

ARM Passes x86 and Power Architecture to Become The Leading MCU-eMPU Architecture in 2010

London, England; May 11 2011; According to preliminary findings from the 2011 edition of Semicast's 32/64-bit Microcontrollers & Embedded Microprocessors study, ARM became the leading architecture for 32/64-bit MCUs/eMPUs in 2010.

Colin Barnden, Principal Analyst at Semicast Research and study author, commented "The data, which is based on revenues for microcontrollers and embedded microprocessors but excludes ASICs, ASSPs and FPGAs, shows ARM with an estimated market share of 23.5% in 2010. A comparison with the 2007 data shows ARM on 13.6%, indicating a near doubling of its market share in just three years".

The ARM architecture has had a presence in the microcontroller market since the mid-1990s, with early adopters such as Atmel, Cirrus Logic and Oki offering microcontrollers based on the original ARM7 core. However the first products had little success, with ARM often being perceived as the architecture of the cellphone and having limited suitability to the microcontroller market. That perception started to change in 2006, when ARM announced the Cortex-M3 core, with first silicon introduced by lead partner Luminary Micro. Luminary's goal was clearly to blur the traditional "8/16/32-bit" boundaries, and to challenge the perception that ARM could not succeed in the cost sensitive microcontroller market. Luminary's early success resulted in it being bought by TI in 2009 and as other suppliers such as Atmel, Freescale, NXP, ST and Toshiba introduced Cortex 'M' microcontrollers, so ARM rapidly rose to become established as the leading architecture.

Semicast judges TI to have been the leading supplier of ARM-based MCUs/eMPUs in 2010, ahead of NXP and ST. Most of the leading microcontroller suppliers have now introduced a range of ARM-based products, including Freescale, which Semicast judges to have been the leading supplier overall of 32/64-bit MCUs/eMPUs in 2010. Freescale's Kinetis line of Cortex-M4 parts complements its 32/64-bit microcontroller offering alongside Power Architecture and Coldfire. Microchip remains one of the few established microcontroller suppliers not to adopt the ARM architecture and has instead elected to use MIPS for its PIC32 product line, while Renesas Electronics continues to primarily support the SuperH, V850, H8SX, M32, R32 and RX product families.

Semicast judges the key end-use sectors for ARM-based MCUs/eMPUs to be automotive and industrial/medical. In comparison, Power Architecture has strengths primarily in automotive and communications infrastructure, while the main embedded markets for x64/x86 are judged to be industrial compute and communications infrastructure.

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