AM335x Starter Kit ID Memory Programming

This page captures the AM335x Starter Kit ID Memory Programming Procedure.

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Prerequisites

Software

1. AM335x Starter Kit test Binaries v3.2 - For Production boards 1.2B (http://processors.wiki.ti.com/images/9/96/Sk3358_diag_bin_v3.2.zip)

```
a. MLO - Starterware bootloader
b. app - Test binary
c. SK3358ID.txt - EEPROM ID Memory configuration file
```

Hardware

1. USB 2.0 A to Micro-B Cable for the Device USB port(J3-USB0)

2. MicroSD Card Kingston/Sandisk 4GB/8GB FAT formatted as a bootable disk

** Note - Once you have formatted the MicroSD card, go into the Disk Management utility of your OS. The MicroSD card should be shown as having an "Active" partition. If not, set the MicroSD partition as "active". If this step is skipped, the system will not boot from the MicroSD card and the terminal will display repeating 'C' characters.*

3. Power supply output:5V 3A

EEPROM ID Memory layout

I2C ID Memory on SK3358, These are the contents of the I2C ID Memory

Name	Size (bytes)	Contents
Header	4	MSB 0xEE3355AA LSB
Board Name	8	Name for board in ASCII "A335X_SK" = AM335x TMDXEVM3358-SK Board
Version	4	Hardware version code for board in ASCII "1.0A" = rev. 01.0A
Serial Number	12	Serial number of the board. This is a 12 character string which is: WWYY4P19nnnn where: WW = 2 digit week of the year of production YY = 2 digit year of production nnnn = incrementing board number
Configuration Option	32	Codes to show the configuration setup on this board. For the available EVM's supported, the following codes are used: ASCII "SKU#00" = default configuration Remaining 26 bytes are reserved
Available	32720	Available space for other non-volatile codes/data

Important Note: SK3358 board version is 1.2B

EEPROM ID Memory Configuration File

Filename: SK3358ID.txt

File Contents:

```
AA5533EE
A335X_SK
1.2B
```

```
SKU#00
```

```
Important Note: No spaces/tabs in the beginning of each line text
```

EEPROM ID Memory Programming Steps

Steps to be done before starting the EEPROM ID Memory programming

1. Copy the AM335x Starter Kit test Binaries to the microSD card

2. Connect the following to the board before power up:

```
a. microSD card to the board
b. Connect the power cable
```

4. Power ON the board by pressing the SW5 button(in the bottom of the board near the microSD card) for 2-3 seconds.

5. Open the hyperterminal with 115200,8N1

6. For entering the EEPROM ID Memory programming mode the user need to select the **1-ID Memory Programming** option from the Main Menu.

```
A. If the SD card mount is successful and the ID Memory configuration file is available the ID Memory programming
will be automatic except for the Board serial number which need to be entered manually, Refer to the A. Automation procedure.
```

```
B. If the ID Memory configuration file is not available ID Memory programming fails and wait in the SD card mount prompt.
Refer to the B. Manual procedure below for the instructions for the Manual ID Memory programming.
```

A. Automated Procedure:

Board serial number should be entered by the user by manual key entry on the Console. The Board serial number should be taken from the Board label in the bottom side of the board.

```
************************************************************


    Main Menu - SK3358 Diagnostics Test v3.2

************************************************************


 1-ID Memory Programming
 2-Diagnostics
Enter your test option: 1

/> AA5533EE
A335X_SK
1.2B

SKU#00/>

ID Memory Contents Read from the config file from microSD

AA5533EE
A335X_SK
1.2B

SKU#00
 Header : AA5533EE
 WRITING HEADER IN ID-MEMORY  COMPLETED SUCCESSFULLY

 Now ACCESSING ID-MEMORY TO CHECK

 Header in ID-MEMORY LSB: 0xAA
 Header in ID-MEMORY    : 0x55
 Header in ID-MEMORY    : 0x33
 Header in ID-MEMORY MSB: 0xEE


 BOARD NAME :A335X_SK

 BOARD NAME IN ID-MEMORY:-A335X_SK


 BOARD VERSION NUMBER :  1.2B
 BOARD VERSION IN ID-MEMORY (LSB BYTE FIRST):-1.2B


 BOARD CONFIGURATION :SKU#00FFFFFFFFFFFFFFFFFFFFFFFF

 CONFI. IN MEMORY:-SKU#00FFFFFFFFFFFFFFFFFFFFFFFF



************************************************

 ENTER BOARD SERIAL NUMBER INFORMATION
12 BYTES AND PRESS ENTER:

 Example:'WWYY4P15NNNN'

         WW = 2 Digit Week Of Year Of Production
```

```
         YY = 2 Digit Year Of Production
          NNNN = Incrementing Board Number

  BOARD SERIAL NUMBER IN ID-MEMORY :-000000000000
  To edit type and enter

  Press 'ESC' key to exit at any time!!


  Serial Number :-22124P190109
  BOARD SERIAL NUMBER IN ID-MEMORY:-22124P190109


 ***********************************************

  TMDXEVM3358-SK Board


 ******* Reading From ID MEMORY  *****
  Header in ID-MEMORY LSB: 0xAA
  Header in ID-MEMORY    : 0x55
  Header in ID-MEMORY    : 0x33
  Header in ID-MEMORY MSB: 0xEE

  BOARD NAME IN ID-MEMORY : A335X_SK

  VERSION NUMBER :   1.2B

  SERIAL NUMBER  :   22124P190109

  Configurations :   SKU#00
 ***********************************************
```

B. Manual Procedure:

If the ID Memory configuration file(SK3358ID.txt) is not present in the SD Card, user has to press 'ESC' key after the command error to enter the Manual programming mode. The user need to enter the header information one by one manually, please refer to the log below.

```
************************************************************

     Main Menu - SK3358 Diagnostics Test v3.2

************************************************************


 1-ID Memory Programming
 2-Diagnostics
Enter your test option: 1

/> Command returned error code FR_NO_FILE
/>
MMC SD Mount Test Quit


ID Memory Contents Read from the config file from microSD

Wrong ID Memory Header/board name

Manual entry of ID Memory contents required
```

```
****************************************
      BOARD ID CONFIGURATION SETTINGS

****************************************


        TMDXEVM3358-SK Board



1. Show Configurations


2. Edit Configurations


3. Any Other Key to Cancel


Enter Your Choice :  2
1. Edit All
2. Header Only
3. Board Name
4. Board Version
5. Board Serial Number
6. Board Configuration
7. Any Other Key to cancel


Enter Your Choice :  1

READING HEADER INFORMATION
Header in ID-MEMORY LSB: 0xAA
Header in ID-MEMORY    : 0x55
Header in ID-MEMORY    : 0x33
Header in ID-MEMORY MSB: 0xEE
```

```
To edit type HEADER and enter

Press 'ESC' key to exit at any time!!
****************************************

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ENTER HEADER INFO 4 HEX BYTES (e.g  LSB AA5533EE MSB):  AA5533EE
Header : AA5533EE
WRITING HEADER IN ID-MEMORY  COMPLETED SUCCESSFULLY

Now ACCESSING ID-MEMORY TO CHECK

Header in ID-MEMORY LSB: 0xAA
Header in ID-MEMORY    : 0x55
Header in ID-MEMORY    : 0x33
Header in ID-MEMORY MSB: 0xEE



****************************************

Examples:-

For SK3358 IN ASCII     A335x_SK

****************************************

BOARD NAME IN ID-MEMORY :-A335X_SK


To edit type and enter

Press 'ESC' key to exit at any time!!

ENTER BOARD NAME : 8 BYTES AND ENTER :
****************************************


BOARD NAME  :-A335x_SK
BOARD NAME :A335X_SK

BOARD NAME IN ID-MEMORY:-A335X_SK



****************************************

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Version information 4 byte  ASCII '1.0A' = REV. 01.0A

BOARD VERSION IN ID-MEMORY (LSB BYTE FIRST):-1.2A


To edit type and enter

Press 'ESC' key to exit at any time!!
VERSION : 1.2B
BOARD VERSION NUMBER :  1.2B
BOARD VERSION IN ID-MEMORY (LSB BYTE FIRST):-1.2B



************************************************

ENTER BOARD SERIAL NUMBER INFORMATION
12 BYTES AND PRESS ENTER:

Example:'WWYY4P15NNNN'

        WW = 2 Digit Week Of Year Of Production
        YY = 2 Digit Year Of Production
        NNNN = Incrementing Board Number

BOARD SERIAL NUMBER IN ID-MEMORY :-22124P190109
To edit type and enter

Press 'ESC' key to exit at any time!!


Serial Number :-22124P190109
BOARD SERIAL NUMBER IN ID-MEMORY:-22124P190109



************************************************

ENTER BOARD CONFIGURATION INFORMATION 32 BYTES

The following codes are used:
ASCII 'SKU#00' = SK3358
CONFI. IN MEMORY(LSB BYTE FIRST)

 : SKU#00FFFFFFFFFFFFFFFFFFFFFFFFFFFF
To edit type and enter

Press 'ESC' key to exit at any time!!


Configuration :-SKU#00
BOARD CONFIGURATION :SKU#00FFFFFFFFFFFFFFFFFFFFFFFFFFFF

CONFI. IN MEMORY:-SKU#00FFFFFFFFFFFFFFFFFFFFFFFFFFFF
```

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1. switchcategory:MultiCore=

Keystone=	C2000=*For technical support on the C2000 please*	DaVinci=*For technical support on DaVincoplease*	MSP430=*For technical support on MSP430*	OMAP35x=*For technical support on OMAP please*	OMAPL1=*For technical support on OMAP please*	MAVRK=*For technical support on MAVRK*	*For tech please p questior*
▪ For technical support on MultiCore devices,							*http://e2*

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- For questions related to the BIOS MultiCore SDK (MCSDK), please use the BIOS Forum

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