Ultra mobile PATA & CEATA
Spinpoint A1

Capacity		20GB	30GB	40GB
Interface	Sector Size			
(PATA/ZIF)	1024 bytes	HU020HA	HU030HA	HU040HA
	512 bytes	HU025HA	HU035HA	HU045HA
(CE-ATA)	1024 bytes		HU030HP	HU040HP
	512 bytes		HU035HP	HU045HP

FEATURES

- Max. 40 GB Formatted Capacity Per Disk
- High Speed Digital Signal Processor Based Architecture
- Low Power HDC
- Advanced Power Management Control
- Fluid Dynamic Bearing Spindle Motor Technology
- ATA S.M.A.R.T. Compliant
- ATA 28-bit Address Feature Set
- Multi-Burst On-The-Fly Error Correction
- SilentSeek™
- Free Fall Sensor (Optional)

DRIVE CONFIGURATION

Interface	PATA(ZIF)/CEATA
Capacity	20/30/40
Rotational Speed	3,600 rpm
Sector Size (Bytes)	512/1024

PERFORMANCE SPECIFICATIONS

Data Buffer	2MB
Average Read Seek time (typical)	25.0ms
Average Latency	8.3ms
Media Transfer Rate (max.)	278 Mb/s
Interface Transfer Rate (max.)	
PATA	100 MB/s
CEATA	52 MB/s
Drive Ready Time (typical)	2.0 sec

RELIABILITY SPECIFICATIONS

Non-recoverable Read Error	1 sector in 10^{13} bits
Controlled Ramp Load/Unload	600,000

ACOUSTICS(Average Sound Power)

Idle	1.6 Bel
Performance Seek	2.1 Bel

POWER REQUIREMENTS

Voltage	+3.3V ±5%
Spin-up Current (Max.)	350 mA
Seek (typical)	0.60 W
Read/Write (typical)	0.75 W
Idle (typical)	0.20 W
Standby (typical)	0.07 W
Sleep (typical)	0.05 W

ENVIRONMENTAL SPECIFICATIONS

Temperature	
Operating	0 ~ 60 ℃
Non-operating	-20 ~ 85 ℃
Humidity (non-condensing)	
Operating	8 ~ 90 %
Non-operating	8 ~ 90 %
Linear Shock (1/2 sine pulse)	
Operating	650 G
Non-operating	1600 G
Vibration	
Operating	0.67 Grms
Altitude (relative to sea level)	
Operating	-1,000 to 10,000 ft
Non-operating	-1,300 to 50,000 ft

PHYSICAL DIMENSION

Height	5.0 mm
Width	42.8 mm
Length	36.4 mm
Weight (max.)	20 g

* Note : Design and specifications are subject to change without prior notice.

1. 1MB = 1,000,000 Bytes, 1GB = 1,000,000,000 Bytes
   Accessible capacity may vary as some OS uses binary numbering system for reported capacity
2. A small portion of the 2MB buffer memory is reserved for firmware use