



MK8026GAX (HDD2191) 80GB HDD

In 2003, Toshiba Storage Device Division launched the GAX series of 2.5-inch hard disk drives. The three drive models include: MK4026GAX, MK6026GAX and MK8026GAX. Due to its 40GB per platter technology in a 2.5-inch form factor, the GAX models are super slim and lightweight. The 40GB, 60GB and 80GB provide a diverse range of storage capacity for a wide range of mobile applications; from notebooks to consumer electronics as well as industrial and automotive applications. Furthermore, due to excellent specifications, Toshiba hard disk drives are the ideal storage devices for most of the world's leading manufacturers.

Specifications

Formatted capacity	80,012MByte
Form factor	2.5inch
Interface type	ATAPI/IDE
Supported interface standards	ATA-2 ATA-3 ATA-4 ATA-5 ATA-6
Head/actuator technology	»Ramp-Load« technology GMR head
Shock detection	Shock sensor circuit
S.M.A.R.T.	The S.M.A.R.T. command set is supported
Bytes/sector	
Bytes/sector	512
Physical parameters	
Number of platters	2
Number of cylinders	54,000
Number of heads	4
Access times	
Average seek time	12ms
Maximum seek time	22ms
Track-to-track seek time	2ms
Transfer rates	
Internal	From 233 To 446 MBit/s
PIO mode (Host)	PIO mode 4 (16.6 MByte/s)
UDMA mode (Host)	UDMA mode 5 (100 MByte/s)
Rotational speed	
Rotational speed	5,400rpm
Buffer	
Buffer size	16,384kByte
Cache	Read-ahead cache Write cache
Reaction times	



Start time (Spin-up time, typical)	4s
Start time (Spin-up time, maximum)	10s
Recovery time (from stand-by, typical)	4s
Recovery time (from stand-by, maximum)	10s

Reliability specifications

Seek error rate	1 error per 10 ⁶ seeks
Non-recoverable error rate	1 error per 10 ¹³ seeks
MTBF	300,000Hours
Power-on hours	2,800Hours
Product life	5 years or 20,000 POH (whatever comes earlier)
Preventive maintenance	No preventive maintenance is required

Source voltage 5 V

Start (Maximum)	5W
Seek (Average)	2.9W
Read (Average)	2.5W
Write (Average)	2.5W
Low-power idle (Average)	0.85W
Sleep (Average)	0.1W
Stand-by (Average)	0.25W

Power supply motor

Supply voltage	+5 V (+/- 5 %)
Allowable noise/ripple	Max. 100mV

Power supply logic

Supply voltage	+5 V (+/- 5 %)
Allowable noise/ripple	Max. 100mV

Cable

Length ATAPI cable (Maximum)	0.46m
Capacitance ATAPI cable (Maximum)	35pF

Mechanical specifications

Drive width	69.85mm
Drive height	9.5mm
Drive depth	100mm
Drive weight	0.101kg
Drive orientation	The drive can be installed in all axes (6 directions)
Mounting instructions (Screwing)	Four screws should be tightened equally with 0.39 Nm torque. The depth should be 3.0 mm minimum and 3.5 mm maximum

Temperature

Operating	From 5 To 55 °C
Non-operating	From -20 To 60 °C
Shipping	From -40 To 70 °C

Humidity



Operating	From 8 To 90 %
Non-operating	From 8 To 90 %
Shipping	From 5 To 90 %
Wet bulb	
Operating (Maximum)	29°C
Non-operating (Maximum)	40°C
Vibration	
Operating (Maximum)	1 G, with 5 - 500 Hz
Non-operating (Maximum)	5 G, with 10 - 500 Hz
Shock	
Operating (Maximum)	200 G, with 2 ms half sine wave
Non-operating (Maximum)	800 G, with 1 ms half sine wave
Shipping (Maximum)	0.7 m free drop with no unrecoverable error. Drive must be packed in Toshiba's original shipping package. Apply shock in each direction of the drive's three mutually perpendicular axes, one axis at a time.
Altitude	
Operating	From -300 To 3,000 m
Non-operating	From -400 To 15,000 m
Acoustic noise	
Idle mode (Disk spinning)	Max. 25dB
Random seek	Max. 29dB
BIOS specifications	
Number of cylinders (Logical)	16,383
Number of heads (Logical)	16
Number of sectors/track (Logical)	63
Safety specifications	
Safety standards	CSA C22.2, No. 60950-00 D 33003 EN60950 UL 60950
EMC adaptability	EN55022 EN61000-3-2 EN61000-3-3 EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11 ENV50204