

Freescale MQX RTOS Example Guide

Flashx example

This document explains the Flashx example, what to expect from the example and a brief introduction to the API used.

The example

The example demonstrates basic operation we can do with flash memory including writing string of characters into the memory and reading it back. The memory characteristic, reading and writing statuses as well as the data are displayed over output terminal.

Note for flashx demo on Vybrid platform:

- flashx is supported on Vybrid A5 target: twrvf65gs10_a5 and vybrid_autoevb_a5
- flashx is currently not supported on Vybrid M4 target. It is due to the ram of current Vybrid M4 target is too small to support flashx.

Running the example

The Flashx application belongs to the set of examples of MQX handling the flash memory. The BSPCFG_ENABLE_FLASHX macro must be set to non-zero in the user_config.h file prior to compilation of MQX libraries and the example itself.

To run the example the corresponding IDE, compiler, debugger and a terminal program are needed.

Explaining the example

The application example creates only one task named flash_task.

- The flash_task firstly opens the connection to flash memory and then uses the flashx driver functions to set the characteristics of the flash memory as well as to display some characteristics on output terminal.
- The last 32 data bytes in flash memory are read before a message shows up which prompts the user to input a string of characters.
- User must input a non-empty string with less than 32 characters.
- The input message from user is then written into flash memory using flashx driver write() function. User must restart the example in order to see the input they previously entered.

The following output is expected as user runs the example.

MQX Flash Example

Flash file flashx:bank0 opened

Size of the flash file: 0x40000 Bytes

Flash sector cache enabled.

Reading last 32 Bytes.

Bytes are blank.

Type a string to be written to the end of file (31 chars max.):abcdefghijklmnopqr
stuvwxyz0123456789012345

Type a string to be written to the end of file (31 chars max.):abcdefghijklmnopqr
stuvwxyz01234

Data written to the flash.

Now you can power down and power up your device

and then retry the test to see if the string was written correctly.

Flash example finished.

MQX Flash Example

Flash file flashx:bank0 opened

Size of the flash file: 0x40000 Bytes

Flash sector cache enabled.

Reading last 32 Bytes.

String found: abcdefghijklmnopqrstuvwzyx01234

Type a string to be written to the end of file (31 chars max.):abcd

Data written to the flash.

Now you can power down and power up your device

and then retry the test to see if the string was written correctly.

Flash example finished.

MQX Flash Example

Flash file flashx:bank0 opened

Size of the flash file: 0x40000 Bytes

Flash sector cache enabled.

Reading last 32 Bytes.

String found: abcd

Type a string to be written to the end of file (31 chars max.):0123456789

Data written to the flash.

Now you can power down and power up your device

and then retry the test to see if the string was written correctly.

Flash example finished.