Freescale MQX RTOS Example Guide
SPI slave example

This document explains the SPI slave driver example, what to expect from the example and a brief introduction to the SPI slave driver API.

The Example

The example shows the usage of the SPI slave driver as a slave, which communicates with a SPI master example (mqx\examples\spi_master) on another MCU.

Running the example

The connections needed for running this example are:

- Serial cable connected to the UART used, this may vary between targets. And a terminal set to 115200 baud, no parity, 8 bits.
- Connect corresponding SPI signals of two boards.
  For example, on SABRE-SDB boards we can connect ECSPI4 signals on SD2 socket.

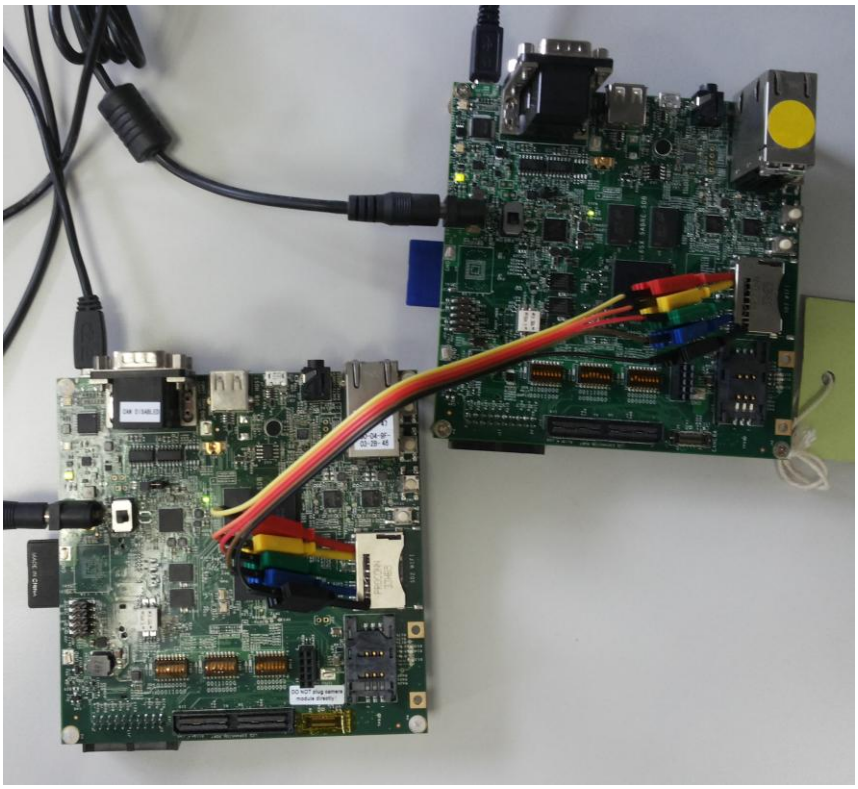

Figure 1

Communications lines

cable	SD socket index	SPI Pin
Black		Ground
Red	2	MISO
Yellow	4	MOSI
Green	8	CLK
Blue	12	SS3

SD index means the sequential SD socket pin position (From 1 to 15) on the board.

After the connections are set, the application can be executed. Make sure that the target BSP has the SPI driver installed, if not, please add the proper macro BSPCFG_ENABLE_SPIn and rebuild the libraries and example.

Explaining the example

The driver example will initialize the SPI driver and wait for the master data transaction.

The slave example will communicate with master MCU with interrupt callback. By default, the example use chip select signal CS3 to connect the SPI master and slave. It simply sending increments from 0 to 20 every transfer and reading data received from master. All transferred data are printed on console.

The master example must be run before slave example, or the initialization of master SPI would cause slave example data loss.

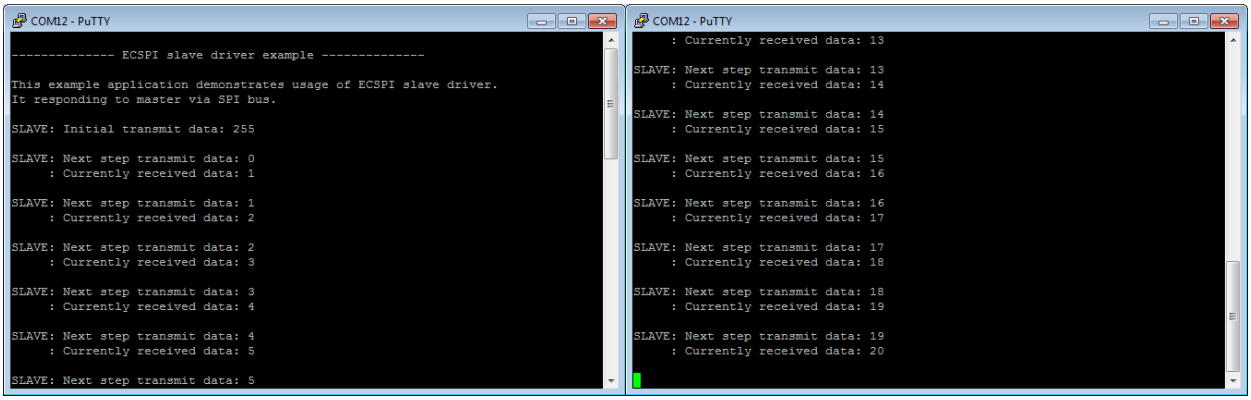

Figure 2
Example output from SPI slave example