

TRACKSIGHT™

by piper

TRAIN-CENTRIC LIDAR POSITIONING TECHNOLOGY

TrackSight™ is Piper's latest innovation, utilizing patented LiDAR positional imaging to determine the location of trains and other vehicles within transit systems. This technology represents a significant advancement by moving rail operations from the trackbed to the train itself, resulting in faster, safer, and more cost-effective deployments and maintenance.

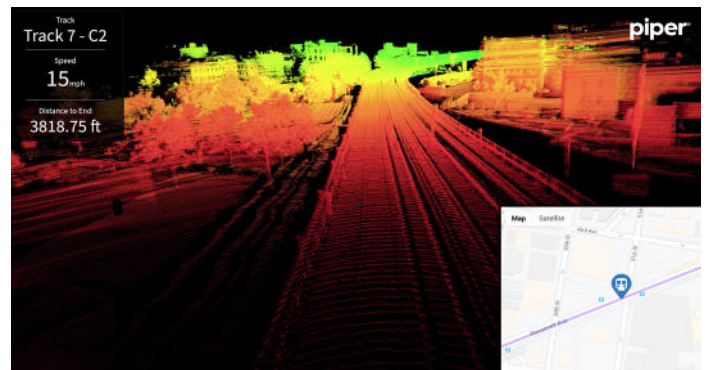


The TrackSight™ device is a small, solid-state LiDAR.

Understanding the precise location of rail-bound vehicles on a track is paramount to ensuring safe operation of the railway system. One of the main challenges for transit operators today is installing and maintaining trackbed or wayside equipment for these solutions. Typically, this process is tedious to complete, requires expensive equipment, and can be hazardous for workers.

TrackSight™ requires no track or wayside components resulting in faster, easier and safer train positioning.

TrackSight™ is a fully deterministic solution that leverages Piper's Solid State LiDAR technology to compare real-time imaging to an onboard database. This train-centric solution offers precise positioning, even in dark tunnels, where various objects and reflective paint can serve as reference points.



TrackSight™ provides highly detailed, real-time images.

Piper has paid attention to the rail industry's stringent safety requirements and the need for interoperability to make the technology easy to integrate and deploy. Unlike AI or machine learning technologies, this design is safety-certifiable to a Safety Integrity Level 4 (SIL-4) standard. Furthermore, the data structure is compatible with the positioning data provided by Piper's other systems, such as those using Ultra Wideband (UWB) and GPS-RTK. It can be installed alongside those systems and provide consistent and redundant positioning data to an onboard CBTC system, for example. As it doesn't require any track or wayside components, installation and maintenance costs are significantly reduced.

Piper's TrackSight™ LiDAR system also offers object and worker detection capabilities. It can calibrate its field of view to detect any potential obstacles in the direction of the track, ultimately preventing collisions with the operating vehicle.

