Ultrastar® C10K1200

Highlights

- Highest capacity 10,000 RPM drive
- Field-proven, reliable design
- Seamless extension to the C10K900 family
- High-performance 6Gb/s SAS for reliable data throughput
- Large 64MB cache buffer manages data efficiently
- Halogen-reduced design and industry-best power utilization for most eco-friendly 10K SFF hard drive

Applications/Environments

- Space and/or power constrained environments
- Enterprise-class servers and networked storage arrays
- Blade and 1U/2U rack-mounted servers
- Databases and Online Transaction Processing (OLTP)
- High performance computing and other 24x7 applications
- Cloud computing

Leadership Performance

The high-performance SAS 6Gb/s interface delivers data reliability, availability and scalability and is the only small form factor SAS drive in the industry to pack a 64MB cache buffer for optimized read/write response time.

Best-in-Class Power Management

Power management innovations designed into the Ultrastar™ C10K1200 enable industry- leading power efficiency and translate into reduced power requirements and lower cooling costs. HGST Advanced Power Management technology, with multi-state idle modes, maintains compatibility with the INCITS T10 Technical Committee standards direction and can be pre-programmed or manually initiated in the system. Ultrastar C10K1200 continues the HGST tradition of environmental leadership with its halogen-reduced components and focus on low power consumption.

Driving the Small Form Factor Transition

Ultrastar C10K1200 delivers a capacity advantage over 3.5-inch 15K drives, providing a massive 1.2 terabytes (TB) of storage space and enabling lower total cost of ownership for many Enterprise environments, especially networked storage arrays. When faced with space and power limitations, the Ultrastar C10K1200 is an efficient solution for online transaction processing, intensive data analysis and multi-user applications. The C10K1200 also offer Bulk Data Encryption for hard-drive-level data security. These self-encrypting models are designed to the Trusted Computing Group's Enterprise A Security Subsystem

Class encryption specification and allow customers to reduce costs associated with drive retirement and extend drive life by enabling swift and secure repurposing of drives.

HGST Quality and Service

The Ultrastar C10K1200 extends the long-standing HGST tradition of performance and reliability leadership. A balanced combination of new and proven technologies helps ensure high reliability and availability of customer data.

HGST drives are backed by an array of technical support and services, which may include customer and integration assistance. HGST is dedicated to providing a breadth of hard disk drive solutions to satisfy all of today's demanding computing needs.



1.2TB | 10K RPM
2.5-inch SFF | SAS 6Gb/s

Features & Benefits

	Feature / Function	Benefits
Return on Investment	• Advanced power management • 1.2TB	• Cool enterprise SAS with lower power requirements • More capacity in less space for configuration flexibility
Performance	• Dual Stage Actuator • SAS 6Gb/s dual port • 64MB cache buffer • 10,020 RPM • Rotational Vibration Safeguard (RVS) • Workload detector technology	• Enhances seek performance • Fastest interface for enhanced reliability • Manages data efficiency • Low latency for faster access to data • Maintains drive performance in high rotational vibration environments and multi-drive systems • Maximizes performance in RAID environments
Reliability	• IDRC technology • RRO fields • End-to-end data protection (ANSI) without capacity loss • Patented head load/unload ramp	• Improves signal processing for more robust data integrity • Improves handling of repeatable run out to lower risk of data squeeze and write inhibit rate • Enhances error detection for optimal data integrity • Minimizes handling damage during integration

Ultrastar® C10K1200

Specifications

Models	HUC101212CSS600 HUC101212CSS601
Configuration	
Interface	SAS 6Gb/s
Capacity (GB)[1]	1200 (1.2TB)
Recording zones	40
Data heads (physical)	8
Data disks	4
Max. areal density (Gbits/sq. in.)	448
Performance	
Data buffer (MB)[2]	64
Rotational speed (RPM)	10K
Latency average (ms)	<3.0
Media transfer rate (Mbits/s, max)	2232
Interface transfer rate (MB/s, max)[5]	600
Sustained transfer rate (MB/s, typical)[5]	198 - 112
Seek time (read/write, ms, typical)[3]	4.6/5.0
Reliability	
Error rate (non-recoverable, bits read)	1 in 10^{16}
MTBF[4] (M hours)	2.0
Annualized Failure Rate[4] (AFR)	0.44%
Availability (hrs/day x days/wk)	24x7
Acoustics	
Idle (Bels)	3.1

Power	
Requirement	+5 VDC (+/-5%), +12 VDC (+/-5%)
Operating, (W, typical)	6.7
Low power idle (W)	3.7
Power consump. efficiency index (W/GB)	0.0038
Physical size	
z-height (mm)	14.8
Dimensions (width x depth, mm)	70.1 x 100.6
Weight (g, max)	218
Environmental (operating)	
Ambient temperature	5° to 55° C
Shock (half-sine wave, 2ms, G)	60
Vibration, random (G RMS, 5 to 500 Hz)	0.4, all axes
Environmental (non-operating)	
Ambient temperature	-40° to 70° C
Shock (half-sine wave, 2ms, G)	>300
Vibration, random (G RMS, 5 to 500 Hz)	1.2, all axes

[1] One MB is equal to on million bytes, one GB is equal to one billion bytes and one TB equals 1,000GB (one trillion bytes) when referring to hard drive capacity. Accessible capacity will vary from the stated capacity due to formatting and partitioning of the hard drive, the computer's operating system, and other factors.

[2] Portion of buffer capacity used for drive firmware

[3] Excludes command overhead

[4] MTBF and AFR targets are based on a sample population and are estimated by statistical measurements and acceleration algorithms under median operating conditions. MTBF and AFR ratings do not predict an individual drive's reliability and do not constitute a warranty.

[5] MB is equal to Million Bytes

How to read the Ultrastar model number

HUC101212CSS600 = 1.2TB, SAS 6Gb/s
H = HGST
U = Ultrastar
C = Compact (vs S for Standard)
10 = 10,000 RPM
12 = Full capacity — 1.2TB
12 = Capacity this model, 12 = 1.2TB
C = Generation code
S = 14.8mm z-height
S6 = Interface, SAS 6Gb/s
0 = Reserved
0 = Reserved (1 = TCG encryption)

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Product specifications provided are sample specifications and do not constitute a warranty. Information is true as of the date of publication and is subject to change. Actual specifications for unique part numbers may vary.

Please visit the Support section of our website, www.hgst.com/support, for additional information on product specifications. Photographs may show design models.

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