

YardFlow Flex™

AI-Powered Perception for Challenging Yard Environments

Rail Vision's YardFlow Flex™ delivers AI-powered perception and safety for freight and industrial yard operations, across locomotives and railcar movers operating in demanding yard environments.

Combining multi-spectral electro-optical sensors with AI perception, the system detects on-track or near-track hazards in real time at distances of up to 200 meters (650 ft). By providing immediate alerts, YardFlow Flex helps operators prevent incidents, maximize uptime, and maintain seamless operational continuity, even under harsh weather and low-visibility conditions.



200 m

Real-time hazard detection range — up to 650 ft ahead

24/7

Operational in darkness, adverse weather and low visibility

Railway-Grade

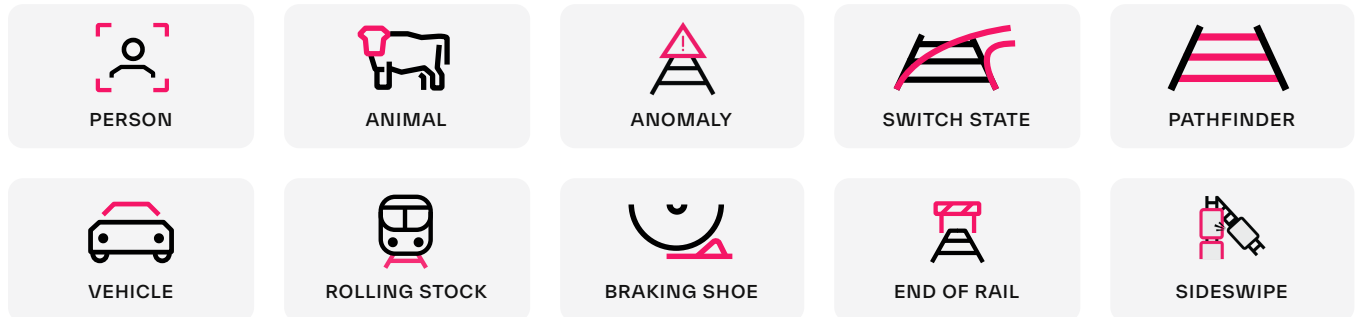
Engineered for international railway standards

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

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 industry-first **switch state detection** (including switches aligned against the locomotive), **anomaly detection** for unclassified hazards, and **sideswipe detection** to identify rolling stock extending beyond the foul line.



Operational & Business Benefits

01

Operational Continuity & Yard Safety

Protect yard staff and rail assets from unexpected events through early hazard detection, ensuring uninterrupted and reliable switching operations even in unlit or challenging weather conditions.

02

Enhanced Situational Awareness

Provide operators with real-time perception through multi-spectral vision to eliminate blind spots and safely navigate complex yard environments in adverse operational conditions.

03

Productivity & Operational Efficiency

Prevent costly yard downtime and equipment damage during controlled coupling while optimizing day-to-day switching operations.

Technological Advantages & Reliability

High-Sensitivity Sensors

Multi-spectral electro-optical sensors provide rich visual data for AI-powered, real-time perception, delivering reliable situational awareness where conventional visual systems face performance limitations.

Automatic Braking Interface

An optional interface that connects to existing locomotive control systems for active intervention, triggering automatic emergency braking if an operator does not respond to a critical alert.

Intuitive Operator Interface

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

Modular Structure for Easy Adaptation

A robust, modular design enables seamless installation across diverse switching locomotives and railcar movers in demanding yard configurations.

Compliance with Railway Standards

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

