

TS32GSSD25-S/M TS64GSSD25-M

2.5" Solid State Disk

Description

Due to smaller size (fit the standard dimensions of 2.5" IDE Hard Disk Drives), huge capacity, high speed, and low power consumption, Solid State Disk is perfect replacement storage device for PCs, Laptops, gaming systems, and handheld devices.

Placement



Features

- RoHS compliant
- Fully compatible with devices and OS that support the IDE standard (44-Pin, pitch = 2.00 mm)
- Non-volatile Flash Memory for outstanding data retention
- Built-in ECC (Error Correction Code) functionality and wear-leveling algorithm ensures highly reliable of data transfer
- Supports up to Ultra DMA Mode 5
- Shock resistance

Dimensions

Side	Millimeters	Inches
A	100.00 ± 0.40	3.937 ± 0.016
B	69.85 ± 0.20	2.750 ± 0.008
C	7.40 ± 0.15	0.292 ± 0.004

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Specifications

Physical Specification		
Form Factor		2.5-inch HDD
Storage Capacities		32 GB to 64 GB
Dimensions (mm)	Length	100.0 0 ± 0.40
	Width	69.85 ± 0.20
	Height	7.40 ± 0.15
Input Voltage		3.3V/5V $\pm 10\%$
Weight		80 g
Connector		44-Pin standard IDE/ATA connector (Pitch 2.0 mm)

Environmental Specifications	
Operating Temperature	0 °C to 70 °C
Storage Temperature	- 40 °C to 85 °C

Power Requirements			
Input Voltage		3.3V/5V $\pm 10\%$	
Mode		TYP (mA)	MAX (mA)
TS32GSSD25-S Power Consumption (DC 5V @25°C)	Write	201.98	242.01
	Read	188.96	200.21
	Idle	154.82	154.85
TS32GSSD25-M Power Consumption (DC 5V @25°C)	Write	213.87	257.92
	Read	186.68	195.85
	Idle	157.70	157.75
TS64GSSD25-M Power Consumption (DC 5V @25°C)	Write	210.81	246.83
	Read	185.78	206.52
	Idle	157.04	157.10

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Reliability	
Data Reliability	Support 8 Bytes ECC in 512 data bytes
Data Retention	10 years

Interface Specification	
Jumper Settings	Master/Slave/Cable-select Settings
ATA Compatibility	ATA/ATAPI 6
	UDMA Modes 5

Performance				
Model P/N	Read (KB/s)	Write (KB/s)	Random Read (KB/s)	Random Write (KB/s)
TS32GSSD25-S	56952	40943	44271	15866
TS32GSSD25-M	55531	23400	41207	8515
TS64GSSD25-M	55501	21768	41201	8284

* Note : 25 °C, according to 44 pin to 40 pin IDE transferring cable test on GIGABYTE GA-965PDS3, 1GB RAM, IDE interface support UDMA, Windows® XP Version 2002 SP2, benchmark utility HDBENCH (version 3.4006), copied file 100MB

Actual Capacity				
Model P/N	User Max. LBA	Cylinder	Head	Sector
TS32GSSD25-S	62,504,960	16,383	16	63
TS32GSSD25-M	62,504,960	16,383	16	63
TS64GSSD25-M	125,009,920	16,383	16	63

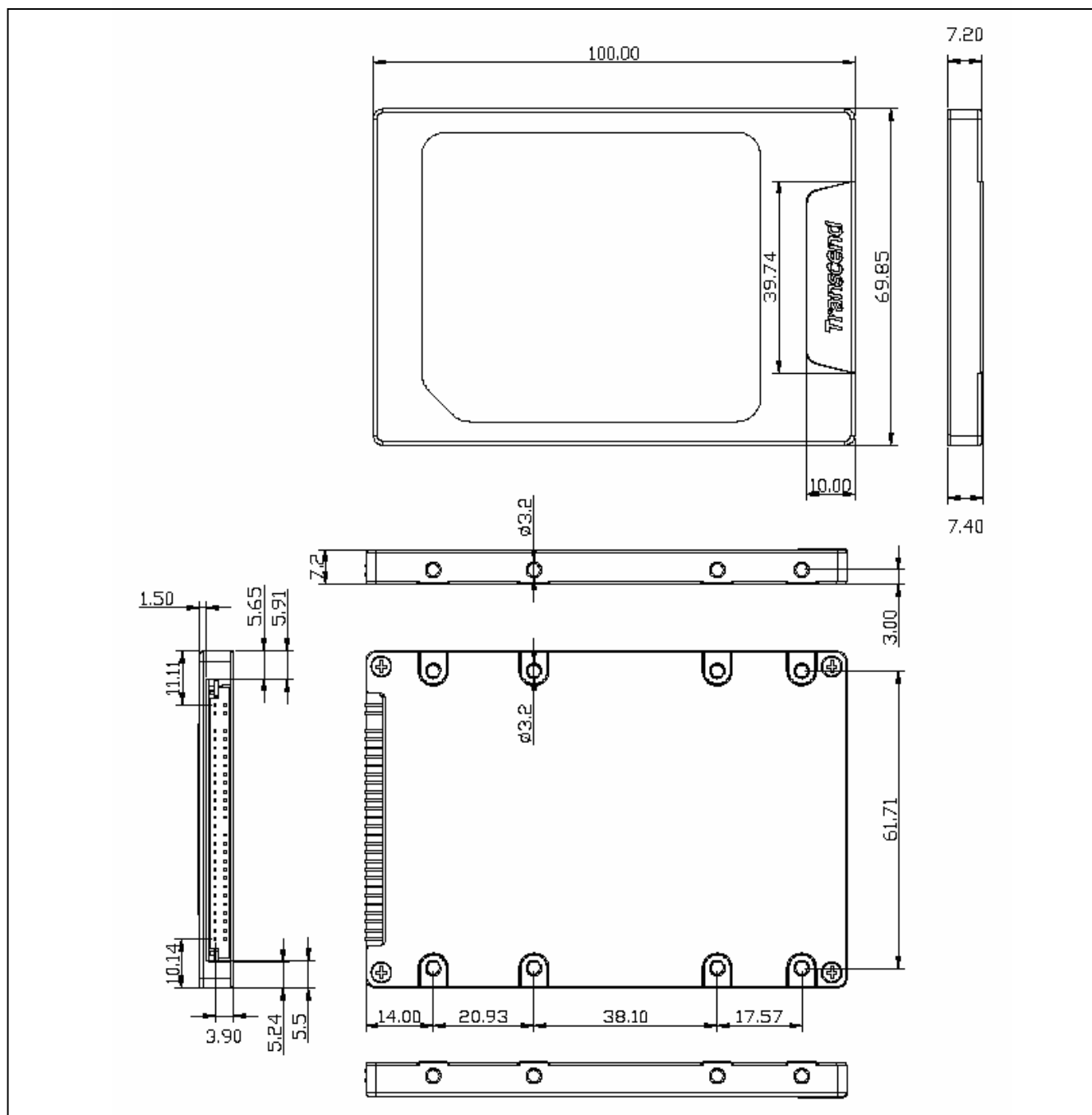
Regulations	
Compliance	CE, FCC and BSMI

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Package Dimensions

Below figure illustrates the Transcend 2.5" Solid State Disk. All dimensions are in mm.



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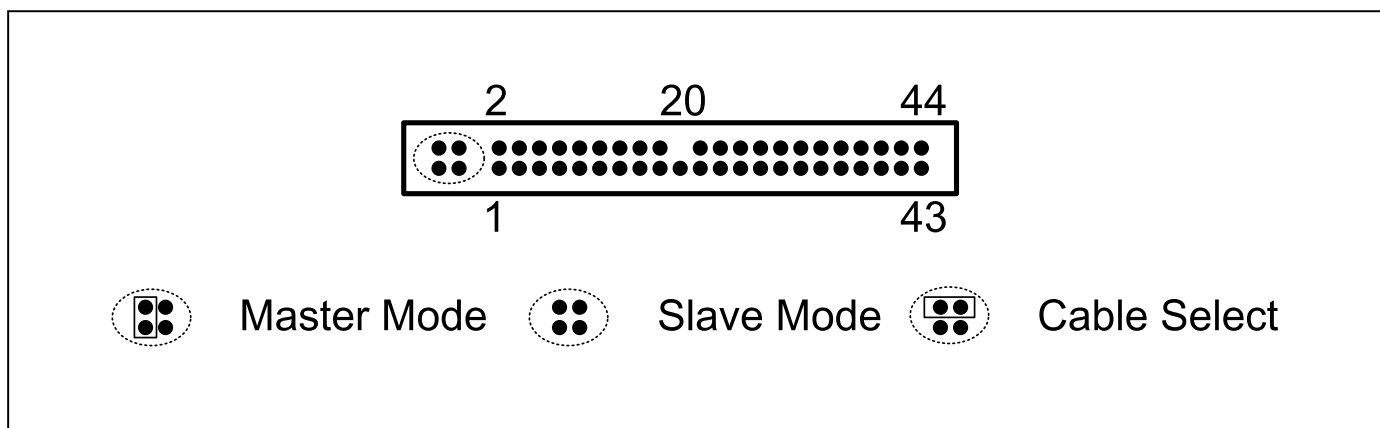
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Pin Assignments

Pin No.	Pin Name	Pin No.	Pin Name
01	-RESET	02	GND
03	DD7	04	DD8
05	DD6	06	DD9
07	DD5	08	DD10
09	DD4	10	DD11
11	DD3	12	DD12
13	DD2	14	DD13
15	DD1	16	DD14
17	DD0	18	DD15
19	GND	20	KEY-PIN (OPEN)
21	DMARQ	22	GND
23	-DIOW : STOP	24	GND
25	-DIOR : -HDMARDY : HSTROBE	26	GND
27	IORDY : DDMARDY : DSTROBE	28	CSEL
29	-DMACK	30	GND
31	INTRQ	32	IOCS16B
33	DA1	34	-PDIAG : -CBLID
35	DA0	36	DA2
37	-CS0	38	-CS1
39	-DASP	40	GND
41	VCC	42	VCC
43	GND	44	NC (No Connect)

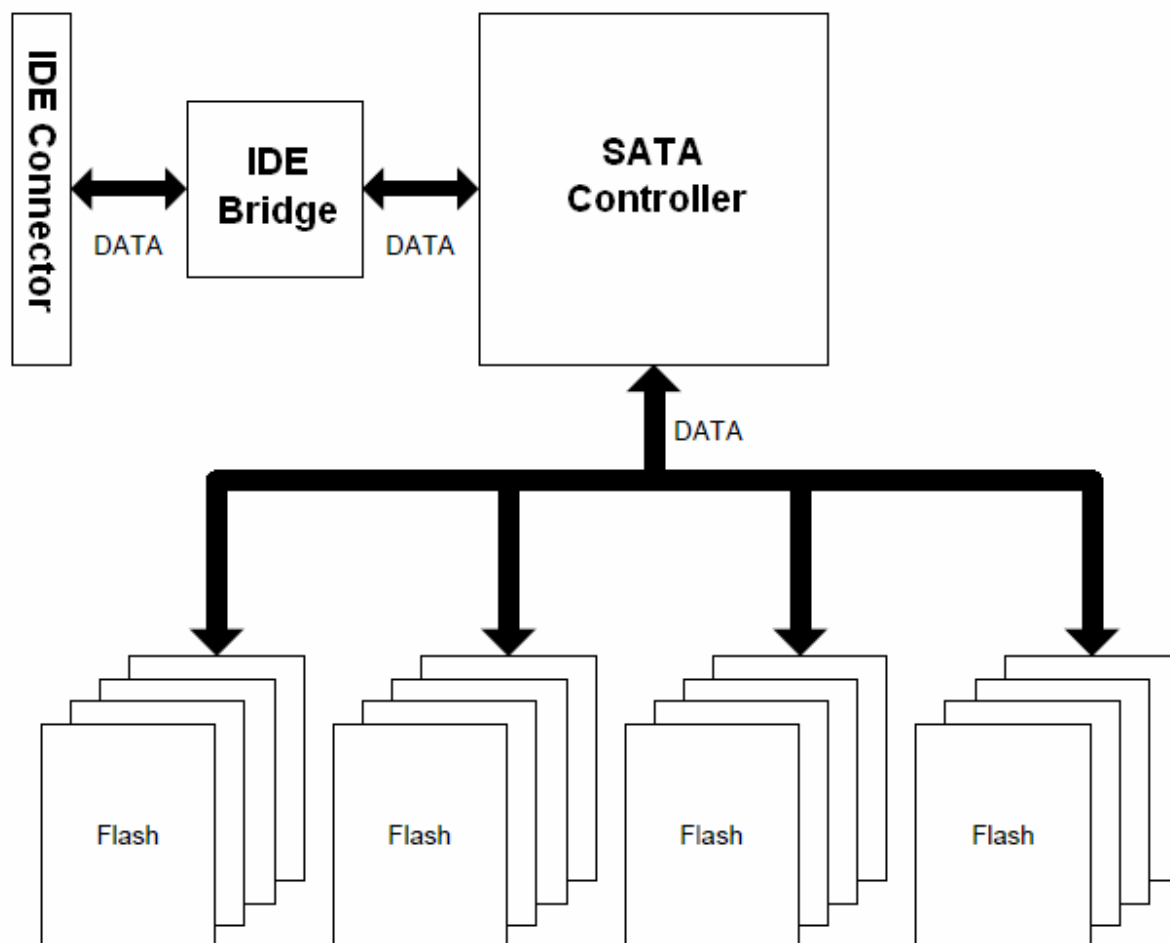
Pin Layout



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Block Diagram



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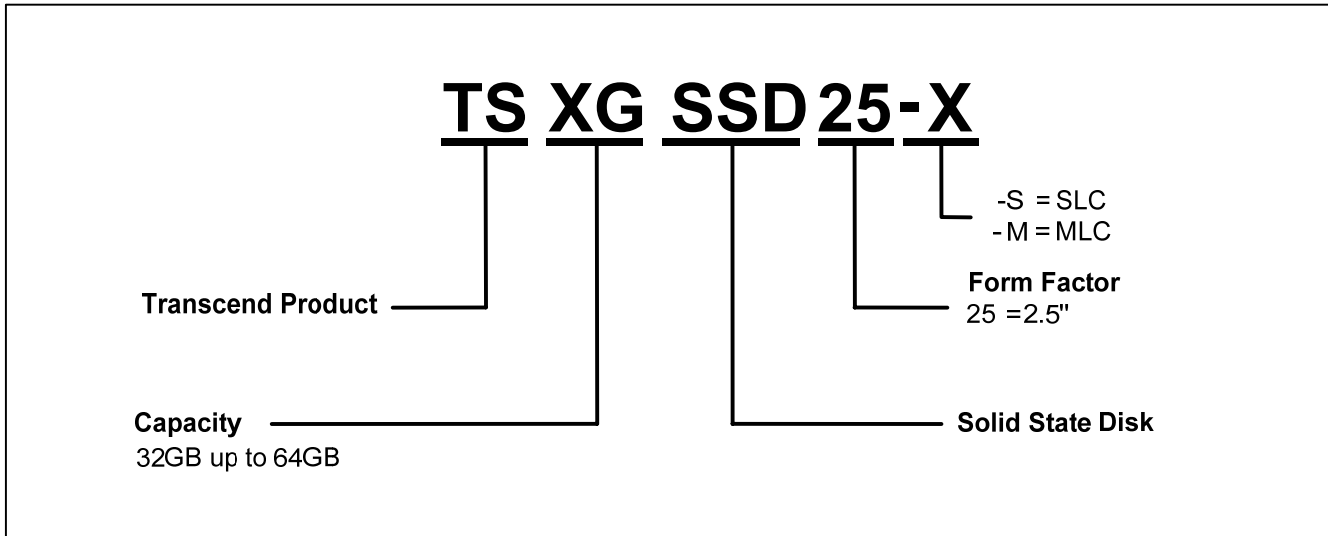
Command Set

Command Name	Code
RECALIBRATE	10h
READ SECTOR(S)	20h
WRITE SECTOR(S)	30h
READ VERIFY SECTOR(S)	40h
INITIALIZE DEVICE PARAMETERS	91h
DOWNLOAD MICRICODE	92h
SMART	B0h
READ MULTIPLE	C4h
WRITE MULTIPLE	C5h
SET MULTIPLE MODE	C6h
READ DMA	C8h
WRITE DMA	CAh
STANDBY IMMEDIATE	E0h
IDLE IMMEDIATE	E1h
STANDBY	E2h
IDLE	E3h
CHECK POWER MODE	E5h
SLEEP	E6h
FLUSH CACHE	E7h
IDENTIFY DEVICE	ECh
SET FEATURES	EFh
SECURITY SET PASSWORD	F1h
SECURITY UNLOCK	F2h
SECURITY ERASE PREPARE	F3h
SECURITY ERASE UNIT	F4h
SECURITY FREEZE LOCK	F5h
SECURITY DISABLE PASSWORD	F6h

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Ordering Information



The above technical information is based on industry standard data and has been tested to be reliable. However, Transcend makes no warranty, either expressed or implied, as to its accuracy and assumes no liability in connection with the use of this product. Transcend reserves the right to make changes to the specifications at any time without prior notice.



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