NXP Introduces LPC4370 Microcontroller for High-Speed Data Acquisition Applications

Single chip with 204-MHz ARM Cortex-M processors features fastest 12-bit ADC on an MCU

Eindhoven, Netherlands and San Jose, California (PRWEB) October 21, 2013 -- NXP Semiconductors N.V. (NASDAQ: NXPI) today introduced the high-performance LPC4370 microcontroller – a complete solution for high-speed data acquisition applications available on a single chip. Powered by a 204-MHz ARM® Cortex™-M4 processor – the fastest in the industry – the LPC4370 also features the fastest 12-bit ADC available on a Cortex-M microcontroller today with a sampling rate of 80 Msps. In addition, the LPC4370 has a 204-MHz Cortex-M0 co-processor for offloading control and I/O tasks like handling USB stacks, as well as a dedicated subsystem for handling programmable digital I/O and pre- or post-processing. Advanced peripherals include Hi-Speed USB with on-chip PHY and Ethernet for high-speed communications, and a graphics LCD controller for display interfacing.

Demanding data acquisition applications such as spectrum analysis, current measurement, digital signal processing, audio streaming / processing, and analytical instrumentation typically require multiple chips for input, processing and output. The LPC4370 breaks new ground by integrating this functionality in a single chip, eliminating data bottlenecks, improving power efficiency and noise performance, as well as reducing the overall PCB footprint, cost and application complexity. The multi-core architecture of the LPC4370 also offers simplified algorithm partitioning. With its large SRAM and flexible memory expansion, the LPC4370 allows system designers to tailor the memory type and size to their specific application requirements.

“Our new LPC4370 takes NXP’s industry-leading microcontroller performance and integration to the next level – creating a single-chip solution for high-speed data acquisition applications,” said Ross Bannatyne, general manager, mass market microcontroller product line, NXP Semiconductors. “With an integrated 80-Msps 12-bit ADC, the LPC4370 provides a competitive edge in high-speed analog data conversion and opens significant possibilities in streamlining data acquisition, processing and communications for a wide range of data-intensive applications.”

The LPC4370 is pin-compatible with all LPC4300 and LPC1800 series microcontrollers in similar packages. LPC-Link 2, the standalone debug adapter introduced by NXP in April 2013, is based on the LPC4370 microcontroller.

“We’ve been impressed with the performance of the LPC4370,” said Anders Rosvall, technical director, Embedded Artists, “particularly the Serial GPIO peripheral which is great for digital I/O handling and the new 80-Msps sampling rate of the 12-bit ADC. These new features make the LPC4370 an excellent choice for data acquisition applications. Our Embedded Artists’ LabTool is a powerful development tool because we have been able to make the most of the rich peripherals available on the LPC4370.”

The LPC4370 is available immediately at a suggested unit price of US $3.96 in quantities of 10,000 units. The LabTool is available from Embedded Artists or NXP authorized distributors under product no. EA-XPR-202.

Links
About NXP Semiconductors
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Contact Information
Eureka Endo
NXP Semiconductors
http://www.nxp.com
+44 795 828 7483

Hillary Cain
NXP Semiconductors
http://www.nxp.com
+1 408 518 5227

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