



Figure 7-2: SPI Mode Initialization Flow

READ_OCR (CMD58) is designed to provide SD Memory Card hosts with a mechanism to identify cards that do not match the V_{DD} range desired by the host. If the host does not accept voltage range, it shall not proceed further initialization sequence. The levels in the OCR register shall be defined accordingly (See Chapter 5.1).

SD_SEND_OP_COND (ACMD41) is used to start initialization and to check if the card has completed initialization. It is mandatory to issue CMD8 prior to the first ACMD41. Receiving of CMD8 expands the CMD58 and ACMD41 function; HCS (High Capacity Support) in the argument of ACMD41 and CCS (Card Capacity Status) in the response of CMD58. HCS is ignored by the card, which didn't accept CMD8. Standard Capacity SD Memory Card ignores HCS. The "in idle state" bit in the R1 response of ACMD41 is used by the card to inform the host if initialization of ACMD41 is completed. Setting this bit to "1" indicates that the card is still initializing. Setting this bit to "0" indicates completion of initialization. The host repeatedly issues ACMD41 until this bit is set to "0". The card checks the HCS bit in the OCR only at the first ACMD41. While repeating ACMD41, the host shall not issue another command except CMD0.

After initialization is completed, the host should get CCS information in the response of CMD58. CCS is valid when the card accepted CMD8 and after the completion of initialization. CCS=1 means that the card is a High Capacity SD Memory Card. CCS=0 means that the card is a Standard Capacity SD Memory Card.