

What Customers and Partners are Saying about Xilinx Embedded Processor Solutions

Real breakthroughs. Real stories.

PowerPC

"We designed our latest Nova identity4 broadcast production video switcher with what we consider a truly disruptive technology utilizing only a single Virtex™-II Pro FPGA. This approach reduced our part count 10-fold over prior systems while providing a per-channel cost at a fraction of our competition.

"We are very excited about the new Virtex-4 FX family of devices. The higher performance processor and integrated APU will allow us to rapidly create hardware modules for accelerating specific software functions. By leveraging these capabilities with the integrated EMAC cores and enhanced RocketIO™ transceivers available in Virtex-4 FX devices, our next-generation systems will further widen the distance between us and our competition."

Xilinx Customer

Roger Smith, Chief Engineer, Echolab

"Leveraging a high degree of IP design re-use developed with our first Virtex-II Pro-based system, we can rapidly migrate our high-performance storage networking architecture to the Virtex-4 FX family of devices. By utilizing many of the FX features, we are able to increase both functionality and performance while reducing system cost.

"Key elements include the enhanced PowerPC™ processor running Linux OS to manage and control our high throughput multi-channel switching matrix and the integrated dual tri-mode Ethernet MAC and RocketIO transceivers for high-speed data transfer. The APU controller can also offload some tasks via custom-defined instructions, resulting in further computing and performance headroom."

Xilinx Customer

*Sandy Helton, Chief Technology Officer,
SAN Valley Systems*

MicroBlaze

"The MicroBlaze™ solution has proven to be far more than a companion micro-processor to our FPGA compute engines. It has become quite an integral part in shaping the way we are solving problems and is helping reduce our engineering costs.

"Currently, we use the MicroBlaze processor in our 68-billion-color LED display system to manage calibration and setup routines for the video processor module. The ability to easily modify these functions without completely changing the design allows us to offer a cutting-edge product."

Xilinx Customer

*Ricardo Ramos, President and CEO,
Interativa Paineis Eletronicos*

"Incorporating the MicroBlaze processor inside a single FPGA allowed us to use a low pin-count device and reduce PCB complexity and cost. But the most significant impact that the MicroBlaze processor has offered is the ability to almost completely change a design without needing to change the physical design whatsoever. As requirements change, we no longer need to remap functionality into different peripherals, as is often the case when moving to a larger microcontroller. We can add, delete, or move peripherals; the Embedded Development Kit (EDK) makes this effortless."

Xilinx Partner
Erik Widding, President,
Birger Engineering

"The storage module was a nice application for the MicroBlaze embedded processor. We wrote routines in C for the MicroBlaze core for asynchronous transfer, including the packet handler and interpretation. The routines that needed acceleration were re-coded in RTL and moved to hardware implementations on the same Virtex-II device. The storage elements needed to take data streams in, process them, and put the data out to disk. We could accomplish that 100% with the MicroBlaze core, just not at speed.

"The MicroBlaze processor allowed us to update the program without reprogramming the device, drop in a test program in C, set breakpoints, and functionally debug by examining memory, variables, and registers. This helped us debug the functionality very quickly. We also were able to do performance analysis and profiling that helped us decide what modules needed acceleration."

Xilinx Partner
Derek Stark, Senior Software Engineer,
Nallatech

PicoBlaze

"The favorite toy in our Xilinx bag-of-tricks is the PicoBlaze™ processor. We could not have completed the sign project in the time allowed without extensive use of the PicoBlaze processor.

"The sign contains an impressive count of more than 1,000 of these embedded processors, with nine different designs. PicoBlaze processors provide efficient logic resource utilization by time-multiplexing logic circuits. The PicoBlaze processor also provides a quick and easy way to develop control functions. The alternative would be to build a custom state machine for each function. The PicoBlaze processor is a programmable state machine, meaning that the state machine is already built; one just has to program it."

Xilinx Partner
Jason Daughenbaugh, Sr. Design Engineer,
Advanced Electronic Designs (AED)

"We do four channels of PID + feedforward control + profile generation + host interface, all with 32-bit position resolution and 32-bit breakpoints at a sample rate of 10 KHz, with all four axes in motion. Not bad for an 8-bit microcontroller!"

Xilinx Customer
Peter Wallace, Partner, Mesa Electronics

"We needed the control that a CPU provides without the overhead of extra peripherals and external hardware. The PicoBlaze processor was easy to implement and worked very well in our custom protocol application."

Xilinx Customer
Scott Orangio, Senior Hardware Engineer,
Polycom Inc.

"The PicoBlaze processor made our transition towards embedding a software-based application into our well-known FPGA environment seamless and surprisingly simple."

Xilinx Customer
Moti Cohen, Hardware Design Engineer,
TeraSync

Xilinx Platform Studio

Regarding Xilinx Platform Studio winning the DesignVision Award:

"It is inspiring to see Platform Studio recognized in this way. The platform approach to next-generation embedded systems will become the only viable solution to meet the economic and technological challenges of the future. Xilinx continues to prove its undeniable leadership in developing world-class technologies that make FPGAs a compelling system platform for an expanding range of embedded processing applications."

Jerry Worchel, Principal Analyst,
In-Stat/MDR

Regarding Xilinx Platform Studio 6.3i product release:

"The platform approach will not only find a permanent home in the FPGA world, but in the ASIC and ASSP worlds as well. With this announcement, Xilinx continues to prove its undeniable leadership in this market."

Max Baron, Principal Analyst,
In-Stat/MDR