

# iMPACT

## New Configuration and Programming Software

The new iMPACT software helps you configure and program all Xilinx FPGAs, CPLDs, and ISP PROMs.

by Frank Toth  
Marketing Manager, Configuration Solutions  
[frank.toth@xilinx.com](mailto:frank.toth@xilinx.com)

The new iMPACT software features a series of “wizard” dialogs that guide even the most novice user through the every step of the configuration process. This software is fully integrated and easy to use, combining three previously separate tools: JTAG Programmer, Hardware Debugger, and the CoolRunner™ PC-ISP programmer. With iMPACT:

- You can quickly shift among the various programming modes.
- You receive instant visual feedback on all operations such as Erase, Program, Verify Blank Check, and various USER and ID codes.

- You can watch the chains being built graphically, so you can see how the cables should be connected for the supported modes.
- You can use a wide range of input and output file types including JED, BIT, BSDL, MCS, and SVF.

### Programming Modes

The iMPACT configuration software enables you to easily configure all Xilinx FPGAs, using three different modes:

- Slave Serial (Single Bit Serial) – A two-wire implementation with performance up to 66 Mbps.
- SelectMAP (8-bit parallel) – The fastest mode (500 Mbps in system design performance), requiring eight data lines and several control lines.

- Boundary Scan Mode (commonly known as the JTAG mode) -The traditional four wire interface used for point-to-point testing and diagnostics by various standard third party tools. A special function in the JTAG mode allows you to test both the operation of the cable and the robustness of the JTAG chain. You can test chain operation by instructing iMPACT to write to and read back from the IDCODE multiple times. It then counts the number of errors that occur in this operation. Thus you can evaluate the relative robustness of the JTAG chain and the susceptibility to noise and other influences such as board layout.

### Download Cables

The iMPACT software also supports two different cables:

- Parallel Cable III (Parallel Port) – Primarily used as a low cost solution for interface to a standard parallel printer cable on any PC.
- MultiLINX (USB and RS-232 ports) – Can be used with a USB port for the ultimate in download performance when used in the Slave Serial or SelectMAP mode. It also features a standard RS-232 port for users requiring this traditional interface for workstation support.



### Conclusion

The new iMPACT software greatly simplifies the configuration and programming process. The sophisticated graphical interface and wizard dialogs guide you through the configuration process every step of the way, while providing instant feedback on various configuration modes and help with exact cable hookups.

For more information on iMPACT, visit [www.xilinx.com](http://www.xilinx.com)