

Express Logic ThreadX Supports Xilinx Zynq-7000



[Express Logic](#) [1], a worldwide leader in royalty-free, real-time operating systems (RTOS) with over 1 billion units deployed, announced that its [ThreadX RTOS](#) [2] now supports [Xilinx's Zynq-7000](#) [3] Extensible Processing Platform (EPP). ThreadX is the one of the first RTOSes to support Zynq EPP devices, enabling developers of high-performance consumer, medical, and industrial products to meet their needs for processor performance and real-time response.

ThreadX is a small-footprint, high-performance, royalty-free RTOS with efficient real-time responsiveness. With sub-microsecond context switching, and service times of 100-200 cycles, ThreadX easily supports the demands of embedded system devices. ThreadX also offers a rich ecosystem of complementary development tools, including the [Xilinx ISE Design Suite](#) [4] for the Zynq-7000 EPP. ThreadX also supports other Xilinx embedded processing solutions, including the MicroBlaze soft processor and Virtex-class FPGA devices with embedded PowerPC processors, using this same tool suite.

"We are pleased to be able to bring Express Logic's ThreadX RTOS into Xilinx's already broad ecosystem environment supporting our exciting new Zynq Extensible Processing Platform," said Lawrence Getman, Vice President of Processing at Xilinx. "Express Logic's longstanding support of Xilinx FPGA processing platforms based on MicroBlaze and PowerPC processors, and now its support of the Zynq EPP, helps Xilinx to provide developers with a robust ecosystem that can meet a wide variety of requirements for their applications."

The ZYNQ family is Xilinx's first Extensible Processing Platform (EPP). This new class of semiconductor device combines an industry-standard ARM dual-core Cortex-A9 MPCore processing system with Xilinx's scalable 28-nm programmable logic architecture. This processor-centric architecture offers the flexibility and scalability of an FPGA, combined with ASIC-like performance and power consumption, and the programming ease of a microprocessor.

The dual-core Zynq can be used in a Symmetric Multiprocessing (SMP) mode, where

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an RTOS such as Express Logic's ThreadX runs on both processors from a single copy in common memory, or in an Asymmetric Multiprocessing (AMP) mode, where ThreadX can be used in conjunction with Linux to address applications that require both robust functionality and rapid real-time response.

"With multicore Zynq-7000 devices, ThreadX can be used on one processor while another OS?Linux, VxWorks, etc.?runs on the other processor," commented William E. Lamie, President of Express Logic. "This way, real-time demands can be met by ThreadX, while the robust features of a large-service OS such as Linux can be used simultaneously. For such applications, interprocessor communication can be performed at the application level by a simple 'mailbox' mechanism in shared memory."

Shipping and Availability

ThreadX for the Zynq-7000 EPP is available in full source-code form, royalty-free, with project license prices starting at \$12,500. For more information about Zynq-7000 devices, please visit www.xilinx.com/zynq [5].

About Express Logic and ThreadX

Headquartered in San Diego, CA, Express Logic offers the most advanced run-time solution for deeply embedded applications, including the popular [ThreadX RTOS](#) [6], the high-performance [NetX TCP/IP stack](#) [7], the [FileX](#) [8] embedded MS-DOS compatible file system, and the [USBX](#) [9] Host/Device USB protocol stack. All products from Express Logic include full source code and have no run-time royalties. For more information about Express Logic solutions, please visit the Web site at <http://www.expresslogic.com> [10], call 1-888-THREADX, or e-mail inquires to info@expresslogic.com [11].

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