VideoTrak® plus

Vehicle Detection, Counting Intersection Actuation & Classification

VideoTrak® is the intelligent choice for cost-effective and accurate aboveground vehicle detection and traffic data collection. With its patented digital image processing algorithms, VideoTrak provides an inexpensive and unobtrusive means to accomplish both fully actuated vehicle detection for intersection control and traffic surveillance.

Proven Digital Imaging Algorithms

The multi-resolution processor provides efficient analysis of real-time video input in order to identify traffic conditions, adapt to various environments, monitor for adequate image quality, and verify proper camera operation.

Patented tracking-based algorithms provide superior detection, while specialized shadow filtering, image stabilization, and automatic field-of-view gain algorithms minimize false detections and missed calls.

Scalable Modular Design

- Remote or onsite display of the traffic scene provides visual verification of detection accuracy
- Available in two models, which support up to 4 or 8 cameras — with as many as 32 detection zones per camera — providing up to 128 or 256 detection zones, depending on model

Standards Compliance

- Video Processing Module supports RS-170, NTSC, CCIR or PAL format CCD cameras
- Detection features are compatible with NEMA TS-1/TS-2, Type 170/179, Type 2070 and ATC controllers
- Counting and classification data retrieval supported via ATMS Real-time Protocol
- NEMA, FCC and CE compliant

Applications

VideoTrak's breadth of features is designed to serve the needs of transportation engineers across the globe.

- Complete intersection detection
- Highway detection/management
- Highway ramp control
- Tunnel stopped-vehicle detection
- Vehicle counting/classification
- Automatic incident detection
- Collection of traffic statistics

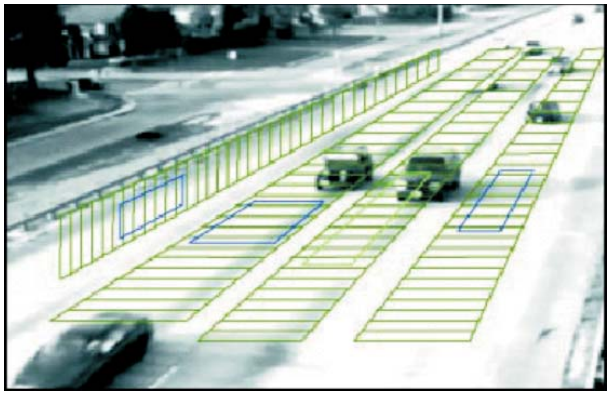
How It Works

Video cameras are mounted in accordance with a Peek site survey to optimize camera locations. Positioned on a signal pole or mounted on a traffic signal mast arm or any other stable structure, cameras require only power and video connections.

For each camera, the user defines the area of detection (Zone). Each zone can be configured as either a normal or incident detection zone.

A normal zone provides standard presence detection, which can be programmed to operate any output, either directly or conditionally. An incident zone is used to detect particular traffic conditions or events. Typically, incident detections are forwarded to ATMS systems for instant recognition.

Standard notebook/laptop computers may be used for detection zone setup and viewing of detector actuations within the traffic scene.



Statistics

Regardless of the zone type, user-configured statistics may be collected and stored in user-selected intervals (10 seconds to 60 minutes) for each vehicle passing over a zone.

- Number of vehicles (volume/counts)
- Average speed (mph/kph)
- Lane occupancy (% time lane is occupied)
- Density (volume/speed)
- Headway (avg. in seconds)
- Delay (avg. delay in seconds)
- Queue length (foot/meters)
- Vehicle length (avg. in ft/meters)

Normal Detection

Normal detection zones can be set up using one of many conditional attributes, including delay and extend, as well as these other attributes:

- Detect always
- Detect only if phase is (green/red)/is not (green/red)
- Detect only if zone X has no occluding vehicles
- Detect always, but only accumulate statistics if the phase is red/yellow/green

Incident Detection Features

Automatic incident detection features that may be captured include:

- Vehicle presence for “n” duration
- Vehicle speed (less than/more than speed)
- Wrong way detection
- Queue length exceeded
- Delay exceeded
- Occupancy exceeded
- Length exceeded
- Red light traffic runners
- Vehicle stopped for “n” seconds

ATMS Compatible

VideoTrak can act as a data collection outstation and provide larger traffic management systems with real-time traffic data via an Advanced Transportation Management System (ATMS) communications protocol. The ATMS package provides developers a mechanism to poll VideoTrak for current statistical and status information that can then be used for a myriad of functions such as Adaptive Traffic Control, Incident Detection, Tunnel Management, etc.

Specifications

Characteristic	Description
Height	6.5" (165 mm)
Depth	10.75" with handle (275 mm)
Width	Model 905 Plus: 10.72" (272 mm) Model 910 Plus: 13" (331 mm)
Card Size	3U
Bus Interface	3U VME (J1 Connector)
Voltage	120 VAC / 60 Hz or 240 VAC / 50 Hz
Temperature Range	-29°F to +165°F (-34°C to +74°C)
Humidity	0% to 95% non-condensing

www.peektraffic.com

Please contact Peek Traffic Corporation for customer inquiries about any of the company’s Traffic Control, Data Collection, Enforcement, Detection, or Tolling products. To learn how Peek Traffic is making the world a safer place to travel, visit the Peek Traffic web site at http://www.peektraffic.com.

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