

PlateGard™

Read their license plate and we know who they are!

Automatic License Plate reading forms the basis for vehicle identification in a number of different applications, ranging from toll collection to border crossing to speed detection as well as many others.

The TDS ALPR System

The Transport Data Systems license plate reader system uses a 5 megapixel digital area scan camera operating in either the visible or near IR bands to provide high resolution lane coverage over a capture area of approximately 12 feet wide by 9 feet high. The digital video is transmitted via a IEEE1394 Firewire link to the Host Controller. The Firewire link also provides the means for triggering and for initialization and control of the camera by the Host Controller.

The Image Processor stores each captured image. When a violation is detected, the Image Processor transfers the image to the next level. The optical character recognition process can be performed either by the Image Processor, the Plaza Server or at the Violation Processing Center, depending upon the requirements of the particular toll system design.

The Image Processor is capable of handling both front and back cameras simultaneously. Ideally the front camera will operate in the near IR band while the rear camera operates across the full visible band. This implementation provides good front plate coverage without the safety hazards and the privacy concerns associated with the use of visible light. Further the rear camera provides a visible image of the vehicle for identification purposes. The use of a color camera further enhances the ability of the system to detect the state and identify the vehicle.

- Highways, Bridges, Tunnels. Ferries, Borders, Inspection Stations

- Real Time Optimization

- High Accuracy OCR

- Rugged Sealed Enclosure

- 0 to 100 mph

- Strobe Triggering

- COTS Equipment

- Software Tool for Remote Camera Alignment

- Firewire Fiber Interface

- State Detection

Front IR Camera Image



Rear Color Camera Image





Camera Assembly

The TDS camera systems use digital cameras from Point Grey. They are enclosed in sealed enclosures for operations in rugged environments. They include a fiber extender system to allow the cameras to be located up to 1500 feet from the image processor. They are equipped with zoom lenses with variable irises that can be controlled and focused from a remote location.

Illuminator

The TDS LED illuminator products provide pulsed flash illumination to enable photo capture during low light conditions. The illuminator strobe is digitally controlled with the illuminator only being activated during the exposure period. This results in a significantly lower duty cycle which results in a low average power consumption and an operational lifecycle of 10+ years.

Basic System Elements

- Camera Assembly (Near-IR or Color 5 Megapixel)
- Strobed LED Illuminator (IR or Color)
- ALPR Processor

Optional Elements

- Trigger
- Plaza Server

Software

- Linux Operating System
- Adaptive Camera Control
- Optical Character Recognition
- System Status
- Host Interface
- Alignment Tool

Optical Character Recognition

The TDS OCR engine leverages the high quality of the images provided by the TDS imaging system to quickly and accurately locate the plate in the image and deliver outstanding read rates. The TDS reader can be “trained” to a single plate style or to multiple styles to maximize the level of automation and reduce manual labor costs. Additional recognition algorithms allow for the identification of state of origin.

PlateGard Plaza Server

The TDS plaza/host server is designed to interface with the TDS image capture systems and provide a central location for storing and processing of violation images and violation transactions. The design is scalable and can be implemented at the plaza or host level in a toll collection system. Special application software is provided to optimize the OCR process when using front and rear cameras and to compress the images prior to transfer to the next higher level. The plaza server runs a database for image and violation storage. It include a web server and associated web site for viewing locally stored transactions.



Contact Info

Dick Hasselbring
VP, Business Development
619 295-5050
www.transportdatasystems.com

**TDS**
TRANSPORT DATA SYSTEMS