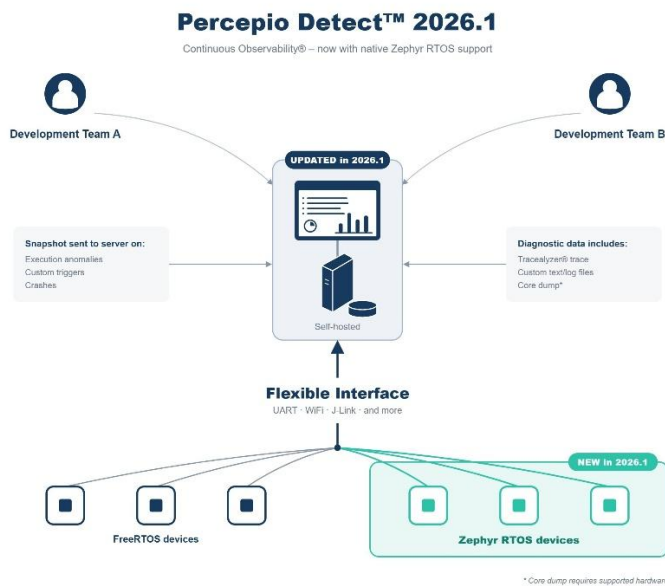


FOR IMMEDIATE RELEASE



Caption: Percepio Detect™ 2026.1 at a glance: the updated platform extends Continuous Observability® to Zephyr RTOS, capturing diagnostic snapshots from Zephyr and FreeRTOS devices whenever anomalies, custom triggers, or crashes occur.

High-res image available: <https://percepio.com/press/photos/Percepio-Detect-2026-1.jpg>

Percepio Detect™ 2026.1 Brings Continuous Observability® to Zephyr RTOS

New release delivers native Zephyr RTOS support, enabling embedded teams to automatically detect, capture, and diagnose runtime anomalies and faults with diagnostic snapshots, including system traces, logs, and core dumps.

Västerås, Sweden – 22 October 2026 – Percepio AB, a leading provider of observability solutions for embedded and edge systems, today announced the release of Percepio Detect 2026.1, adding comprehensive Zephyr RTOS support to its Continuous Observability platform. The release marks a significant milestone for the growing Zephyr ecosystem, enabling development teams to monitor, detect, and diagnose system-level runtime issues directly on target hardware – without relying on full trace streaming or repeated fault reproduction.

Coinciding with [Zephyr's 10th anniversary](#), Detect 2026.1 reflects Percepio's commitment as a Silver Member of the [Zephyr Project](#). The release responds to growing demand from embedded teams for a Zephyr-native observability solution that supports not only debugging, but also continuous quality assurance throughout development and testing.

Continuous Observability, Now for Zephyr RTOS

Percepio Detect 2026.1 extends the platform's "security-camera-style" monitoring approach to Zephyr-based systems. Rather than streaming all trace data continuously, Detect monitors the

system and automatically captures compact diagnostic snapshots only when anomalies occur. These snapshots, including both traces and optional core dumps, can then be analyzed using Tracealyzer® and Detect's integrated core dump viewer to identify root causes quickly.

Core dumps and trace snapshots can also be triggered via a Detect API call on Arm Cortex-M devices, enabling teams to capture the active function call stack and surrounding runtime context even for non-fatal errors and warnings – without requiring a Zephyr fatal error.

By embedding observability directly into daily workflows, Percepio aims to shift industry practices from reactive debugging to proactive development. Instead of waiting for failures in late testing or in the field, teams can continuously verify system behavior and catch subtle issues early – before they escalate into costly defects.

Runtime observability is also becoming more relevant as agentic development gains traction in embedded software. With AI agents contributing more code, teams will need runtime monitoring during integration and system testing to detect undesired changes in performance, resource usage, and “near-miss” margins. This is feedback that agents typically lack, and an area Percepio aims to improve in the near future.

The combination of Percepio Detect and Tracealyzer provides a practical workflow from detection to root cause – even for intermittent issues that do not reproduce on demand. The solution is designed to run across a wide range of supported hardware platforms, with initial validation on popular development boards from Nordic Semiconductor and STMicroelectronics.

Strengthening the Zephyr Ecosystem

“Zephyr support has been one of the most requested capabilities since we launched Percepio Detect, and we’re proud to deliver it as part of our 10th anniversary contribution to the community,” said Dr Johan Kraft, CTO and founder of Percepio. *“With Detect 2026.1, embedded teams working on Zephyr can adopt continuous observability as a standard practice – bringing the same level of runtime visibility that FreeRTOS teams have already been using in production.”*

“As the Zephyr Project ecosystem scales into increasingly complex and connected systems, the availability of professional observability tools is essential for maintaining long-term reliability,” said Kate Stewart, Vice President of Dependable Embedded Systems at the Linux Foundation. *“Contributions from our member community, such as Percepio’s support for the Zephyr RTOS, provide developers with more options to implement continuous observability as a standard practice. This shift toward built-in, proactive monitoring helps set a new standard for ensuring high-quality firmware throughout the entire product life cycle.”*

Catching What Tests Miss

Percepio Detect has already demonstrated its value in production CI/CT (continuous integration and testing) pipelines. In one case reported by a customer, firmware had been running in continuous integration for weeks with all known crashes resolved and all tests passing. After enabling Percepio Detect, the team received alerts within hours: a background communication task was occasionally executing far longer than expected. The system always

recovered and no test ever failed – but Detect had automatically captured RTOS-level traces, each only a few kilobytes, at the exact moments the anomaly occurred.

When viewed in Tracealyzer, the risk was immediately apparent: under real-world conditions involving clock drift, temperature variation, and I/O jitter, the same behavior could have triggered a watchdog reset. A targeted optimization eliminated the issue entirely – before it reached the field.

Key Capabilities in Percepio Detect 2026.1

- **Zephyr RTOS support** – Runtime monitoring, automatic anomaly detection, and diagnostic trace capture for Zephyr-based systems across a broad range of supported hardware platforms.
- **TaskMonitor** – Tracks CPU activity per thread, automatically detecting freezes, overloads, and timing anomalies that traditional debugging tools often miss.
- **Core dump support** – Capture core dumps for post-mortem debugging, including programmatically triggered dumps to preserve the function call stack at failure or on non-fatal errors.
- **Tracealyzer integration** – Open diagnostic snapshots in Tracealyzer for visual root cause analysis, including kernel events, thread execution, and application logging.
- **Integrated core dump viewer** – Inspect core dumps directly within Detect, complementing Tracealyzer’s visual trace analysis with call-stack-level diagnostics.
- **CI/CT pipeline ready** – Designed for continuous integration and testing environments, with self-service evaluation and ready-to-run demo packages for rapid onboarding.

Availability

Percepio Detect 2026.1 is available now. A self-service evaluation download and a ready-to-run demo package with documented examples are available at percepio.com/detect.

About Percepio AB

Percepio AB provides Continuous Observability® solutions for embedded and edge software, helping development teams understand and assure software behavior throughout the product lifecycle. From real-time tracing during development with Percepio Tracealyzer®, to automated monitoring and anomaly detection during system testing with Percepio Detect™, and remote diagnostics in deployment with Percepio DevAlert®, Percepio’s tools help accelerate development, improve software quality and runtime assurance, and reduce risk in increasingly complex, software-defined, and AI-enabled systems. Percepio collaborates with leading processor, operating system, and embedded technology vendors worldwide. For more information, visit percepio.com.

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