MQX™ RTOS Release Notes for Kinetis SDK v1.2.0 for KL33Z64 for FRDM-KL43Z Freescale Freedom Development Platform

1   Overview

These are Release Notes for the MQX™ RTOS for the Kinetis software development kit (SDK) 1.2.0 of KL33Z64 FRDM-KL43Z Freescale Freedom development board. Freescale KL33Z64 belongs to the Kinetis L series processor family of the 32-bit microcontrollers. The software is based on Freescale Kinetis SDK (KSDK) version 1.2.0. It includes the full set of RTOS services and a standard set of peripheral drivers.

Contents

1.1 Development tools

The release was tested with the following development tools:

- IAR Embedded Workbench® for ARM® Version 7.40
    - Support available for Kinetis ARM Cortex®-M0+ devices
    - See build projects in the iar subdirectories

- ARM-MDK for Keil µVision® Version 5.14
    - Support available for Kinetis ARM Cortex-M0+ devices
    - See build projects in mdk subdirectories

- Kinetis Design Studio (KDS) IDE 3.0
    - Support available for Kinetis ARM Cortex
    - See build projects in KDS IDE subdirectories

- Atollic TrueSTUDIO for ARM Pro 5.3
    - Support available for Kinetis ARM Cortex
    - See build projects in atl subdirectories

- GCC ARM Embedded tool chain 4.8.3
    - Support available for Kinetis ARM Cortex
    - See build projects in armgcc subdirectories

1.2 System requirements

The system requirements are defined by the development tool requirements. There are no special host system requirements for the Kinetis SDK distribution itself.

The minimum PC configuration is determined by the development tools.

The recommended PC configuration is 2 GHz processor, 2 GB RAM, and 2 GB free disk space.

1.3 Target requirements

The MQX RTOS package was tested with this hardware configuration:

- FRDM-KL43Z Rev. C, which is the mass production version board, with a MKL43Z256VLH4 processor.

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2 Features

2.1 Key features

This package provides support for KL33Z64 on the FRDM-KL43Z Freescale Freedom development platform and a standard set of features and example applications.

This section describes the major changes and new features implemented in this release.

- BSP Timer: SysTick
- Default console: LPUART0 (CDC virtual COM)

The package supports these features:

- PSP support for the KL33Z64 Microcontroller
- BSP for the FRDM-KL43Z Freescale Freedom development board
- MQX RTOS STDLIB
- nShell
- KSDK support for the KL33Z64 microcontroller

2.2 Limitations

This release does not support these features:

- CodeWarrior v10

2.3 Example applications

This package contains applications demonstrating the MQX RTOS kernel and peripherals on the FRDM-KL43Z Freescale Freedom development board. The applications can be found at the following locations:

- `<install_dir>rtos/mqx/mqx/examples`: standard set of examples for kernel features and basic peripheral drivers.

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2.4 Release contents

This section provides an overview of the release content.

Deliverable	Location
Specific content for the evaluation boards	<install_dir>rtos/mqx/...
MQX PSP source code for Kinetis	.../mqx/source/psp/cortex_m/
MQX PSP build projects	.../mqx/build/<compiler>/ mqx_frdmkl43zkl33z4/
MQX example applications	.../mqx/examples/
MQX RTOS STDLIB Source Code	<install_dir>rtos/mqx_stdlib/...
MQX RTOS STDLIB build projects	.../mqx_stdlib /build/<compiler>/ mqx_stdlib_frdmkl43zkl33z4/
MQX RTOS STDLIB Source Code	.../mqx_stdlib /source/
KSDK MQX Source Code	<install_dir>/lib/ ksdk_mqx_lib/…
KSDK build projects	.../ksdk_mqx_lib /<compiler>/ KL33Z644/
KSDK source	<install_dir>platform/
Shell Library Source Code	<install_dir>rtos/nshell/...
Shell source code	.../nshell/source/
Shell build projects	.../nshell/build/<compiler>/ nshell_frdmkl43zkl33z4/
PC Host Tools	<install_dir>/tools/
Documentation	<install_dir>/doc/

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3 Installation Instructions

3.1 Installation guide

Run the self-extract package to the folder <SDK_install_dir>rtos/mqx/.

3.1.1 Build procedure

For build procedures, see the *Getting Started with Freescale MQX™ RTOS for Kinetis SDK* (document KSDK12KL33GSUG).

3.1.2 Board-specific build targets

Internal Flash (Debug and Release): These targets enable building applications suitable for booting the system from the internal Flash memory. After reset, the code is executed from the internal Flash.

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4 Revision history

This table summarizes revisions to this document.

Revision History		
Revision number	**Date**	**Substantive changes**
0	4/2015	Initial release

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