Freescale Semiconductor
Release Notes

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Kinetis SDK v.1.3.0 Release Notes for the Freescale Freedom FRDM-K66F Development Platform

1 Overview

These are the release notes for the Freescale Kinetis Software Development Kit (KSDK) v1.3.0 support for the Freescale Freedom FRDM-K66F development platform. This release adds support for the boards, including the set of demos and examples, into an existing KSDK 1.3.0 installation. For more information about the KSDK 1.3.0 content, structure, and limitations, see the *Kinetis SDK v.1.3.0 Release Notes* (document KSDK130RN).

For the latest version of this and other Kinetis SDK documents, see the Kinetis SDK homepage KINETIS-SDK: Software Development Kit for Kinetis MCUs.

Contents

2 What is New

These are the new features for Kinetis SDK v1.3.0:

- Added board support for Freescale Freedom FRDM-K66F development platform

- Added MQX™ RTOS support for the Freescale Freedom FRDM-K66F development platform

3 Development Tools

The Kinetis SDK v1.3.0 was compiled and tested with these development tools:

- Kinetis Design Studio IDE v3.0

- IAR Embedded Workbench for ARM® version 7.40.7

- MDK-ARM Microcontroller Development Kit (Keil)® 5.15

- Makefiles support with GCC revision 4.9-2015-q1-update from ARM Embedded

- Atollic® TrueSTUDIO® 5.3.1

4 Supported Development Systems

This release supports boards and devices listed in this table. Boards and devices in boldface were tested in this release:

Table 2. Release contents

Development boards	Kinetis MCU devices
FRDM-K66F	MK66FN2M0VMD18

5   Release Contents

The table below describes the contents of this release.

Table 3. Release contents

Deliverable	Location
Examples	<install_dir>/examples/...
Demo applications	<install_dir>/examples/<board_name>/demo_apps/…
USB Demo applications	<install_dir>/examples/<board_name>/demo_apps/usb/…
Driver examples	<install_dir>/examples/<board_name>/driver_examples/...
Documentation	<install_dir>/doc/...
Middleware	<install_dir>/middleware/...
File system	<install_dir>/middleware/filesystem/...
RTOS Kernel Code, RTOS abstraction implementations, and RTOS kernel folders	<install_dir>/rtos/...
cmake toolchain files	<install_dir>/tools
USB stack and USB projects to build libraries	<install_dir>/usb/...

6   Kinetis SDK Release Overview

6.1 Demo applications

The demo applications demonstrate the usage of the driver libraries and other integrated software solutions on supported development systems. For details, see the *Kinetis SDK v.1.3 Demo Applications User's Guide* (document KSDK13K66FDEMOUG).

6.2 Driver examples

The driver examples demonstrate configuring drivers by passing configuration data to the API functions. For details, see the *Kinetis SDK v.1.3 Demo Applications User's Guide* (document KSDK13DEMOUG).

7   Known Issues

7.1   Maximum file path length in Windows® 7 operating system

Windows® 7 operating system imposes a 260 character maximum length for file paths. When installing the Kinetis SDK, place it in a directory close to the root to prevent file paths from exceeding the maximum character length specified by the Windows operating system. The recommended location is the C:\Freescale folder.

7.2   The MQX examples project lwmsgq and msg fail

The MQX examples project lwmsgq and msg print incorrectly and out of order on the terminal screen because of overloading the nio_serial driver.

7.3   cdc_serial/OTG example on KSDK MQX RTOS

Follow these steps to run the host cdc_serial/OTG example on the KSDK MQX RTOS.

1. Add two lines to the rtos/mqx/config/mcu/<soc_name>/mqx_sdk_config.h

    ```
    #define BSPCFG_ENABLE_IO_SUBSYSTEM
    ```

    ```
    #define printf debug_printf
    ```

2. Re-compile all libraries such as mqx_<board_name>, mqx_stlib_<board_name>, ksdk_mqx_lib, and usbh_sdk_<board_name>_mqx.

7.4   Bubble_level demo project read register address

In some cases, the Bubble_level demo project cannot read the register address. The demo project sometimes ends with an error, displaying the message "Unexpected result from WHO_AM_I" in the log. This is typically after the reset button is pressed, or if there is a repeated download. As a workaround, switch the power of the entire board off and on again.

7.5   Update the manifest file

The ksdk_manifest.xml manifest file cannot be updated to contain Freescale Freedom FRDM-K66F development platform information. As a result, when a new Processor Expert project that is Kinetis SDK enabled is created for the FRDM-K66F platform, the an error is reported in the Project Wizard that says "Board FRDM-K66F is not supported by selected SDK 1.3.0". This issue exists in the Processor Expert for the Kinetis v.3.0.1 project.

One workaround is to manually modify the ksdk_manifest.xml manifest file in the folder where KSDK is installed. The following lines need to be added inside the <boards></boards> tag:

```
<board id="FRDM_K66F" name="frdmk66f"
package="MK66FN2M0VMD18" user_name="FRDM-K66F">
     <source value="examples/frdmk66f/*.c"/>
     <source value="examples/frdmk66f/*.h"/>
</board>
```

Also see the ksdk_frdmk66f_manifest.xml file in the folder where KSDK is installed.

7.6 Hot-plug of USB PHDC device from PHDC host

When running the PHDC demo, the PHDC device should not be unplugged from the PHDC host until enumeration is completed. Otherwise, communication fails and the host application must be restarted.

8   Installation Instructions

8.1 Installation guide

This package is installed as an update of an existing KSDK 1.3.0. Before installing this package, ensure that the KSDK 1.3.0 is installed. Run the installer for the Kinetis SDK v1.3.0 with FRDM-K66F Freescale platform to install the package.

8.2 Build procedure

For build procedures, see the *Getting Started with Kinetis Software Development Kit (KSDK) v.1.3 for the Freescale Freedom FRDM-K66F Development Platform* (KSDK13K66FGSUG).

8.3 Jumper settings

These are the jumper settings for FRDM-K66F standalone operation:

- J34, J35, J36 default ON at position 1-2
- J37, J38 default ON at position 2-3
- J21 setting ON to supply power for USB host and OPEN to disable power of USB host

9 Revision history

This table summarizes revisions to this document.

Revision history		
Revision number	**Date**	**Substantive changes**
0	10/2015	Initial release

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