

# $SD~2.0~Card^{TM} \\$ Product Specification

### Version 1.0

Information in this document is provided in connection with TwinMOS products. No license, express or implied, by estoppels or otherwise, to any intellectual property rights is granted by this document. Except as provided in TwinMOS's Terms and Conditions of Sale for such products, TwinMOS assumes no liability whatsoever, and TwinMOS disclaims any express or implied warranty, relating to sale and/or use of TwinMOS products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright or other intellectual property right. TwinMOS may make changes to specifications and product descriptions at any time, without notice.

Copyright © TwinMOS Technology Inc. 2001

## **Table of Contents**

A.	Product Outline	1
В.	Features	2
C.	Block Diagram	3
D.	Pin Assignments	. 4
Е.	Physical Specifications	.5-6

#### **Change History**

Version	Date	Description
1.0		New Release



#### A. Product Outline

The TwinMOS **SD2.0 Memory Card** <sup>TM</sup> consists of **SD 2.0 Memory Card** <sup>TM</sup> Controller, which supports most regular and compatible NAND type flash memory. It is the best choice for consumer to download to your PC, you can organize and store the files as you wish. The **SD2.0 Memory Card** <sup>TM</sup> is meet SDHC specification V2.0.



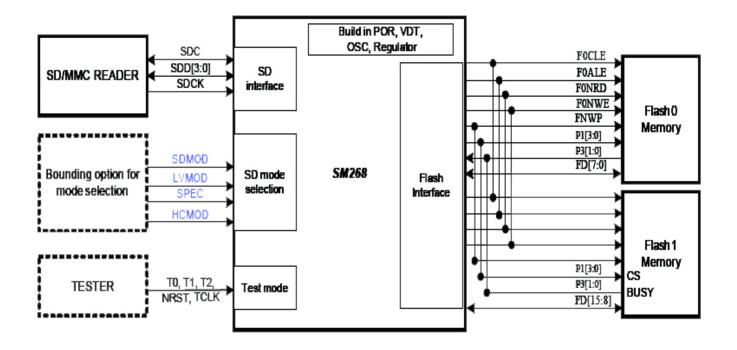
#### **B.** Features

- Support SD memory card specification V2.0
- Support CPRM
- Targeted for portable and stationary applications
- Designed for read-only and read / write cards
- Card Detection (Insertion /Removal)
- Card removal during read operation will never harm the content
- Forward compatibility to MultiMedia Card
- Supports firmware ISP (in system programming)
- Support SD command class :Class 2, Class 4, Class 6
- Operating Voltage range: 1.8V or 3.3V
- Correction of memory field errors
- Comfortable erase mechanism
- Total memory capacity up to 32GBytes
- SMI SM268 Flash Controller inside
- Flash Memory Support

> Samsung/ST-Micro/Hynix SLC /MLC NAND type Flash



#### C. Block Diagram

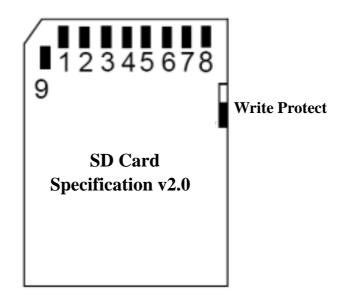


本文件爲勤茂資通(股)有限公司專有之財產,非經書面許可,不准透露或使用本文件,亦不准複製或轉變成任可其他 形式使用。如有任何修改恕不另行通知

The information contained herein is the exclusive property of TwinMOS Technologies Inc. and shall not be distributed, reproduced, or disclosed in whole or in part without prior written permission of TwinMOS Technologies Inc. TwinMOS Technologies Inc reserved the right to make changes without ant prior notice. <a href="http://www.twinmos.com">http://www.twinmos.com</a>



#### D. Pin Assignments



	SD Mode			SPI Mode		
	Pin Name	Туре	Remark	Pin Name	Туре	Remark
1	Det / D03	I/O/P	Card Detect / Data Line(bit3)	CS	I	Chip Select (Truth when Neg.)
2	CMD	P	Command/Response	Din	I	Data in
3	Vss	S	Ground	Vss	S	Ground
4	Vdd	S	Supply Voltage	Vdd	S	Supply Voltage
5	CLK	I	Clock	SCLK	I	Clock
6	Vss	S	Ground	Vss	S	Ground
7	D00	I/O/P	Data Line(bit0)	Dout	O/P	Data out
8	D01	I/O/P	Data Line(bit1)	RSV		
9	D02	I/O/P	Data Line(bit2)	RSV		

#### [remark]

1. I : Input

2. O: Output using push-pull drivers

3. P: I/O using Push Pull Drivers

4. S: Power Supply



# E. Physicial Specifications [Unit] mm

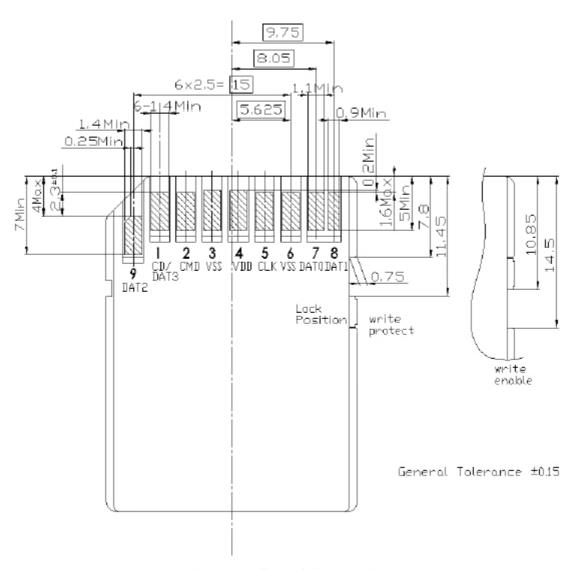


Fig- 1 Top Side of SD Housing

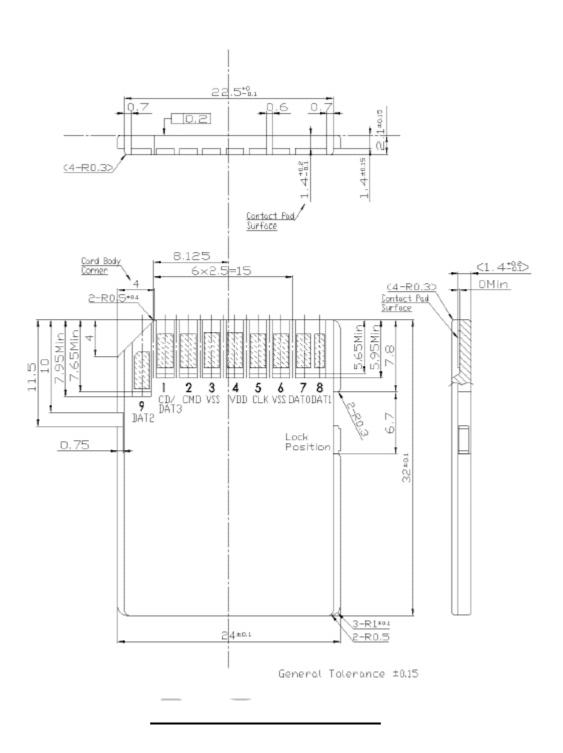


Fig- 2 Bottom Side of SD Housing