

Trusted. Reliable. Secure.

Railway IoT



ZTRTM

Railway IoT Solutions

Connect locomotives and railway equipment for optimized performance.

Complex **Railway IoT** Made Simple.

Managing your railway competitively means connecting to your equipment and data driven decision making. As Railway Internet of Things (IoT) experts, ZTR has created cost effective and flexible solutions to get you connected and drive efficiency in your operations from locomotives and rail cars, to maintenance and yard equipment.

The ZTR Railway IoT solutions easily integrate with locomotive equipment and your business systems with rugged hardware, responsive user interface, and an advanced data network. From simple asset tracking and remote monitoring solutions, to full health diagnostics for your locomotives and industrial railway equipment, we can help ensure that all of your assets are optimized for better performance through data driven decision-making.



What you get with a ZTR Railway IoT Solution

Benefits

- Seamless integration with your equipment and business systems, regardless of OEM or model
- View and manage health and performance of locomotives and other railway assets, in a single view
- Know the location of your locomotives and other railway assets with remote monitoring and GPS
- Get alerts on equipment health and location
- Select from a range of hardware, designed for the rigors of the railway
- View information remotely, on any device with a web browser and an internet connection
- Create maintenance plans by receiving notifications and assigning the closest team
- Customize and schedule reports to get insights on performance issues
- Get expert assistance with remote diagnostics and troubleshooting in real time
- Improve your equipment uptime by taking corrective action based on data, not opinions

Understanding both the **Railways** and the **Industrial IoT** allows ZTR to be an experienced provider of Railway IoT with customized solutions to fit your railway needs.



Maps, Alerts & Mobile Tools

Getting data from your locomotives, rail yard equipment and business systems, all in one place can be a challenge. ZTR brings the information together in a way that fits naturally with your workflow.



Maintenance & Operations Planning

Planning and recording maintenance can be labor intensive, with inefficiencies from manual paperwork, lack of information, non-compliance and missed work due to technician errors. ZTR brings equipment data, plans, and records into the same user interface to save labor expense, make tasks simpler, and speed up response time.



Analytics & Reports

Becoming a data-driven company requires a connection to your railway equipment and intuitive business insight tools. ZTR analytics will uncover new operational efficiencies and growth opportunities.

Locomotive Solutions

When **reliability**, **availability** and **maintainability** of your locomotive fleet is critical to your railway operations, it is important to have **connected locomotives**.



Equipment Health

Whether it's reducing the time taken to diagnose locomotive faults, using health and fault data to reduce shop time, or trending data to better predict issues, it all contributes to maximizing locomotive availability.

ZTR Railway IoT solutions integrate with multiple enterprise systems to provide valuable data on fleet health, location, runtime, and diagnostics, in one place, to allow fleet managers to make timely decisions, save money and reduce resources.



Operations Safety and Security

Whether it's connecting to, monitoring adherence to operating practices, or alerting on key parameters, remote access to equipment utilization data can provide railway operators information on crew behavior and other key metrics needed to proactively increase operational efficiencies.

ZTR Railway IoT solutions capture operating data and perform on-board processing to produce high-value alerts and reports for PTC compatibility and to increase the efficiency and safety of your fleet.



Fuel Management

Optimized fuel usage is critical to the effective management of a locomotive fleet. Whether it's tracking fuel savings with an AESS or remotely monitoring locomotive fuel usage, more information allows fleet managers to optimize fuel usage and make data driven decisions.

ZTR Railway IoT solutions allow you to receive real time information, reports and alerts on fuel fill events, fuel levels, fuel usage, fuel theft events, idling information, fuel savings, and the potential for greater fuel savings. This allows you to optimize your use of fuel and reduce operational costs.



Asset Utilization and Reporting

Regardless of your IoT strategy, the most important aspect is to just get started. Even the smallest amount of data can have an impact on your operations.

ZTR Railway IoT solutions connect with devices that allow you to gather data and generate reports with existing systems. These solutions can later expand with full health diagnostics. This allows you to start assessing usage trends to make better decisions now, with the potential for advancement in the future.



Integration with Enterprises Systems

Railways often have solutions from many different suppliers on-board. Data collection is done manually and is challenging or solutions to off-board safety data from on-board systems can be restricted or proprietary.

ZTR Railway IoT solutions consolidate, analyze and communicate locomotive information from systems like event recorders, locomotive interface gateways, LDARS equipment, or other locomotive sub-systems, for optimized operations, maintenance and safety.

Other Railway Asset Solutions

Manage and **optimize** your railway operations in one place, with connected railway support equipment.



Rail Yard Equipment

Improved Asset Location Monitoring – Whether big or small, mobile or stationary, keep track of it by monitoring the location and usage of your rail yard equipment, so it's ready when you need it.

Advanced Usage and Maintenance Tracking – Easily track the usage and maintenance of critical equipment with regular mobile reports that you can share to ensure that your equipment is always available.



Rail Cars

Cost-effective Asset Monitoring and Supply Chain Management – Track the location of your goods and choose how to share this information with other members of the supply chain.

Reduced Maintenance Costs – Switch to usage-based maintenance schedules, prevent unneeded work, and reduce breakdowns by tracking the location, usage and health of your cars.



Maintenance of Way (MOW) Equipment

Asset Health Monitoring – Remote access to diagnostics from critical systems allows you to increase asset availability, avoid costly delays, and improve equipment utilization.

Improved Troubleshooting – Asset usage, and accurate location tracking information to help you detect problems sooner, troubleshoot in the field and increase the uptime of your equipment.

Maintenance Planning – Create maintenance schedules on-line and manage alerts to increase efficiency and usage of the assets for a maximum ROI.

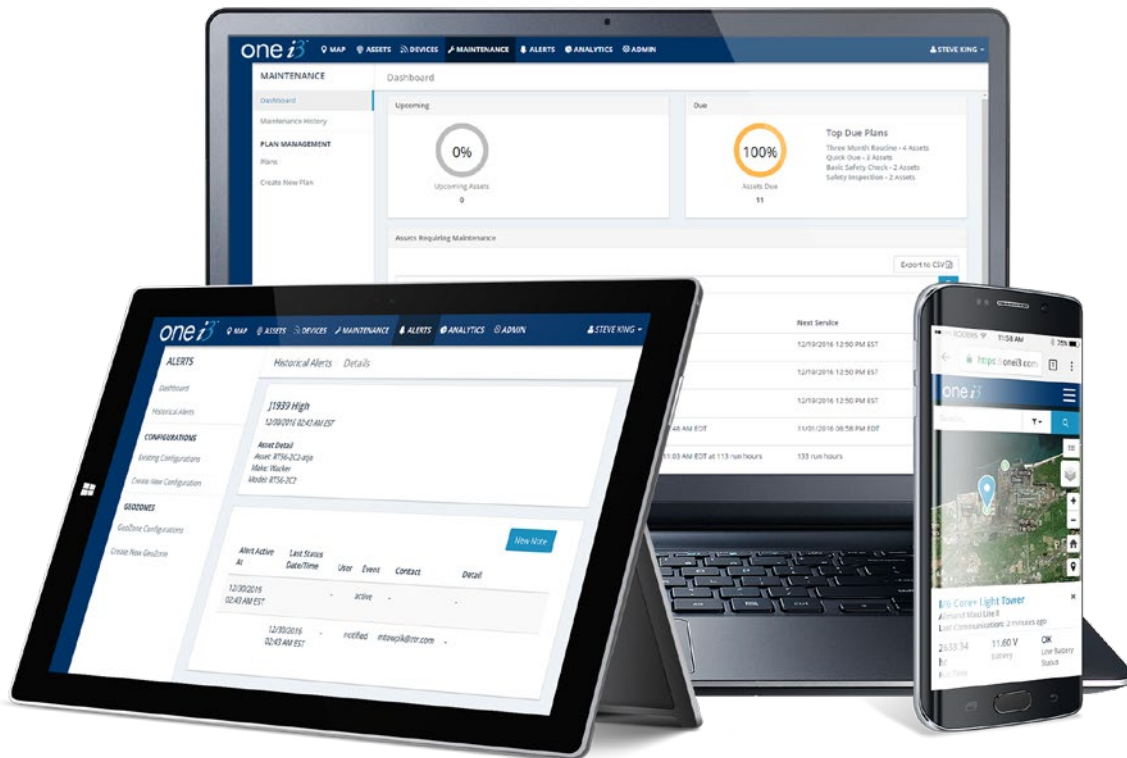
As a **global leader** in industrial asset management, we have extensive experience in creating solutions for the **Industrial IoT**.

Benefits of working with ZTR:

- Over 300,000 assets monitored world wide
- Customized solutions backed by 24/7 technical support
- Nearly 30 years as Locomotive Modernization Experts
- Multiple solutions to meet the needs of your locomotive fleet and railway equipment

In addition to being Locomotive Modernization Experts, our extensive experience allows us to provide a variety of solutions for your locomotive and railway equipment that are customized to your business with the information you need.

One place for **all of your** equipment data.



Integrated. Intelligent. Interactive.

You can count on ZTR to connect your locomotives, railway equipment and business systems. We'll take care of the ever-changing Industrial IoT world, so you can focus on using the equipment data to grow your business.

Contact your ZTR Account Manager today for more details.

1-952-233-4340