



TRAINwise
Powered by QuesterTangent

Monitoring and control solution



TrainWise is a flexible, comprehensive solution for passenger trains and locomotives that employs leading edge technology in a rail-robust package. This suite provides a unified interface to monitor and manage all on-board electronic vehicle systems. This means easy integration for rail manufacturers, enhanced operational and maintenance management for transit authorities, and a superior passenger experience.

Rising to the challenge

Fleet operators today face significant challenges including aging infrastructure and vehicle fleets, plus a growing demand for safer and more efficient transit. These ongoing pressures must also be balanced within economic realities.

Many current fleets are plagued by a lack of interoperability and component failures that cause unwanted downtime, reduce efficiency and compromise reliability. In addition, the corresponding lack of long-term support can significantly affect revenue service.

An on-board centralized system that monitors, controls and diagnoses problems with vehicle systems is vital to address the challenges of rail manufacturers and transit authorities.

Flexible solutions for complex needs

Quester Tangent is a trusted partner with over 20 years of industry expertise and service-proven installations. Our TrainWise monitoring and control solution is designed with modular, reliable technology that integrates with new or existing train equipment.

Our TrainWise monitoring and control offer provides operators and maintainers with a simple centralized system of servers, operator displays, controllers, and event recorders. This smart solution increases fleet interoperability, expedites maintenance, and ultimately enhances revenue service.

Coupled with Quester Tangent's system integration and project management expertise, this flexible, scalable architecture helps rail manufacturers reduce procurement risk and provides you with powerful tools to respond to customer needs both now and in the future.

Operational benefits



A complete, integrated solution

Purchase products individually or as a fully-integrated suite. Have your engineers develop software for our powerful touchscreen display or let Quester Tangent provide you with our own applications. TrainWise monitoring and control components can be configured in myriad ways to provide a complete solution to your needs. Our modular approach supports high levels of customization and functionality.



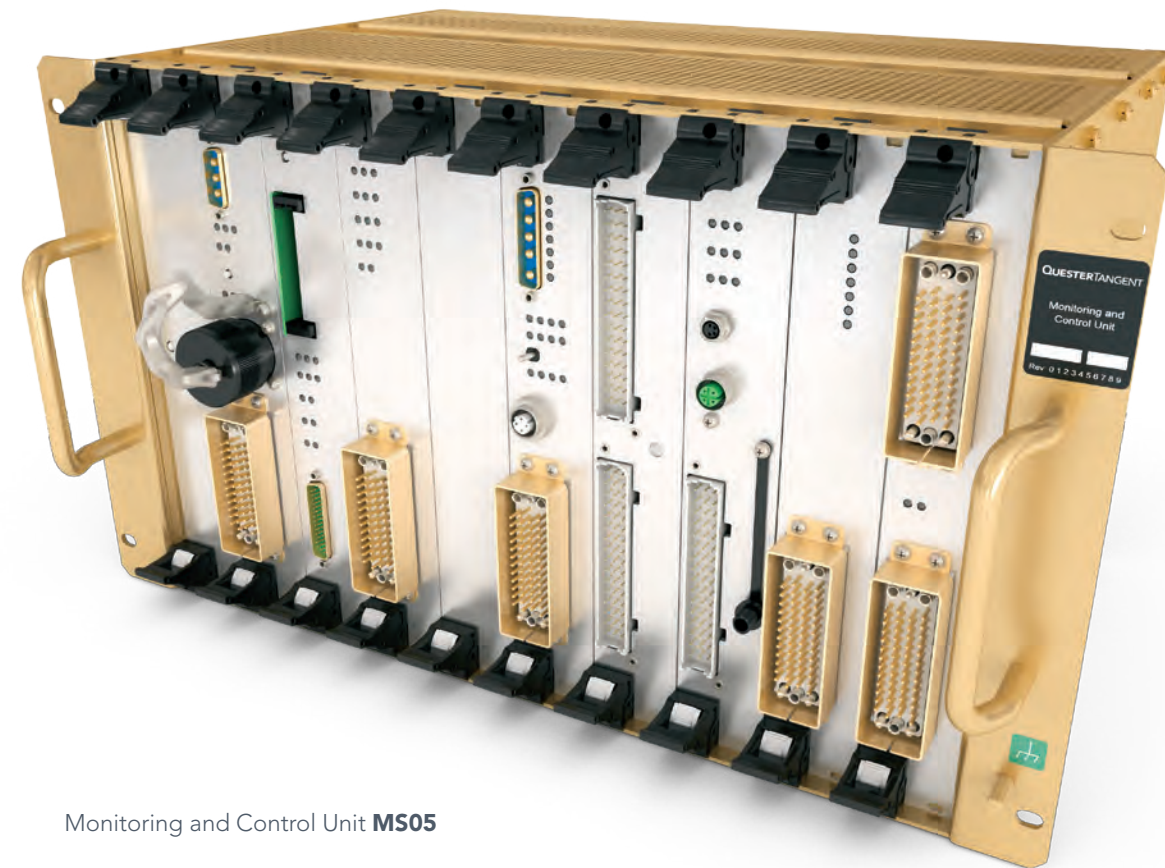
Better train visibility and flexibility

Change how your train data are collected, reported, stored and accessed whenever you like. Display data in formats and views that are relevant to personnel roles and workflows. Keep operators and maintainers up to date on train status and fault conditions and alert staff about important events. Fast and easy access to meaningful real-time or archived train information improves operational efficiency.



Global view of operational data

See the status of every vehicle subsystem on the train. Intuitive, color-coded screens give train operators easy access to detailed information – everything from cabin temperature and door status, to brake pressure and propulsion faults. This global data view supports a swift response to operational issues for less idle time, fewer delays, and happier passengers.



Monitoring and Control Unit **MS05**

Long-term benefits



Improved maintenance at your fingertips

Enable rapid on-board troubleshooting. Give maintainers access to detailed diagnostic information through cab displays and our optional **TestWise** test equipment. Create custom, automatic alerts that provide advance warning about potential problems. This powerful array of tools promotes a proactive approach to maintenance and increases fleet availability.



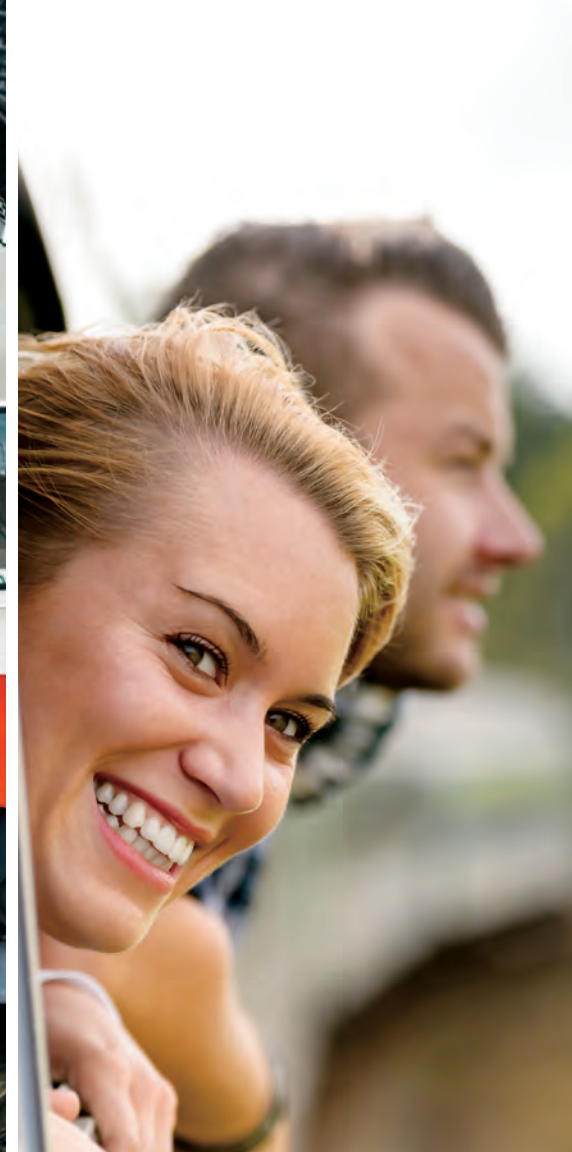
Lasting peace of mind

Future-proof your operations. Quester Tangent intelligently deploys processors and electronic components at the correct time in their life-cycle with future expansion in mind. We are thinking ahead so you can add functionality, minimize obsolescence, and extend the service life of your fleet.



Built-in investment protection

Reduce your total cost of ownership. All TrainWise monitoring and control equipment is backed by our **2/20/40** life cycle support program which includes an active **two year** warranty for new products, **20+ years** extended support and **40+ years** modernization support. This comprehensive approach maximizes the useful life of our on-board products. We are there to help throughout the life of your vehicle.





Server products

Displays

Providing a window into the integrated monitoring and control system, TrainWise displays are elegant, easy to use, and ruggedly designed for the on-train environment. TrainWise offers a wide range of display products suitable for train operators and maintenance personnel, from compact and simple to fully integrated touchscreen units with on-board processing, Ethernet communications and discrete I/O.

All TrainWise displays incorporate a graphical user interface that can be tailored to the needs of fleet operators.



Monitoring and Control Servers

As the engine behind monitoring and control, a TrainWise server collects, manages, stores and delivers data to provide easy and seamless management of the train consist electrical systems.

This rich and powerful line of servers provides functions from real-time data management and event logging to fault logic processing.

TrainWise servers address a broad range of train types and electrical systems through flexible, configurable packaging and interfaces.



Controller products

I/O Controller

The TrainWise I/O controller is a robust and reliable product that monitors and controls a wide range of electrical signals on the train.

Discrete I/O circuits are galvanically isolated for safe operation within the harsh train environment. In addition, I/O is configurable to interface with a variety of systems.



Headlight Controller

The TrainWise headlight controller operates on a wide range of common train voltages to adapt to many vehicle types. It controls headlights or auxiliary lights in compliance with FRA requirements.

This product can also monitor and report light status via cab indicators, monitoring systems or event recorders.



Event Recorder Controller

The TrainWise event recorder meets both FRA and IEEE standards for North America.

This product collects information about train control systems, driver activities and vehicle performance, and stores it in a crash hardened memory module. Recorded data provides vital information following a crash or as an input for preventative maintenance programs.



Customer Highlights

Proudly supplying:



Partner in operational efficiency

Founded in 1983, Quester Tangent is a leading North American supplier of train electronics and software solutions for the passenger rail and locomotive industries. Quester Tangent features a complete portfolio of rail technology products: **TrainWise**, flexible on-board train and locomotive electronics, **FleetWise**, innovative wayside software and **TestWise**, comprehensive test equipment products.

The TrainWise suite encompasses monitoring, diagnostic and control products, event recorders, on-board trainline and wireless network communications, passenger information systems, and CCTV products. This service-proven turnkey solution provides rail manufacturers and transit authorities with superior reliability, improved operational performance, advanced diagnostics, and enhanced rider comfort and peace of mind.

Contact Quester Tangent today at 1 855 510-7837 and find out how a TrainWise monitoring and control system will help you.

QUESTERTANGENT
Delivering Train Electronics

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Quester Tangent is registered to ISO 9001:2008, CMMI Level 2 SCAMPI A ready.