Mobile SATA
Momentus®

SPINPOINT

Capacity		250GB	320GB	500GB	640GB	750GB	1TB	
Model	8 MB	ST250LM004	ST320LM001	ST500LM012	ST640LM001	ST750LM022	ST1000LM024	Seagate Models
Model	8 MB	HN-M250MBB	HN-M320MBB	HN-M500MBB	HN-M640MBB	HN-M750MBB	HN-M101MBB	Samsung Models

FEATURES

- Max. 500GB formatted capacity per disk
- SATA Native Command Queuing Feature
- TuMR/PMR head with FOD   technology
- Serial ATA 3.0Gbps Interface Support
- Load/Unload Head Technology

- ATA Security Mode Feature Set
- ATA S.M.A.R.T. Feature Set
- SilentSeek™
- NoiseGuard™

DRIVE CONFIGURATION

Capacity[1]	250~750GB, 1TB
Interface	SATA 3.0 Gbps (1.5Gbps)
Buffer DRAM Size[2]	8 MB
Rotational Speed	5,400 RPM class

PERFORMANCE SPECIFICATIONS

Average Seek time (typical)	12 ms
Average Latency	5.6 ms
Data Transfer Rate	
Media to/from Buffer (Max.)	145 MB/s
Buffer to/from Host (Max.)	300 MB/s
Drive Ready Time (typical)[3]	4 sec

RELIABILITY SPECIFICATIONS

Non-recoverable Read Error	1 sector in 10^{14} bits
Controlled Ramp Load/Unload	600,000

ACOUSTICS

Idle	2.4 Bel
Performance Seek	2.6 Bel

POWER REQUIREMENTS

Voltage	+5V±5%
Spin-up Current (Max.)	1000 mA
Seek (AVG)[4]	2 W
Read/Write (AVG)	2.2 W
Low Power Idle (AVG)	0.7 W
Standby (AVG)	0.2 W
Sleep (AVG)	0.2 W

ENVIRONMENTAL SPECIFICATIONS

Temperature	
Operating	5 ~ 55
Non-operating	-40 ~ 70
Humidity (non-condensing)	
Operating	5-90 %
Non-operating	5-95 %
Linear Shock (1/2 sine pulse)	
Operating, 2ms	325 G
Non-operating, 2ms	750 G
Vibration (swept sine, 1/4 octave per minute)	
Operating	1 .5 Grms
Altitude (relative to sea level)	
Operating	-300 to 3000 m
Non-operating	-400 to 15000 m

PHYSICAL DIMENSION

Height	9.5 ± 0.2 mm
Width	69.75 ± 0.25 mm
Length	100.3 ± 0.4 mm
Weight (max.)	107 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 8MB buffer memory is reserved for firmware use

3 Power-On to Drive Ready

4 30% duty cycle, random seek

SAMSUNG