



3.5 HARD DRIVE DATA SHEET

Smart. Safe. Secure.  
Video Optimised and Edge Ready



Seagate® SkyHawk™ AI 20 TB is a video-optimised drive designed for NVRs with artificial intelligence (AI) for edge applications.



#### Best-Fit Applications

- Network video recorders (NVR)
- AI-enabled NVR systems



SKYHAWK  
HEALTH



## Key Advantages

**ImagePerfect™ AI firmware** delivers zero dropped frames while supporting heavier workloads.

**Versatile capabilities** intelligently adapt to the scale of your AI environment, supporting up to 64 HD video streams and 32 AI streams.

**Rescue Data Recovery Services.<sup>2</sup>** SkyHawk AI comes with extra peace of mind for any mechanical, accidental, or natural disaster. With a 95% success rate of in-house recovery, Seagate has your back with a 3-year included Rescue Services plan.

**SkyHawk Health Management** actively helps protect your video storage by focusing on prevention, intervention and recovery options.<sup>1</sup> Included RAID RapidRebuild™ provides 3× faster volume rebuilds.

**Class-Leading Reliability and Dependability** SkyHawk AI drives are rated for 2M hours MTBF and a 550 TB/year workload rate for more than 3x that of standard surveillance hard drives. Backed by a 5-year limited warranty.

**Powerful processing** to welcome workload challenges — SkyHawk AI supports video analysis and recording simultaneously with GPU analytics workloads.

**Enjoy consistent performance** with built-in rotational vibration sensors providing reliable storage for NVR with little lag or downtime.

**Multi-bay support** helps you meet your growing storage demands with up to 16+ bays.

<sup>1</sup> Contact your Seagate sales representative for further information.



| Specifications                                     | 20 TB              | 18 TB              | 16 TB              | 12 TB              | 10 TB              |
|----------------------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Capacity                                           | 20TB               | 18TB               | 16TB               | 12TB               | 10TB               |
| Standard Model Numbers                             | ST20000VE002       | ST18000VE002       | ST16000VE002       | ST12000VE001       | ST10000VE0008      |
| Interface                                          | SATA 6 Gb/s        | SATA 6 Gb/s        | SATA 6 Gb/s        | SATA 6 Gb/s        | SATA 6 Gb/s        |
| Recording Technology                               | CMR                | CMR                | CMR                | CMR                | CMR                |
| Drive Design                                       | Helium             | Helium             | Helium             | Helium             | Helium             |
| Features and Performance                           |                    |                    |                    |                    |                    |
| Drive Bays Supported                               | 16+                | 16+                | 16+                | 16+                | 16+                |
| AI Channels                                        | 32                 | 32                 | 32                 | 32                 | 32                 |
| AI Real Time Capture Events/Sec <sup>1,2</sup>     | Up to 120          | Up to 120          | Up to 120          | Up to 120          | Up to 120          |
| AI Real Time Compare Events/Sec <sup>1,2</sup>     | Up to 96           | Up to 96           | Up to 96           | Up to 96           | Up to 96           |
| HD Cameras Supported <sup>3</sup>                  | Up to 64           | Up to 64           | Up to 64           | Up to 64           | Up to 64           |
| RV Sensors                                         | Yes                | Yes                | Yes                | Yes                | Yes                |
| Max Data Transfer Rate (MB/s)                      | Up to 260          | Up to 260          | Up to 255          | Up to 255          | Up to 255          |
| Cache (MB)                                         | 256                | 256                | 256                | 256                | 256                |
| Reliability/Data Integrity                         |                    |                    |                    |                    |                    |
| Tarnish Resistant                                  | Yes                | Yes                | Yes                | Yes                | Yes                |
| Load/Unload Cycles                                 | 600,000            | 600,000            | 600,000            | 600,000            | 600,000            |
| Non-recoverable Read Errors Rate, Max              | 1 per 10E15        | 1 per 10E15        | 1 per 10E15        | 1 per 10E15        | 1 per 10E15        |
| Power-On Hours per year                            | 8,760              | 8,760              | 8,760              | 8,760              | 8,760              |
| Workload Rate Limit (WRL) <sup>4</sup>             | 550                | 550                | 550                | 550                | 550                |
| Mean Time Between Failures (MTBF) (hours)          | 2,000,000 hr       | 2,000,000 hr       | 2,000,000 hr       | 2,000,000 hr       | 2,000,000 hr       |
| Warranty, Limited (years) <sup>5</sup>             | 5                  | 5                  | 5                  | 5                  | 5                  |
| Rescue Data Recovery Services (years) <sup>6</sup> | 3                  | 3                  | 3                  | 3                  | 3                  |
| Power Management                                   |                    |                    |                    |                    |                    |
| Startup Current, Typical (12V, A)                  | 2                  | 2                  | 2                  | 2                  | 1.8                |
| Average Read/Write Power * (W) <sup>7</sup>        | 7.72               | 7.7                | 8                  | 8                  | 6.9                |
| Idling Average (W)                                 | 3.54 W             | 3.5 W              | 5.3 W              | 5.3 W              | 4.9 W              |
| Standby Mode/Sleep Mode, Typical (W)               | 1.01/1.01          | 1/1                | 1.3/1.3            | 1.3/1.3            | 1.2/1.2            |
| Voltage Tolerance (5 V)                            | ±5%                | ±5%                | ±5%                | ±5%                | ±5%                |
| Voltage Tolerance (12 V)                           | ±10%               | ±10%               | ±10%               | ±10%               | ±10%               |
| Environmental/Temperature                          |                    |                    |                    |                    |                    |
| Operating (Ambient, min °C)                        | 0                  | 0                  | 0                  | 0                  | 0                  |
| Operating (drive reported, max °C) <sup>8</sup>    | 65                 | 65                 | 65                 | 65                 | 65                 |
| Non-operating (ambient, min °C)                    | -40                | -40                | -40                | -40                | -40                |
| Physical                                           |                    |                    |                    |                    |                    |
| Height (mm/in, max)                                | 26.11 mm/1.028 in  | 26.11 mm/1.028 in  | 26.11 mm/1.028 in  | 26.11 mm/1.028 in  | 26.11 mm/1.028 in  |
| Width (mm/in, max)                                 | 101.85 mm/4.01 in  | 101.85 mm/4.01 in  | 101.85 mm/4.01 in  | 101.85 mm/4.01 in  | 101.85 mm/4.01 in  |
| Depth (mm/in, max)                                 | 146.99 mm/5.787 in | 146.99 mm/5.787 in | 146.99 mm/5.787 in | 146.99 mm/5.787 in | 146.99 mm/5.787 in |
| Weight (g/lb, typical)                             | 680 g/1.499 lb     | 680 g/1.499 lb     | 670 g/1.477 lb     | 670 g/1.477 lb     | 690 g/1.521 lb     |
| Carton Unit Quantity                               | 20                 | 20                 | 20                 | 20                 | 20                 |
| Cartons per Pallet/Cartons per Layer               | 40/8               | 40/8               | 40/8               | 40/8               | 40/8               |

<sup>1</sup> Events can be human, vehicle, or object capture.

<sup>2</sup> Tested and verified using embedded AI NVR – 64-ch HD recording, 16-ch PB. Average picture size ~250 KB

<sup>3</sup> 1080P, H.265, 25 fps

<sup>4</sup> SkyHawk AI surveillance drives are designed for always-on workloads of 550 TB/year. For higher transaction workloads, see Seagate's enterprise-class drive offerings.

<sup>5</sup> 5-year limited warranty applies to product shipped after July 3, 2021. Check with your reseller for more information.

<sup>6</sup> From May 1, 2020, 3-year Rescue Data Recovery Services plan may be offered in addition to standard warranty. This is offered for selected regions only. Check with reseller on availability.

<sup>7</sup> Based on IDEMA three stream workload

<sup>8</sup> Seagate does not recommend operating at sustained extreme temperatures. Operation at high temperatures will shorten product life.



| Specifications                                     | 10 TB              | 8 TB               |
|----------------------------------------------------|--------------------|--------------------|
| Capacity                                           | 10TB               | 8TB                |
| Standard Model Numbers                             | ST10000VE001       | ST8000VE001        |
| Interface                                          | SATA 6 Gb/s        | SATA 6 Gb/s        |
| Recording Technology                               | CMR                | CMR                |
| Drive Design                                       | Air                | Air                |
| <b>Features and Performance</b>                    |                    |                    |
| Drive Bays Supported                               | 16+                | 16+                |
| AI Channels                                        | 32                 | 32                 |
| AI Real Time Capture Events/Sec <sup>1,2</sup>     | Up to 120          | Up to 120          |
| AI Real Time Compare Events/Sec <sup>1,2</sup>     | Up to 96           | Up to 96           |
| HD Cameras Supported <sup>3</sup>                  | Up to 64           | Up to 64           |
| RV Sensors                                         | Yes                | Yes                |
| Max Data Transfer Rate (MB/s)                      | Up to 255          | Up to 255          |
| Cache (MB)                                         | 256                | 256                |
| <b>Reliability/Data Integrity</b>                  |                    |                    |
| Tarnish Resistant                                  | Yes                | Yes                |
| Load/Unload Cycles                                 | 600,000            | 600,000            |
| Non-recoverable Read Errors Rate, Max              | 1 per 10E15        | 1 per 10E15        |
| Power-On Hours per year                            | 8,760              | 8,760              |
| Workload Rate Limit (WRL) <sup>4</sup>             | 550                | 550                |
| Mean Time Between Failures (MTBF) (hours)          | 2,000,000 hr       | 2,000,000 hr       |
| Warranty, Limited (years) <sup>5</sup>             | 5                  | 5                  |
| Rescue Data Recovery Services (years) <sup>6</sup> | 3                  | 3                  |
| <b>Power Management</b>                            |                    |                    |
| Startup Current, Typical (12V, A)                  | 2                  | 2                  |
| Average Read/Write Power * (W) <sup>7</sup>        | 9                  | 8.8                |
| Idling Average (W)                                 | 7.4 W              | 7.4 W              |
| Standby Mode/Sleep Mode, Typical (W)               | 1/1                | 1/1                |
| Voltage Tolerance (5 V)                            | ±5%                | ±5%                |
| Voltage Tolerance (12 V)                           | ±10%               | ±10%               |
| <b>Environmental/Temperature</b>                   |                    |                    |
| Operating (Ambient, min °C)                        | 0                  | 0                  |
| Operating (drive reported, max °C) <sup>8</sup>    | 65                 | 65                 |
| Non-operating (ambient, min °C)                    | -40                | -40                |
| <b>Physical</b>                                    |                    |                    |
| Height (mm/in, max)                                | 26.11 mm/1.028 in  | 26.11 mm/1.028 in  |
| Width (mm/in, max)                                 | 101.85 mm/4.01 in  | 101.85 mm/4.01 in  |
| Depth (mm/in, max)                                 | 146.99 mm/5.787 in | 146.99 mm/5.787 in |
| Weight (g/lb, typical)                             | 720 g/1.59 lb      | 720 g/1.59 lb      |
| Carton Unit Quantity                               | 20                 | 20                 |
| Cartons per Pallet/Cartons per Layer               | 40/8               | 40/8               |

<sup>1</sup> Events can be human, vehicle, or object capture.

<sup>2</sup> Tested and verified using embedded AI NVR – 64-ch HD recording, 16-ch PB. Average picture size ~250 KB

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