EXAMPLE NAME: DISPLAY_7SEG_EXAMPLE_XMC12

OVERVIEW: This example demonstrates how use the DISPLAY_7SEG APP to drive 8 units of 7-segment display, where the display characters are changed in the callback function.

DESCRIPTION:

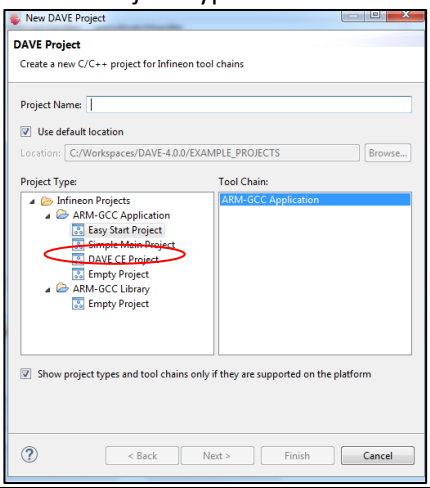
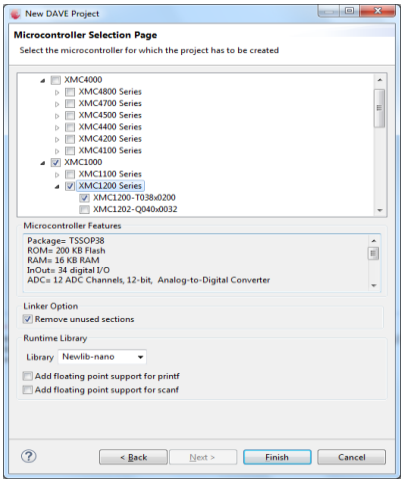
- DISPLAY_7SEG APP drives 8 units of 7-segment LED display. The characters displayed are cycled between “HELLO…”, “12345678” and “INFINEON” in the callback function.

REQUIRMENTS:

Boards Required: XMC1200 CPU Board (Order Nr: KIT_XMC12_BOOT_001), 7-Segment Display Card (Prototype board, please refer to attached schematics “inTouch_LED7Seg.pdf”)

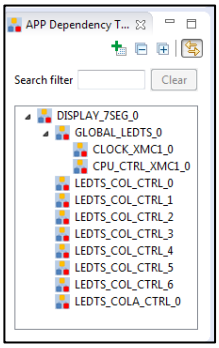
HOW TO CREATE THE PROJECT:

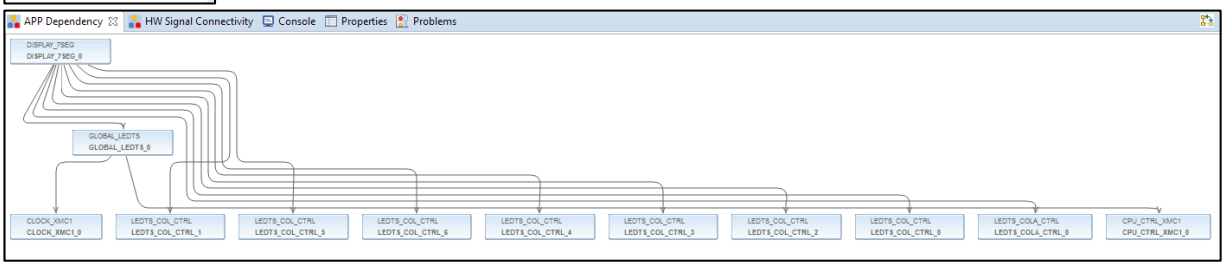
1. Open the DAVE CE and use  “Add IDE New Project Wizard” on the toolbar to add a new DAVE Project.

Enter Project Name Select “Project Type ➔ DAVE CE Project”	Select Microcontroller ➔XMC1200 Series ➔ XMC1200-T038x0200
	

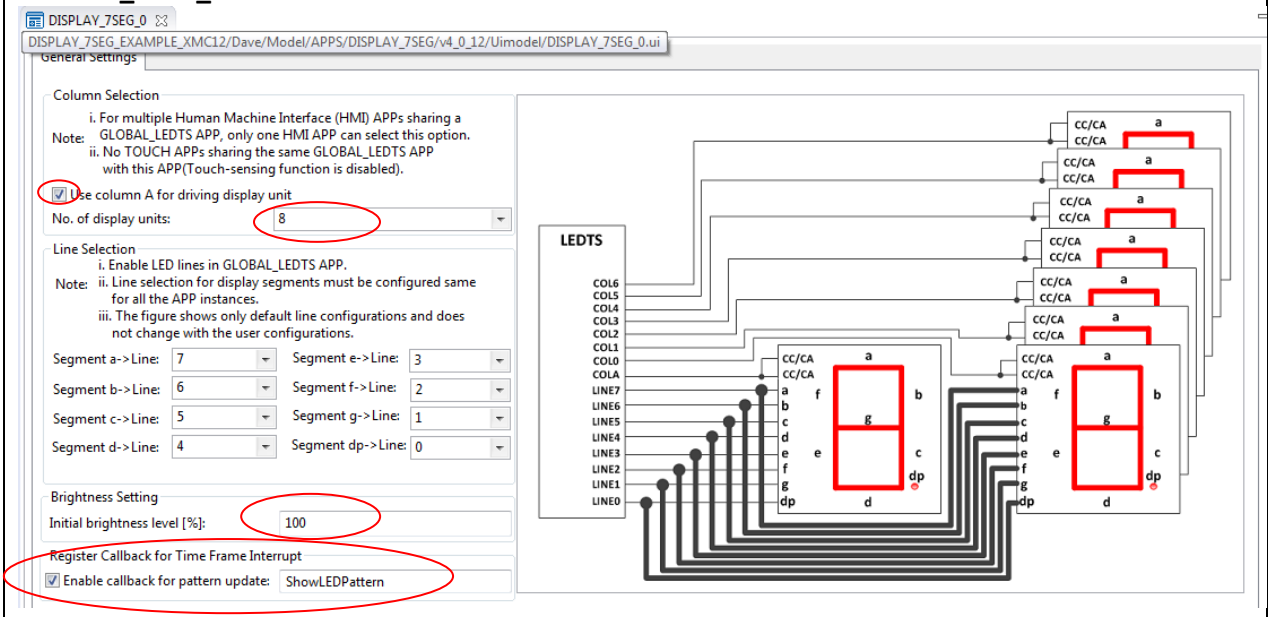
2. Use the  "Add New App" in the toolbar to add 1 instance of DISPLAY_7SEG APP. Configure the App instances with the following configurations.

Views: App Dependency Tree and App Dependency

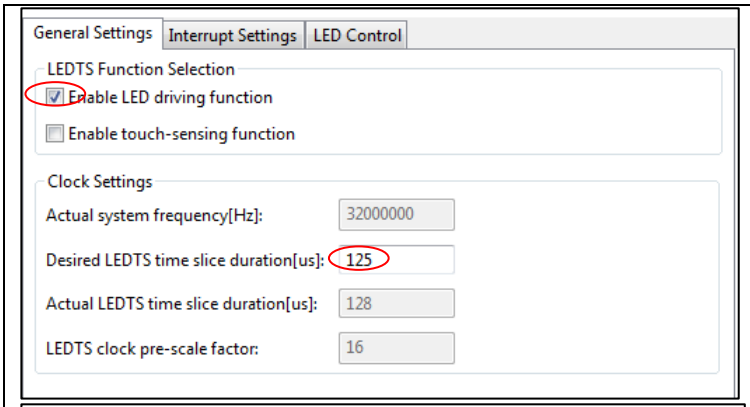


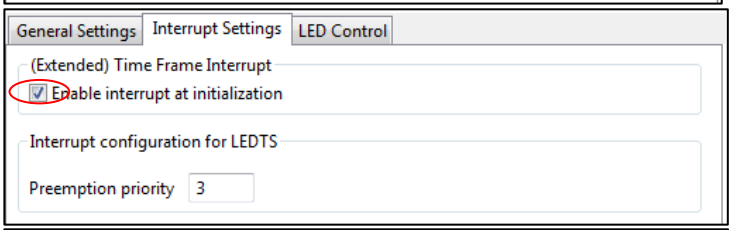


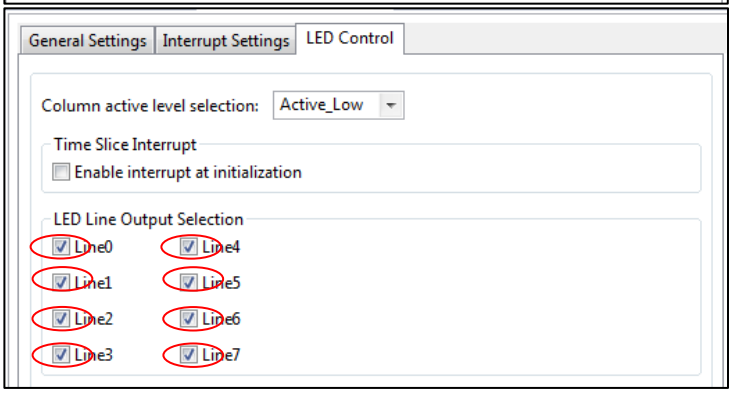
DISPLAY_7SEG_0:



GLOBAL_LEDTS_0:

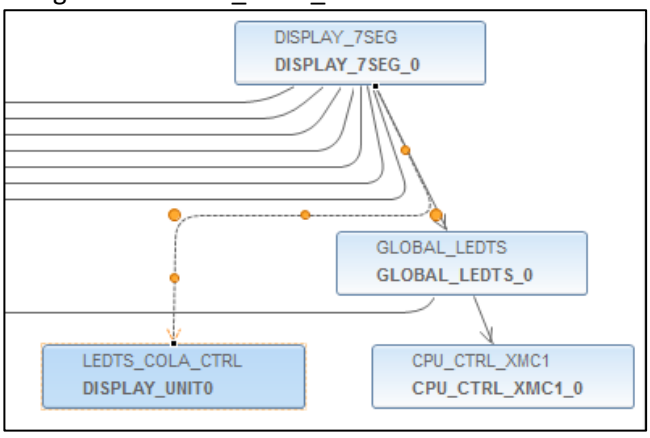




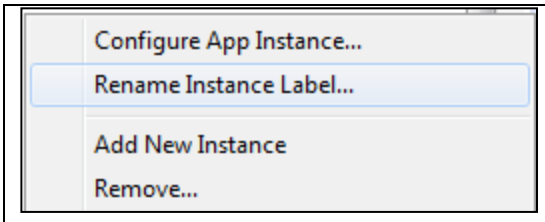


3. Rename the APP instance label: LEDTS_COLA_CTRL →DISPLAY_UNIT0.

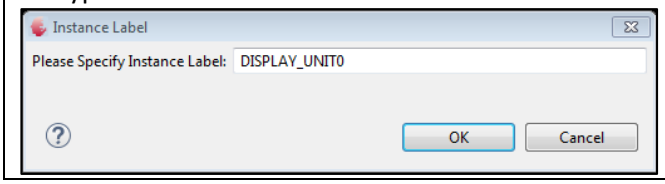
1. Right-click LEDTS_COLA_CTRL APP.



2. Select “Rename Instance Label”.

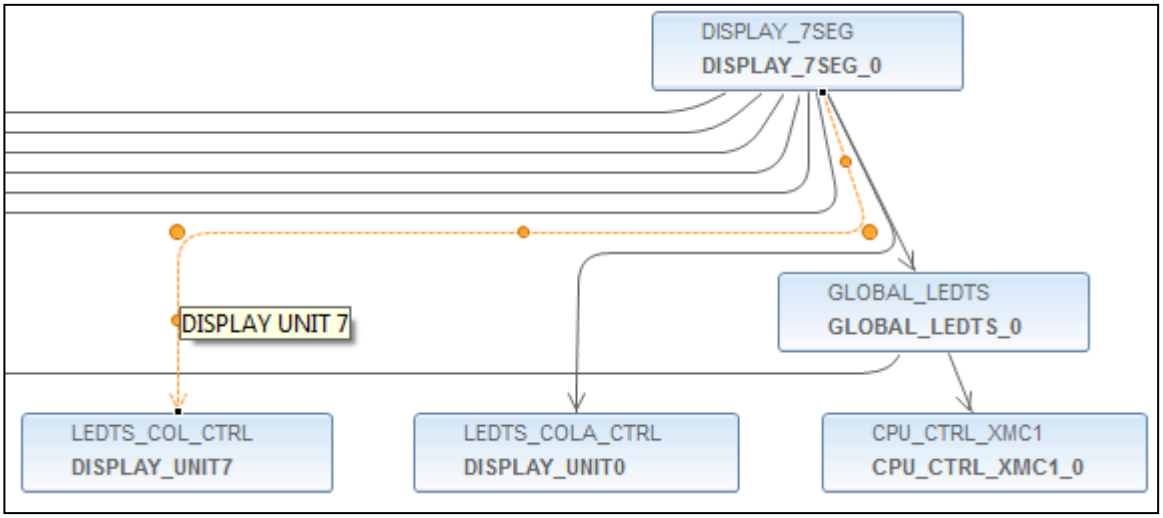


3. Type in new instance.

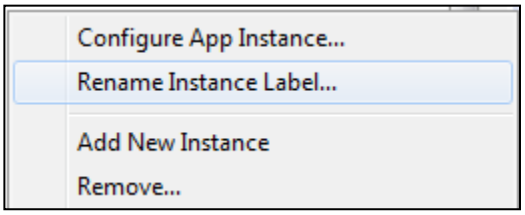


4. Rename the instance labels for LEDTS_COL_CTRL APPs.

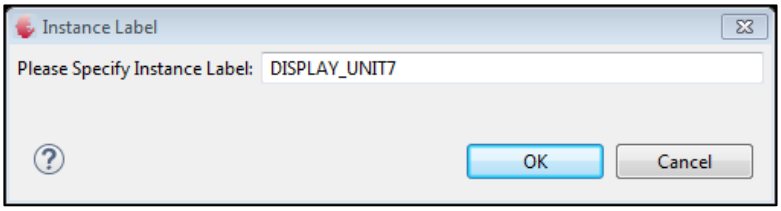
1. Hover mouse cursor over the connecting arrow to an LEDTS_COL_CTRL APP. A label will display momentarily e.g. DISPLAY UNIT 7.
2. Right-click the LEDTS_COL_CTRL APP.



3. Select “Rename Instance Label”.

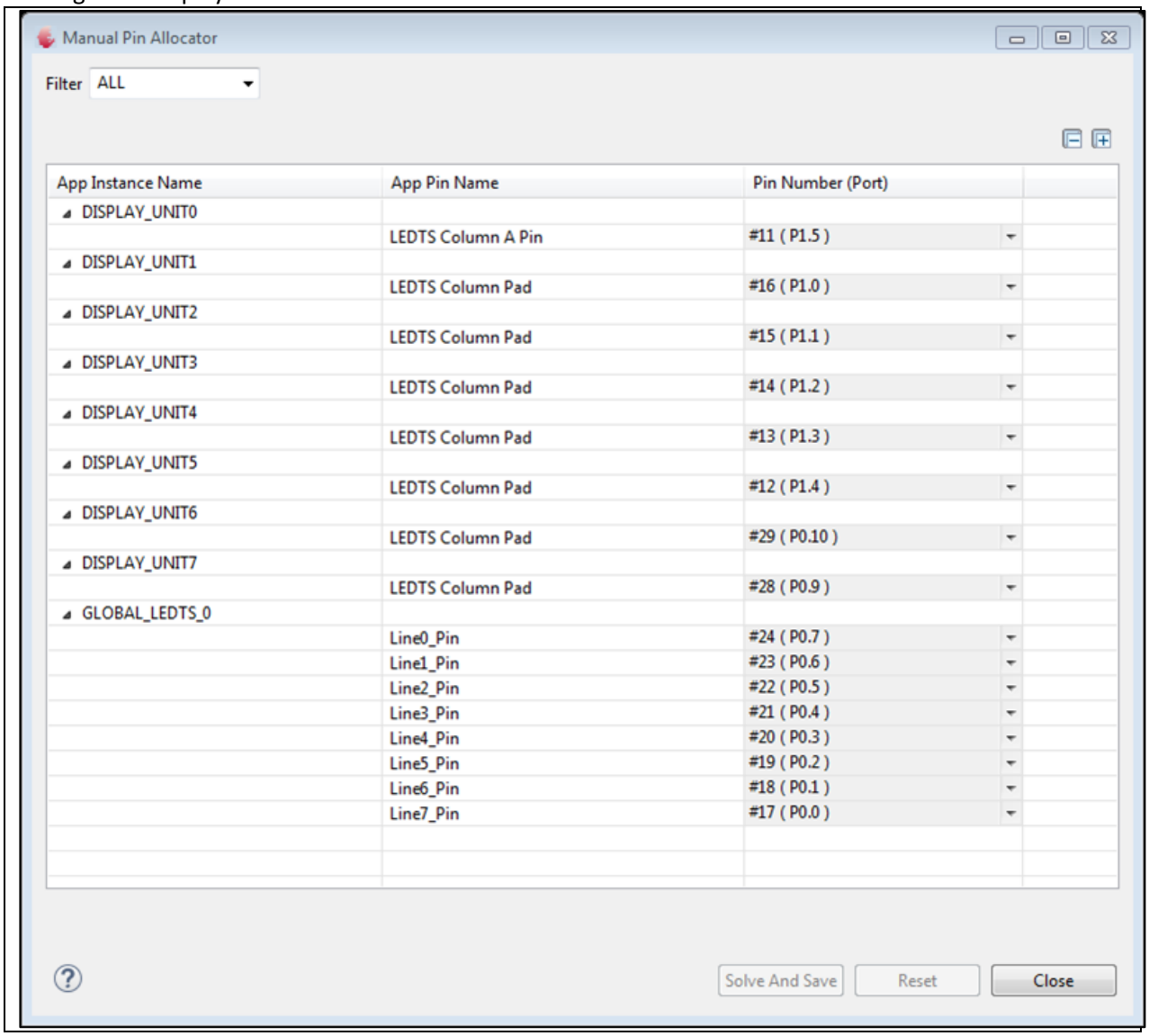


4. Type in same label seen in step 1 as new instance label.



5. Repeat steps 1 to 4 for other LEDTS_COL_CTRL APPs.

5. Use the  "Manual Pin Assignment" found in the toolbar, configure the output pins for the 7-Segment Displays.



6. Generate the code for configurations made using  shortcut in the toolbar.
7. Change main.c accordingly.
8. Build and download to the microcontroller using  shortcut in the toolbar.

HOW TO TEST:

Download and run the demo in the uC.

OBSERVATIONS:

- The 8 units of 7-segment displays will show “HELLO...” in the first second.
- The 8 units of 7-segment displays will show “12345678” in the next second.
- The 8 units of 7-segment displays will show “INFINEON” in the next second.

- The 8 units of 7-segment displays will then start to slowly dim down to zero brightness level, then dim up to 100% brightness level.
- The display sequence will restart.

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

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