



Company News

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IAR Systems collaborates with NSITEXE to accelerate functional safety development for RISC-V

Establish partnership to provide safety-certified solutions for NSITEXE's RISC-V-based IP cores

Uppsala, Sweden—August 2, 2021—IAR Systems®, the future-proof supplier of software tools and services for embedded development, today announced its partnership with NSITEXE, a group company of DENSO Corporation that develops and sells high-performance semiconductor IP. The partnership focuses on bringing high-performance development tools solutions with ensured functional safety and extensive support services to innovative applications based on RISC-V.

Functional safety is a constant growing requirement for embedded systems, with automotive applications, industrial automation and medical devices as three of the major driving forces. IAR Systems launched the first edition of its functional safety certified products in 2013. With the rise of RISC-V technology and its rapid evolution into many different embedded systems designs, functional safety for RISC-V is also becoming more and more important. In 2020, IAR Systems presented its functional safety solutions for RISC-V. IAR Systems and NSITEXE are now together further expanding the possibilities for companies choosing RISC-V.

NSITEXE was established in 2017 as a wholly-owned subsidiary of DENSO, one of the world's largest tier one automotive parts manufacturing companies, with significant development in key areas of advanced automotive technologies. Recently announced, the NS31A is a general-purpose CPU with a single-issue core with a 4-stage in-order pipeline that uses a 32-bit RISC-V ISA (RV32IMAF). It supports ISO 26262 ASIL D functional safety mechanism required for automotive applications, and also supports a privileged mode which is required by the AUTOSAR Platform.

"At NSITEXE, development efforts have been focused on three pillars—versatility, efficiency, and functional safety—with massive future trends in mind," commented Hideki Sugimoto, CTO, NSITEXE, Inc. "The NS31A implements these as a RISC-V 32-bits general-purpose CPU with high functional safety for users who want to control embedded systems easily, reasonably, and safely. IAR Embedded Workbench® for RISC-V will be the must-use software development tools in the market of RISC-V, and IAR Embedded Workbench for RISC-V and NS31A will be a leading solution for customers who develop safety-related applications."

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"Our collaboration with NSITEXE brings our joint strong technology and services further into the RISC-V community with extended possibilities for functional safety development," said Stefan Skarin, CEO, IAR Systems. "IAR Systems' functional safety offering provides the widest standards coverage in the industry, and together with NSITEXE, we are now enabling companies to speed up the path of using RISC-V in applications where ensured safety is critical for success."

For companies with requirements on functional safety, IAR Systems offers functional safety editions of its complete development toolchain IAR Embedded Workbench. The certified tools are complemented with a special Functional Safety Support and Update Agreement with guaranteed support for the sold version for the longevity of the contract as well as prioritized technical support. The functional safety edition of IAR Embedded Workbench for RISC-V is certified by TÜV SÜD according to the requirements of IEC 61508, the international umbrella standard for functional safety, as well as ISO 26262, which is used for automotive safety-related systems. In addition, the certification covers IEC 62304, EN 50128, EN 50657, IEC 60730, ISO 13849, IEC 62061, IEC 61511 and ISO 25119. More information is available at www.iar.com/riscv_fs.

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***Editor's Note:** IAR Systems, IAR Embedded Workbench, Embedded Trust, C-Trust, C-SPY, C-RUN, C-STAT, IAR Visual State, IAR KickStart Kit, I-jet, I-jet Trace, I-scope, IAR Academy, IAR, and the logotype of IAR Systems are trademarks or registered trademarks owned by IAR Systems AB. All other product names are trademarks of their respective owners.*

IAR Systems Contacts

AnnaMaria Tahlén, Media Relations & Content Manager, IAR Systems

Tel: +46 18 16 78 00 Email: annamaria.tahlen@iar.com

Tora Fridholm, Chief Marketing Officer, IAR Systems

Tel: +46 18 16 78 00 Email: tora.fridholm@iar.com

About IAR Systems

IAR Systems supplies future-proof software tools and services for embedded development, enabling companies worldwide to create the products of today and the innovations of tomorrow. Since 1983, IAR Systems' solutions have ensured quality, reliability and efficiency in the development of over one million embedded applications. The company is headquartered in Uppsala, Sweden and has sales and support offices all over the world. Since 2018, Secure Thingz, the global domain expert in device security, embedded systems, and lifecycle management, is part of IAR Systems Group AB. IAR Systems Group AB is listed on NASDAQ OMX Stockholm, Mid Cap. Learn more at www.iar.com.