The Wi-Tronix Ecosystem:
A Platform-Based Solution

Enabling railroad operators to view and analyze consolidated locomotive data points in real-time, the Wi-Tronix platform-based solution is anything but a stationary box. Experience a complete view of your rail operations, including a comprehensive replay of events for safety and risk analysis.

A single solution built for continuous improvement

The Wi-Tronix Violet ecosystem is comprised of the edge platform and the cloud platform. The edge — located onboard — is supported by cloud-computing technologies. Together, they create one fully functional ecosystem with countless business use cases.

Violet Edge Hardware

Our Violet Edge hardware devices provide reliable access to data, enabling quick decision making, increasing safety, and improving operational efficiency.

- A self-monitoring ER, DVR, and CHMM
- Connected edge AI & ML processor (for reporting and alerting)
- Cameras with IR & VR capability and visual intelligence, enabling users to virtually See, Hear, Feel, & Experience
- Energy management:
    - Fuel sensor, fuel displays, and battery monitoring
    - Operator assisted systems

Violet Edge Software

Advanced software solutions process on the edge to provide business insights and analytics in real time. Dynamic data processing integrates asset, train configuration, GIS, and other specified data sources to improve planning and operational safety.

As a connected solution, data is continuously synced to the cloud, eliminating the need to physically connect to the onboard event recorder.

Visit www.wi-tronix.com or contact us at sales@wi-tronix.com for more information.

Built to grow with your operations

The Wi-Tronix hardware, software, and cloud-computing ecosystem records hundreds of locomotive and video data sets, seamlessly merges this critical onboard data with additional subsystem data, and provides users with a single, time-synchronized view monitoring solution.

Layered on the collected data is edge-computing technology: users receive actionable alerts in real time that can directly affect the safety, reliability, and operational efficiency of a fleet. Don't be alerted of what happened on your rail network after the fact: experience what's happening as if you're personally seeing, hearing, and experiencing it yourself.

Cloud computing
Securely store, retrieve, and analyze data from anywhere, anytime, from any device to provide valuable insights that maximize the utilization of your locomotives.

- Common user experience for diverse data sets
- Data visualization tools
- SOC 2 Type II-compliant attests Wi-Tronix provide security, availability, processing integrity, confidentiality, and privacy

Comms wireless data transfer
A multi-mode communication solution that includes the use of commercial cellular networks and the customer's Wi-Fi infrastructure, with optional satellite capability.

- Data is continuously synced to the cloud
- Efficient two-way wireless communication designed for mobile assets using standard IP protocol stack
- Tower routing and wireless switching for seamless, reliable communications

Fuel savings and operational efficiency
Experience real-time locomotive operational, crew, and fuel usage monitoring and reporting. Wi-Tronix reports and alerts include Engine Idle, Throttle Brake, Engineer Initiated Emergencies, AESS Monitoring, Penalty/Alerts, Locomotive Utilization, Trip Reports, and Fuel Performance by Engineer, Asset, and/or Train.

Regulatory compliance assistance at your fingertips
Identify and reduce at-risk behavior and ensure compliance to both internal best practices and federal regulations. Have immediate access to locomotive and video data and video or utilize historical data for incident investigation purposes.

Maintenance
Identify maintenance needs before the occur with locomotive engine and vehicle control systems data, alerts, reports, shop scorecard, and configuration management tracking of connected devices.

Incident reporting
Begin incident investigations immediately with automatic downloads of event recorder and DVR files triggered by alerts and On Demand requests.

Distinctly rugged, modular hardware
Connect to locomotives regardless of age or manufacturer, all in one central place.

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