S2C
FPGA PROTOTYPING SOLUTIONS

Overview

S2C's rapid SoC prototyping solutions perfect matched Action's requirements in reducing the development time, cost and risk for the MP3 and MP4 SoC design.

S2C's Prodigy Logic Module played an integral role in Action's program development and software system development. S2C's support before and after the sale helped to improve Actions success in implementing their SoC prototype.

Using the S2C rapid SoC prototyping solutions, Actions was able to verify and optimize its MP3 and MP4 project development process. By using the S2C prototyping solutions for hardware and software development, Actions has not only reduced the overall design cycle but also optimized the performance of its MP3 and MP4 SoC.

- Reduced overall design cycle to get to market first with innovative new capabilities

- Used combination of Xilinx and Altera TAI Logic Modules

- S2C pre- and post-sales support helped in the success of this project

- Optimized the performance of its MP3 and MP4 SoC

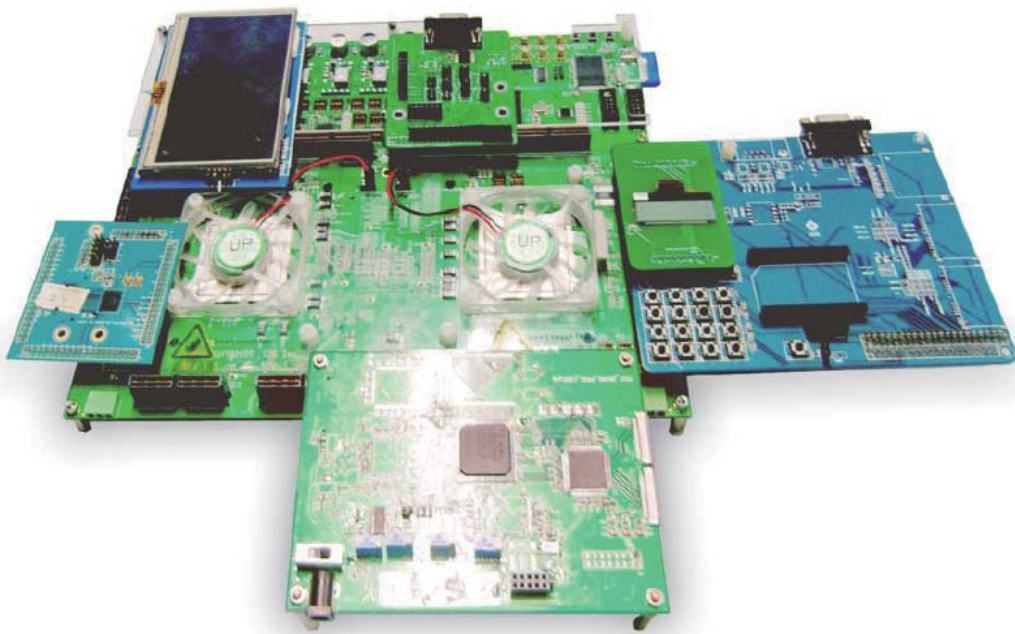- Will work with S2C on co-simulation and co-emulation on future projects

About Actions

Actions Semiconductor Co., Ltd . (NASDAQ: ACTS) is one of China's leading fabless semiconductor companies that provides mixed-signal and multimedia SoC solutions for portable consumer electronics. Actions Semiconductor products include SoCs, firmware, software, solution development kits, as well as detailed specifications of other required components and the providers of those components. Actions Semiconductor also provides total product and technology solutions that allow customers to quickly introduce new portable consumer electronics to the mass market in a cost effective way.

Challenge

Actions is customer-oriented and devoted to satisfying customers' needs. MP3 and MP4 are popular world-wide consumer electronics standards. A competitive MP3/MP4 solution is critical to the success of the project.

The MP3 and MP4 solutions must be flexible enough to meet the ceaseless innovation in the Consumer market. This MP3 and MP4 solutions must target current applications as well as future designs.

"Developing a MP3/MP4 SoC is full of challenges because the application is more and more complex and the customers' needs always change," said Mu Wu, Vice Manager of the System Design Department. "We require an extremely reliable and flexible prototyping system for the MP3 and MP4 solutions, so we can validate the design, program and software applications."

"Such a large Altera FPGA board we purchased outside is more secure, because our expertise is SoC design and Software development. Also we may face problems such as the capacity is not big enough, the speed is not fast enough or the board is not stable enough. Developing the FPGA hardware ourselves would have added at least 2 ~ 3 months to the SoC design cycle. We needed an off-the-shelf really high reliability and performance prototyping solutions in order to support our ongoing SoC projects," Mr. Wu said.

Solution

Actions selected S2C's rapid SoC prototyping solutions based on a review of FPGA-based SoC prototyping products available. "Compared with other vendors, S2C's products and customer support impressed us. What's more, we like the fact that the Prodigy V5 Logic Module is so flexible and reliable. The S2C prototyping solution enables us to build our SoC prototype verification environment quickly. Therefore we decided to continually use S2C's Prodigy V5 Logic Modules and the latest Prodigy S4 Logic Modules for our MP3 and MP4 SoC prototyping. We use some boards for FPGA verification and the other boards are used or software developments," Said Mr. Wu.

"The structure of S2C prototyping solutions is really wonderful. Its flexibility enables us to develop MP3 and MP4 chips today and in the future. Especially the rich choices for interface accessories enable us to upgrade functions or applications much easier." Said Mr. Wu.

Results

Within S2C's rapid SoC prototyping solutions, Actions can reliably build a MP3 and MP4 SoC prototyping in just hours rather than weeks or months.

"S2C's rapid SoC prototyping solutions fill the gaps in our verification environment. S2C's prototyping solutions high capacity, reliable and flexible help us minimize the risk of hardware failure." Said Mr. Wu. "We can now focus on the SoC design and software development. S2C's solutions really reduce the design cycles, costs and risks. Having an effectively reference design, we can quickly move to the MP3 and MP4 system validation. And we can get to the market first which gives us a significant competitive advantage. We look forward to building the long-term cooperation with S2C in other areas, such as co-simulation and co-emulation."