

elQ[®] Inference with Glow NN

elQ-Glow

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The eIQ machine learning (ML) software development environment for i.MX RT crossover MCUs supports the Glow machine learning compiler, which enables ahead-of-time compilation. The compiler converts the neural networks into object files, then the user converts this into a binary image for increased performance and smaller memory footprint as compared to a traditional runtime inference engine.

Glow is used as a software back-end for the PyTorch machine learning framework, including support for the ONNX model format.

Glow, or graph lowering, compiler derives its name because it lowers a neural network into a two-phase strongly typed intermediate representation. In the first phase, the optimizer performs domain-specific optimizations. The second phase allows the compiler to perform optimizations that take advantage of specialized back-end hardware features. It's in this second phase that NXP has added specialized support for Arm® Cortex®-M cores and Cadence® Tensilica® HiFi 4 DSP support, accelerating performance by utilizing Arm CMSIS-NN and HiFi NN libraries, respectively.

elQ® Inference with Glow NN elQ® Inference with Glow NN Block Diagram



View additional information for eIQ® Inference with Glow NN.

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