

# TOSHIBA STORAGE DEVICE DIVISION

## 2.5" HDD INSTALLATION NOTES

### MK1234/1034/8034/6034/4034GSX

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#### GENERAL DESCRIPTION

Toshiba's 9.5mm series of 2.5" Hard Disk Drives is comprised of fast, high-capacity drives which feature an ATA-7 and Serial ATA 1.0a/Serial ATA II 1.2 interface embedded controller. Toshiba recommends that these drives be installed by a qualified technician. Additional installation hardware may be required depending on how and where the drive is being installed.

Specifications	MK1234GSX	MK1034GSX	MK8034GSX
	HDD2D31	HDD2D37	HDD2D38
Formatted Capacity	120.034GB	100.03GB	80.026GB
Height	9.5mm	9.5mm	9.5mm
# of Disks (platters)	2	2	2
# of Data Heads	4	4	3
	MK6034GSX	MK4034GSX	
	HDD2D35	HDD2D39	
Formatted Capacity	60.012GB	40.008GB	
Height	9.5mm	9.5mm	
# of Disks (platters)	1	1	
# of Data Heads	2	2	

#### FUNCTIONAL SPECIFICATION

Logical Drive Parameters	MK1234GSX	MK1034GSX	MK8034GSX
	HDD2D31	HDD2D37	HDD2D38
# of Cylinders (user)	79,056	69,336	74,520
Bytes per Sector	512	512	512
LBA Sectors	234,441,648	195,371,568	156,301,488
Buffer Size (KBYTES)	8,192	8,192	
Rotation Speed ( $\pm$ .1%)	5400	5400	
Transfer Rate	245 – 475	220 – 466	220 – 466
Internal (MBITS/sec.)			
# of Cylinders (logical)	16,383	16,383	16,383
# of Heads	16	16	16
# of sec./Track	63	63	63
Host Transfer Rate	150MB/s	150MB/s	150MB/s
Seek Time (MSEC.)			
Average	12	12	12
Track-to-track	2	2	2
Maximum	22	22	22

Logical Drive Parameters	MK6034GSX	MK4034GSX	
	HDD2D35	HDD2D39	
# of Cylinders (user)	79,056	60,912	
Bytes per Sector	512	512	
LBA Sectors	117,210,240	78,140,160	
Buffer Size (KBYTES)	8,192	8,192	
Rotation Speed ( $\pm 1\%$ )	5400	5400	
Transfer Rate Internal (MBITS/sec.)	245 – 475	199– 434	
# of Cylinders (logical)	16,383	16,383	
# of Heads	16	16	
# of sec./Track	63	63	
Host Transfer Rate	150MB/s	150MB/s	
Seek Time (MSEC.)			
Average	12	12	
Track-to-track	2	2	
Maximum	22	22	

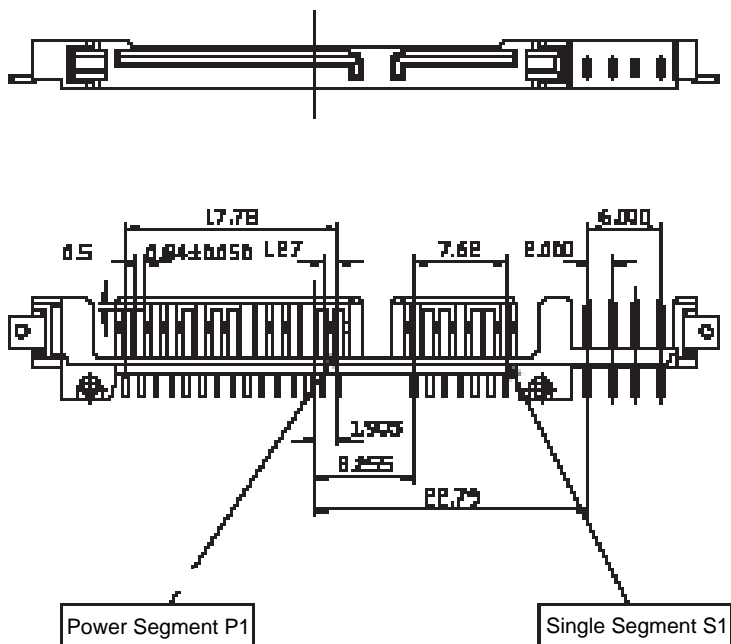
### **UNPACKING PROCEDURE**

Visually inspect the shipping container prior to unpacking for any signs of damage to the container or its contents (the carrier is responsible for any damage incurred during shipment). The drive is a precision device and even a small drop onto any surface can cause damage. Prior to opening the anti-static bag, it is recommended that the user ground themselves with a ground strap or by touching the PC chassis or other metal object. Remove the drive from the anti-static bag and check it for damage. Place the drive on the anti-static bag while configuring jumpers to avoid any electrostatic discharge. Save the shipping container and packing material for possible use later.

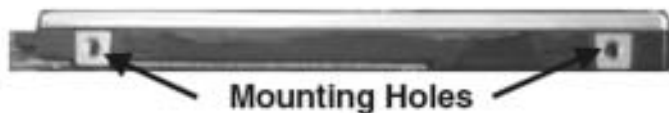
### **INSTALLATION INSTRUCTIONS**

*Note: Toshiba's 2.5" HDDs are primarily used in notebook devices. Installation into a notebook varies depending on the system manufacturer. Toshiba's 2.5" drives that are installed into a desktop PC require a 3.5" installation kit.*

1. Determine mounting configuration (can be mounted in either a horizontal or vertical orientation).
2. Configure drive for system application.
3. When connecting the drive and host system with Serial ATA cable, use of a Serial ATA 1.a specification compliant cable is recommended.
4. Refer to applicable manuals for software installation instructions.



**FIGURE 1 – 2.5" HDD JUMPER LOCATIONS**



**FIGURE 2 – MOUNTING HOLE LOCATIONS**

**INTERFACE CONNECTOR**

Drive Side Connector		Molex RSD97799-015 or equivalent
Recommended Host Side Connector	for board	Right Angle Type: Molex 67492-0221, 67492-0222 or equivalent
	for cable	Molex 88750-5318 or equivalent (for signal). No recommendation now for power segment.

## PIN ASSIGNMENT

The following table describes all of the pins on the Serial ATA connector

Signal Segment Key			
Signal Segment	S1	GND	2nd mate
	S2	A+	Differential Pair A from PHY
	S3	A-	
	S4	GND	Differential Pair B from PHY
	S5	B-	
	S6	B+	
	S7	GND	2nd mate
Signal Segment "L"			
Central Connector Polarizer			
Power Segment "L"			
	P1	V33	3.3V Power (unused)
	P2	V33	3.3V power (unused)
	P3	V33	3.3V Power pre-charge 2nd mate (unused)
	P4	GND	
	P5	GND	
	P6	GND	
	P7	V5	5V Power pre-charge 2nd mate
	P8	V5	5V power
	P9	V5	5V power
	P10	GND	
	P11	ACT/Spin	
	P12	GND	1st Mate
	P13	V12	12V Power pre-charge 2nd mate (unused)
	P14	V12	12V Power (unused)
	P15	V12	12V Power (unused)
Power segment Key			
Notice: this drive uses 4V power only. 3.3V and 12V power are not used.			

## TECHNICAL SUPPORT

Should you require technical support, contact your computer distributor. If your distributor is unable to answer your questions, have them call Toshiba Storage Device Division Technical Support, on your behalf.

TOSHIBA - STORAGE DEVICE DIVISION TECHNICAL SUPPORT

PHONE: 510/651-6798 FAX: 510/623-9893

EMAIL: [sdd\\_techhelp@pcs-sj.com](mailto:sdd_techhelp@pcs-sj.com)

You can also visit Toshiba's web site at: <http://www.sdd.toshiba.com>

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