IEC60730BCM33L43RN

IEC60730B Library Release notes CM33 v4.3

Rev. 0 — 30 September 2022 **Release notes**

1 Introduction

IEC60730B_CM33_4_3 is the actual version of the core self-test library for NXP devices with the CM33 core. The library is certified by VDE/UL. It is dedicated for use in applications compliant with the Safety class B standard (specified by IEC 60730, IEC60335 and/or UL 60730, and UL 1998).

The library is released in a pre-compiled format, together with functional example projects and documentation describing the respective tests.

The library is created in close cooperation with the application team, who have vast experience in customer projects. The customer feedback is also taken into consideration.

2 What is new

When compared to the previous version of the library, the main changes are:

- The AIO functions were rewritten according to customer requests. Now, a similar approach to that of the DIO is adapted. Please see the corresponding chapter in the library user guide.
- The following devices were added to the CM33 library: MIMXRT118x device.

2.1 Description

The supported devices are the following:

- LPC55Sxx
- LPC55xx
- MIMXRT118x

The supported/recommended IDEs are the following:

- IAR v9.30.1 and higher
- Keil µVision V5.37(C compiler V6) and higher
- MCUXpresso IDE V11.6

The tested components are the following:

- CPU registers
- Program counter
- Variable memory (RAM)
- Invariable memory (flash)
- Clock
- Digital I/O
- Analog I/O
- Stack
- Watchdog

- Touch Sensing Interface (TSI)

3 Optimizations, improvements, and changes

3.1 Library

The AIO functions were rewritten in an approach similar to the DIO test. For more information, see the dedicated chapter in the respective library user guide for your device.

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Support of devices without DSP/FPU

For devices without a DSP/FPU, a new library is prepared and it has a different register test. The *FS_CM33_CPU_Register_NDSP()* function in the *iec60730b_cm33_reg.h* file is dedicated for devices without a DSP/FPU.

Devices with DSP/FPU

For devices with an FPU/DSP, it is necessary to use the *FS_CM33_CPU_Register()* function from the *iec60730b_cm33_reg_dsp_fpu.h* file.

To test FPU registers, use the *FS_CM33_CPU_Float1(), FS_CM33_CPU_Float2()* function.

3.2 Documentation

The documentation for the library is a part of the SDK package and it is also available at www.nxp.com/iec60730.

The documentation of the IEC60730B library consists of:

- IEC60730B_Library_User_Guide_CM33_v4_3.pdf
- IEC60730B_Library_Release_Notes_CM33_v4_3.pdf

The example applications have their dedicated release notes and user guides.

3.3 Functional example projects

All information about the IEC60730B library is available at www.nxp.com/iec60730.

Contents

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

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