

duostech

Safety Is the #1 Concern of the Railroad Industry!

Railcars contain hundreds of parts and critical components that must be inspected frequently to ensure safe and reliable operations.

With more than 1.6 million railcars running on nearly 200,000 miles of track in North America, railroads and railcar owners are seeking advanced technologies to keep their operations safe, reliable and efficient. Improving processes in this area is key to improving safety and operations.

Duos **Railcar Inspection Portal (RIP®)** offers comprehensive remote visual inspection of railcars aided by the power of advanced artificial intelligence and machine learning (AI/ML) algorithms.

Railcar Inspection Portal (RIP®)

Remote Visual Railcar Inspections Made Easy

Capturing finely detailed high-resolution images at track speed, the RIP® provides a 360-degree (all-around) view of a passing railcar in mere seconds. The images are presented in **CENTRACO®** – a modern, intuitive

*Request a Duos AI Detection catalogue [here](#).

browser-based application thoughtfully designed to facilitate thorough and accurate railcar inspections within a flexible and streamlined workflow.

Expertly-Developed AI/ML Offers a Second Set of Eyes

Who couldn't use a little help now and then?

The RIP® features a set of over forty (and growing) expertly crafted artificial intelligence/machine learning (AI/ML) models that offer just that. As the RIP captures high-resolution images, our AI models immediately analyse the images and look for anomalies or defects on the railcars. Detected defects are immediately reported in the **CENTRACO®** application, giving the inspector advanced notification of such conditions.

Railcar Inspectors – The Voice of Authority

No one knows more about inspecting railcars than experienced railcar inspectors. That's why Duos employs skilled and certified railcar mechanics on our staff to oversee the planning, development and continual training of our AI models. In addition, each



of our AI models is developed and trained to detect conditions that matter most to railcar inspectors and railroad industry in general.

Actionable Intelligence in Record Time

We believe that intelligence is only actionable when delivered in a timely manner. That's why our AI/ML models operate at lightning speed at the edge (track side), not in some far-off cloud. As a result, notifications of detections and anomalies found on railcars are made available within an average of 60 seconds after the railcar is scanned. This timing is especially important for defects that could result in extended dwell time or even mechanical derailments.

Sharing is Caring

It has been written that no man is an island. We believe the same is true for mission-critical systems designed to detect safety-related issues and conditions. That's why the RIP® has been designed to make detection data and related data available in close-to-real-time via a wide variety of transport options and protocols, including text messages (SMS), email, and even APIs (application programming interfaces).

Features / Benefits

- *Modular, customisable turnkey system
- Enhances safety for employees, shippers & general public
- Mitigates risk through derailment prevention
- Improves network fluidity by reducing line of road delay & yard dwell
- Improves fleet utilisation
- Railroad benchmark study showed 8x more effective than human inspection alone

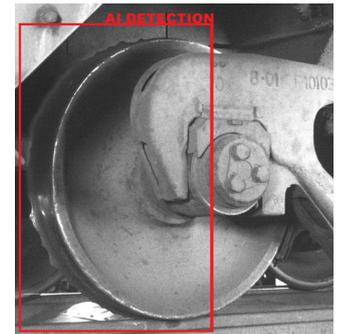
**All modules use high-resolution technology combined with artificial intelligence to create unparalleled imagery and detection.*

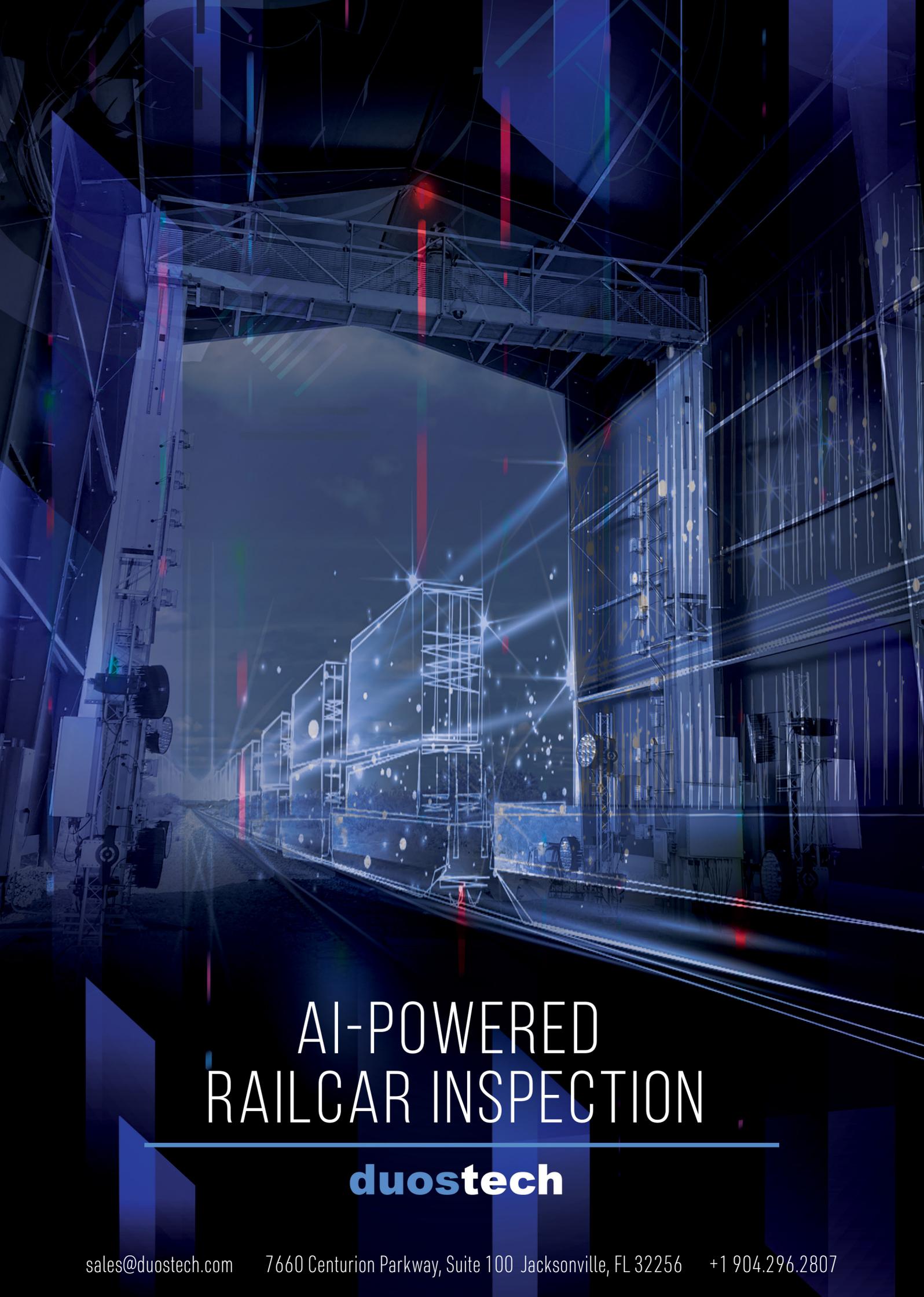


Click or scan the QR code of more information

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A futuristic, dark blue-toned scene depicting an AI-powered railcar inspection. A train of railcars is moving along tracks, with a complex network of white and blue lines and beams overlaid on the scene, representing the AI's scanning and data processing. The background is a dark, industrial-looking structure with various pipes and equipment. The overall atmosphere is high-tech and futuristic.

AI-POWERED RAILCAR INSPECTION

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