

# Programming FPGA

Note 1: You can see the file “inv\_2.vhd”, given to you, for how to do pin connections.

Note 2: Pin connections of the board is at the file “ug347.pdf”.

Note 3: Some of our GP I/O LED's do not work. Do not use them !!!

For the board with LCD;

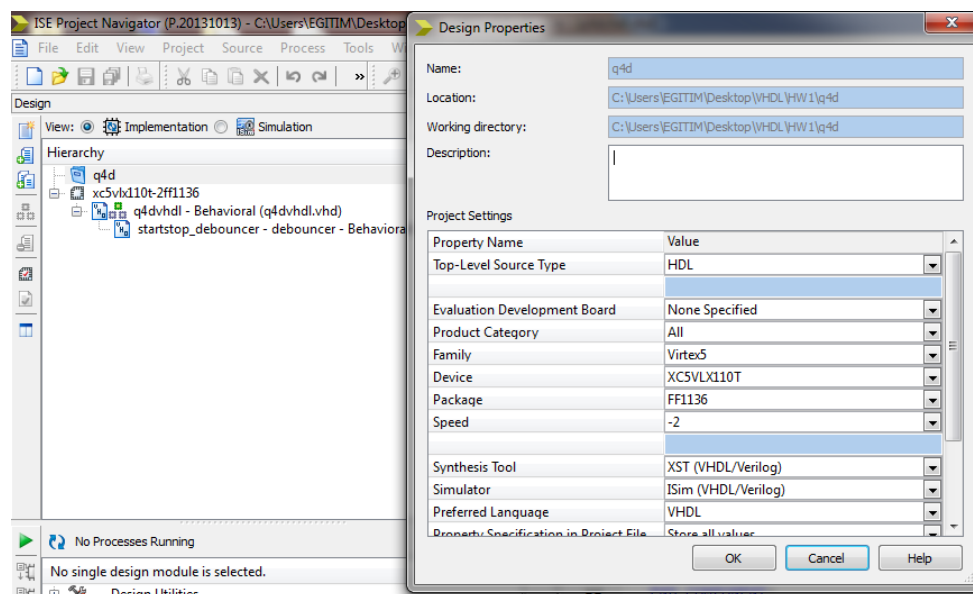
LED0, LED1, LED2 and LED4 work but LED3, LED5, LED6, LED7 do not work.

For the board without LCD;

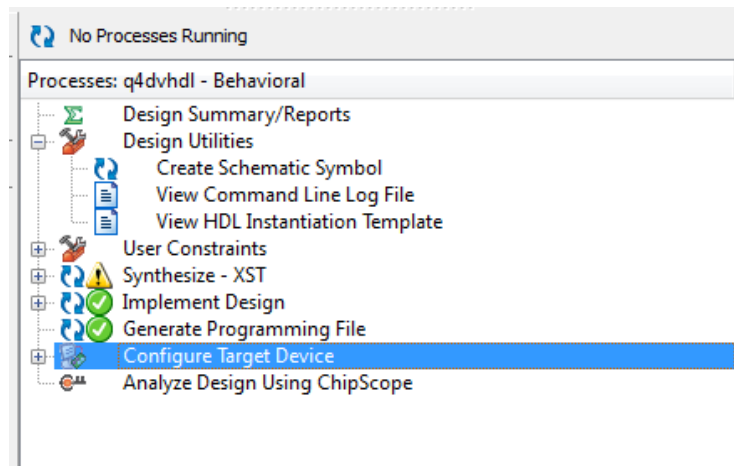
LED3, LED5, LED6 and LED7 work but LED0, LED1, LED2, LED4 do not work.



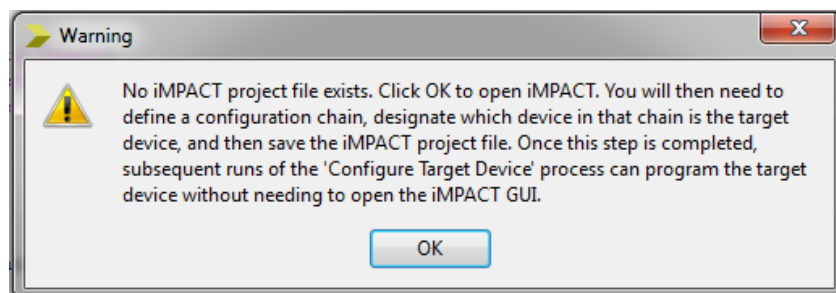
Make the cable connections. (On/off switch is at the upper-right corner)



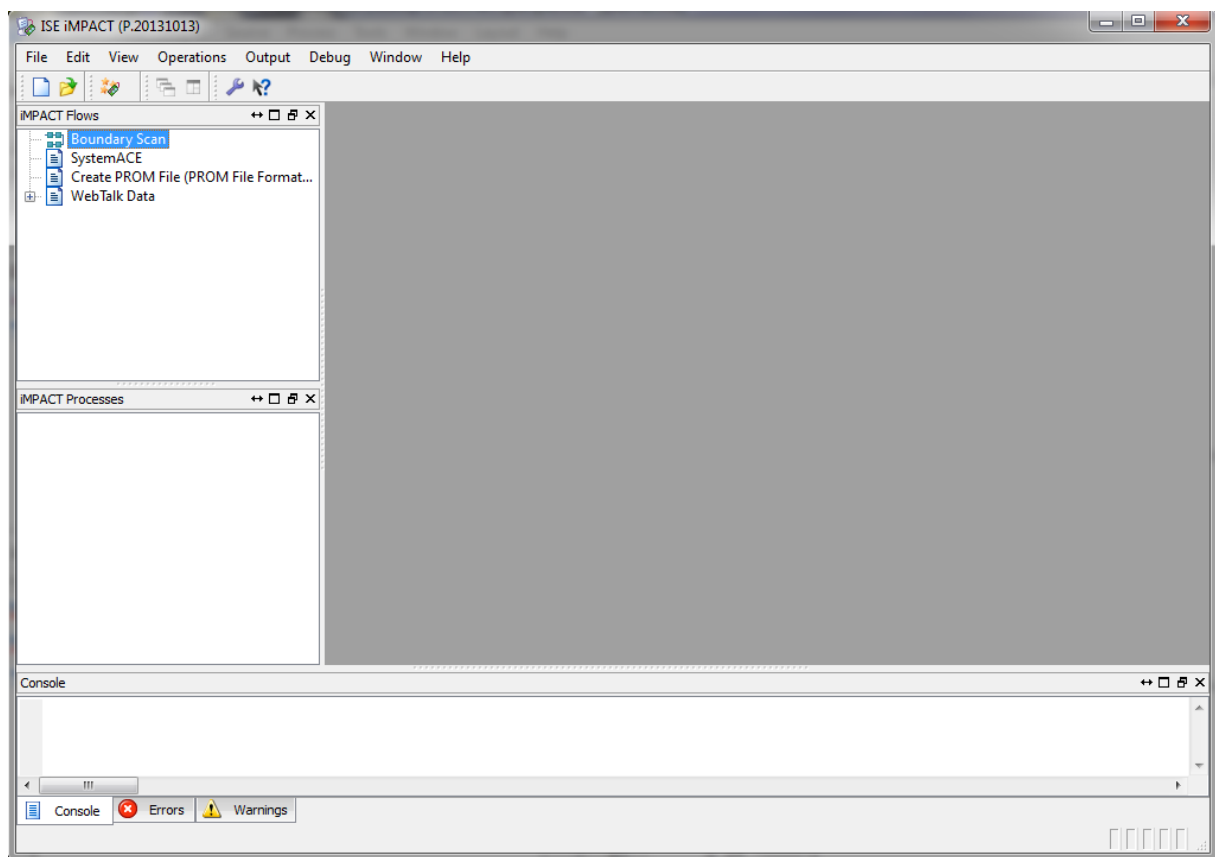
Make sure that design properties are same as in the figure above. (If you use different board, set the properties accordingly.)



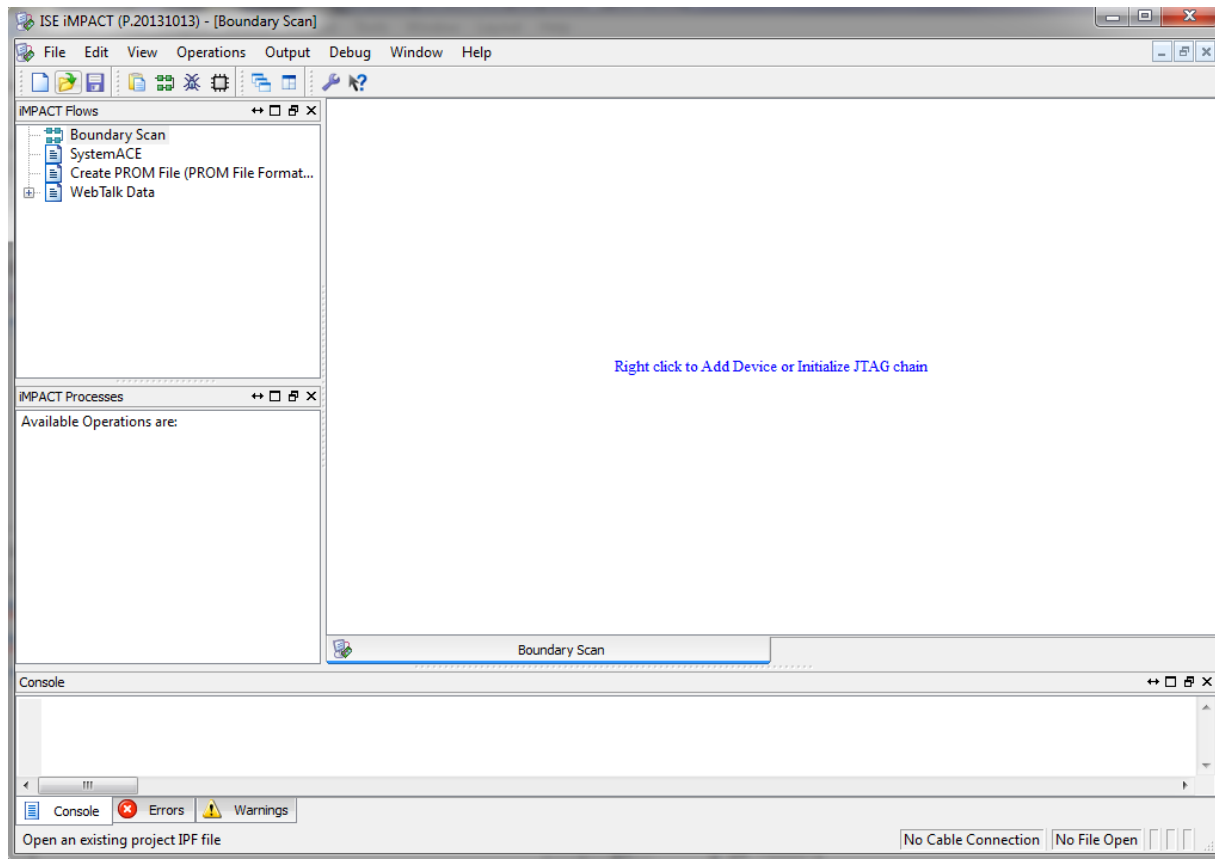
Generate programming file and double click on “Configure Target Device”



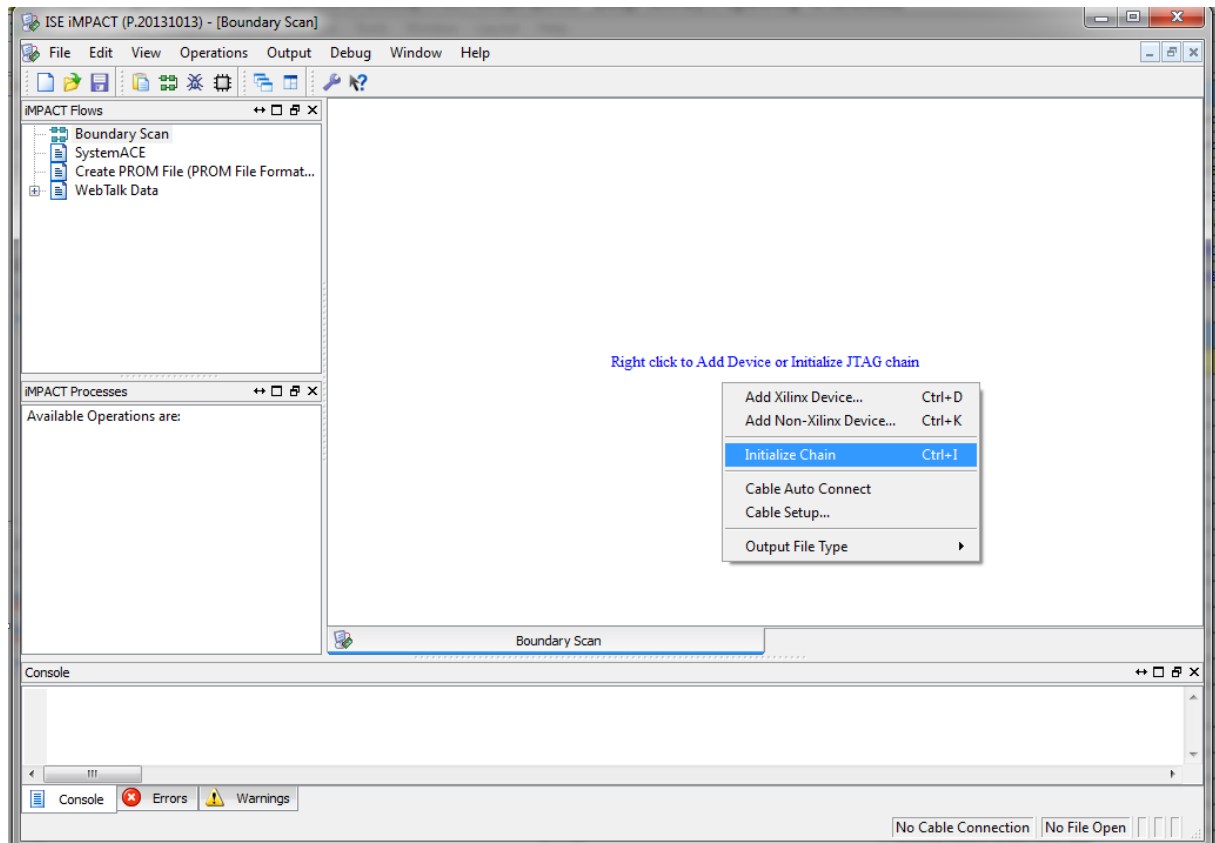
Click “Ok”



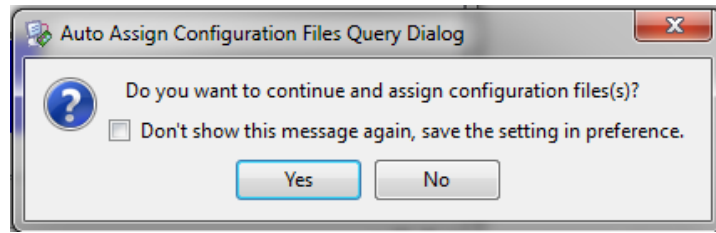
Double click “Boundary Scan”



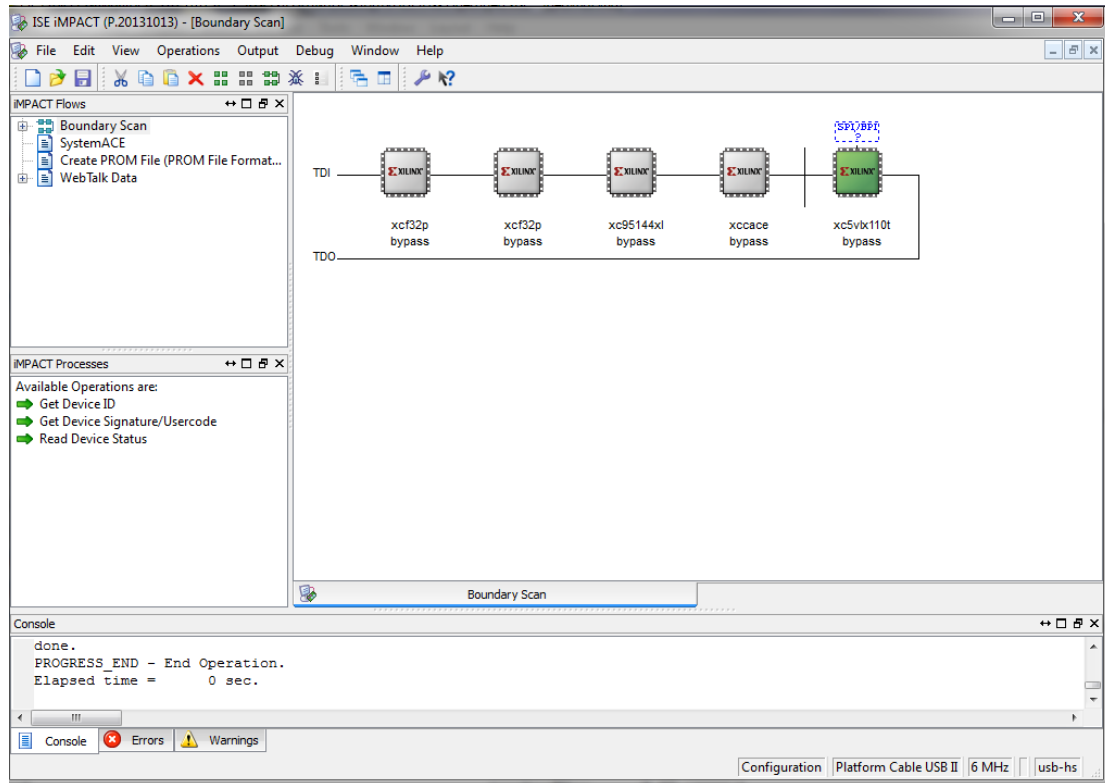
Right click the empty area on the right.



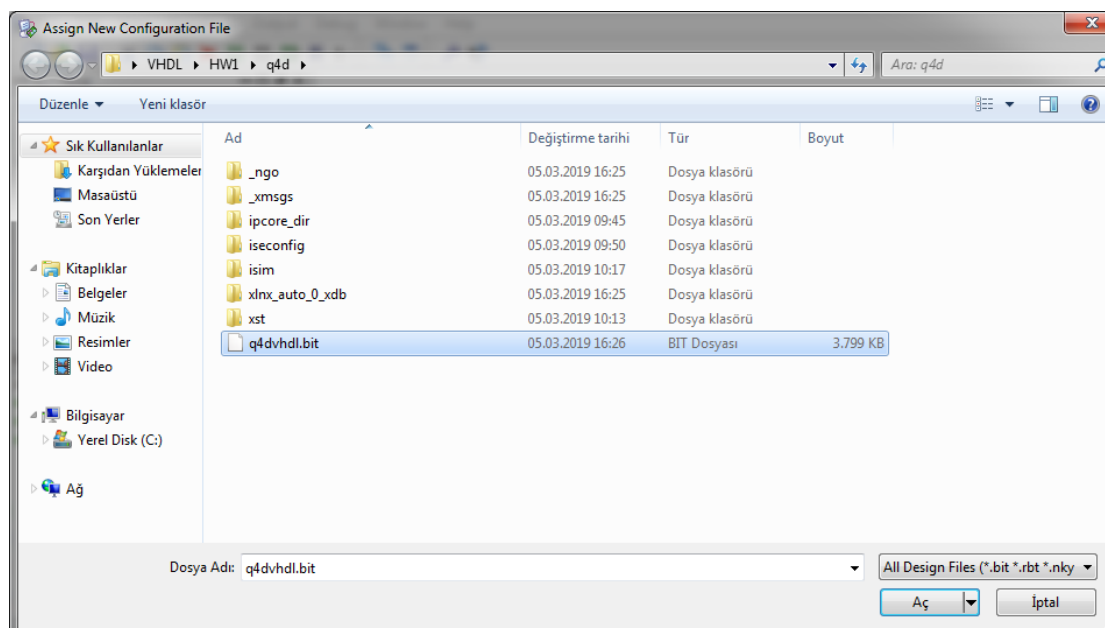
Click "Initialize Chain"



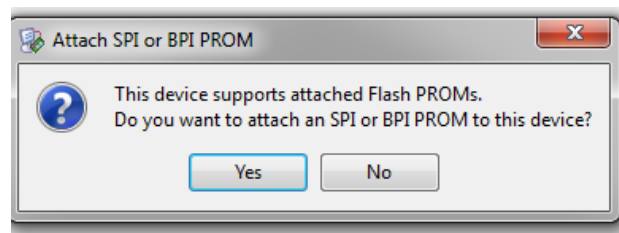
Click “X” and close the window which pop-ups



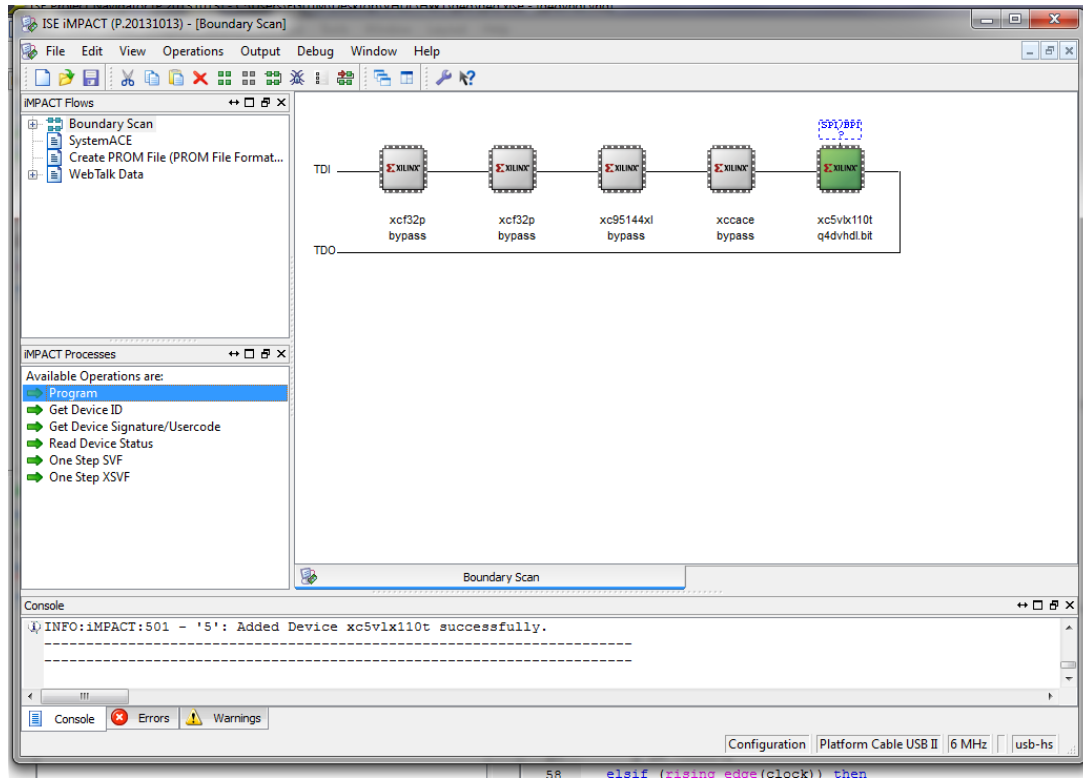
Double click the rightmost one (i.e xc5vtx110t)



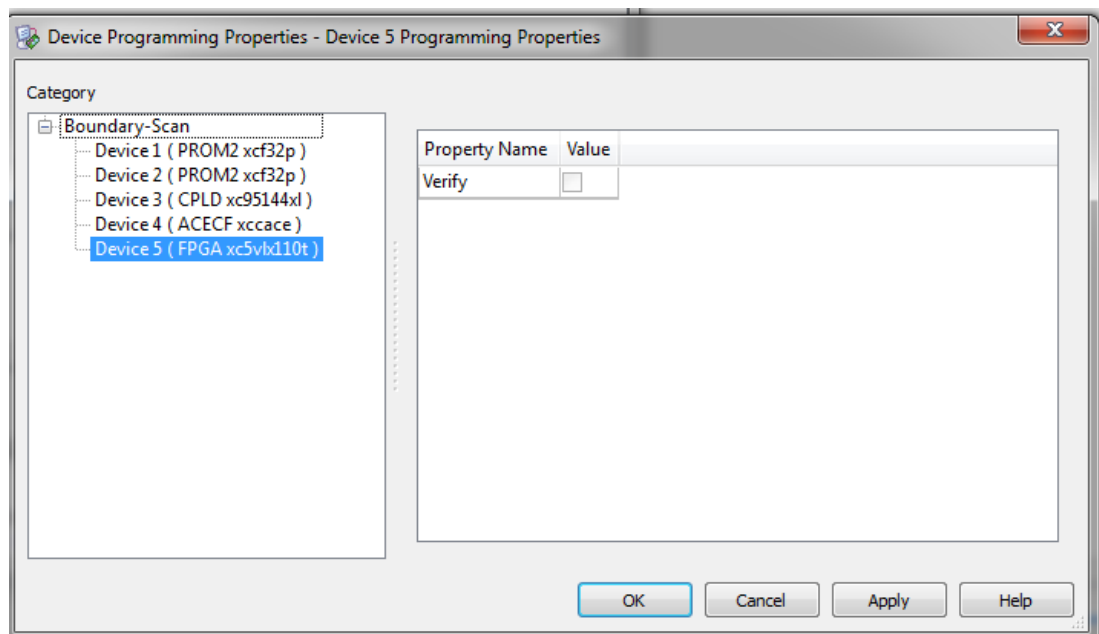
Load your .bit file



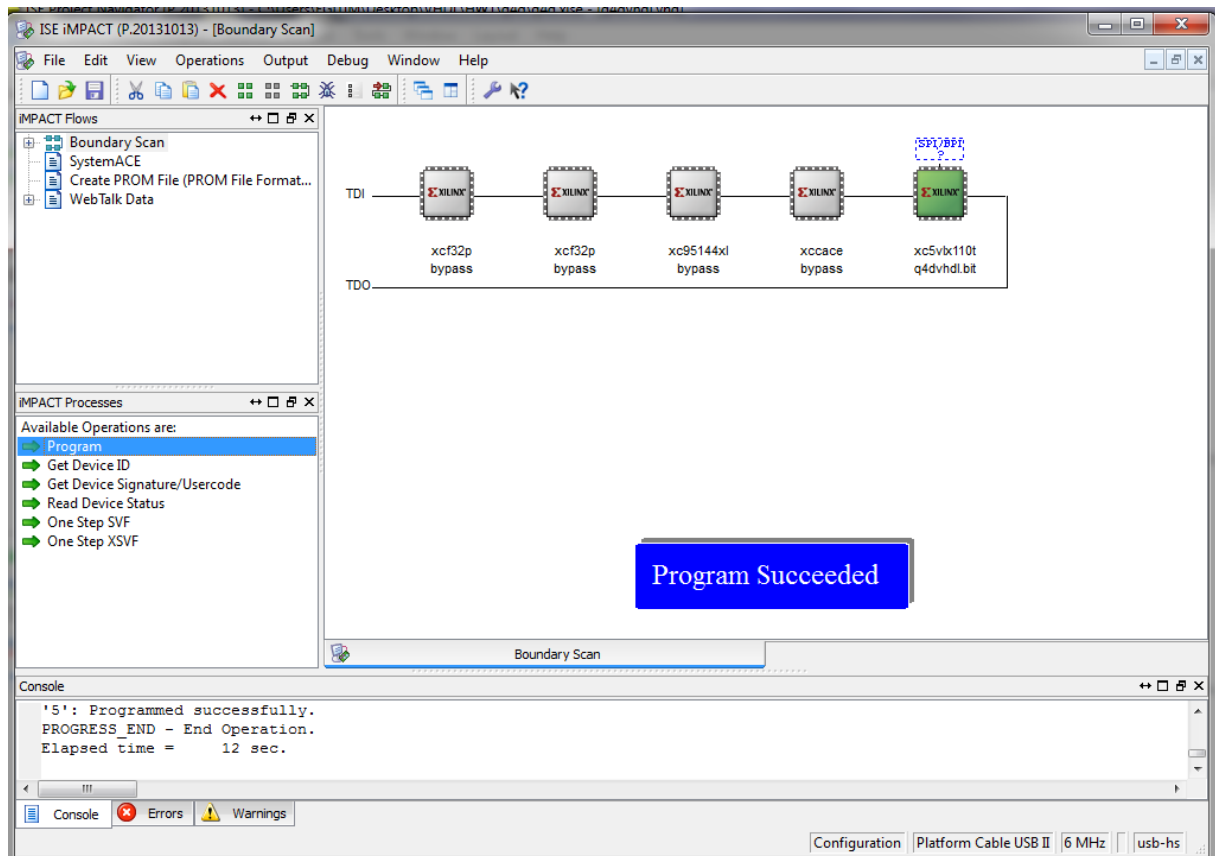
Click "X"



Choose the rightmost one and click "Program"



Click "Ok"



Make sure to see “Program Succeeded”