 (300 G) [2 ms duration) 2.95 to 3048 -305 to 12 192 2.4 2.2 2.6.1 1.47 1.01.85	0 to 65 -40 to 70 8 to 90 5 to 95 6.57 (0.67 6) (5 to 500 Hz) - 10.2 (1.04 6) (2 to 200 Hz) 686 (70 6) (2 ms duration) -300 to 3048 -300 to 12 000 29 27 26.1 147 101.85	0 to 60 -40 to 70 5 to 90 5 to 95 4.90 (0.50 6) [5 to 350 Hz) 2.45 (0.25 6) [350 to 500 Hz) 2.45 (0.25 6) [350 to 500 Hz) 2.94 (3.0 6) [6 to 500 Hz) 2.95 (80 G) [2 ms duration) 3432 (350 G) [2 ms duration) -305 to 3048 -305 to 12 192 27 25 26.1 147 101.85
Humidity Vibration Shock Altitude Acoustics ¥20 Physical Dimension Height Length Width Weight Weight Sottom holes type ¥21	(Operating) (Non-operating) ※15, 18 (Operating) (Non-operating) ※15 (Operating) ※16, ※19 (Non-operating) ※16, ※19 (Operating) ※16, ※11 (Operating) ※10, ※11 (Operating) (Non-operating) ※10, ※11 Seek	TO (Surface) TO (Surface) TO (SKR1) SKR1 (m/s2 G m/s2 Max m/s2 Max m/s2 Max m/s2 Max Max m/s2 Max Max m/s2 Max Max m/s2 Max M	0 to 60 -40 to 65 -5 to 90 -5 to 95 -5 to 95 -4.90 (0.56 G) (5 to 350 Hz) -2.45 (0.25 G) (350 to 500 Hz) -2.9.4 (3.0.6) (5 to 500 Hz) -688 (70 G) (2 ms duration) -305 to 3048 -305 to 12 192 -25 -24 -26.1 -147	0 to 60 -40 to 65 -40 to 65 -5 to 90 -5 to 90 -5 to 95 -4.90 (0.50 G) [5 to 500 Hz) -2.45 (0.25 G) [350 to 500 Hz) -2.45 (0.25 G) [350 to 500 Hz) -2.46 (30.0 G) [6 to 500 Hz) -2.40 (30.0 G) [2 ms duration] -3.05 to 30.48 -3.05 to 12 192 -2.4 -2.2 -2.6.1 -1.47	0 to 65 -40 to 70 8 to 90 5 to 95 6.57 (0.67 6) (5 to 500 Hz) - 10.2 (1.04 6) (2 to 200 Hz) 686 (70 6) (2 ms duration) -300 to 3048 -300 to 12 000 29 27 26.1 147	0 to 60 -40 to 70 -5 to 90 -5 to 90 -5 to 95 -4.90 (0.50 oi] (5 to 350 Hz) 2.45 (0.25 6) (350 to 500 Hz) 2.45 (0.25 6) (350 to 500 Hz) 785 (80 6) (2 ms duration) -305 to 3048 -305 to 12 192 27 25 26.1

P300 Data Sheet

(Sp (Op (Idd (St: Environmental		[(Sbit/s] [(pm]	HDWD220 2 TB SMR HDWD220UZSVA SATA 6.0 Gbit/s 3.5-inch 512e yes yes yes yes yes	HDWD120 2 TB CMR HDWD120UZSVA EOL SATA 6.0 Gbit/s 3.5-inch 512e yes yes yes yes	HDWD110 1 TB CMR HDWD110UZSVA SATA 6.0 Gbit/s 3.5-inch 512e yes yes yes yes
Capacity #1 Recording Technology #2 Parts Number Basic Specifications Interface #3 Form Factor Sector Size #4 Features Native command queuing (NCQ) Advanced Format (AF) Roils compilant Halogen Free Performances Interface Speed #3 Rotton Speed Sustained data transfer rate #3 Buffer Size #7 Reliability MITH #8 Unrecoverable Error Rate Maximum rated workload #9 Load/Unload cycles Power Requirements Supply Voltage #10 #1 Supply Voltage #10 #3 Formit on the Maximum rated workload #9 Load/Unload cycles Power Consumption Speed		[rpm]	2 TB SMR HDWDZ20UZ5VA SATA 6.0 GbH/s 3.5-inch 512e yes yes yes yes	2 TB CMR HDWD120UZ5VA EOL SATA 6.0 Gbit/s 3.5-inch 512e yes yes	1 TB CMR HDWD110UZSVA SATA 6.0 Gbit/s 3.5-inch 512e yes yes yes
Recording Technology #2 Parts Number Basic Specifications Interface #3 Form Factor Sector Size #4 Features Native command queuing (NCQ) Advanced Format (AF) RoMISt compliant Halogen Free Performances Interface Speed #3 Rotation Speed system #4 Buffer Size #7 Reliability MTIT #8 Unrecoverable Error Rate Maximum rated workload #9 Load/Unload cycles Power Requirements Supply Voltage #10 #1 **Power Consumption (Sp. (Gp. (Gp. (Gp. (Gp. (Gp. (Gp. (Gp. (G		[rpm]	SMR HDWD220UZSVA SATA 6.0 GbRt/s 3.5-inch 512e yes yes yes yes yes	CMR HDWD120USVA EOL SATA 6.0 Gbit/s 3.5-inch 512e yes yes yes	CMR HDWD110UZSVA SATA 6.0 Gbit/s 3.5-inch 512e yes yes yes
Parts Number Basic Specifications Interface #3 Form Factor Sector Size #4 Features Native command queuing (NCQ) Advanced Format (AF) ROHS compliant Haldgen Free Performances Interface Speed #3 Rotation Speed Sustained data transfer rate #3 Buffer Size #7 Reliability MITT #8 Unrecoverable Error Rate Maximum rated worldoad #9 Load/Unload cycles Power Requirements Supply Voltage #10 #1 #1 #2 #4 **Power Consumption (St.) Environmental		[rpm]	HDWD220UZSVA SATA 6.0 GbH/s 3.5-inch 512e yes yes yes yes yes	HDWD120UZSVA EOL SATA 6.0 Gbit/s 3.5-inch 512e Yes yes yes	HDWD110UZSVA SATA 6.0 Gbit/s 3.5-inch 512e yes yes yes
Basic Specifications Interface #3 Form Factor Sector Size #4 Features Native command queuing (NCQ) Advanced Format (AF) Advanced Format (AF) RoMS compliant Halogen Free Performances Interface Speed #3 Rotation Speed #3 Loud Authority #4 Unrecoverable Error Rate Maximum rated workload #9 Load /Unload cycles Power Requirements Supply Voltage #10 #7 Power Consumption (Sp. (Gp. (Gp. (Gp. (Gp. (Gp. (Gp. (Gp. (G		[rpm]	SATA 6.0 Gbit/s 3.5-inch 512e Yes Yes Yes Yes Yes	EOL SATA 6.0 Gbit/s 3.5-inch 512e yes yes yes	SATA 6.0 Gbit/s 3.5-inch 512e yes yes yes
Interface #3 Form Factor Sector Site #4 Features Native command queuing (NCQ) Advanced Format (AF) ROMS compliant Halogen Free Performances Interface Speed #3 Rotation Speed \$3 Rotation Speed \$3 Buffer Site #7 Reliability MTT #8 Unrecoverable Error Rate Maximum rated workload #9 Load/Unload cycles Power Requirements Supply Voltage #10 #10 #10 #10 #10 #10 #10 #10		[rpm]	3.5-inch 512e yes yes yes yes	SATA 6.0 Gbit/s 3.5-inch 512e yes yes yes	3.5-inch 512e yes yes yes
Interface ¥3 Form Factor Sector Size ¥4 Features Native command queuing (NCQ) Advanced Format (AF) RoMS compliant Halogen Free Performances Interface Speed ¥3 Rotation Speed 43 Rotation Speed 43 Rotation Speed 48 Sustained data transfer rate ¥3 Sustrained data transfer rate ¥3 Unrecoverable Error Rate Maximum rated workload ¥9 Load/Unload cycles Power Requirements Supply Voltage ★10 ** Power Consumption (Sp. (Op. (Id.) (St.) Environmental		[rpm]	3.5-inch 512e yes yes yes yes	3.5-inch 512e Yes Yes Yes	3.5-inch 512e yes yes yes
Interface #3 Form Factor Sector Size #4 Features Native command queuing (NCQ) Advanced Format (AF) ROMS Compilant Halogen Free Performances Interface Speed #3 ROMAION STATE #3 SUSTAINED #4 SUSTAINE		[rpm]	3.5-inch 512e yes yes yes yes	3.5-inch 512e Yes Yes Yes	3.5-inch 512e yes yes yes
Native command queuing (NCQ) Advanced Format (AF) RoMSt Compliant Halogen Free Performances Interface Speed ¾3 Rotation Speed Sustained data transfer rate ¾3 Buffer Size ¾7 Reliability MTTF ¾8 Unrecoverable Error Rate Maximum rated workload ¾9 Load/Unload cycles Power Requirements Supply Voltage ¾10 ———————————————————————————————————		[rpm]	3.5-inch 512e yes yes yes yes	3.5-inch 512e Yes Yes Yes	3.5-inch 512e Yes Yes Yes
Native command queuing (NCQ) Advanced Format (AF) ROK15 compliant Halogen Free Performances Interface Speed #3 Rotation Speed Sustained data transfer rate #3 Buffer Size #7 Reflability MTTF #8 Unrecoverable Error Rate Maximum rated workload #9 Load/Unload cycles Power Requirements Supply Voltage #10 #1 Power Consumption \$\$(5)\$ (0p (dd. Environmental		[rpm]	yes yes yes yes	yes yes yes	yes yes yes
Native command queuing (NCQ) Advanced Format (AF) ROMS compliant Halogen Free Performances Interface Speed ¾3 Rotation Speed Sustained data transfer rate ¾3 Buffer Size ¾7 Refability MTTT ¾8 Unrecoverable Error Rate Maximum rated workload ¾9 Load/Unload cycles Power Requirements Supply Voltage ¾10 **Power Consumption \$\$(5)\$ (\$\$(5)\$ (\$\$(5)\$ Environmental		[rpm]	yes yes yes	yes yes	yes yes
Native command queuing (NCQ) Advanced Format (AF) NotS compliant Halogen Free Performances Interface Speed ※3 Notation Speed Sustained data transfer rate ※3 Sustained data transfer rate ※3 Sustained data transfer rate ※3 Unrecoverable Error Rate Maximum rated workload ※9 Load/Unload cycles Power Requirements Supply Voltage ※10 ※10 Power Consumption (Sp. Cop. Cop. Cop. Cop. Cop. Cop. Cop. Co		[rpm]	yes yes yes	yes yes	yes yes
Advanced Format (AF) ROMS compliant Halogen Free Performances Interface Speed \$3 Rotation Speed Sustained data transfer rate \$3 Buffer Size \$7 Reliability MTTF \$8 Unrecoverable Error Rate Maximum rated workload \$9 Load/Unload cycles Power Requirements Supphy Voltage \$10 \$\$ Power Consumption \$5 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6		[rpm]	yes yes yes	yes yes	yes yes
Rolfs compilant Halogen Free Performances Interface Speed ¾3 Rotation Speed Sustained data transfer rate ¾3 Sustained data transfer rate ¾3 Sustained workload ¾9 Load/Unload cycles Power Requirements Supply Voltage ¾10 ¾1 Power Consumption (Sp (Cg (Dd (Estriptionmental		[rpm]	yes yes	yes	yes
Alalogen Free Performances Interface Speed ¾3 Notation Speed Sustained data transfer rate ¾3 Suffer Size ¾7 Nellability WTTF ¾8 Intercoverable Error Rate Maximum rated workload ¾9 Ower Requirements Supply Voltage ¾10 %10 %20 %20 %20 %20 %20 %30 %30 %30 %30 %30 %30 %30 %30 %30 %3		[rpm]	yes		
Performances Interface Speed 第3 Notation Speed Sustained data transfer rate 第3 Buffer Size 第7 Reliability WITF 第8 Intercoverable Error Rate Maximum rated workload 第9 .oad/Inhad cycles Power Requirements Supply Voltage 第10 第1 Power Consumption (Sp (Og (Idd) Environmental		[rpm]	·	yes	yes
Interface Speed #3 Rotation Speed Rotation		[rpm]	6.0/3.0/1.5		
Interface Speed #3 Rotation Speed Rotation		[rpm]	6.0 / 3.0 / 1.5		
Sustained data transfer rate #3 Buffer Size #7 MITT #8 Unrecoverable Error Rate Maximum rated workload #9 Load/Unload cycles Power Requirements Supply Voltage #10 #1 #2 #3 #4 Environmental		[rpm]		6.0 / 3.0 / 1.5	6.0 / 3.0 / 1.5
isustained data transfer rate ¥3 butter Size ¥7 telability WHTF Xe Jintecoverable Error Rate Maximum rated workload ¥9 .oad/Unload cycles Power Requirements upply Voltage ¥10 ** Power Consumption Sp (Op (Idd. (St.)			5400	7200	7200
teliability WTF Xe teliability WTF Xe Maximum rated workload Xe oad/Unload cycles Power Requirements Lupply Voltage Xf0 Sever Consumption Sp (Op (Idd) (Stc Environmental		[MB/s]	Non-Public	Non-Public	Non-Public
MTTF %8 Innecoverable Error Rate Maximum rated workload %9 coad/Unload cycles Power Requirements Supply Voltage %10 %1 Power Consumption (Sp (Op (Idd (Str.)		[MB]	128	64	64
MTTF %8 Innecoverable Error Rate Maximum rated workload %9 coad/Unload cycles Power Requirements Supply Voltage %10 %1 Power Consumption (Sp (Op (Idd (Str.)					
Unrecoverable Error Rate Maximum rated workload ¥9 coad/Unibad cycles Power Requirements Supply Voltage ¥10 ** Power Consumption (5) (5) (6) (6) (6) Environmental		[hours]	Non-Public	Non-Public	Non-Public
Asaimum rated workload 189 aad/Unload cycles vower Requirements upply Voltage 1810 (Sp (Op (Idd) (St) (St) (Storonmental		[]	1 per 10E14	1 per 10E14	1 per 10E14
vower Requirements upply Voltage ※10 ** ** ** ** ** ** ** ** **		[TB/year]	Non-Public	Non-Public	Non-Public
Supply Voltage X 10 ** ** ** ** ** ** ** ** **		[times]	600 000	300 000	300 000
Supply Voltage X 10 ** ** ** ** ** ** ** ** **					
** Ower Consumption (Sp. (Sp. (Consumption)) Sp. (Op. (Idd. (Str.		[V]	12 VDC ±10 %	12 VDC ±10 %	12 VDC ±10 %
Ower Consumption (Sp (Sp (Op (Idd (St:	11	[V]	5 VDC ±5 %	5 VDC ±5 %	5 VDC ±5 %
(Sp (Op (Idd (Sta :nvironmental	oin up, +12 VDC) ※ 12	[A, peak]	0.98	2	2
(Op (Idd (Sta invironmental	oin up, +5 VDC) ※ 12	[A, peak]	0.41	1.2	0.6
(Sta	perating) 💥 13	[w]	4.14	6.7	6.4
(Sta	el-A) 💥 14	[w]	2.11	4.4	3.7
	andby)	[w]	0.31	1	1
emperature (Op	perating)	[°C] (Ambient)	0 to 55	0 to 60	0 to 60
	perating)	[°C] (Surface)	0 to 60	0 to 65	0 to 65
	on-operating) 💥 15, 18	[°C]	-40 to 65	-40 to 70	-40 to 70
	perating)	[%RH]	5 to 90	8 to 90	8 to 90
(No	on-operating) 💥 15	[%RH]	5 to 95	5 to 95	5 to 95
ibration (Op	perating) 💥 16、17	[m/s2] [G] [m/s2] [G]	4.90 {0.50 G} (5 to 350 Hz) 2.45 {0.25 G} (350 to 500 Hz)	6.57 {0.67 G} (5 to 500 Hz)	6.57 {0.67 G} (5 to 500 Hz
fair .	on-operating) ※ 16, ※ 19	[m/s2] [G]		10 3 (1 04 C) (3 +- 300 H)	10.3 (1.04.0) (2.4
	on-operating) ※ 16, ※ 19 perating) ※ 16	[m/s2] [G] [m/s2] [G]	29.4 (3.0 G) (5 to 500 Hz) 686 (70 G) (2 ms duration)	10.2 {1.04 G} (2 to 200 Hz) 686 {70 G} (2 ms duration)	10.2 {1.04 G} (2 to 200 Hz) 686 {70 G} (2 ms duration
	perating) 3 8:16 on-operating) 3 8:10, 3 8:11	[m/s2] [G]	3430 (350 G) (2 ms duration)	3430 {350 G} (2 ms duration)	3432 (350 G) (2 ms duration
	perating)	[m/s2] [G]	-305 to 3048	-300 to 3048	-300 to 3048
	on-operating) ※ 10	[m]	-305 to 12 192	-300 to 3048	-300 to 12 000
coustics ₩2 0 See		[dB] (Typ.)	-305 to 12 192	-500 to 12000	-300 to 12 000
	e mode	[dB] (Typ.)	21	25	25
thurst Discourse					
hysical Dimension eight		[mm] (Max)	26.1	26.1	26.1
			26.1 147	26.1 147	26.1 147
ength Vidth		[mm] (Max) [mm] (Max)	147 101.85	147 101.85	147 101.85
Weight		[g] (Max)	440	680	450
Bottom holes type ※ 21		(6) (Wax)	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 MB = 1 048 57 5 B

#8 MITT [Mean Time to Fallure) is not a guarantee or estimate of 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.

#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, O.1 ms) when turning on or off the power

#12 Not including glitch less than 100 µs.

#13 Operating wat 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 2048 on roless. Up to 55 °C at 7620 m. Up to 40°C at 12 192 m.

#19 At power-off state after installation

#20 The measuring method is based on ISO 7773. Idle is active idle mode.

**1 One terabyte (TB) = one trillion bytes; accessible capacity will be less and actual capacity depends on the **2 CMR means Conventional Magnetic Recording, SMR means Shingled Magnetic Recording, SM3 The maximum sustained data rate and interface speed may be restricted to the response speed of host sp. **4 Read-modify-write is supported.
**4 Read-modify-write is supported.
**5 Number of surveillance cameras support capability is defined by performance simulation with High Defir video compression technology used, as well as system variables such as resolution, frames per second, and o **86 As for 'Drive Bays Supported', please contact your Solutions Provider because the compatibility with the **X7 1 MIB = 1 048 57 6 B
**8 MITTF (Mean Time to Failure) is not a guarantee or estimate of product life; it is a statistical value related

##9 Workloads 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 watts in reasured using 80 % random read/write and 20 % performance idle. (HDWD1xx) Ran
##14 lelie is active idle
##15 Non-operating condition (except storage condition) assumes short term transportation.
##15 Vibration applied to the HDD is measured at near the mounting screw hole on the frame as much as po:
##17 At random seek write/read and default on retry setting with log sweep vibration
##18 The range of altitude is 3084 nor less. Up to 55 °C at 7620 m. Up to 40°C 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.