

A close-up photograph of a dark, square AI chip with the letters 'AI' glowing in white on its surface. The chip is set against a background of a complex, glowing blue circuit board with intricate patterns of light and dark traces.

Artosyn & S2C

Prototype Enables New Synergy— How Artosyn Helps their Customers Succeed

Artosyn Microelectronics, a leading provider of AI SoCs for drones and other sophisticated applications finds itself at the intersection of hardware architecture and software development. ***“Our customers are advancing the state of AI programming every day,”*** said Shen Sha, Senior R&D Manager of Artosyn's AI Chip Department. ***“They need early access to the hardware to develop their software. It's imperative.”***

Since 2015, Artosyn has specialized in Image Signal Processors (ISPs) and Neural Processing Units (NPUs), highly advanced ASIC devices that must meet the demanding requirements of low-power and high-performance. These systems represent the most advanced generation of controllers today, employing artificial intelligence for such tasks as object detection, object classification, and object tracking. Artosyn's chips are at the heart of the latest generation of UAVs (drones), as well as being used in smart surveillance systems, robots, autonomous vehicles, and more.

These are designs of enormous size and complexity, and verifying their correct operation presents its own challenges. ***“We've used many of S2C's FPGA development systems including their single and dual Prodigy VU440 systems,”*** explains Sha. ***“We were able to successfully complete the validation of several complex chips in the hundred-million gate range quickly and efficiently.”***



But validating hardware still leaves millions of lines of code to test and verify. As a company dedicated to the customer experience, Artosyn looks for creative ways to help: ***“In some cases we’ve used the large capacity FPGA-based systems from S2C to directly built a prototype for the customer’s evaluation,”*** said Sha. ***“This really accelerates their software development process.”***

Sharing the power of S2C’s Prodigy VU440 enabled both companies to leverage a unique form of cooperation – Artosyn was able to swiftly validate their 100-million gate design, and their customer gained access to the hardware critical to furthering their development schedule. Moreover, Artosyn benefits from additional insight by working so closely with their customer; knowledge that helps drive improvements in their own designs. It’s a win for both firms.

S2C specializes in providing leading-edge prototyping platforms for a broad range of design sizes and applications. Built around the world’s largest and fastest FPGAs – such as the Xilinx UltraScale+ VU19P, and the Intel Stratix 10 – S2C’s Prodigy series can scale up to accommodate the largest designs in the hyperscale class. With a rich library of memories, daughter cards, and interface modules, Prodigy systems can be quickly adapted and configured for any purpose. If you’re facing the challenge of large-scale design validation, let us help. Together, we can find a win for you too.

About Artosyn

Artosyn Microelectronics is the leading embedded AI SoC supplier. The application of their chips covers the market such as drones, robots, smart surveillance, and more. Artosyn is

known for its solid experience in wireless communication, computer vision and deep learning.

About S2C

S2C is a leading global supplier of FPGA prototyping solutions for today's innovative SoC and ASIC designs, now with the second largest share of the global prototyping market. S2C has been successfully delivering rapid SoC prototyping solutions since 2003. With over 500 customers, including 6 of the world's top 15 semiconductor companies, our world-class engineering team and customer-centric sales team are experts at addressing our customer's SoC and ASIC verification needs. S2C has offices and sales representatives in the US, Europe, mainland China, Hong Kong, Korea and Japan. For more information, please visit www.s2cinc.com