A Marine GPS System and A Desktop Projection System

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The Xilinx HardWire ASIC family of low-cost, mask-programmed devices makes it very easy for you to replace FPGAs when you need to cost-reduce high-volume applications. The following two success stories show how some of our customers are taking advantage of this capability.

Hand-Held GPS

A major supplier of marine Global Positioning Systems (GPS), uses Xilinx FPGAs for a number of its systems. Their latest hand-held GPS device was in production for about three months (approximately 25K units), using the Xilinx XC3030L-VQ64 FPGA. Because the product was targeted for high-volume production (estimated to be 150K units per year), they also evaluated cost reduction methods.

The designers chose the Xilinx HardWire XC3330L-VQ64 device because of its ability to meet their required 2.7-V operation, and because of its ASIC-like cost structure. In addition, the HardWire device is fully compatible with its FPGA counterpart, so they were able to simply replace the FPGA with the HardWire ASIC, with no change in their PC board.

The company's engineer said this FPGA-to-HardWire ASIC conversion gave them a 30% cost reduction.

Texas Instruments
Desktop Projection System

Texas Instruments builds a variety of projection systems, for which Xilinx has supplied a number of FPGAs. Their latest project is the second generation of a desktop projection system, sold to a number of different suppliers who re-sell it under their own brand name (estimated to be 100K units per year). This new system was designed using the Xilinx XC4036XL-PQ240 FPGA, which allowed TI engineers to quickly prototype and debug their design. The first generation of this system sold approximately 25K units, using Xilinx FPGAs. However, cost reduction was a primary consideration for this high volume application.

The TI team chose the Xilinx XC4436XL-PQ240 Hardwire ASIC for their cost-reduction program because of its ASIC-like cost structure, fast conversion time, and quick turnaround. They also chose Xilinx because of our experience in converting full-featured designs using CE, JTAG, and RAM.

TI engineer Philip Bucholz said their FPGA-to-HardWire ASIC conversion gave them a 50% cost reduction.

Xilinx supports a full line of FPGAs with footprint-compatible HardWire ASICs that make it very easy for you to cost-reduce high-volume systems. For more information on our HardWire ASIC capability, visit WebLINX (www.xilinx.com). ◆