

Creating intelligent solutions with Video Analytics

Intelligent IP video surveillance is one of the most effective ways to secure any environment. Its reach is unparalleled and allows for the monitoring of even the most remote locations. Fast becoming a standard security system for many organizations, IP video surveillance becomes an intelligent solution when the right Video Analytics (VCA) are applied to it.

Today's intelligent IP Video Surveillance solutions not only meet customer expectations, RIVA solutions exceed them.

VCA - from passive to reactive and preventative

While IP video capabilities enable organizations to view their entire environment, that doesn't necessarily result in proactive monitoring. All this changes though once VCA applications are embedded into the solution, transforming passive IP video systems into proactive solutions.

With the ability to identify activity that needs attention, VCA capabilities not only identifies activity that needs attention, it helps prevent it.

Benefits of VCA

At RIVA we've made VCA capabilities a standard feature on all of our IP SD, Megapixel and HD cameras, IP encoders and PC cards. This combined RIVA's device with Video Analytics provides the most comprehensive surveillance coverage to combat today's increasing security risks.

Without VCA, IP video surveillance systems are simply reactive, but with VCA they become preventative, mitigating risk and the potential for costly damage.

With VCA motion-based recording feature, storage needs are substantially reduced, saving security-conscious organizations significant expenses over time. Additionally, RIVA's cameras and encoders embedded with VCA also become sensors, eliminating the need for other detection systems.

Video analysis benefits extend far beyond the proactive security it provides. Through its advanced People Tracker and Counting Line algorithm, it Improves business information and efficiency as real-time metadata can be used by management, marketing and security to gain operational insight



People Tracking Engine

- Track people through occlusion in medium density scenes.
- Provides higher quality metadata for 3rd party advanced functionality

The advantages of Video Content Analysis

RIVA's commitment to providing you with the most effective solutions has led us to embed our leading primary VCA application on our entire product line. This allows you to provide your customers with cost-effective solutions that meet the needs of today's security-conscious environment.

What you can expect from VCA technology:

- VCA alarm events integration with the world's leading video management systems
- RIVA VCA is approved by the UK Home Office i-Lids*
- Future ready with easy upgrade
- Works out of the box, a Plug 'n' Play solution
- Self-learning algorithm automatically adapts to environmental changes
- Tracks up to 100 targets and has up to 40 detection zones per camera
- Easy-to-use web browser setup based on simple graphical controls
- Simple, unique 3D grid calibration
- Robust tracking engine - tracks stopped and very slow movement
- Ignores light changes due to cloud shadows, artificial lights and camera auto-iris operation
- Ignores repetitive movement such as swaying trees or rippling water
- Adjusts to image degradation caused by rain, fog, dirty lens and low sun position glare

VCA System Overview

To address the wide range of your customers' needs, RIVA has created flexible VCA packages that address specific environments. Always included, and at no extra cost, our primary VCA Standard License features:

- Intelligent motion detection
- Camera tampering detection
- No manual adjustments or calibration necessary
- Works out of the box, without the need for set up

VCA also has a wide spectrum of advanced intelligent VCA filters. These advanced VCA filters can be ordered bundle as needed, and make up the advanced VCA license packages.

Advanced Intelligent VCA Intrusion Filters include:

- Presence filter -- Detects when an object or individual has penetrated the defined perimeter
- Enter and exit -- An alarm is raised when an object crosses from the outside to the inside of a detection zone. Conversely, an alarm is raised when an object crosses from the inside to the outside of a detection zone
- Appear and Disappear -- Used to detect people appearing or disappearing through a doorway but ignores people passing by in front of the doorway.
- Dwell -- Objects that dwell inside a zone for longer than the pre-defined amount of time will trigger an alarm such as loitering people
- Tailgating -- Object tailgating is defined as two objects crossing a virtual line or zone within in a pre-defined time frame
- Stopping -- Objects that are stopped inside a zone for longer than the defined amount of time will trigger an alarm
- Direction -- Objects that travel in the configured direction (within the limits of the acceptance angle) through a zone or over a line trigger an alarm



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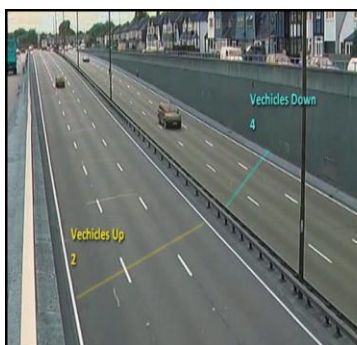
Advanced Intelligent VCA Object Detection Filters include:

- Abandoned object -- This filter detects the abandoning of an object in a pre-defined zone such as a bag or suitcase left on the street
- Removed object -- Significant objects are detected when removed from a zone



Advanced Intelligent VCA Counting Filters include:

- People counting -- An excellent tool for collecting statistics on customer behavior, this filter counts customer flow without the need for human intervention.
- Vehicle counting -- Used for both commercial and safety applications, this filter captures statistics on vehicle flow
- Stabilizer -- In environments where camera stability is an issue, this feature will compensate for any movement to provide a clear view.



VCA Application Packages

Designed with specific vertical markets and environments in mind, these advanced VCA application license packages provide focused solutions tailored to customer needs. All solutions include the primary VCA functionality.

VCA Count -- This counting solution includes a bi-directional line-crossing filter, suitable for counting people in busy doorways and entrances. VCA Count is also suitable for counting vehicles.

VCA Access -- This access control solution protects your access points with tailgating detection and a line-crossing filter.

VCA Detect -- A perimeter solution, this package includes classification, direction and dwell filters.

VCA Follow -- PTZ auto-tracking capabilities can track objects and individuals wherever they go in a defined zone.

Comprehensive Full VCA Packages for complete coverage

Our most comprehensive VCA solutions, these packages provide the ultimate in IP Video VCA enable surveillance protection. Utilizing the extensive VCA capabilities found in these solutions, customers are able to fully leverage proven cost, resource and timesavings. Also available

VCA Surveillance -- As a complete surveillance solution, this package includes the Surveillance Tracker, all surveillance filters and has been optimized for outdoor use.

VCA Professional -- For the enterprise environment, this package includes all surveillance filters in addition to the people tracker and counting line filters. The people tracker filter has been optimized for populated indoor scenes.

VCA Auto Tracking -- This complete perimeter solution includes all VCA surveillance filter options and PTZ auto tracking with automatic, manual and VCA lay-on capabilities.

PC-based VCA Packages

Giving you and your customers the flexibility you require, RIVA also provides VCA capabilities for PC-based use such as VMS and DVR solutions. The VCA PC based solution offers two versions. One supports PC cards and the other can support any video stream input from any device as long and its decompressed

VCA Surveillance -- As a complete surveillance solution, this package includes the Surveillance Tracker, all surveillance filters and has been optimized for outdoor use. *

VCA Count -- This counting solution includes a bi-directional line-crossing filter, suitable for counting people in busy doorways and entrances. VCA Count is also suitable for counting vehicles.

VCA Advanced -- This surveillance and counting solution includes the Surveillance Tracker, all surveillance filters and the Counting Line filter. *

*Excluding filters for Abandoned and Removed Objects and Tailgating

RIVA - your partner of choice

With a complete range of products, RIVA can provide you with security and surveillance solutions that your markets needs.