



Ada 95 Cross Development Systems for PowerPC

The SCORE (Safety Critical Object-oriented Real-time Embedded) Ada Cross Compiler for an embedded PowerPC provides a complete high quality Ada development environment which is based on the ANDF (Architectural Neutral Distribution Format) technology. The SCORE family provides not only Ada development, but it also facilitates embedded development with mixed languages including C and C++. SCORE Ada is optimized for hard deadline systems where safety is required. The ANDF technology provides a supporting state-of-the-art tool chain, and thereby a complete development environment is established.

SCORE Ada for PowerPC can be used for applications which are ultimately intended for PowerPC targets. SCORE Ada for PowerPC executes on Sun SPARC workstations running Solaris. Target support includes PPC 603e. Windows NT versions are planned for the future.

SCORE Ada is the right choice for projects and application development where high quality Ada development tools and outstanding support for those tools are key issues.

Other Services

DDC-I provides a full spectrum of consulting, training and support services. Each service is priced individually and is designed to help customers with complex applications achieve project goals on-time and on-budget.

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Features

- Robust, proven compiler technology
- Excellent run-time performance
- Full symbolic multi-language debugger, non-intrusive
- Support for real-time and system programming annexes
- Support for PPC 603e
- Support for pipelining
- Includes compact full Ada tasking system
- Point and click easy-to-learn GUI
- Supports fast edit-compile-link-debug cycle
- Coexistence with ANDF tool chain



Advanced Ada Compiler Technology

Based on the ANDF technology established by a group of cooperating European companies and research groups, during the nineties and backed by the European Commission, a complete new open compiler system and development tool architecture is established. The SCORE Ada compiler from DDC-I conforms with this new technology.

- Extensive optimizations
- Two levels of interrupt handling
- Pragma interface to Assembly and C
- Full chapter 13 support
- Extensive diagnostic messages
- Optional register allocation (including small structures)
- Representation clauses
- Address clauses
- Machine code insertions
- Support for real-time and system programming annexes

Full-Featured Debugging

The DDC-I Ada debugger for PowerPC offers a full-featured multi-windowed, non-intrusive debugging environment with a GUI

Supports full Ada-level debugging of large applications:

- Set breakpoints and tracepoints at any statement or declaration
- Break on exceptions, accepting an entry, leaving block/body containing tasks
- Display call chain, task structure and status
- Modify variables
- Debugging of tasks
- Trace program execution at statement level
- Singlestep by statement, into or over subprograms, and to subprogram return
- Set breakpoint to affect a task or set of tasks
- Display Ada object values, layouts, constraints and addresses
- Raise exceptions
- Change Ada view points
- Move the call chain freely around

Supports full machine-level debugging:

- Set breakpoint and tracepoints on memory access
- Display and modify memory
- Display and modify I/O ports
- Singlestep at instruction level
- Display and modify machine code
- Display and modify registers
- Display and modify the stack
- Trace program execution at instruction level

Provides general-purpose debugging support:

- Restart program
- Define start-up scripts
- Define symbols
- Log and replay debug sessions
- Define debugger script subprograms

Flexible Project Management

SCORE Ada for PowerPC supports both large and small scale projects.

- Hierarchical library structure supports independent development
- Project-, program-, file- and user-level option settings
- Complete library management support
- Automatic program recompilation

Additional Tools

DDC-I tools for unit testing, coverage testing, code size analysis and task stack size analysis are available with SCORE Ada for PowerPC. A disassembler, assembler, and an object map-tool are also provided. The SCORE Ada product line also includes tools to provide certification of applications conforming with the FAA level A requirements.

Docomentation

Extensive documentation is provided:

- User's Guides to all components
- Installation Guide
- On-line help
- Quick Reference Guide
- Diagnostic Guide
- Release Note

Cross PowerPC Support

SCORE Ada for PowerPC is an advanced development system for embedded PowerPC applications. The SCORE family provides not only Ada development, but it also facilitates embedded development with mixed languages including C and C++. SCORE Ada is optimized for hard deadline systems where safety is required. The ANDF technology provides a supporting state-of-the-art tool chain, and thereby a complete development environment is established.

Hardware/Software Requirements

- PPC 603e target
- 32 Mbytes of RAM
- 50 Mbytes of disk space
- Host computer: Sun SPARC running Solaris version 2.5 and up