

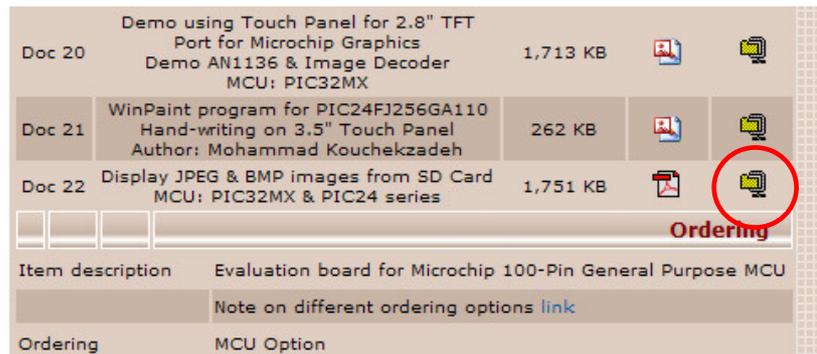
Using Microchip Graphics Library version 1.60

BMP and JPEG images display from SD Card

1 How to use this demo:

From our web site under the following address, download the compressed file with full source code.

http://www.techtoys.com.hk/PIC_boards/PIC24-Eval-C/PIC24-Eval-RevC.htm



Doc ID	Document Name	Size	Download Icon	Thumbnail Icon
Doc 20	Demo using Touch Panel for 2.8" TFT Port for Microchip Graphics Demo AN1136 & Image Decoder MCU: PIC32MX	1,713 KB		
Doc 21	WinPaint program for PIC24FJ256GA110 Hand-writing on 3.5" Touch Panel Author: Mohammad Kouchekzadeh	262 KB		
Doc 22	Display JPEG & BMP images from SD Card MCU: PIC32MX & PIC24 series	1,751 KB		

Ordering

Item description	Evaluation board for Microchip 100-Pin General Purpose MCU
	Note on different ordering options link
Ordering	MCU Option

Development environment: MPLAB IDE v8.20
C32 compiler version: MPLABC32-v105-Evaluation
C30 v3.11b Student Edition
Microchip Graphics Library v1.60

Unzip the project to any folder of your own choice. You may need to download WinRAR from www.Download.com to unzip this project.

After unzip, you will get two new folders.

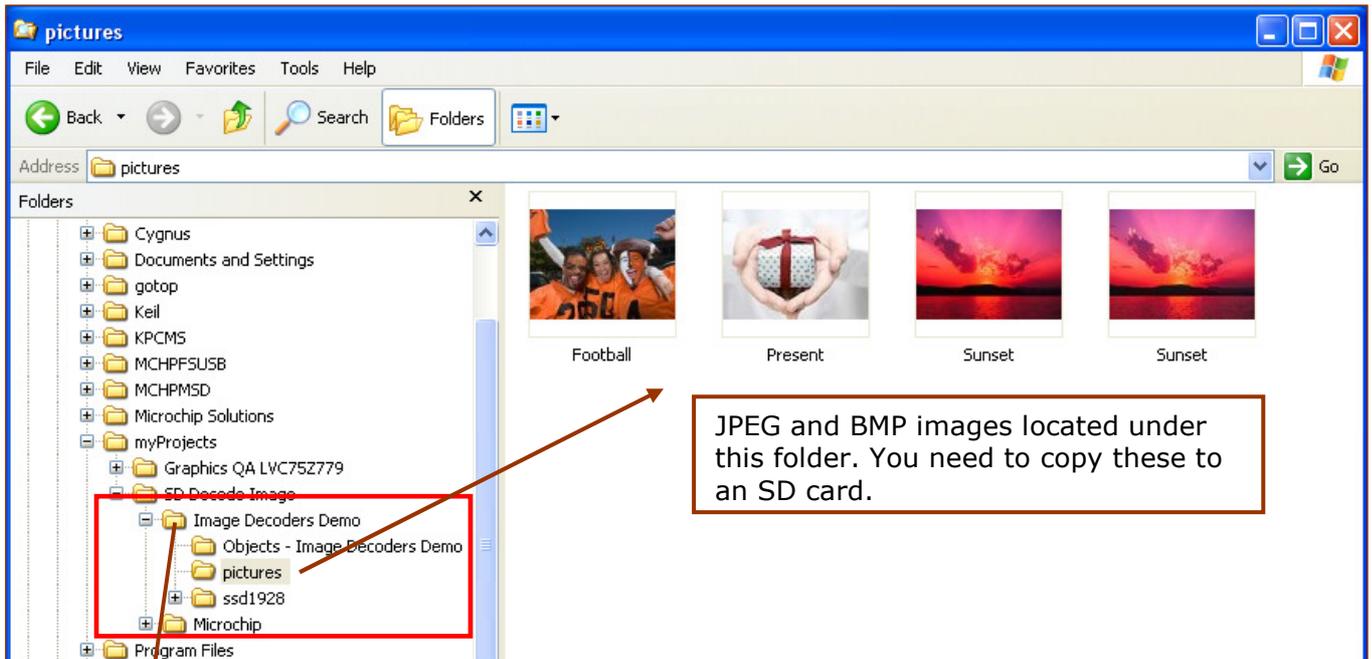
1. C:\myProjects\SD Decode Image\Image Decoders Demo
This folder contains all project workspaces, ssd1928/ILI9320/ILI9325 folders which contain the drivers for SSD1928/ILI9320/ILI9325. **All pictures used in this demo are stored under ..\SD Decode Image\Image Decoders Demo\pictures. You will need these images for your SD card/microSD card.**
2. C:\myProjects\Microchip
This folder contains the original Microchip Graphics Library v1.60 and the MDD File System

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Every project is a self-contained project. That means you don't need to keep track of every little change to the original graphics library file inside the Microchip folder (and sub-folders). It is because we will have to modify some of the source code of the graphics library, e.g. GOL.c and GOL.h and others for development of custom widgets or any particular application.

The downside is that, we need to keep multiple copies of the Graphics Library versions.



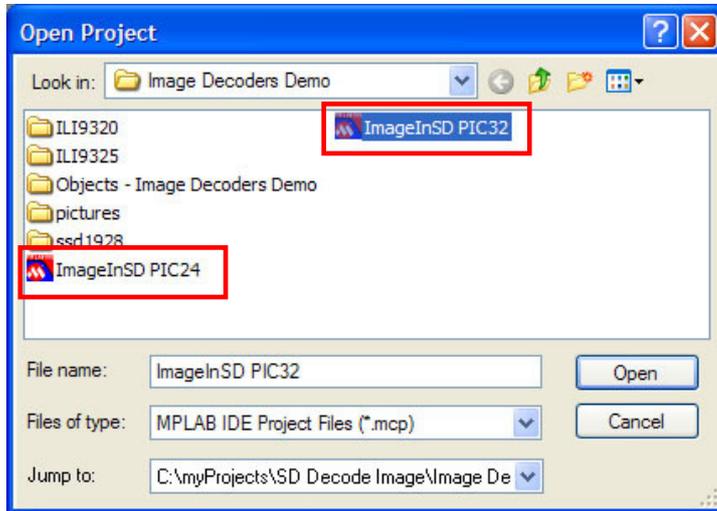
Project workspace is located under Image Decoders Demo folder

JPEG and BMP images located under this folder. You need to copy these to an SD card.

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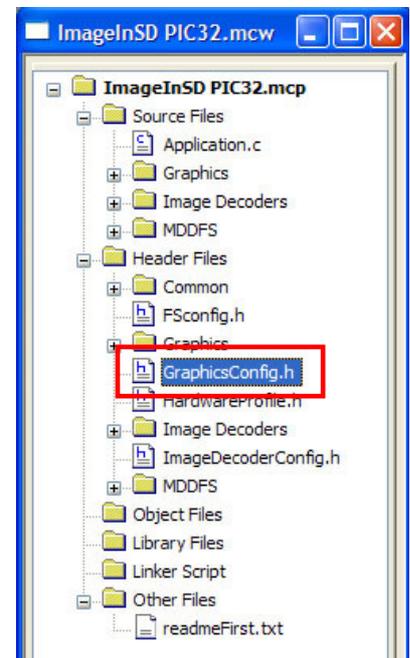
Launch MPLAB, under *Project* → *Open*, browse to C:\myProjects\SD Decode Image\Image Decoders Demo, select the PIC model you are using. Workspace ImageInSD PIC32.mcp for PIC32MX series, and ImageInSD PIC24.mcp for PIC24FJ series.



Under GraphicsConfig.h, select the correct model for your choice of LCD display. Just comment the unwanted display controller. In this example, ILI9325 for 2.8" TFT LCD module is required, therefore ILI9325 left for compile.

```
///define DISPLAY_CONTROLLER  
#define DISPLAY_CONTROLLER  
///define DISPLAY_CONTROLLER
```

```
SSD1928  
ILI9325  
ILI9320
```



Under *Project* → *Build All* to generate the hex code required. The step remains is to debug or hex code download to your target development system by PICKit2, ICD2/3.

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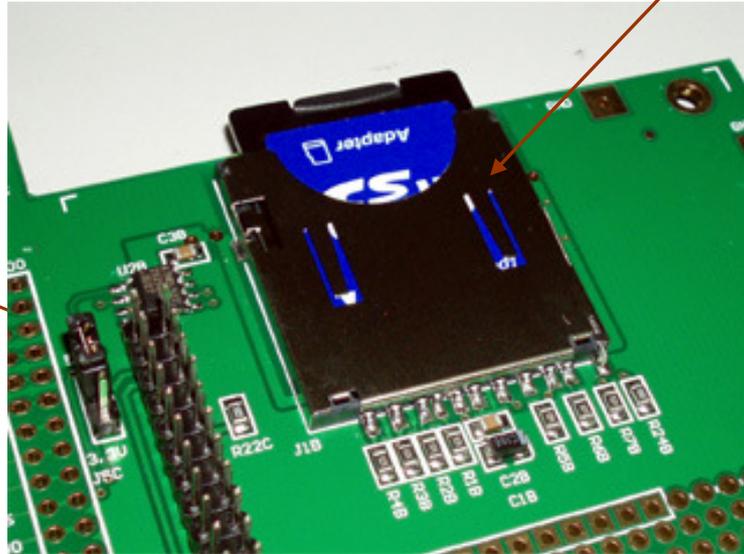
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2 This project demonstrates the following features:

- (1) Microchip Memory Disk Drive File System. Three media type is supported: SD card, CF card, and USB interface. We are using the SD card connector standard with every PIC24/32-Eval Board C2.

Short J5C to :

5V for LVC75Z779
3V for TY240
none for TY280T



Only SD cards or microSD cards smaller than 2GB capacity has been tested. Four cards attempted. **Cards with 64MB, 2GB SD Card, and a microSD 1GB all working.** Unfortunately, nothing showed on display with 4GB SD card. Because a SD card with capacity larger than 2GB differentiates from a 4GB card (SDHC), I just wonder if the current MDD FS works with SDHC (*need further verification*).



64 MB SD card of FAT format (OK)

1GB microSD of FAT32 format (OK)

4GB microSD of FAT32 format (not working)

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- (2) Image decode by using a pointer to image files (bmp, jpeg, or gif) located in SD card. This is done by the following functions:

```
...  
pointer=FSfopen("FOOTBALL.BMP", "r");  
ImageFullScreenDecode(pointer, IMG_BMP, NULL, PixelOutput);  
...
```

It is advised to read the Image Decoders section in the Microchip Graphics Library.htm help file for full details.

Running this demo give you a colorful result as below screen shoots for 3.5" TFT LCD module.

