

electronica 2010: new microprocessors, boards, development platforms and test software

electronica 2010 will be a hotbed of embedded components, systems, software and development platforms for automotive, industrial and commercial designs. Exhibits will range from individual components for mobile devices to complete system solutions for industrial applications. In addition, presenters at the Embedded Forum, which will take place in hall A6, will discuss the latest trends, themes and highlights in the industry.

Embedded systems programming and testing

Programmierbare Logik & Systeme GmbH (pls), and HighTec EDV-Systeme GmbH will jointly present a completely new SoC (System-on-a-Chip) development platform. SoC chips integrate all functions on an integrated circuit, resulting in very small dimensions.

The development platform for power architecture SoCs from STMicroelectronics and Freescale primarily comprises a GNU compiler from HighTec and the Universal Debug Engine (UDE) from pls. An efficient universal device family (UAD2+/UAD3+) from pls supports debugging via a JTAG-Interface and a Nexus port, and therefore completes the UDE. When used as a programming tool, the development platform facilitates the development, testing and maintenance of microcontroller applications. The power architecture development platform is designed for automotive and industrial applications (Programmierbare Logik & Systeme GmbH, Hall A6, Stand 442; HighTec EDV-Systeme GmbH, Hall A6, Stand S04).

Göpel electronic will present new software technologies for measuring and test systems. Based on VarioTAP models, Göpel will demonstrate the latest test software for the MicroBlaze from Xilinx and the CORTEX A8 Core from ARM. The microcontroller from Xilinx and the ARM processor are often used in embedded systems. The VarioTAP processor model for the Microblaze Softcore from Xilinx permits the in-system combination of boundary scan tests with processor emulation and CPLD/FPGA programming based on a single JTAG test and debug interfaces, as well as high-speed processor assisted flash programming. Thanks to the software, it is possible for the first time to formulate adaptive test and programming strategies for embedded systems with Xilinx FPGA on an implementation platform. VarioTAP establishes a virtual test controller in the switching center of the unit to be tested and can therefore perform different function tests (Hall A1, Stand 351).

Embedded hardware innovations

Epson Europe Electronics GmbH will present embedded microprocessors including the S1A20100 which is designed for input sensors such as gyro sensors, air pressure sensors and a compass. The component provides a computing platform with

dedicated algorithms, making integration in existing system architectures easier. Possible applications include sports watches and activity monitors (Hall A4, Stand 224).

Another new product at electronica 2010 will be embedded boards from Data Modul AG, which are based on the latest Atom platforms "Luna Pier Refresh and "Tunnel Creek". Data Modul will also present the new ECM-QM57, one of the first 3.5 boards with an Intel Calpella platform. The board contains an Intel(r) Core™ i7-620LE/i7-620UE CPU with an Intel QM57 chipset and has 4 gigabytes of DDR3 RAM. The ECM-QM57 is especially suitable for applications in which maximum computing power and high graphic performance are required, such as home automation, point of sale, kiosk systems and medical technology (Hall A3, Stand 207).

electronica Embedded Forum

The electronica Embedded Forum at hall A6 allows participants to discuss industry highlights and themes. Representatives from Microsoft will provide a first-hand account of the development of systems based on Windows Embedded 7. With regard to motor control, the Embedded Forum will discuss key factors for improved energy efficiency and lower system costs. An overview of the main trends and factors in small form factor boards will show the development of small integrated circuits for use in embedded boards.

The up-to-date program of the Embedded Forum can be found in the electronica event database at: www.electronica.de/event-database [1].

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