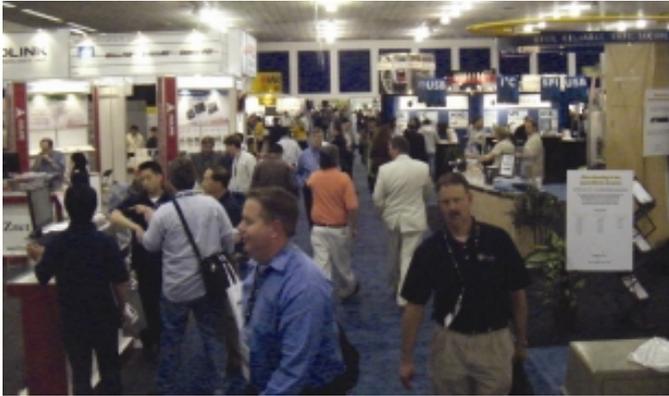


A Visit to the 2009 Embedded Systems Conference



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 show demonstrated that while the economy may be depressed, the design engineering community isn't. There may not be many shipments being made, but most of the companies we spoke to at the event spoke about a lot of design activity being done as manufacturers prepare for the demand for new products and technologies that will follow the recovery. This situation was forced on the electronics industry by outside forces, and so the serious problems that plagued us all (overstocked warehouses, poor supply chain management, the telecom meltdown) the last time around are not factors.

On the technology side, there was quite a lot of news, with new attention paid to multicore, I/O busses, operating systems, and ever-smaller single-board computers.



Atmel showed off its recently-released ATA6617 System-in-Package (SiP) solution for LIN automotive networking applications. A powerful LIN UART with integrated hardware routines simplifies protocol stack handling and limits the interrupt generation, thus reducing the microcontroller load and flash memory consumption. (www.atmel.com [1])

Intended to help developers avoid stack overflow in embedded systems, Express Logic's StackX development tool performs a comprehensive analysis of a complete application at the executable code level, computing the worst-case stack usage the application can experience. StackX analyzes a program's executable file, mapping all function calls, interrupt service routines, local variables, and any other factors to

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enable calculation of each thread's maximum stack memory requirements.

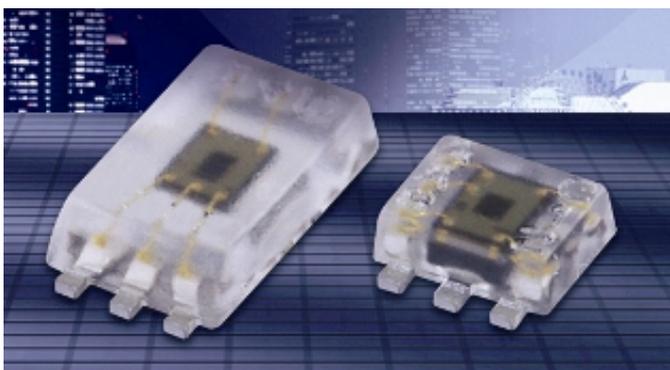
(www.rtos.com [2])

Presented as the first fully automated end-to-end solution for software verification support, version 8.0 of the LDRA tool suite enables companies to trace, verify, and test their code through all stages of software development from requirements through static and dynamic analysis and testing. By integrating requirements management into the LDRA tool suite using TBreq, LDRA's tool for next-generation management and complete automation of requirements traceability, developers can reduce software errors, project costs, and resource constraints. (www.ldra.com [3])

Microsoft was out in force with its Windows Embedded POSReady 2009 optimized for OEMs building POS solutions and enterprises using POS devices. With technologies such as Microsoft Silverlight, .NET Framework 3.5, and Windows Presentation Foundation, the platform enables a differentiated user experience. (www.POSReady.com [4])

Designed for system engineers developing IP-based communication products, the AMP5071 from Performance Technologies comes integrated with a choice of processing Advanced Mezzanine Cards (AMC) with either an Intel Core 2 Duo processor or Freescale MPC8641D dual-core 1 GHz PowerPC processor. Additional AMC modules for I/O, storage, and compute functions can be easily configured and integrated into the system in order to meet a wide range of IP-based communications design criteria. (www.pt.com/ [5])

Xilinx announced the first shipments of its Virtex-6 FPGAs, with high-speed serial transceivers, power-saving technology, and 40-nm architecture. The devices' 11.2 Gbps transceivers enable developers of 40G and 100G wired telecom equipment to address the need for high bandwidth and have an ability to operate on a 1.0-V core voltage with an available 0.9- V low-power option. (www.xilinx.com [6])



Incorporating multiple photodiodes with different junction depths, a family of analog and digital Ambient Light Sensor (ALS) ICs ROHM Semiconductor is better able to control LED backlighting because the devices can more closely mimic the human eye's response. The BH16xx analog devices provide a linear current output from 0 to 100,000 lux, and the BH17xx digital devices produce a 1-lux resolution over a range of 0 to 65,000 lx.

(www.rohm.com [7])

The Small Form Factor Special Interest Group (SFF-SIG), a collaboration of suppliers of embedded component, board, and system technologies announced COMIT

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(Computer On Module Interconnect Technology), a new form-factor independent, Computer-on-Module interface standard. 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. (www.sff-sig.org [8])

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<http://www.ecnmag.com/product-releases/2009/04/visit-2009-embedded-systems-conference>

Links:

- [1] <http://www.atmel.com/>
- [2] <http://www.rtos.com/>
- [3] <http://www.ldra.com/>
- [4] <http://www.posready.com/>
- [5] <http://www.pt.com/>
- [6] <http://www.xilinx.com/>
- [7] <http://www.rohm.com/>
- [8] <http://www.sff-sig.org/>