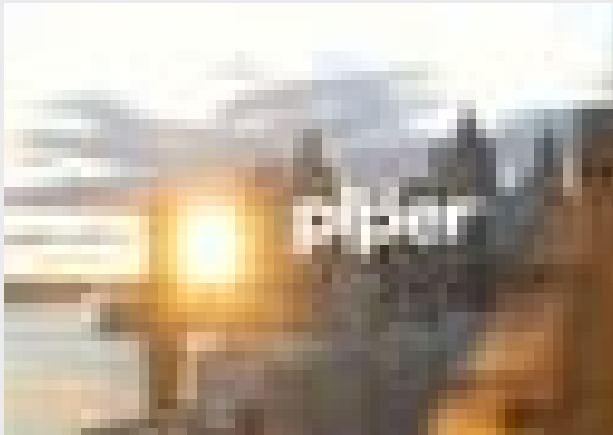




Reliably Innovative Transit Solutions

Piper Networks is an innovative rail engineering solutions provider and systems integrator specializing in the development of transportation technologies. We have four primary product lines that serve the industry, including: Vital Train Positioning, Maintenance of Way (MOW) Protection, Automatic Train Protection (ATP), and Passenger Information Display Systems (PIDS). Our proprietary Ultra Wideband (UWB), GPS-RTK, and patent-pending TrackSight™ LiDAR image positioning technology are designed to operate in some of the most challenging transportation environments while maintaining pinpoint accuracy that improves performance for train operators and train control suppliers.



Vital UWB Train Positioning

Piper has developed the world's first SIL4 Safety Certified Ultra Wideband (UWB) Positioning System. Piper's ETLST™ (Enhanced Transit Location System) uses UWB Technology to track the location and movement of trains, vehicles, equipment, people and other objects in real-time for various location awareness needs. Piper believes that the use of UWB in train control systems is an important evolutionary leap forward for signaling. Because UWB equipment is installed on the wayside and in the interior control cabinets on the train (as opposed to the track bed and the undercarriage of the rolling stock), the positioning systems required to manage train headways can be deployed faster, at lower cost, and with minimal disruption.

[Download Whitepaper to Learn More](#)

TrackSight™ LiDAR Positioning



TrackSight™ is Piper's latest innovation that employs patent-pending positional imaging to determine the location of trains and other vehicles within transit systems. The train-centric solution is the next evolutionary step that moves rail operations from the trackbed to the train itself which makes deployments and maintenance faster, safer and more cost effective. TrackSight™ is a fully deterministic solution that uses Piper's Solid State LiDAR technology to compare real-time imaging to an onboard database. It can also be installed alongside UWB and provide consistent and redundant positioning data to an onboard CBTC system. And because it requires no track or wayside components, installation and maintenance costs are dramatically reduced.

[Download Whitepaper to Learn More](#)



Helix™ MoW Solutions

Helix™ is an advanced, multi-sensor Limits Compliance and Collision Avoidance System (LCCAS) that uses LiDAR, UWB and other positioning technologies. The Maintenance of Way (MoW) safety solution allows for fleets of rail-bound and hi-rail equipment to be accurately detected and tracked on the railroad in real-time, thereby reducing the potential for worker injury, equipment damage, and operational disruptions resulting from accidents or major rule violations. The solution provides: Limits Compliance, Collision Avoidance, Collision Detection, Object & Worker Detection, Live HD Video, and Real-Time Employee-in-Charge & Operator Communication.

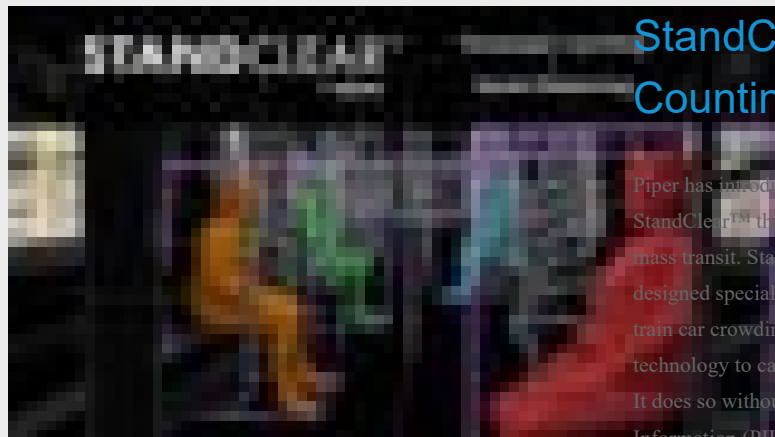
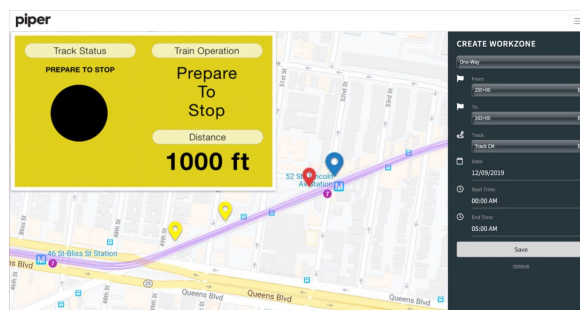
[Download Whitepaper to Learn More](#)

SecureTrack™ Work Zone Awareness

Piper's SecureTrack™ solution allows for remote, real-time set up

of dynamic work zones. An in-cab alerting system delivers audio/video alerts to train operators indicating proximity to the approaching flagging points. Railway workers are positioned in the system with the use of UWB wearables on their PPE that communicate passively with a portable base station. Track work leaders are issued ruggedized handheld Android devices so that they can communicate directly with the train operator, letting them know when they can release the train and resume movement. The system was designed in accordance with industry standard flagging rules.

[Download Whitepaper to Learn More](#)



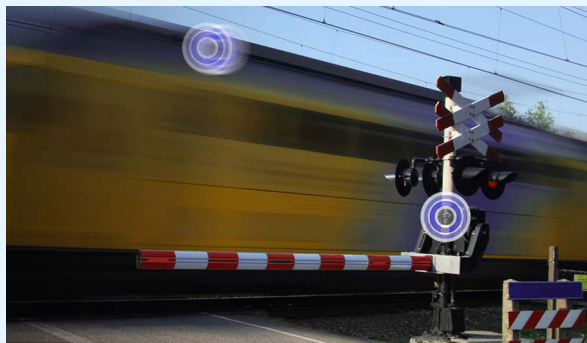
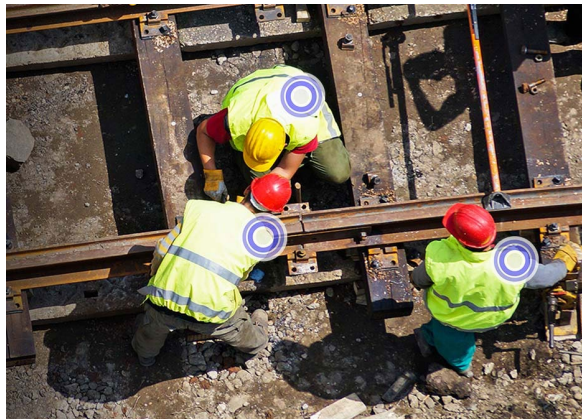
StandClear™ Passenger Counting

Piper has introduced a new social distancing solution called StandClear™ that will renew confidence for passengers to return to mass transit. StandClear™ is a passenger counting solution, designed specially for transit agencies, that uses LiDAR to detect train car crowding. The solution uses Piper's Solid State LiDAR technology to capture passenger crowding on trains and platforms. It does so without compromising Personal Identification Information (PII) or by capturing facial recognition information. The valuable data is communicated in real-time to riders via mobile applications and our newest innovation, LED light pipes on the platforms. This information will direct passengers where they can stand so they can choose to board less crowded cars and improve their social distancing efforts.

[Download Whitepaper to Learn More](#)

Track Worker Safety

Two-way communication between devices on trains and wearables worn by workers trigger safety alarms and lights to warn of the proximity between trains and workers. Flashing strobes in the cab and on worker armbands or vests create simultaneous passive alerts to help avoid injuries. This same technology can be used to locate workers in the event they are lost or incapacitated.



Grade Crossing Detection

Piper's Grade Crossing Detection system uses Ultra-wideband and LIDAR to detect if people or vehicles that are entering a grade crossing could potentially cause a safety issue. Ultra-wideband devices on the train and at the crossings communicate with each other in real-time and trigger the train and operator to follow the appropriate safety protocol.

Solutions

ETLS Train Positioning
Track Worker Safety
Grade Crossing Detection
Data Communications
Warehouse Asset Tracking
ViTRACE™

Benefits

About

About Piper
Case Studies
Terms of Service
Privacy Policy

Contact

Piper Networks
3636 Nobel Drive
Suite 300
San Diego, CA
92122

Copyright © 2021 Piper