EIQTRN

eIQ Toolkit Release Notes

Rev. 19 — 7 April 2025 **Release notes**

Document information

Information	Content
Keywords	Machine Learning, AI, TensorFlow, Neural Networks, eIQ, Computer Vision
Abstract	This document contains information about the content, new features, and limitations of the eIQ Toolkit package. eIQ Toolkit is a machine learning environment which enables its users to train and run machine learning models as efficiently as possible on NXP hardware.

1 Overview

This document contains information about the content, new features, and limitations of the eIQ Toolkit package. The eIQ Toolkit is a machine-learning environment which enables its users to train and run machine-learning models on NXP hardware as efficiently as possible.

Table 1. Component overview

Component	Version
eIQ Portal	2.15.0
Model Tool	2.11.0
eIQ Time Series Studio	1.1.5
eIQ Converter	2.8.0
eIQ Converter (ONNX plug-in)	2.8.0
eIQ Converter (RTM plug-in)	2.8.0
eIQ Converter (TF Lite plug-in)	2.9.0
eIQ Converter (Arm Vela plug-in)	1.2.0
eIQ Converter (Neutron plug-in)	1.1.0
eIQ Converter (ONNX2Tflite plug-in)	1.0.0
eIQ Datastore	2.4.0
eIQ Importer	2.4.0
DeepViewRT	2.4.46
Modelrunner	2.6.0
Modelrunner Client	1.3.0
Modeleditor	1.1.0
eIQ Trainer	2.8.2
eIQ Validator	2.8.0
eIQ Python	2.8.5
Python	3.10.11
Python – Tensorflow	2.16.2
Python – ONNX	1.15.0
Python – ONNX Runtime	1.17.3
Extension - Arm Vela	1.3.1
Extension - Explainability	0.4.0
Extension - Vision Pipeline	1.4.0-rc2
Extension - Watermarking	1.2.3
Extension - TAO	0.0.1

2 References

This release includes the following references and additional information:

- *eIQ Toolkit User's Guide* (document EIQTUG)
- *eIQ Toolkit Release Notes* (document EIQTRN)

3 1.15 Features and fixes

- ***General Updates***
  - Added modelrunner for the Yocto BSP version LF_6.12.3_1.0.0
- ***Neutron Converter***
  - Added Neutron Converter for MCU SDK 25.03
  - Updated Neutron Converter Yocto BSP version LF_6.12.3_1.0.0 (Linux only)
  - Neutron Converter for i.MX95 with **NXP i.MX Yocto BSP LF6.6.52_2.2.x** is available only in **eIQ Toolkit 1.14**.

4 Known issues and workarounds

The following list specifies the current known issues (which may impact the user experience) and workarounds:

- Do not use batch sizes of less than 4 in eIQ Portal.
- Validation may not work when the proxy settings are enabled.
- Issues are observed for the H5/TF Lite to ONNX conversions due to differences between the 2 formats and third-party library usage.
- Issues are observed in quantized conversions from the TF SavedModel format.
- Unable to quantize LSTM layer in TF Lite.
- CUDA/GPU acceleration is supported only on Linux and through WSL on Windows due to TensorFlow. This means that the Linux installer is much bigger than the Windows installer, because it includes CUDA and the eIQ Toolkit for Windows is not accelerated on the GPU.
- Direct export for the eIQ Neutron NPU and Ethos-U (i.MX93) in the eIQ Portal (BYOM) is not supported. The model must be exported to quantized TF Lite and then converted using the Model Tool.
- When using the Neutron Converter plugin, you may try to pass the “input” or “output” parameter through the “custom options” argument and not the standard way. As this would cause conflicts with the default behavior, the plugin will disregard these parameters and warn you about it.
- Due to a TensorFlow issue, when training a detection model on Ubuntu using GPU, the GUI may show an error. The workaround is to either disable the GPU so that the model is trained on the CPU instead or simply trying to run the training again until it succeeds.
- During model validation, the process may hang sometimes when the validation is executed before everything is loaded properly. Wait for a few seconds on the validation screen before starting it.
- When using the Neutron Converter with i.MX95 devices, while loading firmware for models in the tflite.Interpreter() call, the correct sequence is:

```
Interpreter1 = tflite.Interpreter(model1, …)
Interpreter1.invoke()
Interpreter2 = tflite.Interpreter(model2, …)
Interpreter2.invoke()
```

- When converting large models (e.g. yolov8m) using the Neutron Converter with i.MX95 devices, it may fail with the “ internal error” message. The conversion will work if you switch to an x86 host with a bigger system memory (64 GB).

5 Revision history

Table 2. Revision history

Document ID	Release date	Description
EIQTRN v19.0	7 April 2025	Updated release of eIQ Toolkit 1.15.0
EIQTRN v18.0	20 January 2025	Updated release of eIQ Toolkit 1.14.0
EIQTRN v17.0	28 November 2024	Updated release of eIQ Toolkit 1.13.3
EIQTRN v16.0	30 October 2024	Updated release of eIQ Toolkit 1.13.2
EIQTRN v15.0	25 October 2024	Updated release of eIQ Toolkit 1.13.1
EIQTRN v14.0	9 October 2024	Updated release of eIQ Toolkit 1.13.0
EIQTRN v13.0	3 June 2024	Updated release of eIQ Toolkit 1.12
EIQTRN v12.0	2 April 2024	Updated release of eIQ Toolkit 1.11
EIQTRN v11.0	10 January 2024	Updated release of eIQ Toolkit 1.10
EIQTRN v10.0	12 October 2023	Updated release of eIQ Toolkit 1.9
EIQTRN v9.0	3 July 2023	Updated release of eIQ Toolkit 1.8
EIQTRN v8.0	11 April 2023	Updated release of eIQ Toolkit 1.7
EIQTRN v7.0	1 February 2023	Updated release of eIQ Toolkit 1.6
EIQTRN v6.0	3 October 2022	Updated release of eIQ Toolkit 1.5.2
EIQTRN v5.0	8 July 2022	Updated release of eIQ Toolkit 1.4.5
EIQTRN v4.0	31 March 2022	Updated release of eIQ Toolkit 1.3.4
EIQTRN v3.0	18 January 2022	Updated release of eIQ Toolkit 1.2.5
EIQTRN v2.0	19 October 2021	Updated release of eIQ Toolkit 1.1.8
EIQTRN v1.0	24 June 2021	Updated release of eIQ Toolkit 1.0.5
EIQTRN v0.1	15 June 2021	Initial release of eIQ Toolkit 1.0.3

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