

Re: [OT] Crazy idea: Design open-source graphics chip – DONE

Source: <http://linux.derkeiler.com/Mailing-Lists/Kernel/2004-01/7766.html>

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Not so crazy – it is already done :-)

http://www.opencores.org/projects/vga_lcd/

FEATURES

- CRT and LCD display support
- 24bit Standard VGA interface
- Separate VSYNC/HSYNC and combined CSYNC synchronization signals
- Composite BLANK signal
- TripleDisplay support
- 12bit Interface
- Compatible with DVI transmitters and 12bit VGA ADCs
- 4 different output modes
- Can be used simultaneous with the 24bit interface
- User programmable video resolutions
- User programmable video timing
- User programmable video control signals polarization levels
- 32bpp, 24bpp and 16bpp color modes
- 8bit gray-scale and 8bit pseudo-color modes
- Supports video- and/or color-lookup-table bankswitching during vertical retrace
- 32bit WISHBONE revB.3 compliant slave and master interfaces
- Operates from a wide range of input clock frequencies
- Static synchronous design
- Fully synthesizable

STATUS

VGA/LCD core v2.0 is ready and available in verilog from OpenCores CVS via cvsweb or via cvsget.

Low level abstraction layer available in C from CVS.

Character simulation software is currently under development.

But to get a board that gives you anything more than a cheap old VGA board

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the XServer should be running on the board! (PowerPCs are good for embedding)
But for some applications you might need to talk directly to the frame
buffer...

/RogerL

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