Creating SigmaStudio for SHARC LDR with Embedded Code and Parameter

Please follow the steps mentioned below to include SigmaStudio code and parameter in the LDR. This scheme can be used to:

- Run SigmaStudio for SHARC without the USB to SPI hardware.

- Run SigmaStudio for SHARC from the flash.

Step 1: Convert the exported files to required format

1. Export the system file using "Action->Export System Files" menu.

2. Give xxxxxx as the file suffix for the above dialog box.

3. Open Cygwin and go to 'utility' directory in the attached zip file.

4. Copy all the exported files to the 'utility' folder.

5. Type *make SWC "EXPORT_FILE=xxxxxx_IC_1"* (Use NWC instead of SWC if your target application is in Non-VISA mode).

Assembly file *ss_code_param.asm* will get generated in the same folder. This file contains code and parameter in the required format.

Step 2: Modify the application to incorporate the code and parameter buffers

1. Make the changes to your application *app.c,* as shown in the *app.c* inside the attached zip file. Changes are summarized below.

   a. Edit *app.c* to remove memory allocation for Code (*adi_ss_mem1*) and Parameter (*adi_ss_mem5*).

   b. Change the SPI ID in the communication instance configuration to *SELECT_SPI0_NO_WAIT*.

   c. Set *oSSnConfig.bSkipInitialDownload* to '1'. This will skip the initial download.

2. Include *ss_code_param.asm* generated in the Step 1 above to the application project.

3. Build the project to generate LDR. This LDR file can be loaded in the same way as default LDR. The processing will start without the need to press compile and download.

Step 3: Loading the LDR from the Flash

The LDR can also be booted from the SPI flash. The LDR must be written to the flash first

1. Write the LDR to the Flash using VisualDSP++ 'Flash Programmer'

    a. Pre-program erase option: "Erase Affected"

    b. File Format: "Binary"

    c. Offset: "0x0"

2. Modify the SW4 switch on the board from position '0' to '1'.

3. Reset the board.