Customer Success Story
Accelerating Edge AI

The Customer Challenge

Neuronix AI Labs faced the growing industry demand for enhanced computer vision capabilities in edge devices, confronting several interconnected challenges. Their customers required higher resolution and frame rates for object detection, classification, and segmentation, while simultaneously demanding improved accuracy without compromising power efficiency. The critical challenge was developing cost-effective solutions that could operate on battery power for extended periods. Adding to this complexity was the necessity to implement these improvements without requiring customers to replace their existing hardware infrastructure, ensuring a seamless upgrade path for their systems.

The Veriest Solution

Veriest Solutions deployed their expert engineering teams to:

- Created a specialized Neural Network acceleration core optimized for computer vision applications
- Developed integration capabilities with AMD MPSoC family of products and other FPGA platforms
- Implemented standard interfaces to existing AI environments
- Provided comprehensive software toolset support
- Enabled seamless integration with minimal changes required from system vendors

Result

The collaboration delivered exceptional outcomes:

- 8-12x performance increase for edge computer vision inferencing
- 90% reduction in power consumption and cost
- Successful implementation on existing off-the-shelf hardware
- Maintained flexibility and future-proofing comparable to GPU solutions
- Enabled higher resolution, higher frame rate, and more robust networks
- Successfully demonstrated at the Embedded World Conference
- Achieved performance comparable to dedicated silicon while maintaining FPGA flexibility

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"Working closely with the Veriest team on this groundbreaking innovation enabled us to complement our internal team capabilities with the expertise and experience of Veriest engineering. Our solution for Neural Network acceleration on off-the-shelf FPGAs enables system vendors in the industrial, Smart-Retail, Safe-City as well as other verticals to get the best performance per dollar and per Watt – Similar to those offered by dedicated silicon, while maintaining flexibility and future proof similar to those offered by GPUs."
Yaron Raz, CEO at Neuronix AI Labs