

GOWIN Semiconductor Announces their GoAI Solution for AI Acceleration at the Edge

SAN JOSE, Calif. and GUANGZHOU, China, September 16, 2019 -- GOWIN Semiconductor Corp., the world's fastest-growing programmable logic company, announces the release of its latest solution called GoAI, providing acceleration for artificial intelligence at the edge on GOWIN FPGAs. GOWIN GoAI offers a 78x performance gain over standard microcontrollers with complete design flow support into existing AI and machine learning development tools.

Adoption of artificial intelligence for edge and IoT applications is dramatically increasing to make intelligent decisions in low cost, power and form factor products without web connectivity. GoAI provides full stack support to easily test and deploy AI inference solutions at the edge by connecting into existing Caffe and Arm CMSIS-NN frameworks. This allows users to train and test a model, quantize and retest the trained model on a microcontroller within the GOWIN FPGA and then accelerate their model in FPGA fabric to enable real-time performance.

"Many edge AI solutions create roadblocks for developers by requiring proprietary software to deploy trained networks on the FPGA." said Grant Jennings, Director of International Marketing for GOWIN Semiconductor. "By connecting into existing software frameworks for quantization and optimization we enable easier and more productive development of AI inference solutions for our customers along with better scaling across GOWIN FPGA products. This results in faster time to market and better collaborative development with more options to balance cost and performance in the end product."

GOWIN's GoAI accelerator provides an AHB interface, which allows customers to control the accelerator with a state machine, a soft processor or a hardened Arm Cortex-M3 processor. It also provides easier connectivity with FPGA fabric allowing developers to connect the accelerator to various interfaces such as a MIPI CSI-2 camera or various I2S microphones.

"Due to strict area and computational power requirements, edge AI applications require highly flexible domain-specific frameworks." said Dr. Jianhua Liu, Director of Software Engineering for GOWIN Semiconductor. "GoAI combines an embedded processor with a highly flexible FPGA accelerator that seamlessly fits into popular AI frameworks enabling unique, fast and efficient AI development for broad edge applications as a result."

GOWIN's GoAI solution will be demonstrated at Arm Techcon 2019. The demonstration shows detection of various objects from a Omnivision camera connected to the GOWIN FPGA. The FPGA uses a neural network trained with the CIFAR10 dataset and configured within the GoAI accelerator to provide immediate inference results.

About GOWIN Semiconductor Corp.

Founded in 2014, Gowin Semiconductor Corp., headquartered with major R&D in China, has the vision to accelerate customer innovation worldwide with our programmable solutions. We focus on optimizing our products and removing barriers for customers using programmable logic devices. Our commitment to technology and quality enables customers to reduce the total cost of ownership from using FPGA on their production boards. Our offerings include a broad portfolio of programmable logic devices, design

software, intellectual property (IP) cores, reference designs, and development kits. We strive to serve customers in the consumer, industrial, communication, medical, and automotive markets worldwide.

For more information about GOWIN, please visit www.gowinsemi.com

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