EVA SDK

Edge Vision Analytics (EVA) Software Development Kit (SDK) for ADLINK AI Vision Products

EDGE VISION ANALYTICS



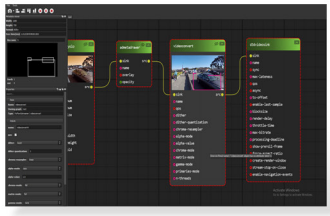
Introduction

EVA SDK is a unified edge vision analytics service-ready software platform that enables ADLINK AI hardware, making it easier for users to develop optimized edge AI vision applications by simplifying integration and focusing on essential functionality. Users can leverage ready-to-use open-source plugins to facilitate each stage the AI vision project lifecycle, including image capture and processing, AI inference, post-processing, and analytics. This "One API" framework allows users to successfully build a proof-of-concept in two weeks and speed up mass deployment time.

Key Features

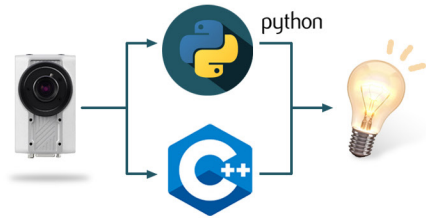
The Best PoC Tool for Edge AI Vision Applications

- **AI Pipeline Studio**



GUI interface for AI applications, editing, executing, debugging, and performance profiling

- **Abundant Ready-to-use Plugins**



Hardware codec, image processing, and edge communication, including stream out

- **Optimized AI Models**



Object classification, detection, segmentation, and human posture detection

Easy Migration from Lab Test to Field PoC

- **Supports Hybrid AI Inference Engines Simultaneously in a Pipeline**

NVIDIA intel

• NVIDIA: GPGPU, Jetson
• Intel: CPU, iGPU, VPU

- **Support Multiple Industrial Camera Types**

USB VISION GiGE VISION mipi

• Basler, FLIR, Hikrobot GigE and USB3 vision camera
• RTSP, V4L2

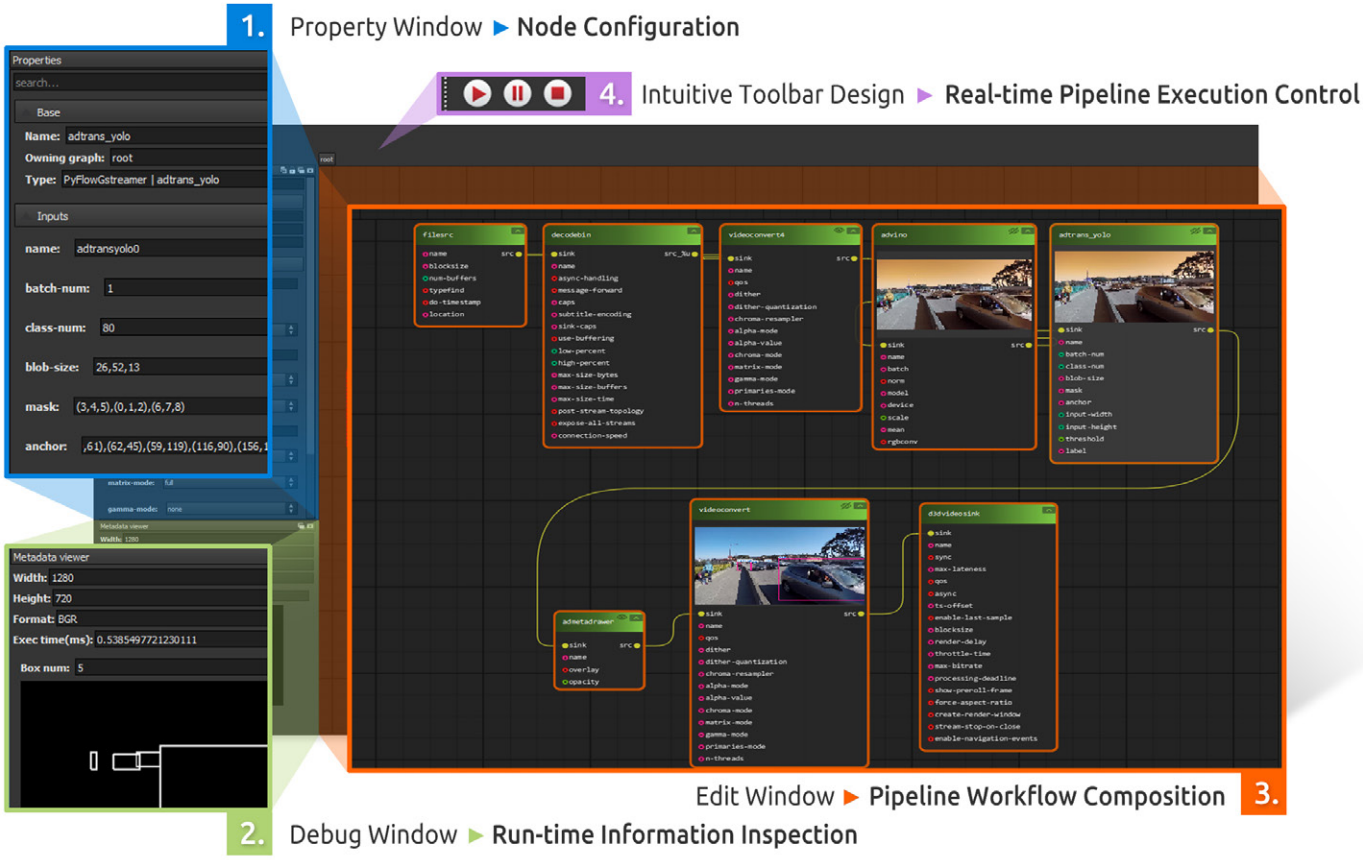
- **Supports Operation between Different Operating Systems**

ubuntu Windows

No porting effort for platform migration

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Intuitive GUI for Fast and Easy AI Inference Pipeline Development



Key Functions

Image Capturing

- Basler USB3/GigE camera
- FLIR USB3/GigE camera
- Hikrobot USB3/GigE camera
- RTSPS stream
- V4L2
- Video/Image files

Image Pre-Processing

- NVIDIA H.264/H.256 HW CODEC
- Intel H.264/H.265 HW CODEC
- Pixel format transfer
- Image rotate/flip/crop
- Gamma correction
- Median filter
- Brightness, contrast, hue, saturation

AI Inference

- Object Classification
- Object Detection
- Segmentation
- Human pose
- Customized model

Connectivity

- RTSP stream out
- AWS connector
- DDS data river (2021.Q3)
- ROS2 (2021.Q3)
- MS Azure Connector (2021.Q3)

Programing language: C/C++, Python
Operating system: Windows 10, Ubuntu 18.04

AI Models Verified on EVA

Application	Network	Original Framework	TensorRT	OpenVINO
			Verified	Verified
Classification (OK/NG, or sorting)	GoogLeNet	Caffe	V	V
	MobilenetV2	ONNX	V	V
Defect/Object Detection	SSD Inception-V2	Tensorflow	V	-
	Face detection (SSD based)	Caffe	X	V
	Yolov3	Darknet	V	V
	Yolov4	Darknet	V	-
	Yolov3-tiny	Darknet	V	-
Pose Detection	OpenPose	PyTorch	V	V
Segmentation	FCN-Alexnet	Caffe	V	X
	Intel Segmentation	Caffe	X	V

Note: The specific configuration of neural network and original framework is validated and supported by EVA.
For other configuration options, please contact ADLINK for support.

Supported AI Vision Platforms & Cameras

Product Type	Model
AI Smart Camera	NEON-2000-JNX
Vision System	EOS-i6000-P
	EOS-JNX-I / EOS-JNX-G

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