



Scalable Development Platform Integrated Software

December 15, 1997

Product Specification



T7L Technology, Inc.

220 Duncanmill Road
Suite 307
North York, Ontario
Canada, M3B 3J5
Phone: +1 416-445-4783
Fax: +1 416-445-5741
E-mail: t7linfo@t7l.com
URL: www.t7l.com

Features

- Software development platform for T7L RISC CPU

- cores
 - Supplied free with CPU core license
- Complete integrated software tool set
 - Project manager
 - Source code editor
 - C compiler
 - Assembler
 - Object file linker
 - Test vector generator
 - Software debugger
 - Hardware debugger
- Runs under Windows 95

General Description

The T7L Scalable Development Platform (T7L SDP) is a software development platform for T7L Scalable CPU products and is free for all T7L CPU core license users. It provides project management, source code editor, C compiler, assembler, object file linker, test vector generator and facilities to help in the program debugging process during soft-

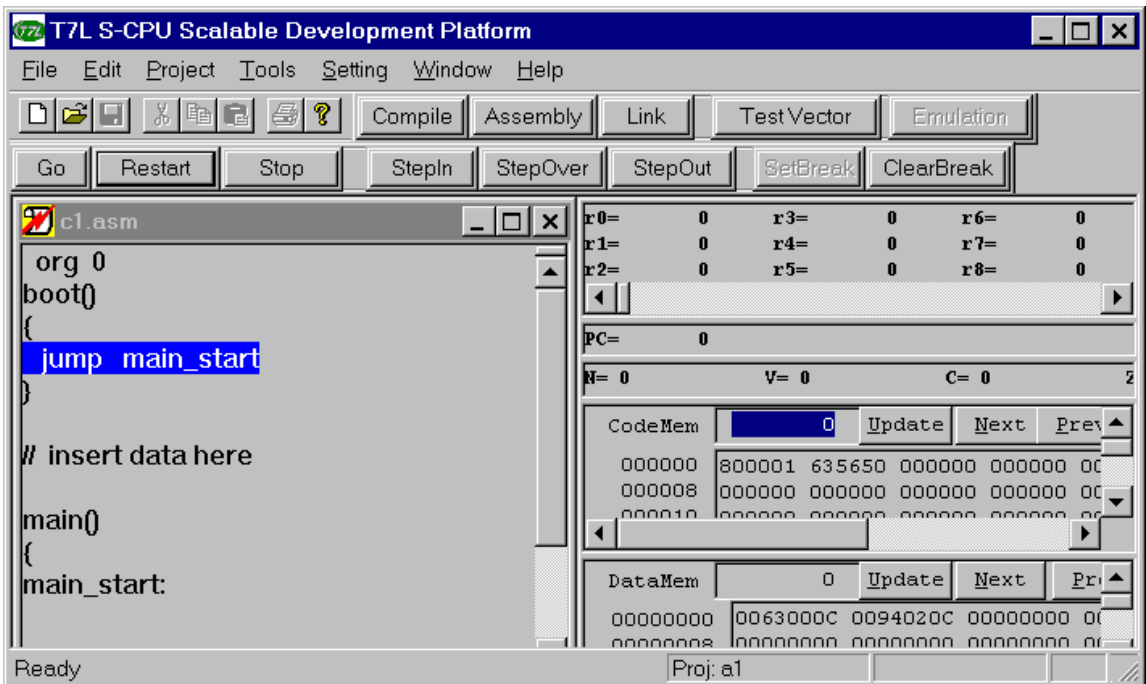


Figure 1: SDP Integrated Software Debugger Screen

ware and hardware development. SDP is designed to run under Windows 95 or upward compatibles. It does not work for Windows 3.1 or older versions.

Functional Description

The T7L SDP toolkit includes a complete set of software tools as described below.

Project Manager

It provides a GUI based project development environment for use in embedding T7L CPU core and in software programming. Various file house-keeping functions are supported for user's design data base.

Source Code Editor

This is a built-in text editor for source code and test vector editing. It provides an integrated design entry tool on the same development platform.

C Compiler

A C Compiler is provided for high-level language software programming. It is an embedded version of standard C language processor and generates assembly source code for further optimization.

Assembler

This is a super symbolic assembler for object code generation according to the user's target CPU configuration. The user can modify mnemonic and operand syntax strings as required. A new style of assembly programming was created to cope with the T7L CPU scalability.

Object File Linker

This helps the user to combine object codes and common library elements together and generates system firmware codes.

Test Vector Generator

This generates an input stimulus file in ASCII form for system simulation. The file can be merged with the user's system test vectors for chip level testing. The vectors also support memory file format (.mem) for Xilinx LogiBLOX RAM/ROM generator. With the Test Vector Generator, T7L SDP is perfectly integrated with Xilinx place and route tools in internal ROM-base program development.

Software Debugger

This is a virtual CPU simulator for the T7L scalable RISC processor. Software debugging can be carried out in parallel with the target hardware prototype. It supports debugging commands, Restart, Stop, Go, Step, Set Break and Clear Break, and displays all register and data memory contents.

Hardware Debugger

A hardware debugging tool is supplied for real time at-speed debugging. Using a standard parallel interface, the debugger can remotely read and modify internal CPU register and data memory contents in the target hardware system. Other than software debugging commands, the debugger also supports Xilinx FPGA configuration data downloading. A T7L SDP snooping bus port is defined for debugging during technical development and for on-site troubleshooting. An optional T7L SDP debugger cable is provided for on-site re-configuring and debugging.

Available Support Products

T7L offers 26 versions of the TX400 RISC CPU core each bundled with the SDP Integrated Software. When used with the SDP Design Base Board, customers have a complete development environment for integrating and testing T7L RISC cores in Xilinx FPGAs.

The software manual and all other documentation can be downloaded from the T7L web site at www.t7l.com.

Ordering Information

The SDP Integrated Software is bundled free with all T7L RISC CPU cores. For more information on this or associated products, contact T7L directly.

Related Information

Xilinx Programmable Logic

For information on Xilinx programmable logic or development system software, contact your local Xilinx sales office, or:

Xilinx, Inc.
2100 Logic Drive
San Jose, CA 95124
Phone: +1 408-559-7778
Fax: +1 408-559-7114
URL: www.xilinx.com

For general Xilinx literature, contact:

Phone: +1 800-231-3386 (inside the US)
+1 408-879-5017 (outside the US)
E-mail: literature@xilinx.com

For AllianceCORE™ specific information, contact:

Phone: +1 408-879-5381
E-mail: alliancecore@xilinx.com
URL: www.xilinx.com/products/logiccore/alliance/tblpart.htm
