

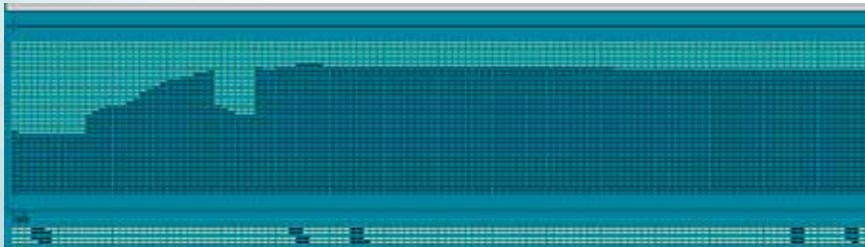
Vehicle Profiler

Dimension your vehicles on the fly.

Automatic Vehicle Dimensioning provides the agency with the ability to check the external dimensions of a vehicle in real time as it passes through an inspection station. At the same time the system provides excellent vehicle separation and hitch detection along with accurate license plate camera triggering.

Basic Vehicle Scanner

The basic profiler uses dimensioning information from a laser profiler with the velocity from a separate scanning laser (Scandar) to create a 3D profile of the vehicle. From this the height profile of the vehicle is generated. The addition of a second laser profiler provides for the creation of a width profile without shadowing. Laser axle detection can also be added in the event that data is useful to the using agency. A separate laser can be added to detect ground clearance of the vehicle and to assist in vehicle separation under difficult weather situations.



UVIScan® Under Vehicle Inspection System

The system can be expanded to include the UVIScan® Under Vehicle Inspection System. This system creates an undercarriage infrared profile of the vehicle. This profile will allow the user to inspect, and digitally record the underside of vehicles and assist in the detection of explosives, weapons, narcotics, and other contraband hidden under vehicles.



- Border Crossings, Entry Portals, Inspection Stations

- Adaptable Design

- Shape Recognition

- Height, Width, Length, Axles, Hot Spots

- 0 to 60 mph (Stop & Go)

- Plate Reader Triggering

- COTS Equipment

- Optional Under Vehicle Scanning

- Optional IR Hot Spot Scanning

- Ethernet Host Interface



Basic System Elements

- Laser Overhead Scanner
- Laser Tracker (Scandar)
- AVC Controller

Optional Elements

- Second Laser Scanner
- Axle Detector (Laser or Treadle)
- Dual Tire Detector
- WIM Quartz Strips
- Undercarriage Scanner
- Thermal Imager

Software

- Sensor Interfaces
- Vehicle Tracking/Separation
- Vehicle Profiling
- Lane Controller Interface
- Camera Triggering
- System Status

Vehicle Profile Features

- Axle Locations
- Length
- Height Profile
- Width Profile
- Undercarriage Profile
- IR Profile
- Speed
- Special Characteristics

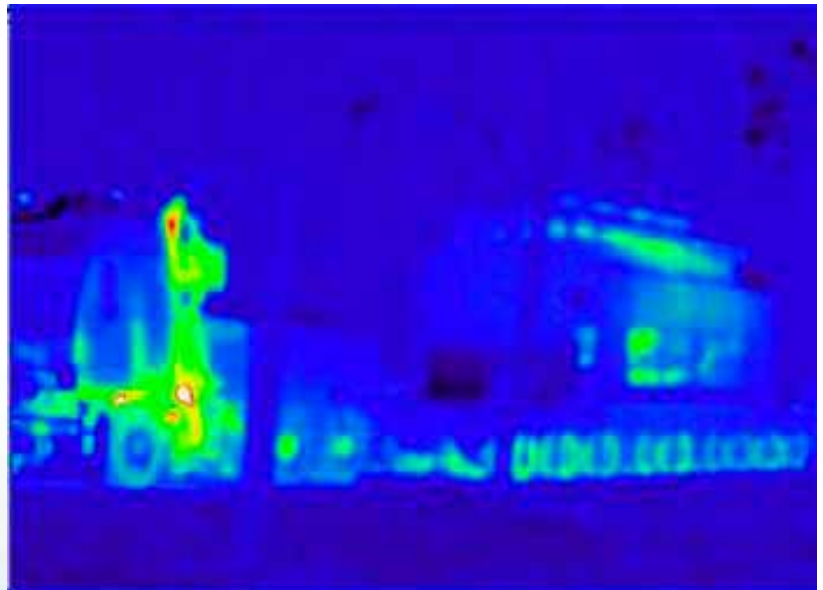
Special Detection

- Hitches
- Forward or Backward Motion
- Vehicle Backouts

IR Line Scan Camera

A IR line scan camera can also be added to the design. Using the information from the Doppler radar, the line scan camera can be triggered at regular intervals along the vehicle. From this an IR profile of the side of the vehicle (or the top) can be generated.

Infrared (IR) radiation is not detectable by the human eye, but an IR camera can convert it into a visual image that depicts thermal variations across the vehicle. A properly calibrated IR camera can capture thermographic images and can provide accurate non-contact temperature measurements of those objects. These quantitative measurements can be used in a variety of monitoring operations. It displays heat and can tell a lot about trucks routed off the highway for inspection. The hotter a part of the truck, the whiter the image; the cooler it is, the darker it appears on the monitor. So wheels displayed as white are hot and show the brakes were working. If a wheel appears cold, the brakes didn't engage.



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