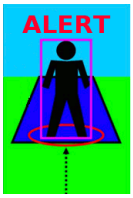
Intelligent Video Analytics on the i-Volution Series 5000

The Series 5000 Video Analytics is an optional embedded package available on the i5110-ET multi-protocol encoders. Based on ObjectVideo® industry leading OnBoard® technology, the Series 5000 Video Analytics package empowers the encoder with intelligent video content analysis "at the edge". Standard ObjectVideo® rules based configurations provide the most flexible and powerful video analysis tailored for your applications.

Applications

- Security Surveillance
  - Airports
  - Seaports
  - Military
  - Industrial Complexes
  - Unattended Sites
- Transportation
  - City Intersection Monitoring
  - Highways
  - Rail/Metro/Subway

Event Detection Features



- Object Classification
- Single and Multi-line Trip-wire Events
- Direction and Velocity
- Left and Object Removed
- Appears and Object Disappears
- Enters and Object Exits
- Camera Moved, Lens Sprayed
- Multi-view support for PTZ presets

Industry Leading Analytics

ObjectVideo® is the leader in the industry with superior video analytics applicable in the widest range of video security applications. Relying on the ObjectVideo® assures that your video content analysis strategy is based on widespread field proven technology optimized to achieve the highest rate of event capturing and the lowest rate of false event detection.

OnBoard®

ObjectVideo® OnBoard® technology means that the video content analysis is performed "at the edge". This empowers the encoder to capture only the desired event video instead of incurring the inefficiencies of a central server based solution which requiring constant transmission of video to the server for video content analysis. OnBoard® keeps video were it is needed. Overall, this has the benefit of reducing bandwidth and eliminates or greatly reduces the cost of larger expensive PC based solutions. Furthermore, the solution allows saving marked up event video to local flash and sending detection alert messages and/or video capture to a control centre.

Powerful DSP Technology

Impath's Series 5000 Video Analytics options is embedded technology that leverages powerful TI® DSP based hardware. This is a dual advantage in that the code is highly optimized and is accelerated by fast and powerful local DSP.

Highly Flexible

The Series 5000 Video Analytics is fully based on common rules based management. You are not limited by a constrained suite of video detection concepts decided by somebody else. You chose how to apply the event, the schedule, and the appropriate responses for each case. The security commissioning authority familiar with this concept will appreciate the common rules based management.

Beyond Event Detection

A most powerful inherent feature of this solution is object classification. This goes beyond motion, direction and velocity detection and can infer object classification. You can now capture and determine whether the moving object is a person, car, truck, ship or other recognizable shape.

Event Detection Capabilities

Object Classification: Differentiation in all events between a person, vehicle or other object.

Tripwire: Detects when the specified object moving in a specified direction crosses over a line (tripwire) drawn within the camera's field of view. For example, if the object is a person, the person's feet must cross over the line in the specified direction to trigger an alert. Tripwires can be uni-directional or bi-directional. ObjectVideo® holds a patent for this feature.

Multi-line Tripwire: Permits building rules with association between two video tripwires with respect to crossing one before the other and relative time between crossing both. For example, the Multi-line Tripwire can detect illegal turns or traffic flow (vehicles or people) and indicate speeding.

Enters and Exits: Detects when the specified object type enters and exits an Area of Interest from any direction within the camera's field of view respectively.

Appears: Detects when the specified object appears in an Area of Interest without appearing within the camera's field of view previously. For example, by walking through a doorway that exists inside the Area of Interest.

Disappears: Detects when the specified object disappears from the camera's field of view without exiting the Area of Interest.

Inside of: Detects the specified object moving inside of a designated area of interest within the camera's field of view.

Loitering: A moving object remains within an area of interest for a user-specified period of time. A different loitering time can be specified for each event.

Leave Behind: Detects when an object has been left behind or inserted in the full view of a camera, or a designated area of interest. For example, a Leave Behind rule will trigger an alert when a suspicious object is left on the ground.

Take Away: Detects when an object has been removed from the full field of view, or from a designated area of interest. For example, a Take Away rule will trigger an alert when a picture is removed from a wall.

Scene Change: Detects event that significantly change the field of view of the camera, such as the camera being panned away from a known view, a camera lens being painted, a camera being covered up, turned off or unplugged, or the lights being turned on or off.

Multi-View: The ability to store multiple views and rule sets for a give camera. This enables operation with a PTZ camera with multiple pre-set stops.

Impath OV Feature	30	60	90	200	1000
Object Classification	√	√	√	√	√
Tripwire		√	√	√	√
Multi-line Tripwire					√
Enters/Exits		√	√	√	√
Appears/Disappears				√	√
Inside Of	√	√	√		√
Loitering			√		√
Leave Behind/Take Away					√
Scene Change		√	√	√	√
Multi-view				√	√

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