Real-time Health Monitoring of Railroad Wayside and On-board Equipment
Asset Monitoring with an Innovative Touch

Our railroad-proven Digital Storage Oscilloscope (DSO) cost-effectively logs and monitors every critical aspect of rail infrastructure. It securely communicates the captured data to the maintenance server, and ensures all data is properly conditioned to obtain an optimum data format. Our family of DSO products are compatible with a wide range of non-invasive current, voltage, pressure, temperature, strain gage, and fluid level transducers. Each DSO provides multiple mixed analog and digital channels, providing every piece of connected wayside and on-board equipment with real-time and continuous health monitoring 24 hours a day, every day of every year.

Good Data In, Good Data Out

For any organization seeking to extend its maintenance regime to include predictive maintenance capabilities, the DSO is the key component to consider. The key feature of DSO is that the raw field data is properly formatted and conditioned, so that failure predictions is accurate, no matter the analytics platform selected.

What does the DSO do?

The DSO module is a compact, high speed data logger capable of collecting and conditioning captured data. The DSO provides a clean and accurate measurement of actual field conditions as they occur in a production railroad environment. The DSO affords a common platform to capture real-time data from any number of potential data sources including power switch machines (mechanical and hydraulic), track circuits (all types and varieties), interlockings (microprocessor and relay-based), battery banks and battery cells, grade crossing equipment, trip stops, catenary tensioning devices, on-board door systems, on-board HVAC systems, elevator/escalator motors and controls, and virtually any other electro-mechanical appurtenance utilized in your operation. We can even monitor the actual resistance to ground of all voltage sources, ensuring cable integrity to your vital signal and propulsion systems.
As an example, a single DSO may be configured to capture data from four mainline power switch machine motors, their associated track circuits, and measure the temperature of a bank of batteries. The number of potential data sources captured by each DSO lowers the per point cost of the logger, providing an incredibly low-cost method to monitor real-time field conditions.

Where does the data go?
Depending on the DSO configuration, up to 8 analog or 26 digital sensors can interface to a single DSO. Additionally, DSO’s can be networked together to form even larger configurations. Large volumes of captured, real-time data is communicated from each DSO module to a central maintenance server located either behind your firewall or optionally through secure access to our hosted server. Built-in ethernet and a cellular modem provides convenient data communication to Centrix, our server-based application used to aggregate all data sources.

What is Centrix?
Centrix is a data aggregator platform residing either behind your firewall on a dedicated maintenance server or optionally accessible through our hosted web service. Centrix provides a common communication protocol to access each fielded DSO module. It also provides a common interface point to your 3rd party data analytics platform. Additionally, Centrix is equipped with a powerful condition-based monitoring capability of its own and includes graphical replay and fault prevention of detected events. Centrix allows for an entire network of DSO modules to be programmed to monitor a variety of analog/digital inputs and feed all the data into a single platform for additional analysis and fault prediction.
About TekTracking

We are an Asset Management Technology Provider servicing passenger and freight rail operators throughout North America. Our products and solutions address asset management issues faced by railroads worldwide.

We offer a proven solution to railway asset management by combining our technology, services, and the best in class partner solutions to decrease railroad operating costs. TekTracking has assembled a comprehensive solution set to meaningfully reduce railroad operating costs attributed to 2/3’s of a railroad’s operating budget!

Set up a Field Demonstration

Call (toll free): 855-655-8600
Email: sales@tektracking.com