Black Sesame Technologies and S2C

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Zhou Bintian the director of ASIC design

The Customer

Founded in 2016 and initially based in Shanghai and other locations, Black Sesame Technologies is an artificialintelligence company focused on image processing, perception algorithm, and SOC design. 80%of 300 employees are in R&D. The founders, Mr. Shan Jizhang and Mr. LiuWeihong, are experts in image science and automotive industries, respectively,and lead a professional team averaging 15+ year industry experiences.

The Challenges

Automobile, as a rare complete computing platform that can operate as an independent system must have ultra-high computing performance, energy efficiency and reliability. If meeting the above requirements, it must be able to handle large-scale concurrent tasks at the same time. In addition, multiple modes of information processing have caused the complexity of on-board computing chips to rise sharply. Coupled with the unique vehicle regulatory certification in the automotive industry, problems in any one step will result in a double loss of corporate economy and market opportunities.

S2C Solution

S2C's Prodigy Logic Module and Logic System series products are currently the most competitive and cost-effective domestic prototype verification solutions on the market. Black Sesame Intelligent

Business Challenges

- New products to market on time
- Expand market share and grow into new applications

Design Challenges

- Complete verification efficiently for new products
- Enable early firmware and driver integration, and debug, prior to FPGA prototype availabilityapplications

S2C Solution

- Prodigy Logic Module and Logic System with simulation acceleration use model
- Accelerate design validation

Results

- Increased validation speed multiple hundreds of times compared to simulation
- Black Sesame Huashan No. 1 chip is in mass production

Technology has successively adopted a single FPGA, dual FPGAs and four A variety of different product options of FPGA for automotive chip development.

- The most cost-effective solution to meet the needs of different design capacities and applications
- Modular and integrated design, providing the highest flexibility and performance
- Complete prototype verification tool support (automatic segmentation and in-depth debugging)

Dual Prodigy Logic System

The Results

Currently, the Black Sesame Huashan No. 1 chip is in mass production, and the project with domestic head OEMs on L2+ and L3 level autonomous driving is also underway. It is expected that by the end of 2021, models equipped with the Black Sesame Huashan No. 2 chip will also be officially launched.

Customer Reviews

"We used the products of S2C, from the Logic Module of a single FPGA to the Logic System of multiple FPGAs, for the prototype verification of our company's visual perception chip for autonomous driving, including the design verification of the chip. , firmware and driver development. The design of the core IP includes image/video processing, display, computer vision, neural network parts. And these products are convenient and flexible to use, and have strong scalability, which greatly reduces our chip prototypes and verification time."

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