EKE

About
EKE

Smarter trains. Better future.

WHAT WE DO

FOR ALMOST FOUR DECADES, EKE-ELECTRONICS HAS BEEN A TRUSTED PARTNER TO GLOBAL TRAIN MANUFACTURERS AND OPERATORS, DELIVERING COMPREHENSIVE TRAIN AUTOMATION SOLUTIONS.

WHY CHOOSE EKE?

Our experienced professionals possess extensive knowledge in designing, testing, and maintaining robust solutions, ensuring long-term commitment to the product's lifecycle. Customers benefit from our high-quality hardware and software for train control and management, remote condition monitoring solutions, and safety applications.

Our tailored offerings aim to optimise efficiency, reliability, and safety across train, metro, and tram operations, ensuring a safe and comfortable experience for passengers.

DIVERSE PORTFOLIO

EKE offers a diverse portfolio spanning train control and management systems, SIL safety applications, and condition-based monitoring solutions for trains and tracks. Our expertise in these areas ensures robust, reliable performance across diverse railway environments, supporting enhanced safety, efficiency, and operational excellence.

01

TRAIN CONTROL AND MANAGEMENT SYSTEMS

EKE-Trainnet® Train Control and Management System supports SIL 2 development, with some key modules already pre-certified. Its modular design allows you to select only the features you need, creating a cost-efficient, flexible, and versatile solution with a simplified architecture.
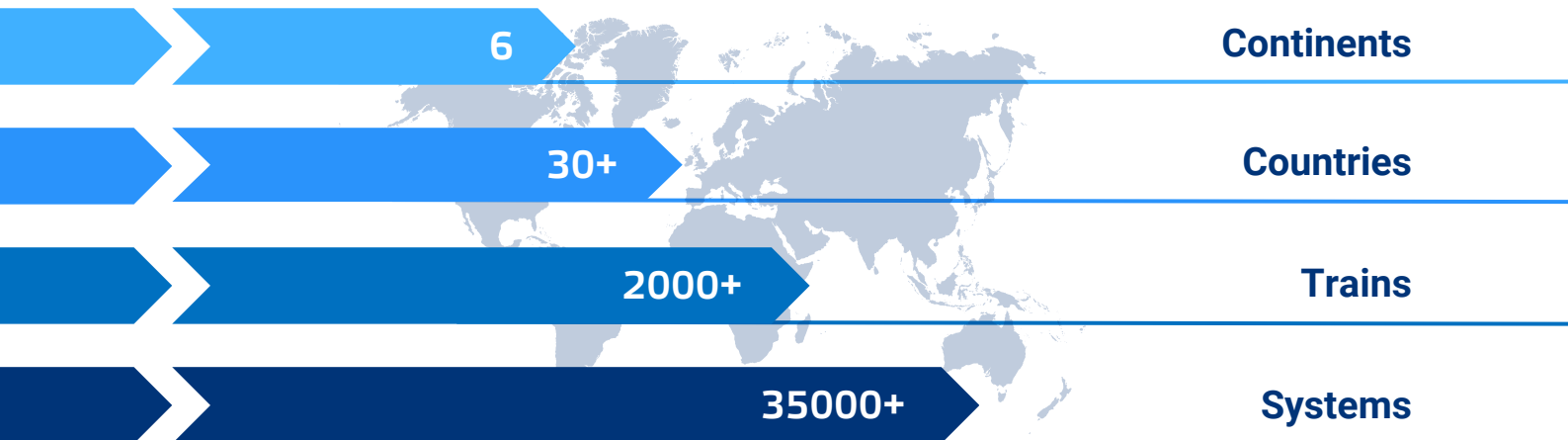
02

SIL SAFETY APPLICATIONS

At EKE-Electronics, we excel in developing SIL 2 systems across diverse safety functions, following strict standards (EN 50126/50128/ 50129/50716). With our proven track record and rigorous practices, we deliver unmatched reliability in safety-critical solutions.

03

CONDITION-BASED MONITORING

SmartVision™ is EKE-Electronics' condition-based and predictive maintenance platform. The platform enables users to conveniently monitor the health status of their fleet or track infrastructure through our browser-based user interface. Our Monitoring as a Service capability empowers continuous fleet monitoring and extends to the monitoring of track assets as well.

6	Continents
30+	Countries
2000+	Trains
35000+	Systems

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WHAT DO WE OFFER?

EKE offers a unique blend of a broad product portfolio, flexible business model, and experienced people. We deliver tailored solutions that enhance the efficiency and reliability of your railway operations.

TRAIN CONTROL AND MANAGEMENT SYSTEM

TCMS for new builds and refurbishment projects
EKE's TCMS platform integrates safety and non-safety features to optimise operations and save resources. It offers flexible, tailored solutions with a commitment to long-term reliability and support, ensuring peace of mind for clients.

Different project delivery options
We have a range of project delivery options, including turnkey, delivery, or solution projects, tailored to match your capability and resource availability.

Independent implementation available
Transform your EKE-Trainnet® products with our Software Development Environment Powered by CODESYS®. This comprehensive software suite allows for independent configuration and programming of our products for any purpose, powered by the flexible Linux operating system.

Tailor made hardware solutions
A range of modular products available including event recorders which can be combined to build your unique solution. These include:

- Train and vehicle bus
- Gateways: WTB, MVB, CAN Ethernet, serial links
- Event recorders
- Vehicle control units
- Remote I/O systems

SIL SAFETY APPLICATIONS

In-house competencies to develop a range of safety applications up to SIL 2
Examples of safety applications developed:

- Automatic selective door operation
- Hot axle box detection
- Lateral acceleration monitoring
- Vigilance control system
- Automated pantograph control
- Physical prevention of over-speeding
- Examples of other applications developed: Fire detection sub-system monitoring, brake pipe pressure monitoring, train speed and distance monitoring, supervision of traction enabling, supervision of passenger alarm activation

Safety Competencies

Larger number of exisitng functionalities already developed

Testing & documentation produced

Process in place (EN50126/50128/50129/50716)

Proven experience

Ability to develop up to SIL 2

CONDITION-BASED MONITORING

Train Condition Monitoring
EKE's TCMS customers can benefit from our train condition monitoring capability. We offer 3 types of train condition monitoring

- Remote diagnostics based on TCMS data
- Condition monitoring based on TCMS data
- Condition monitoring with additional sensors

Track Condition Monitoring
EKE's Track Condition Monitoring uses in-service trains to continuously measures the vibration caused by the wheels running over the rail.

Data is sent to the cloud to identify issues as they emerge, preventing them from developing into major problems. This facilitates targeted maintenance based on actual track condition, reducing unnecessary interventions, optimising resource allocation and enhancing safety.

Analysis and results can be examined in our user-friendly interface.

Train Control and Management Systems

SIL Safety Applications

Condition-based Monitoring

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CONTACT US

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