



OVERVIEW

The TMC' s SD/miniSD Flash Card has a 256/512/1024/2048/4096/8192 Mbit capacity, supporting the standard SD/miniSD V1.0/V1.1 bus interface. It is fabricated using TMC most advanced COB and Molding technology. It has been developed for 3.3 V voltage applications. Some of its major features are best compatibility, best performance, and less power consumption. It provided highest data transfer and excellent performance to accommodate more data intensive content in future mobile phones and digital cameras.

FEATURES

SD Card Standard. Operating Characteristics

- E System specification V1.0 and V1.1 Compliance !
- E Operating voltage
- E Support CPRM — 2.7V~3.6V
- E SPI Mode support !
- E Operating current
- E Support clock frequencies 0~50MHZ — Maximum sequential read current<40 mA/1.8V>
- E Support different Bus width: x1, x4 —Maximum stand-by current:<0.45 mA>
- E High performance DMA transfer.

- ! E Operating temperature range
- Flash NAND Type —-25 ¢
- J to +85 ¢ J

- E Storage Size: 256/512/1024/2048/4096/8192Mbit
- E ( 32/64/128/256/512/1024 M byte)
- E 100,000 erase/ write cycles !
- E Operating clock frequencies
- E 10 years data retention! @ —0~50M HZ
- ! E Electrostatic discharge (ESD)
- 5,000 V

Packages

- ! E 9 pin SD V1.1
- ! E 11 pin miniSD V1.1



32MB/64MB/128MB/256MB/512MB/1024MB

SD/miniSD V1.1 Flash Card

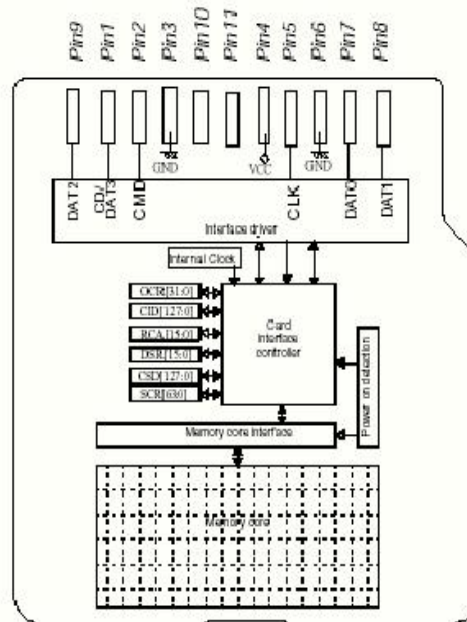
Data Sheet

**OUTLINE**

Mini SD



Front side Back side



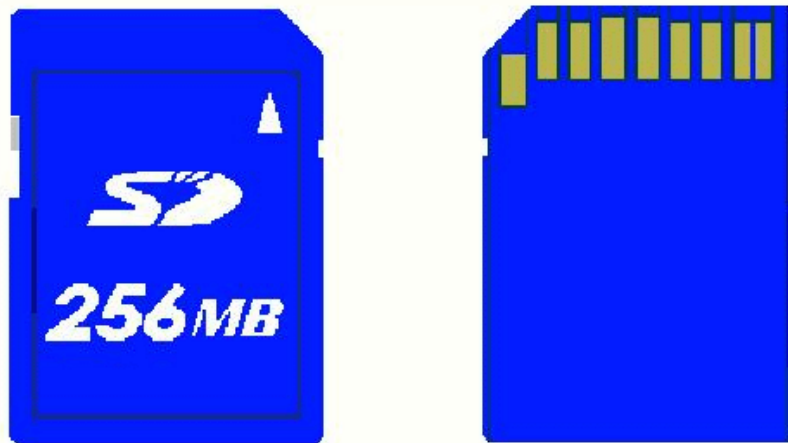
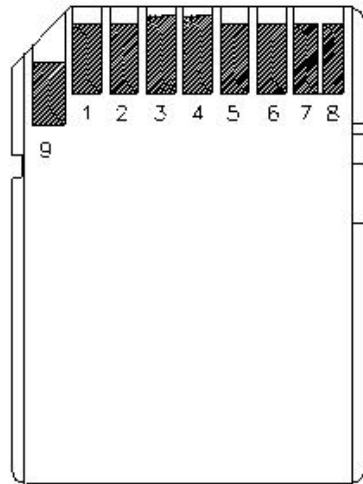
I/O pins definition



32MB/64MB/128MB/256MB/512MB/1024MB  
SD/miniSD V1.1 Flash Card

Data Sheet

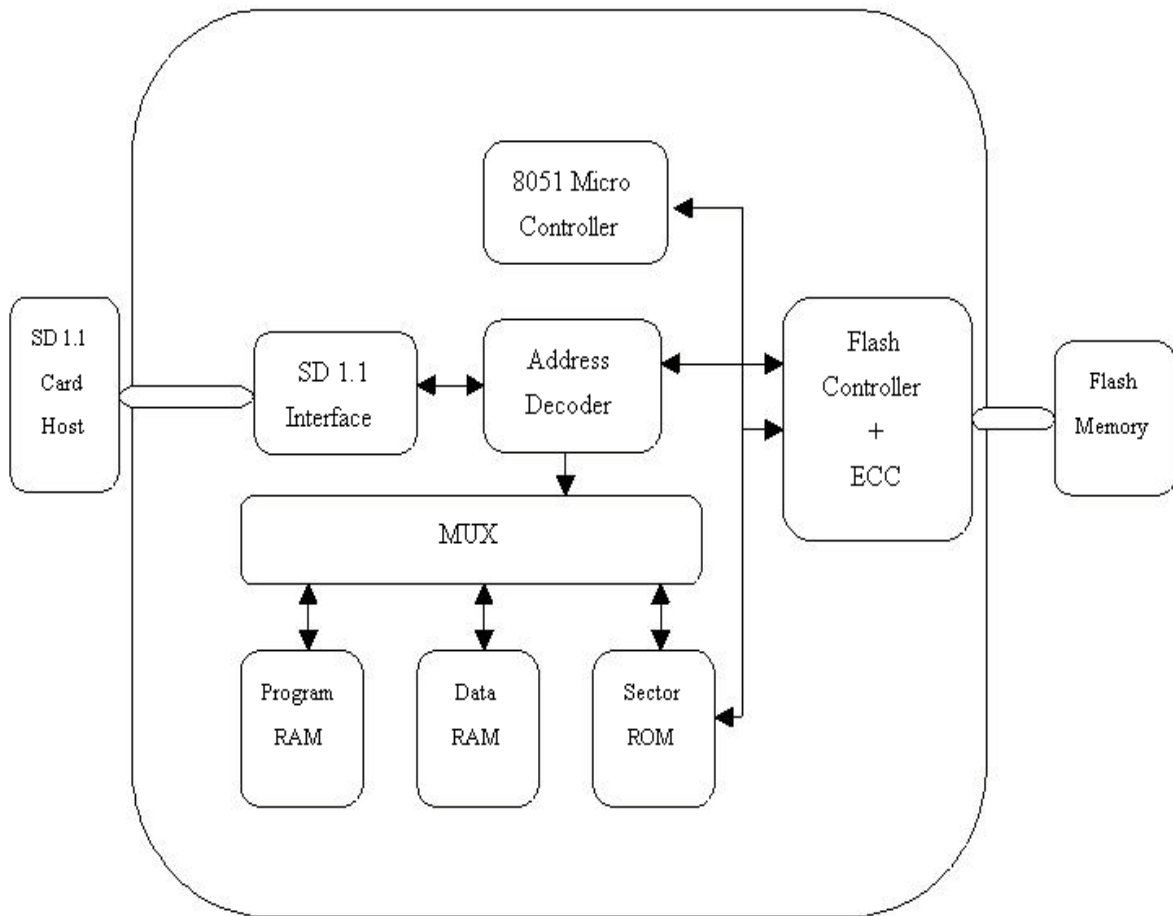
SD



Front side Back side



**BLOCK DIAGRAM**



**PIN DEFINITIONS****SD 1.1 Pins**

Pin no.	Name	Type	Description	Remark
1	CD/DAT3 I/O/PP		Card Detect / Data line(Bit 3)	
2	CMD	PP	Command / Response	
3	Vss 1	S	Supply voltage ground	
4	VDD	S	Supply voltage	
5	CLK	I	Clock	
6	Vss 2	S	Supply voltage ground	
7	DAT0	I/O/PP	Date Line(Bit 0)	
8	DAT1	I/O/PP	Date Line(Bit 1)	
9	DAT2	I/O/PP	Date Line(Bit 2)	

**I:input, O:output, PP:push-pull drivers, S:power supply**

**miniSD 1.1 Pins**

Pin no.	Name	Type	Description	Remark
1	CD/DAT3 I/O/PP		Card Detect / Data line(Bit 3)	
2	CMD	PP	Command / Response	
3	Vss 1	S	Supply voltage ground	
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7	DAT0	I/O/PP	Date Line(Bit 0)	
8	DAT1	I/O/PP	Date Line(Bit 1)	
9	DAT2	I/O/PP	Date Line(Bit 2)	
10	NC	I/O/PP	For Future Use	
11	NC	I/O/PP	For Future Use	