



PRELIMINARY

# HX8010A

480/420/384CH 6-bit mini-LVDS  
TFT Source Driver

May 2002, Version 02

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## 1. General Description

The HX8010A is a 480/420/384 channels selectable output source driver suitable for mini-LVDS digital interface, which is used for driving the source line of TFT LCD panel. The HX8010A converts 18-bit digital data into the analog voltage for 480/420/384 channels and generates corresponding 64-level gray scale voltage output, which can realize a 256K colors display simultaneously. Since the output circuit of this source driver incorporates an operational amplifier, a positive and a negative voltage can be alternately output from each channel. Therefore, a high quality display with less cross-talk can be achieved.

## 2. Features

- 480/420/384 output selectable source driver for TFT LCD panel
- Maximum 13.3V<sub>P-P</sub> output dynamic range
- Capable of output 64 gray scales by means of 14 external  $\gamma$  reference voltages
- Applicable for dot inversion, column inversion, and n-lines inversion driving method
- Incorporate operational amplifier in the output circuit of each channel
- Mini-LVDS digital interface for low EMI.
- 3/4/5/6 pairs selectable for differential inputs
- Prechargeless output buffer
- Polarity inversion output to each channel
- Right or left shift data input selectable
- 162MHz maximum operation frequency
- 2.7V to 3.6V logic supply voltage
- 8.0V to 13.5V LCD driver supply voltage