EXAMPLE NAME: SPI_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 Full Duplex SPI.

DESCRIPTION:

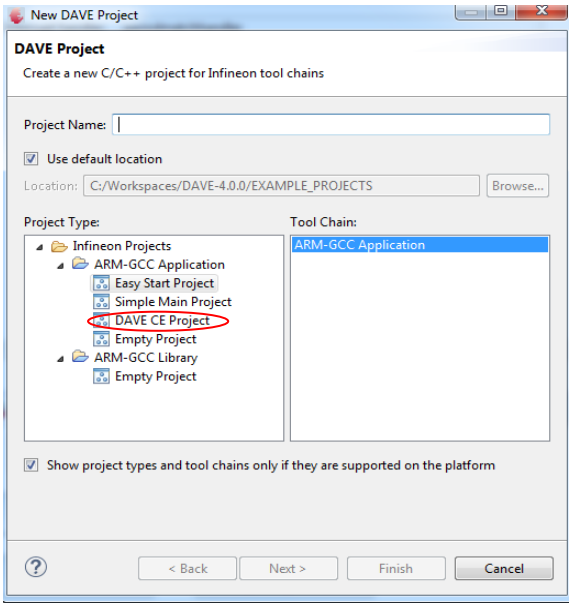
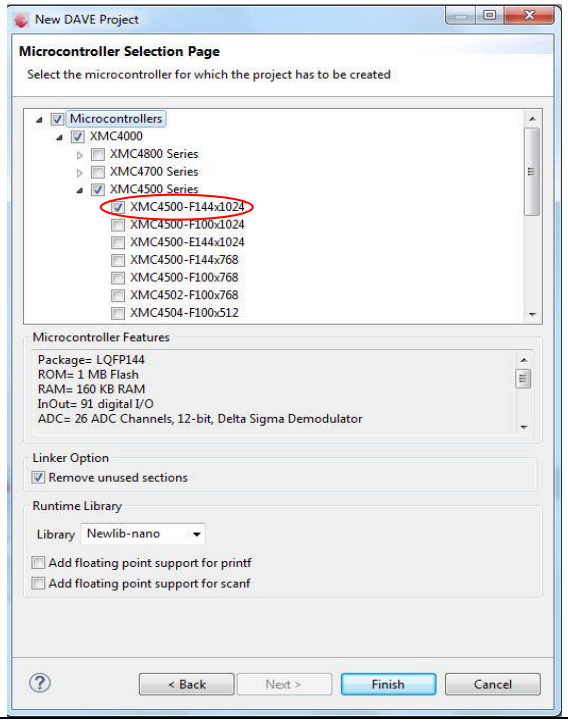
- DIGITAL_IO APP switch-on the onboard LED connected to P3.9 whenever the reading writing from/to the memory fails.
- SPI_MASTER APP Programs the onboard qSPI flash chip N25Q03 using Full Duplex SPI Mode and verifies the data.

REQUIRMENTS:

Boards Required: XMC4500 CPU Board

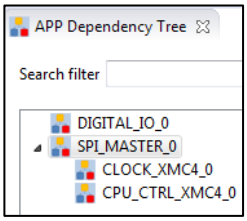
HOW TO CREATE THE PROJECT:

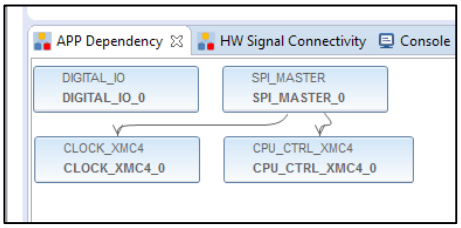
1. Open the DAVE CE and use  "Add IDE New Project Wizard" on the toolbar to add a new DAVE Project.

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

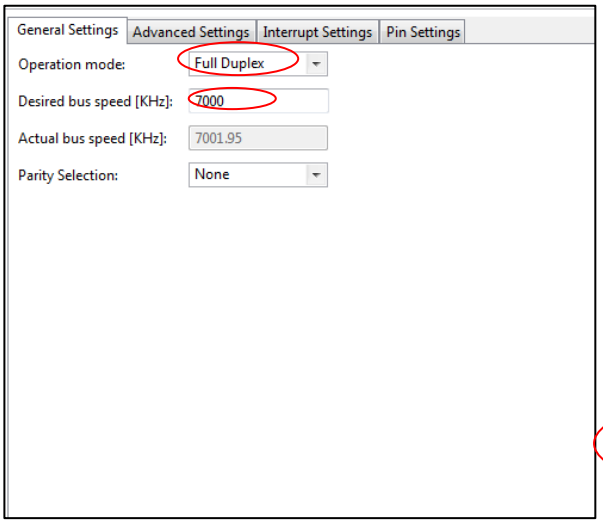
2. Use the "Add New APP" in the toolbar to add 1 instance of SPI_MASTER and DIGITAL_IO APP. Configure the APP instances with the following configurations.

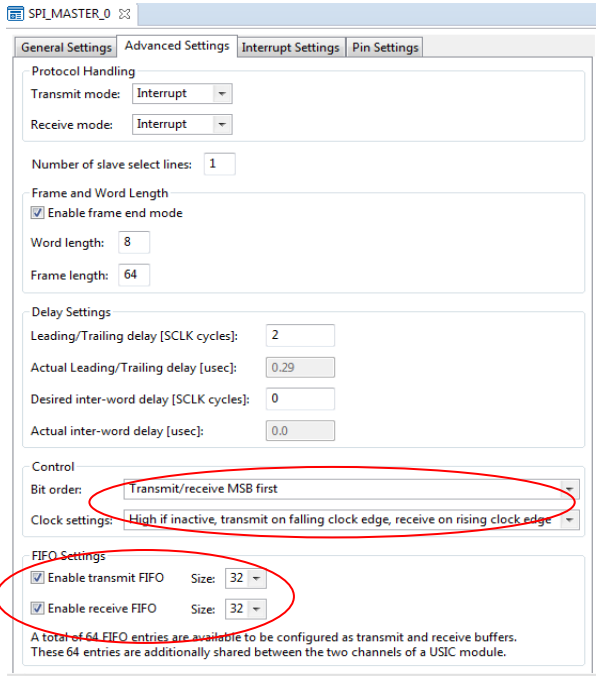
Views: APP Dependency Tree and APP Dependency



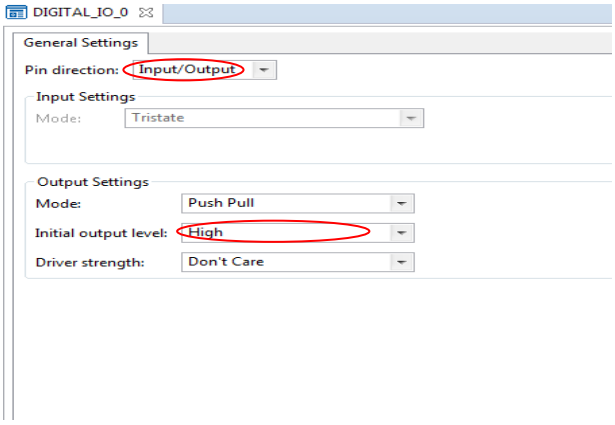


SPI_MASTER:

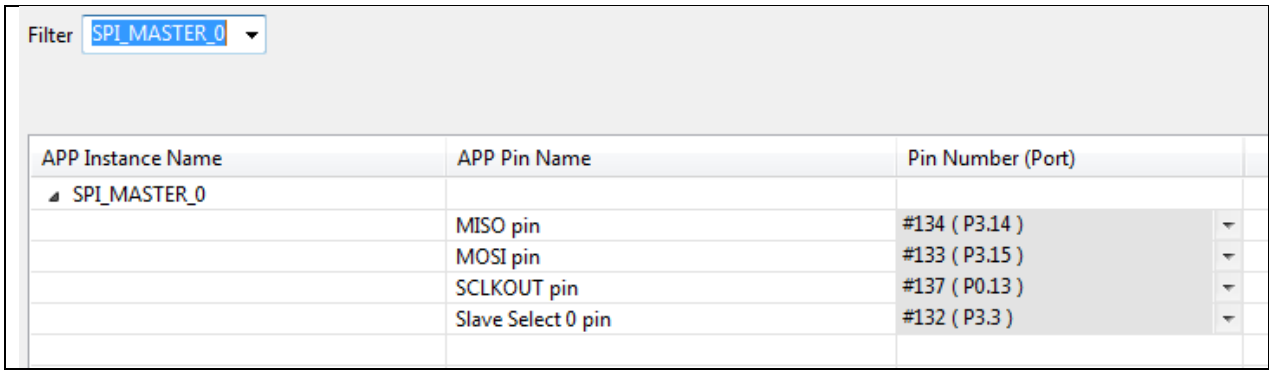


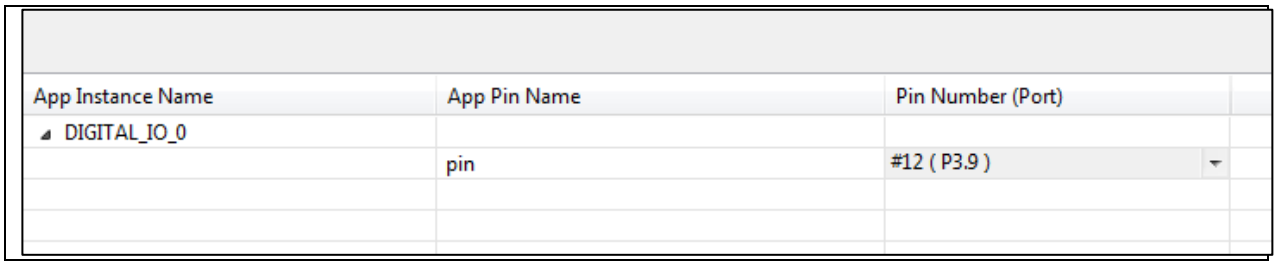


DIGITAL_IO:



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





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.