

P80SD Series



CAPACITY ^{†1}	40GB	80GB	120GB	160GB
MODEL	HD040GJ	HD080HJ	HD120IJ	HD160JJ

FEATURES

- 80GB Formatted Capacity Per Disk
- Native Serial ATA II (3.0Gbps) with Native Command Queuing (NCQ)
- Fluid Dynamic Bearing Spindle Motor Technology
- High Speed Dual Digital Signal Processor (DSP) Based Architecture
- ATA SMART 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 Streaming Feature Set(Optional)
- Staggerd Spin Up support
- ATA Device Configuration Overlay Feature Set
- Permuted RLL/ECC On-The-Fly Error Correction
- RoHS-compliant
- NoiseGuard™
- SilentSeek™
- Hot-Plug & Hot-Swap capable

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, 0.25 octave per minute)		
Operating		
5 ~ 21 Hz	0.034"	(double amplitude)
21 ~ 300 Hz		1.5 Go-p
Non-operating		
5 ~ 21 Hz	0.195"	(double amplitude)
21 ~ 500 Hz		8 Go-p
Altitude (relative to sea level)		
Operating		-1,000 to 10,000 feet
Non-operating		-1,000 to 40,000 feet

DRIVE CONFIGURATION

Interface	Serial ATA II 3.0Gbps
Buffer DRAM Size	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 ^{†2}	7,200 RPM
Maximum Data Transfer Rate	
Media to/from Buffer	880 MB/sec
Buffer to/from Host	300 MB/sec
Drive Ready Time (typ.)	7 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 ^{†3}	3.1 Bel

POWER REQUIREMENTS

Voltage	+5V±5%, +12V±10%
Spin Up Current (max.)	650 / 1900 mA
Seek ^{†4} (typ.)	9.0 W
Read/Write On-Track (typ.)	8.0 W
Normal (typ.)	7.8 W
Idle (typ.) ^{†5}	6.8 W
Standby ^{†6} (typ.)	0.7/1.5 W
Sleep ^{†6} (typ.)	0.7/1.5 W

PHYSICAL DIMENSION

Height	1 in
Width	4 in
Depth	5.75 in
Weight	1.43 lb

Specifications are subject to change without notice.

^{†1} 1MB=1,000,000 Bytes 1GB=1,000,000,000 Bytes.

^{†2} 7,200 RPM class. Actual speed can be different a little.

^{†3} Averaged value under fast mode.

^{†4} Random seek with 30% duty cycle.

^{†5} Idle with slumber mode.

^{†6} Power consumption with/without slumber mode.

