Freescale MQX RTOS Example Guide

KLOG_lite example

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

The example

The example shows the usage of the kernel log component of RTOS MQX. The kernel log allows user's application program to record the information about the context switch as tasks being re-scheduled and interrupt happened in the application program. The kernel log API is used to enable log for specific component and to display log information to terminal.

Running the example

The user only needs to do compilation of MQX libraries, ksdk library and the example without any further step.

Then we compile the project klog_lite.

In <MQX_folder>\rtos\mqx\config\mcu\<board>\mqx_sdk_config.h please set

```
#define MQX_USE_LOGS                    1

#define MQX_USE_LWLOGS                  1

#define MQX_KERNEL_LOGGING              1

#define MQXCFG_STATIC_KLOG              0

#define MQXCFG_STATIC_LWLOG             0

#define MQXCFG_ALLOCATOR                MQX_ALLOCATOR_LWMEM
```

If the platform supports floating point, you have to disable floating point:

```
#define MQXCFG_ENABLE_FP                0
```

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 called main_task.
The main_task creates the kernel log component as it is optional component of RTOS MQX.
The kernel log is then activated over specific components using command _klog_control(), for example

_klog_control(KLOG_ENABLED | KLOG_CONTEXT_ENABLED | LOG_INTERRUPTS_ENABLED| KLOG_SYSTEM_CLOCK_INT_ENABLED | KLOG_FUNCTIONS_ENABLED | KLOG_TIME_FUNCTIONS | KLOG_INTERRUPT_FUNCTIONS, TRUE);

The information of function switching, interrupt occurrence, task switching are displayed over the output terminal.

An example of the output is shown in the following figure.