

TrackScout™

Long-Range AI Perception for Mainline Rail Networks

Rail Vision's TrackScout™ brings advanced, long-range AI-powered perception to mainline freight and passenger rail networks. Powered by multi-spectral electro-optical sensors and proprietary deep learning algorithms, the system detects and classifies hazards in real time at an extended visual range of up to 2,000 meters (1.2 miles). By providing real-time alerts, TrackScout provides drivers the critical reaction time needed to prevent incidents, maximize uptime and maintain continuous mainline operations, even under challenging weather and visibility.



2,000 m

Real-time hazard detection range — up to 1.2 miles ahead

24/7

Operational in darkness, adverse weather and low visibility

Railway-Grade

Engineered for international railway standards

Intelligence Driven by Big Data

Designed to enhance efficiency and safety, our **operational intelligence platform** acts as a complementary solution across our entire product line. It centralizes system-wide data collection to deliver real-time tracking, continuous event recording, and remote health monitoring. By leveraging big data analytics, the platform delivers actionable insights and customizable reports to key stakeholders across the organization.

System Detection & Classification Capabilities

The system dynamically detects and classifies a wide range of objects and track conditions, with the flexibility to add new classes as operational needs evolve. Key capabilities feature **anomaly detection** for unclassified hazards and industry-first **switch state detection** (including switches aligned against the locomotive).



Operational & Business Benefits

01

Mainline Safety & Uptime

Protect passengers, train crews, and high-value infrastructure through early hazard detection to prevent costly collisions and maximize operational uptime, even under challenging weather and visibility conditions.

02

Enhanced Situational Awareness

Provide locomotive drivers with extended visibility beyond human sight to ensure reliable, uninterrupted performance.

03

Improved Productivity & Operational Efficiency

Keep rail operations running without interruption by preventing catastrophic collisions, costly network delays, and equipment damage.

Technological Advantages and Reliability

Long-Range Multi-Spectral Perception

High-sensitivity electro-optical sensors capture rich visual data for AI-powered real-time perception. The system detects, classifies, and tracks hazards at distances of up to 2,000 meters (1.2 miles), extending human vision to provide drivers with crucial reaction time.

Intuitive Driver Interface

Delivers clear visual and acoustic alerts prioritized by threat level for quick decision-making.

Modular Structure for Fast Fleet Retrofit

Modular design enables quick, simple installation across diverse mainline freight and passenger locomotive fleets.

Compliance with Railway Standards

Engineered to meet international rail standards for mainline safety, reliability, and environmental compatibility.

