

SCANWORKS® BOUNDARY SCAN PROGRAMMING SOFTWARE

OVERVIEW

The ScanWorks® Boundary-Scan Programming software offers a complete set of tools for in-system programming (ISP) or in-system configuration (ISC). Programming routines can be developed quickly, saving money, time and resources. And the graphical interface on ScanWorks makes the development, debug and execution of programming routines intuitive and easy.

MODEL-BASED DEVELOPMENT

Programming devices like NOR Flash, NAND Flash, I2C, SPI, FPGA, PLD and others with ScanWorks is automated because it is based on easy-to-use device models. Any other type of device can also be accommodated with the ScanWorks Component Action. Programming routine development is a matter of minutes rather than days.



THE PROGRAMMING PROCESS

After devices have been bonded to a circuit board, ScanWorks accesses programmable devices through the JTAG (boundary-scan) interface on the board to load program or configuration data. The programming algorithms for reading and writing to programmable devices are integrated into ScanWorks. All ScanWorks needs to start programming a device is the device type and model. The most common source file formats are supported, including BIN, HEX and SREC.

COMPONENT ACTION

The ScanWorks model-based Component Action enables programming of many types of devices, such as system controllers or system monitors. With the Component Action, virtually any device can be read, written to, erased or verified. Built on the Tcl scripting language, Component Action provides a very powerful process for accessing non-boundary-scan components. All of the capabilities of the Component Action's modeling language are available to users, including file handling for source files. Any device model employed on one design can be easily re-used on other designs without editing.



FPGA AND PLD CONFIGURATION

ScanWorks Programming software can configure and program FPGAs and PLDs with the most prevalent programming methods, including IEEE 1532, SVF and STAPL. All PLD and FPGA devices supplied by Xilinx®, Altera®, Actel and Lattice are supported.

NOR/NAND FLASH PROGRAMMING

NOR Flash can be erased, programmed and verified. In addition, a device can be accessed to extract the name of the manufacturer and the device ID code. For faster programming, ScanWorks provides external IO access to the WE and RDY/BSY signals. To further accelerate the programming process, erase and programming operations can be performed on an entire page or block of memory, when applicable. Similarly to NOR Flash, NAND Flash can be erased, programmed and verified with ScanWorks. The manufacturer and device ID code can also be provided. ScanWorks automatically recognizes bad blocks of memory and skips them during programming.

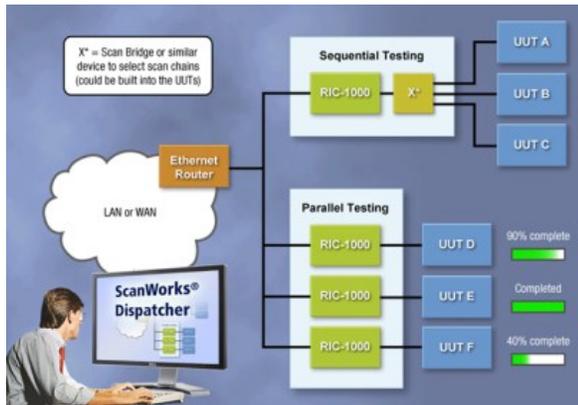
SPI AND I2C EEPROM PROGRAMMING

EEPROMs on the SPI or I2C buses can be easily programmed and verified. ScanWorks automatically handles any commands needed to program EEPROM on these buses. Single-byte programming as well as page or block programming are supported, when applicable.



POWERFUL DEBUG TOOLS

ScanWorks BST Programming software features action-based, customizable debug tools. Users are able to “peek and poke” at a circuit board to better understand what each programming or test action is actually doing. Users are empowered and in control with all ScanWorks debug actions.



PARALLEL PROGRAMMING

ISP has many benefits during manufacturing. ScanWorks multiplies those benefits by supporting broadcast programming operations on as many as 128 circuit boards in parallel. And the boards need not be identical. Programming start times for all 128 different boards can be set individually. Moreover, the ScanWorks programming tools can be adjusted to fit any particular set of needs or a unique manufacturing flow.

SCANWORKS PLATFORM FOR EMBEDDED INSTRUMENTS

The ScanWorks platform for embedded instruments is a seamless software environment that validates, tests and debugs circuit boards, chips and systems. The ScanWorks platform includes products for boundary-scan test (BST), processor-controlled test (PCT), high-speed I/O (HSIO) validation, FPGA-controlled test (FCT) and IJTAG test.

ASSET CONTACTS:

Please contact your ScanWorks representative for more information.

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Key Features

- Model-Based Automated Development of programming operations*
- One Environment*
- Rapid Test Development*
- Powerful Integrated Debuggers*
- Excellent Diagnostic and Fault Location*
- Easy Integration with ScanWorks APIs*
- Flexible Licensing*
- Accelerated Production Throughput*
- Program Multiple Boards in Parallel*
- Fully Compatible with Other ScanWorks Products*