



Empowering City Planners

With Smart Video Camera Analytics

Smart City/ITS

Smart Security

Smart Parking

Overview

IntelliVision's Smart City/ITS solution is a complete suite of video analytics products with applications in the following areas:

- Smart City/Intelligent Transportation Systems
- Smart Security and Surveillance
- Smart Parking Applications

The Smart City/ITS solution takes advantage of smart cameras combined with video analytics software to add intelligence and monitoring to city transport, security and parking applications, and are in use in cities around the world. IntelliVision Smart City/ITS comprises the following analytics:

- Traffic metrics and monitoring
- License Plate Recognition (ALPR/ANPR)
- People and vehicle tracking
- Zone detection and intrusion

- Improve accuracy and use fewer cameras for parking assistance applications
- Track vehicles in parking lots or across the city using license plate/number plate recognition
- Improve security and surveillance with intelligent motion detection and people/vehicle tracking
- Analytics can be run in the camera, on premise servers, or in the cloud
- Reduce false alarms as lighting changes and animal/tree movements are filtered out
- State-of-the-art Deep Learning-based algorithms with small footprint for low-power embedded platforms

Benefits

IntelliVision's Smart City/ITS solution provides the following benefits:

- Replace expensive-to-maintain inductive loops for traffic signal control
- Monitor roadways for incidents and congestion

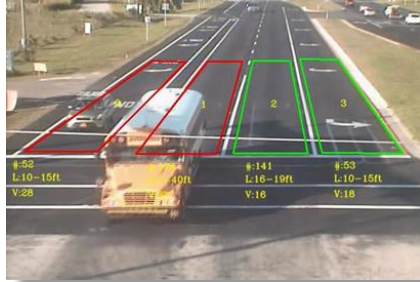
Smart City/ITS

IntelliVision's video analytics have been deployed in over 15,000 video cameras at intersections across the United States, helping to improve traffic flow and reduce maintenance. In these applications the camera and IntelliVision's video analytics are used to replace more expensive traditional equipment such as traffic signal vehicle detection and counting using road-embedded inductive loops.



The Smart City/ITS application provides the following capabilities:

- **Intelligent Traffic Monitoring.** Analyze vehicle and traffic patterns at intersections and provide traffic signal control information such as vehicle presence, absence, count, green time, lane priority etc.
- **Intelligent Traffic Metrics.** Analyze vehicle and traffic patterns and provide information such as vehicle count, speed, type, length, total counts, average counts, report by minute, hour or day. Alert system or operators to congestion levels.
- **Roadway Incident Monitoring.** Intelligent video analytics can be used to detect stopped vehicles and accidents and alert roadway emergency services.
- **Disaster Management.** Video analytics can help to improve traffic flow in a disaster, as well as track vehicles and people.



Smart Parking (LPR/ANPR)

IntelliVision supports Smart Parking applications with its License Plate Recognizer™ product. This is a Deep Learning and AI-based license plate (ALPR/ANPR) detection, recognition and search solution with an accuracy as high as 98%. The product works with live cameras and archived video. The following capabilities are provided:

- Detects and recognizes license plates on moving or stationary vehicles



- Supports processing of single frames and video streams. Can also be run on archived video.
- Compares detected plates against a watch list database and provides real-time alerts on plate matches
- Provides detailed reports
- Handles different plate styles, e.g. regular/stacked
- Supports multiple countries (check for current list)
- Various ALPR/ANPR models are available: gates, entrance, roadside, traffic lights, parking lots, highway, tollway and mobile/law enforcement vehicles

Smart Security

IntelliVision has developed a number of security and surveillance applications for the Smart City market. These applications take advantage of the full suite of IntelliVision video analytics products:

- **Facial Recognition.** Recognize faces from a database or watch list with up to 99% accuracy from a single camera or across multiple cameras. Log faces for later forensic investigation.
- **Intelligent Video Motion Detection.** Detect valid motion, filtering out noise such as lighting changes and tree/animal movements leading to fewer false alarms.
- **Intrusion Detection/Perimeter Monitoring.** Provides automated perimeter monitoring and secured area protection. Detects a moving object crossing the defined line. Entry/exit direction can be defined and line drawn in any direction.
- **Camera Tamper Detection.** Detect any attempt to tamper with a security camera, partially or completely blocking its field of view, or drastically changing the camera angle.
- **Object Left/Removed.** Detect an object that has been left unattended for too long and is not part of the normal scene, or when an object is removed.



About IntelliVision

IntelliVision is a market leader in AI and Deep Learning-based video analytics and video cloud software for Smart Cameras. IntelliVision solutions provide actionable insights for security and monitoring in Smart Home/Enterprise/City/Retail applications. IntelliVision's Advanced Driver Assistance Systems (ADAS) improve car and road safety in automobiles. IntelliVision is a subsidiary of Nortek Security & Control, with headquarters in San Jose, California and offices in Asia and Europe.

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