

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											CPP13: FW 8.80, CPP 14: FW 9.40	
		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

Integration partner		Analytics												Evaluation based on CPP14 with FW 9.40 or newer											
		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:

	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				
Person	●	●	●	●
Vehicle	●	●	●	●
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 AUTODOME intexx 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.

Reliable detection in and around buildings



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 Perimeter

Specs with Genetec SC:

Genetec

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
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



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

- 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



BOSCH

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 Genetec SC:

Genetec

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 traffic use
cases in SC

Metadata



*IVA Tasks Supported



Person



Object in / enter / leave field¹⁾



Car



Line Crossing¹⁾



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 properties²⁾



IVA Pro
Traffic

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

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: 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, 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 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

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:

Genetec

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



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 Genetec SC:

Genetec

	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				
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.
- 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



BOSCH

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:

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

Address people search & counting use cases in SC

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	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
- 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)

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



● 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:

Genetec

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



Person



Vehicle



Safety vest (w/ ; w/o) P



Hard hat (w/ ; w/o) P



IVA Tasks*



*IVA Tasks Supported



Special PPE task

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 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.

Reliable detection of
personal protective
equipment (PPE)



● 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 LPR

Specs with Genetec SC:

Genetec

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

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.

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



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



BOSCH

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:

Genetec

	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



BOSCH

Detecting and recognizing the content of ADR signs on vehicles

IVA Pro DGS

Specs with Genetec SC:

Genetec

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

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



BOSCH

IVA Pro Privacy Mask

Specs with Genetec SC:



Ensure privacy while
still obtaining
actionable insights

Can blur in
Security Center

Address privacy
use cases in SC

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



BOSCH



IAA Gunshot Detection

Specs with Genetec SC:

Genetec

	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.

Enhance mobility,
safety, and the efficient
use of roadways



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

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:



	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				
Person	●	●	●	●
Vehicle	●	●	●	●
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 AUTODOME inteoX 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.

Reliable detection in and around buildings



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 XProtect:



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

			
Person	●	●	●
Bike	●	●	●
Car	●	●	●
Truck	●	●	●
Geolocation	●	●	●
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 AUTODOME inteoX 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.



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

Enhance mobility,
safety, and the efficient
use of roadways

IVA Pro Traffic

☒ 13 VEHICLES
☒ 1 BICYCLE
 GPS LOCATION:
 51.44638242, -84.09475,
 5.4579124473605205
 SPEED: 39 KM/H

IVA Pro Traffic Specs with XProtect:



XPROTECT 2024 R2

	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			
Person	●	●	●
Car	●	●	●
Bus	●	●	●
Truck	●	●	●
Bicycle	●	●	●
Motorcycle	●	●	●
Vehicle color	●	●	●
Geolocation		●	●
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 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



BOSCH

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 Specs with XProtect:



XPROTECT 2024 R2

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



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 XProtect:



XPROTECT 2024 R2

	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 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



BOSCH

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

— 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 people search & counting use cases in XProtect

Metadata



*IVA Tasks Supported



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*	●	●	●

Special APPEARANCE (A) task

Object in / enter / leave field¹⁾Line Crossing¹⁾

Object traversing route



Loitering



Object starting / stopping



Object counting



Crowd detection



Combine tasks using scripts

Object properties²⁾

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

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:



XPROTECT 2024 R2

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 PPE use
cases in XProtect

Metadata



*IVA Tasks Supported



Person



Special PPE (P) task



Vehicle

Object in / enter / leave field¹⁾

Safety vest (w/ ; w/o) P

Line Crossing¹⁾

Hard hat (w/ ; w/o) P



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
- 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.

Reliable detection of
personal protective
equipment (PPE)



● Integrated

● Coming soon

● On the roadmap

● Not supported



BOSCH

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

IVA Pro LPR

Specs with XProtect:



XPROTECT 2024 R2

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

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.

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



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



BOSCH

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



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

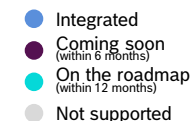
Also available in combined
IVA Pro License Plate +
Make Model license

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.



Detecting and recognizing the content of ADR signs on vehicles

IVA Pro DGS Specs with XProtect:

milestone
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
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

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



BOSCH

IAA Gunshot Detection

Specs with XProtect:



XPROTECT 2024 R2

	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 gunshot detection use cases in XProtect
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

- 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:



Real-time

Forensic

Receive alarms on events in BVMS

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 intex 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.

Reliable detection in and around buildings



● 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 BVMS:



IVA Pro Perimeter

☑ 1 PERSON
GPS LOCATION:
51.446382427409475,
5.4579124473605205

Long-distance intrusion
detection alongside
perimeters

Real-time

Receive alarms on
events in **BVMS**

Forensic

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



BOSCH

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 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 intex 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



BOSCH

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
[X] 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.



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 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:



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



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*	●	●

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⁾	●



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

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



BOSCH

IVA Pro PPE

Specs with BVMS:



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.

Reliable detection of personal protective equipment (PPE)



● 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 LPR

Specs with BVMS:



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



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



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:



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

Object traversing route



T4 alarm - CO

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.

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



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:



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



Person



Vehicle



*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⁾

Reliable detection in
and around buildings

Additional characteristics

- Works with Bosch AUTODOME intex 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



Aspect
ratio

Color

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

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**


Person

Object in / enter / leave field¹⁾

Bike

Line Crossing¹⁾

Car



Object traversing route



Truck



Loitering



Geolocation



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

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



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

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

IVA Pro Traffic Specs with Genetec SC SaaS:

Genetec

	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			
Person			
Car			
Bus			
Truck			
Bicycle			
Motorcycle			
Vehicle color			
Geolocation			
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 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



BOSCH

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 Genetec SC SaaS:

Genetec

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.



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 Visual Gun Detection

PERSON ☒
GUN IN HAND ☒

Detect brandished guns, directly on camera

IVA Pro Visual Gun Detection Specs with Genetec SC SaaS:

Genetec

	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			
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⁾			

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.



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 Appearance

Specs with Genetec SC SaaS:



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



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:



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



Person



Vehicle



Safety vest (w/ ; w/o)



Hard hat (w/ ; w/o)



IVA Tasks*



*IVA Tasks Supported



Special PPE (P) task

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 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.

Reliable detection of
personal protective
equipment (PPE)



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 LPR

Specs with Genetec SC SaaS:

Genetec

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.

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



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



BOSCH

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



IVA Pro MMR

Specs with Genetec SC SaaS:

Genetec

	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



BOSCH

Detecting and recognizing the content of ADR signs on vehicles

IVA Pro DGS

Specs with Genetec SC SaaS:

Genetec

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)



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



BOSCH

IVA Pro **Privacy Mask**

Specs with Genetec SC SaaS:



Ensure privacy while
still obtaining
actionable insights

Can blur in
SC SaaS

Address privacy
use cases in
SC SaaS

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

- 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



BOSCH



IAA Gunshot Detection

Specs with Genetec SC SaaS:

Genetec

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	●
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.

Main use cases addressed

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

Enhance mobility,
safety, and the efficient
use of roadways



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

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 Buildings

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			
Person	●	●	●
Vehicle	●	●	●
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 AUTODOME intex 7000i, 3100i, 5100i, 7100i and 8100i series cameras
- 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

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 EEN Alert Manager.

Reliable detection in
and around buildings



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


BOSCH



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			
Person	●	●	●
Bike	●	●	●
Car	●	●	●
Truck	●	●	●
Geolocation	●	●	●
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, 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:



Size



Speed



Direction

Aspect
ratio

Color



Integrated

Coming soon
(within 6 months)On the roadmap
(within 12 months)

Not supported



BOSCH



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



Object in / enter / leave field¹⁾



Car



Line Crossing¹⁾



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 properties²⁾



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



BOSCH



IVA Pro Traffic

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



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 EEN Cloud VMS:

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.

Address traffic & inner-city use cases in EEN

Address buildings use cases in EEN Cloud VMS

*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

- 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:



Size

Speed

Direction

Aspect ratio

Color

● Integrated

● Coming soon (within 6 months)

● On the roadmap (within 12 months)

● Not supported



BOSCH



IVA Pro Visual Gun Detection

PERSON ☒
GUN IN HAND ☒

Detect brandished guns, directly on camera

IVA Pro Visual Gun Detection 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			
Person	●	●	●
Gun in Hand	●	●	●
IVA Tasks*	●	●	●
*IVA Tasks Supported			

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: 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

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

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:



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



On the roadmap



Not supported



BOSCH



IVA Pro PPE

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			
Person	●	●	●
Vehicle	●	●	●
Safety vest (w/ ; w/o)	P	P	●
Hard hat (w/ ; w/o)	P	P	●
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
- 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.

Reliable detection of
personal protective
equipment (PPE)



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



BOSCH

IVA Pro LPR

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





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



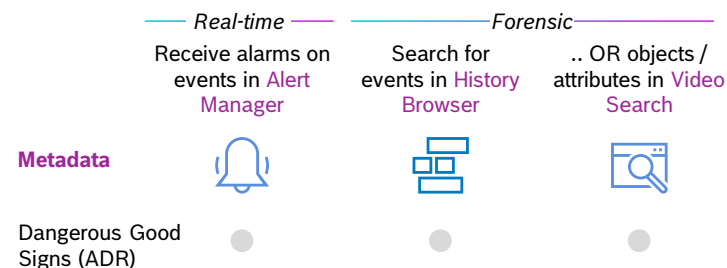
BOSCH



Detecting and recognizing the content of ADR signs on vehicles

IVA Pro DGS

Specs with EEN Cloud VMS:



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.

IVA Pro Dangerous Goods Sign

- ☒ 3YE
- ☒ FLAMMABLE LIQUID
- ☒ 1203
- ☒ GASOLINE



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



BOSCH



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



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



BOSCH





IAA Gunshot Detection

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			
Gunshot	●	●	●
Gunshot direction			●
T3 alarm – Smoke	●	●	●
T4 alarm – CO	●	●	●
*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
- 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:



Size

Speed

Direction

Aspect ratio

Color

● Integrated

● Coming soon
(within 6 months)

● On the roadmap
(within 12 months)

● Not supported



BOSCH

Enhance mobility,
safety, and the efficient
use of roadways



2.4

VideoView+



IVA Pro Buildings

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 field¹⁾



Vehicle



Line Crossing¹⁾



IVA Tasks*



Object traversing route



Loitering



Object starting / stopping



Object counting



Crowd detection



Combine tasks using scripts



Object properties²⁾



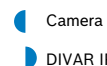
Reliable detection in and around buildings

Additional characteristics

- Works with Bosch AUTODOME intex 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



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⁾

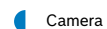


Additional characteristics

- Works with Bosch AUTODOME 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



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

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



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



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⁾

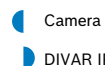


Additional characteristics

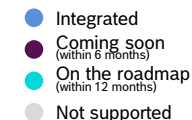
- IVA Pro Intelligent Tracking can be used in conjunction with IVA Pro Buildings and IVA Pro Traffic
- Works with Bosch AUTODOME intex 7000i / AUTODOME 7100i and MIC intex 7100i

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.



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.



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 Appearance

Specs with VideoView+:



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 VideoView+

Forensic
Search for objects in Forensic Search

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

Metadata



*IVA Tasks Supported



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*		

Special APPEARANCE (A) task

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 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



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 VideoView+:



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



Special PPE (P) task



Vehicle

Object in / enter / leave field¹⁾

Safety vest (w/ ; w/o) P

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.

Reliable detection of
personal protective
equipment (PPE)



- 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 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

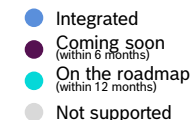
Detect and read license plates on moving vehicles (car, van, bus, truck, motorbike) in real-time for parking applications or city environments. It supports strategies that improve traffic flow, reduce congestion, and enhance safety at intersections, toll booths, and parking facilities. It ensures reliable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



Camera



DIVAR IP



BOSCH

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



IVA Pro MMR Specs with VideoView+:



	Real-time	Forensic
	Receive alarms on events in VideoView+	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⁾

Address privacy
use cases in
VideoView+

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

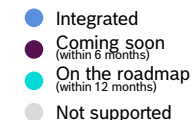


Additional characteristics

- 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.



¹⁾ In edge device, not via VSC



IAA Gunshot Detection

Specs with VideoView+:



Real-time
Receive alarms on
events in
VideoView+

Forensic
Search for objects
in Forensic Search

Metadata



Gunshot



Gunshot direction



T3 alarm - Smoke



T4 alarm - CO



Enhance mobility,
safety, and the efficient
use of roadways

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+.



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



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:

	ONVIF	MQTT		IVA tasks that can be received via ONVIF and MQTT
	Bosch camera sends out ONVIF	Bosch camera sends out MQTT		
Metadata			*IVA Tasks Supported	
Person	●	●	Object in / enter / leave field ¹⁾	●
Vehicle	●	●	Line Crossing ¹⁾	●
IVA Tasks*	●	●	Object traversing route	●
<div><div>i</div><p>At this moment MQTT only supports IVA Tasks and no object classifications (e.g., <i>people</i> or <i>vehicles</i>). 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.</p></div>		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

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.

Reliable detection in and around buildings



● 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 —

— 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⁾	●
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

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

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	
	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⁾ ●
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.



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 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

MQTT

Bosch camera sends out **ONVIF**

Bosch camera sends out **MQTT**

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

Metadata



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)

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IVA Tasks*

●

●

*IVA Tasks Supported



Special APPEARANCE (A) task
Object in / enter / leave field¹⁾
Line Crossing¹⁾
Object traversing route
Loitering
Object starting / stopping
Object counting
Crowd detection
Combine tasks using scripts
Object properties²⁾

A

●

●

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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.



- 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 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			
Person	●	●	<i>Special PPE (P) task</i> ●
Vehicle	●	●	Object in / enter / leave field ¹⁾ ●
Safety vest (w/ ; w/o)	●	●	Line Crossing ¹⁾ ●
Hard hat (w/ ; w/o)	●	●	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

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.

Reliable detection of personal protective equipment (PPE)



● 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

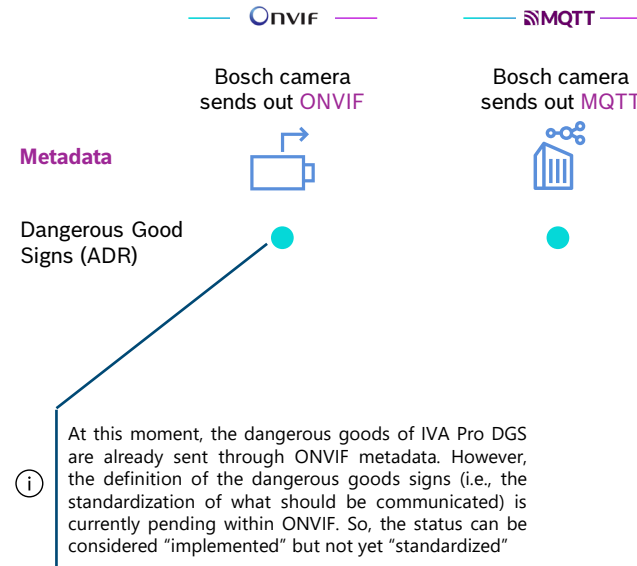

BOSCH

Detecting and recognizing the content of ADR signs on vehicles

**IVA Pro
Dangerous Goods Sign**

- ✓ 3YE
- ✓ FLAMMABLE LIQUID
- ✓ 1203
- ✓ GASOLINE

IVA Pro DGS Specs with ONVIF and MQTT:



Additional characteristics

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

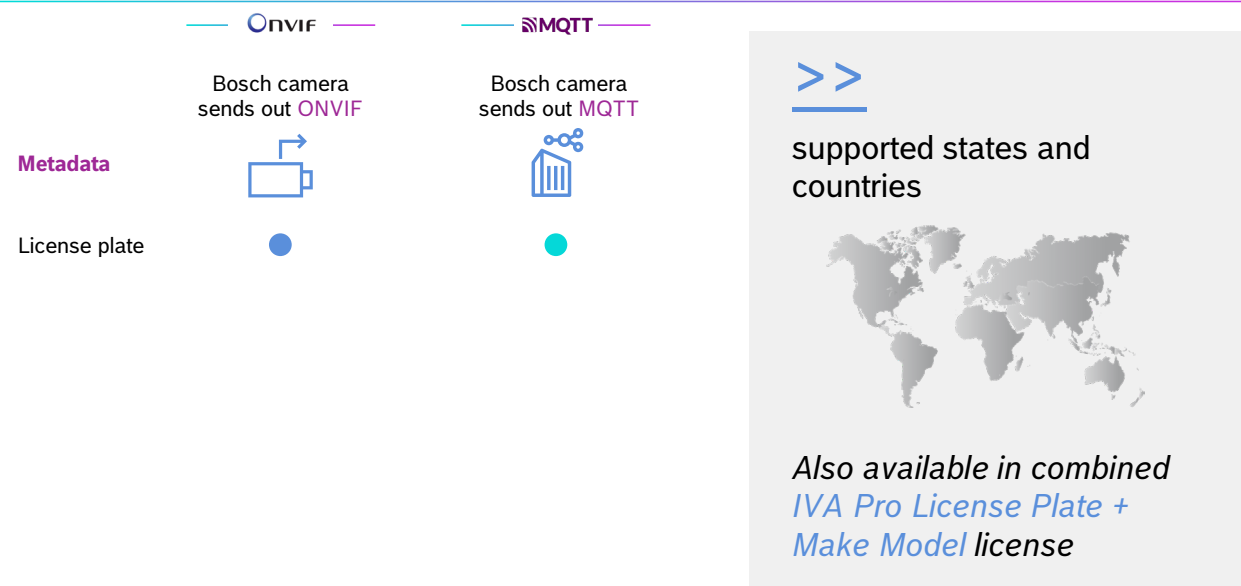
Main use cases addressed

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.



IVA Pro LPR

Specs with ONVIF and MQTT:



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

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.

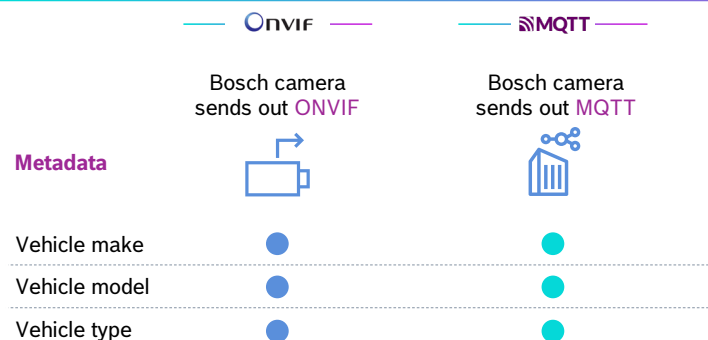
- Integrated
- Coming soon (within 6 months)
- On the roadmap (within 12 months)
- Not supported

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



IVA Pro MMR

Specs with ONVIF and MQTT:



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



BOSCH



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

IAA Gunshot Detection

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 
Gunshot			Object in / enter / leave field ¹⁾ 
Gunshot direction			Line Crossing ¹⁾ 
T3 alarm - Smoke			Object traversing route 
T4 alarm - CO			Loitering 
IVA Tasks*			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.


Enhance mobility,
safety, and the efficient
use of roadways



 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*