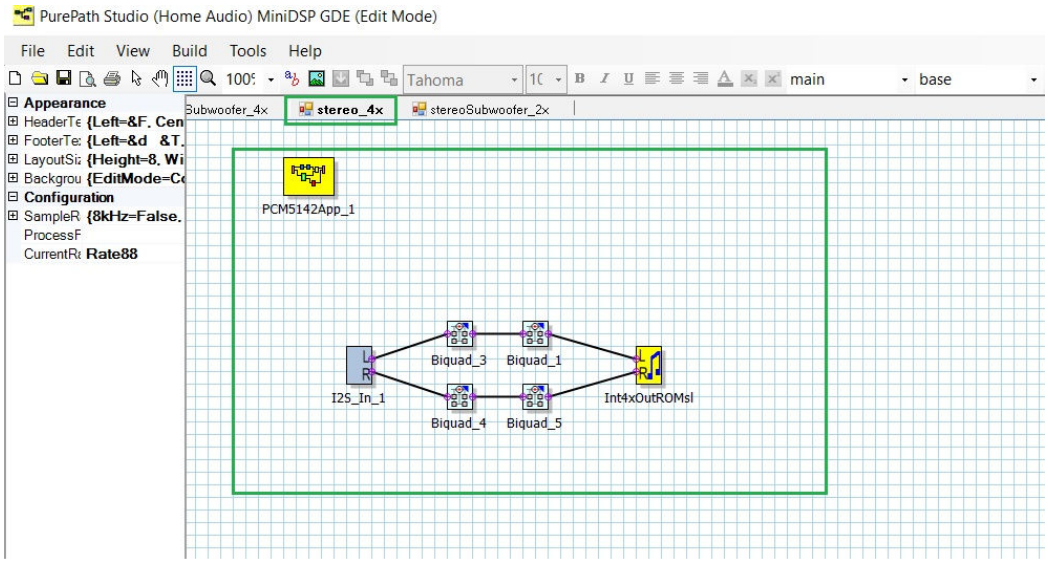
PUREPATH PROCESS FLOW for Allo Piano 2.1 DAC

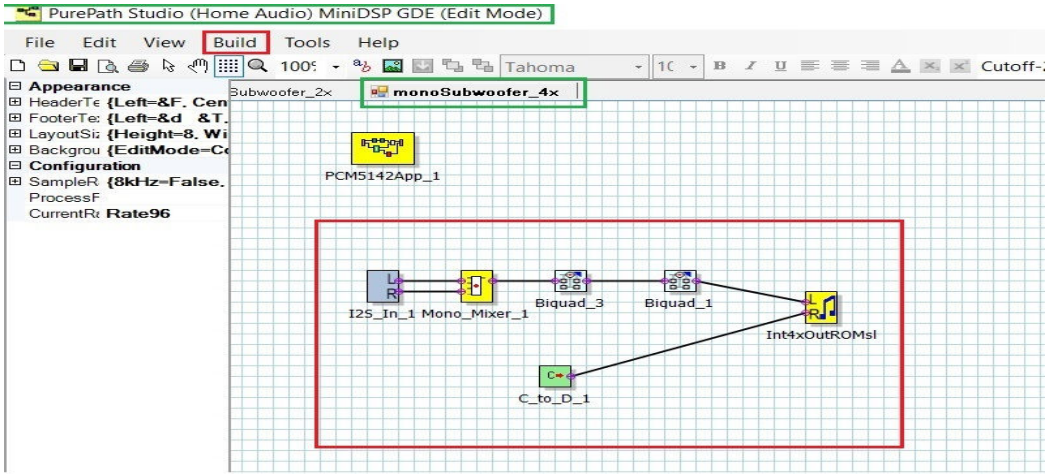
PurePath Studio GDE is used to generate the DSP process flows. You can download PurePath Studio from the below link.
http://www.ti.com/tool/aicpurepath_studio

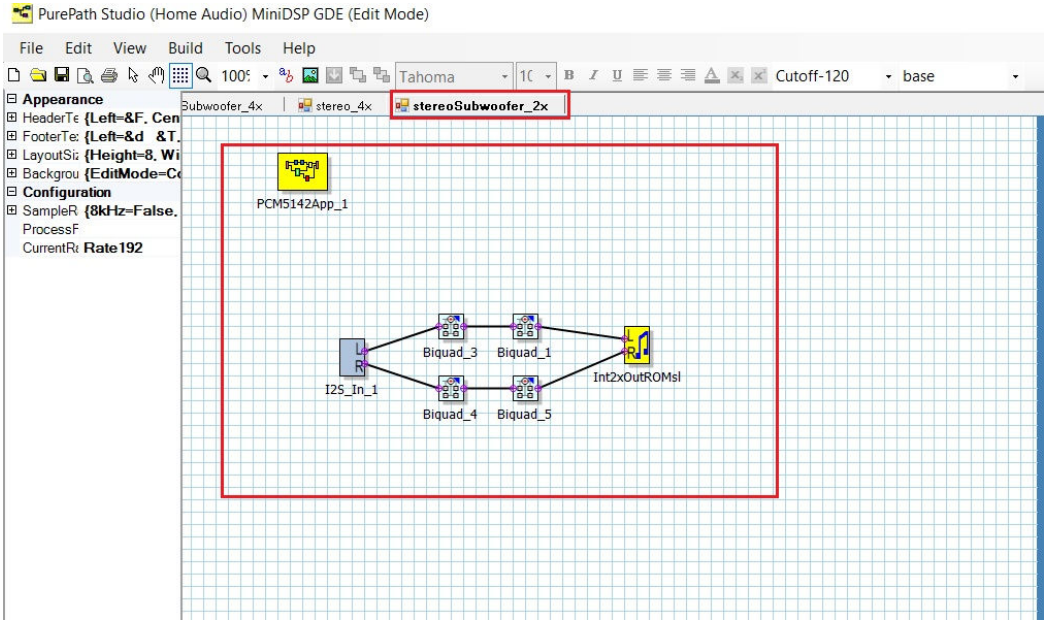
DSP process flow can be created by adding required components like filters, interpolators, etc. For more details on the PurePath Studio please refer to TI documents.

Required steps to generate the DSP fw bin file for Allo Piano 2.1 DAC:

1. DSP process flows must be created for subwoofer stereo, subwoofer mono & stereo speaker separately.







2. By clicking Build ->Generate code option, .cfg files get generated.

3. Within the .cfg files, all repeating lines should be modified. Execute this command within the directory where the configuration files reside.

   $sudo sed -i '/> 00/c\w 98 01 000' *

4. Remove ^M (DOS carriage-return character) from the files, if present (Using Vim,

   :%s/.\{1}$//)

5. Convert .cfg files to .bin files with this command

   $ xxd -r -p <file>.cfg <file>.bin

   NOTE: In <file>.bin, file name must be as follows
   Allo-piano-dsp-<*sampling rate*>-<*cut-off-frequency*>-<*sub-woofer*>.bin
   sampling rate: 44100, 48000, 88200, 96000, 176400 or 192000
   cut-off-frequency: 60, 70, …. 190 or 200
   sub-woofer: 1 for subwoofer & 0 for audio-speakers.

6. .bin files must be copy into proper locations on the target board
   /lib/firmware/allo/piano/2.1 => Mono sub-woofer bin files
   /lib/firmware/allo/piano/2.2 => Stereo sub-woofer and audio-speaker bin files.

7. Reboot the target board, to enjoy the new DSP process flows.