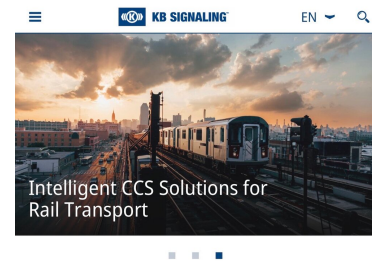




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KB Signaling's Website is Live!

We are excited to share that a newly designed KB Signaling website is now live and will soon feature an integrated Document Search Tool that will make it easier than ever to find technical documents, product data sheets, manuals, and regulatory information. While not all materials will be available today, our library will continue to expand in the weeks ahead as we add more resources to support our customers, partners, and industry stakeholders. Stay tuned for the official launch and discover a smarter way to access KB Signaling product information.



KB Signaling Launches Rail TempEst™ to Help Railroads Reduce Buckling-Related Risks

A sensor-free, machine learning application delivers real-time rail temperature and force estimates using existing signal infrastructure.

Rail safety is advancing once again with the introduction of Rail TempEst™, a breakthrough analytics application from KB Signaling Inc. (KBS). Now commercially available for the company's Wayside System Data Management Module (WSDMM™) edge computing platform, Rail TempEst is the first solution of its kind to provide highly localized, real-time estimates of rail temperature and longitudinal forces—without the need for rail-mounted sensors or added hardware.



Tackling a Leading Cause of Derailments

Rail buckles and breaks remain a top cause of significant derailments in North America, and safety advisories tied to extreme weather are steadily increasing. Traditional methods of risk management—based on broad forecasts and assumptions—often leave operators with little more than educated guesswork. Rail TempEst changes this by turning existing Electro Code™ (EC5™ and EC6™) track circuits into precision monitoring tools that deliver actionable intelligence right down to specific sections of track.

“This gives operators better information to make better decisions,” said Jeff Fries, Chief Technologist at KB Signaling. “Today, they’re relying on forecasts. Now they can see what’s happening in real time, on the ground.”

Data-Driven, Real-Time Decision Support

Through its web-based dashboard, Rail TempEst delivers live and historical data with customizable displays, while alerts and data streams are available via MQTT, SMS, or email. Operators can issue inspections or slow orders based on actual field conditions rather than regional estimates—helping reduce operational disruptions and better focus maintenance resources.

Developed over three years and validated through multiple trials, Rail TempEst uses machine learning algorithms that improve diagnostic accuracy over time. Importantly, it operates completely separate from safety-critical signaling systems, ensuring zero interference with core operations while enhancing risk awareness.

Building Smarter Infrastructure

As the first high-impact application launched on the WSDMM platform, Rail TempEst signals the next phase of KB Signaling’s analytics and diagnostics roadmap. It joins other recent ElectroLogIXS® platform innovations such as the IXC-R20™ solid-state crossing controller—underscoring the company’s strategy of delivering meaningful innovation with real operational impact.

“This is exactly the kind of technology railroads need today,” said Giampaolo Orrigo, Senior Product Manager, Wayside Intelligence at KB Signaling. “It empowers railroads to manage risk more intelligently, cost-effectively, and immediately—using infrastructure already in place.”

Rail TempEst is available today and offers reoccurring licenses, with support agreements that include Tier 1–3 support and quarterly updates. Each instance supports up to four monitored circuits, making the application easily deployable across tens of thousands of sites worldwide.

[Read the full press release here](#)

Advancing Safety and Simplifying Maintenance: KB Signaling Introduces IXC-R20™

A first-in-industry redundant solid-state crossing controller delivers resilience, diagnostics, and seamless migration.

Railroads today face the dual challenge of maintaining legacy infrastructure while meeting evolving regulatory and operational demands. KB Signaling is responding with a breakthrough that changes the landscape of highway crossing technology: the new IXC-R20™ Integrated Crossing Control Module.



As the latest advancement in the proven ElectroLogIXS™ platform, the IXC-R20 introduces the rail industry's first redundant solid-state crossing controller. This innovation not only advances safety but also streamlines maintenance and ensures a clear upgrade path for customers who have already invested in KB Signaling solutions.

Redundancy Redefined

At the core of the IXC-R20 is a high-availability design that allows active/standby pairing. In the event of a fault, control seamlessly transfers to the standby unit—without user intervention. This ensures uninterrupted crossing protection and addresses a long-standing concern for railroads that had continued relying on interface relays for availability.

"This is the first solid-state redundant crossing controller in the industry," said Aric Weingartner, director of products at KB Signaling. "That redundancy changes the conversation for a lot of railroads."

Smarter Maintenance Tools

Maintenance efficiency is equally critical. FRA rules mandate frequent inspections, and the IXC-R20 was designed with maintainers in mind. A one-touch automated test activates the entire crossing, records all metrics, and produces an instant report—saving time while supporting compliance.

The module also integrates current-sensing lamp monitoring, replacing separate hardware and enabling earlier detection of failures. All operational data flows directly into KB Signaling's Wayside System Data Management Module (WSDMM™), providing powerful visualization and trend analysis tools to anticipate and prevent issues before they impact performance.

"These are the kinds of tools that make a real impact for the people maintaining the system," noted Paul Harper, product manager – highway crossing systems.

Seamless Migration Path

Designed as a direct replacement for the outgoing IXC-20S™ portfolio, the IXC-R20 requires no rewiring or reprogramming. Customers can retain their existing configurations, streamlining deployment and validation. By eliminating the need for external interface panels, the module reduces cost and complexity while maximizing available space inside equipment bungalows.

"Everything about the IXC-R20 was designed to make migration easier," Harper explained.

Built for Global Standards

With certification processes underway, the IXC-R20 is on track to achieve SIL 4 safety certification by year-end 2025—reinforcing its readiness for international deployment.

Launch volumes are prepared, with general availability targeted for Q3 2025.

“What really matters is the everyday performance—the uptime, the ease of use, and the ability to make more informed decisions with better data,” said Weingartner. “That’s what the IXC-R20 delivers.”

The IXC-R20 is more than a controller—it is a step forward in making crossings safer, maintenance simpler, and operations more efficient for railroads of every size.

[Read the full press release here](#)

KB Signaling EC6™ Track Circuit Reaches 800-Unit Milestone

Freight railroads accelerate adoption of resilient, digital track circuits that enhance safety and streamline infrastructure.



KB Signaling Inc. (KBS) has reached a significant industry milestone with its Electro Code™ 6 (EC6™) track circuit. More than 800 VTI-2E™ modules are now in operation across North America—covering over 4,800 miles of signaled track. The achievement reflects a growing shift among railroads toward modern, low maintenance signaling technologies that deliver reliability in even the most challenging environments.

The EC6 track circuit provides two-way, safety-critical digital communications through the rails. Supporting train detection, signal aspect transmission, and broken rail identification, the system is designed as a seamless, drop-in upgrade for KBS’s EC5™ and ElectroLogIXS® platforms. Installation typically takes less than 30 minutes, enabling rapid deployment without changes to wiring or application logic.

“Adoption is accelerating,” said Aric Weingartner, Director of Products at KB Signaling. “Railroads are increasingly recognizing EC6 as the solution to long-standing circuit performance challenges. In 2025 alone, we’ve sold more units than in the previous two years combined.”

Proven Performance in the Field

Class I railroads and transit agencies are leveraging EC6 to simplify infrastructure, reduce maintenance demands, and eliminate reliability concerns in environments ranging from saltwater exposure to unstable ballast. Customers are reporting measurable service improvements, reduced disruptions, and new opportunities to advance digitalization strategies.

Unlike traditional analog systems, the EC6 circuit transmits up to 100 bits per second across each rail segment, providing valuable real-time data to both signaling and track departments. This intelligence enables precise ballast condition assessment and reduces the need for costly manual adjustments. In some cases, railroads have avoided up to \$250,000 in costs per eliminated track circuit.

Built for the Future

The EC6 circuit's digital foundation and software-defined architecture ensure long-term adaptability. Railroads can expand capabilities through software updates—such as transmitting infrastructure alerts or integrating with asset health analytics platforms. Future enhancements may even enable direct communication with onboard train systems, positioning EC6 as a cornerstone for smarter, data-driven rail operations.

“No other track circuit offers EC6’s combination of environmental resilience, plug-and-play simplicity, and digital throughput,” said Greg Hann, Senior Product Manager at KB Signaling. “It is more than an upgrade—it’s a platform for the future of rail signaling.”

[Read the full press release here](#)

Print the newsletter



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