EXAMPLE NAME: DAC_LUT_EXAMPLE_XMC45

OVERVIEW: This example demonstrates how use the DAC_LUT App to generate two high resolution analogue sine signals with a phase shift of 45°

DESCRIPTION:

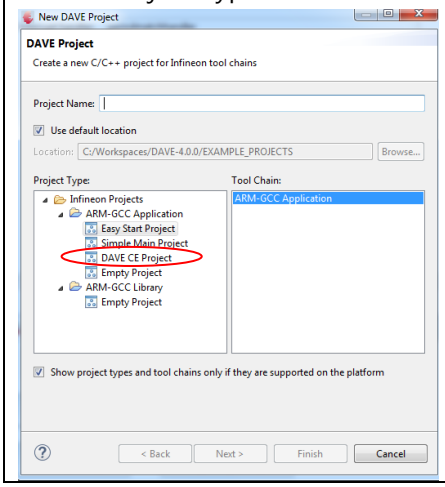
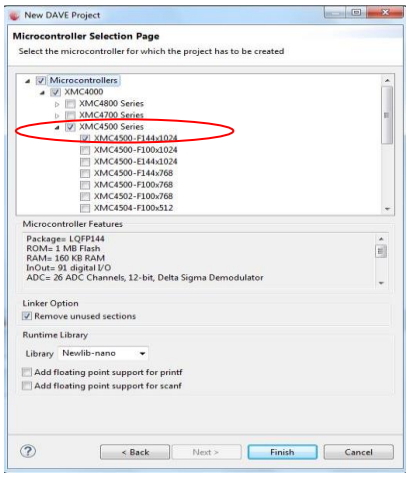
- DAC_LUT App generates two analogue sine signals
- 200 steps per period
- The sine signals have a phase shift of 45° and a frequency of 1kHz
- The output Pins are P14.8 and P14.9
- The output range is from 0.3V to 2.5V

REQUIRMENTS:

Boards Required: XMC4500 CPU Board (Order Nr: KIT_XMC45_EE1_002)

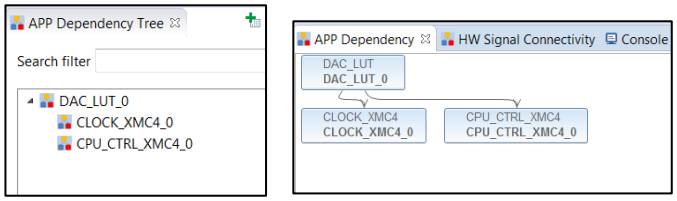
HOW TO CREATE THE PROJECT:

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

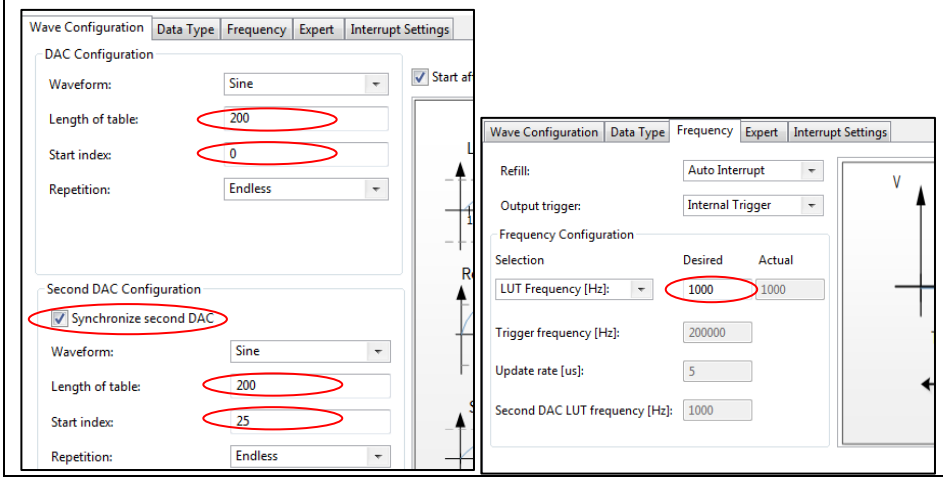
Enter Project Name Select "Project Type ➔ DAVE CE Project"	Select Microcontroller ➔XMC4500 Series ➔ XMC4500-F144X1024
	

2. Use the "Add New App" in the toolbar to add one instance of DAC_LUT. Configure the App instance with the following configurations.

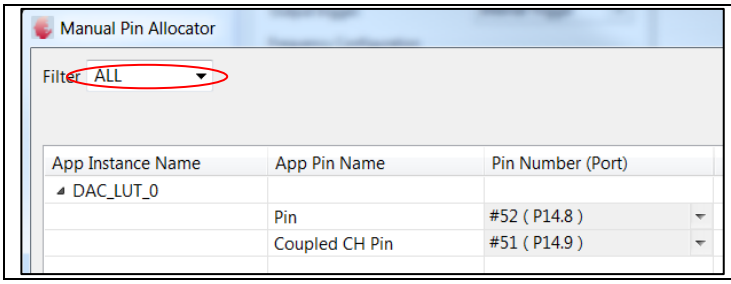
Views: App Dependency Tree and App Dependency



DAC_LUT:



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



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 in the uC.

OBSERVATIONS:

- Two analogue sine signals are generated on P14.8 and P14.9
- The frequency is 1kHz, the Amplitude 2.2V with 0.3V offset
- The sine signals have a phase shift of 45°

HINTS WHEN MIGRATING EXAMPLE TO OTHER DEVICES IN THE SAME XMC FAMILY:

- No additional information is necessary.