

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

2.5-Inch Automotive-Grade Hard Disk Drive

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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 | 1 year (from date of purchase) |
|------------------|--------------------------------|

Visit us at: www.toshibastorage.com

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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