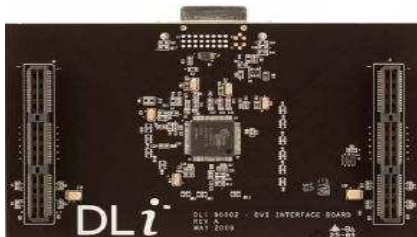# D2D DVI Interface Expansion

Digital Light Innovations is the world leader in DLP® Discovery™ control & interface board design. In addition to designing the last few generations of Texas Instruments' Discovery™ Controller Boards, we created the D2D DVI Interface Expansion Board. The D2D (DVI to DMD) is intended for users that require a high brightness, intuitive grayscale-enabled DVI interface for the DL*i*41xx & Discovery™ D4100 platforms.

D2D DVI Interface Expansion Board

The D2D Expansion is a product unique to DL*i* and it expands the capability of the versatile Discovery™ D4100 Developer Kits by enabling users to stream video to the DMD via a PC or device with DVI-D. In addition to streaming video to the DMD, the D2D Expansion is designed to give users the capability to create patterns and images in real time using OpenGL, DirectX, or Flash. The source video can be supplied by a PC, DVD Player, etc. with DVI output using any number of methods: creating a custom video or AVI, Flash, DirectX or OpenGL rendering, or image "slideshows," etc.

D2D Daughter Board (Top View)

D2D Daughter Board (Bottom View)

The D2D daughter board connects to the DL*i*4110 / D4100 controller board via the two on-board EXP Connectors, enabling plug and play functionality. The D2D fits into the EXP Connectors so that the DVI end is not directly under the controller board. For users expanding an existing D4100 Kit, the D2D can be added and installed at any time without having to make hardware modifications or reprogram the controller board.
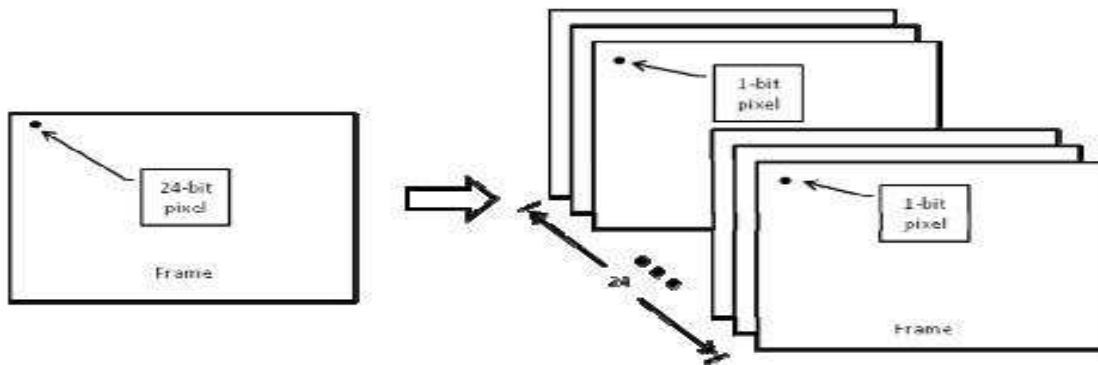

EXP Connector

The D2D also expands the capability of the D4100 by adding 2GB DDR2 SDRAM to the controller board and providing users the functionality to stream XGA & 1080p images at 60Hz with 8-bit grayscale in two different modes: **True 8-bit and Luminance**.
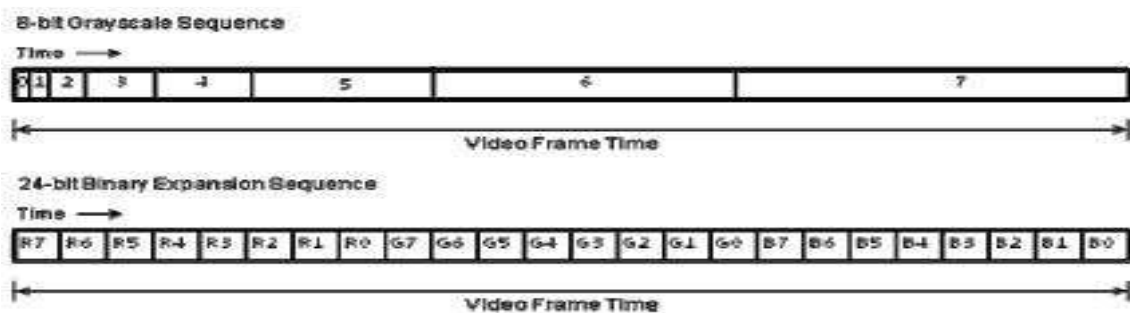
D2D DVI Interface Expansion

D2D Enabled 8-bit grayscale

One of the most unique features of the D2D is the 24-bit Binary Expansion Mode, which takes a 24-bit color frame and converts it into 24 different binary frames, allowing for up to 1,440 Hz.

24-bit Expansion Mode

8-bit Grayscale vs 24-bit Binary Expansion

The D2D comes with the D2D Manager Software and Graphical User Interface (GUI), which allows users to easily switch between 3 different modes: Binary, 8-bit Grayscale, and 24-bit Expansion. The D2D Manager software will configure the DL*i*4110 / D4100 FPGA for standard binary, 60Hz grayscale, or binary 24-bit Expansion Mode.

D2D DVI Interface Expansion

D2D Manager Software

DL*i*4110 Developer's Kit Bundle

The DLi4110 Bundle Kit was created in response to customer needs and growing DLP trends. The DL*i*4110 is a Developer's Kit Bundle that includes the Discovery™ D4100 + D2D Interface Expansion packaged as a price-optimized, turn-key solution.

(DMD not shown)

DL*i*4110 0.95" 1080p Bundle Kit

The DMD can be specified for operation with UV or Visible wavelengths and comes in 0.7″ XGA, 0.95″ 1080p, and 0.96″ WUXGA resolutions.
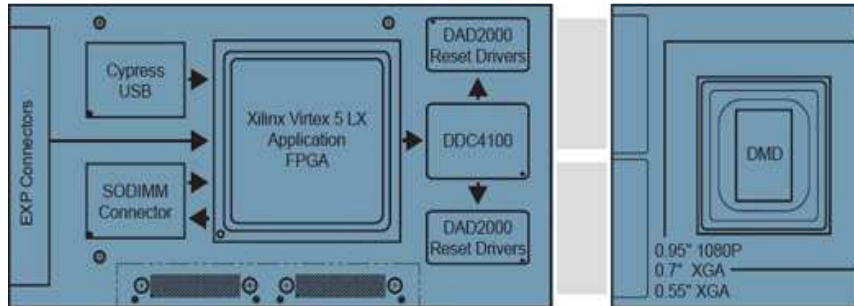

0.7" XGA (VIS / UV)	0.95" 1080p (UV / VIS)	0.96" WUXGA (VIS)
1024 x 768	1920 x 1080	1920 x 1200

D2D DVI Interface Expansion

DL*i*4110 Controller Board Layout

Call or Email for More Information:

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