

IVA Pro Integration Support – V2.0 (Status: 2025-02-19)

BT-VS

IVA Pro Integration Support

Analytics support for cameras

- Included by default
- Available as license
- ★ New w/ 9.40

Camera Model	CPP	Analytics											
		IVA Pro Buildings	IVA Pro Perimeter	IVA Pro Traffic	IVA Pro Intelligent Tracking	IVA Pro Visual Gun Detection	IVA Pro Appearance	IVA Pro PPE	IVA Pro LPR	IVA Pro MMR	IVA Pro DGS	IVA Pro Privacy	IAA Gunshot Detection
AUTODOME intex 7000i	13	●	●	●	●	●	●	●	●	●	●	●	●
AUTODOME 7100i (IR)	13	●	●	●	●	●	●	●	●	●	●	●	●
MIC intex 7100i	13	●	●	●	●	●	●	●	●	●	●	●	●
FLEXIDOME 3100i (IR)	14.3	●	●	●	●	●	●	●	●	●	●	●	●
DINION 3100i IR	14.3	●	●	●	●	●	●	●	●	●	●	●	●
FLEXIDOME panoramic 5100i (IR)	14.2	★	★	●	●	●	●	●	●	●	●	★	●
FLEXIDOME corner 7100i IR	14.2	●	●	●	●	●	●	●	●	●	●	●	●
FLEXIDOME multi 7000i (IR)	14.1	●	●	●	●	●	●	●	●	●	●	●	●
DINION 5100i IR	14.2	●	●	●	●	●	★	★	★	★	★	★	●
FLEXIDOME 5100i (IR)	14.2	●	●	●	●	●	★	★	★	★	★	★	★
DINION 7100i IR	14.2	●	●	●	●	●	★	★	★	★	★	★	●
FLEXIDOME 8100i (IR)	14.2	★	★	★	●	★	★	★	★	★	★	★	★

*- Only available for person detection
 R- Only available on IR versions

IVA Pro Integration Support

Analytics support with IPP partners and internally

(Status: 2024-12-10)

- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported

Evaluation based on CPP14 with FW 9.40 or newer

Integration partner

Analytics

		IVA Pro Buildings	IVA Pro Perimeter	IVA Pro Traffic	IVA Pro Intelligent Tracking	IVA Pro Visual Gun Detection	IVA Pro Appearance	IVA Pro PPE	IVA Pro LPR	IVA Pro MMR	IVA Pro DGS	IVA Pro Privacy	IAA Gunshot Detection
On-Premise	Genetec Security Center ⓘ	●	●	●	●	●	●	●	●	●	●	●	●
	Milestone XProtect ⓘ	●	●	●	●	●	●	●	●	●	●	●	●
	BVMS ⓘ	●	●	●	●	●	●	●	●	●	●	●	●
Cloud	Genetec Security Center SaaS ⓘ	●	●	●	●	●	●	●	●	●	●	●	●
	Milestone Kite / Arcules ⓘ	●	●	●	●	●	●	●	●	●	●	●	●
	Eagle Eye Networks ⓘ	●	●	●	●	●	●	●	●	●	●	●	●
	VideoView+ ⓘ	●	●	●	●	●	●	●	●	●	●	●	●
Other	ONVIF ⓘ	●	●	●	●	●	●	●	●	●	●	●	●
	MQTT ⓘ	●	●	●	●	●	●	●	●	●	●	●	●

ⓘ Please note: This slide should not be used on its own. Always accompany it with the corresponding explanatory slides that detail the scope and specifics of the integration for each platform and IVA Pro license.

1.1

Genetec Security Center

This chapter provides an overview of Bosch IVA Pro integrations with Genetec Security Center (on-prem)

The Bosch Plugin Suite for Genetec Security Center (On-Prem) allows seamless configuration and utilization of Bosch edge-based analytics. Additionally, Bosch analytics are further enhanced by integration with Genetec vertical products like RSA Maps and Traffic Sense Systems (TSS).

1. **Real-Time Monitoring & Automation:**
Genetec's Event-to-Action and automation capabilities enable the creation of tasks and processes based on Bosch events, maximizing value through full integration with the Genetec Security Center environment.
2. **Configuration of Bosch Edge-Based Analytics:**
The Bosch Ease of Configuration Plugin, included in the Bosch Plugin Suite, provides a secure environment for fully configuring the rule engine of Bosch cameras without requiring access to passwords.
3. **Forensic Search & Attribute Search:**
The plugin supports two powerful metadata search options:
 - **Attribute Search:** Enables searching across multiple cameras based on specific objects and attributes.
Note: release target for middle of January
 - **Forensic Search:** Facilitates searches based on IVA (Intelligent Video Analytics) tasks, such as detecting objects in specific fields, and more.



IVA Pro Buildings

Specs with Genetec SC:



Reliable detection in and around buildings

	Real-time Receive alarms on events in SC Event-to-Action	Forensic Search for objects in SC Forensic Search Plug-in	.. OR in Bosch Attribute Search Plug-in	Address buildings use cases in SC
Metadata				
*IVA Tasks Supported				
Person	●	●	●	●
Vehicle	●	●	●	●
IVA Tasks*	●	●		
Object in / enter / leave field ¹⁾				●
Line Crossing ¹⁾				●
Object traversing route				●
Loitering				●
Object starting / stopping				●
Object counting				●
Crowd detection				●
Combine tasks using scripts				●
Object properties ²⁾				

Additional characteristics

- Works with Bosch AUTODOME intex 7000i, 3100i, 5100i, 7100i and 8100i series cameras
- IVA Tasks: You can create object-based IVA Tasks ease of configuration plug-in and receive alarms in SC. Subsequently, in SC you can see which object has triggered the specific event (e.g., person line cross vs vehicle line cross), Furthermore you can use rules of same type to trigger different action.

Main use cases addressed

Ensure accurate detection and classification of persons and vehicles in busy scenes for robust building surveillance, and enable high-performance people counting, parking lot occupancy insights and tamper detection, and alarm for it in Genetec SC Event-to-Action.



● Integrated

● Coming soon (within 6 months)

● On the roadmap (within 12 months)

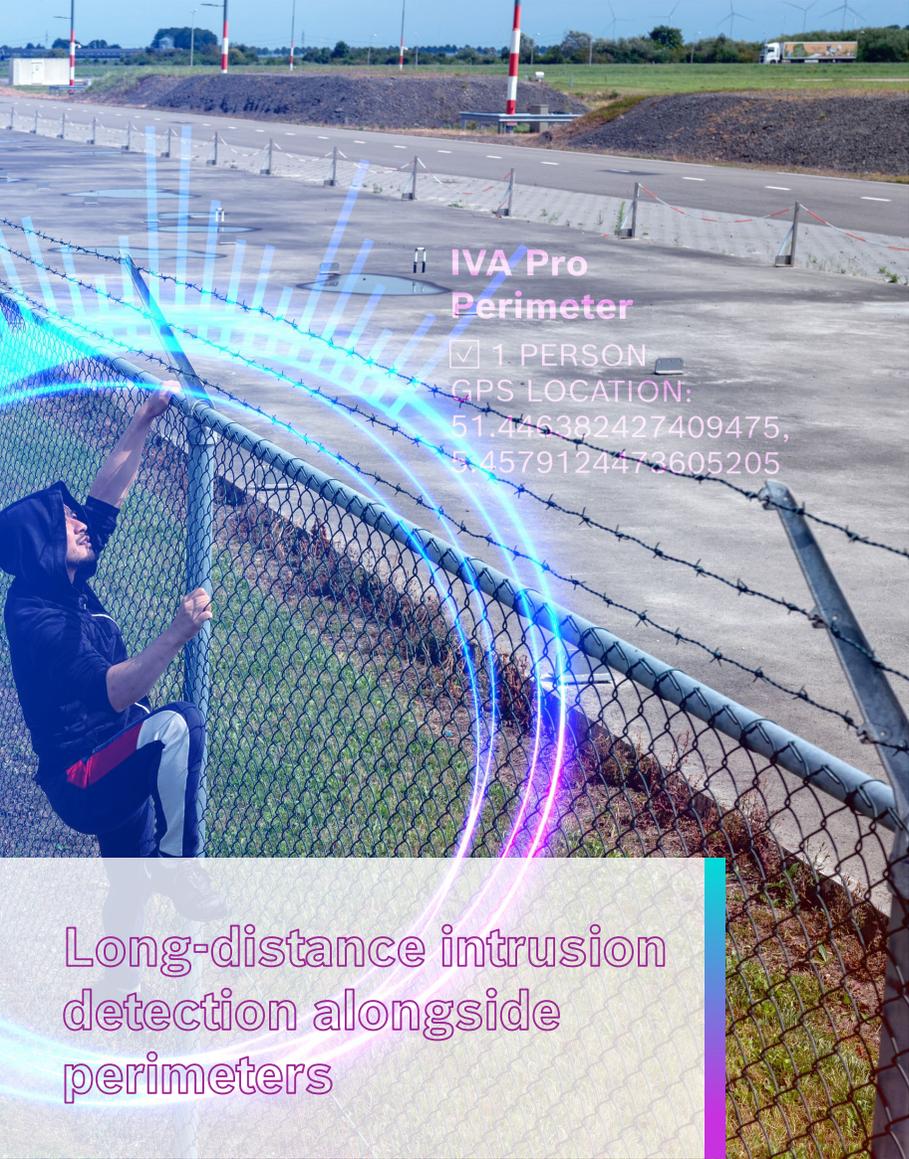
● Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



BOSCH

IVA Pro Perimeter Specs with Genetec SC:



	Real-time Receive alarms on events in SC Event-to-Action	Forensic Search for objects in SC Forensic Search Plug-in	.. OR in Bosch Attribute Search Plug-in	Address perimeter use cases in SC
Metadata				
*IVA Tasks Supported				
Person	●	●	●	●
Bike	●	●	●	●
Car	●	●	●	●
Truck	●	●	●	●
Geolocation	●	●	●	●
IVA Tasks*	●	●		
Object in / enter / leave field ¹⁾				●
Line Crossing ¹⁾				●
Object traversing route				●
Loitering				●
Object starting / stopping				●
Object counting				●
Crowd detection				●
Combine tasks using scripts				●
Object properties ²⁾				●

Additional characteristics

- Restricted Security Area Surveillance for advance map-based parameter production solution
- Easy setup with AI-based 3D autocalibration
- IVA Tasks: You can create object-based IVA Tasks ease of configuration plug-in and receive alarms in SC. Subsequently, in SC you can see which object has triggered the specific event (e.g., person line cross vs vehicle line cross), Furthermore you can use rules of same type to trigger different action.

Main use cases addressed

Detect rolling, crawling or camouflaged intruders, even in harsh (lighting) conditions. Setup intrusion, loitering or other alerts and alarm for it in Genetec SC Event-to-Action and Map based geofencing with RSA Maps



● Integrated

● Coming soon (within 6 months)

● On the roadmap (within 12 months)

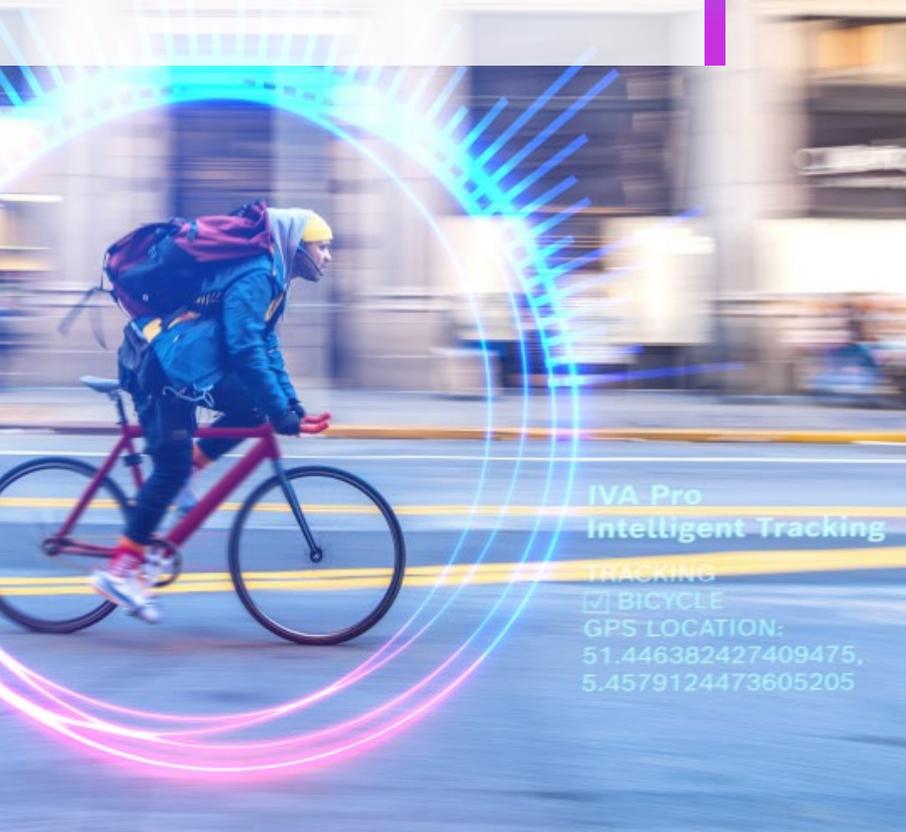
● Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



BOSCH

Intelligent Tracking in traffic and inner city



**IVA Pro
Intelligent Tracking**
TRACKING
[X] BICYCLE
GPS LOCATION:
51.446382427409475,
5.4579124473605205

IVA Pro Intelligent Tracking Specs with Genetec SC:



Address traffic & inner-city use cases in SC

Address buildings use cases in SC

Intelligent Tracking Modes



Auto mode*

In this mode, the camera follows any object that has triggered an alarm in the Intelligent Video Analytics application. This mode is most useful for scenarios in which the alarm cases can be clearly defined, for example, when a vehicle is driving the wrong way or when a person is present on a highway.

Click mode

In this mode, users can click on any object detected by the Intelligent Video Analytics application to enable the camera to track the movement of the selected object. With AI tracking, the camera is able to autotrack even in crowded scenes. For example, an operator watching a train station scene can click on a person of interest and have them automatically tracked by the camera.



*IVA Tasks to Trigger Auto Mode



Object in / enter / leave field¹⁾



Line Crossing¹⁾



Object traversing route



Loitering



Object starting / stopping



Object counting



Crowd detection



Combine tasks using scripts



Object properties²⁾



Additional characteristics

- IVA Pro Intelligent Tracking can be used in conjunction with IVA Pro Buildings and IVA Pro Traffic
- Works with Bosch AUTODOME inteoX 7000i / AUTODOME 7100i and MIC inteoX 7100i
- IVA Tasks: You can create object-based IVA Tasks ease of configuration plug-in and receive alarms in SC. Subsequently, in SC you can see which object has triggered the specific event (e.g., person line cross vs vehicle line cross), Furthermore you can use rules of same type to trigger different action.

Main use cases addressed

Automatically detect and separate upright persons and vehicles. Follow them in traffic or inner-city scenes by panning, tilting, and zooming to follow an object of interest and keep it prominently in the field of view, while ignoring potential disruptions caused by vehicle headlights or shadows, extreme weather, and sun reflections.



● Integrated

● Coming soon (within 6 months)

● On the roadmap (within 12 months)

● Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



BOSCH

IVA Pro Visual Gun Detection

PERSON
GUN IN HAND

IVA Pro Visual Gun Detection Specs with Genetec SC:



	Real-time Receive alarms on events in SC Event-to-Action	Forensic Search for objects in SC Forensic Search Plug-in	.. OR in Bosch Attribute Search Plug-in	Address gun detection use cases in SC
Metadata				
*IVA Tasks Supported				
Person	●	●	●	●
Gun in Hand	●	●	●	●
IVA Tasks*	●	●		
Object in / enter / leave field ¹⁾				●
Line Crossing ¹⁾				●
Object traversing route				●
Loitering				●
Object starting / stopping				●
Object counting				●
Crowd detection				●
Combine tasks using scripts				●
Object properties ²⁾				

Detect brandished guns, directly on camera

Additional characteristics

- Works with Bosch DINION & FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- The built-in tamper detection generates alarms on camera hooding/masking, blinding, defocusing, and repositioning.
- IVA Tasks: You can create object-based IVA Tasks ease of configuration plug-in and receive alarms in SC. Subsequently, in SC you can see which object has triggered the specific event (e.g., person line cross vs vehicle line cross), Furthermore you can use rules of same type to trigger different action.

Main use cases addressed

Designed to detect persons and brandished guns (86.7% true positive rate under predefined conditions*) in order to reduce reaction time in hazardous situations.



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color

IVA Pro Appearance

Specs with Genetec SC:



IVA Pro Appearance

- TOP COLOR: RED
- TOP LENGTH: LONG
- BOTTOM COLOR: NAVY
- BOTTOM LENGTH: LONG
- HAIR COLOR: UNKNOWN
- HAIR LENGTH: SHORT
- GENDER: MALE
- BACKPACK
- HAT
- GLASSES

Robust, detailed people surveillance and high-performance counting

	Real-time Receive alarms on events in SC Event-to-Action	Forensic Search for objects in SC Forensic Search Plug-in	.. OR in Bosch Attribute Search Plug-in	Address people search & counting use cases in SC
Metadata				
*IVA Tasks Supported				
Person	●	●	●	
Vehicle	●	●	●	
Gender	Ⓐ	●	●	
Top color	Ⓐ	●	●	
Top length	Ⓐ	●	●	
Bottom color	Ⓐ	●	●	
Bottom length	Ⓐ	●	●	
Hair color	Ⓐ	●	●	
Hair length	Ⓐ	●	●	
Hat (w/ ; w/o)	Ⓐ	●	●	
Glasses (w/ ; w/o)	Ⓐ	●	●	
Bag (w/ ; w/o)	Ⓐ	●	●	
Backpack (w/ ; w/o)	Ⓐ	●	●	
IVA Tasks*	●	●	●	
Special APPEARANCE (A) task				Ⓐ
Object in / enter / leave field ¹⁾				●
Line Crossing ¹⁾				●
Object traversing route				●
Loitering				●
Object starting / stopping				●
Object counting				●
Crowd detection				●
Combine tasks using scripts				●
Object properties ²⁾				

Additional characteristics

- Works with Bosch DINION & FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- Offers highly accurate distinguishing of people based on attributes
- IVA Tasks: You can create object-based IVA Tasks ease of configuration plug-in and receive alarms in SC. Subsequently, in SC you can see which object has triggered the specific event (e.g., person line cross vs vehicle line cross), Furthermore you can use rules of same type to trigger different action.

Main use cases addressed

Search accurately for a person of interest across multiple cameras based on a list of attributes provided as criteria. Alarm automatically in Genetec SC when specific person is detected (e.g., male with short brown hair and glasses)



Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color

- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



IVA Pro PPE

Specs with Genetec SC:



Reliable detection of personal protective equipment (PPE)

	Real-time Receive alarms on events in SC Event-to-Action	Forensic Search for objects in SC Forensic Search Plug-in	.. OR in Bosch Attribute Search Plug-in	Address PPE use cases in SC
Metadata				
*IVA Tasks Supported				
Person	●	●	●	P
Vehicle	●	●	●	●
Safety vest (w/ ; w/o) P	●	●	●	●
Hard hat (w/ ; w/o) P	●	●	●	●
IVA Tasks*	●	●		
Special PPE task				P
Object in / enter / leave field ¹⁾				●
Line Crossing ¹⁾				●
Object traversing route				●
Loitering				●
Object starting / stopping				●
Object counting				●
Crowd detection				●
Combine tasks using scripts				●
Object properties ²⁾				

Additional characteristics

- Works with Bosch DINION & FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- IVA Tasks: You can create object-based IVA Tasks ease of configuration plug-in and receive alarms in SC. Subsequently, in SC you can see which object has triggered the specific event (e.g., person line cross vs vehicle line cross), Furthermore you can use rules of same type to trigger different action.

Main use cases addressed

Detect people and personal protective equipment items or their absence on a specific person to reduce accident risk, support safety compliance (like OSHA), and improve operational efficiency and save costs.



Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color

- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



IVA Pro LPR

Specs with Genetec SC:



Detecting and recognizing license plates (LPR) in stop and go and city traffic

— Real-time —	— Forensic —
Receive alarms on events in SC Event-to-Action	Search for objects in SC Forensic Search Plug-in .. OR in Bosch Attribute Search Plug-in

Metadata

License plate	●	●	●
Country	●	●	●
State	●	●	●
Black- whitelist	●	●	●



supported states and countries



Also available in combined IVA Pro License Plate + Make Model license

Additional characteristics

- Works with Bosch DINION 5100i and DINION 7100i series
- Advanced functionality will be addressed by Genetec Cloud Runner integration

Main use cases addressed

Detect and read license plates on moving vehicles (car, van, bus, truck, motorbike) in real-time for parking applications or city environments. It supports strategies that improve traffic flow, reduce congestion, and enhance safety at intersections, toll booths, and parking facilities. It ensures reliable and precise data capture for automated ticketing systems, traffic enforcement, and smart parking solutions.



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



Detecting and recognizing the manufacturer and Model (MMR) of vehicles



IVA Pro Vehicle Make Model

- ✓ BRAND: PEUGEOT
- ✓ MODEL: 504
- ✓ COLOR: GREY

IVA Pro MMR Specs with Genetec SC:



	Real-time Receive alarms on events in SC Event-to-Action	Forensic Search for objects in SC Forensic Search Plug-in	.. OR in Bosch Attribute Search Plug-in
Metadata			
Vehicle make	●	●	●
Vehicle model	●	●	●
Vehicle type	●	●	●

140+ manufacturers
2,000+ models

Also available in combined IVA Pro License Plate + Make Model license

Additional characteristics

- Works with Bosch DINION 5100i and DINION 7100i series
- Privacy-friendly solution without license plate recognition
- Advanced functionality will be addressed by Genetec Cloud Runner integration

Main use cases addressed

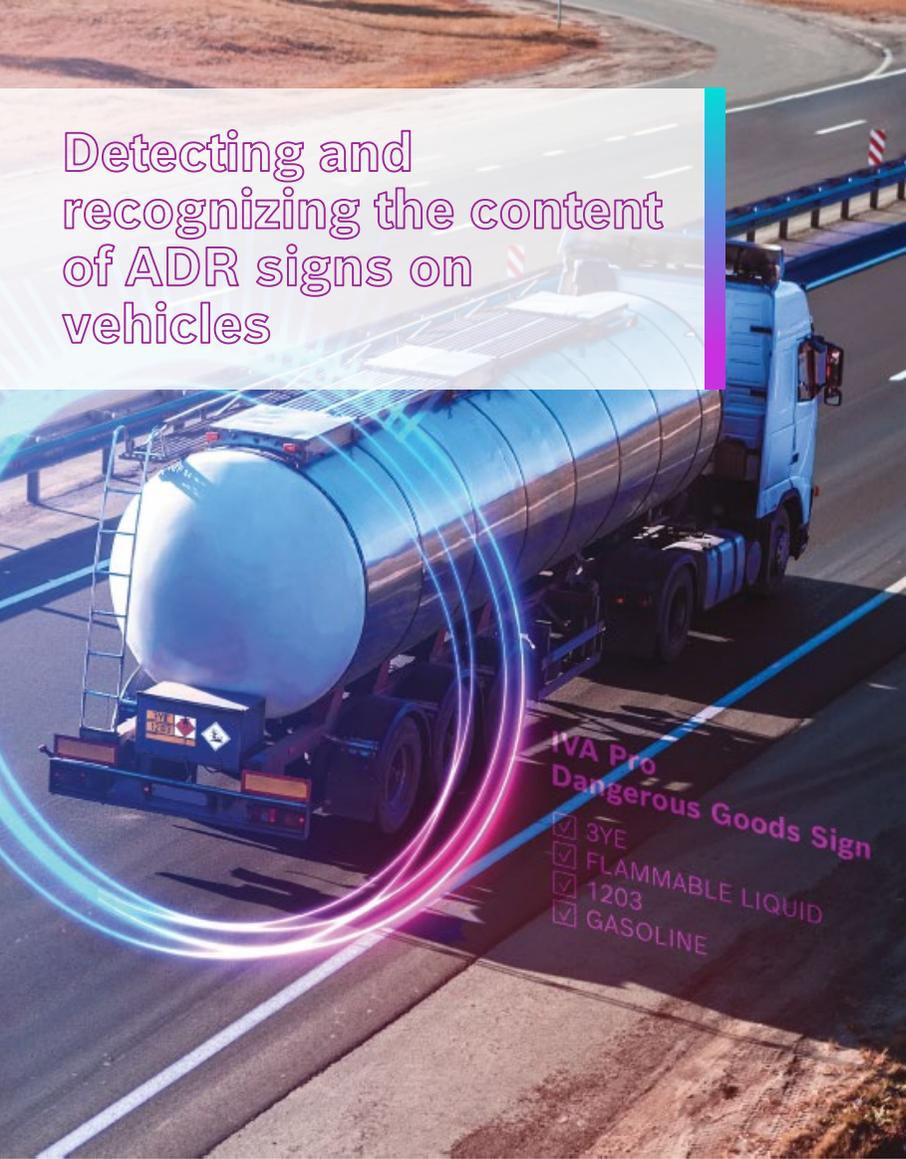
Excel in real-time recognition of vehicles in stop and go parking applications or city environments. Conduct more refined forensic search for specific vehicles in places where license plate recognition (LPR) is not an option.



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



Detecting and recognizing the content of ADR signs on vehicles



IVA Pro DGS Specs with Genetec SC:



	Real-time	Forensic	.. OR in Bosch Attribute Search Plug-in
Receive alarms on events in SC Event-to-Action	●	●	●
Search for objects in SC Forensic Search Plug-in	●	●	●
Metadata	●	●	●
Dangerous Good Signs (ADR)	●	●	●

Additional characteristics

- Works with Bosch DINION 5100i and DINION 7100i series

Main use cases addressed

Specifically tailored for applications in urban traffic management and logistics. It supports strategies that improve hazardous material transport monitoring, emergency response, and regulatory compliance. It ensures reliable and precise data capture of ADR signs, enabling real-time tracking and identification of dangerous goods being transported. City authorities, logistics companies, and emergency services can streamline operations, enhance roadway safety, and make data-driven decisions to improve the safe and efficient transport of dangerous goods.



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



IVA Pro Privacy Mask

Specs with Genetec SC:



Ensure privacy while still obtaining actionable insights

Can blur in Security Center

Metadata



Person



Face



Vehicle



All above



Privacy masking options



Semi-transparent privacy mask

Ensures anonymization while still getting insights about moving objects in the area.



IVA Pro behind privacy mask

Mask camera image fully or partially, while allowing other IVA Pro software to run in these areas, obtaining anonymized metadata, counting statistics, and alarm events while protecting people privacy



Masking IVA Pro objects

Dynamically mask all IVA Pro detected objects w/o hindering view of scene



Additional characteristics

- Works and comes by default with Bosch DINION / FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- Works with IVA Pro Buildings, Perimeter, Traffic, Visual Gun Detection, PPE, or Appearance
- Configure privacy settings per encoder stream, enabling anonymization of persons in live view while preserving evidence in recorded stream. Blurred objects and attributes will still be included into the metadata
- Synchronize video streams and IVA Pro objects for best anonymization performance

Main use cases addressed

Ensure privacy while still getting actionable insights with using another IVA Pro software that detects and tracks objects. IVA Pro Privacy can mask static areas or dynamic IVA Pro objects.

- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



IAA Gunshot Detection Specs with Genetec SC:



Enhance mobility,
safety, and the efficient
use of roadways

	Real-time Receive alarms on events in SC Event-to-Action	Forensic Search for objects in SC Forensic Search Plug-in	.. OR in Bosch Attribute Search Plug-in	Address gunshot detection use cases in SC
Metadata				
Gunshot	●	●	●	●
Gunshot direction	●	●	●	●
T3 alarm - Smoke	●	●	●	●
T4 alarm - CO	●	●	●	●
Events				
Object in / enter / leave field ¹⁾				●
Line Crossing ¹⁾				●
Object traversing route				●
Loitering				●
Object starting / stopping				●
Object counting				●
Crowd detection				●
Combine tasks using scripts				●
Object properties ²⁾				

Additional characteristics

- Works with Bosch 5100i, FLEXIDOME corner & DINION 7100i, and 8100i series
- Detects and identifies target sounds against ambient sounds.

Main use cases addressed

Detect and classify gunshot alarms to alarm for it in SC Event-to-Action.



● Integrated

● Coming soon (within 6 months)

● On the roadmap (within 12 months)

● Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: *Size* *Speed* *Direction* *Aspect ratio* *Color*



1.2

Milestone XProtect

Milestone XProtect is one of our leading on-premise video management software partners. This chapter provides an overview of Bosch IVA Pro integrations with XProtect.

Searching forensically in XProtect

As of XProtect 2024R2, there are two primary methods for conducting forensic searches on Bosch camera data: (1) Natively in XProtect Centralized Search without the use of any plug-in. And (2) through the Bosch Forensic Search plug-in for XProtect. The advantage of XProtect Centralized search compared to using the plug-in is that you can search for most of our new IVA Pro objects/attributes (e.g., backpack through IVA Pro Appearance). The downside of XProtect Centralized search is that it does not support searching forensically for Bosch IVA tasks (e.g., object-in-field). If you want to apply Bosch IVA tasks forensically, you can use the Bosch Forensic Search plug-in for XProtect.

Bosch Enhanced Metadata Plug-in

For visualizing Bosch camera metadata (i.e., add Bosch shapes, trajectories and some classifications), to use IVA Pro Intelligent Tracking (click-mode), or to control a wiper or heater on a Bosch MIC Camera, the Bosch Enhanced Metadata Plug-in for XProtect should be used.

De-warping Plug-in

If you want to de-warp your panoramic cameras in XProtect, please make use of the Bosch De-warping plug-in.



IVA Pro Buildings

Specs with XProtect:



Reliable detection in and around buildings

	Real-time Receive alarms on events in XProtect Alarm Manager	Forensic Search for objects in XProtect Centralized Search	.. OR in Bosch Forensic Search Plug-in	Address buildings use cases in XProtect
Metadata				
*IVA Tasks Supported				
Person	●	●	●	●
Vehicle	●	●	●	●
IVA Tasks*	●	●	●	●
Object in / enter / leave field ¹⁾				●
Line Crossing ¹⁾				●
Object traversing route				●
Loitering				●
Object starting / stopping				●
Object counting				●
Crowd detection				●
Combine tasks using scripts				●
Object properties ²⁾				

Additional characteristics

- Works with Bosch AUTODOME intex 7000i, 3100i, 5100i, 7100i and 8100i series cameras
- IVA Tasks: You can create object-based IVA Tasks in Bosch Config Manager and receive alarms in XProtect Alarm Manager. Subsequently, in XProtect you can see which object has triggered the specific event (e.g., person line cross vs vehicle line cross)

Main use cases addressed

Ensure accurate detection and classification of persons and vehicles in busy scenes for robust building surveillance, and enable high-performance people counting, parking lot occupancy insights and tamper detection, and alarm for it in XProtect Alarm Manager.



● Integrated

● Coming soon (within 6 months)

● On the roadmap (within 12 months)

● Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



IVA Pro Perimeter

Specs with XProtect:



XPROTECT 2024 R2



IVA Pro Perimeter

☑ 1 PERSON
GPS LOCATION:
51.446382427409475,
5.4579124473605205

Long-distance intrusion detection alongside perimeters

	Real-time	Forensic		
	Receive alarms on events in XProtect Alarm Manager	Search for objects in XProtect Centralized Search	.. OR in Bosch Forensic Search Plug-in	Address perimeter use cases in XProtect
Metadata				
*IVA Tasks Supported				
Person	●	●	●	●
Bike	●	●	●	●
Car	●	●	●	●
Truck	●	●	●	●
Geolocation	●	●	●	●
IVA Tasks*	●	●	●	●
Object in / enter / leave field ¹⁾				●
Line Crossing ¹⁾				●
Object traversing route				●
Loitering				●
Object starting / stopping				●
Object counting				●
Crowd detection				●
Combine tasks using scripts				●
Object properties ²⁾				●

Additional characteristics

- Works with Bosch AUTODOME intex 7000i, 5100i, 7100i and 8100i series cameras
- IVA Tasks: You can create object-based IVA Tasks in Bosch Config Manager and receive alarms in XProtect Alarm Manager. Subsequently, in XProtect you can see which object has triggered the specific event (e.g., person line cross vs vehicle line cross)
- Easy setup with AI-based 3D autocalibration

Main use cases addressed

Detect rolling, crawling or camouflaged intruders, even in harsh (lighting) conditions. Setup intrusion, loitering or other alerts and alarm for it in XProtect Alarm Manager.



● Integrated

● Coming soon (within 6 months)

● On the roadmap (within 12 months)

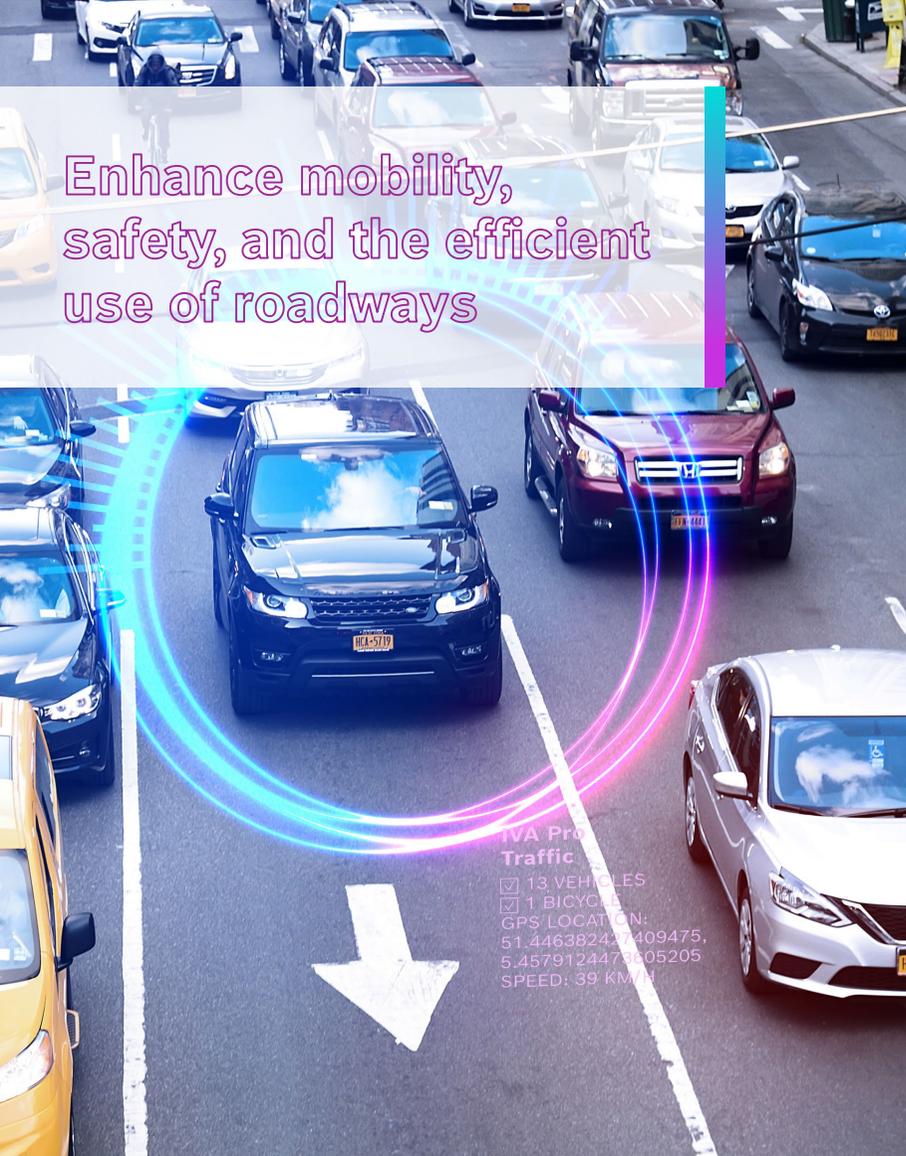
● Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



BOSCH

Enhance mobility, safety, and the efficient use of roadways



IVA Pro Traffic

Specs with XProtect:



	Real-time Receive alarms on events in XProtect Alarm Manager	Forensic Search for objects in XProtect Centralized Search	.. OR in Bosch Forensic Search Plug-in	Address traffic use cases in XProtect
Metadata				
*IVA Tasks Supported				
Person	●	●	●	●
Car	●	●	●	●
Bus	●	●	●	●
Truck	●	●	●	●
Bicycle	●	●	●	●
Motorcycle	●	●	●	●
Vehicle color	●	●	●	●
Geolocation		●	●	●
IVA Tasks*	●	●	●	●
Object in / enter / leave field ¹⁾				●
Line Crossing ¹⁾				●
Object traversing route				●
Loitering				●
Object starting / stopping				●
Object counting				●
Crowd detection				●
Combine tasks using scripts				●
Object properties ²⁾				●

Additional characteristics

- Works with Bosch AUTODOME 7000i, AUTODOME / MIC intex 7100i, FLEXIDOME / DINION 5100i, DINION 7100i, and 8100i series
- IVA Tasks: You can create object-based IVA Tasks in Bosch Config Manager and receive alarms in XProtect Alarm Manager. Subsequently, in XProtect you can see which object has triggered the specific event (e.g., person line cross vs vehicle line cross)
- Easy setup with AI-based 3D autocalibration

Main use cases addressed

Detect, classify, and locate vehicle types for traffic monitoring for intersections, tunnels, and highways: e.g., wrong-way driving, stopped vehicle, traffic congestion, jaywalking and alarm for it in XProtect Alarm Manager.

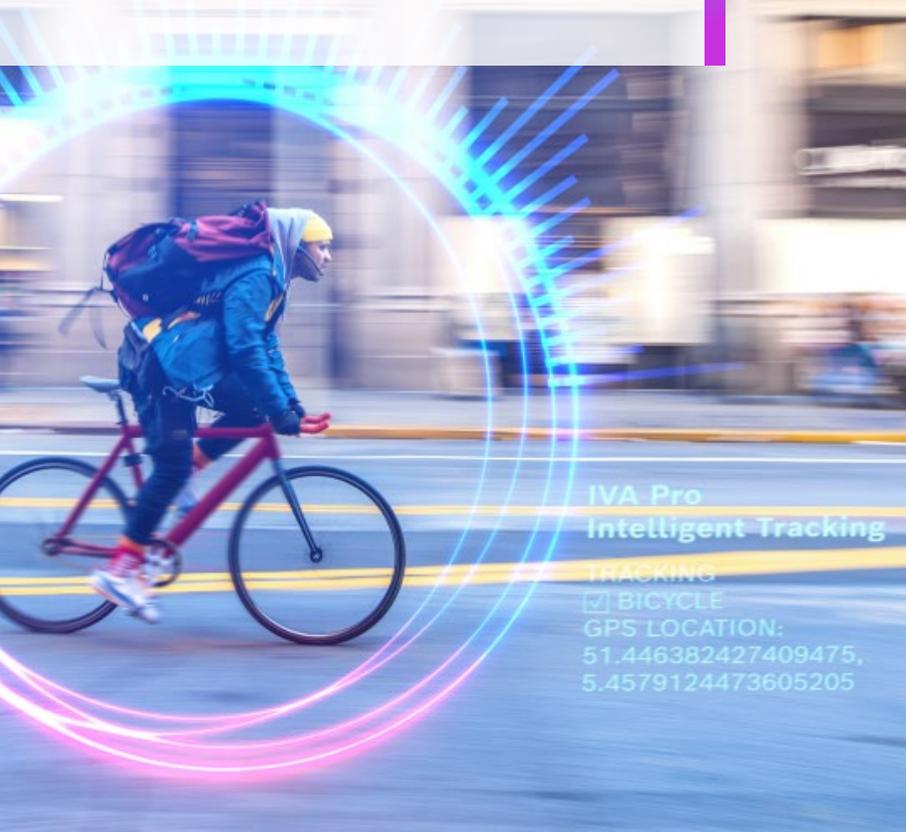


- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color

Intelligent Tracking in traffic and inner city



IVA Pro
Intelligent Tracking

TRACKING
 BICYCLE
 GPS LOCATION:
 51.446382427409475,
 5.4579124473605205



IVA Pro Intelligent Tracking Specs with XProtect:



Address traffic & inner-city use cases in XProtect

Address buildings use cases in XProtect

Intelligent Tracking Modes



Auto mode*

In this mode, the camera follows any object that has triggered an alarm in the Intelligent Video Analytics application. This mode is most useful for scenarios in which the alarm cases can be clearly defined, for example, when a vehicle is driving the wrong way or when a person is present on a highway.

Click mode

In this mode, users can click on any object detected by the Intelligent Video Analytics application to enable the camera to track the movement of the selected object. With AI tracking, the camera is able to autotrack even in crowded scenes. For example, an operator watching a train station scene can click on a person of interest and have them automatically tracked by the camera.



*IVA Tasks to Trigger Auto Mode



Object in / enter / leave field¹⁾



Line Crossing¹⁾



Object traversing route



Loitering



Object starting / stopping



Object counting



Crowd detection



Combine tasks using scripts



Object properties²⁾



Additional characteristics

- IVA Pro Intelligent Tracking in XProtect is fully supported and **requires installation of Bosch Enhanced Metadata plug-in**
- IVA Pro Intelligent Tracking can be used in conjunction with IVA Pro Buildings and IVA Pro Traffic
- Works with Bosch AUTODOME intex 7000i / AUTODOME 7100i and MIC intex 7100i

Main use cases addressed

Automatically detect and separate upright persons and vehicles. Follow them in traffic or inner-city scenes by panning, tilting, and zooming to follow an object of interest and keep it prominently in the field of view, while ignoring potential disruptions caused by vehicle headlights or shadows, extreme weather, and sun reflections.

● Integrated

● Coming soon (within 6 months)

● On the roadmap (within 12 months)

● Not supported



Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



IVA Pro Visual Gun Detection

PERSON
GUN IN HAND



Detect brandished guns, directly on camera

IVA Pro Visual Gun Detection Specs with XProtect:



XPROTECT 2024 R2

	Real-time	Forensic		
	Receive alarms on events in XProtect Alarm Manager	Search for objects in XProtect Centralized Search	.. OR in Bosch Forensic Search Plug-in	Address gun detection use cases in XProtect
Metadata				
Person	●	●	●	●
Gun in Hand	●	●	●	●
IVA Tasks*	●	●	●	●
*IVA Tasks Supported				
Object in / enter / leave field ¹⁾				●
Line Crossing ¹⁾				●
Object traversing route				●
Loitering				●
Object starting / stopping				●
Object counting				●
Crowd detection				●
Combine tasks using scripts				●
Object properties ²⁾				

Additional characteristics

- Works with Bosch DINION & FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- The built-in tamper detection generates alarms on camera hooding/masking, blinding, defocusing, and repositioning.

Main use cases addressed

Designed to detect persons and brandished guns (86.7% true positive rate under predefined conditions*) in order to reduce reaction time in hazardous situations.



Integrated
 Coming soon (within 6 months)
 On the roadmap (within 12 months)
 Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



IVA Pro Appearance

Specs with XProtect:



XPROTECT 2024 R2



IVA Pro Appearance

- TOP COLOR: RED
- TOP LENGTH: LONG
- BOTTOM COLOR: NAVY
- BOTTOM LENGTH: LONG
- HAIR COLOR: UNKNOWN
- HAIR LENGTH: SHORT
- GENDER: MALE
- BACKPACK
- HAT
- GLASSES

Robust, detailed people surveillance and high-performance counting

- Real-time — Receive alarms on events in XProtect Alarm Manager
- Forensic — Search for objects in XProtect Centralized Search .. OR in Bosch Forensic Search Plug-in
- Address people search & counting use cases in XProtect

Metadata

	Real-time	Forensic	.. OR in Bosch Forensic Search Plug-in
Person	●	●	●
Vehicle	●	●	●
Gender	A	●	●
Top color	A	●	●
Top length	A	●	●
Bottom color	A	●	●
Bottom length	A	●	●
Hair color	A	●	●
Hair length	A	●	●
Hat (w/ ; w/o)	A	●	●
Glasses (w/ ; w/o)	A	●	●
Bag (w/ ; w/o)	A	●	●
Backpack (w/ ; w/o)	A	●	●
IVA Tasks*	●	●	●

*IVA Tasks Supported

Special APPEARANCE (A) task	A
Object in / enter / leave field ¹⁾	●
Line Crossing ¹⁾	●
Object traversing route	●
Loitering	●
Object starting / stopping	●
Object counting	●
Crowd detection	●
Combine tasks using scripts	●
Object properties ²⁾	●

Additional characteristics

- Works with Bosch DINION & FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- IVA Tasks: You can create object-based IVA Tasks in Bosch Config Manager and receive alarms for those tasks in XProtect Alarm Manager. Objects marked with the letter "A" can only be combined with the special "appearance" IVA task.

Main use cases addressed

Search forensically for a person of interest across multiple cameras based on a list of attributes provided as criteria. Alternatively, alarm automatically in XProtect when specific person is being detected (e.g., male with short brown hair and glasses)



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



BOSCH

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color

IVA Pro PPE

Specs with XProtect:



Reliable detection of personal protective equipment (PPE)

— Real-time — Forensic

Receive alarms on events in XProtect Alarm Manager Search for objects in XProtect Centralized Search .. OR in Bosch Forensic Search Plug-in

Address PPE use cases in XProtect

Metadata				*IVA Tasks Supported	
Person	●	●	●	Special PPE (P) task	● P
Vehicle	●	●	●	Object in / enter / leave field ¹⁾	●
Safety vest (w/ ; w/o) P	● P	●	●	Line Crossing ¹⁾	●
Hard hat (w/ ; w/o) P	● P	●	●	Object traversing route	●
IVA Tasks*	●	●	●	Loitering	●
		●	●	Object starting / stopping	●
			●	Object counting	●
			●	Crowd detection	●
			●	Combine tasks using scripts	●
			●	Object properties ²⁾	●

Additional characteristics

- Works with Bosch DINION & FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- IVA Tasks: You can create object-based IVA Tasks in Bosch Config Manager and receive alarms for those tasks in XProtect Alarm Manager. Objects marked with the letter "P" can only be combined with the special "PPE" IVA task.

Main use cases addressed

Detect people and personal protective equipment items or their absence on a specific person to reduce accident risk, support safety compliance (like OSHA), and improve operational efficiency and save costs.



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color

IVA Pro LPR

Specs with XProtect:



Detecting and recognizing license plates (LPR) in stop and go and city traffic

— Real-time —	— Forensic —
Receive alarms on events in XProtect Alarm Manager	Search for objects in XProtect Centralized Search .. OR in Bosch Forensic Search Plug-in

Metadata

License plate	●	●	●
Country	●	●	●
State	●	●	●
Black- whitelist	●	●	●



supported states and countries



Also available in combined IVA Pro License Plate + Make Model license

Additional characteristics

- Works with Bosch DINION 5100i and DINION 7100i series
- The current version of IVA Pro LPR is not able to provide alarms based on specific license plates or vehicles from specific countries or states

Main use cases addressed

Detect and read license plates on moving vehicles (car, van, bus, truck, motorbike) in real-time for parking applications or city environments. It supports strategies that improve traffic flow, reduce congestion, and enhance safety at intersections, toll booths, and parking facilities. It ensures reliable and precise data capture for automated ticketing systems, traffic enforcement, and smart parking solutions.

- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



Detecting and recognizing the manufacturer and Model (MMR) of vehicles



IVA Pro
Vehicle Make Model

- ✓ BRAND: PEUGEOT
- ✓ MODEL: 504
- ✓ COLOR: GREY

IVA Pro MMR Specs with XProtect:



	Real-time Receive alarms on events in XProtect Alarm Manager	Forensic Search for objects in XProtect Centralized Search	.. OR in Bosch Forensic Search Plug-in
Metadata			
Vehicle make	●	●	●
Vehicle model	●	●	●
Vehicle type	●	●	●

140+ manufacturers
2,000+ models

Also available in combined
IVA Pro License Plate +
Make Model license

Additional characteristics

- Use Milestone Centralized Search to directly search for vehicle types, makes and models without the need for any plug-in
- Works with Bosch DINION 5100i and DINION 7100i series
- The current version of IVA Pro MMR is not able to provide alarms based on specific vehicle makes or models

Main use cases addressed

Excel in real-time recognition of vehicles in stop and go parking applications or city environments. Conduct more refined forensic search for specific vehicles in places where license plate recognition (LPR) is not an option.

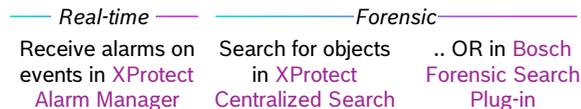


- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



Detecting and recognizing the content of ADR signs on vehicles

IVA Pro DGS Specs with XProtect:



Metadata

Dangerous Good Signs (ADR)



Additional characteristics

- Works with Bosch DINION 5100i and DINION 7100i series
- The current version of IVA Pro DGS is not supported in conjunction with Milestone XProtect

Main use cases addressed

Specifically tailored for applications in urban traffic management and logistics. It supports strategies that improve hazardous material transport monitoring, emergency response, and regulatory compliance. It ensures reliable and precise data capture of ADR signs, enabling real-time tracking and identification of dangerous goods being transported. City authorities, logistics companies, and emergency services can streamline operations, enhance roadway safety, and make data-driven decisions to improve the safe and efficient transport of dangerous goods.



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



IVA Pro Privacy Mask Specs with XProtect:



Ensure privacy while still obtaining actionable insights

	Can blur in XProtect	Address privacy use cases in XProtect
Metadata		
Person	●	●
Face	●	
Vehicle	●	●
All above	●	
Privacy masking options		
Semi-transparent privacy mask <i>Ensures anonymization while still getting insights about moving objects in the area.</i>		●
IVA Pro behind privacy mask <i>Mask camera image fully or partially, while allowing other IVA Pro software to run in these areas, obtaining anonymized metadata, counting statistics, and alarm events while protecting people privacy</i>		●
Masking IVA Pro objects <i>Dynamically mask all IVA Pro detected objects w/o hindering view of scene</i>		●

Additional characteristics

- Works and comes by default with Bosch DINION / FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- Works with IVA Pro Buildings, Perimeter, Traffic, Visual Gun Detection, PPE, or Appearance
- Configure privacy settings per encoder stream, enabling anonymization of persons in live view while preserving evidence in recorded stream. Blurred objects and attributes will still be included into the metadata
- Synchronize video streams and IVA Pro objects for best anonymization performance

Main use cases addressed

Ensure privacy while still getting actionable insights with using another IVA Pro software that detects and tracks objects. IVA Pro Privacy can mask static areas or dynamic IVA Pro objects.



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



IAA Gunshot Detection Specs with XProtect:



XPROTECT 2024 R2

— Real-time — Forensic —

Receive alarms on events in XProtect Alarm Manager Search for objects in XProtect Centralized Search .. OR in Bosch Forensic Search Plug-in

Address gunshot detection use cases in XProtect

Metadata



Events



Metadata	Real-time	Forensic	.. OR in Bosch Forensic Search Plug-in
Gunshot	●	●	●
Gunshot direction		●	●
T3 alarm - Smoke	●	●	●
T4 alarm - CO	●	●	●

Events	Address gunshot detection use cases in XProtect
Object in / enter / leave field ¹⁾	●
Line Crossing ¹⁾	●
Object traversing route	●
Loitering	●
Object starting / stopping	●
Object counting	●
Crowd detection	●
Combine tasks using scripts	●
Object properties ²⁾	

Additional characteristics

- The detection of a gunshot + its direction can soon be visualized in XProtect but **requires the Bosch Enhanced Metadata plug-in**
- Works with Bosch 5100i, FLEXIDOME corner & DINION 7100i, and 8100i series
- Detects and identifies target sounds against ambient sounds.

Main use cases addressed

Detect and classify gunshot alarms and detect T3 and T4 sound alarms for CO and smoke and alarm for it in XProtect Alarm Manager.

Enhance mobility, safety, and the efficient use of roadways



● Integrated

● Coming soon (within 6 months)

● On the roadmap (within 12 months)

● Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



BOSCH

1.3

Bosch Video Management System (BVMS)



IVA Pro Buildings

Specs with BVMS:



Reliable detection in and around buildings

Real-time

Receive alarms on events in BVMS

Forensic

Search for objects in Forensic Search

Address buildings use cases in BVMS

Metadata



*IVA Tasks Supported



Person



Object in / enter / leave field¹⁾



Vehicle



Line Crossing¹⁾



IVA Tasks*



Object traversing route



Loitering



Object starting / stopping



Object counting



Crowd detection



Combine tasks using scripts



Object properties²⁾



Additional characteristics

- Works with Bosch AUTODOME inteox 7000i, 3100i, 5100i, 7100i and 8100i series cameras

Main use cases addressed

Ensure accurate detection and classification of persons and vehicles in busy scenes for robust building surveillance, and enable high-performance people counting, parking lot occupancy insights and tamper detection. Use BVMS alarming to perform required immediate reactions.



● Integrated

● Coming soon (within 6 months)

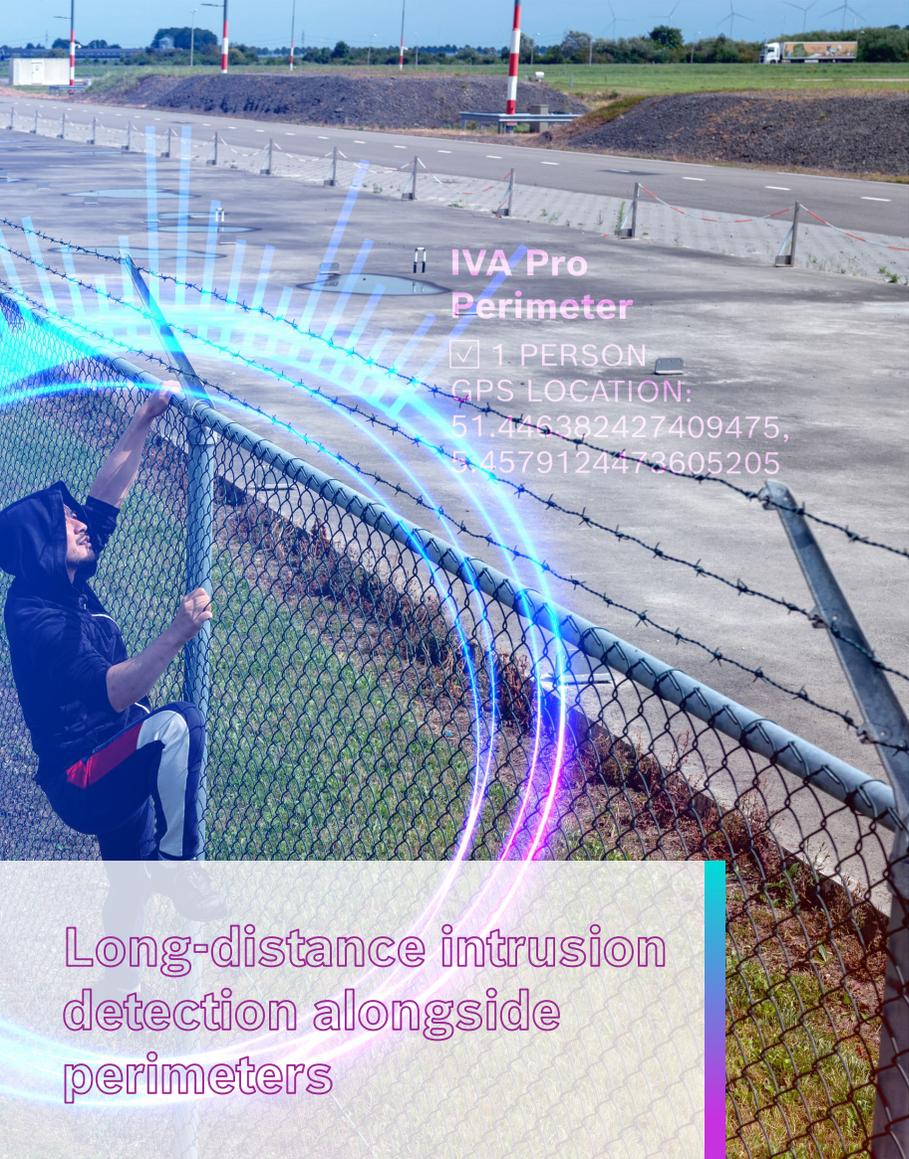
● On the roadmap (within 12 months)

● Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



IVA Pro Perimeter Specs with BVMS:



— Real-time —

— Forensic —

Receive alarms on events in BVMS

Search for objects in Forensic Search

Address perimeter use cases in BVMS

Metadata



*IVA Tasks Supported



Person



Object in / enter / leave field¹⁾



Bike



Line Crossing¹⁾



Car



Object traversing route



Truck



Loitering



Geolocation



Object starting / stopping



IVA Tasks*



Object counting



Crowd detection



Combine tasks using scripts



Object properties²⁾



Additional characteristics

- Works with Bosch AUTODOME intexx 7000i, 5100i, 7100i and 8100i series cameras
- Easy setup with AI-based 3D autocalibration
- Visualize detected objects on a map to get situational awareness

Main use cases addressed

Detect rolling, crawling or camouflaged intruders, even in harsh (lighting) conditions. Setup intrusion, loitering or other alerts and use BVMS alarming to perform required immediate reactions.



● Integrated

● Coming soon (within 6 months)

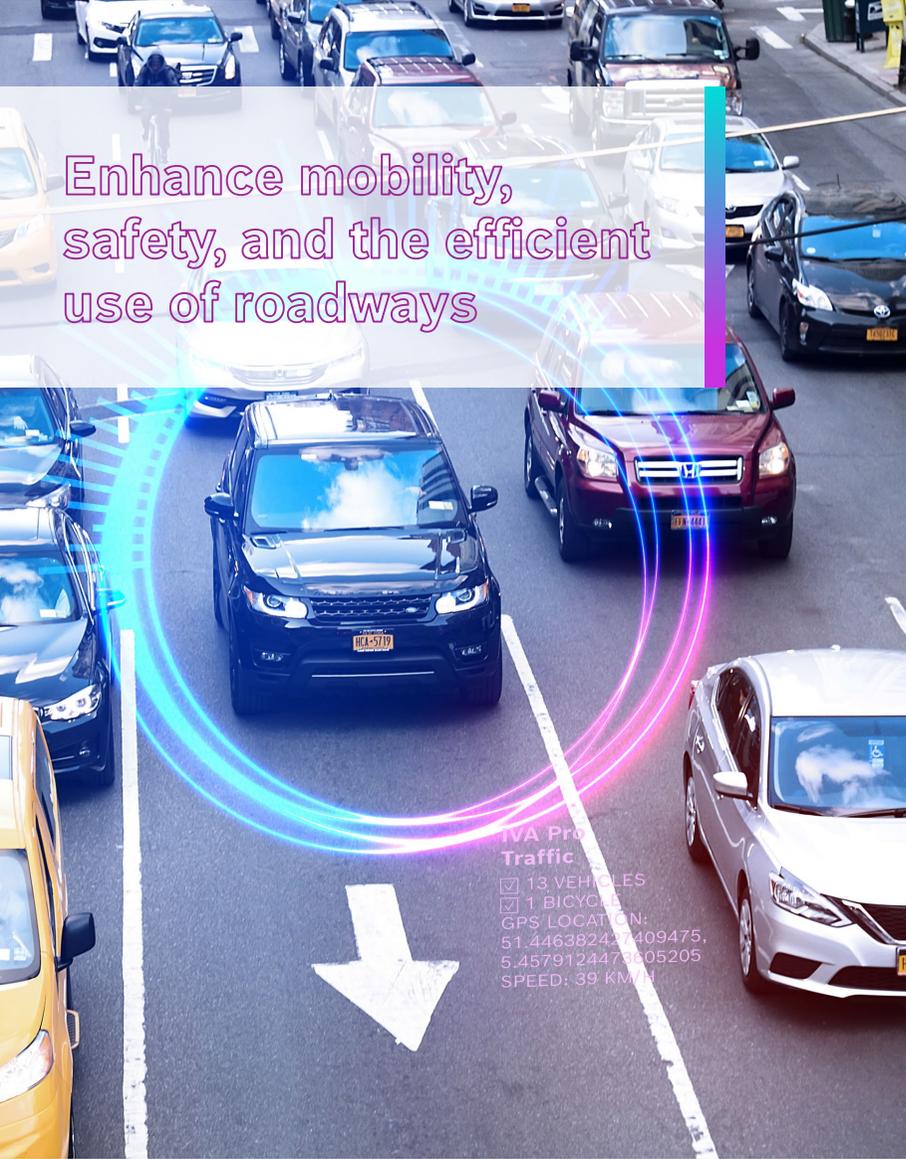
● On the roadmap (within 12 months)

● Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



Enhance mobility, safety, and the efficient use of roadways



IVA Pro Traffic

Specs with BVMS:



	Real-time	Forensic	
	Receive alarms on events in BVMS	Search for objects in Forensic Search	Address traffic use cases in BVMS
Metadata			
*IVA Tasks Supported			
Person	●	●	Object in / enter / leave field ¹⁾ ●
Car	●	●	Line Crossing ¹⁾ ●
Bus	●	●	Object traversing route ●
Truck	●	●	Loitering ●
Bicycle	●	●	Object starting / stopping ●
Motorcycle	●	●	Object counting ●
Vehicle color	●	●	Crowd detection ●
Geolocation	●	●	Combine tasks using scripts ●
IVA Tasks*	●	●	Object properties ²⁾

Additional characteristics

- Works with Bosch AUTODOME 7000i, AUTODOME / MIC inteox 7100i, FLEXIDOME / DINION 5100i, DINION 7100i, and 8100i series
- Easy setup with AI-based 3D autocalibration
- Visualize detected people and vehicles on a map to get situational awareness

Main use cases addressed

Detect, classify, and locate vehicle types for traffic monitoring for intersections, tunnels, and highways: e.g., wrong-way driving, stopped vehicle, traffic congestion, jaywalking and use BVMS alarming to perform required immediate reactions.



● Integrated

● Coming soon (within 6 months)

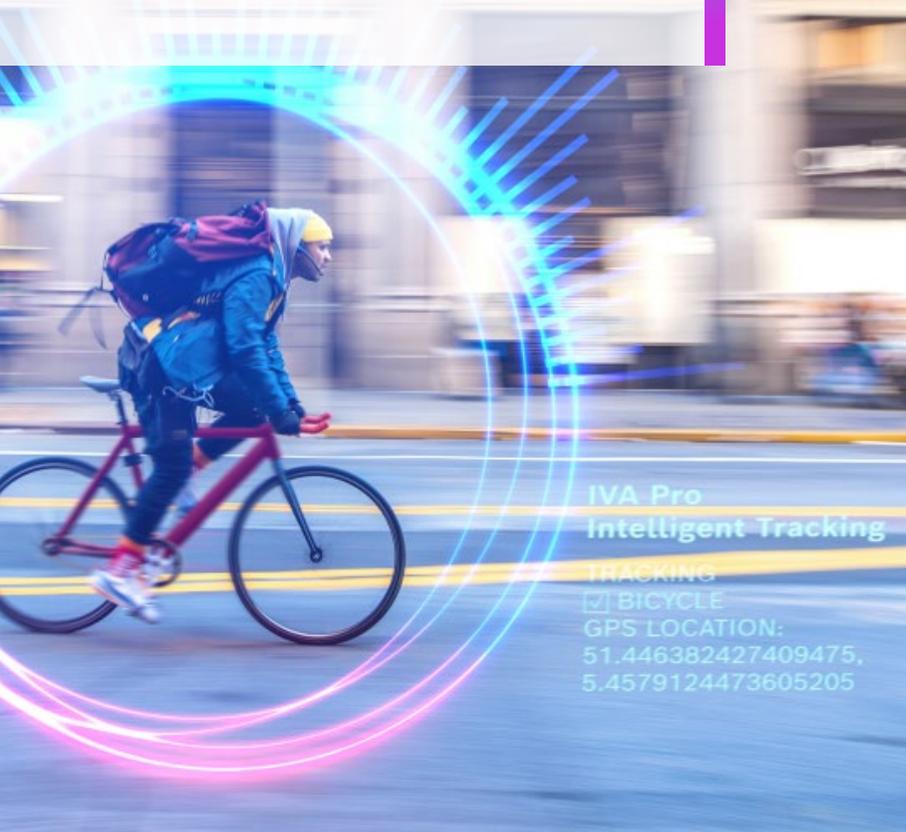
● On the roadmap (within 12 months)

● Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



Intelligent Tracking in traffic and inner city



IVA Pro Intelligent Tracking
 TRACKING
 BICYCLE
 GPS LOCATION:
 51.446382427409475,
 5.4579124473605205

IVA Pro Intelligent Tracking Specs with BVMS:



Address traffic & inner-city use cases in BVMS

Address buildings use cases in BVMS

Intelligent Tracking Modes



Auto mode*

In this mode, the camera follows any object that has triggered an alarm in the Intelligent Video Analytics application. This mode is most useful for scenarios in which the alarm cases can be clearly defined, for example, when a vehicle is driving the wrong way or when a person is present on a highway.

Click mode

In this mode, users can click on any object detected by the Intelligent Video Analytics application to enable the camera to track the movement of the selected object. With AI tracking, the camera is able to autotrack even in crowded scenes. For example, an operator watching a train station scene can click on a person of interest and have them automatically tracked by the camera.



*IVA Tasks to Trigger Auto Mode



Object in / enter / leave field¹⁾



Line Crossing¹⁾



Object traversing route



Loitering



Object starting / stopping



Object counting



Crowd detection



Combine tasks using scripts



Object properties²⁾



Additional characteristics

- IVA Pro Intelligent Tracking can be used in conjunction with IVA Pro Buildings and IVA Pro Traffic
- Works with Bosch AUTODOME intex 7000i / AUTODOME 7100i and MIC intex 7100i

Main use cases addressed

Automatically detect and separate upright persons and vehicles. Follow them in traffic or inner-city scenes by panning, tilting, and zooming to follow an object of interest and keep it prominently in the field of view, while ignoring potential disruptions caused by vehicle headlights or shadows, extreme weather, and sun reflections.



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported

- Size
- Speed
- Direction
- Aspect ratio
- Color

Note(s): 1) configure up to three zones / lines combined | 2) Properties:



IVA Pro Visual Gun Detection

PERSON
GUN IN HAND



Detect brandished guns, directly on camera

IVA Pro Visual Gun Detection Specs with BVMS:



	Real-time	Forensic	
	Receive alarms on events in BVMS	Search for objects in Forensic Search	Address gun detection use cases in BVMS
Metadata			
Person	●	●	Object in / enter / leave field ¹⁾
Gun in Hand	●	●	Line Crossing ¹⁾
IVA Tasks*	●	●	Object traversing route
			Loitering
			Object starting / stopping
			Object counting
			Crowd detection
			Combine tasks using scripts
			Object properties ²⁾

Additional characteristics

- Works with Bosch DINION & FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- The built-in tamper detection generates alarms on camera hooding/masking, blinding, defocusing, and repositioning.

Main use cases addressed

Designed to detect persons and brandished guns (86.7% true positive rate under predefined conditions*) in order to reduce reaction time in hazardous situations. Use BVMS alarming to perform required immediate reactions.



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color

IVA Pro Appearance Specs with BVMS:



IVA Pro Appearance

- TOP COLOR: RED
- TOP LENGTH: LONG
- BOTTOM COLOR: NAVY
- BOTTOM LENGTH: LONG
- HAIR COLOR: UNKNOWN
- HAIR LENGTH: SHORT
- GENDER: MALE
- BACKPACK
- HAT
- GLASSES

Robust, detailed people surveillance and high-performance counting

Real-time

Forensic

Receive alarms on events in BVMS

Search for objects in Forensic Search

Address people search use cases in BVMS

Metadata



*IVA Tasks Supported



Attribute	Real-time	Forensic
Person	●	●
Vehicle	●	●
Gender	A	●
Top color	A	●
Top length	A	●
Bottom color	A	●
Bottom length	A	●
Hair color	A	●
Hair length	A	●
Hat (w/ ; w/o)	A	●
Glasses (w/ ; w/o)	A	●
Bag (w/ ; w/o)	A	●
Backpack (w/ ; w/o)	A	●
IVA Tasks*	●	●

Task	Supported
Special APPEARANCE (A) task	A
Object in / enter / leave field ¹⁾	●
Line Crossing ¹⁾	●
Object traversing route	●
Loitering	●
Object starting / stopping	●
Object counting	●
Crowd detection	●
Combine tasks using scripts	●
Object properties ²⁾	●

Additional characteristics

- Works with Bosch DINION & FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- Offers highly accurate distinguishing of people based on attributes

Main use cases addressed

Search accurately for a person of interest across multiple cameras based on a list of attributes provided as criteria. Alarm automatically in BVMS when specific person is detected (e.g., male with short brown hair and glasses)



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



IVA Pro PPE Specs with BVMS:



Reliable detection of
personal protective
equipment (PPE)

— Real-time —

— Forensic —

Receive alarms on
events in BVMS

Search for objects
in Forensic Search

Address PPE use
cases in BVMS

Metadata



*IVA Tasks Supported



Person



Special PPE (P) task



Vehicle



Object in / enter / leave field¹⁾



Safety vest (w/ ; w/o)



Line Crossing¹⁾



Hard hat (w/ ; w/o)



Object traversing route



IVA Tasks*



Loitering



Object starting / stopping



Object counting



Crowd detection



Combine tasks using scripts



Object properties²⁾



Additional characteristics

- Works with Bosch DINION & FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series

Main use cases addressed

Detect people and personal protective equipment items or their absence on a specific person to reduce accident risk, support safety compliance (like OSHA), and improve operational efficiency and save costs.



● Integrated

● Coming soon
(within 6 months)

● On the roadmap
(within 12 months)

● Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



IVA Pro LPR

Specs with BVMS:



Detecting and recognizing license plates (LPR) in stop and go and city traffic

— Real-time —

— Forensic —

Receive alarms on events in BVMS

Search for objects using BVMS events

Metadata



License plate



Country



State



Black- whitelist



supported states and countries



Also available in combined IVA Pro License Plate + Make Model license

Additional characteristics

- Works with Bosch DINION 5100i and DINION 7100i series

Main use cases addressed

Detect and read license plates on moving vehicles (car, van, bus, truck, motorbike) in real-time for parking applications or city environments. It supports strategies that improve traffic flow, reduce congestion, and enhance safety at intersections, toll booths, and parking facilities. It ensures reliable and precise data capture for automated ticketing systems, traffic enforcement, and smart parking solutions.

- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



Detecting and recognizing the manufacturer and Model (MMR) of vehicles



IVA Pro Vehicle Make Model

- ✓ BRAND: PEUGEOT
- ✓ MODEL: 504
- ✓ COLOR: GREY



IVA Pro MMR Specs with BVMS:



	Real-time	Forensic
	Receive alarms on events in BVMS	Search for objects using BVMS events
Metadata		
Vehicle make	●	●
Vehicle model	●	●
Vehicle type	●	●

140+ manufacturers
2,000+ models

Also available in combined IVA Pro License Plate + Make Model license

Additional characteristics

- Works with Bosch DINION 5100i and DINION 7100i series
- Privacy-friendly solution without license plate recognition

Main use cases addressed

Excel in real-time recognition of vehicles in stop and go parking applications or city environments. Conduct more refined forensic search for specific vehicles in places where license plate recognition (LPR) is not an option.

- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



IVA Pro Privacy Mask Specs with BVMS:



Ensure privacy while
still obtaining
actionable insights

Can blur in BVMS

Metadata



Person



Face



Vehicle



All above



Address privacy use cases in BVMS

Privacy masking options



Semi-transparent privacy mask

Ensures anonymization while still getting insights about moving objects in the area.



IVA Pro behind privacy mask

Mask camera image fully or partially, while allowing other IVA Pro software to run in these areas, obtaining anonymized metadata, counting statistics, and alarm events while protecting people privacy



Masking IVA Pro objects

Dynamically mask all IVA Pro detected objects w/o hindering view of scene



Additional characteristics

- Works and comes by default with Bosch DINION / FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- Works with IVA Pro Buildings, Perimeter, Traffic, Visual Gun Detection, PPE, or Appearance
- Configure privacy settings per encoder stream, enabling anonymization of persons in live view while preserving evidence in recorded stream. Blurred objects and attributes will still be included into the metadata
- Synchronize video streams and IVA Pro objects for best anonymization performance

Main use cases addressed

Ensure privacy while still getting actionable insights with using another IVA Pro software that detects and tracks objects. IVA Pro Privacy can mask static areas or dynamic IVA Pro objects.

- Integrated
- Coming soon
(within 6 months)
- On the roadmap
(within 12 months)
- Not supported



IAA Gunshot Detection Specs with BVMS:



Enhance mobility,
safety, and the efficient
use of roadways

— Real-time —

— Forensic —

Receive alarms on
events in **BVMS**

Search for objects
in **Forensic Search**

Address gunshot
detection use
cases in **BVMS**

Metadata



Events



Gunshot



Object in / enter / leave field¹⁾



Gunshot direction



Line Crossing¹⁾



T3 alarm - Smoke



T4 alarm - CO

Object traversing route



Loitering



Object starting / stopping



Object counting



Crowd detection



Combine tasks using scripts



Object properties²⁾



Additional characteristics

- Works with Bosch 5100i, FLEXIDOME corner & DINION 7100i, and 8100i series
- Detects and identifies target sounds against ambient sounds.

Main use cases addressed

Detect and classify gunshot alarms to alarm for it in BVMS.



● Integrated

● Coming soon
(within 6 months)

● On the roadmap
(within 12 months)

● Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



2.1

Genetec SC SaaS

This chapter provides an overview of Bosch IVA Pro integrations with Genetec Security Center SaaS

There are two main approaches to analyzing events, each serving distinct purposes:

- 1. Real-time Monitoring & Automation:** Receive instant alerts using Event-to-Action capabilities. With the launch, firearm detection events (via Cloud Link) are supported. Over time, additional event types will be integrated for even broader real-time functionality.
- 2. Forensic Search:** Genetec's natural language search leverages Bosch's edge-based object and attribute detection. The initial launch supports forensic search capabilities through Cloud Link for CPP 14.
- 3. SC SaaS offers multiple ways to connect cameras:**
 - Direct to cloud: leveraging latest Web RTC technology, Direct-to-cloud integration cuts hardware costs, eliminating on-site servers and maintenance. Available for CPP 14 cameras
 - Cloud Link: Connect devices to our cloud-managed appliances for hybrid deployment. Genetec handles updates & security.
 - Federation: Federate on-prem systems to a new Security Center SaaS deployment or connect new cloud sites to your existing infrastructure.

At ISC West, we plan to showcase a demonstrator featuring Events & Metadata Forensic Search, as well as direct-to-cloud (D2C) integration for streamlined functionality.



IVA Pro Buildings

Specs with Genetec SC SaaS:



Reliable detection in and around buildings

Real-time
Receive alarms on events in SC SaaS
Event-to-Action

Forensic
Search for objects in SC SaaS
Forensic Search

Address buildings use cases in SC SaaS

Metadata



*IVA Tasks Supported



Person



Object in / enter / leave field¹⁾



Vehicle



Line Crossing¹⁾



Object traversing route



Loitering



Object starting / stopping



Object counting



Crowd detection



Combine tasks using scripts



Object properties²⁾



Additional characteristics

- Works with Bosch AUTODOME inteox 7000i, 3100i, 5100i, 7100i and 8100i series cameras

Main use cases addressed

Ensure accurate detection and classification of persons and vehicles in busy scenes for robust building surveillance, and enable high-performance people counting, parking lot occupancy insights and tamper detection, and alarm for it in Genetec SC SaaS Event-to-Action.

Cloud Link (Gateway)

Direct to cloud



Integrated

Coming soon (within 6 months)

On the roadmap (within 12 months)

Not supported

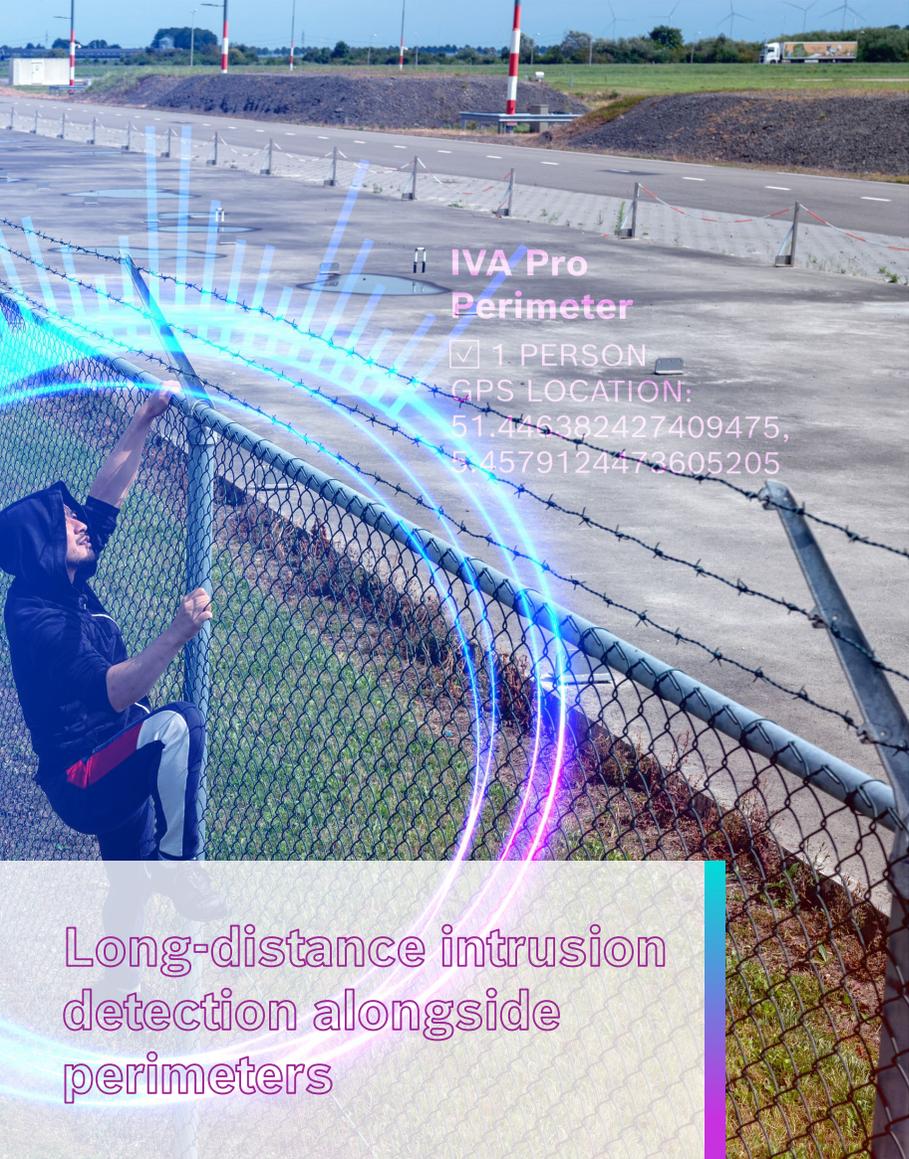
Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



BOSCH

IVA Pro Perimeter

Specs with Genetec SC SaaS:



IVA Pro Perimeter

1 PERSON
 GPS LOCATION:
 51.446382427409475,
 5.4579124473605205

Long-distance intrusion detection alongside perimeters

Real-time
 Receive alarms on events in SC SaaS
 Event-to-Action

Forensic
 Search for objects in SC SaaS
 Forensic Search

Address perimeter use cases in SC SaaS

Metadata



*IVA Tasks Supported



Metadata	Real-time	Forensic	*IVA Tasks Supported
Person	●	●	Object in / enter / leave field ¹⁾
Bike	●	●	Line Crossing ¹⁾
Car	●	●	Object traversing route
Truck	●	●	Loitering
Geolocation	●	●	Object starting / stopping
			Object counting
			Crowd detection
			Combine tasks using scripts
			Object properties ²⁾

Additional characteristics

- Works with Bosch AUTODOME intex 7000i, 5100i, 7100i and 8100i series cameras
- Easy setup with AI-based 3D autocalibration

Main use cases addressed

Detect rolling, crawling or camouflaged intruders, even in harsh (lighting) conditions. Setup intrusion, loitering or other alerts and alarm for it in Genetec SC SaaS Event-to-Action.

- Cloud Link (Gateway)
- Direct to cloud

- 🔧
- 📶
- ↔️
- 📄
- 🌈
- Aspect ratio
- Color

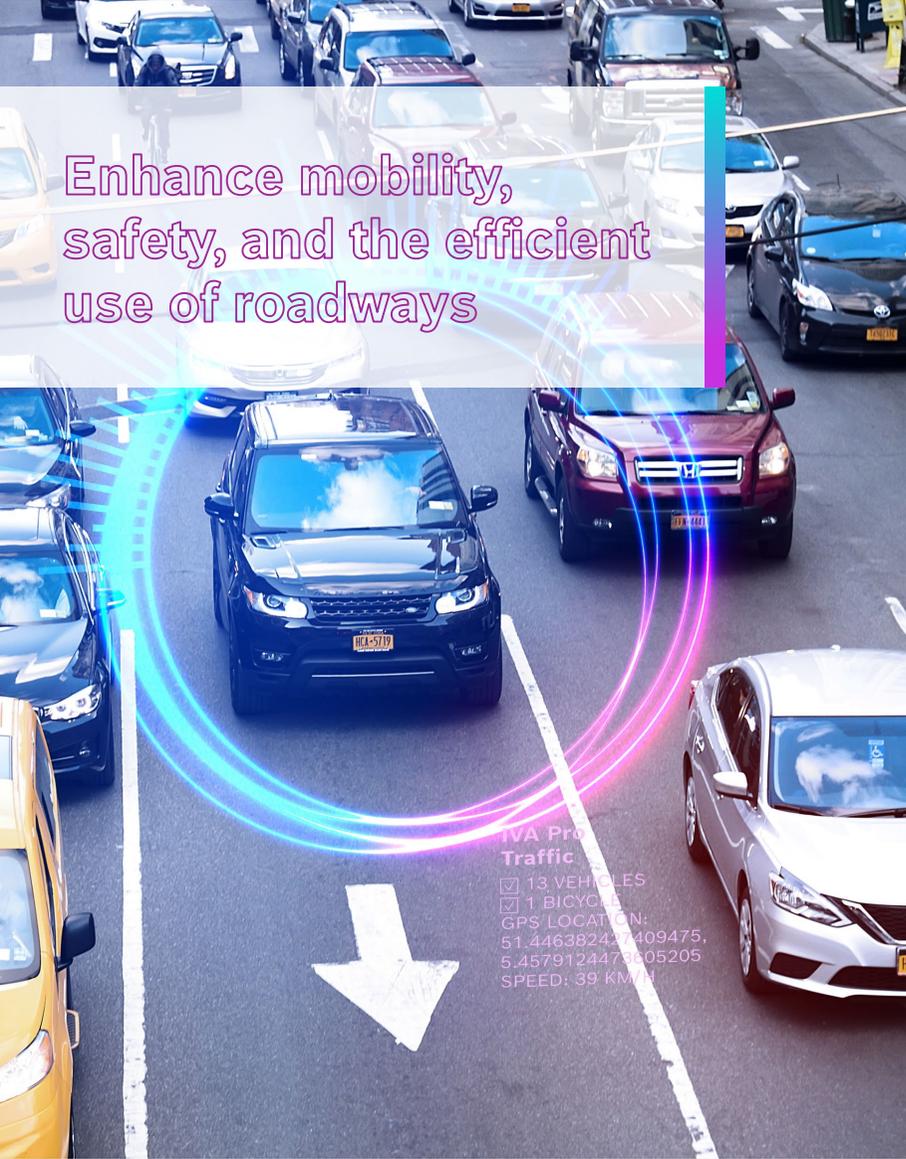
- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



Enhance mobility, safety, and the efficient use of roadways



IVA Pro Traffic

13 VEHICLES
 1 BICYCLE
 GPS LOCATION:
 51.44638242, 409475,
 5.4579124473605205
 SPEED: 39 KM/H

IVA Pro Traffic

Specs with Genetec SC SaaS:



	Real-time Receive alarms on events in SC SaaS Event-to-Action	Forensic Search for objects in SC SaaS Forensic Search	Address traffic use cases in SC SaaS
Metadata			
*IVA Tasks Supported			
Person			
Car			
Bus			
Truck			
Bicycle			
Motorcycle			
Vehicle color			
Geolocation			
IVA Tasks*			
Object in / enter / leave field ¹⁾			
Line Crossing ¹⁾			
Object traversing route			
Loitering			
Object starting / stopping			
Object counting			
Crowd detection			
Combine tasks using scripts			
Object properties ²⁾			

Additional characteristics

- Works with Bosch AUTODOME 7000i, AUTODOME / MIC intex 7100i, FLEXIDOME / DINION 5100i, DINION 7100i, and 8100i series
- Easy setup with AI-based 3D autocalibration

Main use cases addressed

Detect, classify, and locate vehicle types for traffic monitoring for intersections, tunnels, and highways: e.g., wrong-way driving, stopped vehicle, traffic congestion, jaywalking and alarm for it in Genetec SC SaaS Event-to-Action.



Integrated

Coming soon (within 6 months)

On the roadmap (within 12 months)

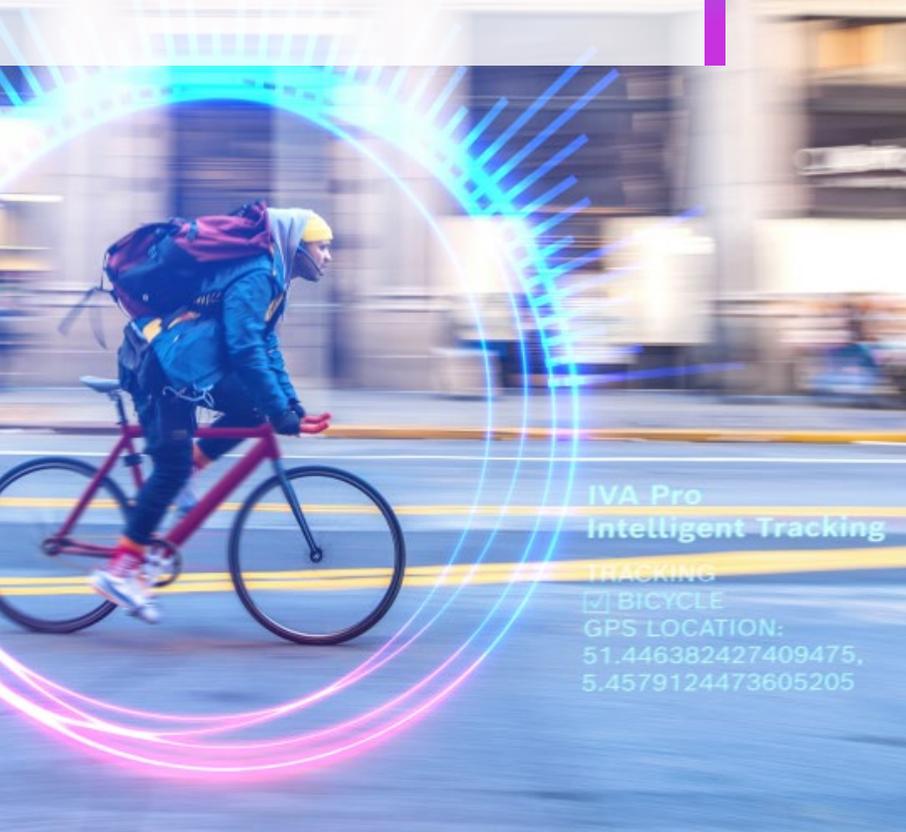
Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



BOSCH

Intelligent Tracking in traffic and inner city



IVA Pro
Intelligent Tracking

TRACKING

BICYCLE

GPS LOCATION:

51.446382427409475,

5.4579124473605205

IVA Pro Intelligent Tracking Specs with Genetec SC SaaS:



Address traffic & inner-city use cases in SC SaaS

Address buildings use cases in SC SaaS

Intelligent Tracking Modes



Auto mode*

In this mode, the camera follows any object that has triggered an alarm in the Intelligent Video Analytics application. This mode is most useful for scenarios in which the alarm cases can be clearly defined, for example, when a vehicle is driving the wrong way or when a person is present on a highway.

Click mode

In this mode, users can click on any object detected by the Intelligent Video Analytics application to enable the camera to track the movement of the selected object. With AI tracking, the camera is able to autotrack even in crowded scenes. For example, an operator watching a train station scene can click on a person of interest and have them automatically tracked by the camera.



*IVA Tasks to Trigger Auto Mode



Object in / enter / leave field¹⁾



Line Crossing¹⁾



Object traversing route



Loitering



Object starting / stopping



Object counting



Crowd detection



Combine tasks using scripts



Object properties²⁾



Additional characteristics

- IVA Pro Intelligent Tracking can be used in conjunction with IVA Pro Buildings and IVA Pro Traffic
- Works with Bosch AUTODOME intex 7000i / AUTODOME 7100i and MIC intex 7100i

Main use cases addressed

Automatically detect and separate upright persons and vehicles. Follow them in traffic or inner-city scenes by panning, tilting, and zooming to follow an object of interest and keep it prominently in the field of view, while ignoring potential disruptions caused by vehicle headlights or shadows, extreme weather, and sun reflections.



● Integrated

● Coming soon (within 6 months)

● On the roadmap (within 12 months)

● Not supported



Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



BOSCH

IVA Pro
Visual Gun Detection

PERSON
GUN IN HAND

Detect brandished
guns, directly on
camera

IVA Pro Visual Gun Detection Specs with Genetec SC SaaS:



	Real-time Receive alarms on events in SC SaaS Event-to-Action	Forensic Search for objects in SC SaaS Forensic Search	Address gun detection use cases in SC SaaS
Metadata			
*IVA Tasks Supported			
Person	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Gun in Hand	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IVA Tasks*			
Object in / enter / leave field ¹⁾			<input checked="" type="checkbox"/>
Line Crossing ¹⁾			<input checked="" type="checkbox"/>
Object traversing route			<input type="checkbox"/>
Loitering			<input type="checkbox"/>
Object starting / stopping			<input type="checkbox"/>
Object counting			<input type="checkbox"/>
Crowd detection			<input type="checkbox"/>
Combine tasks using scripts			<input type="checkbox"/>
Object properties ²⁾			

Additional characteristics

- Works with Bosch DINION & FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- The built-in tamper detection generates alarms on camera hooding/masking, blinding, defocusing, and repositioning.
- Detect firearm as event supported

Main use cases addressed

Designed to detect persons and brandished guns (86.7% true positive rate under predefined conditions*) in order to reduce reaction time in hazardous situations.



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color

IVA Pro Appearance

Specs with Genetec SC SaaS:



IVA Pro Appearance

- TOP COLOR: RED
- TOP LENGTH: LONG
- BOTTOM COLOR: NAVY
- BOTTOM LENGTH: LONG
- HAIR COLOR: UNKNOWN
- HAIR LENGTH: SHORT
- GENDER: MALE
- BACKPACK
- HAT
- GLASSES

Robust, detailed people surveillance and high-performance counting

Real-time
Receive alarms on events in SC SaaS
Event-to-Action

Forensic
Search for objects in SC SaaS
Forensic Search

Address people search & counting use cases in SC SaaS

Metadata



*IVA Tasks Supported



Attribute	Real-time	Forensic
Person	●	●
Vehicle	●	●
Gender	Ⓐ	●
Top color	Ⓐ	●
Top length	Ⓐ	●
Bottom color	Ⓐ	●
Bottom length	Ⓐ	●
Hair color	Ⓐ	●
Hair length	Ⓐ	●
Hat (w/ ; w/o)	Ⓐ	●
Glasses (w/ ; w/o)	Ⓐ	●
Bag (w/ ; w/o)	Ⓐ	●
Backpack (w/ ; w/o)	Ⓐ	●

Special APPEARANCE (A) task	Ⓐ
Object in / enter / leave field ¹⁾	●
Line Crossing ¹⁾	●
Object traversing route	●
Loitering	●
Object starting / stopping	●
Object counting	●
Crowd detection	●
Combine tasks using scripts	●
Object properties ²⁾	●

Additional characteristics

- Works with Bosch DINION & FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- Offers high-performance people counting

Main use cases addressed

Search accurately for a person of interest across multiple cameras based on a list of attributes provided as criteria. Alarm automatically in Genetec SC SaaS when specific person is detected (e.g., male with short brown hair and glasses)



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



BOSCH

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color

IVA Pro PPE

Specs with Genetec SC SaaS:



Reliable detection of personal protective equipment (PPE)

Real-time
Receive alarms on events in SC SaaS
Event-to-Action

Forensic
Search for objects in SC SaaS
Forensic Search

Address PPE use cases in SC SaaS

Metadata



*IVA Tasks Supported



Person	●	●	Special PPE (P) task	●
Vehicle	●	●	Object in / enter / leave field ¹⁾	●
Safety vest (w/ ; w/o)	P	●	Line Crossing ¹⁾	●
Hard hat (w/ ; w/o)	P	●	Object traversing route	●
IVA Tasks*	●		Loitering	●
			Object starting / stopping	●
			Object counting	●
			Crowd detection	●
			Combine tasks using scripts	●
			Object properties ²⁾	●

Additional characteristics

- Works with Bosch DINION & FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series

Main use cases addressed

Detect people and personal protective equipment items or their absence on a specific person to reduce accident risk, support safety compliance (like OSHA), and improve operational efficiency and save costs.



● Integrated

● Coming soon (within 6 months)

● On the roadmap (within 12 months)

● Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



BOSCH

IVA Pro LPR

Specs with Genetec SC SaaS:



Detecting and recognizing license plates (LPR) in stop and go and city traffic



Real-time
Receive alarms on events in SC SaaS
Event-to-Action

Forensic
Search for objects in SC SaaS
Forensic Search

Metadata



License plate



supported states and countries



Also available in combined
*IVA Pro License Plate +
Make Model license*

Additional characteristics

- Works with Bosch DINION 5100i and DINION 7100i series

Main use cases addressed

Detect and read license plates on moving vehicles (car, van, bus, truck, motorbike) in real-time for parking applications or city environments. It supports strategies that improve traffic flow, reduce congestion, and enhance safety at intersections, toll booths, and parking facilities. It ensures reliable and precise data capture for automated ticketing systems, traffic enforcement, and smart parking solutions.

- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



Detecting and recognizing the manufacturer and Model (MMR) of vehicles



IVA Pro Vehicle Make Model

- ✓ BRAND: PEUGEOT
- ✓ MODEL: 504
- ✓ COLOR: GREY



IVA Pro MMR

Specs with Genetec SC SaaS:



	Real-time Receive alarms on events in SC SaaS Event-to-Action	Forensic Search for objects in SC SaaS Forensic Search
Metadata		
Vehicle make	●	●
Vehicle model	●	●
Vehicle type	●	●

140+ manufacturers
2,000+ models

Also available in combined IVA Pro License Plate + Make Model license

Additional characteristics

- Works with Bosch DINION 5100i and DINION 7100i series
- Privacy-friendly solution without license plate recognition

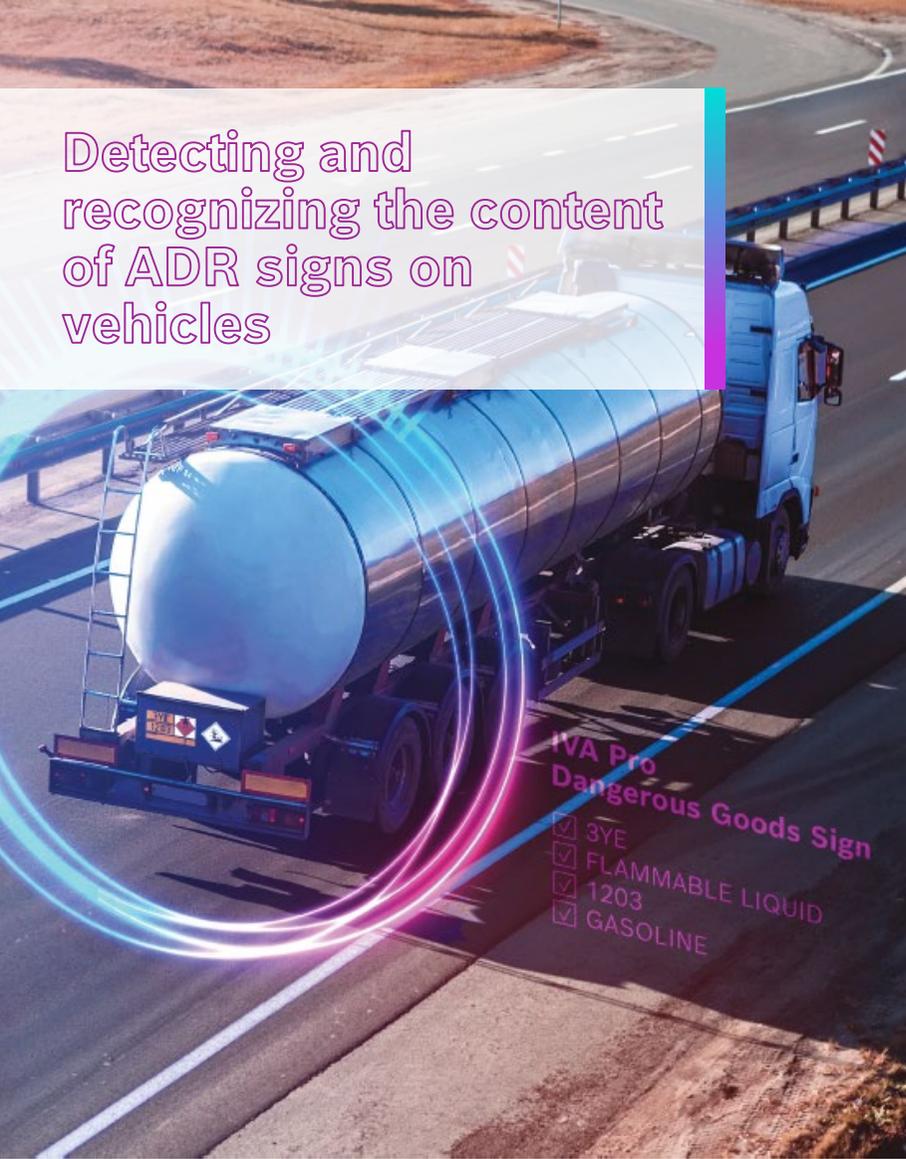
Main use cases addressed

Excel in real-time recognition of vehicles in stop and go parking applications or city environments. Conduct more refined forensic search for specific vehicles in places where license plate recognition (LPR) is not an option.

- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



Detecting and recognizing the content of ADR signs on vehicles



IVA Pro DGS

Specs with Genetec SC SaaS:



Real-time
Receive alarms on events in SC SaaS
Event-to-Action

Forensic
Search for objects in SC SaaS
Forensic Search

Metadata



Dangerous Good Signs (ADR)



Additional characteristics

- Works with Bosch DINION 5100i and DINION 7100i series

Main use cases addressed

Specifically tailored for applications in urban traffic management and logistics. It supports strategies that improve hazardous material transport monitoring, emergency response, and regulatory compliance. It ensures reliable and precise data capture of ADR signs, enabling real-time tracking and identification of dangerous goods being transported. City authorities, logistics companies, and emergency services can streamline operations, enhance roadway safety, and make data-driven decisions to improve the safe and efficient transport of dangerous goods.



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



IVA Pro Privacy Mask

Specs with Genetec SC SaaS:



Ensure privacy while still obtaining actionable insights

Metadata

Person

Face

Vehicle

All above

Can blur in SC SaaS



Privacy masking options

Semi-transparent privacy mask

Ensures anonymization while still getting insights about moving objects in the area.

IVA Pro behind privacy mask

Mask camera image fully or partially, while allowing other IVA Pro software to run in these areas, obtaining anonymized metadata, counting statistics, and alarm events while protecting people privacy

Masking IVA Pro objects

Dynamically mask all IVA Pro detected objects w/o hindering view of scene

Address privacy use cases in SC SaaS



Additional characteristics

- Genetec SC SaaS offers Privacy Masking too
- Works and comes by default with Bosch DINION / FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- Works with IVA Pro Buildings, Perimeter, Traffic, Visual Gun Detection, PPE, or Appearance
- Configure privacy settings per encoder stream, enabling anonymization of persons in live view while preserving evidence in recorded stream. Blurred objects and attributes will still be included into the metadata
- Synchronize video streams and IVA Pro objects for best anonymization performance

Main use cases addressed

Ensure privacy while still getting actionable insights with using another IVA Pro software that detects and tracks objects. IVA Pro Privacy can mask static areas or dynamic IVA Pro objects.

- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



IAA Gunshot Detection

Specs with Genetec SC SaaS:



Enhance mobility,
safety, and the efficient
use of roadways

Real-time
Receive alarms on
events in SC SaaS
Event-to-Action

Forensic
Search for objects
in SC SaaS
Forensic Search

Address gunshot
detection use
cases in SC SaaS

Metadata



Events



Gunshot	<input type="radio"/>
Gunshot direction	<input type="radio"/>
T3 alarm - Smoke	<input type="radio"/>
T4 alarm - CO	<input type="radio"/>

<input type="radio"/>
<input type="radio"/>
<input type="radio"/>
<input type="radio"/>

Object in / enter / leave field ¹⁾	<input type="radio"/>
Line Crossing ¹⁾	<input type="radio"/>
Object traversing route	<input type="radio"/>
Loitering	<input type="radio"/>
Object starting / stopping	<input type="radio"/>
Object counting	<input type="radio"/>
Crowd detection	<input type="radio"/>
Combine tasks using scripts	<input type="radio"/>
Object properties ²⁾	

Additional characteristics

- Works with Bosch 5100i, FLEXIDOME corner & DINION 7100i, and 8100i series
- Detects and identifies target sounds against ambient sounds.

Main use cases addressed

Detect and classify gunshot alarms to alarm for it in SC SaaS Event-to-Action



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



BOSCH

Note(s): 1) configure up to three zones / lines combined | 2) Properties: *Size* *Speed* *Direction* *Aspect ratio* *Color*

2.2

Arcules

Arcules (or Milestone Kite) is the cloud-based video service (cloud VMS) from Milestone Systems. Until recently, Arcules operated as a separate company but is now merging with Milestone, with the process expected to finish by the end of 2024. Until then, Bosch cannot collaborate with Milestone/Arcules on camera and feature integrations. Discussions for deeper integration are planned for early 2025. Bosch's focus will lay on (1) integrating ONVIF Profile M camera metadata (mostly object data) and (2) enabling direct camera-to-cloud connections with Bosch cameras.

Until then, all Bosch cameras can be connected to Arcules and Milestone Kite for surveillance purpose, but without utilizing camera metadata. In this scenario an Arcules bridging device will be necessary.

For more information visit [this](#) internal Docupedia page.



2.3

Eagle Eye Networks Cloud VMS

This chapter provides an overview of Bosch IVA Pro integrations with Eagle Eye Cloud VMS.

Before you read this chapter:

Within EEN you can make use of Bosch camera events through real-time alarms and scrubbing through the history browser. Also, you can forensically search for camera generated metadata:

1. Real-time: Receive real-time alerts with EEN Alert Manager → This will be generally available from January 2025
2. Forensic:
 - a. Scrub through events within EEN History Browser
 - b. Search for metadata in EEN Video Search

It is important to note that EEN Video Search does currently not support forensic searches for Bosch IVA tasks. To perform this type of search, use the EEN History Browser.

As of today, you need an EEN on-prem appliance, called “Bridge” (for local buffering) or “CMVR” / Cloud Video Management Recorder (long-term on-prem storage) to integrate Bosch cameras.

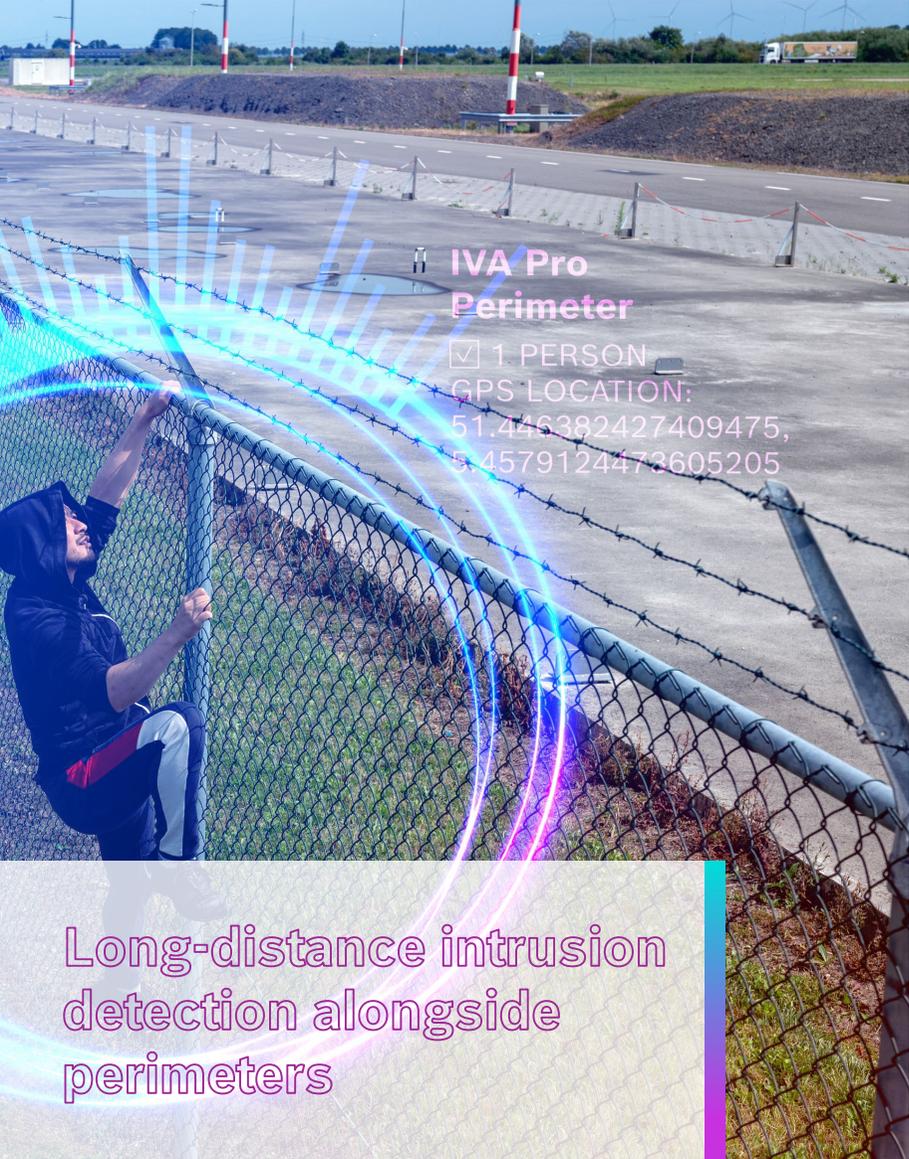
We are currently working on a Direct-to-Cloud connection which will be available around ISC West 2025. The details described on the following pages refer to appliance-based solutions only.





IVA Pro Perimeter

Specs with EEN Cloud VMS:



IVA Pro Perimeter

☑ 1 PERSON
GPS LOCATION:
51.446382427409475,
5.4579124473605205

Long-distance intrusion detection alongside perimeters

	Real-time Receive alarms on events in Alert Manager	Forensic Search for events in History Browser	.. OR objects / attributes in Video Search	Address buildings use cases in EEN Cloud VMS
Metadata				*IVA Tasks Supported
Person	●	●	●	Object in / enter / leave field ¹⁾ ●
Bike	●	●	●	Line Crossing ¹⁾ ●
Car	●	●	●	Object traversing route ●
Truck	●	●	●	Loitering ●
Geolocation	●	●	●	Object starting / stopping ●
IVA Tasks*	●	●	●	Object counting ●
				Crowd detection ●
				Combine tasks using scripts ●
				Object properties ²⁾

Additional characteristics

- Works with Bosch 5100i, 7100i and 8100i series cameras
- Easy setup with AI-based 3D autocalibration
- IVA Tasks: Create object-based IVA Tasks in Bosch CM and receive alarms in EEN. The VMS will not describe which specific object triggered the event (e.g., person line cross vs. vehicle line cross) or, in case you've created multiple tasks of the same type (e.g., multiple line crossings from the same camera), which task caused the event

Main use cases addressed

Detect rolling, crawling or camouflaged intruders, even in harsh (lighting) conditions. Setup intrusion, loitering or other alerts and alarm for it in EEN Alert Manager.



Note(s): 1) configure up to three zones / lines combined; "object in field" support not yet decided | 2) Properties:

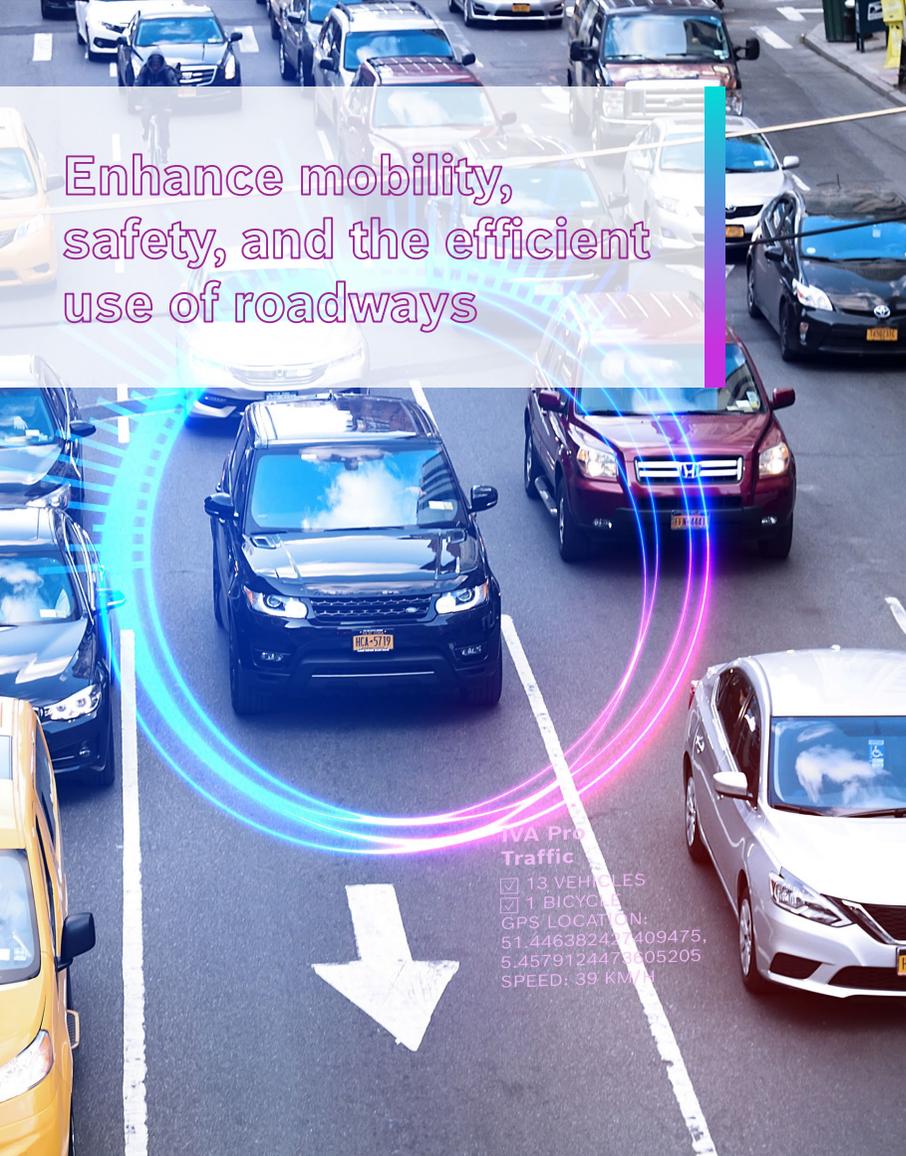


- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported





Enhance mobility, safety, and the efficient use of roadways



IVA Pro Traffic

Specs with EEN Cloud VMS:

	Real-time Receive alarms on events in Alert Manager	Forensic Search for events in History Browser	.. OR objects / attributes in Video Search	Address buildings use cases in EEN Cloud VMS
Metadata				
*IVA Tasks Supported				
Person	●	●	●	●
Car	●	●	●	●
Bus	●	●	●	●
Truck	●	●	●	●
Bicycle	●	●	●	●
Motorcycle	●	●	●	●
Vehicle color	●	●	●	●
Geolocation	●	●	●	●
IVA Tasks*	●	●	●	●
Object in / enter / leave field ¹⁾				●
Line Crossing ¹⁾				●
Object traversing route				●
Loitering				●
Object starting / stopping				●
Object counting				●
Crowd detection				●
Combine tasks using scripts				●
Object properties ²⁾				●

Additional characteristics

- Works with Bosch AUTODOME 7000i, AUTODOME / MIC intex 7100i, FLEXIDOME / DINION 5100i, DINION 7100i, and 8100i series
- Easy setup with AI-based 3D autocalibration
- IVA Tasks: Create object-based IVA Tasks in Bosch CM and receive alarms in EEN. The VMS will not describe which specific object triggered the event (e.g., person line cross vs. vehicle line cross) or, in case you've created multiple tasks of the same type (e.g., multiple line crossings from the same camera), which task caused the event
- Bicycle and Motorcycle will run under "Bike"

Main use cases addressed

Detect, classify, and locate vehicle types for traffic monitoring for intersections, tunnels, and highways: e.g., wrong-way driving, stopped vehicle, traffic congestion, jaywalking and alarm for it in EEN Alert Manager.

Note(s): 1) configure up to three zones / lines combined; "object in field" support not yet decided | 2) Properties:

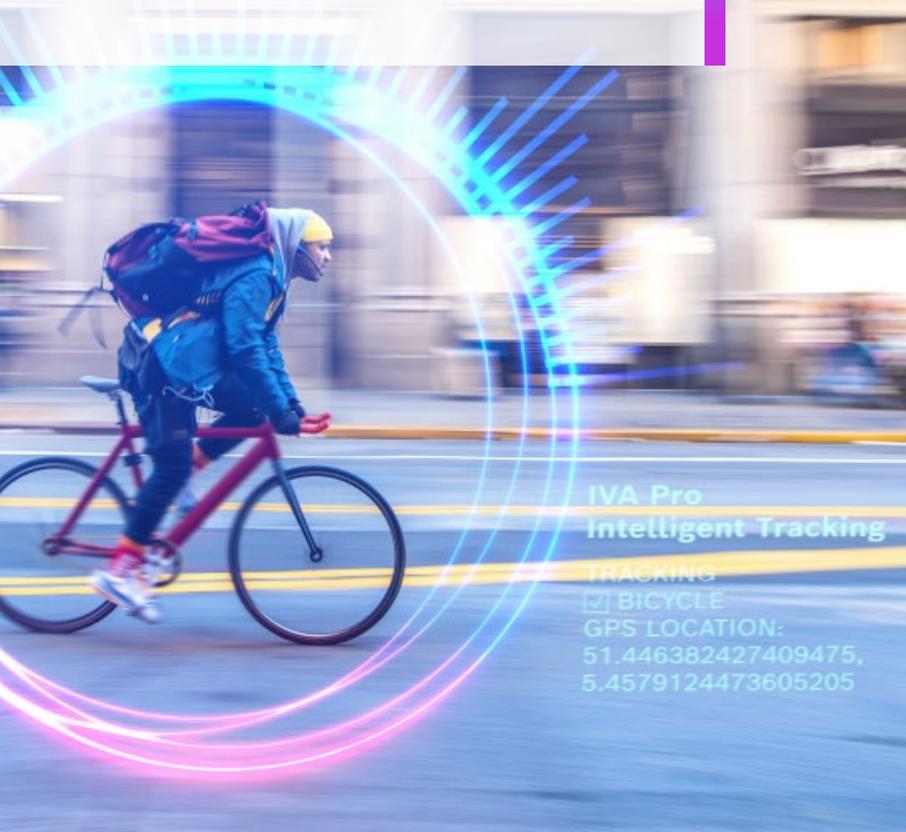
- Size
- Speed
- Direction
- Aspect ratio
- Color

- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported





Intelligent Tracking in traffic and inner city



IVA Pro Intelligent Tracking Specs with EEN Cloud VMS:

	Address traffic & inner-city use cases in EEN	Address buildings use cases in EEN Cloud VMS
Intelligent Tracking Modes 		*IVA Tasks Supported
Auto mode* <i>In this mode, the camera follows any object that has triggered an alarm in the Intelligent Video Analytics application. This mode is most useful for scenarios in which the alarm cases can be clearly defined, for example, when a vehicle is driving the wrong way or when a person is present on a highway.</i>	●	Object in / enter / leave field ¹⁾ ● Line Crossing ¹⁾ ● Object traversing route ● Loitering ● Object starting / stopping ● Object counting ● Crowd detection ● Combine tasks using scripts ● Object properties ²⁾
Click mode <i>In this mode, users can click on any object detected by the Intelligent Video Analytics application to enable the camera to track the movement of the selected object. With AI tracking, the camera is able to autotrack even in crowded scenes. For example, an operator watching a train station scene can click on a person of interest and have them automatically tracked by the camera.</i>	●	

Additional characteristics

- IVA Pro Intelligent Tracking can be used in conjunction with IVA Pro Buildings and IVA Pro Traffic
- Works with Bosch AUTODOME inteoX 7000i / AUTODOME 7100i and MIC inteoX 7100i
- IVA Tasks: Create object-based IVA Tasks in Bosch CM and receive alarms in EEN. The VMS will not describe which specific object triggered the event (e.g., person line cross vs. vehicle line cross) or, in case you've created multiple tasks of the same type (e.g., multiple line crossings from the same camera), which task caused the event

Main use cases addressed

Automatically detect and separate upright persons and vehicles. Follow them in traffic or inner-city scenes by panning, tilting, and zooming to follow an object of interest and keep it prominently in the field of view, while ignoring potential disruptions caused by vehicle headlights or shadows, extreme weather, and sun reflections.



Note(s): 1) configure up to three zones / lines combined; "object in field" support not yet decided | 2) Properties:



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported





IVA Pro Appearance

Specs with EEN Cloud VMS:



IVA Pro Appearance

- TOP COLOR: RED
- TOP LENGTH: LONG
- BOTTOM COLOR: NAVY
- BOTTOM LENGTH: LONG
- HAIR COLOR: UNKNOWN
- HAIR LENGTH: SHORT
- GENDER: MALE
- BACKPACK
- HAT
- GLASSES

Robust, detailed people surveillance and high-performance counting

	Real-time Receive alarms on events in Alert Manager	Forensic Search for events in History Browser	.. OR objects / attributes in Video Search	Address buildings use cases in EEN Cloud VMS
Metadata				
*IVA Tasks Supported				
Person	●	●	●	●
Vehicle	●	●	●	●
Gender	Ⓐ	Ⓐ	●	●
Top color	Ⓐ	Ⓐ	●	●
Top length	Ⓐ	Ⓐ	●	●
Bottom color	Ⓐ	Ⓐ	●	●
Bottom length	Ⓐ	Ⓐ	●	●
Hair color	Ⓐ	Ⓐ	●	●
Hair length	Ⓐ	Ⓐ	●	●
Hat (w/ ; w/o)	Ⓐ	Ⓐ	●	●
Glasses (w/ ; w/o)	Ⓐ	Ⓐ	●	●
Bag (w/ ; w/o)	Ⓐ	Ⓐ	●	●
Backpack (w/ ; w/o)	Ⓐ	Ⓐ	●	●
IVA Tasks*	●	●	●	⚡

Additional characteristics

- Works with Bosch DINION & FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- Offers high-performance people counting
- IVA Tasks: Create object-based IVA Tasks in Bosch CM and receive alarms in EEN. The VMS will not describe which specific object triggered the event (e.g., person line cross vs. vehicle line cross) or, in case you've created multiple tasks of the same type (e.g., multiple line crossings from the same camera), which task caused the event
- Bag = Backpack in EEN

Main use cases addressed

Search accurately for a person of interest across multiple cameras based on a list of attributes provided as criteria. Alarm automatically in EEN Alert Manager when specific person is detected (e.g., male with short brown hair and glasses)



Note(s): 1) configure up to three zones / lines combined; "object in field" support not yet decided | 2) Properties:

- Size
- Speed
- Direction
- Aspect ratio
- Color

- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported





IVA Pro PPE

Specs with EEN Cloud VMS:



Reliable detection of personal protective equipment (PPE)

	Real-time Receive alarms on events in Alert Manager	Forensic Search for events in History Browser	.. OR objects / attributes in Video Search	Address buildings use cases in EEN Cloud VMS
Metadata				
*IVA Tasks Supported				
Person	●	●	●	●
Vehicle	●	●	●	●
Safety vest (w/ ; w/o) ^P	●	●	●	●
Hard hat (w/ ; w/o) ^P	●	●	●	●
IVA Tasks*	●	●	●	●
Object in / enter / leave field ¹⁾				●
Line Crossing ¹⁾				●
Object traversing route				●
Loitering				●
Object starting / stopping				●
Object counting				●
Crowd detection				●
Combine tasks using scripts				●
Object properties ²⁾				⚡

Additional characteristics

- Works with Bosch DINION & FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- IVA Tasks: Create object-based IVA Tasks in Bosch CM and receive alarms in EEN. The VMS will not describe which specific object triggered the event (e.g., person line cross vs. vehicle line cross) or, in case you've created multiple tasks of the same type (e.g., multiple line crossings from the same camera), which task caused the event
- One "PPE alarm" in EEN to alert on people w/o safety vest and hard hat, search for safety vest / hard hat will be possible

Main use cases addressed

Detect people and personal protective equipment items or their absence on a specific person to reduce accident risk, support safety compliance (like OSHA), and improve operational efficiency and save costs.



Note(s): 1) configure up to three zones / lines combined; "object in field" support not yet decided | 2) Properties:

Size	Speed	Direction	Aspect ratio	Color

● Integrated
● Coming soon (within 6 months)
● On the roadmap (within 12 months)
● Not supported





IVA Pro LPR

Specs with EEN Cloud VMS:



Detecting and recognizing license plates (LPR) in stop and go and city traffic



— Real-time —	— Forensic —
Receive alarms on events in Alert Manager	Search for events in History Browser .. OR objects / attributes in Video Search

Metadata

			
License plate	●	●	●
Country	●	●	●
State	●	●	●
Black- whitelist	●	●	●



supported states and countries



Also available in combined *IVA Pro License Plate + Make Model license*

Additional characteristics

- Works with Bosch DINION 5100i and DINION 7100i series
- IVA Tasks: Create object-based IVA Tasks in Bosch CM and receive alarms in EEN. The VMS will not describe which specific object triggered the event (e.g., person line cross vs. vehicle line cross) or, in case you've created multiple tasks of the same type (e.g., multiple line crossings from the same camera), which task caused the event

Main use cases addressed

Detect and read license plates on moving vehicles (car, van, bus, truck, motorbike) in real-time for parking applications or city environments. It supports strategies that improve traffic flow, reduce congestion, and enhance safety at intersections, toll booths, and parking facilities. It ensures reliable and precise data capture for automated ticketing systems, traffic enforcement, and smart parking solutions.

- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported





Detecting and recognizing the manufacturer and Model (MMR) of vehicles



IVA Pro Vehicle Make Model

- ✓ BRAND: PEUGEOT
- ✓ MODEL: 504
- ✓ COLOR: GREY

IVA Pro MMR Specs with EEN Cloud VMS:

	Real-time Receive alarms on events in Alert Manager	Forensic Search for events in History Browser	.. OR objects / attributes in Video Search
Metadata			
Vehicle make	●	●	●
Vehicle model	●	●	●
Vehicle type	●	●	●

140+ manufacturers
2,000+ models

Also available in combined
IVA Pro License Plate + Make Model license

Additional characteristics

- Works with Bosch DINION 5100i and DINION 7100i series
- Privacy-friendly solution without license plate recognition

Main use cases addressed

Excel in real-time recognition of vehicles in stop and go parking applications or city environments. Conduct more refined forensic search for specific vehicles in places where license plate recognition (LPR) is not an option.



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported





Detecting and recognizing the content of ADR signs on vehicles

IVA Pro DGS

Specs with EEN Cloud VMS:

<p>— Real-time —</p> <p>Receive alarms on events in Alert Manager</p>	<p>— Forensic —</p> <p>Search for events in History Browser</p>	<p>.. OR objects / attributes in Video Search</p>
--	--	--

Metadata

Dangerous Good Signs (ADR)



IVA Pro Dangerous Goods Sign

- 3YE
- FLAMMABLE LIQUID
- 1203
- GASOLINE

Additional characteristics

- Works with Bosch DINION 5100i and DINION 7100i series

Main use cases addressed

Specifically tailored for applications in urban traffic management and logistics. It supports strategies that improve hazardous material transport monitoring, emergency response, and regulatory compliance. It ensures reliable and precise data capture of ADR signs, enabling real-time tracking and identification of dangerous goods being transported. City authorities, logistics companies, and emergency services can streamline operations, enhance roadway safety, and make data-driven decisions to improve the safe and efficient transport of dangerous goods.



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported





IVA Pro Privacy Mask

Specs with EEN Cloud VMS:



Ensure privacy while still obtaining actionable insights

Can blur in EEN

Metadata



- Person ●
- Face ●
- Vehicle ●
- All above ●

Address privacy use cases in EEN



Privacy masking options

Semi-transparent privacy mask

Ensures anonymization while still getting insights about moving objects in the area.

IVA Pro behind privacy mask

Mask camera image fully or partially, while allowing other IVA Pro software to run in these areas, obtaining anonymized metadata, counting statistics, and alarm events while protecting people privacy

Masking IVA Pro objects

Dynamically mask all IVA Pro detected objects w/o hindering view of scene

Additional characteristics

- Works and comes by default with Bosch DINION / FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- Synchronize video streams and IVA Pro objects for best anonymization performance
- Configure privacy settings per encoder stream, enabling anonymization of persons in live view while preserving evidence in recorded stream

Main use cases addressed

Ensure privacy while still getting actionable insights with using another IVA Pro software that detects and tracks objects. IVA Pro Privacy can mask static areas or dynamic IVA Pro objects.

- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



IAA Gunshot Detection

Specs with EEN Cloud VMS:



Enhance mobility, safety, and the efficient use of roadways

	Real-time Receive alarms on events in Alert Manager	Forensic Search for events in History Browser	.. OR objects / attributes in Video Search	Address buildings use cases in EEN Cloud VMS
Metadata				
*IVA Tasks Supported				
Gunshot	●	●	●	●
Gunshot direction			●	●
T3 alarm – Smoke	●	●	●	●
T4 alarm – CO	●	●	●	●
Object in / enter / leave field ¹⁾				●
Line Crossing ¹⁾				●
Object traversing route				●
Loitering				●
Object starting / stopping				●
Object counting				●
Crowd detection				●
Combine tasks using scripts				●
Object properties ²⁾				⚡

Additional characteristics

- Works with Bosch 5100i, FLEXIDOME corner & DINION 7100i, and 8100i series
- Detects and identifies target sounds against ambient sounds
- IVA Tasks: Create object-based IVA Tasks in Bosch CM and receive alarms in EEN. The VMS will not describe which specific object triggered the event (e.g., person line cross vs. vehicle line cross) or, in case you've created multiple tasks of the same type (e.g., multiple line crossings from the same camera), which task caused the event

Main use cases addressed

Detect and classify gunshot alarms to alarm for it in EEN Alert Manager.



Note(s): 1) configure up to three zones / lines combined; "object in field" support not yet decided | 2) Properties:



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



2.4

VideoView+



IVA Pro Buildings

Specs with VideoView+:



Reliable detection in and around buildings

Real-time
Receive alarms on events in VideoView+

Forensic
Search for objects in Forensic Search

Address buildings use cases VideoView+
Real-time: **Forensic:**

Metadata



***IVA Tasks Supported**



	Real-time	Forensic		Real-time	Forensic
Person	●	●	Object in / enter / leave field ¹⁾	●	●
Vehicle	●	●	Line Crossing ¹⁾	●	●
IVA Tasks*	●	●	Object traversing route	●	●
			Loitering	●	●
			Object starting / stopping	●	●
			Object counting	●	●
			Crowd detection	●	●
			Combine tasks using scripts	●	●
			Object properties ²⁾	🔗 📶 🌐	●

Additional characteristics

- Works with Bosch AUTODOME inteox 7000i, 3100i, 5100i, 7100i and 8100i series cameras

Main use cases addressed

Ensure accurate detection and classification of persons and vehicles in busy scenes for robust building surveillance, and enable high-performance people counting, parking lot occupancy insights and tamper detection, and alarm for it in VideoView+.



- Camera
- DIVAR IP



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



BOSCH

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color

IVA Pro Perimeter Specs with VideoView+:



IVA Pro Perimeter

☑ 1 PERSON
GPS LOCATION:
51.446382427409475,
5.4579124473605205

Long-distance intrusion
detection alongside
perimeters

Real-time
Receive alarms on
events in
VideoView+

Forensic
Search for objects
in Forensic Search

Address buildings use
cases VideoView+
Real-time: **Forensic:**

Metadata



*IVA Tasks Supported



	Real-time	Forensic		Real-time	Forensic
Person	●	●	Object in / enter / leave field ¹⁾	●	●
Bike	●	●	Line Crossing ¹⁾	●	●
Car	●	●	Object traversing route	●	●
Truck	●	●	Loitering	●	●
Geolocation	●	●	Object starting / stopping	●	●
IVA Tasks*	●	●	Object counting	●	●
			Crowd detection	●	●
			Combine tasks using scripts	●	●
			Object properties ²⁾	📏 📏 📏	●

Additional characteristics

- Works with Bosch AUTODOME intex 7000i, 5100i, 7100i and 8100i series cameras
- Easy setup with AI-based 3D autocalibration

Main use cases addressed

Detect rolling, crawling or camouflaged intruders, even in harsh (lighting) conditions. Setup intrusion, loitering or other alerts and alarm for it in VideoView+.

- 📷 Camera
- 📡 DIVAR IP

- 📏 Size
- 🏎️ Speed
- 👤 Direction
- 📐 Aspect ratio
- 🌈 Color

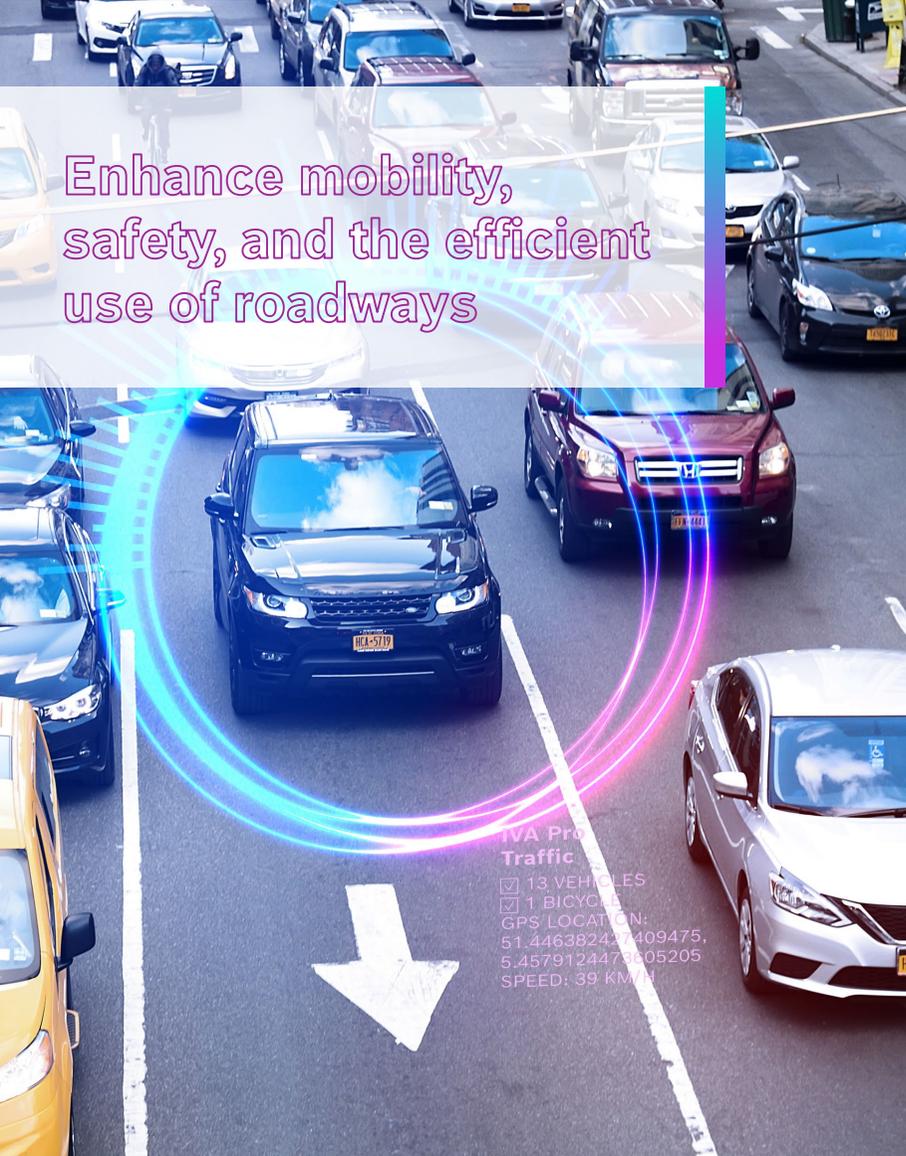
- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



Note(s): 1) configure up to three zones / lines combined | 2) Properties:



Enhance mobility, safety, and the efficient use of roadways



IVA Pro Traffic

13 VEHICLES
 1 BICYCLE
 GPS LOCATION:
 51.44638242, 409475,
 5.4579124473605205
 SPEED: 39 KM/H

IVA Pro Traffic Specs with VideoView+:



	Real-time Receive alarms on events in VideoView+	Forensic Search for objects in Forensic Search		Address buildings use cases VideoView+ Real-time:	Forensic:
Metadata			*IVA Tasks Supported		
Person			Object in / enter / leave field ¹⁾		
Car			Line Crossing ¹⁾		
Bus			Object traversing route		
Truck			Loitering		
Bicycle			Object starting / stopping		
Motorcycle			Object counting		
Vehicle color			Crowd detection		
Geolocation			Combine tasks using scripts		
IVA Tasks*			Object properties ²⁾		

Additional characteristics

- Works with Bosch AUTODOME 7000i, AUTODOME / MIC intex 7100i, FLEXIDOME / DINION 5100i, DINION 7100i, and 8100i series
- Easy setup with AI-based 3D autocalibration

Main use cases addressed

Detect, classify, and locate vehicle types for traffic monitoring for intersections, tunnels, and highways: e.g., wrong-way driving, stopped vehicle, traffic congestion, jaywalking and alarm for it in VideoView+



- Camera
- DIVAR IP

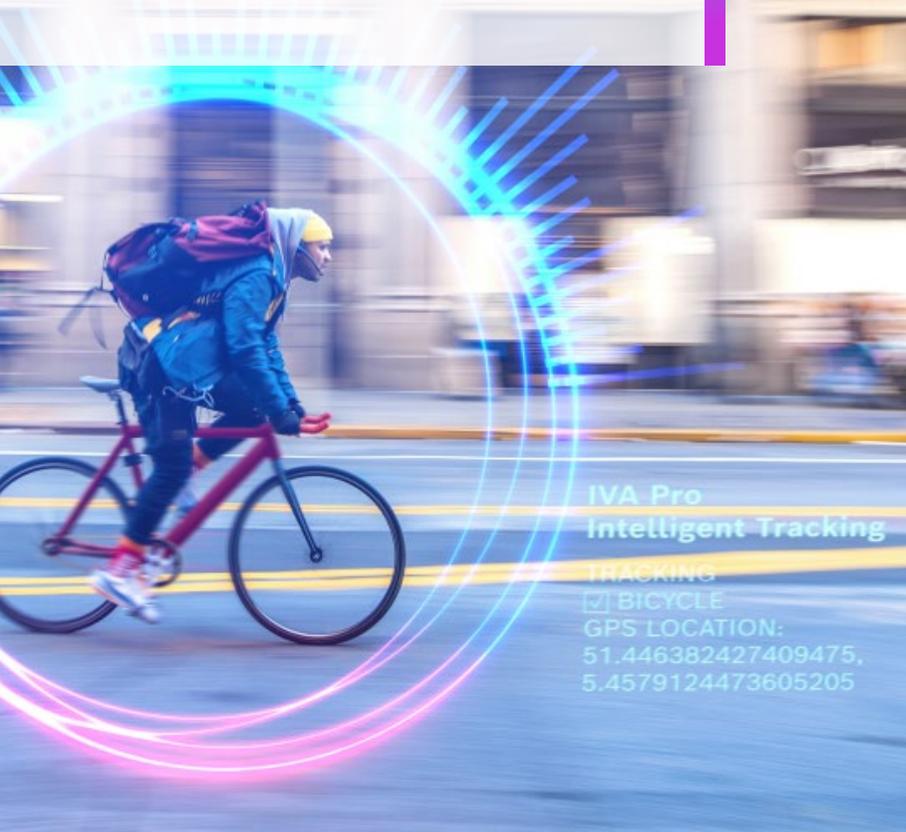
- Hand
- Speed
- Direction
- Aspect ratio
- Color

- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



Intelligent Tracking in traffic and inner city



IVA Pro Intelligent Tracking
 TRACKING
 BICYCLE
 GPS LOCATION:
 51.446382427409475,
 5.4579124473605205

IVA Pro Intelligent Tracking Specs with VideoView+:



Address traffic & inner-city use cases in VideoView+

Address buildings use cases in VideoView+

Intelligent Tracking Modes



Auto mode*

In this mode, the camera follows any object that has triggered an alarm in the Intelligent Video Analytics application. This mode is most useful for scenarios in which the alarm cases can be clearly defined, for example, when a vehicle is driving the wrong way or when a person is present on a highway.

Click mode

In this mode, users can click on any object detected by the Intelligent Video Analytics application to enable the camera to track the movement of the selected object. With AI tracking, the camera is able to autotrack even in crowded scenes. For example, an operator watching a train station scene can click on a person of interest and have them automatically tracked by the camera.



*IVA Tasks to Trigger Auto Mode



Object in / enter / leave field¹⁾

Line Crossing¹⁾

Object traversing route

Loitering

Object starting / stopping

Object counting

Crowd detection

Combine tasks using scripts

Object properties²⁾



Additional characteristics

- IVA Pro Intelligent Tracking can be used in conjunction with IVA Pro Buildings and IVA Pro Traffic
- Works with Bosch AUTODOME intex 7000i / AUTODOME 7100i and MIC intex 7100i

Main use cases addressed

Automatically detect and separate upright persons and vehicles. Follow them in traffic or inner-city scenes by panning, tilting, and zooming to follow an object of interest and keep it prominently in the field of view, while ignoring potential disruptions caused by vehicle headlights or shadows, extreme weather, and sun reflections.

- Camera
- DIVAR IP



Integrated

Coming soon (within 6 months)

On the roadmap (within 12 months)

Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



IVA Pro Visual Gun Detection

PERSON
GUN IN HAND



Detect brandished guns, directly on camera

IVA Pro Visual Gun Detection Specs with VideoView+:



	Real-time Receive alarms on events in VideoView+	Forensic Search for objects in Forensic Search	Address gun detection use cases VideoView+ Real-time: Forensic:
Metadata			*IVA Tasks Supported
Person			Object in / enter / leave field ¹⁾
Gun in Hand			Line Crossing ¹⁾
IVA Tasks*			Object traversing route
			Loitering
			Object starting / stopping
			Object counting
			Crowd detection
			Combine tasks using scripts
			Object properties ²⁾

Additional characteristics

- Works with Bosch DINION & FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- The built-in tamper detection generates alarms on camera hooding/masking, blinding, defocusing, and repositioning.

Main use cases addressed

Designed to detect persons and brandished guns (86.7% true positive rate under predefined conditions*) in order to reduce reaction time in hazardous situations.



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color

IVA Pro Appearance

Specs with VideoView+:



Robust, detailed people surveillance and high-performance counting

— Real-time —
Receive alarms on events in VideoView+

— Forensic —
Search for objects in Forensic Search

Address buildings use cases VideoView+
Real-time: Forensic:

Metadata



Person		●
Vehicle		●
Gender	A	●
Top color	A	●
Top length	A	●
Bottom color	A	●
Bottom length	A	●
Hair color	A	●
Hair length	A	●
Hat (w/ ; w/o)	A	●
Glasses (w/ ; w/o)	A	●
Bag (w/ ; w/o)	A	●
Backpack (w/ ; w/o)	A	●
IVA Tasks*		●

*IVA Tasks Supported



Special APPEARANCE (A) task		
Object in / enter / leave field ¹⁾	●	●
Line Crossing ¹⁾	●	●
Object traversing route	●	●
Loitering	●	●
Object starting / stopping	●	●
Object counting	●	●
Crowd detection	●	●
Combine tasks using scripts	●	●
Object properties ²⁾	●	●

Additional characteristics

- Works with Bosch DINION & FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- Offers high-performance people counting

Main use cases addressed

Search accurately for a person of interest across multiple cameras based on a list of attributes provided as criteria. Alarm automatically in VideoView+ when specific person is detected (e.g., male with short brown hair and glasses)

- Camera
- DIVAR IP



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



IVA Pro PPE

Specs with VideoView+:



Reliable detection of personal protective equipment (PPE)

Real-time
Receive alarms on events in VideoView+

Forensic
Search for objects in Forensic Search

Address PPE use cases in SC

Metadata



*IVA Tasks Supported



Person	●
Vehicle	●
Safety vest (w/ ; w/o) P	●
Hard hat (w/ ; w/o)	●
IVA Tasks*	●

●
●
●
●
●

Special PPE (P) task	● P
Object in / enter / leave field ¹⁾	●
Line Crossing ¹⁾	●
Object traversing route	●
Loitering	●
Object starting / stopping	●
Object counting	●
Crowd detection	●
Combine tasks using scripts	●
Object properties ²⁾	●



Additional characteristics

- Works with Bosch DINION & FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series

Main use cases addressed

Detect people and personal protective equipment items or their absence on a specific person to reduce accident risk, support safety compliance (like OSHA), and improve operational efficiency and save costs.



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



IVA Pro LPR

Specs with VideoView+:



Detecting and recognizing license plates (LPR) in stop and go and city traffic

Real-time
Receive alarms on events in VideoView+

Forensic
Search for objects in Forensic Search

Metadata



License plate



Country



State



Black- whitelist



supported states and countries



Also available in combined IVA Pro License Plate + Make Model license

Additional characteristics

- Works with Bosch DINION 5100i and DINION 7100i series

Main use cases addressed

Detect and read license plates on moving vehicles (car, van, bus, truck, motorbike) in real-time for parking applications or city environments. It supports strategies that improve traffic flow, reduce congestion, and enhance safety at intersections, toll booths, and parking facilities. It ensures reliable and precise data capture for automated ticketing systems, traffic enforcement, and smart parking solutions.

- Camera
- DIVAR IP

- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



Detecting and recognizing the manufacturer and Model (MMR) of vehicles



IVA Pro Vehicle Make Model

- ✓ BRAND: PEUGEOT
- ✓ MODEL: 504
- ✓ COLOR: GREY



IVA Pro MMR Specs with VideoView+:



	Real-time Receive alarms on events in VideoView+	Forensic Search for objects in Forensic Search
Metadata		
Vehicle make		
Vehicle model		

140+ manufacturers
2,000+ models

Also available in combined IVA Pro License Plate + Make Model license

Additional characteristics

- Works with Bosch DINION 5100i and DINION 7100i series
- Privacy-friendly solution without license plate recognition

Main use cases addressed

Excel in real-time recognition of vehicles in stop and go parking applications or city environments. Conduct more refined forensic search for specific vehicles in places where license plate recognition (LPR) is not an option.

- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



Detecting and recognizing the content of ADR signs on vehicles

IVA Pro DGS Specs with VideoView+:



Real-time
Receive alarms on events in VideoView+

Forensic
Search for objects in Forensic Search

Metadata



Dangerous Good Signs (ADR)



IVA Pro
Dangerous Goods Sign

- 3YE
- FLAMMABLE LIQUID
- 1203
- GASOLINE

Additional characteristics

- Works with Bosch DINION 5100i and DINION 7100i series

Main use cases addressed

Specifically tailored for applications in urban traffic management and logistics. It supports strategies that improve hazardous material transport monitoring, emergency response, and regulatory compliance. It ensures reliable and precise data capture of ADR signs, enabling real-time tracking and identification of dangerous goods being transported. City authorities, logistics companies, and emergency services can streamline operations, enhance roadway safety, and make data-driven decisions to improve the safe and efficient transport of dangerous goods.

- Camera
- DIVAR IP

- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



IVA Pro Privacy Mask

Specs with VideoView+:



Ensure privacy while still obtaining actionable insights

Can blur in VideoView+¹⁾

Metadata



Person



Face



Vehicle



All above



Privacy masking options



Semi-transparent privacy mask

Ensures anonymization while still getting insights about moving objects in the area.



IVA Pro behind privacy mask

Mask camera image fully or partially, while allowing other IVA Pro software to run in these areas, obtaining anonymized metadata, counting statistics, and alarm events while protecting people privacy



Masking IVA Pro objects

Dynamically mask all IVA Pro detected objects w/o hindering view of scene



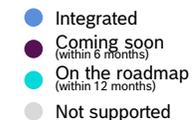
Address privacy use cases in VideoView+

Additional characteristics

- Works and comes by default with Bosch DINION / FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- Works with IVA Pro Buildings, Perimeter, Traffic, Visual Gun Detection, PPE, or Appearance
- Configure privacy settings per encoder stream, enabling anonymization of persons in live view while preserving evidence in recorded stream. Blurred objects and attributes will still be included into the metadata
- Synchronize video streams and IVA Pro objects for best anonymization performance

Main use cases addressed

Ensure privacy while still getting actionable insights with using another IVA Pro software that detects and tracks objects. IVA Pro Privacy can mask static areas or dynamic IVA Pro objects.



¹⁾ In edge device, not via VSC

IAA Gunshot Detection Specs with VideoView+:



Enhance mobility,
safety, and the efficient
use of roadways

Real-time
Receive alarms on
events in
VideoView+

Forensic
Search for objects
in Forensic Search

Metadata



Event	Real-time
Gunshot	●
Gunshot direction	●
T3 alarm - Smoke	●
T4 alarm - CO	●

Event	Forensic
Gunshot	●
Gunshot direction	●
T3 alarm - Smoke	●
T4 alarm - CO	●

Additional characteristics

- Works with Bosch 5100i, FLEXIDOME corner & DINION 7100i, and 8100i series
- Detects and identifies target sounds against ambient sounds.

Main use cases addressed

Detect and classify gunshot alarms to alarm for it in VideoView+.



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



3

ONVIF and MQTT

ONVIF

Using ONVIF can be helpful to connect Bosch IVA Pro metadata with other platforms than those of ourselves (i.e., BVMS and VideoView+) or those of our globally managed partners (i.e., Milestone, Genetec and EEN). Before using ONVIF, please always check with the respective connecting platform whether they are properly equipped to take in the respective metadata from the Bosch cameras into their client side. Even though the connecting VMS might be ONVIF conformant, that does not automatically mean that it has implemented all our camera's metadata output elements.

MQTT

Using MQTT can be helpful in situations where you want to connect with broader industry applications, like multi-sensor and/or IoT platform environments. It is designed as an extremely lightweight publish/subscribe messaging transport that is ideal for connecting remote devices with a small code footprint and minimal network bandwidth. MQTT today is used in a wide variety of industries, such as automotive, manufacturing, telecommunications, oil and gas. All Bosch cameras equipped with IVA Pro can send out MQTT.



IVA Pro Buildings

Specs with ONVIF and MQTT:



Reliable detection in and around buildings

ONVIF

Bosch camera sends out ONVIF



Metadata

Person ●

Vehicle ●

IVA Tasks*



MQTT

Bosch camera sends out MQTT



At this moment MQTT only supports IVA Tasks and no object classifications (e.g., *people* or *vehicles*). There is a workaround: you can create an IVA task that raises an event when an object crosses a line. Subsequently, you name the task "person" or "vehicle". This workaround can be used for any detected object by a Bosch camera.

IVA tasks that can be received via ONVIF and MQTT

*IVA Tasks Supported



Object in / enter / leave field¹⁾ ●

Line Crossing¹⁾ ●

Object traversing route ●

Loitering ●

Object starting / stopping ●

Object counting ●

Crowd detection ●

Combine tasks using scripts ●

Object properties²⁾ ●



Additional characteristics

- Works with Bosch AUTODOME inteox 7000i, 3100i, 5100i, 7100i and 8100i series cameras

Main use cases addressed

Use ONVIF to address use cases in situations where our own platforms or globally managed platforms are not being used. Use MQTT to apply Bosch camera metadata in broader industry applications, like multi-type-sensor and/or IoT platform environments.



● Integrated

● Coming soon (within 6 months)

● On the roadmap (within 12 months)

● Not supported

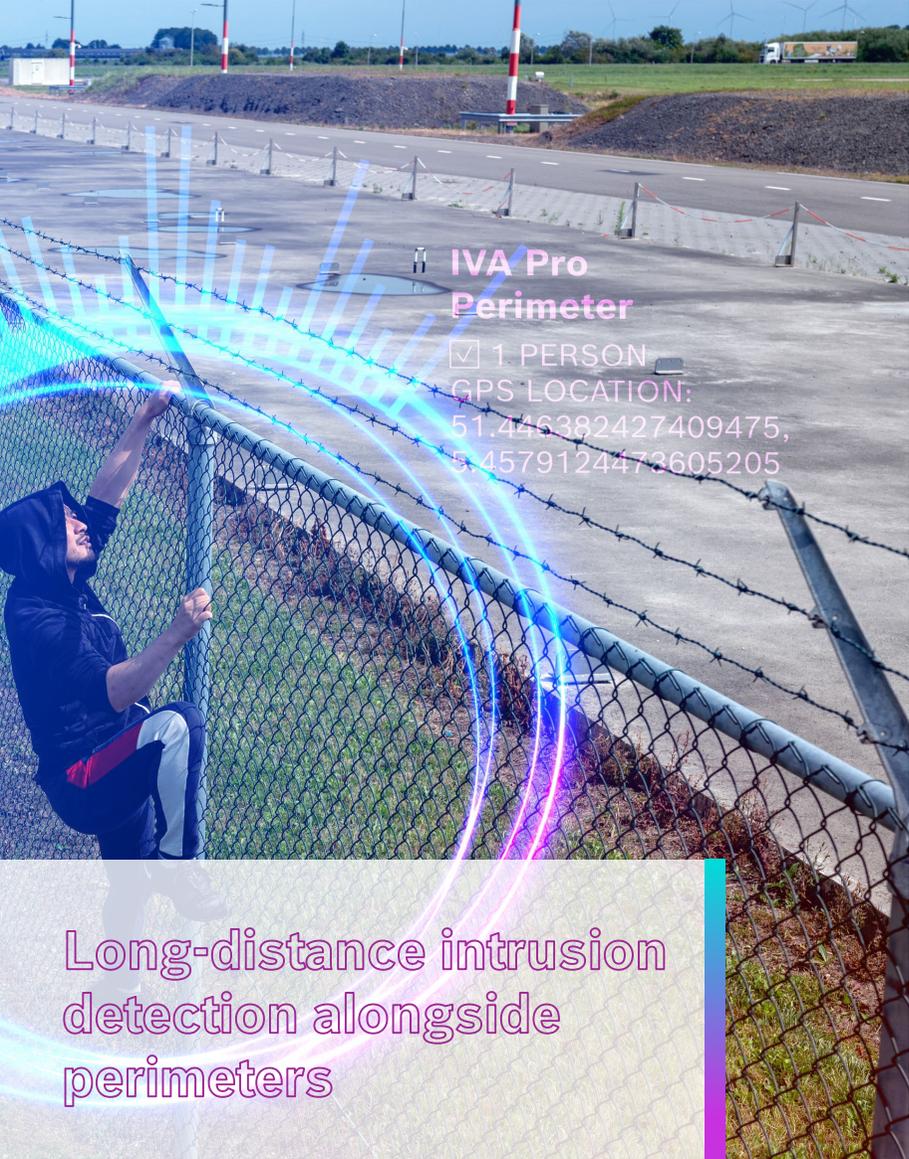
Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color



BOSCH

IVA Pro Perimeter

Specs with ONVIF and MQTT:



— ONVIF —

Bosch camera sends out **ONVIF**



— MQTT —

Bosch camera sends out **MQTT**



IVA tasks that can be received via **ONVIF and MQTT**

Metadata

Person



Bike



Car



Truck



Geolocation



IVA Tasks*



***IVA Tasks Supported**



Object in / enter / leave field¹⁾



Line Crossing¹⁾



Object traversing route



Loitering



Object starting / stopping



Object counting



Crowd detection



Combine tasks using scripts



Object properties²⁾



Additional characteristics

- Works with Bosch AUTODOME intex 7000i, 5100i, 7100i and 8100i series cameras
- Easy setup with AI-based 3D autocalibration

Main use cases addressed

Use ONVIF to address use cases in situations where our own platforms or globally managed platforms are not being used. Use MQTT to apply Bosch camera metadata in broader industry applications, like multi-type-sensor and/or IoT platform environments.



● Integrated

● Coming soon (within 6 months)

● On the roadmap (within 12 months)

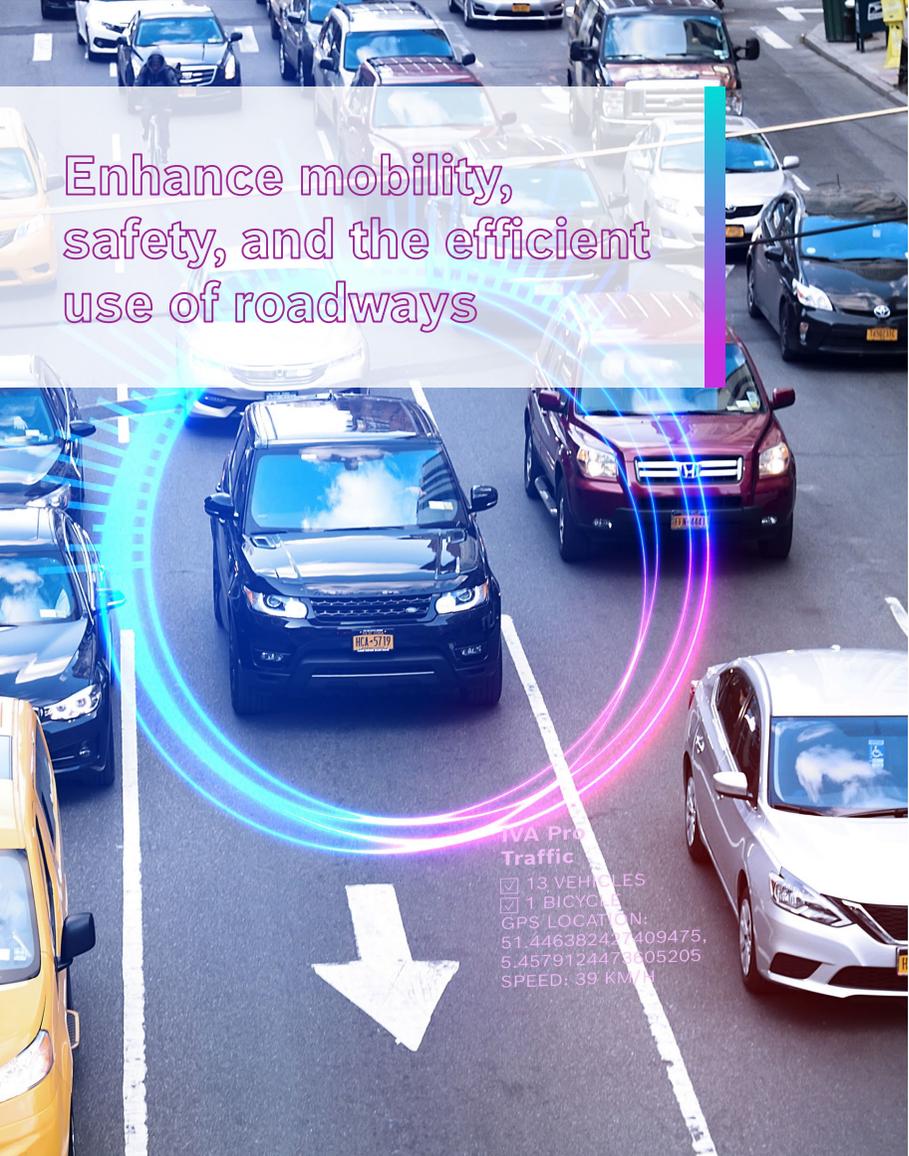
● Not supported



Note(s): 1) configure up to three zones / lines combined | 2) Properties: *Size* *Speed* *Direction* *Aspect ratio* *Color*



Enhance mobility, safety, and the efficient use of roadways



IVA Pro Traffic

13 VEHICLES
 1 BICYCLE
 GPS LOCATION:
 51.44638242, 409475,
 5.4579124473605205
 SPEED: 39 KM/H

IVA Pro Traffic Specs with ONVIF and MQTT:

	ONVIF	MQTT		
	Bosch camera sends out ONVIF	Bosch camera sends out MQTT		IVA tasks that can be received via ONVIF and MQTT
Metadata			*IVA Tasks Supported	
Person	●	●	Object in / enter / leave field ¹⁾	●
Car	●	●	Line Crossing ¹⁾	●
Bus	●	●	Object traversing route	●
Truck	●	●	Loitering	●
Bicycle	●	●	Object starting / stopping	●
Motorcycle	●	●	Object counting	●
Vehicle color	●	●	Crowd detection	●
Geolocation	●	●	Combine tasks using scripts	●
IVA Tasks*	●	●	Object properties ²⁾	

Additional characteristics

- Works with Bosch AUTODOME 7000i, AUTODOME / MIC intex 7100i, FLEXIDOME / DINION 5100i, DINION 7100i, and 8100i series
- Easy setup with AI-based 3D autocalibration

Main use cases addressed

Use ONVIF to address use cases in situations where our own platforms or globally managed platforms are not being used. Use MQTT to apply Bosch camera metadata in broader industry applications, like multi-type-sensor and/or IoT platform environments.



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



BOSCH

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color

IVA Pro Visual Gun Detection

PERSON
GUN IN HAND



Detect brandished guns, directly on camera

IVA Pro Visual Gun Detection Specs with ONVIF and MQTT:

	ONVIF	MQTT	IVA tasks that can be received via ONVIF and MQTT
Metadata	Bosch camera sends out ONVIF	Bosch camera sends out MQTT	*IVA Tasks Supported
Person	●	●	Object in / enter / leave field ¹⁾ ●
Gun in Hand	●	●	Line Crossing ¹⁾ ●
IVA Tasks*	●	●	Object traversing route ●
			Loitering ●
			Object starting / stopping ●
			Object counting ●
			Crowd detection ●
			Combine tasks using scripts ●
			Object properties ²⁾

Additional characteristics

- Works with Bosch DINION & FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- The built-in tamper detection generates alarms on camera hooding/masking, blinding, defocusing, and repositioning.

Main use cases addressed

Use ONVIF to address use cases in situations where our own platforms or globally managed platforms are not being used. Use MQTT to apply Bosch camera metadata in broader industry applications, like multi-type-sensor and/or IoT platform environments.



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color

IVA Pro Appearance

Specs with ONVIF and MQTT:



IVA Pro Appearance

- TOP COLOR: RED
- TOP LENGTH: LONG
- BOTTOM COLOR: NAVY
- BOTTOM LENGTH: LONG
- HAIR COLOR: UNKNOWN
- HAIR LENGTH: SHORT
- GENDER: MALE
- BACKPACK
- HAT
- GLASSES

Robust, detailed people surveillance and high-performance counting

ONVIF

Bosch camera sends out ONVIF



MQTT

Bosch camera sends out MQTT



IVA tasks that can be received via ONVIF and MQTT

Metadata

Person	●
Vehicle	●
Gender	● ^A
Top color	● ^A
Top length	● ^A
Bottom color	● ^A
Bottom length	● ^A
Hair color	● ^A
Hair length	● ^A
Hat (w/ ; w/o)	● ^A
Glasses (w/ ; w/o)	● ^A
Bag (w/ ; w/o)	● ^A
Backpack (w/ ; w/o)	● ^A

IVA Tasks*

Additional characteristics

- Works with Bosch DINION & FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series
- Offers high-performance people counting

Main use cases addressed

Use ONVIF to address use cases in situations where our own platforms or globally managed platforms are not being used. Use MQTT to apply Bosch camera metadata in broader industry applications, like multi-type-sensor and/or IoT platform environments.

*IVA Tasks Supported

Special APPEARANCE (A) task	● ^A
Object in / enter / leave field ¹⁾	●
Line Crossing ¹⁾	●
Object traversing route	●
Loitering	●
Object starting / stopping	●
Object counting	●
Crowd detection	●
Combine tasks using scripts	●
Object properties ²⁾	●



Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color

- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



BOSCH

IVA Pro PPE

Specs with ONVIF and MQTT:



Reliable detection of personal protective equipment (PPE)

ONVIF

MQTT

	Bosch camera sends out ONVIF	Bosch camera sends out MQTT	IVA tasks that can be received via ONVIF and MQTT
Metadata			
*IVA Tasks Supported			
Person	●	●	● P
Vehicle	●	●	●
Safety vest (w/ ; w/o)	● P	●	●
Hard hat (w/ ; w/o)	● P	●	●
IVA Tasks*	●	●	●
			● <i>Special PPE (P) task</i>
			● Object in / enter / leave field ¹⁾
			● Line Crossing ¹⁾
			● Object traversing route
			● Loitering
			● Object starting / stopping
			● Object counting
			● Crowd detection
			● Combine tasks using scripts
			● Object properties ²⁾

Additional characteristics

- Works with Bosch DINION & FLEXIDOME 5100i, DINION 7100i and FLEXIDOME 8100i series

Main use cases addressed

Use ONVIF to address use cases in situations where our own platforms or globally managed platforms are not being used. Use MQTT to apply Bosch camera metadata in broader industry applications, like multi-type-sensor and/or IoT platform environments.



● Integrated

● Coming soon (within 6 months)

● On the roadmap (within 12 months)

● Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: Size Speed Direction Aspect ratio Color

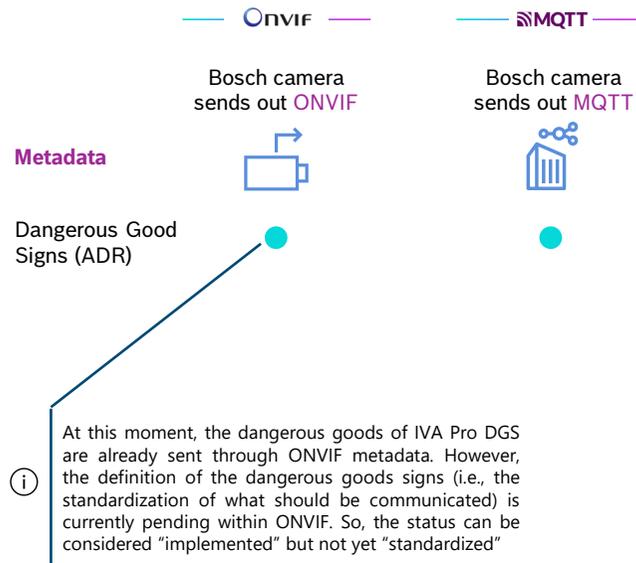


BOSCH

Detecting and recognizing the content of ADR signs on vehicles



IVA Pro DGS Specs with ONVIF and MQTT:



Additional characteristics

- Works with Bosch DINION 5100i and DINION 7100i series

Main use cases addressed

Use ONVIF to address use cases in situations where our own platforms or globally managed platforms are not being used. Use MQTT to apply Bosch camera metadata in broader industry applications, like multi-type-sensor and/or IoT platform environments.



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



IVA Pro LPR

Specs with ONVIF and MQTT:



Detecting and recognizing license plates (LPR) in stop and go and city traffic



>>

supported states and countries

*Also available in combined
IVA Pro License Plate +
Make Model license*

Additional characteristics

- Works with Bosch DINION 5100i and DINION 7100i series

Main use cases addressed

Use ONVIF to address use cases in situations where our own platforms or globally managed platforms are not being used. Use MQTT to apply Bosch camera metadata in broader industry applications, like multi-type-sensor and/or IoT platform environments.

- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



Detecting and recognizing the manufacturer and Model (MMR) of vehicles



IVA Pro MMR Specs with ONVIF and MQTT:

	ONVIF	MQTT
	Bosch camera sends out ONVIF	Bosch camera sends out MQTT
Metadata		
Vehicle make	●	●
Vehicle model	●	●
Vehicle type	●	●

140+ manufacturers
2,000+ models

Also available in combined
IVA Pro License Plate +
Make Model license

Additional characteristics

- Works with Bosch DINION 5100i and DINION 7100i series
- Privacy-friendly solution without license plate recognition

Main use cases addressed

Use ONVIF to address use cases in situations where our own platforms or globally managed platforms are not being used. Use MQTT to apply Bosch camera metadata in broader industry applications, like multi-type-sensor and/or IoT platform environments.



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



IVA Pro Privacy Mask

Specs with ONVIF and MQTT



Ensure privacy while still obtaining actionable insights

— ONVIF —

— MQTT —

Bosch camera sends out **ONVIF**

Bosch camera sends out **MQTT**

Metadata



Person	Not applicable	Not applicable
Face	Not applicable	Not applicable
Vehicle	Not applicable	Not applicable
All above	Not applicable	Not applicable



- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported



IAA Gunshot Detection Specs with ONVIF and MQTT:



Enhance mobility,
safety, and the efficient
use of roadways

— ONVIF —

— MQTT —

	Bosch camera sends out ONVIF	Bosch camera sends out MQTT	IVA tasks that can be received via ONVIF and MQTT
Metadata			
Gunshot	●	●	●
Gunshot direction	●	●	●
T3 alarm - Smoke	●	●	●
T4 alarm - CO	●	●	●
IVA Tasks*	●	●	●
*IVA Tasks Supported			
Object in / enter / leave field ¹⁾			●
Line Crossing ¹⁾			●
Object traversing route			●
Loitering			●
Object starting / stopping			●
Object counting			●
Crowd detection			●
Combine tasks using scripts			●
Object properties ²⁾			

Additional characteristics

- Works with Bosch 5100i, FLEXIDOME corner & DINION 7100i, and 8100i series
- Detects and identifies target sounds against ambient sounds.

Main use cases addressed

Use ONVIF to address use cases in situations where our own platforms or globally managed platforms are not being used. Use MQTT to apply Bosch camera metadata in broader industry applications, like multi-type-sensor and/or IoT platform environments.



● Integrated

● Coming soon (within 6 months)

● On the roadmap (within 12 months)

● Not supported

Note(s): 1) configure up to three zones / lines combined | 2) Properties: *Size* *Speed* *Direction* *Aspect ratio* *Color*



BOSCH