

# Freescale MQX Example Guide

## GPIO example

This document describes the LWGPIO component example application. It shows how to work with the component and how to use API functions.

### Running the example

Start a terminal application on your PC and set the serial connection for 115200 baud, 8 data bits, 1 stop bit, no parity and no flow control.

Start the GPIO example on the target platform. For instructions how to do that in different IDEs and for different debuggers, see the MQX documentation (<MQX installation folder>/doc/tools).

After starting the application, you will see the printed message as the following.

```
===== GPIO Example =====
```

```
The (SW1) button is configured to trigger GPIO interrupt.  
Press the (SW1) button 3x to continue.
```

```
Button pressed 3x
```

```
The (SW1) button state is now polled.  
Press the (SW1) button to switch LED on or off
```

```
Button released
```

### Explanation of the example

The example code consist of just one task (main\_task) and the interrupt service routine triggered by the gpio pin(int\_service\_routine).

main\_task:

- Creates semaphore.
- Configures the led and the button.
- Configures the button to trigger the interrupt on the falling edge if supported by the selected platform. (Register int\_service\_routine)
- Waits for 3 button pushes.
- Disables interrupt from the button.
- Reconfigures the button from the interrupt mode to the standard gpio mode.
- Drives the led based on the button state or drives the led automatically if BSP\_BUTTON1 is not available.
- Prints out information message if BSP\_BUTTON1 and BSP\_LED1 are not available.

int\_service\_routine:

- Clears interrupt flag.

- Posts semaphore.

