Lauterbach provides full debug and trace support for PX5 RTOS

With full support Lauterbach's TRACE32 development tools, PX5 RTOS developers of embedded systems can more easily and quickly evolve their applications

HOEHENKIRCHEN, Germany/SAN DIEGO, June 3, 2025— Lauterbach TRACE32® development tools now support PX5 RTOS with its industry-leading OS-awareness features. TRACE32 tool support includes access to the PX5 RTOS internal structures and data so that developers can better understand how their applications behave and use chip resources for faster and easier development.

PX5 RTOS is a leading RTOS for embedded developers, providing ultra-fast operation with sub-microsecond context switching and API calls on most microprocessors as well as rich determinism. The RTOS' memory footprint is less than 1KB for use in the most memory-constrained devices. Certified to the highest levels of the IEC 61508 functional safety standard – IEC 61508 SIL 4, IEC 62304 Class C, ISO 26262 ASIL D, and EN 50128 SW-SIL 4, PX5 provides patent-pending pointer/data verification (PDV) technology as well as extensive testing, including 100% statement and branch decision coverage.

By providing PX5 OS-awareness, Lauterbach's TRACE32 tools allow developers to control the whole software stack. Developers can debug the whole software stack from user application to device driver and in doing so, query and display all OS objects such as threads, message queues, etc.

The TRACE32 PowerView software provides not only a static display of the current status of PX5 OS objects, but also the dynamic behavior of the OS objects over time, (e.g., an OS task scheduling analysis as well as many sophisticated real-time analysis functions, including symbolic function call trace and detailed performance analysis functions.)

"Like our TRACE32 tools, PX5 RTOS is exceptionally well suited for the most demanding embedded applications," said Norbert Weiss, managing director, Lauterbach GmbH. "With the help of our OS-awareness for PX5 RTOS, developers now have unprecedented insight into the entire software stack."

"If you can't see it, you can't fix it!" said Bill Lamie, President and CEO, PX5. "Lauterbach is a leader in helping developers to understand, debug and optimize their embedded devices. With PX5 RTOS developers now having the full power of TRACE3, they can more quickly and easily evolve their applications."

Learn more about Lauterbach's market-leading TRACE32 OS-awareness: https://www.lauterbach.com/features/os-awareness

Learn more about PX5 RTOS: https://px5rtos.com

About LAUTERBACH:

Lauterbach is the leading manufacturer of cutting-edge development tools for embedded systems with more than 45 years of experience. It is an international, well-established company, serving customers all over the world, partnering with all semiconductor manufacturers and growing steadily. At the headquarters in Hoehenkirchen, near Munich, the engineering team develops and produces highly proficient and specialized, easy-to-use Development Tools under the brand TRACE32®. Branch offices in United Kingdom, Italy, France, Tunisia, on the East and West coasts of the United States, Japan and China and highly qualified sales as well as support engineers in many other countries make Lauterbach's full product range available worldwide. For more information please visit https://www.lauterbach.com

About PX5:

PX5 creates the industry's most advanced runtime solutions for deeply embedded applications. With decades of domain expertise, including creating the ThreadX real-time operating system, PX5 is pushing the boundaries of how industry standards improve the safety, security, and portability of applications running on microprocessor-based systems. The industrial-grade PX5 RTOS is an advanced, fifth-generation RTOS designed for the most demanding embedded applications, featuring a native implementation of the POSIX pthreads API and best-of-class size and performance.

Headquartered in San Diego, California, all PX5 products include complete source code and are free of run-time royalties.

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