SKYHAWK SURVEILLANCE

SEAGATE

3.5 HARD DRIVE DATA SHEET

# Smart. Safe. Secure.
# Surveillance-Specialized Storage



SkyHawk™ leverages Seagate's extensive experience in designing drives purpose-built for surveillance applications.




### Best-Fit Applications

- Network video recorders (NVR)
- Surveillance DVRs

SKYHAWK HEALTH

## Key Advantages

**ImagePerfect™ firmware** is designed to ensure seamless video footage capture in 24×7 surveillance workloads[1] that record video from 64 HD cameras.

**SkyHawk Health Management** actively helps protect your surveillance storage by focusing on prevention, intervention, and recovery options.[2] Included is RAID RapidRebuild™, which provides 3× faster volume rebuilds over traditional RAID rebuilds.

**RV sensors built in** allow drives to maintain performance in multi-bay systems, giving customers the flexibility to scale their systems when more storage is needed.

**ATA streaming support** enables recordings from up to 64 HD cameras for smooth, uninterrupted footage.

**1M hours MTBF, 3-year limited warranty**[3] represents an improved total cost of ownership (TCO) with reduced maintenance costs.

**Lower power consumption** means a reduction in heat emissions, which improves reliability in surveillance solutions. Tarnish-resistant components help protect drive from environmental elements, increasing field reliability.

1 SkyHawk surveillance drives are designed for always-on workloads of 180TB/year. For higher transaction workloads, see Seagate's enterprise-class drive offerings.

2 Contact your Seagate sales representative for further information.

3 Seagate does not recommend operating at sustained extreme temperatures. Operating at higher temperatures will reduce useful life of the products.

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| Specifications | 8TB | 8TB | 6TB | 6TB | 4TB |
|---|---|---|---|---|---|
| Standard Model Numbers | ST8000VX004 | ST8000VX002 | ST6000VX011 | ST6000VX001 | ST4000VX005 |
| SkyHawk™ Health Management Included | Yes | Yes | Yes | Yes | Yes |
| Interface | SATA 6Gb/s | SATA 6Gb/s | SATA 6Gb/s | SATA 6Gb/s | SATA 6Gb/s |
| Recording Technology | CMR | SMR | SMR | CMR | SMR |
| Drive Design | Air | Air | Air | Air | Air |
| **Features and Performance** | | | | | |
| Drive Bays Supported | Up to 16 | Up to 16 | Up to 16 | Up to 16 | Up to 16 |
| Cameras Supported [1] | Up to 64 | Up to 64 | Up to 64 | Up to 64 | Up to 64 |
| RV Sensors | Yes | Yes | Yes | Yes | Yes |
| Max Sustained Transfer Rate OD (MB/s) | 210MB/s | 180MB/s | 180MB/s | 180MB/s | 180MB/s |
| Cache (MB) | 256 | 256 | 256 | 256 | 256 |
| **Reliability/Data Integrity** | | | | | |
| Tarnish Resistant | Yes | Yes | Yes | Yes | Yes |
| Load/Unload Cycles | 300,000 | 600,000 | 600,000 | 600,000 | 600,000 |
| Nonrecoverable Read Errors Rate, Max | 1 per 10E15 | 1 per 10E14 | 1 per 10E14 | 1 per 10E14 | 1 per 10E14 |
| Power-On Hours per year | 8760 | 8760 | 8760 | 8760 | 8760 |
| Workload Rate Limit (WRL)[2] | 180 | 180 | 180 | 180 | 180 |
| Mean Time Between Failures (MTBF) (hours) | 1,000,000hr | 1,000,000hr | 1,000,000hr | 1,000,000hr | 1,000,000hr |
| Warranty, Limited (years)[3] | 3 | 3 | 3 | 3 | 3 |
| **Power Management** | | | | | |
| Startup Current, Typical (12V, A) | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| Average Operating Power (W) | 8.73W | 5.3W | 5.3W | 5.0W | 3.7W |
| Idle Average (W) | 7.06W | 3.4W | 3.4W | 3.4W | 2.5W |
| Standby Mode/Sleep Mode, Typical (W) | 0.96/0.96 | 0.25/0.25 | 0.25/0.25 | 0.25/0.25 | 0.25/0.25 |
| Voltage Tolerance (5V) | +10/-5% | ±5% | ±5% | ±5% | ±5% |
| Voltage Tolerance (12V) | ±10% | ±10% | ±10% | ±10% | ±10% |
| **Environmental/Temperature** | | | | | |
| Operating (ambient, min °C) | 5 | 0 | 0 | 0 | 0 |
| Operating (drive case, max °C)[4] | 70 | 70 | 70 | 70 | 70 |
| Nonoperating (ambient, min °C) | -40 | -40 | -40 | -40 | -40 |
| **Physical** | | | | | |
| Height (mm/in, max) | 26.11mm/1.028in | 26.11mm/1.028in | 26.11mm/1.028in | 26.11mm/1.028in | 20.20mm/0.795in |
| Width (mm/in, max) | 101.85mm/4.010in | 101.85mm/4.010in | 101.85mm/4.01in | 101.85mm/4.01in | 101.85mm/4.010in |
| Depth (mm/in, max) | 146.99mm/5.787in | 146.99mm/5.787in | 146.99mm/5.787in | 146.99mm/5.787in | 146.99mm/5.787in |
| Weight (g/lb, typical) | 716g/1.579lb | 630g/1.389lb | 610g/1.345lb | 610g/1.345lb | 490g/1.08lb |
| Carton Unit Quantity | 20 | 20 | 20 | 20 | 25 |
| Cartons per Pallet/Cartons per Layer | 40/8 | 40/8 | 40/8 | 40/8 | 40/8 |

1 Tested and verified using embedded NVR – 64-ch HD recording, 1080P 25 fps H.265

2 SkyHawk surveillance drives are designed for always-on workloads of 180TB/year. For higher transaction workloads, see Seagate's enterprise-class drive offerings.

3 Extended warranty options available. Consult your distributor for details.

4 Seagate does not recommend operating at sustained extreme temperatures. Operating at higher temperatures will reduce useful life of the products.

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| Specifications | 4TB | 3TB | 2TB | 2TB | 1TB |
|---|---|---|---|---|---|
| Standard Model Numbers | ST4000VX000 | ST3000VX009 | ST2000VX012 | ST2000VX003 | ST1000VX005 |
| SkyHawk™ Health Management Included | Yes | — | — | — | — |
| Interface | SATA 6Gb/s | SATA 6Gb/s | SATA 6Gb/s | SATA 6Gb/s | SATA 6Gb/s |
| Recording Technology | CMR | CMR | SMR | CMR | CMR |
| Drive Design | Air | Air | Air | Air | Air |
| **Features and Performance** | | | | | |
| Drive Bays Supported | Up to 16 | Up to 8 | Up to 8 | Up to 8 | Up to 8 |
| Cameras Supported [1] | Up to 64 | Up to 64 | Up to 64 | Up to 64 | Up to 64 |
| RV Sensors | Yes | — | — | — | — |
| Max Sustained Transfer Rate OD (MB/s) | 190MB/s | 180MB/s | 180MB/s | 180MB/s | 180MB/s |
| Cache (MB) | 64 | 256 | 256 | 64 | 64 |
| **Reliability/Data Integrity** | | | | | |
| Tarnish Resistant | Yes | Yes | Yes | Yes | Yes |
| Load/Unload Cycles | 300,000 | 600,000 | 600,000 | 300,000 | — |
| Nonrecoverable Read Errors Rate, Max | 1 per 10E14 | 1 per 10E14 | 1 per 10E14 | 1 per 10E14 | 1 per 10E14 |
| Power-On Hours per year | 8760 | 8760 | 8760 | 8760 | 8760 |
| Workload Rate Limit (WRL)[2] | 180 | 180 | 180 | 180 | 180 |
| Mean Time Between Failures (MTBF) (hours) | 1,000,000hr | 1,000,000hr | 1,000,000hr | 1,000,000hr | 1,000,000hr |
| Warranty, Limited (years)[3] | 3 | 3 | 3 | 3 | 3 |
| **Power Management** | | | | | |
| Startup Current, Typical (12V, A) | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| Average Operating Power (W) | 5.5W | 3.5W | 3.7W | 5.6W | 5.6W |
| Idle Average (W) | 3.2W | 2.5W | 2.5W | 4.0W | 4.0W |
| Standby Mode/Sleep Mode, Typical (W) | 0.25/0.25 | 0.25/0.25 | 0.25/0.25 | 0.5/0.5 | 0.5/0.5 |
| Voltage Tolerance (5V) | ±5% | ±5% | ±5% | ±5% | ±5% |
| Voltage Tolerance (12V) | ±10% | ±10% | ±10% | ±10% | ±10% |
| **Environmental/Temperature** | | | | | |
| Operating (ambient, min °C) | 0 | 0 | 0 | 0 | 0 |
| Operating (drive case, max °C)[4] | 70 | 70 | 70 | 70 | 70 |
| Nonoperating (ambient, min °C) | -40 | -40 | -40 | -40 | -40 |
| **Physical** | | | | | |
| Height (mm/in, max) | 26.11mm/1.028in | 20.20mm/0.795in | 20.20mm/0.795in | 26.11mm/1.028in | 20.20mm/0.795in |
| Width (mm/in, max) | 101.85mm/4.010in | 101.85mm/4.01in | 101.85mm/4.01in | 101.85mm/4.010in | 101.85mm/4.01in |
| Depth (mm/in, max) | 146.99mm/5.787in | 146.99mm/5.787in | 146.99mm/5.787in | 146.99mm/5.787in | 146.99mm/5.787in |
| Weight (g/lb, typical) | 608g/1.345lb | 490g/1.08lb | 415g/0.915lb | 610g/1.345lb | 415g/0.915lb |
| Carton Unit Quantity | 20 | 25 | 25 | 20 | 25 |
| Cartons per Pallet/Cartons per Layer | 40 / 8 | 40/8 | 40/8 | 40 / 8 | 40/8 |

1 Tested and verified using embedded NVR – 64-ch HD recording, 1080P 25 fps H.265

2 SkyHawk surveillance drives are designed for always-on workloads of 180TB/year. For higher transaction workloads, see Seagate's enterprise-class drive offerings.

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