EIQMPPRN

eIQ Media Processing Pipeline Release Notes

Rev. 0 — 30 June 2022 **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 11.6.0
- 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	MIMXRT1176AVM8A, MIMXRT1176CVM8A, MIMXRT1176DVMAA, MIMXRT1171DVMAA, MIMXRT1171AVM8A,MIMXRT1171CVM8A, MIMXRT1173CVM8A, MIMXRT1175DVMAA, MIMXRT1175AVM8A, MIMXRT1175CVM8A, MIMXRT1172DVMAA, MIMXRT1172AVM8A, MIMXRT1172CVM8A

4 New features

This is the initial release of eIQ Media Processing Pipeline software library.

Note: *This release is Early Access Release (Alpha) quality.*

5 Known issues

The following are the known issues:

- The only TFLite model component order supported by the HAL is NHWC. Where, N is the dimension size, H is the height, W is the width, and C is channels.
- The element "labeled rectangle" prints the text in one orientation. The buffer displays portrait orientation. This leads to a 90° orientation difference between the image display and the text display, if the image is rotated beforehand.
- The PXP driver does not support RGB888 as output format. Instead, the BGR888 format is used for the input image to the TFLite.
- PXP HAL, currently, does not support RGB 32-bit input format.
- TFLite processing block supports only a single instance.
- IAR and MDK toolchains are not supported.
- Image flip operation is not supported. Depending on the display mounting, objects move in the opposite direction on the screen.
- Top lines of PXP output may contain garbage pixels.

- PXP output window left position does not work.
- Shared buffer management is not reliable.
- Camera_mobilenet_view freezes with compiler option -O0 of ARMGCC 10.3-2021.10.
- Camera_mobilenet_view example application freezes with armgcc toolchain in debug configuration with XMCD; only DCD works.
- Armgcc build for debug target fails when using the SDK generated build script. This script calls 'make' with just one process. For the workaround to build debug target with armgcc, see the eIQ MPP User's Guide document.
- Build fails with Console Semi-hosting enabled in MCUXpresso. It builds only if SDK_DEBUGCONSOLE_UART is removed from C-flags.
- ML Inference element supports only models with a single output Tensor.

6 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

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