Freescale MQX Example Guide
lwadc example

This document describes the lwadc component example application. The lwadc example demonstrates how to read converted values from analogue inputs using lwadc api.

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 lwadc 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).

If the board the example is executed on features a potentiometer connected to an analogue input, the example enters potentiometer monitoring stage and you will see the printed message as the following:

```
ADC Test for <board name>
Monitoring potentiometer
Rotate potentiometer. Test will run until readings range from  10% to 90%
potentiometer = 34
```

The example now reads and displays potentiometer value in a loop.

Rotate the potentiometer slowly completely to the left and watch the values changing. Then rotate it slowly completely to the right.

When values from both ends (below 10% and above 90%) are obtained the potentiometer reading loop is exited and the example follows to the next stage.

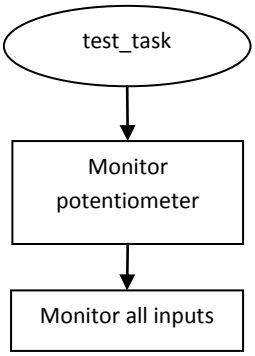
```
Monitoring all inputs
Monitoring ADC Inputs
```

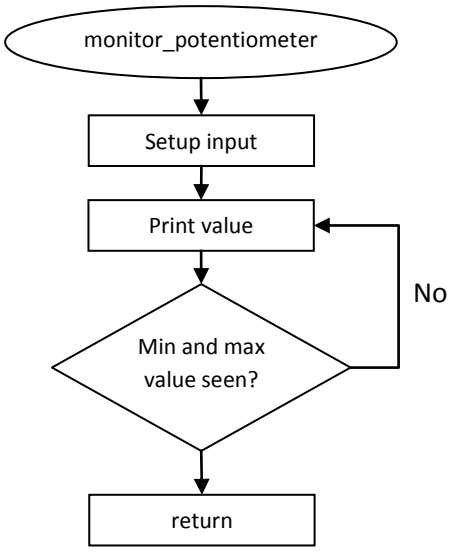
This message is followed by values obtained from each analogue inputs as raw number and scaled to mV.
The monitoring runs in a loop indefinitely.

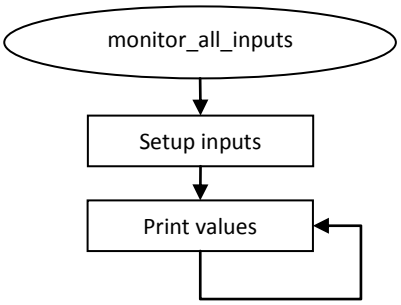
Explanation of the example

There is just one task (test task) which first calls monitor_potentiometer() function (only if the board features a potentiometer connected to an analogue input).

After monitor_potentiometer() returns, function monitor_all_inputs() is called. The function then runs in a loop displaying values on inputs defined in adc_inputs[] table indefinitely.


test_task
Monitor potentiometer
Monitor all inputs


monitor_potentiometer
Setup input
Print value
Min and max value seen?
No
return


monitor_all_inputs
Setup inputs
Print values