EXAMPLE NAME: I2C_EXAMPLE_XMC45

OVERVIEW: In this example the I2C_MASTER APP is used to configure the XMC4500 device to interface the IO Expander of the HMI board.

DESCRIPTION:

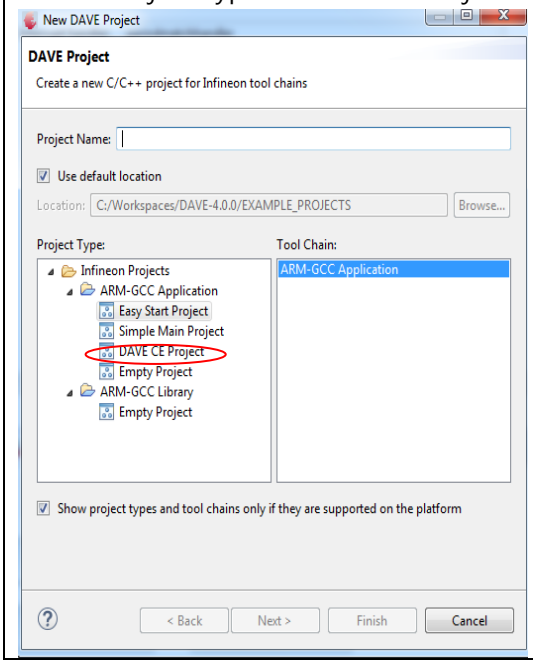
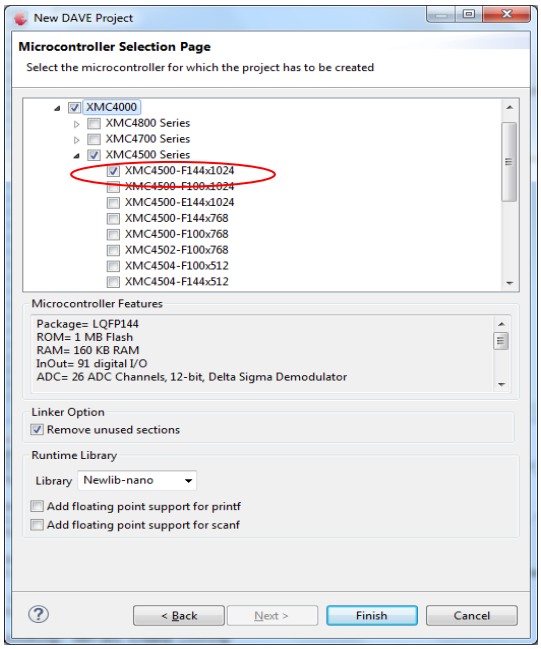
- I2C_MASTER APP Configures the USIC peripheral to send the right commands to the IO Expander of the HMI board by I2C protocol to implement a counter using the onboard LEDs. The LEDs will display the binary numbers from 1 to 15 continuously.

REQUIRMENTS:

Boards Required: XMC4500 CPU Board

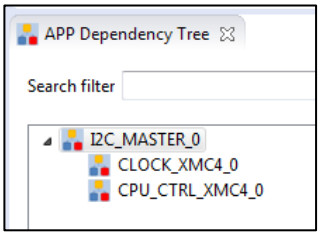
HOW TO CREATE THE PROJECT:

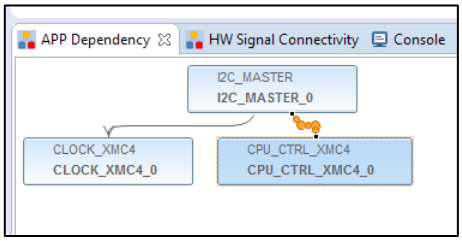
1. Open the DAVE CE and use  "Add IDE New Project Wizard" on the toolbar to add a new DAVE Project.

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

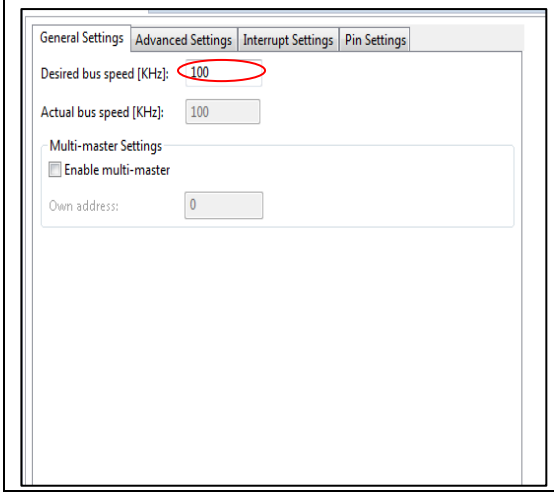
2. Use the "Add New App" in the toolbar to add 1 instance of I2C_MASTER. Configure the APP instance with the following configurations.

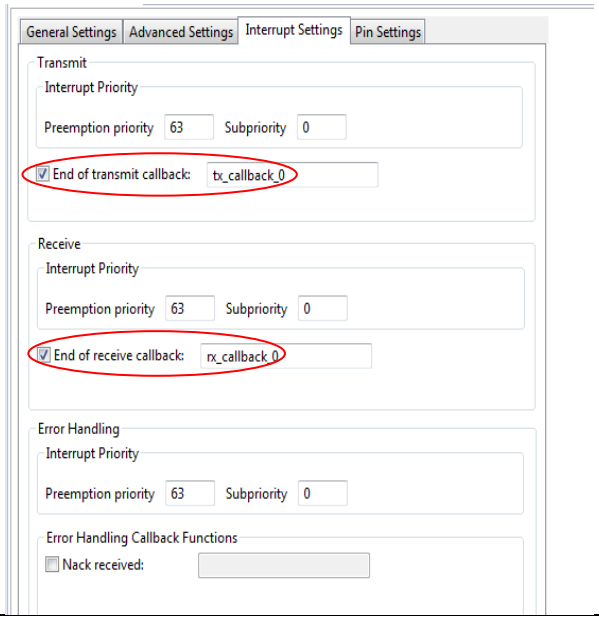
Views: APP Dependency Tree and APP Dependency



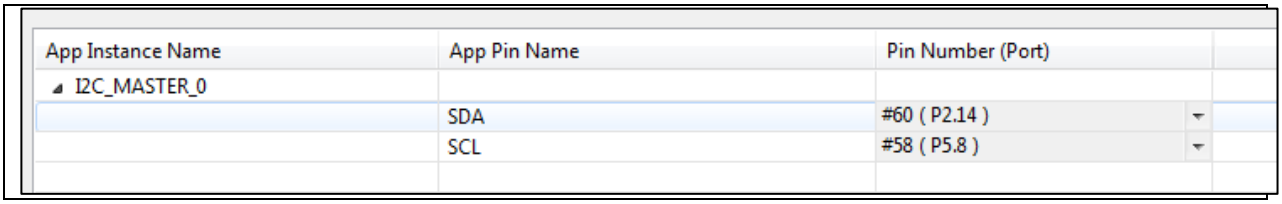


I2C_MASTER:





3. Use the "Manual Pin Allocator" found in the toolbar, configure the pins for the I2C_MASTER.



4. Generate the code for configurations made and change main.c accordingly.
5. Build and download to the microcontroller.

HOW TO TEST:

Download and run the demo using the CPU_45A-V3 board with the HMI_OLED board connected. If everything is well configured, you will see the counter implemented in the LEDs of the HMI_OLED board.