

# N300 Pro Data Sheet

Model			HDWG62C	HDWG62A	HDWG51J	HDWG51G
Model Number			22 TB	20 TB	18 TB	16 TB
Capacity <sup>1</sup>			CMR	CMR	CMR	CMR
Recording Technology <sup>2</sup>			HDWG62CUZSVB	HDWG62AUZSVB	HDWG51JUZSVB	HDWG51GUZSVB
Parts Number						
Basic Specifications						
Interface <sup>3</sup>			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 <sup>4</sup>			512e	512e	512e	512e
Features						
24 x 7 Operation			yes	yes	yes	yes
Drive Bays Supported <sup>6</sup>			up to 24	up to 24	up to 24	up to 24
Rotational Vibration Safeguard (RVS)			yes	yes	yes	yes
Shock Sensor			yes	yes	yes	yes
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 <sup>3</sup>	[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]		7200	7200	7200	7200
Sustained data transfer rate <sup>3</sup>	[MB/s]		281	281	281	281
Buffer Size <sup>7</sup>	[MB]		512	512	512	512
Reliability						
MTTF <sup>8</sup>	[hours]		1 200 000	1 200 000	1 200 000	1 200 000
Unrecoverable Error Rate			1 per 10E15	1 per 10E15	1 per 10E14	1 per 10E14
Maximum rated workload <sup>9</sup>	[TB/year]		300	300	300	300
Load/Unload cycles	[times]		600 000	600 000	600 000	600 000
Power Requirements						
Supply Voltage <sup>10</sup>	[V]		12 VDC ±10 %	12 VDC ±10 %	12 VDC ±10 %	12 VDC ±10 %
	[V]		5 VDC +10 / -7 %	5 VDC +10 / -7 %	5 VDC +10 / -7 %	5 VDC +10 / -7 %
Power Consumption	[W]					
	(Spin up, +12 VDC) <sup>11</sup>	[A, peak]	1.49	1.49	1.44	1.44
	(Spin up, +5 VDC) <sup>12</sup>	[A, peak]	0.4	0.4	0.29	0.29
	(Operating) <sup>13</sup>	[W]	8.02	8.02	7.48	7.48
	(Idle-A) <sup>14</sup>	[W]	4.35	4.41	4.14	4.14
	(Standby)	[W]	0.61	0.66	0.42	0.42
Environmental						
Temperature	(Operating)	[°C] (Ambient)	-	-	-	-
	(Operating)	[°C] (Surface)	5 to 60	5 to 60	5 to 60	5 to 60
	(Non-operating) <sup>15, 18</sup>	[°C]	-40 to 70	-40 to 70	-40 to 70	-40 to 70
Humidity	(Operating)	[%RH]	5 to 90	5 to 90	5 to 90	5 to 90
	(Non-operating) <sup>15</sup>	[%RH]	5 to 95	5 to 95	5 to 95	5 to 95
Vibration	(Operating) <sup>16, 17</sup>	[m/s <sup>2</sup> ] [G]	7.35 (0.75 G) (5 to 300 Hz)	7.35 (0.75 G) (5 to 300 Hz)	7.35 (0.75 G) (5 to 300 Hz)	7.35 (0.75 G) (5 to 300 Hz)
		[m/s <sup>2</sup> ] [G]	2.45 (0.25 G) (300 to 500 Hz)	2.45 (0.25 G) (300 to 500 Hz)	2.45 (0.25 G) (300 to 500 Hz)	2.45 (0.25 G) (300 to 500 Hz)
		[m/s <sup>2</sup> ] [G]	-	-	-	-
Shock	(Non-operating) <sup>16, 19</sup>	[m/s <sup>2</sup> ] [G]	29.4 (3.0 G) (5 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) (5 to 500 Hz)
	(Operating) <sup>16</sup>	[m/s <sup>2</sup> ] [G]	490 (50 G) (2 ms duration)	490 (50 G) (2 ms duration)	686 (70 G) (2 ms duration)	686 (70 G) (2 ms duration)
	(Non-operating) <sup>10, 11</sup>	[m/s <sup>2</sup> ] [G]	1960 (200 G) (2 ms duration)	1960 (200 G) (2 ms duration)	2450 (250 G) (2 ms duration)	2450 (250 G) (2 ms duration)
Altitude	(Operating)	[m]	-305 to 3048	-305 to 3048	-305 to 3048	-305 to 3048
	(Non-operating) <sup>10</sup>	[m]	-305 to 12 192	-305 to 12 192	-305 to 12 192	-305 to 12 192
Acoustics <sup>20</sup>	Seek	[dB] (Typ.)	32	32	32	32
	idle mode	[dB] (Typ.)	20	20	20	20
Physical Dimension						
Height	[mm] (Max)		26.1	26.1	26.1	26.1
Length	[mm] (Max)		147	147	147	147
Logistic Information	[mm] (Max)		101.85	101.85	101.85	101.85
Weight	[g] (Max)		720	720	720	720
Bottom holes type <sup>21</sup>			TYPE1	TYPE1	TYPE1	TYPE1

# N300 Pro Data Sheet

Model			HDWGS1E	HDWGS1C	HDWG71A	HDWGS1A
Model Number			14 TB	12 TB	10 TB	10 TB
Capacity <sup>1</sup>			CMR	CMR	CMR	CMR
Recording Technology <sup>2</sup>			HDWGS1EUZSVB	HDWGS1CUZSVB	HDWG71AUZSVB	HDWGS1AUZSVB
Parts Number						
Basic Specifications						
Interface <sup>3</sup>			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 <sup>4</sup>			512e	512e	512e	512e
Features						
24 x 7 Operation			yes	yes	yes	yes
Drive Bays Supported <sup>6</sup>			up to 24	up to 24	up to 24	up to 24
Rotational Vibration Safeguard (RVS)			yes	yes	yes	yes
Shock Sensor			yes	yes	yes	yes
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 <sup>3</sup>	[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]		7200	7200	7200	7200
Sustained data transfer rate <sup>3</sup>	[MB/s]		281	281	281	281
Buffer Size <sup>7</sup>	[MB]		512	512	512	512
Reliability						
MTTF <sup>8</sup>	[hours]		1 200 000	1 200 000	1 200 000	1 200 000
Unrecoverable Error Rate			1 per 10E14	1 per 10E14	1 per 10E15	1 per 10E14
Maximum rated workload <sup>9</sup>	[TB/year]		300	300	300	300
Load/Unload cycles	[times]		600 000	600 000	600 000	600 000
Power Requirements						
Supply Voltage <sup>10</sup>	[V]		12 VDC ±10 %	12 VDC ±10 %	12 VDC ±10 %	12 VDC ±10 %
	[V]		5 VDC +10 / -7 %	5 VDC +10 / -7 %	5 VDC +10 / -7 %	5 VDC +10 / -7 %
Power Consumption	[W]					
	[A, peak]		1.45	1.5	1.43	1.5
	[A, peak]		0.31	0.3	0.45	0.3
	[W]		7.38	6.85	9.07	6.85
	[W]		3.77	3.3	5.74	3.3
	[W]		0.41	0.41	0.58	0.41
Environmental						
Temperature	[°C] (Ambient)		-	-	-	-
	[°C] (Surface)		5 to 60	5 to 60	5 to 60	5 to 60
	[°C]		-40 to 70	-40 to 70	-40 to 70	-40 to 70
Humidity	[%RH]		5 to 90	5 to 90	5 to 90	5 to 90
	[%RH]		5 to 95	5 to 95	5 to 95	5 to 95
Vibration	[m/s <sup>2</sup> ] [G]		7.35 (0.75 G) (5 to 300 Hz)	7.35 (0.75 G) (5 to 300 Hz)	7.35 (0.75 G) (5 to 300 Hz)	7.35 (0.75 G) (5 to 300 Hz)
	[m/s <sup>2</sup> ] [G]		2.45 (0.25 G) (300 to 500 Hz)	2.45 (0.25 G) (300 to 500 Hz)	2.45 (0.25 G) (300 to 500 Hz)	2.45 (0.25 G) (300 to 500 Hz)
	[m/s <sup>2</sup> ] [G]		-	-	-	-
	[m/s <sup>2</sup> ] [G]		29.4 (3.0 G) (5 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) (5 to 500 Hz)
Shock	[m/s <sup>2</sup> ] [G]		686 (70 G) (2 ms duration)	686 (70 G) (2 ms duration)	686 (70 G) (2 ms duration)	686 (70 G) (2 ms duration)
	[m/s <sup>2</sup> ] [G]		2450 (250 G) (2 ms duration)	2450 (250 G) (2 ms duration)	2450 (250 G) (2 ms duration)	2450 (250 G) (2 ms duration)
Altitude	[m]		-305 to 3048	-305 to 3048	-305 to 3048	-305 to 3048
	[m]		-305 to 12 192	-305 to 12 192	-305 to 12 192	-305 to 12 192
Acoustics <sup>20</sup>	[dB] (Typ.)		32	32	35	32
	[dB] (Typ.)		20	20	34	20
Physical Dimension						
Height	[mm] (Max)		26.1	26.1	26.1	26.1
Length	[mm] (Max)		147	147	147	147
Logistic Information	[mm] (Max)		101.85	101.85	101.85	101.85
Weight	[g] (Max)		705	690	755	690
Bottom holes type <sup>21</sup>			TYPE1	TYPE1	TYPE1	TYPE1

# N300 Pro Data Sheet

Model			HDWG780	HDWG480	HDWG760	HDWG460
Model Number			HDWG780	HDWG480	HDWG760	HDWG460
Capacity <sup>1</sup>			8 TB	8 TB	6 TB	6 TB
Recording Technology <sup>2</sup>			CMR	CMR	CMR	CMR
Parts Number			HDWG780UZSVB	HDWG480UZSVB	HDWG760UZSVB	HDWG460UZSVB
Basic Specifications						
Interface <sup>3</sup>			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 <sup>4</sup>			512e	512e	512e	512e
Features						
24 x 7 Operation			yes	yes	yes	yes
Drive Bays Supported <sup>6</sup>			up to 24	up to 24	up to 24	up to 24
Rotational Vibration Safeguard (RVS)			yes	yes	yes	yes
Shock Sensor			yes	yes	yes	yes
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 <sup>3</sup>			[Gbit/s]	6.0 / 3.0 / 1.5	6.0 / 3.0 / 1.5	6.0 / 3.0 / 1.5
Rotation Speed			[rpm]	7200	7200	7200
Sustained data transfer rate <sup>3</sup>			[MB/s]	281	260	281
Buffer Size <sup>7</sup>			[MB]	512	256	512
Reliability						
MTTF <sup>8</sup>			[hours]	1 200 000	1 200 000	1 200 000
Unrecoverable Error Rate				1 per 10E15	1 per 10E15	1 per 10E15
Maximum rated workload <sup>9</sup>			[TB/year]	300	300	300
Load/Unload cycles			[times]	600 000	600 000	600 000
Power Requirements						
Supply Voltage <sup>10</sup>			[V]	12 VDC ±10 %	12 VDC ±10 %	12 VDC ±10 %
			[V]	5 VDC +10 / -7 %	5 VDC +10 / -7 %	5 VDC +10 / -7 %
Power Consumption			[W]			
(Spin up, +12 VDC) <sup>11</sup>			[A, peak]	1.42	1.51	1.41
(Spin up, +5 VDC) <sup>12</sup>			[A, peak]	0.45	0.26	0.44
(Operating) <sup>13</sup>			[W]	8.19	-	7.43
(Idle-A) <sup>14</sup>			[W]	4.92	5.62	4.14
(Standby)			[W]	0.57	0.41	0.57
Environmental						
Temperature			[°C] (Ambient)	-	-	-
(Operating)			[°C] (Surface)	5 to 60	5 to 60	5 to 60
(Non-operating) <sup>15, 18</sup>			[°C]	-40 to 70	-40 to 70	-40 to 70
Humidity			[%RH]	5 to 90	5 to 90	5 to 90
(Operating)			[%RH]	5 to 95	5 to 95	5 to 95
(Non-operating) <sup>15</sup>			[m/s <sup>2</sup> ] [G]	7.35 (0.75 G) (5 to 300 Hz)	7.35 (0.75 G) (5 to 300 Hz)	7.35 (0.75 G) (5 to 300 Hz)
(Operating) <sup>16, 17</sup>			[m/s <sup>2</sup> ] [G]	2.45 (0.25 G) (300 to 500 Hz)	2.45 (0.25 G) (300 to 500 Hz)	2.45 (0.25 G) (300 to 500 Hz)
Vibration			[m/s <sup>2</sup> ] [G]	-	-	-
(Non-operating) <sup>16, 19</sup>			[m/s <sup>2</sup> ] [G]	29.4 (3.0 G) (5 to 500 Hz)	29.4 (3.0 G) (5 to 500 Hz)	29.4 (3.0 G) (5 to 500 Hz)
(Operating) <sup>16</sup>			[m/s <sup>2</sup> ] [G]	686 (70 G) (2 ms duration)	686 (70 G) (2 ms duration)	686 (70 G) (2 ms duration)
(Non-operating) <sup>10, 11</sup>			[m/s <sup>2</sup> ] [G]	2450 (250 G) (2 ms duration)	2450 (250 G) (2 ms duration)	2450 (250 G) (2 ms duration)
Shock			[m]	-305 to 3048	-305 to 3048	-305 to 3048
(Operating)			[m]	-305 to 12 192	-305 to 12 192	-305 to 12 192
(Non-operating) <sup>10</sup>			[dB] (Typ.)	35	35	35
Acoustics <sup>20</sup>			[dB] (Typ.)	34	31	34
Idle mode						
Physical Dimension						
Height			[mm] (Max)	26.1	26.1	26.1
Length			[mm] (Max)	147	147	147
Logistic Information			[mm] (Max)	101.85	101.85	101.85
Weight			[g] (Max)	730	720	700
Bottom holes type <sup>21</sup>				TYPE1	TYPE2	TYPE1

# N300 Pro Data Sheet

Model			HDWG740	HDWG440
Model Number			HDWG740	HDWG440
Capacity <sup>1</sup>			4 TB	4 TB
Recording Technology <sup>2</sup>			CMR	CMR
Parts Number			HDWG740UZSVD	HDWG440UZSVB
Basic Specifications				
Interface <sup>3</sup>			SATA 6.0 Gbit/s	SATA 6.0 Gbit/s
Form Factor			3.5-inch	3.5-inch
Sector Size <sup>4</sup>			512e	512n
Features				
24 x 7 Operation			yes	yes
Drive Bays Supported <sup>6</sup>			up to 24	up to 24
Rotational Vibration Safeguard (RVS)			yes	yes
Shock Sensor			yes	yes
Native command queuing (NCQ)			yes	yes
Advanced Format (AF)			yes	no
RoHS compliant			yes	yes
Halogen Free			yes	yes
Performances				
Interface Speed <sup>3</sup>			[Gbit/s]	6.0 / 3.0 / 1.5
Rotation Speed			[rpm]	7200
Sustained data transfer rate <sup>3</sup>			[MB/s]	281
Buffer Size <sup>7</sup>			[MB]	512
Reliability				
MTTF <sup>8</sup>			[hours]	1 200 000
Unrecoverable Error Rate				1 per 10E15
Maximum rated workload <sup>9</sup>			[TB/year]	300
Load/Unload cycles			[times]	600 000
Power Requirements				
Supply Voltage <sup>10</sup>			[V]	12 VDC ±10 %
<sup>11</sup>			[V]	5 VDC +10 / -7 %
Power Consumption			[A, peak]	1.42
(Spin up, +12 VDC) <sup>12</sup>			[A, peak]	0.45
(Spin up, +5 VDC) <sup>12</sup>			[W]	6.75
(Operating) <sup>13</sup>			[W]	3.49
(Idle-A) <sup>14</sup>			[W]	0.59
(Standby)				0.45
Environmental				
Temperature			[°C] (Ambient)	-
(Operating)			[°C] (Surface)	5 to 60
(Non-operating) <sup>15, 18</sup>			[°C]	-40 to 70
Humidity			[%RH]	5 to 90
(Operating)			[%RH]	5 to 95
(Non-operating) <sup>15</sup>				5 to 95
Vibration			[m/s <sup>2</sup> ] [G]	7.35 (0.75 G) (5 to 300 Hz)
(Operating) <sup>16, 17</sup>			[m/s <sup>2</sup> ] [G]	2.45 (0.25 G) (300 to 500 Hz)
(Non-operating) <sup>16, 19</sup>			[m/s <sup>2</sup> ] [G]	-
Shock			[m/s <sup>2</sup> ] [G]	29.4 (3.0 G) (5 to 500 Hz)
(Operating) <sup>16</sup>			[m/s <sup>2</sup> ] [G]	686 (70 G) (2 ms duration)
(Non-operating) <sup>10, 11</sup>			[m/s <sup>2</sup> ] [G]	2940 (300 G) (2 ms duration)
Altitude			[m]	-305 to 3048
(Operating)			[m]	-305 to 12 192
(Non-operating) <sup>10</sup>				-305 to 12 192
Acoustics <sup>20</sup>			[dB] (Typ.)	35
Seek			[dB] (Typ.)	31
Idle mode				34
Physical Dimension				
Height			[mm] (Max)	26.1
Length			[mm] (Max)	147
Logistic Information			[mm] (Max)	101.85
Weight			[g] (Max)	690
Bottom holes type <sup>21</sup>				TYPE1

- ※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.
- ※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 °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.