

DE2 Adapter

This is a procedure information handout to test the **DE2 adapter**. Follow the instructions below to make sure the DE2 adapter is connected properly between the **Digital Switch Board** and the **DE2 Board**.

Parts required:

- 2 40 pin ribbon cables
- 1 DE2 adaptor
- 1 DE2 board
- 1 Digital switch board

1) Connect one end of a 40 pin ribbon cable to the 40 pin header labelled **PIT** on the DE2 adapter. Connect the other end to the 40 pin header on the Digital Switch Board. Connect one end of the other 40 pin ribbon cable to the 40 pin header labelled **DE2** on the DE2 adapter and the other end to the 40 pin header labelled J2 (outside 40 pin header on the DE2 board)

2) Go to the Ultra Gizmo web site, www-ug.eecg.utoronto.ca/gizmo Select from the side bar **DE2 Test programs**. Select **DE2_adapter.sof**. Download this file to your PC. Use **Quartus** to download the file to the DE2 Board.

Testing the connections

There are two modes in this test.

Mode 1 [switch 0] on the DE2 Board is off (**down**)

In this mode when any of switches 1 through 8 on the Digital Switch Board are off (**down**) the LED corresponding to that switch will be **off**. If any of the switches 1 through 8 on the Digital Switch Board are on (**up**) then the corresponding LED will be **on**. See (table 1) below for a details

Table 1:

UP	DOWN	ON	OFF
sw1		LED1	
sw2		LED2	
sw3		LED3	
sw4		LED4	
sw5		LED5	
sw6		LED6	
sw7		LED7	
sw8		LED8	

Table 1:

UP	DOWN	ON	OFF
	sw1		LED1
	sw2		LED2
	sw3		LED3
	sw4		LED4
	sw5		LED5
	sw6		LED6
	sw7		LED7
	sw8		LED8

Mode 2 [**switch 0**] on the DE2 board is on(**up**)

In this mode the pulse switch and LED 1 to 8 on the Digital Switch Board are tested. Connect a 1 uf capacitor to the Digital switch board. This is used to generate a slow clock output. When you look at the LEDs on the Digital switch board you will notice that LED 1 through 8 strobe in a pattern. If you press the pulse switch the pattern will reset and start from the beginning.

If both these test work properly then the connections between the DE2 Board and the Digital Switch Board are correct and working properly