

Paving Intelligence into Safety, Security & Mobility



Self-calibrating Automatic Incident Detection (AID) and video surveillance solution for highways, expressways and bridges

Citilog's VisioPaD is a video-based Automatic Incident Detection (AID) solution. It provides real-time incident detection and video surveillance capabilities on highways, expressways and bridges. Built-in image processing algorithms provide real-time video detection by extracting pertinent information from standard videosurveillance camera images. This enables enhanced homeland security, safety and mobility for any traffic operations management center.



To enable rapid identification and notification of an incident, VisioPaD provides traffic operators

with an alarm (audible and visual) within a few seconds after an incident – such as a stopped vehicle – occurs, even before the consequences of an incident can be noticed by traditional monitoring. It provides a vast monitoring area for all directions and traffic lanes within camera view. The software-based system uses existing video signals from any Closed Circuit Television (CCTV), fixed, Pan-Tilt-Zoom (PTZ), analog, IP and any other camera, thus requiring no new hardware or infrastructure additions.

Thanks to an advanced self-calibrating algorithm, VisioPaD does not require any configuration or calibration, allowing for quick and easy setup. Such advanced options enable seamless integration into existing infrastructure allowing traffic operations centers to get VisioPaD up and running with minimal time or technical constraints.

In addition, VisioPaD automatically adjusts to camera shifts and changes in the video feed which makes it ideal to deploy on PTZ cameras. VisioPaD also operates in all weather conditions and all traffic conditions to maximize video clarity at all times of the day or night. Video is recorded and can be stored for post analysis, audit trails and safety performance measurements.

Citilog's solutions enable state, county and city resource managers to limit the losses from road traffic incidents, accidents or unauthorized access, by providing real time automated incident detection enabling the possibility to deploy corrective measures before the loss escalates. It is a field-proven technology around the world for homeland security and safety applications and for traffic safety and mobility.

VisioPaD also provides the added benefit of aiding states, counties and cities in their quest to reduce pollutant emissions, by ensuring fast recovery from an incident to get traffic flowing again.



### **KEY CAPABILITIES**

- Automate traffic monitoring operations with real-time intelligent Automatic Incident Detection.
- Complete on-screen audible and visual alarms for incidents in real time within seconds of the occurrence of an incident.
- Seamless integration into existing infrastructure of Closed Circuit Television (CCTV), cameras – pan, tilt, zoom (PTZ), analog, digital / IP, etc.
- Improves road safety, security and mobility thus enabling improved homeland security and reduced environmental impacts from traffic delays and congestion.

## **KEY BENEFITS**

- Reduce the negative economic, social and environmental impact from traffic incidents.
- Improve infrastructure efficiency.
- Improve Traffic Operations
   Center efficiency.
- Reduce incident detection times thus, decreasing response times and improving safety, security and mobility.



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A supervisory and clip management interface provides a global view of all cameras being monitored and when an incident occurs, the interface automatically pops up the camera with the incident highlighted to enable a rapid response. Maintenance tools identify malfunctioning cameras and enable remote maintenance. A Log Manager displays messages generated by the system and stores data on the actions performed by operators, administrator and external systems. VisioPaD provides a cost-effective, easy-to-integrate solution to migrate traditional traffic monitoring to intelligent and proactive AID.

There are nearly one billion vehicles on roadways today in congested conditions that create negative impacts on safety, security, mobility and the environment. These events require new and advanced road and traffic management solutions all around the world to minimize the stress being placed on infrastructure and management personnel.

VisioPaD provides the intelligent AID solution necessary to meet any growing safety, security, mobility and environmental challenges facing traffic operators around the world.

# **Technical Specifications**

#### Equipment

- For cost efficiency and upgradability, Citilog exclusively uses standard "off-the-shelf" hardware for its equipment: analyzers and servers.
- Up to 16 video inputs per analyzer (depending on options and video mode).
- Usable with any camera and most video sources: analog (PAL, NTSC), digitally encoded (IP cameras, IP encoders), IR, color/BW.
- H.264 streaming video and recording capability.

#### Architecture

- Easy integration with any CCTV architecture.
- Equipment can be deployed centrally (TMC) and/or locally (roadside cabinet).
- All Citilog products are compatible and can be easily integrated in the same GUI.
- Standard redundant architecture for enhanced system efficiency and availability.

Latest Hardware specifications available upon request.

#### Communications

Frequency : one frame per 0.20 s

- Standard Software Developer's Kit
- TCP/IP Client-ServerActiveX
- Open collectors
- Serial
- Wireless
- Fully accessible SQL
   database

# DETECTION HIGHLIGHTS Trajectory-based stopped vehicles detection.

- Discriminates fluid traffic and congested traffic for enhanced stopped vehicles management.
- Self calibrating system does not require any setup or calibration.
- Automatically adapts to changes in field of view in line with camera movement. Ideal for PTZ cameras.
- New H.264 streaming video and recording capability and dual streaming for enhanced video quality.



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