## 15,000 RPM

# 2.5-Inch SAS Enterprise Hard Disk Drives



Industry's Highest Capacity Enterprise

Small Form Factor 15K HDD



MK1401GRRB MK1401GRRR MK3001GRRB MK3001GRRR

Toshiba's 2.5-inch high performance enterprise-class MK01GRRB/R series supports the exacting requirements of compute-intensive environments. With a 15,000 RPM spin speed, 6 Gb/sec SAS interface, and top capacity of 300GB\* the Toshiba MK01GRRB/R drives leverage an enhanced power condition state that reduces drive spin in idle states, significantly lowering power consumption. Lower power consumption also means lower heat dissipation, which increases system stability, and less energy use. This saves enterprises money and reducing the impact on the environment.

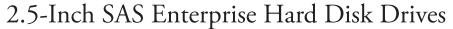
As part of its commitment to improved security, select models of the Toshiba MK01GRRB/R series features self-encryption technology (AES-256) designed to the Trusted Computing Group (TCG) "Enterprise SSC" specification. SED technology provides simple and complete data security throughout the drive's usable life cycle – with no performance impact – and enables organizations to crypto-graphically erase protected data securely, enabling the ability to return, service, repurpose, or retire drives without lengthy data overwrite operations or physical destruction of the drive.

- Up to 300GB\* of storage capacity for high performance, mission critical servers and storage system applications
- 6 Gb/sec SAS interface
- Low power consumption
- 5-Year Warranty

# Hard



## 15,000 RPM





Series Overview	MK1401GRRB	MK1401GRRR	MK3001GRRB	MK3001GRRR	
Drive Capacity	147GB¹ 300GB¹ 6 Gb/sec SAS  Yes 6 Gb/sec				
Drive Interface					
RoHS Compliant					
Transfer Rate to Host					
Self Encryption Technology	No	AES-256	No	AES-256	
Performance					
Track-to-track Seek		0.35ms typ. (Read), 0.2ms typ. (Write)			
Average Seek Time		3.0ms typ. (Read), 2.7ms typ. (Write)			
Rotational Speed	15,000 RPM				
Average Latency	2.00ms 32MB				
Buffer Size					
Power Requirements					
Voltage	5V (+/- 5%), 12V (+/- 5%)				
Spin up (start) Power	2V +/- 5%: 1.2A (peak), 1.5A (peak < 100us), 5V +/- 5%: 1.0A (peak)				
Read/Write Power	8.7 watts				
Active Idle Power	4.3 v	vatts	4.5 \	watts	
Physical Size					
Dimensions (W) x (D) x (H)	69.85 mm (2.75 in) x 100.45 mm (3.95 in) x 15 mm (0.59 in)				
Weight	220 g				
Environmental					
Temp - Operating		5° to 55°C (41° to 158°F)			
Temp - Non-Operating	-40° to 70°C (-40° to 158°F)				
Relative Humidity - Operating	5% to 95% RH				
Relative Humidity - Non-Operating	5% to 95% RH				
Vibration - Operating	0.6mm (5 to 20Hz) / 9.8m/s <sup>2</sup> (1.0G) (20Hz to 300Hz)				
Vibration - Non-Operating	3.1mm (5 to 20Hz) / 49m/s² (5.0G) (20Hz to 300Hz)				
Shock - Operating	980m/s² (100G) max (1ms)				
Shock - Non-Operating	3,920m/s² (400G) max (1ms)				
Altitude - Operating	3,048 m 12,192 m				
Altitude - Non-Operating		12,18	32 m		
Acoustics					
Acoustics (ready)	3.3 bels				
Reliability					
Mean Time Between Failure (MTBF)	1,600,000 hours				
Component Life	5 years				
Error Rate (seek)	1 x 10e <sup>7</sup>				
Error Rate (unrecoverable)	1 x 10e <sup>16</sup>				
Limited Warranty		5 years (from da	ate of purchase)		

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