



## MK4004GAH (HDD1524) 40.0GB 1.8-inch HDD

Toshiba introduces a 40GB 1.8-inch embedded HDD, the MK4004GAH. Enabling some of today's most exciting, small form factor mobile devices, the new mini-drives offer manufacturers significant storage for consumer, commercial and PC applications - such as music players, handheld PCs, PDAs, wearable computers and laptops. Toshiba is committed to grow with developers and users to provide smart computing solutions, backed by Toshiba-renowned quality and technology leadership.

40.0 Gigabytes\*  
Lightweight, only 62 grams  
Low Power Consumption  
15ms Average Seek Time  
100MB/s Ultra DMA Transfer Rate  
300,000 MTTF Hours

### Specifications

Data Storage Physical:	
Per drive, formatted*	40.0GB
Number of Disks	2
Number of Data Heads	4
User Data Cylinders	38,160
Logical Configuration:	
Heads	16
Cylinders	16,383
User Sectors/Track at zone 0	63
Logical Blocks (LBA)	78,126,048
Data Transfer Rate:	
Buffer to Host- PIO	16.6MB/sec
Buffer to Host- Ultra DMA	100MB/sec
Maximum Internal	125.5 - 253.1 Mbits/sec
Seek Time:	
Track-to-track	3ms
Average	15ms
Maximum	26ms
Nominal Power Requirements:	
Voltage	3.3V (±5%)
Energy Consumption Efficiency:	0.01W/GB
Power Consumption:	
Start	1.2watts
Seeking	1.4watts
Reading	1.4watts
Writing	1.4watts
Idle	0.6watts
Standby	0.2watts
Sleep	0.08watts
Other:	
Rotational Speed	4,200rpm

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## Products Hard Disk Drives



Average Latency	7.14ms
Interface	ATA (2 - 5)
Buffer	512KB
<b>Physical &amp; Environmental Specs</b>	
<b>Dimensions/Weight:</b>	
Height	0.315" (8.0mm)
Width	2.12" (54mm)
Depth	3.09" (78.5mm)
Weight	2.19 oz (62g)
<b>Ambient Temperature:</b>	
Operating	41° - 140°F (5 to 60°C)
Non-Operating	-4° - 149°F (-20 to 65°C)
Shipping	-40° - 158°F (-40 to 70°C)
<b>Vibration and Shock:</b>	
Operating Vibration	1.0G (5-50 Hz)
Operating Shock	250G/2.0ms
Non-Operating Shock	1,000G/1.0ms
<b>Reliability Characteristics</b>	
<b>Error Rates:</b>	
Non-recoverable	1 in 10 <sup>13</sup> bits
Seek	1 in 10 <sup>6</sup> seeks
<b>Other:</b>	
MTTF (Power on hours)	300,000
Preventive Maintenance	None
Product Life	5 years or 20,000 power ON hours

\*Toshiba defines a megabyte (MB) as 1,000,000 bytes and a gigabyte (GB) as 1,000,000,000 bytes.