



# **TRIP 8-BIT DAC-MUXWITHGENLOCK PLL & ANALOG COLOR KEY**

## **GENERAL DESCRIPTION**

Winbond's W9951TF combines three 8-bit DACs, a YUV-to-RGB Color Space Converter, high-speed analog multiplexers, analog input attenuators, video buffers, a genlock PLL, analog color key detector, and numerous programmable features in one integrated circuit.

The W9951TF's high-speed analog multiplexer allows simultaneous display of video (digital RGB or YUV) with graphics (analog RGB), making the W9951TF ideal for video games, video editing, CD and PC video, and for applications requiring picture-in-picture capability.

The W9951TF provides a 24-bit digital interface, which supports both RGB and 4:2:2 YCbCr input formats. With the 4:2:2 YCbCr input format, a built-in color space converter translates YUV video information to RGB before mixing with the analog graphics input.

There are eighteen control registers, which provide access to video attribute control functions of contrast, hue, brightness, PLL divider value, and analog color key range. These functions are programmable via the two-wire serial interface pins.

## **FEATURES**

- Triple 8-bit DAC and buffers support up to 1280 x 1024 resolution
- Built-in Genlock PLL regenerates pixel clock for video processor
- Programmable Color Key for Analog RGB inputs
- Genlock & Analog Keying Capability eliminates the need for VGA-Video feature connector
- High-speed multiplexing between digital and analog RGB signals
- 24-bit interface supports up to 16.7M colors
- Supports CCIR601 4:2:2 YCbCr input format
- Built in YUV-to-RGB color space conversion
- Analog RGB inputs with programmable attenuation
- 2's complement input capability on two channels
- Programmable brightness, contrast and hue attributes for the digital input signals
- Programmable switching delay compensation
- Two-wire serial programming
- CMOS technology in 64-pin PQFP
- 5V supply

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