

# S166 Series



CAPACITY <sup>†1</sup>	40GB	80GB	120GB	160GB
<b>MODEL</b>	8M	HD042GJ	HD082GJ	HD120HJ
	2M	HD041GJ	HD081GJ	HD161HJ

## FEATURES

- Max. 160GB Formatted Capacity Per Disk
- Serial ATA 3.0Gbps Interface Support
- SATA Native Command Queuing Feature set
- On-the-fly(OTF) error correction
- Supports all logical geometries as programmed by the host
- Fluid Bearing Spindle Motor Technology
- Noise predictive PRML read channel
- Dynamic anti-stiction algorithm
- ATA S.M.A.R.T. Compliant
- ATA Automatic Acoustic Management Feature Set
- ATA 48-bit Address Feature Set
- ATA Streaming Feature Set(Optional)
- ATA Device Configuration Overlay Feature Set
- NoiseGuard™
- SilentSeek™

## DRIVE CONFIGURATION

Interface	Serial ATA 3.0Gbps
Buffer DRAM Size <sup>†7</sup>	2 / 8 MB
Rotational Speed <sup>†2</sup>	7,200 RPM
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
Data Transfer Rate	
Media to/from Buffer (max.)	967 Mbits/sec
Buffer to/from Host (max.)	300 MB/sec
Drive Ready Time (typ.)	8 sec

## RELIABILITY SPECIFICATIONS

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

## ACOUSTICS (AVERAGE SOUND POWER)<sup>†3</sup>

Idle	2.45 Bel
Performance Seek	2.80 Bel
Quiet Seek	2.75 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, 2.0 ms	350 G
Altitude (relative to sea level)	
Operating	-300 to 3,000 m
Non-operating	-300 to 12,000 m

## POWER REQUIREMENTS

Voltage	+5V±5%,	+12V±10%
Spin Up Current (12V)		2.0 A
Seek <sup>†4</sup>		9.5 W
Read/Write		8.0 W
Idle		6.5 W
Standby <sup>†5</sup>		0.7/1.5 W
Sleep <sup>†5</sup>		0.7/1.5 W

## PHYSICAL DIMENSION

Height		25.4 mm
Width		101.6 mm
Length		146.0 mm
Weight	40/80GB	449.0 g
	120/160GB	462.6 g

*Specifications are subject to change without notice.*

<sup>†1</sup> 1MB=1,000,000 Bytes 1GB=1,000,000,000 Bytes.

Accessible capacity may vary depending on operating environment and formatting

<sup>†2</sup> 7,200 RPM class. Actual speed can be different a little.

<sup>†3</sup> Averaged value with a high performance cover.

<sup>†4</sup> Random seek with 30% duty cycle.

<sup>†5</sup> Power consumption with/without slumber mode.

<sup>†7</sup> A small portion of the 8MB buffer memory is reserved for firmware use

