

4,200 RPM

2.5-Inch Automotive-Grade Hard Disk Drive

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*Designed Specifically for the In-cabin
Automotive Systems Environment*



MK4050GAC
MK8050GAC

Toshiba, the leader in automotive-grade hard disk drives, introduces the MKxx50GAC 2.5-inch hard disk drive. Featuring storage capacities of 40 and 80GB¹, the MKxx50GAC is designed specifically for the in-cabin automotive systems environment, and delivers the enhanced operating temperature range and operating altitude range required to meet the operating extremes of the on-road and off-road environment.

Toshiba pioneered the development of automotive grade hard disk drives to deliver the robust, cost-effective, high-capacity storage required for the complex GPS navigation systems used in the Far East and Europe. Building on this success, Toshiba works closely with Tier-1 automotive systems designers to meet the storage challenges presented by the evolving in-dash “infotainment” and telematics marketplace. In addition, Toshiba’s automotive-grade hard disk drives provide robust storage for in-car computing and for on-the-go digital communications.

- Up to 80GB¹ Storage Capacity
- Extended Temperature Operating Range
- Enhanced Altitude Operating Range
- Robust Operating Vibration Range
- 16ms Average Seek Time
- Industry-standard 2.5-inch form-factor (9.5mm z-height)
- 4,200 RPM Rotational Speed
- ATA-7 Interface

Hard Drive

4,200 RPM

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Series Overview

	MK4050GAC	MK8050GAC
Drive Capacity	40GB ¹	80GB ¹
Drive Interface	Parallel ATA, ATA-7	
Number of Platters (disks)	1	
Number of Data Heads	2	
RoHS Compliant	Yes	
Transfer Rate to Host	100MB/sec	

Performance

Track-to-track Seek	3ms
Average Seek Time	16ms
Rotational Speed	4,200 RPM
Average Latency	7.14ms
Buffer Size	8MB

Power Requirements

Voltage	5V (+/-5%)
Spin up (start) Power	5.5 watts (-20° to 85°C) / 6.5 watts (-30° to -20°C)
Seek Power	2.3 watts
Read/Write Power	2.0 watts
Active Idle Power	1.0 watts
Low Power Idle	0.8 watts
Standby Power	0.25 watts
Sleep Power	0.1 watts

Physical Size

Dimensions (W) x (D) x (H)	69.85 mm (2.75 in) x 100.0 mm (3.94 in) x 9.5 mm (0.37 in)
Weight	98 g (3.46 oz)

Environmental

Temp - Operating	-30° to 85°C (-22° to 185°F)
Temp - Non-Operating	-40° to 95°C (-40° to 203°F)
Vibration - Operating	29.4m/s ² , (3G) 5-50Hz / 19.6m/s ² , (2.0G) 50-200Hz
Vibration - Non-Operating	49 m/s ² (5G) 10 to 500Hz
Shock - Operating	2,940m/s ² , (300G) 2.0ms, 1/2sine / 980m/s ² , (100G) 11ms, 1/2sine
Shock - Non-Operating	7,840 m/s ² (800G) 1.0ms, 1/2sine
Altitude - Operating	-300 to 5,500 m
Altitude - Non-Operating	-300 to 12,000 m

Acoustics

Acoustics (idle)	22 dB
Acoustics (seek)	22 dB

Limited Warranty

Limited Warranty	3 years (from date of purchase)
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¹One Gigabyte (1GB) 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 1GB = 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.

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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