MVC-IVA-PPE IVA Pro PPE
IVA Pro



- Detect personal protective equipment
- Support safety compliance and reduce accident risk

Many organizations in critical infrastructure, government, and airport environments have strict safety regulations that require employees and visitors to wear specific personal protective equipment (PPE). Companies failing to comply with health and safety protocols set by OSHA may face fines. Intelligent Video Analytics (IVA) Pro PPE (Personal Protective Equipment) is a new application-specific video analytics software designed to detect the proper use of personal protective equipment and promptly alert when missing. The software may enhance safety compliance and operational efficiency, potentially reducing accident risk and promoting health and safety.
IVA Pro PPE 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

Reliable detection of personal protective equipment
IVA Pro PPE can reliably detect people and personal protective equipment items on a specific person with proven accuracy. Personal protective equipment items include:

- Safety vest
- Hard hat

Attributes like object class, color, and direction of motion are added to the metadata stream. It allows users to set specific alarms and events using our proprietary Configuration Manager.

Support safety compliance
Noncompliance with safety regulations can lead to accidents or penalties. IVA Pro PPE uses AI cameras to automate the enforcement of safety rules, helping to prevent accidents and penalties. It alerts in real-time when personal protective equipment is missing, supporting strict safety regulations. This feature helps to reduce risks associated with noncompliance by confirming that personal protective equipment is consistently worn in required areas.

Improve operational efficiency and save costs
Ensuring that all individuals wear the required personal protective equipment can help reduce the need for manual checks and interventions. IVA Pro PPE is designed to improve operational efficiency by continuously monitoring personal protective equipment compliance. With its automated monitoring system, IVA Pro PPE saves time, resources, and associated costs that a company would otherwise spend on manual enforcement of personal protective equipment rules.

Reducing accident risk
Concerns about potential accidents and injuries are valid when using personal protective equipment. Accidents resulting from the lack of proper personal protective equipment can lead to injuries that require medical treatment. IVA Pro PPE may help reduce the risk of accidents and injuries that require medical treatment, thus enhancing workplace safety.

Object classes
IVA Pro PPE provides the following object classes:
- Person
- Vehicle

Alarm and statistic tasks
The following alarm and statistic tasks are available:
- Detect persons not wearing specified personal protective equipment entering a zone
- Detect persons and vehicles 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 persons and vehicles traversing a route
- Detect loitering in an area related to radius and time
- Detect persons and vehicles that have started or stopped moving
- Detect persons and vehicles with properties, such as size, direction, and aspect ratio, that change within a configured time according to specification
- Count persons and vehicles crossing a virtual line
- Count persons and vehicles within an area and alarm if a predefined threshold is reached
- Combine tasks using scripts

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.

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 PPE 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].

Configuration
IVA Pro PPE detects upright persons and analyzes them to ensure they are wearing personal protective equipment. It triggers an alarm when it detects a missing safety vest or hard hat.

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-PPE IVA Pro PPE
Video analytics software based on deep neural network technology for detecting personal protective equipment.
Order number **MVC-IVA-PPE**

https://www.boschsecurity.com