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Erasing and Programming the Sequencing Engine EEPROM
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This application note describes how to block erase the sequencing engine EEPROM space (0xFA;0x00 to 0xFB;0xFF) and write to the space byte by byte.

ERASING 0xFA; 0x00–0xFB; 0xFF EEPROM SPACE

Erasing 0xFA; 0x00 to 0xFB; 0xFF EEPROM space is a three-step process.

1. Write 0x01 to Register 0x90. This is the memory update control register. Writing 0x01 enables the configuration register to update continuously. It is recommended that this bit be set during the entire read/write in-circuit testing (ICT) process.

2. Write 0x01 to Register 0x93. This halts the sequencing engine. This must be halted every time there is a read/write transaction to the sequencing engine EEPROM space.

3. Write 0x05 to Register 0x90. This enables EEPROM block erase functions.

4. Use the routine outlined below when erasing pages in any of the EEPROM space. The following section breaks down the SMBus transactions even further for page erase functions.

   - Send slave address.
   - Receive acknowledge.
   - Send EEPROM upper address (0xFA).
   - Receive acknowledge.
   - Send EEPROM lower address (0x00).
   - Receive acknowledge.
   - Send stop.
   - Send slave address.
   - Receive acknowledge.
   - Send command code for a page erase (0xFE.)
   - Receive acknowledge.
   - Send stop.

5. For each page to be erased, repeat the routine in Step 4 incrementing the lower address by 32 bytes, that is, 0x20, 0x40, 0x60, 0x80, 0xA0, 0xC0, and 0xE0.

6. When the eight pages of 0xFA are erased, repeat the routine in Step 4, incrementing the upper address to 0xFB. In addition, increment the lower address by 32 bytes, that is, 0x20, 0x40, 0x60, 0x80, 0xA0, 0xC0, and 0xE0.

7. Write 0x01 to Register 0x90. This disables the EEPROM block erase function.

WRITING TO 0xFA; 0x00–0xFB; 0xFF EEPROM SPACE
Byte Write

1. Use the following routine:

   - Send slave address.
   - Receive acknowledge.
   - Send EEPROM upper address (0xFA)
   - Receive acknowledge.
   - Send EEPROM lower address (0x00)
   - Receive acknowledge.
   - Send data.
   - Slave acknowledge.
   - Send stop.

2. Repeat the routine in Step 1, above, for all the 0xFA EEPROM space, but increment the lower address for each of the 255 bytes of data.

3. When all the EEPROM in the 0xFA address range has been written to, change 1e to 0xFB and repeat Step 1 and Step 2.

4. Write 0x00 to Register 0x93. This activates the sequencing engine for normal operation.

NOTES

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