Providing developers of embedded systems with world-leading software tools

10 offices worldwide with HQ in Uppsala, Sweden

Uppsala Munich Paris Tokyo Seoul
San Francisco Dallas Boston Los Angeles Shanghai

Global professional technical support in 9 languages
Large ecosystem of partners

Listed on NASDAQ/Stockholm
33 years in the industry
32% of revenue invested in R&D

+ Distributor representation in 43 countries
<table>
<thead>
<tr>
<th>Renesas Platinum Partner</th>
<th>8-bit and 16-bit: RL78, H8, H8S, R8C, 78K, M16C</th>
<th>1 toolchain for 13 Renesas families with 4,000+ devices</th>
</tr>
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<tbody>
<tr>
<td></td>
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<td>Cortex-M7, Cortex-M4, Cortex-M3, Cortex-M1, Cortex-M0+, Cortex-M0, Cortex-A15, Cortex-A9, Cortex-A8, Cortex-A7, Cortex-A5, Cortex-R4, Cortex-R5, Cortex-R7, ARM11, ARM9, ARM7</td>
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MARKET DRIVERS

• Increasing number of embedded systems
• Increasing degree of technical consolidation
• Growing complexity in embedded applications
• Increasing demand for low-power solutions
• Need for shorter time-to-market as well as reduced risk
• Demand for simplicity (code generators, wizards)
• Growing use of embedded systems in safety-critical
• The Internet of Things
MARKET TRENDS

The embedded market is under consolidation since years:

- Vendors
- Technologies
- Tools

Driven by customer demands:

- More and more complex implementations
- Shorter time to market
- Flexibility in use, ROI

Flexibility vs. commercial value

1. Customers drive flexibility - Commercial value drops
2. Vendors try to lock customers in - Commercial value increases
3. Customers drives flexibility - Commercial value drops
4. ....
ADAPTIVE INDUSTRIES: AUTOMOTIVE

**Connected cars and smart road infrastructure**

- The IoT is already here: Software updates, traffic info, automatic notification to emergency response center in case of an accident, etc.
- More and more vehicles, as well as the roads and rails, become connected.

- Safer traffic environment
- Personalized driving experience
- Energy efficiency
- Optimized car pools usage
- Supply chain efficiency
- Avoidance of costly stand-stills
Shorter time-to-market, energy savings and lower cost with big data analysis

- The Industrial Internet of Things (IIoT) affects production, supervising equipment, inventory, supply chain management, etc.
- Reduced lead times, cheaper factory set-up, leaner supply chains

Easier and cheaper to build factories
Detect wear and tear in advance
Gather data wirelessly
Remove bottlenecks and optimize processes
ADAPTIVE INDUSTRIES: MEDICAL

The traditional medical sector is catching up fast with the fitness industry

- Loads of ideas in the medical and health industry on how to make the best use of IoT and connected devices
- The fitness industry has shown that personalized devices can be manufactured and sold in high volumes

Improve quality of life

Improve drug prescriptions

Detect complex conditions

Determine the exact response to real-time drug administration

Improve treatments over an entire population

Avoid overtraining and injury

Maximize the ROI of training
Create new business opportunities
Reduce pollution
Lower noise
Limit time spent in rush traffic
Cut power costs
NEXT-GENERATION EMBEDDED DEVELOPMENT

**Globalized**
Teams are without geographical limitations. No matter where you are, you need solutions and support brought to you.

**Customized**
The solutions you use should be of high quality and collect everything you need to be innovative. Your supplier should support your current needs, as well as the needs you will have in the future.

**Simplified**
Innovations must be brought to market fast and easy.

Enter emerging markets, be an active partner and invest in the necessary change of the embedded market
- New technology offerings
- New alliances
- New business models
IAR SYSTEMS’ VISION FOR THE CONNECTED WORLD

New technology offerings
Shared knowledge
Strong strategic alliances

Our collaboration with Renesas on the Renesas Synergy platform is part of this vision
- Simplified, customizable and globalized approach
- Response to requests from our customers to offer a solution for IoT and other emerging technologies
30 years technology invested in future embedded development

IAR Embedded Workbench for Renesas Synergy EWARM-RS

- Workflow integrated beyond the stand-alone product
- Performance optimized (speed and size)
- Code quality by runtime and static analysis included
- Unlimited flexible licensing included
- Global support and maintenance included

IAR EWARM-RS specific features

- Synergy MCU Project Generator/Editor
- Pin Configurator
- Clock Configurator
- Interrupt Control Unit (ICU) Configurator
- SSP Module Selector/Configurator
- Analysis tools C-STAT and C-RUN
- Immediately begin writing application code at “main.c”
- Secure Source debug viewer
- ThreadX® RTOS awareness
- TraceX® support
- GUIX™ Studio support
First-class tools

Full RTOS awareness plugin

Stable and fast IDE – user-friendly integrated environment

Built-in static and runtime analysis tools

IDE and documentation in Japanese available

C++ interface lets you mix C++ and C

Compiler maximized for performance — www.coremark.org

Advanced debug capabilities with code profiling, code coverage, live watch, stack analysis, timeline and conditional and data breakpoints

Natively integrated high-performance debug and trace probes
Why go with IAR Embedded Workbench?

Reuse code and knowledge!
All Renesas architectures are supported by IAR Systems’ tools.

Maximize performance!
With IAR Embedded Workbench, you get smaller, faster, smarter code.

Take full control of your code!
Code analysis tools are provided with a unique, full integration in the IDE.

Trust your application!
Renesas and IAR Systems have worked together for many years to ensure the excellent code quality supported by tools.
Conclusion

The Renesas Synergy platform and associated tools is a unique opportunity to leverage on thousands of manhours of development and quality assurance without eye watering up-front investment!