Video Systems and Solutions

AI meets Perimeter Security

Your selection guide to intelligent outdoor cameras

BOSCH

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Artificial intelligence (AI) in security systems has transformed how we safeguard our properties in recent years. With the integration of AI-enabled cameras, early and reliable detection of potential threats has become more accessible while minimizing the number of false alarms. These cameras use advanced algorithms that help differentiate between actual threats and false alarms, enabling security personnel to respond promptly and effectively when necessary.

Whether you're looking to secure a large-scale industrial site, energy facility, or government building, this guide will help you understand and choose the best AI-enabled camera suited to your perimeter security needs.

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DINION 7100i IR

Reliable nighttime detection

Get accurate detection, precise classification, and clear images in low-light or darkness when securing long distances.

DINION 7100i IR bullet cameras are designed for high security applications that demand long-range detection and classification. Their exceptional low-light image performance combined with application specific artificial intelligence ensures the highest reliability in extreme environments.

In challenging conditions, built-in starlight X, HDR X, and powerful intelligent IR deliver exceptional performance over extended distances. Electronic image stabilization (EIS) automatically removes motion caused by wind or vibration to maintain a steady, high-quality image.

Finally, these robust cameras are designed to deliver outstanding coverage in harsh outdoor environments, including wind, vibration, rain, and snow. Secure, cyber resilient solutions, that are built for lasting protection and performance.
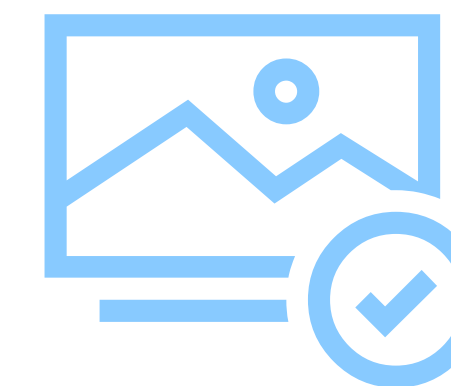
Intelligent Video Analytics Pro (IVA Pro)

Built-in

IVA Pro Perimeter comes pre-installed and covers large distances along fence lines and includes an intuitive map-based calibration tool when long-range perimeter detection, object tracking, and filtering according to vehicle size and speed is desired. Highly sensitive to motion, nothing escapes detection, including professional intruders who crawl, roll or use camouflage. It also delivers enhanced metadata such as GPS location, while only relevant events trigger alerts to minimize false alarms.

Exceptional imaging

DINION 7100i IR cameras provide excellent long-range details in low light and the ability to deliver actionable insights for safeguarding facilities details even in challenging lighting for improved situational awareness:

- Starlight X technology provides clear and relevant images regardless of lighting conditions, time of day, or object movement
- High Dynamic Range X (HDR X) technology ensures an enhanced dynamic range (up to 144dB) that is motion-optimized to capture the highest level of detail in challenging scenes in both dark and bright areas, while eliminating blur and artefacts caused by the movement of objects
- The built-in intelligent IR allows the camera to see up to 120 meters in total darkness
- The optional polarizing filter helps reduce reflection
- Exchangeable IR modules answer specific requirements such as railway (where invisible IR is required)
- Electronic image stabilization (EIS) removes the motion caused by wind or vibration for enhanced image quality
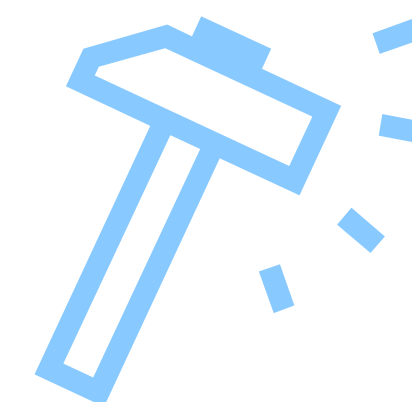

IR On

Distance: 110m / 360ft

Shock and vibration
resistant NEMA TS-2

Robust design

Designed to perform in challenging environments,
the solid housing withstands high wind, rain and
snow, 100% humidity and temperatures from
-50° to 60° C (-58° to 140° F). So your investment
is protected against the harshest conditions.
We ensure the high quality with decades of R&D
experience and extensive testing in Bosch owned
labs beyond normative requirements.

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Environmental
protection IP66, IP67,
NEMA 4X

Vandal resistance IK10

SECURITY
today
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NEW PRODUCT
OF THE YEAR

The DINION 7100i IR cameras have
been selected for Security Today
magazine's New Product of the Year Award in the
Video Surveillance Cameras – AI category. The awards
program honors the outstanding product development
achievements of manufacturers whose products are
considered noteworthy in their ability to improve security.

AUTODOME 7100 (IR)

Stable images, no matter what

Choose the most rugged cameras to deliver enduring performance and accurate detection in challenging environments and distances.

The AUTODOME 7100i (IR) cameras feature IVA Pro, an expert suite of application-specific video analytics offering reliable, precise classification for long-distance perimeter detection.

Further enhancing reliability, these cameras are equipped with a unique positioning system. The cameras will always retain their position and provide consistently stable images despite power outages, excessive force, and vibration. To save valuable time while still maintaining safety standards, the cameras employ a simplified installation concept and require no calibration for person or vehicle detection.

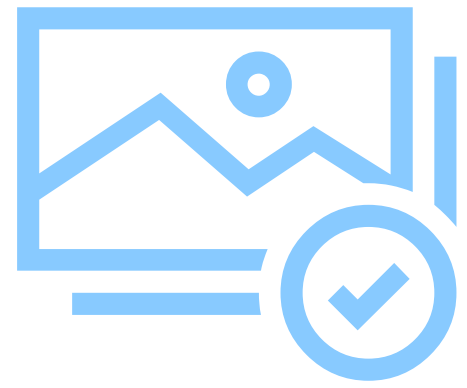## Built-in: Intelligent Video Analytics Pro (IVA Pro)

In perimeter security, it is important to have access to details with excellent clarity to identify objects of interest and maintain situational awareness. Or for visual verification in real-time or forensic search. AUTODOME 7100i (IR) cameras offer exactly that thanks to high resolution imaging (up to 4K ultra HD) combined with starlight, 60 fps, High Dynamic Range and 12x / 40x zoom.
The IVA Pro Perimeter (built-in as standard) is ideal for the use of perimeter security.

- It offers early detection in challenging outdoor scenes
- It can even detect crawling and rolling
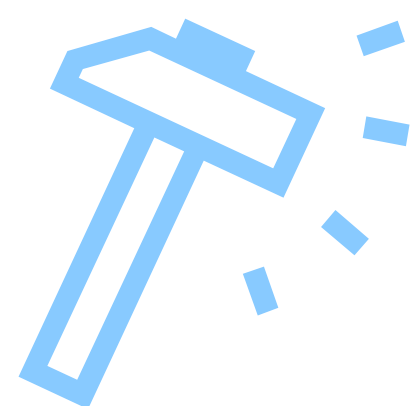
Built-in

High-quality imaging

The AUTODOME 7100i (IR) camera portfolio includes 1080p and 4K ultra-HD resolution, 12 to 40x optical zoom, and optional IR. They are equipped with starlight technology, providing detailed overviews 24/7, even in a low-light environment. Intelligent IR comes standard on IR models to eliminate hot spots and ensure optimum illumination. Optical image stabilization is built-in on 8-megapixel models.

The new ball form factor eliminates optical distortion, enabling high-resolution video 20-degrees above the horizon, which is especially useful for city roadways with gradual inclines.

Smart and robust design

A patented installation concept enables operators to install the AUTODOME 7100i (IR) cameras on a wall or pipe with one hand. A new assistant hinge allows installers to click the camera in place safely and securely and get it up and running quickly, especially when installing from an elevated area. On top of this, system integrators can perform services such as changing configuration settings or installing firmware updates via the Bosch Remote Portal from anywhere.

Adding to the reliability of these cameras and leveraging the MIC's unique positioning system, the AUTODOME 7100i (IR) never loses track of its position, even if power is lost or the camera sustains excessive force. Built-in brushless positioning motors are highly efficient because they use less energy and offer a longer service life. The system presets are accurate to .10 degrees and maintains the intended position for pre-positions, sectors, and privacy masks.

The AUTODOME 7100i IR cameras feature IVA Pro, an expert suite of application-specific video analytics offering reliable, precise classification that's ideal for long-distance perimeter detection.

Camera will hold its position in wind up to 170 mph (274 kph)

Shock and vibration resistant NEMA TS2

IP68-rated ingress protection

Vandal resistance IK10

MIC family

Situational awareness in extreme conditions

Maintain consistent steady images despite power outages, excessive force and vibration, and get reliable, precise classification over long distances.

Securing the perimeter of mission-critical sites such as energy and utility plants is extremely challenging. Operators need to know what's happening in every area around the facility as early as possible, day or night, to confirm that assets are secure. They also need reliable, detailed information from their video system regardless of weather, temperature, vibration, or shock so they can assess any situation and respond quickly to incidents.
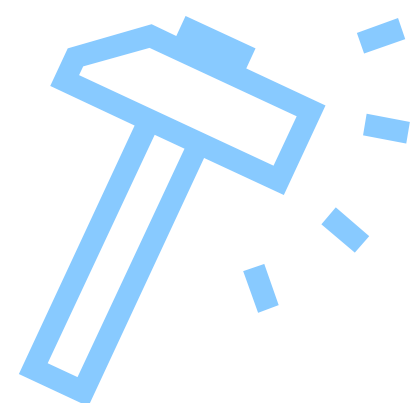
Built-in

Edge-based video analytics

Thanks to edge-based AI, the MIC cameras are designed to withstand harsh environments and resist false triggers like snow, wind, rain, hail, water reflections, and shaking. Despite the most extreme conditions, video data can be interpreted directly at the source to improve the security level further and enable video data to do more than security alone. Different models offer:

- Analytics while moving
- Intelligent tracking
- Camera Trainer
- IVA Pro

Built to last

The lifespan for a MIC camera typically exceeds 10 years even when exposed to constant vibrations and road debris impacts. Designed to perform in any environment, the solid metal body withstands:

- High wind
- Rain and snow
- 100% humidity
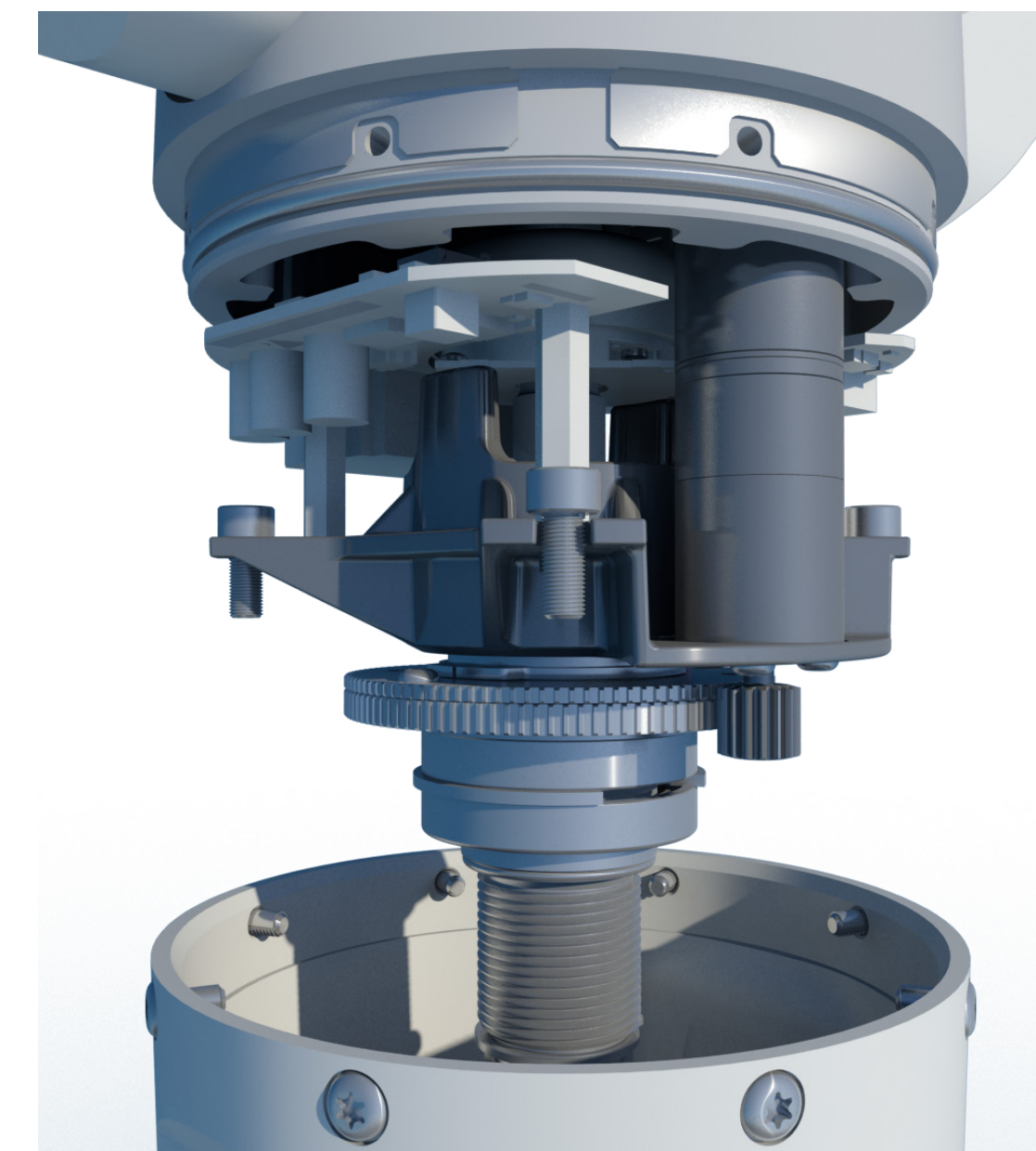- Temperatures from -40° to +65° C (-40° to +149° F)

The superior metallurgy and finish provide exceptional protection against corrosion. With MIC cameras, your investment is protected against the harshest conditions.

All-metal gears and brushless positioning

A high-efficiency solid-state motor with brushless positioning ensures continuous operation without significant wear and tear or troublesome camera positioning slip. All-metal intermeshing gears provide more resistance to shock and vibration and enjoy a longer operational life compared to cameras with plastic gears and rubber belts.

Anti-backlash drive-train

The unique anti-backlash drive-train braking system offers enhanced preposition and tracking accuracy. It also improves optical image stabilization when the cameras are installed on poles subject to vibration or shaking.

Closed loop positioning

The cameras never need recalibration and never lose their positioning, returning to presets with unprecedented accuracy. If exposed to a heavy shock or external force, like gale force winds, the positional encoders will send feedback to the control software to correct errors and steer the camera back to the exact pre-programmed positions.
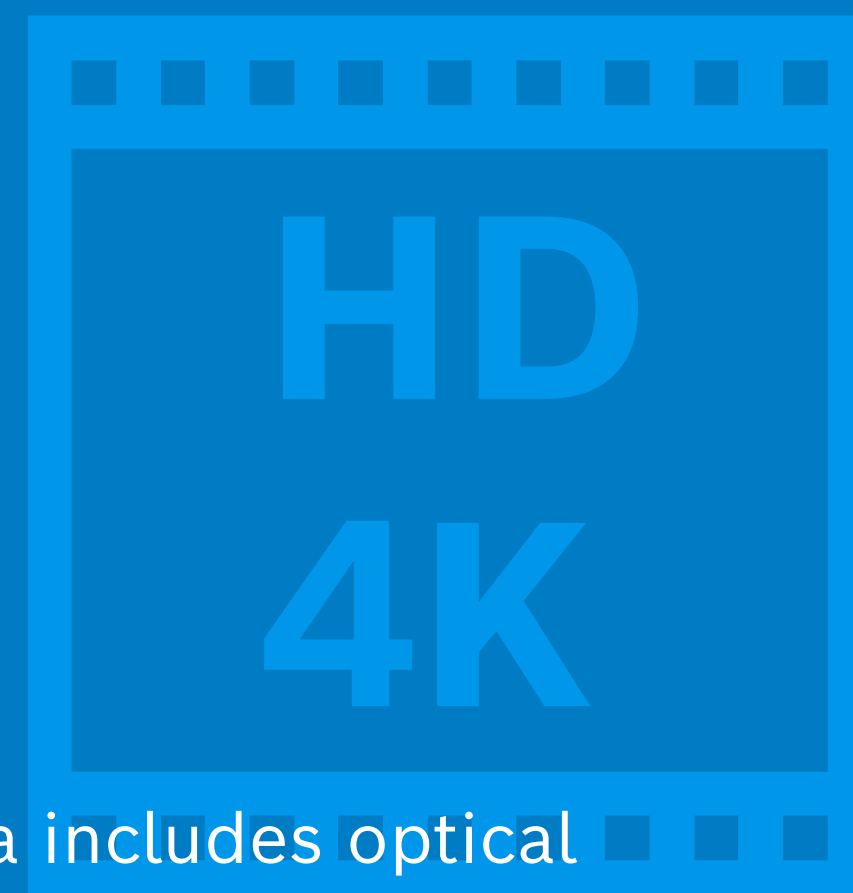
MIC IP starlight 7100i

The MIC IP starlight 7100i cameras are equipped with starlight technology in 1080p resolution for excellent low-light sensitivity, and Intelligent Video Analytics, for seamless detection and tracking in any outdoor application. They use an all-metal gear design for resisting extreme vibrations and high impacts (IK10 rating) and a have a longer operational life compared to cameras with plastic gears and rubber belts. A stable drive train enables them to track slow-moving targets as smoothly as possible. The cameras are guaranteed never to lose their homing position, returning to a preset position over their entire lifetime, even when exposed to extreme vibration or brute force.

Excellent lowlight sensitivity (color = 0.0047 lx) and High dynamic range (120 dB)

MIC IP ultra 7100i

The MIC IP ultra 7100i camera includes optical image stabilization (OIS) in the 4K variant, maintaining pin-sharp images even in situations where the camera is subject to vibration, such as on bridges. There is also no need to cut off the field of view to compensate for the vibration electronically. They are ideal for any outdoor application including traffic monitoring on bridges, in tunnels, or on highways, perimeter security, city surveillance, and mining.

4K ultra HD resolution and 12x optical zoom

MIC IP fusion 9000i

The MIC IP fusion 9000i 9mm camera brings maximum situational awareness to perimeter detection applications. It adds a wider thermal field of view (70° x 52°), downscaling prepositions to six for a single camera to provide 360-degree coverage in approximately 30 seconds. Receiving a full circle view quickly lowers security costs per square meter, resulting in customer savings.

The MIC IP fusion 9000i 9mm camera combines a thermal imager with an optical camera in a single housing. It employs a unique technology, metadata fusion, to blend object detection data from both thermal and optical video analytics streams and display them in one view.

Metadata fusion:
Blend object detection data from both thermal and optical video analytics streams and display them in one view.

MIC IP fusion 9000i 9mm lens: six pre-positions for a 360 degree coverage of the full scene in less than 30 seconds

MIC inteox 7100i

The solid metal body of the MIC inteox 7100i withstands severe weather and environmental conditions, such as high winds, rain, fog, dust, temperatures from -40° to 65° C (-40° to 149° F), 100% humidity, vibration on bridges, and high impacts from debris. The cameras offer IP68-rated protection against water ingress without requiring a pressurized housing to reduce maintenance and your total cost of ownership.

The 4K model includes OIS. The Object Classification (OC) models offer Intelligent Video Analytics Pro (IVA Pro) Traffic, providing reliable detection and sub-classification of vehicles, such as cars, bicycles, buses, motorcycles, and trucks, and accurate detection of pedestrians, even in crowded scenes.

IVA Pro Perimeter
pre-installed

Our commitment to data security and cyber resilience

We embrace the highest standards when developing and manufacturing products, ensuring optimum data security and cyber resilience in every network-connected device.
As a result of our sustained efforts, Bosch cameras have achieved IEC 62443-4-1 and UL 2900-2-3 Level 2 cybersecurity certifications, demonstrating that we perform critical penetration testing and implement internal security measures to safeguard against cyber attacks – providing you with peace of mind.
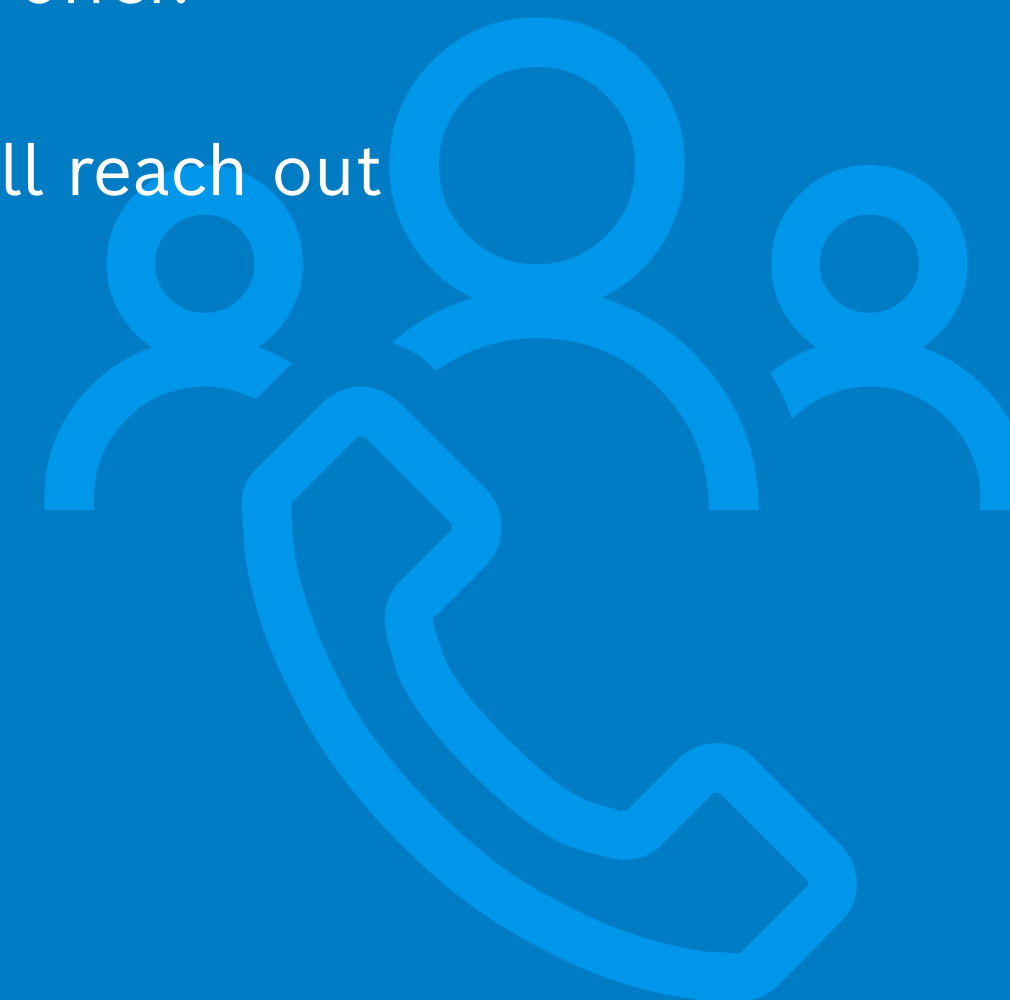
Want to know (or see) more?

Not sure which camera is the best option for you project? Or want to see a specific camera in action? We've got experts in your region who are more than willing to look into your situation and demonstrate all that our product have to offer.

Simply let us know and we'll reach out to set something up.

Get a demo >

Bosch Security and Safety Systems
Protecting lives, buildings and assets is our
aim. Our product portfolio includes video
security, intrusion detection, fire detection
and voice evacuation systems as well as
access control and management systems.
Professional audio and conference systems for
communications of voice, sound and music
complete the range.

Invented for life

BOSCH