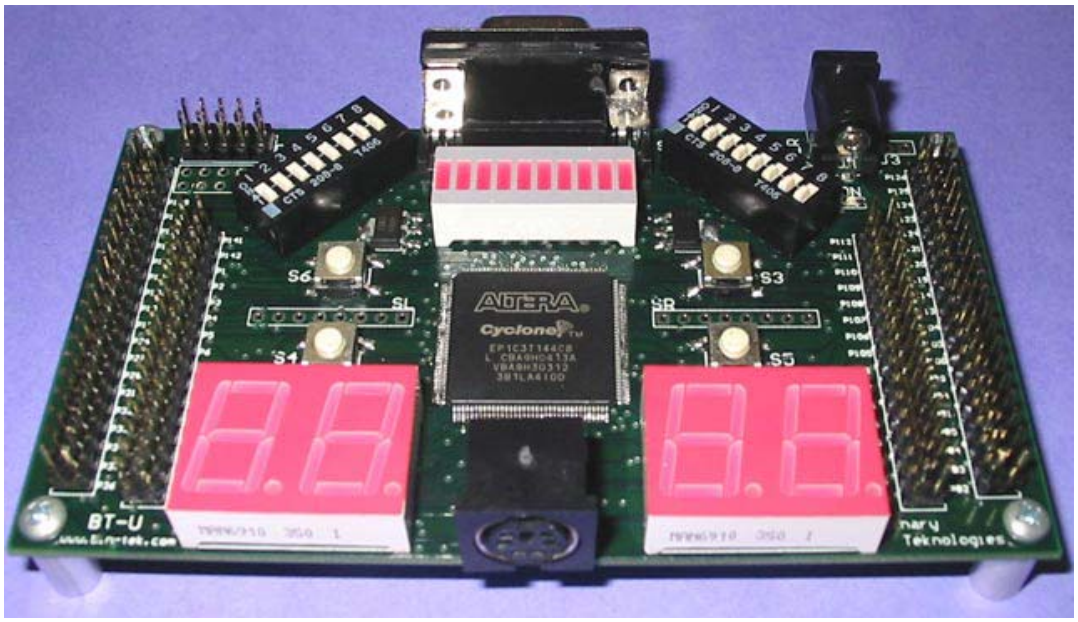
BT-U Test Guide

Presented by Binary Teknologies



Please just be careful and ask questions to things you do not know.

INTRODUCTION

At Binary Teknologies, we designed the BT-U board to meet the needs of university students, hobbyists and engineers. As with our entire product line, we strive to offer affordable tools for designing and implementing digital systems. The BT-U board is a great platform to learn about FPGAs and implementing VHDL and VERILOG designs. Below we describe a simple test for your board in which you can type on a keyboard and see the key strokes on a VGA monitor.

Step 1. Install free Quartus II Version 4 from Altera. They also provide instructions on how to install and run the program.

Step 2. Download the file “bt-u-test.sof” from our website (www.bin-tek.com) under the heading of documents in the section of FPGA.

Step 3. Open the file in quartus, see figure 1 below:

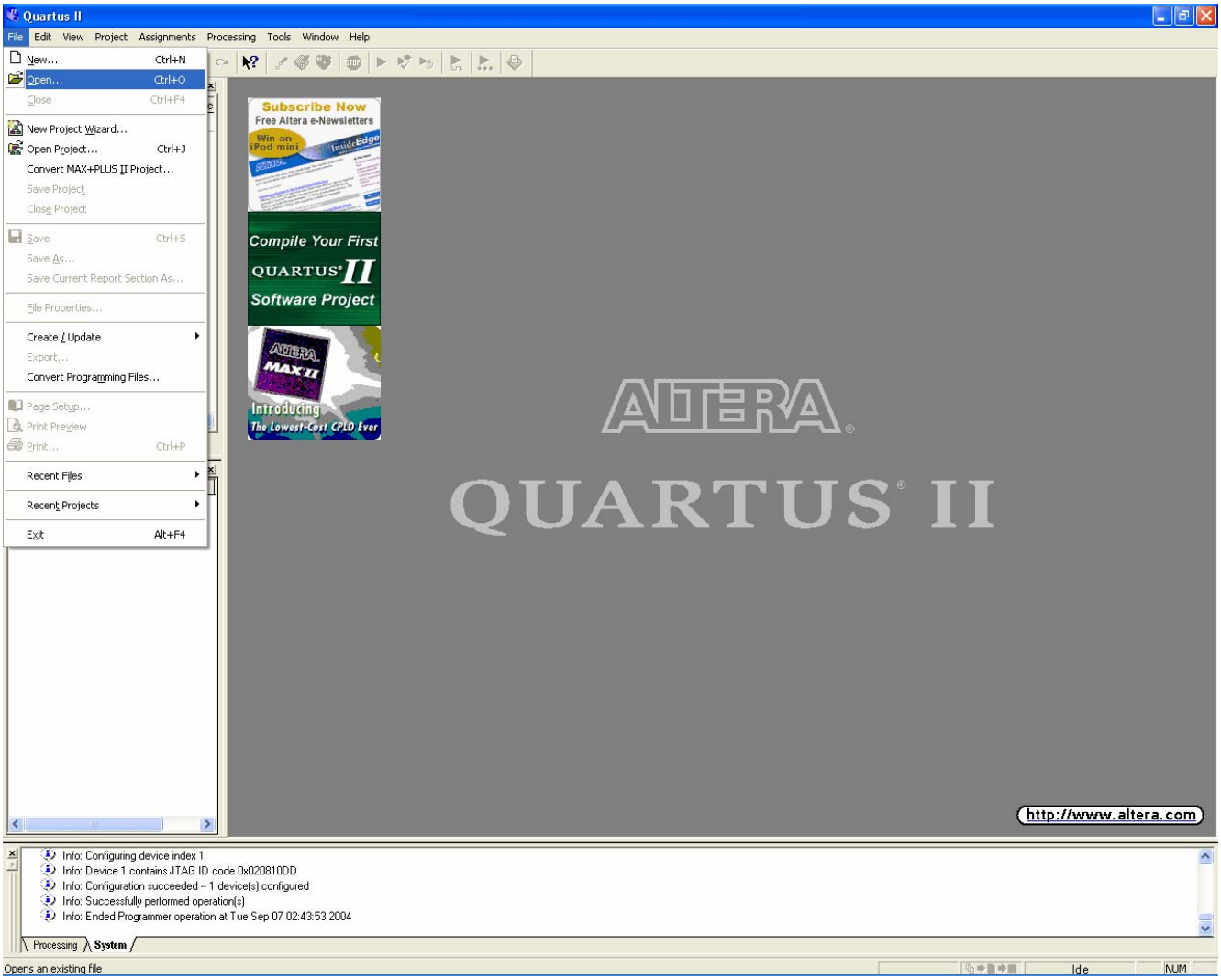


Figure 1. Opening files in quartus

Step 4. Locate where you stored the file and open it.

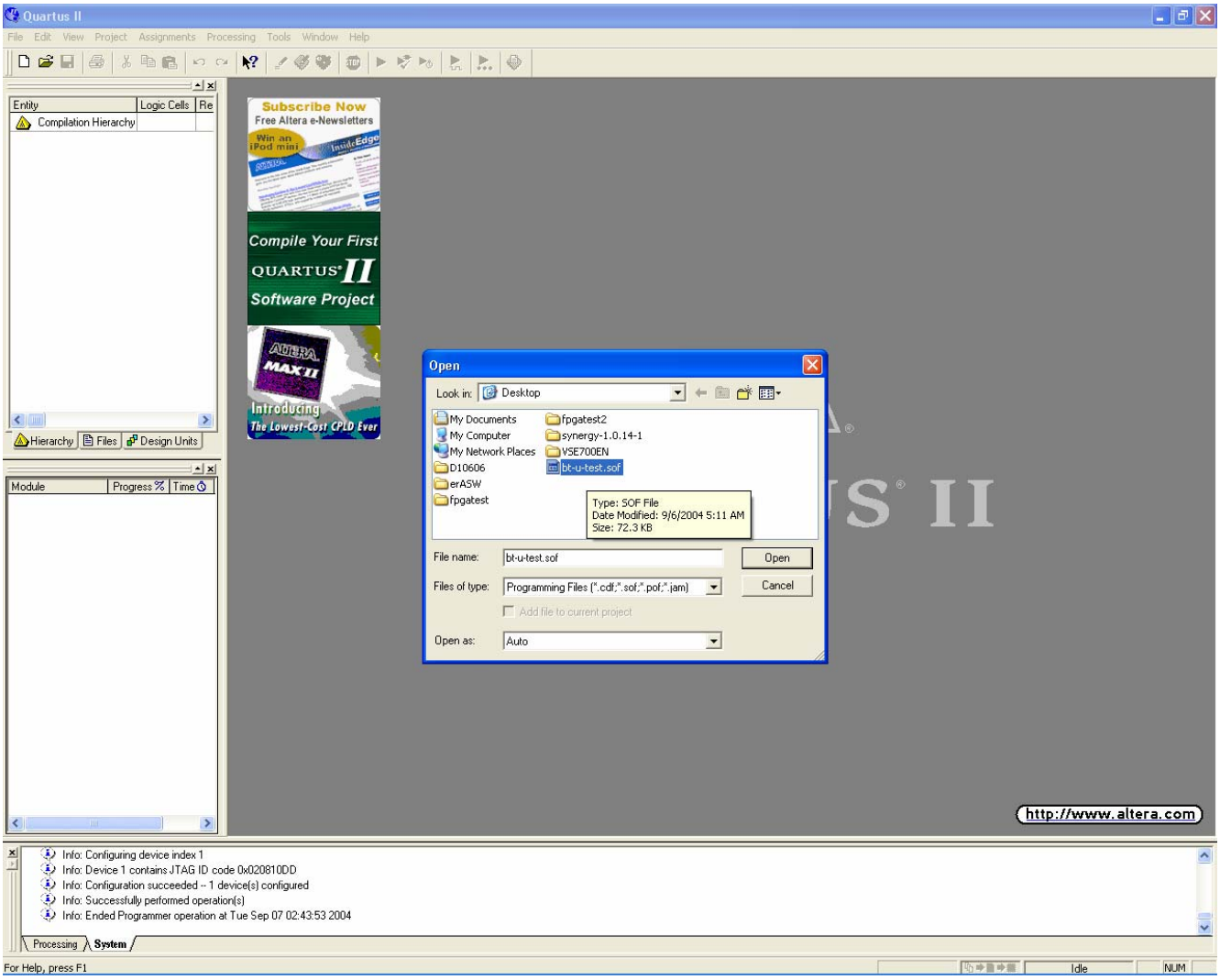


Figure 2. Locating where you stored the file

Step 5. Once the file is opened, your screen should look like the following:

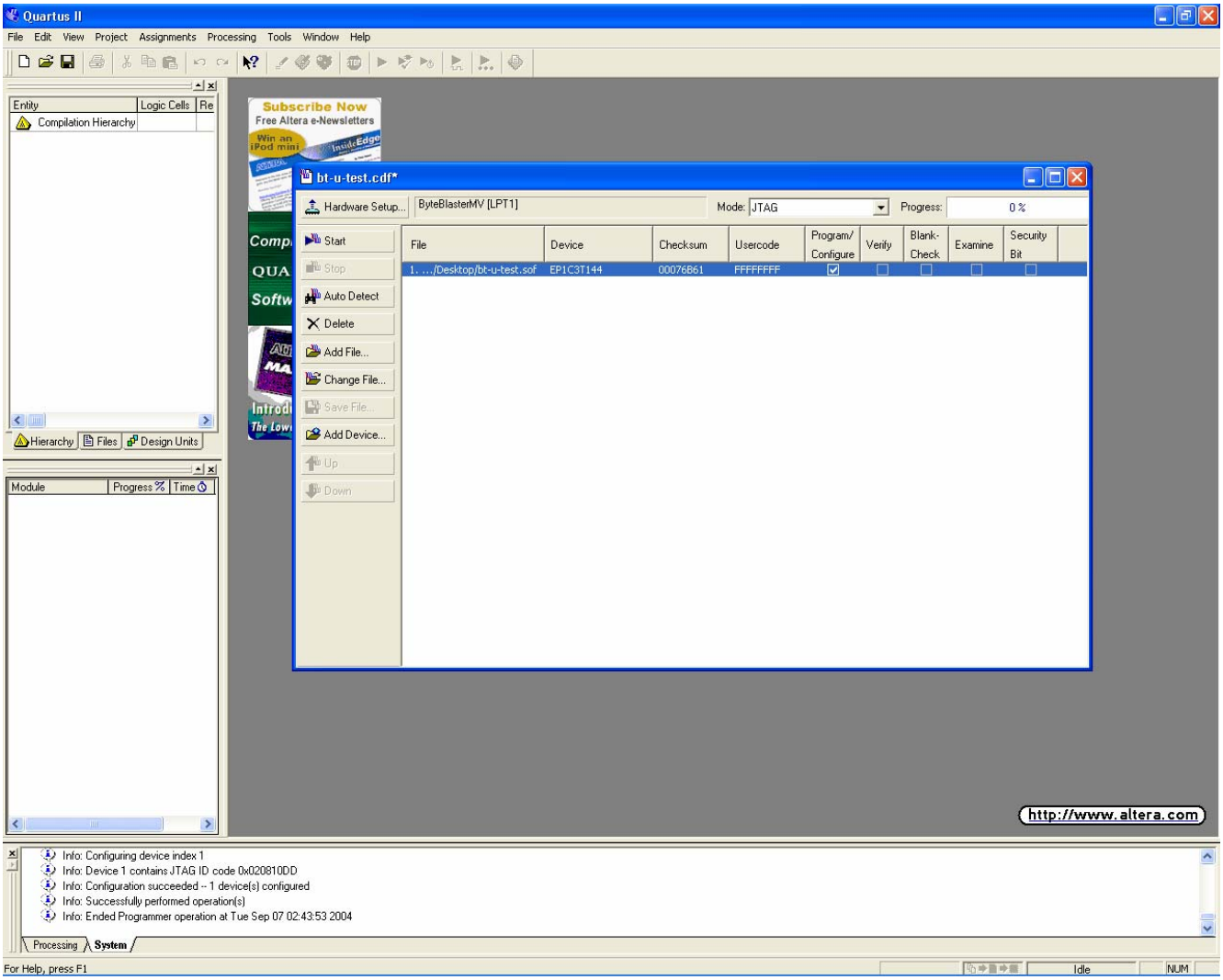


Figure 3. Programmer window should open

Step 6. At this point make sure your board is ready to be programmed. Make sure you have jumpers (or wire-wrap wire) on header J7 as shown below in figure 4. Place the BT-Blaster with red-stripe orientated as below.

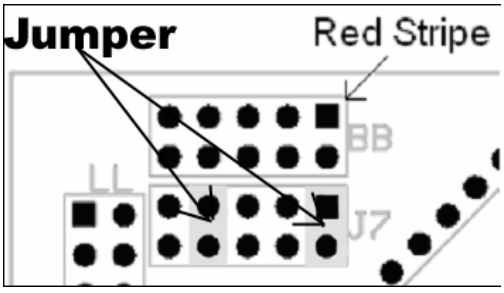


Figure 4. BB header and J7 with specified jumpers

Step 7. Plug in the power.

Step 8. Click the start button in quartus to program the board. After successfully programming the board, the screen should look as the following (with 100% blue bar):

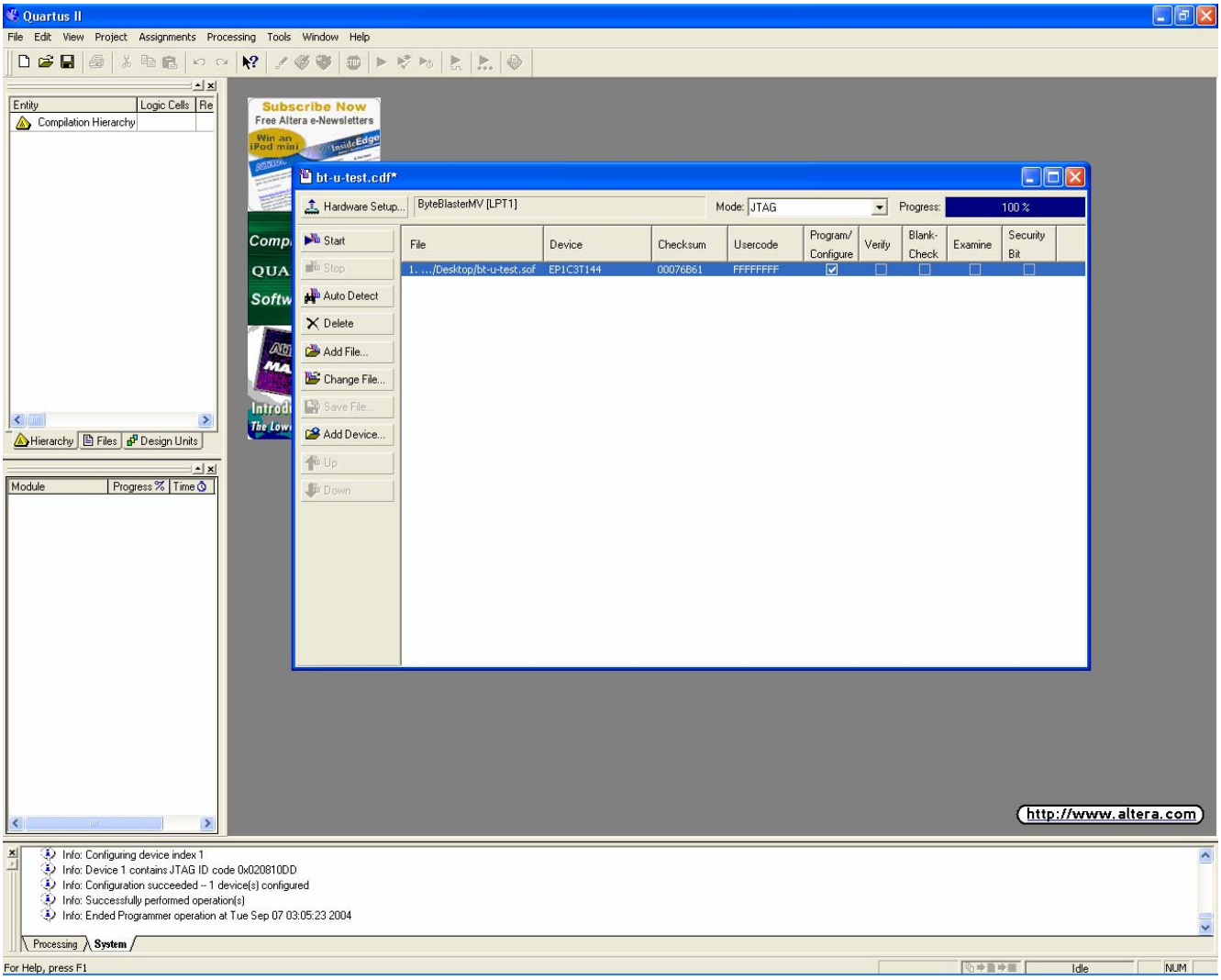


Figure 5. Successful programming of board

LEAVE THE POWER PLUGGED IN!!!!!!

Step 9. Place the appropriate jumpers (OR WIRE-WRAP WIRE) on the board in order to connect the peripherals to the FPGA.

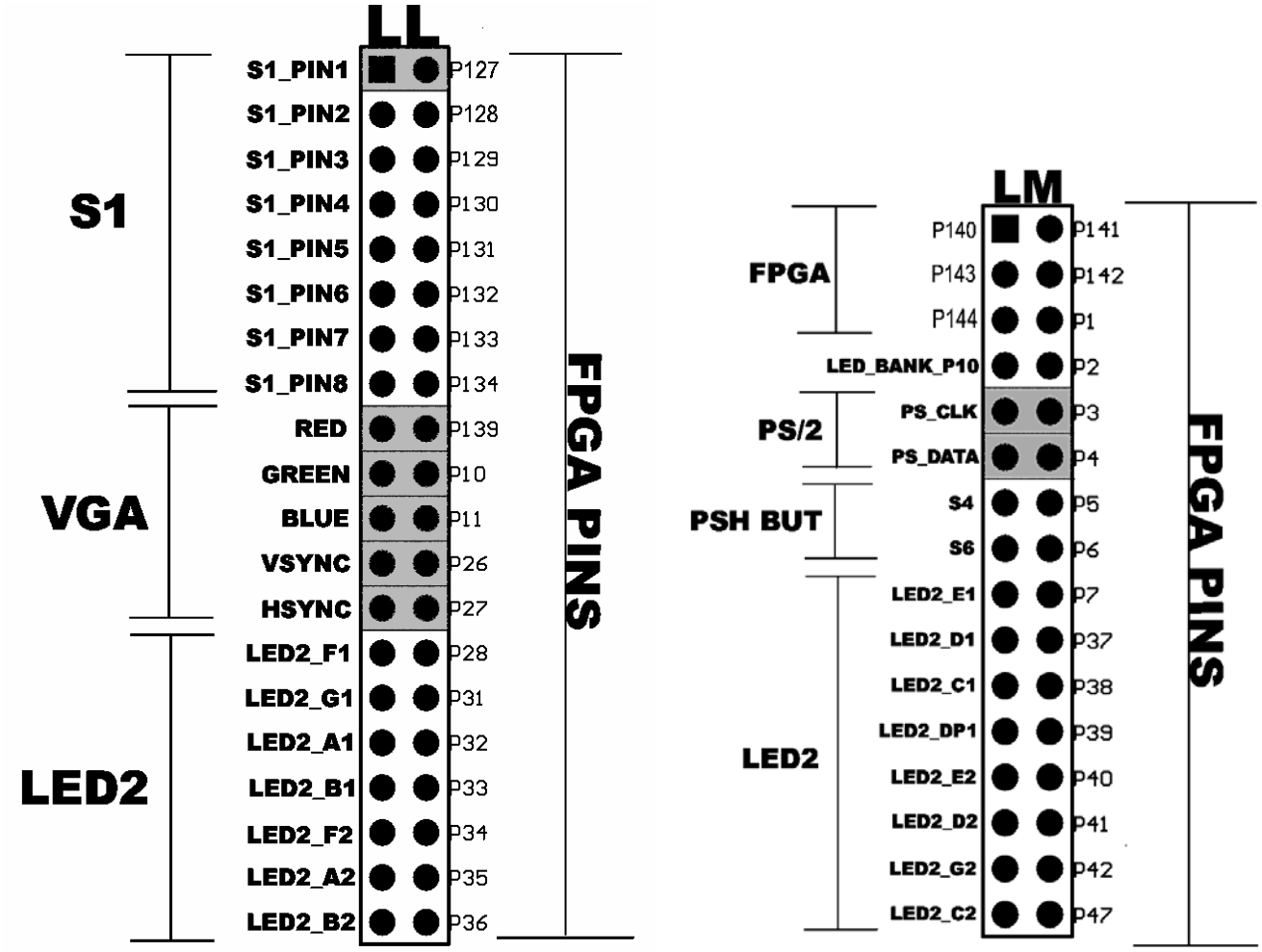


Figure 6. Place jumpers or wire-wrap wire on these locations

Step 10. Plug the keyboard into the PS/2 port and the VGA monitor into the VGA connector.

Step 11. Use Pin 1 on the DIP switch 'S1' to reset the system. Flip it on and then flip it off (leaving it on off). Then start typing on the keyboard and the key strokes should appear on the VGA monitor.

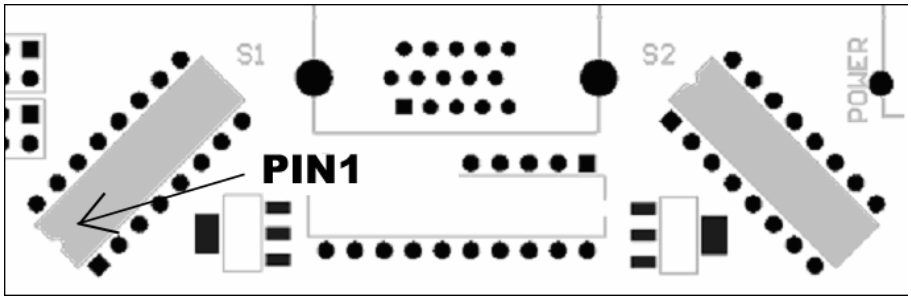


Figure 7. Pin 1 on 'S1' resets the system flip on then off