

Comparison btw. MMC & SD

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- ❑ All of the below categories are same in MultiMediaCard & SD Card
 - SPI Bus Protocol
 - Mode Selection
 - Bus Transfer Protection
 - Data Read/Write operation and timing values
 - Erase & Write Protect Management
 - Read CID/CSD Registers
 - Reset Sequence
 - Clock control
 - Memory Array Partitioning
 - Card Lock/Unlock
 - Command/Response Format

- ❑ Please refer to the MMCA system specification ver4.x
 - Visit www.mmca.org

Card Register Comparison Table

Application
Note

Register Name	Length	MMC 3.3	MMC 4.1	MMC 4.2	SD 1.1	SD 2.0
OCR register	32 bits	checked by CMD1	checked by CMD1	checked by CMD1	checked by ACMD41	checked by ACMD41
CID register	127 bits	checked by CMD2, CMD10	checked by CMD2, CMD10	checked by CMD2, CMD10	checked by CMD2, CMD10	checked by CMD2, CMD10
CSD register	127 bits	checked by CMD9	checked by CMD9	checked by CMD9	checked by CMD9	checked by CMD9
EXT_CSD register	512 bytes	x	checked by CMD8	checked by CMD8	x	x
RCA register	16 bits	Assigned by CMD3	Assigned by CMD3	Assigned by CMD3	Dumped by CMD3	Dumped by CMD3
SCR register (SD config. reg)	64 bits	x	x	x	checked by ACMD51	checked by ACMD51
SSR register (SD status)	512 bits	x	x	x	checked by ACMD13	checked by ACMD13
CSR register (Card status)	32 bits	checked by CMD13	checked by CMD13	checked by CMD13	checked by CMD13	checked by CMD13
Switch Function Status	512 bits	x	x	x	checked by CMD6	checked by CMD6

Initial and Register Access Related Commands

	MMC 3.3	MMC 4.1	MMC 4.2	SD 1.1	SD 2.0
CMD6	x	Switch card function. No further data transfer	Switch card function. No further data transfer	Switch card function with 512 bits data block (switch function status) read.	Switch card function with 512 bits data block (switch function status) read.
CMD8	x	Read extended CSD from a 512 bytes data block	Read extended CSD from a 512 bytes data block	x	Send interface condition. No further data transfer.
CMD14	x	Bus Test Read <i>(Not applicable in SPI mode)</i>	Bus Test Read <i>(Not applicable in SPI mode)</i>	x	x
CMD19	x	Bus Test Write <i>(Not applicable in SPI mode)</i>	Bus Test Write <i>(Not applicable in SPI mode)</i>	x	x
ACMD6	x	x	x	Set bus width. No data transfer. <i>(Not applicable in SPI mode)</i>	Set bus width. No data transfer. <i>(Not applicable in SPI mode)</i>
ACMD13	x	x	x	Read SSR from a 512 bits data block	Read SSR from a 512 bits data block
ACMD51	x	x	x	Read SCR from a 64 bits data block	Read SCR from a 64 bits data block

* All commands for MMC and SD are exactly same except the commands listed in above table

** All the ACMDs shall be preceded with APP_CMD command (CMD55) in SD card

Other Major Different Commands

	MMC 3.3	MMC 4.1	MMC 4.2	SD 1.1	SD 2.2
CMD23	set block count	set block count	set block count	x	x
CMD32	x	x	x	Erase start	Erase start
CMD33	x	x	x	Erase end	Erase end
CMD35	Erase start	Erase start	Erase start	x	x
CMD36	Erase end	Erase end	Erase end	x	x
ACMD22	x	x	x	Send the number of the written block.	Send the number of the written block.
ACMD23	x	x	x	Set write erase count.	Set write erase count.
ACMD42	x	x	x	Disconnect/Connect pull up register	Disconnect/Connect pull up register

* All commands for MMC and SD are exactly same except the commands listed in above table

** All the ACMDs shall be preceded with APP_CMD command (CMD55) in SD card