Trimble Rail Asset Lifecycle Management Solutions

TRIMBLE. INTELLIGENCE IN RAIL.

Trimble

Trimble
RAIL ASSET LIFECYLE MANAGEMENT

Delivering intelligent asset data to improve utilization and reliability

Passenger and freight rolling stock operators understand the implications of asset failures. When components fail unexpectedly or maintenance is poorly managed, operational issues arise resulting in poor asset utilization.

Not identifying failures in a timely manner, preferably before they happen, can mean increased delays or even cancellation of services, resulting in possible penalties, extra costs and loss of revenue. And failures can also lead to safety issues, a major concern.

Trimble is working with the rail industry to meet these challenges by delivering solutions that significantly improve work practices within operations and maintenance.

DELIVERING INTELLIGENT ASSET DATA TO ROLLING STOCK PASSENGER & FREIGHT OPERATORS

Increase the value of rail data and act on insights

Trimble's rail asset lifecycle management products manage the lifecycle of rail transport assets from operations through to maintenance and repair. Using this comprehensive portfolio of on-board and wayside condition monitoring solutions, rail companies can improve operational efficiencies, increase safety, manage service levels, and reduce costs.

Trimble rail solutions are relied on by rail operators worldwide to deliver actionable insight from data. Implementing Trimble's end-to-end rail asset lifecycle solutions to maintain rolling stock assets, from remote diagnostics and condition monitoring, to predictive analytics and engineering asset management, improves operational efficiencies and performance.

Trimble Nexala Solutions
REMOTE DIAGNOSTICS, IN-SERVICE PERFORMANCE, & ENGINEERING ASSET MANAGEMENT

Utilize on-train equipment and cloud-based software to deliver real-time fleet-wide remote diagnostic information

The Trimble® Nexala range of solutions are used by engineering, maintenance, and fleet operations managers of train operating companies to optimize maintenance programs, increase asset utilization, and improve fleet management. Trimble R2M real-time remote diagnostics solution reduces maintenance costs by decreasing staffing time to address faults. Trimble R2M's powerful rules engine with customizable rules provides fully configurable technical and operational warnings and alerts which drives reliability growth and mitigates failures.

Enterprise-wide systems that facilitate efficient running of maintenance and asset management

Trimble E2M unified system for engineering asset management allows efficient workshop management and defect reporting, enabling the effective planning of maintenance across depots, resources, and material requirements. This improves work utilization and resource planning while reducing an organization's operating costs.

In-service planning and performance management system for operational excellence

Trimble P2M performance planning and management system utilizes timetable, actual vehicle location, and real-time in-service diagnostic information to identify the root cause of delays and to plan journeys for optimum timetable adherence and fuel usage.

Trimble Beena Vision Solutions
WAYSIDE CONDITION MONITORING OF ROLLING STOCK

Automatically capture and analyze rolling stock condition to flag potential issues before they happen

The Trimble Beena Vision® range of wayside mounted non-contact measurement and inspection technologies allows the automated, proactive monitoring of rolling stock condition, providing data feeds that can be processed to effectively assess rolling stock condition from component level to full train inspection.

These solutions maximize the life of expensive components like wheelsets, enable maintenance cost savings, prevent costly incidents, decrease operational delays, and increase the predictability of long term maintenance scheduling.

Achieve maintenance improvement and minimize derailment events using wayside condition monitoring data

Trimble WISE software is a condition monitoring data management platform which provides a comprehensive unified interface to all data gathered by wayside condition monitoring systems. Data from various types of wayside detectors including systems provided by Beena Vision and from other suppliers can be seamlessly integrated within WISE to rapidly assess rolling stock component condition.

Trimble TrainWatch software is a virtual train inspection portal developed to provide a comprehensive train inspection environment where the train inspector is able to inspect a full train using data gathered by wayside equipment.

▶ Trimble R2M System
REAL-TIME REMOTE DIAGNOSTIC MONITORING

Trimble R2M system provides a comprehensive view of fleet status including specific on-train faults, recommended actions, and it identifies potential faults that may arise in the future.

▶ Trimble P2M System
PERFORMANCE PLANNING & MANAGEMENT

Trimble P2M system uses timetable, vehicle location, and real-time in-service performance diagnostic data to plan for optimal timetable adherence and fuel efficiency.

▶ Trimble D2M System
ROLLING STOCK RESOURCE ALLOCATION

Trimble D2M is a rolling stock allocation and management system that provides on the day control of resources to maximize utilization and delivery of rail services and minimize disruption.

▶ Trimble WheelView System
WAYSIDE WHEEL PROFILE MEASUREMENT

Trimble WheelView® wayside system measures wheel profiles of moving trains for derailment prevention, preventative maintenance and scheduling, and to reduce track/rail damage caused by worn wheels.

▶ Trimble TreadView System
WAYSIDE WHEEL TREAD & SURFACE INSPECTION

Trimble TreadView® system is a sophisticated automatic non-contact optical wheel surface inspection product that inspects wheel tread surface, flange, and plate areas at mainline speeds.

▶ Trimble TrainView System
FULL SCALE TRAIN IMAGING & INSPECTION

Trimble TrainView® full scale train imaging and inspection system consists of multiple line and area scan cameras that provide images of the train at mainline speeds with high resolution.

▶ Trimble E2M System
ENGINEERING MAINTENANCE MANAGEMENT

Trimble E2M rail engineering asset and maintenance system manages assets and components, streamlines parts and materials usage, and optimizes resources and procurement.

▶ Trimble C2M System
COMPONENT CONDITION MONITORING

Trimble C2M system provides full condition monitoring of key components, such as wheels and brakes, reporting on defect identification, wear detection, and automating maintenance planning.

▶ Trimble CAS Cab Advisory
IN CAB ADVISORY

The Trimble CAS cab advisory system is an on-board solution that informs drivers about train performance, adherence to timetable, energy efficiency, and advises of in-service corrective actions for improved operations.

▶ Trimble TruckView System
WAYSIDE TRUCK (BOGIE) INSPECTION

Trimble TruckView® wayside truck (bogie) inspection vision-based system operates at mainline speeds using high-speed and high-definition imaging for inspection and measurement of trucks.
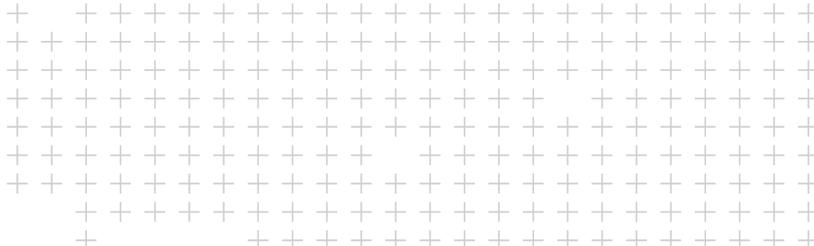
▶ Trimble BrakeView System
WAYSIDE BRAKE MEASUREMENT

Trimble BrakeView™ automatic wayside vision-based systems measure and inspect brake shoes (blocks), pads, or disc profiles at mainline speeds using high-speed digital imaging.

▶ Trimble CSCView System
WAYSIDE UNDERCARRIAGE INSPECTION

Trimble CSCView® undercarriage imaging and automated inspection system produces high quality images to inspect undercarriage structural components of railcars (wagons) and locomotives at mainline speeds.
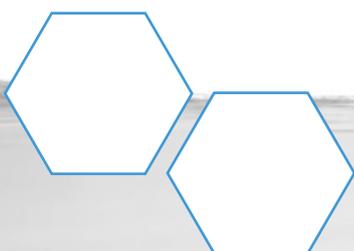
®Trimble

About Trimble

TRIMBLE. INTELLIGENCE IN RAIL.

Trimble's rail solutions combine the latest in sensors and monitoring technologies with customized software and wireless communications to quickly and accurately capture the data needed to maintain and construct rail infrastructure or to manage rail transport assets.

Trimble's rail asset lifecycle management products manage the lifecycle of rail transport assets from operation through maintenance and repair. In 2014, Trimble acquired Nexala of Dublin, Ireland, providers of data aggregation and analytics tools for engineering and operations of rolling stock. In 2017, Trimble acquired Beena Vision of Atlanta, Georgia, a manufacturer of vision-based automatic wayside rail inspection systems. Using this comprehensive portfolio of on-board and wayside condition monitoring solutions, rail companies can improve operational efficiencies, manage service levels and reduce costs, while ensuring that service is maintained to the highest level. Customers using Trimble solutions include major freight operators such as BNSF, Aurizon, Norfolk Southern, and Canadian National as well as many passenger operators such as South Western Railway, Eurostar, SNCF, Irish Rail, the Go-Ahead group, Arriva, and Greater Anglia among others.

For more information, visit:
rail.trimble.com
www.trimble.com/nexala
www.trimble.com/beenavision

TRIMBLE
NORTH AMERICA
10368 Westmoor Dr
Westminster, CO 80021
USA
+1-716-9895-981 Phone

NEXALA
EUROPE
Fenward House, Arkle Road
Sandyford, Dublin 18
IRELAND
+353-1-539-8700 Phone
+44-203-290-9350 Phone

BEENA VISON
NORTH AMERICA
600 Pinnacle Court
Norcross, GA 30071
USA
+1-678-597-3156 Phone

AUSTRALASIA
Level 1, 23 Peel St
Adelaide, SA 5000
AUSTRALIA
+61-435-844-409 Phone

EMAIL & WEBSITE
rail@trimble.com
rail.trimble.com
www.trimble.com/nexala
www.trimble.com/beenavision

Trimble