



Weltrend Semiconductor, Inc.

WT9103

150 MHz I²C RGB Video Preamplicifier with Internal OSD and 4 DAC

Data Sheet

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General Description

The WT9103 pre-amp is an integrated CMOS CRT preamp and On Screen Display (OSD) generator. It has an I²C interface which allows control of all the parameters necessary to directly setup and adjust the gain and contrast in the CRT display. Brightness and bias can be controlled through the DAC outputs.

Black level clamping of the signal is carried out directly on the AC coupled input signal into the high impedance preamplifier input, thus eliminating the need for additional black level clamp capacitors. Horizontal and vertical blanking of the outputs is provided and the length of the vertical blanking is register programmable. The IC is packaged in an industry standard 24 lead DIP molded plastic package.

Features

- Maximum 100KHz I²C compatible interface with slave address \$BAH.
- Internal 512 character OSD (384x2 plus 128x4 color).
- 8 character programmable RAM fonts.
- OSD override allows OSD messages to replace video and the use of burn-in screens.
- 4 DAC outputs (8 bit resolution) for bus controlled CRT bias and brightness.
- Spot killer which blanks the video outputs when V_{CC} falls below the specified threshold.
- Suitable for use with discrete or integrated clamp, with software configurable brightness mixer.
- H and V blanking (V width is register programmable).
- Power Save (Green) Mode with 80% power reduction.
- Auto-calibration

Applications

- Color monitors with OSD.
- 1280 x 1024 displays up to 75Hz
- Pixel clock frequencies up to 135MHz
- Monitors requiring cathode blanking