

DEEPCONVIEW

MODEL PACK FOR OBJECT DETECTION



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Multi Object Detection in images and video sequences is a heavily researched subject among computer vision experts. Historically much of this research, and associated implementations, is carried out on desktop class machines as embedded processors have become more powerful, there has been a growing effort to translate these learnings and implementations to them. Au-Zone's Model Pack for Detection takes the latest public model research and techniques to create, adapt and test detection models you can deploy today. This allows you to focus on your business needs and not worry about how to get the best detection model on your platform.

Benefits

- Reduce your time to success from months to days
- Lower your model development project cost/effort by 90%
- Deploy customized detection models to MCU or application processors
- Avoid the pitfalls of trial-and-error approach and eliminate the time consuming 'research' components in your programs ie model topologies, conversion, training and quantization issues
- Be confident that you will always be up to date with the latest research & model performance
- eIQ Toolkit provides a feature rich desktop development environment to save your time and money with no cloud training required

**LOWER
YOUR COST
BY 90%**





FULLY OPTIMIZED FOR NXP I.MX RT MCU & I.MX8 PROCESSORS

Book 98%

Key Features:

- Bundle of state-of-the-art detection models pretrained with large public datasets
- Fully tested & optimized for NXP RT Crossover MCU's and i.MX8 Application Processors
- Quickly and easily adapt (retrain) these models for your use-case with eIQ Toolkit
- Fully documented with benchmark data and ongoing commercial support

Model Training and Validation:

- Get started NOW ! Train any or all these models on your dataset with eIQ Toolkit
- Validate the performance of your adapted model on desktop, target or in the wild in minutes with any target running DeepViewRT including EVK's and Starter Kits

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Features

- Detection heads support interchangeable backbones
- Models can all be run at custom resolutions and aspect ratios (non-square inputs)
- Backbones and Detection Heads parameterized for user-configurable performance vs. accuracy

What's included:

- Source and binary examples
- Python libraries, eIQ Portal model plugins, Jupyter Notebook examples
- Documentation including benefits / tradeoffs and benchmarks
- 1st year of support and maintenance

Detection Heads:

- SSD+FPN
- CenterNet
- YOLO
- EfficientDet

Backbones:

- Optimized Mobilenets
- ResNet
- DarkNet
- EfficientNet
- Proprietary Models

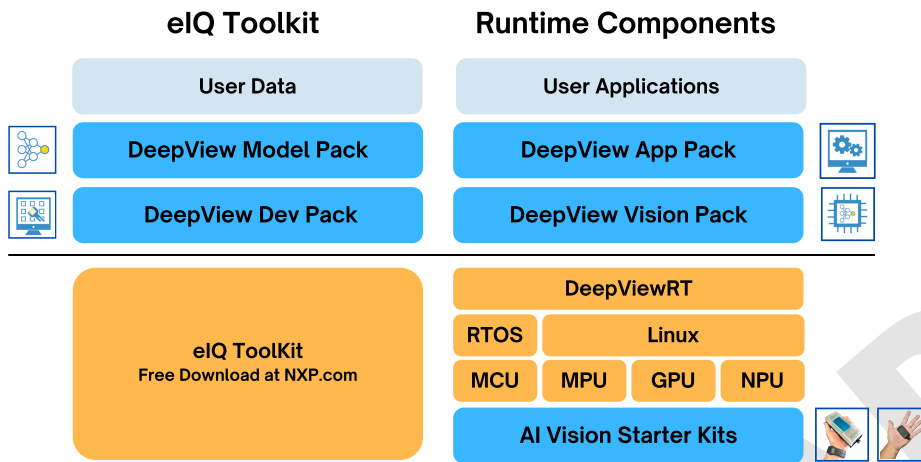
100% Compatible with:

- [eIQ Toolkit](#)
- [DeepViewRT Inference Engine](#)
- [VisionPack for Microcontrollers](#), [VisionPack for Application Processors](#) & [DeepView Application Pack](#)
- [Micro and Maivin AI Vision Starter Kits](#)

Supported NXP Devices & Platforms

Feature/Performance	Device	EVK	Starter Kit
Application Processors	i.MX 8M Plus	EVK	Maivin
	i.MX 8M	EVK	Maivin
	i.MX 8	EVK	Maivin
MCU's	i.MX RT 1062	EVK	Micro
	i.MX RT 1064	EVK	Micro
	i.MX RT 1170	EVK	Micro

Build Your Vision Sensor Today



DeepView Development Pack

The Dev-Pack is a bundle of eIQ Toolkit add-on features designed to extend what developers can do with the baseline eIQ Portal providing developers with a practical set of tools to instrument, optimize and deploy highly tuned machine learning solutions on target.



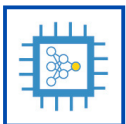
DeepView Model Pack for Detection

DeepView Model Pack is a bundle of state-of-the-art detection models pretrained with COCO and OpenImages and has been fully tested & optimized for NXP RT Crossover MCU's and i.MX8 Application Processors.



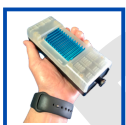
DeepView Application Pack | Tracking on MCU

The Tracking Application Pack is the amalgamation of a Au-Zone's proprietary tracking algorithm, DeepViewRT, VisionPack for MCU and ModelPack to provide an integrated solution for Multi Object Tracking on a microcontroller.



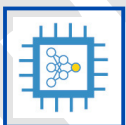
DeepView Vision Pack for Application Processors

The Vision Pack for Apps Processors provides developers with an end to end, hardware accelerated video pipeline for optimized AI based Vision applications. Fully integrated with DeepViewRT inference engine for the high performance / low overhead AI vision solution on Applications Processors.



Maivin AI Vision Starter Kit

The Maivin AI Vision Starter Kit is a modular AI smart camera platform built on NXP's i.MX8MPlus Applications Processor and production grade hardware and software components to enable rapid prototyping and field deployment of custom Vision Solutions. The Maivin targets applications where compute performance is the priority.



DeepView Vision Pack for MCU

Production ready MCU project with hardware optimized vision pipeline for highest performance on MCU class devices. Fully integrated with DeepViewRT inference engine for the high performance / low overhead AI vision solution on MCU.



Micro AI Vision Starter Kit

The Micro Vision Starter Kit is a modular AI smart camera platform built on NXP's i.MXRT1064 Crossover MCU and production grade hardware and software components to enable rapid prototyping and field deployment of custom Vision Solutions. The Micro targets applications where lower cost, design complexity and size are prioritized over computer performance