

# Moving towards predictive solutions with sustainability and trust in mind

## Power to Predict

Know what's next with AIoT video  
solutions from Bosch



# Get data with AI

## AI-enabled camera portfolio

Fixed dome cameras



Bullet cameras



Moving cameras



Moving cameras extreme



Multi-imager cameras



Panoramic cameras



Thermal (moving) cameras



Box cameras



# Get data with AI

## Latest introductions

### FLEXIDOME panoramic 5100i (IR) camera family



360-degree panoramic overview in 6MP and 12MP resolution **without blind spots**



Optimized for all lighting conditions with integrated IR and High Dynamic Range



**Built-in Intelligent Video Analytics** capable of converting data into insights in challenging conditions



Prepared for **future audio analytics** with built-in microphone array

# Get data with AI

## Latest introductions

### FLEXIDOME multi 7000i (IR) camera family



Built-in **Intelligent Video Analytics** on all four independent imagers. Capable of converting data into insights



A perfect fit for a variety of applications like traffic intersections and building corners



Built-in Camera Trainer (**machine learning**) to tailor video analytics capability to customer requirements



Camera family offers IR and non-IR models that provide 12- or 20-megapixel resolution

# Get data with AI

## Latest introductions

### MIC IP fusion 9000i cameras

#### Challenge

- ▶ Use cases such as perimeter detection at critical infrastructure sites or monitoring tunnels and bridges require short to medium range detection for activity in and around the scene.
- ▶ This requires a camera solution that gives a wide overview, ensuring the full scene is captured.

#### Solution

A 9mm thermal lens model is added to the MIC IP fusion 9000i camera series that offers a wider thermal field of view (70° x 52°)



**MIC IP fusion 9000i**  
9mm lens model

# Get data with AI

## Latest introductions

### MIC IP fusion 9000i cameras

#### Benefits

- ▶ It provides a significantly wider field of view which reduces the number of pre-positions required to provide 360-degree coverage in approx. 30 seconds. Making it much quicker to configure the complete solution.
- ▶ Receiving a full circle view that quickly, lowers security costs per square meter. This results in customer savings as other security measurements become unnecessary.
- ▶ Following a moving object is done in a smoother fashion as compared to narrower field of views.



**MIC IP fusion 9000i**  
9mm lens model

The MIC family of extremely rugged moving cameras are built to perform in practically any environment.



**NEW**  
9mm lens  
model



19mm lens  
model



50mm lens  
model

# Get data with AI

## Deep learning AI-detectors – Traffic Detector

### Integrated with Intelligent Video Analytics



GPS location



Speed



Color

- ▶ Integration of Intelligent Tracking and Traffic Detector for unmistakable object detection and tracking
- ▶ Augmentation of data with color, geolocation and speed
- ▶ Better localization of objects for positioning on maps

### Distinguish and classify vehicles



- ▶ Higher detector resolution for object detection at longer distances
- ▶ Distinguish and classify types of vehicles in congested scenes with precise detail
- ▶ Enhanced scene understanding with subclasses: cars, trucks, buses, motorcycles, and bicycles

### Person detection and counting



- ▶ Distinguish people in crowded scenes with precise detail
- ▶ Enables wide angle view people counting

# Get data with AI

## Deep learning AI-detectors – Traffic Detector

Detect and count trucks, buses, motorcycles, bicycles, and people.

Reliably distinguish and count people in crowded scenes



# Get data with AI

## INTEOX cameras – select your device

Building customer-specific solutions starts with freedom of choice.

A portfolio of moving and fixed cameras.  
**Now available**

MIC intex 7100i  
MIC intex 7100i OC



MIC intex 7100i (4K model)  
MIC intex 7100i OC  
(4K model)



AUTODOME intex 7000i  
AUTODOME intex 7000i OC



FLEXIDOME intex 7100i IR  
FLEXIDOME intex 7100i OC



DINION intex 7100i IR  
DINION intex 7100i IR OC



# Select your device

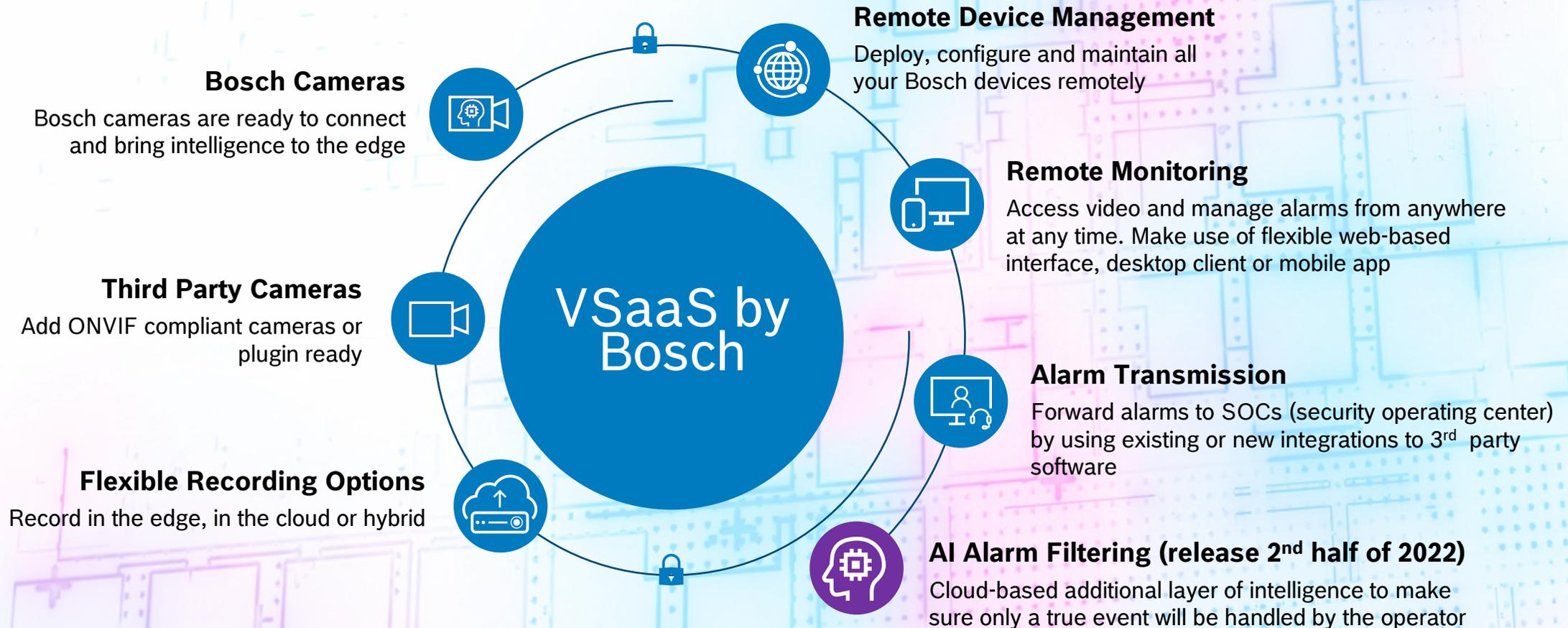
## All INTEOX cameras offer

- ✓ Smart security with built-in Video Analytics
- ✓ Excellent image quality and bitrate management
- ✓ Remote maintenance and firmware updates
- INTEOX **Full freedom** to create custom applications
- INTEOX **Data security** with secure element inside
- INTEOX **Powerful** platform that supports:
  - ▶ Deep neural network-based analytics
  - ▶ Triple video streaming



# Connect, analyze, visualize

## Latest introductions – VSaaS by Bosch



# Connect, analyze, visualize VSaaS applications

Distributed or remote sites with a moderate number of cameras



Small logistical centers



Energy and utility sites



Financial institutions



Mobile camera trailer companies



Temporary construction sites



Retail chains and services

# Rely on data

## Solutions built on trust

### Capable



- ▶ Starlight X technology
- ▶ Up to 4K ultra HD resolution
- ▶ Perfect exposure (HDR X)
- ▶ Intelligent bitrate management (H.265)
- ▶ Freedom of choice (complete portfolio)

### Durable



- ▶ Backward compatibility
- ▶ Extreme solutions:
  - ▶ Up to IK10+ and IP68
  - ▶ Corrosion proof
  - ▶ MIC cameras
- ▶ Robust recording concept (VRM)
- ▶ Software resilience

### Secure by design



- ▶ End-to-end data security approach
- ▶ Secure element inside
- ▶ Automated FW updates via secure cloud
- ▶ Product Security Incident Response Team (PSIRT)

### Accuracy > 95%



- ▶ Our AI founded on deep neural network-based video analytics learns using high-quality, real-life data from the field, so it can recognize patterns to tackle more complex tasks faster, easier, and with accuracy levels beyond 95 percent

# Rely on data Simply trusted

**5-year  
warranty**



Five-year worry-free standard warranty on all our fixed optical cameras and the fixed parts of our moving cameras

**IoT certified**



Cameras, processes and documentation related to data security are certified. Confirming that declared Security Maturity targets are met

**Secure by  
design**



Approach centered on a built-in Secure Element with TPM<sup>1</sup> functionality, safely storing all certificates and keys needed for authentication and encryption

**Ready to  
connect**



All our IP cameras can connect securely to the Bosch cloud supporting remote system management and VSaaS



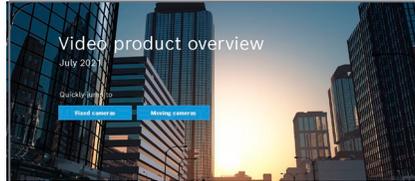
<sup>1</sup>) Trusted Platform Module

# Video Systems and Solutions

## Our latest tools for you



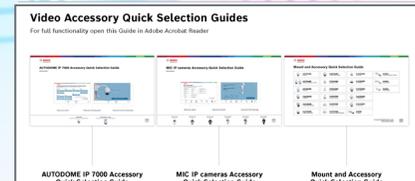
**Video Product Selector** →



**Video Product Overview** →



**Product Catalogue** →



**Video Accessory Quick Selection Guides** →



**Video Analytics applications** →



**Bosch Building Technologies Academy** →



**Video Analytics and Lens Calculator** →



**Storage Calculator** →



**Building Information Modeling** →



**BVMS System Design Guide** →



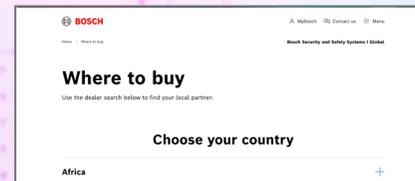
**Video Systems overview** →



**AI-enabled Video Analytics** →



**Video Systems News** →



**Where to buy** →



**Facebook** →

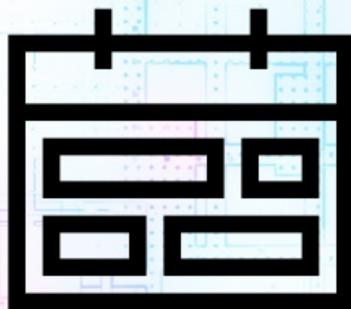
**LinkedIn** →

**Youtube** →

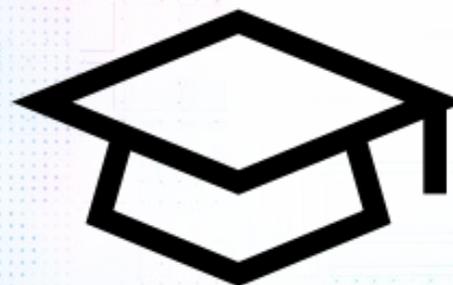
# Get in touch!



[Customer support](#)



[Event Calendar](#)



[Academy](#)



[Where to buy](#)

# Fixed cameras

## Indoor

### Essential Video Analytics

<b>FLEXIDOME IP 5000i</b>  <b>NDI-5503-A</b> 30 fps@5MP	<b>FLEXIDOME IP 5000i IR</b>  <b>NDI-5503-AL</b> 30 fps@5MP, IR	<b>FLEXIDOME IP starlight 5000i</b>  <b>NDI-5502-A</b> 60 fps@1080p
<b>FLEXIDOME IP starlight 5000i</b>  <b>NDI-5502-AL</b> 60 fps@1080p	<b>DINION IP starlight 6000 HD</b>  <b>NBN-63013-B</b> 60 fps@720p, starlight	<b>DINION IP starlight 6000 HD</b>  <b>NBN-63023-B</b> 60 fps@1080p, starlight

### Intelligent Video Analytics

<b>DINION IP starlight 7000 HD</b>  <b>NBN-73013-BA</b> 60 fps@720p, starlight	<b>DINION IP starlight 7000 HD</b>  <b>NBN-73023-BA</b> 60 fps@1080p, starlight	<b>DINION IP starlight 8000 MP</b>  <b>NBN-80052-BA</b> 30 fps@5MP, starlight	<b>DINION IP ultra 8000 MP</b>  <b>NBN-80122-CA</b> 30 fps@UHD
<b>FLEXIDOME panoramic 5100i</b>  <b>NDS-5703-F360</b> 30 fps@6MP	<b>FLEXIDOME panoramic 5100i</b>  <b>NDS-5704-F360</b> 30 fps@12MP	<b>FLEXIDOME IP indoor 8000i</b>  <b>NDV-8502-R</b> 1080p, HDR	<b>FLEXIDOME IP indoor 8000i</b>  <b>NDV-8503-R</b> 6MP, HDR
<b>FLEXIDOME IP indoor 8000i</b>  <b>NDV-8504-R</b> 4K UHD, HDR	<b>FLEXIDOME IP indoor 8000i</b>  <b>NDV-8502-RX</b> 1080p, starlight X, HDR X	<b>FLEXIDOME IP indoor 8000i</b>  <b>NDV-8503-RX</b> 4.1MP, starlight X, HDR X	

- Essential Video Analytics
- Intelligent Video Analytics



# Fixed cameras

## Outdoor

### Essential Video Analytics

<b>FLEXIDOME IP 5000i</b>  <b>NDE-5503-A</b> 30 fps@5MP	<b>FLEXIDOME IP 5000i IR</b>  <b>NDE-5503-AL</b> 30 fps@5MP, IR
<b>FLEXIDOME IP starlight 5000i IR</b>  <b>NDE-5502-A</b> 60 fps@1080p	<b>FLEXIDOME IP starlight 5000i IR</b>  <b>NDE-5502-AL</b> 60 fps@1080p, IR

### Intelligent Video Analytics

<b>DINION IP thermal 8000</b>  <b>NHT-8001-F</b> VGA	<b>DINION IP thermal 8000</b>  <b>NHT-8000-F</b> QVGA	<b>FLEXIDOME IP starlight 8000i</b>  <b>NDE-8512-R(T)</b> 1080p, starlight, HDR	<b>FLEXIDOME IP starlight 8000i</b>  <b>NDE-8513-R(T)</b> 6MP, starlight, HDR	<b>FLEXIDOME IP starlight 8000i</b>  <b>NDE-8514-R(T)</b> 4K UHD, starlight, HDR	<b>FLEXIDOME IP starlight 8000i</b>  <b>NDE-8512-RX(T)</b> 1080p HDR X, starlight X
<b>FLEXIDOME IP starlight 8000i</b>  <b>NDE-8513-RX(T)</b> 4MP HDR X, starlight X	<b>FLEXIDOME panoramic 5100i IR</b>  <b>NDS-5703-F360LE</b> 30 fps@6MP	<b>FLEXIDOME panoramic 5100i IR</b>  <b>NDS-5704-F360LE</b> 30 fps@12MP	<b>FLEXIDOME multi 7000i</b>  <b>NDM-7702-A</b> 30 fps@4x 3MP	<b>FLEXIDOME multi 7000i</b>  <b>NDM-7703-A</b> 30 fps@4x 5MP	<b>FLEXIDOME multi 7000i IR</b>  <b>NDM-7702-AL</b> 30 fps@4x 3MP
<b>FLEXIDOME multi 7000i IR</b>  <b>NDM-7703-AL</b> 30 fps@4x 5MP	<b>FLEXIDOME intex 7100i IR</b>  <b>NDE-7604-AL</b> 8MP	<b>FLEXIDOME intex 7100i IR</b>  <b>NDE-7604-AL-OC</b> 8MP, Traffic Detector	<b>DINION intex 7100i IR</b>  <b>NBE-7604-AL</b> 8MP	<b>DINION intex 7100i IR</b>  <b>NBE-7604-AL-OC</b> 8MP, Traffic Detector	

- Essential Video Analytics
- Intelligent Video Analytics
- Cameras featuring Intelligent Video Analytics, machine learning (Camera Trainer), and deep learning AI detectors



# Moving cameras

## Indoor

### Intelligent Video Analytics

#### AUTODOME IP starlight 7000i



**NDP-7512-Z30Cx**  
in-ceiling,  
30 fps@1080p,  
starlight

#### NDP-7602-Z30Cx



**NDE-4502-A**  
In-ceiling,  
30 fps@1080p,  
starlight

## Outdoor

### Intelligent Video Analytics

#### AUTODOME IP starlight 7000i



**NDP-7512-Z30**  
30 fps@1080p,  
starlight

#### AUTODOME inteoX 7000i



**NDP-7602-Z30x**  
30 fps@1080p,  
starlight

#### AUTODOME inteoX 7000i



**NDP-7602-Z30x-OC**  
30 fps@1080p,  
starlight, Traffic  
Detector

## Extreme outdoor

### Intelligent Video Analytics

#### MIC IP fusion 9000i



**MIC-9502-Z30xxx**  
60 fps@1080p,  
fusion, Intelligent  
Video Analytics

#### MIC IP ultra 7100i



**MIC-7505-Z12xR**  
30 fps@4K UHD,  
12x zoom, Intelligent  
Video Analytics

#### MIC inteoX 7100i



**MIC-7604-Z12xx**  
Intelligent Video  
Analytics

#### MIC IP starlight 7100i



**MIC-7522-Z30x**  
60 fps@1080p,  
starlight, 30x  
zoom, Intelligent  
Video Analytics

#### MIC inteoX 7100i



**MIC-7602-Z30x**  
30 fps@1080p,  
30x, Intelligent Video  
Analytics

#### MIC inteoX 7100i



**MIC-7604-Z12xx-OC**  
30 fps@UHD, 12x,  
Traffic Detector

#### MIC IP starlight 7100i



**MIC-7522-Z30xR**  
60fps@1080p, 30x,  
Enhanced version,  
Intelligent Video  
Analytics

#### MIC inteoX 7100i



**MIC-7602-Z30xx**  
30 fps@1080p, 30x,  
Enhanced version,  
Intelligent Video  
Analytics

#### MIC inteoX 7100i



**MIC-7602-Z30x-OC**  
30 fps@1080p, 30x,  
starlight, Traffic  
Detector

Intelligent Video Analytics

Cameras featuring Intelligent Video Analytics, machine learning (Camera Trainer), and deep learning AI detectors

