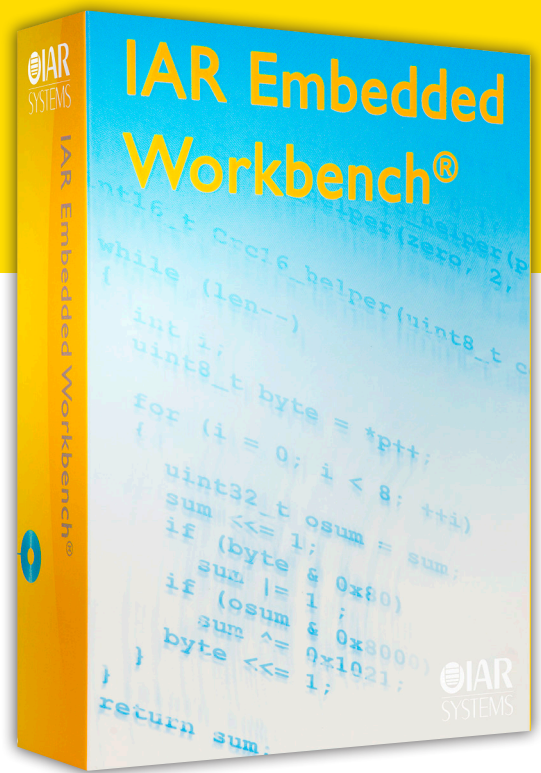


IAR EMBEDDED WORKBENCH®

for RL78

IAR Embedded Workbench is a set of highly sophisticated and easy-to-use development tools for embedded applications. It incorporates the IAR C/C++ Compiler™, assembler, linker, librarian, text editor, project manager, and C-SPY® Debugger in an integrated development environment. With its built-in RL78-specific code optimizer, IAR Embedded Workbench generates very efficient and reliable FLASH/PROMable code for Renesas RL78 microcontrollers. In addition to this solid technology, IAR Systems provides professional worldwide technical support.



Modular and extensible IDE

- Seamlessly integrated environment for building and debugging embedded applications
- Powerful project management that allows multiple projects in one workspace
- Hierarchical project representation
- User-friendly text editor with features like auto completion, parameter hint, code folding, block select, block indent, bracket matching, zoom and word/paragraph navigation
- Smart source browser
- Configurable on global, source files group, or individual source file level
- Flexible project building via batch build, pre/post-build or custom build with access to external tools
- Multi-file compilation
- Integration with Subversion and other source code control systems
- Device support with ready-made header files, description files and linker command files

Highly optimizing C/C++ compiler

- Support for C and C++
- Automatic checking of MISRA-C rules (MISRA-C:1998 and MISRA-C:2004)
- Support for all RL78 devices
- 32-bit floating-point types in standard IEEE format
- Language extensions for embedded applications with target-specific support
 - Extended keywords for data/functions defining an declaring with memory/type attributers
 - Pragma directives for controlling compiler's behavior, such as how it allocates memory
 - Intrinsic functions for direct access in C source to low-level processor operations

- Advanced global and target-specific optimizations generating stable code that is the fastest and most compact in the industry
- Multiple level of optimizations on code size and execution speed allowing different transformations, such as function inlining, loop unrolling etc.
- Position-independent code and data

State-of-the-art C-SPY® Debugger

- Advanced performance analyzer
- Complex code and data breakpoints
- Very fine granularity execution control (function call-level stepping)
- Stack window to monitor the memory consumption and integrity of the stack
- Complete support for stack unwinding even at high optimization levels
- Profiling and code coverage performance analysis tools
- Trace support
- Versatile monitoring of registers, structures, call chain, locals, global variables and peripheral registers
- Smart STL container display in Watch window
- Symbolic memory window and static watch window
- RTOS-aware debugging with built-in plugin for:
 - Micrium µC/OS-II
 - OSEK Run Time Interface (ORTI)
 - Segger embOS
 - ExpressLogic ThreadX
 - FreeRTOS
 - CMX
- Interrupt and peripheral simulation
- Common timeline for visualizing interrupt activity and call stack

C-SPY target system support

- Renesas E1
- Renesas E20
- Renesas IECUBE
- Renesas TK

IAR Assembler

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

IAR ILINK Linker

- Complete linking, relocation and format generation to produce FLASH/PROMable code
- Flexible segment commands allowing detailed control of code and data placement, including unused virtual functions
- Optimized linking removing unused code and data
- Automatic selection of smallest printf/scanf formatter
- Direct linking of raw binary images, for instance multimedia files
- Optional code checksum generation for runtime checking
- Comprehensive cross-reference and dependency memory maps
- Support for over 30 industry-standard output formats, compatible with most popular debuggers and emulators

IAR Library and library tools

- All required ISO/ANSI C and C++ libraries included
- All low-level routines such as writechar and readchar provided in full source code
- Lightweight runtime library, user-configurable to match the needs of the application; full source included
- Library tools for creating and maintaining library projects, libraries and library modules
- Listings of entry points and symbolic information

Information Center

Web based navigation system that gives easy access to tutorials, product documentation, and example projects

Comprehensive documentation

- PDF user guides with detailed usage and reference information
- Efficient coding hints for embedded application
- Extensive step-by-step tutorials
- Context sensitive help and hypertext versions of the user-documentation available online

Free evaluation software

Free evaluation licenses are available at www.iar.com/ewrl78

For the latest product news and up-to-date device support list, visit www.iar.com/ewrl78

