EXAMPLE NAME: RTC_EXAMPLE_XMC13

OVERVIEW: This example demonstrates how use the RTC APP generates a periodic second interrupt to blink the on-board LED. An alarm is generated every minute and reconfigured to the next minute. A message is sent out to the COM port each time the alarm occurs.

DESCRIPTION:

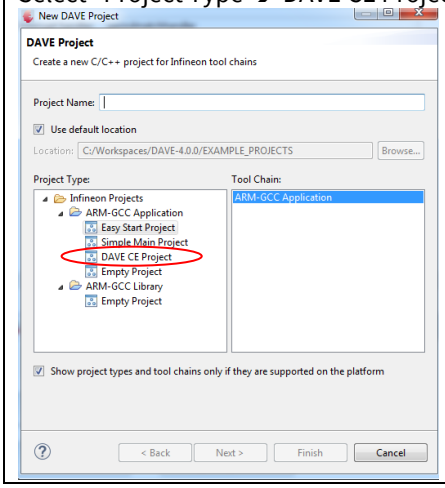
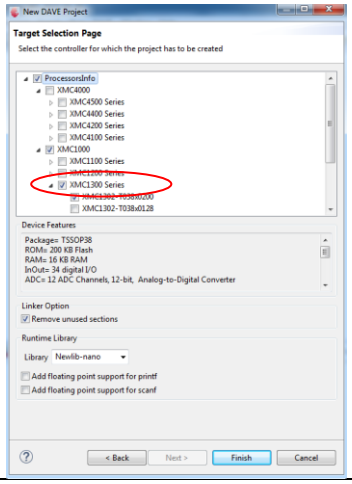
- RTC APP is used to generate a periodic second interrupt and an alarm interrupt
- UART APP is used to send out message that alarm has occurred.
- DIGITAL_IO APP is used to blink the on-board LED at every second

REQUIRMENTS:

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

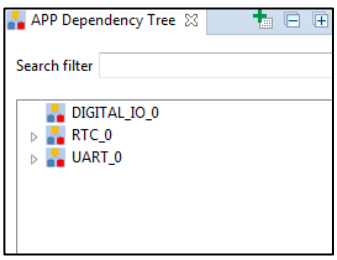
HOW TO CREATE THE PROJECT:

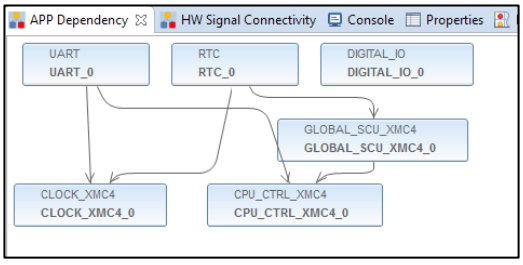
1. Open the DAVE CE and use  "Add IDE New Project Wizard" on the toolbar to add a new DAVE Project.

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

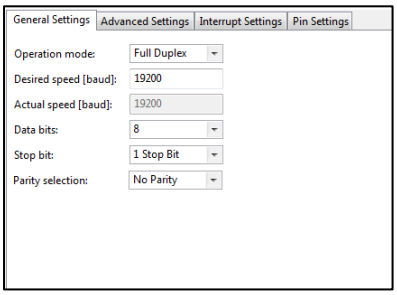
2. Use the  "Add New APP" in the toolbar to add APPs listed. Configure the App instances with the following configurations.

Views: App Dependency Tree and App Dependency

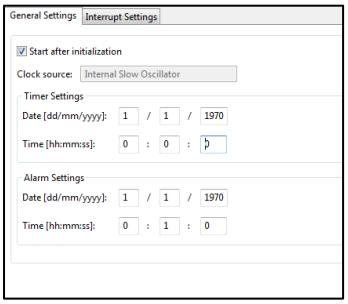


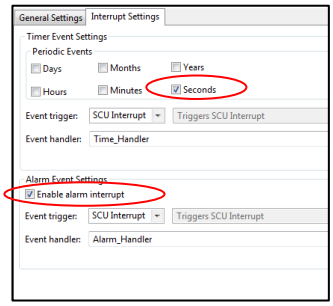


UART_0:	⇨ No change to settings on all Tabs

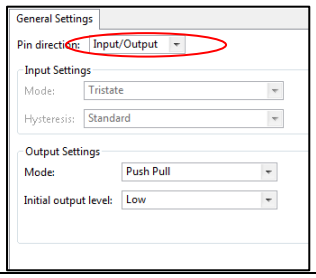


RTC_0:





DIGITAL_IO_0:



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

App Instance Name	Resource	Port-Pin	Pin Number
◢ DIGITAL_IO_0			
	pin	(P0.0)	#17
◢ UART_0			
	Receive Pin	(P1.3)	#13
	Transmit Pin	(P1.2)	#14

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 every alternate second, LED lights up. (RTC Periodic second interrupt occurs)
- On every minute, the RTC alarm occurs and reconfigured to the next minute.
- On each occurrence of alarm, a message “ALARM HAS RUNG!!” is sent to the COM port.

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

No additional information is required.