Western Digital.

Ultrastar DC HA340
DATA CENTER CMR DRIVE

12TB

Highlights

- Capacities up to 12TB[1] in proven air-based HDD platform design

- Delivers high IOPS to data intensive applications

- Superior reliability of field-proven hardware and firmware designs

- Seamless integration with existing applications & environments

Target Audience

- Data Center Architects

- IT Administrators

- Data Center Managers

- AI System Administrators

Ideal for

- Hyperscalers and High Performance Computing (HPC)

- Artificial Intelligence training pools

- Converged infrastructures

- Cloud and hybrid cloud environments

Ultrastar® DC HA340 Data Center HDD

Ultrastar® Data Center HA340 hard drives are medium capacity air-filled HDDs that deliver high IOPS to support data intensive applications with proven durability and reliability.

Delivers High IOPS with Proven Technology
A unique combination of **field-proven hardware** with the latest innovative technologies enables these air-filled drives to deliver high IOPS to data intensive applications.

Optimized Performance and Durability
Performance-optimized to deliver **higher access densities (IOPS/TB)** to data intensive applications with proven durability.

Rapid Qualification and Integration
Leveraging hardware designs from **generations of highly successful products** ensures easy qualification, seamless integration and rapid adoption.

Reliability You Can Trust
Built off the same platform that is **deployed in thousands of data centers around the world**, these drives deliver superior dependability and field-proven reliability for hassle free data storage.

Protected Against Vibration & Shock
Our exclusive **Rotational Vibration Safeguard (RVS)** uses dual sensors to anticipate and counteract disturbances, maintaining peak performance in high-vibration environments. Combined with **Dynamic Fly Height technology**, Western Digital offers exceptional drive reliability and protection from unexpected shock events.

Trusted Reliability, Quality and World-Class Support
As an **industry-leading hard drive manufacturer**, Western Digital stands behind their Ultrastar hard drives with the assurance of a **2.0M-hour MTBF rating, a 5-year limited warranty**[8] and world-class support services to help create environments for data to thrive.

Specifications

Ultrastar DC HA340 HDD Models

Capacity[1] (TB)	Part Number	Model Number
12TB	0B47061	WUS721212BLE604
	0B47063	WUS721212BLE6L4
10TB	0B47060	WUS721210BLE604
	0B47062	WUS721210BLE6L4
8TB	0B46951	WUS721208BLE604
	0B47078	WUS721208BLE6L4
6TB	0B46950	WUS721206BLE604
	0B47077	WUS721206BLE6L4
4TB	0B46940	WUS721204BLE604
	0B47076	WUS721204BLE6L4

Configuration

Interface		SATA 6Gb/s
Format: Sector size (bytes)[2]		512e: 512
Areal density (Gbits/sq. in.)	6-12TB	1022
	4TB	834

Performance

Data buffer[3] (MB)	10-12TB	512
	4-8TB	256
Rotational speed (RPM)		7200
Latency average (ms)		4.16
Interface transfer rate (max)		6 Gb/s
Sustained transfer rate[4] (MB/s, max) / (MiB/s, max)		267 / 255
Random Read[4] IOPS (4K, QS16)	10-12TB	150
	4-8TB	154
Random Write[4] 4KB IOPS (4K, QS16)	10-12TB	465
	4-8TB	425

Environmental Specifications (Operating)

Temperature	5° C to 60° C
Shock (half-sine wave 2 ms, G)	70
Vibration (G RMS 5 to 500 Hz)	0.67 (XYZ)

Environmental Specifications (Non-Operating)

Ambient Temperature		-40° to 70° C
Shock (half-sine wave, G)	10-12TB	250
	4-8TB	300
Vibration (G RMS 2 to 200 Hz)		1.04 (XYZ)

[1] One MB is equal to one million bytes, one GB is equal to one billion bytes and one TB equals 1,000GB (one trillion bytes). Actual user capacity may be less due to operating environment.

[2] Advanced Format drive: 4K (4096-byte) physical sectors.

[3] Portion of buffer capacity used for drive firmware.

[4] Based on internal testing; performance may vary depending on host environment, drive capacity, logical block address (LBA), and other factors. The location of the max rate is at approximately 10% into the capacity of the HDD. 1MiB = 1,048,576 bytes (2^20), 1MB = 1,000,000 bytes (10^6).

[5] This product has an AFR specification rating based on typical workload and temperatures. The AFR specification is based on a sample population and is estimated by statistical measurements and acceleration algorithms under typical operating conditions at 40°C device reported temperature. Derating of AFR and max rated workload will occur above these parameters. AFR ratings do not predict an individual drive's reliability and do not constitute a warranty.

[6] Idle specification is based on use of Idle_A.

[7] 5°C ambient temperature, 60°C device reported temperature.

[8] See http://support.wd.com/warranty for regional specific warranty details.

Ultrastar DC HA340 HDD Models

Reliability

Error rate (non-recoverable, bits read)	1 in 10[15]
Load/Unload cycles (at 40°C)	600,000
Availability (hrs/day x days/wk)	24x7
MTBF (hours, projected)	2,000,000
Annualized Failure Rate[5] (AFR, projected)	0.44%
Limited Warranty	5 Years

Power Management

Requirement		+5 VDC, +12VDC
Operating (W, typical)[7]	10-12TB	9.2
	6-8TB	8.0
	4TB	7.0
Idle[6] (W)	10-12TB	8.4
	6-8TB	6.7
	4TB	5.8
Power consumption efficiency at idle (W/TB)	12TB	0.7
	8-10TB	0.84
	6TB	1.12
	4TB	1.45

Physical Dimensions

Height (max)		1.028 in. (26.1 mm) max
Length (max)		5.787 in. (147.0 mm) max
Width (max, ± .01 in.)		4.0 in. (101.6 mm)
Weight (max, ± 10%)	10-12TB	1.65 lb. (750 g)
	4-8TB	1.58 lb. (715 g)

Acoustics

Idle/Operating (Bels, typical)	10-12TB	3.4 / 3.9
	4-8TB	2.9 / 3.6

How to Read the Ultrastar Model Number

WUS721212BLE6y4

W = Western Digital
U = Ultrastar
S = Standard (vs. H for Helium)
72 = 7200 RPM
12 = Full capacity (12TB)
12 = Capacity this model (12TB)
B = Generation code
L = 26.1 z-height (mm)

xx = Interface
  E6 = 512e SATA 6 Gb/s
y = Power Disable Pin 3 status
  0 = Power Disable Pin 3 support
  L = Legacy Pin 3 config - no Power Disable support
z = Data Security Mode
  4 = Base (SE)*: No Encryption. Sanitize Overwrite only.