

**TABLE 1—CARD ALTERNATIVES AND RELEVANT SPECIFICATIONS**

Card format	Size (mm)	Total interface pin count	Data-interface pin count	Interface clock rate (MHz)	Maximum data rate at host interface (Mbytes/sec)	Voltage (V)	Built-in memory controller	Security
PCMCIA	85.6×53.8×3.3 (Type I)	68	Eight, 16, or 32	8 (PC Card variant) 33 (CardBus variant)	16 (PC Card variant) 132 (CardBus variant)	3.3	Yes	No
	85.6×53.8×5 (Type II)					5		
	85.6×53.8×10.4 (Type III)							
CompactFlash	42.8×36.4×3.3 (Type I)	50	Eight or 16	8	16	3.3, 5	Yes	No
	42.8×36.4×5 (Type II)							
SmartMedia	37×45×0.8	22	Eight	NA	20	3.3, 5	No	No
MultiMediaCard (MMC)	24×32×1.4	Seven	One	20	2.5	1.8, 3.3	Yes	Optional
MMCplus	24×32×1.4	13	Eight	52	52	1.8, 3.3	Yes	Optional
RS (Reduced Size)-MMC	24×18×1.4	Seven	One	20	2.5	1.8, 3.3	Yes	Optional
MMCMobile	24×18×1.4	13	Eight	52	52	1.8, 3.3	Yes	Optional
SD Card	24×32×2.1	Nine	Four	20	10	3.3	Yes	Yes
Mini-SD Card	20×21.5×1.4	Nine	Four	20	10	3.3	Yes	Yes
Memory Stick	21×50×2.8	10	One	24	3	3.3	Yes	No
Memory Stick Duo	20×31×1.6	10	One	24	3	3.3	Yes	No
Memory Stick Pro	21×50×2.8	10	Four	40	20	1.8, 3.3	Yes	Yes
Memory Stick Pro Duo	20×31×1.6	10	Four	40	20	1.8, 3.3	Yes	Yes
TransFlash Memory	10×15×1.1	Nine	Four	20	10	3.3	Yes	Yes
xD-Picture Card	25×20×1.7	18	Eight	NA	20	3.3	Yes	No
USB Flash Drive	Various	Four	One (differential)	12 (Full Speed) 480 (High Speed)	1.5 (Full Speed) 60 (High Speed)	5	Yes	Optional

**Notes:**

1. Samsung supplied most of the information in this table. 2. Confirm information with relevant vendors and standards bodies before finalizing your design.