



Mirasys VMS Video Analytics for Surveillance and Business Intelligence

Mirasys VMS Video Analytics Platform enables seamless integration of intelligent analytics modules into the market leading Mirasys video management system. The rich and open interfaces of the platform allow any type of analytics solution to be integrated – whether running in the edge (camera), network or recording server – with no changes required in the Mirasys VMS itself.

Mirasys VMS has a built-in video analytics solution for both IP and analog cameras, providing a cost-effective easy-to-implement solution targeted for advanced protection and monitoring. It is a general purpose analytics package aimed at intruder detection, flow analysis, counting, tampering detection, and many other commercial and government CCTV applications.

Features

Mirasys VCA (Video Content Analytics) comprises a set of real-time video analytics solutions that utilizes advanced image processing algorithms to turn video into actionable intelligence. At the core of the product is an advanced object recognition and tracking engine that continually tracks moving and stationary targets. The tracking engine features built-in robustness to environmental nuisance conditions such as changing illumination, moving foliage, rippling water, etc.

Mirasys VCA is a generic name for a suite of Enterprise analytics add-on product options that include functionality such as:

- **Motion object tracking:** Motion-data based object highlighting and tracking, auto-zoom functionality. The motion-data is produced by server-based, hermeneutic motion detection.
- **Temporary event counting visualization:** In addition to motion object tracking functionality, the Spotter user interface is able to visualize camera stream session event counting either from live stream or even playback. Event counting is based on metadata events and needs to be turned on from camera window settings.
- **Object behaviour/attributes detection:** In addition to the aforementioned functionality, to continually track and classify moving and stationary targets and features a full suite of rule-based filters including object: presence, enter, exit, appear, disappear, stopped, dwell/loitering, directionality constraints, speed, tailgating, object counting, abandoned/removed, color, type (person, car, etc). Multiple filters are supported on any combination of multiple overlapping detection zones. In addition to an advanced people tracking engine optimized for tracking people in cluttered indoor scenes such as retail scenarios. Includes specific high-accuracy counting functions optimized for use in busy scenes.



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Related analytics options: Available as separate applications, products or through project-based integrations:

- **Mirasys ANPR+:** Separate Enterprise option (application) for automatic number (license) plate recognition and management.
- **Mirasys Reporting:** Separate Enterprise option (application) for Reporting brings the numerical information and statistics to an easily readable form, from where you can, for example, track trends over time or look for abnormalities from a big amount of data. You can define the events that shall be reported, freely select time frame and compare different time frame activities in graphs.
- Camera-based (built-in, edge) analytics support for selected camera manufacturers and their functionality through manufacturer-specific integration connectors (VCA connector license).
- Audio analytics technologies, which refers to software for extraction of information and meaning from audio signals, such as detecting sounds of breaking glass, etc.
- Facial recognition technologies, which refers to software for automatically identifying or verifying the identity, age, gender, etc., of a person from video footage.

Video Content Analytics Packaging

- Counting of objects (VCA Count line license)
- Full VCA functionality (VCA Advanced license)
- Includes tampering detection mechanism to prevent camera vandalism
- Includes camera shake cancellation for more accurate analytics
- Easy-to-use, graphical configuration tool for camera calibration and generating the zones, lines and rules for VCA events
- Full forensic metadata storage in XML format (SQL database)
- Can select on a camera-by-camera basis the most appropriate analytics functionality to be used
- Web based reporting tool (Reporting tool license)

Architecture

Mirasys VMS. Analytics meta-data, such as object coordinates and properties, is captured through XML configurable network interfaces. Once captured, then the semantics of different meta-data languages is harmonized and the data is checked against alarm rules. Finally the data is stored into an open database for later search and retrieval.

