A PCI Acquisition Board Using the XC4013

A unique PCI bus data acquisition design with dynamic reconfiguration management.

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At Multi Video Designs, we have developed a high-speed data acquisition board for one of our customers, based on the XC4013E FPGA and a Xilinx PCI LogiCORE. The FPGA includes a Master/Slave PCI interface as well as data acquisition management and a Video-RAM controller. The board can acquire data bursts of between one pixel and one megapixel at frequencies up to 40MHz. Data is then transfered over the PCI bus in master burst mode. The corresponding control software operates under Windows and DOS.

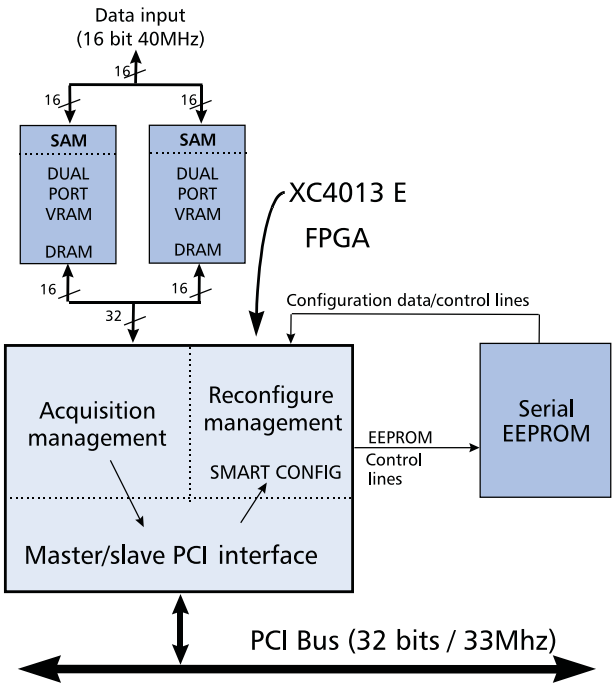
The FPGA can be reconfigured using "Smart config," an original feature that allows you to rewrite an integrated EEPROM which reconfigures the FPGA on reset. This makes the board much more flexible than is usual for a PCI board, and it can be rapidly adjusted to your changing needs without even opening your computer.

We chose a Xilinx PCI LogiCORE because it allows us to implement both the master/slave PCI interface and application specific logic. It also makes for a very short development time.

Our customer wanted five working boards designed and built in less than 6 weeks. Thanks to the Xilinx PCI LogiCORE and our own hardware and software PCI analyzer "Anna-Liz" *(see page 22)*, our customer was completely satisfied.

Conclusion

With Xilinx FPGAs and PCI LogiCOREs you can quickly get your PCI product to market.



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About Multi Video Designs

Multi Video Designs is a consulting company specializing in the development of Xilinx FPGA/CPLD for video, telecom, PCI and other applications where speed and/or density is an important factor. Our services include:

- On-site training courses for Xilinx FPGA (Xilinx approved training center)
- On-site training courses for VHDL logic synthesis and simulation
- On-site PCI bus training courses
- Approved design center (to customer requirements)
- Electronic board design to customer specs
- Electronic board fabrication
- On-site technical assistance