Western Digital.

Ultrastar® DC HA210

DATA SHEET

3.5-INCH DATA CENTER HARD DRIVES

2TB & 1TB | 7200 RPM | SATA 6Gb/s 512n

Highlights

- Up to 2TB capacity[1] in a standard 3.5-inch form factor
- Enhanced RAFF™ anti-vibration technology for robust performance in multi-drive environments
- Reliable, field-proven design
- SATA 6Gb/s with 512-byte (512n) supportd legacy enterprise applications
- 2M hours MTBF[2] rating & 5-year limited warranty

Applications/Environments

- RAID arrays
- Massive scale-out (MSO) data centers
- Data warehousing & mining
- Cloud storage
- Enterprise NAS
- Disk-to-disk backup & archiving
- Legacy mainstream enterprise capacity applications that require 512n block size

Value to the Data Center with Performance-optimized Capacity for High-intensity Applications

Data centers that need fast access to data in Tier 2 environments need look no further. The Ultrastar® DC HA210* HDD, a member of our HA200 series product line, delivers fast data access in capacity-optimized, enterprise-class storage systems. Enhanced RAFF™ technology in the DC HA210 includes sophisticated electronics to monitor the drive and correct both linear and rotational vibration disturbances in real time—especially helpful in multi-drive arrays and rack-mounted systems maintaining high read/write performance. Designed to handle workloads up to 550TB per year, the Ultrastar DC HA210 delivers up to 2TB of affordable storage capacity for high-intensity applications in enterprise-class environments.

Maximize Your Data Center Application Investment with Proven Storage Technology

Data centers face growing pressures to store more with flat-to-shrinking budgets. Keeping systems operational for as long as possible to maximize investments can be an effective part of the strategy, but supporting those legacy applications becomes even more challenging as drive technologies move to next generation formats and interfaces. The Ultrastar DC HA210 has a SATA 6Gb/s interface and native 512-byte (512n) sector size to provide consistent, high performance and compatibility with legacy data center applications. Dual-stage actuator technology provides a head positioning system that improves positional accuracy over the data tracks, enabling data to be written to and read from the drive more reliably. Trust Western Digital to deliver storage options that allow data centers to get the most from their hardware investment.

Designed with Data Center Requirements in Mind

Multi-axis shock sensor technology automatically detects the smallest shock events and compensates to protect stored data on the Ultrastar DC HA210. RAID-specific, time-limited error recovery reduces drive fallout caused by extended hard drive error-recovery processes. Ramp load/unload technology keeps the recording heads away from the disk media during idle time and power down, ensuring significantly less wear to the recording heads and media, and provides better drive protection in transit. Through the use of dynamic fly-height technology, each read-write head's fly-height is adjusted in real time for optimum reliability and performance. With a 2M hour MTBF rating and a 5-year warranty, rely on Ultrastar DC HA210 to deliver capacity, performance and reliability for more value to your data center.

Western Digital Quality and Service

Ultrastar DC HA210 extends Western Digital's product offerings for capacity-enterprise environments. The proven drive design enables high reliability and availability to customer data. Ultrastar quality, performance and world class technical support and service provides customers with a lower total cost of ownership over previous generations. Western Digital data center drives are backed by an array of technical support and services, which may include customer and integration assistance. Western Digital offers a complete portfolio of product offerings designed to create environments for data to thrive.

Features & Benefits

	Feature / Function	Benefits
Capacity	• 2TB and 1TB	• Popular capacity points for high-intensity applications
Performance	• Dual-stage actuator • Rotational vibration sensor technology • SATA 6Gb/s with 512n sectors • 128MB cache buffer	• Accurate head positioning, especially in multi-drive environments, for better performance, data integrity and reliability • Maintains drive performance in high rotational vibration environments and multi-drive systems • Supports legacy enterprise systems • Improves response time and data management
Reliability	• RAID-specific time-limited error recovery • RAFF™ vibration compenstation technology • Multi-axis shock sensor • Load/unload ramp technology • 2M hours MTBF[2] and 0.44% AFR[2] • 5-year limited warranty	• Reduces drive fallout caused by extended hard drive error-recovery processes • Helps maintain performance in high-vibration environments, common in multi-drive systems • Automatically detects the smallest shock events and compenstates to protect the data • Protects user data when power is removed • High reliability rating • Enterprise-class warranty rating

*Previously known as Ultrastar 7K2

Ultrastar® DC HA210

Specifications

	SATA
Model / Part No.	HUS722T2TALA604 / 1W10002 HUS722T1TALA604 / 1W10001
Configuration	
Interface	SATA 6Gb/s
Capacity[1] (TB)	2TB // 1TB
Sector size (bytes)	512 native (512n)
Max. areal density (Gbits/sq. in)	638
Performance	
Data buffer[3] (MB)	128
Rotational speed (RPM)	7200
Latency average (ms)	4.2
Interface transfer rate (MB/s, max)	600
Sustained transfer rate[4] (MiB/sec, typ.) (MB/sec, typ.)	 191 // 175 200 // 184
Reliability	
Error rate (non-recoverable, bits read)	1 in 10^{15}
Load/Unload cycles (40°C)	600,000
MTBF[2] (M hours)	2.0
Annualized Failure Rate[2] (AFR)	0.44%
Availability (hrs/day x days/wk)	24×7
Warranty (yrs)	5

	SATA
Acoustics	
Idle/Operating (Bels, typical)	2.5 // 2.8
Power	
Requirement	+5V, +12V
Operating (W, typical)	8.1
Idle (W)	5.9
Power consumption efficiency at idle (Watts/TB) (Watts/GB)	 2.95 // 5.9 0.00295 // 0.0059
Physical size	
z-height (mm)	26.1
Dimensions (width x depth, mm)	101.6 (+/-0.25) x 147 (max)
Weight (g, typical)	640 (+/-10%)
Environmental (operating)	
Ambient temperature	5° to 60° C
Shock (half-sine wave, G, read operation)	65 (2 ms)
Vibration (G RMS, 10 to 300 Hz)	1.08 (XYZ)
Environmental (non-operating)	
Ambient temperature	-40° to 70° C
Shock (half-sine wave, G)	300 (2ms)
Random Vibration (G RMS, 10 to 300 Hz)	3.8 (XYZ)

[1] One megabyte (MB) is equal to one million bytes, one gigabyte (GB) is equal to 1,000MB (one billion bytes), and one terabyte (TB) is equal to 1,000GB (one trillion bytes) when referring to storage capacity. Accessible capacity will vary from the stated capacity due to formatting, system software, and other factors.

[2] MTBF and AFR specifications are based on a sample population and are estimated by statistical measurements and acceleration algorithms under typical operating conditions for this drive model. MTBF and AFR ratings do not predict an individual drive's reliability and do not constitute a warranty.

[3] Portion of buffer capacity used for drive firmware

[4] MiB/s is 2^{20} bytes, MB/s is 10^{6} bytes

[5] Excludes command overhead

How to Read the Ultrastar Model Number

Example: HUS722T2TALA604 = 7200 RPM, 2TB, 512n SATA 6Gb/s

H = Western Digital
U = Ultrastar
S = Standard
72 = 7200 RPM
2T = Full capacity — 2TB (2,000GB)
2T = Capacity this model (2T = 2TB, 1T = 1TB)
A = Generation code
L = 26.1mm z-height
A6 = Interface, 512n SATA 6Gb/s
0 = Reserved
4 = Data Security Mode
(Secure Erase – overwrite only)

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