Document Number: MCSDK210RN
Rev. 3, 09/2016

Multicore SDK (MCSDK) v2.1.0 Release Notes

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1 Overview

These are the release notes for the NXP Multicore Software Development Kit (MCSDK) version 2.1.0. This software package contains components for efficient work with multicore devices.

2 What is new

- This Multicore SDK (MCSDK) release is intended for the Kinetis Software Development Kit (SDK) Package v. 2.0.0 to support eRPC-based multiprocessor examples.
- New version 1.3.0 of the embedded Remote Procedure Call (eRPC)
- Supported evaluation boards (multiprocessor examples):
  - FRDM-K22F
  - FRDM-K64F
  - FRDM-K66F
  - FRDM-K82F
  - FRDM-KL25Z
  - FRDM-KL27Z
  - FRDM-KL43Z

3 Development tools

The Multicore SDK (MCSDK) version 2.1.0 was compiled and tested with these development tools:

- Kinetis Design Studio IDE v3.2
- IAR Embedded Workbench for ARM® version 7.70
- MDK-ARM Microcontroller Development Kit (Keil)® version 5.20
- Makefiles support with GCC revision v4.9-2015-q3 from ARM Embedded
- Atollic® TrueSTUDIO® 5.5.2

4 Release contents

This table describes the release contents.

Table 1. Release contents

Deliverable	Location
Multicore SDK location within the Kinetsi SDK folder structure	<KSDK_install_dir>/middleware/multicore_<version>/...
Documentation	<KSDK_dir>/docs/multicore/…
Embedded Remote Procedure Call component	<MCSDK_dir>/erpc/…
Multicore Manager component (not included in this release)	<MCSDK_dir>/mcmgr/…
RPMsg-Lite (not included in this release)	<MCSDK_dir>/rpmsg_lite/…
Multicore demo applications (not included in this release)	<KSDK_install_dir>/boards/<board_name>/ multicore_examples/...
Multiprocessor demo applications	<KSDK_install_dir>/boards/<board_name>/ multiprocessor_examples/...

5 Multicore SDK release overview

Together, the Multicore SDK (MCSDK) and the Kinetis SDK (KSDK) form a framework for the development of software for NXP multicore devices. The MCSDK release consists of the following elementary software components for multicore:

- Embedded Remote Procedure Call (eRPC)
- Multicore Manager (MCMGR) - not included in this release
- Remote Processor Messaging - Lite (RPMsg-Lite) - not included in this release

The MCSDK is also accompanied with documentation and several multicore and multiprocessor demo applications.

6 Demo applications

The multicore demo applications demonstrate the usage of the MCSDK software components on supported multicore development boards. The following multicore demo applications are located together with other Kinetis SDK examples in the *<KSDK_install_dir>/boards/<board_name>/multicore_examples...* subdirectories.

- erpc_matrix_multiply
- erpc_matrix_multiply_rtos
- hello_world
- low_power
- rpmsg_lite_pingpong
- rpmsg_lite_pingpong_rtos

The eRPC multicore component can be leveraged for inter-processor communicaton and remote procedure calls between SoCs / development boards. The following multiprocessor demo applications are located together with other Kinetis SDK examples in the *<KSDK_install_dir>/boards/<board_name>/multiprocessor_examples...* subdirectories.

- erpc_client_matrix_multiply_spi
- erpc_server_matrix_multiply_spi
- erpc_client_matrix_multiply_uart
- erpc_server_matrix_multiply_uart
- erpc_server_dac_adc

7 Revision history

This table summarizes revisions to this document.

Table 2. Revision history

Revision number	Date	Substantive changes
0	09/2015	Initial release
1	03/2016	Updated for the KSDK 2.0.0 and the MCSDK 1.1.0
2	08/2016	Updated for the MCSDK 2.0.0 and the LPCXpresso54114 support
3	09/2016	Updated for the MCSDK 2.1.0

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