



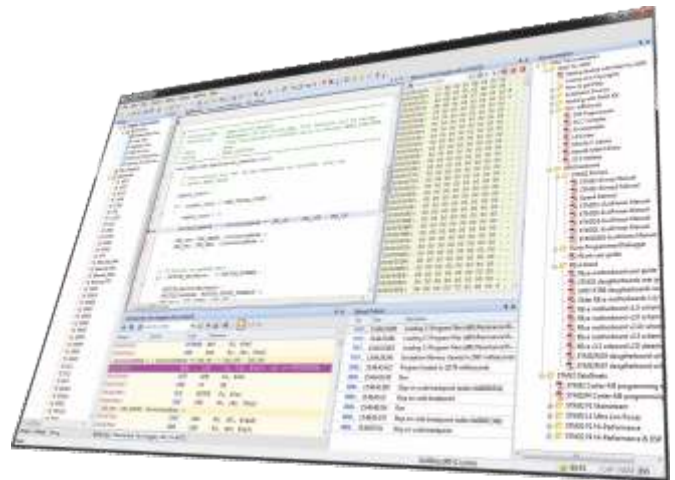
**RAISONANCE**  
a KEOLABS brand

## Development tools for 8051 core-based MCUs

### Accompanying Innovation from Start to Finish

The Raisonance application development tools are a complete professional solution for coding, compiling and fine tuning software applications for 8051 core-based microcontrollers from a range of manufactures.

- // Extensive manufacturer device support
  - Silicon Laboratories - NXP - Texas Instruments
  - Micronas - Analog Devices - Atmel - Cypress
- // Ride7 Integrated Development Environment
- // Raisonance C compiler toolchain for 8051
- // Patented post-link optimization tools
- // Simulator for core & peripherals
- // Real time kernel



#### Software solutions

**Ride7** development environment seamlessly integrates a range of Raisonance software and 3rd party tools to meet diverse needs:

- // Raisonance 8051 C compiler offering both speed & code size optimizations
- // CodeCompressor post link code optimizer
- // Editor, manager, debug & programming interfaces
- // KR-51 embedded kernel for resource constrained MCUs
- // Script manager, editor for common task automation
- // Plugins integrate 3rd party software tools for version management, code verification, etc.

#### Hardware debugging

For software debugging, the Raisonance solution integrates the advanced SIMICE simulator.

For debugging external hardware, the Raisonance tools integrate with 3rd party hardware to provide debugging by emulator or JTAG in-circuit debugger. Debugging hardware platforms include:

- // Python PICE-51 emulators
- // Silicon Laboratories' Flash programmer / debugger

# Complete Software Tool Set

Raisonance offers a full range of software tools to complement our advanced compiler technology with the project management, debugging and code optimization capabilities that users need to get the most out of their tool investment.



## Ride7 & RKit-51 software tools

**Ride7** is the software environment common to all Raisonance tool solutions, which support a range of microcontroller core technologies. Ride7 with **RKit-51** software provides everything needed to code, compile and debug applications for **8051** core based MCUs from a variety of device manufacturers.

The Ride7 solution for 8051 integrates:

- /// **Raisonance 8051 compiler** offering a full range of code size & speed optimizations, support of ANSI standard with expanded 8051 keywords & libraries coded in Assembly language.
- /// **Project manager** with productivity features:
  - Script manager for task automation
  - Advanced code editor
  - Plugins for 3rd party software tools
- /// Seamless transition between editor, compiler, debugger & device programmer
- /// KR-51 real-time OS for resource constrained MCUs
- /// CodeCompressor post-link optimizer

## Code Compressor

**CodeCompressor** is a unique post-link code size optimizing tool capable of achieving best code density by optimizing the entire application as if it were a single module.

To facilitate its use, CodeCompressor is seamlessly integrated in the latest Ride7 environment so that optimizations are applied in three easy-to-understand levels (in-lining, factorization and peepholing).

## Application debugging

Based on Raisonance technology that includes peripheral views and emulator-like functions such as trace management and complex breakpoints, the **SIMICE-51** simulator offers the advanced functionality users need to debug and fine tune their applications.

For hardware debugging, Raisonance software facilitates integration with 3rd party tools including:

- /// **Phyton PICE-51**: connects to application hardware in place of an MCU and offers the advantages of advanced emulation systems - complex breakpoints, trace, code coverage, etc. PICE modularity optimizes cost of emulation for a wide range of MCUs.
- /// **SiLabs Flash programmer/debugger** allows debug via JTAG interface with the target microcontroller.

## Real time kernel

The **KR-51 Real Time Operating System (RTOS)** is designed to provide a variety of operating system functions for applications running on resource constrained 8051 microcontrollers.

Services include time and memory management, semaphores, event synchronization, inter-task communications, as well as more sophisticated functions like a perpetual calendar.

KR-51 is fully integrated in RKit-51 allowing task declaration at the C source or Assembly source levels, and configuration of the kernel at the project level.

## Products & purchasing

The following products are available through Raisonance distributors and online shop. Visit [www.raisonance.com](http://www.raisonance.com)

- /// **RKitE-51**: RKit-51 Enterprise licence for unlimited compiler, simulator, CodeCompressor and KR-51 kernel. **1335.00 Euros**
- /// **RKitL-51**: RKit-51 Lite licence for 32K code limited compiler, simulator and task limited KR-51 kernel. **465.00 Euros**
- /// **RCA-51**: RKit-51 compiler only licence for unlimited compiler toolchain. **915.00 Euros**

For information about hardware debugging tools, including Phyton PICE-51 and solutions for SiLabs, please contact [info@raisonance.com](mailto:info@raisonance.com).

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17, av Jean Kuntzmann  
38330 Montbonnot  
FRANCE

Tel: +33 (0)4 76 61 02 30  
Fax: +33 (0)4 76 41 81 68  
[info@raisonance.com](mailto:info@raisonance.com)

[www.raisonance.com](http://www.raisonance.com)