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1 Introduction

IEC60730B_CM33_4_1 is the actual version of the core self-test library for NXP devices with the CM33 core. The library is certified by VDE. 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 precompiled 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

This version is based on the CM4_CM7 library.

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

- The WDOG function is consolidated - there is now only one function for one reference timer with parameters that enable you to select a correct WDOG refresh sequence.
- The following new devices are added: LPC55s28.

2.1 Description

The supported devices are as follows:

- LPC55Sxx
- LPC55xx

The supported/recommended IDEs are as follows:

- IAR v8.50 and higher
- Keil µVision V5.33(C compiler V6) and higher
- MCUXpresso IDE V11.3 and higher

The tested components are as follows:

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

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- Stack
- Watchdog
- Touch Sensing Interface (TSI)

3 Optimizations, improvements, and changes

3.1 Library

The CM33 library has only LPC55S28 added.

3.2 Documentation

The documents for all test routines are merged into one document.

3.3 Examples

The example projects are available only in the MCUXpresso SDK as middleware.

To open an example, use the link from the table at <http://www.nxp.com/iec60730> or perform the following steps:

- Go to <http://mcuxpresso.nxp.com>.
- Click Select Development Board.
- Select the supported board and click to add the Safety middleware.
- Build and download the SDK package.

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