S2C
FPGA PROTOTYPING SOLUTIONS

Overview

• Prodigy™ Player Pro Software provided us with a greater level of control compared to our previous platform

• The fast USB FPGA image downloading is a real time saver

• The larger gate capacity enabled us to put more of our SoC logic onto the FPGA platform at a time, reducing the number of verification iterations needed

• S2C's Dual Stratix-4 820 platform is well designed and feature rich, which reduced the overall design cycle time

S2C's rapid prototyping solution was instrumental in helping us complete the prototyping on time. It is a well-designed system with powerful capabilities, which enabled us to verify large amount of logic by mapping it to the FPGAs . In addition, Prodigy Player Pro Software left us with a great impression, particularly by how it allowed us to run self-testing, clock generation, fast USB download and many other useful functions.

Challenge

"Ablaze Wireless focuses on the femtocell market with the mission of providing highly secured, cost effective solutions to our customers. So we must always keep up with the challenges of innovation in this industry, speeding up product development cycles and reducing time to market.

About Ablaze Wireless

ABLAZE WIRELESS

Ablaze Wireless was founded in 2008 with the goal of providing highly secured, cost effective solutions to the femtocell market. Over the course of the past few years, the company has achieved the impossible by delivering quality products with innovation while still staying lean. In 2009, Ablaze Wireless expanded its operation by setting up an office in Taipei, Taiwan to work closely with the supply chain and manufacturers to bring down the cost of femto access points.

Our team has immense knowledge in mobile communications, digital signal processing, interference suppression, MIMO, and network optimization. With determination and the relentless pursuit of perfection, the team announced the availability of Ablaze's first femtocell baseband processor in May 2011.

It is our belief that there are tremendous opportunities awaiting in the femtocell market as long as the company can continue to grow with innovation while providing superb quality, optimal cost, best service, and strong customer support.
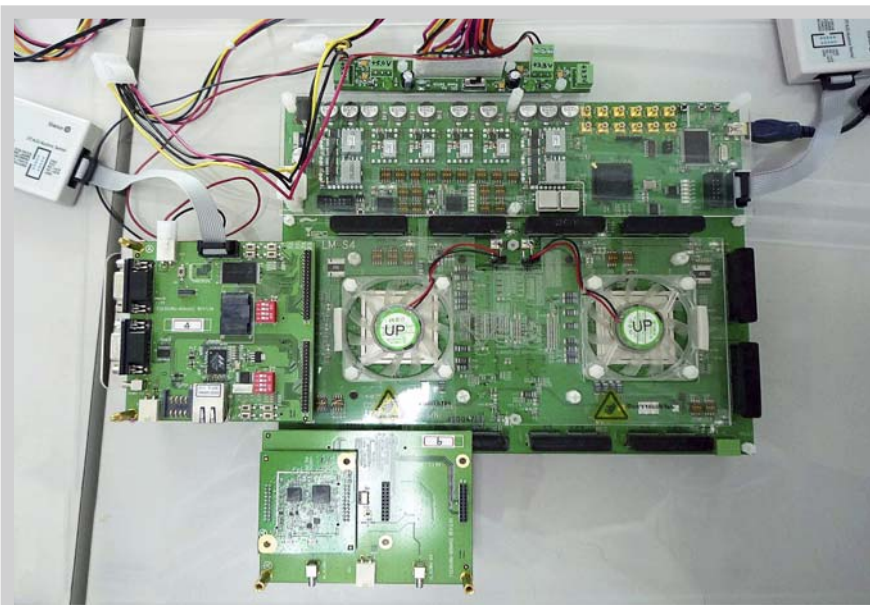
"The Dual Stratix-4 820 Platform enabled us to put more of our SoC design on the FPGA platform at a time than what we could before. Fast USB FPGA image download is a real time saver. And, Prodigy Player Pro software also provided us with a greater level of control compared to our previous platform."

Said Ching-Han Tai
ASIC Director

As our design size grows rapidly, prototyping our design on FPGA becomes very complex, which then requires splitting the design into multiple FPGAs and debugging such a complex FPGA system.

We do not want to be involved with solving such problems as building and debugging a multiple FPGA board. We want to dedicate our resource on the innovation of our technology," said Ching-Han Tai, ASIC Director.

Solution

"We originally discovered S2C from the Altera Website. We are strongly impressed by the features provided by S2C. After careful research, we felt that the S2C Sratix-4 820 platform provided the best combination of performance, features and cost advantages. Everything went well and we purchased two Dual Stratix-4 820 FPGA prototyping platforms. We used the FPGA platforms for both hardware bring-up and hardware software co-development. The fact that we could develop our production-quality software and verify it on our SoC prototype based on FPGAs, before making the final decision to tape-out provided us with tremendous advantage," said Ching-Han Tai, ASIC Director. "The Dual Stratix-4 820 Platform enabled us to put more of our SoC design on the FPGA platform at a time than what we could before. Fast USB FPGA image download is a real time saver. And, Prodigy Player Pro Software also provided us with a greater level of control compared to our previous platform."

Results

"Not only did S2C products improve the confidence level of our SoC design robustness, but they also accelerated the time-consuming iteration process between hardware and software prototyping cycles. For example, we could easily adjust the reference clock frequencies via Prodigy Player Pro Software, which allowed us to benchmark the clock frequencies vs. memory throughputs without having to compile multiple FPGA images," said Ching-Han Tai, ASIC Director. "S2C FPGA platform was instrumental in helping us complete our prototyping on time. Compared with our prior experiences of using a competitor's platform, we estimated that the S2C platform shortened our development cycle by 3~6 months, due to the larger capacity, improved stability, and the abundance of connectivity options. We look forward to using more advanced S2C verification software such as DPI and C-API to speed up our cycle-based simulations in the next project."

Ξ S2C

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