EXAMPLE NAME: DAC_EXAMPLE_XMC45

OVERVIEW: This example demonstrates how use the DAC App to generate an analogue sine signal and a ramp. The sine frequency is updated periodically.

DESCRIPTION:

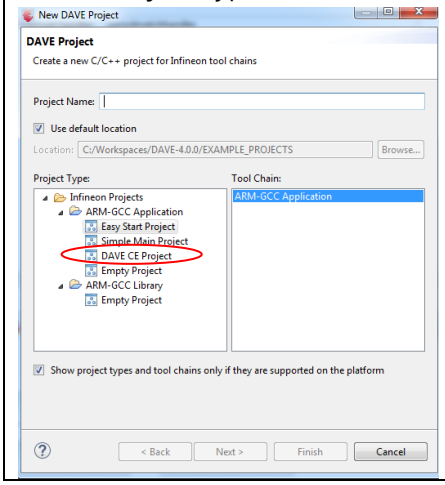
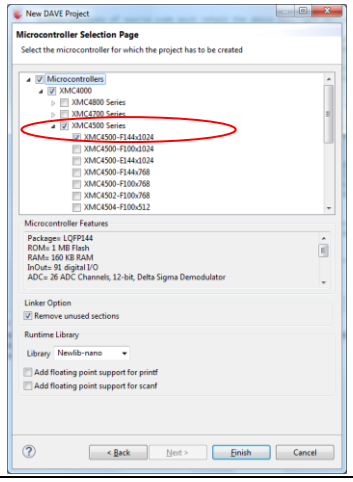
- DAC App generates an analogue sine signal on P14.9 at 50Hz, 444Hz, 4400Hz and 16kHz frequency.
- Using the SYSTIMER App, the frequency is changed every 10 seconds.
- DAC App generates an analogue ramp signal on P14.8 at 1Hz from 1V to 1.8V

REQUIRMENTS:

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

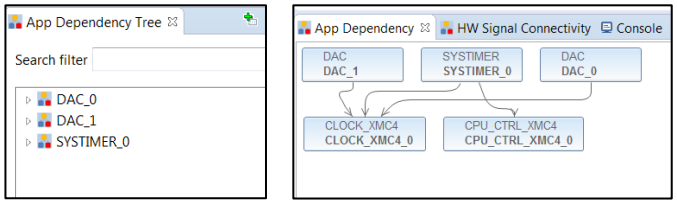
HOW TO CREATE THE PROJECT:

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

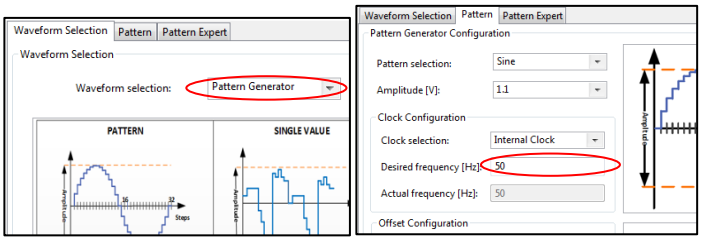
Enter Project Name Select "Project Type ➔ DAVE CE Project"	Select Microcontroller ➔XMC4500 Series ➔ XMC4500-F144X1024
	

2. Use the "Add New App" in the toolbar to add 2 instances of DAC and 1 SYSTIMER APP. Configure the App instances with the following configurations.

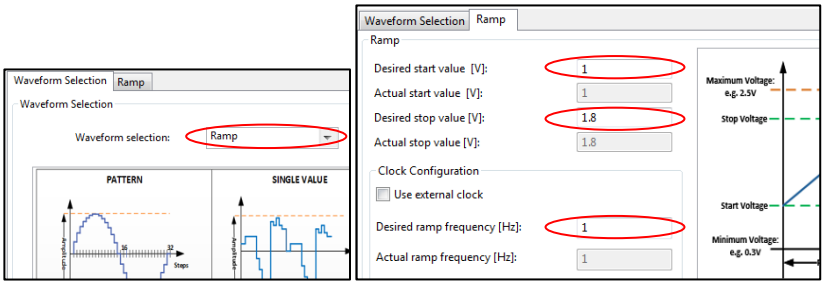
Views: App Dependency Tree and App Dependency



DAC_0:



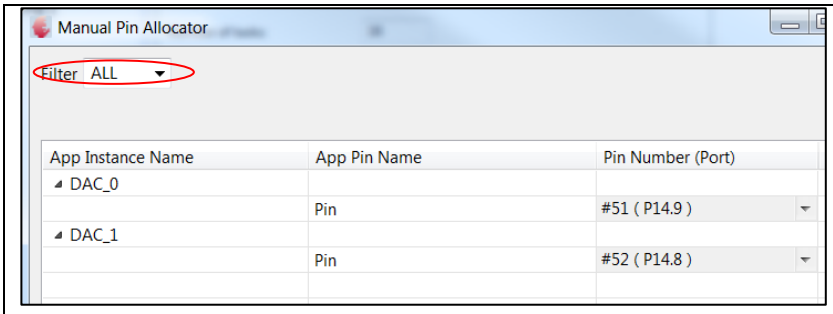
DAC_1:



SYSTIMER_0:

No changes required.

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:

- For every 10 seconds, the DAC sine frequency on on P14.9 changes.
- The frequency duration is: 50Hz, 440Hz, 4400Hz, 16kHz. Repeating.
- Additionally the DAC provide a ramp from 1V to 1.8V on P14.8

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

- No additional information is necessary.