aimetis

Aimetis VE Series™ Video Analytics

Put Smart Analytics Behind Your Lens

Aimetis VE Series™ Video Analytics is a family of intelligent video engines for physical security and business intelligence applications. Based on a branch of artificial intelligence called computer vision, Aimetis VE Series™ Video Analytics, transform standard IP surveillance into proactive and intelligent information by providing users with accurate, real time notification of events, time-saving review of archived video data, and a wealth of operational reports.

Aimetis VE Series™ Video Analytics are extremely reliable even in the harshest of environments, and are available for PC or embedded* applications. The full suite of video engines are available with an Aimetis Symphony™ Enterprise License.**

*DSP, Texas Instruments or Freescale, **Aimetis Symphony™ Standard and Professional license include: VE130, VE140, VE141,

Choosing the Right Analtyic

Aimetis VE Series™ Video Analytics are highly specialized algorithms, each designed to perform optimally in different environments. Most of the VE Series™ algorithms are designed to perform more than one function. This decreases CPU requirements as it is possible to use only one algorithm for multiple applications. Use the table below to select the right analytic to meet your needs.

VE Series Algorithm	Pixel Change/VMD			Advanced Motion Detection					Object Persistence
	VE 130	VE 140	VE 141	VE 150	VE 160	VE 161	VE 250	PT 090	VE 350
Functionality (see back page for definitions)									
Camera Loss Detection		■							
Camera Obstruction/ Scene Change			■						
Pixel Change/Motion Detection	■			■	■	■	■		
Motion Tracking				■	■	■	■		
Object Classification				■					
Virtual Fence				■	■	■	■		
Wrong Direction				■	■	■	■		
Multiple Area Alarms				■	■	■	■		
Left/Removed Item									■
People/Vehicle Counting					■	■			
Loitering/Dwell Time					■	■			
Auto-PTZ Tracking								■	
Environment									
Indoor	■	■	■		■	■	■		■
Outdoor	■	■	■	■	■	■	■	■	■
Busy	■	■	■		■	■	■		
Non-Busy	■	■	■	■	■	■	■	■	■
Camera Angle	Any	Any	Any	30-60°	Overhead	30-60°	Any	30-60°	Any
Camera Height	Any	Any	Any	6-10m	3m	3m	Any	6-10m	Any
Minimum Hardware Requirements (PC Environment)									
CPU	2.4 GHz	2.4 GHz	2.4 GHz	2.4 GHz	2.4 GHz	2.4 GHz	2.4 GHz	2.4 GHz	2.4 GHz
Frame Rate	1 fps	1 fps	1 fps	5 fps	8 fps	8 fps	8 fps	8 fps	6 fps
Resolution	4 CIF	1 CIF	4 CIF	4 CIF	1 CIF	1 CIF	1 CIF	1 CIF	1 CIF
CPU Usage	0.07%	0.0026%	0.10%	8.19%	17.22%	13.87%	9.04%	9.04%	6.86%

Functionality Definitions

Camera Loss Detection
The camera loss detection function detects the loss of video signal (e.g. cord cut) from any camera.

Camera Obstruction/Scene Change
The camera obstruction function detects when a camera has been moved, spray-painted, or covered.

Pixel Change/Motion Detection (VMD)
The motion detection function alerts on all pixel changes between images in the field of view.

Motion Tracking
The motion tracking function compares relevant pixel changes between images and alerts on relevant motion while ignoring "background" motion (e.g. rain, snow, blowing objects, leaves on trees).

Object Classification
The object classification function is able to distinguish between people, vehicles and unknown objects.

Virtual Fence
A virtual fence refers to an invisible tripwire that can send an alert when crossed in one or both directions.

Wrong Direction
The wrong direction function will alert on motion going against the specified flow of traffic.

Multiple Area Alarms
Multiple area alarms refers to the ability to highlight multiple alarm zones in a field of view and alert on activity in any one of them while ignoring activity in unselected areas.

Left/Removed Item Detection
The left/removed item function alerts on background image changes caused by new/removed objects in the field of view.

People/Vehicle Counting
The counting functionality counts objects entering and leaving a field of view or crossing a virtual fence.

Loitering/Dwell Time
The loitering/dwell time function recognizes how long an object stays in a defined field of view.
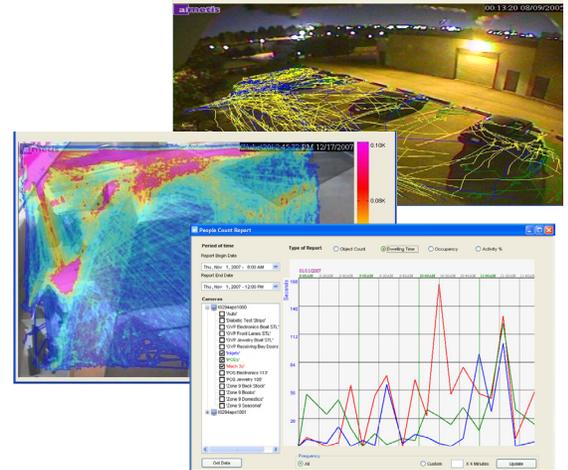
Auto-PTZ Tracking
The auto-PTZ tracking function will automatically control PTZ cameras when relevant activity or a rule break is detected.

Business Intelligence Reports

Aimetis Symphony™ allows the user to run a variety of business intelligence reports, directly from the software, which can be leveraged to provide architects, developers, traffic analysts, security agents or marketers with the information they need to evaluate operations, optimize operations and plan business requirements.

Available reports include:
- People Counts
- Vehicle Counts
- Object Density
- Occupancy
- Traffic Flow
- Alarm Counts/Time/Rule
- Dwell Time
- Activity Level

Reports are also available using Aimetis Symphony™ Web Access, making them easily accessible for non-traditional users of video.

Smart-Search

Unlike traditional video recording systems which demand hours of trial and error to manually sift through video, Aimetis Symphony™ intelligent search enables users to quickly pinpoint specific events in seconds.   Using Aimetis Symphony™, users simply set search parameters such as:

- Activity Type (e.g. loitering, tripwire crossed, etc.)
- Activity Location
- Time Frame

Aimetis Symphony™ will then immediately compile the qualifying snippets into a continuous movie, allowing for fast and seamless review of the relevant content.

Custom Analytics

Aimetis can develop custom analytics to meet unique and highly specific requirements for a variety of applications. Previously developed custom analytics have included applications for:

- Detecting people on train tracks, while ignoring trains
- Detecting items removed from a retail shelf
- Detecting electronic article surveillance lights at retail exit doors

Contact Aimetis to discuss your particular requirements.

Sample Videos

Visit www.aimetis.com to download and view sample videos that highlight the functionality of each video engine in a variety of application environments.

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