Development Tools for the CP3000 Family

IAR Systems

Introduction

IAR Systems is a leading supplier of software development tools for embedded microcontrollers. Collaborating with the world's major chip manufacturers, IAR develops programming tools to support a wide range of chip architectures. These tools include highly efficient C and EC++ compilers in the IAR Embedded Workbench™ development environment, a device driver wizard IAR MakeApp (for the graphical configuration and initialization of the chip as well as the creation of complete device drivers), and the patented IAR visualSTATE® graphic programming tool for the generation of production-ready code.

Established in 1983, IAR Systems is a global corporation with offices in the US, UK, Japan, Germany, Denmark, and Sweden. IAR additionally operates through software distributors in more than 30 countries.

Support for the CP3000 Family

The IAR Embedded Workbench

A comprehensive toolkit, the Embedded Workbench is based on IAR's latest technology platform which allows for plug-in modules from both IAR and its partners. The tool includes an editor, a project manger, the IAR C/C++ compiler, an assembler, a linker, a librarian, run-time libraries, the IAR C-SPY debugger simulator as well as documentation.

Embedded Workbench features:

Integrated Development Environment (IDE)

- A modular and extensible IDE running under Windows 98/ME/NT4/2000/XP
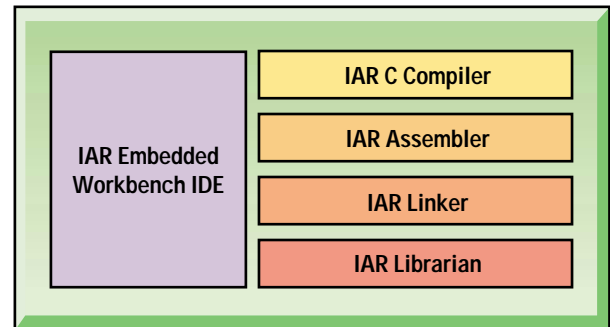- Tool options configurable on global, group of source files, or individual source files level

Editor

- User-friendly, error-sensitive editor
- Customizable toolbar
- C and Embedded C++ syntax highlighting

Make utility

- Rapid recompile or reassemble of updated parts of code only

C/Embedded C++ compiler

- Support for CR16C architecture (the CP3000 family is based on the CR16C core)
- Multiple levels of optimization for code size and execution speeds
- Extended keywords specific to the CR16C
- Built-in advanced CR16C-specific optimizer
- Easy and fast interrupt handling directly in C/EC++
- Mixed C/EC++ and assembler listings

Assembler

- A powerful relocating macro assembler with a versatile set of directives and operators, built-in C language preprocessor, accepting all C macro definitions

Linker

- Complete linking, relocation, and format generation to produce FLASH/ROM-able code
- Flexible segment commands allowing detailed control of code and data placement
- Support for a wide range of industry-standard symbolic formats, compatible with most popular emulators
- Links only functions/variables needed by the application
- Generates checksum of code for run-time checking
- Comprehensive MAP list files

Librarian

- For creating and maintaining libraries and library modules
- Listings for entry points and symbolic information

C-SPY simulator/debugger

- Complex code and data breakpoints
- C/EC++ call stack with parameters
- Complete support for stack unwinding even at high optimization levels
- I/O and interrupt simulation
- Versatile monitoring of registers, structures, call chain, local/global variables and peripheral registers
- Fine-grain single stepping
- Profiling and code coverage

National Semiconductor
The Sight & Sound of Information

Product Ordering Information

- **EWCR16C**—IAR Embedded Workbench including: Editor, Project Manger, IAR C/C++ Compiler, Assembler, Linker, Librarian, Run-Time Libraries, IAR C-SPY Debugger/Simulator, and Documentation.
- **EWCR16C-LE**—Contains all components included in IAR Embedded Workbench except the IAR C-SPY Debugger/Simulator.

Customer Support

Products are sold with one-year of free upgrades and prioritized IAR technical support, after which, a Support and Update Agreement (SUA) may be purchased on a yearly basis.

Contact

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