

FPD8020x LCD TV TFT-LCD Timing Controller with PPDS™ Interface

General Description

The FPD8020x timing controllers (TCONs) are designed to meet the needs of today's advanced LCD TV applications. The FPD8020x supports both WXGA (1280 x 768) and WXGA+ (1366 x 768) resolutions with true 8-bit color (16.7 million colors).

When combined with the FPD48084 column driver, the FPD8020x provides true independent gamma curves for the red, green, and blue subpixels through internal lookup tables (LUTs). The FPD8020x also uses an advanced Response Time Compensation algorithm to improve the motion video performance of the LCD panel.

The FPD8020x TCONs incorporate National's PPDS™ interface (Point to Point Differential Signaling) that enables advanced features, independent column driver control, large panel sizes, and lower overall system cost.

Panel timing and control parameters can be programmed into an internal ROM for production or changed using an external EEPROM for initial product development.

Features

- Targeted at WXGA (1280x768) and HDTV (1366x768) applications for LCD TV
- Differential point-to-point interface to column drivers
- 10-bit resolution LUT for digital independent gamma support
- Response time compensation support (8-8-8) with pre-tilt; includes external DDR memory interface
- Single FPD-Link™ input bus for high speed, low EMI
- 90 MHz input clock rate
- Operating Supply Range: Vcc = 2.25 to 2.75V
- Optional 3.3V Outputs to support Row Driver compatibility
- Optional EEPROM programming allows fine-tuning in development and production environments. (24LC64 or equivalent)
- EDID version 1.3 and 2.0 supported with the optional EEPROM.
- Internal pattern generation for panel self-test
- Supports data configuration for 384 or 414 output column drivers
- 144-pin LQFP package

