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4D SYSTEMS
TURNING TECHNOLOGY INTO ART

4DLCD-FT843-Breakout

For the 4D Systems 4DLCD-FT843 Display

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Document Revision: 1.0

Contents

1. Description

The 4DLCD-FT843-Breakout is a simple breakout module designed specifically to interface the 4D Systems 4DLCD-FT843 Display (see 4D Systems' website) directly with a host. The breakout module provides the Host with a SPI Display powered by the FTDI FT800 Video Engine. The FT800 Video Engine features EVE (Embedded Video Engine), which takes care of many of the graphics functions from the Host.

The Breakout Module features a 10 way FPC connection to attach the 4DLCD-FT843 Display, along with a 10 way 2.54mm pitch male pin header to attach directly to a Host PCB or onto a Breadboard for prototyping.

Communication between the Host and the 4DLCD-FT843 display (via this Breakout) is by the SPI Bus, along with 4 digitals.
The Chip Select (CS) for the micro-SD card, the Chip Select (CS) for the Display, the Power Down (PD) for the Display, and the Host Interrupt (INT) for the Display, are the 4 digitals. The two CS pins are required to be used for the micro-SD and Display, and the PD and INT pins are optional but may be desired for some functionality.

The 4DLCD-FT843 also breaks out the Audio from the FT800 Video Engine, which can then be connected to an external filter and amplifier circuit if the user wishes to take advantage of this feature.

Power for the 4DLCD-FT843 Display comes via this Breakout board, and should be between 3.0 and 3.6V, Nominal 3.3V.

All signals from the 4DLCD-FT843 Display are 3.3V and are NOT 5V tolerant.

For details on each of the pins and their descriptions, please refer to the 4DLCD-FT843 Display Datasheet.

All software support for the 4DLCD-FT843 Display and FT800 Video Engine is provided directly from FTDI, who also write and supply the library and demos for this shield/display combo. Hardware support is provided by 4D Systems.

4DLCD-FT843 Breakout Module Top
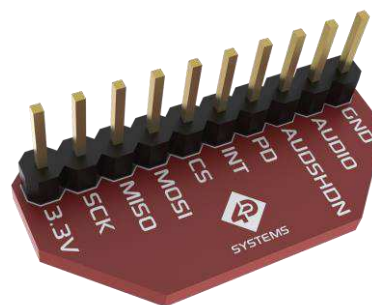
4DLCD-FT843 Breakout Module Bottom

2. Configuration Options

2.1. Display Flex Connector (FPC)

FPC is a 10 way Bottom Contact FPC connector, for connecting directly to the 4DLCD-FT843 displays flex. When connecting the display flex to the FPC connector, please ensure the display flex is located as far into the connector as possible, however ensure this is done with care as to not damage the delicate display flex.

NOTE: Please ensure the component section of the flex is not handled excessively and is not bent nor twisted, otherwise damage may result and the display will no longer function correctly. The thin portion of the flex which is used to connect to the ADAM Shield should also be handled with care, and not subjected to strain or excessive twisting and bending else damage could occur.

2.2. 10 way 2.54mm pitch Male Pin Header

The 10 way 2.54mm pitch Male Pin Header is designed to plug directly into a Host PCB, or into a breadboard/prototyping board. For a description of each of the pinouts, please refer to the 4DLCD-FT843 Display Datasheet which explains them in full, which is available from the products page on the 4D Systems' website, www.4dsystems.com.au
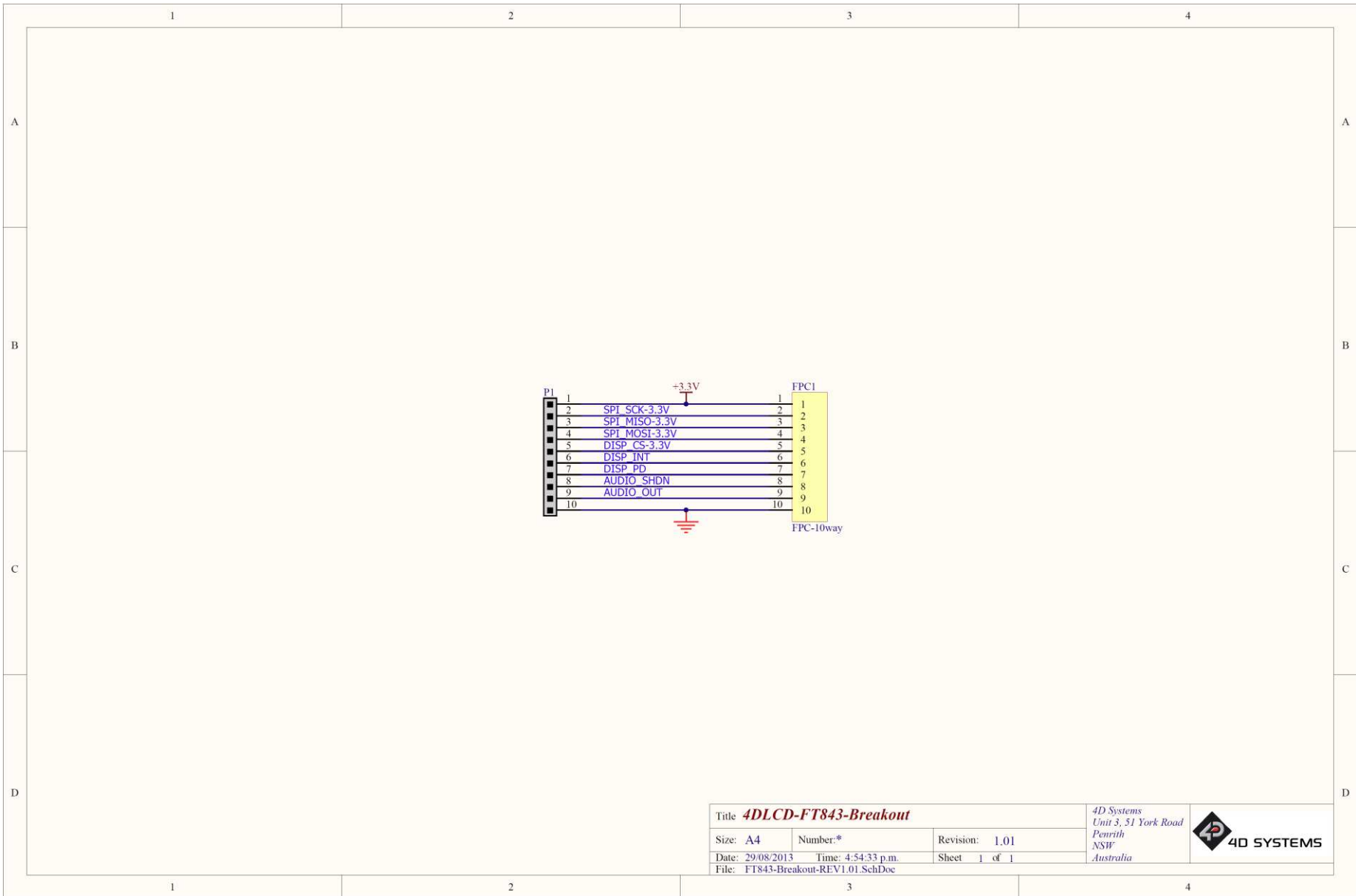
3. Software Support

All software relating to the 4DLCD-FT843 Display are supplied from FTDI Directly, and are not created nor maintained by 4D Systems.
4D Systems has created the 4DLCD-FT843-Breakout Module and the 4DLCD-FT843 Display hardware, however all software relating to these products are provided by FTDI. For any software support relating to these products, please refer to the FTDI Support Forum directly. http://www.ftdichip.com/FTContact.htm

4. Hardware Support

The 4DLCD-FT843 Display and the 4DLCD-FT843-Breakout hardware are supported by 4D Systems. Any issues regarding the hardware itself, please contact the 4D Systems Support team via the 4D Systems website, or on the 4D Systems Forum (also accessible from the 4D Systems website). www.4dsystems.com.au

5. Schematic Diagram

	1	2	3	4

+3.3V

P1
FPC1

1		1	1
2	SPI_SCK-3.3V	2	2
3	SPI_MISO-3.3V	3	3
4	SPI_MOSI-3.3V	4	4
5	DISP_CS-3.3V	5	5
6	DISP_INT	6	6
7	DISP_PD	7	7
8	AUDIO_SHDN	8	8
9	AUDIO_OUT	9	9
10		10	10

FPC-10way

Title	**4DLCD-FT843-Breakout**			4D Systems
Size: A4	Number:*		Revision: 1.01	Unit 3, 51 York Road Penrith NSW Australia
Date: 29/08/2013	Time: 4:54:33 p.m.		Sheet 1 of 1	
File: FT843-Breakout-REV1.01.SchDoc				

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6. Mechanical Dimensions

26.5mm

12mm

6mm

6mm

8mm

5.5mm

10.3mm

9.6mm

2.1mm

2.54mm

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS
SURFACE FINISH:
TOLERANCES: 0.2mm
LINEAR:
ANGULAR:

TITLE:

4DLCD-FT843-Breakout

A3

	NAME	DATE
DRAWN	JB	30/08/2013
CHK'D		
APPV'D		

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DO NOT SCALE DRAWING

REVISION 1.01

SCALE: 2:1

SHEET 1 OF 1
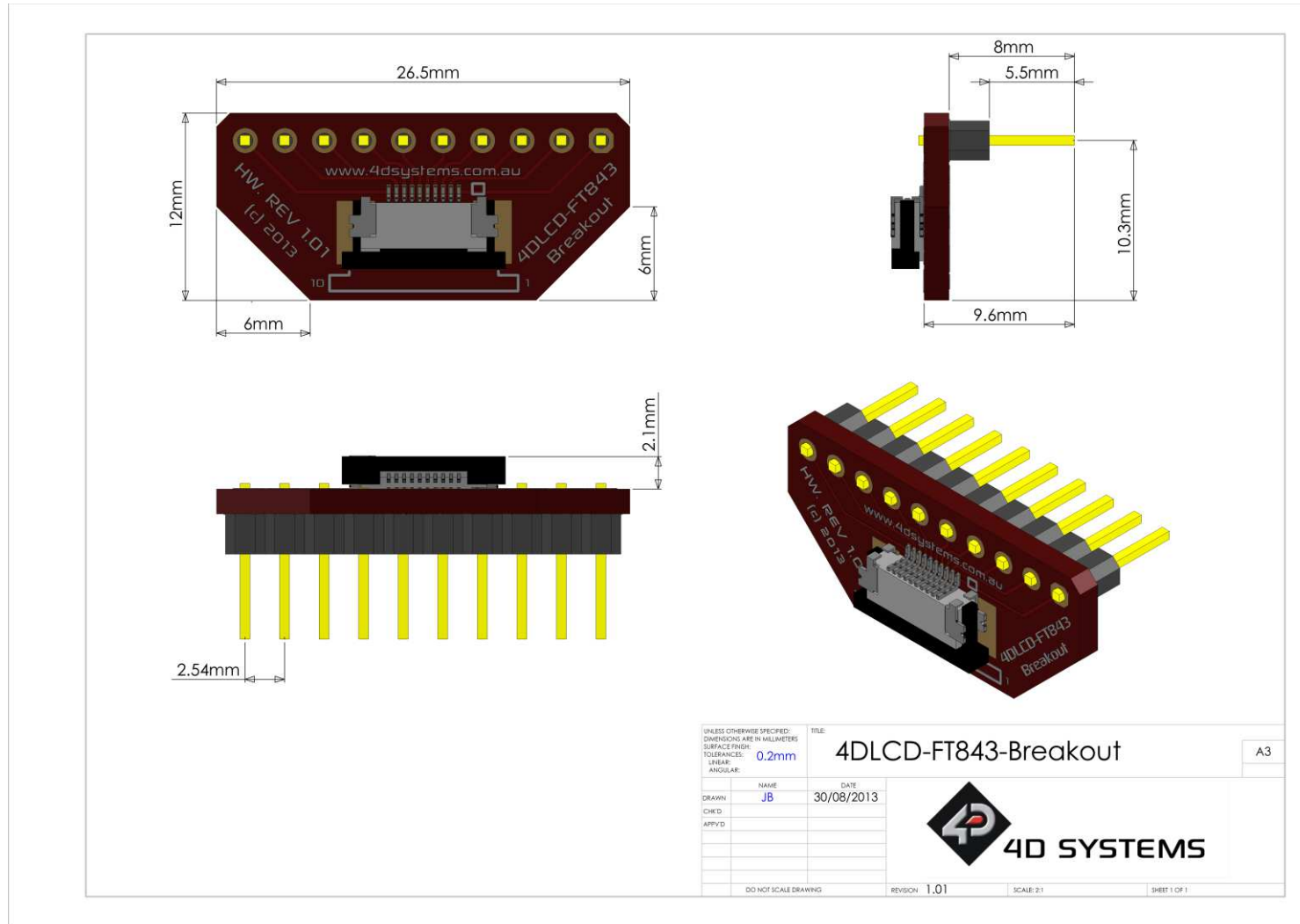
7. Specifications and Ratings

RECOMMENDED OPERATING CONDITIONS					
Parameter	**Conditions**	**Min**	**Typ**	**Max**	**Units**
Supply Voltage (VCC)		3.0	--	3.6	V
Operating Temperature		-10	--	+70	°C

ORDERING INFORMATION
Order Code: 4DLCD-FT843-Breakout **Packaging:** Module sealed in antistatic foam padded 4D Systems Box

4DLCD-FT843 Breakout Module

4DLCD-FT843 Breakout Module *(vertical sidebar text)*

8. Legal Notice

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9. Contact Information

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