

USDOT READER SYSTEM



FEATURES

- DOT, VIN and Motorcarrier Numbers
- 0 to 60 Miles Per Hour Coverage
- Multiple Image Capture
- Invisible Long Life Illumination
- Near IR Image Capture
- 6 Megapixel Images
- OCR > 85% accuracy on Human Readable Images.
- Real Time Adaptive Camera Control Based on History and Image Heuristics.
- Automatically adapts to site and seasonal variations.
- Database and Web Site included.



BENEFITS

- Locate Vehicles of Interest
- Assists in Vehicle Credentialing
- Full 24 Hour Operations
- Fiber Interface for Lightning Protection
- No Driver Distraction
- No Calibration Required after Initial Setup
- Post OCR Image Compression
- Remote Viewing of Images and Transactions
- Real Time Status Monitoring

USES

- Weigh in Motion Sites
- Ag Inspection Sites
- Electronic Screening
- Safety Information Exchange
- Electronic Credentialing
- Virtual WIM Stations
- Border Crossings

System Overview

The Transport Data Systems USDOT Recognition System provides a quick and efficient method for obtaining a machine readable USDOT number from a high resolution image of the side of a vehicle. This system combines a very high resolution digital camera with a pair of high energy, invisible flash units to capture a clear, unblurred image of the side of a truck operating at over 60 miles per hour. With this illumination the system is capable of 24/7 operations.

A companion OCR engine locates the USDOT, VIN and motor carrier numbers and converts them into a machine readable form. This number is stored in a local database. The system includes a web server application to allow for viewing of the information by a local or a remote browser. Data can also be uploaded to a user system for processing, display and report generation. The system output may be integrated with a set of business rules to derive real-time event handling.

In a typical operation the USDOT reader captures and processes the images in real time. It can be used in a stand alone application or in conjunction with a vehicle inspection/weighing site.

Adaptive Control

The key to good capture performance lies in the ability of the camera control module to cope with various lighting conditions in the lane. The TDS camera control module uses a set of adaptive algorithms that examine image data over a series of time periods to eliminate the need for extensive setup and tuning. When the system is turned on, the automatic tuning process begins. The correct camera settings are determined within a few images after startup. The algorithm then learns the correct camera settings over time with the initial training process being completed within 24 hours. The system is capable of providing better than 99% usable images over an extended period of operations with no further tuning required.

Illumination

The TDS USDOT reader system is supplied with low power, high intensity strobed LED illumination in the near IR band. The use of a LED based illuminator provides a low power, highly reliable source of directed illumination. TDS developed these illuminators specifically for use with their image capture systems.

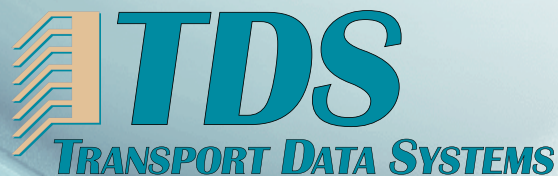
Lane Processor

The Lane Processor is an Advantech ARK-3440 with Intel® Core™ i7, PCIe Expansion and Dual SATA HDDs for Embedded Controller Applications.



Central Server

A central server can be provided to perform the OCR process and store the processed images. Once a centralized server has been implemented, additional lanes can be easily added to the system.



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