

# EIQMPPRN

## eIQ Media Processing Pipeline Release Notes

Rev. 2 — 9 January 2023

Release notes

### Document information

Information	Content
Keywords	eIQ, Media, Media Processing, Processing Pipeline, Library
Abstract	This document is the release notes for the Media Processing Pipeline software library for MCUs.



## 1 Overview

This document contains information about the content, new features, and limitations of the eIQ Media Processing Pipeline. eIQ Media Processing Pipeline is a software library for constructing media-handling components graphs for Vision-specific applications on NXP hardware.

## 2 Development tools

The MCUXpresso SDK is compiled and tested with these development tools:

- MCUXpresso IDE, version is 11.7.0
- GCC Arm Embedded, version is 10.3-2021.10

## 3 Supported development system

This release supports boards and devices listed in table below. The boards and devices in bold were tested in this release.

Table 1. Supported boards and devices

Development boards	MCU devices
MIMXRT1170-EVK, MIMXRT1170-EVKB	MIMXRT1176AVM8A, MIMXRT1176CVM8A, MIMXRT1176DVMAA, MIMXRT1171DVMAA, MIMXRT1171AVM8A, MIMXRT1171CVM8A, MIMXRT1173CVM8A, MIMXRT1175DVMAA, MIMXRT1175AVM8A, MIMXRT1175CVM8A, MIMXRT1172DVMAA, MIMXRT1172AVM8A, MIMXRT1172CVM8A
EVKB-IMXRT1050	MIMXRT1052DVL6B, MIMXRT1052DVL6B, MIMXRT1052CVJ5B, MIMXRT1051DVJ6B, MIMXRT1051CVL5B, MIMXRT1052DVJ6B, MIMXRT1051DVL6B, MIMXRT1052CVL5B, MIMXRT1051CVJ5B

## 4 New features

The following features are added to this release:

- Machine Learning Inference element supports DeepViewRT framework.
- Added support for board i.MXRT1050 EVKB.
- Added support for board i.MIMXRT1170-EVKB.
- New API functions to get statistics during pipeline execution.

## 5 Fixed issues

- Top lines of PXP output may contain garbage pixels.
- Pipeline does not support multiple inference processing blocks.

## 6 Known issues

The following are the known issues:

- The PXP driver does not support RGB888 as output format.

**Note:** The RGB888 output format is obtained with a combination of the PXP conversion and a CPU conversion from BGR888 to RGB888.

- TFLite and GLOW processing block supports only a single instance.
- IAR and MDK toolchains are not supported.
- PXP output window left position does not work.
- camera\_mobilenet\_view\_tflm freezes with compiler option -O0 of ARMGCC 10.3-2021.10.
- camera\_mobilenet\_view\_tflm example application freezes with armgcc toolchain in debug configuration with XMCD (only DCD works).
- Armgcc build for debug target is failing when using the SDK generated build script. This script is calling 'make' with just one process. To apply the workaround when building debug target with armgcc, see the eIQ MPP User's Guide.

## 7 Revision history

[Table 2](#) summarizes the changes done to this document since the initial release.

Table 2. Revision history

Revision number	Date	Substantive changes
0	30 June 2022	Initial release
1	06 September 2022	Updated for MCUXpresso SDK 2.12.1
2	09 January 2023	Updated for MCUXpresso SDK 2.13.0

## 8 Legal information

### 8.1 Definitions

**Draft** — A draft status on a document indicates that the content is still under internal review and subject to formal approval, which may result in modifications or additions. NXP Semiconductors does not give any representations or warranties as to the accuracy or completeness of information included in a draft version of a document and shall have no liability for the consequences of use of such information.

### 8.2 Disclaimers

**Limited warranty and liability** — Information in this document is believed to be accurate and reliable. However, NXP Semiconductors does not give any representations or warranties, expressed or implied, as to the accuracy or completeness of such information and shall have no liability for the consequences of use of such information. NXP Semiconductors takes no responsibility for the content in this document if provided by an information source outside of NXP Semiconductors.

In no event shall NXP Semiconductors be liable for any indirect, incidental, punitive, special or consequential damages (including - without limitation - lost profits, lost savings, business interruption, costs related to the removal or replacement of any products or rework charges) whether or not such damages are based on tort (including negligence), warranty, breach of contract or any other legal theory.

Notwithstanding any damages that customer might incur for any reason whatsoever, NXP Semiconductors' aggregate and cumulative liability towards customer for the products described herein shall be limited in accordance with the Terms and conditions of commercial sale of NXP Semiconductors.

**Right to make changes** — NXP Semiconductors reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.

**Suitability for use** — NXP Semiconductors products are not designed, authorized or warranted to be suitable for use in life support, life-critical or safety-critical systems or equipment, nor in applications where failure or malfunction of an NXP Semiconductors product can reasonably be expected to result in personal injury, death or severe property or environmental damage. NXP Semiconductors and its suppliers accept no liability for inclusion and/or use of NXP Semiconductors products in such equipment or applications and therefore such inclusion and/or use is at the customer's own risk.

**Applications** — Applications that are described herein for any of these products are for illustrative purposes only. NXP Semiconductors makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification. Customers are responsible for the design and operation of their applications and products using NXP Semiconductors products, and NXP Semiconductors accepts no liability for any assistance with applications or customer product design. It is customer's sole responsibility to determine whether the NXP Semiconductors product is suitable and fit for the customer's applications and products planned, as well as for the planned application and use of customer's third party customer(s). Customers should provide appropriate design and operating safeguards to minimize the risks associated with their applications and products.

NXP Semiconductors does not accept any liability related to any default, damage, costs or problem which is based on any weakness or default in the customer's applications or products, or the application or use by customer's third party customer(s). Customer is responsible for doing all necessary testing for the customer's applications and products using NXP Semiconductors products in order to avoid a default of the applications and the products or of the application or use by customer's third party customer(s). NXP does not accept any liability in this respect.

**Terms and conditions of commercial sale** — NXP Semiconductors products are sold subject to the general terms and conditions of commercial sale, as published at <http://www.nxp.com/profile/terms>, unless otherwise agreed in a valid written individual agreement. In case an individual agreement is concluded only the terms and conditions of the respective agreement shall apply. NXP Semiconductors hereby expressly objects to applying the customer's general terms and conditions with regard to the purchase of NXP Semiconductors products by customer.

**Export control** — This document as well as the item(s) described herein may be subject to export control regulations. Export might require a prior authorization from competent authorities.

**Suitability for use in non-automotive qualified products** — Unless this data sheet expressly states that this specific NXP Semiconductors product is automotive qualified, the product is not suitable for automotive use. It is neither qualified nor tested in accordance with automotive testing or application requirements. NXP Semiconductors accepts no liability for inclusion and/or use of non-automotive qualified products in automotive equipment or applications.

In the event that customer uses the product for design-in and use in automotive applications to automotive specifications and standards, customer (a) shall use the product without NXP Semiconductors' warranty of the product for such automotive applications, use and specifications, and (b) whenever customer uses the product for automotive applications beyond NXP Semiconductors' specifications such use shall be solely at customer's own risk, and (c) customer fully indemnifies NXP Semiconductors for any liability, damages or failed product claims resulting from customer design and use of the product for automotive applications beyond NXP Semiconductors' standard warranty and NXP Semiconductors' product specifications.

**Translations** — A non-English (translated) version of a document, including the legal information in that document, is for reference only. The English version shall prevail in case of any discrepancy between the translated and English versions.

**Security** — Customer understands that all NXP products may be subject to unidentified vulnerabilities or may support established security standards or specifications with known limitations. Customer is responsible for the design and operation of its applications and products throughout their lifecycles to reduce the effect of these vulnerabilities on customer's applications and products. Customer's responsibility also extends to other open and/or proprietary technologies supported by NXP products for use in customer's applications. NXP accepts no liability for any vulnerability. Customer should regularly check security updates from NXP and follow up appropriately. Customer shall select products with security features that best meet rules, regulations, and standards of the intended application and make the ultimate design decisions regarding its products and is solely responsible for compliance with all legal, regulatory, and security related requirements concerning its products, regardless of any information or support that may be provided by NXP.

NXP has a Product Security Incident Response Team (PSIRT) (reachable at [PSIRT@nxp.com](mailto:PSIRT@nxp.com)) that manages the investigation, reporting, and solution release to security vulnerabilities of NXP products.

### 8.3 Trademarks

Notice: All referenced brands, product names, service names, and trademarks are the property of their respective owners.

**NXP** — wordmark and logo are trademarks of NXP B.V.

**AMBA, Arm, Arm7, Arm7TDMI, Arm9, Arm11, Artisan, big.LITTLE, Cordio, CoreLink, CoreSight, Cortex, DesignStart, DynamiQ, Jazelle, Keil, Mali, Mbed, Mbed Enabled, NEON, POP, RealView, SecurCore, Socrates, Thumb, TrustZone, ULINK, ULINK2, ULINK-ME, ULINK-PLUS, ULINKpro, uVision, Versatile** — are trademarks or registered trademarks of Arm Limited (or its subsidiaries) in the US and/or elsewhere. The related technology may be protected by any or all of patents, copyrights, designs and trade secrets. All rights reserved.

**eIQ** — is a trademark of NXP B.V.

i.MX — is a trademark of NXP B.V.

Contents

1 Overview ..... 2

2 Development tools .....2

3 Supported development system .....2

4 New features .....2

5 Fixed issues ..... 2

6 Known issues .....2

7 Revision history ..... 3

8 Legal information .....4

Please be aware that important notices concerning this document and the product(s) described herein, have been included in section 'Legal information'.