This is a demonstration program to decode and display jpeg or bmp images from SD card.

Software:

Microchip MPLAB IDE version 8.63

Installation path at C:\Program Files\Microchip

C32 Compiler versions 1.12

Installation path at C:\Program Files\Microchip\mplabc32

Microchip Graphics library version 2.00

The source code of this graphics library has been included in the project under the Microchip folder.

Microchip IDE and C32 complier can be downloaded from Microchip[i] web site.

Hardware:

SSD1963EVK R3B[ii] as the display controller

MCU host can be PIC24/32 EVK RD4[iii] with PIC32MX360F512L option -or-

Multimedia Evaluation Kit Revision 1A[iv] (MMEVK R1A) with Microchip PIC32GP SK [v]stacked (DM320001).

A microSD card of 2GB or smaller. Source of jpeg and bmp pictures is included in the project folder under the directory \pictures. Copy the pictures to a microSD card and plug in the socket.

There are three choices on display panel:

4.3" TFT 480x272 (TY430TFT480272[vi]), 5" TFT 800x480 (TY500TFT800480), or 7" TFT 800x480 (TY700TFT800480[vii])

Choice of TFT panel is selected at compile time under individual hardware profile.

First, pick the appropriate hardware combination from HardwareProfile.h. Pick it from the project panel under Microchip MPLAB IDE.

If it is SSD1963EVK R3B + PIC24/32 EVK RD4 with PIC32MX360F512L option

#include "Alternative Configurations\HardwareProfile_PIC32MX_EVK_RD4_16PMP_SSD1963EVK_R3B.h"

If it is SSD1963EVK R3B + MMEVK R1A with Microchip PIC32GP SK on board

#include "Alternative Configurations\HardwareProfile_PIC32_STK_ON_PIC32STKSSD1963EVKR1A.h"

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Second, select the panel size to use.

Under both hardware profiles, there are compile time directives:

//#define DISPLAY_PANEL TY700TFT800480

#define DISPLAY_PANEL TY430TFT480272

//#define DISPLAY_PANEL TY500TFT800480

Selective only one panel and Build All from Project->Build All

Results:

Figure 1   Development platform PIC23/32 EVK RD4 with PIC32MX360F512L MCU option

Figure 2   Development platform MMEVK R1A with Microchip PIC32GP SK on board

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Hyperlink

[i] http://www.microchip.com/

[ii] http://www.techtoys.com.hk/Displays/SSD1963EvalRev3B/SSD1963%20Eval%20Board%20Rev3B.htm

[iii] http://www.techtoys.com.hk/PIC_boards/PIC2432EVK-RD4/PIC2432%20EVK%20RD4.htm

[iv] http://www.techtoys.com.hk/PIC_boards/PIC32STK%20SSD1963%20EVK/PIC32STK%20SSD1963%20EVK%20R1A.htm

[v] http://www.microchip.com/stellent/idcplg?IdcService=SS_GET_PAGE&nodeId=2615&dDocName=en532453

[vi] http://www.techtoys.com.hk/Displays/TY430TFT480272/TY430TFT480272Rev03.htm

[vii] http://www.techtoys.com.hk/Displays/TY700TFT800480/TY700TFT800480Rev02.htm

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