



Renesas Ready Ecosystem Partner Solution

IAR Embedded Workbench



Solution Summary

IAR Embedded Workbench is a complete development toolchain providing powerful code optimizations and comprehensive debugging features in an easy-to-use integrated development environment that works with [RA Family](#), [RX Family](#), [RL78 Family](#), MCUs and [RZ Family](#) MPUs.

Features/Benefits

- Complete C/C++ compiler and debugger toolchain
- Outstanding performance through sophisticated optimization technology
- Comprehensive debugger
- User-friendly features and broad ecosystem integration
- Integrated static and runtime code analysis
- Global support services and training
- Functional safety certification: IEC 61508, ISO 26262, IEC 62304, EN 50128, EN 50657, IEC 60730, ISO 13849, IEC 62061, IEC 61511 and ISO 25119
- Build tools enabling automated workflows with cross-platform benefit

Diagrams/Graphics

The screenshot shows the IAR Embedded Workbench IDE interface. The main window displays C code for an ADC conversion routine. Below the code is a 'Sampled Graphs' window showing a plot of 'adc_result' over time. To the right, a 'Disassembly' window shows the corresponding assembly code. Overlaid on the right side is a circular diagram with the IAR logo in the center. The diagram is divided into six segments: 'Global Technical Support' (yellow), 'Debugging & Trace Probes' (red), 'Static Code Analysis' (green), 'Runtime Analysis' (light green), 'IP Protection' (blue), and 'Production Control' (teal). The center of the diagram contains the text '23+ architectures, one environment.' and 'Safety Certification' with a TÜV logo.

Target Markets and Applications

- Industrial automation
- Consumer electronics
- Smart metering
- Automotive
- Medical technology and wearables

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Our Comprehensive Solution for Developers

IAR Embedded Workbench is the number one development toolchain – a robust, flexible and complete platform with powerful functionality just a tick box away. The toolchain offers integrated code analysis tools and is certified by TÜV SÜD for Functional Safety development. The security development tool C-Trust works as an extension of IAR Embedded Workbench and enables developers to easily protect an existing or new application without having to master the deeper complexities of security. IAR Systems also provides extensive technical support and training options.

The screenshot displays the IAR Embedded Workbench IDE interface for an RSKRX66T project. The main window shows a C program in the `main()` function, which configures the SCI11 module and enters a loop that checks for an A/D conversion flag, performs a conversion, displays the result on an LCD, and increments a counter. The interface includes a workspace tree on the left, a code editor in the center, and a disassembly window on the right. Below the code editor, there are two panels: 'Sampled Graphs' showing a histogram of ADC results over time, and 'Performance Analysis' showing execution cycle and interrupt count statistics.

#	Condition	Time	Count
1	Execution cycle	25s 425674.33 us	3051080920
2	Interrupt count	-	582687

The future-proof supplier of software solutions and services for embedded development

IAR Systems and Renesas have had a strong partnership since the 1980's. With more than 4,000 supported Renesas devices, IAR Embedded Workbench supplies exceptional design flexibility for embedded developers working with the extensive Renesas product portfolio. The tools deliver outstanding performance and let customers migrate easily between different architectures, choosing the one best suited for a specific application while using the same development tools, and with the ability to reuse code.

IAR Systems is a Renesas Platinum Partner, and is committed to continue supplying high-class tools for all Renesas MCUs and MPUs.

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