CHRONTEL

Chrontel CH7010 DVI / TV Output Device

1. FEATURES

- DVI Transmitter up to 165MHz
- DVI low jitter PLL
- DVI hot plug detection
- TV output supporting graphics resolutions up to 1024 x768 pixels
- Programmable digital interface supports RGB and YCrCb
- TrueScale™ rendering engine supports underscan in all TV output resolutions
- Enhanced text sharpness and adaptive flicker removal with up to 7 lines of filtering
- Support for all NTSC and PAL formats
- Provides CVBS, S-Video and SCART (RGB) outputs
- TV connection detection
- Programmable power management
- 10-bit video DAC outputs
- Fully programmable through serial port
- Complete Windows and DOS driver support
- Low voltage interface support to graphics device
- Offered in a 64-pin LQFP package

2. GENERAL DESCRIPTION

The CH7010 is a display controller device which accepts a digital graphics input signal, and encodes and transmits data through a DVI (DFP can also be supported) or TV output (analog composite, s-video or RGB). The device accepts data over one 12-bit wide variable voltage data port which supports five different data formats including RGB and YCrCb.

The DVI processor includes a low jitter PLL for generation of the high frequency serialized clock, and all circuitry required to encode, serialize and transmit data. The CH7010 comes in versions able to drive a DVI display at a pixel rate of up to 165MHz, supporting UXGA resolution displays. No scaling of input data is performed on the data output to the DVI device.

The TV-Out processor performs non-interlace to interlace conversion with scaling and flicker filters, and encode the data into any of the NTSC or PAL video standards. The scaling and flicker filter is adaptive and programmable to enable superior text display. Eight graphics resolutions are supported up to 1024 by 768 with full vertical and horizontal underscan capability in all modes. A high accuracy low jitter phase locked loop is integrated to create outstanding video quality. Support is provided RGB bypass mode which enables driving a VGA CRT with the input data.
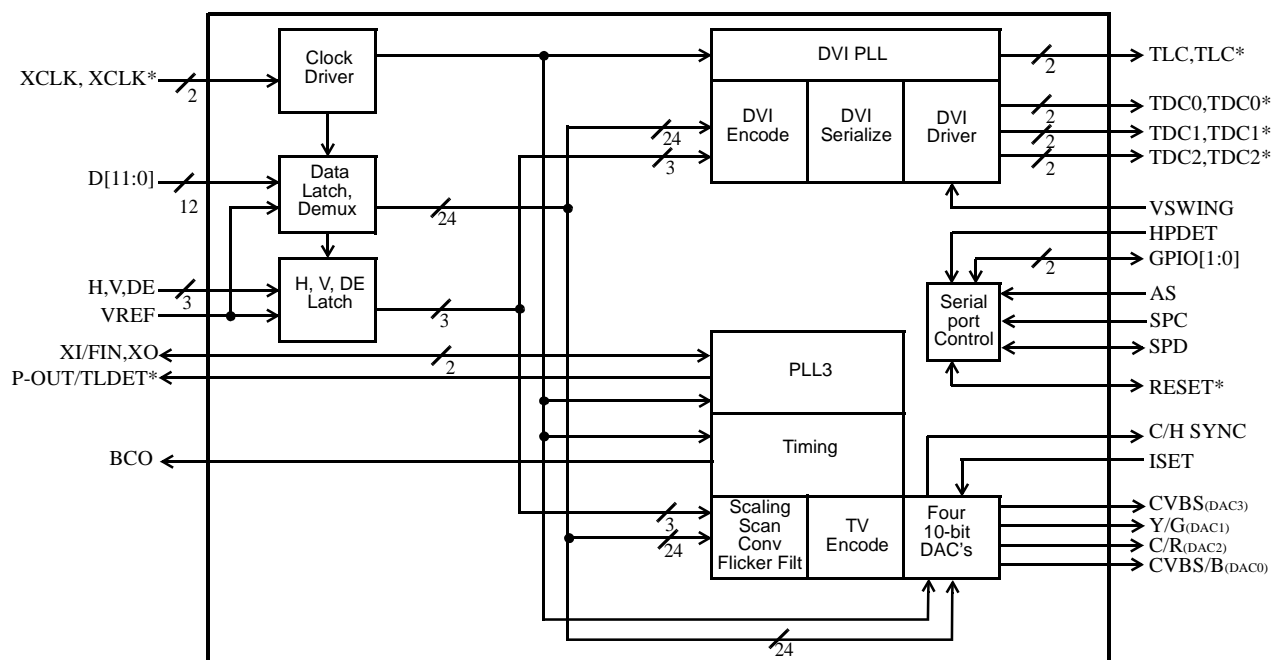

Figure 1. Functional Block Diagram

ORDERING INFORMATION			
Part number	Package type	Number of pins	Voltage supply
CH7010A-T	LQFP	64	3.3V/3.6V

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