



eIQ® Inference with Glow NN

eIQ-Glow

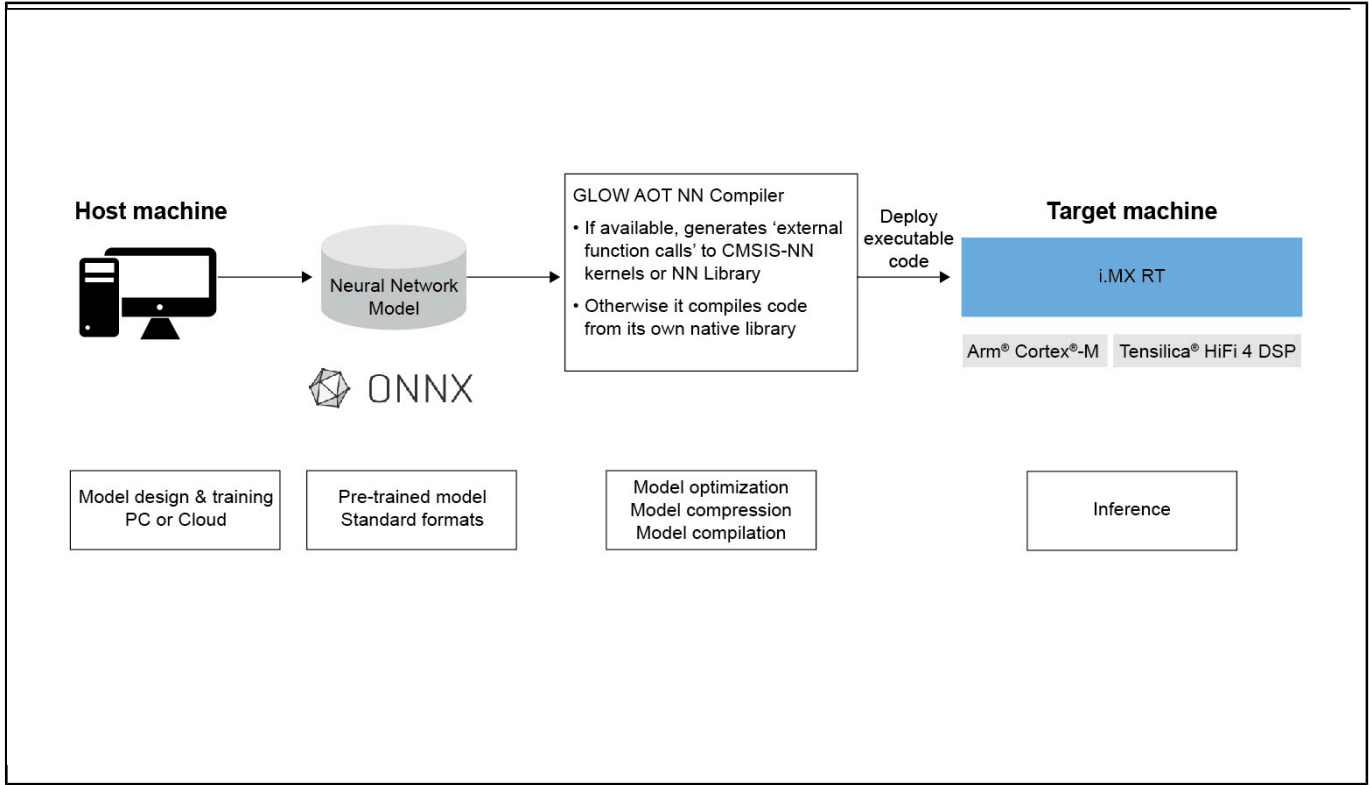
Last Updated: Aug 30, 2022

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.

eIQ® Inference with Glow NN eIQ® Inference with Glow NN Block Diagram



View additional information for [eIQ® Inference with Glow NN](#).

Note: The information on this document is subject to change without notice.

www.nxp.com

NXP and the NXP logo are trademarks of NXP B.V. All other product or service names are the property of their respective owners. The related technology may be protected by any or all of patents, copyrights, designs and trade secrets. All rights reserved. © 2024 NXP B.V.