

F1EG Desktop Class



CAPACITY ^{†1}	250GB	320GB	500GB	640GB	750GB	1TB
MODEL 16MB 32MB	HD252HI	HD322HI	HD502JI	HD642JI	HD753LI	HD103UI

FEATURES

- Max. 334GB Formatted Capacity per Disk
- Serial ATA 3.0Gbps Interface Support
- Improved recording stability over temperature with PMR
- Advanced dynamic FOD control for best data integrity
- Intelligent compensation of external disturbance
- SATA Native Command Queuing Feature
- Device Initiated SATA Power Management
- Staggered Spin-up Support
- Environment friendly product with RoHS compliance
- Improved performance with dual-ARM based firmware
- ATA S.M.A.R.T. Compliant
- ATA Automatic Acoustic Management Feature
- ATA 48-bit Address Feature
- ATA Device Configuration Overlay Feature
- NoiseGuard™
- SilentSeek™

DRIVE CONFIGURATION

Interface	Serial ATA 3.0Gbps
Rotational Speed ^{†2}	5,400 RPM
Buffer DRAM Size	16 / 32 MB
Sector Size	512 bytes

PERFORMANCE SPECIFICATIONS

Read Seek Time (typical)	
Average	8.9 ms
Average Latency	5.52 ms
Data Transfer Rate	
Media to/from Buffer (max.)	140 MB/sec
Buffer to/from Host (max.)	300 MB/sec
Drive Ready Time (typical)	250-320GB 8 sec 500-1000GB 12 sec

RELIABILITY SPECIFICATIONS

Non-recoverable Read Error	1 sector in 10 ¹⁵ bits
Start/Stop Cycles (Ambient)	50,000

ACOUSTICS (TYPICAL SOUND POWER)^{†3}

Active Idle	250-320GB 2.45 Bel 500-1000GB 2.70 Bel
Performance Seek	250-320GB 2.80 Bel 500-1000GB 2.90 Bel

ENVIRONMENTAL SPECIFICATIONS

Temperature	
Operating	0 ~ 60 °C
Non-operating	-40 ~ 70 °C
Thermal Gradient (operating)	20°C/hr
Humidity (non-condensing)	
Operating	5 ~ 90 %
Non-operating	5 ~ 95 %
Linear Shock (1/2 sine pulse)	
Operating, 2ms	70 G
Non-operating, 2ms	250-320GB 350 G 500-1000GB 300 G
Altitude (relative to sea level)	
Operating	-300 to 3,000 m
Non-operating	-300 to 12,000 m

POWER REQUIREMENTS (AVERAGE)

Voltage	+5V±5%, +12V±10%		
	250/320GB	500/640GB	750/1000GB
Spin Up Current (12V)	2.0 A	2.0 A	2.0 A
Seek ^{†4}	4.6 W	5.0 W	5.6 W
Read/Write	4.9 W	5.4 W	6.2 W
Idle(typical)	3.7 W	4.2 W	5.0 W
Standby ^{†5}	0.5/0.8 W	0.5/0.8 W	0.5/0.8 W
Sleep ^{†5}	0.5/0.8 W	0.5/0.8 W	0.5/0.8 W

PHYSICAL DIMENSION

Height(max.)	26.1 mm
Width	101.5 mm
Length(max.)	147.0 mm
Weight(avg.)	250/320GB 470 g 500/640GB 610 g 750/1000GB 640 g

Specifications are subject to change without notice.

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

Accessible capacity may vary depending on operating environment and formatting

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

^{†3} Averaged value with a high performance cover.

^{†4} Random seek with 30% duty cycle.(typical value)

^{†5} Power consumption values are with/without slumber mode.

