

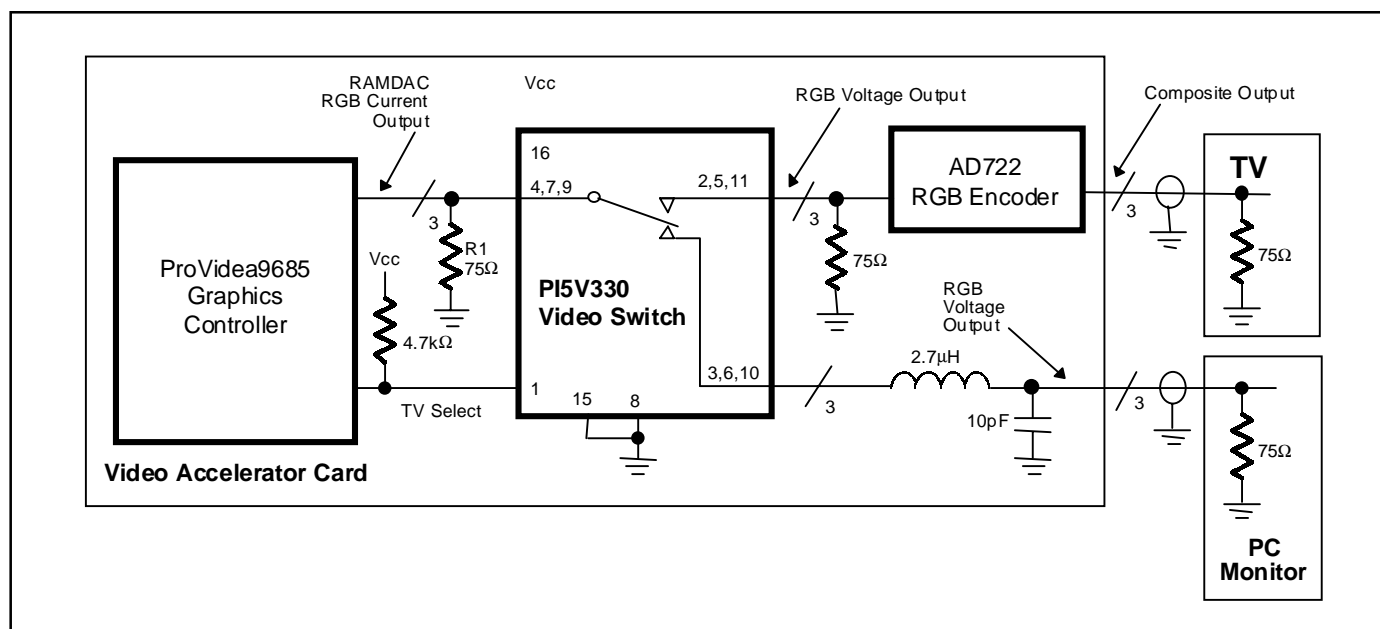
# Switching RGB Video Between Monitor and TV Using PI5V330

by Mike Parsin, March 13, 1997

## Introduction

This brief shows how the Trident ProVidea 9685, graphics/video accelerator and CRT controller, uses the PI5V330 Video Multiplexer to switch analog RGB signals between a PC monitor and

TV. Video RGB signals can be displayed on any typical television by converting RGB to NTSC/PAL with an Analog Devices AD722 Encoder chip.



## Circuit Description

The Trident 9685 Graphics Controller outputs RGB current from its RAMDAC at a rate determined by the pixel clock. This current is converted to voltage by resistor R1. This RGB voltage is multiplexed between the AD722 TV encoder and PC monitor by the TV select control. This control signal is asserted by the Trident 9685. It should also be noted that all grounds shown here are analog grounds.

The PI5V330, operating with a pixel clock of 13.5MHz (NTSC frequency), has crosstalk between RGB channels of -55dB. When the switch is off the isolation between input and output is -36dB.

| Select Logic | PC Monitor | TV Encoder |
|--------------|------------|------------|
| Low          |            | X          |
| High         | X          |            |

