

IEC60730BSERN

IEC60730B Example release notes

Rev. 0 — 12/2020

Release Notes

by: NXP Semiconductors

1 Introduction

These release notes describe important release information for the IEC60730B safety example application released with IEC60730B library v4.1.

All information about IEC60730B are at www.nxp.com/iec60730.

Contents

1	Introduction.....	1
2	What is new.....	1
3	Version of library in SDK.....	2
4	Development tools.....	2
5	Known issues or important changes	3

2 What is new

The example released with the IEC60730B library version v4_1 contains example projects for the following boards:

Table 1. Device with available example projects

Development board	Version of library	Example projects available in MCUXpresso SDK
lpcxpresso845max	4.1	Y
lpcxpresso824max	4.1	Y
frdmkv11z	4.1	Y
frdmke15z	4.1	Y
frdmk32l2a4s	4.1	Y
frdmk32l2b3	4.1	Y
evkmimx8mm	4.1	Y
evkmimxrt1020	4.1	Y
evkmimxrt1024	4.1	Y
evkbimxrt1050	4.1	Y
evkmimxrt1060	4.1	Y
frdmkv31f	4.1	Y
lpcxpresso55s69	4.1	Y
lpcxpresso55s28	4.1	Y
evkmimx8mn	4.1	Y
frdmkl26z	4.1	N
frdmke02z40m	4.1	N
lpcxpresso802	4.1	N

Table continues on the next page...



Table 1. Device with available example projects (continued)

Development board	Version of library	Example projects available in MCUXpresso SDK
lpcxpresso804	4.1	N
lpcxpresso51u68	4.1	N
twrke18f	4.1	N
twrkv58f220m	4.1	N
twrkv46f150m	4.1	N
evkmimxrt1170	4.1	N

Updates in version 4.1

- **WDOG test function consolidated** - the function for the specific timer was merged to one with parameters that select the correct refresh sequence for a dedicated WDOG.
- **Hardware flash test on i.MXRT10xx** - The hardware test is now supported also for i.MXRT1010 and other devices with the same DCP module.
- **Analog I/O test on i.MXRT10xx** - software triggered version of the Analog I/O test was added.
- **Newly supported devices** - frdmk32l2b3, frdmk32l2a4s, lpcxpresso55s28, evkmimx8mn, evkmimx8mm, evkmimxrt1024, evkmimxrt1170.
- **Updated device** - The examples for Kinetis devices were updated from version 3 to example version 4.1.
- **frdm-ke15z** - The ADC test is now set for a 5 V reference. This is set in the *safety_config.h* file. For more information, see the corresponding example user's guide.

3 Version of library in SDK

The following table lists the released examples in the SDK and the corresponding library version.

Table 2. Conversion table between SDK and IEC60730B library version

IEC60730B library version	Device cores	SDK release version
4.1	CM0,CM4,CM7,CM33	Rel. 2.9.0

4 Development tools

The safety IEC60730B example application was compiled and tested with the following development tools:

- IAR Embedded Workbench IDE version 8.50.6
- Arm[®]-MDK - Keil[®] μVision[®] version 5.33
- MCUXpresso IDE version 11.3.0

[FreeMASTER tool version 3.0](#) was used for application monitoring.

4.1 Debuggers

All projects (for the IAR, Keil, and MCUXpresso IDEs) have the following debuggers set in the default configurations:

Table 3. Default board settings

Development board	Default debugger	FreeMASTER communication channel via	Serial communication speed [Bd]
lpcxpresso845max	CMSIS-DAP	on-board debbuger	9600
lpcxpresso824max	CMSIS-DAP	on-board debbuger	9600
lpcxpresso804	CMSIS-DAP	on-board debbuger	9600
lpcxpresso802	CMSIS-DAP	on-board debbuger	9600
frdmkv11	PE micro	on-board debbuger	9600
frdmkl26z	PE micro	on-board debbuger	9600
frdmke02z40m	PE micro	on-board debbuger	9600
frdmke15z	CMSIS-DAP	on-board debbuger	9600
frdmk32l2a4s	CMSIS-DAP	on-board debbuger	9600
frdmk32l2b3	CMSIS-DAP	on-board debbuger	9600
frdmkv31f	CMSIS-DAP	on-board debbuger	9600
twrkv46f150m	PE micro	on-board debbuger	9600
twrke18f	CMSIS-DAP	on-board debbuger	9600
evkmimx8mm	J-Link	external J-Link plugin	-
twrkv58f220m	CMSIS-DAP	on-board debbuger	9600
evkmimxrt1010	CMSIS-DAP	on-board debbuger	19200
evkmimxrt1020	CMSIS-DAP	on-board debbuger	19200
evkmimxrt1024	CMSIS-DAP	on-board debbuger	19200
evkmimxrt1060	CMSIS-DAP	on-board debbuger	19200
evkbimxrt1050	CMSIS-DAP	on-board debbuger	19200
evkmimx8mn	J-Link	external J-Link plugin	-
lpcxpresso55s69	CMSIS-DAP	on-board debbuger	9600
lpcxpresso55s28	CMSIS-DAP	on-board debbuger	9600

5 Known issues or important changes

This chapter contains the description of known issues or non-standard behavior of the released example.

MIMX8M Mini and Nano

The MIMX8M Mini and Nano application examples are not provided for the Keil and MCUXpresso IDEs.

LPCxpresso80x - MCUXpresso IDE

The FreeMASTER monitoring is turned off due to small memory size of the MCU.

FRDM-KL26 uVision Keil support

The current version of the SDK does not support KL26 with the ArmV6 compiler.

FRDM-KE02z uVision support

The MKE02Z application example is not provided for the Keil IDE.

TWR-KV58F220M - uVision support

In the uVision Keil, turn off the flash test due to a problem with the download of the edited binary file by the debugger.

How To Reach Us

Home Page:

nxp.com

Web Support:

nxp.com/support

Information in this document is provided solely to enable system and software implementers to use NXP products. There are no express or implied copyright licenses granted hereunder to design or fabricate any integrated circuits based on the information in this document. NXP reserves the right to make changes without further notice to any products herein.

NXP makes no warranty, representation, or guarantee regarding the suitability of its products for any particular purpose, nor does NXP assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation consequential or incidental damages. "Typical" parameters that may be provided in NXP data sheets and/or specifications can and do vary in different applications, and actual performance may vary over time. All operating parameters, including "typicals," must be validated for each customer application by customer's technical experts. NXP does not convey any license under its patent rights nor the rights of others. NXP sells products pursuant to standard terms and conditions of sale, which can be found at the following address: nxp.com/SalesTermsandConditions.

While NXP has implemented advanced security features, all products may be subject to unidentified vulnerabilities. Customers are responsible for the design and operation of their applications and products to reduce the effect of these vulnerabilities on customer's applications and products, and NXP accepts no liability for any vulnerability that is discovered. Customers should implement appropriate design and operating safeguards to minimize the risks associated with their applications and products.

NXP, the NXP logo, NXP SECURE CONNECTIONS FOR A SMARTER WORLD, COOLFLUX, EMBRACE, GREENCHIP, HITAG, ICODE, JCOP, LIFE VIBES, MIFARE, MIFARE CLASSIC, MIFARE DESFire, MIFARE PLUS, MIFARE FLEX, MANTIS, MIFARE ULTRALIGHT, MIFARE4MOBILE, MIGLO, NTAG, ROADLINK, SMARTLX, SMARTMX, STARPLUG, TOPFET, TRENCHMOS, UCODE, Freescale, the Freescale logo, Altivec, CodeWarrior, ColdFire, ColdFire+, the Energy Efficient Solutions logo, Kinetis, Layerscape, MagniV, mobileGT, PEG, PowerQUICC, Processor Expert, QorIQ, QorIQ Qonverge, SafeAssure, the SafeAssure logo, StarCore, Symphony, VortiQa, Vybrid, Airfast, BeeKit, BeeStack, CoreNet, Flexis, MXC, Platform in a Package, QUICC Engine, Tower, TurboLink, EdgeScale, EdgeLock, eIQ, and Immersive3D are trademarks of NXP B.V. All other product or service names are the property of their respective owners. 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, µVision, 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. Oracle and Java are registered trademarks of Oracle and/or its affiliates. The Power Architecture and Power.org word marks and the Power and Power.org logos and related marks are trademarks and service marks licensed by Power.org.

© NXP B.V. 2020.

All rights reserved.

For more information, please visit: <http://www.nxp.com>

For sales office addresses, please send an email to: salesaddresses@nxp.com

Date of release: 12/2020

Document Identifier: IEC60730BSERN

