EXAMPLE NAME: PWM_CCU8 _EXAMPLE_XMC13

OVERVIEW: This example starts 2 slices of CCU8 synchronously using an external start event and 1 slice of CCU8 is started during initialization.

DESCRIPTION:

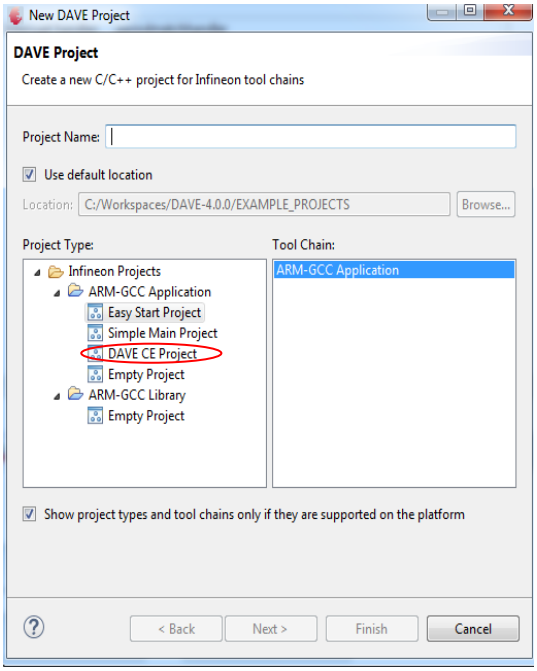
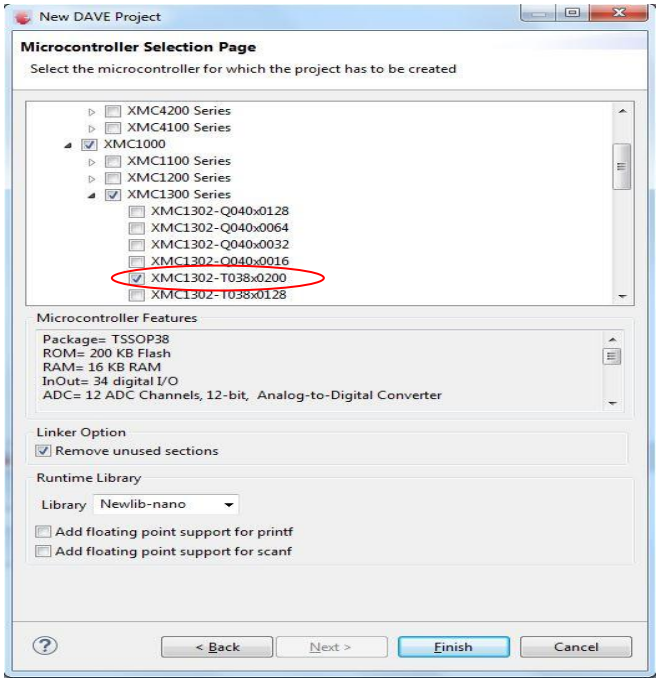
- PWM_CCU8 APP
    - Instance 0 is configured in asymmetric mode and timer is started with an external event is used to configure the dead time for the output signal.
    - Instance 1 is configured in symmetric mode and timer is started during initialization.
    - Instance 2 is configured in asymmetric mode and timer is started with an external event.
    - All 3 instances share the same CCU8 kernel.
- GLOBAL_CCU8 APP is used to trigger the start of 2 PWM slices.

REQUIRMENTS:

Boards Required: XMC1300 Boot Kit (Order Nr: KIT_XMC13_BOOT_001)

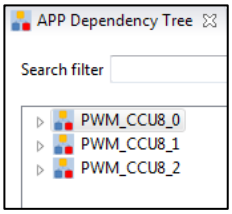
HOW TO CREATE THE PROJECT:

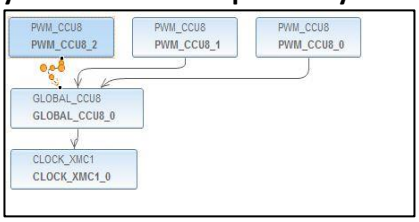
1. Open the DAVE CE and use  "Add IDE New Project Wizard" on the toolbar to add a new DAVE Project.

Enter Project Name Select "Project Type ➔ DAVE CE Project"	Select Microcontroller ➔XMC1300 Series ➔ XMC1302-T038X0200
	

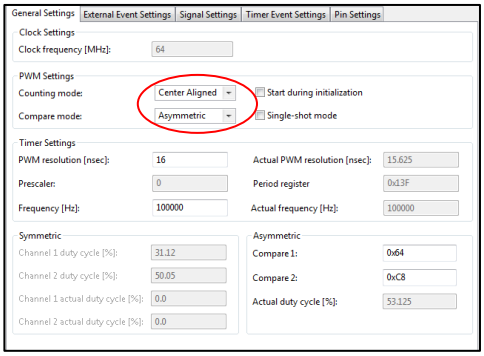
2. Use the  "Add New APP" in the toolbar to add APPs listed. Configure the APP instances with the following configurations.

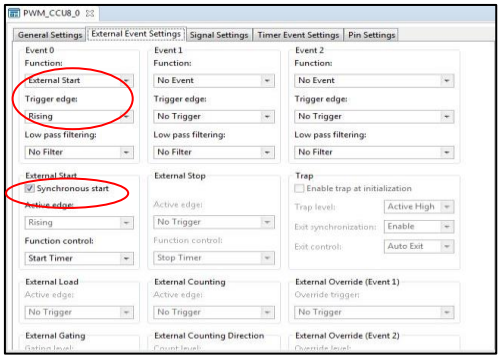
Views: APP Dependency Tree and APP Dependency

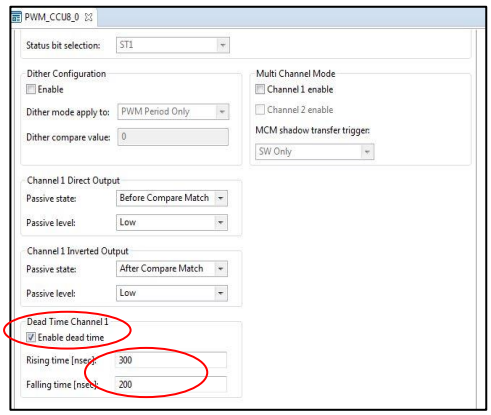


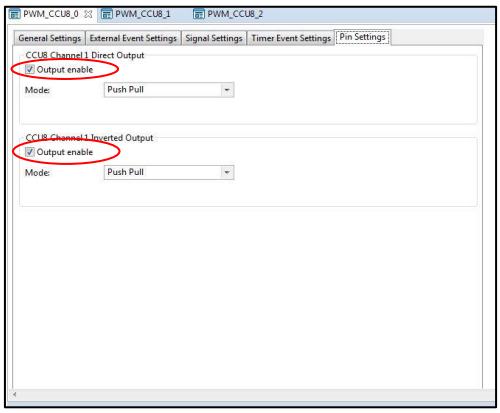


PWM_CCU8_0: Default settings to Tab: Timer Event Settings

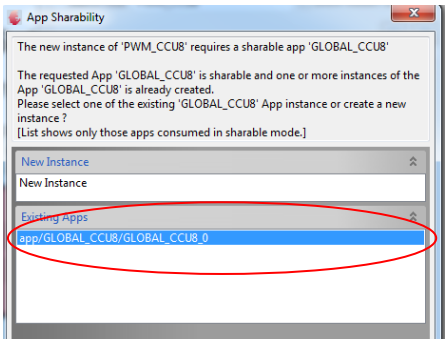


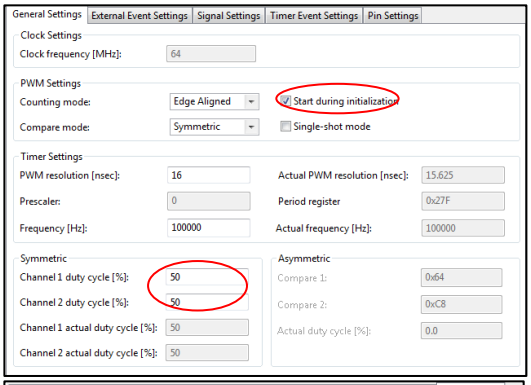


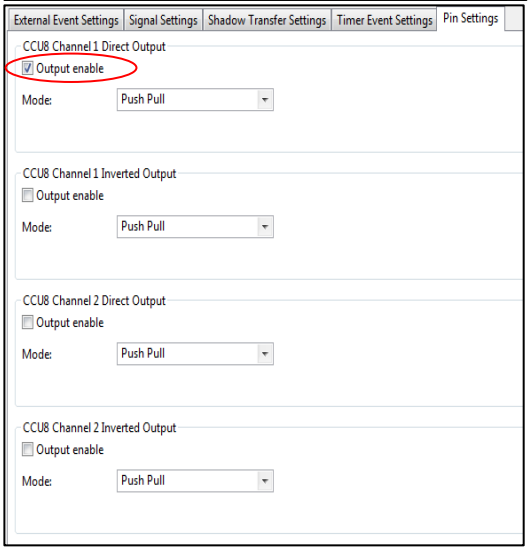




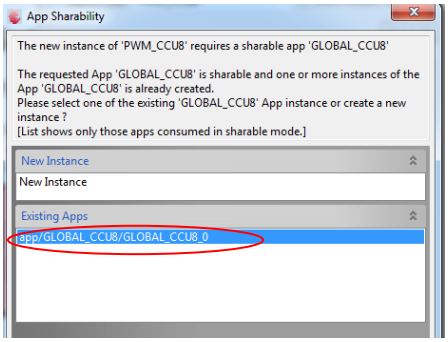
PWM_CCU8_1: Share same kernel with PWM_CCU8_0

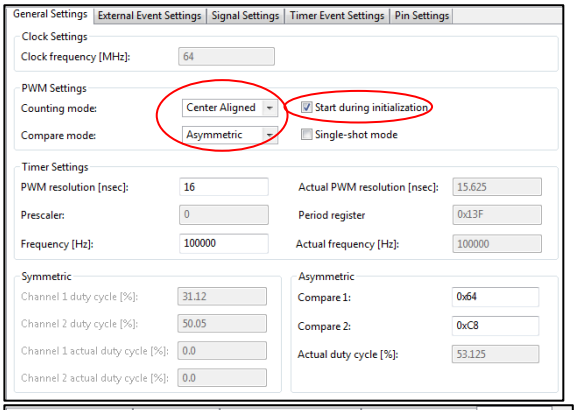


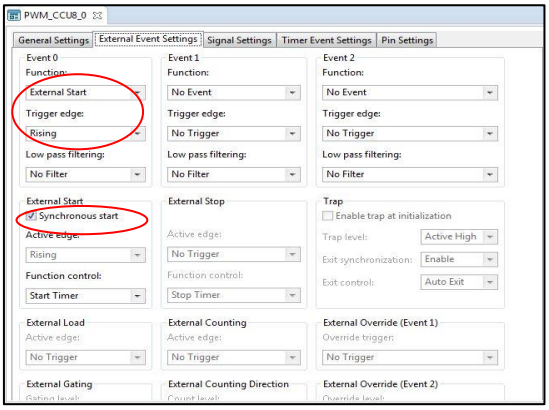


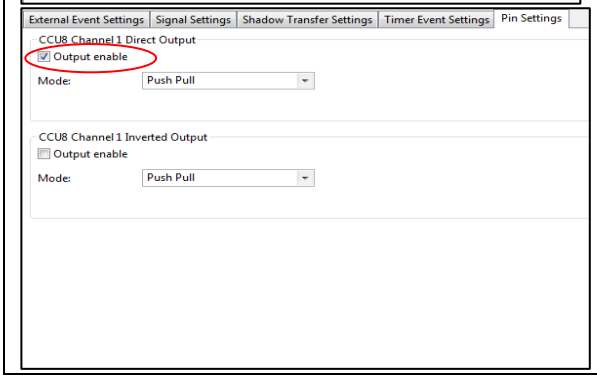


PWM_CCU8_2: Share same kernel with PWM_CCU8_0









3. Use the  "Manual Pin Allocator" found in the toolbar, configure the output pin for the LED.

App Instance Name	Resource	Port-Pin	Pin Number
◢ PWM_CCU8_0			
	PWM_CCU8 CH1 Direct Out	(P1.2)	#14
	PWM_CCU8 CH1 Invert Out	(P1.3)	#13
◢ PWM_CCU8_1			
	PWM_CCU8 CH1 Direct Out	(P2.10)	#7
◢ PWM_CCU8_2			
	PWM_CCU8 CH1 Direct Out	(P1.0)	#16

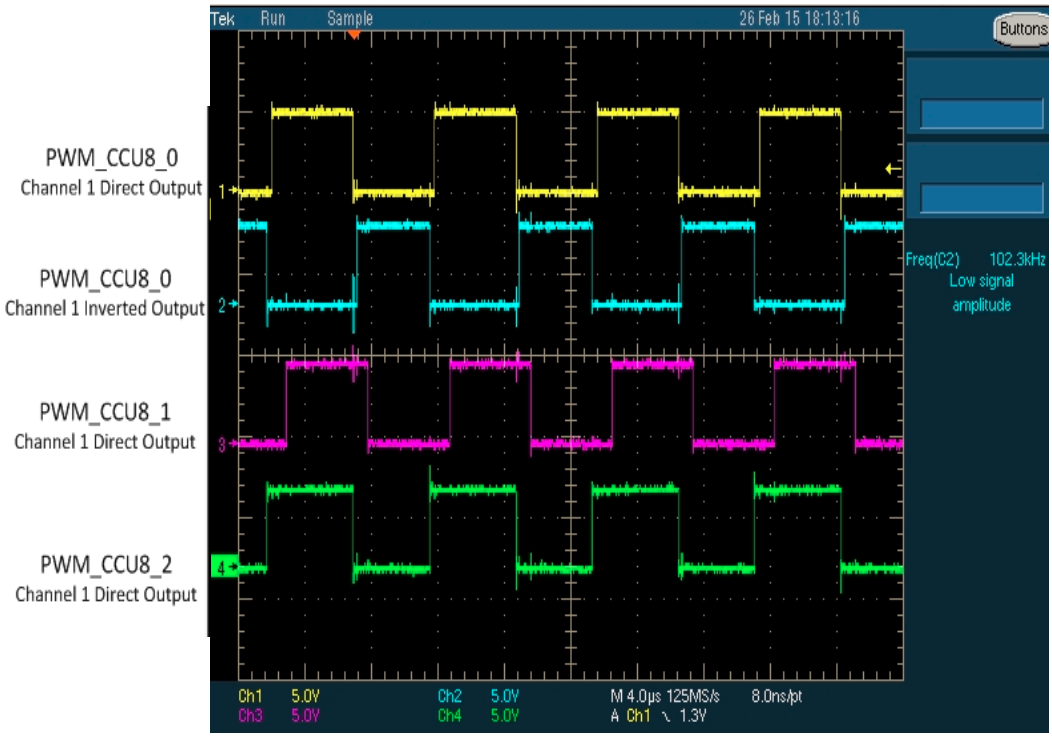
4. Generate the code for configurations made and change main.c accordingly.
5. Build and download to the microcontroller.

HOW TO TEST:

Download and run the demo in the uC.

OBSERVATIONS:

On the oscilloscope, observe the signals.



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

Only XMC1300 and XMC1400 devices have CCU8 peripheral module.