EXAMPLE NAME: QSPI_EXAMPLE_XMC45

OVERVIEW: This example shows the use of the SPI_MASTER APP to communicate between the XMC4500 (master) and the onboard qSPI flash chip N25Q03 (slave) in Quad SPI.

DESCRIPTION:

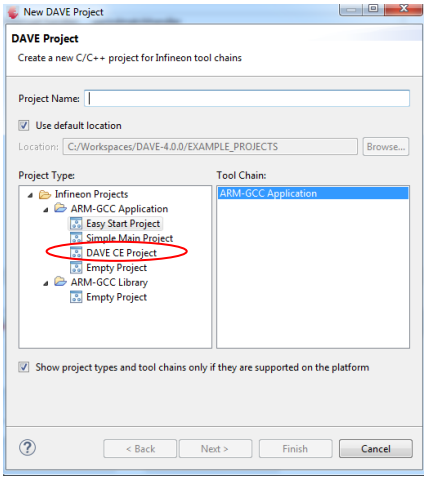
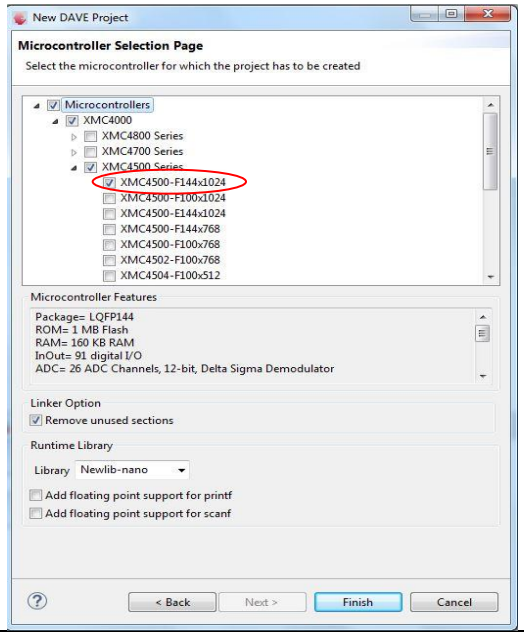
- DIGITAL_IO APP switch-on the onboard LED connected to P3.9 whenever the reading writing from/to the memory fails.
- SPI_MASTER APP Programs the onboard qSPI flash chip N25Q03 using Quad SPI Mode and verifies the data.

REQUIRMENTS:

Boards Required: XMC4500 CPU Board

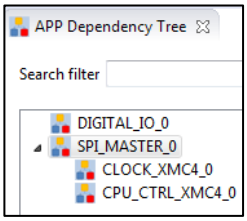
HOW TO CREATE THE PROJECT:

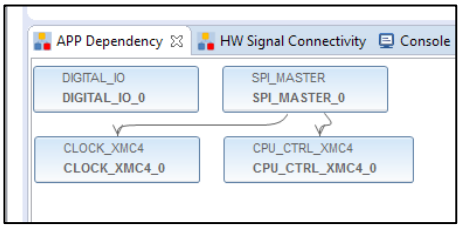
1. Open the DAVE CE and use  "Add IDE New Project Wizard" on the toolbar to add a new DAVE Project.

Enter Project Name Select "Project Type ➔ DAVE CE Project"	Select Microcontroller ➔XMC4500 Series ➔ XMC4500-F144X1024
	

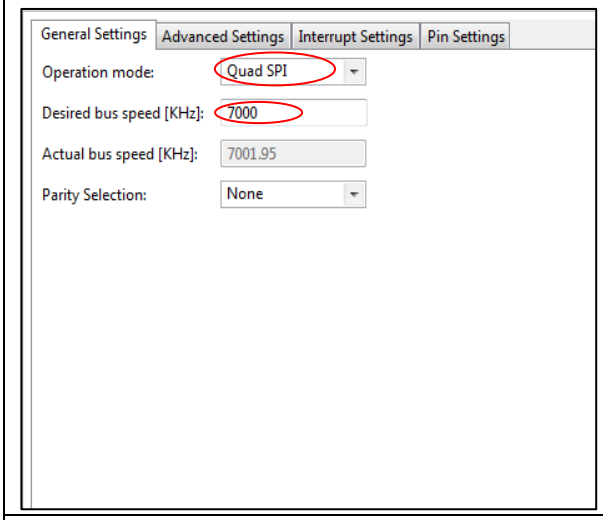
2. Use the "Add New APP" in the toolbar to add 1 instance of SPI_MASTER and DIGITAL_IO APP. Configure the APP instances with the following configurations.

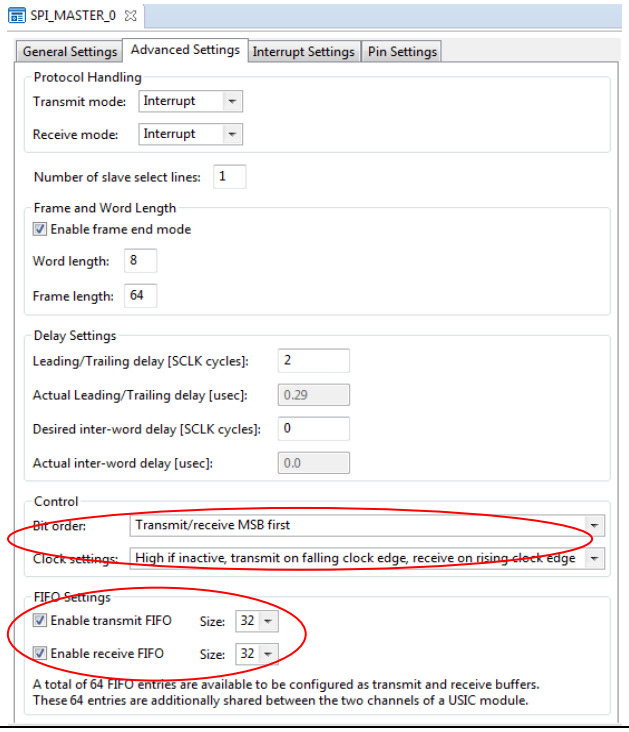
Views: APP Dependency Tree and APP Dependency



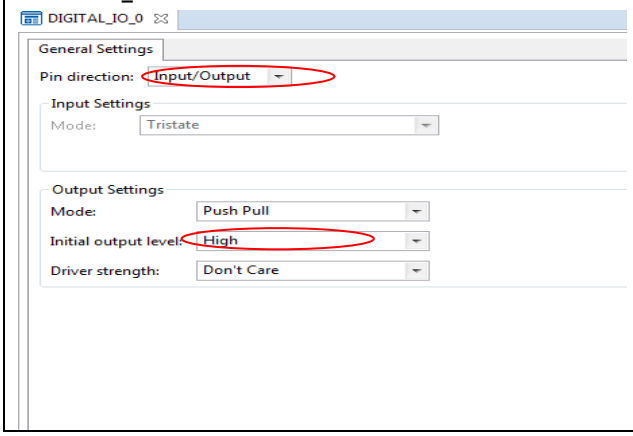


SPI_MASTER:





DIGITAL_IO:



3. Use the  "Manual Pin Allocator" found in the toolbar, configure the pins for the SPI_MASTER and DIGITAL_IO respectively.

App Instance Name	App Pin Name	Pin Number (Port)
SPI_MASTER_0		
	MOSI\MISO_0 pin	#133 (P3.15)
	MOSI\MISO_1 pin	#134 (P3.14)
	MOSI\MISO_2 pin	#135 (P0.15)
	MOSI\MISO_3 pin	#136 (P0.14)
	SCLKOUT pin	#137 (P0.13)
	Slave Select 0 pin	#132 (P3.3)

App Instance Name	App Pin Name	Pin Number (Port)
DIGITAL_IO_0		
	pin	#12 (P3.9)

4. Include the provide files N25Q03.c and N25Q03.h
5. Generate the code for the configurations made and change main.c accordingly.
6. Build and download to the microcontroller.

HOW TO TEST:

Download and run the demo in the using the CPU_45A-V3 board. If the LED in 3.9 Pin remains switched OFF (Pin is HIGH), the test is passed successfully.