



PERFORMANCE ENHANCEMENTS

for JTAG Programmer v3.1

As Boundary Scan becomes more important as a method for accessing PLDs for programming, robust JTAG tools become essential.

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In the new Xilinx JTAG Programmer v3.1 software there are significant modifications that improve your productivity and aid in quickly bringing up chains of Boundary Scan (JTAG) devices. Here are some of the new features:

- **Chain Integrity Test** - This allows you to verify the integrity and robustness of the Boundary Scan chain to determine its electrical integrity. This is the first step in analyzing why devices in the chain may not be configuring correctly. This test repeatedly reads the IDCODE register to identify issues related to electrical noise. You can choose the device that will be addressed and then select the number of times to loop and read the IDCODE register. A visual pass-fail indication tells you whether the chain is working properly. By increasing the number of times the device loops through this sequence you can get an idea of the robustness and relative noise immunity of the Boundary Scan chain.
- **Readback Capability** - This function reads the contents of the FPGA configuration memory and compares it against the bitstream file. You can use this to verify the correctness of the configuration operations as well as to determine that the appropriate bit stream file was downloaded.

- **BSDL Files are Not Required** - Now you have the ability to use third-party Boundary Scan devices with the JTAG programmer software without having their associated BSDL files. All you need to do is indicate the size of the instruction register, which is readily available from the device datasheet. If you have the BSDL file, you can use it as before.
- **New Devices Added** - Xilinx has paved the way for fully JTAG-compliant PROMs with the introduction of the new XC1800 series. These IRL-enabling ISP PROMS feature a Boundary Scan input for downloading along with parallel load (byte-wide) output capability for configuring Spartan devices in Express mode or Virtex devices in SelectMAP mode. The XC1800 Proms are all now supported in JTAG Programmer.

As Boundary Scan grows in importance, push-button, easy-to-use configuration of devices is quickly becoming a necessity. Xilinx has added several new features to the latest edition of JTAG programmer to make Boundary Scan chain debugging and device programming much easier. ⌘

For the latest version of JTAG Programmer, please go to the WebPACK site at: <http://www.xilinx.com/sxpresso/webpack.htm>.