

Digital Video Pattern Generator

FPDDrive



ELDIM FPDDrive device generates digital video graphic patterns with fully programmable timing and resolution. It has been targetted for evaluation and integration tests of display modules, including LCD, PDP and LED. Designed as a user-friendly, PC-based system, FPDDrive is a complete and upgradable costeffective solution.

FEATURES

TTL, LVDS or DVI 1.0 interfaces

1 to 3 options possibility

Pixel rate up to 320 MHz

DVI x2 link or TTL x2 link (224 MHz LVDS x2 link)

Display size up to UXGAW

(1900 x 1200)

USB 2.0 Plug & Play interface

Quick and easy programming

standard or user design pattern and timing library

Easy integration within any existing measurement process

automatic sequencing or manual control modes through ActiveX interface

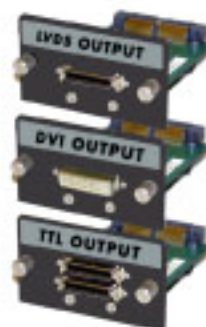
ADVANCED COLORIMETRY by  **ELDIM**

FPDDrive configuration

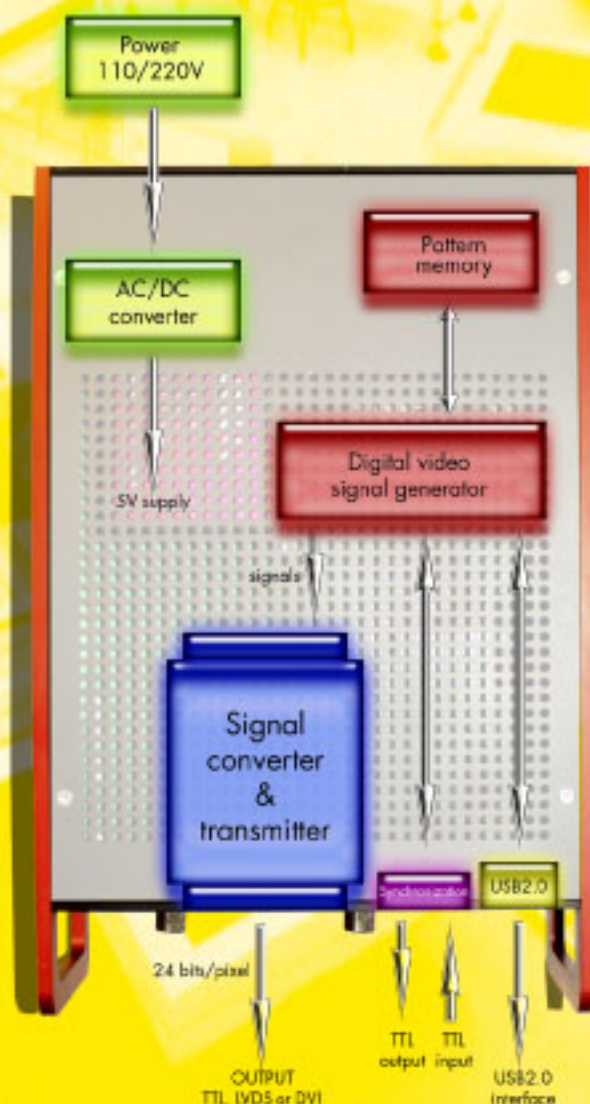
FPDDrive package allows to test LCDs and other flat panels in end-user conditions. It can provide different driving format, fully programmable panel definition, data output format, patterns and sequences.

FPDDrive module includes small removable extension cards which can be exchanged to provide alternate interfaces.

- Power ❶
- Removable optional output ❷
- Synchronized TTL input/output ❸
- USB interface ❹
- Control LED ❺



FPDDrive structure



AC/DC Converter

Power is directly connected to 110/220V. No external supply is needed

USB2.0

An USB2.0 interface is used for Data transfer between PC and FPDDrive. It uses the high speed mode to make rapid transfer rate (480Mbit/s).

Digital video signal generator

Based on programmable components generates all the digital video signals prior to formatting. Later firmware upgrades can easily be realized.

Pattern memory

The purpose of this memory is to store data before sending image to the display. Our architecture allows easy future upgrade for higher size display. 256Mbit SDRAM available.

Signal converter and transmitter

This specific extension card provides the 24 bits/pixel signal for a given standard : TTL, LVDS or DVI. In a few seconds and without any tools, you can change from one standard to another.

Synchronization

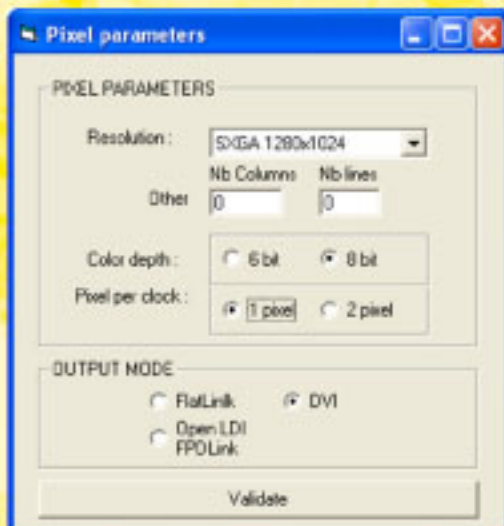
The 5V TTL synchronization input/output enable synchronization with other manufacturing tools.

FPDDrive : easy turn key solution

step
1

Define your pixel parameters (manual or automated*)

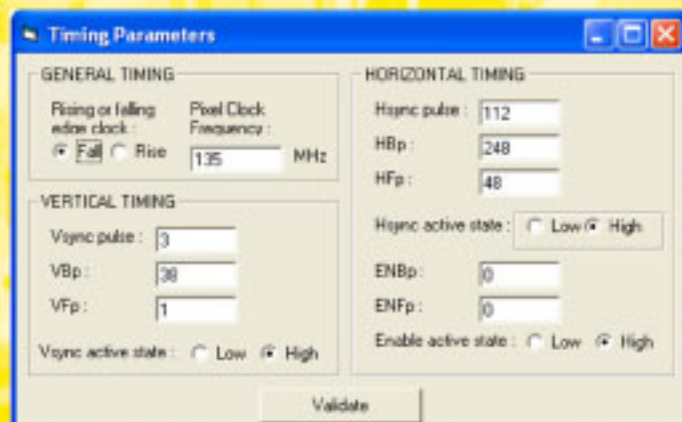
- Resolution
- Color depth
- Single or dual link mode
- Save & load parameter



step
2

Select your timing parameters (manual or automated*)

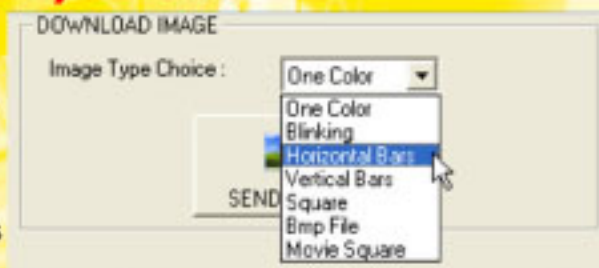
- Horizontal/vertical timing and synchronization
- Rising/Falling edge clock
- Pixel clock frequency
- Save & load parameter



step
3

Choose your pattern or create your own

- Pre-defined test patterns as :
- Horizontal/ vertical bars and lines
 - Uniform background
 - Boxes and chessboards
 - Static, blinking and moving images



Any bmp file with predefined color palette

step
4

Run and forget the tool

* can be downloaded directly from DDC interface

Specifications

Pixel Rate

- 0,5 MHz to 160 MHz in Single Link
- 1 MHz to 320 MHz in Dual Link
- Pixel Clock Phase Adjustments : rising or falling edge

Graphic Display

- Display Resolution : up to 4096x2048 pixels

Color Depth

- RGB 8x8x8-bit within 16 770 000 colors

Scan Mode

- Interlaced and non-interlaced mode

Horizontal Timing

- Frequency : 122Hz - 64MHz
- Total pixels per line : 5 - 4096 (in single mode)
- Sync. Width : 5 - 2048 dots (in single mode)
- Sync. Position : Fully Programmable

Vertical Timing

- Frequency : 0,028Hz - 64MHz
- Total lines per frame : 1 - 4096
- Sync. Width : 1 - 2048 lines
- Sync. Position : Fully Programmable

Test image Content

- Standard Patterns
- Blinking images
- Moving images, including lines, columns and rectangles
- *.BMP imported files

Data channels

- DDC2B (read and write)

Synchronization

- 5V TTL input/output compatible

Computer interfaces

External interface

- USB2.0

FPDDrive software

- Load predefined format parameters
- Create, edit and save your custom parameters file
- Load predefined pattern files or BMP image files
- Design your own test image
- Install firmware upgrades

ActiveX library

- Enable you to use the FPDDrive in your own software

Note : Specifications are typical and subject to change.

Optional interfaces

VDS

- FPDLink, FlatLink, OpenDI v.0.95
- Single : up to 112 MHz
- Dual : up to 224 MHz
- DDC interface
- Output 5V power
- Connector : MDR36
- Transmitter: DS90C387 or SN75LVDS83

DVI

- DVI 1.0 TMDS
- Single: up to 160 MHz
- Dual: up to 320 MHz
- DDC interface
- Output 5V power
- Connector: DVI-D
- Transmitter: SIL178

TTL

- Single : up to 160 MHz
- Dual : up to 320 MHz
- Output : 3.3/5 VDC
- Output 5V power

Other interfaces : please contact us

Other informations

Miscellaneous

- Size : (W) 280 x (H) 80 x (D) 185 mm
- Power : 50-60 Hz; 100-240 VAC; 0.75 A max.

Configuration

- Video Pattern Generator box
- Stand alone software, ActiveX library and automation samples

