

## Overview

This document describes the features of the GUI program used to control the Low-Cost Video Interface platform.

## Control Panel Overview

Below is a screen image of the GUI software. The graphical controls communicate with the TMS320C6204 on the platform to modify its execution. Video and audio control mechanisms are provided, as well as a message area to provide status.

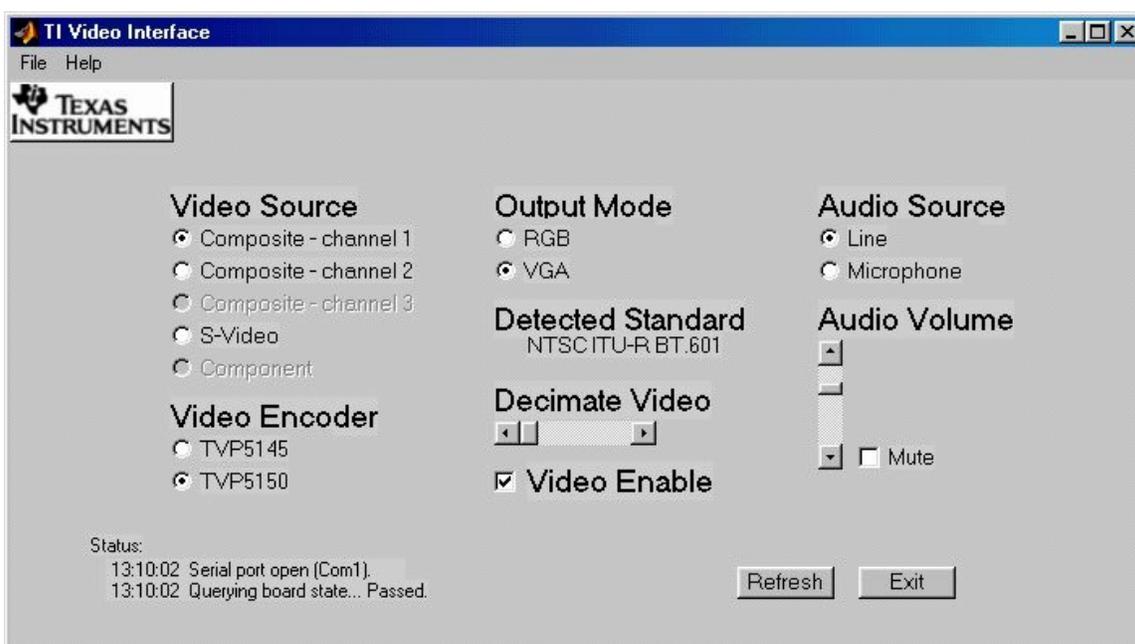


Figure 1. Screenshot

### Video Source

The radio buttons under Video Source select what video source should be selected as input. The composite3 and component inputs are only valid for the TVP5145 video encoder. As such they will be grayed out when the 5150 is selected (as pictured in Figure 1). Note that an S-Video connection should not be made simultaneously with other inputs as they will conflict.

### Video Encoder

There are two video encoders on the platform. These two radio buttons select which provides the input to the FPGA.

### Output Mode

The output mode selection determines the format with which the FPGA outputs video data. RGB and VGA modes are supported.

***Detected Standard***

This is for information only. It displays the format which the TVP51xx encoder has detected. It is updated on a periodic basis.

***Decimate Video***

This slider can be used as a demonstration of very simple video processing. In the processor every nth frame will be displayed. Setting the slider to its minimum results in displaying every frame. On the opposite end, a pause of almost 2 seconds will be inserted between displayed frames.

***Video Enable***

This check-box enables or pauses the video transfer in the DSP.

***Audio Source***

The Line and Microphone radio buttons here determine the audio source. These buttons are not mutually exclusive, i.e. both the Line and Microphone inputs can be selected simultaneously if desired.

***Audio Volume / Mute***

The slider controls the level of both channels of the audio output in the 'AIC23. The output range goes from -34.5 dB to +12 dB in 1.5 dB steps. The Mute check-box disables the output; when re-enabled, the volume will assume the current slider setting.

***Refresh Button***

The Refresh button will query the platform for a set of variables which represent the state of the system and then refresh the GUI appropriately. This function is duplicated in the File menu and additionally runs on a periodic basis to keep the display current.

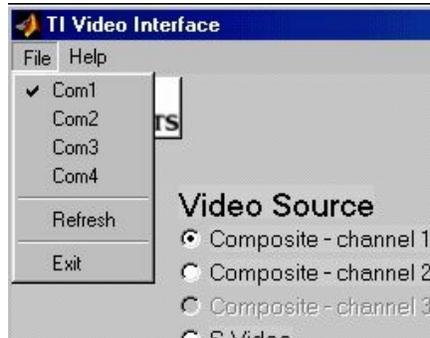
***Exit Button***

The Exit button will close the TI Video Interface window. It also closes any open serial port connections. It has the same effect as the "X" in the upper right hand corner of the window and the exit item in the file menu.

***Status window***

The area at the very bottom left of the Video Interface window is used to display messages to the user. Messages include reported errors and confirmation of button actions. A time stamp is displayed with each message item.

**File Menu Items**



**Figure 2. File Menu**

**Com1 - Com4**

These menu items will change the com port through which the serial communications take place. When the com port selection is changed, the program will close any currently open port before attempting to open the new one. A message will be displayed in the status window regarding the success of the operation.

**Refresh**

Refresh the GUI appropriately. (see "Refresh Button")

**Exit**

This will close the Video Interface window. (see "Exit Button")

### **Help Menu Items**



**Figure 3. Help Menu**

### **About**

This menu item will open up a window with the version numbers of the DSP and FPGA code along with a copyright notice. Clicking on the OK button will close the window.



**Figure 4. About Window**

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