



# DLP® Discovery™ 4100

The DLP Discovery 4100 is the latest in a series of spatial light modulation development platforms from Texas Instruments' DLP products. Users of the DLP Discovery 4100 platform have the ability to manipulate light with extremely high performance and high resolution.

## DLP® Discovery™ chipset

At the heart of the DLP Discovery 4100 is the DLP chipset from Texas Instruments, which consists of an optical semiconductor module that allows developers to manipulate light digitally. When integrated with a light source and optics, this unique technology creates binary light patterns with speed, precision and efficiency far surpassing that of other spatial light modulators.

- DLP Chip (one of the following) –
  - 0.95" 1080p 2xLVDS (Visible & UV)
  - 0.7" XGA 2xLVDS (Visible & UV & NIR)
  - 0.55" XGA 2xLVDS
- DDC4100 digital controller
- DAD2000 DLP chipset power and reset driver

## DLP® Discovery™ 4100 kit

The DLP Discovery 4100 kit comprises a:

- Remote DLP chipset board
- Controller board containing the DLP chip reset-driver, digital controller and Xilinx Virtex 5 FPGA
- Flexible interface cable that connects the DLP chip board to the controller board
- Power Supply

This flexible kit allows users the freedom to develop almost any application by driving the DLP Chip using a variety of different communication interfaces, such as:

- USB 2.0
- Avent EXP
- 64-bit DDR2 SODIMM DRAM
- Many multipurpose I/O

## Kit dimensions

- Controller board:
  - 190 mm (7.5 inches) x 98.5 mm (3.9 inches)
- DLP chipset remote board:
  - 101.6 mm (4 inches) x 82.6 mm (3.75 inches)

For more information about the DLP Discovery 4100 platform, visit [www.dlpdiscovery.com](http://www.dlpdiscovery.com).

Discovery 4100 DMD features	Array	Patters/second	Data rate (Gbs)	Mirror pitch	
+/-12° operation					
400 MHz LVDS interface	.95" 1080	1920 x 1080	23,148	48	10.8 μm
Fill factor > 91 %	.7" XGA	1024 x 768	32,552	25.6	13.6 μm
	.55" XGA	1024 x 768	32,552	25.6	10.8 μm

## ViALUX

The ViALUX team has a long-term experience in optical engineering and provides comprehensive consultation and product support for emerging DLP applications, including all aspects of high-speed control, solid-state light sources and light engine design. ViALUX developed an LED-based optical module for instant use of the DLP Discovery starter kit boards as well as ALP controller boards that are available for each generation of Discovery kits. In addition to the ALP product line, ViALUX supplies the full spectrum of DLP Discovery products and offers customized software and hardware development based on Discovery chipsets.