

# 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 manager, 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

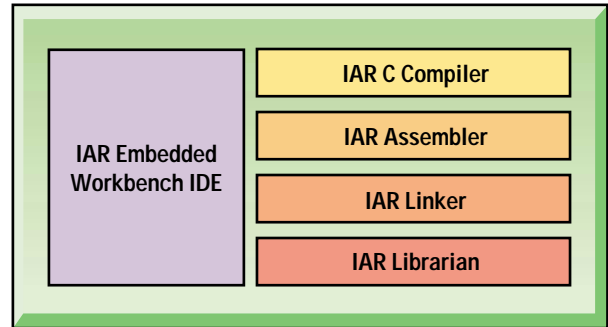
- User-friendly, error-sensitive editor
- Customizable toolbar
- C and Embedded C++ syntax highlighting

##### 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

## Product Ordering Information

- **EWCR16C**—IAR Embedded Workbench including: Editor, Project Manager, 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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