

Pure Solid State Scanning LiDAR



Over-height Solution

LiDAR is the sensor technology for over-height detection and collision avoidance as it provides 4D actionable insights to accurately detect objects. LiDAR increases safety by reducing accidents from over-height vehicles, which dramatically decreases costs by improving traffic flow.

Unlike traditional over-height systems, Opsys' LiDAR, ALTOS, creates a real-time 4D image of a vehicle and the road and uses this information to provide the over-height warning. In its most simple version, using an optional ethernet relay with analog outputs, the system can be used to trigger a warning signal directly. We can communicate in protocols like D/I0 or NTCIP. The ATLOS can also be integrated into more complex system traffic management systems using protocols like NTCIP.



Benefits of ALTOS include:

- **Accurate over-height detection:** delivers precise vehicle height measurements in real time, minimizing false positives and missed detections
- **High reliability in harsh conditions:** solid-state design with no moving parts ensures consistent, long-term operation in roadside environments
- **Easy to deploy and maintain:** all-in-one, compact unit with Power over Ethernet (PoE) simplifies installation on bridges, tunnels, or road gantries
- **Scalable across locations:** ideal for multi-site deployments - units can be easily added to cover more roads, routes, or infrastructure assets
- **Supports smart infrastructure:** integrates with existing signage or alert systems to automatically warn over height vehicles before damage occurs
- **Edge processing capabilities:** processes data onboard for instant alerts, reducing latency and network dependency.



Easy to deploy
Camera-like



Compact
Aesthetically-pleasing



Cost-saving
Semiconductor-based



High-resolution
Centimeter-level accuracy



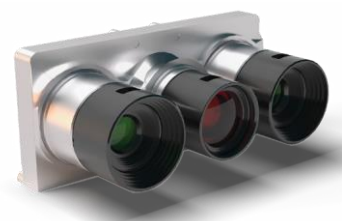
Industrial-grade
High-performance (IP67)



Infinitely scalable
Affordable technology



Actionable insights
Real-time digital twin



ALTOS: high performance at low cost

- **Low power:** Efficient design allows for solar or battery-powered deployment in remote locations, reducing infrastructure costs.
- **No moving parts:** allows for 24/7 operation with no limitation for EOL performances/no mechanical failures over time, which also provides great value for money
- **Point by point:** scanning increases 'signal to noise ratio' and 'single point probability'
- **Performs in all lighting conditions:** infrared-based sensing ensures reliable detection day or night, and in challenging weather like fog or rain; no need for illumination



No moving parts
Highly durable



Ultra-fast scanning
25 FPS



Low power consumption
Cost-saving

Bridges (Roads)



Tunnels



Railroad Crossings



Bridges (Water)



The ALTOS is a perfect solution for combining a simple and reliable over-height with a **wrong-way detection** system. Both applications can be achieved with a single sensor that can cover multiple lanes. The LiDAR sensor measures the actual size of the vehicles and can measure multiple vehicles simultaneously.

Additional ALTOS use cases include:

- **Smart Cities:** Planning, Traffic Management, Stadiums, Transport Terminals, Safety
- **Transportation:** Flow & Safety For Airports, Rail Stations
- **Industrial:** Robotics, Smart Factories, Factory Safety, Production & Automation, Heavy Machinery
- **Security:** Perimeter Security, Public Safety, Healthcare, Education

The world's most advanced solid state scanning LiDAR

info@opsys-tech.com | www.opsys-tech.com

