



3.5 HDD DATA SHEET

The Power of Agility for Home, SOHO, and SMB NAS Enclosures



IronWolf™ is designed for everything NAS. Get used to tough, ready, and scalable 24x7 performance that can handle multi-drive environments across a wide range of capacities.



Best-Fit Applications

- 1- to 8-bay network attached storage (NAS)
- Desktop RAID and servers
- Multimedia server storage
- Private cloud



Key Advantages

Optimized for NAS with AgileArray™. AgileArray enables dual-plane balancing and RAID optimization in multi-bay environments, with the most advanced power management possible.

Actively protect your NAS with IronWolf Health Management focusing on prevention, intervention, and recovery.¹

High performance means no lag time or downtime for users during workload traffic for the NAS. Seagate leads the competition with the highest-performing NAS drive portfolio.²

Rotational Vibration (RV) sensors. First in its class of drives to include RV sensors to maintain high performance in multi-drive NAS enclosures.³

Range of capacities up to 16TB. More capacity options means more choices that will fit within the budget. Seagate provides a scalable solution for any NAS use-case scenario.

Do more in multi-user environments. IronWolf provides a workload rate of 180TB/year. Multiple users can confidently upload and download data to the NAS server, knowing IronWolf can handle the workload, whether you are a creative professional or a small business.

Designed for always-on, always-accessible 24x7 performance. Access data on your NAS any time, remotely or on site.

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

¹ Contact your Seagate sales representative for further information.

² Performance may vary depending on user's hardware configuration and operating system.

³ Included on 4, 6, 8, 10, 12, 14, and 16TB models.



| Specifications | 16TB | 14TB | 12TB | 10TB | 8TB |
|---|------------------|------------------|------------------|------------------|------------------|
| Capacity | 16TB | 14TB | 12TB | 10TB | 8TB |
| Standard Model Number | ST16000VN001 | ST14000VN0008 | ST12000VN0008 | ST10000VN0008 | ST8000VN004 |
| Interface | SATA 6Gb/s | SATA 6Gb/s | SATA 6Gb/s | SATA 6Gb/s | SATA 6Gb/s |
| Features and Performance | | | | | |
| Drive Bays Supported | 1-8 Bays | 1-8 Bays | 1-8 Bays | 1-8 Bays | 1-8 Bays |
| Multi-User Technology | 180TB/year | 180TB/year | 180TB/year | 180TB/year | 180TB/year |
| Rotational Vibration (RV) Sensor | Yes | Yes | Yes | Yes | Yes |
| Dual-Plane Balance | Yes | Yes | Yes | Yes | Yes |
| Error Recovery Control | Yes | Yes | Yes | Yes | Yes |
| Max. Sustained Transfer Rate OD (MB/s) | 210MB/s | 210MB/s | 210MB/s | 210MB/s | 210MB/s |
| Spindle Speed (RPM) | 7200 | 7200 | 7200 | 7200 | 7200 |
| Cache (MB) | 256 | 256 | 256 | 256 | 256 |
| Reliability | | | | | |
| Load/Unload Cycles ¹ | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 |
| Nonrecoverable Read Errors Rate, Max | 1 per 10E15 | 1 per 10E15 | 1 per 10E15 | 1 per 10E15 | 1 per 10E15 |
| Power-On Hours | 8,760 | 8,760 | 8,760 | 8,760 | 8,760 |
| Workload Rate Limit (WRL) | 180 | 180 | 180 | 180 | 180 |
| Mean Time Between Failures (MTBF, hours) | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 |
| Limited Warranty (years) | 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) | 7.3W | 7.3W | 7.8W | 7.8W | 8.8W |
| Idle Average (W) | 5.3W | 5.3W | 5W | 5W | 7.6W |
| Standby Mode/Sleep Mode, Typical (W) | 0.8/0.8 | 0.8/0.8 | 0.8/0.8 | 0.8/0.8 | 0.6/0.6 |
| Voltage Tolerance, Inc. Noise (5V) | ±5% | ±5% | ±5% | ±5% | ±5% |
| Voltage Tolerance, Inc. Noise (12V) | ±10% | ±10% | ±10% | ±10% | ±10% |
| Environmental/Temperature | | | | | |
| Operating (ambient, min °C) | 5 | 5 | 5 | 5 | 5 |
| Operating (drive case, max °C) ² | 70 | 70 | 70 | 70 | 70 |
| Nonoperating (ambient, min °C) | -40 | -40 | -40 | -40 | -40 |
| Nonoperating (ambient, max °C) | 70 | 70 | 70 | 70 | 70 |
| Halogen Free | Yes | Yes | Yes | Yes | Yes |
| Environmental/Shock | | | | | |
| Shock, Operating/Nonoperating: 2ms (max) | 50Gs/200Gs | 50Gs/200Gs | 70Gs/250Gs | 70Gs/250Gs | 70Gs/250Gs |
| Environmental/Acoustics | | | | | |
| Idle (typical) ³ | 2.8bels | 2.8bels | 1.8bels | 1.8bels | 2.8bels |
| Seek (typical) | 3.0bels | 3.0bels | 2.8bels | 2.8bels | 3.2bels |
| Physical | | | | | |
| Height (mm/in) | 26.11mm/1.028in | 26.11mm/1.028in | 26.11mm/1.028in | 26.11mm/1.028in | 26.11mm/1.028in |
| Width (mm/in, max) | 101.85mm/4.01in | 101.85mm/4.01in | 101.85mm/4.01in | 101.85mm/4.01in | 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) | 670g/1.477lb | 670g/1.477lb | 690g/1.521lb | 690g/1.521lb | 722g/1.591lb |
| Carton Unit Quantity | 20 | 20 | 20 | 20 | 20 |
| Cartons per Pallet/Cartons per Layer | 40/8 | 40/8 | 40/8 | 40/8 | 40/8 |

¹ Load/unload tested to 600,000 cycles.

² Seagate does not recommend operating at sustained case temperatures above 60°C. Operating at higher temperatures will reduce useful life of the product.

³ Idle measured in Idle 1 state.



| Specifications | 8TB | 6TB | 6TB | 4TB | 3TB |
|---|------------------|------------------|------------------|------------------|------------------|
| Capacity | 8TB | 6TB | 6TB | 4TB | 3TB |
| Standard Model Number | ST8000VN0022 | ST6000VN0033 | ST6000VN001 | ST4000VN008 | ST3000VN007 |
| Interface | SATA 6Gb/s | SATA 6Gb/s | SATA 6Gb/s | SATA 6Gb/s | SATA 6Gb/s |
| Features and Performance | | | | | |
| Drive Bays Supported | 1-8 Bays | 1-8 Bays | 1-8 Bays | 1-8 Bays | 1-8 Bays |
| Multi-User Technology | 180TB/year | 180TB/year | 180TB/year | 180TB/year | 180TB/year |
| Rotational Vibration (RV) Sensor | Yes | Yes | Yes | Yes | No |
| Dual-Plane Balance | Yes | Yes | Yes | Yes | Yes |
| Error Recovery Control | Yes | Yes | Yes | Yes | Yes |
| Max. Sustained Transfer Rate OD (MB/s) | 210MB/s | 210MB/s | 190MB/s | 180MB/s | 180MB/s |
| Spindle Speed (RPM) | 7200 | 7200 | 5400 | 5900 | 5900 |
| Cache (MB) | 256 | 256 | 256 | 64 | 64 |
| Reliability | | | | | |
| Load/Unload Cycles ¹ | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 |
| Nonrecoverable Read Errors Rate, Max | 1 per 10E15 | 1 per 10E15 | 1 per 10E14 | 1 per 10E14 | 1 per 10E14 |
| Power-On Hours | 8,760 | 8,760 | 8,760 | 8,760 | 8,760 |
| Workload Rate Limit (WRL) | 180 | 180 | 180 | 180 | 180 |
| Mean Time Between Failures (MTBF, hours) | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 |
| Limited Warranty (years) | 3 | 3 | 3 | 3 | 3 |
| Power Management | | | | | |
| Startup Current, Typical (12V, A) | 1.8 | 1.8 | 1.8 | 1.8 | 2 |
| Average Operating Power (W) | 8.8W | 8.1W | 5.3W | 4.8W | 4.8W |
| Idle Average (W) | 7.6W | 7.2W | 3.4W | 3.95W | 4.8W |
| Standby Mode/Sleep Mode, Typical (W) | 0.6/0.6 | 0.6/0.6 | 0.25/0.25 | 0.5/0.5 | 0.5/0.5 |
| Voltage Tolerance, Inc. Noise (5V) | ±5% | ±5% | ±5% | ±5% | ±5% |
| Voltage Tolerance, Inc. Noise (12V) | ±10% | ±10% | ±10% | ±10% | ±10% |
| Environmental/Temperature | | | | | |
| Operating (ambient, min °C) | 5 | 5 | 5 | 5 | 5 |
| Operating (drive case, max °C) ² | 70 | 70 | 70 | 70 | 70 |
| Nonoperating (ambient, min °C) | -40 | -40 | -40 | -40 | -40 |
| Nonoperating (ambient, max °C) | 70 | 70 | 70 | 70 | 70 |
| Halogen Free | Yes | Yes | Yes | Yes | Yes |
| Environmental/Shock | | | | | |
| Shock, Operating/Nonoperating: 2ms (max) | 70Gs/250Gs | 70Gs/250Gs | 70Gs/250Gs | 80Gs/300Gs | 80Gs/300Gs |
| Environmental/Acoustics | | | | | |
| Idle (typical) ³ | 2.7bels | 2.7bels | 2.6bels | 2.3bels | 2.3bels |
| Seek (typical) | 2.8bels | 2.8bels | 2.7bels | 2.5bels | 2.5bels |
| Physical | | | | | |
| Height (mm/in) | 26.11mm/1.028in | 26.11mm/1.028in | 26.11mm/1.028in | 26.11mm/1.028in | 26.11mm/1.028in |
| Width (mm/in, max) | 101.85mm/4.01in | 101.85mm/4.01in | 101.85mm/4.01in | 101.85mm/4.01in | 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) | 780g/1.72lb | 705g/1.55lb | 610g/1.345lb | 610g/1.345lb | 610g/1.345lb |
| Carton Unit Quantity | 20 | 20 | 20 | 20 | 20 |
| Cartons per Pallet/Cartons per Layer | 40/8 | 40/8 | 40/8 | 40/8 | 40/8 |

¹ Load/unload tested to 600,000 cycles.

² Seagate does not recommend operating at sustained case temperatures above 60°C. Operating at higher temperatures will reduce useful life of the product.

³ Idle measured in Idle 1 state.



| Specifications | 2TB | 1TB |
|---|------------------|------------------|
| Capacity | 2TB | 1TB |
| Standard Model Number | ST2000VN004 | ST1000VN002 |
| Interface | SATA 6Gb/s | SATA 6Gb/s |
| Features and Performance | | |
| Drive Bays Supported | 1-8 Bays | 1-8 Bays |
| Multi-User Technology | 180TB/year | 180TB/year |
| Rotational Vibration (RV) Sensor | No | No |
| Dual-Plane Balance | Yes | Yes |
| Error Recovery Control | Yes | Yes |
| Max. Sustained Transfer Rate OD (MB/s) | 180MB/s | 180MB/s |
| Spindle Speed (RPM) | 5900 | 5900 |
| Cache (MB) | 64 | 64 |
| Reliability | | |
| Load/Unload Cycles ¹ | 600,000 | — |
| Nonrecoverable Read Errors Rate, Max | 1 per 10E14 | 1 per 10E14 |
| Power-On Hours | 8,760 | 8,760 |
| Workload Rate Limit (WRL) | 180 | 180 |
| Mean Time Between Failures (MTBF, hours) | 1,000,000 | 1,000,000 |
| Limited Warranty (years) | 3 | 3 |
| Power Management | | |
| Startup Current, Typical (12V, A) | 2 | 1.2 |
| Average Operating Power (W) | 4.3W | 3.76W |
| Idle Average (W) | 3.56W | 2.5W |
| Standby Mode/Sleep Mode, Typical (W) | 0.5/0.5 | 0.5/0.5 |
| Voltage Tolerance, Inc. Noise (5V) | ±5% | ±5% |
| Voltage Tolerance, Inc. Noise (12V) | ±10% | ±10% |
| Environmental/Temperature | | |
| Operating (ambient, min °C) | 5 | 5 |
| Operating (drive case, max °C) ² | 70 | 70 |
| Nonoperating (ambient, min °C) | -40 | -40 |
| Nonoperating (ambient, max °C) | 70 | 70 |
| Halogen Free | Yes | Yes |
| Environmental/Shock | | |
| Shock, Operating/Nonoperating: 2ms (max) | 80Gs/300Gs | 80Gs/300Gs |
| Environmental/Acoustics | | |
| Idle (typical) ³ | 1.9bels | 2.1bels |
| Seek (typical) | 2.1bels | 2.3bels |
| Physical | | |
| Height (mm/in) | 26.11mm/1.028in | 20.2mm/0.795in |
| Width (mm/in, max) | 101.85mm/4.01in | 101.85mm/4.01in |
| Depth (mm/in, max) | 146.99mm/5.787in | 146.99mm/5.787in |
| Weight (g/lb, typical) | 535g/1.18lb | 415g/0.915lb |
| Carton Unit Quantity | 20 | 25 |
| Cartons per Pallet/Cartons per Layer | 40/8 | 40/8 |

¹ Load/unload tested to 600,000 cycles.

² Seagate does not recommend operating at sustained case temperatures above 60°C. Operating at higher temperatures will reduce useful life of the product.

³ Idle measured in Idle 1 state.

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