



Website: www.displaytech-us.com

Embedded Demonstration Board Product Specification

EMB035TFTDEMO

3.5" Color TFT Display Demonstration Board

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1. Introduction

The Displaytech EMB035TFTDEMO is a demonstration and development board for the Displaytech DT035TFT 3.5" color TFT display. The display is controlled by a Microchip PIC24FJ256DA210 microcontroller with integrated graphics controller. Furthermore, the demonstration board includes on-board external SRAM for extra frame-buffer memory as well as SPI flash for storing fonts and images.

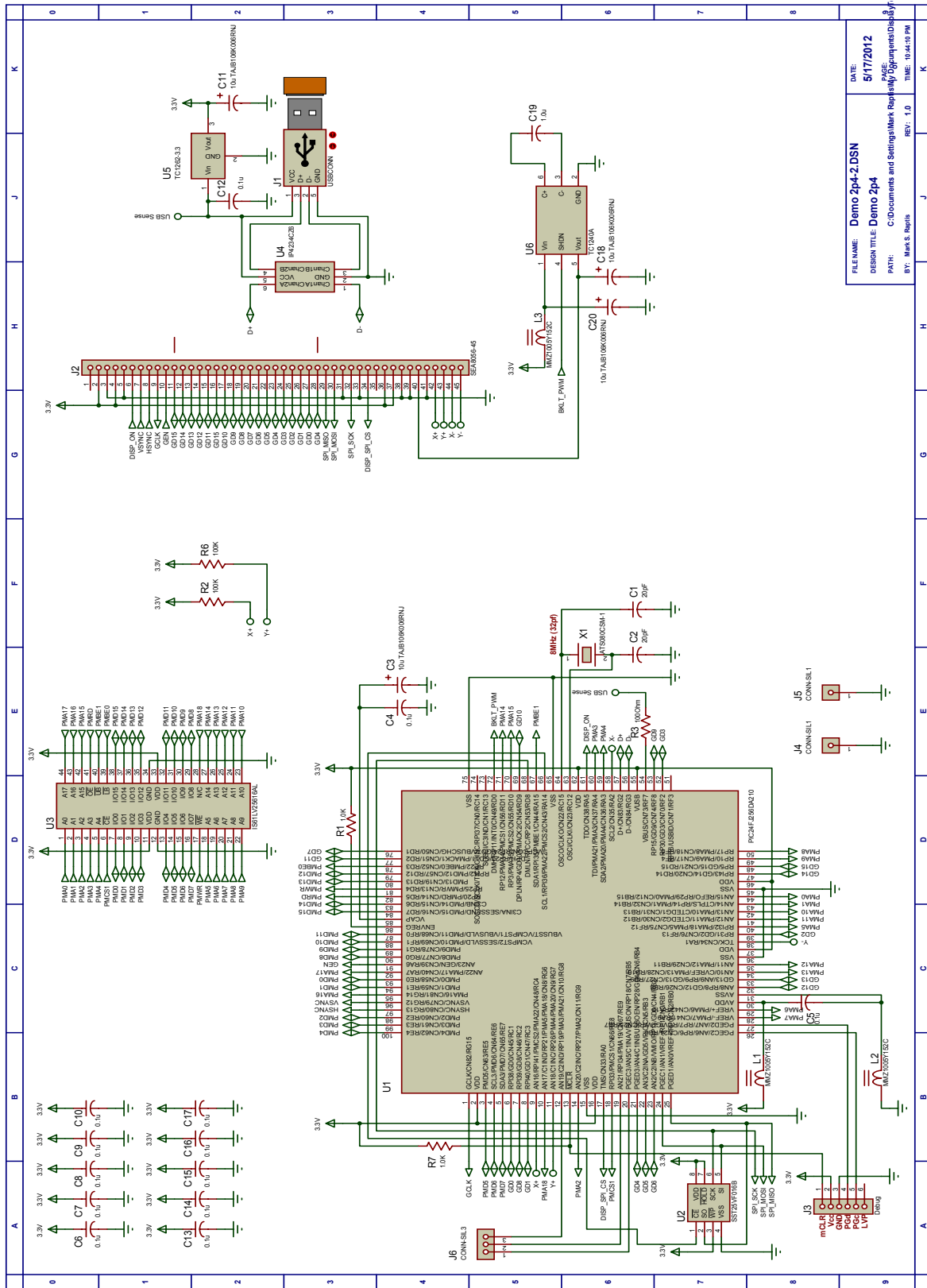
2. General Specifications

Item	Specification	Unit
LCD Resolution (Horizontal)	320	Line
LCD Resolution (Vertical)	240	Line
PCB Size (Horizontal)	3.5	Inch
PCB Size (Vertical)	2.5	Inch
Interface	USB and PICKit	---
TFT Driver IC	NT39016D	---
Microcontroller/Graphics Controller	PIC24FJ256DA210	---
SRAM Size	512	KB
External SPI Flash Size	2	MB
Power Supply	5 (from USB)	V

Technical drawing of a 3.5 inch TFT LCD module. The drawing includes three views: a top view, a side view, and a bottom view. The top view shows the overall dimensions of the module, including the display area, bezel, and mounting holes. The side view shows the thickness of the module and the location of the mounting holes. The bottom view shows the location of the mounting holes and the display area. The drawing includes dimensions in millimeters (mm) and inches (in). The dimensions are as follows:

- Top View:
 - Overall width: 88.90±0.50 (PCB)
 - Overall height: 76.90 (BL)
 - Display area width: 76.50 (TP)
 - Display area height: 72.08 (TP V.A.)
 - Mounting hole diameter: 71.08 (TP A.A.)
 - Mounting hole spacing: 70.08 (A.A.)
 - Mounting hole offset: 6.00±0.30
 - Mounting hole diameter: 6.20±0.30
 - Mounting hole offset: 6.41±0.30
 - Mounting hole diameter: 8.91±0.30
 - Mounting hole offset: 9.41±0.30
 - Mounting hole diameter: 6.17±0.30
 - Mounting hole offset: 6.37±0.30
 - Mounting hole diameter: 2.12±0.30
 - Mounting hole offset: 2.62±0.30
 - Mounting hole diameter: 3.12±0.30
 - Mounting hole offset: 3.12±0.30
- Side View:
 - Module thickness: 4.35±0.30
 - Mounting hole offset: 1.60
 - Mounting hole offset: 4.20±0.50
 - Mounting hole offset: 5.00 MAX.
- Bottom View:
 - Mounting hole offset: 2.58±0.50
 - Mounting hole offset: 38.10±0.50
 - Mounting hole offset: 25.40±0.50
 - Mounting hole offset: 83.69±0.50
 - Mounting hole offset: 4.75 4H
 - Mounting hole offset: 57.93±0.50
 - Mounting hole offset: 3.80±0.30
 - Mounting hole offset: 81.30±0.30
 - Mounting hole offset: 9.42±0.50
 - Mounting hole offset: 3.82±0.30
 - Mounting hole offset: 47.92±0.50
 - Mounting hole offset: 27.94±0.50
 - Mounting hole offset: 17.02±0.50
 - Mounting hole offset: 68.59±0.30
 - Mounting hole offset: 2.54x5=12.70
 - Mounting hole offset: 2.54x2=5.08

4. Schematic



FILE NAME:	Demo 2p4-2.DSN	DATE:	5/17/2012
DESIGN TITLE:	Demo 2p4	PAGE:	1
PATH:	C:\Documents and Settings\Mark Rupp\My Documents\Display	REV:	1.0
BY:	Mark S. Rupp	TIME:	19:44:19 PM

5. Example Firmware

Example firmware running the Microchip Graphics Object Layer demonstration can be obtained from the Displaytech forum, at:

https://www.dropbox.com/s/1h2bm62ogzsqe3x/SEA_EMB035TFTDEMO_SW_SRC_REV1.0.zip

Note: Microchip's MPLABX IDE and X16 compiler will be required to run the demo. Both are available at <http://www.microchip.com>.

5.1. Programming

To program the EMB035TFTDEMO, connect a Microchip Pickit3 programmer (available at <http://www.microchipdirect.com>) to the 6-pin header and the supplied USB cable to the USB-Mini connector.

Open the firmware package in MPLAB and build the project in release mode. Select the PICKit3 as the programmer and program the device.

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