

SEGGER's J-Trace analyzes Rust applications generated by Ferrocene

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SEGGER and [Ferrous Systems](#) have partnered to ensure that Rust applications compiled with Ferrous Systems's qualified Ferrocene toolchain can be downloaded and analyzed in real time with SEGGER's [J-Trace](#) streaming trace probes.

A joint demonstration by the two companies at embedded world 2025 showcases SEGGER's [Ozone debugger](#) and J-Trace probes, which allow embedded-systems developers to gain detailed insight into firmware operation, down to the instruction level. Compatible with the output of almost any toolchain, Ozone is both a debugger and a performance analyzer. It includes all common debugging controls, and it expands on them with features for advanced analysis, such as instruction tracing and code profiling.

Building on SEGGER's recent support for [Rust in Ozone](#), Ferrous Systems was able to seamlessly integrate Ozone with Ferrocene—the first open-source Rust toolchain qualified for safety- and mission-critical applications in accordance with ISO 26262 (for automotive use), IEC 61508 (for industrial use), and ISO 62304 (for medical use).

Ferrous Systems's test application is built on [RTIC](#), an open-source, hardware-accelerated, real-time operating system (RTOS) written in Rust. The application also uses the highly efficient deferred-formatting framework "[defmt](#)," produced by Ferrous Systems as part of their open-source [Knurling-rs](#) project.

"We've always known that defmt offers compelling efficiency improvements when compared to legacy string-based approaches to logging," says Jonathan Pallant, Senior Embedded Engineer at Ferrous Systems. "We're delighted to be working with SEGGER to demonstrate this efficiency with SEGGER's Ozone debugger and J-Trace probes."

"Given the growing interest in Rust for commercial systems, adding support to Ozone was an easy decision for us," explains Johannes Lask, Product Manager at SEGGER. "It was great seeing how straightforward it was for Ferrous Systems to integrate their Ferrocene toolchain with both Ozone and J-Trace for this demo."

For more information on this demonstration, visit Ferrous Systems in Hall 4, Booth 4-402, and SEGGER in Hall 4, Booth 4-367, at embedded world 2025.



About Ferrous Systems

[Ferrous Systems](#) is a Berlin-based consultancy that has extensive experience working with Rust. They provide [training courses](#) for programmers interested in furthering their Rust skills, as well as customized training programs for corporate software development teams. Their flagship product [Ferrocene](#) is the first open-source Rust compiler toolchain qualified for safety- and mission-critical applications, such as those found in the automotive, industrial, and medical areas. For more information, please visit the Ferrous Systems website, or contact them directly at ferrous-systems.com/contact/.

About SEGGER

SEGGER Microcontroller GmbH, founded in 1992, has over three decades of experience in embedded systems, producing cutting-edge [RTOS and software libraries](#), J-Link and J-Trace [debug and trace probes](#), a line of [Flasher in-system programmers](#), and [software development tools](#).

SEGGER's all-in-one solution [emPower OS](#) provides an RTOS plus a complete spectrum of software libraries for, among other things, communication, security, data compression and storage, user-interface software, and more. emPower OS gives developers a head start, allowing them to benefit from decades of experience in the industry.

SEGGER's professional embedded-development software and tools are simple in design, optimized for embedded systems, and support the entire embedded-system development process with their affordability, high-quality, flexibility, and ease of use.

SEGGER, with headquarters in Monheim am Rhein, Germany, also has an office in Boston, Massachusetts, United States, and branch operations in Silicon Valley, California, United States; Shanghai, China; and the United Kingdom. With distributors on most continents, SEGGER's full product range is available worldwide.

For more information on SEGGER, please visit www.segger.com.

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