



# Track Intrusion Detection System

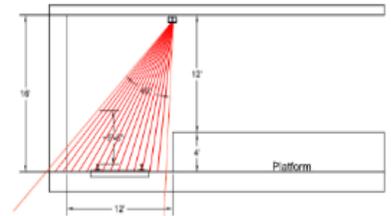
## Intelligent Platform Monitoring Solution

duostech Track Intrusion Detection System (TIDS) monitors transit track within a passenger station to detect and characterize the presence of people and objects who enter or fall onto the track bed.

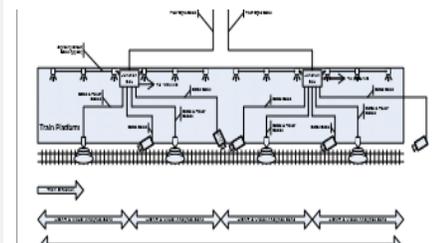
Our turn-key answer for track intrusion monitoring includes the system design and all related hardware components (mechanical, electrical, communications) and software to successfully detect and alarm the presence of intrusions on the track roadbed and at the end of the platform.

### How it works:

- The first layer uses the duostech praesidium® analytics suite to establish a virtual boundary along the platform edge and intrusion detection zones on railway tracks.
- **Layer two** incorporates Laser Induced Differential Absorption Radar or LIDAR. Using multi-point LIDAR enables us to create a digital point cloud of the area of the trackbed. LIDAR creates a digital map of the trackbed where any object that enters the space is geo-plotted and measured.
- Data from these two sensor technologies will be continuously monitored and automatically evaluated by our expanded analytics engine providing event detection redundancy. Logic embedded into the Alarm Management Service will measure the accuracy of detection and establish thresholds for the output of alarm events.
- Once the praesidium® engine determines there is an accurate detection, this information is outputted to the centraco® user interface.
- The purpose of using a layered technology strategy is to maximize the accuracy of event detection while minimizing the potential for false positive and negative events.
- praesidium® also enables the simultaneous detection of multiple events, processes each event in accordance with user-defined parameters, and presents it through the centraco® platform.



LIDAR Coverage



Platform Sample



Track Intrusion Detection Area

# Track Intrusion Detection System (TIDS)

TIDS utilizes **centraco**<sup>®</sup>, a Command & Control Physical Enterprise Information Management platform that enables the integration and use of a variety of systems, sensors and devices to create an intelligent, intuitive work flow process.

**centraco**<sup>®</sup> is a scalable, open architecture platform that allows for easy use, reducing complexity to deploy and maintain while ensuring that new and legacy systems work seamlessly. It consolidates data and alarm events from multiple sources into a unified, interactive user interface, which is customized to the individual customer's Concept of Operations (CONOPS). It provides situational awareness and data visualization for security and operations objectives. With **centraco**<sup>®</sup>, authorized personnel can simultaneously view, monitor, and analyze video and alarms from multiple locations.

**centraco**<sup>®</sup> includes shared event distribution and distributive alarm management features. It offers a multi-layered, drill-down interface with graphical navigation through a scene. Users employ customized investigative and analytics tools, using multiple search and seek criteria, to perform forensic analysis, research a specific event, or search for trends. Both standard and customized reports can be created from the user interface. **centraco**<sup>®</sup> can represent multiple target events for rapid investigation and response.

In addition to integrating current sensors and data sources, the system enables the integration and use of a variety of third party systems, sensors and devices on the same graphical user interface. It integrates an unlimited number of sensor technologies, providing a unified, comprehensive solution that can be accessed via standard browser and is usable on all major operating systems and mobile devices capable of displaying HTML5 web applications. This system also offers availability to an unlimited number of users on both desktop and mobile platforms.

**Duos Technologies Inc.** provides a broad range of sophisticated intelligent technology solutions with an emphasis on mission critical applications. We combine an innovative business philosophy with a focus on customer service. Our specialty is the development and delivery of customized turnkey solutions for rail centric critical infrastructure systems.

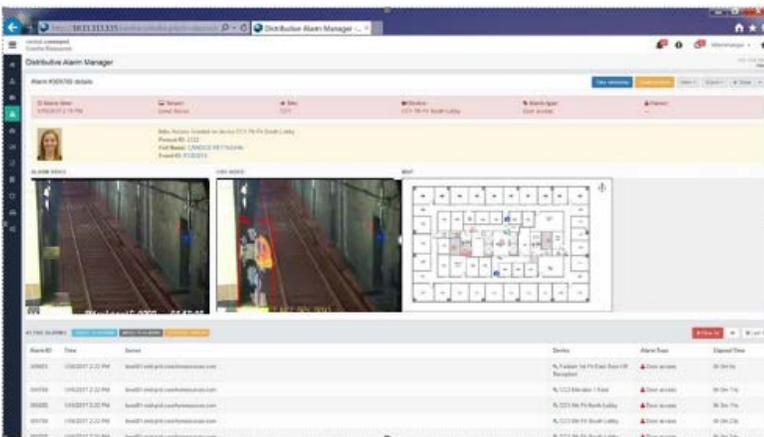
All products, systems and solutions are backed by a 24 x 7 x 365 global training, maintenance and service program.

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