

RN00399

eIQ Time Series Studio Release Notes

Rev. 1.1 — 12 February 2026

Release notes

Document information

Information	Content
Keywords	RN00399, eIQ, Anomaly Detection, AI, Machine Learning, Classification, Regression, Classical Machine Learning, Neural Networks, Time Series Studio
Abstract	These release notes describe the system architecture and principles. They also list new features, supported devices, and known issues for eIQ Time Series Studio (TSS).



1 System Workflow

eIQ Time Series Studio (TSS) provides an end-to-end solution for developing time-series-based machine learning applications. The workflow covers the full development cycle—from initial evaluation to production deployment—and includes data logging, data labeling, data operations, data visualization, smart data analysis, automated machine learning optimization, model emulation, and library generation.

1.1 Bring Your Own Data (BYOD)

The following diagram illustrates the complete BYOD workflow.

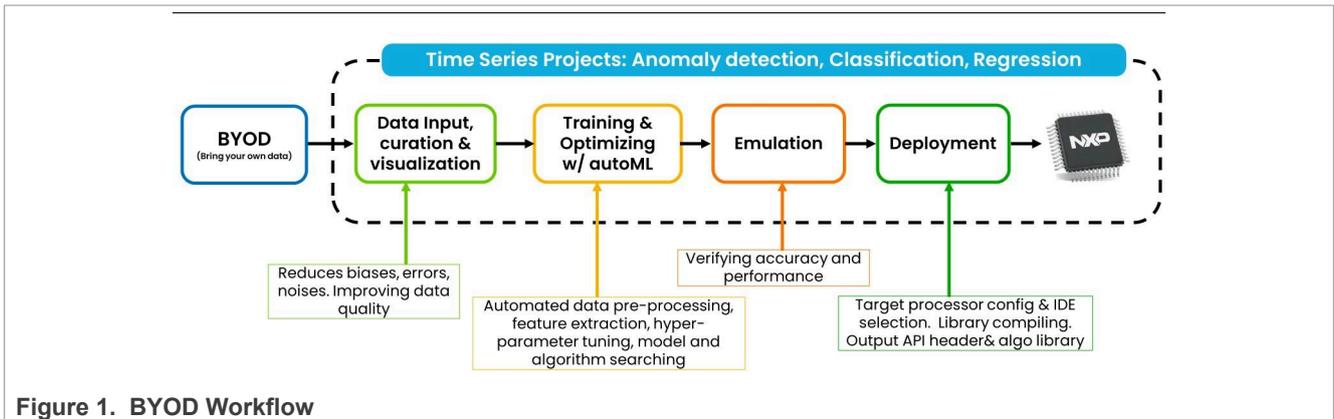


Figure 1. BYOD Workflow

- It supports time series dataset input that the customer completely owns.
- Based on the input dataset, it automatically trains and outputs a list of the best classical machine learning models or a selected deep learning model.
- Generates the algorithm header file and runtime library for the selected CPU core.

1.2 Bring Your Own Model (BYOM)

The following diagram illustrates the complete BYOM workflow.

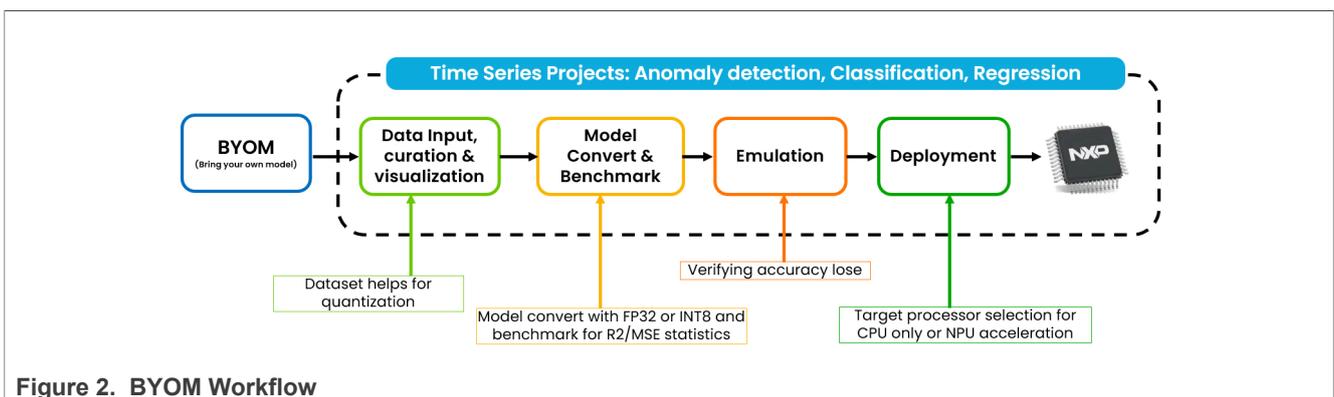


Figure 2. BYOM Workflow

- It supports time series deep learning model input that the customer completely owns.
- From the dataset input, it automatically quantizes with R2/MSE benchmark and emulation test accuracy results.
- It generates the algorithm header file and runtime library for a selected CPU core or NPU accelerator.

2 System Architecture

The following diagram illustrates the system architecture.

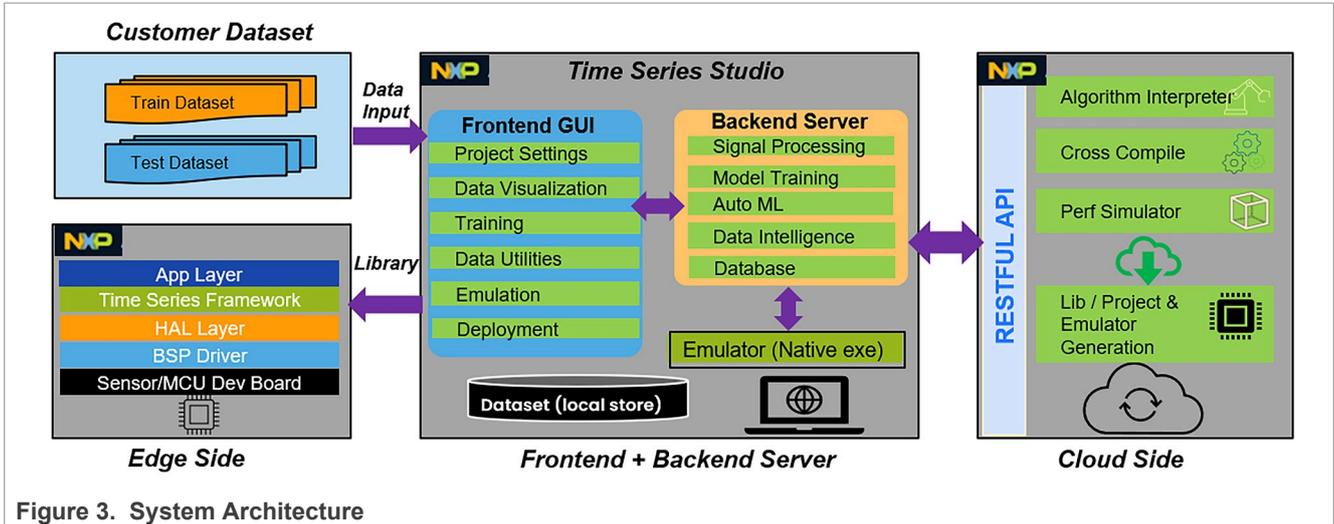


Figure 3. System Architecture

The eIQ Time Series Studio consists of a GUI-based front-end, a shell command-based backend server, and a cloud server for source code generation. It supports different compilers, emulators, and library deployment. eIQ Time Series Studio has a scalable architecture that supports flexible deployment and rapid development. The main blocks with function descriptions are listed below.

3 System Requirements

- A standard x64 PC with a minimum of 32 GB RAM, 16 GB of available disk space, and a recommended 1080p resolution display.
- An Internet connection is required for authentication, emulation and algorithm library generation, and tool upgrades.
- Supported OS: i. Microsoft® Windows 10 and Windows 11. ii. Ubuntu 22.04 LTS.

4 Supported Devices and Boards

The algorithm library broadly supports Arm Cortex cores, including Cortex-M33, Cortex-M7, Cortex-M4, and others, as well as embedded AI acceleration technologies such as NPU and PowerQuad. Devices not listed in the table above may still be supported if they share the same core architecture.

Table 1. Supported devices and boards

Class	Boards
DSC	MC56F83000-EVK, MC56F80000-EVK
Kinetis	FRDM-K66F, FRDM-KV31F, FRDM-K32L3A6
LPC	LPC55S69-EVK
MCX	FRDM-MCXA156, FRDM-MCXN947, FRDM-MCXC444, FRDM-MCXN236, FRDM-MCXW71, AFCI-MCXN547, FRDM-MCXE247
RW	FRDM-RW612
i.MX 8 Processors	8MPLUSLPD4-PEVK
i.MX 6 Processors	MCIMX6ULL-EVK
i.MX RT	MIMXRT595-EVK, MIMXRT685-EVK, MIMXRT1060-EVK, MIMXRT1170-EVK, MIMXRT1180-EVK, i.MX-RT700

5 Changes and Known Issues

5.1 Version 1.5.5 Release Highlights

5.1.1 New Features

- Added two new sample applications for regression task.

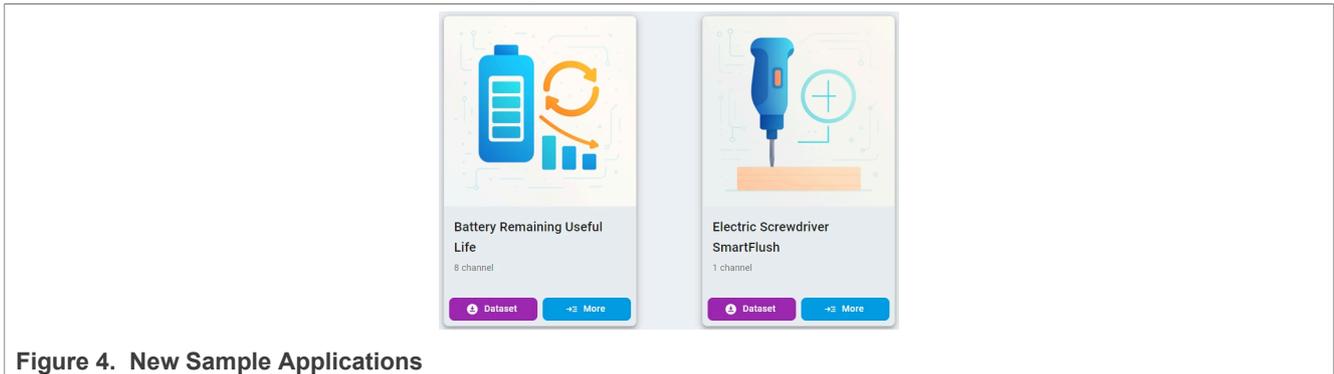


Figure 4. New Sample Applications

- Support generation of independent and executable algorithm binaries for deployment.
- Added DeepSVDD DL model for AD and 1-Class tasks.
- Support DL model training with GPU acceleration.
- Support dynamically enabling or disabling data shuffling for regression task.
- Added Time Series project management feature with project export/import capability.
- Integrated Data logging functionality for AFCI solution.
- Support automatic data labeling for AFCI solution.
- Improved UI/UX for displaying the AFCI signal spectrum.
- Support i.MX6ULL processor for edge deployment.
- Support MCXN547 controller AFCI solution deployment.
- Support MCXE247 controller for edge deployment.
- Added data augmentation for extremely unbalanced anomaly data in Data Operation utility.
- Added UX/UI animations demonstrating the process of data operation feature.
- Support the device projects imported by VS Code IDE.

5.1.2 Fixed Issues

- Fixed the issue of occasionally failing to log in the TSS account through Time Series Studio application.
- Fixed the issue preventing users from launching two Time Series Studio instances simultaneously.
- Upgraded Neutron software package from 2.1.3 to 2.2.2, which improves prediction accuracy with Neutron option enabled.

5.1.3 Known Issues

- Users are notified with an error message when the Neutron converter failure caused by intermediate computation results exceed FP16 representable range.

5.2 Version 1.4.4 Release Highlights

Starting from version 1.4.4, eIQ Time Series Studio is released as a standalone installer and is no longer part of the eIQ toolkit.

5.2.1 New Features

- Added Multi-Scale CNN DL model for classification tasks.
- Enabled NXP MPOM CML model for AD tasks with on-device learning.
- Supported AD tasks trained only with normal dataset.
- Implemented OC Classification tasks.
- Supported enhancement training with selected algorithm pipelines.
- Supported DL model deployment with TFL on MPU platforms.
- Optimized the memory footprint for multi-process runtime.
- Enabled DL training and emulation for both FP32 and INT8 according to MCU and MPU platforms.
- Supported multi-sensor configurations for data logging.
- Implemented data pre-labeling and improved performance for previewing large raw files during data labeling.
- Added RESNET DL model for regression tasks.
- Enabled quantization support for both MCU and MPU platforms.
- Added seven new sample applications.

5.2.2 Known Issues

- Ubuntu 20.04 is no longer supported.
- The new installation overwrites the existing application. Cannot launch two instances simultaneously.
- When generating a library with the Neutron option, the prediction result accuracy may drop slightly compared to the prediction result with pure C code. The result is acceptable if the gap is less than 0.1%. However, with the Neutron driver enabled, some cases show a significant prediction accuracy decrease. If you encounter a similar issue, contact NXP technical support.
- During operator fusion calculation, if the intermediate computation results exceed the representable range of FP16, it can result in execution failure of the Neutron converter.

6 Additional Resources

For comprehensive documentation and tutorials, visit: <https://eiq.nxp.com/timeseries/v1.5/documentation/>

7 Acronyms

The following is the list of the acronyms used in this document along with their description.

Table 2. Acronym

Description	Full Form
AD	Anomaly Detection
AI	Artificial Intelligence
BACC	Balanced Accuracy
BYOD	Bring Your Own Data
BYOM	Bring Your Own Model
CLI	Command-Line Interface
CLS	Classification
CML	Classical Machine Learning
CNN	Convolutional Neural Network
DL	Deep Learning
FP32	32-bit Floating Point
GUI	Graphical User Interface
IDE	Integrated Development Environment
MPOM	Multiple Patterns Online Learning Machine
MSE	Mean Squared Error
OC	1-Class (Classification)
R2	R-squared (Coefficient of Determination)
REG	Regression
TFL	TensorFlow Lite
TSS	Time Series Studio

8 Revision History

Table 3. Revision History

Document ID	Release Date	Description
RN00399 v.1.1	12 February 2026	Update documentation for the release of eIQ Time Series Studio 1.5.5
RN00399 v.1.0	03 November 2025	Initial release of eIQ Time Series Studio 1.4.4

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