# Using JTAG And Hardware Manager

1. Connect JTAG Cable to Saturn.
2. Plug it into the PC USB.
3. Power up Saturn.
4. Run Vivado
5. Select **Flow -> Open Hardware Manager**
6. Vivado will report “no hardware target is open”. Click **Open Target** & select **Auto Connect**

The hardware window shows the FPGA, but no serial config prom:

Graphical user interface, application, Word

Description automatically generated

1. Right click on the FPGA xc7a200t\_0 and select **Add Configuration Memory Device**
2. Select manufacturer to **Spansion**
3. Select **s25fl256sxxxxxx0-spi-x1\_x2\_x4**

Graphical user interface, table

Description automatically generated

1. Click **OK**
2. The config prom is now shown in the hardware window

Graphical user interface, application, Word

Description automatically generated

1. You will get an option “do you want to program the configuration memory now?” select  **OK**
2. Select the saturnfallback.bin file and click **OK**

Graphical user interface, text, application, email

Description automatically generated

1. Click OK to begin
2. The config prom is programmed through the JTAG cable and the FPGA – this will take 2-5 minutes
3. The operation is complete when this appears:

Graphical user interface, application, Teams

Description automatically generated

1. Close Vivado hardware manager
2. Power the board off and back on; it will boot from that file.