Hitachi Ultrastar®10K300

HARD DISK DRIVES
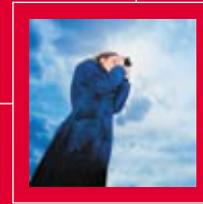
300GB, 147GB, and 73GB | **10,000 RPM** | **Ultra320 SCSI and 2Gb/s Fibre Channel**

The world's first 300GB enterprise hard disk drive — massive capacity for mission-critical applications

Highlights

> Proven drive design for superior quality and reliability

> 10,000 RPM rotational speed for outstanding performance

> Full range of capacities from an industry-leading 300GB to 73GB offers enterprise customers configuration flexibility and ease of integration

> Ultra320 SCSI and 2Gb/s Fibre Channel supports high data throughput

Lowest Total Cost of Ownership

The Ultrastar 10K300 offers the lowest total cost of ownership enterprise solution in the industry. At double the capacity of previous generations, the new Ultrastar drive enables mission-critical configurations utilizing fewer systems for equivalent capacity and performance, requiring less power to run those systems, and fewer people to manage them. A mature drive design means higher quality and less downtime for repairs.

Features and Benefits

	Feature / Function	Benefits
Reliability	Mature drive design	Lower total cost of ownership
	SCSI protocol	User controllable error recovery
	SMART technology	Early warning error detection
Performance	10,000 RPM	Reduced latency for faster access to data
	Rotational Positioning Optimization	Increased data throughput
	Rotational Vibration Safeguard	Improved system robustness in multi-drive systems
	Highly optimized Voice Coil Motor	Faster access to data
Capacity	300GB / 147GB / 73GB	Configuration flexibility and ease of integration
Interfaces	Ultra320 SCSI (68 and 80 pin), FC 2Gb/s	Configuration flexibility for a broad range of system environments

Applications

> Online transaction processing

> RAID

> Storage Area Network (SAN)

> Network Attached Storage (NAS)

> Scientific engineering and data analysis

> Imaging systems

> Media streaming

> Data warehousing

Hitachi quality and service

Hitachi's Ultrastar 10K300 extends the company's long-standing tradition of performance and capacity leadership. 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 compared to previous generations.

Hitachi drives are backed by an array of technical support and services, which may include customer and integration assistance.

Hitachi is dedicated to providing a breadth of hard disk drive solutions to satisfy all of today's demanding computing needs.

Hitachi Ultrastar® 10K300

⊚ Hitachi G lobal S torage T echnologies

Product	Ultrastar 10K300	Ultrastar 10K300
Model names	HUS103030FL3600*, HUS103030FL3800**	HUS103030FLF210
	HUS103014FL3600*, HUS103014FL3800**	HUS103014FLF210
	HUS103073FL3600*, HUS103073FL3800**	HUS103073FLF210

* 68-pin, ** 80-pin

Specifications

Configuration

Interface	Ultra320 SCSI	2Gb/s FC
Capacity (GB)[1]	300 / 147 / 73.4	←
Sector size (Bytes)	512, 514, 516, 520, 522, 524	512, 516, 520, 524
Recording zones	18	←
Data heads (physical)	10 / 5 / 3	←
Data disks	5 / 3 / 2	←
Max. areal density (Gbits/sq. inch)	61	←

Performance

Data buffer (MB)[2]	8	16
Rotational speed (RPM)	10,025	←
Latency average (ms)	2.99	←
Media transfer rate (Mbits/sec, max)	1075	←
Interface transfer rate (MB/sec, max)	320	200
Sustained data rate (MB/sec)	46.8 - 89.3	←
Seek time (read, typical)[3]		
Average (ms)	4.7 / 4.5 / 4.3	←
Track to track (ms)	0.4	←
Full track (ms)	10	←

Reliability

Error rate (non-recoverable)	10 in 10E16	←

Acoustic

Idle - Typical (Bels)	3.4	←

Power

Requirement	+5 VDC (+/-5%) +12 VDC (+/-5%)	←
Dissipation		
Startup current (A, max.)	0.70 (5V), 2.45 (12V)	1.10 (5V), 2.45 (12V)
Idle (W)	11.2 / 8.5 / 8.0	13.4 / 10.8 / 10.3
Power consump. efficiency index (W/GB)	0.038 / 0.062 / 0.110	0.045 / 0.073 / 0.141

Physical Size

Height (mm, max)	26.1	←
Width (mm)	101.6 (+/-0.25)	←
Depth (mm, max)	147	←
Weight - Typical (kg, max)	0.75	←

Environmental characteristics

Operating		
Ambient temperature	5° to 55° C	←
Relative humidity (non-condensing)	5% to 90%	←
Max. wet bulb (non-condensing)	29° C	←
Shock (half sine wave)	15 G (11 ms)	←
Vibration (random (RMS))	1.0 G, all axis	←
Non-operating		
Ambient temperature	–40° to 70° C	←
Relative humidity (non-condensing)	5% to 90%	←
Max. wet bulb (non-condensing)	29° C	←
Shock (half sine wave)	250 G (2 ms) / 75 G (11 ms)	←
Vibration (random (RMS))	5.0 G, all axis	←

[1] GB equals one billion bytes when referring to hard drive capacity; accessible capacity may be less.
[2] Buffer capacity includes 1.36 MB used for drive firmware.
[3] Excludes command overhead.

For more information:

Internet:
> www.hitachigst.com (Main Web site)

> www.hitachigst.com/vpp (Reseller Web site)

Technical Support E-mail:
> support_usa@hitachigst.com (N. America)

> support_ap@hitachigst.com (Asia Pacific)

> support_uk@hitachigst.com (EMEA and UK)

Technical Support Phone Numbers:
> 1 888 426-5214 (N. America)

> 65 6840 9595 (Asia Pacific)

> 44 20 7133 0032 (EMEA and UK)

> 49 6929 993601 (Germany)

How to Read the Ultrastar Model Number

HUS103030FL3800 = 300GB/8MB
H = Hitachi
U = Ultrastar
S = Standard (vs C for Compact, for example)
10 = 10,000 RPM
30 = Full capacity - 300GB
30 = Capacity this model 30 = 300GB,
     (14=147GB, 73=73GB)
F = Generation code
L = 1-inch form factor
38 = Interface - 38 = Ultra 320 80-pin,
     (36 = Ultra 320 68-pin, F2= Fibre Channel 2GB)
0 = Cache Size (0 = 8MB SCSI, 1 = 16MB FCAL)
0 = Reserved