

TS8GSSD25S-S TS16GSSD25S-S TS32GSSD25S-S/M TS64GSSD25S-S/M

2.5" Solid State Disk

Description

Due to smaller size (fit the standard dimensions of 2.5" SATA 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 SATA II 3.0Gbps standard
- 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
- 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	9.50 ± 0.15	0.374 ± 0.004

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Specifications

Physical Specification		
Form Factor		2.5-inch HDD
Storage Capacities		8 GB to 64 GB
Dimensions (mm)	Length	100.0 0 ± 0.40
	Width	69.85 ± 0.20
	Height	9.50 ± 0.15
Input Voltage		5V ± 5%
Weight		48 g
Connector		SATA 7+15 pins combo connector

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

Power Requirements			
Input Voltage		5V ± 5%	
Mode		TYP (mA)	TYP (W)
Power Consumption (DC 5V @25°C)	Write	239	1.20
	Read	190	0.95
	Idle	124	0.62

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

Regulations	
Compliance	CE, FCC and BSMI

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Performance				
Model P/N	Read	Write	Random Read	Random Write
TS8GSSD25S-S	104 MB/s	49 MB/s	73 MB/s	18 MB/s
TS16GSSD25S-S	107 MB/s	50 MB/s	74 MB/s	20 MB/s
TS32GSSD25S-M	102 MB/s	27 MB/s	74 MB/s	11 MB/s
TS32GSSD25S-S	119 MB/s	65 MB/s	70 MB/s	24 MB/s
TS64GSSD25S-M	117 MB/s	43 MB/s	68 MB/s	12 MB/s
TS64GSSD25S-S	119 MB/s	65 MB/s	70 MB/s	24 MB/s

* Note : 25 °C , according to 7+15 pins combo connector test on GIGABYTE GA-965P-DS3, 1GB RAM, 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
TS8GSSD25S-S	14,761,984	14,644	16	63
TS16GSSD25S-S	29,523,968	16,383	16	63
TS32GSSD25S-M	59,047,936	16,383	16	63
TS32GSSD25S-S	59,047,936	16,383	16	63
TS64GSSD25S-M	118,095,872	16,383	16	63
TS64GSSD25S-S	118,095,872	16,383	16	63

Vibration	
Operating	3.0G, 5 - 800Hz
Non-Operating	3.0G, 5 - 800Hz

* Note: Reference to the IEC 60068-2-6 Testing procedures; Operating-Sine wave, 5-800Hz/1 oct., 1.5mm, 3g, 0.5 hr./axis, total 1.5 hrs.

Shock	
Operating	1500G, 0.5ms
Non-Operating	1500G, 0.5ms

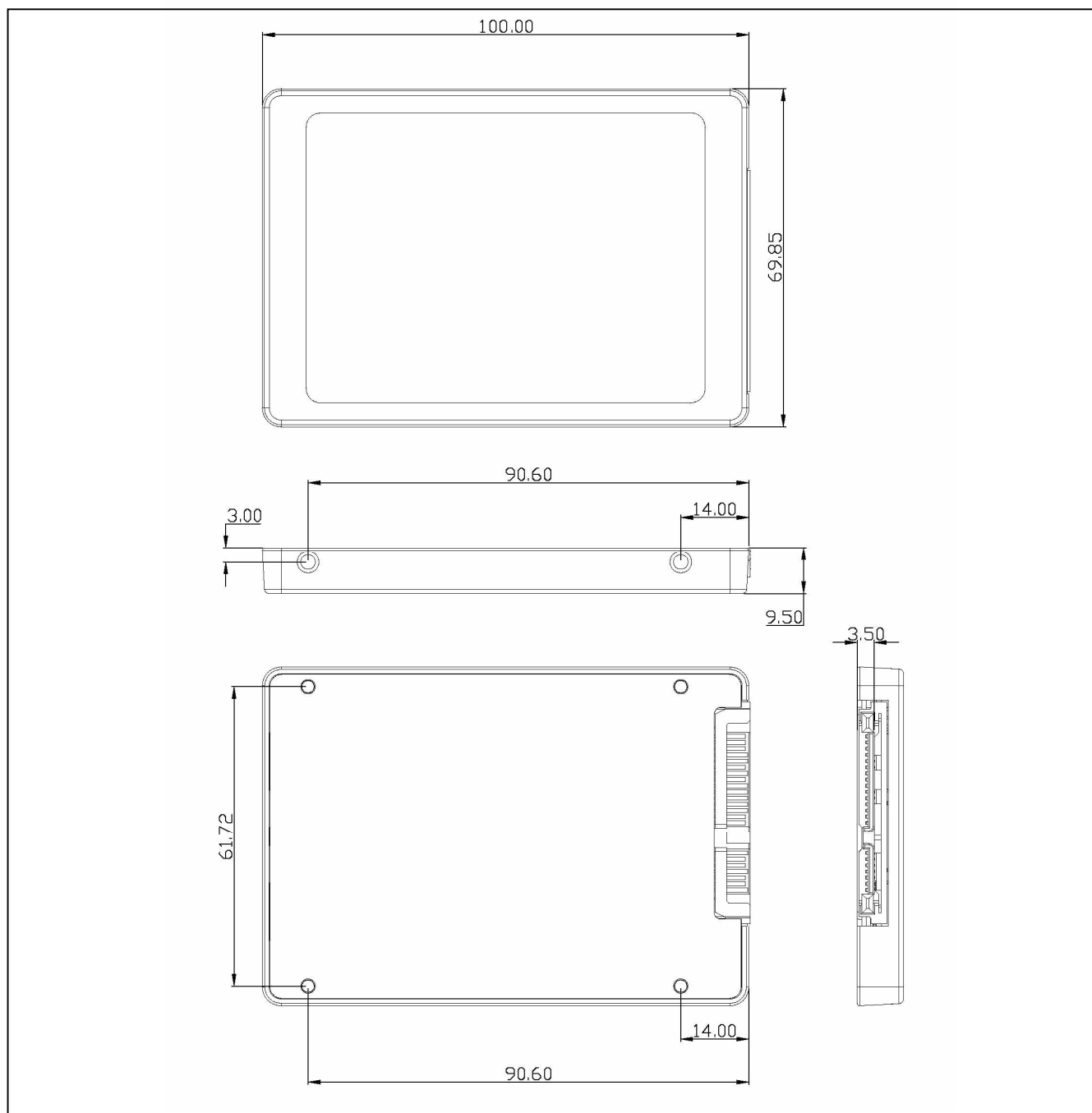
* Note: Reference to the IEC 60068-2-27 Testing procedures; Operating-Half-sine wave, 1500g, 0.5ms, 3 times/dir., total 18 times.

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Package Dimensions

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



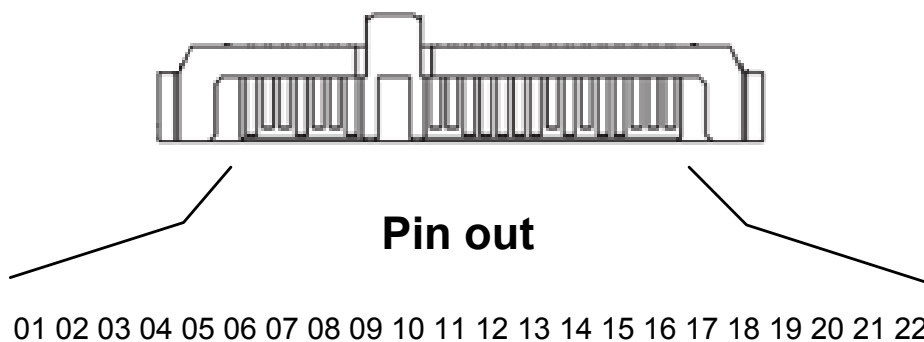
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Pin Assignments

Pin No.	Pin Name	Pin No.	Pin Name
01	GND	02	A+
03	A-	04	GND
05	B-	06	B+
07	GND	08	NC
09	NC	10	NC
11	GND	12	GND
13	GND	14	5V
15	5V	16	5V
17	GND	18	GND
19	GND	20	NC
21	NC	22	NC

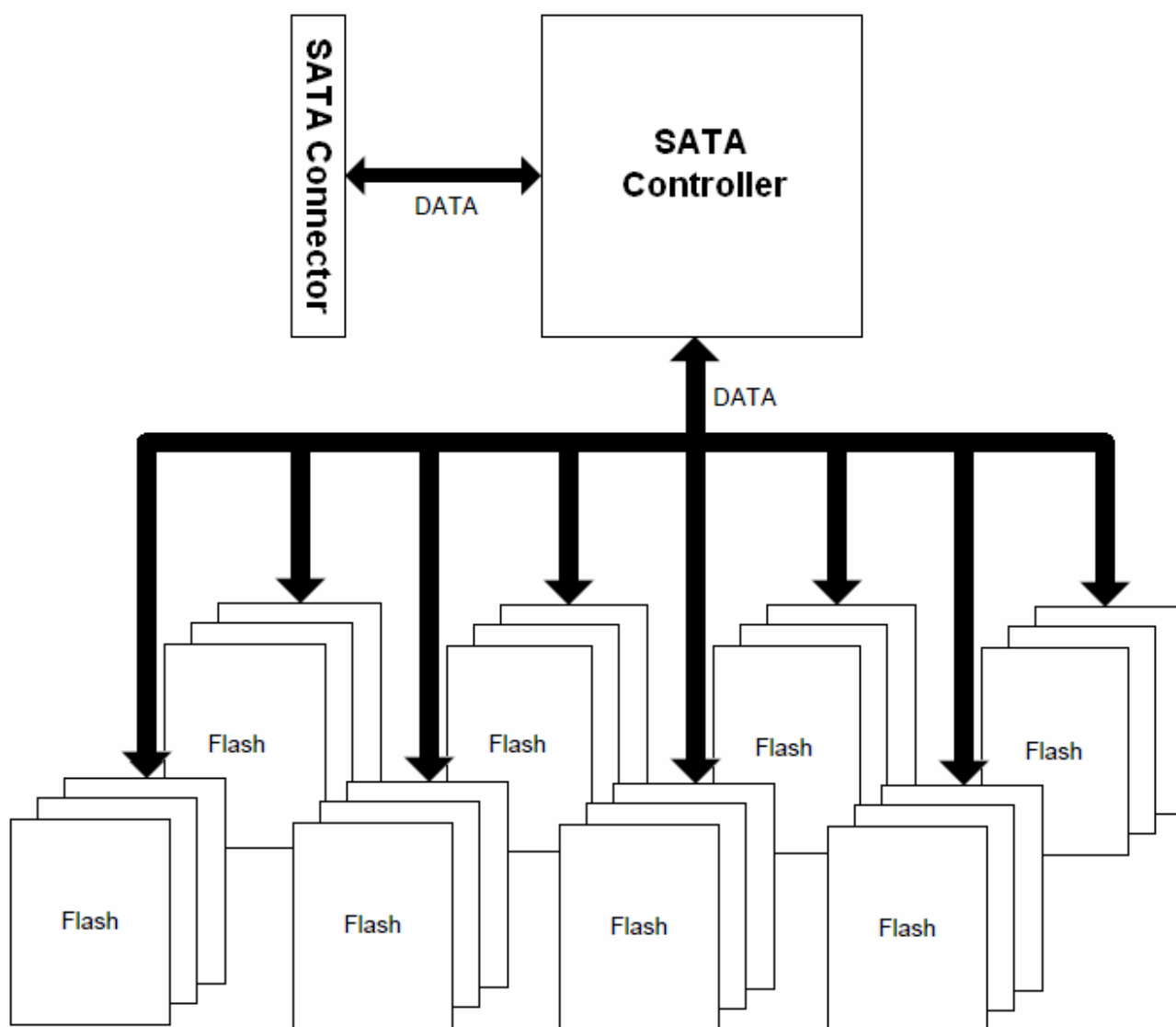
Pin Layout



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Block Diagram



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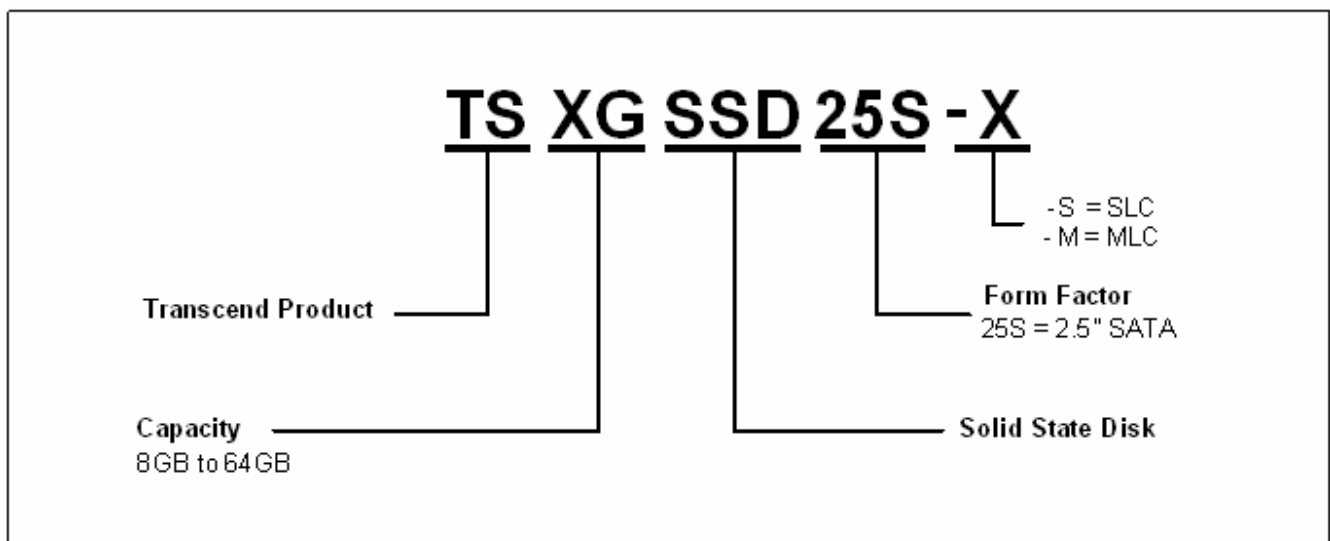
Command Set

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

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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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