

10,025 RPM

2.5-Inch SAS Enterprise Hard Disk Drives

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*The latest 2.5-inch enterprise drive
with 6 Gb/sec SAS interface for
maximum performance*



MBD2147RC
MBD2300RC

Utilizing the vast experience and innovative technology developed over 40 years, Toshiba introduces a new enterprise class 2.5-inch SAS drive offering industry leading performance and environmental benefits.

The MBD2-RC Series is the first enterprise hard disk drive from Toshiba to be halogen free⁴. The 10,025 RPM 6 Gb/sec SAS interface enterprise drive doubles its capacity from previous generation models through the adoption of perpendicular magnetic recording.

The higher capacity and performance meets a wide range of enterprise applications, from midrange volume servers to disk storage arrays. In addition, the best-in-class low power values are ideal for servers and storage systems used in data centers, which require minimal energy usage and mounting space. The 6 Gb/sec SAS interface and improved areal densities enable higher data rates.

As part of Toshiba's environment initiatives, the new series provides the best-in-class power efficiency at 3.4 watts idle, achieving up to 28% reduction from previous generation models, and up to 74% reduction from current 3.5-inch 15,000 RPM offerings.

- Available in 147GB¹ and 300GB¹ preferred capacity points for mainstream server and disk storage array applications
- Improvement in maximum internal transfer rates
- Best-in-class power consumption at 3.4 watts idle
- Part of Toshiba's environmental initiatives
- Environmental benefits offer an ecological solution for enterprise applications requiring performance and power efficiencies

Hard Drive

10,025 RPM

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Series Overview

MBD2147RC²

MBD2300RC²

Drive Capacity	147GB ¹	300GB ¹
Drive Interface	6 Gb/sec SAS	
RoHS Compliant	Yes	
Transfer Rate to Host	6 Gb/sec	

Performance

Track-to-track Seek	0.2ms (Read), 0.4ms (Write)	
Average Seek Time	3.8ms (Read), 4.3ms (Write)	
Rotational Speed	10,025 RPM	
Average Latency	2.99ms	
Buffer Size	16MB ³	

Power Requirements

Voltage	5V (+/-5%), 12V (+/-5%)	
Spin up (start) Power	12V (+/-5%) @ 1.2A (peak), 1.5A (peak < 100us), 5V (+/-5%) @ 1.0A (peak)	
Read/Write Power	8.7 watts	
Active Idle Power	3.2 watts	3.4 watts

Physical Size

Dimensions (W) x (D) x (H)	69.85 mm (2.75") x 100.45 mm (3.95") x 15 mm (0.59")	
Weight	220 g	

Environmental

Temp - Operating	5° to 55°C	
Temp - Non-Operating	-40° to 70°C	
Humidity - Operating	5% to 95% RH	
Humidity - Non-Operating	5% to 95% RH	
Vibration - Operating	(0.6 mm) 5 to 20 Hz / 9.8 m/s ² (1.0G) 20 to 300 Hz	
Vibration - Non-Operating	(3.1 mm) 5 to 20 Hz / 49 m/s ² (5.0G) 20 to 300 Hz	
Shock - Operating	980 m/s ² (100G) 1ms	
Shock - Non-Operating	3,920 m/s ² (400G) 1ms	
Altitude - Operating	3,048 m	
Altitude - Non-Operating	12,192 m	

Acoustics

Acoustics (idle)	2.9 bels or less	
Acoustics (seek)	3.8 bels	

Reliability

Mean Time Between Failure (MTBF)	1,600,000 hours
Component Life	5 years POH
Limited Warranty	5 years (from date of purchase)

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¹One Gigabyte (1 GB) means 10⁹ = 1,000,000,000 bytes using powers of 10. A computer operating system, however, reports storage capacity using powers of 2 for the definition of 1 GB = 2³⁰ = 1,073,741,824 bytes, and therefore shows less storage capacity. Available storage capacity will also be less if the computer includes one or more pre-installed operating systems, pre-installed software applications, or media content. Actual formatted capacity may vary.

²This drive was developed and originally sold by Fujitsu and still bears the Fujitsu name. As of October 1, 2009 any orders for this product will be sold by Toshiba America Information Systems, Inc. and will use the original Fujitsu Part Number.

³A small portion of buffer memory is used for drive firmware control.

⁴Halogen free as defined by levels of chlorine (CL) and bromine (Br) or a compound in which they are combined reduced to be less than the standards of IEC61249-2-21:2003, as stated below: Chlorine: less than 900ppm, Bromine: less than 900ppm, Chlorine + bromine: less than 1500ppm

Subject to Change: While Toshiba has made every effort at the time of publication to ensure the accuracy of the information provided herein, product specifications, configurations, prices, system/component/options availability are all subject to change without notice.
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