

IoT Subsystems from CAST and SoC Solutions Reduce Time to Market for Connected Products

Woodcliff Lake, New Jersey, and Suwanee Georgia — May 28, 2015 — Semiconductor intellectual property provider CAST Inc. and system IP and design firm SoC Solutions have partnered to give an advantage in productivity, functionality, and cost to developers in today's competitive world of interconnected electronic devices.

Instead of starting from scratch, these developers of Internet of Things (IoT), Machine-to-Machine (M2M), and other connected applications can purchase ready-to-run hardware/software subsystems that perform the functions they need in an optimized fashion. The system experts at SoC Solutions develop these subsystems from CAST processor and peripheral IP cores and pre-integrated platforms, plus additional IP as needed. They integrate all the IP, add or develop necessary software, optimize the subsystem for the lowest total energy consumption, and verify its correct operation.

The result is a competitive product in considerably less time—and with less development and testing cost—than most companies could produce themselves.

“The small yet extremely powerful and energy-efficient 8-bit 8051s and powerful 32-bit BA2 processors we offer don't function alone, and most customers today are looking to combine multiple IP cores and base software to bring their product vision to market as quickly as possible,” said Nikos Zervas, chief executive officer of CAST. “Extending our long partnership with SoC Solutions into customized subsystems for the most in-demand applications is a natural progression and that we believe offers a fantastic solution for these customers.”

“The custom system development we've done for over a decade plus CAST's IP now come together in a great solution for those companies rushing to get new IoT products to market as quickly as possible,” said Jim Bruister, president of SoC Solutions. “We can dramatically shorten the distance between a team's compelling vision for a new connected device and them successfully bringing to market a product that works correctly and beats the competition in performance, power consumption, and cost.”

Central to the custom subsystems are the 8-, 16-, and 32-bit microcontrollers and processors that CAST offers. The line of compact, high-speed 8051-compatible MCUs is sourced from Silesia Devices, while the innovative, low-power, high-performance BA2x™ 32-bit processor family is sourced from Beyond Semiconductor.

CAST offers these controllers and processors in off-the-shelf platforms pre-integrated with peripheral and interconnect cores and with drivers and other essential software. Image and video platforms combining processors with the compression cores CAST sources from Alma Technologies are also available, such as the ready-to-run [Video Over IP Platform](#).

Customers needing more can engage with SoC Solutions for custom or semi-custom subsystem development. Starting with but not limited to CAST's IP, SoC's engineers offer a spectrum of services that can include:

1. Defining the system design and chip architecture that best satisfies the customer's specific IoT or M2M product goals.
2. Specifying, procuring, and/or developing the necessary hardware and software IP and prototyping the complete system and chip design in an FPGA or at the board level.
3. Designing and verifying the detailed system logic, and guiding customers through the SoC implementation, foundry, and pre-production verification process.

This process enables SoC Solutions to do more for customers than simply combining existing IP. SoC Solutions can, for example, efficiently integrate encryption to satisfy IoT security concerns, or draw on their years of system development experience to achieve comprehensive memory and bandwidth reductions with significant system-level power savings.

SoC Solutions staff will be on hand to discuss and demonstrate their connected device subsystems in CAST's booth (#1029) at the design Automation Conference in San Francisco, June 7–10, 2015.

About SoC Solutions

SoC Solutions is an independent semiconductor systems design and production firm founded in 2000 and based near Atlanta, Georgia. The company focuses on developing and verifying processor-based system-on-chip designs, and offers standard IP platforms, customized IP subsystems, and consulting services along the spectrum from product conception through manufacture and test. Learn more at www.socsolutions.com.

About CAST, Inc.

CAST is a twenty-year-old developer, integrator, and aggregator of IP cores for ASICs and FPGAs. The company also offers some of the best available choices for other low-power, high-value IP, including BA2x 32-bit Processors; 8051 microcontrollers; video, image, and data compression; security, interfaces and other functions needed for complete system on chip designs. Visit www.cast-inc.com, or follow [@castcores](https://twitter.com/castcores) on Twitter.

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