MVC-IVA-APC IVA Pro Appearance
IVA Pro

- Extract people appearance for a later forensic search
- Use as a surveillance or counting solution

Do you need to find a specific person in your surveillance system? Intelligent Video Analytics (IVA) Pro Appearance, a software solution based on AI capabilities of our cameras, analyzes the appearance of people for later forensic search in video management systems like BVMS. Instead of manually searching through a multitude of cameras and times, IVA Pro Appearance allows you to automatically highlight persons based on gender, color, and length of clothes and hair, as well as wearing hats, glasses, bags, or backpacks.
In addition, IVA Pro Appearance can fulfill basic surveillance and counting tasks as it comes with a robust detection and separation of upright people and vehicles.
IVA Pro Appearance joins the IVA Pro family of advanced, application-specific artificial intelligence (AI) video analytics software for our cameras. All IVA Pro software provides video surveillance operators with a deeper understanding of scenes and delivers valuable insights, enabling informed decisions for a prompt response.

Functions

Robust people surveillance
IVA Pro Appearance automatically detects and separates upright persons and vehicles based on deep learning. It ignores other, unwanted objects like vehicles or sources of motion from environment such as rain, snow, clouds, and leaves blowing in the wind, lighting changes, or a shaking camera.

High-performance people counting
IVA Pro Appearance offers high-performance indoor and outdoor people counting for typical surveillance views by using the inbuilt person detector.

Reliable appearance description
IVA Pro Appearance can reliably detect people and analyzes their appearance with proven accuracy. This includes:

- Gender: male, female
- Top color: black, grey, white, brown, beige, green, red, blue, yellow, orange, pink, purple
- Top length: short, long
- Bottom color: black, grey, white, brown, beige, green, red, blue, yellow, orange, pink, purple
- Bottom length: short, long
- Hair color: black, grey, brown, blond, red
- Hair length: short, long
- Hat / no hat
- Glasses / no glasses
- Bag / no bag
- Backpack / no backpack

These attributes are added in the metadata stream. They allow users to set specific alarms and events using our proprietary Configuration Manager.

Tamper detection
The built-in tamper detection generates alarms on camera hooding / masking, blinding, defocusing, and repositioning.

Alarm and statistic tasks
The following alarm and statistic tasks are available:

- Detect objects within, entering, or leaving a single or multiple (up to three) defined detection zones in specified sequence or timing
- Detect multiple line crossings from a single line up to three lines combined in specified sequence or timing
- Detect objects traversing a route
- Detect loitering in an area related to radius and time
- Detect objects that have started or stopped moving
- Detect objects with properties, such as size, direction, and aspect ratio, that change within a configured time according to specification
- Count objects crossing a virtual line
- Count objects within an area and alarm if a predefined threshold is reached
- Combine tasks using scripts

Filters
To enhance robustness, IVA Pro can be configured to ignore specific image areas and small objects. Furthermore, object size in pixel, two-way direction, aspect ratio, and color filters can be used in any combination to create specific detection rules for exactly the objects you are looking for. Statistics on object properties are stored and can be displayed for fine tuning the object filters. Object properties can also be defined by selecting an appropriately similar object in the video.

Intelligence-at-the-edge concept
The intelligence-at-the-edge technology allows users to reduce bandwidth and storage in the absence of action and switch back to full image quality in case of video analytics alarms. Alarm conditions can be signaled by a relay output on the unit or an alarm connection to stream video to a decoder, or a video management system. Alarms can also be transmitted to a video management system to start extended alarm scenarios. As well as creating alarms, IVA Pro produces metadata describing the content of the analyzed scene. This metadata is sent over the network and may also be recorded with the video stream or used independently of the video stream.

Forensic search
The recorded metadata can be used for a full forensic search in which the rules can be changed within Bosch Video Management System (Bosch VMS), even after the fact. New tasks can be defined and adapted for each search, and the recorded metadata is then scanned and evaluated accordingly. Forensic search is very time efficient and can scan a huge recording database for events within seconds.

Intuitive graphical user interface
The setup is available via the Configuration Manager software. A wizard-based graphical user interface guides the user through the configuration. It provides all the necessary tools to set up IVA Pro and specify detection or counting tasks. All configuration options are visualized as feedback overlays and can be edited directly for intuitive configuration.
When movement is detected, the object is outlined in yellow on the display and its motion is displayed as a green trajectory. If an object and its motion match the rule conditions defined for one of the detector tasks, an alarm is created and the object outlines change to red. Additionally, an idle object is marked with [I] and a removed object is marked with [X].

Minimal configuration
With the minimal configuration, IVA Pro Appearance will detect upright persons and extract their appearance attributes, without any additional configuration needed. If you want IVA Pro Appearance to double as a surveillance or counting solution, then select your task and mark the area of interest in the image.

Parts included

Quantity	Component
1	License

Technical specifications

Compatibility
For information on supported cameras, refer to the Bosch Video Product Selector:
www.videoselector.boschsecurity.com

Configuration
Configure IVA Pro with Configuration Manager, a free software available for download from this website:
https://downloadstore.boschsecurity.com/.

Ordering information

MVC-IVA-APC IVA Pro Appearance
Video analytics software based on deep neural network technology for extracting people appearance for a later forensic search; can be used as a surveillance or counting solution
Order number **MVC-IVA-APC**

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