

artivision technologies

# enhance your awareness



- > cross video analytics
- > pervasive face recognition

Artivision tightly integrates cross analytics functionality and pervasive face recognition with an enterprise-class video management platform, delivering powerful automated situational awareness for a variety of incidents, behaviors and individuals.

Artivision's broad range of video analytics applications are designed to detect and alert for suspicious events in real time and to generate transactional business intelligence data. Using distributed non-intrusive face recognition, Artivision enables automated identification and tracking of people of interest across large-scale environments. All these intelligent video capabilities are seamlessly embedded on edge and central video devices, and support standard IP and analog surveillance cameras.

Artivision helps public and private sector organizations to proactively manage video to reduce vulnerability, enhance security operations and improve business performance.



## > cross video analytics

### detect suspicious events

Security operators are required to watch multiple surveillance cameras simultaneously. Artivision's analytics automate detection, and filter out only the relevant incidents for further decision and action, transforming CCTV monitoring into a proactive process.

- > Intrusion and loitering detection – protect sensitive areas from intruders. Objects of interest can be categorized by size and direction of movement, as well as by the time they spend in the supervised region. Multiple areas can be defined simultaneously to enhance effectiveness.
- > Perimeter protection – define a virtual trip wire which triggers alerts when an object touches or fully-crosses it, with additional filters for direction and size. The perimeter line also enables a pre-alert zone which can detect people loitering near the perimeter.
- > Missing object – detect objects that were removed, such as high value items or storage crates. The analytics engine is smart enough to identify an attempt to replace the object of interest with an object of a similar size.
- > Stationary object – detect objects that have been left stationary for longer than a pre-defined duration, such as illegally parked cars or unattended baggage.
- > Crowd detection – alerts when the density of people in a specified area exceeds the accepted level.

### generate transactional and business intelligence data

Surveillance video can be used to extract business information, such as queues, people and vehicle traffic data, for optimizing staffing and service point planning, improving productivity, and enhancing overall safety.

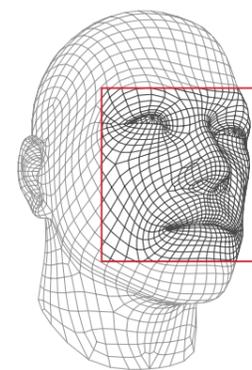
- > People counting – count the number of people entering or leaving a specified area, with the ability to aggregate multiple counters.

- > Queue management – track queue length and indicate when it exceeds acceptable levels.
- > Vehicle counting – count the number of vehicles moving in or away, in one or more lanes.
- > Vehicle classification – categorize vehicles according to appearance and dimensions.
- > Traffic congestion – track traffic flow and indicate when slow-down or congestion occurs.

### reliable and accurate indoors and outdoors

Artivision's analytics enable robust performance even under harsh weather and environmental conditions, using advanced object tracking, ambient motion cancellation and other false alarm filters. The analytics engine automatically adjusts to changes in the scene, effectively differentiating between environmental "noise" and true events.

- > Apply depth of perspective and aspect ratio – effective detection in 3 dimensions.
- > Ignore blinking lights and insects – automatically adjust for broad range of illumination (sun rise and set, switching lights on/off, shadows, reflections), while cancelling nuisances such as insects or birds.
- > Identify even slow motion – identify extremely slow moving objects (such as crawling people).
- > Cancel vibrations – compensate for vibration movement in fixed video cameras, usually when positioned on poles.
- > Filter directional movement – focus detection on one or more specific directions.
- > Anti-tampering protection – verify that a camera has not shifted its position, and alert for any tampering attempts.



## > pervasive face recognition

Modern security challenges require enhanced levels of awareness. Law enforcement, safety and security operators need to be able to determine in real time that specific individuals have been identified in the area, as well as their current exact location. Each person can be of negative interest (a wanted terrorist, criminal or shoplifter), or of positive interest (VIP, casino high roller, etc), and should be automatically recognized and tracked.

Artivision's unique pervasive face recognition technology is seamlessly embedded in a range of edge and central devices, connected to standard IP or analog surveillance cameras. This architecture makes it cost effective to carry out mass deployments of strategically-placed face-recognition-enabled video cameras across large scale facilities such as airports, campuses and public areas.

Employing recent algorithmic breakthroughs in computer-vision research, Artivision's engine leverages the full spectrum of surveillance video to operate non-intrusively with extreme accuracy while guaranteeing virtually near-zero false positives. As more cameras are deployed, the probability of identifying specific people-of-interest increases, and respectively improves the geo-spatial location of their current whereabouts. Artivision's pervasive face recognition enables transportation, government and municipal facilities, public areas, financial institutions, leisure and hotel security operators to automatically determine in real

time some of the most critical situational awareness questions:

- **Did specific people-of-interest enter the facility? When?**
- **Where are they now?**
- **Have they been here before?**

### highlights

- > Automated identification and tracking of people-of-interest across large facilities.
- > Highly accurate "one-to-many" recognition with near zero false positives.
- > Optimized for large-scale surveillance using standard analog or IP cameras.
- > Operates non-intrusively in lighting-controlled environments.
- > Dynamic black lists – enrollment of people-of-interest using images or footage, with instant update to all video devices. Black list supports over 500 entries with instant recognition.
- > Real time face enrollment – operators can specify people-of-interest on the fly, by interactively acquiring them from live or recorded video.
- > Face database and advanced forensic tools – progressive creation of a face database, enabling to map all entrants to one or more facilities, providing retroactive biometric investigative tools.



artivision technologies



Artivision delivers enterprise video solutions that help government, transportation and commercial organizations to enhance security and improve business-performance. Artivision's broad intelligent video platform tightly integrates cross analytics and pervasive face recognition embedded on edge and central devices, and a complete set of modular video capture, recording and management building blocks. Artivision is headquartered in Singapore and is publicly traded in the Singapore Exchange.



artivision technologies

Singapore (Global HQ) | Artivision Technologies Ltd.  
31 International Business Park | Creative Resource #03-04 | Singapore 609921  
Tel: +65 6535 1233 | Fax: +65 6534 5031  
[www.arti-vision.com](http://www.arti-vision.com) | [info@arti-vision.com](mailto:info@arti-vision.com)