P80 Series

SpinPoint™

CAPACITY[†1]	80GB	120GB	160GB
MODEL ATA, 2MB	SP0842N	SP1243N	SP1644N
ATA, 8MB		SP1253N	SP1654N

FEATURES

- 80GB Formatted Capacity Per Disk
- Ultra ATA-133
- Fluid Dynamic Bearing Spindle Motor Technology
- High Speed Dual Digital Signal Processor (DSP) Based Architecture
- ATA S.M.A.R.T. Compliant
- ATA Security Mode Feature Set
- ATA Host Protected Area Feature Set
- ATA Automatic Acoustic Management Feature Set
- ATA 48-bit Address Feature Set
- ATA Device Configuration Overlay Feature Set
- Multi-Burst On-The-Fly Error Correction
- SilentSeek™

DRIVE CONFIGURATION

Interface	ATA-6
Buffer DRAM Size[†2]	2 / 8 MB
Bytes per Sector	512

PERFORMANCE SPECIFICATIONS

Read Seek Time (typ.)	
Track to Track	0.8 ms
Average	8.9 ms
Full Stroke	18 ms
Average Latency	4.17 ms
Rotational Speed	7,200 rpm
Maximum Data Transfer Rate	
Media to/from Buffer (max.)	880 Mbits/sec
Buffer to/from Host	133 MB/sec
Drive Ready Time (typ.)	6 sec

RELIABILITY SPECIFICATIONS

Non-recoverable Read Error	1 sector in 10^{14} bits
MTBF	600,000 POH
Start/Stop Cycles (Ambient)	50,000
Component Design Life	5 years

ACOUSTICS (AVERAGE SOUND POWER)

Idle	2.7 Bel
Random Read/Write	2.8 Bel

ENVIRONMENTAL SPECIFICATIONS

Temperature	
Operating	0 ~ 60 °C
Non-operating	-40 ~ 70 °C
Thermal Gradient (max.)	20°C/hr
Humidity (non-condensing)	
Operating	5 ~ 90 %
Non-operating	5 ~ 95 %
Linear Shock (1/2 sine pulse)	
Operating, 2ms	63 G
Non-operating, 2ms	350 G
Vibration (swept sine, 1 octave per minute)	
Operating	
5 ~ 21 Hz	0.034” (double amplitude)
21 ~ 300 Hz	1.5 Gp-p
Non-operating	
5 ~ 21 Hz	0.195” (double amplitude)
21 ~ 500 Hz	8 Gp-p
Altitude (relative to sea level)	
Operating	-1,000 to 10,000 feet
Non-operating	-1,000 to 40,000 feet

POWER REQUIREMENTS

Voltage	+5V±5%, +12V±10%
Spin Up Current (max.)	650 / 1900 mA
Seek (typ.)	8.5 W
Read/Write On-Track (typ.)	7.5 W
Idle (typ.)	6.5 W
Standby (typ.)	0.6 W
Sleep (typ.)	0.6 W

PHYSICAL DIMENSION

Height	1 in
Width	4 in
Depth	5.75 in
Weight	1.21 lb

Specifications are subject to change without notice.

[†1] 1MB=1,000,000 Bytes 1GB=1,000,000,000 Bytes
[†2] 128 KB is used for firmware
[†3] 30% duty cycle, random seek

SAMSUNG