

Block Erasing, Reading, and Writing to the ADM106x EEPROM

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This application note describes how to block erase a single page (32 bytes) of the ADM106x EEPROM space, and block write to and block read that same page. For the purpose of this application note, the EEPROM range to be erased, written to, and read from is 0xF8; 0x00 to 0xF8; 0x1F.

BLOCK ERASING THE 0xF8; 0x00 TO 0xF8; 0x1F EEPROM SPACE

Follow these steps to block erase from the EEPROM space.

1. Write 0x05 to Register 0x90. This enables EEPROM block erase.
2. Follow the routine outlined below which lists all of the SMBus transactions.
 - Send slave address WRITE
 - Receive acknowledge
 - Send EEPROM upper address (0xF8)
 - Receive acknowledge
 - Send EEPROM lower address (0x00)
 - Receive acknowledge
 - Send STOP
 - Send slave address WRITE
 - Receive acknowledge
 - Send command code for a page erase (0xFE)
 - Receive acknowledge
 - Send STOP
3. Repeat the routine in Step 2 for each page of EEPROM to be erased. However, increment the lower address (send EEPROM lower address) by 32 bytes, for example, 0x20, 0x40, 0x60, 0x80, 0xA0, 0xC0, and 0xE0.
4. Write 0x01 to Register 0x90. This disables the EEPROM block erase.

BLOCK WRITING TO THE 0xF8; 0x00 TO 0xF8; 0x1F EEPROM SPACE

Follow these steps to block write to the EEPROM space.

1. Follow the routine below, which lists all of the transactions.
 - Send slave address WRITE
 - Receive acknowledge
 - Send EEPROM upper address (0xF8)
 - Receive acknowledge
 - Send EEPROM lower address (0x00)
 - Receive acknowledge
 - Send STOP
 - Send slave address WRITE
 - Receive acknowledge
 - Send command for block write (0xFC)
 - Receive acknowledge
 - Send number of bytes to write (0x20)
 - Receive acknowledge
 - Send 32 bytes of data
 - Receive acknowledge from device after every byte
 - Send STOP
2. Repeat the routine in Step 1 for each page of the EEPROM to be written to. However, increment the lower address (send EEPROM lower address) by 32 bytes, for example, 0x20, 0x40, 0x60, 0x80, 0xA0, 0xC0, and 0xE0.

BLOCK READING OF THE 0xF8; 0x00 TO 0xF8; 0x1F EEPROM SPACE

Follow these steps to block read from the EEPROM space.

1. Write 0x01 to Register 0x90. This enables a configuration register continuous update.
2. Follow the routine below, which lists all of the transactions.
 - Send slave address WRITE
 - Receive acknowledge
 - Send EEPROM upper address (0xF8)
 - Receive acknowledge
 - Send EEPROM lower address (0x00)
 - Receive acknowledge
 - Send STOP
 - Send slave address WRITE
 - Receive acknowledge
 - Send command for block read (0xFD)
 - Receive acknowledge
 - Send slave address READ
 - Receive acknowledge
 - Receive number of data bytes to read (0x20)
 - Send master acknowledge
 - Receive 32 bytes of data
 - Send master acknowledge after every byte received
 - Send STOP
3. Repeat the routine in Step 2 for each page of the EEPROM to be written to. However, increment the lower address (send EEPROM lower address) by 32 bytes, for example, 0x20, 0x40, 0x60, 0x80, 0xA0, 0xC0, and 0xE0.