

Edge AI Solution - Intelligence on the Edge



There has been a growing requirement for making decisions on the edge with the need for intelligent devices capable of making real-time decisions on the edge. The Edge AI devices are expected to run complex neural networks and deep learning algorithms while maintaining low latency, power efficiency, and accuracy

Corazon-AI built on Xilinx Zynq® UltraScale+™ MPSoC is designed to solve the above real-world challenges and provide for an intelligent edge solution for video analytics, image processing, robotics and the growing spectra of artificial intelligence applications across the globe.

With the support for multiple cameras and an in built DPU and AI Inference engine, Corazon-AI can fit as the heart of AI Solutions across verticals and industries.

VALUE PROPOSITION

Video Analytics and decisions on the Edge

Integrated DPU and AI Inference engine with support for multiple CNN simultaneously

Multi-Camera Support - 8 IP Cameras up to 1080p, 2 USB3.0 Cameras and SDI

Rapid integration and faster time to market for AI Edge Solutions

Heterogenous ARM + FPGA Architecture

10+ Year Availability

SPECIFICATIONS

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| CPU: |
| Quad Core A53 Processor with MPCore upto 1.5GHz, Dual Cortex-R5 @600MHz |
| MALI - 400 based GPU up-to 677MHz |
| 64bit PS DDR4 with ECC & 32bit PL DDR4 |
| Other Features: |
| H.264/H.265 Video Encoder / Decoder |
| 4K HDMI Input and Output Ports |
| Can Connect 8 IP Cameras up to 1080p, 2 USB3.0 and SDI Camera |
| Wi-Fi 802.11 b/g/n/ac and BT 5.0 |
| Dual Gigabit Ethernet |
| M.2 Expansion Provision for 4G/5G connectivity or extended storage for recording |
| Petalinux Operating System + Vitis AI stack |

APPLICATIONS:



License Plate Recognition



People Counting

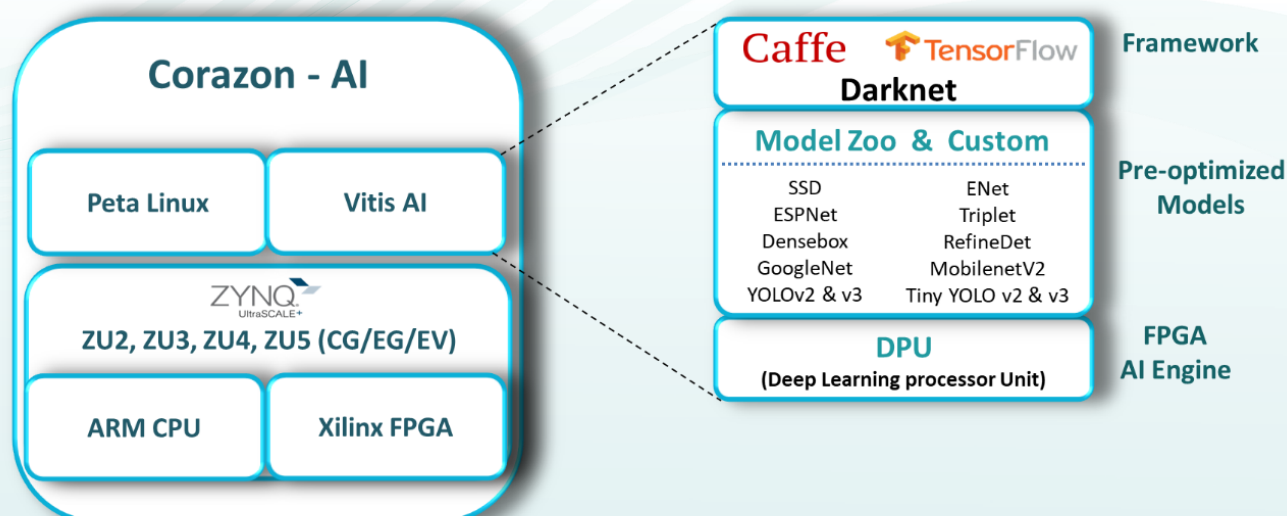


Face Recognition

The Corazon-AI integrated with Xilinx Vitis AI Stack enables faster time to market while reducing complexity. The Xilinx AI Stack includes advanced pre-optimized deep learning models from the mainstream frameworks such as Tensor-flow, Caffe, Darknet, and Computer Vision Libraries.

The Xilinx Vitis AI Stack enables developers to accelerate the development flow of AI applications even without in depth-knowledge of FPGA and deep learning. The Stack support C++/python API's which provides the programming flexibility to the developers.

The DPU AI inference engine provides scalable multi-dimensional parallel architecture capable of performing major



iWave Systems Technologies, established in 1999, focuses on product engineering services involving embedded hardware, software and FPGA. With over 18 years' experience on FPGA, iWave provides custom design services and encompasses a wide array of XILINX System on Modules and Solutions ranging from Zynq 7000 Series to Zynq UltraScale+ MPSoC solutions.

To complement, iWave also provides an extensive suite of FPGA IP Cores such as ARINC818 Complete Suite, Storage & Video Processing IPs.

iWave assures customers of product longevity of 10+ years, providing customers with technical support from ideation to production. iWave can help customers with custom FPGA design implementation, porting well-trained network weights, hardware, and software pipeline optimization for performance-critical functions on the edge.

You can access more detailed information on the solution at www.iwavesystems.com. In case of any enquiries of product information, please contact mktg@iwavesystems.com.

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