ECE 487 LAB 6
Interleaver / Scrambler

This week we will learn interleaver, buffer, unbuffer, reshape blocks in Simulink. Random Interleaver is similar as scrambler. Let use the blocks shown in figure 1 and define the parameters shown as below:

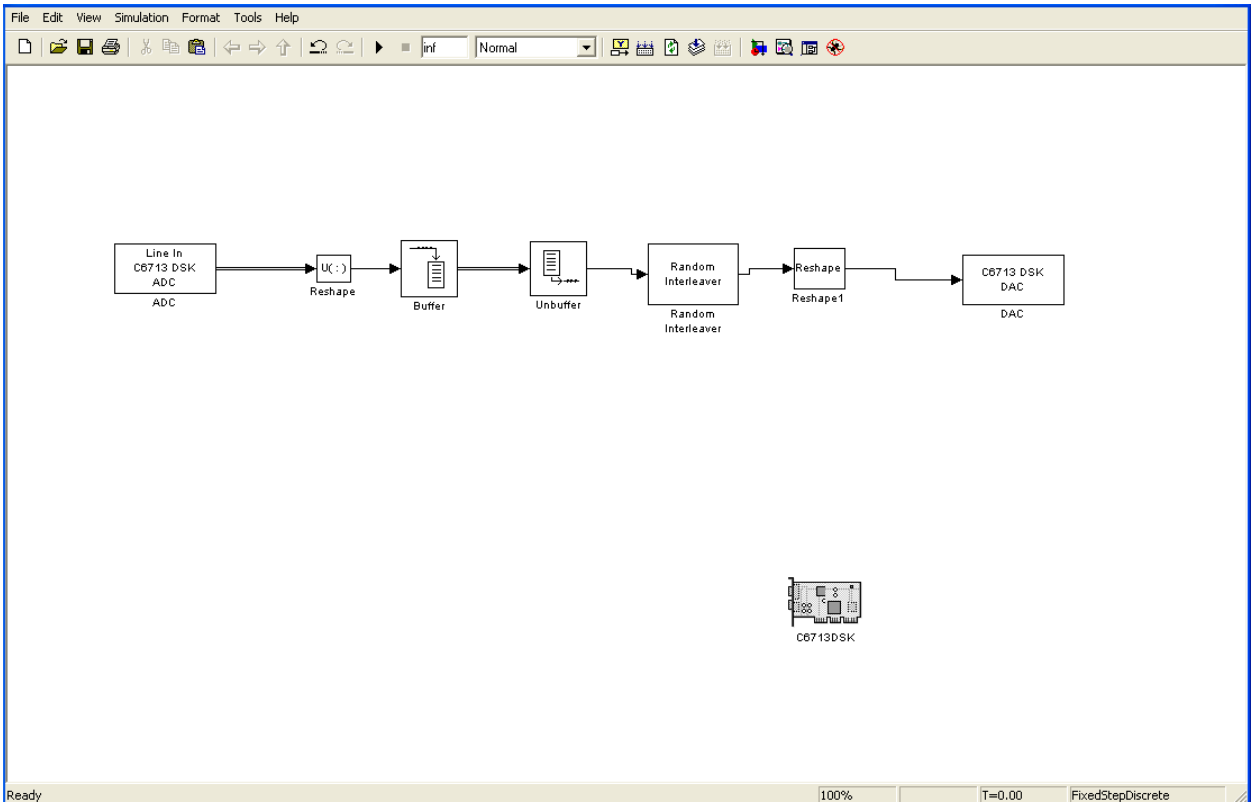
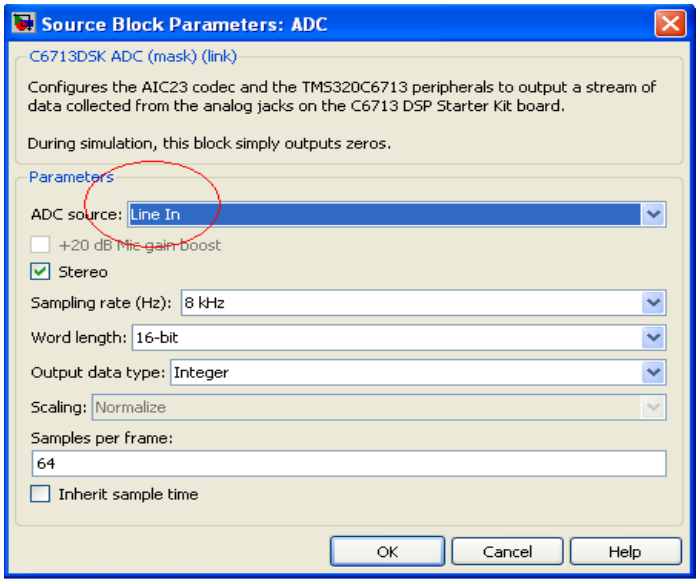
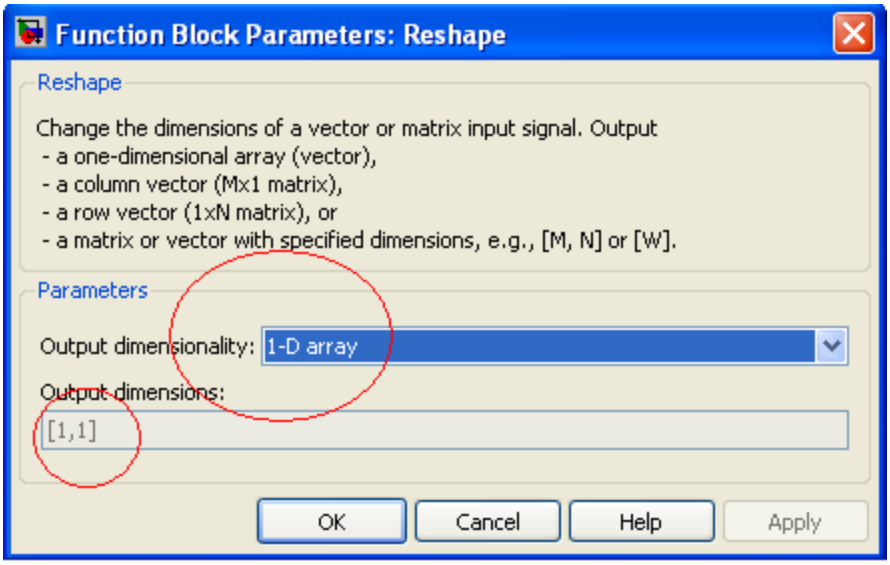


Figure 1

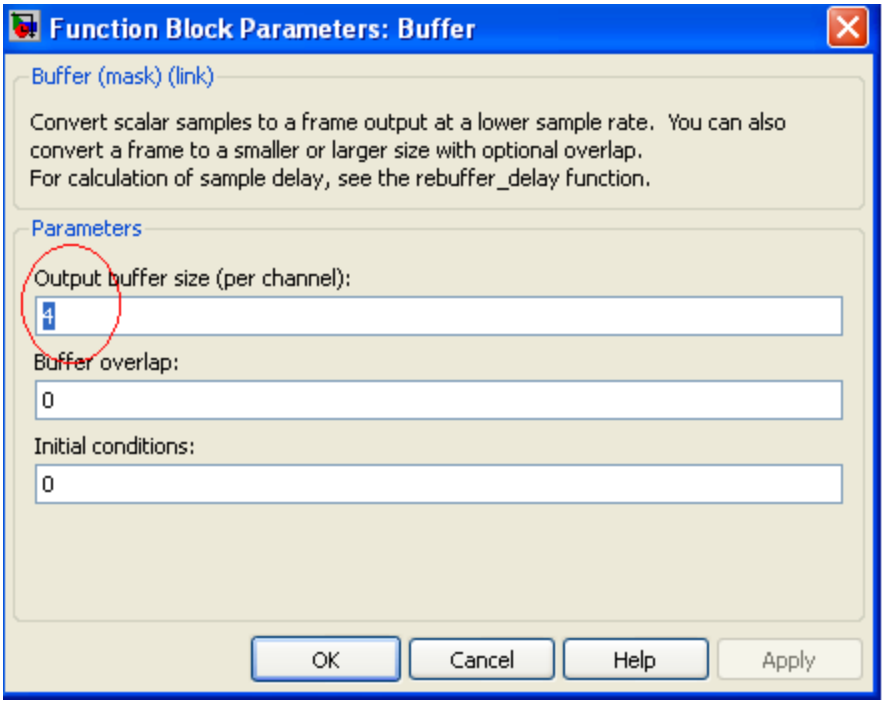
- Click the ADC block and set the parameter as:

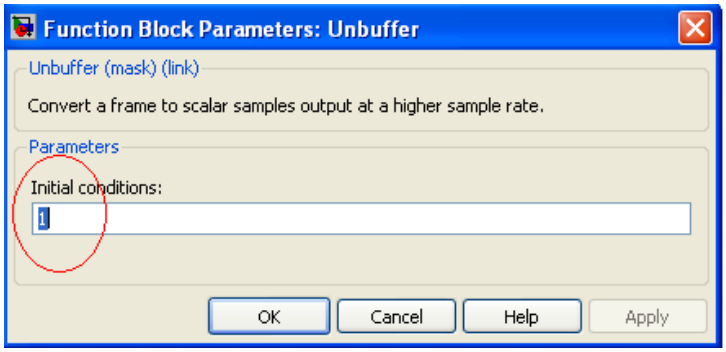


- Drag and drop the first reshape block to the model and define it's parameter as shown below to reshape the output data of ADC as 64x2 to 1-D array.

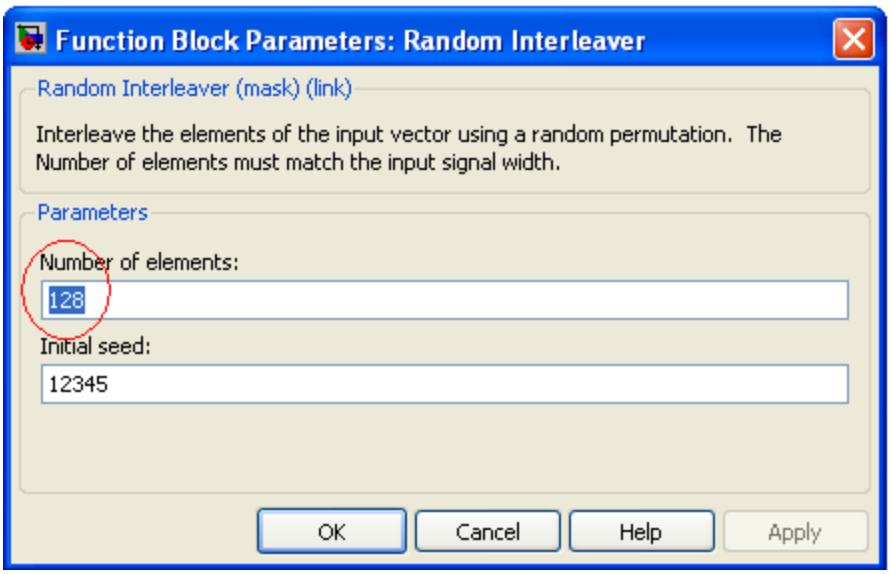


- Now define the buffer and unbuffer block as shown below:





- Let double click the Random Interleaver block and set the parameters shown as below:

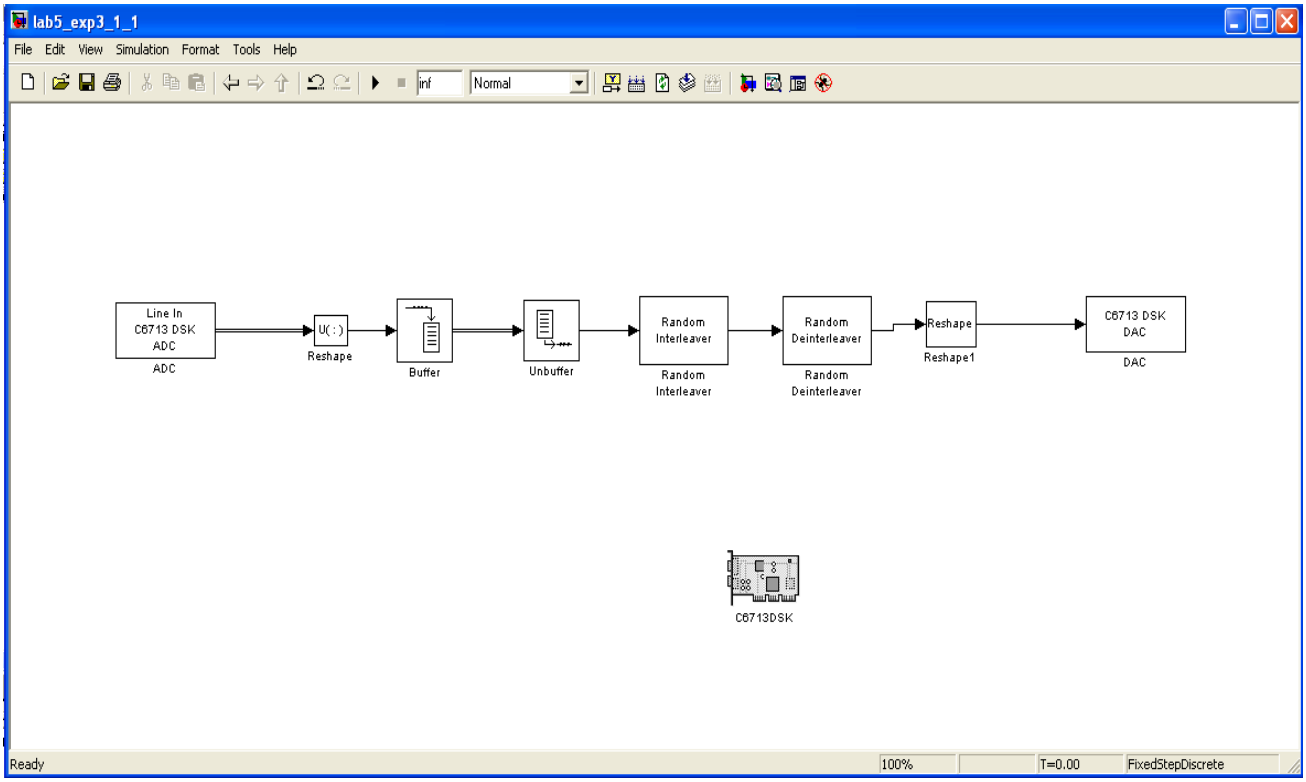


- Finally define the reshape block's parameters as

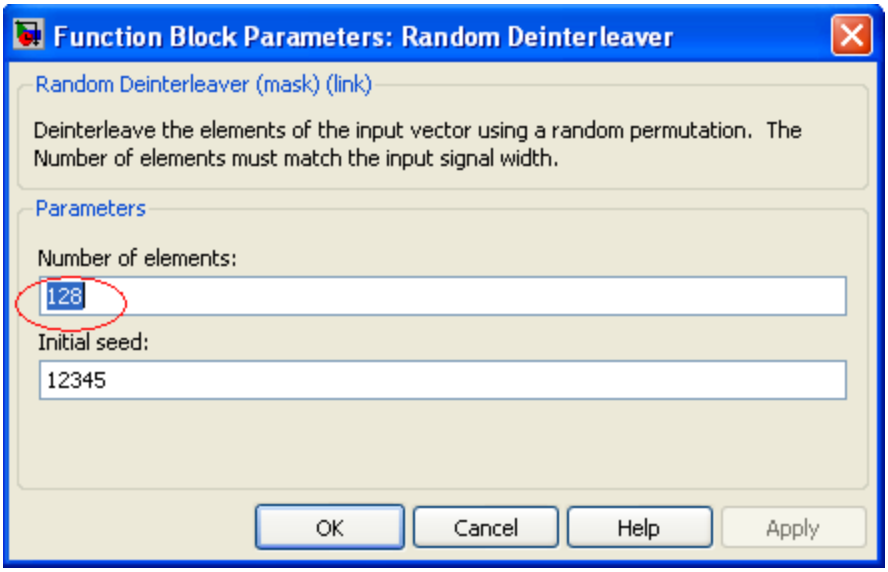
Output Dimensionality =Custimize
Output Dimensions= [64,2]

Now our model ready to simulate . Click the run simulation then click the incrimental build to create Project. Finally Build the Project and Run our C6713 DSP board.

With the same manner let use the Deinterleaver block shown as below:



- At that time define only the Deinterleaver parameter as :



Now our model ready to simulate . Click the run simulation then click the incrimental build to create Project. Finally Build the Project and Run our C6713 DSP board again.

Experiment : With the same manner define the transmitter model with one interleaver on the one board and then model the receiver side with one deinterleaver on the another DSP board. Connect them with each other and run their model at the same time. Observe the experiment.