A Visit to the 2009 Embedded Systems Conference – Part II

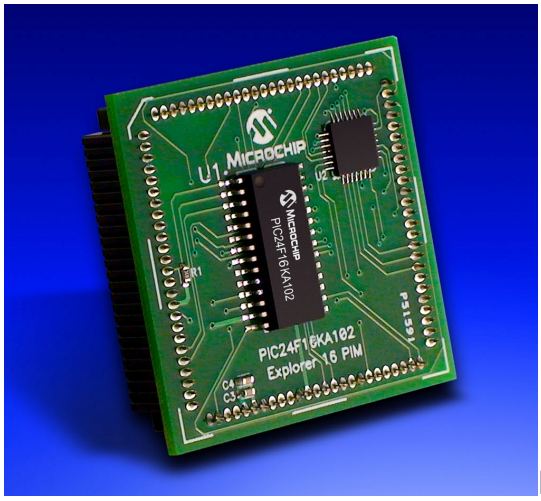
With over 8,000 attendees, this year's Embedded Systems Conference (ESC) was a pleasant surprise to an industry expecting a low turnout. Held in San Jose from March 30 to April 2, the event had a nice assortment of new tech and devices. Here is our second portion of our two-part coverage of the event.

The Small Form Factor Special Interest Group (SFF-SIG) announced COMIT, a new form-factor independent, Computer-on-Module interface standard. COMIT stands for Computer On Module Interconnect Technology, allowing the design of tiny modules to fit within the footprint of small form-factor boards such as EBX, EPIC, PC/104, or Pico ITX, among others. In a single 6 x 40 connector, COMIT's 240 pins supports three PCI Express™ x1 lanes, one PCI Express x4 lane, six high-speed USB 2.0 channels, VGA, SDVO, and dual LVDS video interfaces, two SATA channels, Ethernet, 8-bit SDIO, HD Audio, LPC (Low Pin Count) Bus, SPI/uWire, SMBus/I²C Bus, system clock and control signaling plus ample power and ground.

WinSystems had their new family of open frame color flat panel PCs that consist of a color TFT flat panel display, Pentium-class single board computer (SBC), and touchscreen mounted in an open aluminum frame. It supports standard operating systems such as Windows XPe and Linux plus x86-based real time executives, utilities, and drivers. The back of the Panel PC is designed for easy access and connection to I/O and power cables. The panel PCs are available with three sizes of Optrex displays: 6.5-inch, 12-inch, and 15-inch. (www.winsystems.com [1])

CriticalBlue showed its Prism multicore programming system, which allows engineers to take their existing sequential code and, without changing it, explore and analyze opportunities for concurrency, implement parallel structures, and verify efficient and safe operation. Starting from existing sequential software or code that already includes threading constructs, Prism explores various operating scenarios for the code in a multicore environment with what-if analysis capabilities on the

impact of different threading strategies, numbers of cores, dependency removal, and scheduling policies. (www.criticalblue.com [2])



Microchip Technology announced their 16-bit PIC24F16KA and 8-bit PIC18F46J families of microcontrollers with new nanoWatt XLP eXtreme Low Power Technology. The nanoWatt XLP Technology can customize applications for the lowest power consumption through multiple internal wake-up sources, such as Real-Time Clock and Calendar alarm, Brown-Out Resets, interrupts and Watch-dog Timers, all while maintaining the I/O states. All nanoWatt XLP microcontrollers are supported by development tools available today at http://www.microchip.com/XLPTools [3]. (www.microchip.com [4])

Openmoko demonstrated its open-source Neo FreeRunner tri-band GSM device that comes in 850/1800/1900 and 900/1800/1900 variants. Neo phone developers can use freely available open CAD files, electronics schematics and Free and Open Source software and support of the Open Source community. In addition to its own operating system, Openmoko supports major Open Source distributions including Android, Gentoo, SHR, Debian, community-driven FDOM, and QT by Trolltech (recently acquired by Nokia). (www.openmoko.com [5])

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[1] http://www.winsystems.com/
[2] http://www.criticalblue.com/
[3] http://www.microchip.com/XLPTools
[4] http://www.microchip.com/
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