

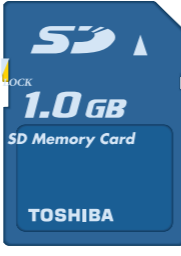
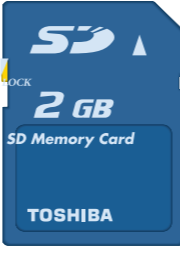

## 东芝存储器详解图

With NAND flash as its starting point, Toshiba Semiconductor focuses on providing a wide range of memory chips to two segments for covering the major memory chip markets.

1. **File memory** : Primarily for image and other data storage  
Providing NAND flash memory and memory cards that utilize the world's top level technology
2. **Mobile memory** :  
Primarily for cell phone and mobile data terminal  
Providing compact and low-power PSRAM, NOR flash memory, and multi-chip packages (MCP)

We are also developing non-volatile RAM technology (FeRAM, MRAM) and FBC technology (1T-RAM).

### Major Memory Roadmap

Function	CY2005	CY2006	CY2007
NAND Flash	4 Gbit	8 Gbit	16 Gbit
SD Memory Card (USB Memory)	 		
PSRAM with Burst	COSMORAM		
	Rev.1, Rev.3	Rev.4	Rev.5
NOR Flash	Page Mode		
		16 / 32 / 64 / 128Mbit	
	Page & Burst Mode		
		64 / 128 / 256Mbit	512Mbit
Mobile MCP	The cutting-edge performance of PSRAM, SDRAM, NOR Flash, NAND Flash and the wide range of combinations using large-capacity memory chips can be installed into a compact, thin package.		
Non-Volatile RAM Technology (FeRAM, MRAM)	100Mb class FeRAM, Mixed technology development Mass production		Mass production
technology (1T-RAM)	Prototype sample evaluation	Product sample	Mass production